



Wisconsin AIDS/HIV Surveillance Data Update

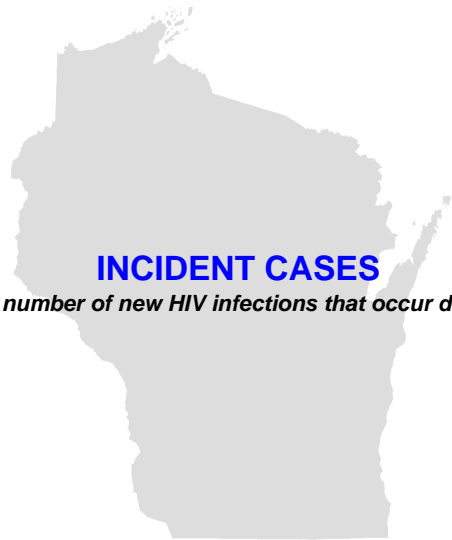
*Incident and prevalent cases reported through
December 31, 2010*

Outline

- **Description of changes in methodology**
- **Incident cases**
 - **Demographic overview**
 - **Risk**
 - **Risk overview**
 - **Men who have sex with men (including MSM/IDU)**
 - **Heterosexual risk**
 - **Injection drug use (excluding MSM/IDU)**
 - **Late testers**
- **Prevalent cases**
 - **Demographic and risk overview**
 - **Deaths**

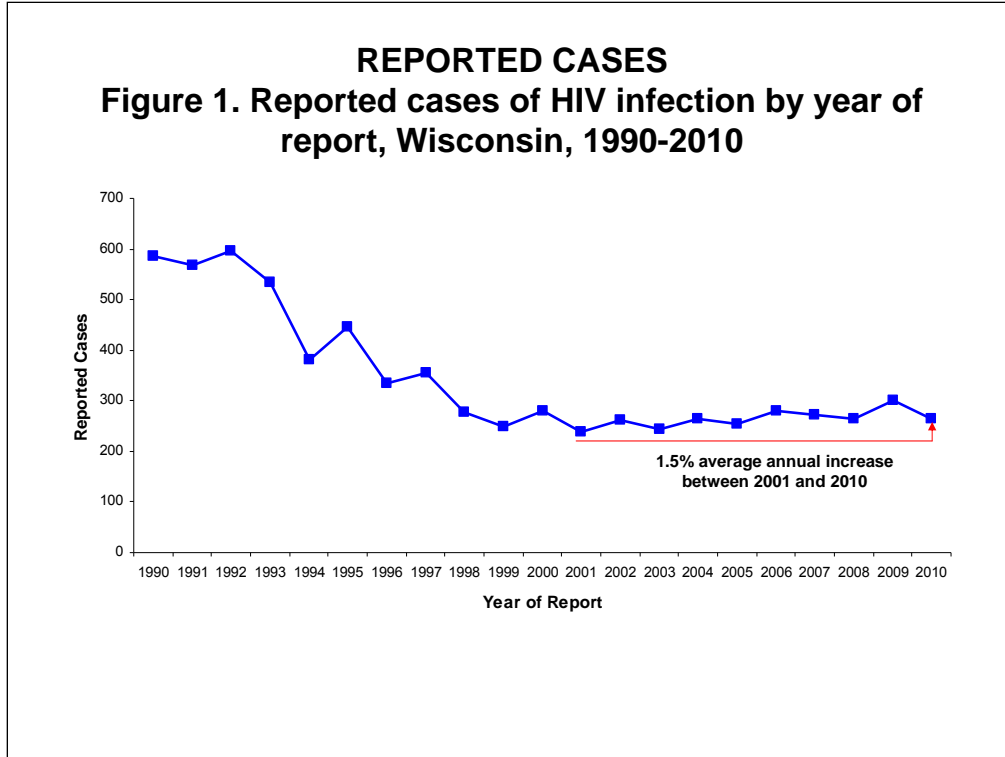
Changes in Methodology for 2010

- **Three methodological changes in 2010 that improve the quality of the epidemiologic profile of HIV infection in WI and allow better evaluation of prevention and care services.**
- **These changes caused an apparent decrease in incident and prevalent cases, in addition to any true changes. The changes are:**
 - A match of HIV surveillance data to Wisconsin death records identified 155 persons with HIV who died since the early 1980s and whose death was not previously recorded in the HIV surveillance database. These individuals are no longer included in the prevalence estimate.
 - Persons with HIV who were once reported to be living in Wisconsin but who are known to have moved to another state are no longer included in the annual prevalence estimate. During the analysis of the 2010 surveillance data, 821 cases who are known to have moved out of Wisconsin were removed from the prevalence estimate.
 - Starting with the 2010 surveillance report, only cases receiving their first HIV diagnosis in Wisconsin will be included in the incidence estimate. During 2010 there 111 cases of HIV infection reported among persons who were already HIV positive and moved into Wisconsin; these cases are excluded from the incidence estimate.
- **Because of the changes in methodology, users of the HIV surveillance data should not compare the numbers presented for 2010 to numbers reported in previous reports. Instead, the new methods have been applied to estimates from previous years in the 2010 report to allow for trend analysis.**
- **The changes implemented during 2010 have improved the quality of the data, have allowed a more accurate presentation of the epidemiology of HIV in Wisconsin, and allow better evaluation of care and prevention services as well as health outcomes.**



