



**Course 1017**

**HIV/AIDS**

3 (three) General Education Credit Hours

TDCJ/RPD

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AIDS is now a pandemic. In 2007, UNAIDS estimated that 33.2 million people worldwide had AIDS that year; AIDS killed 2.2 million people in the course of that year, including 330,000 children, and 76 percent of those deaths occurred in sub-Saharan Africa. According to a UNAIDS 2009 report, worldwide some 6 million people have been infected, with some 25 million deaths, and 14 million orphaned children in southern Africa alone since the epidemic began.

Unfortunately, the AIDS epidemic continues today in Africa and much of Asia, where antiretroviral therapy is not available and health care is seriously inadequate. Over 95 percent of AIDS cases and deaths occur outside the United States.

AIDS is the fourth leading cause of death worldwide, the number one cause of death due to infectious disease, and has surpassed malaria as the number one killer in Africa. There are more than 2.2 million AIDS cases reported worldwide, and 33.6 million people are living with HIV/AIDS. More than 16 million have died from AIDS. According to the National Institutes of Health, AIDS caused 2.6 million deaths in 1999 and more than 3 million deaths in the year 2000.

Because of its incredible toll on human life, the United States formally identified AIDS as a threat to world security, expecting it to have catastrophic long-term consequences in sub-Saharan Africa, South Asia, and the former Soviet Union. In the United States alone, there have been more than 600,000 cases of AIDS reported since 1981 and it is estimated that there may currently be as many as 900,000 Americans infected with HIV.

### What Is HIV/AIDS

The term AIDS stands for Acquired Immune Deficiency Syndrome or Acquired Immunodeficiency Syndrome. AIDS is a disease of the human immune system caused by the human immunodeficiency virus (HIV). HIV is a virus that attacks the immune system, the body's natural defense system. Without a strong defense system, the body has trouble fighting off disease. Both the virus and the infection it causes are called HIV. AIDS is the most severe acceleration of infection with HIV. HIV is a retrovirus that primarily infects vital organs of the human immune system such as the CD4 T cells, macrophages, and dendrite cells. It directly or indirectly destroys CD4 cells. Once HIV has killed so many CD4 there are fewer than 200 of these cells per micro liter of blood, cellular immunity is lost. Acute HIV infection progresses over time to clinical latent HIV infection.

AIDS describes the most advanced stages of HIV infection. Symptoms of some of the life-threatening diseases common to people with AIDS include: coughing, shortness of breath, seizures, lack of coordination, difficult or painful swallowing, mental symptoms, confusion, forgetfulness, severe persistent diarrhea, vision loss, nausea, abdominal cramps, vomiting, extreme fatigue, severe headaches, and finally going into a coma.

HIV is most commonly spread during unprotected sex with an infected partner but can also be spread by a variety of methods such as contact with infected blood, sharing items contaminated by infected blood such as razor blades, toothbrushes, and by needles or syringes used for drug injection. HIV infected mothers can transmit HIV to their babies during pregnancy, birth, or

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through the breast milk. One may be more likely to get HIV during sex with an infected partner by the transmission of a sexually transmitted disease (STD) such as syphilis, genital herpes, chlamydia, or gonorrhea.

Many people have no symptoms when they first become infected with HIV. Some people may experience flu-like symptoms with 1 or 2 months after exposure to the virus. Persistent or severe symptoms may not appear for 10 years or more after HIV first enters the body. Early symptoms may include fever, headache, tiredness, or enlarged lymph nodes.

As the virus slowly destroys the immune system, a variety of other complications start to effect the body. Symptoms often experience months to years before the onset of AIDS include; lack of energy, weight loss, frequent fevers and sweats, persistent/frequent yeast infections, persistent skin rashes or flaky skin, short-term memory loss.

In the absence antiretroviral therapy, the median time of progression of HIV infection to AIDS is note to ten years, and the median survival time after developing AIDS is only 9.2 months. The rate of clinical disease progression varies widely between individuals, from two weeks up to twenty years.

Many factors affect the rate of progression. These include factors that influence the body's ability to defend against HIV such as the infected person's general immune function. Older people have weaker immune systems, and therefore have a greater risk of rapid disease progression than younger people. Poor access to health care and the existence of co-existing infections such as tuberculosis also plays an important role. Some people are resistant to certain strains of HIV. HIV is genetically variable and exists as different strains, which causes different rates of clinical disease progress.

Three years after the emergence of AIDS, two scientists, Robert Gallo and Luc Montagnier found what they believed to be the viral cause of the new disease called HIV-1. Several years later, a new strain of HIV was found in a man living in Africa. The new strain of HIV was called HIV -2.

The major aspect which makes HIV an extremely dangerous disease, is its ability to quickly replicate itself. Once it enters the body, it begins with the process of replication, which occurs at a very fast rate. One reason a cure has not been found so far has been the mutation process of replication, which is at a very fast rate, resulting in the formation of several mutant groups.

Initially, HIV was considered to be one single virus strain. In 1986, it was revealed that there were two strains of the HIV virus: HIV-1 and HIV-2. While HIV-1 is the common type strain which affects the populations across the globe, HIV-2 is increasingly a similar threat. Although the two strains are similar as far as transmission modes, as well as symptoms associated with them, there are a few major differences between the two strains. The first major difference lies in the number of cases reported under each strain. While HIV-1 is the most common strain and is found in the majority of HIV infection cases, HIV-2 is the less common strain and is not found very often. Another major difference between HIV-1 and HIV-2 is in relation to the areas of prevalence. While HIV-1 can be found across all the places in the world, the HIV-2 virus is

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mainly concentrated to areas of Western Africa. HIV-2 cases are mainly found in countries like Senegal, Nigeria, and the Ivory Coast. Apart from this, it has also spread to countries like France and Portugal as a result of economic relations with these countries.

Another important difference between HIV-1 and HIV-2 lies in terms of clinical research, as well as medical facilities available for each strain. Although there are a number of antiretroviral therapies available for the treatment of HIV-1, HIV-2 has been less common and has less scope of clinical research. Due to this reason, there has not been much medical development as far as HIV-2 is concerned.

In the later stages of the disease, HIV-2 does more damage. It has been found to be the more infectious in the later stages, causing a number of ailments in a very short span of time. Although there may be similarities and differences between HIV-1 and HIV-2, both strains of the virus are equally dangerous.

### Transmission

HIV can be detected in several body fluids and tissues of a person infected and living with HIV. It is important to understand however, that finding a small amount of HIV in a body fluid or tissue does not mean that HIV is transmitted by the body fluid or tissue. Only specific body fluids such as blood, semen, vaginal secretions, and breast milk from an HIV-infected person can transmit HIV. These specific fluids must come in contact with a mucous membrane or damaged tissue or be directly injected into the blood-stream (from a needle or syringe) for transmission to occur.

In the United States, HIV is most commonly transmitted through specific sexual behaviors (anal or vaginal sex) or sharing needles with an infected person. It is less common for HIV to be transmitted through oral sex (although it is possible) or for an HIV-infected woman to pass the virus to her baby before or during childbirth or after birth through breastfeeding or pre-chewing food for her infant. In the United States, it is also possible to acquire HIV through exposure to infected blood, transfusions of infected blood, blood products, or organ transplantation, though the risk is extremely remote due to rigorous testing of the U.S. blood supply and donated organs.

Some healthcare workers have become infected after being stuck with needles containing HIV-infected blood, or less frequently, when infected blood comes in contact with a worker's open cut or is splashed into a worker's eyes or inside their nose. There has been only one instance of patients being infected by an HIV-infected dentist. Body fluids that may transmit the virus that health care workers may come into contact with are fluid surrounding the brain and spinal cord; fluid surrounding bone joints, and fluid surrounding an unborn baby.

### Vaginal Sex

It is possible for either partner to become infected with HIV through vaginal intercourse. It is the most common way the virus is transmitted in much of the world. HIV can be found in the blood, semen, pre-seminal, or vaginal fluid of a person infected with the virus. In women, the lining of the vagina can sometimes tear and possibly allow HIV to enter the body. HIV can also be directly absorbed through the mucous membranes that line the vagina and cervix. In men, HIV can enter the body through the urethra or through small cuts or open sores of the penis.

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Risk for HIV infection increases if one of the partners has a sexually transmitted disease (STD).

Not having (abstaining from) sex is the most effective way to avoid HIV. If one chooses to have vaginal sex, use a latex condom to help protect both partners from HIV and STDs. Studies have shown that latex condoms are very effective, though not perfect, in preventing HIV transmission when used correctly and consistently. IF either partner is allergic to latex, plastic (polyurethane) condoms for either male or female can be used.

### Oral Sex

It is possible for either partner to become infected with HIV through performing or receiving oral sex, though it is less a less common mod of transmission than other sexual behaviors (anal and vaginal sex). There have been a few cases of HIV transmission from performing oral sex on a person with HIV. While no one knows exactly what the degree of risk is, evidence suggest that the risk is less than that of unprotected anal or vaginal sex.

If a person performing oral sex has HIV, blood from their mouth may enter the body of the person receiving oral sex through the lining of the urethra; the lining of the cervix; the lining of the anus; or directly into the body through small cuts or open sores.

If the person receiving oral sex has HIV, their blood, semen, pre-seminal fluid, or vaginal fluid may contain the virus. Cells lining the mouth of the person performing oral sex may allow HIV to enter the body. The risk of transmission increases if the person performing oral sex has cuts or sores around or in their mouth or throat; if the person receiving oral sex ejaculates in the mouth of the person performing oral sex; or if the person receiving oral sex has another sexually transmitted disease (STD).

If one chooses to have oral sex, and the partner is female: it is suggested that one use a latex barrier (such as a natural rubber latex sheet, a dental dam, or a cut-open condom that makes a square) between the mouth and the vagina. A latex barrier such as a dental dam reduces the risk of blood or vaginal fluids entering the mouth. Plastic food wrap also can be used as a barrier.

If one chooses to perform oral sex with either a male or female partner and this sex includes oral contact with your partners anus (analingus or rimming) use a latex barrier between the mouth and the anus.

If one chooses to share sex toys with your partner, such as dildos or vibrators, each partner should use a new condom on the sex toy; and be sure to clean sex toys between each use.

### Injecting Drugs

At the start of every intravenous injection, blood is introduced into the needle and syringe. HIV can be found in the blood of a person infected with the virus. The reuse of blood-contaminated needle or syringe by another drug injector (called direct syringe sharing) carries a high risk of HIV transmission because infected blood can be injected directly into the bloodstream.

