Trends in the HIV & AIDS Epidemic

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DEPARTMENT OF HEALTH & HUMAN SERVICES · USA

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

Trends in the HIV and AIDS Epidemic, 1998

A Turning Point in the Epidemic

New treatments have slowed the progression from HIV to AIDS and from AIDS to death for people infected with HIV. Consequently, both AIDS cases and deaths have dropped dramatically, and an increasing number of people with HIV are living longer and healthier lives. While AIDS cases and deaths will continue to provide a valuable measure of groups for whom effective treatment is not available or has not succeeded, these data will tell us little about where and how many new infections are occurring – information critical for addressing the increasing need for prevention and treatment services.[1] To analyze recent trends, data on HIV and STD infections and risk factors has become increasingly important. CDC is working to improve surveillance systems to more effectively track emerging trends. As we enter the next era in HIV prevention, it will be critical to ensure that our systems to monitor the epidemic's path keep pace with our changing information needs. This document presents the latest data on the status of the HIV epidemic in the U.S. It is designed to do several things:

- Summarize the overall toll of the epidemic to date; based on total AIDS cases and deaths, and the estimated number of HIV infections for the nation.
- Present recent trends in the number of people diagnosed with HIV; based on integrated HIV and AIDS reporting from the 25 states that have had HIV reporting for at least 4 years.
- Analyze historical trends in AIDS incidence (through 1996) and summarize what we know about where the epidemic was headed in the U.S. before treatment advances impacted national trends.
- Discuss the implications of HIV/AIDS data and data from HIV seroprevalence studies for

[1]In the past, CDC has primarily reported trends in the epidemic based on the estimated number of people diagnosed with AIDS each year (AIDS incidence). Until now, AIDS incidence provided a reliable picture of trends in the HIV epidemic because researchers could take into account the time between HIV infection and progression to AIDS and estimate where and how many new infections were occurring based on observed cases of disease. But with advances in treatment of HIV, AIDS incidence can no longer be used to reliably track the path of the HIV epidemic.

prevention.

SECTION 1
Magnitude of the Epidemic

As of December 1997, 641,086 Americans have been reported with AIDS. At least 385,000 of them have died. Prior to the introduction of combination therapies for HIV, AIDS incidence was increasing at a rate of less than 5% each year. Partly as a result of prevention efforts targeting those at highest risk, the epidemic had slowed considerably from the early years in the epidemic, when increases were 65% to 95% each year. In 1996, estimated AIDS incidence dropped for the first time, declining 6%. Deaths among people with AIDS also declined for the first time in 1996, dropping 25%.

As new treatments have extended the healthy lifespan of many people with AIDS, AIDS prevalence has continued to increase. In 1996, an estimated 242,000 people were living with AIDS, an increase of almost 12% since 1995. If declines in AIDS cases continue, there will also be an increase in HIV prevalence, pointing to an increased need for both prevention and treatment services. Estimates suggest that 650,000 to 900,000 Americans are now living with HIV, and at least 40,000 new infections occur each year.

SECTION 2
Trends in HIV Diagnoses in 25 States

CDC examined trends in HIV diagnoses reported through the integrated HIV and AIDS reporting systems in 25 states,[2] adjusted for reporting delays. The analysis suggests that contrary to the declining trend in AIDS diagnoses, **HIV diagnoses remained**

[2]States that had confidential routine HIV infection reporting from 1994 to 1997 are 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, and Wyoming. Florida, New Mexico, and Nebraska have initiated name-based HIV reporting in recent years. Connecticut, Texas, and Oregon have confidential routine HIV infection reporting for pediatric cases only.

relatively stable in these states, but a higher proportion of HIV than AIDS cases were among women and minorities. The data also indicate a continuing toll among young people ages 13-24, with at least 2,000 young people diagnosed with HIV in these states every year.

Many of these new diagnoses are occurring among African Americans, women, and people infected heterosexually, with an increase observed among Hispanics. These data must be used to ensure targeted prevention efforts reach those in greatest need, with a primary focus on young African-American and Hispanic men and women at risk through sexual and drug-related behaviors.