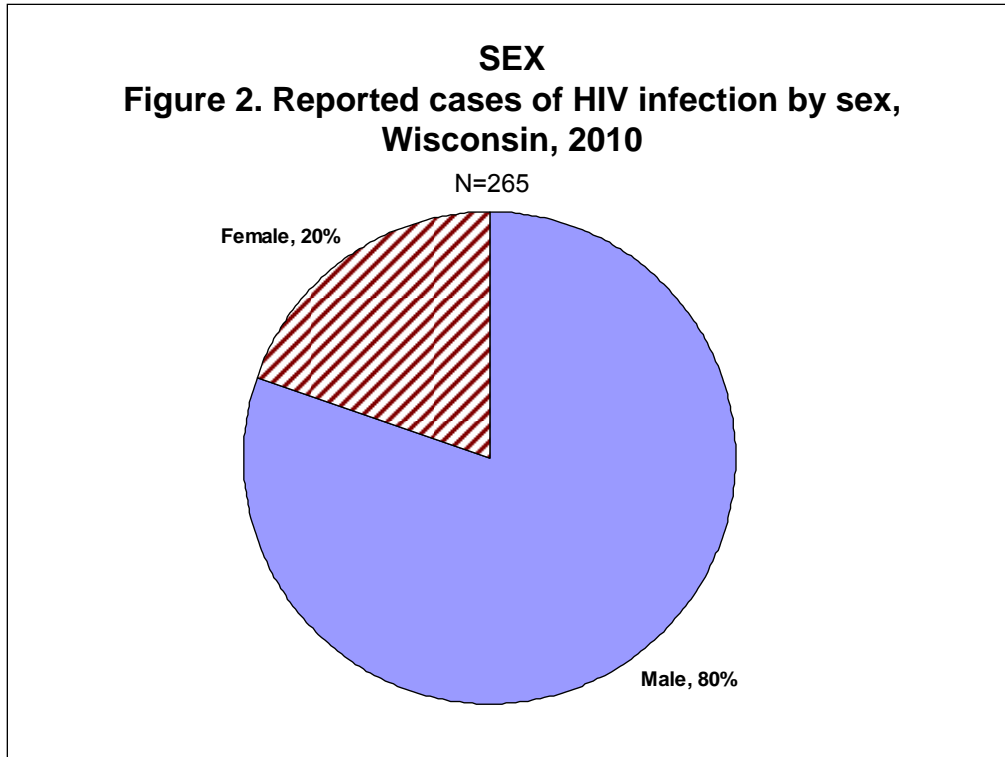
INCIDENT CASES

Incidence is the number of new HIV infections that occur during a given year.

