Epidemiologic Profile

of HIV and AIDS in Colorado

Through June 1999

Colorado Department
of Public Health
and Environment

Division of Disease Control
and
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EXECUTIVE SUMMARY

- The numbers of new AIDS cases in Colorado have decreased steadily since peaking in 1993. AIDS deaths have decreased since peaking in 1995.

- The numbers of persons newly testing positive for HIV infection in Colorado have steadily declined since peaking in 1987, which is consistent with new HIV infections having peaked in the early 1980s.

- Decreases in persons newly testing positive for HIV infection are evident for all risk groups with the exception of males who acquired HIV through heterosexual contact (with an HIV-infected or high risk partner).

- Blacks and Hispanics are disproportionately affected by HIV, especially Black women.

- The main exposure category for men with HIV infection is having sex with men; injecting drug use is a distant second. The main exposure categories for women are heterosexual contact (with an HIV-infected or high risk partner) and injecting drug use.

- Increasing proportions of more recently infected persons appear to be women, Blacks, Hispanics, and acquired through injecting drug use and heterosexual contact (with an HIV-infected or high risk partner).

- 83 percent of 1997-1998 Colorado HIV cases reside in Denver, Adams, Arapahoe, Jefferson, or El Paso counties.

- With one exception, all HIV-infected women who gave birth during 1997-1998 knew their HIV status before pregnancy or delivery and received prophylactic drug treatment to prevent perinatal HIV transmission.

INTRODUCTION

This report is intended for those involved in planning HIV prevention programs, including Coloradans Working Together: Preventing HIV/AIDS, as well as for others interested in the epidemiology of HIV/AIDS in Colorado.

Similar to last year's report, little emphasis is placed on AIDS cases except to highlight the magnitude of the epidemic and as a comparison with more recently acquired infections. To focus on more recently acquired infections, HIV cases diagnosed during 1997-1998 (that have not progressed to AIDS through June 30, 1999) are characterized in this report. To estimate trends in HIV infection, this report presents all cases of HIV or AIDS by the year in which they first tested positive for HIV infection.

DATA SOURCES

Data that form the basis for this report are mainly HIV and AIDS cases diagnosed in Colorado residents (at the time of HIV and AIDS diagnosis, respectively) and reported to the Colorado Department of Public Health and Environment (CDPHE) through June 30, 1999, as well as results from HIV seroprevalence surveys conducted through 1998. The AIDS cases in this report include those meeting the 1993 revision of the AIDS surveillance case definition as well as earlier versions. The 1993 revision includes HIV-infected individuals who have CD4 T-lymphocyte counts <200/uL (or percent of total lymphocytes <14), pulmonary tuberculosis, recurrent pneumonia, or invasive cervical cancer.

HIV infection and AIDS are reportable by name from both laboratories and providers in Colorado. Laboratories are required to report every test result diagnostic of, or highly correlated with HIV infection, including positive HIV antibody tests, positive p24 antigen tests, CD4 counts $<500/mm^3$, and positive viral load tests. Anonymous HIV testing has been available in Colorado since late 1990. Positive tests from persons testing anonymously are not counted as HIV cases (and not included in this report) as names are necessary to maintain unduplicated case counts. When persons who tested positive anonymously access medical care for HIV infection, they are reported by name by their provider and/or the laboratory performing CD4 and viral load tests. At that point, these persons are counted as cases of HIV infection or AIDS.

HIV seroprevalence surveys provide information on levels of HIV infection in certain population groups over time and serve to monitor the spread of HIV to other groups at some risk of infection. Seroprevalence survey data complement AIDS and HIV surveillance data. These surveys have been conducted mainly among persons accessing medical care in various settings such as the Denver metro STD clinic and various drug treatment clinics. CDPHE surveys use unlinked (blinded) HIV testing in which blood samples originally collected for routine diagnostic purposes are tested for HIV after all personal identifying information has been removed. In addition to these surveys, similar data are available from the Department of Defense for Colorado military service applicants, and from the Job Corps for Colorado adolescent/young adult residential entrants to the program.

LIMITATIONS OF DATA

Ideally, for the purposes of HIV prevention planning we would like to know who is currently or most recently becoming infected with HIV. Because of the time between HIV infection and the occurrence of AIDS-defining conditions, AIDS cases have never represented persons with more recently acquired infections. In addition, as newer treatment regimens (combination antiretroviral therapy plus protease inhibitors) have altered the natural history of HIV infection by delaying progression to AIDS, the usefulness of AIDS case data for prevention planning has been even further diminished.

It is important to note that recently diagnosed HIV infection (i.e. newly testing positive for HIV) does not necessarily represent "new" HIV infection. In fact, many HIV-infected persons do not seek testing until late in the course of their disease, including some who first test positive at the time of AIDS diagnosis. However, analyses based on when persons first tested positive may approximate trends in recent infections, certainly more so than analyses based on date of AIDS diagnosis. Unfortunately, the ability to identify persons who are newly infected continues to be very limited as it has been since the beginning of the epidemic.

Since the implementation of CD4 T-lymphocyte count and viral load reporting by laboratories, HIV case reporting in Colorado is believed to be very complete for HIV-infected persons receiving medical care. Persons who test anonymously for HIV, however, are not included in routine HIV surveillance data (until they enter medical care and are reported by the laboratory and/or their provider). This report presents characteristics of persons diagnosed with HIV infection during the most recent two year time frame (1997-98). Within a two year time period, it is likely that many of the persons who tested positive anonymously would also have accessed medical care, and would, therefore, be reported by name as either HIV or AIDS cases. The major limitation of HIV case reports, however, is lack of representation of HIV-infected persons who have not accessed testing at all.

The main limitation of HIV seroprevalence surveys is that persons tested may not be representative of the whole population of interest. For example, the seroprevalence survey conducted among injecting drug users (IDU) in treatment programs may not be representative of IDU out of drug treatment, and the two groups may have differing HIV infection levels.

Throughout this report, small numbers should be interpreted with caution. Fluctuations over time in small numbers may suggest large increases/decreases; however, fluctuations in small numbers may be nothing more than small random ups and downs in the occurrence or reporting of these events.

SOCIODEMOGRAPHIC CHARACTERISTICS OF COLORADO'S POPULATION

The estimated population of Colorado in 1998 was 4.02 million,[1] which represents a 21.6% increase since 1990. The five Denver metropolitan counties (Adams, Arapahoe, Denver, Douglas, Jefferson) comprise 49% and the ten Front Range counties (Denver metro counties plus Boulder, El Paso, Larimer, Pueblo, and Weld) comprise 81% of the state's population.

Demographic Characteristics of Colorado's Population, 1998[1]

Characteristic	Population	Percent
Gender		
Male	1,995,027	49.7
Female	2,021,276	50.3
Race/Ethnicity		
White	3,197,152	79.6
Black	170,248	4.2
Hispanic	525,496	13.1
Native American	40,751	1.0
Asian	82,657	2.1
Age group		
0-12	766,447	19.1
13-19	412,872	10.3
20-24	295,914	7.4
25-29	265,095	6.6
30-39	655,646	16.3
40-49	667,246	16.6
50-59	414,494	10.3
60+	538,586	13.4

Economic Characteristics of Colorado's Population, 1990[2]

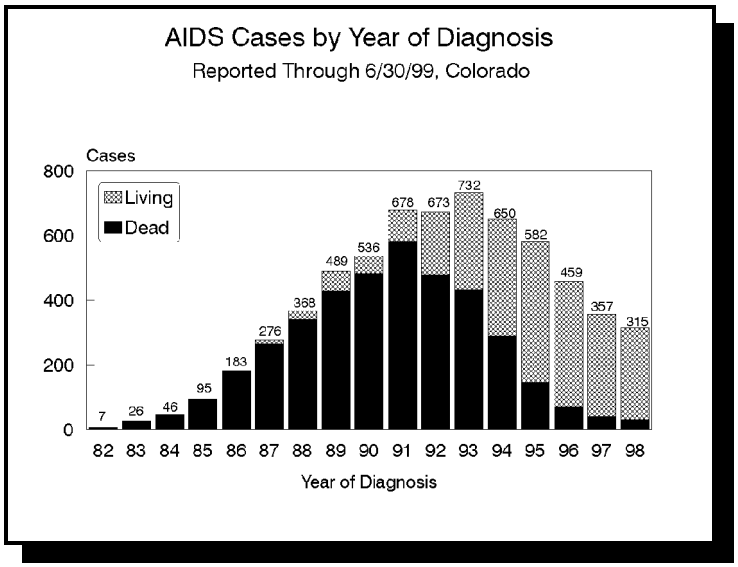
Race/Ethnicity	% Below Poverty	% Unemployed
White	8.8	4.9
Hispanic	**25.5**	**9.9**
Black	23.9	11.2
Asian	16.0	6.5
Native American	27.9	13.0