From January 1994 to June 1997:

- There were a total of 72,905 adults and adolescents diagnosed with HIV or AIDS in these states. Of these, 52,690 (or 72% of the total cases) were initially diagnosed with HIV, compared to 20,215 cases (28%) initially diagnosed with AIDS.
- Comparing HIV and AIDS diagnoses reported in these states provides a much clearer picture of shifts in the epidemic, with a greater percentage of HIV cases diagnosed among women and African Americans. Several key differences can be seen in the following chart:

Comparison of AIDS and HIV Diagnoses from 25 HIV Reporting States, January 1994 - June 1997

	Disease Status at Diagnosis	
	HIV (%) Total Cases	**AIDS (%) Total cases**
Women	**28**	**17**
African Americans	**57**	**45**
Heterosexual Contact[3]	**18**	**12**

In the most recent full year from which overall trends in these states can be examined -- 1995 to 1996:

- HIV diagnoses declined slightly among men (-3% from 10,762 to 10,395), but increased among women (+3% from 4,126 to 4,253).
- HIV diagnoses declined slightly among African Americans (-3% from 8,569 to 8,300) and among whites (-2% from 5,093 to

[3]Because many of the cases of HIV infection initially reported without risk information are later determined to be related to heterosexual contact, those numbers likely underestimate the true number of individuals diagnosed with heterosexually acquired infection.

4,966), but increased among Hispanics (+10% from 971 to 1,070). However, in these states, the number of cases among Hispanics was relatively small.

Taking a closer look at the impact of HIV among young people in these states, the majority of infections were diagnosed among African Americans and women. Of the 7,200 cases of HIV reported among 13- to 24-year-olds from January 1994 to June 1997:

- 44% (3,203) were female
- 63% (4,566) were African American and 5% (394) were Hispanic
- At least 26% (1,886) had heterosexually acquired infections, 31% (2,270) were in men who have sex with men, and 6% (449) were in injection drug users.[4]

While these data provide a reliable indication of the number and characteristics of individuals who have been diagnosed with HIV in confidential settings, they do not include individuals tested only at anonymous test sites or individuals who have not yet been tested. CDC estimates that two-thirds of people living with HIV infection have already been confidentially tested for HIV and know their status. Studies indicate that a high proportion of high-risk individuals have been tested, and given the increasing benefits of early knowledge of HIV status, more people are likely to seek testing and care. Therefore, HIV reporting is likely to become increasingly representative of trends in recent infections. And, as additional states implement HIV reporting, these data will become more representative of national trends in the epidemic.

SECTION 3
Historical Trends in AIDS Incidence

Closer Look at Changes in the Epidemic Over the Last Decade

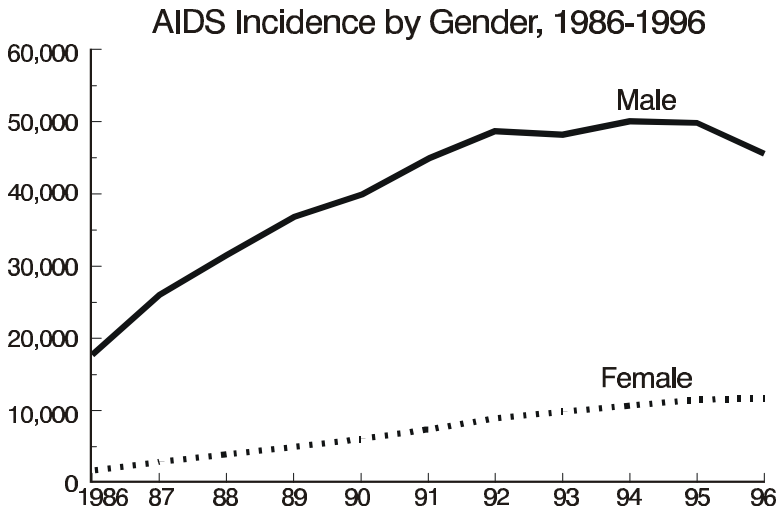
Because of the impact of new combination therapies, researchers can no longer reliably predict the number of people who will be diagnosed with AIDS opportunistic infections each year (referred to in this document as AIDS incidence). There is no longer a way to

[4]The percent of cases in each risk category represents a minimum percentage because a large percentage of cases are initially reported without risk information. When these cases are redistributed based on epidemiologic follow up, all of the categories increase.

