

**LESSON GUIDE**  
**GRADE 12**

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# What Happens When HIV Infects the Body?

## Performance Objectives

Students will be able to:

- Describe how the immune system works.
- Describe how HIV affects the immune system.
- Recognize what the HIV antibody test results can mean.
- Recognize the phases in the progression of HIV infection, and identify factors that may affect the progression of HIV to AIDS.
- Identify opportunistic infections related to AIDS.
- Identify some of the challenges of living with HIV.

## Motivation

- Give the following story as a handout for students to read and react to:

Sam and Hao met several months ago. In the weeks that followed, they occasionally bought and used drugs together. Hao had just started injecting, and didn't always buy new syringes at a drugstore or get some from the syringe exchange. A few times, Sam allowed Hao to use a syringe Sam had already used. Hao eventually decided to stop using drugs, sought help through a treatment program, and lost touch with Sam. Recently, Hao ran into Sam on the street. Hao noticed that Sam seemed to have lost weight, but didn't think about it. As they sat in a donut shop, Sam mentioned being bothered by swollen glands and occasional attacks of sweating at night. Through the syringe exchange, Sam had been referred to a community clinic that, because of his symptoms and history of drug injection, had recommended an HIV antibody test. Hao was upset to hear that Sam's test had been positive. The clinic doctor said that Sam may have been infected several years before beginning to use drugs with Hao.

- Ask, "What might Hao do now?"

## Procedure/Development

- Tell the class that Sam was *asymptomatic* when sharing works with Hao. Explain that "asymptomatic" means without presenting symptoms of illness; people can be infected with HIV but have no visible changes in their body or notice any changes in their body functions.

## GRADE 12 Lesson 1

### NEW YORK STATE LEARNING STANDARDS 1

#### SKILLS

Decision Making  
Self-Management

#### MATERIALS

Chalkboard/Newsprint

#### VOCABULARY

Asymptomatic  
EIA/ELISA Test  
False Negative  
False Positive  
Incubation Period  
Macrophage  
Opportunistic Infection  
Replication  
Seroconversion  
Symptomatic  
Viral Load  
Western Blot Test  
Window Period

- Ask, “Should Hao be concerned, even though Sam had no symptoms at the time they were using drugs together?” Answer: Yes. People at any phase of HIV infection, even if they are asymptomatic, can transmit HIV.
- Ask, “What can be done to find out Hao’s HIV status?” Elicit: Get tested.
- Ask, “What does an HIV antibody test detect?”  
Answer: An HIV antibody test is a blood test that detects the *antibodies* specific to HIV infection produced by the immune system. An antibody is a type of protein produced by the body to help fight disease. The presence of antibodies can show that a person is fighting a certain type of germ. Because it takes 3-12 weeks from infection with HIV to develop antibodies, the New York State Department of Health AIDS Institute recommends that anyone who tests negative for HIV should be tested again three months later and refrain from all risk behaviors between tests. That way, the two tests cover “the window period” between infection and development of antibodies.
- Ask, “How is HIV different from some other infections that create immune responses?”  
Answer: Some other infections will eventually leave the body, with only the antibodies that the body produced to fight the infection remaining as signs that the infection was there. In contrast, once someone is infected with HIV, the antibodies and the rest of the immune system cannot destroy the entire virus.
- Say, “Suppose Hao got tested tomorrow morning and one week later got the results that said Hao was HIV negative. What could that indicate about Hao’s HIV status?” Elicit:
  - No antibodies to HIV infection were detected in Hao’s blood.
  - Hao is not HIV infected.
  - Hao is infected, but the immune system has not yet made HIV antibodies.
- Ask, “Can anyone tell me about the ‘window period’?”
- Say, “It takes time for the body to manufacture antibodies to HIV. The amount of time depends on the person’s immune system and on the quantity of the virus that the person received.”
- Say, “Some people develop antibodies by three or four weeks after infection; nearly everyone develops antibodies within three months after infection. The time period between infection and manufacture of antibodies is called the *window period*. An HIV antibody test done during the window period may not detect antibodies, and therefore will give *false negative* results (indicating that an infected person is not infected.). There are several different HIV antibody tests. Some can detect antibodies slightly earlier than others. There are other tests that detect the virus rather than antibodies. Viral load tests measure the amount of virus in the blood.
- Say, “If there can be *false negatives*, you might think there can be *false positives*. You are right. HIV is such a serious diagnosis that for any test turning out positive, a second *confirmatory test* using a more specific technique for detection of antibodies is done. The first test is usually an EIA/ELISA test and the second usually a *Western Blot* test.”
- Ask, “What do you think Hao should do to find out for sure if he has HIV?”  
Answer: Get re-tested in three months. And, during the three month window period, make sure not to engage in any risk behavior that could lead to a new infection and, thus, a new window period.
- Briefly remind students how the immune system works. Refer to following note as needed.

**Teacher Note:** Explain the workings of the immune system.

The immune system has three levels of response:

- 1) barriers such as skin and mucous membranes
- 2) innate response to any pathogen regardless of type, e.g., the macrophages that are near mucous membranes and skin
- 3) adaptive response, that is, production of a response to a particular pathogen, such as HIV (e.g., B-cells, antibodies, T-cells)
  - The adaptive immune system is composed of various types of white blood cells, which work together to identify and then destroy specific bacteria, viruses, or any other pathogens that enter the body.
  - During the innate or nonspecific part of the immune response, macrophages will engulf some pathogens and carry some of them to the lymph nodes where certain T-cells begin to orchestrate the specific response to the specific pathogen.
  - One type of T cell is the CD4 helper cell. The CD4 helper cells (there are anywhere from 500 to 1500 CD4 cells per cubic millimeter of blood in a person whose immune system is intact) evaluate the situation, and send signals to other components of the immune system, including B-cells.
  - The B-cells have a receptor (like a docking station) that binds an antigen, a piece of the pathogen. The B-cell digests the antigen into fragments. A CD4 cell docks at another part of the B-cell and stimulates the B-cell chemically to create antibodies. The antibodies are like little copies of the B-cell antigen docking site and thus can latch onto pathogens, identifying them.
  - The CD4 cells then signal other cells. They signal a specific kind of T-cells (cytotoxic T-lymphocytes) specialized to destroy cells already infected with HIV and more macrophages to attack HIV that may be circulating in the body. Other cells are called to help as well (e.g., NK Killer cells, part of the innate immune system; these cells are neither B- nor T-cells, but, like cytotoxic T-cells, they destroy infected cells). Sadly, HIV infects CD4 cells so that it is CD4 cells that are destroyed by what is usually an effective immune response.
  - In every illness, all of these white blood cells combine to destroy the pathogen. If they are successful, the body recovers. On the other hand, if the body does not destroy the pathogen, the infection becomes permanent in the body. In the case of HIV, after antibodies are formed, the immune system holds HIV in check for a while. But then the immune system weakens over years. We call the process of antibody formation in HIV *seroconversion*. (Note the words, “sero” for blood, “conversion” for change; the blood now has HIV antibodies.)

- Ask, “How does HIV affect the immune system?” Explain:
  - When the virus enters the body, the immune system tries to work as usual (e.g., the macrophages begin to engulf the virus), but there is a major difference between HIV and other pathogens: HIV directly attacks the immune system itself, by infecting the CD4 (Helper T) cells, using the CD4 cells to make copies of itself (known as *replication*), and sometimes destroying the CD4 cell as multiple copies of HIV burst out.
  - As a result the infected CD4 (Helper T) cells can no longer signal the other components of the immune system to respond to the HIV virus.
  - As the disease progresses, the amount of HIV in the blood (known as *viral load*) increases while the number of healthy CD4 (Helper T) cells decreases. In some people, this process can be rapid while in others it is gradual.

- Explain that Sam’s blood contains the antibodies to HIV, indicating that Sam is HIV-positive, and has seroconverted (from previous HIV-negative status), and will be permanently HIV infected. Elicit that he is in the *symptomatic* phase, meaning he already has symptoms.
- Ask, “What are Sam's symptoms?” (Revisit the story in the “Motivation” section to find out.)
- Write student responses on the chalkboard/newsprint under the heading “Symptoms of HIV Infection.” Possible answers include:
  - Night sweats
  - Persistent and recurring swollen glands
  - Weight loss (which was, as Sam could tell us, rapid and significant)
- Ask, “What other symptoms might Sam experience, even if he has not yet done so?” Add student responses to the list.
  - Diarrhea
  - Thrush (a type of mouth infection)
  - Persistent dry cough
  - Persistent fever
  - Profound fatigue
  - Higher likelihood of getting sick with common illnesses
- Ask, “How can we explain the progression of Sam's condition from being asymptomatic to being symptomatic?” Draw a continuum on the board to illustrate.