[1] 1997-based final estimate for 1998, Demography Section, Colorado Division of Local Government

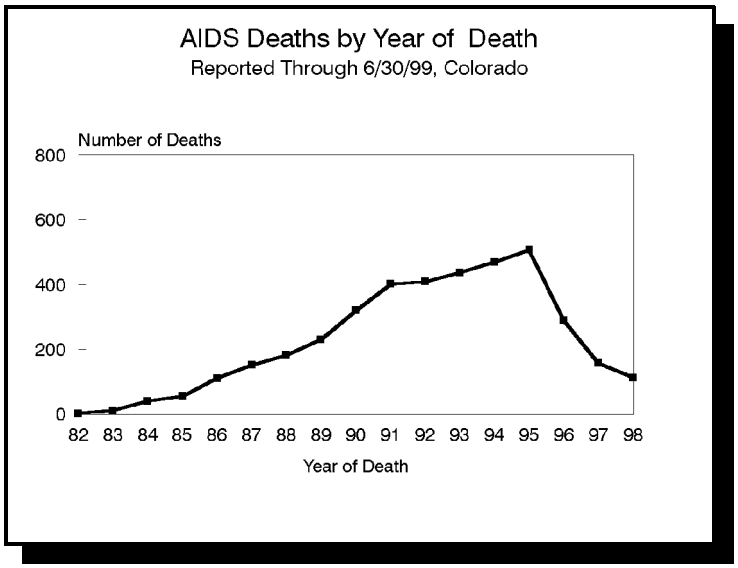
[2] United States Census, 1990

THE IMPACT OF HIV/AIDS IN COLORADO

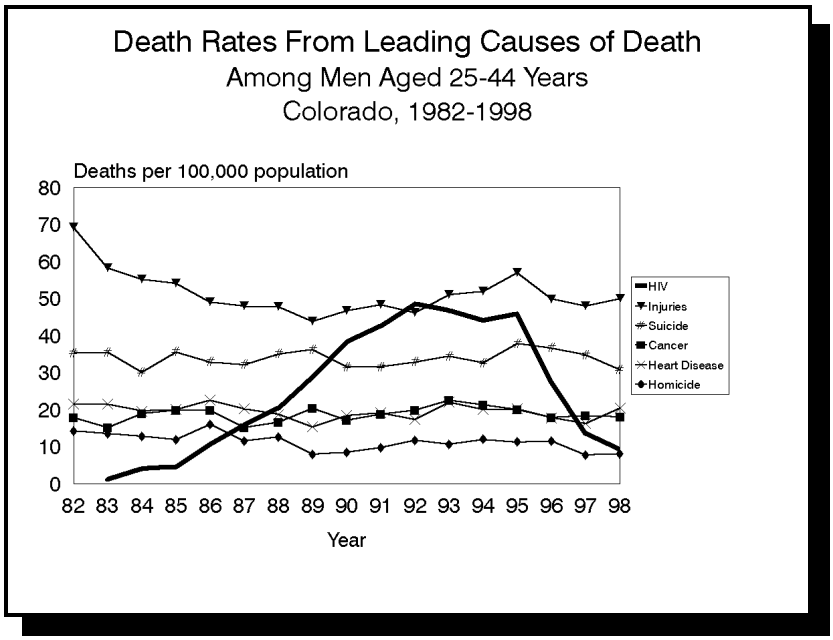
The epidemic curve of AIDS cases diagnosed among Colorado residents shown below illustrates the numbers of cases by the year in which they were diagnosed. The numbers of AIDS cases diagnosed yearly in Colorado have decreased since the peak in 1993. The 315 AIDS cases diagnosed in 1998 (and reported through 6/30/99) represent a 12% decrease over the number of cases diagnosed in 1997; this is a smaller percent decrease than occurred from 1996 to 1997. A total of 6,585 AIDS cases have been diagnosed and reported in Colorado from 1982 through June 1999; of these, 60% are known to have died.



As shown below, numbers of AIDS deaths have also decreased substantially since the peak in 1995. AIDS deaths decreased 28% from 1997 to 1998, a smaller decrease than the 46% from 1996 to 1997.



As the number of AIDS deaths has declined, so to has the position of HIV infection as a leading cause of death in Colorado. As shown below, HIV infection was the leading cause of death among men aged 25-44 years in 1992, whereas, by 1996 it had fallen to third and in 1998 it was the fifth leading cause of death. Among women aged 15-44 years in Colorado, HIV was not one of the top ten leading causes of death in 1998.



Colorado Compared to Other States

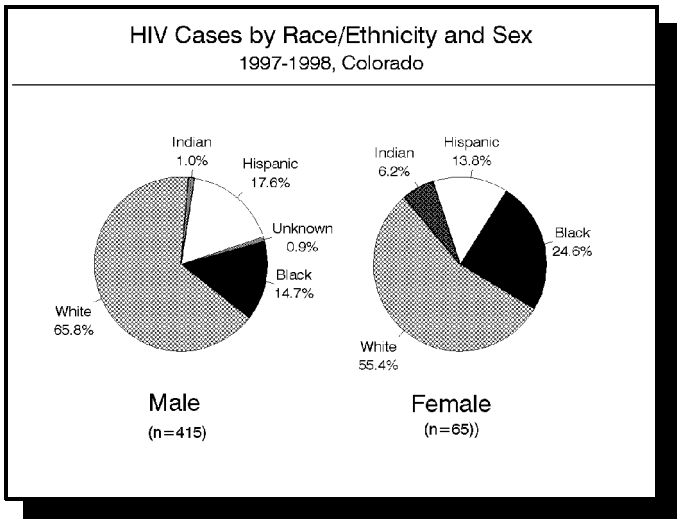
In 1998, Colorado ranked 26th among states in the number of reported AIDS cases to the Centers for Disease Control and Prevention, and ranked 30th among states for the rate of AIDS cases.[3]

[3] Centers for Disease Control and Prevention. HIV/AIDS Surveillance Report, 1998;10 (No.2):p.8.

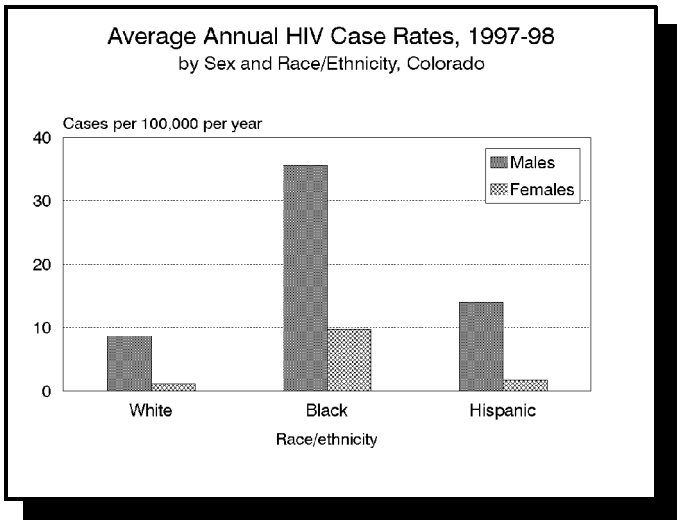
CHARACTERIZATION OF MORE RECENT HIV INFECTIONS

This section presents characteristics of HIV cases diagnosed from 1/1/97 through 12/31/98 who had not progressed to AIDS through 6/30/99. HIV cases diagnosed during this two year period are assumed to represent, on the average, persons infected somewhat more recently (see "Limitations of Data").

