HIV Surveillance Report, 2005

Minnesota Department of Health
HIV/AIDS Surveillance System

MINNESOTA MDH DEPARTMENT OF HEALTH

Introduction (I)

- These two introduction slides provide a general context for the data used to create this slide set. If you have questions about any of the slides please refer to the *Companion Text to the Minnesota HIV Surveillance Report, 2005* or *HIV Surveillance Technical Notes.*

- This slide set describes new HIV infections (including AIDS at first diagnosis) in Minnesota by person, place, and time.

- The slides rely on data from HIV/AIDS cases diagnosed through 2005 and reported to the Minnesota Department of Health (MDH) HIV/AIDS Surveillance System.

- The data are displayed by year of HIV diagnosis.

Introduction (II)

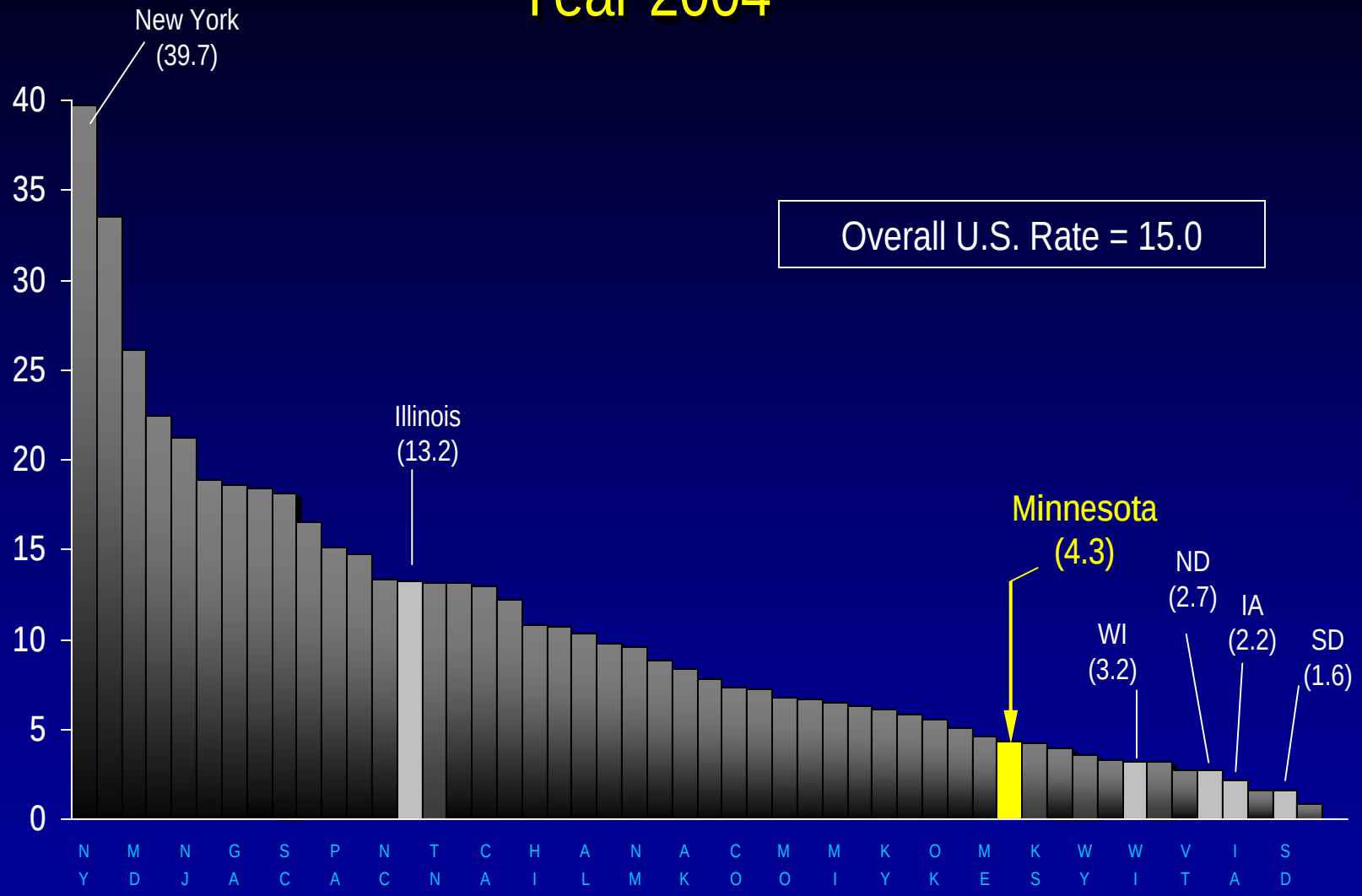
- Data analyses exclude persons diagnosed in federal or private correctional facilities, but include state prisoners (number of state prisoners believed to be living with HIV/AIDS = 100).

- Data analyses for new infections exclude persons arriving to Minnesota through the HIV+ Refugee Resettlement Program (total participants in this program since its inception in August 2000 = 148).

- Some limitations of surveillance data:
  - Data do not include HIV-infected persons who have not been tested for HIV
  - Data do not include persons whose positive test results have not been reported to the MDH
  - Data do not include HIV-infected persons who have only tested anonymously
  - Case numbers for the most recent years may be undercounted due to delays in reporting

National Context

U.S. State-Specific AIDS Rates per 100,000 Population Year 2004



SOURCE:
U.S. HIV/AIDS Surveillance Report, Year-end 2004
National Center for HIV, STD, and TB Prevention, CDC

Overview of HIV/AIDS in Minnesota

Minnesota HIV/AIDS Surveillance: *Cumulative Cases*

- As of December 31, 2005, a cumulative total of 7,824 persons have been diagnosed and reported with HIV infection in Minnesota
  - 3,012 persons diagnosed with HIV infection (non-AIDS)
  - 4,812 persons diagnosed with AIDS

- Of these 7,824 persons, 2,772 are known to be deceased

** This number includes only persons who reported Minnesota as their state of residence at the time of their HIV and/or AIDS diagnosis.*

Estimated Number of Persons *Living with HIV/AIDS in Minnesota*

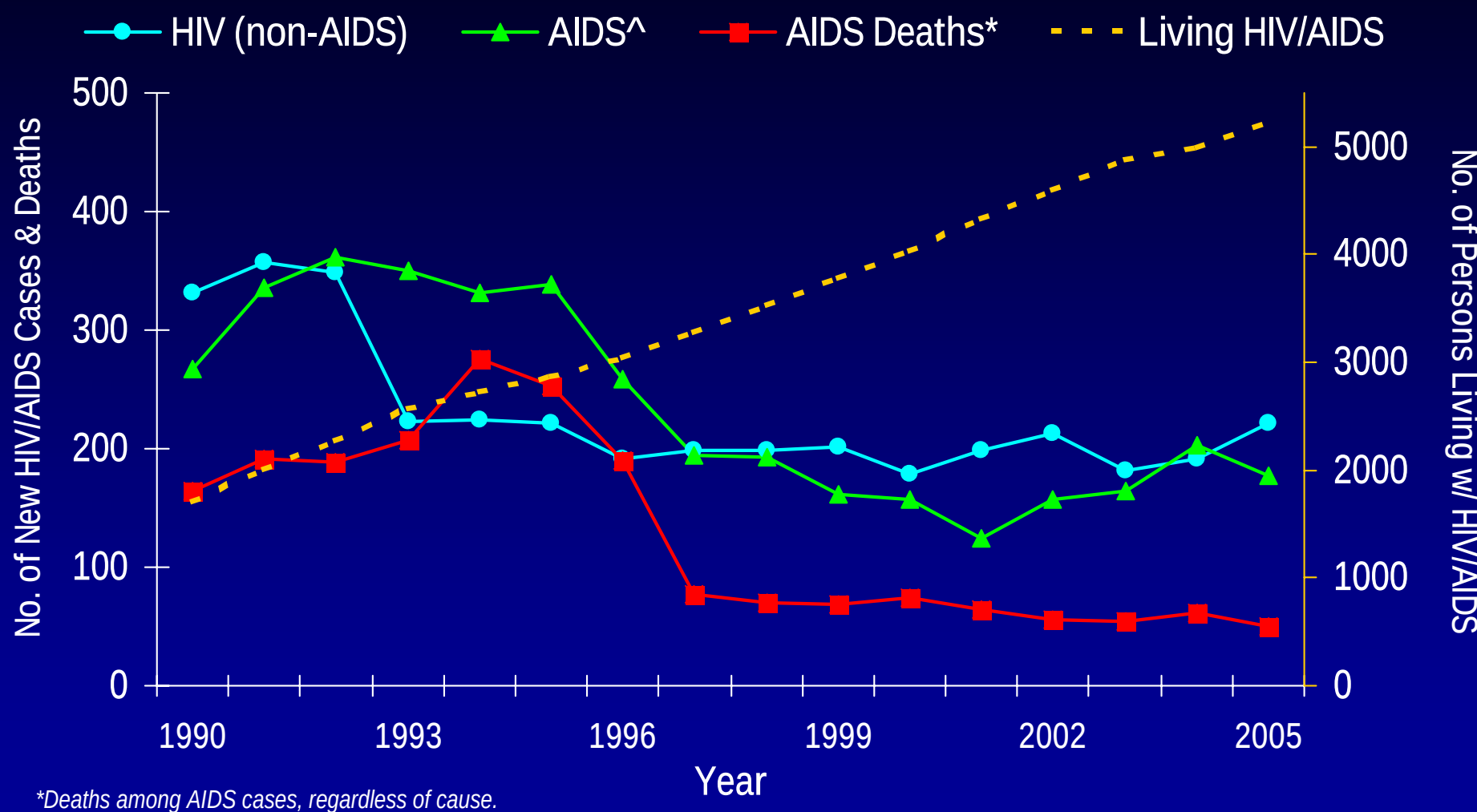
- As of December 31, 2005, 5,233* persons are assumed alive and living in Minnesota with HIV/AIDS
  - 2,914 living with HIV infection (non-AIDS)
  - 2,319 living with AIDS
- This number includes 813 persons who were first reported with HIV or AIDS elsewhere and subsequently moved to Minnesota
- This number excludes 777 persons who were first reported with HIV or AIDS in Minnesota and subsequently moved out of the state

** This number includes persons who reported Minnesota as their current state of residence, regardless of residence at time of diagnosis. Includes state prisoners and refugees arriving through the HIV+ Refugee Resettlement Program*

Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV/AIDS in Minnesota:

Number of New Cases, Prevalent Cases, and Deaths by Year, 1990-2005



**Deaths among AIDS cases, regardless of cause.*

^Includes refugees in the HIV+ Resettlement Program diagnosed with AIDS subsequent to their arrival in the United States

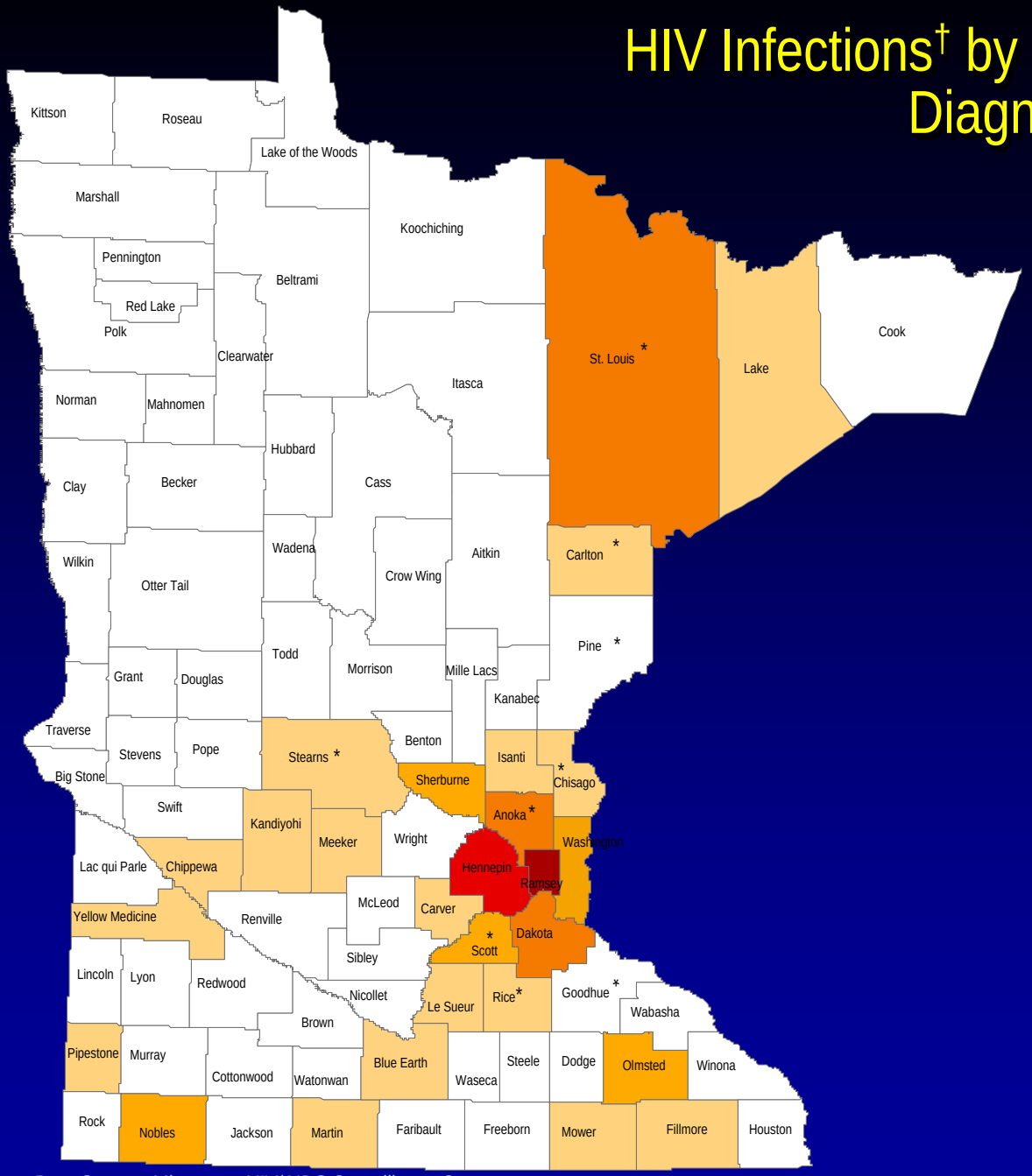
Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* in Minnesota by Person, Place, and Time

** HIV or AIDS at first diagnosis*

Place

HIV Infections† by County of Residence at Diagnosis, 2005



Number of Infections

- None
- 1 - 2
- 3 - 6
- 7 - 18
- 19 - 55
- 56 - 169

City of Minneapolis – 112
City of St. Paul – 39
Suburban# – 113
Greater Minnesota - 37

Total number = 304
(3 people missing residence information)

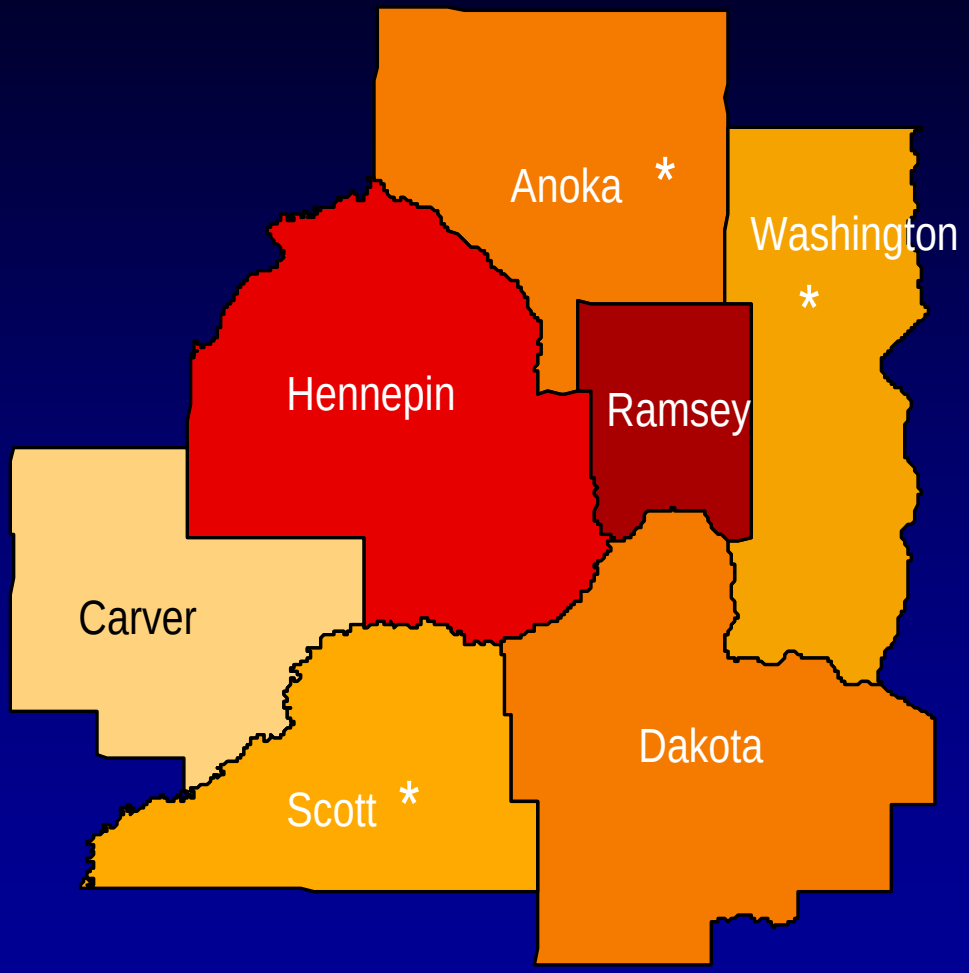
* Counties in which a state correctional facility is located

7-county metro area, excluding the cities of Minneapolis and St. Paul

†HIV or AIDS at first diagnosis

Data Source: *Minnesota HIV/AIDS Surveillance System*

Map of Metro Area:
HIV Infections† by County of Residence at Diagnosis, 2005



Number of Infections

- None
- 1 - 2
- 3 - 6
- 7 - 18
- 19 - 55
- 56 - 169

City of Minneapolis – 112
City of St. Paul – 39
Suburban# – 113

Total number (Metro only) = 264

* Counties in which a state correctional facility is located

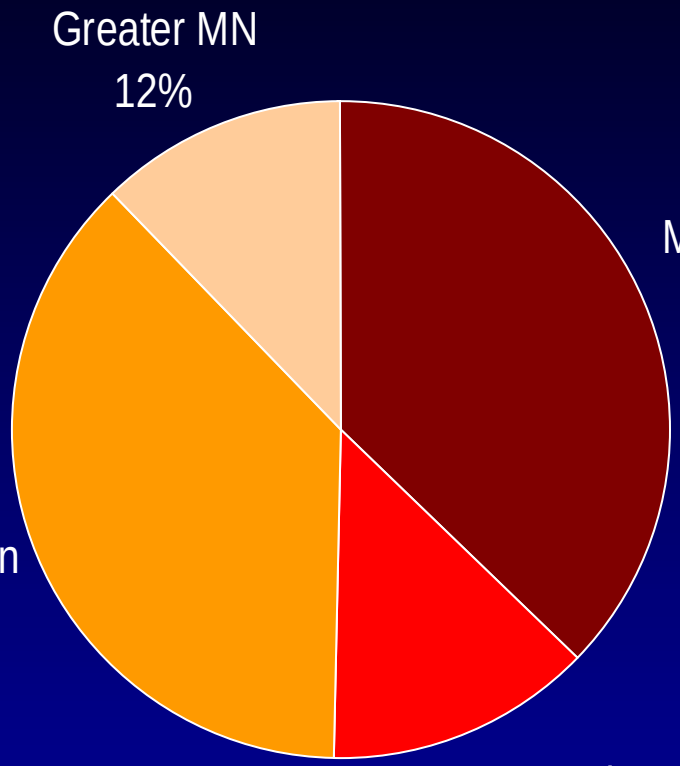
7-county metro area, excluding the cities of Minneapolis and St. Paul

Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* in Minnesota by Residence at Diagnosis, 2005

Total Number = 304

(3 persons missing residence information)



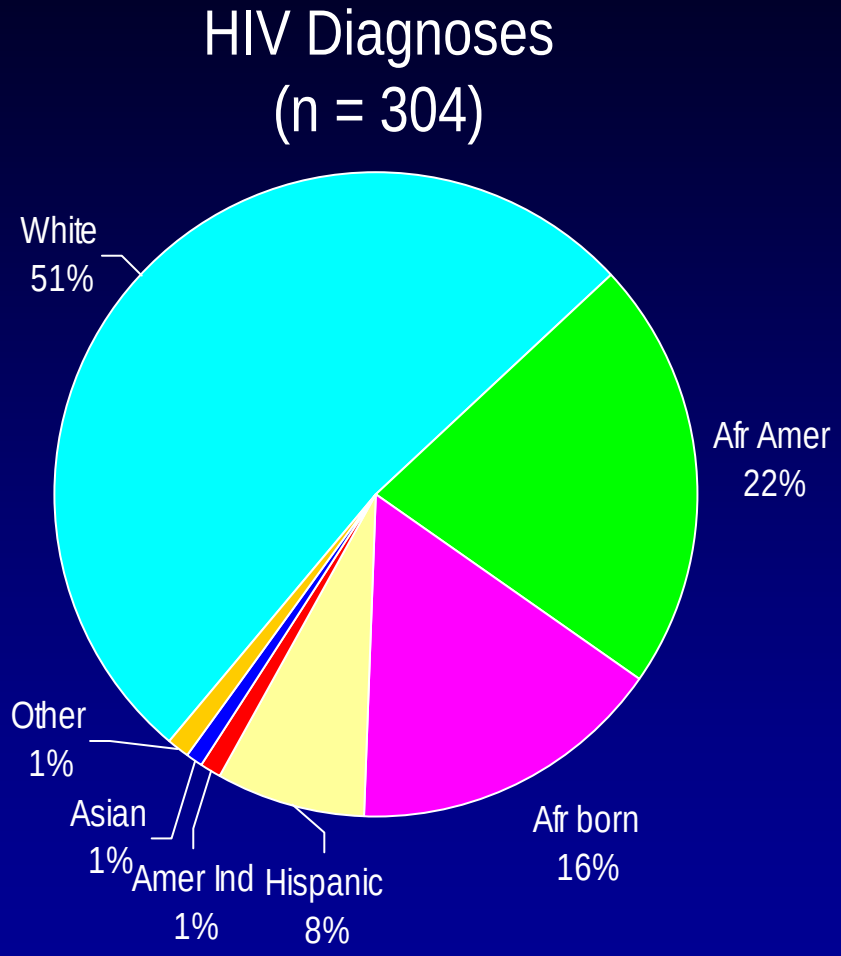
Suburban = Seven-county metro area including Anoka, Carver, Dakota, Hennepin (except Minneapolis), Ramsey (except St. Paul), Scott, and Washington counties. Greater MN = All other Minnesota counties, outside the seven-county metro area.

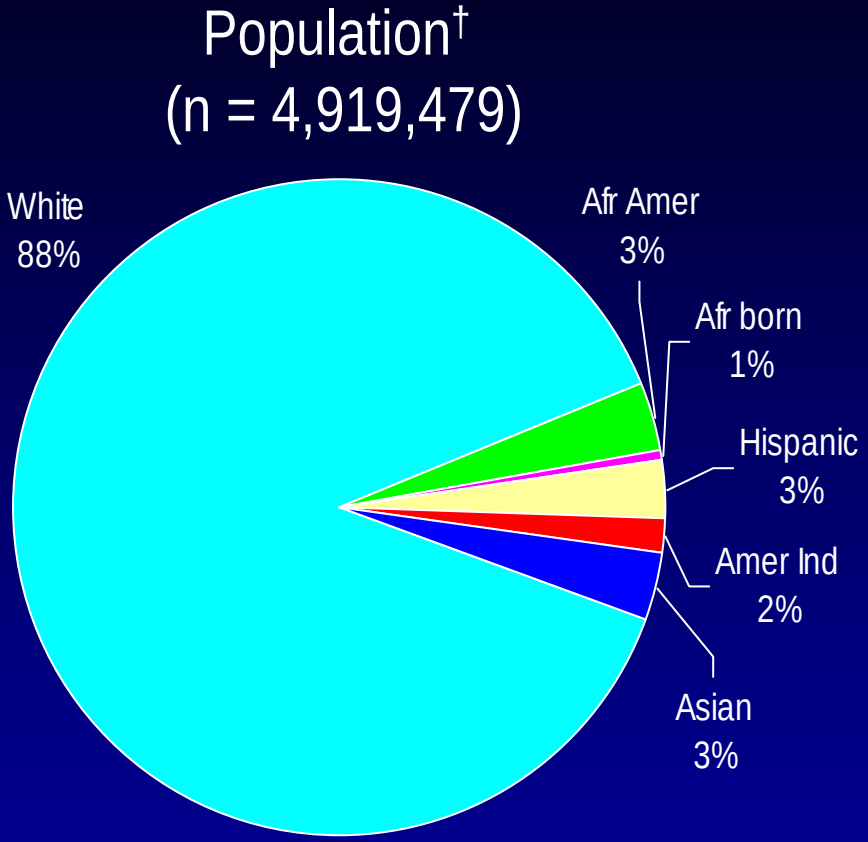
** HIV or AIDS at first diagnosis*

Data Source: *Minnesota HIV/AIDS Surveillance System*

Gender and Race/Ethnicity

HIV Infections* Diagnosed in Year 2005 and General Population in Minnesota by Race/Ethnicity





** HIV or AIDS at first diagnosis*

† Population estimates based on 2000 U.S. Census data.

Data source: Minnesota HIV/AIDS Surveillance System

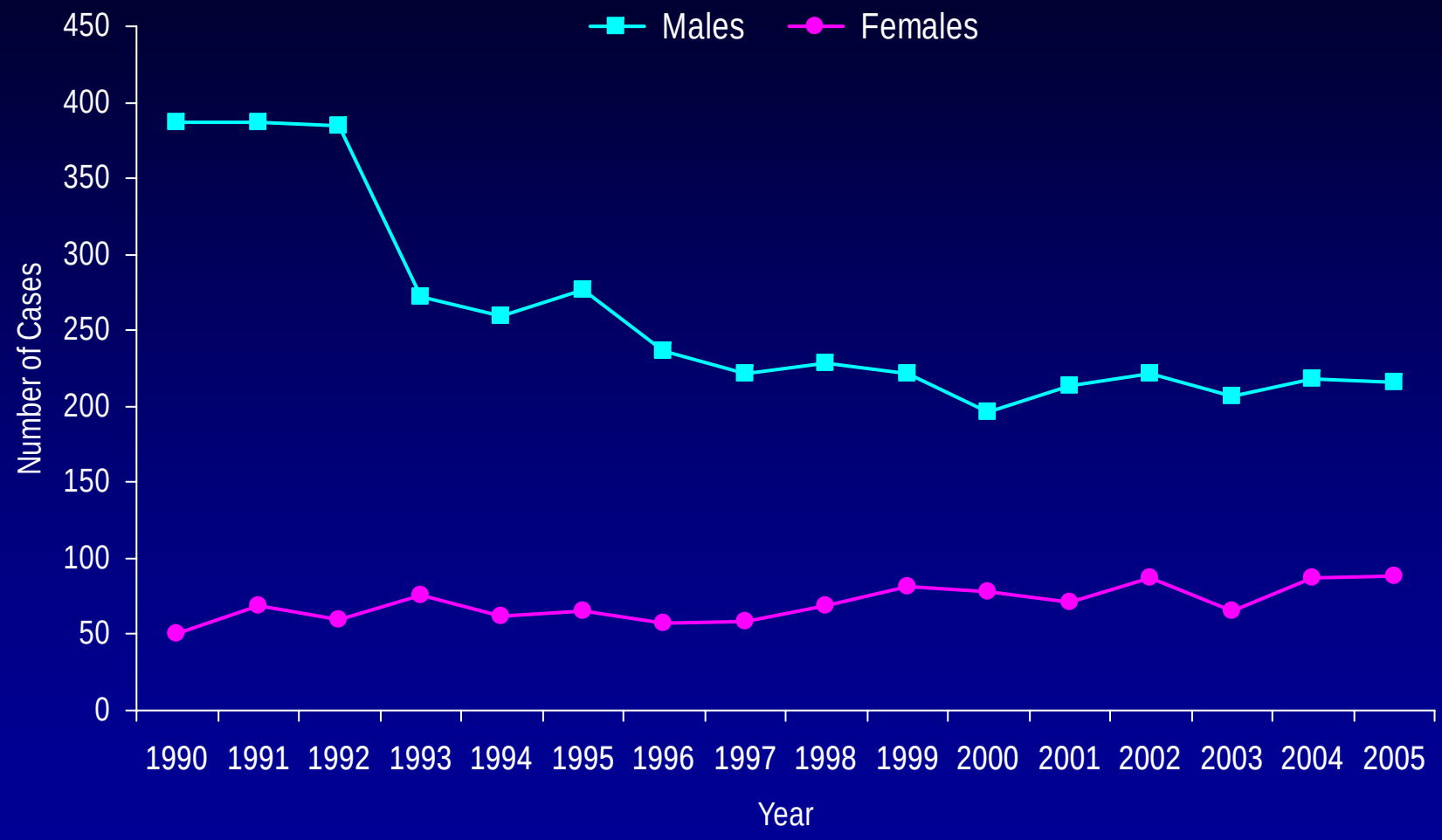
n = Number of persons Amer Ind = American Indian

Afr Amer = African American (Black, not African-born persons)

Afr born = African-born (Black, African-born persons)

MINNESOTA MDH DEPARTMENT OF HEALTH

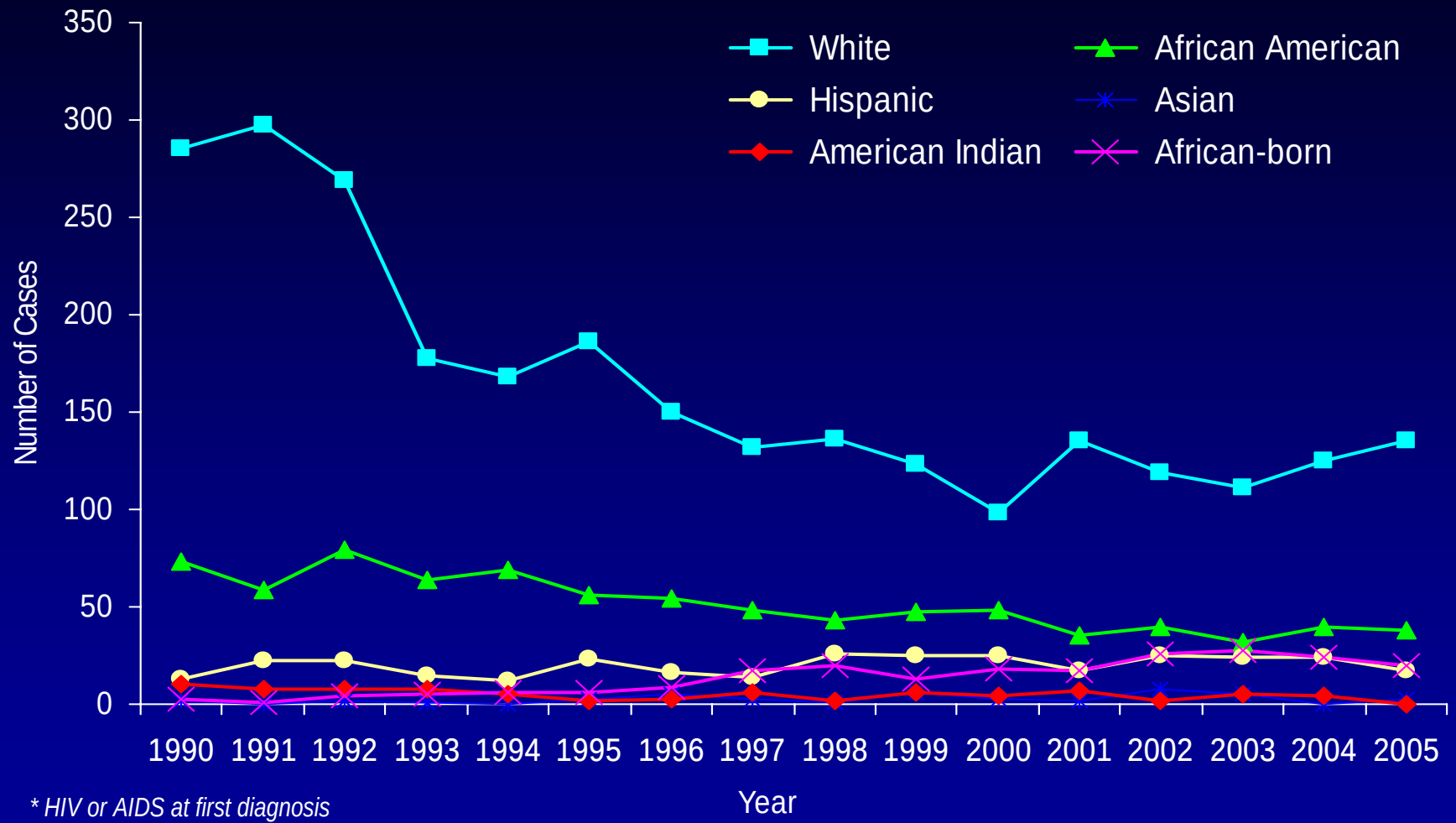
HIV Infections* by Gender and Year of Diagnosis, 1990-2005



** HIV or AIDS at first diagnosis*

Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* Among Males by Race/Ethnicity† and Year of Diagnosis, 1990-2005

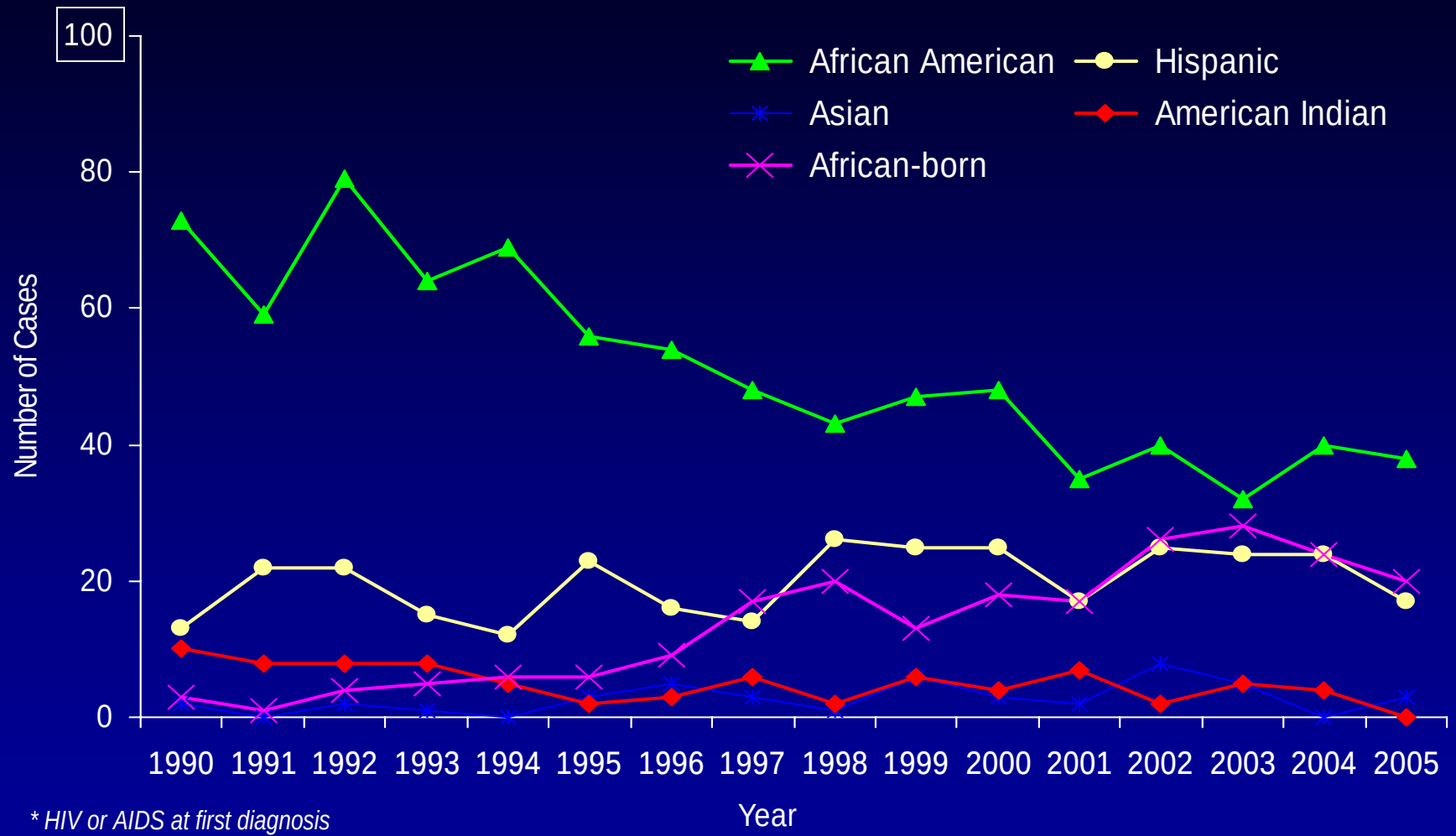


** HIV or AIDS at first diagnosis*

† "African-born" refers to Blacks who reported an African country of birth; "African American" refers to all other Blacks. Cases with unknown race are excluded.

Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* Among Males by Race/Ethnicity† and Year of Diagnosis, 1990-2005 (excluding Whites)

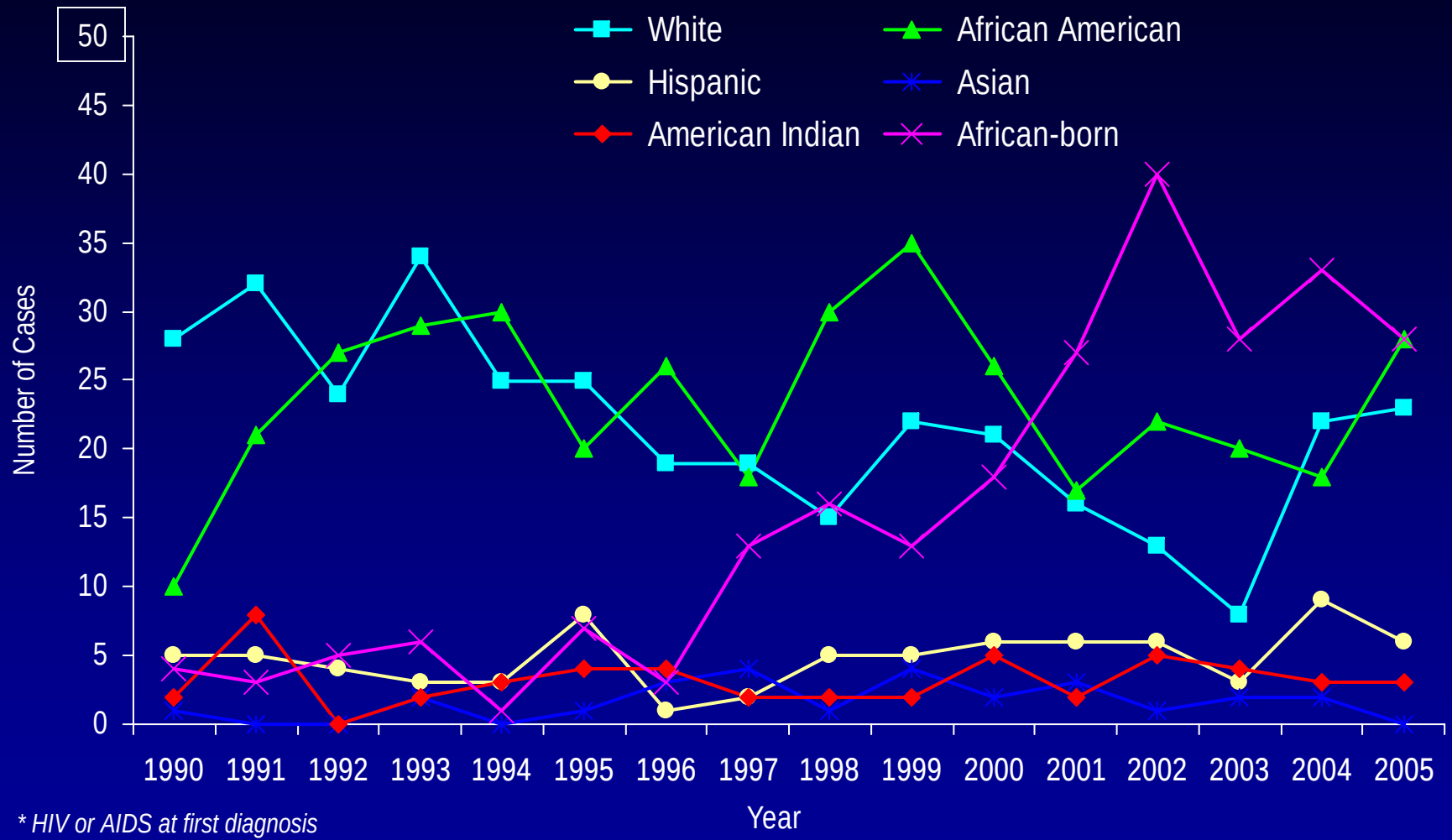


** HIV or AIDS at first diagnosis*

† "African-born" refers to Blacks who reported an African country of birth; "African American" refers to all other Blacks. Cases with unknown race are excluded.

Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* Among Females by Race/Ethnicity† and Year of Diagnosis, 1990-2005



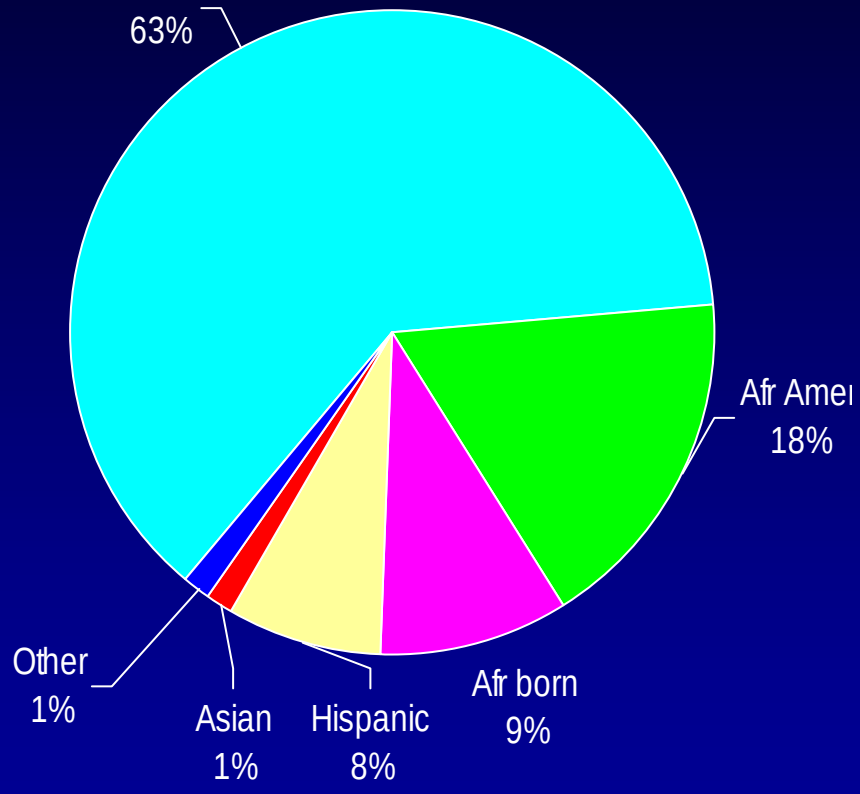
** HIV or AIDS at first diagnosis*

† "African-born" refers to Blacks who reported an African country of birth; "African American" refers to all other Blacks. Cases with unknown race are excluded.

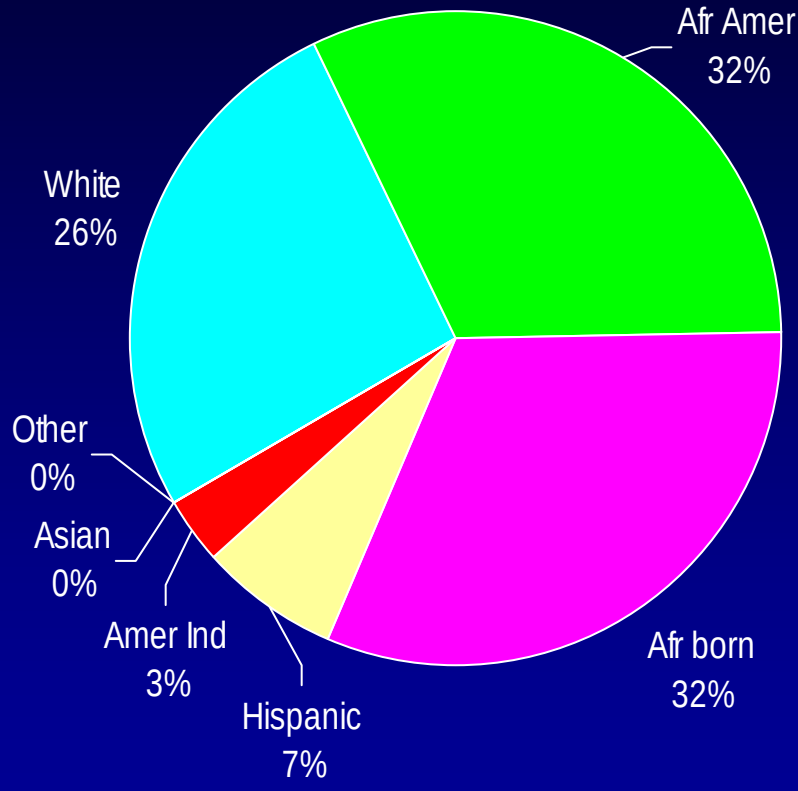
Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* Diagnosed in Year 2005 by Gender and Race/Ethnicity

Males (n = 216)



Females (n = 88)



n = Number of persons Afr Amer = African American (Black, not African-born persons)
Afr born = African-born (Black, African-born persons) Amer Ind = American Indian
Other = Multi-racial persons or persons with unknown race

** HIV or AIDS at first diagnosis*

Data Source: *Minnesota HIV/AIDS Surveillance System*

Number of Cases and Rates (per 100,000 persons) of HIV Infection* by Race/Ethnicity† – Minnesota, 2005

Race/Ethnicity	*Cases*	*%*	*Rate*
White, non-Hispanic	**158**	**52%**	**3.7**
Black, African-American	**66**	**22%**	**39.3**
Black, African-born	**48**	**16%**	**96-136.4††**
Hispanic	**23**	**8%**	**16.0**
American Indian	**3**	**1%**	**3.7**
Asian/Pacific Islander	**3**	**1%**	**1.8**
Other^	**3**	**1%**	**X**
Total	***304***	***100%***	***6.2***

** HIV or AIDS at first diagnosis; 2000 U.S. Census Data used for rate calculations.*

† "African-born" refers to Blacks who reported an African country of birth; "African American" refers to all other Blacks. Cases with unknown race are excluded.

†† Accurate population estimates for African-born persons and MSM (any race) living in Minnesota are unavailable – anecdotal (50,000) and 2000 US Census data (35,188)) were used to create the range of rates reported for African-born.

^ Other = Multi-racial persons or persons with unknown race

Data Source: *Minnesota HIV/AIDS Surveillance System*

Age

Average Age at HIV Diagnosis Among Males: Three-Year Averages

Race/Ethnicity	Average age in years (Number of cases)			
	1989-1991	1994-1996	1999-2001	2003-2005
White	33 (894)	35 (504)	37 (356)	37 (371)
Black				
African American	32 (205)	34 (178)	36 (130)	34 (110)
African-born	29 (5)	36 (21)	37 (48)	36 (72)
Hispanic	31 (52)	33 (51)	32 (67)	32 (65)
Asian	25 (5)	38 (8)	37 (11)	38 (8)
American Indian	29 (28)	29 (10)	34 (17)	40 (9)

Cases with unknown or multiple race or unknown age were excluded.

Data Source: *Minnesota HIV/AIDS Surveillance System*

Average Age at HIV Diagnosis Among Females: Three-Year Averages

Race/Ethnicity	Average age in years (Number of cases)			
	1989-1991	1994-1996	1999-2001	2003-2005
White	30 (85)	32 (69)	32 (59)	35 (53)
Black				
African American	29 (50)	30 (76)	32 (78)	33 (66)
African-born	24 (8)	31 (11)	30 (58)	33 (89)
Hispanic	33 (15)	36 (12)	28 (17)	33 (18)
Asian	26 (2)	26 (4)	34 (9)	42 (4)
American Indian	29 (16)	30 (11)	34 (9)	29 (10)

* *Average age not displayed for subgroups with less than 5 cases.*

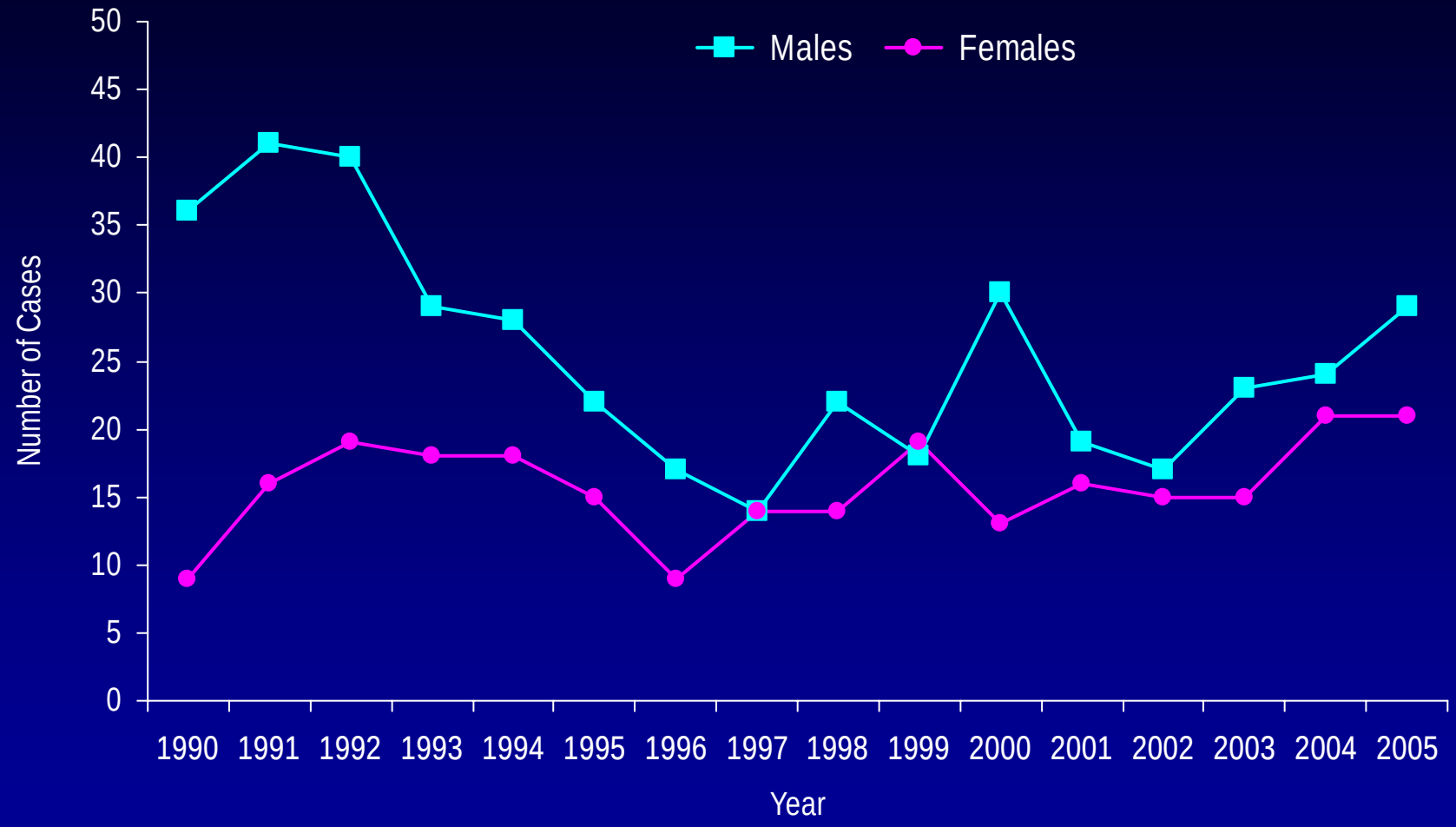
Cases with unknown or multiple race or unknown age were excluded.

Data Source: *Minnesota HIV/AIDS Surveillance System*

Adolescents & Young Adults (Ages 13-24)*

** Case numbers are too small to present meaningful data separately for adolescents and young adults.*

HIV Infections* Among Adolescents and Young Adults† by Gender and Year of Diagnosis, 1990-2005



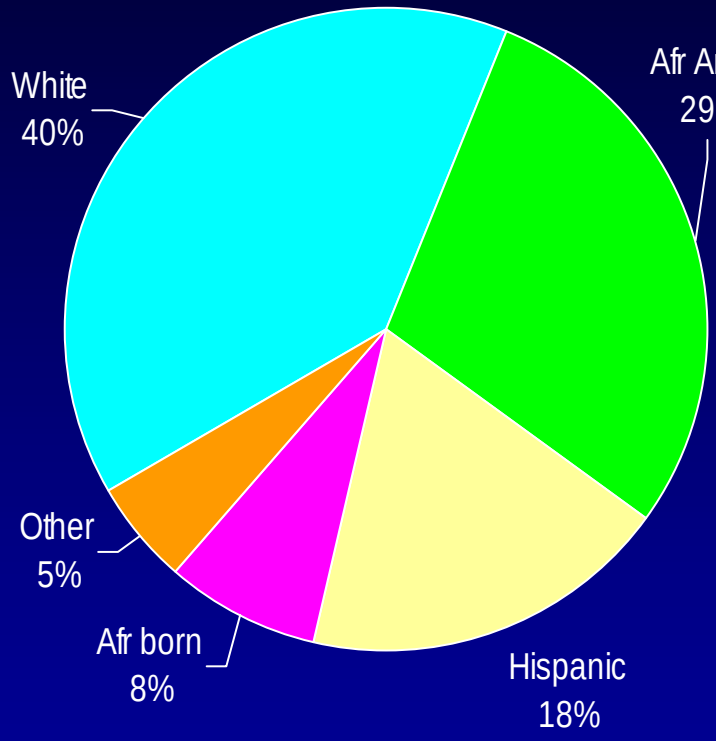
** HIV or AIDS at first diagnosis*

† Adolescents defined as 13-19 year-olds; Young Adults defined as 20-24 year-olds.

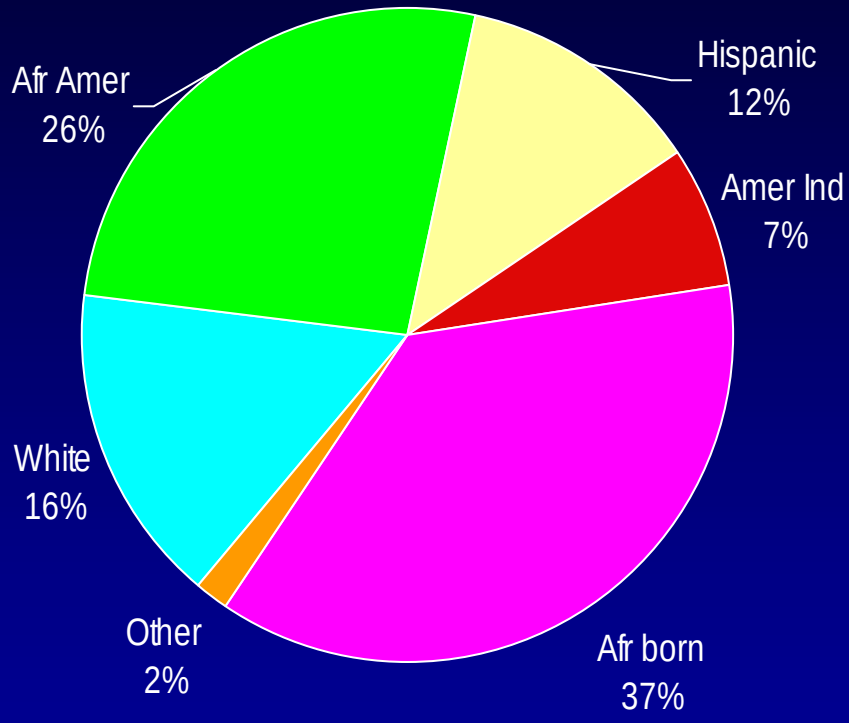
Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* Among Adolescents and Young Adults† by Gender and Race/Ethnicity, 2003-2005 Combined

Males (n = 76)



Females (n = 57)



** HIV or AIDS at first diagnosis*

† Adolescents defined as 13-19 year-olds;
Young Adults defined as 20-24 year-olds.

n = Number of persons Amer Ind = American Indian

Afr Amer = African American (Black, not African-born persons)

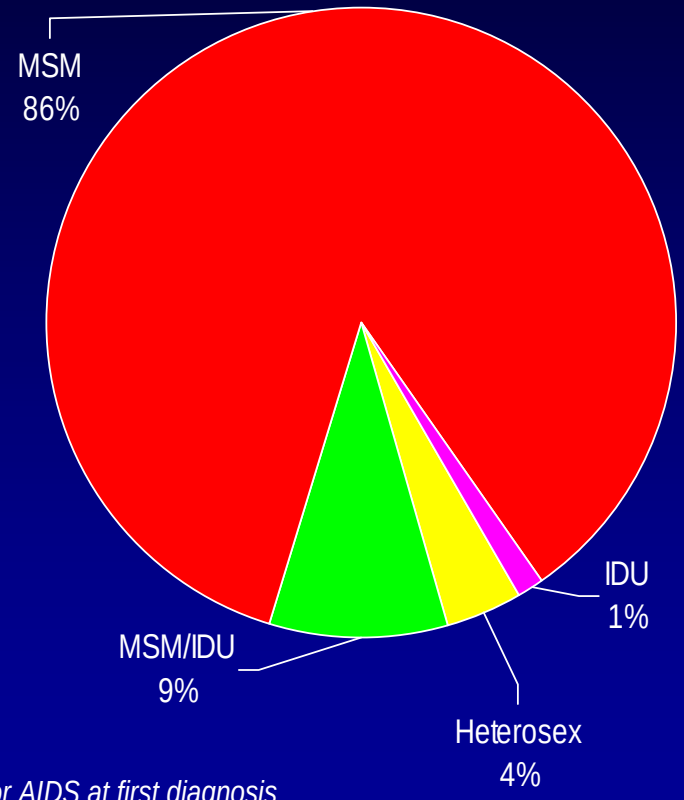
Afr born = African-born (Black, African-born persons)

Other = Multi-racial persons or persons with unknown race

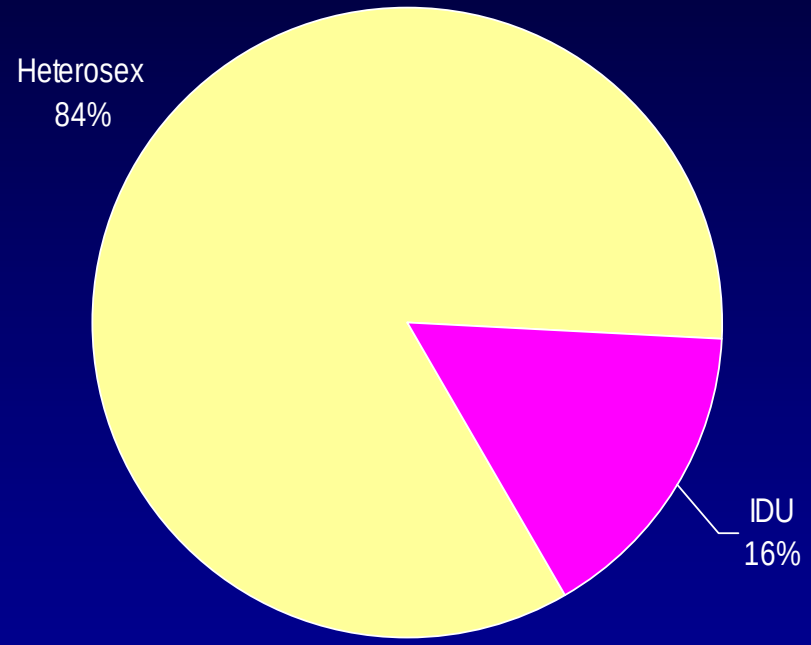
Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* Among Adolescents and Young Adults† by Gender and Estimated Exposure Group#, 2003-2005 Combined

Males (n = 76)



Females (n = 57)



** HIV or AIDS at first diagnosis*

† *Adolescents defined as 13-19 year-olds; Young Adults defined as 20-24 year-olds.*

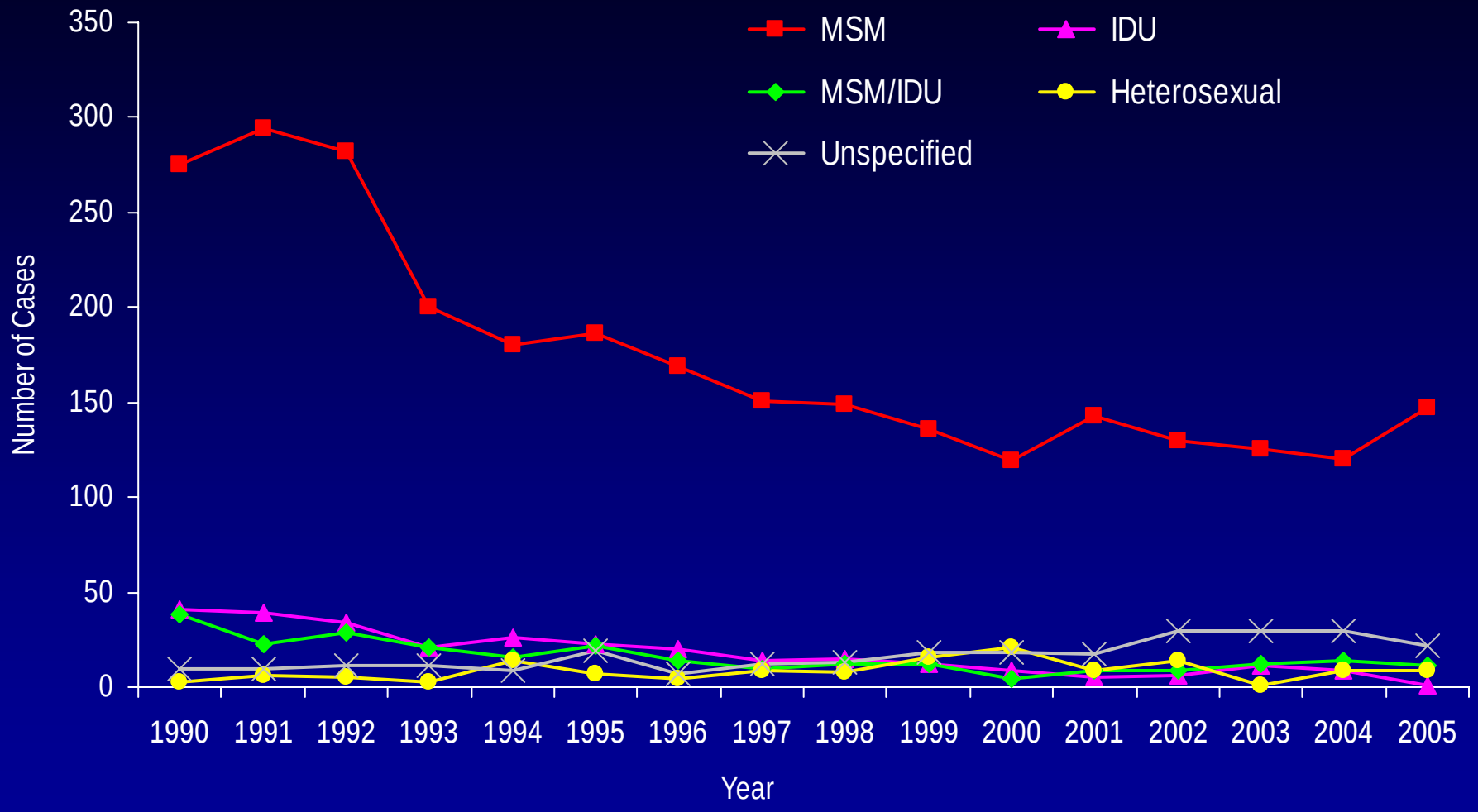
n = Number of persons
IDU = Injecting drug use
MSM = Men who have sex with men
Heterosex = Heterosexual contact

Mode of Exposure proportions have been estimated using cases for 2003-2005 with known risk. For more detail see the HIV Surveillance Technical notes.

