Issues Women
Groups

CDC UPDATE

CENTERS FOR DISEASE CONTROL AND PREVENTION

NCHSTP National Center for HIV, STD & TB Prevention

HIV/AIDS and Women in the United States:

Excerpts from the HIV/AIDS Surveillance Report

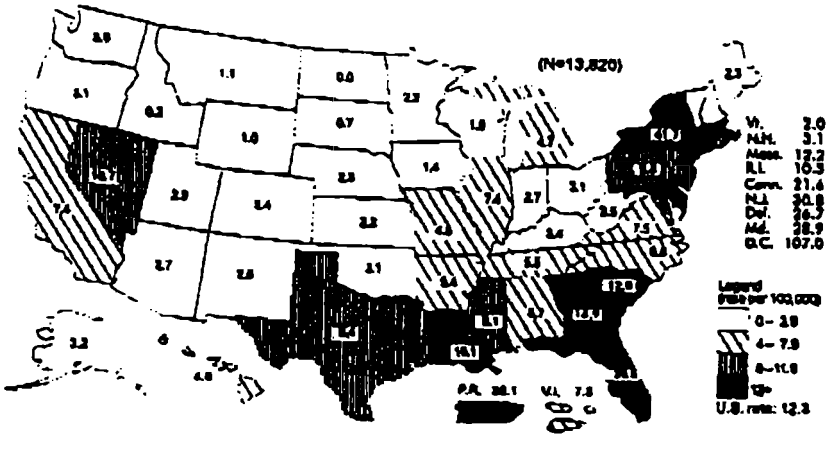
The proportion of total AIDS cases attributable to women is increasing. From 1985 through 1996, the proportion of adolescent/adult women reported to the Centers for Disease Control and Prevention (CDC) with AIDS increased steadily each year, from 7% to 20% of reported cases. Of the total cases reported among women, the proportion attributable to heterosexual contact is also increasing. In 1994, AIDS cases in women attributable to transmission via heterosexual contact surpassed the number attributable to transmission via injecting drug use. HIV infection is the third leading cause of death among women ages 25-44; the leading cause of death among Black women in this same age group. This fact sheet presents data from the 1996 year-end edition of the CDC *HIV/AIDS Surveillance Report.*

Magnitude of the Problem

From June 1982 through December 1996, CDC had received reports of 581,429 cases of AIDS among persons of all ages and racial/ethnic groups in the United States, including 85,500 cases (15%) among women.

In 1996, 69,151 AIDS cases were reported to CDC and of these cases, 13,820 (20%) were reported among women. Over 80% of these cases were reported from Metropolitan Statistical Areas with populations greater than 500,000. Black and Hispanic women have been disproportionately affected, accounting for 59% and 19% of women reported in 1996. AIDS rates for Black and Hispanic women are 17 and 6 times higher than for white women (61.7 and 22.7 and 3.5 per 100,000, respectively). Women under 30 accounted for 22% of reported cases in 1996. Because the time from initial infection with HIV to the development of AIDS can be long and variable, many of these young women acquired their infections in their teens and early twenties. The states with the highest AIDS rates in 1996 were New York , New Jersey, Florida, Maryland, and Delaware. The states with the highest number reported were New York (3249), Florida (1825), New Jersey (1050), California (940), and Texas (722).

Figure 1. Female adult/adolescent AIDS annual rates per 100,000 population, for cases reported in 1996, United States



Suggested Reading:

CDC. "Update: Trends in AIDS Incidence, Deaths, and Prevalence—United States, 1996." *MMWR* 1997;46:165-73.

CDC. "AIDS Associated with Injecting-Drug Use—United States, 1995." *MMWR* 1996;45:392-8.

CDC. "Update: AIDS Among Women—United States, 1994." *MMWR* 1995;44:81-4. Erratum: *MMWR* 1995;44:135.

Kennedy MB, Scarlett MI, Duerr AC, Chu SY. "Assessing HIV Risk among Women Who Have Sex with Women: Scientific and Communication Issues." *JAMWA* 1995;50:103-7.

Ellerbrock TV, Bush TJ, Chamberland ME, et al. "Epidemiology of Women with AIDS in the United States, 1981 through 1990: A Comparison with Heterosexual Men with AIDS." *JAMA* 1991;265:2971-5

Selik RM, Chu SY, Buehler JW. "HIV Infection as Leading Cause of Death Among Young Adults in U.S. Cities and States." *JAMA* 1993;269:2991-4.

For further analysis of surveillance and trends in HIV/AIDS, consult the *HIV/AIDS Surveillance Report*. The most recent issue of the report, as well as many other resources, can be obtained by contacting

The Centers for Disease Control and Prevention's Website: http://www.cdc.gov

CDC National AIDS Clearinghouse
P.O. Box 6003
Rockville, MD 20849-6003
1-800-458-5231
aidsinfo@cdcnac.org
http://www.cdcnac.org

If you have questions concerning HIV infection, AIDS, or information in this update, please call

CDC National AIDS Hotline
1-800-342-2437
1-800-344-7432 (Spanish)
1-800-243-7889 (Deaf)

CDC

CDC Press Summary - February 28, 1997

Contact:
CDC Press Office (404) 639-3286

1996 HIV/AIDS Trends Provide Evidence of Success in HIV Prevention and Treatment

AIDS Deaths Decline for First Time

For the first time in the epidemic, there has been a marked decrease in deaths among people with AIDS. The decline in deaths is likely due to both the slowing of the epidemic overall and to improved treatments over the past several years, which have lengthened the lifespan of people with AIDS. While it is too soon to determine the impact protease inhibitors will have on these trends, these drugs promise to further lengthen the lifespan of individuals living with HIV. Additionally, the estimated number of people diagnosed with AIDS each year (AIDS incidence) continued to slow, with an increase of only 2% in 1995, reflecting in part the ongoing success of prevention efforts.

As treatment advances continue to improve survival, we will face a number of key challenges:

- First, if the number of new HIV infections each year (HIV incidence) remains stable or increases, and deaths continue to decrease, there will be an increasing number of people living with HIV and AIDS. Additional resources will likely be needed for services, treatment, and care.
- Second, to continue to provide the necessary data to plan, direct, and evaluate HIV prevention efforts, HIV/AIDS surveillance systems must adapt to changes in medical practices which increase survival following diagnosis of HIV or AIDS. If progression to AIDS is successfully delayed for an increasing number of individuals, AIDS case reports may no longer provide a reliable indication of trends in the epidemic and will underrepresent the need for treatment services. Surveillance systems will therefore need to improve methods to monitor the number of individuals with HIV infection.
- And finally, as we continue to work to develop better treatment options, we must not lose sight of the fact that preventing HIV infection reduces the number of people who need to undergo complex, costly treatment regimens. Prevention remains our best and most cost-effective approach for bringing the HIV/AIDS epidemic under control and saving lives.

The 1996 Data: Trends in Case Reports, Estimated AIDS Incidence and Deaths

AIDS Cases Reported through December 1996

- 581,429 people with AIDS have been reported to date.
- Of these, 488,300 (84%) were men, 85,500 (15%) were women, and 7,629 (1%) were children.
- In 1996, blacks accounted for a larger proportion of AIDS cases (41%) than whites for the first time.
- The proportion of female AIDS cases continued to increase. In 1996, women accounted for 20% of newly reported AIDS cases.

Trends in AIDS Incidence through 1995:

Between 1994 and 1995, the estimated number of people diagnosed with AIDS (AIDS incidence) increased 2%, from 61,200 to 62,200. These estimates reflect a slowing in the growth of the epidemic, with an average of 15,200 people diagnosed each quarter between January 1994 and June 1996. Hopefully, with a combined strategy to prevent new infections and to provide early diagnosis and treatment for people who are infected, AIDS incidence will soon begin to decline.

During 1995:

- AIDS incidence rates per 100,000 people in the population were 7 times higher among blacks (99) than among whites (15), and three times higher among Hispanics (50) than among whites.
- AIDS incidence rates were much lower among women (10) than among men (48).
- AIDS incidence remained relatively constant among men who have sex with men (decline of 2%) and IDUs (increase of 2%), but continued to increase substantially among people infected heterosexually (17% increase).

Trends in Mortality:

In 1995, the CDC AIDS surveillance system documented approximately 50,000 AIDS deaths. 1995 marked the smallest increase to date in AIDS deaths. During the first 2 quarters of 1996, the estimated number of AIDS deaths (22,000) was 12% less than the estimated number of AIDS deaths during the first two quarters of 1995 (24,900), marking the first decline in AIDS deaths since the beginning of the epidemic. Not surprisingly, trends in AIDS deaths closely parallel trends documented recently in AIDS incidence. AIDS deaths have not declined among women or among heterosexuals.

- AIDS deaths declined in all four regions of the country:
- (Northeast 15%, South 8%, Midwest 11%, West 16%).
- Deaths declined among men by 15% but increased among women by 3%.
- Deaths declined among MSM by 18% and 6% among IDUs, but increased 3% among heterosexuals.
- Deaths declined among all racial/ethnic groups, but declines were greater among whites (21%) than among blacks (2%) and Hispanics (10%).
- HIV infection remains the leading cause of death among 25-44 year olds, accounting for 19% of deaths in this age group.

Trends in AIDS Prevalence:

The number of people living with AIDS continues to increase. As of mid-1996, an estimated 223,000 people were living with AIDS.

- AIDS prevalence has increased 10% since mid-1995.
- The largest number of people living with AIDS by risk category are MSM (44%), followed by IDU (26%), and heterosexuals (12%).
- The greatest proportionate increase in AIDS prevalence from mid-1995 to mid-1996 occurred among those infected heterosexually (19%), while the greatest increase in the number of people living with AIDS occurred among MSM (5,100).

AIDS Action council

AIDS IN AMERICA

- As of February 28, 1997, 581,429 Americans have been diagnosed with AIDS since 1981: 488,300 (84%) men; 85,500 (15%) women; and 7,629 (1%) children
- 365,000 American lives have been lost to AIDS since 1981
- An average of 100 Americans are diagnosed with AIDS daily
- An average 100 to 150 men, women and children become infected with HIV every 24 hours
- HIV infection remains the leading cause of death among 25-44 year olds, accounting for 19% of deaths in this age group
- One-quarter of new HIV infections in the United States occur among young people under age 21

Centers for Disease Control and Prevention, 1996

- Over 76% of women with HIV are women of color
- In the first 6 months of 1996, there was a 3% increase in AIDS deaths among women
- In the first 6 months of 1996, women accounted for 20% of newly reported AIDS cases.

CDC UPDATE NCHSTP March 1997

AIDS Trends Among Women Through December 1996

Trends in AIDS Cases

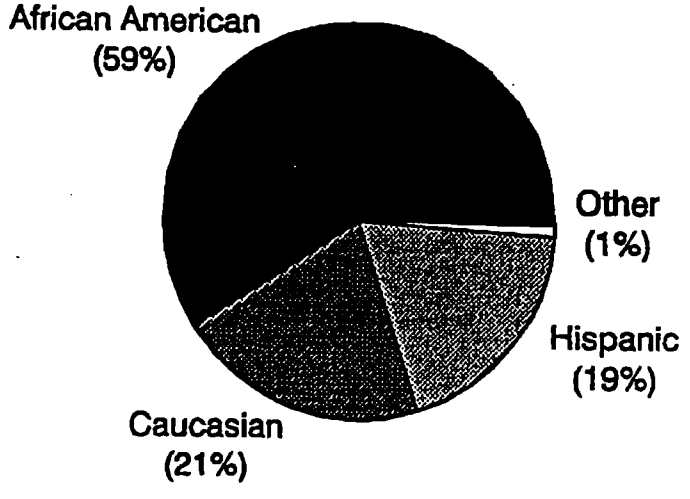
581,429 people with AIDS have been reported to date. Of these, 488,300 (84%) were men, 85,500 (15%) were women, and 7,629 (1%) were children.

There were 13,820 women reported with AIDS in 1996. While the majority of AIDS cases continue to be among men, in 1996, women accounted for an all-time high of 20 percent of adults and adolescents reported with AIDS.

The proportion of female adult and adolescent AIDS cases increased from 7 percent of the annual total in 1985 to 20 percent in 1996. In contrast, the proportion of male adult and adolescent AIDS cases decreased from 93 percent of the annual total in 1985 to 80 percent in 1996.

Preliminary analysis indicates that of the 13,820 women reported with AIDS in 1996, 8147 (59%) are African American, 2,888 (21%) are Caucasian, 2,629 (19%) are Hispanic, 81 (0.6%) are Asian/Pacific Islander, and 41 (0.3%) are American Indian/Alaska Native.

Women Reported with AIDS in 1996



Women are accessing hotlines

Use of Federal HIV/AIDS Treatment Information Resources by HIV-Infected and HIV-Affected Women

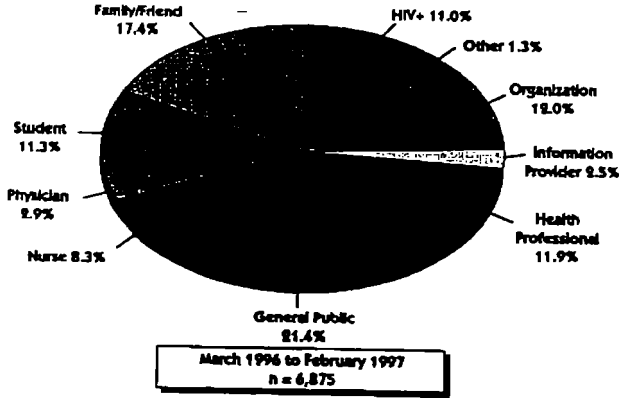
Corey J. Brown, HIV/AIDS Treatment Information Service and AIDS Clinical Trials Information Service
Cynthia G. Cadden, HIV/AIDS Treatment Information Service and AIDS Clinical Trials Information Service

Analysis of gender and requester types recorded by the staff of the HIV/AIDS Treatment Information Service (ATIS) and the AIDS Clinical Trials Information Service (ACTIS) indicates that women utilized these Federal information resources more as caregivers than as patients. The proportion of HIV+ female callers to ACTIS was lower than the rate of HIV infection among women in the United States. In addition, more than twice as many women as men requested information for a family member or friend.