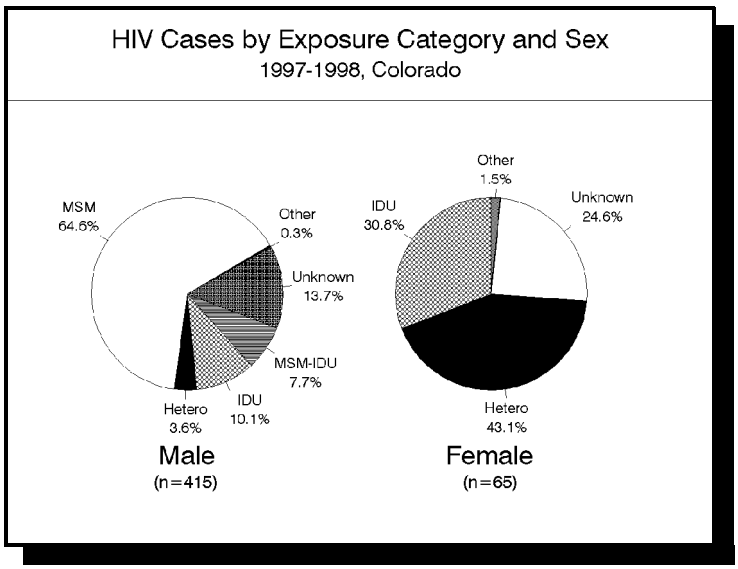
Of the 480 HIV cases diagnosed during 1997-98, 13.5% were females and 86.5% were males. The majority of male HIV cases were White; however, Hispanics comprise 18% and Blacks comprise 15% of these cases, whereas, Hispanics and Blacks comprise only 13% and 4%, respectively, of Colorado's population. Only four Native American and no Asian male HIV cases were reported for this time period. Among 1997-98 female HIV cases, Whites comprise slightly more than half and the proportions of minority cases were even higher than for males. No Asian female HIV cases were reported for this time period.



Another way of characterizing race/ethnicity differences in HIV cases is by comparing rates as shown below. Rates of HIV infection are much greater in males than in females and for both sexes, Blacks have the highest HIV case rates. The rate for Native American females (not shown) is similar to that for Black females, however, this rate is based on small numbers and should be interpreted with caution.



By exposure category, 65% of 1997-98 male HIV cases were men who have sex with men (MSM), 10% were injecting drug users (IDU), 8% were MSM who also inject drugs (MSM-IDU), 4% were heterosexually acquired from partners with or at high risk for HIV infection, and 14% had no reported risk at the time of testing positive for HIV infection. In contrast, heterosexual contact was the main exposure category (43%) for 1997-98 female HIV cases, followed by IDU (31%); however, 25% of females had no reported risk at the time of testing positive for HIV infection. The proportion of female cases with no reported risk is substantially greater than that for males.



The exposure category distribution for persons ages 13-24 testing positive for HIV infection during 1997-98 is similar to the overall distribution above. However, there are lower proportions of IDU in the younger age group.

HIV Cases* Ages 13-24 by Exposure Category and Gender, Colorado, January 1997 - December 1998

Exposure Category	Males		Females	
	No.	(%)	No.	(%)
MSM	36	(69.2)	--	(----)
IDU	2	(3.8)	3	(23.1)
MSM-IDU	5	(9.6)	--	(----)
Heterosexual contact	3	(5.8)	7	(53.8)
Risk not specified	6	(11.5)	3	(23.1)

Total	52	(100)		13	(100)	

* HIV case status as of 6/30/99

Among 1997-98 male HIV cases, MSM was the predominant exposure category for Whites, Blacks, and Hispanics, although, the proportion was highest among Whites. Greater proportions of Black and Hispanic cases were due to heterosexual contact or had no risk specified as compared to Whites. The proportion of IDU cases was highest among Blacks.

Exposure Category Distribution of Male HIV Cases* by Race/Ethnicity, Colorado, January 1997 - December 1998

	White		Black		Hispanic	
	No.	(%)	No.	(%)	No.	(%)
MSM	195	(71.4)	29	(47.5)	41	(56.2)
IDU	26	(9.5)	8	(13.1)	7	(9.6)
MSM-IDU	20	(7.3)	4	(6.6)	7	(9.6)
Heterosexual Contact	3	(1.1)	8	(13.1)	4	(5.5)
Risk not specified	29	(10.6)	11	(18.0)	14	(19.2)
Other†	0	---	1	(1.6)	0	---
Total	273	(100)	61	(100)	73	(100)

* HIV case status as of 6/30/99

† "Other" includes perinatal transmission

Among 1997-98 female HIV cases, heterosexual contact was the main exposure category for Blacks and Hispanics, whereas, both heterosexual contact and IDU were the leading categories for Whites. The proportion of IDU cases among Blacks was much lower than for Whites or Hispanics. Because the numbers of female cases by risk category and race/ethnicity are fairly small, caution should be used when interpreting these data.

Exposure Category Distribution of Female HIV Cases* by Race/Ethnicity, Colorado, January 1997-December 1998

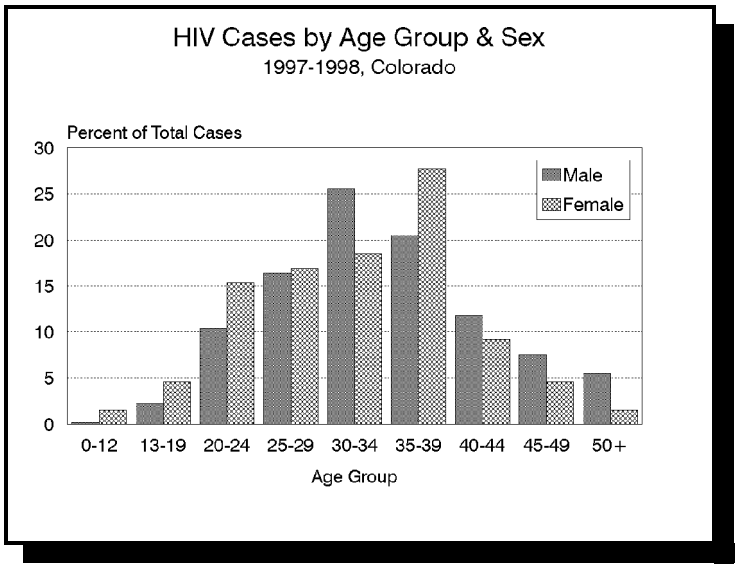
	White		Black		Hispanic	
	No.	(%)	No.	(%)	No.	(%)
IDU	12	(33.3)	1	(6.2)	3	(33.3)
Heterosexual Contact	13	(36.1)	10	(62.5)	5	(55.6)
Risk not specified	10	(27.8)	5	(31.2)	1	(11.1)
Other†	1	(2.8)	0	---	0	—

Total	36	(100)	16	(100)	9	(100)

* HIV case status as of 6/30/99

† "Other" includes perinatal transmission

The age distributions of 1997-98 HIV cases were fairly similar for males and females. However, among males, the greatest proportion of cases was in the 30-34 year age group (at the time of testing positive for HIV infection), whereas, among females it was in the 35-39 year age group. The proportion of cases under age 25 was higher among females than for males, and the proportion of cases above age 39 was greater among males. Since the numbers of cases are small for the youngest and oldest age groups, caution should be used when interpreting these data.

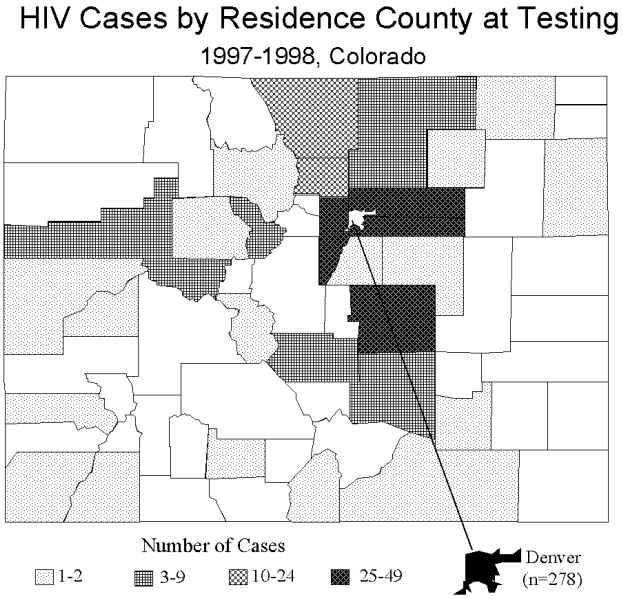


The residence counties of 1997-98 HIV cases (at the time of testing positive) are displayed in the map below. Denver County accounted for 58% of cases while Denver, Adams, Arapahoe, Jefferson, and El Paso counties together accounted for 83%. As a whole, the Front Range counties accounted for 92% of cases during this time period.

