Introduction to Global AIDS

Excerpted from: ***A Guide to Acting on AIDS: Understanding the Global AIDS Pandemic and Responding through Faith in Action***

HIV is the most devastating disease of the 21st century. In the 14th century, the infamous bubonic plague took the lives of 35 million people. The Joint United Nations Program on HIV/AIDS (UNAIDS) estimates that 3.1 million people died of AIDS in 2005, that 40.3 million people were living with HIV at the end of 2005, and that AIDS has killed more than 25 million people since the early 1980s.[1] The 65 million people who either have died or will die due to AIDS since the beginning of the pandemic is greater than the number of people killed by the bubonic plague,[2] or the total number of civilian and military casualties in World War II.[3] The only pandemic to eclipse the death rates of AIDS is the Spanish influenza epidemic of 1918-1919. Experts estimate that influenza killed between 50 million and 100 million people worldwide; that's between 2.8 and 5.6 percent of the global population at that time. (Source: John M. Barry. *The Great Influenza: The Epic Story of the Deadliest Plague in History* (New York, NY: Penguin Group, 2004), 397.)

The AIDS pandemic's devastation reaches far beyond those who are infected. More than 15 million children worldwide have lost one or both parents to AIDS;[4] that number is expected to reach 25 million by the year 2010.[5] As AIDS is killing people in the prime of their lives, many children will grow up in communities with massive shortages of teachers, health care workers, civil servants, and business people. This perpetuates many of the vicious cycles of poverty that further the spread of HIV.

HIV/AIDS is the world's largest health challenge. And with a wide range of experts agreeing that problems associated with AIDS will dominate the 21st century, it is clear that young people today will inherit a world devastated by AIDS.

In this chapter, you will learn what HIV and AIDS are, how HIV is transmitted, and how it destroys a person's immune system. You will also learn about the history of the disease and how it was discovered. Then, you will see how this pandemic looks in specific regions across the world.

The Basics

What is HIV?

Human	*Infects men, women, and children regardless of race or age.*
Immunodeficiency	*Destroys the human body's natural ability to fight infections.*
Virus	*Small, infectious agent that reproduces within a person.*

HIV is the virus that gradually damages the body's immune system and eventually causes AIDS. The human body is equipped with CD4 cells, also called helper T cells, which defend the body against viruses and bacteria. HIV damages the immune system by attacking and entering these cells. Once inside the cells, the viruses reproduce and then move on to attack other helper T cells and repeat the process. As more helper T cells are overtaken, the body becomes less and less able to fight off illnesses.

A person can be infected with the virus for three to five years—and sometimes as many as 10 years—without knowing it or feeling sick. Despite the appearance of good health, the person is able to spread the virus and, without treatment, will ultimately develop AIDS.

What Is AIDS?

Acquired	*A condition one is not born with.*
Immune **D**eficiency	*An immune system that cannot fight off infections.*
Syndrome	*Signs and symptoms that occur together and characterize a particular illness.*

When one's immune system is so damaged that it cannot fight "opportunistic" infections—infections healthy immune systems can fight off but weakened ones can't—he is said to have AIDS. Because the body is not able to fight off these diseases, the person will eventually die. The most common opportunistic infections include tuberculosis, pneumonia, skin cancer, meningitis, thrush, herpes, and bacterial infections that cause fevers, digestive difficulties, and weight loss. AIDS manifests itself differently in every individual. Some people die very soon after becoming infected, while others may live for a decade or more without treatment.

How Are HIV and AIDS Transmitted?

Bodily Fluids

HIV is transmitted when a person has contact with certain bodily fluids of another person who is HIV-positive. (A person who carries HIV is classified as "HIV-positive.")