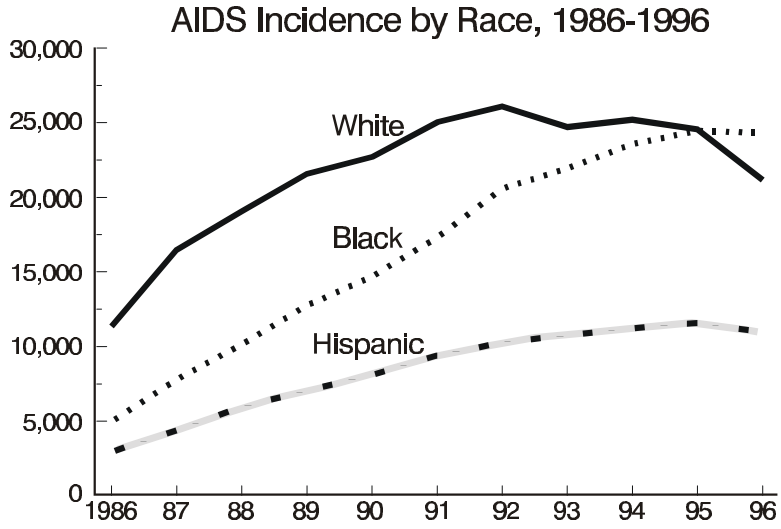
determine the time it will take an infected individual on treatment to develop an opportunistic infection, because treatment has slowed the progression of disease for many individuals and the duration of the effects of these drugs are not certain. Moreover, after 1996, AIDS incidence will no longer provide an indication of trends in HIV transmission. We therefore present estimates of AIDS incidence from 1986 to 1996 to look at where the epidemic was heading nationally before the impact of new combination therapies.

While AIDS incidence remained highest among men who have sex with men (MSM), AIDS incidence increased most dramatically among women, African Americans, and people infected heterosexually and through injection drug use (IDU).

By gender • AIDS incidence increased among both men and women through 1994. In 1994, AIDS incidence began to drop slightly among men, with a more dramatic drop of 8% from 1995 to 1996. The decline in men is due to earlier declines in HIV infections among white gay men, in part, as a result of targeted prevention efforts. Among women, AIDS incidence was increasing at a rate of about 8% annually through 1994 before the impact of treatment. From 1995 to 1996, AIDS incidence among women increased 1%.



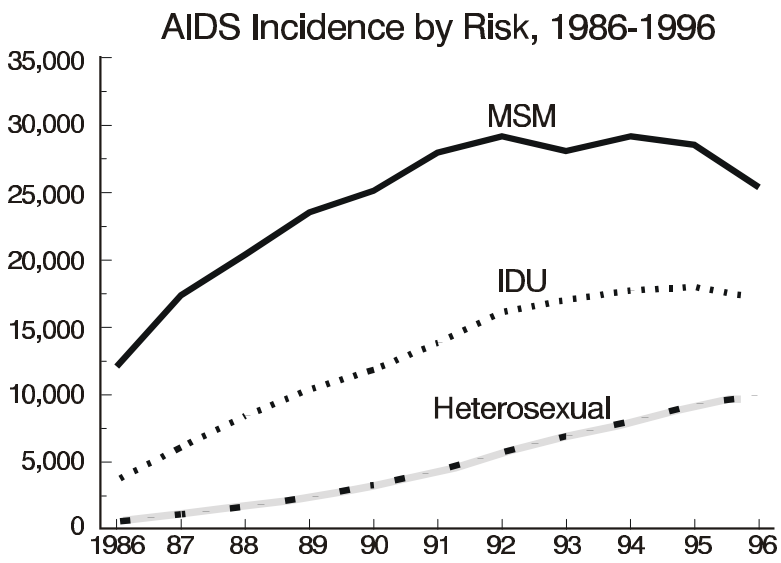
By race • AIDS incidence increased among all races through 1994, with the most significant increases seen among African Americans, who by 1996 accounted for more AIDS diagnoses annually than whites. In 1995, AIDS incidence dropped slightly among whites (-3%), with a more dramatic drop seen in 1996 (-13%) as treatment began having a greater effect. Among both African Americans and Hispanics, increases continued through 1995, with a decline in 1996 among Hispanics (-5%) and a leveling