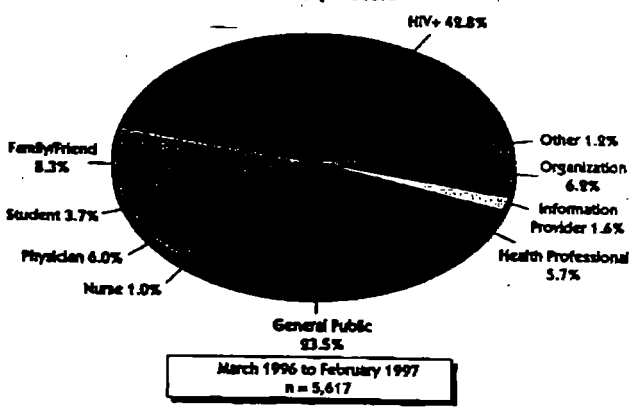
BACKGROUND

ATIS and ACTIS are federally sponsored services that provide HIV/AIDS treatment information and clinical trials information, respectively, via toll-free telephone numbers. The largest portion of requests comes from people directly affected by HIV—those who are HIV+ themselves or whose loved ones are HIV+. Health professionals, community-based organizations, students, and people with a general interest in HIV/AIDS also request information from ATIS and ACTIS. Callers are not asked their gender or their HIV status; data collection is passive, meaning that reference specialists infer information based on the context of the discussion (for instance, "My CD4+ count is. . . ." or "My son was diagnosed. . . ."). Reference specialists record anonymous data about requesters to keep track of what the callers want to know and how the services can best meet their needs.

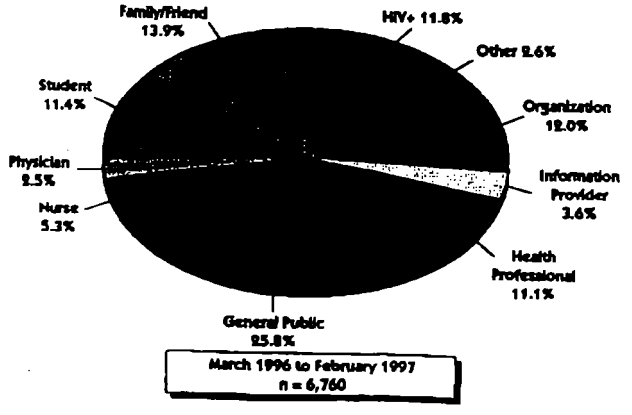
ATIS Requester Types
Female Requesters



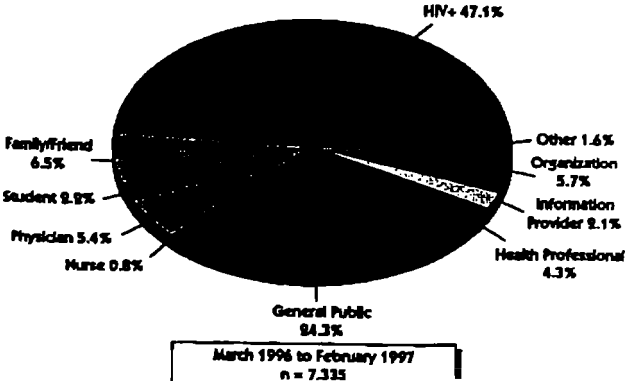
ATIS Requester Types
Male Requesters



ACTIS Requester Types
Female Requesters



ACTIS Requester Types
Male Requesters



1995 - National Institutes of Health
Somewhat dated. New initiatives
include microbicides, etc.

National Institute of Allergy and Infectious Diseases

Women and HIV Infection

AIDS is the fourth leading cause of death for women aged 25 to 44 in the United States. In fact, the disease is the primary cause of death in women of this age group in 15 major U.S. cities.

The number of women infected by HIV is steadily increasing. As of Dec. 31, 1994, more than 58,000 AIDS cases have been reported among adult and adolescent women. The majority are black or Hispanic. Epidemiologists believe that the actual number of women with AIDS is greater because many women whose immune systems are severely compromised by HIV infection remain undiagnosed and unreported. CDC revised the definition of AIDS in January 1993 to add three new conditions, one of which is specific to women--invasive cervical cancer. The other conditions--bacterial pneumonia, pulmonary tuberculosis and having counts of CD4+ T cells, the immune system cells infected by HIV, of 200 or less--also are important for women.

NIAID Epidemiologic Studies of Women With HIV/AIDS

For the National Institute of Allergy and Infectious Diseases (NIAID), HIV infection in women is a major research focus. NIAID supports studies of the natural history, symptoms and transmission of HIV infection in women to learn more about the disease and to design better clinical trials of potential therapies and vaccines. Such studies are carried out in the United States and in 14 other countries: Brazil, Dominican Republic, Jamaica, Mexico, Haiti, India, Kenya, Malawi, Rwanda, Senegal, Thailand, Uganda, Zambia and Zaire.

More Information Needed

In December 1990, the U.S. Public Health Service (PHS) sponsored a national conference on women and HIV infection. A steering committee, which included women living with HIV as well as health and social service providers, made recommendations to the PHS that have helped guide NIAID's research. The conference attendees noted the increasing number of women with HIV infection and underscored the need for targeted studies of women. Recognizing this need, NIAID began several HIV/AIDS studies focusing on women, as well as encouraging women to enroll in the institute's clinical trials of promising HIV/AIDS therapies.

The Women's Interagency HIV Study (WIHS) and the HIV Epidemiology Research Study (HERS)

WIHS is a large long-term study that explores the natural history of HIV infection in U.S. women. Specifically, WIHS researchers comprehensively investigate the impact of HIV among women aged 13 and older. The primary research areas of WIHS are:

protected heterosexual intercourse with an infected partner, women appear to be more easily infected than men.

The NIAID-supported Heterosexual AIDS Transmission Study (HATS) was, in part, a collaborative project with CDC. HATS began in December 1988 and ended in 1994. One HATS study, conducted at the State University of New York in Brooklyn, examined the risk factors influencing heterosexual transmission of HIV to women. In pursuit of an explanation for the higher risk of HIV transmission among female cocaine users, these HATS researchers found that knowledge, perceptions and reported behavioral changes did not differ between cocaine-using women and non-users in an inner-city group. However, the cocaine users had more sexual partners and more cases of sexually transmitted diseases (STDs).

In the same HATS study, scientists found higher rates of HPV infection in a group of younger inner-city women than in older women with comparable sexual practices. More than 40 million Americans are infected with HPV, which causes genital warts, one of the most common STDs in the United States. Age-related differences in younger women's cervical tissue can facilitate HPV infection and may heighten susceptibility to infection with HIV.

The risk of becoming infected, or infecting others, with HIV is substantially increased if one has an STD. A later study at SUNY Brooklyn is tracking the acquisition of STDs in women with HIV infection and following the natural course of their HIV disease. This study, called the Women's AIDS Cohort Study (WACS), has enrolled 450 HIV-infected and high-risk uninfected women. NIAID merged WACS with WIHS in June 1994.

WACS investigators found that women with HIV, once diagnosed, reduce their number of sex partners, increase condom use and show a trend towards stopping use of illegal drugs.

Controlling STDs is crucial to preventing the spread of HIV infection. NIAID is comparing different approaches of detection and treatment of STDs to identify those methods with the greatest potential for reducing HIV transmission.

Additionally, NIAID supports basic research that will lead to the development of topical antimicrobial agents, compounds that might be used safely and effectively in the vagina to kill viruses. The institute also supports studies assessing the ability of nonoxynol-9, an agent found in many spermicides, to destroy the bacteria that cause gonorrhea and chlamydia.

Symptoms and Diagnosis

Because many women do not perceive themselves at risk for HIV infection, symptoms that could serve as warning signals of infection may go unheeded. Recurrent yeast infections (vaginal candidiasis) often occur in the early stages of HIV infection in women. Pelvic inflammatory disease, abnormal changes or dysplasia in cervical tissue that precede cancer, genital ulcers, genital warts and severe mucosal herpes infections also may occur among women with HIV infection. These symptoms should signal doctors to offer women HIV testing accompanied by counseling.

The Patient Care Committee of the ACTG has evaluated other possible barriers that may prevent women from participating in clinical trials. They found many women with HIV lack access to health care and have few options to support themselves and their children. The Women, Children and People of Color Interest Group of CPCRA also has explored this issue. Researchers in both networks work closely with church groups, social workers and others at the grassroots level to find solutions to these problems.

Additionally, funds are available to clinical trials sites for ancillary services to do gynecologic assessments and to help provide child care, transportation and linkage to social services when needed. Some measures of success of such efforts have been seen in ACTG and CPCRA. Since 1986, women's overall enrollment has climbed greatly. In 1994, women accounted for 22 percent of the adults in CPCRA, and 18 percent of those in ACTG.

Antiretroviral Therapies

Treatment for people with HIV infection consists of the use of one or more of several antiretroviral drugs. Treatment guidelines are similar for women who are not pregnant and for men with HIV infection. Studies have shown that the drug zidovudine (AZT) is as beneficial to women as men and should be considered by physicians once a person's number of white blood cells, called CD4+ T cells, drops below 500 cells per cubic millimeter of blood. Limited data are available on the use of the drug didanosine (ddI) and other antiretroviral therapies in women.

Ongoing studies will determine the effects of antiretroviral drugs on pregnant women and their children. Obstetricians from the ACTG Women's Health Committee work closely with the ACTG's Pediatric Committee to develop trials for pregnant women. Thus far, AZT seems to be well-tolerated when used by pregnant women and has not caused malformations, fetal distress or premature birth in their babies.

Other Studies

Two ACTG studies address cervical dysplasia in women. One trial is comparing topical vaginal 5-fluorouracil maintenance therapy to standard therapy to prevent the recurrence of cervical dysplasia in women with HIV infection.

Treatments to fight several gynecologic conditions including genital ulcer disease, fungal infections and pelvic inflammatory disease are under consideration for future ACTG clinical trials. NIAID-funded sites receive resources and training for clinical staff to conduct routine gynecologic exams. Plans to include nested studies, as components of a larger study, are under way to allow investigators to collect additional information on participants' gynecologic conditions.

CPCRA recently completed recruitment of a trial specifically for women. This protocol is designed to determine if fluconazole can prevent yeast infections of the mouth, throat and vagina of women with HIV infection. Candida infections of the mucous membranes may represent the earliest recognized and most common opportunistic infections afflicting women with HIV infection. These infections, common and

Strategies to Prevent Perinatal Transmission

As more women of childbearing age become infected with HIV, experts expect a concurrent rise in the number of infected children.

The results from ACTG 076 have shown that AZT reduced the risk of transmission of HIV from infected pregnant women to their newborns by two-thirds. HIV-infected women in their 14th to 34th week of pregnancy who did not need AZT as part of their medical care received either AZT or placebo during pregnancy and labor. At birth, infants in the study continued their mother's treatment until six weeks of age. AZT produced no serious side effects, but long-term follow-up of the infants and mothers is ongoing to learn more about the risks and benefits of treatment.

Pregnant women are also participating in an NIAID clinical trial of two experimental AIDS vaccines. Investigators will assess whether the vaccines will reduce the amount of virus present in the pregnant women and improve their health, while simultaneously stimulating antibodies that will prevent the women from passing HIV infection to their babies.

Another strategy to prevent transmission is to administer antibodies to pregnant women in the form of immune globulin injections to bolster the immune system. A three-year study, sponsored by NIAID, NICHD and the National Heart Lung and Blood Institute (NHLBI), is evaluating HIVIG, an immunoglobulin preparation containing large quantities of antibodies to HIV. Participants also receive AZT. A control group in the study will receive IVIG, an intravenous immunoglobulin preparation that contains many other types of antibodies, and AZT. In an earlier study on chimpanzees, HIVIG prevented infection after the animals were exposed to the virus.

For More Information About Trials

NIAID provides major support for the AIDS Clinical Trials Information Service, at 1-800-TRIALS-A, to advise callers of the status of HIV clinical trials being conducted throughout the United States. The AIDS Treatment Information Service at 1-800-HIV-0440 provides information about federally approved treatment guidelines. Both services operate from 9 a.m. to 7 p.m. Eastern Time, Monday through Friday. English- and Spanish-speaking specialists are available.

NIAID, a component of the National Institutes of Health, supports research on AIDS, tuberculosis and other infectious diseases as well as allergies and immunology.

Prepared by:
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Public Health Service
U.S. Department of Health and Human Services

February 1995

Fact Sheet

U.S. Public Health Service's Office on Women's Health

June, 1998

WOMEN AND HIV/AIDS

Women are one of the fastest growing groups infected with the human immunodeficiency virus (HIV), and the disease is becoming increasingly common among younger women--especially women of color. For example, in New York City new cases of AIDS in women--reflecting HIV infection several years ago--now exceed new cases of AIDS in gay men. From 1994 through December 1997, of the 92,107 persons initially diagnosed with HIV infection, 26 percent were women. In 1996, AIDS became the third leading cause of death among women of reproductive age and the number one cause of death for African American women of that age. The U.S. Department of Health and Human Services (DHHS) is taking comprehensive action to address the special needs of women with HIV/AIDS and to prevent further spread of the virus to women.

SCOPE OF THE PROBLEM

Acquired immunodeficiency syndrome (AIDS) is caused by infection with human immunodeficiency virus (HIV), a virus that attacks the body's immune system. Through December, 1997, a cumulative total of 641,086 cases of AIDS among Americans of all ages were reported to the Centers for Disease Control and Prevention (CDC), including 102,383 (15%) women ages 13 and older. Through December, 1997, a cumulative total of 390,692 deaths among people with AIDS had been reported to the CDC. The estimated number of U.S. residents living with AIDS grew to 242,000 at the end of 1996, up 11% from the previous year. Many more individuals are living with HIV infection which has not yet progressed to AIDS.