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Sharing drug equipment (or “works”) can be a risk for spreading HIV. Infected blood can be introduced into drug solutions by using blood-contaminated syringes to prepare drugs; reusing water; reusing bottle caps, spoons, or other containers (“spoons” and “cookers”) used to dissolve drugs in water and to heat drug solutions; reusing small pieces of cotton or cigarette filters (“cottons”) used to filter out particles that could block the needle.

“Street sellers” of syringes may repackage used syringes and sell them as sterile syringes. For this reason, people who continue to inject drugs should obtain syringes from reliable sources of sterile syringes, such as pharmacies.

It is important to know that sharing a needle or syringe for any use, including popping or injecting steroids, can put one at risk for HIV and other blood-borne infections.

### Connection Between HIV and Other Sexually Transmitted Diseases

Having a sexually transmitted disease (STD) can increase a person’s risk of becoming infected with HIV, whether the STD causes open sores or breaks in the skin (e.g., syphilis, herpes, chancroid) or do not cause breaks in the skin (e.g., Chlamydia, gonorrhea).

If the STD infection causes irritation of the skin, breaks and sores may make it easier for HIV to enter the body during sexual contact. Even when the STD causes no breaks or open sores, the infection can stimulate an immune response in the genital area that can make HIV transmission more likely.

In addition, if an HIV-infected person is also infected with another STD, that person is three to five times more likely than other HIV-infected persons to transmit HIV through sexual contact.

Not having (abstaining from) sexual intercourse is the most effective way to avoid all STDs, including HIV. For those who choose to be sexually active, the following HIV prevention activities are highly effective: Engaging in behaviors that do not involve vaginal or anal intercourse or oral sex; having sex with only one uninfected partner; using latex condoms every time you have sex.

### Women Who Have Sex with Women

Female-to-female transmission of HIV appears to be a rare occurrence. However, there are case reports of female-to-female transmission of HIV. The well-documented risk of female-to female transmission of HIV shows that vaginal secretions and menstrual blood may contain the virus and that mucous membrane exposure to these secretions has the potential to lead to HIV infection.

In order to reduce the risk of HIV transmission, women who have sex with women should do the following: avoid exposure of a mucous membrane, such as the mouth (especially non-intact tissue), to vaginal secretions and menstrual blood; use condoms consistently and correctly each and every time for sexual contact with men or when using sex toys. Sex toys should not be shared. No barrier methods for use during oral sex have been evaluated as effective by the Food and Drug Administration (FDA). However, natural rubber latex sheets, dental dams, cut open condoms, or plastic wrap may offer some protection from contact with body fluids during oral

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sex and possibly reduce the risk of HIV transmission; know your own and your partner's HIV status. This knowledge can help uninfected women begin and maintain behavioral changes that reduce the risk of becoming infected. For women who are found to be infected, it can assist in getting treatment and avoiding infecting others.

### Tattoo and Body Piercing

A risk of HIV transmission does exist if instruments contaminated with blood are either not sterilized or disinfected or are used inappropriately between clients. It is recommended that single-use instruments intended to penetrate the skin be used once, then disposed of. Reusable instruments or devices that penetrate the skin and/or contact a client's blood should be thoroughly cleaned and sterilized between clients.

Personal service workers who do tattooing or body piercing should be educated about how HIV is transmitted and take precautions to prevent transmission of HIV and other blood-borne infections in their settings.

Anyone considering getting a tattoo or having their body pierced, should ask staff at the establishment what procedures they use to prevent the spread of HIV and other blood-borne infections, such as the hepatitis B virus. You also may call the local health department to find out what sterilization procedures are in place in the local area for these types of establishments.

### Risk of Transmission of HIV from Kissing

There is no risk of transmission closed-mouth kissing. There is a remote risk from deep, open-mouth kissing if there are sores and bleeding gums and blood exchange. Therefore, persons living with HIV should avoid this behavior with a non-infected person.

### Risk of Transmission from a Human Bite

There is no risk from a bite where the skin is not broken. There is a remote risk of transmission by human bite. All documented cases where transmission did occur included severe trauma with extensive damage and the presence of blood.

### Risk of Transmission by Being Scratched

There is no risk of transmission from scratching because there is no transfer of body fluids between individuals. Any person with open wounds should have them treated as soon as possible.

### Risk of Transmission by Being Spit on by an HIV-Infected Person

In some persons living with HIV, the virus has been detected in saliva, but in extremely low quantities. Contact with saliva alone has never been shown to result in transmission of HIV, and there is no documented case of transmission from an HIV-infected person spitting on another person.

Risk of Transmission from Causal Contact (shaking hands, hugging, using a toilet, drinking from the same glass, or the sneezing and coughing of an infected person)

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HIV is not transmitted by day-to-day contact in the workplace, schools, or social settings. HIV is not transmitted through shaking hands hugging, or a casual kiss. You cannot become infected from a toilet seat, a drinking fountain, a door knob, dishes, drinking glasses, food, or pets.

HIV is not an airborne or food-borne virus, and it does not live long outside the body.

Although contact with blood and other body substances can occur in households, transmission of HIV is rare in this setting. A small number of transmission cases have been reported in which a person became infected with HIV as a result of contact with blood or other body secretions from an HIV-infected person in the household.

Persons living with an HIV and persons providing home care for those living with HIV should be fully educated and trained regarding appropriate infection-control procedures.

### Risks of Transmission from Mosquitoes

From the start of the HIV epidemic there has been concern about HIV transmission from biting and bloodsucking insects, such as mosquitoes. However, studies conducted by the CDC and elsewhere have shown no evidence of HIV transmission from mosquitoes or any other insects—even in areas where there are many cases of AIDS and large populations of mosquitoes. Lack of such outbreaks, despite intense efforts to detect them, supports the conclusion that HIV is not transmitted by insects.

### Risks of HIV While Playing Sports

There are no documented cases of HIV being transmitted during participation in sports. The very low risk of transmission during sports participation would involve sports with direct body contact in which bleeding might be expected to occur.

If someone is bleeding, their participation in the sport should be interrupted until the wound stops bleeding and is both antiseptically cleaned and securely bandaged. There is not a risk of HIV transmission through sports activities where bleeding does not occur.

### Restaurant Food

No incident of food being contaminated with HIV-infected blood or semen has been reported to the CDC. Furthermore, CDC has received no reports of HIV infection resulting from eating food, including condiments.

HIV does not live long outside the body, Even if small amounts of HIV-infected blood or semen was consumed, exposure to the air, heat from cooking, and stomach acid would destroy the virus. There is not a risk of contracting HIV from eating food.

### History of HIV-AIDS

It is difficult to overstate the suffering that HIV has caused in South Africa. Statistics in that region of the world show that almost one in five adults are infected. HIV is widespread in a sense that can be difficult to imagine for those living in less affected countries. The average life expectancy in South Africa is now 54 years old – without AIDS, it is estimated that it would be 64. Over half of the 15 year olds are not expected to reach the age of 60.



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It is clear that AIDS is and is still having a devastating impact on South Africa. There are many possible reasons why South Africa has been so badly affected by AIDS, including poverty, social instability and lack of government action. One way to gain a better insight into the situation is to look back at the history of AIDS in South Africa.

In 1985 a State of Emergency was declared in South Africa that would last for five years. This was a result of riots and unrest that had arisen in response to Apartheid, the system of racial segregation that had been in place since the 1950s. Apartheid prohibited mixed-race marriages and sex between different ethnic groups, and categorized separate areas in which different races lived. In the same year, the government set up the country's first AIDS Advisory Group in response to the increasingly apparent presence of HIV among South African people. The first recorded case of AIDS in South Africa was diagnosed in 1982, and although initially HIV infections seemed mainly to be occurring among the gay men, by 1985 it was clear that other sectors were also affected. Towards the ends of the decade, as the abolition of Apartheid began, an increasing amount of attention was paid to the AIDS crisis.

In 1991, the number of diagnosed heterosexually transmitted HIV infections equaled the number of transmitted through sex between men. Since this point, heterosexually acquired infections have dominated the epidemic. Several AIDS information, training and counseling centers were established during that year. In 1992, the first significant response to AIDS came when Nelson Mandela addressed the newly formed National AIDS Convention of South Africa (NAOSA). The purpose of NACOSA was to begin developing a national strategy to cope with AIDS. The free National AIDS Helpline was founded.

In 1993, the National Health Department reported that the number of recorded HIV infections had increased by 60 percent in the previous two years and the number was expected to double in 1993. The HIV prevalence rate among pregnant women was 4.3 percent. In 1994, the International Conference for People Living With HIV and AIDS was held in South Africa, the first time that the annual conference had been held in South Africa. The Deputy President Thabo Mbeki, acknowledged the seriousness of the epidemic, and the South African Ministry of Health announced that some 850,000 people – 2.1 percent of the population were believed to be HIV positive.

By 1996, the prevalence rate among pregnant women was at 17 percent. A national review of South Africa's AIDS response to the epidemic found that there was a lack of political leadership.

In 1998, the pressure group Treatment Action Campaign (TAC) was founded to campaign for the rights of people living with HIV, and to demand access to HIV treatment in South Africa for all those who were in need of it. Deputy President Thabo Mbeki launched the Partnership Against AIDS, admitting that 15,000 HIV infections were occurring everyday. By 1999 the prevalence rate among women with HIV was 22.4 percent.

In 2002, The Department of Health outlined a five-year plan to combat AIDS, HIV, and STIs. A national AIDS Council was set up to oversee these developments. At the International AIDS Conference in Durban, then South African President Thabo Mbeki made a speech that avoided reference to HIV and instead focused on the problem of poverty, fueling suspicions that he was

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switching his focus to poverty rather than HIV, as the main cause of AIDS. President Mbeki consulted a number of “dissident” scientist who rejected the link between HIV and AIDS. By 2001, the HIV prevalence rate among pregnant women was 24.8 percent.

By 2005, at least one service point for AIDS related care and treatment had been established in all of the fifty three districts in the country by March, meeting the governments 2003 target. However, it was clear that the number of people receiving antiretroviral drugs was well behind initial targets. The HIV prevalence rate among pregnant women was 30.3 percent.