Data Source: *Minnesota HIV/AIDS Surveillance System*

Mode of Exposure

HIV Infections* Among Males by Mode of Exposure and Year of Diagnosis, 1990-2005



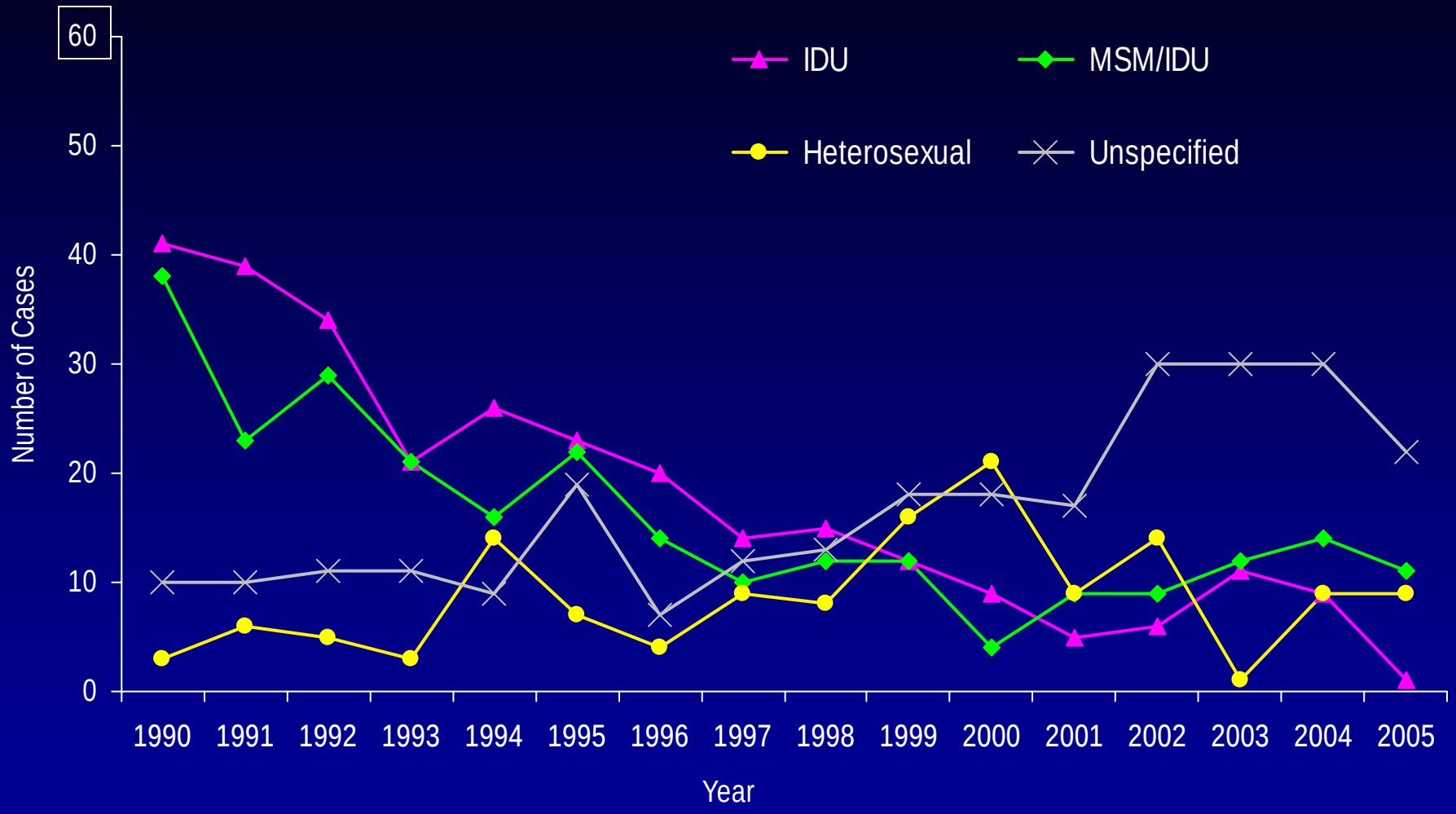
MSM = Men who have sex with men IDU = Injecting drug use Heterosexual = Heterosexual contact

** HIV or AIDS at first diagnosis* Unspecified = No mode of exposure ascertained

Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV/AIDS in Minnesota: Annual Review

HIV Infections* Among Males by Mode of Exposure and Year of Diagnosis, 1990-2005 (excluding MSM)

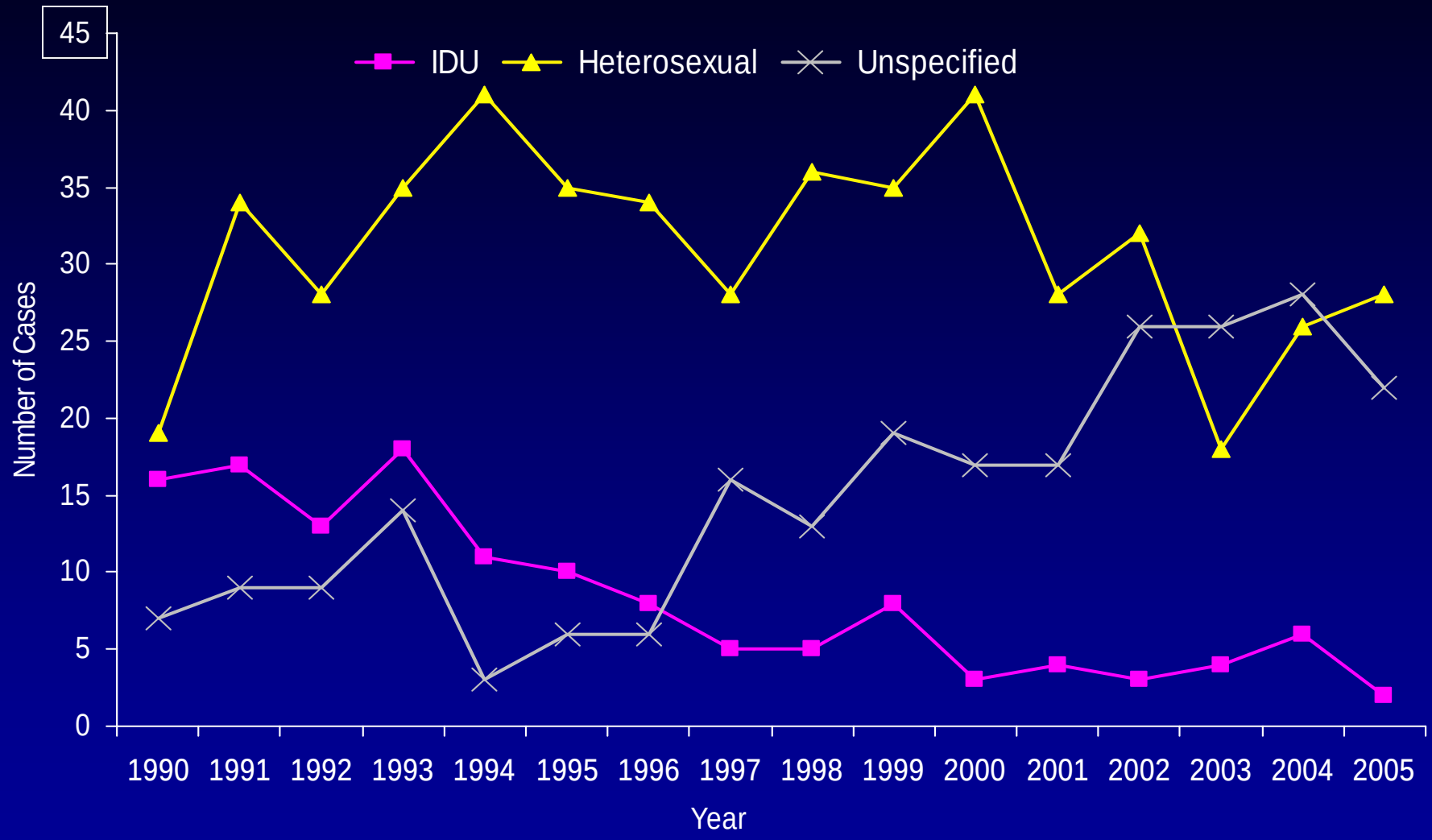


MSM = Men who have sex with men IDU = Injecting drug use Heterosexual = Heterosexual contact

** HIV or AIDS at first diagnosis* Unspecified = No mode of exposure ascertained

Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* Among Females by Mode of Exposure and Year of Diagnosis, 1990-2005



IDU = Injecting drug use

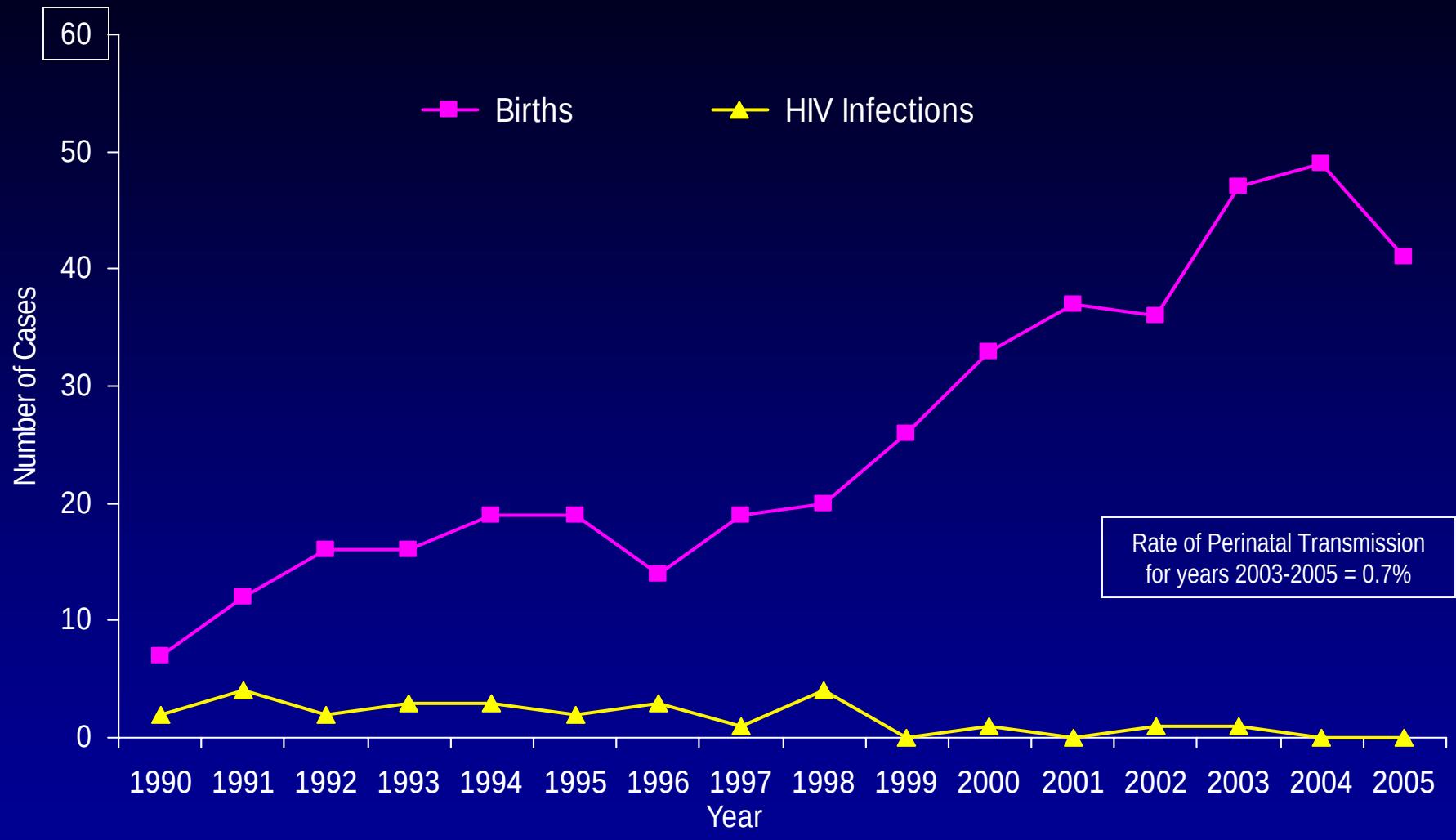
Heterosexual = Heterosexual contact

** HIV or AIDS at first diagnosis*

No Interview = Could not, would not or have yet to be interviewed

Data Source: *Minnesota HIV/AIDS Surveillance System*

Births to HIV-Infected Women and Number of Perinatally Acquired HIV Infections* by Year of Birth, 1990-2005

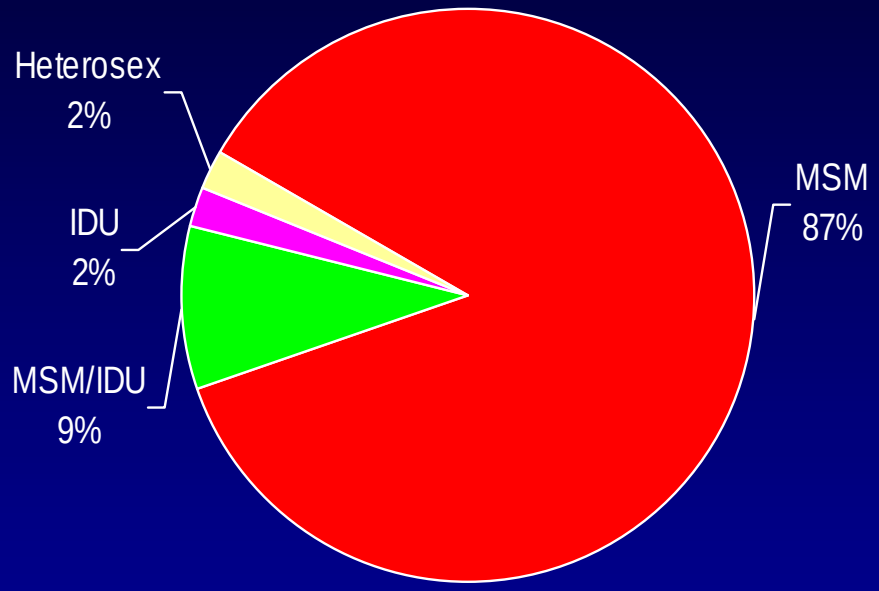


** HIV or AIDS at first diagnosis for a child exposed to HIV during mother's pregnancy, at birth, and/or during breastfeeding.*

Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* by Estimated Mode of Exposure† Diagnosis Years 2003-2005 combined

White Males (n = 371)



n = Number of persons MSM = Men who have sex with men IDU = Injecting drug use Heterosex = Heterosexual contact

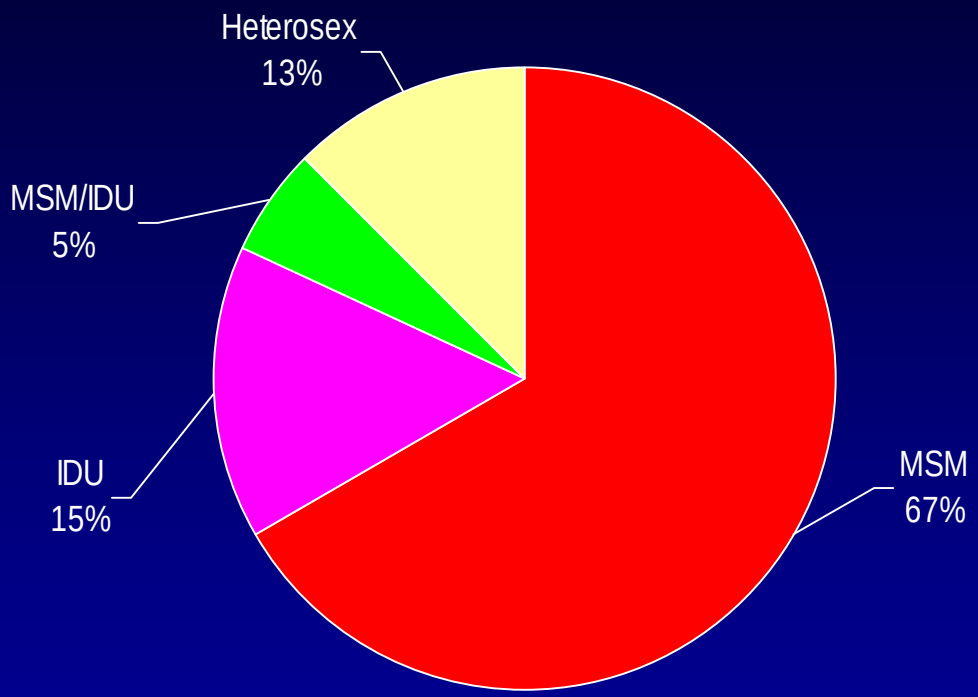
** HIV or AIDS at first diagnosis*

† Mode of Exposure proportions have been estimated using cases for 2003-2005 with known risk. For more detail see the HIV Surveillance Technical notes.

Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* by Estimated Mode of Exposure† Diagnosis Years 2003-2005 combined

African American Males†† (n = 110)



n = Number of persons MSM = Men who have sex with men IDU = Injecting drug use Heterosex = Heterosexual contact

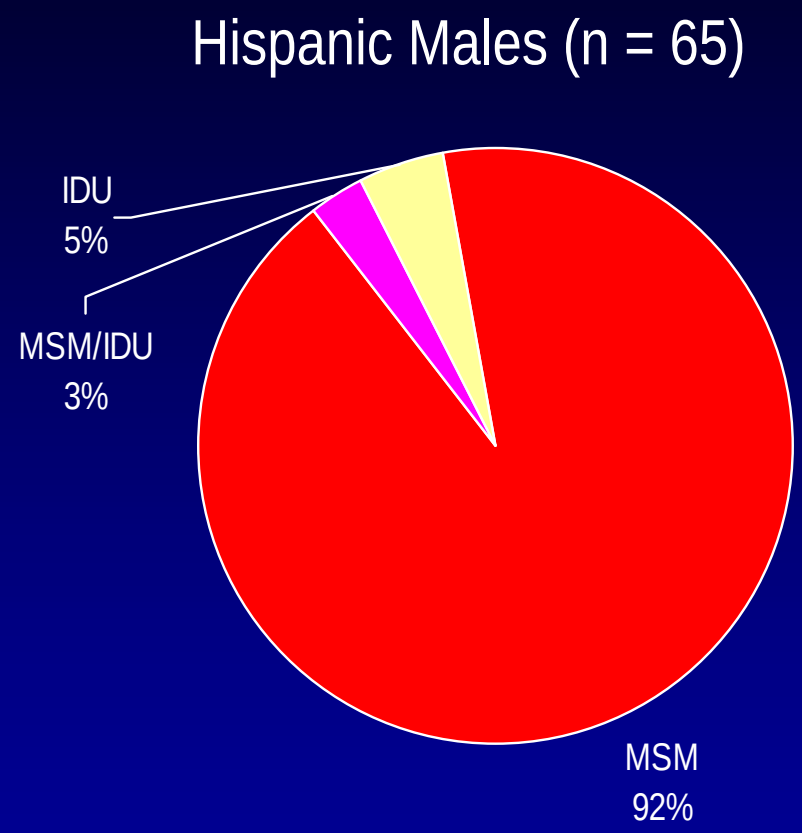
* *HIV or AIDS at first diagnosis*

† Mode of Exposure proportions have been estimated using cases for 2003-2005 with known risk. For more detail see the HIV Surveillance Technical notes.

†† *Refers to Black, African American (not African-born) males.*

Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* by Estimated Mode of Exposure† Diagnosis Years 2003-2005 combined



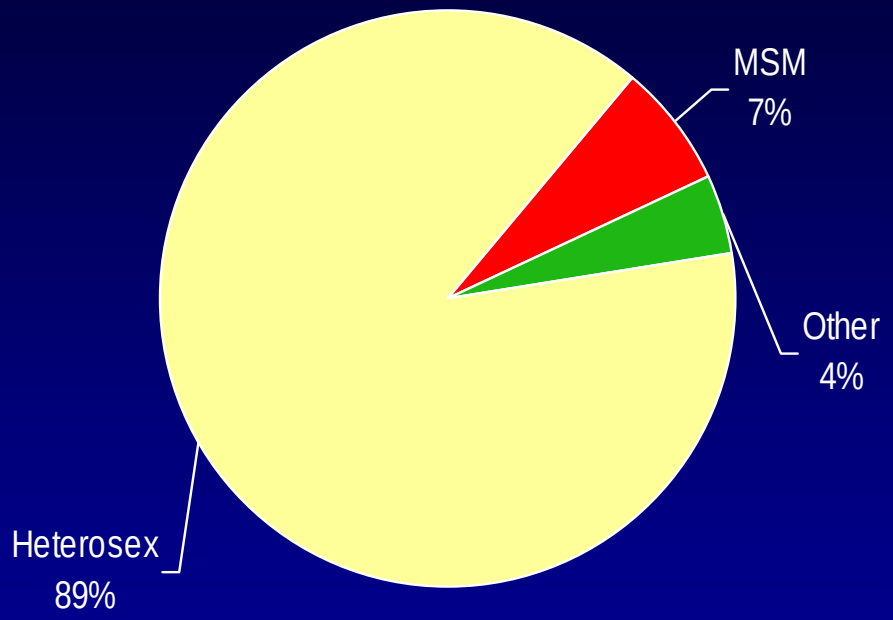
n = Number of persons MSM = Men who have sex with men IDU = Injecting drug use Heterosex = Heterosexual contact

* *HIV or AIDS at first diagnosis*

† Mode of Exposure proportions have been estimated using cases for 2003-2005 with known risk. For more detail see the HIV Surveillance Technical notes.

HIV Infections* by Estimated Mode of Exposure† Diagnosis Years 2003-2005 combined

African-born Males†† (n = 72)



MSM = Men who have sex with men Heterosex = Heterosexual contact Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

n = number of persons

* *HIV or AIDS at first diagnosis*

† Mode of Exposure has been estimated for cases with unknown risk using the following: 5% - MSM, 90% - Heterosexual, and 5%-Other. For more detail see the HIV Surveillance Technical notes.

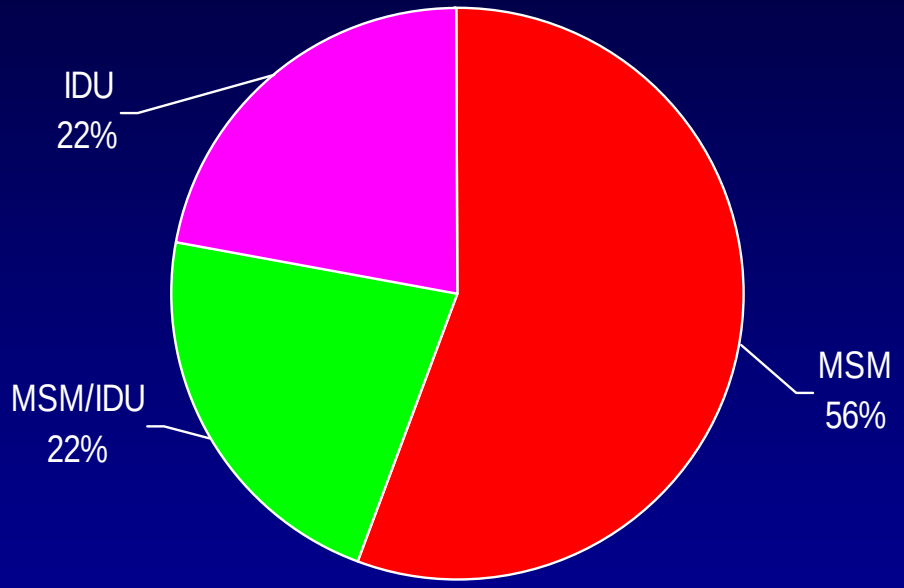
†† *Refers to Black, African-born males.*

Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* by Estimated Mode of Exposure† Diagnosis Years 2003-2005 combined

American Indian Males (n = 9)

CAUTION: Small number of cases – interpret carefully.



n = Number of persons MSM = Men who have sex with men IDU = Injecting drug use Heterosex = Heterosexual contact

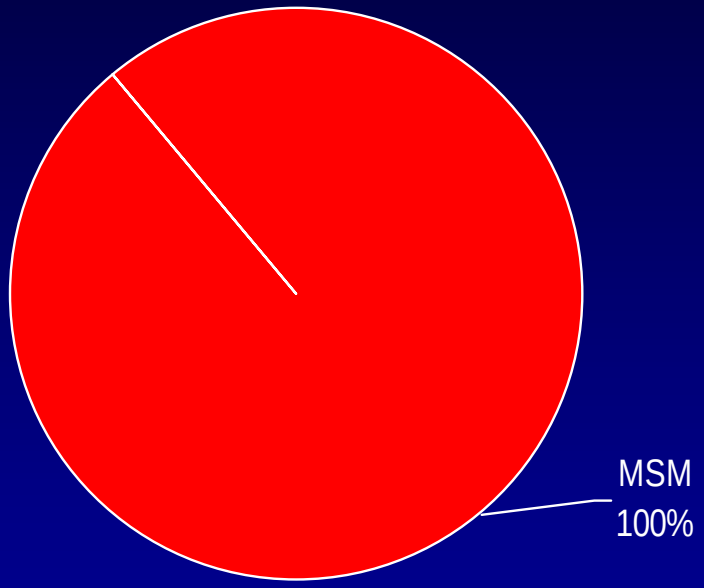
** HIV or AIDS at first diagnosis*

† Mode of Exposure proportions have been estimated using cases for 2003-2005 with known risk. For more detail see the HIV Surveillance Technical notes.

HIV Infections* by Estimated Mode of Exposure†
Diagnosis Years 2003-2005 combined

Asian Males (n = 8)

CAUTION: Small number of cases – interpret carefully.



n = Number of persons MSM = Men who have sex with men IDU = Injecting drug use Heterosex = Heterosexual contact

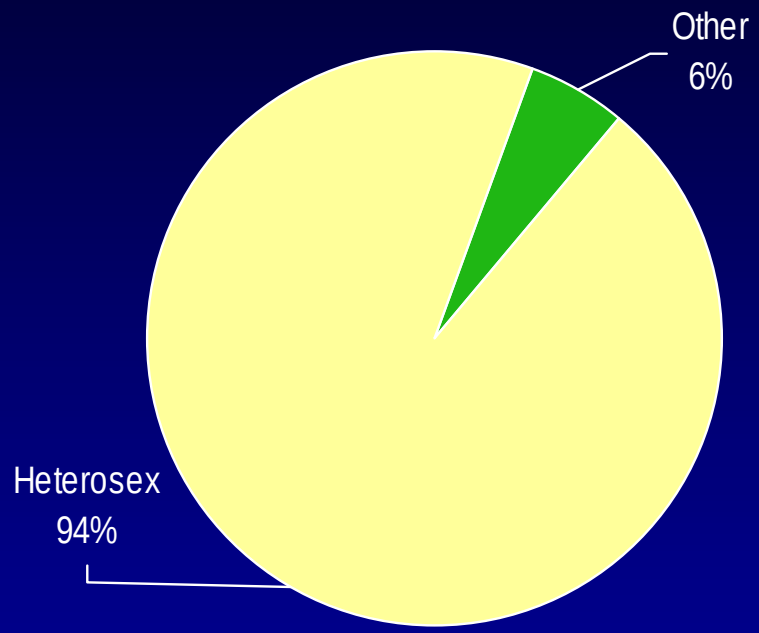
** HIV or AIDS at first diagnosis*

† Mode of Exposure proportions have been estimated using cases for 2003-2005 with known risk. For more detail see the HIV Surveillance Technical notes.

Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* by Estimated Mode of Exposure† Diagnosis Years 2003-2005 combined

African-born Females†† (n = 89)



n = Number of persons Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk Heterosex = Heterosexual contact

* *HIV or AIDS at first diagnosis*

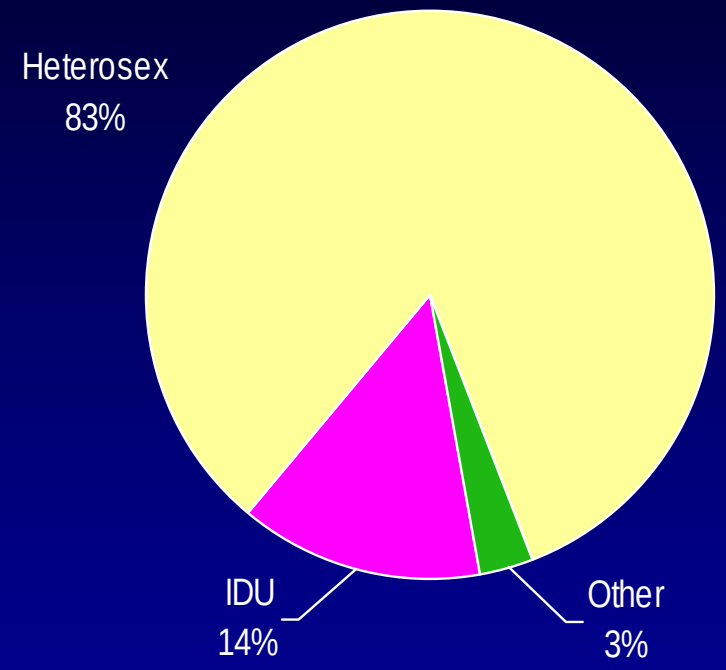
† Mode of Exposure has been estimated for cases with unknown risk using the following: 95% - Heterosexual and 5%-Other. For more detail see the HIV Surveillance Technical notes.

†† *Refers to Black, African-born females.*

Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* by Estimated Mode of Exposure† Diagnosis Years 2003-2005 combined

African American Females†† (n = 66)



IDU = Injecting drug use Heterosex = Heterosexual contact Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

n = Number of persons

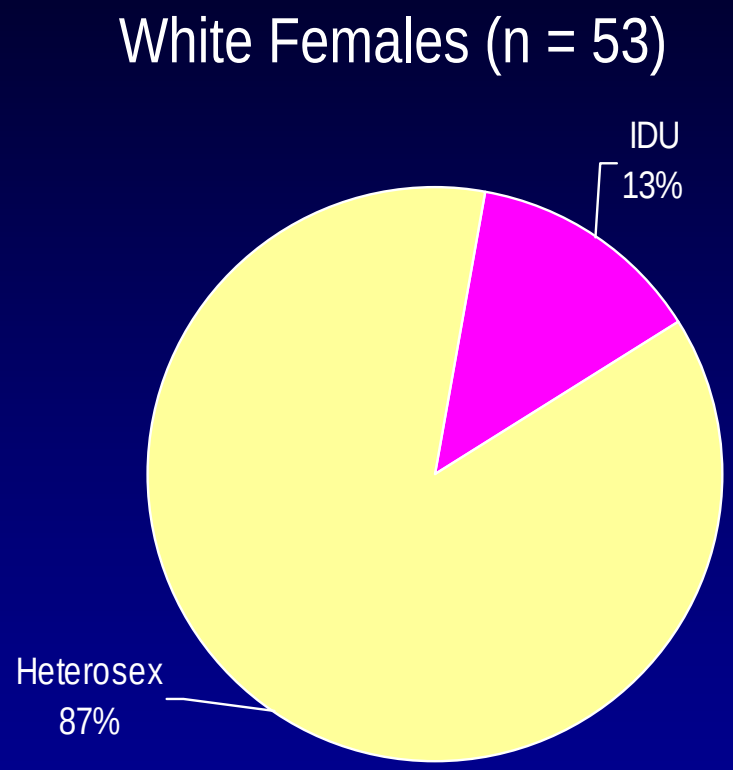
** HIV or AIDS at first diagnosis*

† Mode of Exposure proportions have been estimated using cases for 2003-2005 with known risk. For more detail see the HIV Surveillance Technical notes.

†† *Refers to Black, African American (not African-born) females.*

Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* by Estimated Mode of Exposure† Diagnosis Years 2003-2005 combined



n = Number of persons IDU = Injecting drug use Heterosex = Heterosexual contact Other = Other risk, including perinatal

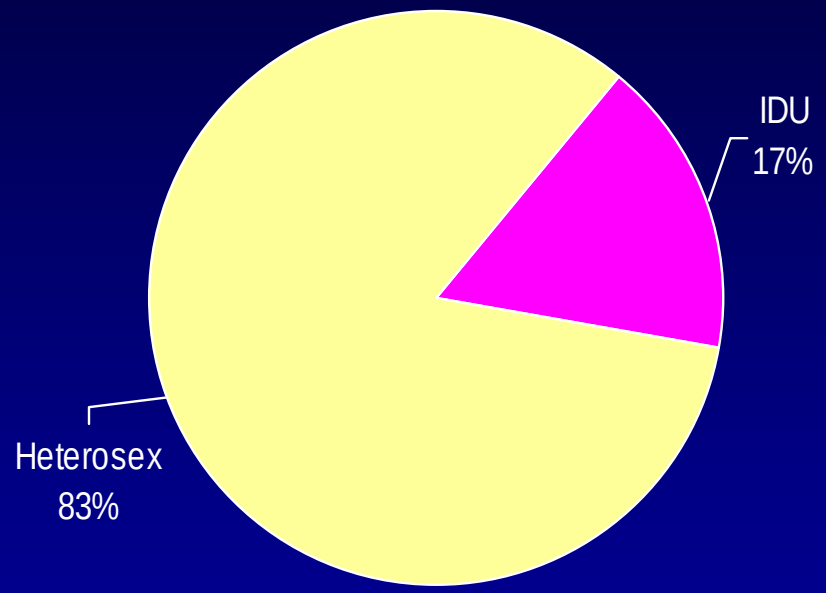
** HIV or AIDS at first diagnosis*

† Mode of Exposure proportions have been estimated using cases for 2003-2005 with known risk. For more detail see the HIV Surveillance Technical notes.

HIV Infections* by Estimated Mode of Exposure† Diagnosis Years 2003-2005 combined

Hispanic Females (n = 18)

CAUTION: Small number of cases – interpret carefully.



IDU = Injecting drug use Heterosex = Heterosexual contact Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

n = Number of persons

** HIV or AIDS at first diagnosis*

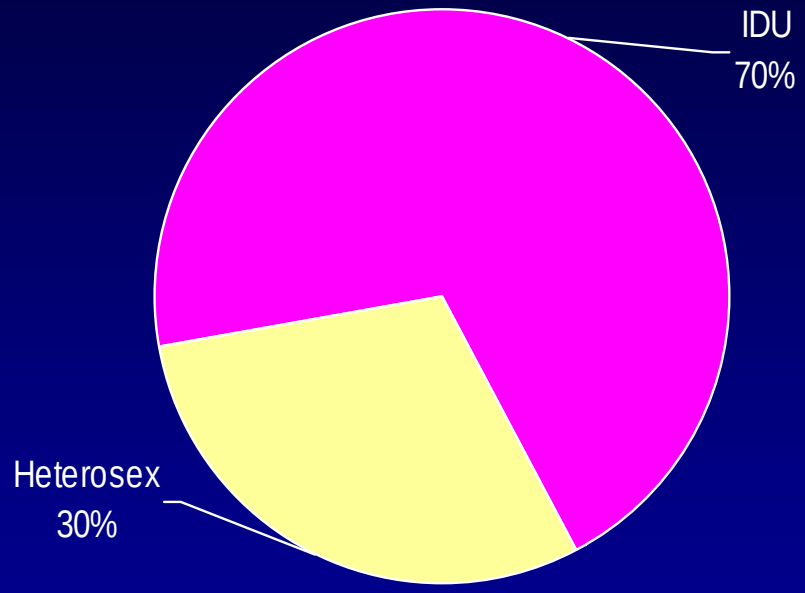
† Mode of Exposure proportions have been estimated using cases for 2003-2005 with known risk. For more detail see the HIV Surveillance Technical notes.

Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* by Estimated Mode of Exposure† Diagnosis Years 2003-2005 combined

American Indian Females (n = 10)

CAUTION: Small number of cases – interpret carefully.



IDU = Injecting drug use Heterosex = Heterosexual contact Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

n = Number of persons

** HIV or AIDS at first diagnosis*

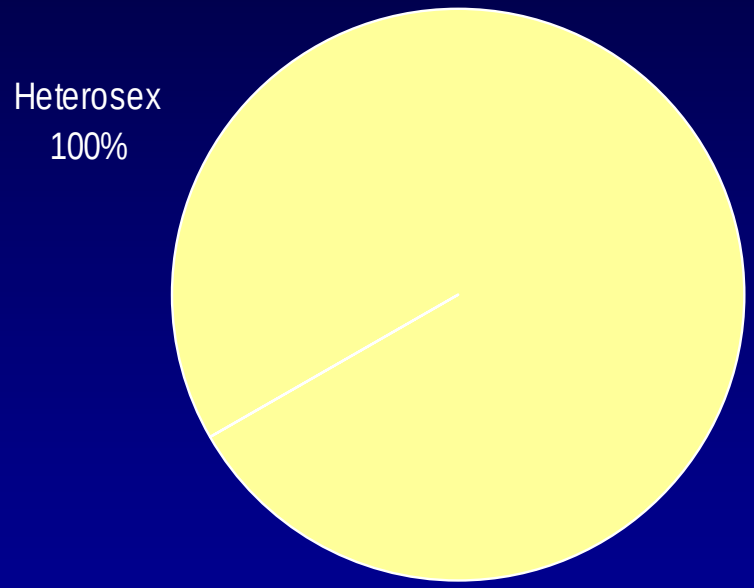
† Mode of Exposure proportions have been estimated using cases for 2003-2005 with known risk. For more detail see the HIV Surveillance Technical notes.

Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* by Estimated Mode of Exposure† Diagnosis Years 2003-2005 combined

Asian Females (n = 4)

CAUTION: Small number of cases – interpret carefully.



n = Number of persons Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk Heterosex = Heterosexual contact

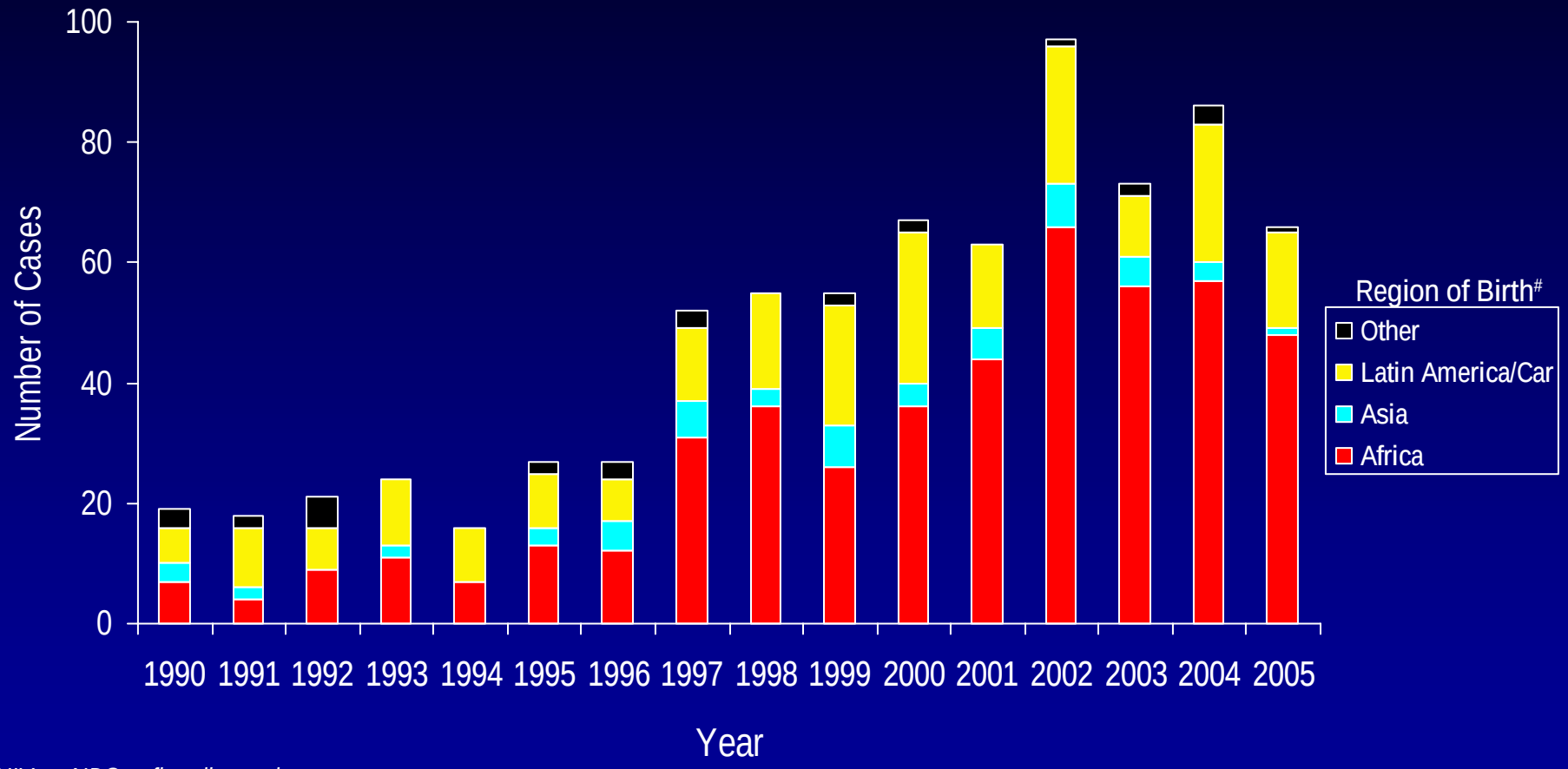
* *HIV or AIDS at first diagnosis*

† Mode of Exposure has been estimated for cases with unknown risk using the following: 95% - Heterosexual and 5%-Other.
For more detail see the HIV Surveillance Technical notes.

Data Source: *Minnesota HIV/AIDS Surveillance System*

Special Populations

HIV Infections* among Foreign-Born Persons† in Minnesota by Year of Diagnosis and Region of Birth, 1990-2005



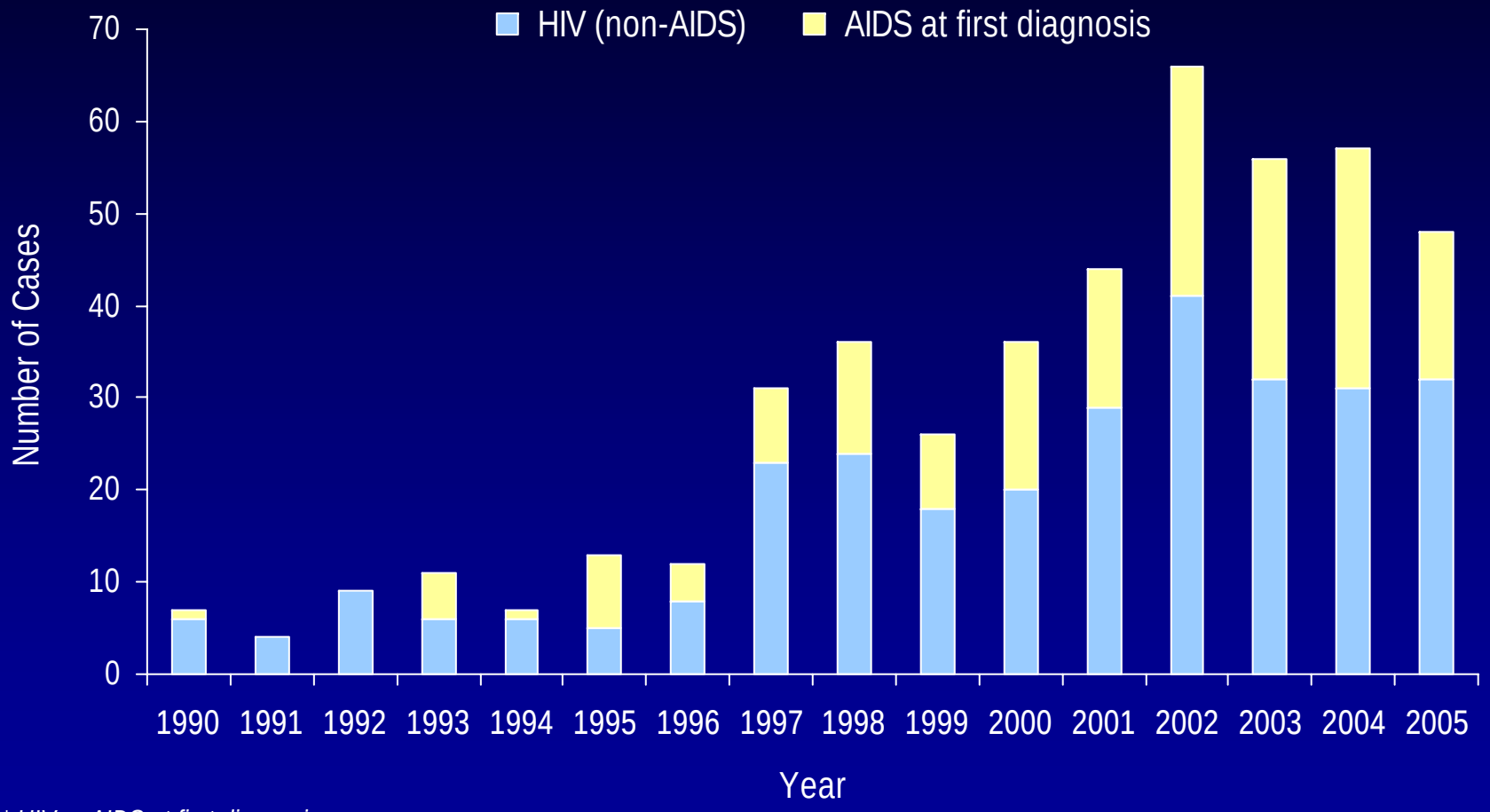
** HIV or AIDS at first diagnosis*

† Excludes persons arriving to Minnesota through the HIV+ Refugee Resettlement Program.

 # Latin America/Car includes Mexico and all Central, South American, and Caribbean countries.

Data Source: *Minnesota HIV/AIDS Surveillance System*

HIV Infections* Among African-Born Persons† by Year of Diagnosis, 1990-2005



** HIV or AIDS at first diagnosis*

† Includes 1 non-Black, African-born individual, but excludes persons arriving to Minnesota through the HIV+ Refugee Resettlement Program.

Data Source: *Minnesota HIV/AIDS Surveillance System*

Companion Text for the Slide Set: *Minnesota HIV Surveillance Report, 2006*

INTRODUCTION

Overview

The *Minnesota HIV Surveillance Report, 2006* describes the occurrence of reported HIV infections in Minnesota by person, place, and time through December 31, 2006. Such data provide information about where and among whom HIV transmission is likely occurring. This knowledge can in turn be used to help educate, target prevention efforts, plan for services, and develop policy.

Data Source

The data in this report are based on confidential case reports collected through the Minnesota Department of Health (MDH) HIV/AIDS Surveillance System. In Minnesota, laboratory-confirmed infections of human immunodeficiency virus (HIV) are monitored by the MDH through this active and passive surveillance system. State rules (Minnesota Rule 4605.7040) requires both physicians and laboratories to report all cases of HIV infection (HIV or AIDS) directly to the MDH (passive surveillance). Additionally, regular contact is maintained with several clinical sites to help ensure completeness of reporting (active surveillance).

Data in this report include cases diagnosed with HIV as of December 31, 2006 and reported to the MDH as of April 2007. All data are displayed by earliest date of HIV diagnosis. Refer to the *HIV Surveillance Technical Notes* for a more detailed description of data inclusions and exclusions.

Data Limitations

Factors that impact the completeness and accuracy of the available surveillance data on HIV/AIDS include the level of screening and compliance with case reporting. Thus, any changes in numbers of infections may be due to one of these factors, or due to actual changes in HIV/AIDS occurrence.

The data presented in this report are not adjusted for reporting delays. Thus, the case number presented for the most recent reporting year can be viewed as a minimum and will likely increase in the future as further case reports are received. Changes in past years' totals are updated in every new annual surveillance report.

HIV/AIDS in the UNITED STATES

Compared with the rest of the nation, Minnesota is considered to be a low to moderate HIV/AIDS incidence state. In 2005, state-specific AIDS rates ranged from 1.0 per 100,000 persons in Vermont to 32.7 per 100,000 persons in New York. Minnesota had the 16th lowest AIDS rate (4.4 AIDS cases reported per 100,000 persons). Compared with states in the Midwest region, Minnesota had a moderate AIDS rate. State-specific HIV rates cannot be compared nationally because some states have just begun name-based HIV case surveillance. At present 47 states have confidential name-based HIV case reporting.

HIV/AIDS IN MINNESOTA

MDH HIV/AIDS Surveillance: Cumulative cases

AIDS has been tracked in Minnesota since 1982. In 1985, AIDS officially became a reportable disease to state and territorial health departments nationwide. Also in 1985, when the Food and Drug Administration approved the first diagnostic test for HIV, Minnesota became the first state to make HIV infection a reportable condition. As of December 31, 2006, a cumulative total of 8,149 cases of HIV infection have been reported among Minnesota residents.[1] This includes 4,986 AIDS cases and 3,163 HIV, non-AIDS cases. Of these 8,149 HIV/AIDS cases, 2,838 are known to be deceased through correspondence with the reporting source, other health departments, reviews of death certificates, active surveillance, and matches with the National Death Index.

[1] This number includes persons who reported Minnesota as their state of residence at the time of their HIV and/or AIDS diagnosis. It also includes persons who may have been diagnosed in a state that does not have HIV reporting and who subsequently moved to Minnesota and were reported here. HIV-infected persons currently residing in Minnesota, but who resided in another HIV-reporting state at the time of diagnosis are excluded.

Overview of HIV/AIDS in Minnesota, 1990-2006

The annual number of new AIDS cases increased steadily from the beginning of the epidemic to the early 1990s, reaching a peak of 361 cases in 1992. Beginning in 1996, both the number of newly diagnosed AIDS cases and the number of deaths among AIDS cases declined sharply, primarily due to the success of new antiretroviral therapies including protease inhibitors. These treatments do not cure, but can delay progression to AIDS among persons with HIV (non-AIDS) infection and improve survival among those with AIDS. Thus between 2001 and 2004 we saw a slow increase in the number of AIDS cases diagnosed, from 124 in 2001 to 206 in 2004, a 66 percent increase. The number of AIDS cases diagnosed has again declined in the past two years to 163 in 2006. The number of HIV (non-AIDS) diagnoses has remained fairly constant since the mid 1990s at approximately 200 cases per year. However, over the past 4 years there has been a slight but constant increase from 185 cases in 2003 to 237 cases in 2006, a 28 percent increase. By the end of 2006, an estimated 5,566 persons with HIV/AIDS were assumed to be living in Minnesota.[2]

NEW HIV INFECTIONS IN MINNESOTA

In this report, the term "new HIV infections" refers to HIV-infected Minnesota residents who were diagnosed in a particular calendar year and reported to the MDH. This includes persons whose first diagnosis of HIV infection is AIDS (AIDS at first diagnosis). HIV infection data are displayed by earliest known date of HIV diagnosis.

New HIV Infections by Geography

Historically, about 90% of new HIV infections diagnosed in Minnesota have occurred in Minneapolis, St. Paul and the surrounding seven-county metropolitan area. This has not changed over time. Although HIV infection is more common in communities with higher population densities and greater poverty, HIV or AIDS has been diagnosed in over 90% of counties in Minnesota.

[2] This number includes persons whose most recently reported state of residence was Minnesota, regardless of residence at time of diagnosis. This estimate does not include persons with undiagnosed HIV infection.

New HIV Infections by Gender

Since the beginning of the epidemic, males have accounted for a majority of new HIV infections diagnosed per year. However, the number and the proportion of cases among females have increased over time. In 1990, males accounted for 89% of new HIV infections. In 2006, 72% of new infections occurred among males and 28% among females.

New HIV Infections by Race/Ethnicity[3]

Trends in the annual number of new HIV infections diagnosed among males differ by racial/ethnic group. New cases among White males drove the epidemic in the 1980s and early 1990s. Although Whites still account for the largest number of new infections among males, this number decreased steadily between 1991 and 2000, but has stayed steady at around 130 since 2001.

In contrast to the overall large decline in the annual number of cases among White males, the decline among African American males was more gradual. The annual number of cases for African American males peaked in 1992 at 81 and gradually decreased to 33 in 2003. Since 2004 the number of cases among African American males has been stable around 40 with 38 cases diagnosed in 2006. The numbers of new cases in all other racial/ethnic groups during this same time remained stable or increased. Increases in the annual number of HIV infections diagnosed among Hispanic and African-born males, in particular, have been recorded since the late 1990s. In 2006, the number of cases diagnosed among Hispanic males is the highest ever recorded in Minnesota, doubling the number seen in 2005. The percentage of new HIV infections diagnosed among men of color as a whole has been increasing over time as the number of cases among White males has dropped.

Similarly, trends in the annual number of HIV infections diagnosed among females differ by racial/ethnic group. In the beginning of the epidemic, White women accounted for a majority of newly diagnosed cases among females. Since 1991, the number of new infections among women of color has exceeded the number among White women. Since 2000, the annual number of new infections diagnosed among African American females had been stable at around 20 cases per year, however in the past two years that number has increased slightly with 28 cases

[3] Black race was broken down into African-born and African American (Black, not African-born). The numbers exclude persons arriving through the HIV-Positive Refugee Resettlement Program and other refugee/immigrants with an HIV diagnosis prior to arrival.

diagnosed in 2006. Between 1999 and 2002 the number of cases among African-born females increased significantly, from 18 to 41 cases. However since 2003 the number has decreased steadily with 18 new infections diagnosed in 2006. The annual number of new infections diagnosed among Hispanic, American Indian, and Asian females continues to be quite small (10 cases or fewer per year for each of these groups).

The most recent data illustrate that men and women of color continue to be disproportionately affected by HIV/AIDS. Whites make up approximately 88% of the male population in Minnesota and 55% of the new HIV infections diagnosed among men in 2006. Men of color make up approximately 12% of the male population and 45% of the infections diagnosed among men in 2006. Similarly for females, Whites make up approximately 89% of the female population and 32% of new infections among women in 2006 whereas women of color make up approximately 11% of the female population and 68% of the new infections among women.[4]

Note that race is not considered a biological reason for disparities in the occurrence of HIV experienced by persons of color. Race, however, can be considered a marker for other personal and social characteristics that put a person at greater risk for HIV exposure. These characteristics may include, but are not limited to, lower socioeconomic status, less education, and greater prevalence of drug use.

Average Age at HIV Diagnosis, Three-year Averages

In recent years, Hispanic (approximate age = 32 years) and African American (approximate age = 34 years) males were slightly younger than White, African-born, American Indian, and Asian males (approximate age = 38 years) at the time of HIV diagnosis. During the past three years, the average age at HIV diagnosis has been approximately 33 years among African American, African-born and Hispanic females. American Indian females were slightly younger (approximate age = 29 years), while White (approximate age = 36) females were older. The number of new cases among Asian females over the past three years was to small to calculate average age. Age at HIV diagnosis can be used as a proxy for age at HIV *infection*. However, due to differences in testing behavior (e.g. variable lengths of time between HIV

[4] Population estimates based on U.S. Census 2000 data.

infection and diagnosis) across time and between sociodemographic groups, comparisons of average age at diagnosis are difficult to interpret.

New HIV Infections among Adolescents and Young Adults[5], 1990-2006

Many people are infected with HIV for years before they actually seek testing and become aware of their HIV status. This phenomenon especially affects the observed case counts for younger age groups. As a result, the reported number of HIV infections among youth[5] (with few or no reports of AIDS at first diagnosis) is likely to underestimate the *true* number of new infections occurring in the population more than the reported number of cases in older age groups does.

In 1990, 10% (45/436) of new HIV infections reported to the MDH were among youth. In 2006 this percentage was 18% (57/318). Among young men, the number of new HIV diagnoses peaked in 1991 at 41 cases and then declined through the mid 1990s to a low of 14 cases in 1997. Since 1997 the annual number of cases diagnosed among young men increased steadily to 32 in 2000, but then dropped to 18 cases in 2002. However, over the past four years that number has increased steadily from 18 cases in 2002 to 35 cases in 2006, close to a hundred percent increase.

Unlike young men, the annual number of new HIV infections diagnosed among young women has remained relatively consistent over time. For example, 19 cases of HIV infection were diagnosed among young women in 1992 and 22 cases in 2006. Females accounted for 38% (22/57) of new HIV infections diagnosed among adolescents and young adults in 2006. In addition, young women accounted for 25% (22/90) of new infections among females, while young males accounted for 16% (35/228) of new infections among males.

Similar to the adult HIV/AIDS epidemic, persons of color account for a disproportionate number of new HIV infections among adolescents and young adults. Among young men, Whites accounted for 48% of new HIV infections diagnosed between 2004 and 2006, African Americans accounted for 28%, Hispanics 16%, and African-born 6% of the cases. Among young women, Whites accounted for 18%, African Americans 32%, African-born 31%, and Hispanics 11% of the new infections diagnosed during the same time period.

[5] In this report, adolescents are defined as 13-19 year-olds and young adults as 20-24 year-olds; these two groups are jointly referred to as "youth." Analyses are performed for adolescents and young adults combined because case numbers are too small to present meaningful data separately for each.

Starting in 2004, MDH has used a risk re-distribution method to estimate mode of exposure among those cases with unknown risk. For additional details on how this was done please read the *HIV Surveillance Technical Notes*. All mode of exposure numbers referred to in the text are based on the risk re-distribution.

Men having sex with men (MSM) was the predominant mode of HIV exposure among adolescent and young adult males, accounting for an estimated 89% of the new HIV infections diagnosed between 2004 and 2006. The joint risk of MSM and injecting drug use (IDU) accounted for an estimated 8%, and heterosexual contact accounted for an estimated 3% of the cases in the same time period.

Heterosexual contact accounted for an estimated 87% of new HIV infections diagnosed among adolescent and young adult females between 2004 and 2006, while IDU accounted for an estimated 13% of the cases.

New HIV Infections by Mode of Exposure

Since the beginning, men have driven the HIV/AIDS epidemic in Minnesota and male-to-male sex has been the predominant mode of exposure reported. Though still the majority, both the number and proportion of new HIV infections attributed to MSM have been decreasing since 1991 reaching an apparent plateau in 2000 at just under 130 cases per year. However in the past two years this number has gone back up with 147 infections attributed to MSM in both 2005 and 2006. On a much smaller scale, the numbers of male cases attributed to IDU and MSM/IDU also have been decreasing over the past decade, while the number of cases attributed to heterosexual contact has been increasing. The number of cases without a specified risk has also been increasing.

Throughout the epidemic, heterosexual contact has been the predominant mode of HIV exposure reported among females. IDU is the second most common mode of transmission making up 4% of cases among women in 2006. Unspecified risk has been designated for a growing percentage of cases for the past several years. In 1996, 7% of women diagnosed with HIV infection did not have a specified mode of transmission. This percentage grew to 27% in 2006 with an additional 33% of female cases who would not agree to or could not be interviewed

by a Disease Intervention Specialist[6] from the MDH. Some cases may yet be interviewed, thus, a portion of these women will later have an identified mode of transmission. This explains *part* of the higher percentage of cases in recent years with an unspecified mode of exposure. According to a study conducted by the Centers for Disease Control and Prevention (CDC)[7], it is likely that at least 80% of women with unspecified risk acquired HIV through heterosexual contact. Heterosexual contact as a mode of HIV transmission is currently only assigned to a female case if she knows that a male sexual partner of hers was HIV-infected or at increased risk for HIV. As mentioned above, in starting in 2004 MDH has used a risk re-distribution method to estimate mode of exposure among those with no risk and the numbers below reflect the risk re-distribution (see *HIV Surveillance Technical Notes* for further details).

The proportion of cases attributable to a certain mode of exposure differs not only by gender, but also by race. Of the new HIV infections diagnosed among males between 2004 and 2006, MSM or MSM/IDU accounted for an estimated 96% of cases among White males, 92% of cases among Hispanic males, 67% of cases among African American males, and 8% of cases among African-born males. The latter three also had the highest proportions of cases with unspecified risk (37%, 34%, and 90%, respectively – this includes cases for whom no interview has been obtained; see *HIV Surveillance Technical Notes* for further information about re-distribution of mode of exposure categories). It is hypothesized that due, in part, to social stigma many of the cases with unspecified risk were unclassified MSM cases and is reflected in the risk re-distribution. This may not hold as true for African-born cases given that heterosexual contact and contaminated medical equipment have been established modes of HIV exposure in their countries of origin. IDU was estimated as a risk in 13% of male African American cases, 8% of Hispanic cases and 2% of male White cases diagnosed during 2004-2006. The number of cases among Asian and American Indian men during the years 2004-2006 was insufficient to make generalizations regarding risk (less than 20 cases in each group), but male-to-male sex appears to be the most prominent mode of exposure among both groups.

Heterosexual contact with a partner who has or is at increased risk for HIV infection accounted for an estimated 78% of cases among African American females, 85% of cases among White females, and 96% of cases among African-born females between 2004 and 2006. More

[6] Disease Intervention Specialists attempt to contact all persons recently diagnosed with HIV in order to provide HIV education, partner notification, and connect the person with medical care or other resources.
[7] MMWR 2001; 50(RR-6):31-40.

than 40% of cases in each of these groups had no specified risk (including cases for whom no interview has been obtained; see *HIV Surveillance Technical Notes* for further information about re-distribution of mode of exposure categories). IDU was estimated as a risk for 15% of cases among Whites, 18% among African Americans, and 0% among African-born. The number of cases among Hispanic, Asian, and American Indian women during the years 2004-2006 were insufficient to make generalizations regarding risk (less than 20 cases in each group).

Mother-to-Child HIV Transmission

The ability to interrupt the transmission of HIV from mother to child via antiretroviral therapy and appropriate perinatal care is an important accomplishment in the history of the HIV/AIDS epidemic. Newborn HIV infection rates range from 25-30% without antiretroviral therapy, but decrease to 1-2% with appropriate medical intervention. Unfortunately, these benefits have largely only been realized in the developed world where antiretroviral therapies are more accessible than in undeveloped countries.

Over the past 10 years the number of births to HIV-infected women has increased steadily from 19 in 1994 to 50 in 2006. During the same time period the rate of transmission has decreased from 15% between 1994 and 1996 to just below 1% in the past three years. However in the same time period the rate of transmission for foreign-born mothers was 1.4%.

The rate of transmission in Minnesota between 1982 and 1994 (before widespread use of zidovudine[8] to prevent mother-to-child HIV transmission) was 25%. Proper prenatal care, including HIV screening for all pregnant women and appropriate medical intervention for those infected, is a vital element in preventing the spread of HIV.

Special Populations:

New HIV Infections among Foreign-born Persons

The number of new HIV infections diagnosed among foreign-born persons in Minnesota has steadily increased from 19 cases in 1990 to 71 cases in 2006. This increase has been largely driven by the increase of cases among African-born persons from 7 cases in 1990 to 36 cases in 2006, as well as, persons from Mexico, Central and South America from 6 cases in 1990 to 29 cases in 2006. Among new HIV infections diagnosed in 2006, 22% were among foreign-born

[8] A common antiretroviral drug.

persons. Based on U.S. Census 2000 data, foreign-born persons make up 5% of the total Minnesota population and are, therefore, disproportionately affected by HIV[9]. Among African-born this disparity is even more evident, while African-born persons make up less that 1% of the Minnesota population they accounted for 11% of new HIV infections in 2006.

Late Testers: Progression to AIDS within one year of HIV diagnosis

Over the past six years approximately one third of all new HIV infection cases diagnosed in Minnesota have either been AIDS at first diagnosis, or have progressed to an AIDS diagnosis within one year of initial diagnosis with HIV (non-AIDS) infection. As with other characteristics of the HIV epidemic in Minnesota, the proportion of late testers varies by demographic characteristics. The most significant differences occur by race/ethnicity, with the proportion of late testers between 2000 and 2006 among Hispanics (47%) and African-born (35%) being higher than that among Whites (30%) and African Americans (28%). Differences by age are as expected with the percentage of late testers increasing with age at time of diagnosis. In 2006[10], 8% of those diagnosed between the ages of 13 and 24 were late testers compared to 44% of those 45 years and older. Finally, the percentage of late testers is also significantly higher among foreign-born cases compared to other cases. In 2006, 38% of foreign-born cases were late testers compared to 23% of US-born cases.

[9] Based on U.S. Census 2000 data, 260,463 foreign-born persons, including 35,188 African-born persons are living in Minnesota out of a total population of 4,919,479. Because there are many reasons foreign-born persons may not be included in the census count (e.g. difficulties with verbal or written English), these numbers are likely an underestimate of the actual size of the foreign-born population living in Minnesota.

[10] Percentage of late testers for 2006 includes only those progressing to AIDS through March 2007. As such, this percentage is likely through increase as additional reports are made to the MDH.

HIV SURVEILLANCE TECHNICAL NOTES

Surveillance of HIV/AIDS

The Minnesota Department of Health (MDH) collects case reports of HIV infection and AIDS diagnoses through a passive and active HIV/AIDS surveillance system. Passive surveillance relies on physicians and laboratories to report new cases of HIV infection or AIDS directly to the MDH in compliance with state rules[1]. Active surveillance conducted by MDH staff involves routine visits and correspondence with select HIV clinical facilities to ensure completeness of reporting and accuracy of the data.

Factors that impact the completeness and accuracy of HIV/AIDS surveillance data include: availability and targeting of HIV testing services, test-seeking behaviors of HIV-infected individuals, compliance with case reporting, and timeliness of case reporting.. Certain events have also impacted trends in HIV/AIDS surveillance data. For example changes over time in the surveillance case definition (most notably the 1993 expansion of the case definition for adults and adolescents[2]) have resulted in artificial jumps in AIDS case counts at the time the new definition went into effect or in the preceding year because changes in case definition allowed for retrospective diagnoses.

New HIV Infections

New HIV infections refer to persons who are diagnosed with HIV infection and newly reported to the MDH. This includes case-patients that meet the CDC surveillance definition for AIDS at the time they are initially diagnosed with HIV infection (AIDS at first diagnosis). Cases of new HIV infection are displayed by year of earliest HIV diagnosis. The number of new HIV infections in Minnesota includes only persons who were first reported with HIV infection while residents of Minnesota. Persons moving to Minnesota already infected with HIV are excluded if they were previously reported in another state.

[1] Minnesota Rule 4605.7040
[2] MMWR 1992;41[no.RR-17]:1-19

Vital Status of HIV/AIDS Cases

Persons are assumed alive unless the MDH has knowledge of their death. Vital status information is updated by monthly visits to select reporting facilities, correspondence with other health departments, annual death certificate reviews, and periodic matches with the National Death Index. "AIDS deaths" refers to all deaths among AIDS cases regardless of the cause of death.

Place of Residence for HIV/AIDS Cases

Persons are assumed to be residing in Minnesota if their most recently reported state of residence was Minnesota and the MDH has not received notice of relocation outside of the state. Likewise, a person's county or city of residence is assumed to be the most recently reported value unless the MDH is otherwise notified. Residence information is updated through standard case reporting, monthly visits to select reporting facilities and/or correspondence with other state health departments. Persons diagnosed with HIV infection while imprisoned in a state correctional facility are included in the data presented unless otherwise noted (federal and private prisoners are excluded). Residential relocation, including release from state prison, is difficult to track and therefore data presented by *current* residence must be interpreted in this light. Data on residence *at time of diagnosis* are considered more accurate, limited only by the accuracy of self-reported residence location.

Data Tabulation and Presentation

The data displayed are not adjusted to correct for reporting delays, case definition changes, or other factors.

MDH surveillance reports published before 2000 displayed data by year of report, the data in these documents are displayed by earliest date of HIV diagnosis. The report date is a function of reporting practices and may be months or years after the date of diagnosis and the date of infection. The date of diagnosis is temporally closer to the date of infection. Displaying data by year of diagnosis more closely approximates when infection occurred. Readers should bear in mind that diagnosis date is also an approximation for infection date. Many years may pass between time of infection and

diagnosis; the incubation period[3] for HIV/AIDS is approximately 10 years. It should also be noted that because of delays in reporting, the annual number of cases reportedly diagnosed in recent years is slightly lower than actual. This discrepancy corrects itself over time. The number of cases diagnosed within a calendar year changes relatively little after two years have passed.

Unless otherwise noted, data analyses exclude persons diagnosed in federal or private correctional facilities (inmates generally are not Minnesota residents before incarceration and do not stay in Minnesota upon their release), infants with unknown or negative HIV status who were born to HIV positive mothers, and HIV-infected refugees who resettled in Minnesota as part of the HIV-Positive Refugee Resettlement Program. However, refugees in the HIV-Positive Refugee Resettlement Program diagnosed with AIDS subsequent to their arrival in the U.S. are included in the number of new AIDS cases.

Mode of Exposure Hierarchy

All state and city HIV/AIDS surveillance systems funded by the Centers for Disease Control and Prevention use a standardized hierarchy of mode of exposure categories. HIV and AIDS cases with more than one reported mode of exposure to HIV are classified in the exposure category listed first in the hierarchy. In this way, each case is counted as having only one mode of exposure. The only exception to this rule is the joint risk of male-to-male sex (MSM) and injection drug use (IDU), which makes up a separate exposure category in the hierarchy. The following is a list of the hierarchy for adolescent/adult HIV/AIDS cases:

(1) MSM
(2) IDU
(3) MSM/IDU
(4) Hemophilia patient
(5) Heterosexual contact
(6) Receipt of blood transfusion or tissue/organ transplant

[3] Incubation period is the time between initial infection with the virus and the development of disease symptoms.

(7) Other (e.g. needle stick in a health care setting)

(8) Risk not specified.

The following is the list of the hierarchy for pediatric HIV/AIDS cases:

(1) Hemophilia patient

(2) Mother with HIV or HIV risk

(3) Receipt of blood transfusion or tissue/organ transplant

(4) Other

(5) Risk not specified.

Heterosexual contact is only designated if a male or female can report specific heterosexual contact with a partner who has, or is at increased risk for, HIV infection (e.g. an injection drug user). For females this includes heterosexual contact with a bisexual male (mainly due to the elevated prevalence of HIV infection among men who have sex with men).

"Risk not specified" refers to cases with no reported history of exposure to HIV through any of the routes listed in the hierarchy of exposure categories. These cases include persons who have not yet been interviewed by MDH staff; persons whose exposure history is incomplete because they died, declined to be interviewed, or were lost to follow-up; and persons who were interviewed or for whom follow-up information was available but no exposure was identified/acknowledged.

The growing number of cases with unspecified risk in recent years is, in part, artificial and due to interviews that have not yet been completed. In time, a number of these will be assigned a mode of exposure category. However, part of the observed increase is real. As stated above, a person must have intimate knowledge about his/her partner to meet the criteria for heterosexual mode of exposure. Often cases will not be certain about their partners' HIV status or risk. Additionally, the perception of social stigma presumably decreases the likelihood that a person will acknowledge certain risk behaviors, particularly male-to-male sex or injection drug use. Thus, if the *true* numbers of cases due to heterosexual contact, MSM, and/or IDU increase, a larger number of cases without a specified risk would be expected.

A recent study by the Centers for Disease Control and Prevention used statistical methods to redistribute risk among female HIV/AIDS cases with unspecified risk[4]. The results are helpful but are based on national data and are not necessarily applicable at the state or local level. Speculation regarding the distribution of risk behaviors among those with unspecified risk is difficult, especially in men, for whom even a national study is not available.

Re-distribution of Mode of Exposure

In 2004 the Minnesota Department of Health began estimating mode of exposure for cases with unspecified risk in its annual summary slides. For 2005, estimation was done by using the risk distribution for cases reported between 2003 and 2005 with known risk by race and gender and applying it to those with unspecified risk of the same race and gender. There were two exceptions to this method, African-born cases and Asian/Pacific Islander women. For both African-born and Asian/Pacific Islander women a breakdown of 95% heterosexual risk and 5% other risk was used. For African-born males a breakdown of 5% male-to-male sex, 90% heterosexual risk, and 5% other risk was used. These percentages are based on epidemiological literature and/or community experience.