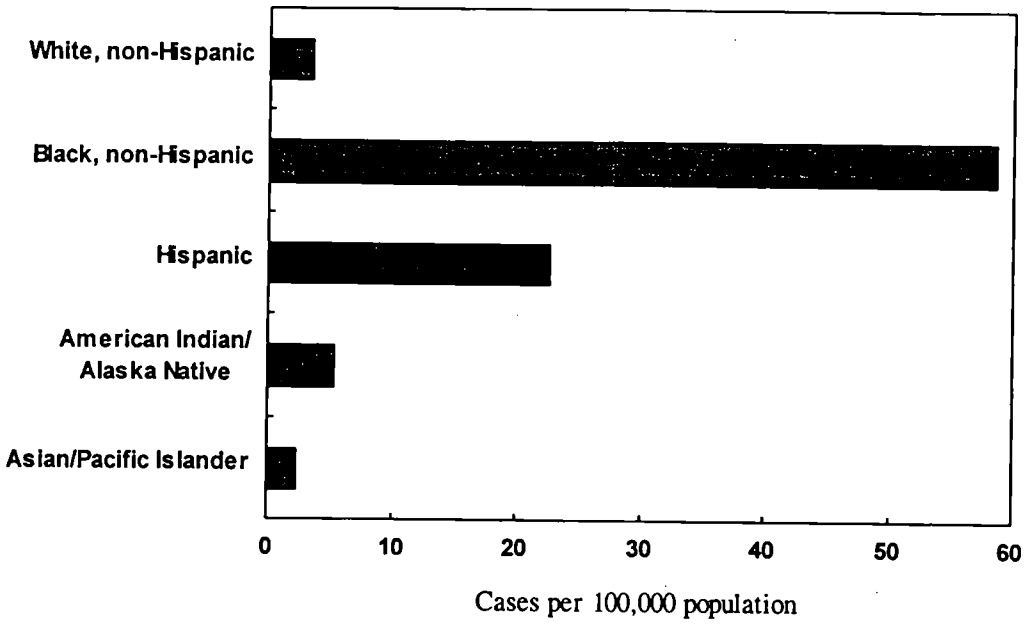

Figure 1. AIDS case rates among U.S. women ages 13 and older by race/ethnicity, reported in 1997

Source: Centers for Disease Control and Prevention. *HIV/AIDS Surveillance Report, Year-end Edition 1997; 9(2).*

An Increasing Public Health Problem Among Women

- **Women are one of the fastest growing segments of the AIDS population.** From 1985 to 1997, the proportion of total new AIDS cases reported annually in women in the United States increased from 7 percent to 22 percent.

- **Women of color are hardest hit.** By 1997, 80 percent of women diagnosed with AIDS were African Americans and Latinas. Compared with white women, the HIV incidence was 19 times higher for African American women and 7 times higher for Latinas. Infected minority women tend to be poor, young residents of urban areas, particularly in the Northeast and the South.

- **HIV/AIDS is a leading killer of women.** AIDS is the third leading cause of death among women ages 25 to 44, and the leading cause of death among African American women in this age group.

- **The AIDS death rate is declining at a slower rate among women than among men.** After years of rising death rates among women with AIDS, a decline in the number of AIDS deaths among women was reported for the first six months of 1996. Data for 1997 show a 28 percent reduction in AIDS deaths overall. However, deaths in women only declined 17 percent compared with a 30 percent drop for men.

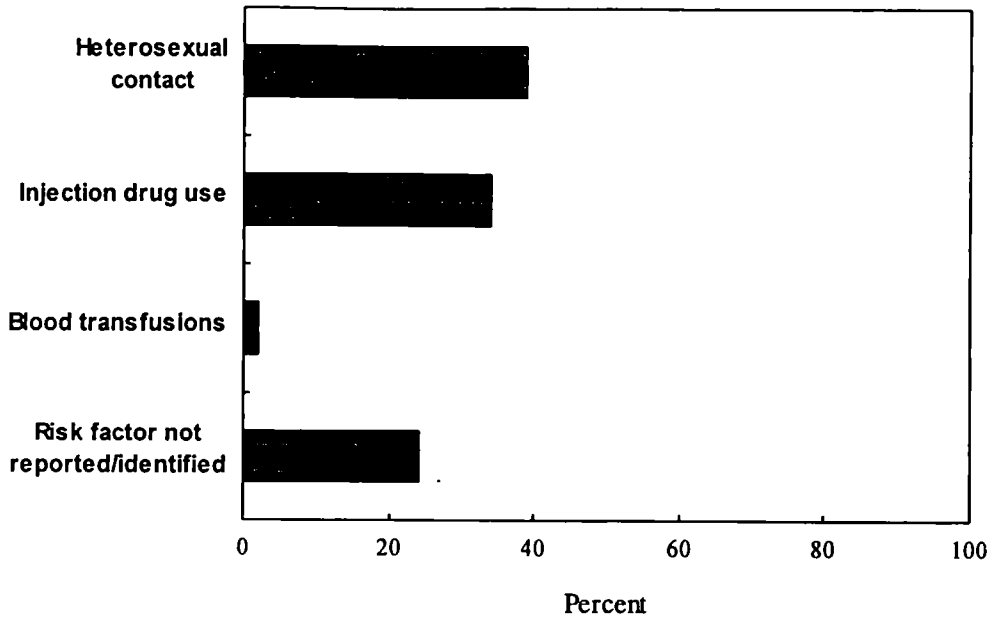

Figure 2. AIDS cases among U.S. women ages 13 and older by exposure category (1997)
Source: Centers for Disease Control and Prevention. *HIV Surveillance Report, 1997; 9(2).*

TRANSMISSION OF HIV TO WOMEN

HIV is found in the blood, semen, vaginal secretions, saliva, and breast milk of infected people. The two main ways that women become infected with HIV are through unprotected sexual contact (anal, vaginal, oral intercourse) with an infected person and injection drug use (IDU) through sharing of used needles and syringes.

Heterosexual Transmission Increasing

From 1991 to 1997, the proportion of women with AIDS who were infected through sexual intercourse with a man has been increasing, especially among adolescents and young women. In fact, the greatest increase of AIDS cases in 1997 were among heterosexually infected women born between 1970 and 1974.

Risk Factors for Heterosexual Transmission

Factors that may increase the risk of heterosexual transmission are contact with multiple sexual partners, initiation of sexual behavior at an early age, the use of drugs (especially cocaine), alcohol and stimulants that impair judgment and increase risky sexual activity, and infection with other sexually transmitted diseases (STDs). Unprotected anal intercourse also increases a woman's risk. In addition, several instances of HIV transmission by oral sex have also been reported.

Young women getting infected with HIV are often themselves using crack cocaine and, in many instances, trading sex for money or drugs.

It is important to know that unprotected intercourse with any--even one--partner who has HIV may lead to HIV transmission.

PREVENTING TRANSMISSION TO WOMEN

The best way to avoid getting HIV or another STD is not to have sex at all or to have sex only with an uninfected person who is having sex only with you. Since this may not always be possible, condoms are the best option to prevent someone from getting or giving STDs, including HIV, if used the right way each time someone has sex (anal, vaginal, oral).

Female-Controlled Methods

Because not all women can ask or persuade her partner to use a male condom, female-controlled methods for preventing HIV transmission are needed. In 1993, a female condom made of polyurethane was introduced in the U.S. market *Reality*®. The female condom may protect against HIV and STDs because it is a physical barrier. However, no clinical data is yet available to show that this method is effective. Studies of other female-controlled methods are underway. These include studies to determine the effectiveness of topical microbicides. They are products that may be capable of killing HIV or organisms or STDs.

Prevention of STDs

People who have STDs are more likely to get HIV or transmit HIV to their sex partners. Therefore, preventing and treating STDs is an important way to routinely prevent HIV. All women at risk for HIV should be tested for STDs and treated when they have an infection.

PREVENTION OF DRUG USE

Injection drug use is now the second most frequently reported risk behavior for infection with HIV. Transmission of HIV occurs most often among injection drug users who share needles and syringes. Needles and syringes can become contaminated with HIV-infected blood during injection and then sharing and reusing needles or other drug equipment (e.g., cookers, cottons) to prepare drugs. If even a tiny, unseen amount of HIV-infected blood is left on the needle or in the syringe, the virus can be transmitted to the next user.

By the end of 1997 some trends indicate the following.

- About 61 percent of all reported cases of AIDS among women were associated with injection drug use or sex with a drug injecting partner.

- The number of cases among heterosexual partners of injection drug users has increased steadily through the 1990s.

- AIDS associated with injection drug use has disproportionately increased among heterosexual minorities, particularly among African Americans.

• Of all reported AIDS cases in children, 53 percent were among children born to mothers who were either injection drug users or sex partners of injection drug users.

Several studies have examined the role that non-injection drugs can play in HIV transmission. These data indicate the high prevalence of HIV infection associated with exchanging sex for drugs and having STDs. Crack is also a problem in rural areas. As in urban areas, crack use in these rural areas were associated with exchanging sex for money or drugs and having STDs.

Agencies within DHHS support HIV counseling, testing, and referral for early intervention services for women who use drugs. Women who continue to inject drugs should be advised to use sterile syringes to prepare and to inject drugs and never reuse or share syringes and other equipment used to prepare drugs.

PERINATAL TRANSMISSION

The transmission of HIV from a pregnant woman to her fetus, known as perinatal or vertical transmission, may occur before or during birth, or after birth through breast-feeding. By 1997, an estimated 7,000 HIV-infected women give birth in the United States each year; without intervention, 15 to 30 percent of their infants (1,000 to 2,000) could become infected. The risk of perinatal transmission increases if the mother has advanced HIV disease, large amounts of HIV, or few immune system cells; is an injection drug user during pregnancy; or gives birth more than 4 hours after rupture of the fetal membranes ("water breaking"). All women who are pregnant should be offered HIV counseling and encouraged to learn their HIV status so they can make informed decisions about treatment for themselves and their infants.

Preventing Perinatal Transmission

The best way to prevent perinatal transmission is to prevent HIV infection in women. For those women already infected, studies have shown that using the drug ZDV (zidovudine; also called AZT) reduces the chance that an infant can be infected by HIV. This regimen calls for women to receive ZDV during pregnancy, labor, and delivery and to administer ZDV to their infants during the first 6 weeks after birth. Adding some of the new drug therapies may assist in further reductions. The long-term effects of ZDV for children are unknown and studies are underway to carefully monitor children who receive this therapy. Because HIV can be transmitted in breast milk, HIV-infected women in the United States are advised to bottle-feed formula substitutions to newborns.

COUNSELING AND TESTING

With the advent of new and better therapies for HIV infection, early diagnosis is important for the health of both women and their infants. All women are encouraged to adopt behaviors that can prevent HIV infection and to learn their HIV status through counseling and voluntary testing. Ideally, women should know their HIV infection status before becoming pregnant. Thus, sites serving women of childbearing age should counsel and offer voluntary HIV testing to women, including adolescents--regardless of whether they are pregnant. In 1985, a targeted approach to

counseling and testing women who were known to be at increased risk of HIV infection (e.g., injection drug users and women whose sex partners were HIV-infected or at risk for infection.) However, studies showed that many women did not realize they were at risk.

The necessary elements for HIV counseling, testing, and referral services include maintenance of confidentiality, risk assessment, prevention counseling, provision of test results, and provision of referrals. HIV counseling should be client-centered; counseling that helps the woman being tested focus on several areas of need. If the woman is infected, counseling should include information regarding the risk for transmission to infants during pregnancy, the risk for transmitting HIV to sex and needle sharing partners, and the availability of therapy. Even if a woman tests negative, counseling should help her more fully understand high-risk behavior. HIV counseling, including any written materials, should be appropriate to language, cultural, and education levels of the woman being counseled.

HIV antibody testing should be performed according to the established standards, which most often includes the use of *enzyme linked immunosorbent assay* (ELISA) for initial screening, with an additional more specific test (e.g., Western blot) for confirming reactive results. HIV infection is defined as a repeatedly reactive ELISA and a positive confirmatory test. Interpretation of HIV antibody test results depends on the client's risk behaviors. Some recently infected clients may have negative antibody tests. Indeterminate results (those which show reactive on EIA and negative on confirmatory) may represent a recent HIV infection or a false positive. Most people develop detectable HIV antibodies within 3 months of infection, the average being 25 days. In rare cases, it may take 6 months. Additional tests (e.g., viral culture, PCR, etc) to diagnose or exclude HIV infection may be required for women whose test results remain indeterminate.

SYMPTOMS AND COMPLICATIONS OF HIV INFECTION

More than half of people infected with HIV show no symptoms for more than 10 years. The first symptoms may be low-grade fever, fatigue, weight loss, and night sweats. As the number of infection-fighting white blood cells, known as CD4+ cells (also referred to as T helper cells) decreases, HIV-infected people become more prone to developing opportunistic infections (OIs). These OIs are the principal cause of death among HIV-infected persons. OIs are caused by a diverse group of bacteria, viruses, protozoa, and fungi; some of the OIs are Pneumocystis carinii pneumonia, cervical cancer, and tuberculosis.

Because many women who have HIV are also at risk for STDs, both may be present. It is important that HIV-infected women get tested for STDs and women with STDs be tested for HIV. All HIV-infected women should have complete gynecologic examinations at both their initial HIV evaluation and six months later as well as annual Pap smears to screen for cervical cancer.

DIAGNOSIS AND TREATMENT OF HIV/AIDS

Women whose HIV infections are detected early and who receive appropriate treatment live at least as long as men who have HIV. However, many women in the United States are unaware that they are at risk for HIV infection, and their health care providers may not diagnose the infection until the actual onset of AIDS or until their child becomes ill. ***It is important that all women who suspect they are at risk of HIV should be tested so that they can receive treatment.***

How HIV Reproduces

The human immunodefiency virus (HIV) infection progressively destroys white blood cells called lymphocytes, eventually causing acquired immunodeficiency syndrome (AIDS) and other diseases that result from the impaired immunity. HIV is a retrovirus, a type of virus that stores genetic information as RNA, rather than DNA. The virus first penetrates the target cell and releases the RNA, the genetic code of the virus. To reproduce, the RNA must be converted to DNA. New antiretroviral agents are now being used in an attempt to stop conversion to DNA, to prevent the virus from reproducing.

Drug Therapy

During the past two years, there have been remarkable advances in the development of antiretroviral therapy. Advances in the field have been so rapid that keeping up with them presents a formidable challenge to health care providers and patients alike. The availability of more numerous and more powerful drugs to lessen the growth of HIV has made it possible to design therapeutic strategies involving combinations of antiretroviral drugs that accomplish prolonged low levels of detectable HIV in many HIV-infected people.

One of the principles of HIV therapy is for women to receive optimal antiretroviral therapy regardless of pregnancy status. Once the decision to start this therapy has been made, treatment should be aggressive with the ultimate goal of suppressing HIV in the infected person as much as possible. Before beginning therapy, however, the patient should receive a complete history and physical, complete blood count and chemistry profile, CD4+ cell count, and viral load testing. ZDV is the only drug proven to lower the risk of HIV transmission pregnant woman to her unborn baby. If combination therapies are used, then ZDV should be included in the therapy regimen.

Like most drugs, antiretroviral drugs have potential side effects. As with any medication, patients should be aware of drug labels and warnings. They should consult both the packaging instructions and their health care providers for correct use of any prescribed drug, especially when they are taking other medications at the same time.