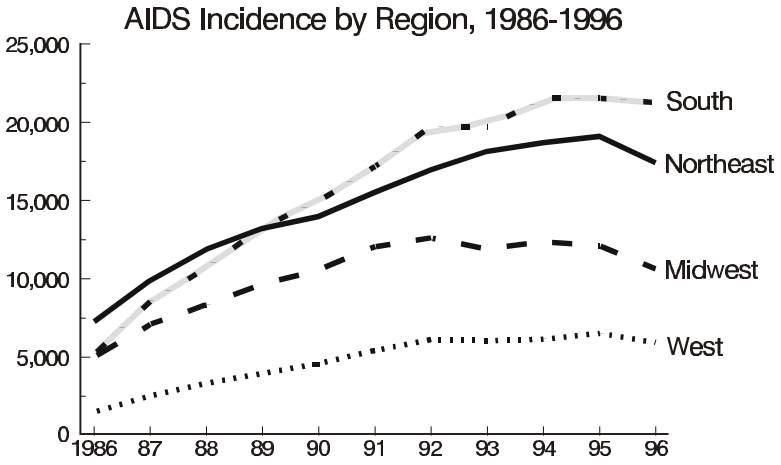
among African Americans (0%).

Note: The percentage of cases among Asians and American Indians remains less than 1%.

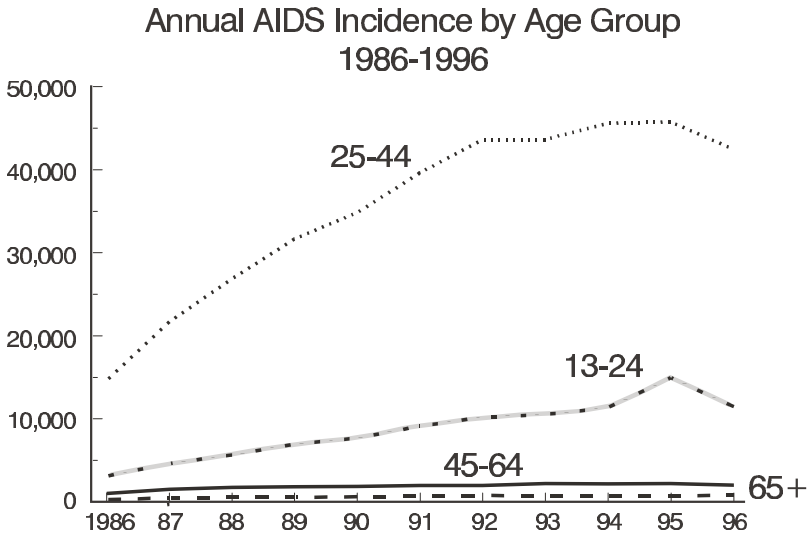
By risk • AIDS incidence increased among all exposure groups through 1994, with incidence increasing most rapidly among heterosexuals. The first drop was seen among men who have sex with men (MSM) in 1995 (-2%), with a more significant drop in 1996 (-11%). AIDS incidence among injection drug users (IDU) was increasing at about 5% each year before treatment, and dropped 5% in 1996. AIDS incidence among heterosexuals was increasing by about 15% each year before 1996, and slowed to an increase of 7% in 1996, likely, in part, as a result of treatment.



By region of the United States • AIDS incidence increased in all regions through 1994, with the most dramatic increases in the South. In 1996, AIDS incidence dropped in the Midwest (-10%), the West (-12%),and the Northeast (-8%), and leveled in the South (0%).



By age • The greatest proportion of AIDS cases has always been among Americans ages 25-44. In 1996, an estimated 57,260 Americans were diagnosed with AIDS. Of these, almost 75% (42,460) were among people 25-44 years old, 21% were among Americans over the age of 44 (12,260), and less than 4% (2,040) were among people 13-24 years of age. The remainder were pediatric (less than age 13) AIDS cases.