ACUTE (PRIMARY HIV INFECTION) → WINDOW PERIOD → ASYMPTOMATIC → SYMPTOMATIC → AIDS

- Explain that for years, Sam’s immune system (T-cells and antibodies) helped hold down the amount of HIV in his body. During this time, the asymptomatic phase, Sam experienced few if any symptoms. After this time, Sam’s body began to lose the CD4 cells and antibodies that protect against HIV and against other diseases. As the virus made more copies of itself, Sam began to experience more of the effects of being infected with HIV and lowered resistance to illness during this symptomatic phase. Even during the asymptomatic and symptomatic phase, the virus was actively multiplying and damaging the cells of the immune system. Sam could have transmitted HIV to other people at any time since infection.
- Explain the difference between HIV and AIDS. HIV infection is when the body has seroconverted. A person with HIV infection may be either asymptomatic or symptomatic while at the same time be healthy or not seriously ill.
- Ask, “What would have to happen to Sam, who is HIV-positive, for him now to be diagnosed as having AIDS, rather than only as having HIV infection?”
- Tell students that AIDS is the most advanced phase of HIV infection. It is defined by the U.S. Centers for Disease Control and Prevention (CDC) as:
  - HIV positive test results (which show the presence of HIV);
  - AND**
  - a CD4 helper cell count of fewer than 200 per cubic millimeter of blood (a drop);
  - AND / OR**
  - the presence of an opportunistic infection or disease.

- Ask, “What are opportunistic diseases or infections?”
- Explain that CDC recognizes 26 conditions that can define an AIDS diagnosis for persons 13 and older. For children under 13, there are 24 conditions that are similar to those for older persons. Most of these are “opportunistic infections,” or diseases that are life threatening. People with healthy immune systems are able to fight off these infections, but they can be life-threatening in HIV-positive people. They take advantage of the weakened immune system to become established in a person’s body. Give examples of some opportunistic infections/diseases:
  - Pneumocystis Pneumonia (PCP): a type of lung infection caused by a fungus that has protozoan characteristics. It is a type of pneumonia that is very serious in persons with weak immune systems.
  - Kaposi’s sarcoma: a form of cancer that appears as purple blotches on the skin; it can also affect internal organs.
  - Cervical cancer: a cancer of the cervix, more common in women with HIV than in those who are not infected.
- Ask, “What could possibly help Sam delay the progression of the disease? Elicit:
  - Find an HIV healthcare provider, and have an evaluation done of the phase of HIV infection.
  - Start and follow treatment for HIV infection, as recommended by the healthcare provider.
  - Being under the care of an HIV healthcare provider is the single most important thing to delay progression of HIV.
  - Have other healthcare needs taken care of.
  - Reduce the risk of re-infection with a different strain of HIV, or with hepatitis or another STI that would damage the immune system further by abstaining from sexual behavior that could transmit HIV, or by using a latex or polyurethane condom to reduce the possibility of re-transmission.
  - Support overall health by such measures as reducing stress, eating a nutritious diet, getting adequate sleep, and exercising.
  - Avoid use of alcohol and other drugs, which may interact with medications or lead to other health problems.
  - Discuss HIV status and treatment with trusted family and friends who can provide support for treatment adherence and other tasks of living with HIV.
  - Pay attention to mental health so as to make effective use of treatment and make maximum use of other resources.
  - Investigate use of services and financial resources that can provide support for adherence and living with HIV.
  - Construct a support system (examples include healthcare providers, social service providers, case managers, friends and relatives, partners, support groups) for living with HIV.
  - Research information about HIV and AIDS so that any decisions that need to be made can be as fully informed as possible.

## Assessment/Homework

- Have students show the progression of HIV infection on a timeline like the one below.
- Have them label the phases of HIV infection and identify the characteristics of each phase, identify the window period, and identify the incubation period.

**Teacher Note:** It is crucial to emphasize to students that these are estimates. The progression of HIV infection varies among individuals, and not all individuals with HIV infection progress to AIDS.

- Have students define the following terms: *incubation period*, *asymptomatic phase (no symptoms)*, *symptomatic phase (night sweats, weight loss, persistent fever, persistent swollen glands, persistent diarrhea)*, and *AIDS (HIV+, fewer than 200 CD4 cells, opportunistic infection—e.g., PCP, cervical cancer, Kaposi's sarcoma)*.

# How Is HIV Transmitted?

## Performance Objectives

Students will be able to:

- Identify specific modes of HIV transmission.
- Identify body fluids that can transmit HIV.
- Use that knowledge to understand why some types of behavior are more likely than others to transmit HIV.
- Understand the ways scientists learn about HIV transmission, and understand how this knowledge can be used to prevent HIV.
- Recognize the major ways HIV is spread in the United States and New York City, and how it affects the students and their communities.

## Motivation

- Say, “What do you know about HIV transmission? How do people get HIV infected?” List students' responses on board or newsprint. Possible responses include:
  - HIV is a virus.
  - HIV is in the blood, including menstrual blood, of an infected person.
  - HIV is in the semen and preseminal fluid (“pre-cum”) of an infected man.
  - HIV is in the vaginal fluids of an infected woman.
  - HIV is in the breast milk of an infected woman.
  - A woman with HIV can pass HIV to her fetus during pregnancy or her newborn during childbirth. (Make sure that students understand that in the US the risk of *perinatal* [mother to fetus or newborn] transmission has been dramatically reduced through the use of medications during pregnancy, certain delivery procedures, and medication of the newborn).
  - A person can get HIV through unprotected vaginal, oral (mouth to penis or vagina), or anal intercourse.
  - A person can get HIV by using the same needles, syringes, or other injection equipment as an infected person.
  - Latex or polyurethane condoms can reduce the risk of HIV transmission.
  - A person can't get HIV from being around someone with HIV/AIDS.
- Ask, “What do you know about HIV treatment and how people get infected?”

## GRADE 12 Lesson 2

### NEW YORK STATE LEARNING STANDARDS 1

#### SKILLS

Decision Making

Self-Management

#### MATERIALS

Chalkboard/Newsprint

#### Activity Sheet 1: *An HIV Story*

#### VOCABULARY

Assumption

Epidemiology

Higher Risk

Lower Risk

Perinatal Transmission

Prevention

- Ask, “What are the body fluids that can transmit HIV?” List on board or newsprint:
  - blood, including menstrual blood
  - semen and preseminal fluid
  - vaginal fluids
  - breast milk

**Teacher Note:** What can we say about transmission risks due to sexual behaviors? Scientists sometimes classify practices as:

- **High risk** (large numbers of cases reported due to these behaviors, especially to the person receiving the potentially infected fluid):
  - Anal sex without correct use of a condom.
  - Vaginal sex without correct use of a condom.
  - Anal sex is the riskiest sexual form of intercourse of HIV infection. It is not clear whether it is due to the nature of the cellular lining in the rectum or because of the high risk for abrasions—however, we do know that anal sex presents the highest risk for HIV transmission.
- **Lower risk**
  - Oral sex.
  - It is important, however, to remember that other STIs (e.g., herpes) can be transmitted relatively easily (to the mucous membranes of the throat or genitals) through oral sex.
- **No risk**
  - Hugging, holding, other practices that do not bring body fluids into contact.
  - Kissing.\*

**However, if a person contracts HIV through a “lower risk” behavior, such as oral sex, then for that person it has proven to be a high risk behavior.**

\*The CDC has reported one instance of transmission through deep kissing in two people, each of whom had gum disease, resulting in the presence of blood in their mouths. This case illustrates why knowing the principles of transmission and using common sense are important to HIV prevention.

**Teacher Note:** Make sure students understand that HIV can be transmitted through vaginal, oral, or anal intercourse with an infected person. When sexual intercourse is not clearly defined to include oral and anal, people may fail to recognize their risk and not take appropriate action to protect themselves and others. In New York State, a person under 17 years of age is incapable of giving legal consent. Vaginal, oral, or anal intercourse with a person less than 17 years of age and to whom the actor is not married constitutes a crime in this state.

- Have students read and discuss Activity Sheet 1, “An HIV Story” (at the end of the lesson), then discuss the following questions:
  - How would you trace the possible routes of HIV transmission in this group of people?
  - Which body fluids would carry HIV in each instance described?
  - By what means or behavior *might* each person transmit the virus to another person?
  - Does what people say about themselves (or what we assume about them) always tell us about their behavior, especially behaviors that can transmit HIV?