While the new advances in drug therapy hold great promise for longer survival and improved quality of life, their long-term benefits and the potential for developing toxic effects are not yet known. In addition, many people develop resistance to specific drugs over time, reducing the effective treatment options available to them. People using these powerful drug combinations must follow complicated regimens that typically means taking more than a dozen pills per day.

An important issue for many HIV-infected people is the high cost of new drugs, which can be more than $10,000 to $15,000 per year. Some health insurance policies have caps on costs for prescription drugs, and there is wide variability in what State drug assistance programs may cover. The federal government provides states with monies specifically for AIDS medicine through the AIDS Drug Assistance Program (ADAP).

New HIV/AIDS treatment guidelines are constantly updated and are available for adults, adolescents, children, and to HIV-infected pregnant women to reduce the risk of perinatal transmission. This information is available to consumers and health care providers through the Centers for Disease Control and Prevention.

Drug Treatment for Opportunistic Infections (OIs)

In 1997, the U.S. Public Health Service, together with the Infectious Diseases Society of America, published updated guidelines entitled " Guidelines for the use of Antiretroviral Agents in HIV infected Adults and Adolescents" for preventing HIV-related OIs. Lower rates of death from certain opportunistic infections indicate some success in their prevention and treatment.

RESEARCH ON WOMEN AND HIV/AIDS

In order to increase our understanding of the clinical course, treatment, and prevention of HIV/AIDS in women, it is critical that women be included in research, including clinical trials. In the early years of the epidemic, AIDS was primarily a disease of white homosexual men, and research focused on how HIV caused disease. Except for studies designed to prevent HIV transmission from infected mothers to their infants, there was no exclusive research focus on women, and women were not included in most clinical trials. As the number of women with HIV/AIDS grew, coupled with the new national emphasis on women's health in the United States, more research attention has been focused on women with HIV/AIDS.

Early in the epidemic, women were not enrolled in HIV-related clinical trials, resulting in limited knowledge of the action, safety, and efficacy of drug therapy for women with HIV-infection. However, subsequent trials appear to show that there are few significant differences in the safety and efficacy of HIV drugs between men and women. Studies are also under way to assess the impact of gender differences on the course of disease and effective prevention strategies for women.

Since 1989, a substantial effort has been made to include underrepresented populations, such as women, minorities, adolescents, and injection drug users, in clinical trials; women now account for 30 percent of enrollees in all NIH clinical trials. In 1993, the NIH implemented new guidelines to ensure that women and members of minorities are included in all human subjects research, including clinical trials, unless there is compelling scientific evidence to the contrary.

The FDA revised its guidelines for the clinical evaluation of drugs to help ensure that sponsors of trials for new drugs appropriately include women in their clinical studies and analyze data for differences in how men and women respond to drug therapy. The FDA has also revised a policy that had excluded most women of childbearing potential with noncritical illnesses from the

earliest phases of clinical trials. Based on recommendations made by the National Task Force on AIDS Drug Development, a group of representatives from both the private and public sectors, the FDA recommends putting a hold on such clinical trials unless they include women in their childbearing years.

The inclusion of women in clinical trials is helping scientists understand differences in women's responses to drug therapy and in the clinical course of the illness, as well as any effect of female hormones on drug therapy. However, many women face barriers to participation in clinical trials, including the time required to participate; however, more trials are including provisions for child care and transportation for their participants.

SOCIOCULTURAL ISSUES RELATED TO HIV/AIDS

Women and Violence

Physical and sexual assaults and histories of childhood abuse are disturbingly common among women with or at high risk for HIV/AIDS. Data has documented that fear of abuse and retaliation may make women reluctant to discuss possible partner infidelity or unwilling to ask their partners to use condoms. The CDC is studying whether concern about partner notification discourages women at high-risk from seeking HIV testing and counseling because of fear their partners will harm them physically.

Women's Caregiving Role

HIV-infected women often bear the responsibility of caring for children and other family members who may also be HIV-infected. Women with HIV disease often lack social support and face other challenges that interfere with their ability to adhere to treatment regimens. Many women live in isolation and fear rejection because of their HIV status.

In 1992, it was estimated that 125,000 to 150,000 children would be orphaned as a result of the deaths of more than 80,000 HIV-infected mothers. Older women are taking increased responsibility for caring for younger family members with HIV/AIDS and for children orphaned by the death of HIV-infected parents.

Access to Health Care and Other Services

Trends that show HIV infection is often diagnosed at a later stage in women than in men may be due, in part, to poor access to health care by women, especially those in minority populations. Reduced access to health care is associated with disadvantaged socioeconomic status and cultural and language barriers that limit access to prevention information and other services. To better plan for and deliver prevention programs and treatment services, systems are being developed to determine access to counseling, testing, and care. There is an increasing call for access to comprehensive, community-based systems of care for HIV-infected women, including child care, respite care, mental health services, and substance abuse treatment. Ideally, case management services would also coordinate and help maintain access to primary medical care, psychological support, and financial assistance.

MAJOR ACTIVITIES AND PROJECTS ON WOMEN AND HIV/AIDS SPONSORED BY THE DEPARTMENT OF HEALTH AND HUMAN SERVICES

Consistent with its mission to protect and advance the Nation's health, the Department of Health and Human Services (DHHS) undertakes a wide range of activities to advance the understanding of HIV/AIDS and to address women-specific concerns related to the epidemic. The DHHS budget for HIV/AIDS totaled $6.4 billion in 1997.

U.S. Public Health Service's Office on Women's Health
(202) 690-7650
http://www.hhs.gov/progorg

In 1991, the Department of Health and Human Services (DHHS) established the U.S. Public Health Service's Office on Women's Health (PHS OWH) to coordinate and stimulate programs and activities across the many agencies and offices of the DHHS and to advise the DHHS Secretary and Assistant Secretary for Health on scientific, medical, ethical, and policy issues relating to women's health concerns. The PHS OWH serves as the focal point for women's health activities and programs in the Department, working with other government organizations and consumer and health care professional groups to advance women's health in the United States and internationally.

Major PHS OWH objectives include: (1) stimulating the development of effective women's health policies and programs at the national, State, and local levels; (2) strengthening and sustaining a broad range of research on the diseases and conditions that affect women; (3) promoting comprehensive and culturally appropriate prevention, diagnostic, and treatment services for women across the lifespan; (4) stimulating public and health care professional education, training, and information dissemination on women's health issues; and (5) fostering the recruitment, retention, and promotion of women in scientific careers and in the health professions.

The Director of the PHS OWH is the co-chair of the Secretary's Work Group on Women and HIV/AIDS. The Secretary's Work Group on Women and HIV/AIDS is an internal Work Group designed to provide a forum for review and discussion of the Department's agenda on women and HIV/AIDS. The Work Group is responsible for coordinating activities, creating initiatives when appropriate and providing recommendations to the Secretary regarding women and HIV/AIDS.

In addition, PHS OWH coordinates the Collaboarative Group on Women and HIV/AIDS which addresses concerns of women who are infected and affected by HIV/AIDS. This Group is comprised of representation from AIDS services organizations, advocates, community leaders, women infected with HIV/AIDS and federal representation. The Collaborative Group on Women and HIV/AIDS has four Work Groups: Research; Care/Treatment; Primary Prevention/Education; and Secondary Prevention/Education. The PHS OWH also coordinates the Young Women and HIV/AIDS Work Group.

Office of HIV/AIDS Policy
(202) 690-6550
http://www.hhs.gov/progorg

The Office of HIV/AIDS Policy (OHAP), in the Office of the Secretary, is responsible for advising the Secretary and senior Department officials on the appropriate and timely development of HIV/AIDS policy, the establishment of priorities, and the coordination of HIV/AIDS programs, initiatives and activities across the Department's agencies. The office meets regularly with professional and advocacy organizations interested in the Department's HIV/AIDS activities.

Included among the activities of the OHAP are:

- Development and coordination of the Panel on Clinical practices for Treatment of HIV Infections, which has prepared guidelines for antiretroviral treatment of HIV infection in adults and adolescents.
- Coordination of the Department's response to HIV/AIDS through the DHHS Coordinating Group on HIV/AIDS.
- Collaboration with the PHS Office on Women's Health and the Special Assistant to the Secretary for HIV/AIDS to sustain a specific focus on HIV-related issues affecting women across the spectrum of prevention, research, and care.
- Coordination of the Tri-national Workshop Developing Joint Initiatives on HIV-Affected Families for DHHS, in conjunction with Canada and Mexico.

Office of Minority Health (OMH)
800 444 6472 TDD (301) 589-0951
http://www.hhs.gov/progorg/ophs/omh

OMH coordinates DHHS efforts to improve the health of racial and ethnic populations through the development of effective health policies and programs. Issues of concern include HIV/AIDS as well as access to and financing of health services, cultural competency in health care, development of health professionals to serve minority communities, and health data issues. The OMH coordinates the DHHS-wide action plan to address the specific needs of racial/ethnic populations and women. The office's programs that include a focus on a demonstration grants project, which seeks to improve the ability of health care providers to deliver linguistically and culturally competent health services to minority populations, and another demonstration grant program to promote the development of coalitions to plan and coordinate services to address health risk factors in minority populations. The OMH also cosponsors conferences, such as one with the National Latino/a Lesbian and Gay Organization.

Office of Population Affairs (OPA)
(301) 594-4000
http://www.hhs.gov/progorg

The OPA provides leadership in population research and voluntary family planning programs and other programs aimed at women. It provides grants and training to prevent STDs, including HIV/AIDS, and to identify substance-abusing women. OPA's Family Planning Program provides reproductive and gynecologic health services, including testing and counseling regarding STDs such as HIV infection. The program trains health care providers about HIV/AIDS and also provides HIV education for the recipients of family planning services, who are primarily women. OPA's Adolescent Family Life Program includes projects that provide information about the prevention of HIV and STD/HIV testing and treatment. The Program Archive on Sexuality, Health, and Adolescence includes program and evaluation materials from 30 adolescent pregnancy prevention and STD/HIV/AIDS prevention programs.

Administration for Children and Families (ACF)
(202) 401-6984
http://www.acf.dhhs.gov

The ACF administers a wide range of Federal programs that promote the economic and social well-being of families, children, individuals, and communities. A number of these programs serve persons with HIV/AIDS.

Projects funded under the Abandoned Infants Assistance Program provide comprehensive services to women affected by HIV/AIDS and their children. These services are designed to strengthen family functioning; prevent out-of-home-placement of children, particularly those who have been perinatally exposed to HIV; and, if necessary, provide for permanency planning for children.

The University Affiliated Program funds universities, usually teaching hospitals, to provide exemplary services to people with developmental disabilities and their families. Eight of the 61 current grantee universities operate specific AIDS clinics or projects.

Agency for Health Care Policy and Research (AHCPR)
(301) 594-6662
http://www.ahcpr.gov

AHCPR's overall mission is to generate and disseminate information that improves the health care system and access to it. In carrying out its mission, the Agency works with the private sector and other public organizations to help policymakers, clinicians, and consumers to (1) determine what works best in clinical practice; (2) make better informed decisions about health care; (3) measure and improve the quality of health care; (4) monitor and evaluate the delivery of health care; (5) improve the cost-effective use of health care resources; and (6) build capacity in health services research.

AHCPR supports HIV-related health services research through its extramural grant program.

Topics of interest include research on access to care, utilization, cost of care for persons with HIV/AIDS, as well as the quality and effectiveness of health care services. In addition, the Agency manages a national sample survey of the costs and utilization of health care services by persons with HIV infection. It also makes a brochure available in several languages which provides information on the risks and benefits of ZDV therapy for HIV-infected pregnant women. Reports and the brochure are available through the AHCPR Clearinghouse at (800) 358-9295.

Centers for Disease Control and Prevention (CDC)
(404) 639-7000
http://www.cdc.gov

As the Nation's prevention agency, CDC integrates prevention science, research and practice. Through basic and laboratory research, epidemiologic research, and surveillance, along with behavioral, communications, and social science research, CDC supports a comprehensive approach to issues which impact prevention. CDC collaborates with a broad variety of governmental and non-governmental organizations, in many cases awarding grants to national organizations, state and local health departments, community-based organizations and other institutions to support prevention activities based on science. This integration of science and practice is consistent across all of CDC's Centers, Institutes, and Offices supporting prevention science activities. These include the National Center for HIV, STD and TB Prevention, the National Center for Infectious Disease (under which falls the Division of AIDS, STD, and TB Laboratory Research), the National Center for Chronic Disease Prevention and Health Promotion (under which falls the Division of Adolescent and School Health and the Division of Reproductive Health), the Office of Women's Health and the Public Health Practice Program Office (which ensures the quality of laboratory testing).

CDC's major research efforts on HIV/AIDS in women include the following:

- CDC supports a wide range of research studies on women and HIV/AIDS, including studies of female-controlled prevention methods such as the female condom and topical microbicides; behavioral research to identify factors that make women vulnerable to HIV infection; the risk of infection for women who have sex with women; and the consequences of HIV counseling and testing for pregnant women.

- CDC's ***Morbidity and Mortality Weekly Report*** disseminates guidelines for health professionals and the public.

- CDC also issues **HIV/AIDS Surveillance Reports** updating data on HIV/AIDS incidence, prevalence, and mortality.

Food and Drug Administration (FDA)
(301) 827-2410
http://www.fda.gov/fdahomepage.html

The FDA, which is responsible for approving new drugs, is developing recommendations that will ensure access for women with life-threatening diseases such as HIV/AIDS to all phases of clinical trials for drug development. Through the clinical trial process, FDA has approved the maternal use of ZDV to reduce perinatal transmission of HIV; home test kits for HIV/AIDS detection; the development of microbicides to protect against transmission of STDs, including HIV; and diagnostic tests for STDs. The FDA also regulates the labeling of products to prevent pregnancy and protect against STDs.

The FDA's Office of Women's Health supports research on virus transmission, mucosal immunity, and topical virucides. Other studies are evaluating the effect of vaccines and antiviral therapy on viral burden in an animal model of genital herpes. The office supports outreach efforts that provide health education about the prevention and treatment of HIV/AIDS and other STDs to minority women in under served communities.