Below is an example of how the process worked for white, African American and African-born females:

Reported Female cases 2003 - 2005

Race/Risk	Heterosexual n (%†)	IDU n (%†)	Other[5] n (%†)	*Unspecified n*	Total N
White	26 (87)	4 (13)	0 (0)	*23*	53
African-American	23 (82)	4 (14)	1 (4)	*38*	66
African-born	12 (92)	0 (0)	1 (8)	*76*	89

† Percent of those with known risk.

[4] MMWR 2001; 50(RR-6):31-40.

[5] Other includes Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

Female Cases for 2003 - 2005 with Estimated risk:

Race/Risk	Heterosexual	IDU	Other	*Unspec.*	Total N
White	(.87*23) + 26 = **46**	(.13*23) + 4 = **7**	0	*0*	53
African-American	(.82*38) + 23 = **54**	(.14*38) + 4 = **9**	(.04*38) + 1 = **3**	*0*	66
African-born‡	(.95*76) + 12 = **84**	0	(.05*76) + 1 = **5**	*0*	89

‡ Used a distribution of 95% heterosexual and 5% other.

Definitions Related to Race/Ethnicity

When data are stratified by race, Black race is broken down into African-born and African American (not African-born) based on reported country of birth.
The terms "persons of color" and "non-Whites" refer to all race/ethnicity categories other than White (Black, Hispanic, American Indian, and Asian/Pacific Islander).

Interstate De-Duplication Project (IDEP)

In 2005, the Minnesota Department of Health (MDH) participated in RIDR. RIDR is a CDC project aimed at eliminating duplicate reports of HIV and AIDS cases among states. Each case of HIV and AIDS is assigned to the state (or states when the diagnosis of HIV and AIDS occurs in two different states) where a person was first diagnosed. RIDR was the second such de-duplication initiative by CDC. The first initiative, IDEP, looked at cases reported through December 31, 2001. RIDR included cases from January 1, 2002 through June 30, 2005. Through this project, MDH identified 50 cases of HIV infection (including AIDS at first report) and 12 AIDS cases whose first diagnosis was not in Minnesota. These cases were previously considered as diagnosed in Minnesota and were counted in the cumulative number of cases diagnosed in Minnesota. As such, the change of "ownership" (where the case was diagnosed) has reduced both cumulative and yearly totals for Minnesota. Additionally, MDH also identified 142 cases that no longer live in Minnesota.

Table 1. Number of New Cases and Rates (per 100,000 persons) of HIV Infection, HIV (non-AIDS), and AIDS[I] Minnesota, 1982-2005[V]

Year	HIV Infection[III]		HIV (non-AIDS)[III]		AIDS[IV]	
	Cases	Rate	Cases	Rate	Cases	Rate
1982-1992	*3890*	--	*2870*	--	*1704*	--
1993	348	7.7	223	4.9	350	7.7
1994	322	7.0	225	4.9	332	7.2
1995	342	7.4	222	4.8	339	7.3
1996	294	6.3	192	4.1	258	5.5
1997	280	5.9	198	4.2	194	4.1
1998	297	6.2	198	4.1	193	4.0
1999	302	6.2	201	4.1	161	3.3
2000	274	5.6	178	3.6	157	3.2
2001	285	5.8	199	4.0	124	2.5
2002	308	6.3	213	4.3	157	3.2
2003	273	5.5	182	3.7	164	3.3
2004	305	6.2	192	3.9	203	4.1
2005	304	6.2	222	4.5	177	3.6
Cumulative Total[II]	*7,824*	*159.0*	*5,515*	*112.1*	*4,513*	*91.7*

[I] HIV Infection = New cases of HIV infection (both HIV (non-AIDS) and AIDS at first diagnosis) diagnosed within a given calendar year. HIV (non-AIDS) = New cases of HIV infection (excluding AIDS at first diagnosis) diagnosed within a given calendar year. AIDS = All new cases of AIDS diagnosed within a given calendar year.

[II] The cumulative rate is calculated by dividing the cumulative number of cases by the estimated current state population and multiplying by 100,000. Rates for individual calendar years were calculated using 2000 U.S. Census population data (2000-2005) and 1993-1999 population estimates were calculated using interpolation between U.S. Census 1990 data and U.S. Census 2000 data.

[III]Numbers and rates exclude federal and private prisoners and refugees in the HIV-Positive Refugee Resettlement Program.

[IV] Numbers and rates include refugees in the HIV-Positive Refugee Resettlement Program diagnosed with AIDS subsequent to their arrival in the U.S.

[V] MDH participates in the Interstate De-Duplication Project administered by CDC and aimed at eliminating duplicate reporting of HIV and AIDS cases. For further detail on the impact of this project on Minnesota numbers please see the HIV Surveillance Technical Notes.

Please Note: The sum of HIV (non-AIDS) cases and AIDS cases will be greater than the number of cases of HIV Infection in a given year. The difference occurs because, unlike the HIV Infection category, the AIDS category includes both cases that are AIDS at first diagnosis as well as those cases that progress from HIV (non-AIDS) to AIDS during the year (see above definitions).

Table 2. Number of Cases and Rates (per 100,000 persons) of HIV Infection by Residence, Age, and Gender[I] -- Minnesota, 2005

Group	Males		Females		*Total*		*HIV*
	Cases	%	Cases	%	*Cases*	*%*	*Infection Rate*
Residence[II]							
Minneapolis	90	42%	22	25%	*112*	*37%*	*29.3*
St. Paul	26	12%	13	15%	*39*	*13%*	*13.6*
Suburban	69	32%	44	51%	*113*	*38%*	*5.7*
Greater Minnesota	29	14%	8	9%	*37*	*12%*	*1.6*
Total	*214*	*100%*	*87*	*100%*	*301*	*100%*	*6.2*
Age							
<13 yrs	1	0%	0	0%	*1*	*0%*	*0.1*
13-19 yrs	7	3%	1	1%	*8*	*3%*	*1.5*
20-24 yrs	22	10%	20	23%	*42*	*14%*	*13.0*
25-29 yrs	38	18%	15	17%	*53*	*17%*	*16.6*
30-34 yrs	33	15%	13	15%	*46*	*15%*	*13.0*
35-39 yrs	44	20%	10	11%	*54*	*18%*	*13.1*
40-44 yrs	31	14%	13	15%	*44*	*14%*	*10.7*
45-49 yrs	19	9%	8	9%	*27*	*9%*	*7.4*
50-54 yrs	13	6%	5	6%	*18*	*6%*	*6.0*
55-59 yrs	6	3%	1	1%	*7*	*2%*	*3.1*
60+ yrs	2	1%	2	2%	*4*	*1%*	*0.5*
Total	*216*	*100%*	*88*	*100%*	*304*	*100%*	*6.2*
StateTotals	*216*		*88*		*304*		*6.2*

[I] HIV Infection includes all new cases of HIV infection (both HIV (non-AIDS) and AIDS at first diagnosis) among Minnesota residents in 2005.

[II] Residence information missing for 3 cases of HIV infection in 2005.

Suburban = Seven-county metropolitan area except Minneapolis & St. Paul (Anoka, Carver, Dakota, Hennepin (except Minneapolis), Ramsey (except St. Paul), Scott, and Washington counties). Greater Minnesota = Remaining 80 counties outside of the seven-county metropolitan area.

Numbers and rates exclude federal and private prisoners and refugees in the HIV-Positive Refugee Resettlement Program. State prisoners are included (one diagnosis in 2005).
Rates calculated using U.S. Census 2000 data. Percentages may not add to 100 due to rounding

Table 3. Number of Cases and Rates (per 100,000 persons) of HIV Infection by Race/Ethnicity & Mode of Exposure[I] -- Minnesota, 2005

	Males			Females			*Total*		
Group	**Cases**	**%**	***Rate*[IV]**	**Cases**	**%**	***Rate*[IV]**	***Cases***	***%***	***Rate*[III]**
Race/Ethnicity									
White, non-Hispanic	135	63%	#	23	26%	#	*158*	*52%*	*3.7*
Black[II], African-American	38	18%	#	28	32%	#	*66*	*22%*	*39.3*
Black[II], African-born	20	9%	#	28	32%	#	*48*	*16%*	*96-136.4*
Hispanic	17	8%	#	6	7%	#	*23*	*8%*	*16.0*
American Indian	0	0%	#	3	3%	#	*3*	*1%*	*3.7*
Asian/PI	3	1%	#	0	0%	#	*3*	*1%*	*1.8*
Other[II]	3	1%	#	0	0%	#	*3*	*1%*	*X*
Total	*216*	*100%*	*8.9*	*88*	*100%*	*3.5*	*304*	*100%*	*6.2*
Mode of Exposure									
MSM	147	68%	X	--	--	X	*147*	*48%*	X
IDU	1	0%	X	2	2%	X	*3*	*1%*	X
MSM/IDU	11	5%	X	--	--	X	*11*	*4%*	X
Heterosexual (Total)	(9)	4%	X	(28)	32%	X	*(37)*	*12%*	X
with IDU	*3*	--	X	*3*	--	X	*6*	--	X
with Bisexual Male	--	--	X	*4*	--	X	*4*	--	X
with Hemophiliac/other	*0*	--	X	*0*	--	X	*0*	--	X
with HIV+, unknown risk	*6*	--	X	*21*	--	X	*27*	--	X
Perinatal	0	0%	X	0	0%	X	*0*	*0%*	X
Other	1	0%	X	0	0%	X	*1*	*0%*	*X*
Unspecified	22	10%	X	22	25%	X	*44*	*14%*	*X*
No Interview	25	12%	X	36	41%	X	*61*	20%	*X*
Total	*216*	*100%*	*8.9*	*88*	*100%*	*3.5*	*304*	*100%*	*6.2*

[I] HIV infection includes all new cases of HIV infection (both HIV (non-AIDS) and AIDS at first diagnosis) among Minnesota residents in 2005.

[II] African-born Blacks are reported separately from other Blacks (born in the U.S. or elsewhere). "Other" includes multi-racial persons and persons with unknown race.

[III] Rates calculated using U.S. Census 2000 data. Accurate population estimates for Black, African-born persons living in Minnesota are unavailable – anecdotal (50,000) and 2000 U.S. Census data (35,188)) were used to create the range of rates reported for African-born persons. The population estimate for Black, African-American persons (167,784) was calculated by subtracting the U.S. Census estimate for African-born persons (35,188) from the total Black population (202,972). Note that this assumes that all African-born persons are Black (as opposed to another race).

[IV] U.S. Census 2000 data necessary to calculate race-specific rates (specifically a breakdown of the state population by "Race alone or in Combination with one or more races" by gender) have not yet been released for Minnesota. When these data become available this table will be updated.

Numbers exclude federal and private prisoners and refugees in the HIV-Positive Refugee Resettlement Program.
MSM = Men who have sex with men. IDU = Injecting drug use. Heterosexual = For males: heterosexual contact with a female known to be HIV+, an injecting drug user, or a hemophiliac/blood product or organ transplant recipient. For females: heterosexual contact with a male known to be HIV+, bisexual, an injecting drug user, or a hemophiliac/blood product or organ transplant recipient. Perinatal = Mother to child HIV transmission; birth may have occurred in a previous year. Unspecified = Cases who did not acknowledge any of the risks listed above. No Interview = Cases who refused to be, could not be or have not yet been interviewed.
Percentages may not add to 100 due to rounding.

Table 4. Number of Cases and Rates (per 100,000 persons) of HIV Infection by County of Residence[I] -- Minnesota, 2005		
County[II]	HIV Infection Cases	HIV Infection Rate[III]
Aitkin	0	-
Anoka	15	5.0
Becker	0	-
Beltrami	0	-
Benton	0	-
Big Stone	0	-
Blue Earth	1	-
Brown	0	-
Carlton	2	-
Carver	2	-
Cass	0	-
Chippewa	1	-
Chisago	1	-
Clay	0	-
Clearwater	0	-
Cook	0	-
Cottonwood	0	-
Crow Wing	0	-
Dakota	13	3.7
Dodge	0	-
Douglas	0	-
Faribault	0	-
Fillmore	1	-
Freeborn	0	-
Goodhue	0	-
Grant	0	-
Hennepin	169	15.1
Houston	0	-
Hubbard	0	-
Isanti	1	-
Itasca	0	-
Jackson	0	-
Kanabec	0	-
Kandiyohi	1	-
Kittson	0	-
Koochiching	0	-
Lac Qui Parle	0	-
Lake	1	-
Lake of the Woods	0	-
Le Sueur	1	-
Lincoln	0	-
Lyon	0	-
McLeod	0	-
Mahnomen	0	-
Marshall	0	-
Martin	1	-
Meeker	2	-
Mille Lacs	0	-
Morrison	0	-
Mower	2	-

Table 4. Number of Cases and Rates (per 100,000 persons) of HIV Infection by County of Residence[I] -- Minnesota, 2005		
County[II]	**HIV Infection Cases**	**HIV Infection Rate[III]**
Murray	0	-
Nicollet	0	-
Nobles	3	-
Norman	0	-
Olmsted	3	-
Otter Tail	0	-
Pennington	0	-
Pine	0	-
Pipestone	1	-
Polk	0	-
Pope	0	-
Ramsey	55	10.8
Red Lake	0	-
Redwood	0	-
Renville	0	-
Rice	1	-
Rock	0	-
Roseau	0	-
St. Louis	7	3.5
Scott	5	5.6
Sherburne	4	-
Sibley	0	-
Stearns	2	-
Steele	0	-
Stevens	0	-
Swift	0	-
Todd	0	-
Traverse	0	-
Wabasha	0	-
Wadena	0	-
Waseca	0	-
Washington	5	2.5
Watonwan	0	-
Wilkin	0	-
Winona	0	-
Wright	0	-
Yellow Medicine	1	-
State Total"	*304*	*6.2*

[I] HIV infection includes all new cases of HIV infection (both HIV (non-AIDS) and AIDS at first diagnosis) among Minnesota residents in 2005. County of residence as reported at time of diagnosis.

[II] Residence information missing for 3 cases of HIV infection in 2005; Total rate is based on all cases in the state (n = 304).

[III] Rates calculated using U.S. Census 2000 data. Rates not calculated for counties with fewer than 5 cases. Numbers and rates exclude federal and private prisoners and refugees in the HIV-Positive Refugee Resettlement Program. HIV infection was diagnosed among one state prisoner during 2005 (State correctional facilities are located in the following counties: Anoka, Carlton, Chisago, Goodhue, Pine, Rice, Scott, St. Louis, Stearns, and Washington).

Perinatal HIV Exposure[I]

Table 5a. Number of Births to HIV-Infected Women[II] by Year of Child's Birth and Mother's Race/Ethnicity, Minnesota 1982-2005

Year(s)	Race/Ethnicity of Mother							*Total*	Foreign-born Mothers[IV]	
	White	Black, African-American[III]	Black, African-born[III]	Hispanic	American Indian	Asian/PI	Multi-racial		Number	(% of total in time period)
1982-1989	15	6	0	0	0	1	0	*22*	2	9%
1990	4	2	0	0	1	0	0	*7*	0	0%
1991	5	4	0	0	3	0	0	*12*	0	0%
1992	9	5	1	1	0	0	0	*16*	1	6%
1993	8	6	1	0	1	0	0	*16*	1	6%
1994	5	9	1	2	2	0	0	*19*	1	5%
1995	8	8	0	1	2	0	0	*19*	1	5%
1996	8	2	0	2	1	1	0	*14*	3	21%
1997	8	8	1	1	0	1	0	*19*	1	5%
1998	8	6	3	1	2	0	0	*20*	4	20%
1999	7	12	3	1	1	1	1	*26*	5	19%
2000	12	10	7	2	1	1	0	*33*	9	27%
2001	1	20	13	1	2	0	0	*37*	15	41%
2002	9	6	13	2	3	0	3	*36*	14	39%
2003	6	15	18	4	2	1	1	*47*	21	45%
2004	8	13	22	3	2	1	0	*49*	24	49%
2005	7	7	21	3	0	2	1	*41*	25	61%
Cumulative Total	128	139	104	24	23	9	6	433	127	29%

NOTE: A birth to an HIV-infected woman was only included in the table if her residence at the time of child's birth was reported as Minnesota.

[I] Exposure of child to HIV during pregnancy, at birth, and/or during breastfeeding.

[II] HIV-infected women may or may not have progressed to an AIDS diagnosis.

[III] African-born Blacks are reported separately from other Blacks (born in the U.S. or elsewhere).

[IV] Mothers' places of birth include: Africa (104), Asia/Pacific Islands (9), Latin America/Caribbean (14).

Perinatal HIV Transmission[I]

Table 5b. Number of Perinatally-Acquired HIV/AIDS Cases by Year of Child's Birth and Mother's Race/Ethnicity, Minnesota 1982-2005

Year(s)	Race/Ethnicity of Mother							*Total*	Foreign-born Mothers[III]	
	White	Black, African-American[II]	Black, African-born[II]	Hispanic	American Indian	Asian/PI	Unknown		Number	(% of total in time period)
1982-1989	5	2	0	0	0	1	0	*8*	1	13%
1990	2	0	0	0	0	0	0	*2*	0	0%
1991	4	0	0	0	0	0	0	*4*	0	0%
1992	2	0	0	0	0	0	0	*2*	0	0%
1993	2	1	0	0	0	0	0	*3*	0	0%
1994	2	0	0	1	0	0	0	*3*	0	0%
1995	0	0	0	1	1	0	0	*2*	0	0%
1996	0	1	0	1	0	1	0	*3*	2	67%
1997	0	0	1	0	0	0	0	*1*	0	0%
1998	1	1	2	0	0	0	0	*4*	2	50%
1999	0	0	0	0	0	0	0	*0*	0	-
2000	0	1	0	0	0	0	0	*1*	0	0%
2001	0	0	0	0	0	0	0	*0*	0	-
2002	0	0	0	1	0	0	0	*1*	1	100%
2003	0	0	1	0	0	0	0	*1*	1	100%
2004	0	0	0	0	0	0	0	*0*	0	-
2005	0	0	0	0	0	0	0	*0*	0	-
Cumulative Total	18	6	4	4	1	2	0	*35*	7	20%
Rate of Transmission 1996-2005	1%	3%	4%	--	--	--	--	*3%*	5%	--
Cumulative Rate of Transmission[IV]	14%	4%	4%	--	--	--	--	*8%*	6%	--

NOTE: Cases of perinatally-acquired HIV/AIDS were only included in the table if the child's residence at the time of birth was reported as Minnesota.

[I] Transmission of HIV from mother to child during pregnancy, at birth, and/or during breastfeeding.

[II] African-born Blacks are reported separately from other Blacks (born in the U.S. or elsewhere).

[III] Mothers' places of birth include: Africa (3), Asia/Pacific Islands (2), Latin America/Caribbean (2).

[IV] The cumulative rate of HIV transmission is calculated by dividing the total number of perinatally-acquired HIV infections by the total number of births in a category and multiplying by 100. Rates calculated only for categories where the cumulative number of births is 30 or greater.

HIV/AIDS Prevalence & Mortality Report, 2005

Minnesota Department of Health
HIV/AIDS Surveillance System

MINNESOTA MDH DEPARTMENT OF HEALTH

Introduction (I)

- These three introduction slides provide a general context for the data used to create this slide set. If you have questions about any of the slides please refer to the ***Companion Text*** *to the Minnesota HIV/AIDS Prevalence & Mortality Report, 2005 or HIV/AIDS Prevalence & Mortality* ***Technical Notes****.*

- This slide set displays estimates of the number of persons living with HIV/AIDS (**prevalence**) and mortality in Minnesota by person, place, and time.

- The slides rely on data from HIV/AIDS cases diagnosed through 2005 and reported to the Minnesota Department of Health (MDH) HIV/AIDS Surveillance System.

Introduction (II)

- Data analyses exclude persons diagnosed in federal or private correctional facilities, but include state prisoners (n=100) and persons arriving to Minnesota through the HIV+ Refugee Resettlement Program (n=148 prevalent cases).

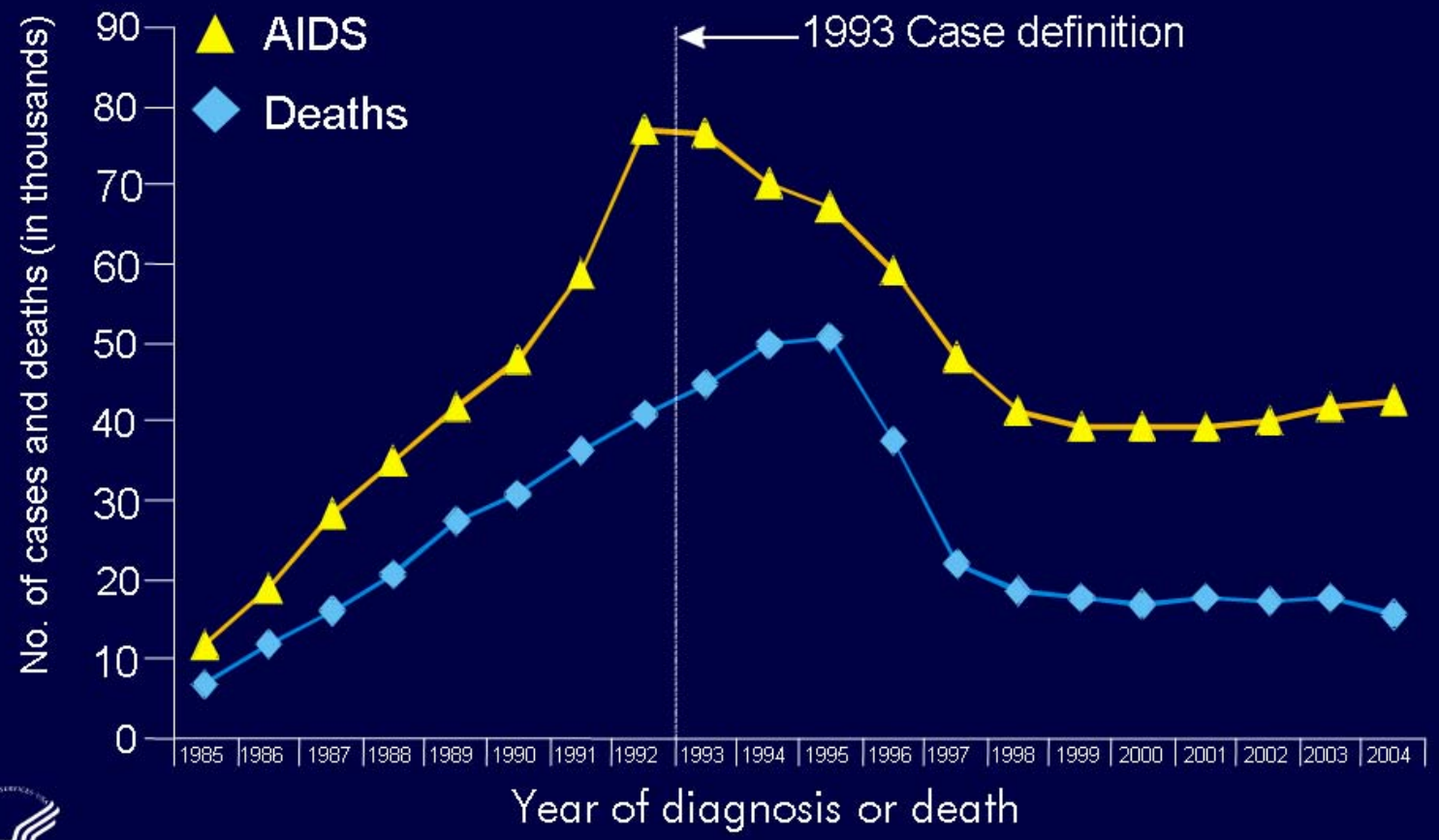
- Some limitations of surveillance data:
  - Data do not include HIV-infected persons who have not been tested for HIV
  - Data do not include persons whose positive test results have not been reported to the MDH
  - Data do not include HIV-infected persons who have only tested anonymously
  - Case numbers for the most recent years may be undercounted due to delays in reporting

Introduction (III)

- Persons are assumed to be alive unless the MDH has knowledge of their death.
- Persons whose most recently reported state of residence was Minnesota are assumed to be currently residing in Minnesota unless the MDH has knowledge of their relocation. Our ability to track changes of residence, including within the state, is limited.
- Vital status and current residence are updated through one or more of the following methods:
  - Standard case reporting
  - Correspondence with other health departments
  - Active surveillance (monthly)
  - Death certificate reviews (annually)
  - National Death Index match

National Context

Estimated Number of AIDS Cases and Deaths among Adults and Adolescents with AIDS, 1985–2004—United States

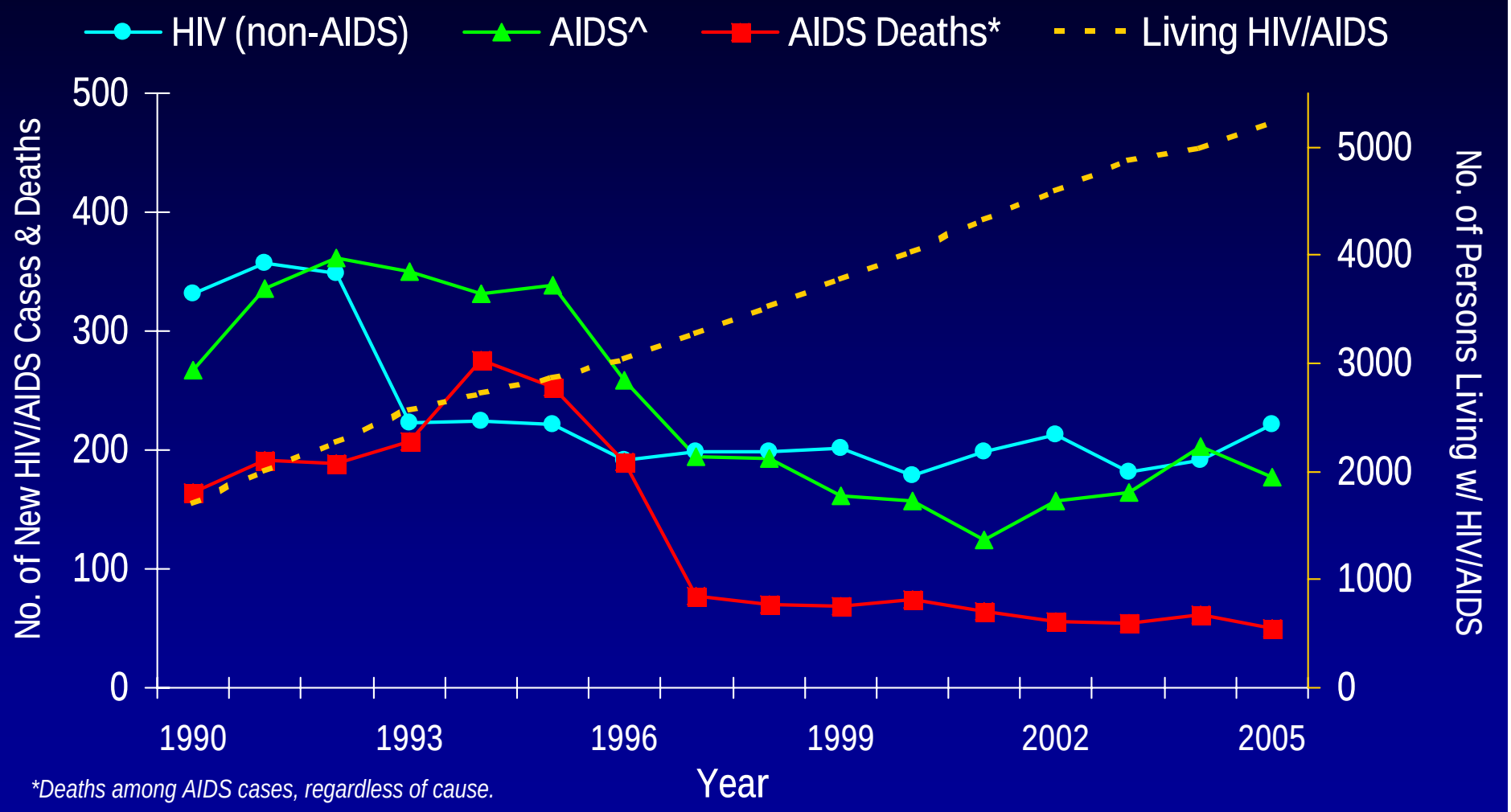


Note. Data adjusted for reporting delays.

Overview of HIV/AIDS in Minnesota

HIV/AIDS in Minnesota:

Number of New Cases, Prevalent Cases, and Deaths by Year, 1990-2005



**Deaths among AIDS cases, regardless of cause.*

^Includes refugees in the HIV+ Resettlement Program diagnosed with AIDS subsequent to their arrival in the United States

Data Source: *Minnesota HIV/AIDS Surveillance System*

Persons Living with HIV/AIDS in Minnesota

Estimated Number of Persons *Living with HIV/AIDS in Minnesota*

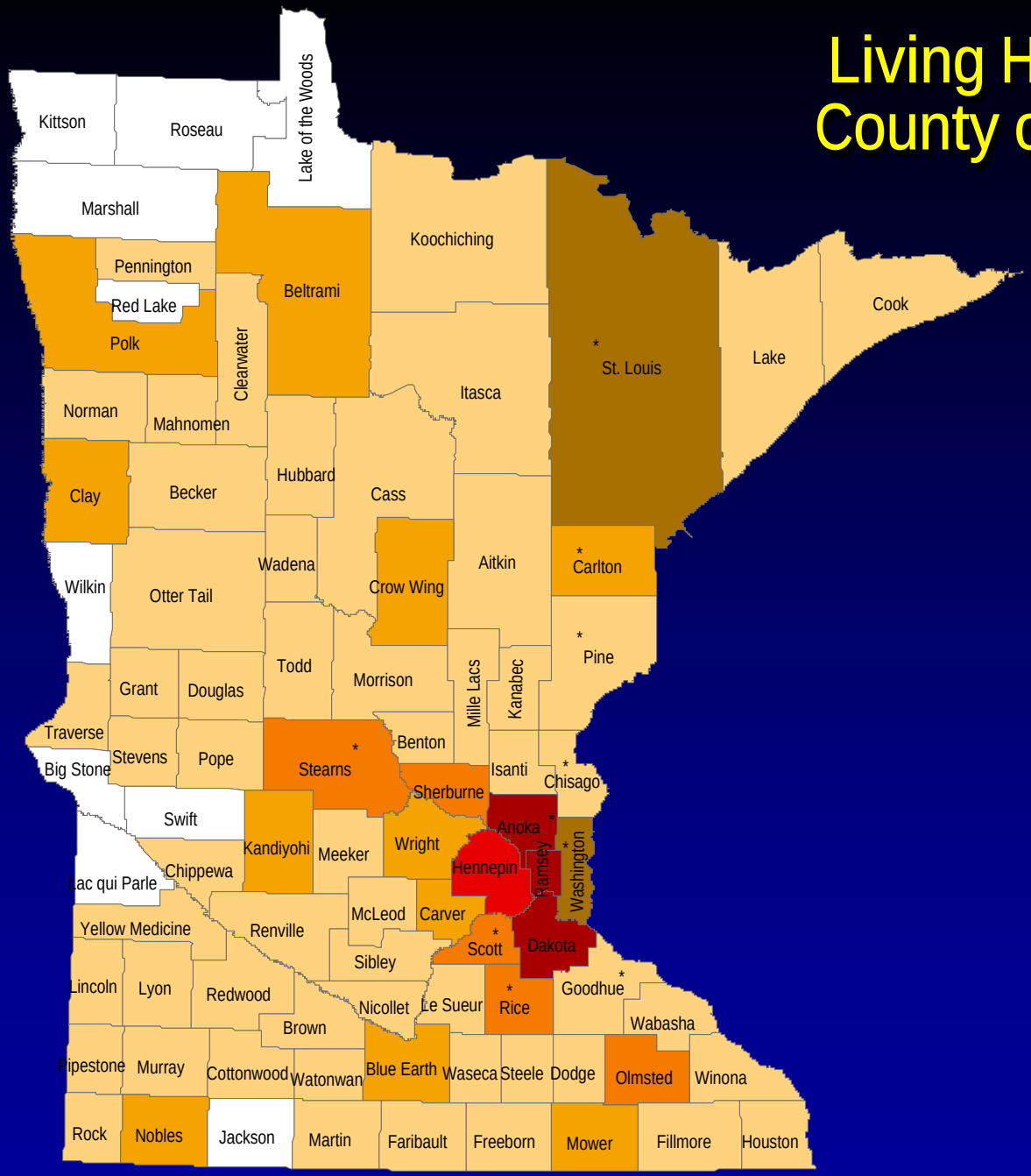
- As of December 31, 2005, 5,233* persons are assumed alive and living in Minnesota with HIV/AIDS
  - 2,914 living with HIV infection (non-AIDS)
  - 2,319 living with AIDS
- This number includes 813 persons who were first reported with HIV or AIDS elsewhere and subsequently moved to Minnesota
- This number excludes 777 persons who were first reported with HIV or AIDS in Minnesota and subsequently moved out of the state

** This number includes persons who reported Minnesota as their current state of residence, regardless of residence at time of diagnosis. Includes state prisoners and refugees arriving through the HIV+ Refugee Resettlement Program*

Data Source: *Minnesota HIV/AIDS Surveillance System*

Place

Living HIV/AIDS Cases by County of Residence, 2005



Number Living with HIV/AIDS

- None
- 1 - 10
- 11 - 30
- 31 - 90
- 91 - 150
- 151 – 1,000
- 1,001 – 3,009

City of Minneapolis – 2,209
City of St. Paul – 750
Suburban[#] – 1,558
Greater Minnesota - 686