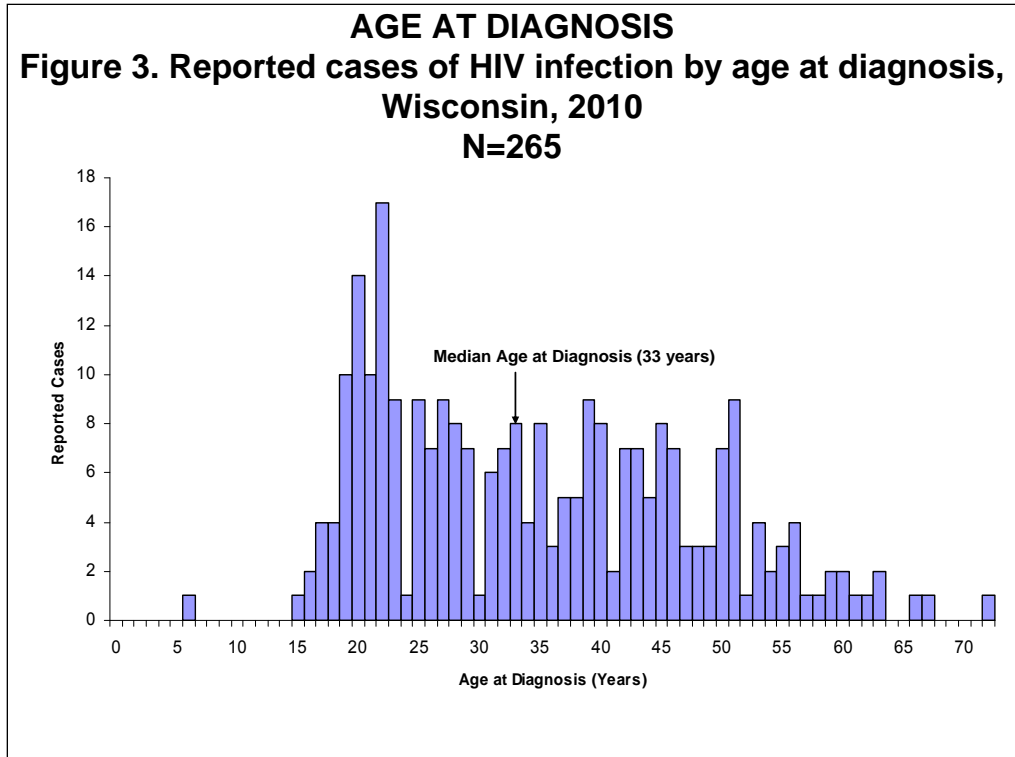


During 2010, 376 cases of HIV infection were reported in Wisconsin, consisting of 265 cases among persons who received their initial HIV diagnosis in Wisconsin, and 111 cases among persons who received their initial HIV diagnosis in another state and moved in to Wisconsin during 2010. The 111 cases are not included in the incidence estimates in this report but do contribute to the prevalence estimate.

Consistent with the natural fluctuation in HIV reporting in Wisconsin, the 265 cases reported in 2010 was fewer than the 300 cases reported in 2009. However, there has been an overall increase in reported cases over the past decade, with an estimated annual increase of 1.5% each year since 2001 (95% CI: 0.2%, 2.9%).

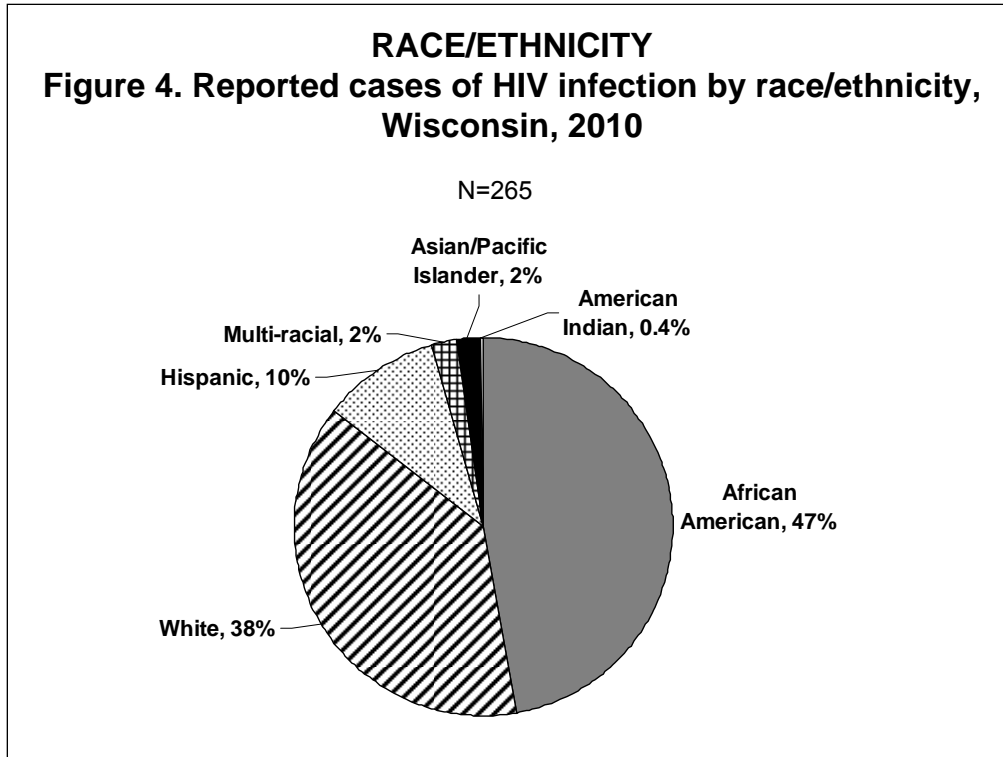


During 2010, 213 reported cases of HIV infection were male and 52 were female. Males are affected at a rate four times that of females; males make up 80% of persons reported with HIV infection in 2010.



The overall median age at diagnosis among cases reported during 2010 was 33 years. However, the median age at diagnosis varied by racial/ethnic group: 29 years among African Americans, 30 years among Hispanics, and 39 years among Whites.