Health Care Financing Administration (HCFA)
(202) 690-6726
http://www.hcfa.gov

HCFA administers the Medicare and Medicaid programs. Medicare helps to pay for health care services furnished to people ages 65 and older, people receiving Social Security disability benefits after 2 years, and people with permanent kidney failure. The Medicaid program is the largest single payer of direct medical services to 50 percent of all persons living with AIDS, including access to new combination drug therapies. Of 18 million Medicaid-eligible women, approximately 32,000 are HIV-infected, including 3,000 who are also pregnant. The number of infected women covered by Medicaid is higher because women as a group are poorer and many have children who are eligible for the Temporary Assistance for Needy Families programs. Medicaid eligibility has been expanded for pregnant women in all States to provide prenatal care, including HIV treatment, if necessary. HCFA's Maternal AIDS Consumer Information Project was created to increase patient and provider knowledge about the availability of treatments that reduce perinatal HIV transmission and Medicaid prenatal care coverage.

Health Resources and Services Administration (HRSA)
(301) 443-2216
http://www.hrsa.gov

HRSA provides leadership for support and delivery of primary and preventive health services to under served and minority women. HRSA programs related to HIV/AIDS include the following:

- The Ryan White CARE Act supports services for low-income, uninsured, or under insured persons living with HIV/AIDS who do not have adequate health insurance or other resources. The CARE Act program is founded on partnerships between the Federal Government, States, and local communities. Since 1991, when the first CARE Act grants were awarded, nearly

$2.8 billion in cumulative Federal funds have been appropriated, providing care to more than 500,000 low-income Americans living with HIV and AIDS.

- The Special Projects of National Significance program provides grants for the demonstration and evaluation of innovative models of delivering health and support services to people with HIV infection. The Women's Initiative (WIN) for HIV Care and Reduction of Perinatal HIV Transmission supports innovative HIV health care delivery models that maintain women and their children in care and provide access to ZDV therapy.

- The Rural Women and HIV project will determine needs of women in rural environments and study successful models of care. The Farm worker Women's Initiative on HIV/AIDS has organized training for Hispanic Farm worker women in several States and provides HIV outreach and education.

- HRSA and the National Institute on Drug Abuse are collaborating on a multisite longitudinal study to elucidate HIV-related service delivery and access issues for drug users of both sexes, including the special barriers faced by female drug users.

- HRSA funds a network of 17 regional AIDS Education and Training Centers in areas with a high incidence of AIDS as resources for educating and training health care professionals in preventing, diagnosing, and treating HIV-infected patients. The National Pediatric HIV Resource Center, a HRSA grantee, offers services to professionals caring for children, youth, and families affected by HIV infection.

Indian Health Service (IHS)
(301) 443-1083
http://www.tucson.ihs.gov

The IHS provides comprehensive health services for Native Americans and Alaska Natives. The IHS AIDS initiative has developed and funded AIDS prevention plans for the 12 IHS areas. IHS also supports the training of HIV patient educators/counselors and has initiated dozens of local health facilities and community-based AIDS education and intervention programs. Along with CDC, IHS has begun a seroprevalence program to determine the extent of HIV infection in its target population. The IHS Center of Excellence for HIV/AIDS, located in Phoenix, Arizona, is sponsoring a regional IHS conference on HIV and Women, planned for April 1998. IHS also sponsors support groups for HIV-infected women that are coordinated by Native American HIV case managers; conferences and training for health care workers on prevention and treatment of HIV/AIDS; and joint projects at the Center of Excellence with the NIH focusing on women, children, and high-risk groups.

National Institutes of Health (NIH)
(301) 496-5787
http://www.nih.gov

As the principal biomedical research arm of the Federal Government, NIH leads the Federal research effort on HIV/AIDS by conducting and supporting basic and clinical research on HIV, including HIV transmission and progression to AIDS; the development of drugs and vaccines to prevent and treat AIDS; and biomedical, behavioral, and social science parameters that affect prevention. Most of NIH's Institutes and Centers actively support research in the area of women and AIDS; those with the largest AIDS programs are the National Institute of Allergy and Infectious Diseases (NIAID), National Institute of Child Health and Human Development (NICHD), National Cancer Institute (NCI), National Institute of Mental Health (NIMH), and National Institute on Drug Abuse (NIDA).

In addition, the Office of AIDS Research coordinates scientific, budgetary, legislative, and policy elements of the NIH AIDS research program; NIH's Fogarty International Center coordinates NIH's role in international HIV/AIDS research and training; the Office of Alternative Medicine funds studies of alternative therapies for HIV/AIDS; and the Office of Research on Women's Health (ORWH) works to strengthen research on health conditions affecting women. NIH releases *Clinical Alerts* to disseminate clinical trials results to health professionals, patients, the media, and the public. The National Library of Medicine (NLM) supports three computerized databases: AIDSTRIALS, which provides information about AIDS-related clinical trials; AIDSDRUGS, which provides information about the agents being tested; and AIDSLINE, which contains references to the published literature on HIV/AIDS. These databases can be accessed on the Internet at: www.healthgate.com/HealthGate/MEDLINE.

Substance Abuse and Mental Health Services Administration (SAMHSA)
(301) 443-4795
http://www.samhsa.gov

SAMHSA identifies the need for women's substance abuse and mental health services, recommends policy, and coordinates activities on mental health services, substance abuse prevention, and substance abuse treatment. SAMHSA's Office for Women's Services works to ensure that the needs of women are addressed; HIV/AIDS is one of its six priority issues for women's mental health. SAMHSA's High-Risk Behavior Program is identifying the key factors and determinants needed in implementing and evaluating community-focused prevention/intervention protocols to encourage and enable individuals at risk for HIV/AIDS, specifically adolescents and women, to reduce their incidence of high-risk behaviors.

SAMHSA's Center for Mental Health Services has included "HIV/AIDS High-Risk Behavior Prevention/ Intervention Model for Young Adults/Adolescents and Women" program as part of the agency's Knowledge Development and Application Program which promotes efficient and effective service applications of research findings. SAMHSA's Center for Substance Abuse Prevention launched a public information campaign in 1996 to help delay and reduce the onset of the use of drugs among girls ages 9 to 14. The campaign is being developed in concert with the DHHS Secretary's Safe Passages initiative to empower young girls and address issues such as

unprotected sex resulting in STDs including HIV/AIDS. SAMHSA's Residential Treatment Program for Pregnant and Postpartum Women and its Residential Treatment Program for Women and their Children both provide pre- and post-test counseling for HIV/AIDS and appropriate follow up or referral, as well as educational components and outreach specifically targeted to women.

SUMMARY

The U.S. Public Health Service's Office on Women's Health, working with other agencies and offices of the U.S. Department of Health and Human Services, is committed to reversing the toll that HIV/AIDS is taking on the lives of American women. Scientists have made significant progress in understanding how HIV infection is transmitted, how it affects the body, and how to treat and prevent it. Now that women are included in studies of the natural history of HIV/AIDS and in clinical trials of AIDS therapies, increased knowledge about this disease and better ways to treat and prevent it should be forthcoming. HIV/AIDS is a critical public health problem for women today. DHHS programs have expanded to address the special needs of women, to ensure that they are a focus of research, prevention, service delivery, and education efforts in the United States.

For Further Information:

U.S. Public Health Service's Office on Women's Health
Department of Health and Human Services
200 Independence Avenue, SW, Room 730B
Washington, DC 20201
Phone: (202) 690-7650
Fax: (202) 690-7172

National Women's Health Information Center (NWHIC)
1-800-994-WOMAN (1-800-994-9662)

CDC National AIDS Hotline -- (1-800-342-2437 (English); 1-800-344-7432 (Spanish) 1-800-243-7889 (TTY) – offers confidential information to the general public 24 hours a day, 7 days a week. Trained information specialists answer questions and can send a variety of free publications.

The **NCHSTP Prevention Information Network,** formerly the CDC National AIDS Clearinghouse **(1-800-458-5231; 1-800-243-7012 (TTY))** is a national reference, referral, and publication distribution service for HIV/AIDS information; it disseminates AIDS information to clinicians, patients, and the public and provides news, funding sources, a calendar, and customized information searches.

AIDS Treatment Information Service (ATIS) 1-800-448-0440; 1-800-243-7012 (TTY)

AIDS Clinical Trials Information Service (ACTIS) 1-800-TRIALS-A; 1-800-874-2572

AIDS in Women in the United States

Recent Trends

Pascale M. Wortley, MD, MPH; Patricia L. Fleming, PhD

Context.—The effect of the acquired immunodeficiency syndrome (AIDS) epidemic on women is substantial and warrants an updated analysis.

Objective.—To describe AIDS incidence trends in women.

Design.—We analyzed national surveillance data on women 13 years of age and older with AIDS reported through June 1996. Data were adjusted for reporting delay, unreported risk, and the 1993 change in AIDS surveillance case definition to assess overall trends and examine trends by age group and birth cohort.

Setting.—Surveillance conducted by the Centers for Disease Control and Prevention in collaboration with state and local health departments.

Results.—In 1995, women accounted for 19% of AIDS cases in adults; AIDS incidence rates per 100 000 women were highest in black women (50.1), women in the Northeast (22.3), heterosexual contacts (5.5), and women living in metropolitan statistical areas with more than 1 million residents (15.9). Greatest increases in rates between 1991 and 1995 by region and mode of transmission were in the South and in heterosexual contacts. Greatest increases in AIDS incidence rates were observed in heterosexually infected women born between 1970 and 1974, ie, women who were 14 to 18 years old in 1988.

Conclusions.—These trends predict continued growth of the number of AIDS cases in women, especially in those in the South and those infected heterosexually, and suggest that successive cohorts of young women may be at risk for human immunodeficiency virus infection as they reach adolescence and young adulthood. Prevention programs must reach young women before they initiate sexual activity and drug use.

JAMA. 1997;278:911-916

BETWEEN 1991 and 1995, the number of women diagnosed as having acquired immunodeficiency syndrome (AIDS) increased by 68%, more than any other group of persons reported as having AIDS, regardless of race or mode of exposure to the human immunodeficiency virus (HIV).[1-3] The AIDS epidemic has had a major effect on morbidity and mortality in women between the ages of 25 and 44 years; in 1993, it became the fourth leading cause of death.[3] As of January 1998, an estimated 107 000 to 160 000 women were living with HIV,[3,4] and of these about 45 000 had been diagnosed as having an AIDS-defining opportunistic illness (OI) by end of 1995.

This report first presents recent AIDS surveillance data for women according to selected characteristics, then focuses on analyses of trends in young women compared with older women. Incidence trends in cases diagnosed at young ages provide a special opportunity to monitor HIV-incidence patterns because an estimated 20% of HIV-infected persons have AIDS diagnosed within 5 years of infection[5] and because high-risk behaviors start in adolescence rather than childhood. Thus, persons with short incubation periods ("rapid progressors") are overrepresented in persons diagnosed as having AIDS by the age of 24 years infected through heterosexual contact or injection drug use (IDU). Because of the relatively short time from HIV infection to AIDS in this group, trends in AIDS incidence parallel trends in HIV incidence. Finally, we performed a birth cohort analysis, a useful approach because HIV infection is associated with behaviors tied to age, such as IDU and sexual activity. A birth cohort analysis allows for joint consideration of the effects of age and time. We would expect AIDS incidence to be highest in women who reached the age of initiation of high-risk sexual or drug-using behavior at or near the peak of the epidemic in heterosexual men (IDUs and heterosexual contacts). If endemic infection is established in men, successive cohorts of women can be expected to become infected.

METHODS

To describe trends in AIDS incidence in women (only overall trends were assessed in men), we analyzed data from all AIDS cases in adult (aged 13 years or older) women and men reported to the Centers for Disease Control and Prevention through June 1996 and diagnosed through December 1995. In this analysis, the term "women" is used to indicate any and all females (adolescent girls and adults) included in the study. Women with more than one possible means of acquisition were classified only in the exposure category listed first in the hierarchy (IDU, hemophilia or other blood disorder, heterosexual contact with a man diagnosed as having or at risk for AIDS, transfusion with HIV-contaminated blood or blood products, undetermined risk).[1,2,6,7] This information was obtained from medical charts, and when risk was not documented, interviews of clinicians were conducted, and patients may have been interviewed. Rural residence is defined as residence in a county not part of a metropolitan statistical area.[8]

In 1993, to count persons earlier in the course of HIV disease when they were eligible for recommended therapy, the AIDS surveillance case definition was expanded to include immunologic reporting criteria (CD4+ cell count $<0.20\times10^9$/L [200/μL] or CD4+ cell percent <14%) in addition to severe life-threatening AIDS-defining OIs. The influx of prevalent cases (HIV-infected persons with CD4+ cell counts $<0.20\times10^9$/L who did not yet have an OI in January 1993 resulted in an artifactual sudden increase in AIDS cases, severely disrupting incidence trends. To be able to follow trends during

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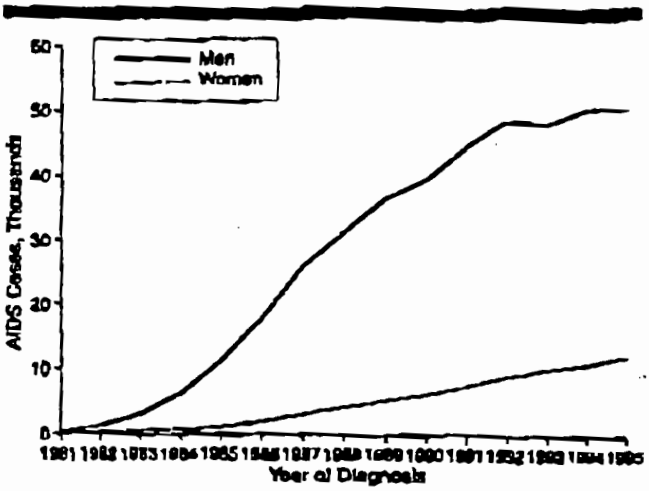

Figure 1.—Number of acquired immunodeficiency syndrome (AIDS) cases by sex, 1981-1995. Data were adjusted for reporting delay, unreported risk, and the 1993 expansion in the AIDS surveillance case definition.