Among children: Perinatal AIDS declines • Trends in AIDS incidence among children continued to demonstrate the dramatic success of efforts to reduce perinatal (mother-to-child) HIV transmission. In 1994, clinical trials showed that HIV-infected women could reduce the risk of transmitting the virus to their babies by as much as two-thirds through administration of zidovudine (ZDV or AZT) during pregnancy, labor, and delivery, and by giving their babies AZT for the first 6 weeks after birth. In 1994, the Public Health Service (PHS) issued guidelines for using AZT during pregnancy, and in 1995, published guidelines for routinely counseling all pregnant women about HIV and offering them an HIV test. As health care providers across the country incorporated these guidelines into clinical practice, perinatal AIDS incidence dropped dramatically. Between 1992 and 1996, the number of children with perinatally acquired AIDS dropped 43%. But despite declines in all racial/ethnic groups, the majority of perinatally acquired AIDS cases continue to occur among African-American and Hispanic children. This indicates the need for intensified efforts to prevent infection among minority women and to reach women who are infected with early prenatal care and preventive treatment.

Estimated Number of Children With Perinatally Acquired AIDS, 1992 - 1996						
Race/Ethnicity	**1992**	**1993**	**1994**	**1995**	**1996**	**% Change**
White	**133**	**126**	**92**	**95**	**67**	**-50**
African American	**566**	**531**	**522**	**415**	**331**	**-42**
Hispanic	**195**	**195**	**166**	**146**	**111**	**-43**

SECTION 4
Implications for Prevention: What Do the Combined Data Tell Us About Groups at Greatest Risks?

Because the dynamics of the HIV epidemic are different in each population, multiple data sets must be used to compile a complete picture of the epidemic in the U.S. While local subepidemics may vary, the HIV and AIDS data described above, combined with data from select studies in high-risk populations, come together to give us a clear indication of where our greatest challenges lie.

Prevention efforts have helped slow the epidemic from a period of rapid growth to an overall stabilization. Yet, we have not achieved the same level of success in all communities. The epidemic – which initially most heavily affected white gay men – has increasingly settled among minority populations.

Looking at select seroprevalence studies among high-risk populations gives an even clearer picture of why the epidemic continues to spread in communities of color. The data suggest that three interrelated issues play a role – the continued health disparities between economic classes, our nation's inability to successfully deal with substance abuse, and the intersection between substance abuse and the epidemic of HIV and other sexually transmitted diseases.

The same populations disproportionately impacted by HIV are also disproportionately impacted by other STDs. And recognizing that other STDs like gonorrhea, syphilis, and chlamydia make people 2-5 times as likely to both spread and acquire HIV, it is clear that the HIV epidemic can not be adequately addressed without also combating the epidemic of other STDs.

- A study of more than 31,000 repeat attenders at STD clinics in 7 U.S. cities shows high incidence rates among both gay and bisexual men (1.5 to 8.2 HIV infections per 100 person years) and heterosexuals (.06 to 1.1 per 100 person years).
- In these STD clinics, both heterosexuals and gay men were much more likely to become infected with HIV if they had other STDs.

For prevention efforts to succeed we must address the dangerous intersection of drug-related and sexual risk. There is no question that drug use is fueling the spread of the epidemic among African-American and Hispanic populations. In addition to the direct impact of injection drug use on the spread of HIV, many people infected heterosexually are infected through sex with an injection drug user or sex in exchange for drugs or money. Studies of seroprevalence in STD clinics and drug treatment centers continue to demonstrate the combined impact of

drug use and STDs.

- Among heterosexuals treated in STD clinics, drug use – both the use of illicit drugs and the exchange of sex for drugs or money – are common risk factors for people who become infected with HIV.

Studies of HIV prevalence among patients in drug treatment centers and among childbearing women demonstrate that the heterosexual spread of HIV in women closely parallels the spread of HIV among injection drug users. The highest prevalence rate in both groups have been observed along the East Coast and in the South.

- All of the prevalence studies in high-risk populations find the rates of HIV among African-American and Hispanic populations to be dramatically higher than those among whites, indicating that the disproportionate toll of the epidemic among minorities continues.

In addition to improving prevention efforts for emerging communities at risk, we must sustain efforts for gay men.

Continued high rates of HIV prevalence among young gay men demonstrate that it is critical to reach each generation of young gay and bisexual men with the information, skills, and support to change behavior.