- Does what people say about themselves (or what we assume about them) always tell us about their HIV status?
- Do we know which characters are infected with HIV? Do the characters know about their own HIV status? Other people’s HIV status?
- If we did know which characters had HIV, could we tell for sure how each one got it?

**Teacher Note:** In leading the discussion of the Activity Sheet, “*An HIV Story*,” it is important to accomplish three goals:

1. To use knowledge of HIV and body fluids to map *potential* routes of transmission;
2. To acknowledge that the exact route of transmission in a particular person is not always traceable, or is not traceable without a great deal of research; and,
3. To point out that we may not know everything about our partners that we might hope to know in order to protect ourselves and others from HIV.

**GOAL #1: HELP STUDENTS TRACE THE POSSIBLE ROUTES OF HIV TRANSMISSION AMONG THE CHARACTERS IN THE STORY.**

Possible routes of HIV transmission in “An HIV Story” include:

Miguel	<ul style="list-style-type: none"> <li>• Shared needles/syringes/works with Shenequa and John, and</li> <li>• Had sexual intercourse with Mary and Shirley.</li> </ul>
Shirley	<ul style="list-style-type: none"> <li>• Had sexual intercourse with Miguel and José, and</li> <li>• Gave birth to Jennifer.</li> </ul>
Mary	<ul style="list-style-type: none"> <li>• Had sexual intercourse with Miguel and Mark.</li> </ul>
Shenequa	<ul style="list-style-type: none"> <li>• Shared needles/syringes/works with Miguel and John.</li> </ul>
John	<ul style="list-style-type: none"> <li>• Shared needles/syringes/works with Miguel and Shenequa, and</li> <li>• Had sexual intercourse with Mark.</li> </ul>
Mark	<ul style="list-style-type: none"> <li>• Had sexual intercourse with John and Mary.</li> </ul>

**Teacher Note:** You may want to make the blank chart on the following page into a transparency to use with the class.

**Handout**

**GOAL #1: HELP STUDENTS TRACE THE POSSIBLE ROUTES OF HIV TRANSMISSION AMONG THE CHARACTERS IN THE STORY.**

Possible routes of HIV transmission in "An HIV Story" include:

Miguel	
Shirley	
Mary	
Shenequa	
John	
Mark	

**GOAL #2: HELP STUDENTS REALIZE THAT THE STORY, LIKE LIFE, CONTAINS MANY UNKNOWN. ALTHOUGH SCIENTISTS TRY TO ESTIMATE THE NUMBERS INFECTED BY DIFFERENT ROUTES, THE ROUTE OF HIV TRANSMISSION IN ANY PARTICULAR CASE IS NOT ALWAYS TRACEABLE.**

One cannot “tell” whether another person has HIV, and the risk of transmission presented by any given individual depends not only on that individual’s history of higher- and lower-risk behaviors, but also on the history of other people with whom he or she has engaged in such behaviors.

*What is known for certain in this story, and what is simply an assumption or a possibility?*

- The characters do not ask or tell each other about all their possible (current or past) higher- and lower- risk behavior. The story does not describe the behaviors of other people with whom any of the characters may have had sex or shared syringes, or the behavior of any of the partners of those people. Therefore it does not cover all possible transmission possibilities. For example, maybe Shirley did not become infected by Miguel, but by another lover she had prior to being with José. Maybe Mark had other male or female sexual partners in addition to John and Mary, or also shared equipment when injecting drugs, either currently or in the past.
- The story also does not describe the exact nature of their higher- or lower-risk behaviors.
- It also does not describe risk reduction measures that any of the characters may have practiced. For example, maybe Miguel correctly and consistently used latex condoms with Shirley and/or Mary, thus preventing possible sexual transmission of HIV to them (if indeed he was infected with HIV).
- The only person in the story who was revealed to have HIV was Shirley. It is possible that none, one, some, or all of the others have HIV, or if one or more of the other characters does, none, one, some, or all of them know it. (Students should distinguish among *known information*, *assumptions*, and *possibilities that may or can happen*).

- Ask, “How did this exercise help you to understand how HIV/AIDS has become an epidemic?”
- Lead the class in a discussion that focuses on the idea that HIV was initially spread, and continues to be spread, by:
  - People who are *unaware of the risks* (to themselves and their partners) involved in their behavior.
  - People who are *unaware of their own HIV status* and/or *that of their partners*.
  - People who engage in *high-risk sex and drug use* because they don’t know, or are not seriously concerned, that HIV infection can often results from such activity.
  - People who *do not take measures to reduce the risk* of possible transmission to themselves and/or their partners.

### Assessment/Homework

- Say, “Based upon the exercise we did today using “An HIV Story,” what messages did you get that could have an impact on the decisions you make in your life?”
- Have students pretend they are an advice columnist for a teen magazine. Write a response to a letter from a teenager who is having sex with her boyfriend and is afraid she might become infected with HIV as a result. She writes that he has used drugs, although she is not sure about which ones. His last girlfriend broke up with him when she developed an STI. What does she need to know about her risk of HIV infection during sexual activity, including sexual intercourse?

Activity Sheet 1

## An HIV Story

Miguel never thought he would become addicted to heroin. He had intended only to experiment with it once in a while, but he found himself “experimenting” more and more. Eventually he no longer just “felt like” doing heroin. He felt that he had to have it.

Heroin cost money, and Miguel, a senior in high school, didn’t earn much from the odd jobs he was able to get after school. So when he went to shoot drugs in the back room of John’s Deli, where several of his friends hung out, he couldn’t always scrape together enough money to buy both heroin and stuff to shoot it with.

“Don’t worry about it,” said Shenequa. “Share mine.” Shenequa, Miguel, and John, the owner of the deli, often passed her needle, syringe, and works around. Miguel appreciated Shenequa’s willingness to share her equipment with him.

John could have afforded his own equipment, but he never really thought about getting any. If Shenequa was willing to share hers, he thought to himself, why bother buying his own?

When Shenequa shared her equipment with Miguel, she was just being friendly to this high school kid. But when she shared with John, she was really trying to get him to feel close with her. John was very handsome and Shenequa was so attracted to him that sometimes she even dreamed about him at night. Yet although John seemed to like her, there was just no chemistry between them. One day Shenequa realized why. Arriving at the deli just as John was about to close up for the night, Shenequa noticed a man in a tan coat standing outside, waiting for John.

“Who’s that?” Shenequa asked John.

John grinned at her.

“He’s the man of my dreams,” he said.

Shenequa blushed, thinking to herself that John was the man of her dreams.

“So that’s why you never asked me out!” Shenequa said.

John replied, “You’re a lovely lady, Shenequa, but I’ve just never been attracted to women.”

Shenequa walked outside with John. After he locked the deli’s security gate, he introduced her to the man in the tan coat, Mark, then the two men walked away. Shenequa stood there for a moment, looking at them, and was surprised when Mark turned around to look back at her. She had the feeling that he was checking her out—but then she thought she must be mistaken. After all, he was gay, wasn’t he?

In fact, Mark didn’t think of himself as gay. He thought of himself as a straight guy who sometimes liked to have sex with other guys. He never told John that he had a 17-year old girlfriend, Mary, with whom he had a sexual

relationship. Nor did Mark tell Mary about John. He didn't see any reason to tell her. They were considering becoming engaged when she graduated from high school in June, and he had always wanted children. Anyway, Mark figured, what he did with John was private. Surely, he thought, a man has a right to a secret or two.

Mary would have been shocked to learn that Mark had sex with John—and upset that they never used a condom. She and Mark never used a condom, either. She used birth control pills and thought that Mark had no other lovers and that there was no need to use a condom to protect against sexually transmitted infections.

Before her relationship with Mark, Mary had only had sex with one other guy. His name was Miguel, and he went to school with her. She had really cared for Miguel, and became upset when he started using drugs. She stayed with him, though, trying to convince him to stop shooting heroin—until she found out that he was also having a sexual relationship with Shirley, a woman several years older than they were. Miguel had met Shirley when she had hired him to put up some bookshelves in her apartment. Shortly after Miguel began his affair with Shirley, Mary broke up with him. Within a couple of months she met Mark, a devoted man whom she hoped to marry.

Shirley and Miguel's relationship didn't last long. Shirley was attracted to this muscular, sweet-natured young man until she noticed the tracks on his arm. She gave him an ultimatum: choose her or drugs. Miguel was addicted to heroin by then. He couldn't stop by himself, and refused to get treatment.