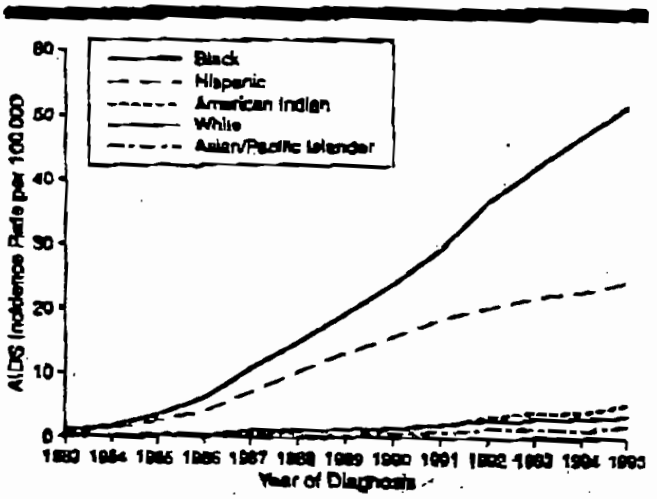

Figure 2.—Acquired immunodeficiency syndrome (AIDS) incidence in women by race/ethnicity, 1985-1995. Data were adjusted for reporting delay, unreported risk, and the 1993 expansion in the AIDS surveillance case definition.

the time that both prevalent and incident cases were reported, a statistical adjustment was applied to allow for analyzing AIDS incidence as if the case definition had not been expanded.[7] In brief, this was done by assigning to persons reported under immunologic criteria (59% in 1995) an estimated date of OI diagnosis based on a probability distribution of time from a given $CD4^+$ cell count to an OI diagnosis. The probability distribution was derived from a large observational study of persons under care for HIV infection,[8] and, because it is derived from persons under care, it takes into account changes in OI incidence resulting from effects of antiretroviral therapy or prophylactic therapy for *Pneumocystis carinii* pneumonia or other preventable OIs. Thus, estimated AIDS incidence using this adjustment is the sum of the observed incidence of persons reported as having an OI and the incidence based on estimated dates of OI diagnosis in cases reported on the basis of a $CD4^+$ cell count less than 0.20×10^9/L. The median $CD4^+$ cell count at time of report for cases reported under immunologic criteria was 0.12×10^9/L in 1995, and the median time between date of first documented $CD4^+$ cell count less than 0.20×10^9/L and the "adjusted" OI diagnosis date was 17 months. For the 41% reported as having an OI diagnosis, there is no change in diagnosis date. The adjustment for the 1993 case definition takes into account the likelihood of dying after a $CD4^+$ cell count of less than 0.20×10^9/L has been identified but before an OI has been diagnosed. The adjustment does not take into account potential underreporting of OIs diagnosed concurrently with $CD4^+$ cell counts of less than 0.20×10^9/L. This is estimated to cause a 2% to 3% underestimate of AIDS incidence. Adjustments for reporting delays and anticipated reclassification of cases initially reported with no identified risk continue to be made as in the past.[9,10] By mid 1996, more than 90% of cases diagnosed in 1994 and more than 75% of cases diagnosed in 1995 were reported; thus, the reporting delay does not introduce a substantial bias. More than 85% of reported cases have risk information within 12 months of report. For redistribution of the 15% or so of women reported without a risk, the proportion redistributed as heterosexual contact or IDU may be ±1.5% to 2.5%. Computing confidence intervals around estimated AIDS rates is not technically feasible at this time. Because data presented here are estimates rather than actual case counts, they are rounded on a relative scale: figures of less than 200, 200 to 499, 500 to 999, and 1000 or more cases are rounded to the nearest 10, 20, 50, and 100, respectively. For simplicity, we will refer to these estimated AIDS rates adjusted for the 1993 case definition as AIDS rates.

To summarize recent trends, AIDS incidence rates for 1991 and 1995, the rate ratio for 1991 and 1995, and the 1995 distribution of cases were calculated for selected characteristics. Annual AIDS incidence rates for 1985 to 1995 were calculated for women and men (overall trends presented for comparison purposes) and for women 15 to 24 years old and 25 to 44 years old at diagnosis by region (Northeast and South) and by mode of transmission (IDU or heterosexual contact). Annual incidence rates from 1985 to 1995 are presented for women born between 1930 and 1939, 1940 and 1949, 1950 and 1959, 1960 and 1969, and 1970 and 1974 (too few women born after 1974 had been diagnosed by 1995 to warrant their inclusion). To calculate annual AIDS incidence rates we used mid-year US population estimates based on decennial census data.[11,12] Rates of AIDS attributed to heterosexual contact and to IDU were calculated using the female population of the appropriate age.

RESULTS

By the end of 1995, a total of 67 400 women had been diagnosed as having AIDS. Of these, 11 500 cases were diagnosed in 1995, accounting for 19% of adults' diagnoses. Figure 1 and 2 show AIDS incidence in women and men over time and AIDS incidence rates in women by race/ethnicity over time, respectively. Table 1 shows 1991 and 1995 rates, the ratio of the 2 rates, and the 1995 distribution of cases in women according to selected demographic characteristics and mode of transmission. Incidence of AIDS increased faster between 1991 and 1995 in women infected through heterosexual contact than through IDU, with slowing in IDU-related cases since 1992 (Figure 3). In 1995, heterosexual contact was the predominant mode of exposure for women with AIDS in all regions except the Northeast, accounting for 46% of cases diagnosed in the Northeast, 52% in the Midwest, 58% in the South, and 52% in the West. Most heterosexual transmission was attributed to sex with an IDU (38%) or sex with an HIV-infected partner of unreported risk (53%). Sex with a bisexual man and sex with a transfusion recipient or a man with hemophilia accounted for 7% and 2%, respectively. For AIDS cases attributed to IDU or heterosexual contact, women outnumbered men 2.4:1 among 15- to 24-year-olds while men outnumbered women 1.4:1 among 25- to 44-year-olds (data not shown).

Trends in Young Women

Women aged 15 to 24 years old accounted for 7% of cases diagnosed in

1995, while women aged 25 to 44 years old accounted for 77%. Figure 3 shows different trends in AIDS incidence rates in women in these 2 age groups by region and mode of transmission (note that scales are different by age group). In both age groups, AIDS incidence rates have increased faster in women infected through heterosexual contact than through IDU (1991-1995 heterosexual and IDU rate ratios, 1.6 and 0.7 for 15- to 24-year-olds; and 2.1 and 1.3 for 25- to 44-year-olds, respectively) and have increased faster in the South than in the Northeast (1991-1995 South and Northeast rate ratios, 1.4 and 1.0 for 15- to 24-year-olds; and 1.8 and 1.5 for 25- to 44-year-olds, respectively). In women aged 15 to 24 years, however, the AIDS incidence rate for heterosexual contacts surpassed the rate for IDUs 6 years earlier than in women aged 25 to 44 years. By 1995, the AIDS incidence rate in the South for women 15 to 24 years old equaled the incidence rate in the Northeast in 1995, but in women 25 to 44 years old the rate was still twice as high in the Northeast.

Table 1.—Acquired Immunodeficiency Syndrome Opportunistic Infection Incidence in Women: 1995 Distribution of Cases, 1991 and 1995 Incidence Rates per 100 000 Women, and 1991-1995 Rate Ratios*

	1995 Case Distribution, No. (%)†	1991 Rate	1995 Rate	1991-1995 Rate Ratio
Race/ethnicity				
White	2500 (22)	2.1	3.0	1.5
Black	8400 (67)	30.1	50.1	1.7
Hispanic	2200 (20)	17.9	25.6	1.5
Asian	60 (<1)	1.1	1.6	1.5
American Indian	30 (<1)	2.0	4.7	2.3
Mode of transmission				
Injection drug use	5000 (43)	3.5	4.6	1.3
Heterosexual contact	6000 (52)	2.7	5.5	2.0
Region				
Northeast	4700 (44)	14.4	22.3	1.5
Midwest	850 (8)	2.1	3.5	1.7
South	4100 (38)	6.4	11.1	1.7
West	1100 (10)	3.2	5.1	1.6
US territories	480 (4)	27.5	27.8	1.0
Urban/rural				
MSAs‡ >1 million	8500 (74)	10.9	15.9	1.5
50 000-999 000	2100 (20)	4.1	6.8	1.7
Rural	700 (6)	1.7	3.2	1.8

*Rates are calculated using the 1991 and 1995 female population ≥13 years of age by race/ethnicity, region, and urban/rural residence. For mode of transmission, rates are calculated using the total female population ≥13 years of age.
†Totals may not sum because of rounding.
‡MSA indicates metropolitan statistical area.

Trends by Birth Cohort

The annual AIDS incidence rates by birth year cohort for women infected through heterosexual contact and IDU, and the 1991 and 1995 incidence rates and rate ratios are shown in Figure 4 and Table 2. The AIDS incidence rate ratio between 1991 and 1995 was higher in women infected through heterosexual contact than in women infected through

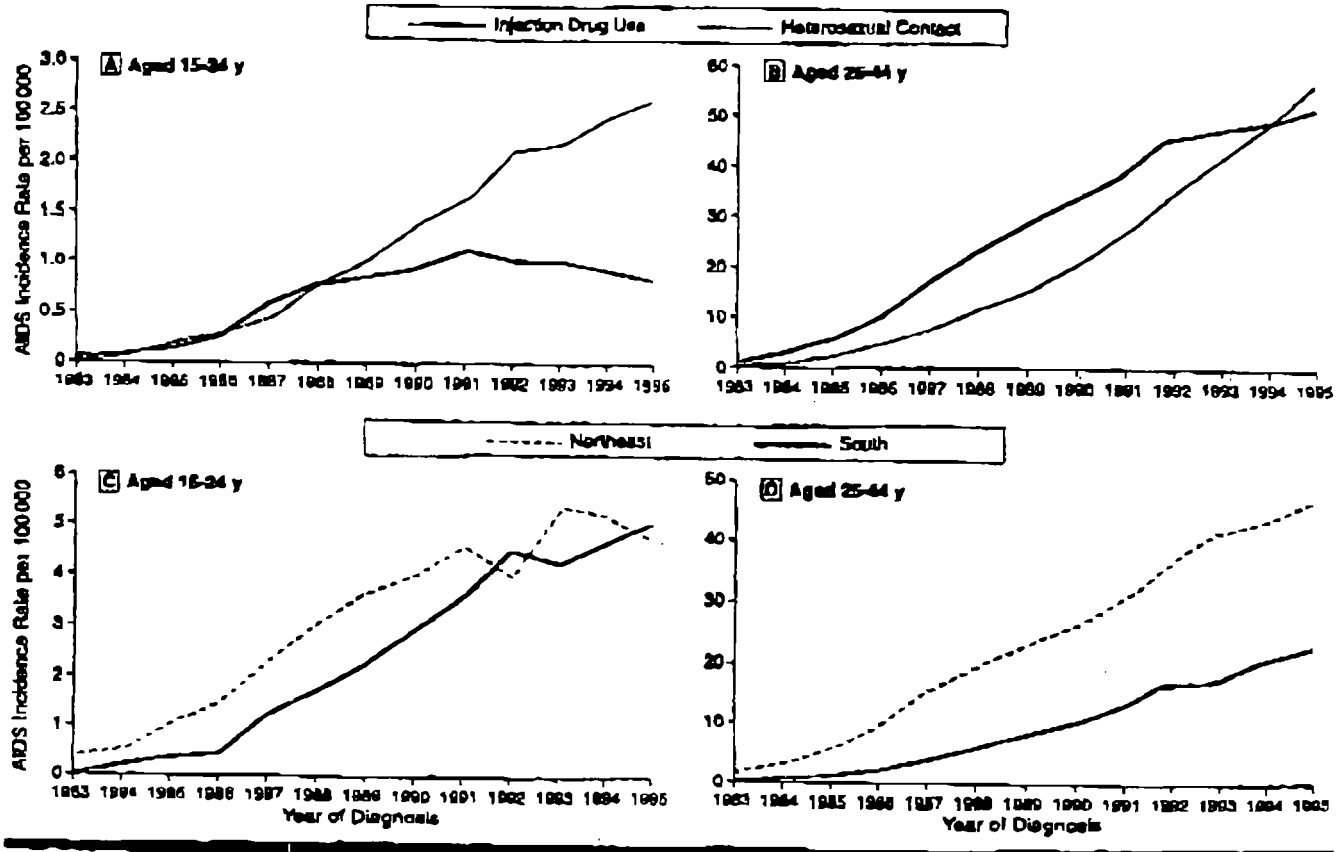

Figure 3.—Acquired immunodeficiency syndrome (AIDS) incidence rates per 100 000 women by age group and mode of transmission (A, B) and by age group and region (C, D). The y-axis scale varies substantially between A, B, C, and D, and the reader should take this into consideration when evaluating data in this figure. Data were adjusted for reporting delay, unreported risk, and the 1993 expansion in the AIDS surveillance case definition.

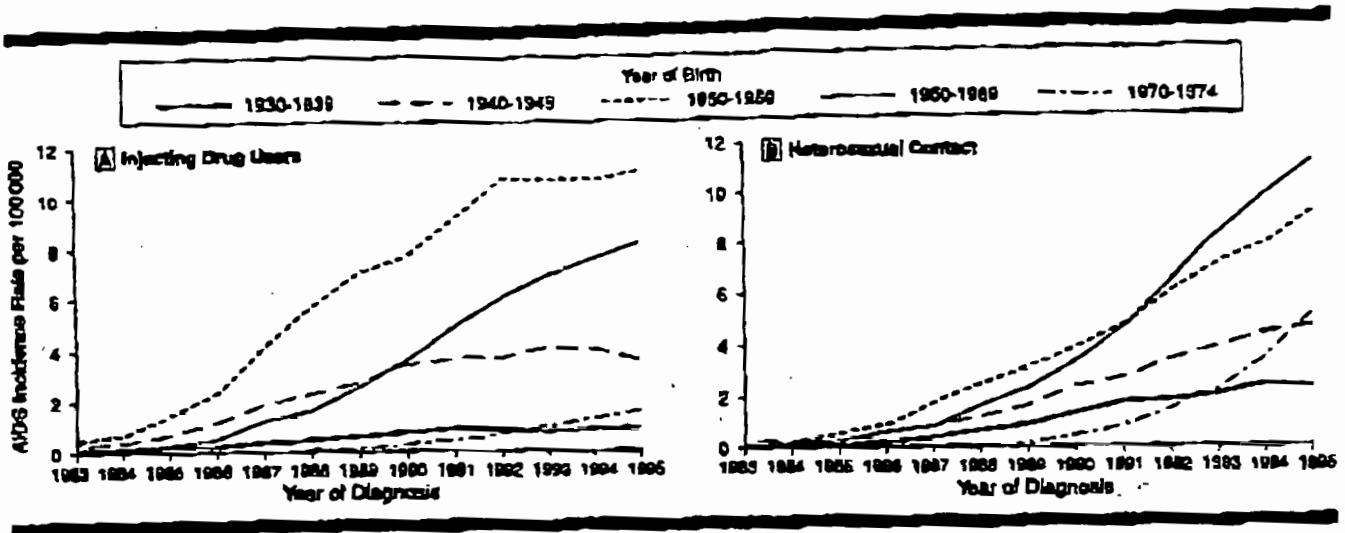

Figure 4.—Acquired immunodeficiency syndrome (AIDS) incidence rates per 100 000 women by birth cohort and mode of transmission. Data were adjusted for reporting delay, unreported risk, and the 1993 expansion in the AIDS surveillance case definition.