Bodily fluids that can contain and transmit HIV include:

- Blood
- Wound discharge or pus
- Semen
- Vaginal fluid
- Breast milk

Bodily fluids that can contain and transmit HIV which medical staff may contact, include:

- Fluid surrounding the brain and spinal cord
- Fluid surrounding bone joints
- Fluid surrounding an unborn baby

HIV and AIDS are primarily transmitted in the following ways:

Sexual Activity

Sexual activity is the most common form of HIV transmission. HIV can be transmitted through any kind of sexual activity (vaginal, anal, and oral) and can occur when bodily fluids of an HIV-positive partner enter into the other partner, including through small, even unidentifiable, cuts or scratches. Women, and especially girls, are twice as vulnerable as men to contracting HIV through sexual activity due to their biological and physiological characteristics. This vulnerability rises substantially in cases of coercive and/or violent sexual intercourse.

Sexually Transmitted Infections

The risk of transmission is further increased if either partner has a sexually transmitted infection (STI). An STI is any disease that is passed from one person to another through sexual contact, such as chlamydia, genital herpes, genital warts, gonorrhea, and syphilis. HIV is also an STI.

A person with an STI is 10 times more likely to transmit or acquire HIV than a person without an STI because (1) many STIs cause open sores or breaks in the skin, providing an avenue for HIV to

enter the body, and (2) the bodily fluids of individuals with STIs have an increased concentration of helper T cells, which serve as targets for HIV and may increase the risk of infection.

Symptoms of STIs include:

- Open sores or breaks in the skin around the genitals
- White, yellow, or green vaginal discharge
- Burning sensation when passing urine
- Itchiness in the genital area
- Pain in the lower stomach or back
- Pain in the testicles
- Pain during sexual activity

Some STIs, however, have no symptoms. (Thus, it is important to visit a health clinic for proper diagnosis and treatment if you think there is a possibility that you have been exposed.) Most STIs are curable. Left untreated, STIs—in addition to facilitating the transmission of HIV—can lead to serious complications, including infertility and cervical cancer.

Blood Transfusions

An individual can become infected if she is given HIV-infected blood during a blood transfusion. Most countries now test donated blood for HIV, lowering the risk. However, in situations where such screening is not done the risk is much higher.

Sharing Needles or Using Syringes and Razor Blades

Needles, syringes, razor blades, and other instruments that pierce the skin (for drug injection, tattooing, piercing, carving scars, circumcision, or shaving) can transmit the virus if they were first used by an infected person. One can even contract HIV in a health care setting if syringes, needles, and equipment are not properly sterilized.

Mother-to-Child Transmission

An HIV-infected woman can pass the virus to her baby during pregnancy through the placenta, and during childbirth through exposure to the mother's blood. Without treatment, approximately 15 to 30 percent of babies born to HIV-positive mothers are infected with the virus. HIV can also be transmitted to a breastfeeding baby through the mother's milk. Breastfeeding by an HIV-positive mother increases the risk of transmission to her baby by 10 to 20 percent.[6] Antiretroviral preventative treatment is an effective method of preventing mother-to-child transmission of HIV. When combined with the use of safer infant-feeding methods, it can halve the risk of infant infection.

False Transmitters

HIV is not acquired through the following:

- Living in the same place with people who have HIV/AIDS
- Kissing (unless there are open sores or exposure to blood within the mouth)
- Touch (hugging, hand-shaking, or sports contact)
- Bites from mosquitoes or other insects
- Shared food, utensils, cups, or dishes
- Shared swimming pools or bathing facilities
- Sneezes or coughs
- Hospital visits
- Sweat, saliva, or tears*
- Urine or feces*

* Research indicates that HIV can be found in these substances, but in too low of a concentration for transmission.

Phases of the Disease from HIV Infection to AIDS

HIV Infection

Once a person is infected with HIV, he may experience cold or influenza-like symptoms, including fever and swollen glands in the neck, underarms, and groin, within a month or two. This is called the "acute phase." Once these symptoms subside, he could live many years without experiencing symptoms associated with AIDS. During this time, he may not know he is infected or appear sick. However, he is able to spread the virus to others who come in contact with his bodily fluids. A person's appearance cannot be used as an indicator of whether or not one is HIV-positive.