For a while Shirley was deeply upset, until she met José. He was a considerate, charming man, whose wife had died in an auto accident shortly after giving birth to their son, Bobby. Now Bobby was four years old, and when José brought him to register at the nursery school where Shirley worked, José and Shirley hit it off immediately. By the end of the school year, they were married, and six months after that Shirley learned that she was pregnant.

Shirley, José, and Bobby were overjoyed. For Bobby, having his nursery school teacher become his stepmother was thrilling, and now the idea of having a new baby in the family was bliss. He made many pictures to hang over the new baby's crib, and when little Jennifer was born, Bobby proudly announced to everyone he met that he was a big brother now.

There had been a surprise, however. While getting prenatal care during her pregnancy, Shirley had taken an HIV test and discovered that she was infected. Because of treatment she had received during pregnancy, and that Jennifer had received after birth, Jennifer does not have HIV. But Shirley is now living with HIV.

## Prevention

NEW YORK STATE  
LEARNING STANDARDS  
1

### SKILLS

Decision Making

Relationship Management

Self-Management

### MATERIALS

Chalkboard/Newsprint

**Activity Sheet 1:**  
*Steps to a Decision,*

*The Decision-Making Process*

### VOCABULARY

Decision-Making Model

Factors

Options

Risk Reduction

# How Can We Learn to Make Effective Decisions?

## Performance Objectives

Students will be able to:

- Analyze how effective decisions can be made.
- Recognize the steps used in a decision-making model and practice using a decision-making model.
- Apply the use of a decision-making model to behaviors that can transmit HIV.

## Motivation

- Say, "I'm going to read a scenario. Please listen carefully. Afterwards you will have two minutes to 'free write' what you would do and why you would do it in this particular situation."

**Teacher Note:** "Free write" means that students write about a specific idea or topic for several minutes. The purpose is to generate ideas. Work is not collected or evaluated; therefore grammar, spelling, and syntax do not matter.

- Read the following scenario to the students:

Jamie and Kim are classmates who feel attracted to each other and start going out. One day, while doing homework at the library, Jamie invites Kim home to work on it. Jamie talks about feelings for Kim, and wanting some time alone while there is no one else home, to express those feelings.

Kim was sexually involved with someone previously, but had decided to wait for a more permanent relationship before having sex again. But Kim is strongly attracted to Jamie both physically and emotionally, and does not want to lose or hurt Jamie.

## Procedure/Development

- Ask students, "Do we know Jamie or Kim's gender? Does it matter? How does it affect this scenario?" Remind students that regardless of gender or sexual orientation anyone who engages in risk behaviors can be exposed to HIV.
- Have students brainstorm the reasons Kim would decide to accept or reject Jamie's invitation. List students' answers on the chalkboard/newsprint. Possible answers may include:

*Reasons to Decline:*

- Kim does not want to have sex.
- Kim does not want to feel sorry later.
- Distrust of Jamie's motives.

- To avoid being accused of some type of unwanted sexual contact (such as assault, rape).
- To avoid being thought of as “easy.”
- To avoid the possibility of being infected with an STI, including HIV.
- Not prepared for risk reduction; condoms or other appropriate barriers not available.
- Not sure exactly what behavior Jamie has in mind.
- Does not want to complicate or damage a good relationship.
- Does not want to risk getting in trouble if either family finds out.

*Reasons to Accept:*

- They care for each other, it's okay.
  - This time it would be different.
  - Doesn't want to hurt Jamie's feelings.
  - Doesn't want to be rejected by Jamie.
  - Maybe nothing would happen.
  - Is prepared for risk reduction; condoms or other appropriate barriers are available.
  - It would be enjoyable.
  - Everybody does it.
  - No one would find out.
- Ask, “Is this a difficult situation for Kim? What could help Kim make the best decision?” Possible answers include:
    - Review original reasons for deciding to postpone sex. Figure out how to say NO preferably without hurting Jamie's feelings.
    - Step back from the situation and let Jamie know that Kim needs time to think and then discuss the situation before taking action.
    - Find a way to explain the decision in terms of the relationship and both of them.
  - Say, “Let's see how a decision-making model could help us make decisions we would feel good about later.” Distribute and discuss the attached Activity Sheet 1, “Steps to a Decision” and “The Decision-Making Process” with the class. Then read the above scenario again and elicit further responses from the students. Be sure to have them discuss the key points of the advantages of abstinence from behavior that could transmit HIV or another STI. Possible student responses about the *benefits of abstinence* may include:
    - Be more in control of your life.
    - Respect for self.
    - Have greater trust in relationship and partner.
    - Focus energy on establishing and achieving current and longer term goals in life.
    - Less anxiety.
    - Maintain personal, religious, family, or community values.
    - Avoid gossip about others.
    - Freedom from the risk of getting or giving a sexually transmitted infection, including HIV.
    - Freedom from the risk of pregnancy and its consequences.
    - Freedom from the need to use condoms or other devices to reduce the risk of infections and/or pregnancy.
    - Freedom to experience a loving relationship without having to perform sexually.

- Ask, “How can Kim use the decision-making model to decide whether or not to become sexually active again, this time with Jamie?”
- Say, “Let’s see what points we came up with when we worked through the decision-making process model. How might they help Kim make this decision?” Possible answers include:
  - Making sure what the choices really are, what Kim really wants.
  - Showing the need to look at all of the implications of the various choices.
  - Providing more time to think about the decision so that all options and their possible effects can be considered.
  - Seeing the possible positive and negative consequences of either decision.
- Ask, “What actions could Kim take to maintain the decision?” Elicit from students:
  - Put the decision in writing.
  - Communicate the reasons for the decision to Jamie; be willing to deal with Jamie’s reactions.
  - Avoid people and situations that could weaken the decision.
  - Make long-term goals and work toward them.
  - Get encouragement from a supportive person who Kim already respects.
  - Accept the reality of the past experience and the consequences, but recognize that the future can be different.
  - Seek friends who share the same values and commitments.
  - Develop hobbies and interests.
  - Set limits on expressions of affection that could weaken the decision.
  - Develop new ways to show caring and affection.

## Homework

- Have students write a paragraph about a decision they once made that they thought was the right one. Use the decision-making process as a model to help. See Appendix B.

## **Steps to a Decision**

### **Directions**

The purpose of this exercise is to help you become aware of a process for problem solving. You may have used these steps already without being aware of them, but becoming aware of them will help you to strengthen your abilities to problem-solve in difficult situations. Read over each of the steps in the decision-making process outlined below. Choose a situation or problem when you would want to make a decision. Go through each of the seven steps for your particular problem.

### **THE DECISION-MAKING PROCESS**

1. Know what the specific problem is and state it clearly. (It may be helpful to ask if it relates to the present or future or both and, if it is a general problem or specific to a situation or person. This helps define the context of the problem.)
2. Make sure you have as many facts as you can gather about the important pieces of the problem, recognizing that decisions about most human problems are made under conditions of incomplete information.
3. List all the possible choices.
4. Evaluate each choice, taking into consideration possible positive and negative consequences:
  - a. What is its impact on your health and well-being?
  - b. What is its impact on others' health and well-being?
  - c. Are there laws or important rules (school, etc.) about it?
  - d. Does it help or hinder your other goals?
  - e. Is it consistent with your personal, religious, family or community values?
5. Decide which choice seems best and state clearly why.
6. Outline the steps that you need to take to help remain firm in the decision taken.
7. Evaluate and review the outcome of the decision.

**THE DECISION-MAKING PROCESS**

1. State the problem clearly:

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2. List all the possible choices (add more letters if necessary):

- a.
- b.
- c.
- d.
- e.

3. Consider each alternative and list all the things that might happen—pros and cons—if that alternative were chosen and acted on. (Add more letters if necessary, and save room within each letter to add more information from Step 4.)

PROS	CONS
a.	a.
b.	b.
c.	c.
d.	d.
e.	e.
f.	f.
g.	g.

4. Think of all the values about right and wrong that you have learned. Think of how family, friends and other people you care about will be affected by your decision. Add to the list above.

5. Decide on the alternative that seems best. Write it out and explain why it seems best:

6. Outline the steps that need to be taken to act on that decision (add more numbers if necessary).

- 1)
- 2)
- 3)
- 4)
- 5)

7. Evaluate the possible outcomes of the decision.

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# What Factors Must Adolescents Consider Before Taking an HIV Antibody Test?

## Performance Objectives

Students will be able to:

- Identify which individuals should consider getting the HIV antibody test, and why.
- List issues to consider before taking the HIV antibody test.
- Explain the differences among anonymous, confidential, and mandatory testing.
- Be able to locate an HIV testing site, and understand what to expect.
- Understand the nature of consent and confidentiality in HIV testing, especially as they affect young people and adolescents.