Perinatal Transmission

Prevention of HIV infection in infants born to HIV-infected women depends upon these women learning their infection status before or during pregnancy and being offered zidovudine (AZT) or combination drug treatment during pregnancy and delivery, and their newborns also receiving zidovudine. The table below summarizes the number of infants born in Colorado to HIV-infected women in 1997 and 1998 and whether the mother knew her infection status before delivery and whether she and/or the newborn received zidovudine.

Infants Born in Colorado to HIV-Infected Mothers by Mother's Knowledge of HIV Status and Mother's/Infant's Receipt of AZT, 1997 - 1998



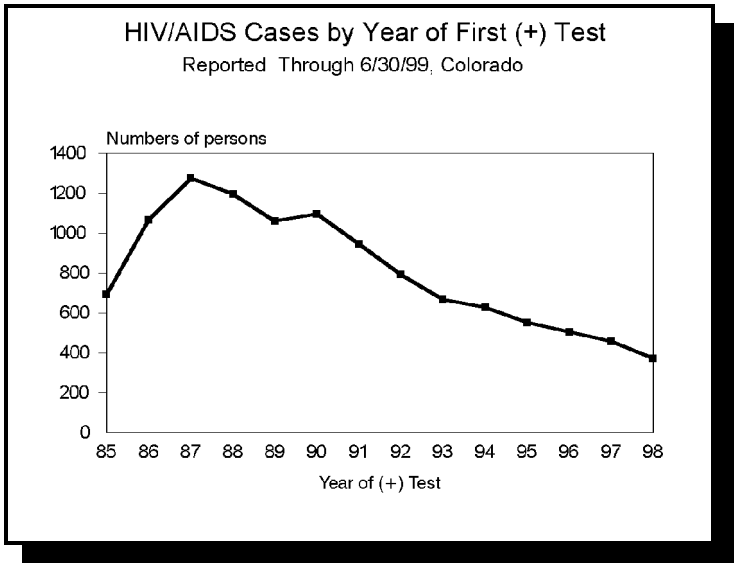
	Birth Year 1997		Birth Year 1998		Total	
	No.	(%)	No.	(%)	No.	(%)
Infants born to HIV-infected mothers	16	—	13	—	29	---
Mother knew HIV infection status before or during pregnancy	15	(94)	13	(100)	28	(97)
Mother received AZT during pregnancy and/or delivery	15	(94)	13	(100)	28	(97)
Infant received AZT	15	(94)	13	(100)	28	(97)

As can be seen in the table above, all but one of the 29 HIV-infected women who gave birth in 1997-1998 knew their HIV status before or during pregnancy and received AZT. Of the 29 infants born to these HIV-infected mothers, only one has been diagnosed with HIV infection (as of 6/30/99).

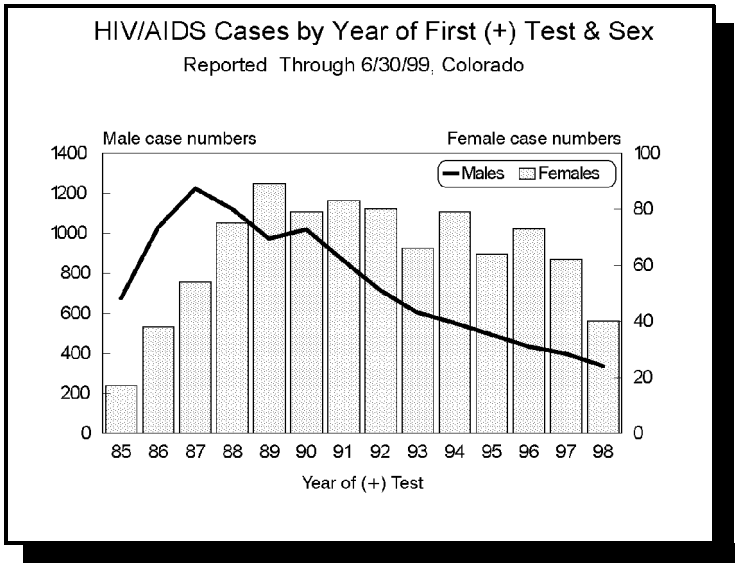
TRENDS IN HIV INFECTION

This section presents trends in persons newly testing positive for HIV infection by the year in which they first tested positive. Although people access HIV testing at varying points in their infection, it is assumed that these analyses of HIV-infected persons in aggregate give a valid approximation of trends in more recent HIV infections.

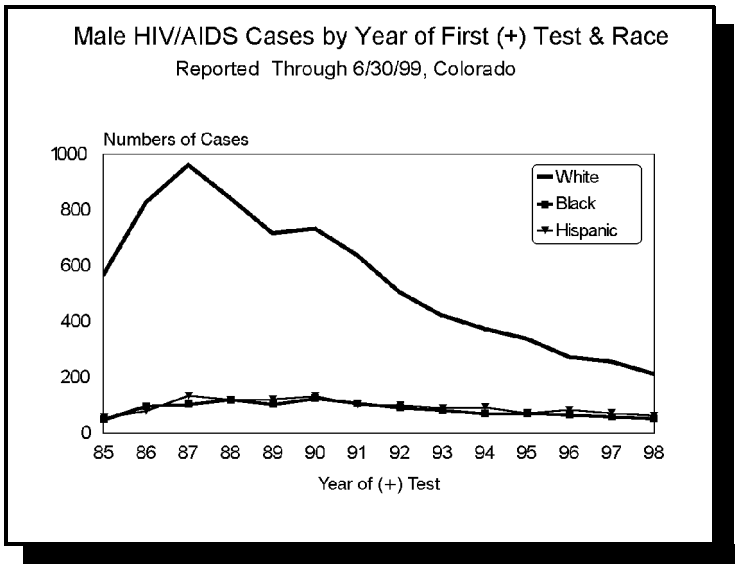
In contrast to trends in new AIDS cases in Colorado, the trend in persons testing positive for HIV infection peaked much earlier (1987 vs 1993) and has declined 71% through 1998. This trend is consistent with the interpretation that new HIV infections in Colorado may have peaked in the early 1980's (testing for HIV infection only became available in 1985).



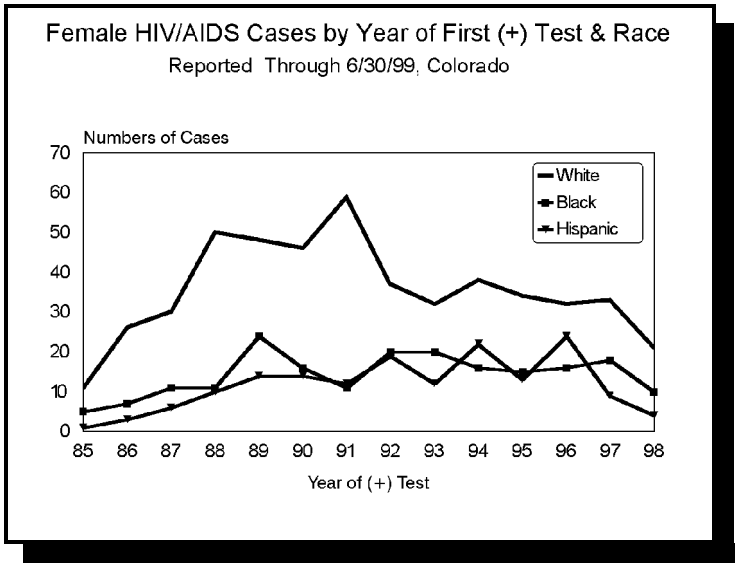
By sex, the numbers of both males and females newly testing positive for HIV have decreased, although for females there was only a 55% decrease from 1989 through 1998, as compared to a 73% decrease for males from 1987 through 1998. The numbers of female cases are small and have fluctuated more than males.