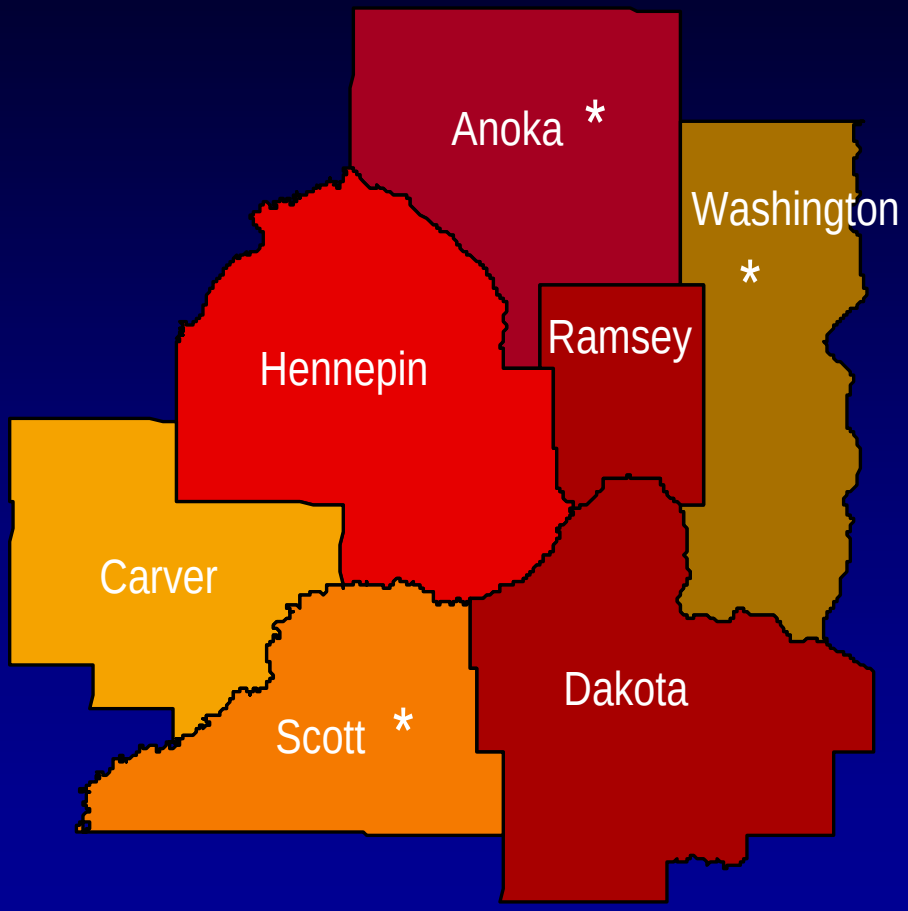
Total number = 5,233
(30 people missing residence information)

* Counties in which a state correctional facility is located

[#] 7-county metro area, excluding the cities of Minneapolis and St. Paul

Data Source: *Minnesota HIV/AIDS Surveillance System*

Map of Metro Area:
Living HIV/AIDS Cases by County of Residence, 2005



Number Living with HIV/AIDS

- None
- 1 - 10
- 11 - 30
- 31 - 90
- 91 - 150
- 151 – 1,000
- 1,001 – 3,009

City of Minneapolis – 2,209
City of St. Paul – 750
Suburban# – 1,558

Total number (Metro only) = 4,517

* Counties in which a state correctional facility is located

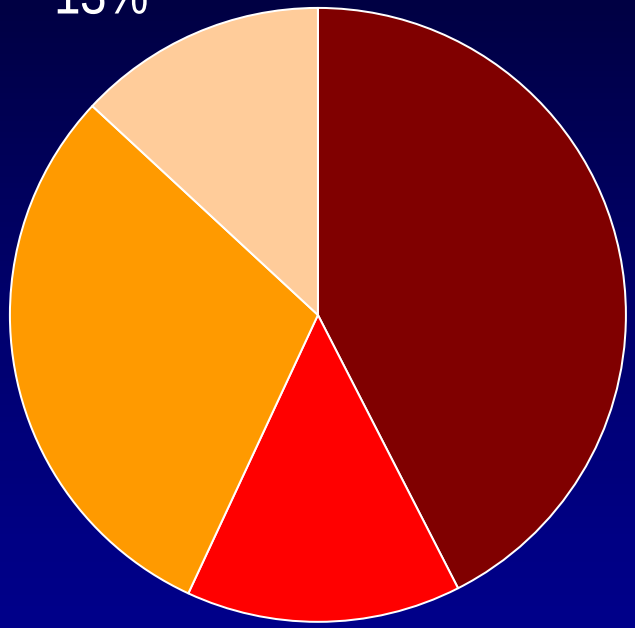
7-county metro area, excluding the cities of Minneapolis and St. Paul

Data Source: *Minnesota HIV/AIDS Surveillance System*

Persons Living with HIV/AIDS in Minnesota by Current Residence, 2005

Total Number = 5,233

(30 persons missing residence information)

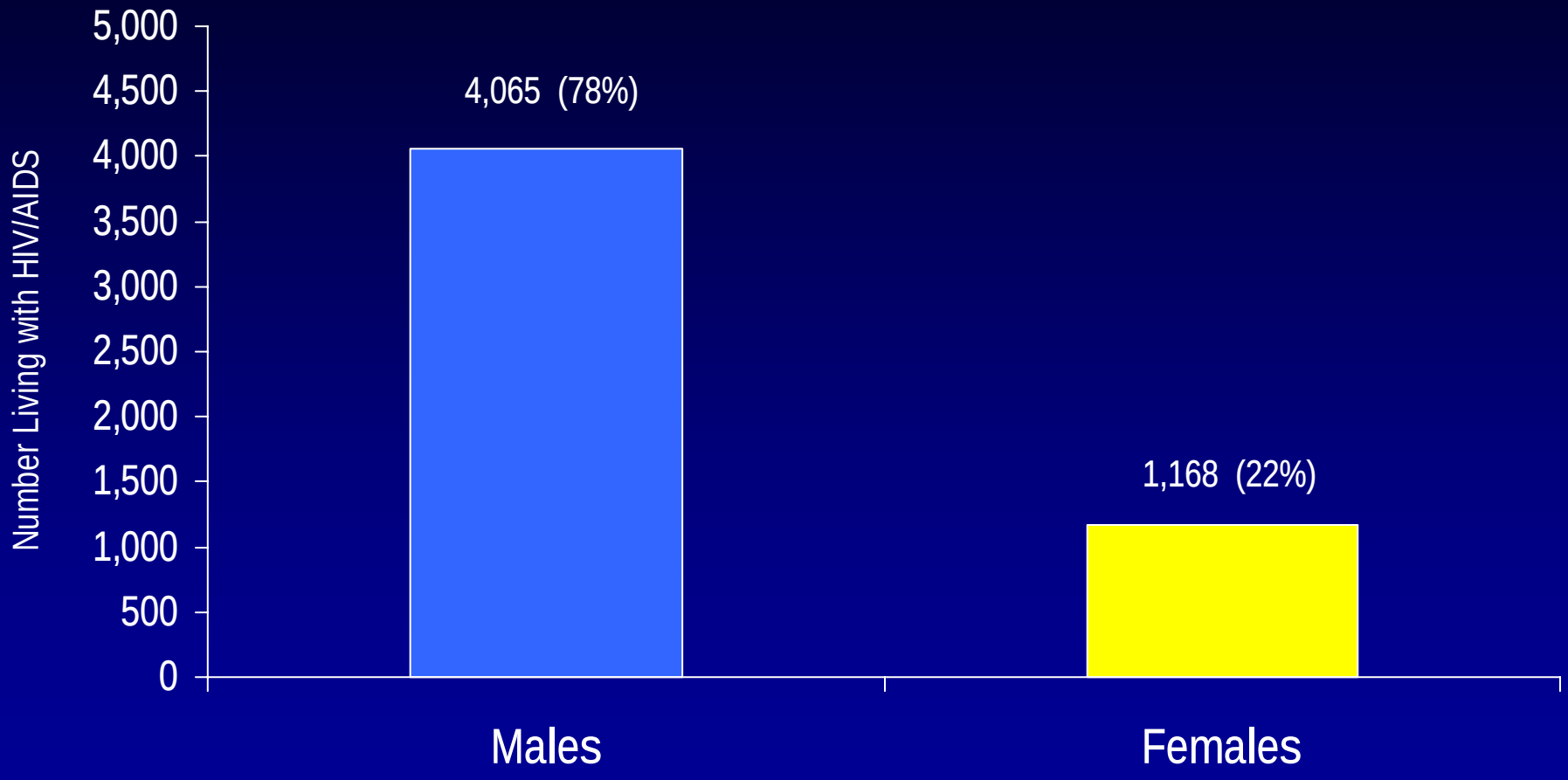


Suburban = Seven-county metro area including Anoka, Carver, Dakota, Hennepin (except Minneapolis), Ramsey (except St. Paul), Scott, and Washington counties. Greater MN = All other Minnesota counties, outside the seven-county metro area.

Data Source: *Minnesota HIV/AIDS Surveillance System*

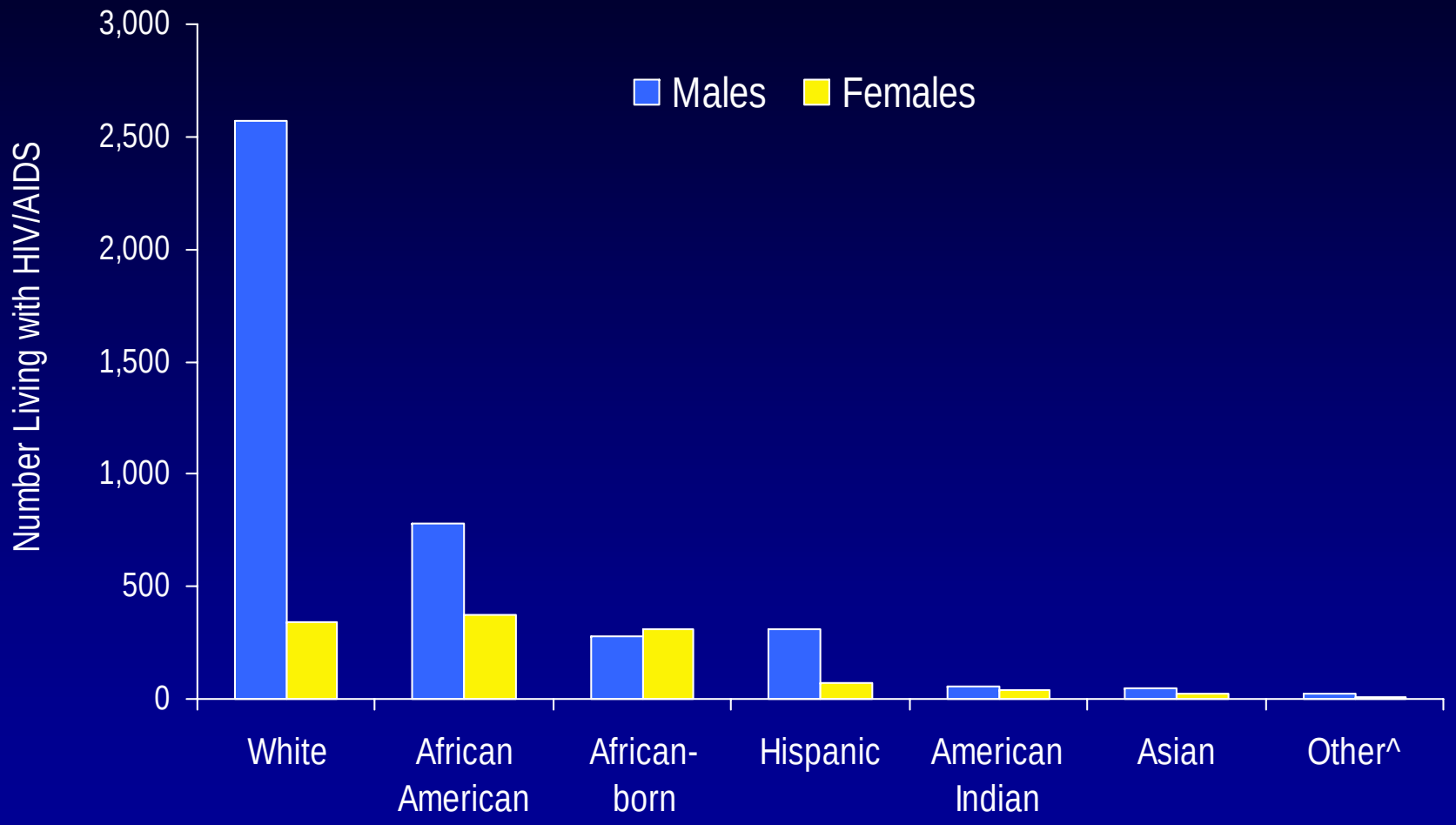
Gender and Race/Ethnicity

Persons Living with HIV/AIDS in Minnesota by Gender, 2005



Data Source: *Minnesota HIV/AIDS Surveillance System*

Persons Living with HIV/AIDS in Minnesota by Gender and Race/Ethnicity*, 2005



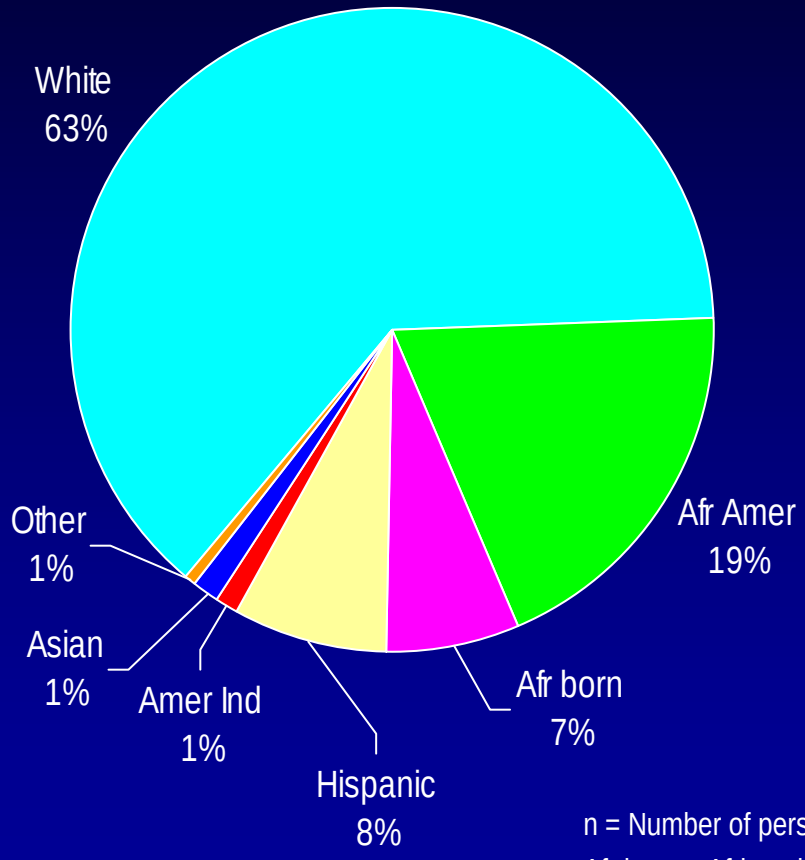
* *"African-born" refers to Blacks who reported an African country of birth; "African American" refers to all other Blacks.*

^ Other includes persons with unknown or multiple races (n=29).

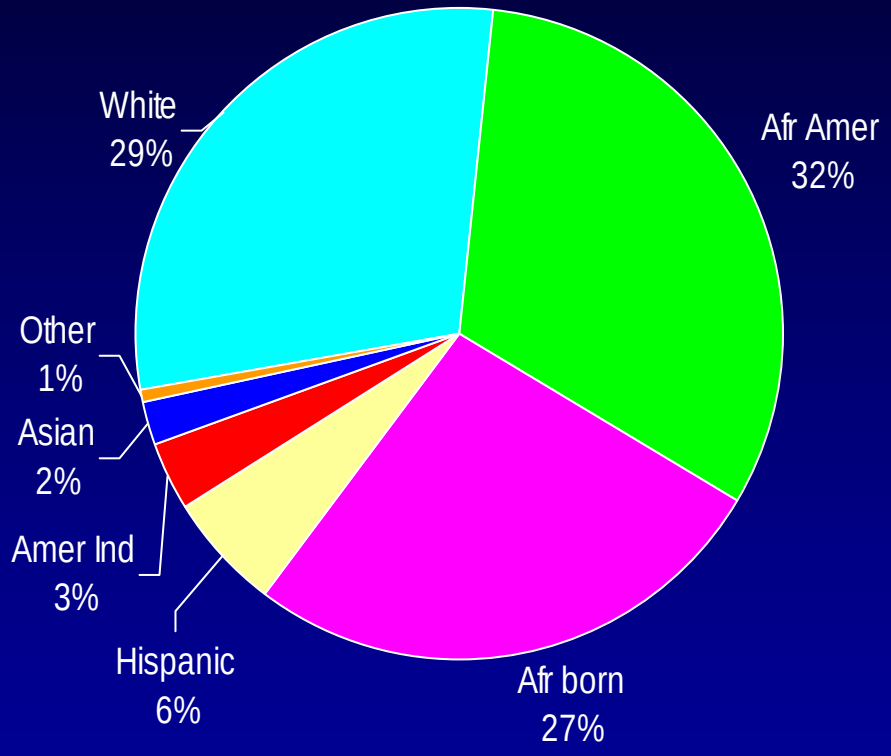
Data Source: *Minnesota HIV/AIDS Surveillance System*

Persons Living with HIV/AIDS in Minnesota by Gender and Race/Ethnicity, 2005

Males (n = 4,065)



Females (n = 1,168)



n = Number of persons Afr Amer = African American (Black, not African-born persons)
Afr born = African-born (Black, African-born persons) Amer Ind = American Indian
Other = Multi-racial persons or persons with unknown race

Data Source: *Minnesota HIV/AIDS Surveillance System*

Number of Cases and Rates (per 100,000 persons) of Persons Living with HIV/AIDS by Race/Ethnicity† – Minnesota, 2005

Race/Ethnicity	*Cases*	*%*	*Rate*
White, non-Hispanic	**2,913**	**56%**	**67.4**
Black, African-American	**1,156**	**22%**	**689.0**
Black, African-born	**587**	**10%**	**1174-1668††**
Hispanic	**377**	**7%**	**262.9**
American Indian	**93**	**2%**	**114.7**
Asian/Pacific Islander	**78**	**1%**	**46.4**
Other^	**29**	**1%**	**X**
Total	***5,233***	***100%***	***106.4***

Census Data used for rate calculations.

† "African-born" refers to Blacks who reported an African country of birth; "African American" refers to all other Blacks. Cases with unknown race are excluded.

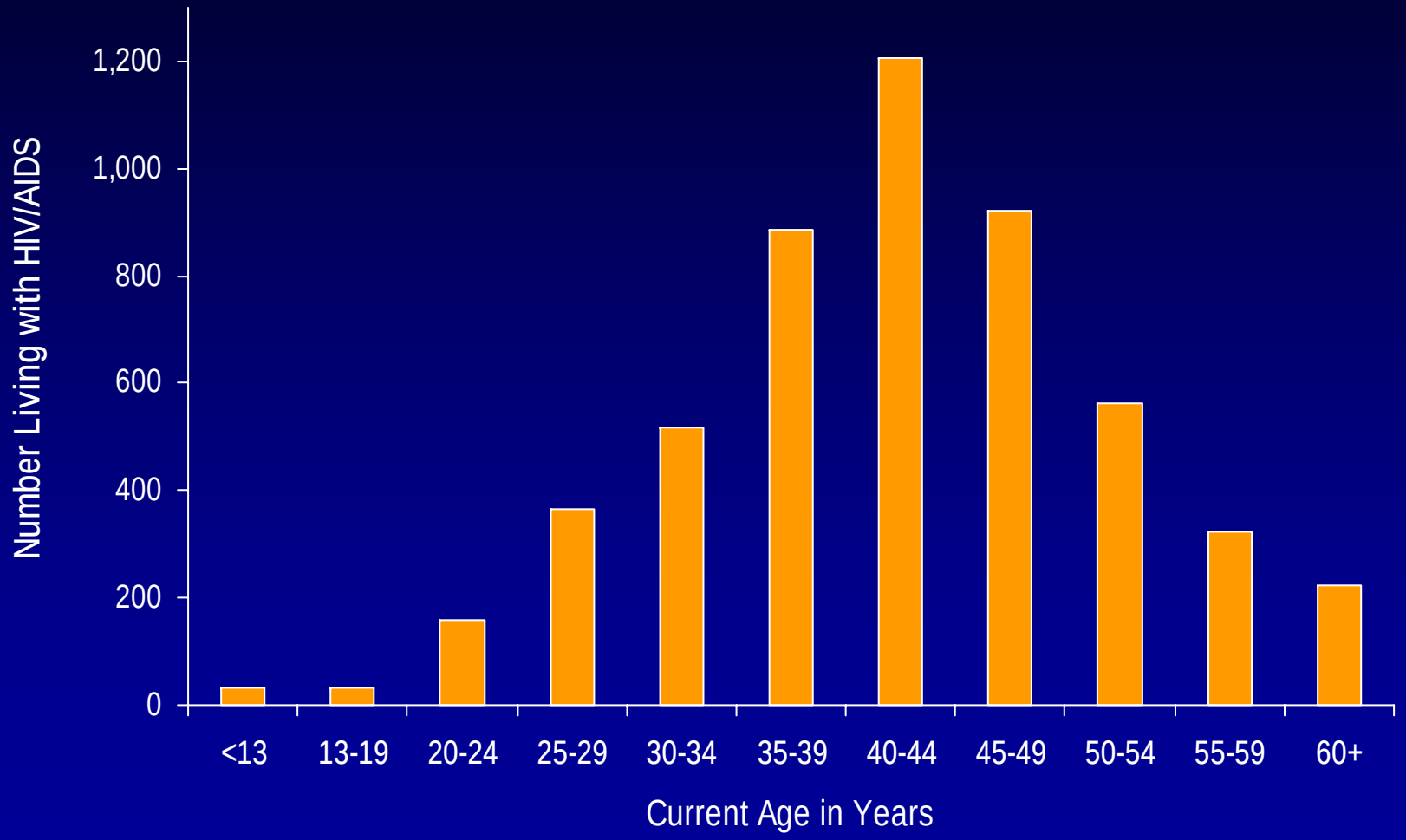
†† Accurate population estimates for African-born persons and MSM (any race) living in Minnesota are unavailable – anecdotal (50,000) and 2000 US Census data (35,188)) were used to create the range of rates reported for African-born.

^ Other = Multi-racial persons or persons with unknown race

Data Source: *Minnesota HIV/AIDS Surveillance System*

Age

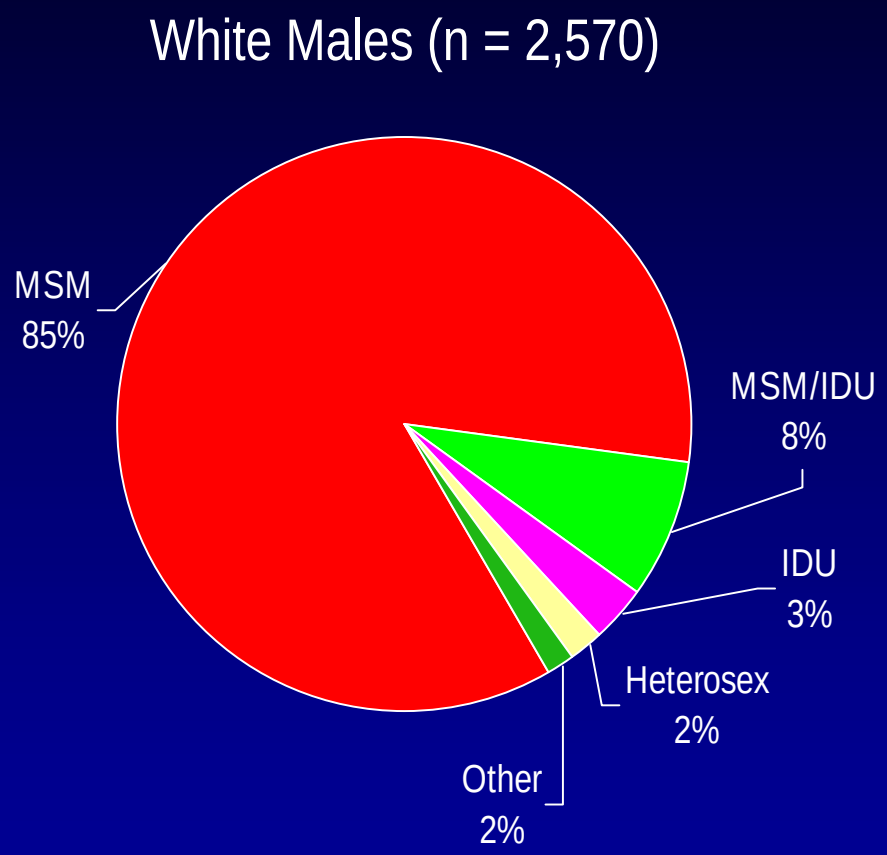
Persons Living with HIV/AIDS in Minnesota by Age Group, 2005



Data Source: *Minnesota HIV/AIDS Surveillance System*

Mode of Exposure

Males Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure†, 2005



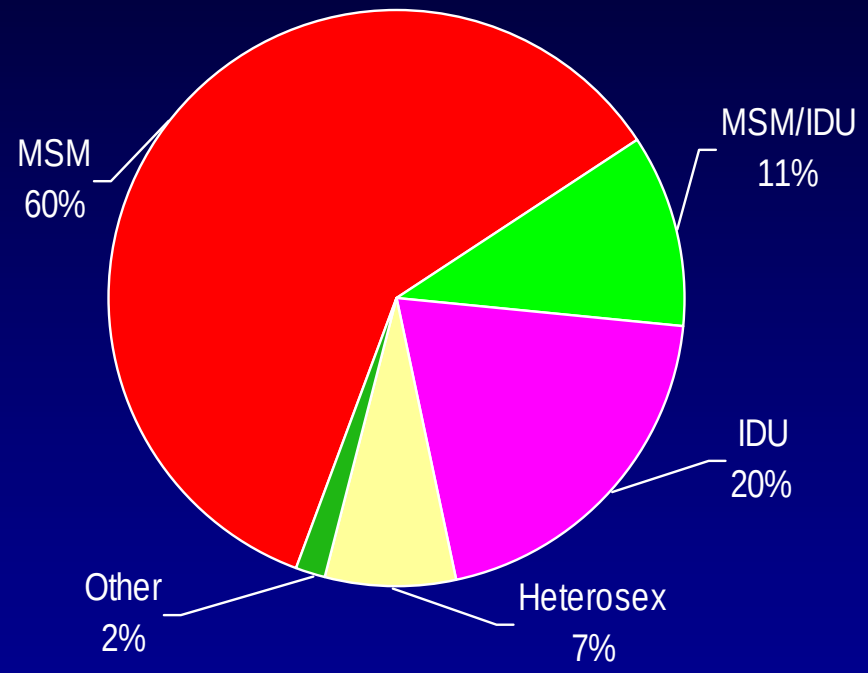
n = Number of persons MSM = Men who have sex with men Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk
IDU = Injecting drug use Heterosex = Heterosexual contact

† Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Prevalence & Mortality Technical Notes.

Data Source: *Minnesota HIV/AIDS Surveillance System*

Males Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure†, 2005

African American Males†† (n = 782)



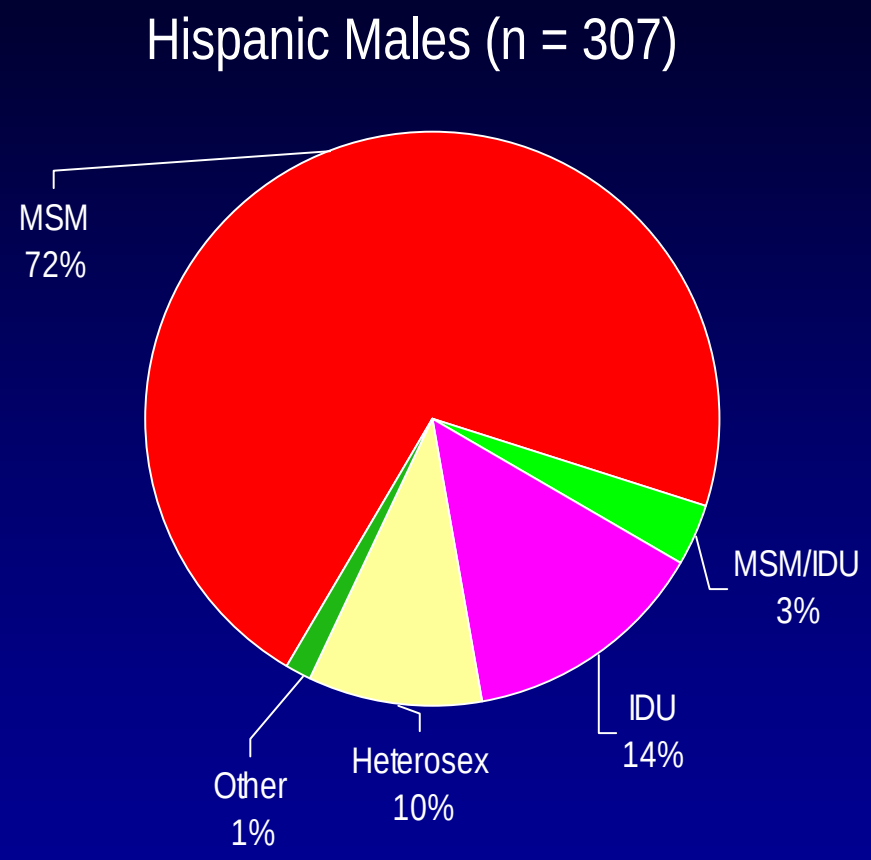
n = Number of persons MSM = Men who have sex with men Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk
IDU = Injecting drug use Heterosex = Heterosexual contact

† Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Prevalence & Mortality Technical Notes.

†† *Refers to Black, African American (not African-born) males.*

Data Source: *Minnesota HIV/AIDS Surveillance System*

Males Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure†, 2005



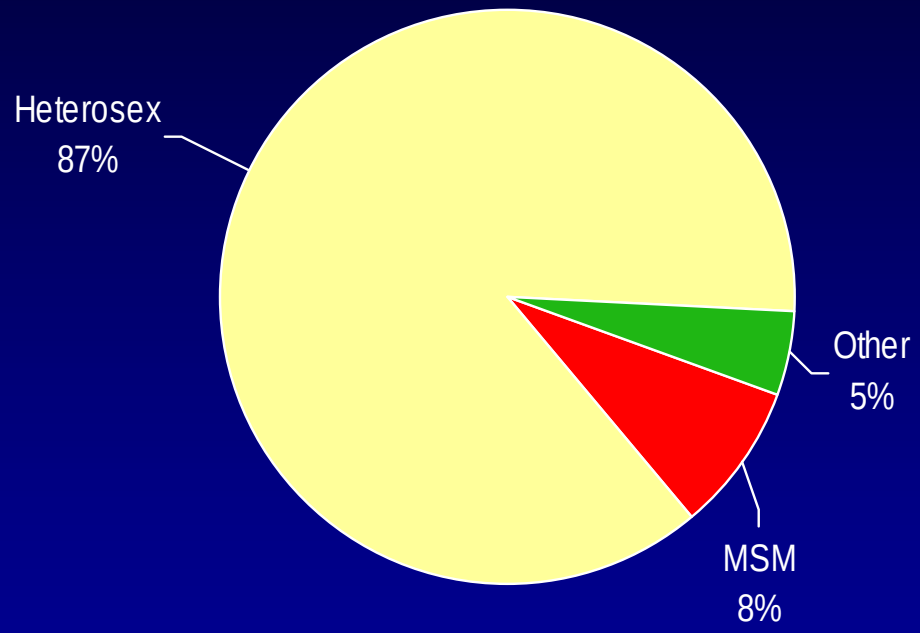
n = Number of persons MSM = Men who have sex with men Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk
IDU = Injecting drug use Heterosex = Heterosexual contact

† Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Prevalence & Mortality Technical Notes.

Data Source: *Minnesota HIV/AIDS Surveillance System*

Males Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure†, 2005

African-born Males†† (n = 277)



n = Number of persons MSM = Men who have sex with men Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk
Heterosex = Heterosexual contact

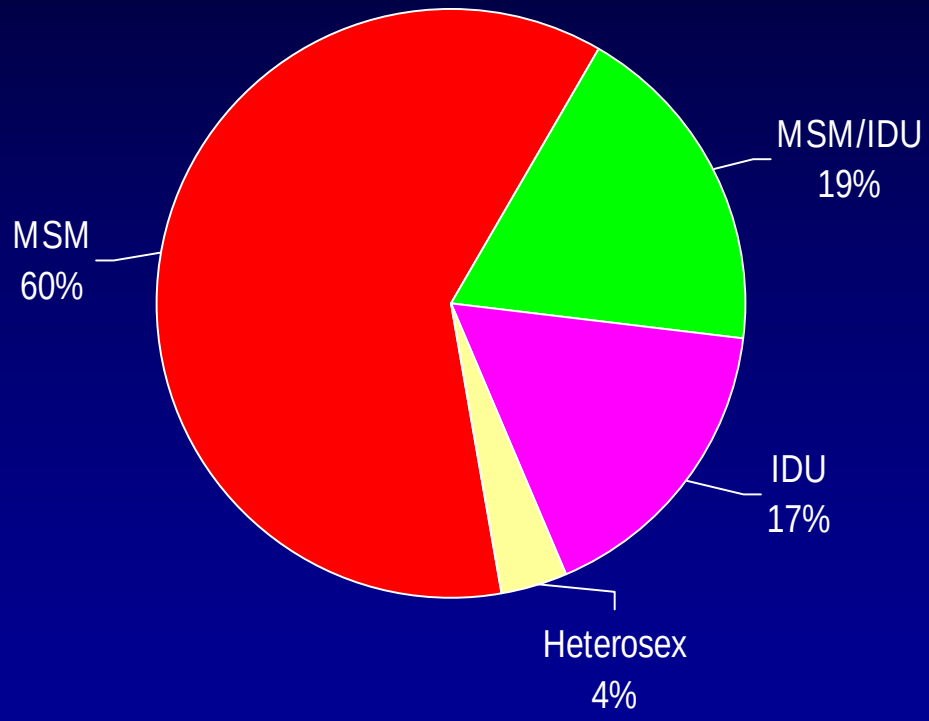
† Mode of Exposure has been estimated using the following breakdown: 5% - MSM, 90% - Heterosex, and 5% - Other.
For additional detail see the HIV Prevalence & Mortality Technical Notes.