- In a sample of young men who have sex with men (ages 15-22) in 6 urban counties, researchers found that between 5% and 8% percent were infected with HIV. A higher percentage of African Americans (13%) and Hispanics (5%) were infected than whites (4%).

We now have more knowledge than ever before about what biomedical and behavioral approaches work best in HIV prevention. Our challenge is to apply what we've learned to designing even more effective tools for prevention and to ensure that our successes are extended to all populations. Despite the dramatic slowing in the epidemic overall, approximately 40,000 new infections continue to occur in the U.S. each year. We must continue to pay attention to prevention. We can and must do even better.

SECTION 5
Evaluating the Impact of Treatment

The Latest Trends in Reported AIDS Cases and Deaths

AIDS incidence and deaths dropped for the first time in 1996. This drop is largely due to the impact of treatment advances in delaying progression of HIV infection to AIDS and from AIDS to death. Consequently, from 1996 on, cases of AIDS and deaths will provide a valuable measure of the continuing impact of treatment, as well as describe populations for whom treatment is either not accessible or not effective. In the first two quarters of 1997 (the most recent period for which AIDS cases can be adjusted for reporting delays),

the declining trend in both AIDS cases and deaths accelerated, with AIDS cases declining 15% and AIDS deaths declining 45%, compared to the first two quarters of 1996.

AIDS Cases and Deaths and Change from First Half of 1996 to First Half of 1997 by Gender and Race

	AIDS Cases		Percent Decrease	AIDS Deaths		Percent Decrease
	Jan - Jun 1996	Jan - Jun 1997		Jan - Jun 1996	Jan - Jun 1997	
Total	33,243	28,370	15	21,281	11,479	45
Men	26,059	21,837	16	17,394	9,282	47
Women	7,184	6,533	9	3,887	2,467	37
White	11,963	8,999	25	8,501	3,920	54
African American	14,425	13,398	7	8,705	5,467	37
Hispanic	6,381	5,543	13	3,830	2,222	42

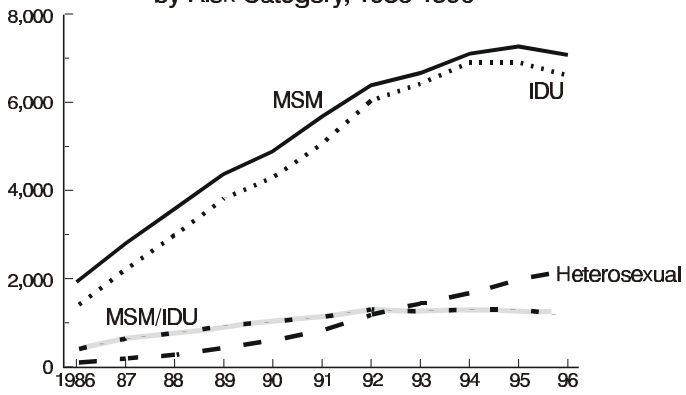
Appendix

A Closer Look at Trends by Race and Gender

African Americans and Hispanics have been disproportionately affected by the HIV epidemic. This section provides a more detailed breakdown of risk factors contributing to the spread of the epidemic in specific racial/ethnic subgroups. The data highlight that prevention challenges vary greatly depending on the populations addressed.

African-American Men • In 1996, an estimated 17,250 African-American men were diagnosed with AIDS. Of these, men who have sex with men (MSM) transmission accounted for 40% (7,070 cases), injection drug use (IDU) transmission accounted for 38% (6,610 cases), and heterosexual contact accounted for 13% (2,190). Men who reported both sex with another man and injection drug use as risk factors account for another 7% (1,150) of cases. Over the last decade, male to male sex and injection drug use have contributed relatively evenly to AIDS cases among African-American men, with heterosexual contact representing an increasing, but still relatively small proportion of cases (from 2% of cases in 1986 to 13% of cases in 1996).