Looking more closely at males by race/ethnicity, the numbers of persons newly testing positive for HIV appear very similar for Whites as for males overall, decreasing 78% from 1987 through 1998. For Blacks and Hispanics, the decreases have been 58% and 53%, respectively, from 1990 through 1998. The numbers of Asian and Native American cases are too small to assess trends.

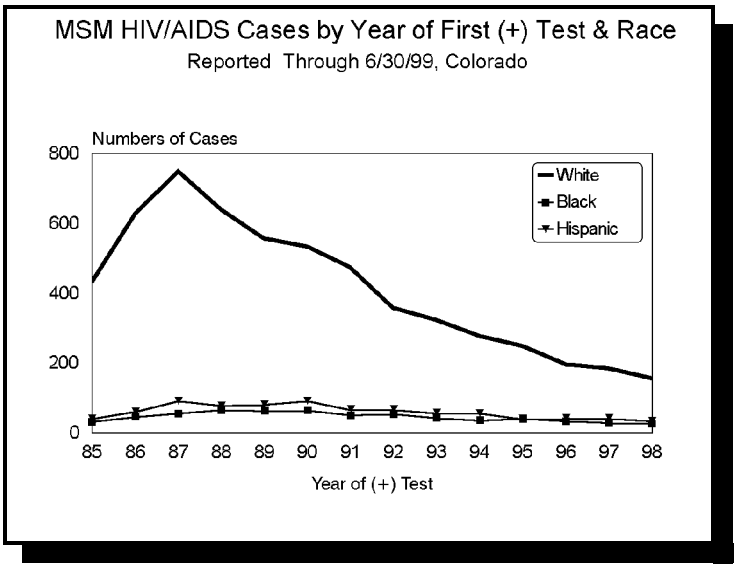


Looking at females by race/ethnicity, the numbers of persons newly testing positive for HIV are much smaller and fluctuate more than for males. The numbers of Whites decreased 64% from 1991 through 1998; whereas, the numbers of Blacks decreased only 10% from 1992 through 1997, but decreased more steeply in 1998. For Hispanics, there was no clear trend through 1996, but there has been a steep decrease between 1996 and 1998.

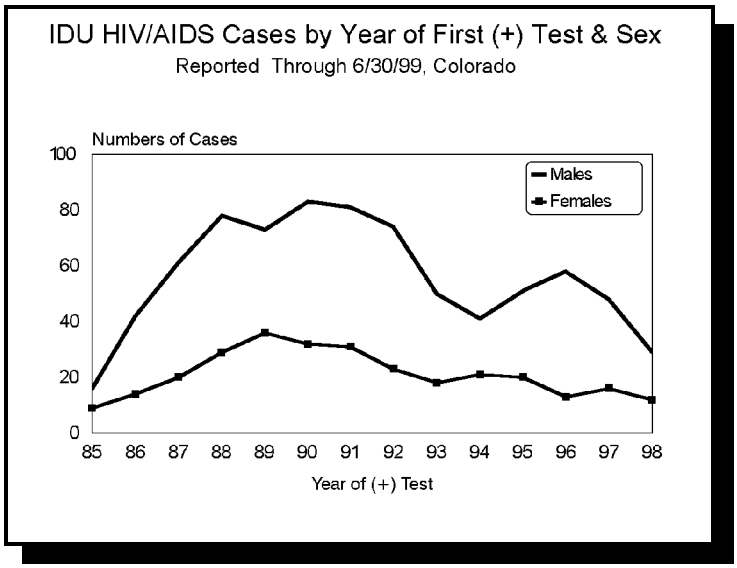


Trends by Exposure Category

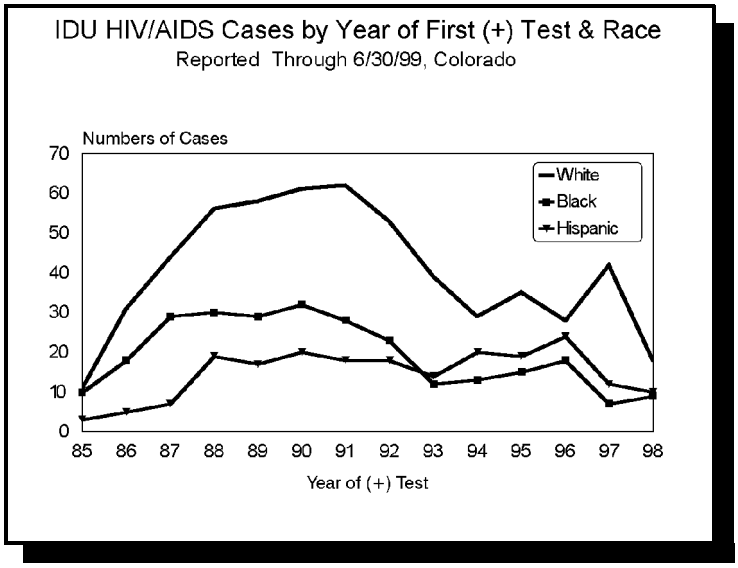
Among men who have sex with men (MSM), the numbers of persons newly testing positive for HIV decreased 79% in Whites from 1987 through 1998; 59% in Blacks from 1990 through 1998; and 64% in Hispanics from 1990 through 1998. The numbers of Asian and Native American MSM cases are too small to assess trends.



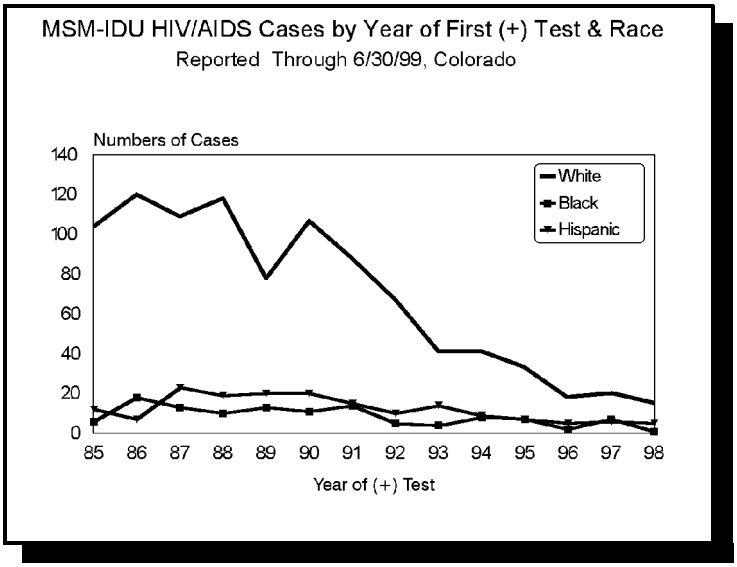
Among injecting drug users (IDU), the numbers of persons newly testing positive for HIV decreased 65% in males from 1990 through 1998 and 67% in females from 1989 through 1998. For male IDU especially, numbers of cases have fluctuated somewhat during more recent years.



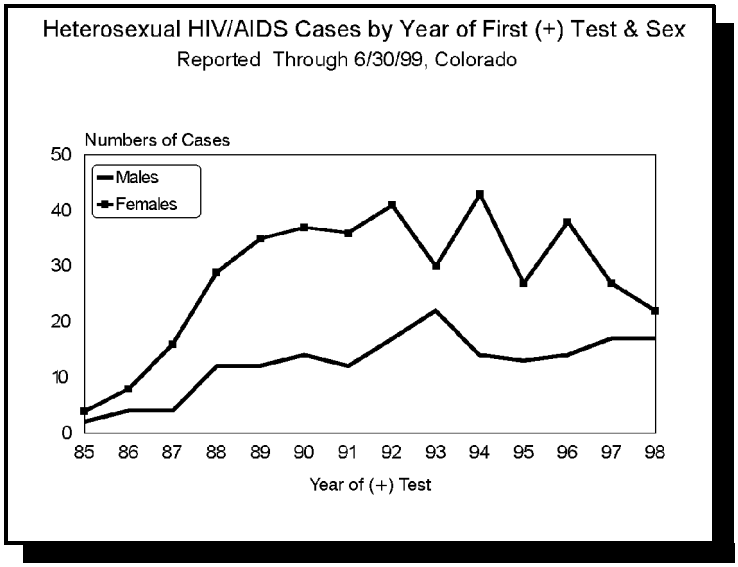
Among IDU by race/ethnicity, the number of persons newly testing positive for HIV decreased 71% in Whites from 1991 through 1998 and 78% in Blacks from 1990 through 1998. For both of these groups, however, trends in more recent years fluctuate. For Hispanic IDU, there is no clear trend through 1995, then substantial fluctuation from 1996 through 1998.