As can be seen, the most rapid increase in South Africa’s HIV prevalence took place between 1993 and 2000, during which time the country was distracted by major political changes. While the attention on South African people and the world’s media was focused on the political and social changes occurring in the country, HIV was rapidly becoming more widespread. Although the results of these political changes were positive, the spread of the virus was not given the attention that it deserved, and the impact of the epidemic was not acknowledged. It is likely that the severity of the epidemic could have been lessened by prompt action at this time.

### History of HIV/AIDS in the United States

Acquired Immunodeficiency Syndrome (AIDS) was first recognized as a new disease in the United States when clinicians in New York, Los Angeles, and San Francisco began to see young homosexual men with *pneumocytis carinii* (now *P. jirovici*) pneumonia (PCP) and Kaposi’s Sarcoma (KS), unusual diseases for young adults not known to be immunosuppressed. The first report in the medical literature that alerted the world to this new immunodeficiency syndrome appeared in June of 1991 and described five young, homosexual men in Los Angeles with PCP. That was followed a few weeks later by a report that twenty six homosexual men from both New York and San Francisco had been diagnosed with Kaposi’s Sarcoma. Other reports followed a similar syndrome in injecting drug users. All of these individuals shared a profound immunodeficiency, the hallmark of which was depletion of CD4-positive, or T-helper, lymphocytes. In mid-1982, the Centers of Disease Control and Prevention published a report of 34 cases of Kaposi’s Sarcoma and opportunistic infections in Haitians living in several different states in the United States, none of whom reported homosexual behavior. One week later, the CDC reported on PCP among persons with hemophilia. The first case in a transfusion recipient was reported in San Francisco in an infant in 1982. For a short time, the new disease was called gay-related immunodeficiency syndrome or GRID, but by September of 1982, the CDC had published a case definition using the current designation of Acquired Immune Deficiency Syndrome (AIDS) in print, and it was rapidly adopted by researchers.

The prominence of homosexual men and injecting drug users in the early cases of AIDS suggested an agent that was both blood borne and sexually transmitted, although early speculation about the etiology of AIDS included the hypothesis that all the patients were immunosuppressed because they had a history of drug use or multiple sexually transmitted diseases or malnutrition (the “immune overload” hypothesis). The majority of researchers thought the likely agent was a sexually transmitted virus that would be found in the peripheral blood. HIV was first isolated in France in 1983 by Françoise Barre-Sinoussi in the laboratory of Luc Montagnier as lymphadenopathy-associated virus (LAV), but strong evidence that it was the AIDS virus did not appear until 1984, when four papers were published in one issue of *Science*

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by Robert Gallo and colleagues, who designated their isolate HTLV-III. The virus was also isolated in San Francisco by Jay Levy, who published his findings a few months later in 1984 and named his isolate AIDS-Associated Retrovirus (ARV). All three of these designations for the virus appear in the early literature. The International Committee on the Taxonomy of Viruses choose the designation Human Immunodeficiency Virus (HIV) in 1986. With the discovery by Montaignier's group later in 1986 of the related HIV-2 virus in West Africa, the original virus became HIV-1.

Although AIDS was not recognized as a new clinical syndrome until 1981, researchers examining the earlier medical literature identified cases appearing to fit the AIDS Surveillance 4 definition as early as the 1950s and the 1960s. Frozen tissue and serum samples were available for one of these possible early AIDS cases, a 15 year old black male from St. Louis who was hospitalized in 1968 and died of an aggressive, disseminated Kaposi's Sarcoma. His tissue and serum specimens were HIV-antibody positive on the Western blot and antigen-positive on the ELISA. This appears to be the first confirmed case of HIV infection in the United States. The patient had no history of travel out of country, so it is likely that some other people in the United States were infected with HIV as early as the 1960s, if not earlier.

### Prevalence of HIV/AIDS in the World/United States

The HIV/AIDS epidemic has already claimed more than 25 million lives and another 39.5 million people are currently estimated to be living with HIV/AIDS worldwide. HIV/AIDS cases have been reported in all regions of the world, but most people living with HIV/AIDS (95%) reside in low-and middle-income countries, where most new HIV infections and AIDS-related deaths occur. The nations of sub-Saharan Africa have been hardest hit, followed by the Caribbean; there is also concern about the epidemic in parts of Eastern Europe and Asia. HIV is the leading cause of death worldwide among those 15-59 years old. It is considered a threat to the economic well-being, social, and political stability of many nations.

### Global Snapshot of HIV/AIDS Worldwide

- There are an estimated 39.5 million people living with HIV/AIDS worldwide, 2.6 million more than 2004 and twice the number of 1995. The number of people living with HIV/AIDS has increased in every region.
- During 2006, an estimated 4.3 million people became newly infected with HIV, including 530,000 children.
- 2.9 million people died of AIDS-related illnesses in 2006, and deaths have been rising.
- Worldwide, most people living with HIV are unaware that they are infected.

The major route of HIV transmission worldwide is heterosexual sex, although risk factors vary within and across populations. In many regions of the world, men who have sex with men, injecting drug users, and sex workers account for significant proportions of infections. Several regions and countries have been particularly hard-hit by the HIV/AIDS pandemic. Even in the United States, where HIV incidence has been level for more than a decade, there are increasing

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numbers of people living with HIV/AIDS. Not everyone has access to care, and HIV/AIDS prevalence is high among some sub-populations.

The most affected regions are the world are:

- Sub-Saharan Africa – Sub-Saharan Africa has been hardest hit and is home to two thirds (62.5%) of people living with HIV/AIDS, or 24.7 million people, but only about 11 percent of the world's population. The region is also home to most (91%) of the 2.3 million children living with HIV/AIDS globally. Almost all nations in the region have generalized HIV/AIDS epidemics-that is, their national HIV prevalence rate is greater than 1 percent. In several of these regions, 10 percent of adults are already estimated to be HIV positive. South Africa has an estimated 5.5 million people living with HIV/AIDS one of the highest in the world, and almost one in five South African adults are HIV positive. Swaziland has the highest prevalence rate in the world (33%). There is evidence that the epidemic may be slowing or stabilizing in eastern and western African countries, but there are signs of growing epidemics in other countries.

- Latin America and the Caribbean

Nearly two million people are estimated to be living with HIV/AIDS in Latin America and the Caribbean combined, 167,000 of whom were newly infected with HIV in 2006. Ten countries in the region have generalized epidemics. The Caribbean has been especially hard hit, with an adult prevalence rate (1.2%) second only to sub-Saharan Africa.

- Eastern Europe and Central Asia

An estimated 1.7 million people are living with HIV/AIDS across South/South-East Asia and East Asia. South/South-East Asia has the highest new infection rates in the region. The region is also home to the two most populous nations in the world-China and India- and despite having relatively low prevalence rates today, even small increases translate into large numbers of people. India already has the highest number of people estimated to be living with HIV/AIDS in the world (5.7 million).

### Impact on Women and Young People

Today women represent almost half(48%) of all adults living with HIV/AIDS, and the number of women living with the disease has increased globally and in all regions over time. In sub-Saharan Africa, women represent more than half (59%) of all adults living with HIV/AIDS. Gender inequalities in social and economic status and in lack of access and prevention and care services increase women's vulnerability to HIV. Sexual violence may also increase women's risk and women, especially young women, are biologically more susceptible to HIV infection than men. The epidemic has multiple effects on women including: added responsibility of caring for sick family members; loss of property if they become widowed and/or infected; and even violence when their HIV status is discovered

Teens and young adults, particularly girls and young women, continue to be at the center of the epidemic. Young people aged 15-24 account for about 40 percent of new HIV infections among those 15 and over. Among young people in sub-Saharan Africa, on average, three women are infected for every young man. A similar pattern is seen in the Caribbean where young women are more than twice as likely to be infected with HIV compared to young men in some countries.

In 2005, there were an estimated 15.2 million AIDS orphans (children who had lost one or both parents to the epidemic), most of whom (12 million) lived in sub-Saharan Africa.

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### Prevalence of HIV/AIDS in the United States

The CDC estimates that more than one million people are living with HIV in the United States. One in five (21%) of those people living with HIV is unaware of their infection. Despite increases in the total number of people living with HIV in the United States in recent years, the annual number of new HIV infections has remained relatively stable. However, new infections continue at far too high a level, with an estimated 56,300 Americans becoming infected with HIV each year.

More than 18,000 people with AIDS still die each year in the United States. Gay, bisexual, and other men who have sex with men (MSM) are strongly affected and represent the majority of persons who have died. Through 2007, more than 576,000 people with AIDS in the United States had died since the epidemic began.

The AIDS epidemic is highly concentrated in the United States. Of the over one million AIDS cases reported nationally through 2007, more than 50 percent have come from five states. New York, California, Texas, New Jersey, and Florida. Despite comprising just 35 percent of the United States population, these five states have accounted for 55 percent of all AIDS cases reported through 2007. Over half a million deaths among persons with HIV/AIDS have occurred in the United States through 2007. Nearly six in ten of these deaths (57.1%) have occurred among those diagnosed in one of the top five states.

Cumulative AIDS Cases and Persons Living With Aids In The United States								
	Cumulative AIDS Cases Through 2007					Persons Living with AIDS in 2007		
	Persons	US Total	# of Cases	US Total	Rank	# of Cases	US Total	Rank
US – Top 5 States								
New York	19,046,040	6.4%	181,461	17.6%	1	75,253	16.1%	1
California	36,163,340	12.1%	148,949	14.4%	2	65,582	14.0%	2
Florida	18,029,900	6.0%	109,949	10.6%	3	48,059	10.3%	3
Texas	23,406,070	7.8%	72,828	7.1%	4	34,940	7.5%	4
New Jersey	8,595,440	2.9%	50,964	4.9%	5	17,671	3.8%	5
Top 5 States	192,974,570	35.3%	563,726	54.7%		241,505	51.5%	
Rest of US	192,974,570	64.7%	467,106	43.3%		227,073	48.5%	
Total US	298,215,360	100.0%	1,030,832	100.0%		468,578	100.0%	

### AIDS in the United States by Geographic Distribution

At the end of 2007 the estimated numbers of adults and adolescents living with AIDS were highest in the South and Northeast, and lowest in the Midwest. The states with the most AIDS diagnoses were found in the South, but the cities with the most AIDS cases were spread across the country. Blacks/African Americans accounted for the largest proportion of AIDS cases in all areas except the West where whites accounted for the highest number of cases.