Early Stages of AIDS

Eventually HIV infection progresses so that more obvious signs of sickness begin to appear. The first symptoms can be any of the following:

- Weight loss (greater than 10 percent of body weight)
- Lack of energy
- Chronic diarrhea for more than one month
- Chronic cough for more than one month
- Painful sores or rashes
- Sores on the lips that do not heal
- Fevers and night sweats
- Swollen glands in neck, armpits, and groin (very soon after infection)
- Thrush (a white rash) in the mouth or on the genitals
- Repeated infections in throat or ears
- Recurring shingles

Late Stages of AIDS

People living with AIDS can develop any of these opportunistic infections or symptoms:

- Respiratory conditions such as atypical tuberculosis and severe recurrent pneumonia
- Further weight loss
- Extreme fatigue
- Dark-blue or reddish-brown marks on the skin (known as Kaposi's sarcoma)
- Painful and itchy skin rashes
- Prickly pain in the hands and feet
- Thrush (a white rash) in the mouth or on the genitals
- Mental disorders, such as dementia, resulting from infections in the brain

The History of HIV and AIDS

The Discovery of HIV and AIDS

HIV and AIDS appeared in the late 1970s when doctors began to see an increasing number of patients with an unusual strain of pneumonia and rare cancers. Some noticed the disease appeared most often in men who had sex with men and began calling it Gay-Related Immune Deficiency Syndrome, or GRID. The Human Immunodeficiency Virus (HIV) was isolated in 1983 by Luc Montagnier at the French Institute Pasteur. This virus was called Lymphadenopathy-Associated Virus. Not long after, Robert Gallo of the U.S. National Cancer Institute discovered a related virus he called HTLV-3.

AIDS was clinically identified in 1983, but medical experts believe the syndrome existed for many years before it was recognized, evidenced by clusters of people infected with what may have been AIDS in a number of places in southern and eastern Africa.

Initial Perceptions within the United States

When the first cases of AIDS were reported in the United States, some of the best medical minds went to work on the problem. After a period of time, blood supplies were tested and purged of potentially infected blood. "At-risk" populations were urged to seek HIV testing. Because the homosexual community was originally the hardest hit, this well-educated and well-resourced segment of the population brought considerable attention to the problem. Due to this, most people in the United States quickly learned about AIDS and how it is transmitted.[7]

Nearly 500,000 individuals have died of AIDS in the United States. However, the rate of infection has decreased by 70 percent since 1994. Many who are HIV-positive are also benefiting from drug therapies that have prolonged their lives and increased their quality of life.

While the United States' highest HIV incidence has been in the homosexual community, in much of the rest of the world HIV is transmitted primarily through heterosexual sex, intravenous drug use, transmission from infected mothers to their babies, and infection through the blood supply.[8]

[1] AIDS Epidemic Update (New York: UNAIDS, December 2005), 1-3.

[2] Norman Cantor, *In the Wake of the Plague: The Black Death and the World It Made* (New York: Perennial, 2002), 7.

[3] During WWII 52.2 million soldiers and civilians were killed. Source: World War II page, Historyplace.com (March 24, 2004), www.historyplace.com/worldwar2/timeline/statistics.htm.

[4] *Global AIDS Report* (New York: UNAIDS, 2004).

[5] *Children on the Brink: A Joint Report on Orphan Estimates and Program Strategies* (New York: UNICEF, 2002), 30.

[6] *HIV and Infant Feeding: A UNICEF Fact Sheet* (New York: UNICEF, 2002), 2.

[7] Dale Hanson Bourke, *The Skeptic's Guide to the Global AIDS Crisis* (Waynesboro, GA: Authentic, 2004), 9.

[8] Bourke, *Skeptic's Guide*, 14.