Among MSM who also inject drugs (MSM-IDU), the numbers of persons newly testing positive for HIV infection decreased 86% in Whites from 1990 through 1998, 93% in Blacks from 1991 through 1998, and 75% in Hispanics from 1990 through 1998.

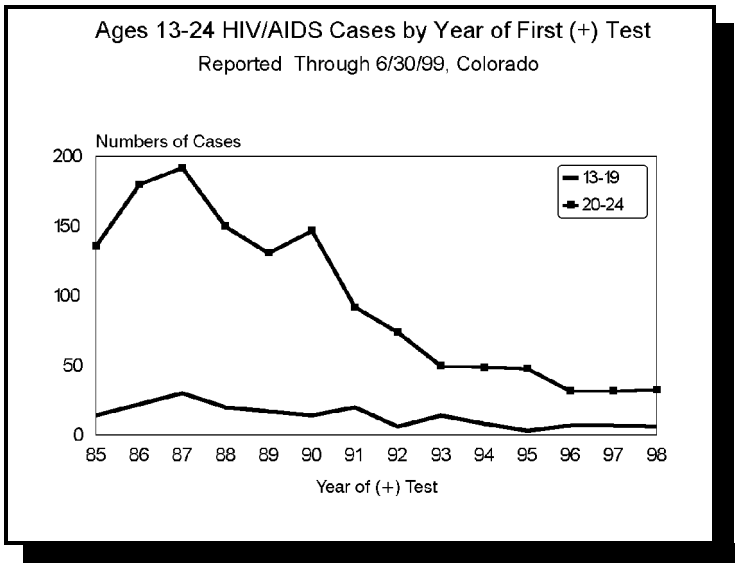


Among male heterosexual contact cases, the numbers of persons newly testing positive for HIV infection do not show a clear decrease as is seen for the other exposure categories. Male heterosexual contact case numbers are very small and the overall trend since 1988 is increasing (although decreasing since 1993). Female heterosexual contact cases have fluctuated substantially since 1992, although there is an overall 46% decrease during this time period.



Trends in Young Persons

Among persons under age 25 at the time of testing positive for HIV infection, the numbers of persons newly testing positive decreased 70% in the 13-19 year age group since 1991, although these numbers are very small. For the 20-24 year age group, the numbers of persons newly testing positive decreased 78% from 1990 through 1998.

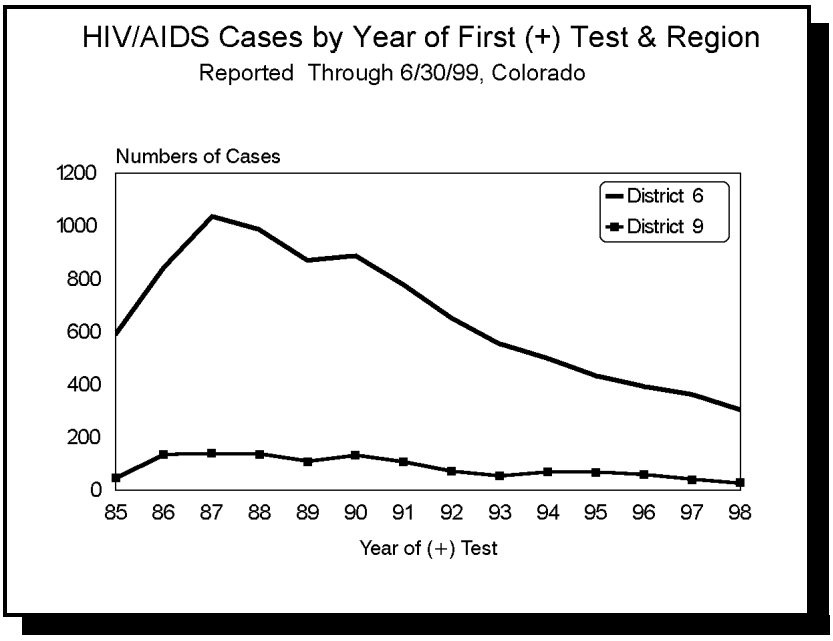


Trends by Geographic Region

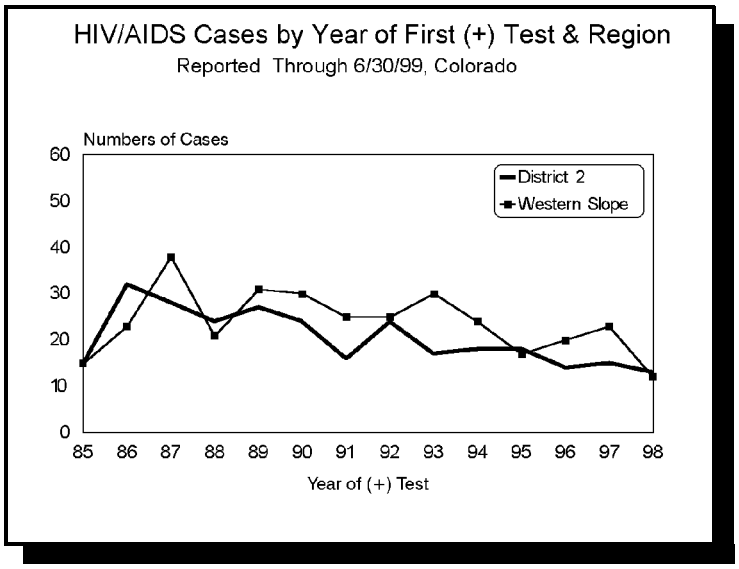
Trends in persons newly testing positive for HIV infection may also be assessed geographically. The trends presented are primarily based on county of residence at the time of newly testing positive for HIV infection. However, for approximately 30% of persons who have been reported with either HIV or AIDS, county of residence at the time of testing positive was unknown; for these persons, county of residence at the time of AIDS diagnosis was used in the analyses. Geographic data should be interpreted with caution since a person's county of residence at the time of testing positive for HIV infection or at the time of AIDS diagnosis may not necessarily represent where they acquired HIV infection.

For HIV prevention planning purposes, Coloradans Working Together: Preventing HIV/AIDS has defined six geographic regions in the state. District 6 is the Denver metropolitan area including Boulder County plus Gilpin and Clear Creek counties. District 9 includes Pueblo, Las Animas, Huerfano, El Paso, Elbert, and Fremont counties. District 2 includes Larimer and Weld counties and the western part of Adams county (outside the Denver metro area). District 8 includes Chaffee, Rio Grande, Mineral, Alamosa, Saguache, Conejos, Costilla, Teller, and Custer counties. The Eastern Plains and the Western Slope comprise the other two regions.

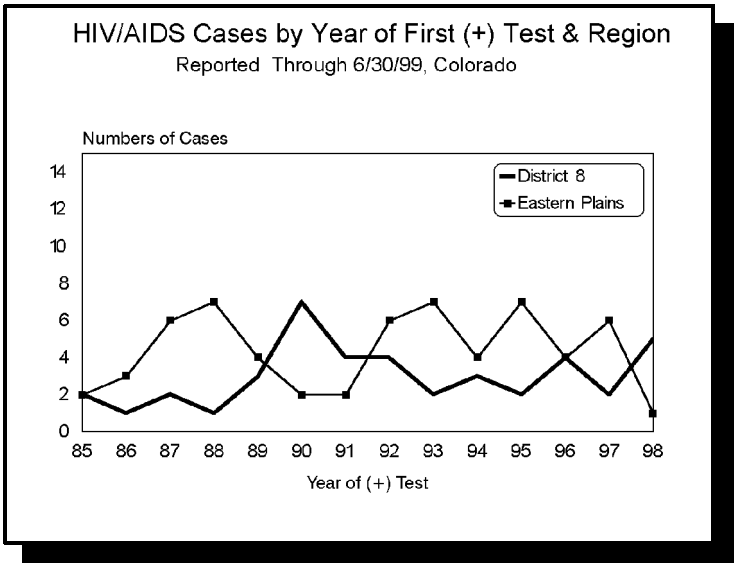
The numbers of persons newly testing positive for HIV infection in District 6, the region with the majority of Colorado's HIV and AIDS cases, decreased 71% from 1987 through 1998 as shown below. District 9 has the next highest number of cases and has experienced a 78% decrease in persons newly testing positive for HIV from 1990 through 1998.