### AIDS in 2007

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- Of the estimated 35,962 (including children) new AIDS diagnoses in the 50 states and the District of Columbia: 25% were in the Northeast; 11% were in the Midwest; 46% were in the South; and 17% were in the West.
- Of the estimated 455,636 (including children) new AIDS diagnoses in the 50 states and the District of Columbia: 29% lived in the Northeast; 11% lived in the Midwest; 40% lived in the South; and 20% lived in the West.
- Of the estimated 14,110 (including children) persons who died with AIDS in the 50 states and the District of Columbia; 25% died in the Northeast; 10% died in the Midwest; 50% died in the South; and 16% died in the West.

### AIDS Diagnosis By REGION

- Northeast 25%
- Midwest 11%
- South 46%
- West 17%

### AIDS Diagnoses in 2007 by RACE

#### Northeast

- Whites 25%
- Asians 2%
- Blacks 46%
- Hispanics Latinos 25%
- Native Hawaiians/Other Pacific Islanders 1%

#### Midwest

- Whites 38%
- Asians 1%
- Blacks 48%
- Hispanics/Latinos 14%
- Native Hawaiians/Other Pacific Islanders 1%

#### South

- Whites 24%
- Asians 1%
- Blacks 61%
- Hispanics/Latinos 31%
- Native Hawaiians/Other Pacific Islanders 1%

#### West

- Whites 43%
- Asians 4%
- Blacks 20%
- Hispanics/Latinos 31%
- Native Hawaiians/Other Pacific Islanders 1%

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### Reported AIDS Cases in 2007 Metropolitan Statistical Areas (MSAs)

Metropolitan Statistical Areas (MSAs) are areas that contain a core urban area with a population of 50,000 or more people.

- The South is currently the region with the largest proportion of AIDS cases in less urban and non-urban areas, while the Northeast and the West, more than 90% of cases were in large metropolitan areas at the time of AIDS diagnosis.
- The five MSAs with the highest number of reported AIDS cases in descending order were: New York City, New York; Los Angeles, California; Miami, Florida; Washington, D.C.; and Philadelphia, Pennsylvania.
- The five MSAs with the highest rates of reported AIDS cases were Miami, Florida; New Orleans, Louisiana; Baton Rouge, Louisiana; Washington, D.C.; and Baltimore, Maryland.

### Prevalence of HIV/AIDS Among Special Populations

#### African Americans

More African Americans are living with HIV or are already dead from AIDS than any other single racial or ethnic group in the United States – a crisis one black activist calls, “a state of emergency” for the African American Community. Over 40 percent of Americans who have been diagnosed with HIV since 1981 have been African Americans. And although AIDS diagnoses and deaths have declined substantially in the United States since the mid-1990s with the advent of highly active antiretroviral therapy (HAART), African Americans have continued to be diagnosed with HIV/AIDS in numbers disproportionate to their percentage of the population.

Between 1999 and 2003, AIDS diagnoses among African Americans increased 7 percent compared with a 3 percent decline among whites. Even as AIDS deaths declined by 18 percent, among whites over this period, African Americans continued to die at the same rate as before effective treatment became available, according to the Kaiser Family Foundation. Black women, youth, and men who have sex with men (MSM) have proven particularly vulnerable to HIV infection.

What accounts for these high mortality rates? Experts say that a mix of factors-including socioeconomic factors, limited access to health care, late HIV testing, high rates of sexually transmitted/infections, and limited knowledge of treatment and prevention options-have contributed to the HIV/AIDS crisis among blacks. Analysts add that the best approaches to treatment and prevention will take these factors into account.

#### Sobering Numbers and Disproportionate Burdens

Although blacks make up 12.3 percent of the United States population, they have accounted for 40 percent of the nearly 930,000 AIDS cases diagnosed in the country since the epidemic began here in 1981. And the proportion appears to be growing. In 2003, 50 percent of the estimated 32,000 new HIV/AIDS diagnoses in the 32 states with confidential name-based HIV reporting were among African Americans.

HIV/AIDS is now the leading cause of death among African Americans ages 25 to 44- ahead of heart disease, accidents, cancer, and homicide. Truly, this does constitute a “State of Emergency” among the African American community.

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The rate of AIDS diagnosis for blacks in 2003 was almost 10 times the rate for whites and almost three times the rate for the Hispanics. Between 2000 and 2003, African American females had 19 times the rate of HIV/AIDS as white females and five times the rate for Hispanic females. The rate of HIV/AIDS among African American males during the same period was seven times the rate for white males and three times the rate of Hispanic males.

### At Greatest Risk: Black Women, Youth, and Men Having Sex With Men

The AIDS HIV epidemic has most greatly affected certain subgroups of African Americans particularly women, youth, and men who have sex with men (MSM). The Kaiser Family Foundation says that black women accounted for two-thirds of new AIDS cases among all U.S. women with AIDS in 2003, compared with white women (14 percent) and Latinas (16 percent). African American teens (ages 13 to 19) accounted for 65 percent of new AIDS cases reported among teens in 2002, although they only account for 15 percent of American teenagers.

African American MSM has been especially affected by the epidemic. A study of six major U.S. cities found that nearly one-third (32 percent) of black MSM between ages 23-29 were already infected with HIV, compared to 7 percent of white MSM in the same age group.

### Risks Factors and Obstacles to Prevention

Although African Americans are most commonly affected with HIV through sex and drug-using behaviors, the proportions of African Americans infected with HIV from particular risk behaviors vary from other populations. Additional socioeconomic and cultural factors such as inadequate access to health care, denial about HIV, and conspiracy theories about the virus also make African Americans particularly vulnerable to infection.

### High Rates of Sexually Transmitted Infections

African Americans have the highest rates of sexually transmitted infections of any racial or ethnic group in the United States. In 2003, blacks were 20 times more likely than whites to have gonorrhea and 5.2 times as likely to have syphilis. Genital lesions, such as those caused by herpes, increase one's chance of contracting HIV three-to-five fold. And a person who is co-infected with HIV and another STD is more likely to spread HIV to others.

### Sexual Behavior and Injection of Drug Use

Among black men, 49 percent of new HIV diagnoses in 32 states from 2000-2003 attributed to unprotected sexual contact with another man-compared with 72 percent of the estimated diagnoses among white men. Injecting drug use accounted for another 18.3 percent of diagnoses. Injecting drug use carries both the risk of infection from sharing needles and other paraphernalia and from users who are more likely to engage the high-risk behavior, such as unprotected sex, under the influence of drugs or alcohol.

Most African American women are infected with HIV through heterosexual contact (80 percent between 2000-2003), followed by injecting drug use (16.7 percent). African American women also are at the highest rate of contracting HIV from male partners who are injecting drug users or engaging in unprotected sex with other men.

### Socioeconomic Factors



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Nearly one in every four African Americans lives in poverty, and studies have found a connection between higher AIDS incidence and lower income. For instance, a study of African American women in North Carolina found that those with HIV infection were more likely than non-infected women to be unemployed; receive public assistance; have had twenty or more lifetime sexual partners; have a lifetime history of genital herpes infection; have used crack or cocaine; or have traded sex for drugs, money, or shelter.

### Limited Access to Health Care

African Americans are more likely to be uninsured than whites – a disparity that also holds for blacks and whites with HIV/AIDS, according to the Kaiser Family Foundation. The HIV Cost and Services Utilization Study found that African Americans with HIV/AIDS were more likely to be publicly insured or uninsured than their white counterparts. More than one-half (59 percent) of African Americans with HIV/AIDS rely on Medicaid, compared to 32 percent of whites.

Another study found that African Americans also were more likely to postpone medical care because they lack transportation, were too sick to go to the doctor, or had other competing needs.

### Limited Treatment, Knowledge, and Access

While more African Americans report being tested for HIV than whites, they tend to have less knowledge about the availability of HIV treatment. And blacks also seem to have less access to HAART, according to a study of 10 primary HIV care sites in the United States. Even though the overall prevalence of HAART has increased since the mid-1990s, women, African Americans, and injection drug users are less likely to receive the treatment.

One cause of this disparity may be the racial gap that seems to exist between patients and their providers. A study of 1,241 HIV-positive adults receiving care from 287 different providers in the United States found that African Americans with white physicians tended to receive HAART later in their illness than did African Americans with African American physicians. And both these groups received HAART later on average than white patients with white physicians.

### Late Testing

Not learning one is infected with HIV until the virus has already damaged the immune system represents missed opportunities from preventing and treating HIV infection. Centers for Disease Control (CDC) data indicate that, between 2000 and 2003, 56 percent of late testers were African Americans.

African Americans with HIV have tended to delay being tested because of psychological or social factors which means that they frequently are diagnosed with AIDS soon after learning they are infected with HIV. For this reason, African Americans with AIDS do not live as long as people with HIV/AIDS from other racial/ethnic groups.

Dr. Daniel Kuritzkes, Director of AIDS at Boston's Brigham and Women's Hospital and associate professor of medicine at Harvard Medical School, described two unequal tracks of HIV treatment and care in the United States. In what Kuritzkes calls the "ideal track," a person discovers she or he is HIV-infected, seeks medical care, has regular follow-ups, and follows a HAART regimen without

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complications. “There is every expectation that this person will lead a normal life.” Kuritzkes says. But some individuals follow a second, more dangerous track. These individuals “come to the hospital with full-blown AIDS as their initial diagnosis. They have limited access to care because of finances or because of social or medical problems interfere. By and large, the deaths [from HIV/AIDS] are among this group, which tends to be African Americans.”

### Denial

The denial of personal risk has played a large role in preventing particularly African American MSM as well as black women from adequately protecting themselves and their partners. There has been a strong tendency to blame ostensibly heterosexual African American men who secretly have sex with other men- the so called “down low” – for the high rates of HIV infection in African American women.

But some observers argue that the fact of men who have secret sex with other men does not absolve either these men’s male or female partners of the need to protect themselves. “The down low is not responsible for the AIDS epidemic.” “HIV is spread by behavior, not indemnity.”

### Conspiracy Fears

There has also been a widespread belief among African Americans that HIV/AIDS was purposely developed by government scientists to exterminate blacks. Though without scientific credence, such views are unsurprising given the troubled relationship between African Americans and scientists harkening to the infamous Tuskegee experiments. In the mid-20<sup>th</sup> century U.S. government-supported study, scientists observed the effects of untreated syphilis in poor black men over several decades while deceiving the men about the alleged “treatment” they were given.