## Motivation

- Remind students that they have learned three important things about HIV that might make them want to consider HIV testing, now or at a later point in their lives. These things are:
  1. HIV transmission occurs through specific behaviors, not through membership in particular groups.
  2. Many people are at risk of HIV infection, and often do not know that they are at risk.
  3. While there is no “cure,” effective treatments for HIV are now available and have made “living with HIV” a real possibility.
- Being able to protect oneself and others from HIV transmission, as well as getting treatment if infected, depends on one knowing one's HIV status. This lesson explores some of the major issues involved with HIV testing.
- Give students the attached Activity Sheet 1, *A Question of Testing* and have them read the story.

## GRADE 12 Lesson 4

### NEW YORK STATE LEARNING STANDARDS 1

#### SKILLS

Self-Management

Decision Making

#### MATERIALS

Chalkboard

#### Activity Sheets 1, 2 and 3

*A Question of Testing*

*An Adolescent May Be Concerned About HIV Testing If...*

*Poems*

#### Appendix A:

*Student Guide to HIV Antibody Testing*

#### VOCABULARY

Anonymous Testing

Antibody Test

Confidential Testing

Consent to Testing

EIA/ELISA Test

False Positive

Fingerstick

Oral Swab

Partner Notification

Poems

Pre- and Post-Test Counseling

Venipuncture

Voluntary Testing

Western Blot Test

## Procedure/Development

**Teacher Note:** Any discussion about HIV antibody testing must address both facts and feelings. Class activities should be interactive and provide opportunities for students to express themselves. Brainstorming and small and/or large class discussions may be utilized in achieving classroom objectives.

In addition to having students read the story, you may want to have them dramatize it, taking the part of characters in the story. After discussion, students may want to expand on the role-play. Characters can discuss their situations, and new characters can be introduced. For example, role-plays may include friends and parents and other adults whom they might ask for advice. See “How to Process Role-Plays” in Appendix B at the back of their curriculum guide.

### Discussion

- Ask students for their reactions to the story and to the variety of feelings the characters exhibit. List responses on the board or on newsprint. Point out that a display of such emotions is normal and often surfaces when addressing HIV testing and other HIV/AIDS issues.
- Ask students to highlight the advantages of being tested, and the impact of waiting. Expand the discussion to include reasons that the other characters would consider getting tested. (Distribute Appendix A, “Student Guide to HIV Antibody Testing,” for information.)
- Ask students to comment on what they would do if they were the characters in the story.
- Say, “Although HIV testing is increasingly common, you cannot assume that it is being done automatically (for example as part of blood taken for routine physical exams). By law in New York State, HIV tests require the informed consent of the person being tested.”
- Ask the students, “What are some of the specific reasons people might think about getting tested for HIV?” Answers should include:
  - Had unprotected sexual activity that might transmit HIV.
  - They are pregnant or got someone pregnant.
  - Recent diagnosis with an STI.
  - Used drugs in ways that could transmit HIV, for example using a syringe or other equipment that was used by someone else.
  - Uncertainty about the possibility of HIV infection.
- Ask, “The CDC estimates that one quarter of people infected with HIV do not know their HIV status. Why is this? What are some of the reasons people who should consider getting tested for HIV might not get tested?” Answers might include:
  - Fear of dying, fear of being sick.
  - Fear of the unknown.
  - Not knowing about available treatment; thinking “why bother, there’s no cure?”
  - Fear of what others will think (stigma).
  - Not recognizing risk behaviors.
  - Fear of being unable to get treatment.
  - Fear of having to explain getting tested (or results) to family, partner, friends.
  - Don’t know how to get tested (where; costs; what it will be like).
  - Worried about confidentiality; who will find out; having test in records.

- Not sure they can do it or are able to consent.
- Fear (of the diagnosis, of the consequences, of their parents, of their partner, of dying).
- Feelings of invulnerability. (“It can’t happen to me.”)
- Denial of risk behaviors.
- Fear that the stigma of the diagnosis would result in discrimination by health providers, insurance companies, at school, at work, in housing, etc.
- Distribute Appendix A, “Student Guide to HIV Antibody Testing.”
- Review the “Student Guide to HIV Antibody Testing,” making sure that students understand the key concepts.
- Ask students: “Where are some places a person might go to get an HIV test?”  
Answers should include:
  - Your regular doctor
  - Health clinics
  - STI clinics run by the New York City Department of Health and Mental Hygiene
  - Clinics at hospitals
  - Family planning clinics
  - Community-based organizations
  - Teen organizations
  - Hospital teen clinics (often called “Adolescent Medicine” or “Adolescent Health”)
  - Special anonymous HIV testing sites
- Ask, “What are some reasons that a person might be concerned about HIV testing?” Distribute the Activity Sheet, “An Adolescent May Be Concerned About HIV Testing If....” Have students work individually or in small groups to brainstorm problem-solving suggestions to help an adolescent with concerns about HIV testing.
- Make sure students have covered the points that are on the answer sheet.

**Teacher Note:** You may want to make the blank chart on the Student Worksheet that follows into a transparency to use with the class.

## Assessment/Homework

- Have students write a “next chapter” to the story, “A Question of Testing,” by featuring one or more of the characters and introducing at least one new character. Include a scene in which one of the characters meets with a testing counselor.
- Write a description of the sources for HIV/AIDS information within the high school: What materials or books does the library have? Who are the HIV/AIDS team members? Where is the Health Resource Room? What are its hours and what does it offer?

**Teacher Note:** When discussing HIV antibody testing, students may address issues of bereavement. You may find the attached activity sheet, “Poems,” to be suitable enrichment for this lesson.

Activity Sheet 1

## A Question of Testing

by Betty Rothbart

Katherine left the clinic feeling full of confusion. She wasn't surprised when Dr. Halevi had said she was pregnant – she had expected that news. What shocked her was the doctor's suggestion that she get tested for HIV.

"An HIV test? I don't have AIDS. I feel fine. A little morning sickness, but otherwise..."

Dr. Halevi had put her hand on Katherine's shoulder.

"A person can feel okay but still be infected. And you told me that you and your boyfriend both had other sexual partners before you started going together."

"Yes, but—"

"If you have HIV, it would be good to know for two reasons: your health, and your baby's."

Your baby. Katherine didn't even know if she wanted a baby, let alone an HIV test. She felt like she was looking into shadowy mirrors that revealed her in strange new ways. Katherine, pregnant. Katherine, faced with enormous decisions that she suddenly felt too young to make.

"Think about it," Dr. Halevi said. "If the test is positive, there are some treatments that can help you stay healthy longer and protect your baby from infection."

The clinic was just down the street from the high school, and Katherine and her boyfriend, Brian, had arranged to meet there. Brian was sitting on the school steps, leaning back on his elbows and staring up at the sky. She sat next to him and rested her head on his shoulder.

"Well?" he asked softly.

"I'm pregnant," she said, "and I'm scared. I don't know what to do."

"We talked about this, Katherine," said Brian. "We're both graduating in a few months. Maybe we could get married, have the baby. I'd get a job, you could work part-time. We'd get by."

"I don't know, Brian. Dr. Halevi mentioned something we never thought about. What if I have HIV? What if the baby were born with it?"

"HIV? Katherine, that's impossible."

"Is it, Brian? We're both had other partners. One of us—or both of us—could have gotten infected. Dr. Halevi thinks I should get tested."

Brian frowned. "If you get tested, and you're infected, then I might find out that I'm infected, too," he said.

"Yes, but Brian, if our tests come back negative, that means we're not infected. All three of us would be okay."

"All three of us," mused Brian. "Sounds weird. When you put it that way, I don't know if I want to celebrate—or run."

"I know," said Katherine. "Getting pregnant, getting tested, getting married, having a baby...it's too much to think about. I don't want to think about it."

"I don't either," Brian replied. "But time's moving on, Katherine. Somehow, we have to figure out how to deal with all this."

A car pulled up in front of the school. Their friends Janis, Kim, and Peter got out and ran up the steps toward them.

"I can't believe school's out and you're still hanging around here!" said Kim. "We're on our way to the park. There's a free concert there tonight, want to go?"

"I don't think so," said Katherine. "We have a lot to talk about. I just came from the clinic and—"

"Let me guess," said Peter. "You're pregnant!"

"Yes, I am."

"Hey, wait a minute," said Peter. "I was just kidding. I didn't think you – really? You're really pregnant? Oh, what are you going to—"

"We don't know what we're doing," said Katherine.

"Come on," said Janis. "So you'll have a baby! Everything will work out."