Numbers of cases of HIV/AIDS in District 2 and the Western Slope are small (as seen by the scale in the graph below) and show moderate fluctuation. The numbers of persons newly testing positive for HIV decreased 52% from 1989 through 1998 in District 2 and 61% in the Western Slope.



The numbers of cases of HIV/AIDS in District 8 and in the Eastern Plains are the smallest of the regions and show moderate fluctuation; therefore, these trends should be interpreted with much caution. There does not appear to be a clear trend in persons newly testing positive for HIV in either region.



COMPARISON OF MORE RECENT TO EARLIER HIV INFECTIONS

Persons diagnosed with HIV infection during the past two years who have not progressed to AIDS (through 6/30/99), are likely to represent, on the average, persons infected more recently than those diagnosed with AIDS, especially those diagnosed with AIDS earlier in the epidemic. For this analysis, persons diagnosed with AIDS in 1993 (peak of AIDS incidence in Colorado) were used. The comparison of recent HIV cases to earlier AIDS cases, therefore, provides a view of how the demographic and risk factor composition of the HIV epidemic has changed in Colorado among persons infected during more recent years compared to those infected earlier in the epidemic.

As seen in the table below, compared to persons infected earlier in the epidemic, persons infected more recently appear somewhat more likely to be women (13% vs 7%) and to be Black (16% vs 13%), Hispanic (17% vs 14%), or Native American (2% vs 1%).

Comparison of 1997-1998 HIV Cases[*] and 1993 AIDS Cases[*], Colorado, by Gender and Race/Ethnicity

	1997-98 HIV Cases		1993 AIDS Cases	
	No.	(%)	No.	(%)
Women	65	(13.5)	49	(6.7)
Men	415	(86.5)	683	(93.3)
White	309	(64.9)[†]	524	(71.6)
Black	77	(16.2)	96	(13.1)
Hispanic	82	(17.2)	105	(14.3)
Native American	8	(1.7)	5	(0.7)
Asian	0	---	2	(0.3)

[*] AIDS and HIV case status as of 6/30/99

[†] Four HIV cases had no race reported and were excluded from the denominators of all race category calculations

More recently infected persons also appear more likely to be IDU (13% vs 10%) or acquired through heterosexual contact (9% vs 5%) with partners with or at high risk for HIV infection compared to persons infected during earlier years. A greater proportion of persons reported with HIV infection have no risk reported (15%) compared to persons diagnosed with AIDS (3%). To the extent that some of these HIV cases may eventually be reclassified as due to IDU or heterosexual contact, these exposure categories may actually comprise an even greater proportion of more recently infected persons.

Comparison of 1997-1998 HIV Cases* and 1993 AIDS Cases*, Colorado, by Exposure Category

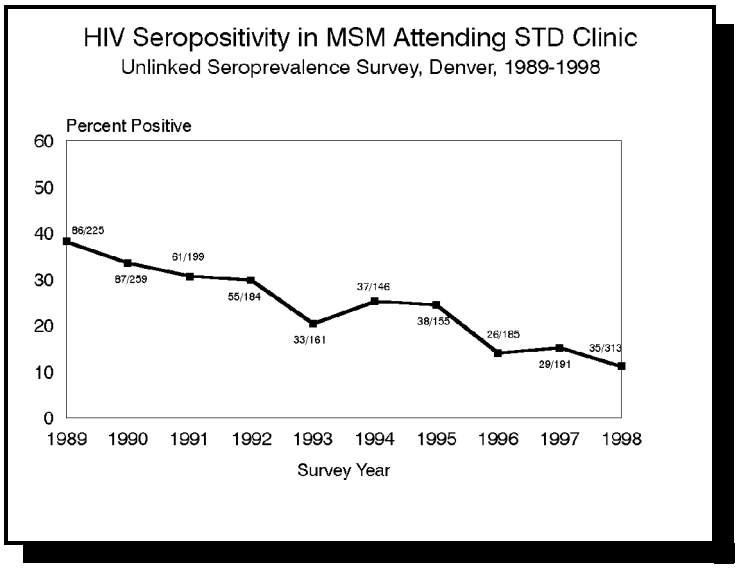
	1997-98 HIV Cases		1993 AIDS Cases	
	No.	(%)	No.	(%)
MSM	268	(55.8)	525	(71.7)
IDU	62	(12.9)	71	(9.7)
MSM-IDU	32	(6.7)	64	(8.7)
Heterosexual Contact	43	(9.0)	38	(5.2)
Risk not specified	73	(15.2)	24	(3.3)
Other†	2	(0.4)	10	(1.4)

* AIDS and HIV case status as of 6/30/99

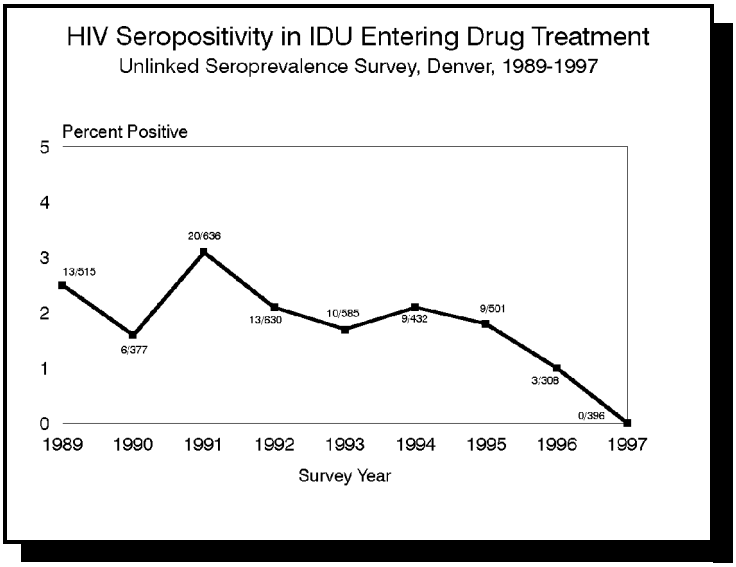
† "Other" includes hemophilia, transfusion, and perinatal transmission

SEROPREVALENCE DATA

Among MSM attending the Denver STD clinic, HIV seropositivity (number of persons testing positive divided by the number of persons tested, expressed as a percent) decreased overall from 1989 (38%) through 1998 (11%). The HIV infection level among MSM attending the STD clinic, however, remains substantial compared to other groups surveyed, although the numbers tested in this survey are relatively small and those tested are unlikely to be representative of all MSM in the Denver metro area.



Among IDU entering drug treatment in several Denver clinics, HIV seropositivity fluctuated from 1989 through 1994 and then clearly decreased from 1995 through 1997 (0%); this survey was discontinued in 1998. IDU entering drug treatment, however, are clearly not representative of all IDU. Project SAFE, a National Institute on Drug Abuse-funded project targeting out-of-treatment IDU and crack users in Denver for HIV prevention services, found an HIV infection rate of 6.5 % among 155 IDU not in treatment at the time of testing during 1998.



HIV infection levels among civilian military applicants may provide a measure of heterosexual spread of HIV in the general population. Overall seropositivity among Colorado civilian military applicants has remained very low from 1989 through 1998, between 0 and .04% (4 per 10,000). In 1998, only one person tested positive among 4,564 military applicants tested (.02%). The positive was a male; none of the 951 female military applicants tested positive. As shown in the table below, among 2,978 adolescent/young males ages 17-24 tested in 1998, there were no positives.