Conspiracy beliefs like these are widely held and can present a barrier in HIV prevention among African Americans. Researchers have reported that men in particular who hold strong conspiracy beliefs are likely to also hold negative attitudes toward condom use as a preventive measure.

### Prevalence of HIV/AIDS Among Hispanic and Latinos

In the United States, the HIV/AIDS epidemic has adversely affected Latino/Hispanic communities and its impact on Hispanic/Latinos continues to grow as disproportionate rates. As the youngest and fastest growing minority group in the United States, the Hispanic/Latino population is witnessing the devastating effects of HIV/AIDS epidemic. Several factors act as obstacles to prevention efforts and thus contribute to the high level of HIV infection. Latinos living in the United States experience cultural factors and familial norms that act as barriers to HIV prevention. They are exposed to cultural pressures that make them more vulnerable to maladaptive behaviors, which increase their likelihood of becoming infected with HIV.

Hispanics are the largest minority group in nation and in 2006 Hispanics accounted for 44.3 million or 14.8 percent of the United States population. With the highest growth rate of any other minority group in the United States, the Hispanic population grew by more than 24 percent or by 2.9 per 100,000 in the years of 2005-2006, which is approximately half of the national population growth rate of 3.1 percent. The highest concentration of the Hispanic population remains in five states: California, Texas, Florida, New York, and Illinois –and in 2006, California had the highest Hispanic population at 13.1 million, followed by Texas at 8.4 million, Florida at 3.6 million, New York at 3.1

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million and Illinois at 1.8 million. Among states with the highest Hispanic population growth rates in 2006, Arkansas had the highest in the nation at 60.9 per 100,000, Georgia had the second highest at 59.4 percent, South Carolina at 57.4 percent, Tennessee at 55.5 percent and North Carolina at 54.9 percent.

The new wave of Hispanic migration to the southern part of the United States is significant for various reasons, one of them being that the current health infrastructure is unable to address the rapid growth, including culturally and linguistically appropriate prevention and health services related to HIV. Local service providers in both the government and nonprofit sectors are struggling to build the infrastructure and capacity to respond to the needs of these newcomers, many of whom are vulnerable to health challenges due to the difficult living and working conditions they experience.

In addition to the highest population growth, Hispanics are relatively young. In 2008, one-third of the Hispanic population was under eighteen, compared with one-fourth of the total U.S. population. IN 2006, the median age for the U.S. population as a whole was 36.4, compared to 27.4 among Hispanics for the same year, and 30.1 among blacks. The same year, the largest Hispanic population, followed by Puerto Rico at 9 percent, Cuban at 3.4 percent, Dominican 2.8 percent, and Central America 7.6 percent, and South American, 5.5 percent. Among Hispanics living in the U.S. in 2006, 60 percent were born in the U.S., and 40 percent were foreign born. This is significant because most migrants that come to the U.S. do so in search for work, most often in agriculture industries, where they are exposed to a new culture, language, and social customs and norms. This can lead to loneliness, isolation, and financial instability, making migrants more vulnerable to being at high risk for HIV infection.

### Hispanics/Latinos in the United States and HIV/AIDS

As the largest minority group in the U.S., Hispanics are disproportionately affected by HIV/AIDS. In 2006, Hispanics comprised 15 percent of the U.S. population or 44.3 million people, yet reporting, 18 percent of HIV/AIDS cases that same year, among 22 states with a name-based reporting, excluding Puerto Rico. At the end of 2006, there was an estimated 80,815 Hispanic/Latinos AIDS rate of 31.3, than Hispanic females, 9.5 percent. According to the National Center for Health Statistics, HIV/AIDS was one of the leading causes of death among Hispanic/Latinos in 2004. Although Blacks had the highest HIV diagnosis in 2006, Hispanics/Latinos had the second highest HIV diagnoses that same year and once again men were diagnosed with HIV at a higher rate than Hispanic women. There was an estimated 51 HIV diagnoses per 100,000 among Hispanic men (compared to 15 HIV diagnoses among Latina women.) From 2003 to 2006, with 33 states reporting, the annual rate of HIV diagnoses per 100,000 decreased from 37.0 in 2003 to 33.7 in 2006.

In 2006, the most common mode of HIV transmission for Latinos in the U.S. was through male-to-male sexual contact. Of all male adults and adolescents living with HIV/AIDS in the U.S. at the end of 2006, male-to-male sexual contact was the primary mode of transmission for 17 percent of Latinos, 47 percent among Black men and 34 percent among White non-Hispanic men. Among MSM, Blacks were estimated to have the highest rate of AIDS per 100,000 in 2006. The infection rate (per 100,000) of AIDS among black MSM (in 2005) was 10.8 compared to 6.3 among Hispanic MSM and 2.56 non-Hispanic white MSM. However, non-Hispanic white MSMs had the highest

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AIDS infection diagnoses (6,251) when compared to black MSMs (4,309) and Hispanic MSMs (2,816).

Among Hispanic/Latinos living with HIV/AIDS at the end of 2006, 23.6 percent were females, and 74.8 percent were male. For Latino men living with HIV/AIDS, the most common mode of HIV transmission is sexual contact with another man, followed by injection drug use (IDU), high risk heterosexual contact and, male-to-male sexual contact (MSM) and IDU combined. At the end of 2006 in 33 states with confidential name-based reporting, 14,427 male adult or adolescent Hispanics living with HIV/AIDS became infected through injecting drugs with HIV contaminated needles, representing 23 percent of Hispanic males living with HIV/AIDS. Latino males became HIV positive through IDU more often than other communities in the U.S. – IDU was the primary mode of transmission for 22 percent of African American males living with HIV/AIDS and 9 percent of non-Hispanic White males living with HIV/AIDS in the U.S.

Although Latinas represented 13 percent of the female population aged 13 and over in 2006, they accounted for 16 percent of estimated AIDS cases. In that same year, the AIDS case rate per 100,000 Latinas (9.5) was five times higher than the case rate for white non-Hispanic women (1.9) in the U.S. Among Latina females, high-risk transmission, accounted for 71 percent of the cases among Latinos that were living with HIV/AIDS at the end of 2006, compared with 75 percent among black females and 65 percent white, non-Hispanic females. In the U.S. the risk of contracting HIV and other sexually transmitted infections among youth and children is disproportionately higher among minority races/ethnicities. As the youngest and fastest growing ethnic minority group in the U.S., the Hispanic/Latino population is witnessing the devastating effects of the HIV/AIDS epidemic.

### Male-To-Male Sexual Contact

Among Latino MSM, the HIV/AIDS rate is climbing at alarming proportions. Among MSM the estimated rate of AIDS infection per 100,000 (in 2006) was 6.3 percent among Hispanics/Latinos, 10.8 percent among Blacks, and 2.56 percent among non-Hispanic Whites. For the same year, 2,816 Hispanics were estimated to be infected with AIDS through this way, compared to 4,309 among Blacks and 6,251 among non-Hispanic Whites; making non-Hispanic White MSM the group most affected by AIDS through male-to-male sexual contact. Among Hispanics at the end of 2006, 57 percent of all Hispanic males living with HIV/AIDS in the U.S. reported male-to-male sexual contact as the transmission category. The percentage of Latino MSM living with HIV/AIDS in the U.S varies by place of birth, 62 percent of Cuban-born and 59 percent of Mexico-born Latinos living with AIDS cited male-to-male sexual contact as the mode of transmission, whereas approximately 18% of people living with AIDS born in Puerto Rico became infected with HIV through male-to-male sexual intercourse.

Several factors act as obstacles to prevention efforts and thus contribute to the high level of HIV infection specifically in the Latino MSM community. MSM are impacted by three socially oppressive forces – poverty, racism, and homophobia-that often produce experiences of social alienation and personal shame. Racism, homophobia, and poverty act as obstacles to prevention and access to care efforts because they contribute to a sense of stigma associated with the disease and what it represents about sexuality and powerlessness and lack of control in their personal lives and sexual situations.

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Many Latino MSM turn to alcohol and illegal drugs use as a means to cope with homophobia and the frustration caused by poverty, racism, and other forms of social discrimination and abuse. The stigma associated with HIV/AIDS and homosexuality, known as “rechazo” (rejection) acts as a major obstacle to prevention efforts in the Latino community. The stigma creates a “sexual silence” in which transgender men carry on a secret sex life cut-off from the support and familial network necessary to overcome isolation. Additionally, traditional rigid gender roles and norms such as “machismo” contribute to the sense of Latino gay men being “failed men”.

### Latinas/Hispanics and HIV/AIDS

In 2006, Latinos represented 13 percent of the U.S. female population aged 13 and over, and accounted for 16 percent of estimated AIDS cases in that same year. Latinas represented a much greater share (22 percent) of AIDS diagnoses among all Latinos and Latinas living in the U.S compared with white women (15 percent) share of AIDS cases diagnosed among all non-Hispanic case rate per 100,00 Latinas. (9.5 percent) as five times higher than the case rate for white non-Hispanic women (1.9 percent) in the U.S.

For Hispanic/Latina women living with HIV/AIDS, the most common methods of HIV transmission are: (1) high risk heterosexual contact and (2) injection drug use (IDU). In 2006, the majority of Latinas living with HIV/AIDS were infected through heterosexual contact-approximately 71 percent of Latinas. Latinas are more likely to have been infected through heterosexual transmission than non-Hispanic women (65 percent), however, Black women (75 percent) are infected more often than Latina or non-Hispanic with women, through heterosexual contact. Intravenous drug use (IDU) ranks as the second most common mode of HIV transmission of Latinas. In 2006, 28 percent of Latinas living with HIV/AIDS identified IDU as the source of HIV transmission, whereas 23 percent of Black women, and 33 percent of non-Hispanic White Women living with HIV/AIDS, identified IDU as the source of transmission. Reports of injection drug use among Latinas vary by country or origin. For example, opiate drug use, often injected intravenously, was highest among women who live in the U.S. and whose country of origin was Puerto Rico at 43 percent and 29 percent among women from Cuba.

Latinas confront several obstacles when it comes to HIV prevention, testing, counseling, and seeking treatment once infected – embarrassment, fear of rejection, and stigma, partner’s objection to testing, and lack of access to financial resources and health insurance coverage. They also face barriers in accessing health care and HIV testing, preventing them from knowing their status. Additionally, women have differential access to medical care counseling, and information, making them less likely than men to receive accurate prognosis and treatment of HIV. Due to infrequent HIV testing, Latinas are often diagnosed during a very late stage of HIV infection and therefore develop AIDS sooner after an HIV diagnosis than white women. Consequently, AIDS has become a major cause of death for Latinas – in 2004, HIV infection was the fifth leading cause of death for Hispanic women aged 35-44 years.