Table 2.—Acquired Immunodeficiency Syndrome Opportunistic Infection Incidence in Women by Birth Cohort: 1995 Distribution of Cases, 1991 and 1995 Incidence Rates per 100 000 Women, and 1991-1995 Rate Ratios*

Birth Cohorts by Mode of Transmission	1995 Case Distribution, No. (%)	1991 Rate	1995 Rate	1991-1995 Rate Ratio
Injection drug users				
1930-1939	110 (3)	0.9	1.0	1.1
1940-1949	550 (11)	3.7	3.8	1.0
1950-1959	2300 (48)	9.2	11.1	1.2
1960-1969	1700 (35)	4.9	8.4	1.7
1970-1974	150 (3)	0.4	1.7	4.3
Heterosexual contact				
1930-1939	260 (5)	1.8	2.4	1.3
1940-1949	700 (12)	2.8	4.7	1.7
1950-1959	1900 (33)	4.9	9.2	1.8
1960-1969	2400 (40)	5.0	11.4	2.3
1970-1974	440 (8)	0.9	5.2	5.8

*Rates are calculated using the female population of the appropriate age.

IDU in each cohort and highest in cohorts born after 1959.

In women infected through IDU, women born between 1950 and 1959 have accounted each year for the greatest number of diagnosed cases, while in women infected heterosexually, the greatest number of cases are diagnosed each year in women born between 1950 and 1959, especially in women born between 1955 and 1964 (data not shown). Annual AIDS incidence slowed markedly after 1992 in women infected through IDU born before 1960; however, this pattern was not seen in heterosexually infected women in whom incidence continues to increase in all cohorts. The sharp increase since 1991 in heterosexually infected women born between 1970 and 1974 is striking.

COMMENT

The incidence of AIDS has increased more in women than men in recent years,[1,2,6] largely because of increases in women infected through heterosexual contact. These trends reflect shifts in HIV prevalence with disproportionate increases in IDUs and heterosexual contacts.[7] In men, AIDS incidence has slowed for men who have sex with men, as of the late 1980s,[8] and for IDUs, as of the early 1990s,[14,15] at the same time as for women IDUs. Incidence of AIDS in women infected through heterosexual contact began to increase a few years later than in IDUs and continues to increase, even as AIDS incidence has slowed in men IDUs, the main reservoir of infection for heterosexually infected women. As the epidemic in women evolved regarding predominant mode of transmission, it also evolved geographically.[16] The epidemic that mostly affected the Northeast in early years now affects all regions, especially the South, while it continues to exact a toll on the Northeast. Regions with highest rates in women correspond to those where seroprevalence is highest in men IDUs.[17] The disproportionate effect on black and Hispanic women remains a constant.

Changes in sexual and IDU-related transmission patterns are most rapidly visible in cases diagnosed young, because women with AIDS diagnosed by age 24 years represent woman who progressed to AIDS faster than average. If these young women are representative of all young women infected with HIV, AIDS incidence patterns seen in this age group reflect recent HIV incidence and may thus forecast future AIDS trends as young HIV-infected women age and progress to AIDS in coming years. Trends in young women suggest that the number and proportion of women diagnosed as having heterosexually acquired AIDS and of cases diagnosed in the South will continue to increase. It is important to note that the relatively stable incidence in young woman infected through IDU is consistent with ongoing transmission of HIV.

Young women are at risk for HIV infection at an earlier age than young heterosexual men, as demonstrated by the relatively high proportion of women in persons younger than 25 years infected through IDU or heterosexual contact. This finding suggests that adolescent women are becoming infected by older sexual or needle-sharing partners and is consistent with the documented age gap between teenaged mothers and their partners.[18-20] A recent study reported that adolescent women were less likely to use condoms with older heterosexual male partners than with same-age partners.[21] The role of older partners in HIV transmission to adolescent women must be recognized to design effective prevention interventions that do not assign to adolescent women alone the responsibility for adopting safe behaviors.

Black and Hispanic women have consistently experienced higher rates of AIDS than have white women. The racial/ethnic distribution of women with

AIDS corresponds to that of men IDUs and heterosexual contacts with AIDS[9,11] and to that of groups with highest rates of sexually transmitted diseases such as syphilis and chancroid.[32-34] Partner selection patterns[33] resulting in an increased probability of contact with an infected sexual or needle-sharing partner may partially explain this overrepresentation. The consistently higher rates of infection in black and Hispanic (specifically Puerto Rican) IDUs compared with whites[17,35] is in part related to differences in high-risk injection behaviors, but other factors such as differences in HIV prevalence within social networks may play an even greater role.[36-38]

Incidence of HIV infection related to IDU is thought to have peaked in the mid 1980s, based on serial seroserveys of IDUs and back-calculation based on AIDS incidence.[20,21] Repeat cross-sectional surveys of young IDUs have documented progressively lower seroprevalence, suggesting that reductions in high-risk injection practices have occurred across age groups.[17,39] The slow increase in IDU-related AIDS since 1988 in women younger than 25 years and the slowing rate of increase of AIDS incidence in women born before 1960 are consistent with these trends. However, HIV prevalence rates in IDUs remain relatively high in many urban areas,[17] and IDUs serve as a source of HIV transmission through heterosexual contact. In addition, transmission related to multiple high-risk sexual contacts associated with use of noninjectable drugs, particularly smokable freebase cocaine ("crack"), increased during the latter half of the 1980s. Crack cocaine has played an important role in heterosexual transmission of HIV because its influence on sexual behavior has led to intersecting epidemics of syphilis and HIV, each enhancing spread of the other.[34,40] The rapid increase in AIDS incidence in the South in the early 1990s is at least partially a consequence of concurrent crack and syphilis epidemics.[37,38] The highest syphilis rates between 1986 and 1990 were observed in black women aged 20 to 29 years old and 15 to 19 years old in southern states.[34,35]

Incidence trends for AIDS in women grouped by year of birth reveal successive cohorts of women at risk for HIV infection as they reach adolescence and young adulthood, an effect more pronounced for women infected through heterosexual contact than IDU, consistent with heterosexual transmission continuing to increase after IDU-related transmission slowed in the mid 1980s. Women born between 1950 and 1959 have experienced the highest incidence rates each year. These women were in their 20s, the age group with highest prevalence of risky sexual and drug-use behaviors, at epidemic onset.[8,40] In comparison, increases in AIDS incidence in women who were born between 1970 and 1974 lagged by several years as these women moved into the high-risk group. Women born between 1970 and 1974 began to be infected through heterosexual contact in late 1980s, as demonstrated by a sharp increase in AIDS incidence in this group between 1991 and 1995. These young women became sexually active at a time when HIV prevalence in men had reached a high.[14] In addition, they were 14 to 18 years old in 1988, an age group experiencing high syphilis rates at that time. Although it is too early to determine whether the 1975 to 1979 birth cohort will experience AIDS incidence rates similar to that of the 1970 to 1974 birth cohort, the pattern observed here raises concern that future generations of young women will become infected with HIV as they reach the age of sexual activity initiation.

Although surveillance data presented here show AIDS incidence increasing in most subgroups of women, the Survey of Childbearing Women, a population-based seroprevalence survey of women giving birth initiated in 1989,[41] has documented stable HIV seroprevalence from its inception to 1994, the last year for which rates are available.[42] Stable seroprevalence may be the result of a steady state, in which the number of incident infections in childbearing women is matched by the number of HIV-infected women who are no longer giving birth because of aging or reduced fertility due to advanced HIV disease.[42] Considered along with AIDS incidence trends, these data are consistent with the greatest increase in HIV incidence occurring before 1989, and therefore not captured by the Survey of Childbearing Women, with new HIV incidence occurring primarily in the youngest cohorts as they enter the age of heightened risk.

The data presented here were adjusted for the 1993 expansion of the AIDS case definition and may be subject to bias. Because the probability distribution of time from a given CD4+ cell count to an OI diagnosis used for adjustment is derived from a study of HIV-infected persons under care (see "Methods"), time to OI diagnosis will be overestimated if all cases reported on basis of severe immunosuppression are not actively under care. The effect of this potential bias is that estimated OI dates would be further in the future than actual dates and current estimates of AIDS incidence would be conservative. However, because median time difference between diagnosis date and adjusted date is 17 months for those reported under immunologic criteria, the adjustment does not affect trends in annual incidence substantially. This is supported by the fact that the same trends are observed in the unadjusted data. Although computing confidence intervals for the rates based on the adjustment for the 1993 case definition is not technically feasible, we believe that conclusions drawn here about differences between groups are valid.

Preliminary findings from a surveillance study to validate cases classified as due to heterosexual contact indicate that these data are reliable[43] and that heterosexual transmission is not overcounted. It may be conservative because women who inject drugs frequently have high-risk partners,[44] and the actual route of HIV transmission for women with multiple risks cannot be determined. In 1994, 28% of women reported as infected through IDU were also reported to have a high-risk partner (Centers for Disease Control and Prevention, unpublished data, 1994); this small proportion is undoubtedly an underestimate. Because reducing sexual risk in IDUs has proven to be more difficult than reducing IDU-related risk,[45,46] women who inject drugs are at risk for both sexual transmission and needle-borne transmission. Drug treatment programs and syringe exchange programs need to incorporate intensified sexual risk reduction interventions for this population.

Prevention efforts remain critical. Although the current rate of HIV infection in women is not known, available information points to ongoing transmission. Efforts to prevent HIV infection in women may be complex for several reasons: women who are financially dependent on male partners are at a disadvantage in negotiating condom use; women who are sex partners of HIV-infected men, bisexual men, and IDUs are difficult to identify and target; and women at highest risk already face a multitude of other problems, including poverty, substance abuse, alcoholism, violence, unemployment, and unplanned pregnancies.[31] Prevention counseling for risk reduction, prevention and treatment of sexually transmitted diseases, and unimpeded access to health care and substance abuse treatment for women continue to be critical factors. Additional factors critical to successful prevention include reaching young women before they initiate sexual activity, continuing to develop interventions targeting men and women to increase condom use, and developing women-controlled methods to prevent HIV transmission. Along

with prevention efforts, adequate resources for care remain critical. Based on national HIV prevalence estimates,[3,4] a minimum of 60 000 to 115 000 HIV-infected women not yet diagnosed as having AIDS will be requiring care for HIV infection in years to come, twice as many as have been diagnosed as having AIDS since 1981.

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TRANSMISSION OK

TX/RX NO	4598
CONNECTION TEL	62438
CONNECTION ID	AIDS Policy
ST. TIME	04/14 15:11
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RESULT	OK

"What's in a Name?"

Village Voice (04/07/98) Vol. 43, No. 14, P. 36; Scoofs, Mark

Several bills in the New York state legislature have sparked a debate over mandatory reporting of the names of HIV-positive individuals. Assemblywoman Nettie Mayersohn--who authored a state law requiring HIV testing for all newborn children--introduced a bill that would require the submission of identifying information to health departments in order to properly notify HIV patients' partners. Republican Guy Velella introduced the bill into the state Senate, and it may likely pass in both houses. Another bill, which would create a database of all HIV-infected people and require them to surrender the names of all their sexual partners or else face criminal charges, has been presented by several Republicans in the assembly. The bill would also eliminate anonymous testing. Opponents of the bills worry that such measures will lead to policing of HIV-positive individuals. They also assert that forcing people to name their sex partners and eliminating anonymity will discourage people from being tested; 11 separate studies show that name reporting does deter some people, and two recent surveys found that 70 percent of participants would not get tested if their names were reported. Activists contend that the population at highest risk for HIV--homosexual men and racial minorities--are also the most likely to be suspicious of the measures. Additionally, many fear that confidentiality will one day be revoked, making the names of HIV-positive patients public knowledge. Proponents argue that these measures are no more drastic than the current standard methods used for surveillance of a number of other infectious diseases. The Centers for Disease Control and Prevention supports name reporting and notes that the practice has been tried in six states without a large decline in overall testing numbers. Maryland and Texas have implemented programs that use

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CRITERIA	ESTIMATE OF ELIGIBLE PROGRAMS
Currently Operating Needle Exchange Programs	110-120 programs
Articulated by Congress 1. A program for preventing HIV transmission is operating in the community; 2. The State or local health office has determined that an exchange project is likely to be an effective component of such a prevention program; 3. The exchange project provides referrals for treatment of drug abuse and for other appropriate health and social services; 4. Such project provides information on reducing the risk of transmission of HIV; 5. The project complies with established standards for the disposal of hazardous medical waste; and 6. The State or local health officer agrees that, as needs are identified by the Secretary, the officer will collaborate with federally supported programs of research and evaluation that relate to exchange projects.	90-100 programs *NB: Only six cities receive HIV prevention funding directly; the remainder would have to go through State authorities for approval*
Added by Secretary 7. programs must comply with State and local legal requirements or waivers	50-60 programs
8. States or localities requesting reprogramming of FY98 funds must be those most severely impacted by injection drug-related AIDS in families and children (not [illegible] of most recent total AIDS	10-15 programs *(estimated number of States or localities that are likely to complete a reprogramming process during FY98)*

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CRITERIA	ESTIMATE OF ELIGIBLE PROGRAMS
Currently Operating Needle Exchange Programs	110-120 programs
Articulated by Congress 1. A program for preventing HIV transmission is operating in the community; 2. The State or local health office has determined that an exchange project is likely to be an effective component of such a prevention program; 3. The exchange project provides referrals for treatment of drug abuse and for other appropriate health and social services; 4. Such project provides information on reducing the risk of transmission of HIV; 5. The project complies with established standards for the disposal of hazardous medical waste; and 6. The State or local health officer agrees that, as needs are identified by the Secretary, the officer will collaborate with federally supported programs of research and evaluation that relate to exchange projects.	90-100 programs *NB: Only six cities receive HIV prevention funding directly; the remainder would have to go through State authorities for approval*
Added by Secretary 7. programs must comply with State and local legal requirements or waivers	50-60 programs
8. States or localities requesting reprogramming of FY98 funds must be those most severely impacted by injection drug-related AIDS in families and children	10-15 programs *(estimated number of States or localities that are likely to complete a reprogramming process during FY98)*