HIV Seroprevalence in Male Civilian Applicants for Military Service,* Colorado, 1998

Age Group	#HIV+	# Tested	%HIV+
17-19	0	2062	0
20-24	0	916	0
25-29	0	368	0
30+	1	267	0.40

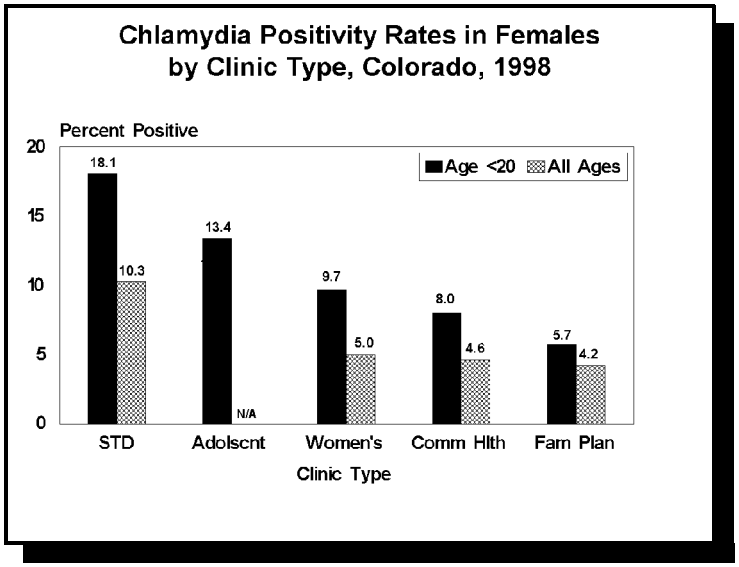
* Data provided by Department of Defense

The Job Corps is a residential occupational training program administered by the U.S. Department of Labor for economically and educationally disadvantaged youth aged 16-24 years. Since Job Corps entrants are screened for HIV, this provides a measure of HIV spread among youth who may be at some increased risk. The program has no exclusions based on sexual preference; however, current injecting drug use is an exclusion criterion. These data may underestimate HIV infection levels among the highest risk youth because of excluding IDU as well as youth who are incarcerated. HIV seropositivity among Colorado Job Corps entrants ages 16-24 remained very low from 1988 through 1997 with no trend (1998 data were not available at the time this report was written). A total of only ten persons have tested positive out of 8,969 (0.11% or 11 per 10,000). Overall infection rates are quite similar for males and females and for White, Black, and Hispanic youth.

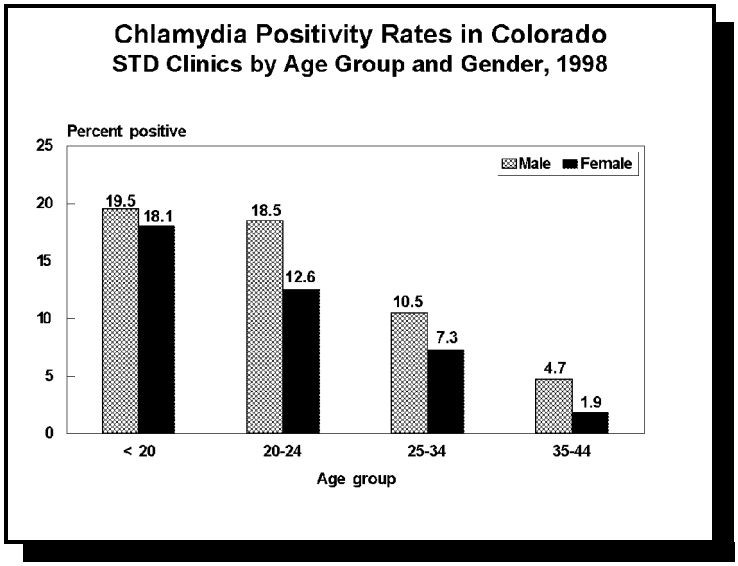
SEXUALLY TRANSMITTED DISEASE DATA

Persons diagnosed with bacterial sexually transmitted diseases (STD) represent a group who have recently or somewhat recently had unprotected sex with infected partners. Persons with STD are at increased risk for acquiring HIV infection if they are exposed to the virus (i.e. they have sex with an HIV-infected partner). Communities/groups with high STD rates may be at increased risk for the introduction and spread of HIV infection.

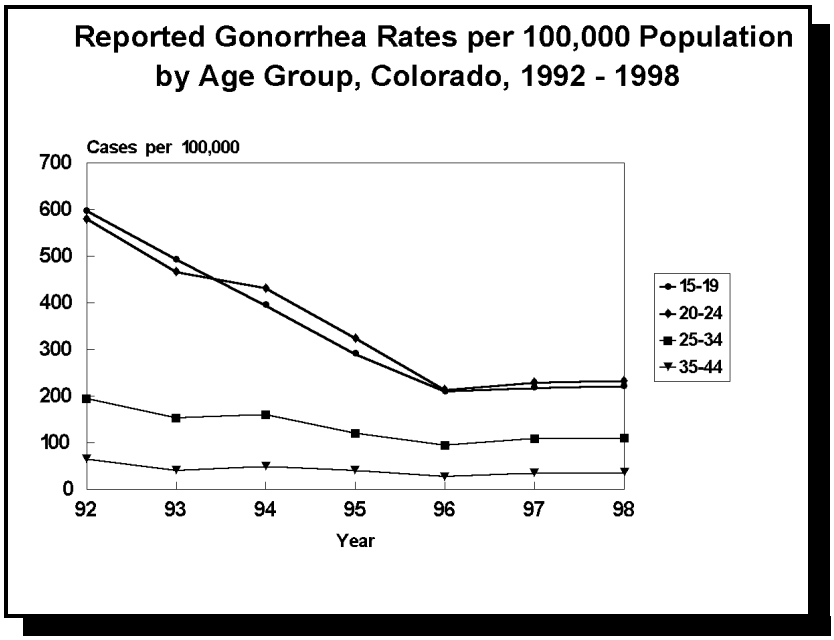
Chlamydia is the most frequent bacterial STD. Current control efforts in Colorado involve screening women in a variety of clinic settings statewide and screening men in STD clinics. Age is the single most important risk factor for chlamydia infection in women. Adolescent females have the highest chlamydia infection (positivity) rates in family planning, STD, community health, and women's clinics.



Among men tested for chlamydia in STD clinics, adolescents also have the highest infection rates. By race/ethnicity, chlamydia positivity rates in these clinic settings are higher in Blacks and Hispanics than in Whites.



Gonorrhea is the second most frequently reported STD in Colorado. Reported rates of gonorrhea also vary substantially by race/ethnicity. The rate among Blacks was 41 times that for Whites in 1998 and the rate for Hispanics was eight times that for Whites. By age group, those ages 15-19 and 20-24 have the highest gonorrhea rates which are very similar. Among females, the highest gonorrhea rate is in the 15-19 year age group, whereas, among males those aged 20-24 and 25-29 had the highest rates in 1998. Rates among all age groups decreased substantially through 1996, however, the overall gonorrhea rate in Colorado increased 11 percent between 1996 and 1998.



The numbers of cases of primary and secondary (P&S) syphilis in Colorado are extremely low; only 12 cases were reported in 1998, representing a new low in incident syphilis. Studies have demonstrated that syphilis facilitates HIV transmission more than non-ulcerative STD (chlamydia and gonorrhea).

PRIORITY GROUPS FOR HIV PREVENTION

Based on the information presented in this Epidemiologic Profile, the following are priority groups for HIV prevention in Colorado. Risk behavior is the factor most predictive of HIV infection. Surrogate risk markers (STD) are the factor least predictive of HIV infection.

By Risk Behavior

- Men who have sex with men (MSM)
- Injecting drug users (IDU)
- Women who are sexual partners of MSM and male IDU
- Men who are sexual partners of female IDU

By Demographics

- Blacks
- Hispanics

By Surrogate Risk Markers (STD)

- Adolescents
- Young Adults

APPENDIX: TABLES FOR COLORADANS WORKING TOGETHER

The following tables are provided for Coloradans Working Together: Preventing HIV/AIDS, for HIV prevention planning purposes. Data included in these tables adhere to the Colorado Department of Public Health and Environment "Policy on Release of Disease Surveillance Data" which specifies how surveillance data may be disseminated so that no individual person may be identified. According to this policy, when the population or geographic region described is less than 100,000 persons, restrictions apply to providing race/ethnicity and risk factor data.