†† *Refers to Black, African-born males.*

Data Source: *Minnesota HIV/AIDS Surveillance System*

Males Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure†, 2005

American Indian Males (n = 55)

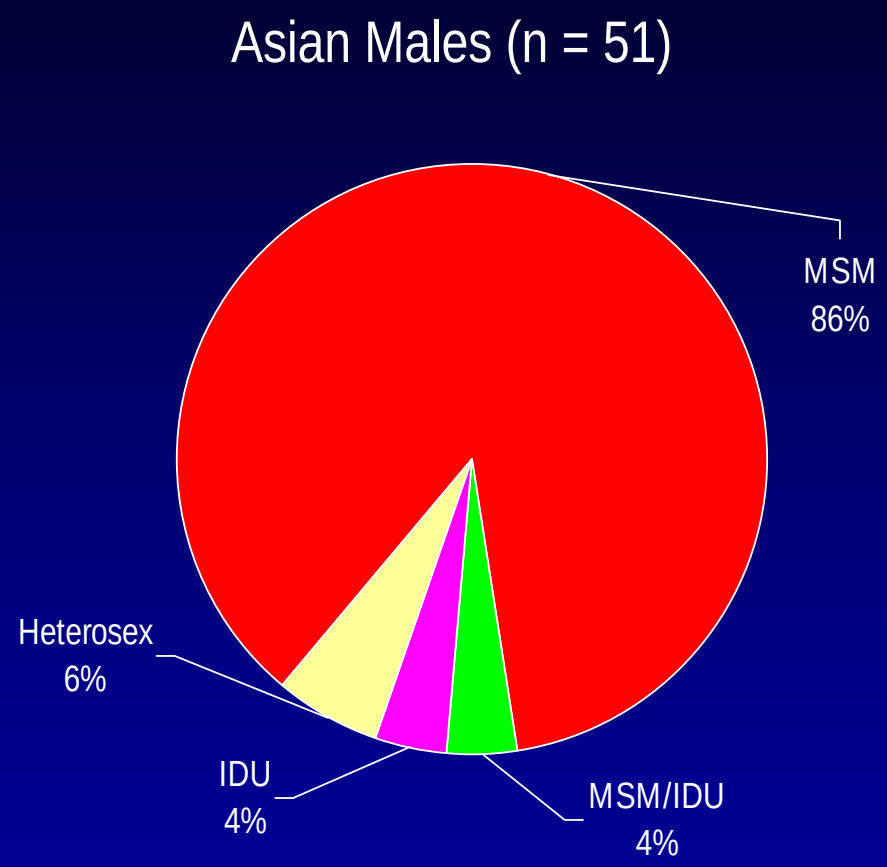


n = Number of persons MSM = Men who have sex with men Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk
IDU = Injecting drug use Heterosex = Heterosexual contact

† Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Prevalence & Mortality Technical Notes.

Data Source: *Minnesota HIV/AIDS Surveillance System*

Males Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure†, 2005



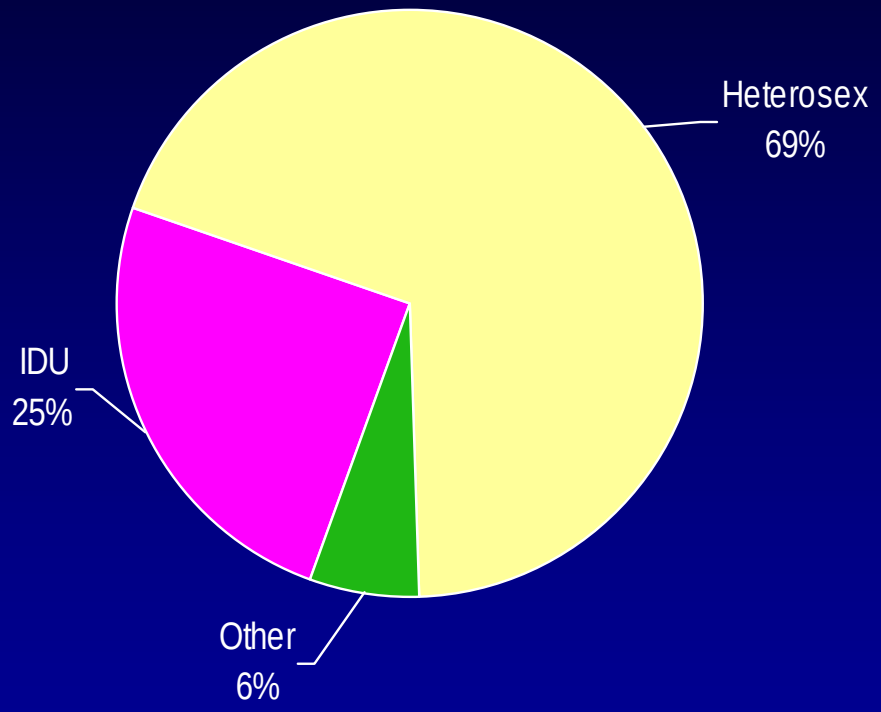
n = Number of persons MSM = Men who have sex with men Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk
IDU = Injecting drug use Heterosex = Heterosexual contact

† Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Prevalence & Mortality Technical Notes.

Data Source: *Minnesota HIV/AIDS Surveillance System*

Females Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure†, 2005

African American Females†† (n = 374)



n = Number of persons

IDU = Injecting drug use

Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

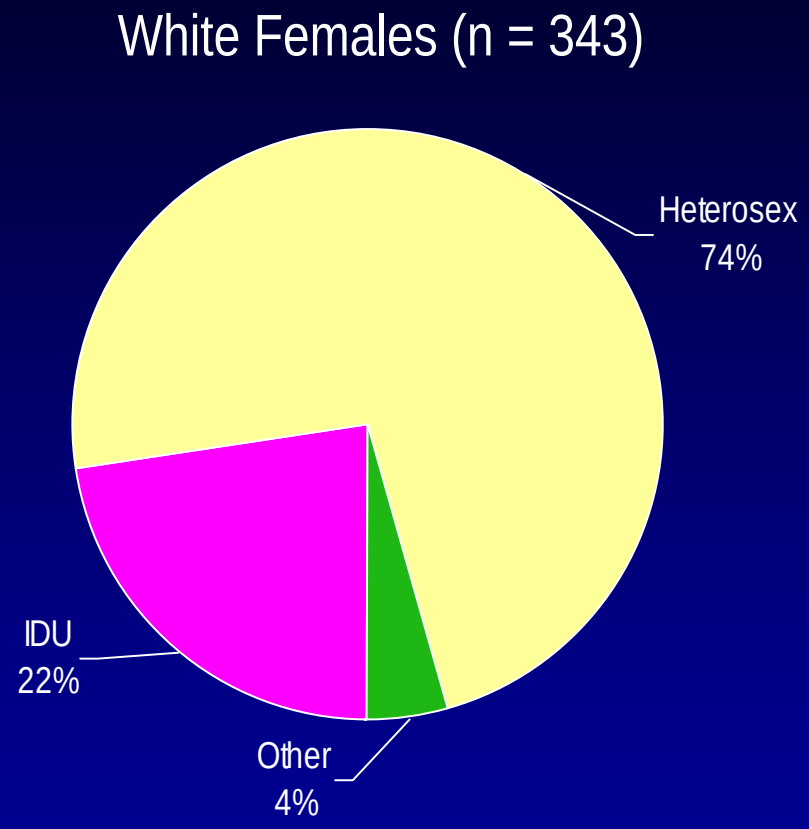
Heterosex = Heterosexual contact

† Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Prevalence & Mortality Technical Notes.

†† *Refers to Black, African American (not African-born) females.*

Data Source: *Minnesota HIV/AIDS Surveillance System*

Females Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure†, 2005

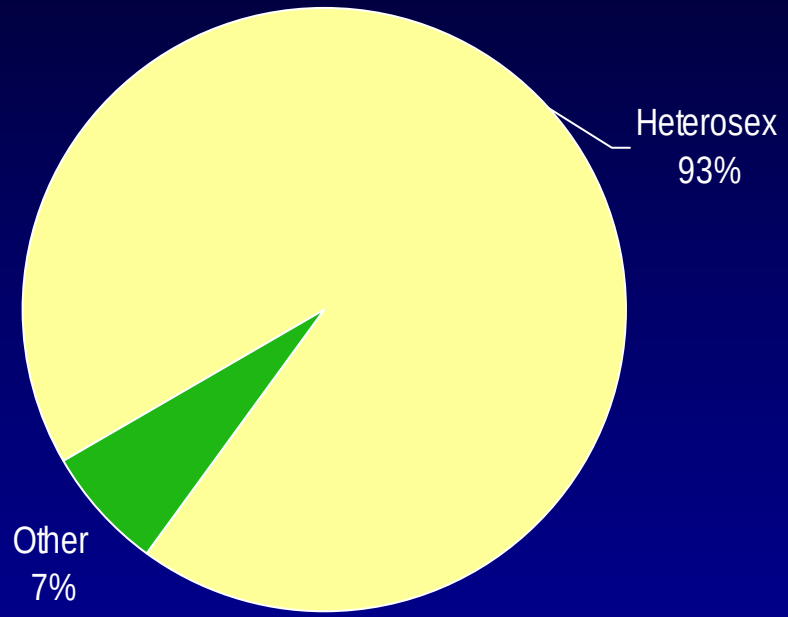


n = Number of persons
IDU = Injecting drug use
Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk
Heterosex = Heterosexual contact

† Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Prevalence & Mortality Technical Notes.

Females Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure†, 2005

African-born Females†† (n = 310)



n = Number of persons

IDU = Injecting drug use

Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

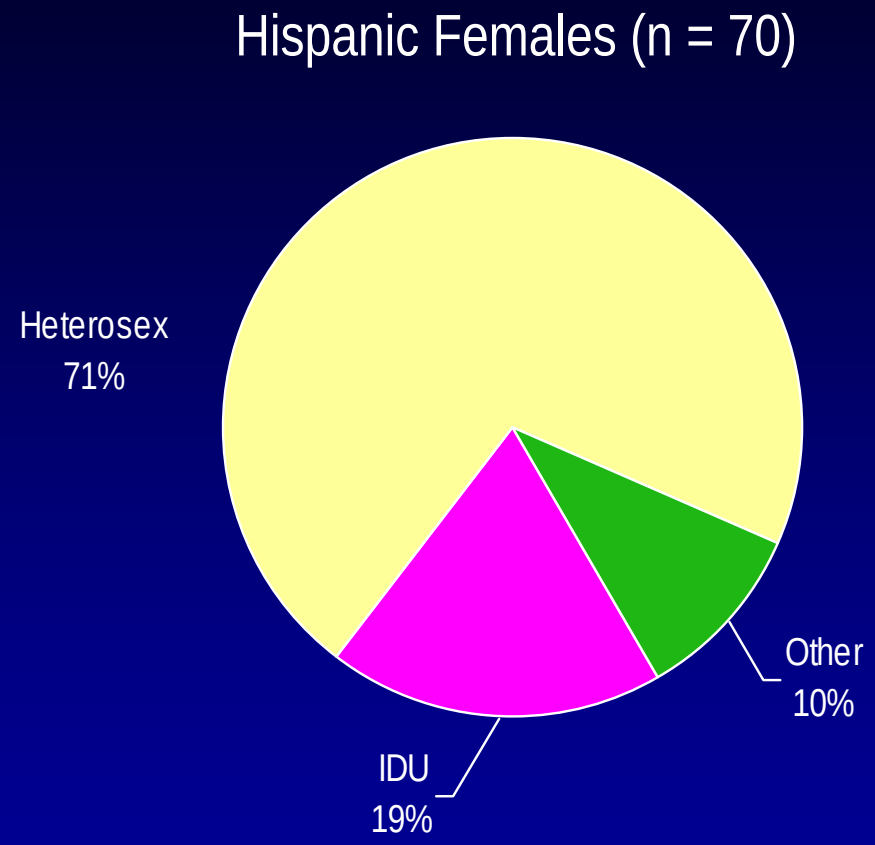
Heterosex = Heterosexual contact

† Mode of Exposure has been estimated using the following proportions: 95% - Heterosexual, 5% - Other. For additional detail see the HIV Prevalence & Mortality Technical Notes.

†† *Refers to Black, African-born females.*

Data Source: *Minnesota HIV/AIDS Surveillance System*

Females Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure†, 2005

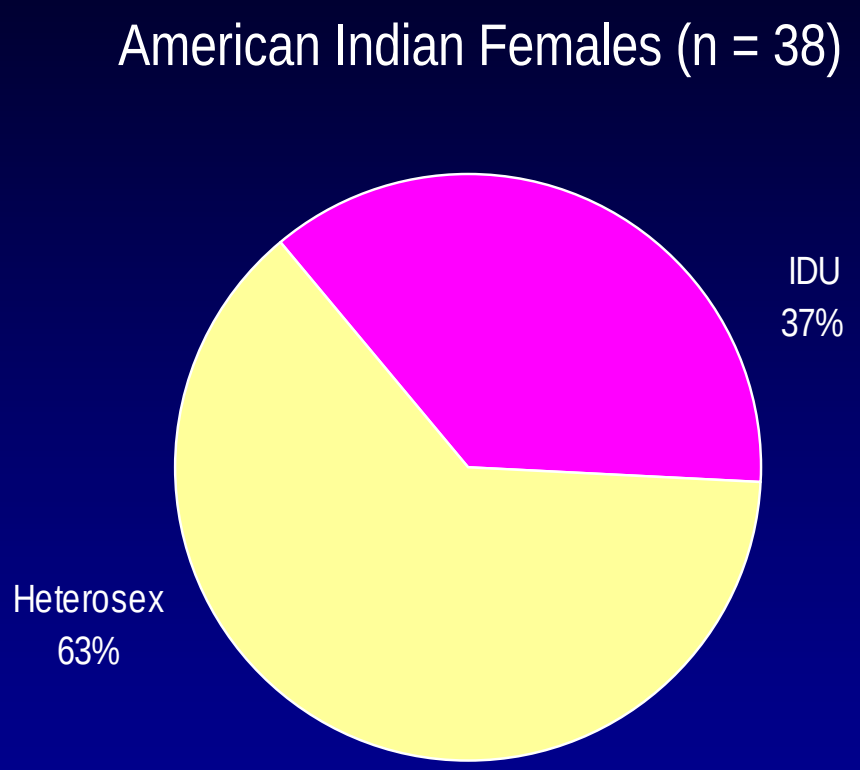


n = Number of persons
IDU = Injecting drug use
Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk
Heterosex = Heterosexual contact

† Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Prevalence & Mortality Technical Notes.

Data Source: *Minnesota HIV/AIDS Surveillance System*

Females Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure†, 2005



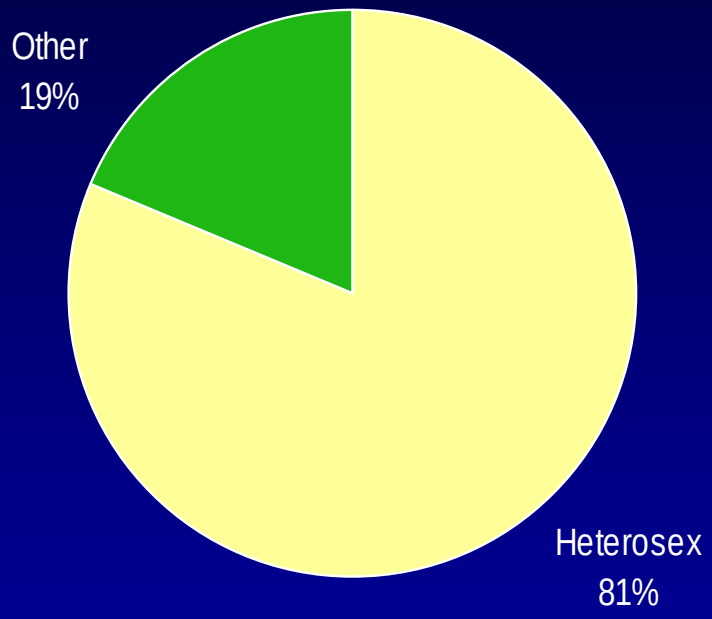
n = Number of persons
IDU = Injecting drug use
Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk
Heterosex = Heterosexual contact

† Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Prevalence & Mortality Technical Notes.

Females Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure†, 2005

Asian Females (n = 27)

CAUTION: Small number of cases – interpret carefully.



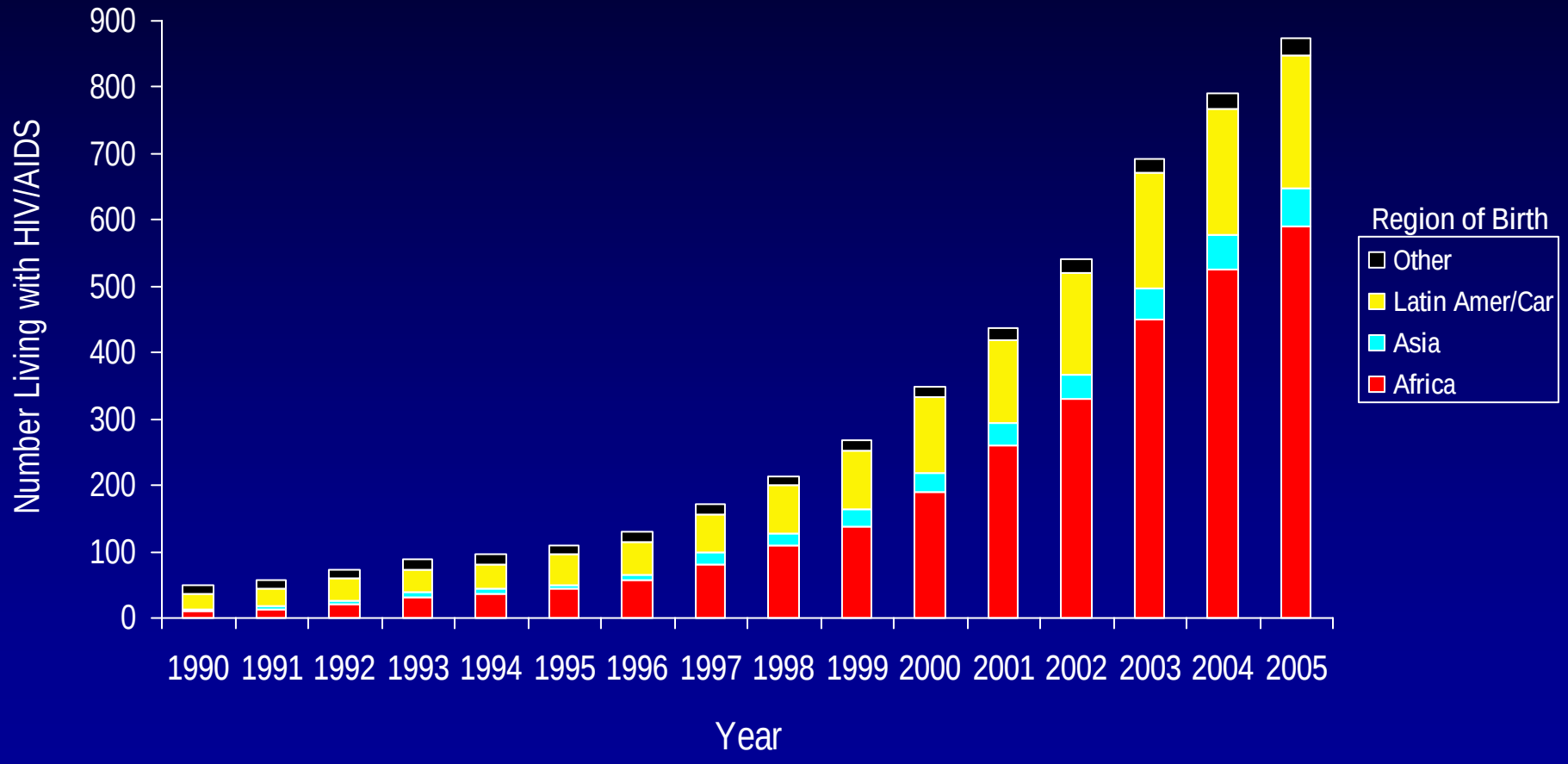
n = Number of persons
IDU = Injecting drug use
Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk
Heterosex = Heterosexual contact

† Mode of Exposure has been estimated using the following proportions: 95% - Heterosexual, 5% - Other.
For additional detail see the HIV Prevalence & Mortality Technical Notes.

Data Source: *Minnesota HIV/AIDS Surveillance System*

Special Populations

Foreign-Born Persons Living with HIV/AIDS in Minnesota by Region of Birth, 1990-2005



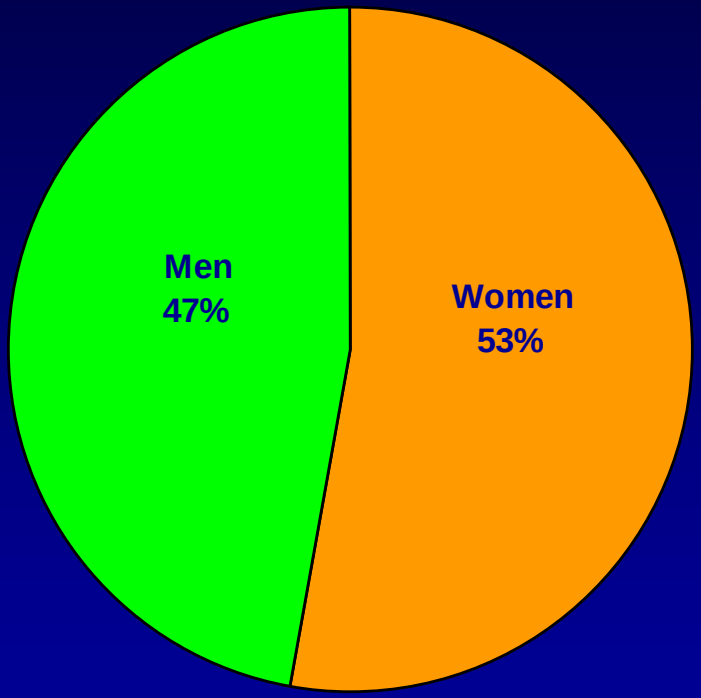
Latin Amer/Car – Includes Mexico, Caribbean, and Central/South American countries

Data Source: *Minnesota HIV/AIDS Surveillance System*

African-Born† Persons Living with HIV/AIDS Compared to Other Minnesota Cases by Gender, 2005

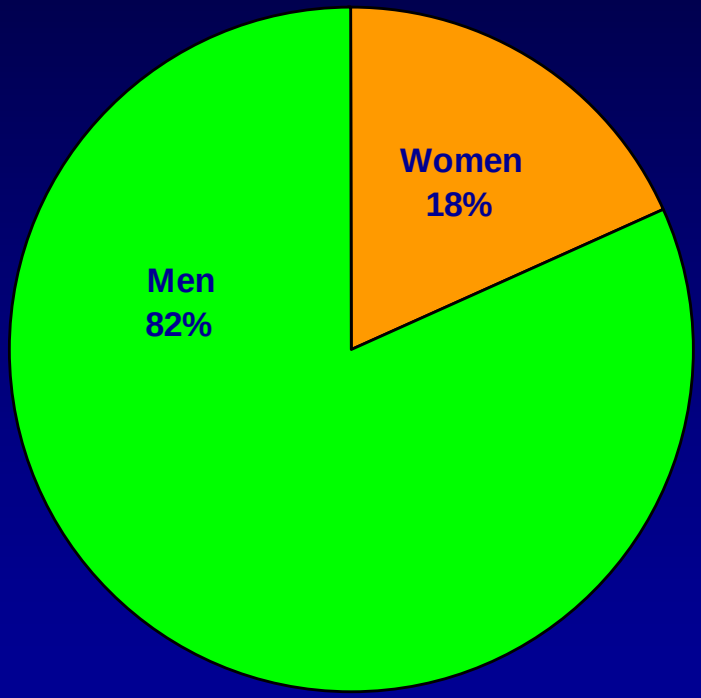
African-born Persons

Total Number = 590



U.S.-born Cases

Total Number = 4,359



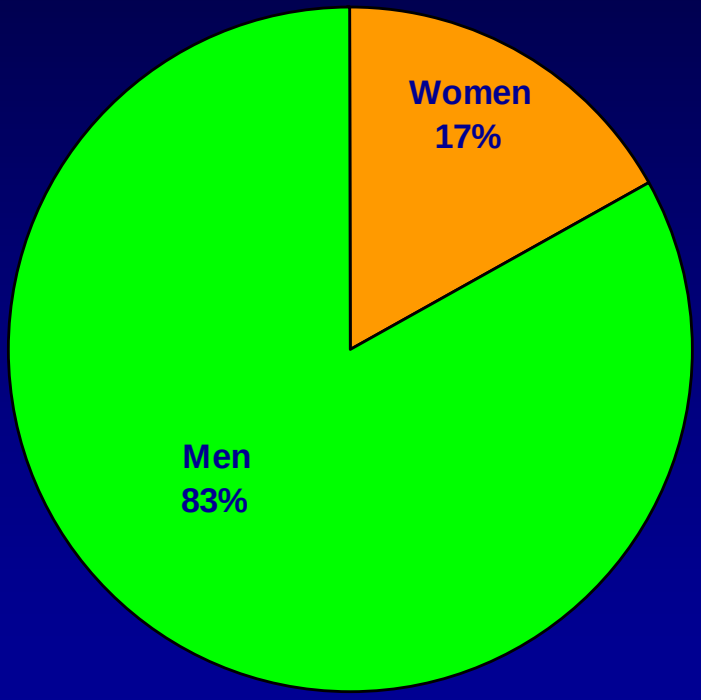
† *Includes persons arriving to Minnesota through the HIV+ Refugee Resettlement Program.*

Data Source: *Minnesota HIV/AIDS Surveillance System*

Persons Living with HIV/AIDS born in Latin America/Caribbean† Countries Compared to Other Minnesota Cases by Gender, 2005

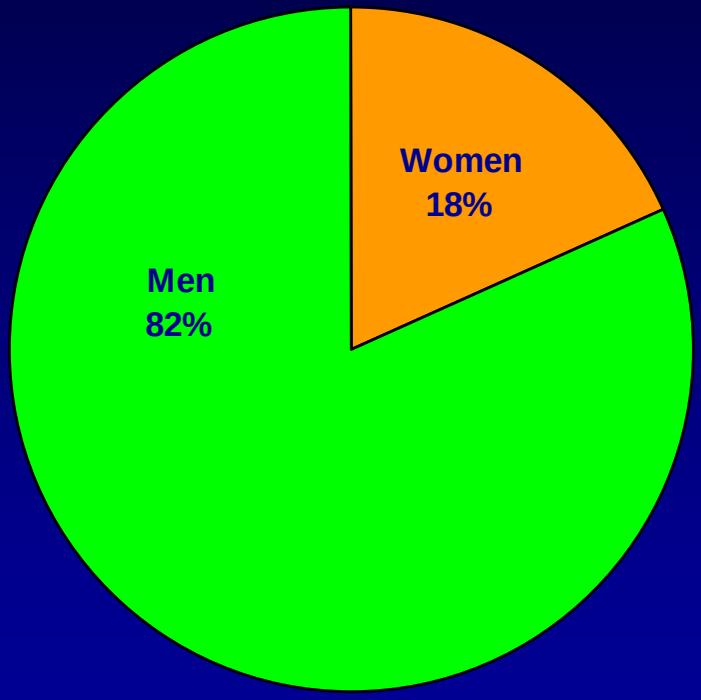
Latin/Caribbean Persons

Total Number = 201



U.S.-born Cases

Total Number = 4,211

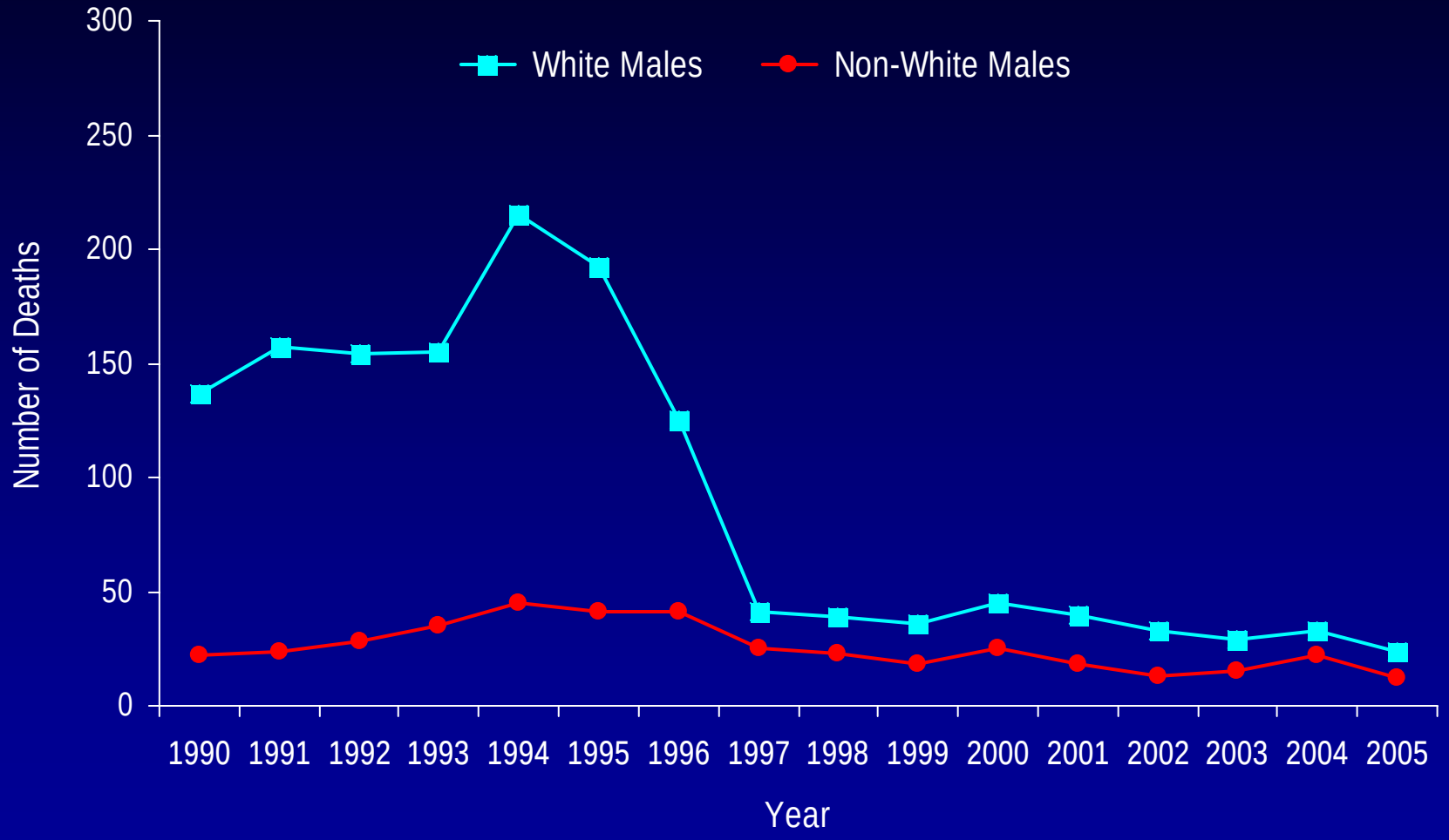


† *Includes Mexico and all Central/South American and Caribbean countries.*

Data Source: *Minnesota HIV/AIDS Surveillance System*

Mortality

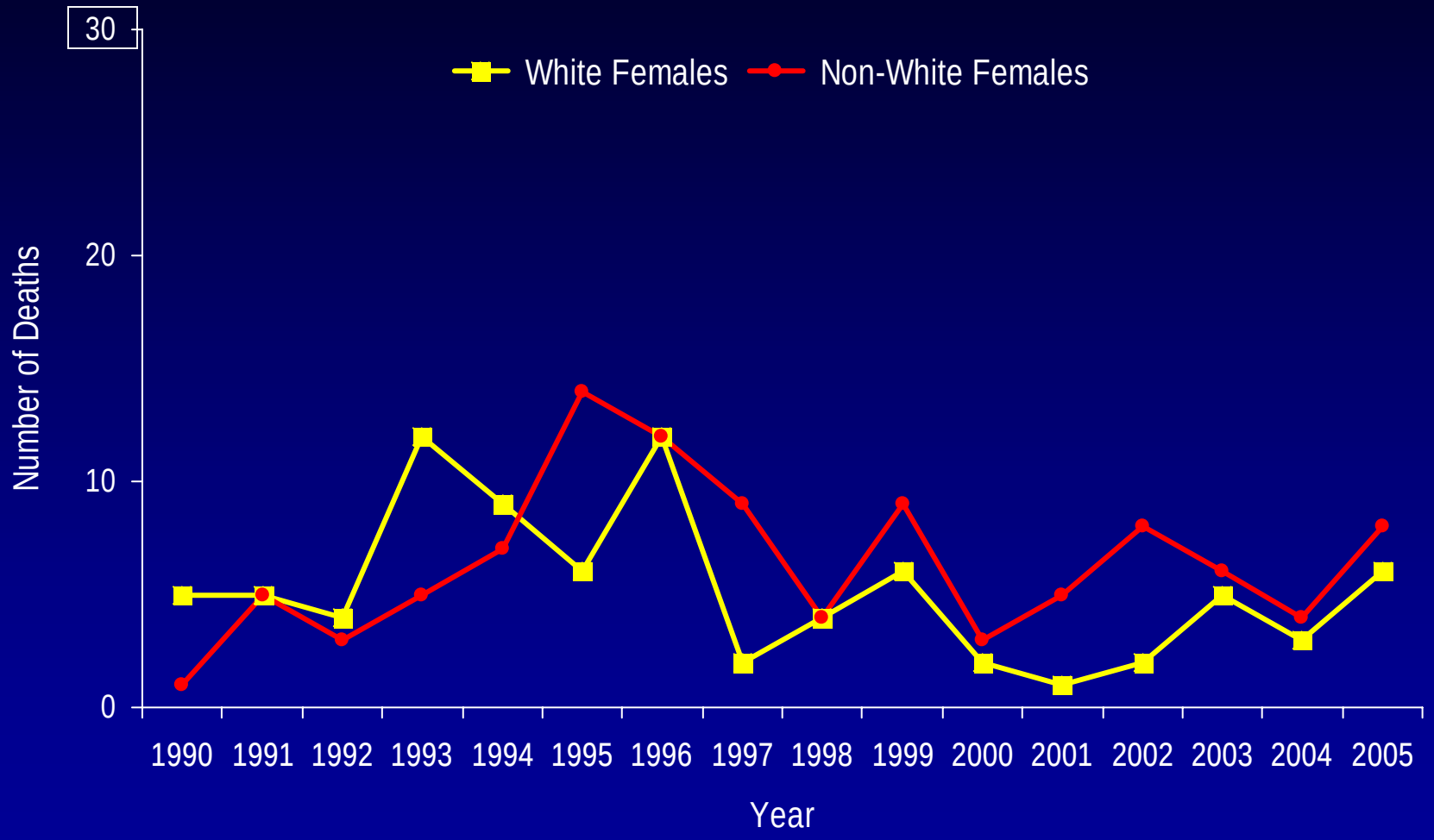
Reported Deaths* among Male AIDS Cases in Minnesota, 1990-2005



** Deaths among AIDS cases, regardless of cause.*

Data Source: *Minnesota HIV/AIDS Surveillance System*

Reported Deaths* among Female AIDS Cases in Minnesota, 1990-2005



** Deaths among AIDS cases, regardless of cause.*

Data Source: *Minnesota HIV/AIDS Surveillance System*

Companion Text for the Slide Set:
Minnesota HIV/AIDS Prevalence & Mortality Report, 2005

INTRODUCTION

Overview

The *Minnesota HIV/AIDS Prevalence & Mortality Report, 2005* contains estimates of HIV/AIDS prevalence (the number of persons living with HIV or AIDS) and mortality in Minnesota. These estimates can be used to help educate, plan for HIV/AIDS services and develop policy.