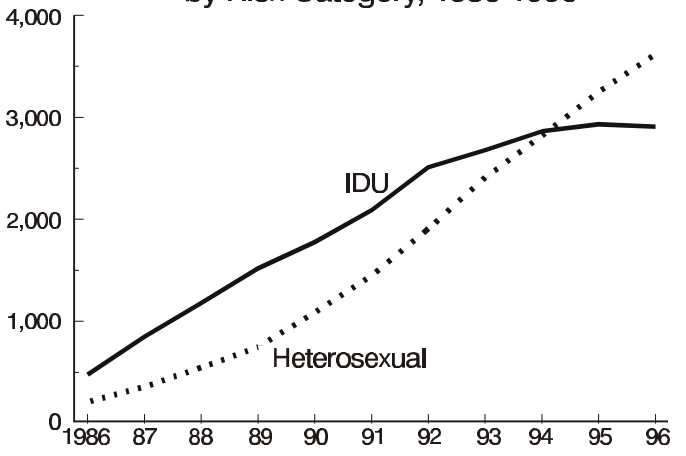
AIDS Incidence in African-American Men
by Risk Category, 1986-1996



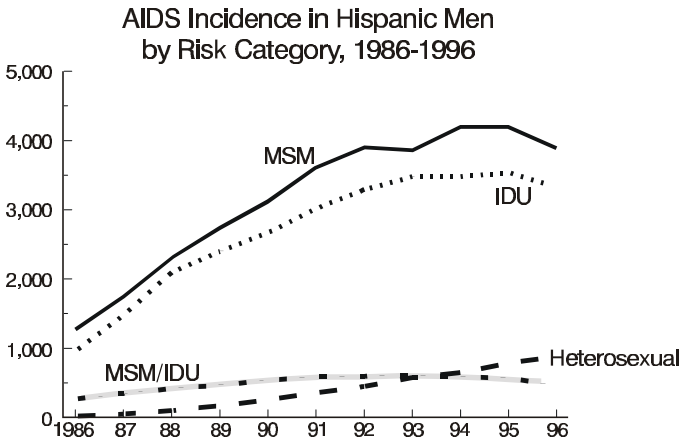
AIDS incidence in each risk category increased through 1995, and while both incidence among African-American MSM and African-American male IDU dropped in 1996 (-3% and -4%), heterosexual cases among African-American men continued to increase (+11%).

African-American Women • In 1996, an estimated 6,750 African-American women were diagnosed with AIDS. Of these, 53% (3,620) were among women infected heterosexually and 43% (2,910) were attributed to injection drug use (IDU). Over the last decade, AIDS incidence among African-American women increased most dramatically among women infected heterosexually. Prior to the impact of treatment, AIDS incidence in African-American women infected heterosexually was increasing at a rate of between 15%-30%. In 1996, this increase continued, but slowed slightly to an increase of 11%. AIDS incidence among African-American women infected through injection drug use also increased over the decade, but at a rate of approximately 10% to 20% each year. In addition to the direct impact of injection drug use on the spread of AIDS among African-American women, injection drug use also contributes to the heterosexual spread of the epidemic in these women. A large proportion of African-American women infected heterosexually are infected through sex with a male IDU.

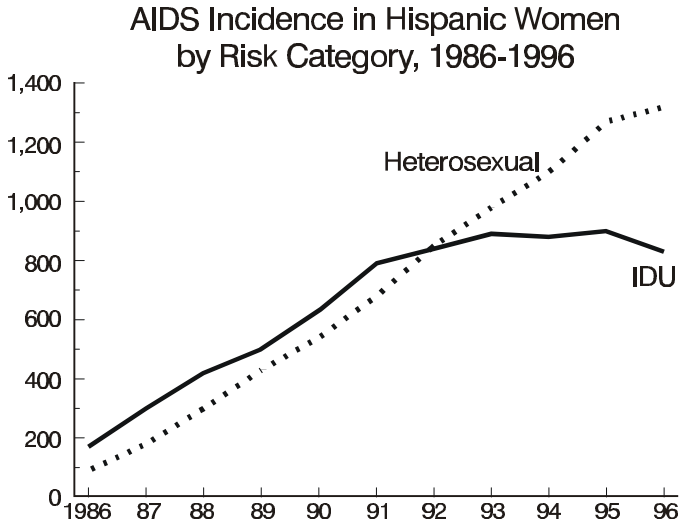
AIDS Incidence in African-American Women
by Risk Category, 1986-1996