Another factor attributing to higher rates of HIV infection among youth and children is disproportionately higher among minority races/ethnicities. Hispanic/Latinos adolescents in the U.S. face unique obstacles that help account for their disproportionately high rate of HIV infection. Hispanic/Latino teens ages 13-19 accounted for 10 percent of AIDS cases among U.S. teens in 2006

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although they represented 17 percent of the U.S. teen population that same year. This reality is especially alarming because in 2005, the proportion of Hispanic/Latinos living with AIDS is 17 percent. The margin is even greater for young adult Hispanic/Latinos aged 20-24. In 2006, Hispanic/Latino young adults in the U.S. represented only 18 percent of the U.S. population, but accounted for 23 percent of AIDS cases. Latino youth aged 13-24 are at risk for contracting HIV for various behavioral and social factors, including inconsistent condom use, multiple sex partners, intravenous drug use, and consumption of alcohol and other substances that impair judgment. Although the HIV infection rate has declined for youth since the beginning of the epidemic, the rate of decline among Hispanic/Latinos have been slower than among non-Latino whites.

Young Latinos living in the U.S. experience cultural factors and familial norms that act as barriers to HIV prevention. They are exposed to cultural stressors-discrimination, language barriers, and acculturation that make them more vulnerable to maladaptive behaviors, which increases their likelihood of becoming infected with HIV. Another cultural factor attributing t higher rates of HIV infection amongst Latino youth is sex, sexuality, and condom use are not openly discussed between parents and youth in traditional Hispanic/Latino families. Consequently, adolescents are less comfortable and less successful n condom negotiation. The lack of communication is concerning because studies show that communication between teens and their parents is associated with lower rates of sexual activity, less risk behavior, and lower rates of teen pregnancy. Although the HIV infection rate has declined for youth since the beginning of the epidemic, the rate of decline among Hispanic/Latinos have been slower than among non-Latino whites.

### Latinos, HIV/AIDS and Substance Use

From the onset of the HIV/AIDS epidemic, the use of any type of drug-regardless of whether a needle and/or syringe are involved, and has put people at high risk for HIV infection. Alcohol use is associated with multiple exposure to HIV infection, especially among youth, including risky sexual behaviors such as having multiple sexual partners and inconsistent condom use. According to a CDC study, users of non-injecting drugs (such as some form of crystal meth or cocaine that is smoked) are three times more likely to be infected with HIV than non-smokers. Risk also varies depending on drug use; for example methamphetamine increases sexual desire and has been shown to lead to unsafe sex. Drug use through injection and methods of drug delivery in general increases the risk of HIV transmission because of the tendency to engage in risky sexual behaviors while under the influence of a substance and the practice of sharing needles or other injection equipment.

Injection drug use (IDU) has directly and indirectly accounted for more than one-third (36 percent) of AIDS cases in the U.S. At the end of 2006, an estimated 353,825 male adults and adolescents were living with HIV/AIDS, 17 percent had been exposed through injection drug use and 7 percent had been exposed through both male-to-male sexual contact together with intravenous drug use. A greater proportion of IDU-associated HIV/AIDS cases occur among adolescents and adult women. A significant number of women diagnoses with HIV/AIDS cases occur among adolescents and adult women. A significant number of women diagnoses with HIV/AIDS in 2006 were infected through high risks heterosexual contacts with an infected male who had a history of intravenous drug use. The burden if IDU-associated with HIV/AIDS is even greater in Latinos. Approximately 5,528 female adult or adolescent Latinas living with HIV/AIDS accounted for IDU-associate HIV/AIDS

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cases, representing 28 percent of Hispanic females living with HIV at the end of 2006. This statistic is alarming because the rate of IDU-associated transmission among Latinos climbed from the previous year's rate in 2005. Latina women represented 25 percent of the IDU reported HIV/AIDS cases.

At the end of 2006 in 33 states with confidential name-based reporting, 14,427 Hispanics living with HIV/AIDS became infected through the injecting of drugs with HIV contaminated needles representing 23 percent of Hispanic males living with HIV/AIDS. Latino males become HIV positive through IDU more often than other communities in the U.S. IDU was the primary mode of transmission for 22 percent of African Americans males living with HIV/AIDS and 9 percent of non-Hispanic White males living with HIV/AIDS in the U.S.

From 2003-2006, Latino-Hispanic males born in Puerto Rico that were living with HIV/AIDS, had the highest percentage of HIV infection through IDU among Hispanic/Latinos. During this period, 26 percent of Latinos born in Puerto Rico identified IDU as the transmission category, 12 percent were among Hispanic born in the U.S., 9 percent among those born in Mexico, and 8 percent born in Central America. The high rate of HIV transmission through IDU for Latinos born in Puerto Rico may be due to the fact that needle exchange programs and methadone treatment are used more often in the U.S than in Puerto Rico; however HIV infections through IDU are the second highest among Latinos/Hispanics born in the U.S.

### HIV/AIDS Among People Age 50 and Above

The number of persons aged 50 years and older living with HIV/AIDS has been increasing in recent years. The increase is partly due to highly active antiretroviral therapy (HAART), which has made it possible for many HIV-infected persons to live longer, and partly due to newly diagnosed infections in persons over the age of 50. As the U.S. population continues to age, it is important to be aware of specific challenges faced by older Americans and to ensure that they get information and services to help protect them from infection.

In 2005, the aged 50 and older accounted for 15 percent of new HIV/AIDS diagnoses; 24 percent of persons living with AIDS increased from 17 percent in the year 2001; this age group accounted for 19 percent of all AIDS diagnoses and accounted for 29 percent of persons living with AIDS as well as accounting for 35 percent of all deaths of persons with AIDS. The rate of HIV/AIDS among persons 50 and older were 12 times as high among blacks (51.7/100,000) and 5 times as high among Hispanics (21.4/100,000) compared with whites (4.2/100,000).

HIV began mostly as a disease of young men and women, but today the epidemic impacts people of all ages, including older people. Issues related to HIV/AIDS and older people are receiving more and more attention as this population grows. On September 18, 2009, the first National HIV/AIDS and Aging Awareness Day was held to recognize the need to prevent HIV infection in this group; understand the unique health effects of the virus in older-HIV positive people; improve the health and quality of life of older HIV-positive people; and increase research on HIV and aging issues.

There are several reasons older people are becoming infected with HIV/AIDS. Some of the reasons are:

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- Health care providers may not test older people for HIV infection.
- Older people may lack awareness of the risk factors for getting HIV.
- Older Americans know less about HIV/AIDS than young people do. They do not always know how it spreads or the importance of using condoms, not sharing needles, getting tested for HIV, and talking about it with their doctor.
- Healthcare workers and educators often do not talk with middle-aged or older people about HIV/AIDS prevention.
- Many older people are newly single. They get divorced or lose their mates. While they had a partner they may have ignored HIV prevention messages.
- Very little HIV prevention education is targeted toward older people.
- Many older people believe that HIV only affects younger people.
- Most older people get no training in safer sexual activities.
- Drug use accounts for more than 16 percent of infections of people over 50.
- Unprotected sexual activity – This may be heterosexual or homosexual sex. Viagra and other drugs that help men get and maintain an erection may contribute to increased rates of sexual activity and sexually transmitted diseases among older people.
- Physicians may not diagnose HIV infection in older people.
- Some early symptoms of HIV disease may appear to be signs of normal aging.
- Older people may not talk to their doctor about their sex lives.
- Doctors may not ask older patients about their sex lives or drug use or talk to them about risky behaviors.
- The stigma of having HIV/AIDS may be worse for older people. This can result in hiding their infection from family and friends.

### Unique Risks for Older Adults

While the majority of older Americans do not participate in behaviors that increase their risk for contracting HIV, some do. Unprotected sex is one of the most common causes. A few physical and social factors also add to older adults risk including:

- Menopausal and postmenopausal women can experience vaginal dryness and thinning, which can lead to cracks that allow easier access for the virus to enter the body.
- Older adults may associate condoms with pregnancy prevention, rather than disease prevention.
- Divorced or widowed adults who are new to the singles scene may be naïve to the risks of unprotected sex and may be less likely to bring up the subject.
- Lonely adults may seek out sex with promiscuous partners or prostitutes.
- Some people may think, mistakenly, that current drug treatments are a cure.
- Some may view the golden years as a time to enjoy themselves and ignore the dangers, not realizing how the disease could affect their quality of life.

### Is HIV Disease Different For Older People?

The first studies of HIV in older people were done before strong anti-HIV drugs were available. Most of them showed that older people got sicker and died faster than younger people. This was thought to be due to the weaker immune systems of older people. Also, older people usually have health problems in addition to HIV.



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Research shows that older people respond well to antiretroviral treatment. Most older patients, unless they are drug users or have mental problems, take their medications more regularly than younger patients. They have better adherence.

### Is HIV The Same In Older People?

CD4 cell levels do not recover as quickly in older patients as in younger patients. Unfortunately, we don't have good information on older people because they were usually not included in clinical trials of new drugs.

Treatment side effects may not be any more frequent in older people. However, changes caused by aging can resemble or worsen treatment side effects. For example, older age is a major risk factor for heart disease and for increasing fat in the abdomen. Some older people without HIV lose fat that looks similar to the changes caused by lipodystrophy.

Recent research suggests that many of the health problems of older people may progress faster in people with HIV. It is not clear whether HIV "accelerates aging or whether the normal diseases of aging interact with each other and HIV and makes them worse.

### What Other Health Problems Are Common Among People 50 and Older?

As people age, they develop health issues that continues for the rest of their lives. The can include heart disease, depression, osteoporosis, high blood pressure, kidney problems, arthritis, diabetes, Alzheimer's disease, and various forms of cancer.

Older people often take many different medications to deal with their health problems. This can make it more difficult for a doctor to choose anti-HIV drugs because of interactions with other medications.

### Mental Problems

Older people may have more problems with thinking and remembering than younger people. These symptoms can appear to be the same as HIV-related mental problems. These problems, sometimes called dementia, are less severe than they were before the use of strong anti-HIV drugs. It is difficult to know what is causing mental problems in older people with HIV. Is it normal aging, or is it HIV diseases? Research studies have been linked to both age and higher viral load to mental problems.