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CRITERIA	ESTIMATE OF ELIGIBLE PROGRAMS
Currently Operating Needle Exchange Programs	110-120 programs
Articulated by Congress 1. A program for preventing HIV transmission is operating in the community; 2. The State or local health office has determined that an exchange project is likely to be an effective component of such a prevention program; 3. The exchange project provides referrals for treatment of drug abuse and for other appropriate health and social services; 4. Such project provides information on reducing the risk of transmission of HIV; 5. The project complies with established standards for the disposal of hazardous medical waste; and 6. The State or local health officer agrees that, as needs are identified by the Secretary, the officer will collaborate with federally supported programs of research and evaluation that relate to exchange projects.	90-100 programs *NB: Only six cities receive HIV prevention funding directly; the remainder would have to go through State authorities for approval*
Added by Secretary 7. programs must comply with State and local legal requirements or waivers	50-60 programs
8. States or localities requesting reprogramming of FY98 funds must be those most severely impacted by injection drug-related AIDS in families and children	10-15 programs *(estimated number of States or localities that are likely to complete a reprogramming process during FY98)*

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TRANSMISSION OK

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CONNECTION ID	
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RESULT	OK

CRITERIA	ESTIMATE OF ELIGIBLE PROGRAMS
Currently Operating Needle Exchange Programs	110-120 programs
Articulated by Congress 1. A program for preventing HIV transmission is operating in the community; 2. The State or local health office has determined that an exchange project is likely to be an effective component of such a prevention program; 3. The exchange project provides referrals for treatment of drug abuse and for other appropriate health and social services; 4. Such project provides information on reducing the risk of transmission of HIV; 5. The project complies with established standards for the disposal of hazardous medical waste; and 6. The State or local health officer agrees that, as needs are identified by the Secretary, the officer will collaborate with federally supported programs of research and evaluation that relate to exchange projects.	90-100 programs *NB: Only six cities receive HIV prevention funding directly; the remainder would have to go through State authorities for approval*
Added by Secretary 7. programs must comply with State and local legal requirements or waivers	50-60 programs
8. States or localities requesting reprogramming of FY98 funds must be those most severely impacted by injection drug-related AIDS (incidence greater than	10-15 programs

Office of HIV/AIDS Policy

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Washington, D.C. 20201

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Fall 1998
Vol. X, No. 3
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World Ecology Report

Critical Issues in Health and the Environment

Knowledge brings new choices. Education brings new knowledge.

■ The Cervical Cancer Prevention Program (CECAP) is being launched in the spring of 1999 by, JHPIEGO, an affiliate of Johns Hopkins University which specializes in international education and training in reproductive health. CECAP is developing partnerships, collaborations and linkages with donors, international agencies, women groups and other institutions in a worldwide effort to reduce the incidence of cervical cancer. More than 500,000 women annually develop cervical cancer, a sexually transmitted disease and more than 200,000 annually die. Because the majority of deaths occur in developing countries, JHPIEGO is targeting 20 of the poorest and largest developing countries to benefit over 695 million women with screening to detect the early signs of cervical cancer, treatment and education programs for those women. Funding sources must be educated to the importance of the program and the dramatic results that can come per dollar spent. In the United States and Europe, JHPIEGO through CECAP is launching awareness activities that will highlight this critical public health emergency and bring support for the intervention's efforts. For additional information on the Cervical Cancer Prevention (CECAP) program, please contact JHPIEGO's Research and Evaluation Office by telephone 410-614-0518, fax 410-614-3458 or Internet E-mail (info@jhpiego.org) or write to JHPIEGO, Brown's Wharf, Suite 200, 1615 Thames Street, Baltimore, Maryland 21231-3492, USA. [See Point of View in this issue]

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World Ecology Report

Critical Issues in Health and the Environment

Knowledge brings new choices. Education brings new knowledge.

POINT OF VIEW

Sustaining Women's Health: Promise of Prevention

Rose is 35 and she has been sexually active since she was 16 years old. Recently she has been experiencing lower abdominal pain, bleeding after intercourse, and an abnormal discharge. Her three children have been immunized and she was recently treated at her local clinic for a pelvic infection. Rose doesn't know it, but next year she will die from cervical cancer because she was never offered a screening test.

Each year over 200,000 women die from a preventable disease-cervical cancer. Worldwide it is the second most common cancer among women and in developing countries, it is the leading cause of female cancer deaths. Over 90% of cervical cancer cases are caused by a sexually transmitted organism-human papilloma virus (HPV) and for most women infection occurs before age 30. Among deaths due to STDs, cervical cancer ranks the highest globally. Although women are generally infected with HPV before their 30's, for the 20-30% whose infection progresses to cancer, this progression occurs over a 10 to 20 year period. Cervical cancer is a debilitating and painful disease, but the progression could be prevented.

Why if cervical cancer is preventable are the rates so high in developing countries? Because these women do not have access to cervical cancer prevention programs. In developed countries, where national screening coverage rates exceed 70%, mortality due to cervical cancer has declined markedly over the past few decades. In developing countries, however, only 5% of the women have ever been screened. This imbalance in coverage is not because proven screening and treatment technologies do not exist. They do. It is because the infrastructure (including facilities such as clinics, hospitals, transportation, electricity, medical supplies and human resources including nurses, doctors, and cytotechnicians) in developing countries cannot continuously support a national prevention program based on the current screening standard-the Pap smear. Worldwide efforts have been launched to improve the quality of and access to the Pap smear; however, the fact remains that in most countries in which cervical cancer poses the greatest public health problem, the logistics involved in sustaining a quality cytology-based system are too cumbersome and cost-prohibitive

Do options exist? Yes. One alternative to the Pap smear is visual inspection. Visual inspection involves wiping the cervix with acetic acid (vinegar) and then looking at the cervix with or without magnification to see if there are abnormalities. Visual inspection with acetic acid (VIA) meets the requirements for a good screening test. It's safe, practical, affordable, available and effective. While recent findings have consistently shown that VIA accurately identifies the majority of cases of true disease, improvement in its specifity would render this technique even more viable as a screening option. Because VIA is noninvasive, inexpensive and can be performed by all levels of healthcare workers, in almost any setting, it could be a valuable alternative to conventional screening programs.

For cervical cancer prevention programs to be effective, widely accessed screening activities must be linked to treatment. Treatment must be as accessible as screening, and it must be safe, acceptable and affordable. Effective treatment technologies for precancerous lesions are available which could be offered on a wide-scale basis at a safe and lower cost than current treatment options in use in developing countries. How VIA based screening and treatment options are implemented at the local level will depend on the amount of attention paid to properly informing healthcare providers and the women they serve about the advantages and disadvantages involved. With this promise of prevention, countries committed to eradicating this important public health problem should now carefully consider how they could maximize access to screening and treatment given the constraints of current healthcare budgets in their countries. [See VOICES in this issue for contact information]

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"Never doubt that a small group of thoughtful committed citizens can change the world. Indeed it's the only thing that ever has."

Margaret Mead

CDC UPDATE
CENTERS FOR DISEASE CONTROL AND PREVENTION
NCHSTP National Center for HIV, STD & TB PREVENTION

June 1998

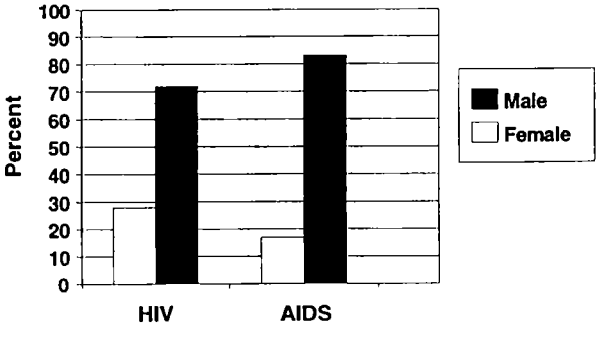
Critical Need to Pay Attention to HIV Prevention for Women: Minority and Young Women Bear Greatest Burden

CDC estimates that, in the United States, between 120,000 and 160,000 adult and adolescent females are living with HIV infection. In just over a decade, the proportion of all AIDS cases reported among adult and adolescent women nearly tripled, from 7% in 1985 to 22% in 1997. HIV/AIDS was the fourth leading cause of death among U.S. women aged 25-44 in 1996 (the most recent year for which complete death information is available), and the leading cause of death among African-American women in this same age group. Today, AIDS-related deaths among women are decreasing, largely as a result of recent advances in HIV treatment. However, AIDS deaths among women are not declining as rapidly as AIDS-related deaths among men.

Further, HIV data from a recent CDC study comparing HIV and AIDS diagnoses in 25 states* with integrated reporting systems showed that a substantial number of women were newly diagnosed with HIV in these states. Between 1995 and 1996, there was a 3% increase in initial HIV diagnoses among women, while HIV diagnoses declined 3% among men during this same period.

Comparing HIV to AIDS diagnoses in these states provides a clearer picture of recent shifts in the epidemic, with a larger percentage of HIV than AIDS cases diagnosed among women, especially women of color. During the period from January 1994 through June 1997, women represented just 17% of all AIDS diagnoses, but 28% of all HIV diagnoses. Young people (ages 13 to 24) also accounted for a much greater proportion of HIV than AIDS diagnoses (14% versus 3%), and nearly half of the HIV diagnoses in that age group were among young women.

Reported Cases of HIV Infection vs. Reported AIDS Cases Among Adults & Adolescents, 25 U.S. States*, January 1994-June1997



* Alabama, Arizona, Arkansas, Colorado, Idaho, Indiana, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nevada, New Jersey, North Carolina, North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Utah, Virginia, West Virginia, Wisconsin, Wyoming

Epidemic Among Women Spreading Fastest Among Minorities

Over the past decade, the epidemic has increased most dramatically among women of color. Prior to the impact of new combination drug therapies to treat HIV infection, AIDS incidence was increasing at rates of 15% to 30% each year among African-American and Hispanic women. **African-American and Hispanic women together represent less than one-fourth of all U.S. women, yet they account for more than three-fourths (76%) of AIDS cases reported to date among women in our country.**

Most women with AIDS were infected through heterosexual exposure to HIV, followed by injection drug use. In addition to the direct risks associated with drug use (sharing needles), drug use also is fueling the heterosexual spread of the epidemic. A large proportion of women infected heterosexually were infected through sex with an injection drug user. Reducing the toll of the epidemic among women will require efforts to combat substance abuse, in addition to reducing HIV risk behaviors.

Female adolescents and young adult women under the age of 25 are at higher risk for HIV/STD infection than older women. This increased risk is likely due to their greater tendency to have multiple sex partners, to engage in risky behaviors, or to be unable to negotiate safer sexual practices with partners.

Young and minority women are also disproportionately affected by other STDs – gonorrhea, syphilis, and chlamydia, for example – that make women at least 2-5 times more vulnerable to HIV infection. Improved STD treatment will be a critical strategy for slowing the heterosexual spread of HIV.

Building Better Prevention Programs for Women

Even if women know how to protect themselves from HIV infection, awareness of the facts must be coupled with the skills and support needed to change behavior. CDC works with states and communities to provide the information and tools needed to design and implement effective local prevention programs for women. To guide prevention activities, CDC works to provide the best available science in the areas of monitoring the epidemic, conducting and disseminating the findings from research, and evaluating what works. As part of this process, CDC conducts an ongoing research synthesis process that seeks to identify the most recent and relevant scientific findings from around the world, both published and unpublished, and make them available to prevention program planners. CDC constantly combs the scientific literature, reviews domestic and international scientific databases, and speaks with colleagues around the world to identify effective interventions for all populations at risk, including women.

Continuing progress is needed in the following areas to slow the HIV epidemic among U.S. women:

- ***Pay attention to prevention for women!*** The AIDS epidemic is far from over. Data from states that have integrated confidential HIV and AIDS case reporting show that a larger proportion of women are reported with HIV than are reported with AIDS. Scientists believe that cases of HIV infection reported among 13- to 24-year-olds are indicative of overall trends in HIV incidence (the number of new infections in a given time period, usually a year) because this age group has more recently initiated high-risk behaviors – *and young women made up nearly half* (44%) of HIV cases in this age group.

- ***Implement programs that have been proven effective*** in changing risky behaviors among women and sustaining those changes over time, maintaining a focus on both the uninfected and infected populations of women. For example, CDC's Women and Infants Demonstration Project, a community-level behavioral intervention research project focusing on young women ages 15 to 34, most of whom are members of racial/ethnic minority populations, is designed to improve understanding of factors influencing women's behavior changes regarding condom and contraceptive use, as well as the development and delivery of interventions. Preliminary results are very promising in terms of increases in condom use among women in the treatment group compared with other communities.

- ***Develop effective female-controlled prevention methods and disseminate them widely.*** More options are urgently needed for women who are unwilling or unable to negotiate condom use with a male partner. CDC researchers are working with scientists worldwide to evaluate the effectiveness of female condoms in preventing HIV, as well as to develop effective topical microbicides that can kill HIV and the pathogens that cause STDs. As with any new tools for prevention, we must not only determine effectiveness, but also evaluate people's willingness and ability to use these methods.

- ***Increase emphasis on prevention and treatment services for young women and women of color.*** Many U.S. women reported with HIV or AIDS are unable to identify their risk for acquiring HIV infection, indicating that they may be unaware of their partners' risk factors. Knowledge about preventive behaviors **and awareness of the need to practice them** is critical for each and every generation of young women – prevention programs should be comprehensive and should include participation by parents as well as the educational system.

- ***Address the intersection of drug use and sexual HIV transmission.*** Women are at risk of acquiring HIV sexually from a partner who injects drugs and from sharing needles themselves. Additionally, women who use noninjection drugs (e.g., "crack" cocaine) are at greater risk of acquiring HIV sexually, especially if they trade sex for drugs or money.

- ***Better integrate prevention and treatment services*** for women across the board, including the prevention and treatment of other STDs and substance abuse and access to antiretroviral therapy.

- ***Make medical and behavioral solutions work together.*** Medical advances can't work by themselves – women first need access to them, then they need the skills and support to use them. While behavioral interventions can help uninfected women stay that way, they also can work with medical treatments to help infected women stay healthier and keep from infecting others.

- ***Preventing HIV infection is by far the best strategy.*** Preventing infections saves lives, eliminates the need for complex and sometimes debilitating therapies, and saves a great deal of money that would otherwise be spent on medical treatment. But, linking women with care and prevention services as soon as possible after infection has occurred is also an important goal, both to protect their own health and that of their sex partners and children.