"The doctor wants me to have an HIV test," said Katherine.

"HIV!" exclaimed Janis, "None of us has to worry about that."

"Don't we?" said Katherine.

Everyone froze as they thought about Katherine's question. Brian finally broke the silence.

"Look, we've all been friends for a long, time," Brian said slowly. "And none of us can sit here and say we don't have to worry about HIV."

"You mean, most of us have probably had sex without condoms," said Kim.

"I haven't," said Janis. "But when I had that problem with drugs last year, I shared needles and works."

"I've done some partying," admitted Peter. "Got drunk, had sex, no condom. We were just fooling around, we weren't thinking about HIV."

"I never thought much about HIV either," said Brian. "But now we have to. Katherine has to decide whether to get tested—"

"We all have to make that decision," said Peter. "We have all been in risky situations. Maybe one of us does have HIV."

"Or some of us," said Janis.

"Or none of us," added Kim.

"We can't know for sure without a test," said Katherine. "But I don't know whether I want to know. I just want time to stop. I don't want to think about this."

Brian took her in his arms. "Time won't stop," he said. "Eventually, one way or another, you'll find out. We'll all find out. Positive or negative, we'll move on with our lives."

**Activity Sheet 2**

<b>AN ADOLESCENT MAY BE CONCERNED ABOUT HIV TESTING IF...</b>	<b>PROBLEM-SOLVING SUGGESTIONS</b>
He or she fears that others might cause results to appear in medical records, complicating insurance, etc.	The young person needs to know that anonymous testing involves no disclosure. Also, HIV results from confidential testing cannot be released to anyone besides the young person, except under specific circumstances (the counselor will list and explain these), or if the person who is being tested signs a specific release.
He or she is not prepared to be told of the results (e.g., states "I'll kill myself if I test positive").	HIV testing can be an emotional experience for virtually everyone, one reason that counseling before and after the test is so important. When a young person feels a great deal of panic, supportive pre-test counseling may help, and a friend or family member should go to offer support.
He or she does not have family support.	Family support is vitally important, but many young people also benefit from support groups. Staff of youth-centered HIV testing sites may be able to help youth talk to family and seek family support.
His or her life situation is in crisis.	Waiting for a calmer time may seem like a good idea. However, the stress of not knowing HIV status is considerable. Relief if one is found to be HIV-negative may help relieve stress.
He or she does not understand the implications of a positive test (e.g., confuses it "With a death sentence") or of a negative test (e.g., thinks it means that she or he is "immune" to contracting HIV).	The young person needs to know that many people live symptom-free for years with HIV and even after developing symptoms, remain in large part healthy. While being HIV-positive affects one's life choices, it does not necessarily mean one will die soon. Testing negative does not mean a person is immune to HIV. The person must be careful not to get infected in the future.
The young person is concerned that partners will find out.	The person being tested is not required to name partners. Testing staff are not authorized to report results to partners. If the young person wants help in notifying partners, there is a totally voluntary program available that the test staff can help them with.
He or she feels that knowing that he or she is infected would be a burden that would best be dealt with in silence, alone.	The young person needs to know that support groups are available to help young people deal with their test results.
He or she doesn't have access to medical care and/or other entitlements.	Choose a test site where social services are available. An agency social worker may be able to help the young person get the medical care and services to which he or she is entitled.
The young person is not yet 18.	The young person needs to know that there is no specific age required for consent to testing in New York State. The testing provider assesses a young person's ability to understand the procedure individually. Parents or guardians are not informed that the test has been performed, or of the results. Eventually, the young person may wish to tell them, and may be able to seek help in doing so.

AN ADOLESCENT MAY BE CONCERNED ABOUT HIV TESTING IF..	PROBLEM-SOLVING SUGGESTIONS
He or she fears that others might cause results to appear in medical records, complicating insurance, etc.	
He or she is not prepared to be told of the results (e.g., states "I'll kill myself if I test positive").	
He or she does not have family support.	
His or her life situation is in crisis.	
He or she does not understand the implications of a positive test (e.g., confuses it "With a death sentence") or of a negative test (e.g., thinks it means that she or he is "immune" to contracting HIV).	
The young person is concerned that partners will find out.	
He or she feels that knowing that he or she is infected would be a burden that would best be dealt with in silence, alone.	
He or she doesn't have access to medical care and/or other entitlements.	
The young person is not yet 18.	

## Poems

### *Do Not Go Gentle Into That Good Night*

by Dylan Thomas

Do not go gentle into that good night,  
Old age should burn and rave at close of day;  
Rage, rage against the dying of the light.

Though wise men at their end know dark is right,  
Because their words had forked no lighting they  
Do not go gentle into that good night.

Good men, the last wave by, crying how bright  
Their frail deeds might have danced in a green bay  
Rage, rage against the dying of the light.

Wild men who caught and sang the sun in flight,  
And learn, too late, they grieved it on its way,  
Do not go gentle into that good night.

Grave men, near death, who see with blinding sight  
Blind eyes could blaze like meteors and be gay,  
Rage, rage against the dying of the light.

And you, my father, there on the sad height,  
Curse, bless, me now with your fierce tears, I pray;  
Do not go gentle into that good night.  
Rage, rage against the dying of the light.

(1951, 1952)

## *Dirge Without Music*

by Edna St. Vincent Millay

I am not resigned to the shutting away of loving hearts in the hard ground.  
So it is, and so it will be, for so it has been, time out of mind:  
Into the darkness they go, the wise and the lovely. Crowned  
With lilies and with laurel they go; but I am not resigned.

Lovers and thinkers, into the earth with you.  
Be one with the dull, the indiscriminate dust.  
A fragment of what you felt, of what you knew,  
A formula, a phrase remains; - but the best is lost.

The answers quick and keen, the honest look, the laughter, the love,—  
They are gone. They are gone to feed the roses. Elegant and curled  
Is the blossom. Fragrant is the blossom. I know. But I do not approve.  
More precious was the light in your eyes than all the roses of the world.

Down, down, down into the darkness of the grave  
Gently they go, the beautiful, the tender, the kind;  
Quietly they go, the intelligent, the witty, the brave.  
I know. But I do not approve. And I am not resigned.

(1928)

## Prevention

NEW YORK STATE  
LEARNING STANDARDS  
1, 2, 3

### SKILLS

Self-Management

Decision Making

### MATERIALS

Chalkboard/Newsprint

Disposable Latex Gloves

### VOCABULARY

Barrier Method

Latex Condom

Polyurethane Condom

Universal Precautions

# How Can We Reduce Our Risk of HIV Infection?

## Performance Objectives

Students will be able to:

- Understand how they can help break the chain of HIV infection by practicing universal precautions.
- Understand that consistent and correct use of latex or polyurethane condoms can reduce, but not eliminate, the risk of the sexual transmission of HIV.
- Evaluate how risk reduction strategies compare with abstinence as a method of breaking the chain of HIV infection.

## Motivation

- Tell students this story:

Jordan and Alex are playing basketball in the park with friends. Alex is accidentally knocked forcefully to the ground. Getting up, everyone notices blood pouring from an elbow wound where broken glass on the ground has made a deep cut. Jordan holds a bandana to Alex's arm, but his arm and Jordan's hands are quickly covered with blood. In the meantime, one of the other players has gone to get someone to drive Alex to the hospital. Alex and Jordan jump into the back of the car and arrive at the hospital emergency room. As Jordan waits, a doctor wearing latex gloves and a mask uses a disposable needle to place six stitches in Alex's arm. While the doctor works, an orderly wearing latex gloves comes by to clean up the blood from the floor, using a large disposable pad and a cleaner that contains bleach. The orderly disposes of the bloody bandana and the gauze pads used by the doctor in a red plastic garbage bag marked "infectious waste." The doctor disposes of the used needle in a special red bin marked "sharps disposal." Unknown to Alex, their friends, or to the healthcare providers, Alex is HIV-positive because he inconsistently used condoms while having sexual intercourse with an infected partner.

- Ask, “Who is at risk for transmission of HIV in this story? Why?” Students should answer that Jordan is at risk of infection because he had contact with Alex’s infected blood. While intact skin is normally a good barrier, there could be open cuts or breaks in the skin. Therefore, some risk exists since Jordan did not use a barrier that could prevent transmission.
  - The emergency room staff could be at risk because of the contact with blood, but have used precautions.
  - Say, “The emergency room personnel in this story did some things to protect against getting infected with HIV. What are some of the precautions they took?” Write students’ answers on the newsprint/ chalkboard.
- After they provide the list, add any precautions that they did not mention.