Rates of depression and substance use haven't been well studied in older people. However, these problems may be related to HIV disease, aging, or both. They need to be diagnosed and treated correctly.

### Perinatal HIV Transmission and Prevention

Perinatal transmission of HIV (also called vertical transmission) occurs when HIV is spread from an HIV positive woman to her baby during pregnancy, labor and delivery, or breastfeeding. For a HIV positive woman not being treated for HIV, the chance of passing the virus to her child is about 25 percent during pregnancy, labor, and delivery. If she breastfeeds her infant, there is an additional 12 percent chance of transmission. Perinatal HIV transmission is the most common route of HIV infection in children and is now the source of almost all AIDS cases in children in the United States. Most of the children with AIDS are members of minority races/ethnicities.

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In 2005, HIV was diagnosed for an estimated 142 children less than 13 years old who had been infected with HIV perinatally. An estimated 6,051 persons who had been infected with HIV perinatally were living with AIDS at the end of 2005. Of the perinatally infected persons living with HIV/AIDS at the end of 2005 and estimated 66 percent were black, and an estimated 20 percent were Hispanic/Latinos.

Of the estimated 68 children for whom AIDS was diagnosed during 2005, and estimated had been infected with HIV perinatally. An estimated 46 persons with AIDS who had been infected with HIV perinatally died in 2005. Since the beginning of the epidemic, AIDS has been diagnosed for an estimated 8,460 children who were infected perinatally. Of those, and estimated 4,800 (57 percent) had died. Over the course of the epidemic, the number of AIDS cases associated with perinatal transmission has decreased dramatically. This decrease is largely due to the increased identification of women infected with HIV and timely interventions to prevent perinatal transmission.

The main risk factor, which is also a barrier to the prevention of perinatal HIV transmission, is lack of awareness of HIV status among pregnant women. Because approximately 25 percent of all people infected with HIV do not know their HIV status, many pregnant women who are infected with HIV may not know they are infected. This is why CDC has recommended routine, opt-out HIV testing for all pregnant women. If women are tested early in their pregnancy, those who are infected can be given therapy to improve their own health and reduce the risk of transmitting HIV to the baby. In the United States, without antiretroviral therapy, approximately 25 percent of pregnant women infected with HIV will transmit the virus to their child.

Recent CDC studies found that HIV testing rates for pregnant women varied widely and that a relatively high proportion of women of childbearing age were unaware that treatment is available to reduce the risk of perinatal transmission. In a 2002 study of HIV testing in the United States, 31 percent of the 748 women who had recently been pregnant reported they had not been tested during prenatal care. Continued efforts are needed to ensure that all women know their HIV status as early as possible in pregnancy.

Because of prenatal testing, most HIV-infected women know they are infected before they give birth. Still, testing rates in the United States remain uneven: 18 percent of the women in another study were not tested until after childbirth. State HIV testing rates differ, depending on the testing approach used.

To reduce further the incidence of HIV infection, CDC announced a new initiative, Advancing HIV Prevention. This initiative comprises of four strategies: making HIV testing a routine part of medical care, implementing new models for diagnosing HIV infections outside medical settings, preventing new infections by working with HIV-infected persons and their partners, and further decreasing perinatal HIV transmission.

In 2006, CDC published “Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health-Care Settings”. To further reduce the number of children who are infected with HIV perinatally, these recommendations called for routine opt-out HIV screening for all the four criteria: women at high risk and women who receive health care jurisdictions within

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elevated rates of HIV infection among women. Women whose HIV status is unknown at the time of labor should be offered opt-out screening with a rapid HIV test.

Already, perinatal HIV prevention has saved lives. The number of children with a diagnosis of AIDS who had been perinatally exposed to HIV declined from 118 in 2001 to 67 in 2005. The number of infants infected with HIV through perinatal transmission decreased from an estimated peak of 1,659 HIV-infected infants born in 1991 to 96-186 infants born in 2004.

Antiretroviral therapy administered to the mother during pregnancy, labor, and delivery, and then to the newborn, as well as elective cesarean section for women with high viral loads (more than 1,000 copies/ml), can reduce the rate of perinatal HIV transmission to two percent or less. If medications are started during labor and delivery, the rate of perinatal transmission can still be decreased to less than 10 percent.

### HIV Among Women Who Have Sex With Women

To date, there are not confirmed cases of female-to-female sexual transmission of HIV in the United States database. However, case reports of female-to-female transmission of HIV and the well-documented risk of female-to-male transmission indicate that vaginal secretions and menstrual blood are potentially infectious that mucous membrane exposure to these secretions has the potential to lead to HIV infection.

Like any risk involving sexual activity, HIV risk for women who have sex with women (WSM) varies depending on what they do. Some WSM may shoot drugs, have sex with men, trade sex for money or drugs, be victims of rape or abuse, have sex with many partners or have artificial insemination.

It is important to remember that sexual identity and sexual behavior are not always similar; for example, women who identify as lesbian can also have sex with men, and not all WSW identify as lesbian or bisexual.

Among injection drug users, WSW have higher HIV rates than do women who have sex with men only. A study of female injection drug users (IDUs) in 14 U.S. cities found that, compared to heterosexual women, women who had a female sex partner were more likely to share syringes, to exchange sex for drugs, or money, to be homeless and to seroconvert.

Women who identify as lesbian or bisexual and have sex with men may be a high risk for HIV due to male partnering choices and low condom use. A study of lesbians and bisexual women in San Francisco, California, found that 81 percent report sex with men in the past 3 years. Of those women, 39 percent participated in unprotected vaginal sex and 11 percent unprotected anal sex. In a survey of lesbians and bisexual women in 16 small U.S. cities, among women who were currently sexually active with a male partner, 39 percent reported sex with a gay/bisexual man and 20 percent sex with IDU user.

From what we know at the present time, there is a small still unspecified risk of HIV transmission associated with female-to-female sexual practices. HIV is found in vaginal fluids and menstrual blood, but the amount of virus has not been adequately measured. Female-to-female sex can include

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a variety of activities, and the risk relative to all activities is still not known. It is thought that oral sex alone poses a relatively low risk, and acts that may result in vaginal trauma, such as sharing sex toys without condoms or digital play with finger cuts or sharp nails, might pose a higher risk.

To date, there have been no studies that have rigorously examined female-to-female sexual acts or cunnilingus as a risk of HIV transmission, but there are a number of reported cases of transmission. Only one study has looked at HIV-discordant lesbian couples (where one woman is infected and the other one isn't). Although this study followed only 10 couples and only over a short period of time, they found no seroconversions.

Social, environmental, and economic factors can be barriers to prevention. WSW who are poor, drug addicted, lack adequate job training, are homeless, or who fear violence may turn to prostitution or engage in sex with men for survival. Attention to more immediate concerns of food, housing, and addiction often takes priority over future concerns of HIV infection.

Expectations of heterosexuality and negative social and cultural attitudes towards homosexuality may serve to increase risk behaviors among some WSW. One study found that young lesbians engaged in high rates of alcohol and drug use, unprotected sex with men, and sexual experimentation with young gay men as ways of coping with societal pressures.

At-risk WSW are often invisible or not recognized within other groups such as crack smokers and injection drug users, the homeless, commercial sex workers, and prisoners. WSW who have sex with men may identify with different communities depending on the gender of their current sex partner. Prevention efforts should take this into account, and recognize that bisexual women may be most effectively reached through programs targeted to high risk heterosexual women.

Violence against women interacts with HIV epidemic in many ways, all to the detriment of women. Women can be infected with HIV through forced sex. The chances of women contracting HIV through a forced sexual encounter are probably increased since forced sex often involves trauma and tissue tearing which can provide an open door to the virus. Sexual abuse in childhood is associated with risky behavior later in life, increasing an individual's lifetime risk of contracting HIV. Violence and fear of violence can prevent a woman, even one in a consensual union, from insisting on condom use or refusing unwanted sex. Since condom use and abstinence are currently the only means to avoiding HIV infection, this leaves women with no means of protecting themselves.

Fear of violence, stigma, and abandonment can dissuade women from learning their HIV-infection status – or, if they do learn it, from sharing it with their partners. Since violence can affect women's willingness to be tested, it can have a detrimental effect on HIV control, treatment, and prevention of mother to child transmission programs.

### Prevalence of HIV/AIDS Among Prison Inmates

The United States has the second highest rate of incarceration in the world. One in 32 Americans (two million people) are incarcerated. At the beginning of the year 2000, 6.3 million adults were incarcerated or on parole. Seventeen percent of people living with HIV/AIDS have spent time in the correctional system, where the prevalence rate of AIDS is six times higher than in the general public. Incarcerated populations are susceptible to HIV/AIDS as a result of high-risk behaviors that are

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prevalent in correctional facilities. The geographic distribution of HIV/AIDS cases in U.S. prisons is remarkably uneven. Some facilities' HIV rates are as low as one percent, whereas other facilities have rates that approach or exceed 20 percent. Each year, millions of people are released from jails and prisons back into American society. Many ex-offenders do not know their HIV serostatus.

Prisons and jails contain high concentrations of persons living HIV/AIDS and individuals at great risk of acquiring HIV/AIDS via injection drug use and sexual activity. Therefore, HIV intervention programs implemented in correctional facilities are among those with the greatest potential to have a substantial impact on the epidemic.

### HIV Transmission in Correctional Facilities

The Center for AIDS Prevention Studies at the University of California, San Francisco, reports that the majority of HIV-positive prisoners were infected prior to entering jails and prisons. Even so, incarcerated individuals may participate in high-risk activities that can lead to HIV infection during their incarceration. Continued injection drug use, tattooing, and consensual sexual activity occur in prison settings. Despite the efforts of correctional facility systems to prevent these behaviors, a significant number of people entering correctional facilities continue to engage in high-risk activities that they initiated prior to their incarceration. A history of physical or emotional violence, sexual abuse, or substance dependency increases the likelihood of sexual risk-taking and substance use, behaviors that place incarcerated populations at-risk of HIV transmission. Other high-risk activities, such as rape or coerced sex among inmates, also contribute to HIV transmission inside correctional facilities.

### *Injection Drug Use*

The Office of National Drug Control Policy reports that 60 to 83 percent of inmates have used drugs at some stage of their life – two times the estimated drug use found among the general U.S. population. Sixty-three percent of the individuals entering prison had been charged with drug-related offenses, and 73 percent reported using illicit drugs during their lifetime. Injection drug use decreases in prison: however, those who continue to use needles are more likely to do so in an unsafe manner. One quarter of prisoners have used needles to inject drugs; nearly half have shared needles. The scarcity of sterile drug paraphernalia leads to needle sharing and increases the likelihood of HIV transmission.