Data Source

The data in this report are based on confidential case reports collected through the Minnesota Department of Health (MDH) HIV/AIDS Surveillance System. In Minnesota, laboratory-confirmed infections of human immunodeficiency virus (HIV) are monitored by the MDH through this active and passive surveillance system. State rules (Minnesota Rule 4605.7040) requires both physicians and laboratories to report all cases of HIV infection (HIV or AIDS) directly to the MDH (passive surveillance). Additionally, regular contact is maintained with several clinical sites to ensure completeness of reporting (active surveillance).

Data Limitations

The prevalence estimate is calculated by totaling the number of HIV and AIDS cases diagnosed through December 31, 2005 who are not known to be deceased and whose most recently reported state of residence was Minnesota. It bears noting that persons who are HIV-infected but not yet tested are not included in this prevalence estimate. Migration (known HIV-infected persons moving in or out of the state) also affects the estimate. Refer to the *HIV/AIDS Prevalence & Mortality Technical Notes* for a more detailed description of data inclusions and exclusions.

Factors that impact the completeness and accuracy of the available surveillance data on HIV/AIDS include the level of screening and compliance with case reporting.

Produced by the Minnesota Department of Health. For questions about HIV/AIDS Surveillance data, please contact Luisa Pessoa-Brandão at (651) 201-4032.

Thus, any changes in numbers of infections may be due to one of these factors, or due to actual changes in HIV/AIDS occurrence.

PERSONS LIVING WITH HIV/AIDS IN THE UNITED STATES

According to the Centers for Disease Control & Prevention (CDC), at the end of 2003, 1,039,000 to 1,185,000 persons in the United States were living with HIV/AIDS, with 24-27% undiagnosed and unaware of their HIV infection[1]. The number of people specifically living with AIDS in the United States has been increasing in recent years: from approximately 290,400 in 1998 to approximately 415,000 in 2004.[2]

PERSONS LIVING WITH HIV/AIDS IN MINNESOTA

Overview of HIV/AIDS in Minnesota, 1990-2005

The number of persons assumed to be living with HIV/AIDS in Minnesota has been steadily increasing over time. As of December 31, 2005, 5,233 persons known to be living with HIV/AIDS resided in Minnesota, a 4.6% increase from 2004. While the number of HIV (non-AIDS) diagnoses has remained steady since the mid-1990s at just under 200 cases per year, both the number of newly diagnosed AIDS cases and the number of deaths among AIDS cases declined between 1996 and 2000. These decreases were primarily due to the success of new treatments introduced in 1995 (protease inhibitors) and 1996 (highly active antiretroviral therapy or HAART). These treatments do not cure, but can delay progression to AIDS among persons with HIV (non-AIDS) infection and improve survival among those with AIDS. Thus, the declines slowed during the late 1990s and since 2001 the numbers of AIDS cases have been slowly increasing.

Living HIV/AIDS Cases, 2005

Among the estimated 5,233 prevalent cases in Minnesota, 2,914 are diagnosed with HIV (non-AIDS) and 2,319 are diagnosed with AIDS. The majority (87%) of

[1] Glynn M, Rhodes P. Estimated HIV prevalence in the United States at the end of 2003. National HIV Prevention Conference; June 2005; Atlanta. Abstract 595.
[2] Centers for Disease Control and Prevention. *HIV/AIDS Surveillance Report* 2004:16.

prevalent cases reside in the seven-county metropolitan area surrounding the Twin Cities of Minneapolis and St. Paul (Hennepin, Ramsey, Anoka, Dakota, Scott, and Washington counties). Although HIV infection is more common in communities with higher population densities and greater poverty, there are people living with HIV or AIDS in over 85% of counties in Minnesota.

Gender & Race/Ethnicity

Seventy-eight percent (78%) of prevalent HIV/AIDS cases are males. Broken down by race/ethnicity, 63% of male cases are White, 19% African American, 8% Hispanic, 7% African-born, 1% American Indian, and 1% Asian/Pacific Islander. In total, 37% of males living with HIV/AIDS are non-White whereas only 12% of the general male population is Non-White. Among female cases, the distribution is even more skewed toward women of color: 29% White, 32% African American, 27% African-born, 6% Hispanic, 3% American Indian, and 2% Asian/Pacific Islander. Thus, 71% of prevalent female HIV/AIDS cases are non-White whereas only 11% of the general female population in Minnesota is non-White.

Please note that race is not considered a biological reason for disparities related to HIV/AIDS experienced by persons of color. Race, however, can be considered a marker for other personal and social characteristics that put a person at greater risk for HIV exposure. These characteristics may include, but are not limited to, lower socioeconomic status, less education, and less access to health care.

Age

Seventy-eight percent (78%) of persons living with HIV/AIDS in 2005 are currently 35 years of age or older. Broken down into five-year age groups, 40-44 year olds make up the largest group (23% of cases), followed by 45-49 year olds (18%) and 35-39 year olds (17%).

Mode of Exposure

In 2005, MDH used a risk re-distribution method to estimate the mode of exposure among cases with unknown risk. For additional details on how this was done

please read the *HIV Prevalence and Mortality Technical Notes*. All mode of exposure numbers referred to in the text are based on the risk re-distribution.

The proportions of living cases attributable to particular modes of exposure differ among gender and race groups. While male-to-male sex (MSM or MSM/IDU) accounts for an estimated 93% of White male cases, it accounts for an estimated 61% of non-White male cases. The estimated percent of male cases that identified IDU or MSM/IDU as a risk factor was particularly high for American Indians (34%), African Americans (31%) and Hispanics (17%). These percentages among White, Asian, and African-born males were estimated at 11%, 8%, and 0%, respectively. Similar to the MSM category, IDU may be underreported due to social stigma.

Across all race/ethnicity groups, females most frequently report heterosexual contact as their mode of HIV exposure. However, IDU also accounts for a large percentage of female cases among most race/ethnicity groups. The largest estimated percentage of IDU cases are among American Indians (37%) followed by African Americans, Whites, and Hispanics with 24%, 22%, and 19%, respectively. There were no cases either among African-born females or among Asian females. The number of prevalent HIV/AIDS cases among Asian females was too small (n = 27) to make generalizations about risk.

While risk re-distribution was used to make better sense of mode of exposure information there are differences by race and gender on how many cases have unspecified risk. Among males 15% of prevalent cases have no risk information, compared to 41% of females. Additionally, among males only 6% of White prevalent cases have unspecified risk, compared to 91% of African-born, 39% of Asian, and over 15% for both African American and Hispanic cases. Among women, the disparity between White females (26% unspecified) and women of color is not as striking, except for African-born (80% unspecified) and Asian (59%) females. See the *HIV/AIDS Prevalence & Mortality Technical Notes* for a detailed discussion of mode of exposure categories.

Emerging Trend

Between 1990 and 2005, the number of foreign-born persons living with HIV/AIDS in Minnesota increased substantially, especially among the African-born population. In 1990, 50 foreign-born persons were reported to be living with HIV/AIDS in Minnesota, and by 2003 this number had increased twelve-fold to 692 persons. In 2005, the total number of foreign-born persons living with HIV/AIDS in Minnesota was 874, a 10% increase from 2004. This trend illustrates the growing diversity of the infected population in Minnesota and the need for culturally appropriate HIV care services and prevention efforts.

The characteristics of foreign-born persons living with HIV/AIDS in Minnesota differ from U.S.-born, especially in gender. While females account for 18% of cases among U.S.-born persons, they account for 43% of foreign-born cases. This is especially noticeable among African-born cases, where women account for 53% of those living with HIV/AIDS in Minnesota. Among Asian-born cases, women account for 39% of cases. The gender distribution among cases born in Latin America, the Caribbean and Europe is similar to that of U.S.-born cases, where approximately 20% of prevalent cases are among women.

HIV/AIDS MORTALITY IN MINNESOTA

The number of deaths[3] among Minnesota AIDS cases decreased between 1995 and 1997 and remained relatively constant between 1997 and 2005. The largest declines in mortality were observed among White males in the mid 1990s. In recent years, the number of deaths among AIDS cases has been comparable between White and non-White males and between White and non-White females. In 2005, a total of 50 deaths were reported among AIDS cases. Of these deaths, fourteen (14) were among women and 36 among men.

[3] Includes all deaths, regardless of cause.

HIV/AIDS PREVALENCE & MORTALITY
TECHNICAL NOTES

Surveillance of HIV/AIDS

The Minnesota Department of Health (MDH) collects case reports of HIV infection and AIDS diagnoses through a passive and active HIV/AIDS surveillance system. Passive surveillance relies on physicians and laboratories to report new cases of HIV infection or AIDS directly to the MDH in compliance with state rules[1]. Active surveillance conducted by MDH staff involves routine visits and correspondence with select HIV clinical facilities to ensure completeness of reporting and accuracy of the data.

Factors that impact the completeness and accuracy of HIV/AIDS surveillance data include: availability and targeting of HIV testing services, test-seeking behaviors of HIV-infected individuals, compliance with case reporting, and timeliness of case reporting. Certain events have also impacted trends in HIV/AIDS surveillance data. For example changes over time in the surveillance case definition (most notably the 1993 expansion of the case definition for adults and adolescents[2]) have resulted in artificial jumps in AIDS case counts at the time the new definition went into effect or in the preceding year because changes in case definition allowed for retrospective diagnoses.

Vital Status of HIV/AIDS Cases

Persons are assumed alive unless the MDH has knowledge of their death. Vital status information is updated by monthly visits to select reporting facilities, correspondence with other health departments, annual death certificate reviews, and periodic matches with the National Death Index. "AIDS deaths" refers to all deaths among AIDS cases regardless of the cause of death.

Place of Residence for HIV/AIDS Cases

Persons are assumed to be residing in Minnesota if their most recently reported state of residence was Minnesota and the MDH has not received notice of relocation outside of the state. Likewise, a person's county or city of residence is assumed to be the

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[1] Minnesota Rule 4605.7040
[2] MMWR 1992;41[no.RR-17]:1-19

most recently reported value unless the MDH is otherwise notified. Residence information is updated through standard case reporting, monthly visits to select reporting facilities and/or correspondence with other state health departments. Persons diagnosed with HIV infection while imprisoned in a state correctional facility are included in the data presented unless otherwise noted (federal and private prisoners are excluded). Residential relocation, including release from state prison, is difficult to track and therefore data presented by *current* residence must be interpreted in this light. Data on residence *at time of diagnosis* are considered more accurate, limited only by the accuracy of self-reported residence location.

Data Tabulation and Presentation

Unless otherwise noted, data analyses exclude persons diagnosed in federal or private correctional facilities (inmates generally are not Minnesota residents before incarceration and do not stay in Minnesota upon their release), infants with unknown or negative HIV status who were born to HIV positive mothers. Data include HIV-infected refugees who resettled in Minnesota as part of the HIV-Positive Refugee Resettlement Program.

The HIV/AIDS surveillance system is a live database that is continuously updated to reflect the most current information available. Variables such as current state of residence are over-written when updates are made. Annual archive files were initiated in 2001. Thus, the numbers of HIV/AIDS cases residing in Minnesota in 2000 and 2001 were estimated using the current state of residence variable while the number in previous years (1990-1999) was estimated using state of residence at time of diagnosis, vital status, and date of death variables. The number of HIV/AIDS cases alive in a certain year was calculated by summing cases with an HIV/AIDS diagnosis in that year or prior whose vital status in 2001 was “alive” or whose date of death was either after the calendar year of interest or missing.

Mode of Exposure Hierarchy

All state and city HIV/AIDS surveillance systems funded by the Centers for Disease Control and Prevention use a standardized hierarchy of mode of exposure categories.

HIV and AIDS cases with more than one reported mode of exposure to HIV are classified in the exposure category listed first in the hierarchy. In this way, each case is counted as having only one mode of exposure. The only exception to this rule is the joint risk of male-to-male sex (MSM) and intravenous drug use (IDU), which makes up a separate exposure category in the hierarchy. The following is a list of the hierarchy for adolescent/adult HIV/AIDS cases:

(1) MSM
(2) IDU
(3) MSM/IDU
(4) Hemophilia patient
(5) Heterosexual contact
(6) Receipt of blood transfusion or tissue/organ transplant
(7) Other (e.g. needle stick in a health care setting)
(8) Risk not specified.

The following is the list of the hierarchy for pediatric HIV/AIDS cases:

(1) Hemophilia patient
(2) Mother with HIV or HIV risk
(3) Receipt of blood transfusion or tissue/organ transplant
(4) Other
(5) Risk not specified.

Heterosexual contact is only designated if a male or female can report specific heterosexual contact with a partner who has, or is at increased risk for, HIV infection (e.g. an intravenous drug user). For females this includes heterosexual contact with a bisexual male (mainly due to the elevated prevalence of HIV infection among men who have sex with men).

"Risk not specified" refers to cases with no reported history of exposure to HIV through any of the routes listed in the hierarchy of exposure categories. These cases include persons who have not yet been interviewed by MDH staff; persons whose exposure history is incomplete because they died, declined to be interviewed, or were lost to follow-up; and persons who were interviewed or for whom follow-up information was available but no exposure was identified/acknowledged.

The growing number of cases with unspecified risk in recent years is, in part, artificial and due to interviews that have not yet been completed. In time, a number of these will be assigned a mode of exposure category. However, part of the observed increase is real. As stated above, a person must have intimate knowledge about his/her partner to meet the criteria for heterosexual mode of exposure. Often cases will not be certain about their partners' HIV status or risk. Additionally, the perception of social stigma presumably decreases the likelihood that a person will acknowledge certain risk behaviors, particularly male-to-male sex or injecting drug use. Thus, if the *true* numbers of cases due to heterosexual contact, MSM, and/or IDU increase, a larger number of cases without a specified risk would be expected.

A recent study by the Centers for Disease Control and Prevention used statistical methods to redistribute risk among female HIV/AIDS cases with unspecified risk[3]. The results are helpful but are based on national data that are not necessarily applicable to the state or local level. Speculation regarding the distribution of risk behaviors among those with unspecified risk is difficult, especially in men, for whom even a national study is not available.

Re-distribution of Mode of Exposure

In 2004 the Minnesota Department of Health began estimating mode of exposure for cases with unspecified risk in its annual summary slides. Estimation was done by using the risk distribution for living cases with known risk by race and gender and applying it to those with unspecified risk of the same race and gender. There were two exceptions to this method, African-born cases and Asian/Pacific Islander women. For both African-born and Asian/Pacific Islander women a breakdown of 95% heterosexual risk and 5% other risk was used. For African-born males a breakdown of 5% male-to-male sex, 90% heterosexual risk, and 5% other risk was used. These percentages are based on epidemiological literature and/or community experience.

Below is an example of how the process worked for white, African American and African-born females:

Living Cases among Females in 2005

[3] MMWR 2001; 50(RR-6):31-40.

Race/Risk	Heterosexual n (%†)	IDU n (%†)	Other n (%†)	Unspecified n	Total N
White	186 (73)	57 (22)	11 (4)	89	343
African-American	177 (69)	63 (25)	16 (6)	118	374
African-born	53 (85)	0 (0)	9 (15)	248	310

† Percent of those with known risk.

Female Cases with Estimated risk:

Race/Risk	Heterosexual	IDU	Other	Total N
White	(.73*89) + 186 = **251**	(.22*89) + 57 = **77**	(.04*89) + 11 = **15**	343
African-American	(.69*118) + 177 = **259**	(.25*118) + 63 = **92**	(.06*118) + 16 = **23**	374
African-born‡	(.95*248) + 53 = **289**	0	(.05*248) + 9 = **21**	310

‡ Used a distribution of 95% heterosexual and 5% other.

Definitions Related to Race/Ethnicity

When data are stratified by race, Black race is broken down into African-born and African American (not African-born) based on reported country of birth.

The terms “persons of color” and “non-Whites” refer to all race/ethnicity categories other than White (Black, Hispanic, American Indian, and Asian/Pacific Islander).

Interstate De-Duplication Project (IDEP)

In 2005, the Minnesota Department of Health (MDH) participated in RIDR. RIDR is a CDC project aimed at eliminating duplicate reports of HIV and AIDS cases among states. Each case of HIV and AIDS is assigned to the state (or states when the diagnosis of HIV and AIDS occurs in two different states) where a person was first

diagnosed. RIDR was the second such de-duplication initiative by CDC. The first initiative, IDEP, looked at cases reported through December 31, 2001. RIDR included cases from January 1, 2002 through June 30, 2005. Through this project, MDH identified 50 cases of HIV infection (including AIDS at first report) and 12 AIDS cases whose first diagnosis was not in Minnesota. These cases were previously considered as diagnosed in Minnesota and were counted in the cumulative number of cases diagnosed in Minnesota. As such, the change of "ownership" (where the case was diagnosed) has reduced both cumulative and yearly totals for Minnesota. Additionally, MDH also identified 142 cases that no longer live in Minnesota.

Table 1. Number[I] and Rate[II] (per 100,000) of Persons Living with HIV (non-AIDS) and AIDS by Residence, Age, and Gender -- Minnesota, 2005[V]							
Group	**HIV (non-AIDS)**		**AIDS**		***Total***		***HIV/AIDS***
	Cases	**%**	**Cases**	**%**	***Cases***	***%***	***Prevalence Rate***
Residence[III]							
Minneapolis	1,250	43%	959	42%	*2,209*	*42%*	*577.3*
St. Paul	405	14%	345	15%	*750*	*14%*	*261.2*
Suburban	875	30%	667	29%	*1,542*	*30%*	*78.2*
Greater Minnesota	363	13%	339	15%	*702*	*13%*	*30.8*
Total	*2,893*	*100%*	*2,310*	*100%*	*5,203*	*100%*	*106.4*
Age[IV]							
<13 yrs	22	1%	9	0%	*31*	*1%*	*3.4*
13-19 yrs	25	1%	6	<1%	*31*	*1%*	*5.9*
20-24 yrs	125	4%	32	1%	*157*	*3%*	*48.7*
25-29 yrs	269	9%	95	4%	*364*	*7%*	*113.8*
30-34 yrs	319	11%	198	9%	*517*	*10%*	*146.3*
35-39 yrs	526	18%	361	16%	*887*	*17%*	*215.0*
40-44 yrs	631	22%	576	25%	*1,207*	*23%*	*293.2*
45-49 yrs	471	16%	451	19%	*922*	*18%*	*253.1*
50-54 yrs	270	9%	293	13%	*563*	*11%*	*186.8*
55-59 yrs	151	5%	173	7%	*324*	*6%*	*142.8*
60+ yrs	97	3%	125	5%	*222*	*4%*	*28.7*
Total	*2,906*	*100%*	*2,319*	*100%*	*5,225*	*100%*	*106.4*
Gender							
Male	2,212	76%	1,853	80%	*4,065*	*78%*	*166.9*
Female	702	24%	466	20%	*1,168*	*22%*	*47.0*
Total	*2,914*	*100%*	*2,319*	*100%*	*5,233*	*100%*	*106.4*
StateTotals	*2,914*		*2,319*		*5,233*		*106.4*

[I] Cases reported to the MDH, assumed to be alive, and currently residing in Minnesota as of 12/31/05.

[II] HIV/AIDS prevalence rate calculated by dividing the total number of prevalent cases in a stratum (e.g persons agec 20-24 years) by the estimated population for that stratum and multiplying by 100,000. Population estimates are based on 2000 U.S. Census data.

[III] Residence information missing for 21 persons living with HIV and 9 persons living with AIDS.

[IV] Age missing for 8 persons living with HIV and 0 persons living with AIDS.

[V] MDH participates in the Interstate De-Duplication Project administered by CDC and aimed at eliminating duplicate reporting of HIV and AIDS cases. For further detail on the impact of this project on Minnesota numbers please see the HIV Surveillance Technical Notes.

Suburban = Seven-county metropolitan area except Minneapolis & St. Paul (Anoka, Carver, Dakota, Hennepin (except Minneapolis), Ramsey (except St. Paul), Scott, and Washington counties). Greater Minnesota = Remaining 80 counties outside of the seven-county metropolitan area.

Numbers exclude federal and private prisoners, but include 100 state prisoners and 148 refugees in the HIV-Positive Refugee Resettlement Program.

Percentages may not add to 100 due to rounding.

Table 2. Number of Males & Females and Rates (per 100,000) Living with HIV (non-AIDS) and AIDS by Race/Ethnicity and Mode of Exposure[I] - Minnesota, 2005

Group	Males				Females				*Total*				
	HIV (non-AIDS)	AIDS	*Total*		HIV (non-AIDS)	AIDS	*Total*		*HIV (non-AIDS)*	*AIDS*	*Grand Total*		
			Cases	*%*			*Cases*	*%*			*Cases*	*%*	*Rate[III]*
Race/Ethnicity													
White, non-Hispanic	1,425	1,145	*2,570*	*63%*	209	134	*343*	*29%*	*1,634*	*1,279*	*2,913*	*56%*	*67.4*
Black[II], African-American	425	357	*782*	*19%*	230	144	*374*	*32%*	*655*	*501*	*1,156*	*22%*	*689.0*
Black[II], African-born	155	122	*277*	*7%*	184	126	*310*	*27%*	*339*	*248*	*587*	*11%*	*1174 - 1668*
Hispanic	133	174	*307*	*8%*	38	32	*70*	*6%*	*171*	*206*	*377*	*7%*	*262.9*
American Indian	25	30	*55*	*1%*	22	16	*38*	*3%*	*47*	*46*	*93*	*2%*	*114.7*
Asian/PI	30	21	*51*	*1%*	16	11	*27*	*2%*	*46*	*32*	*78*	*1%*	*46.4*
Other[II]	19	4	*23*	*1%*	3	3	*6*	*1%*	*22*	*7*	*29*	*1%*	*x*
Total	*2,212*	*1,853*	*4,065*	*100%*	*702*	*466*	*1,168*	*100%*	*2,914*	*2,319*	*5,233*	*100%*	*106.4*
Mode of Exposure													
MSM	1,498	1,218	*2,716*	*67%*	--	--	--	--	*1,498*	*1,218*	*2,716*	*52%*	*x*
IDU	131	115	*246*	*6%*	63	77	*140*	*12%*	*194*	*192*	*386*	*7%*	*x*
MSM/IDU	138	141	*279*	*7%*	--	--	--	--	*138*	*141*	*279*	*5%*	*x*
Heterosexual (Total)	(71)	(63)	(134)	*3%*	(298)	(184)	(482)	*41%*	*(369)*	*(247)*	*(616)*	*12%*	*x*
with IDU	29	34	63	--	78	69	147	--	107	103	210	--	*x*
with Bisexual Male	-	-	-	--	54	30	84	--	54	30	84	--	*x*
with Hemophiliac/other	1	1	2	--	4	0	4	--	5	1	6	--	*x*
with HIV+, unknown risk	41	28	69	--	162	85	247	--	203	113	316	--	*x*
Perinatal	7	8	*15*	*0%*	26	7	33	*3%*	33	15	48	*1%*	*x*
Other	15	25	*40*	*1%*	8	4	*12*	*1%*	*23*	*29*	*52*	*1%*	*x*
Unspecified	126	124	*250*	*6%*	140	93	*233*	*20%*	*266*	*217*	*483*	*9%*	*x*
No Interview	226	159	*385*	*9%*	167	101	*268*	*23%*	*393*	*260*	*653*	*12%*	*x*
Total	*2,212*	*1,853*	*4,065*	*100%*	*702*	*466*	*1,168*	*100%*	*2,914*	*2,319*	*5,233*	*100%*	*106.4*

[I] Cases reported to the MDH, assumed to be alive and currently residing in Minnesota as of 12/31/05.

[II] African-born Blacks are reported separately from other Blacks (born in the U.S. or elsewhere). "Other" includes multi-racial persons and persons with unknown race.

MSM = Men who have sex with men. IDU = Injecting drug use. Heterosexual = For males: heterosexual contact with a female known to be HIV+, an injecting drug user, or a hemophiliac/blood product or organ transplant recipient. For females: heterosexual contact with a male known to be HIV+, bisexual, an injecting drug user, or a hemophiliac/blood product or organ transplant recipient. Perinatal = Mother to child HIV transmission. Other = Hemophilia patient/blood product or organ transplant recipient. Unspecified = Cases who did not acknowledge any of the risks listed above. No Interview = Cases who refused to be, could not be or have not yet been interviewed.

[III] HIV/AIDS prevalence rate calculated by dividing the total number of prevalent cases in a stratum (e.g White, non-Hispanic) by the estimated population for that stratum and multiplying by 100,000. Population estimates are based on 2000 U.S. Census data. Accurate population estimates for Black, African-born persons living in Minnesota are unavailable – anecdotal (50,000) and 2000 U.S. Census data (35,188)) were used to create the range of rates reported for African-born persons. The population estimate for Black, African-American persons (167,784) was calculated by subtracting the U.S. Census estimate for African-born persons (35,188) from the total Black population (202,972). Note that this assumes that all African-born persons are Black (as opposed to another race).

Numbers exclude federal and private prisoners, but include 100 state prisoners and 148 refugees in the HIV-Positive Refugee

Percentages may not add to 100 due to rounding.

Table 3. Number and Rate (per 100,000) of Persons Living with HIV (non-AIDS) and AIDS by County of Residence[I] -- Minnesota, 2005

County[II]	HIV (non-AIDS)	AIDS	*Total*	*Rate[III]*
Aitkin	2	2	*4*	-
Anoka	104	73	*177*	*59.4*
Becker	0	4	*4*	-
Beltrami	4	9	*13*	*32.8*
Benton	4	4	*8*	*23.4*
Big Stone	0	0	*0*	-
Blue Earth	12	9	*21*	*37.5*
Brown	4	4	*8*	*29.7*
Carlton	5	9	*14*	*44.2*
Carver	14	14	*28*	*39.9*
Cass	0	4	*4*	-
Chippewa	0	2	*2*	-
Chisago	2	4	*6*	*14.6*
Clay	10	9	*19*	*37.1*
Clearwater	1	0	*1*	-
Cook	0	2	*2*	-
Cottonwood	0	2	*2*	-
Crow Wing	5	7	*12*	*21.8*
Dakota	125	78	*203*	*57.0*
Dodge	2	3	*5*	*28.2*
Douglas	1	4	*5*	*15.2*
Faribault	2	7	*9*	*55.6*
Fillmore	4	4	*8*	*37.9*
Freeborn	1	2	*3*	-
Goodhue	7	1	*8*	*18.1*
Grant	1	1	*2*	-
Hennepin	1,699	1,310	*3,009*	*269.6*
Houston	1	1	*2*	-
Hubbard	3	4	*7*	*38.1*
Isanti	4	4	*8*	*25.6*
Itasca	3	5	*8*	*18.2*
Jackson	0	0	*0*	-
Kanabec	2	2	*4*	-
Kandiyohi	7	9	*16*	*38.8*
Kittson	0	0	*0*	-
Koochiching	1	0	*1*	-
Lac Qui Parle	0	0	*0*	-
Lake	1	1	*2*	-
Lake of the Woods	0	0	*0*	-
Le Sueur	2	4	*6*	*23.6*
Lincoln	2	0	*2*	-
Lyon	6	1	*7*	*27.5*
McLeod	3	2	*5*	*14.3*
Mahnomen	1	0	*1*	-
Marshall	0	0	*0*	-
Martin	3	2	*5*	*22.9*
Meeker	5	4	*9*	*39.7*
Mille Lacs	2	7	*9*	*40.3*
Morrison	2	7	*9*	*28.4*
Mower	11	8	*19*	*49.2*
Murray	0	1	*1*	-
Nicollet	3	5	*8*	*26.9*
Nobles	12	5	*17*	*81.6*
Norman	1	0	*1*	-
Olmsted	42	31	*73*	*58.7*
Otter Tail	2	3	*5*	*8.7*
Pennington	1	1	*2*	-
Pine	5	2	*7*	*26.4*
Pipestone	1	1	*2*	-
Polk	6	5	*11*	*35.1*
Pope	1	2	*3*	-
Ramsey	502	411	*913*	*178.7*
Red Lake	0	0	*0*	-
Redwood	0	1	*1*	-
Renville	1	1	*2*	-
Rice	9	6	*15*	*26.5*
Rock	1	2	*3*	-
Roseau	0	0	*0*	-
St. Louis	56	38	*94*	*46.9*
Scott	16	25	*41*	*45.8*

Table 3. Number and Rate (per 100,000) of Persons Living with HIV (non-AIDS) and AIDS by County of Residence[I] -- Minnesota, 2005

County[II]	HIV (non-AIDS)	AIDS	*Total*	*Rate[III]*
Sherburne	11	13	*24*	*37.3*
Sibley	1	1	*2*	-
Stearns	17	22	*39*	*29.3*
Steele	5	1	*6*	*17.8*
Stevens	1	1	*2*	-
Swift	0	0	*0*	-
Todd	1	0	*1*	-
Traverse	1	1	*2*	-
Wabasha	3	3	*6*	*27.8*
Wadena	4	3	*7*	*51.0*
Waseca	8	0	*8*	*41.0*
Washington	35	41	*76*	*37.8*
Watonwan	2	1	*3*	-
Wilkin	0	0	*0*	-
Winona	5	2	*7*	*14.0*
Wright	14	9	*23*	*25.6*
Yellow Medicine	1	0	*1*	-
State Total[II]	*2,914*	*2,319*	*5,233*	*106.4*

[I] Cases reported to the MDH, assumed to be alive and currently residing in a Minnesota county as of 12/31/05.

[II] Residence information missing for 21 persons living with HIV and 9 persons living with AIDS. Total rate is based on all cases in the state (n=5,233)

Numbers by county exclude federal, and private prisoners, but include 148 refugees in the HIV-Positive Refugee Resettlement Program. Numbers for counties in which a state correctional facility is located, exclude those inmates. The total number of state prisioners is 100. State correctional facilities are located in the following counties: Anoka, Carlton, Chisago, Goodhue, Pine, Rice, Scott, St. Louis, Stearns, and Washington.

[III] HIV/AIDS prevalence rate calculated by dividing the total number of prevalent cases in a stratum (e.g persons living in Hennepin county) by the estimated population for that stratum and multiplying by 100,000. Population estimates are based on 2000 U.S. Census data. Rates not calculated for counties with fewer than 5 cases.

Table 4. Number of HIV (non-AIDS) Cases, AIDS Cases, and AIDS Deaths[I]
Minnesota, 1990-2005

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
HIV (non-AIDS)	332	357	348	223	225	222	192	198	198	201	178	199	213	182	192	222
AIDS[II]	267	336	361	350	332	339	258	194	193	161	157	124	157	164	203	177
AIDS deaths	165	191	189	207	276	253	190	77	70	69	75	64	56	55	62	50

[I] HIV (non-AIDS) = New cases of HIV infection (excluding AIDS at first diagnosis) diagnosed within a given calendar year. AIDS = All new cases of AIDS diagnosed within a given calendar year. AIDS deaths = Number of deaths known to have occurred among AIDS cases in a given calendar year, regardless of cause.

[II]Numbers include refugees in the HIV-Positive Refugee Resettlement Program diagnosed with AIDS subsequent to their arrival in the U.S.

Please Note: These numbers refer to events, not individuals. For example, a person diagnosed as an HIV (non-AIDS) case in 1992 and then diagnosed as an AIDS case in 2000 will be counted twice in Table 4, once for each event. Thus, the numbers of HIV (non-AIDS) and AIDS cases cannot be summed over years to obtain cumulative totals. Please refer to the Minnesota HIV Surveillance Report, 2005 New HIV Infections, Table 1 for cumulative totals.
Case numbers exclude federal and private prisoners.

Table 5. Known Mortality among Minnesota AIDS Cases by Year of Diagnosis -- Minnesota, through 2005[I]				
Year	**Cases Diagnosed**	**Cases Known to be Dead[II]**	**Case-Fatality Rate[III]**	**Deaths Occurring in this Interval**
1982-1989	740	713	96%	368
1990	267	247	93%	165
1991	336	306	91%	191
1992	361	280	78%	189
1993	350	252	72%	207
1994	332	196	59%	276
1995	339	118	35%	253
1996	258	82	32%	190
1997	194	51	26%	77
1998	193	39	20%	70
1999	161	27	17%	69
2000	157	27	17%	75
2001	124	12	10%	64
2002	157	22	14%	56
2003	164	13	8%	55
2004	203	21	10%	62
2005	177	11	6%	50
Cumulative Total	4,513	2,417	54%	2,417

[I] CDC 1993 AIDS definition used for all cases.
[II] Cases known to be dead (by any cause) as of 12/31/2005. Reporting of deaths is incomplete.
[III] Case-fatality rate is calculated by dividing the number of cases known to be dead by those diagnosed in a given interval and multiplying by 100.

Numbers exclude federal and private prisoners, but include state prisoners and refugees in the HIV-Positive Refugee Resettlement Program diagnosed with AIDS subsequent to their arrival in the U.S.