#### UNIVERSAL PRECAUTIONS AGAINST HIV INFECTION

- Wear disposable latex gloves before handling blood or bloody fluids.
  - Make sure that the injured person is given appropriate care by knowledgeable personnel.
  - Soak up spilled blood with clean materials or paper towels. Dispose of the materials used to soak up the blood in a sealed plastic bag.
  - Clean up blood spills on floor or other surfaces thoroughly, using soap and water.
  - Use bleach to disinfect the area where blood spilled.
  - Remove latex gloves by turning them inside out. Avoid touching self or others with soiled gloves. Dispose of gloves and any other soiled materials (see C above) in a sealed plastic bag.
  - Dispose of the plastic bag in accordance with any rules on disposal of infectious material.
  - Used “sharps” (surgical needles, or syringes) should not be re-capped or broken, but should be placed in hard plastic containers (specially marked “sharps” bins, or plastic bottles such as bleach bottles for household use) where their points cannot be easily touched by accident.
  - Wash hands thoroughly with soap and water.
- Hospitals and health workers have additional Universal Precautions (wearing masks under certain conditions) because these rules apply not only for prevention of HIV, but for all infectious disorders. The ones listed here are most pertinent to HIV, and Hepatitis B and C, which are all blood-borne infections.

**Teacher Note:** A small but growing number of people, including healthcare providers, are allergic to latex. While latex gloves and condoms are by far the most commonly used, gloves and condoms made of alternative materials such as polyurethane are also available for those with these allergies.

**Teacher Note:** Materials used to control transmission may be shown or just described as: disposable latex gloves, paper towels, plastic bags with seals or “twist ties,” bleach and gauze pads or adhesive bandages for minor first aid.

- Say, “These methods of protection are called *universal precautions*. They are called “universal” because they are used by and with all people and all types of body fluids for all types of infectious diseases. The reason for this is that any person could be HIV-positive or have another infectious condition. Any person who comes into contact with infected body fluids could become HIV-positive or develop another infectious condition. Therefore there is a need to practice specific precautions consistently, correctly, and universally to reduce the risk of HIV transmission, as well as the risk of transmission of other diseases such as hepatitis and bacterial blood infections.” Note that universal precautions protect both healthcare providers and all people who are treated by these workers in the healthcare setting.

- Say, “The same general principles of protecting ourselves from risk apply in other areas. We can avoid any exposure to risk by abstaining from behavior that may place us at risk. If that is not possible, we can reduce the risk by taking precautions. To protect ourselves and others against contact with potentially infected body fluids, we need the right tools and need to know how to use them correctly and consistently every time we are exposed to risk. How can we think of prevention as “universal precautions” in other areas?”
- Ask, “What could Jordan have done differently when he saw Alex bleeding?” Generally, the answers should include a way of putting a barrier between him and Alex’s blood—using something that wouldn’t soak through as easily as a small bandana.
- Ask, “According to our story, what could Alex have done differently to reduce, but not eliminate the risk of becoming HIV infected from sexual behavior that can transmit HIV?” Students’ answers should include: “Alex should have used a latex condom consistently and correctly.” This would also have reduced the risk of Alex transmitting HIV to partners.
- Remind students that preventing the transmission of HIV depends on preventing the contact of possibly infected body fluids (blood, preseminal fluid and semen, vaginal fluids, breast milk) with areas where they can enter the body: through blood or mucous membranes.
- *Consistent* means “every time,” with every partner, for any sexual activity that can transmit HIV by bringing our blood or mucous membranes into contact with possibly infected body fluids from our partner. Ask students what some of the reasons are that people might not use a condom each and every time. These should include:
  - they didn’t know a particular practice could transmit HIV or another STI.
  - they didn’t think to have condoms with them, or forgot.
  - they were embarrassed to purchase them in a pharmacy or other store, or to request them in the high school’s Human Resource Room.
  - they were worried about what their partner might think if they suggested using a condom.
  - they didn’t want to seem to have planned ahead for sex.
  - parents or family members might find the condoms and ask what they were for.
  - they didn’t think this partner would have any kind of infection.
  - they didn’t think they themselves could possibly have HIV or another STI and transmit it to someone else.
  - they didn’t think they themselves could possibly get HIV or another STI.

## THE MALE CONDOM

Correct condom use for the **male condom** means:

- Making sure the condom package is not damaged or torn and that the expiration date has not passed.
- Being sure that the condom has been stored where heat cannot damage the latex.
- If using a lubricant with a latex condom (which is recommended, to reduce friction and improve the likelihood of a condom's effectiveness), use only water-based lubricants. Check the lubricant package to see if it says "water-based" or "safe to use with condoms". Do not use oil-based lubricants, such as baby oil, Vaseline, or other petroleum jelly, as they can damage a latex condom.
- Never reusing a condom; use a new one for each sexual act.
- Following all of the manufacturer's directions on/or with the condom package.

These include:

1. Tear the package open along the notched edge while being careful not to damage the condom. Never use a sharp object to help open the package.
2. Pinch the tip to allow room for preseminal fluid and semen.
3. Being sure that the condom is right-side up (tip up), roll the condom down on the erect penis to the base.
4. Smooth out any air bubbles. Use a water-based lubricant if needed to reduce friction.
5. When intercourse is finished, hold the base of the condom and withdraw the penis while it's still erect.
6. It is now safe to remove the condom, away from your partner.
7. Tie a knot in the end of the condom. Discard the used condom in the trash, not in the toilet.

## THE FEMALE CONDOM

The **female condom** is a *polyurethane* (not latex) sheath that loosely lines the vagina and covers the outside vaginal area. It has thin, flexible rings at either end. The inner ring anchors the female condom behind the pubic bone and the outer ring lies outside of the vagina. It comes pre-lubricated (silicone-based) and can be inserted before intercourse, without an erection or male participation. The polyurethane is not compromised by oil-based lubricant or high temperatures, and proves to be stronger than latex. The female condom has been reported as having similar rates of effectiveness in preventing STIs and pregnancy as the male condom when used correctly and consistently. However, rates of correct and consistent use with the female condom appear to be lower than with the male condom. This may be due to inexperience with proper insertion and usage. It should be noted that the female condom is about five times the cost of male condoms and may not be available through all free condom programs and retail stores.

Correct condom use for the female condom means:

- Practicing insertion can help users feel more comfortable and confident.
- Making sure the package is not damaged or torn and that the expiration date has not passed.
- Inserting the “female condom” before there is any contact with the penis.
- NOT using a male condom and female condom together; this can:
  - increase friction and reduce the effectiveness of both,
  - break down the latex because of the oil-based lubricant on the female condom, AND/OR
  - they can stick to each other and can cause slippage/ displacement.
- NEVER reusing a condom—male or female.
- Following all of the manufacturer's directions on/or with the condom package. These include:
  1. Tear open the package carefully along the notched edge. Do not use anything sharp (teeth, scissors, etc.) to open it.
  2. Squeeze the inner (closed-end) ring between your thumb and forefinger (or middle finger), making it long and narrow.
  3. After finding a comfortable position for insertion (squatting, lying down, etc.), insert the inner ring into the vagina and feel it move into place.
  4. Using your index finger, push it in as far as it will go. Be sure the sheath is not twisted. The open-ended ring should rest outside of the vulva.
  5. You are now ready to use the female condom with your partner. Be careful to guide the penis into the pouch THROUGH the outer ring, not outside the condom.
  6. To remove the condom, twist the outer ring and pull it out gently.
  7. Dispose of the condom in the trash, not the toilet.

- To protect you during oral sex from contact with body fluids that may be infected with HIV or another STI, an unlubricated male condom (or latex glove) can be cut open and flattened, and used instead.
- Say, “A study that reviewed 13 condom studies found that people who said they never used condoms were 6 times more likely to get HIV than those who said they always used condoms when having sex with HIV-positive people. The reason these studies do not add up to 100% effectiveness is that they measure how often people use condoms when they have sex. They do not measure how correctly people put condoms on. It is therefore very important to learn when and how to put on a condom. Condoms are the best prevention tool that sexually active people have for preventing HIV infection.”

**Teacher Note:** Given the high rate of condom failure among adolescents due to incorrect and inconsistent use, any step-by-step demonstrations about the proper way to use a latex condom should only be done in the school’s Health Resource Room, where a student requesting it can receive individualized, personal guidance in a private setting.

**Teacher Note:** Make sure students understand that HIV can be transmitted through vaginal, oral, or anal intercourse with an infected person. When sexual intercourse is not clearly defined to include oral and anal, people may fail to recognize their risk and not take appropriate action to protect themselves and others. In New York State, a person under 17 years of age is incapable of giving legal consent. Vaginal, oral, or anal intercourse with a person less than 17 years of age and to whom the actor is not married constitutes a crime in this state.