Hispanic Men • In 1996, an estimated 8,680 Hispanic men were diagnosed with AIDS. Of these, 45% (3,880) were attributed to men who have sex with men (MSM), 38% (3,330) were attributed to injection drug use (IDU), and 10% (880) were infected heterosexually. About 5% (470) were among Hispanic men with both MSM and IDU as risk factors. Over the course of the decade, transmission through MSM and IDU have accounted for roughly equal proportions of cases among Hispanic men, with the proportion among heterosexuals increasing, although the number of heterosexually transmitted cases is still relatively low. AIDS incidence increased in all risk categories over the decade, although the rate of increase has been greatest for Hispanic men infected heterosexually. With the impact of treatment, only incidence among Hispanic men infected heterosexually continued to increase (+11%), with incidence declining among Hispanics infected through MSM (-8%) and among Hispanic males infected through IDU (-5%).

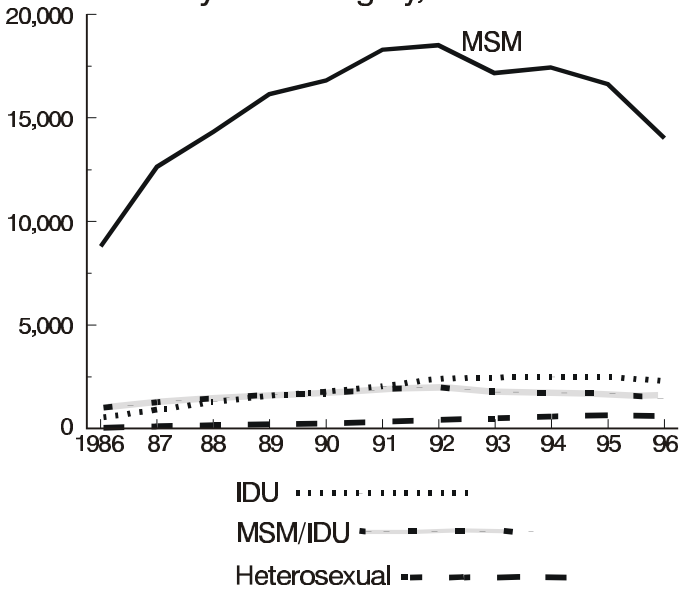


Hispanic Women • In 1996, an estimated 2,210 Hispanic women were diagnosed with AIDS. Of these, nearly 60% (1,320) were women infected heterosexually and 37% (830) were among women infected through injection drug use (IDU). Over the last decade, the proportion of cases among Hispanic women infected heterosexually has increased from approximately 30% to 60% of cases. AIDS incidence among Hispanic women infected heterosexually and Hispanic women infected through IDU increased through 1995, with heterosexual cases increasing most rapidly. In 1996, incidence among Hispanic women infected through IDU dropped 8%, while incidence among Hispanic women infected heterosexually continued to increase, although at a slower rate than in recent years (dropping from annual increases of about 15% to an increase of less than 4% in 1996).



White Men • In 1996, an estimated 18,790 white men were diagnosed with AIDS. Of these, three-quarters (14,020) were attributed to men who have sex with men (MSM), 12% (2,300) were attributed to injection drug use (IDU), 8% were among men who reported both sex with another man and IDU as risk factors, and 3% were among men infected heterosexually. Over the decade, cases attributed to MSM have continued to account for the largest proportion of cases among white men, but both those attributed to IDU and those attributed through heterosexual exposure have accounted for increasing proportions. AIDS incidence among white men infected through MSM began to decline in 1993, reflecting in part the influence of prevention programs in these communities in the 1980s. AIDS incidence among white men attributed to IDU and white men infected heterosexually increased throughout the decade until 1996, when incidence in both groups dropped (-8% and -6%, respectively).

AIDS Incidence in White Men
by Risk Category, 1986-1996



White Women • In 1996, an estimated 2,390 white women were diagnosed with AIDS. Of these, 51% (1,220) were among white women infected heterosexually and 43% (1,040) were among white women infected through injection drug use (IDU). AIDS incidence in both risk categories increased through 1995. In 1996, AIDS incidence among white women infected through IDU declined 5% and AIDS incidence among white women infected heterosexually leveled (0% change).

AIDS Incidence in White Women
by Risk Category, 1986-1996