### *Tattooing and Body Piercing*

Tattooing also contributes to the spread of HIV in correctional facilities. Incarcerated populations use hollowed out ballpoint pins and pen ink to create tattoos. They may use the same pin to create tattoos on multiple prisoners. A report from California suggests that tattooing was the most prevalent HIV risk-related activity among incarcerated men. Equally risky is body piercing.

### *Sexual Activity*

Sexual activity between inmates, including consensual sex, rape, gang rape, and survival sex, is not uncommon and puts incarcerated populations at exceptional risk of HIV transmission. The Federal Bureau of Prisons reports that up to 30 percent of federal inmates engage in homosexual activity while incarcerated. Recent reports suggest that between one in three and one in 10 inmates is sexually abused in the U.S. prison system. Numerous studies have found that condoms are an

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essential component of HIV prevention among all populations. Yet only four percent of jails make condoms available to inmates. Ten percent of prisons allow condom distribution.

### Populations At Risk

Communities of color are over-represented in the incarcerated population. Not unlike the communities most affected by HIV, incarcerated people of color are characterized by disproportionate rates of poverty, injection drug use, high-risk sexual activity, and poor access to preventive and primary health care.

Incarcerated women are three times as likely as incarcerated men to be living with AIDS. In the general population, these rates are reversed: men are four times as likely as women to be living with AIDS. One-third of incarcerated women report injection drug use. Additionally, incarcerated women are more likely to have participated in high-risk HIV behavior ranging from unprotected sex to sex work and/or substance use. In a recent study, 57 newly incarcerated women in the rural South were interviewed about their behavior, and almost all of them (97 percent) reported sexual activity with an injection drug user.

In the United States, African-Americans are 10 times more likely than Caucasians to be infected with HIV. Approximately 75 percent of two million people in prisons and jails are Latino or African-American. African Americans are almost eight times more likely to be incarcerated in local jails than their Caucasian counterparts. Women of color comprise 60 percent of the female incarcerated population. The Centers for Disease Control and Prevention (CDC) finds that Latino and African-American women of childbearing age now constitute 75 percent of female AIDS cases.

### HIV Prevention, Education, and Testing

#### *HIV Prevention and Education*

The Centers for Disease Control and Prevention strongly supports HIV prevention education for incarcerated populations. HIV education programs are effective because inmates can receive information about HIV transmission and safer sexual and drug using practices from respected members of their community. Recent evidence suggests that peer-led education programs are particularly effective in reaching incarcerated populations with practical information about HIV/AIDS transmission.

#### *Testing and Counseling*

Voluntary HIV testing and counseling is a necessary component of any HIV prevention program. The World Health Organization (WHO) supports the provision of voluntary HIV testing for incarcerated populations that includes pre-and post-test counseling. Both the U.S. Department of Justice and WHO oppose mandatory HIV testing of incarcerated populations, finding it unethical, ineffective, and an invasion of privacy. Research has found that incarcerated populations are less likely to participate in HIV testing as a result of their skepticism regarding the confidentiality of test results.

Testing policies for incarcerated populations vary from state to state. Although HIV testing is mandatory upon release from federal prisons, only three state prison systems require testing prior to release. Nineteen states require that incarcerated populations be tested for HIV upon entering prison. State prison systems may also selectively test for HIV according to specific circumstances. In 47

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states, tests are performed if there is a clinical indication of HIV/AIDS. In 39 states, HIV tests are administered after an inmate has been involved in a high-risk incident. Routine tests, in which HIV testing occurs unless the inmate refuses, also occur in several locations around the country. Most city and county jail systems have no mandatory testing; while HIV testing does occur, the circumstances vary.

### *Confidentiality*

Confidentiality of medical information in the prison setting is virtually impossible to maintain. Where quarantines exist, confidentiality cannot. Persons other than medical staff members may handle medical records, and medical personnel may not be meticulous about protecting privacy. Once information is released in a prison, it travels rapidly. Many people in the prison setting believe they have a particular need to know who in the institution is infected with HIV. It has been argued that prisoners have a greater need for privacy than those outside because they live in a closed community where violence is common.

Prisons policies vary in regard to disclosure of test results. Fear of disclosure and its consequences may discourage voluntary testing. Prison officials use HIV antibody test results to make decisions about housing and segregation, work assignment, and visiting privileges, among other matters. It has been common practice to bar inmates with HIV (or AIDS) from kitchen work. In some jurisdictions, results of HIV tests go directly to the prison staff. In 1988, California voters passed Proposition, 96, an initiative authored by the sheriff of Los Angeles County requiring prison and jail physicians to give lists of known or suspected HIV-infected prisoners to custodial staff members. Such policies reflect the fear of misinformation prevalent in many prisons, and undermine the message and practice of universal precaution.

### Prevalence of HIV/AIDS Among Youth

Young people in the United States are at persistent risk for HIV infection. This risk is especially notable for youth of minority races and ethnicities. Continual HIV prevention outreach and education efforts, including programs on abstinence and on delaying the initiation of sex, are required as new generations replace the generations that benefited from earlier prevention strategies. CDC defines young/youth as persons who are 13-24 years old.

In the year 2004 the statistics revealed:

- An estimated 4,883 young people received a diagnosis of HIV infection or AIDS, representing about 13 percent of the persons given a diagnosis during that year.
- HIV infection progressed to AIDS more slowly among young people than among all persons with in whom HIV infection did not progress to AIDS with 12 months after a diagnosis of HIV infection:
  - 81 percent of persons aged 15-24
  - 70 percent of persons aged 13-14
  - 61 of all persons
- African Americans were disproportionately affected by HIV infection, accounting for 55 percent of all HIV infections reported among persons aged 13-24.
- Young men who have sex with men (MSM), especially those of minority races or ethnicities, were at high risk for HIV infection. In seven cities that participated in CDC's Young Men's

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Survey during 1994-1998, 14 percent of African American MSM and 7 percent of Hispanic MSM aged 15-22 were infected with HIV.

- During 2001-2004, in the 33 states with long-term confidential name-based HIV reporting, 62 percent of the 17,824 persons 13-24 years of age given a diagnosis of HIV/AIDS were males, and 38% were females.

### AIDS in 2004

- An estimated 2,217 young people received a diagnosis of AIDS (5.1 percent of the estimated total of 42,514 AIDS diagnoses), and 232 young people with AIDS died.
- An estimated 7,761 young people were living with AIDS, a 42 percent increase since 2000, when 5,457 young people were living with AIDS.
- Young people for whom AIDS was diagnosed during 1996-2004 lived longer than persons with AIDS in any other age group except those younger than 13 years. Nine years after receiving a diagnosis of AIDS, 76 percent of those 13-24 were alive, compared with 81 % of those younger than 13 years of age; 74% of those aged 35-44; 63% of those aged 45-54; and 53% of those aged 55 and older.
- Since the beginning of the epidemic, and estimated 40, 059 young people have received a diagnosis of AIDS, and an estimated 10,129 young people with AIDS had died. They accounted for about 4% of the estimated total of 944,306 AIDS diagnoses and 2% of the 529,113 deaths of people with AIDS.

### Risk Factors and Barriers To Prevention

#### Sexual Risk Factors

##### Early Age at Sexual Initiation:

According to the CDC's Youth Risk Behavioral Survey, many young people begin having sexual intercourse at early ages: 47 % of high school students have had sexual intercourse, and 7.4% of them reported first sexual intercourse before age 13. HIV/AIDS education needs to take place at correspondingly young ages, before young people engage in sexual behaviors that put them at risk for HIV infection.

##### Heterosexual Transmission:

Young women, especially those of minority races or ethnicities, are increasingly at risk for HIV infection through heterosexual contact. According to data from a CDC study of HIV prevalence among disadvantaged youth during the early to mid-1990s, the rate of HIV prevalence among young women aged 16-21 was 50% higher than the rate among young men in that age group. African American women in this study were 7 times as likely as white women and 8 times as likely as Hispanic women to be HIV-positive. Young women are at risk for sexually transmitted HIV for several reasons, including biologic vulnerability, lack of recognition of their partner's risk factors, inequality in relationships, and having sex with older men who are more likely to be infected with HIV.

##### Men having Sex with Men:

Young men having sex with men are at high risk for HIV infection, but their risk factors and the prevention barriers they face differ from those of persons who become infected through heterosexual contact. According to the CDC study of 5,589 men having sex with men, 55% of young men (aged



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15-22) did not let other know they were sexually attracted to men. Men having sex with men who do not disclose their sexual orientation are less likely to know it. Further, because Men having sex with men who do not disclose their sexual orientation are likely to have one or more female sex partners. Men having sex with men who become infected may transmit the virus to a women as well as to men. In a small study of African American men having sex with men college students and nonstudents in North Carolina, the participants had sexual risk factors for HIV infection, and 20% had a female sex partner during the preceding 12 months.

### Sexually Transmitted Diseases (STDs)

The presence of an STD greatly increased a person's likelihood of acquiring or transmitting HIV. Some of the highest STD rates in the country are those among young people, especially young people of minority races and ethnicities.

### Substance Abuse

Young people in the United States use alcohol, tobacco, and other drugs at high rates. Both casual and chronic substance users are more likely to engage in high-risk behaviors, such as unprotected sex, when they are under the influence of drugs or alcohol. Runaways and other homeless young people are at high risk for HIV infection if they are exchanging sex for drugs or money.

### Lack of Awareness

Research has shown that a large proportion of young people are not concerned about becoming infected with HIV. Adolescents need accurate, age-appropriate information about HIV infection and AIDS, including how to talk with their parents and other trusted adults about HIV and AIDS, how to reduce or eliminate risk factors, how to talk with a potential partner about risk factors, where to get tested for HIV, how to use a condom correctly. Information should also include the concept that abstinence is the only 100% effective way to avoid infection.

### Poverty and Out-of-School Youth

Nearly 1 in 4 African American and 1 in 5 Hispanics live in poverty. The socioeconomic problems associated with poverty, including lack of access of high-quality health care, can directly or indirectly increase the risk of HIV infection. Young people who have dropped out of school are more likely to become sexually active at younger ages and fail to use contraception.