- Ask, “In our story, we learned how healthcare providers broke the chain of HIV infection while handling Alex’s blood by using Universal Precautions. We have also discussed how Alex could have reduced, but not eliminated the risk of the sexual transmission of HIV through the correct and consistent use of latex condoms.
- Ask, “What is the only 100 percent effective way for Alex to have eliminated his risk of becoming HIV infected during sex?”

Answer: Alex could have abstained from all forms of sexual behavior that can transmit HIV.

**Teacher Note:** It must be stressed that abstinence from all forms of sexual intercourse is the only 100 percent effective and most appropriate way for young people to eliminate their risk of HIV. They need to know that it is possible for them to break the chain of HIV infection by taking personal responsibility for their sexual behavior. Impress upon students that the best and healthiest choice for an uninfected couple is to delay sexual intercourse until ready for a mutually faithful, lifelong relationship. While *reduced risk* is better than high risk, *no risk* is the best choice for all.

## Assessment/Homework

- Have students create a checklist with pictures or symbols for the Universal Precautions for blood clean-up, suitable for posting in the school gym or classroom, listing the materials needed and the steps to be followed in an easy-to-read format.
- Research a local agency providing HIV risk reduction and prevention services and report back. Questions could include: What kinds of services are provided, to whom, and how do they aim to prevent HIV transmission?

**SKILLS**

Advocacy  
Decision Making  
Self-Management

**MATERIALS**

Board/Newsprint  
Quotes as Handout or  
Overhead Transparency

**VOCABULARY**

AIDS Drug Assistance Program  
(ADAP)  
Community-Based Organization  
(CBO)  
Discrimination  
Microbicide  
Peer Educator  
Ryan White CARE Act  
Vaccine

# What Are the Social and Economic Issues Related to the HIV Epidemic and Living with HIV/AIDS?

## Performance Objectives

Students will be able to:

- Understand some of the social and economic effects of HIV/AIDS on our society.
- Identify how our government is responding to HIV/AIDS.
- Describe how other sectors of our society are providing support for those infected with HIV/AIDS, what has been accomplished to date, and where challenges remain.
- Formulate ideas on what governments and citizens can do in response to the HIV epidemic.

## Motivation

- Reproduce the following quotes on an overhead transparency, in a photocopy, or on the chalkboard/newsprint, and read them aloud to the class:

*Look to your health, and if you have it... value it next to a good conscience; for health is the second blessing that we mortals are capable of, a blessing that money cannot buy.*

— Izaak Walton, from “The Complete Angler”

*The health of nations is more important than the wealth of nations.*

— Will Durant, from “What is Civilization?”

- Ask, “What do these quotes tell us about how we should regard our personal health and that of our fellow human beings?” Possible responses may include:
  - Health is precious and valuable.
  - We should consider good health a blessing or a gift.
  - We should protect and safeguard health.
  - Good health is priceless.
  - Good health is more important than money or wealth.
  - Society needs healthy citizens to be strong and productive.
  - Governments should consider the health of their citizens a top priority.
  - The sickness of others affects everyone.
  - We all need to promote good health practices and help prevent sickness for the good of everyone.

- Ask, “In what ways has our society responded to the needs created by HIV/AIDS?”
- Write the following table outline, on the board/newsprint, so students' answers can be categorized:

GOVERNMENT	HEALTH CARE/ MEDICINE	EDUCATION	COMMUNITY-BASED/ ORGANIZATIONS
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- Students’ answers may include:
  - Government
    - > Government at the federal, state and local level has passed laws making it illegal to discriminate against people who have HIV.
    - > Government has invested in HIV/AIDS research, training, prevention, care, service and treatment, both in the U.S. and abroad.
    - > Making treatment for HIV available to all who need it, even those who cannot afford it, is a major accomplishment. Two major programs ensure that no one goes without treatment because of financial issues:
      1. The Ryan White CARE Act (1990) is a federally funded program that provides grants to state and local governments, hospitals, and community-based organizations to provide specialized HIV services (primary health care and support services) for those who do not have insurance or do not have other resources.
      2. The AIDS Drug Assistance Program (ADAP) is funded by federal grants to the states. It provides people without insurance a way to afford the most up-to-date drugs for HIV.
  - Health Care/Medicine
    - > Hospitals have established special HIV/AIDS clinics to provide counseling and testing and sophisticated outpatient care, as well as a range of other services to help people live with HIV.
    - > Medical research has helped us to better understand the nature of HIV and of its transmission.
    - > Medical research has developed many drugs and treatments that promote fuller, healthier lives for those with living with HIV and have saved or extended the lives of many people living with AIDS.
  - Education
    - > Public and private school systems provide classes and resources on HIV/AIDS awareness and prevention.
    - > Colleges and universities train students for careers in fields that contribute to services and solutions to the HIV epidemic.
    - > Colleges and universities provide training to healthcare and other service providers to improve the quality and availability of HIV prevention and care.
  - Community-based organizations (CBOs)
    - > Provide meals, transportation, companionship, and other services for people with HIV/AIDS.
    - > Provide support groups for people with HIV/AIDS and their families.
    - > Provide referrals to a wide range of services, assist individuals with HIV in accessing financial, medical, support, and social services, including legal services for such things as living wills, healthcare proxies and for cases of discrimination based upon HIV status.
    - > Provide culturally sensitive and community-based testing, counseling, and educational services.

- Say, “There are also community-based organizations that provide services in other countries, both in countries where governments cannot afford or will not provide many services for their citizens who have HIV or AIDS and in countries where governments seek additional expertise in providing services to their citizens who have HIV or AIDS.”
  - Media and the Internet:
    - > Information networks have developed worldwide, linked by computer, to bring the latest developments and resources to those who need them and who have Internet access. Many Web sites provide information to researchers, treatment providers, and all members of the community.
    - > Media have helped develop educational materials and media campaigns around HIV issues.
    - > Many celebrities and other public figures (for example, Magic Johnson, Elizabeth Taylor) have helped to publicize HIV as an issue.
  - Individual citizens in society:
    - > Have promoted the idea of partnership with the healthcare system to prevent and treat HIV, based on the model that people can and should be involved in their own care.
    - > Have formed organizations to develop and provide services for people with HIV/AIDS and their families and support networks, and have attempted to influence government policy.
    - > Have volunteered in prevention services.
    - > Have raised or contributed money to organizations that are involved in HIV/AIDS work.
    - > Have advocated for funding and services for HIV prevention, research, treatment.
- Ask, “Since HIV infection can be prevented, what can society and individuals (especially young people) do now to prevent more years of HIV-related illness while a cure is being sought” Answers could be developed to include:
  - Take responsibility for engaging in behavior that will prevent transmission of HIV and encourage others to do so.
  - If they have engaged in any behavior that may have put them at risk, consider taking an HIV antibody test and encourage others to consider doing so as well.
  - Encourage pregnant women to seek out prenatal care for the sake of their own health and that of the child, and to prevent possible transmission of HIV to the child.
  - Understand that both HIV testing and other forms of prevention involve protecting oneself and others, through larger networks within and beyond the local community.
  - Educate themselves and others about HIV prevention and treatment.
  - Use the media, education, religious, and other social institutions to support abstinence as the only 100% effective choice for HIV transmission prevention.
  - Become a “peer educator” (either informally or through a formal program) to educate other young people on HIV/AIDS issues in a way that others will accept from peers.
  - Advocate within their communities, religious institutions, and governments for more resources and attention to HIV/AIDS.
  - Support attempts by people who use drugs to get treatment and to reduce their risk from using drugs.
  - Try to combat stigma and discrimination around HIV/AIDS by encouraging discussion and action where appropriate.
  - Find ways to support those family, friends, or community members living with HIV/AIDS.

- Say, “An appropriate personal and compassionate response to those among us who are living with HIV/AIDS can ease the burden for them and their families. Let’s brainstorm ways in which this class can offer support to men, women, and children living with HIV/AIDS in our own community and maybe even in this school or classroom. (Break up the class into groups that can carry out various aspects of a project, including investigating what is needed and obtaining the prior consent of a targeted agency.)

**Teacher Note:** If students are unable to identify resources in the community, share with them the Resources Guide in the appendices at the back of this curriculum guide.

## Assessment/Homework

- Have students write a one-page essay titled, “Why I Care About HIV/AIDS, and How I Can Help.”
- Have students find out what a “peer educator” is and report back.
- Have students write a one-page essay on one of the programs or problems listed in this lesson.