It is important to note that the age at diagnosis of HIV infection is not usually the age when HIV infection was acquired. The CDC estimates that at least one-half of all persons with HIV infection in the U.S. acquired the disease before the age of 25 years.



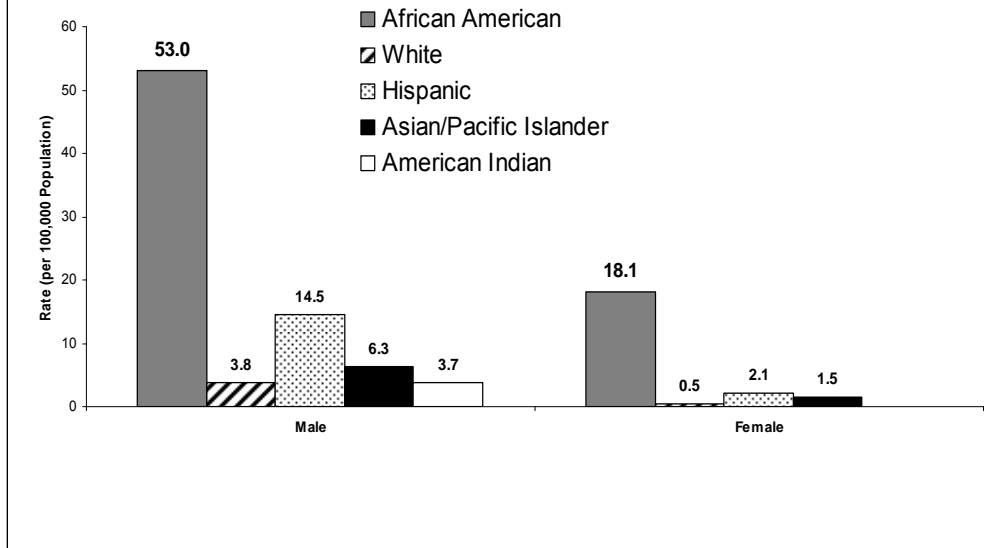
HIV infection has had a disproportionately high impact on minority populations in Wisconsin. Racial/ethnic minorities comprised only 15% of Wisconsin's population but 62% of all HIV cases reported during 2010.

Among cases reported in 2010, 125 (47%) were African American, 102 (38%) were White, 26 (10%) were Hispanic, five (2%) were Asian/Pacific Islander, six (2%) were multi-racial and one (<1%) was American Indian.

African Americans were the only racial/ethnic group with an increase in reported cases of HIV infection during 2010 compared to 2009.

RACE/ETHNICITY: RATES

Figure 5. Reported rates of HIV infection per 100,000 population by sex and race/ethnicity, Wisconsin, 2010



This figure highlights the disproportionate impact of HIV infection on racial/ethnic minorities. Among males, the rate of HIV infection in 2010 was 14-fold greater for African Americans and four-fold greater for Hispanics compared to Whites. Among females the disparity is even greater; the rate of HIV infection in 2010 was 36-fold greater for African American and four-fold greater for Hispanic females compared to White females. These disparities are even greater than those observed nationally.

Between 2006 and 2010 the rate of HIV infection has increased 7.3% per year (95% CI: 1.09%, 13.90%) among African Americans and decreased 12.1% (95% CI: -20.66%, -2.68%) per year among Hispanics. The rate was stable or fluctuated for all other racial/ethnic groups.

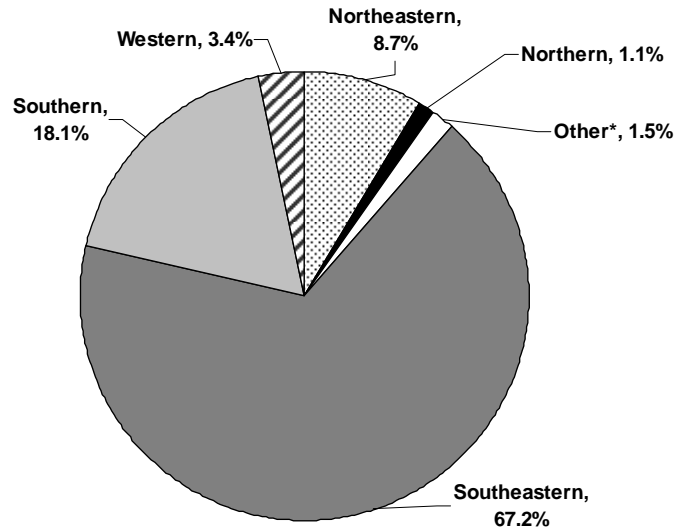
**REFERENCE SLIDE:
GEOGRAPHY**

**Figure 6. Wisconsin
DHS Regions**



GEOGRAPHY
Figure 7. Reported cases of HIV infection by DHS
Region, Wisconsin, 2010

N=265



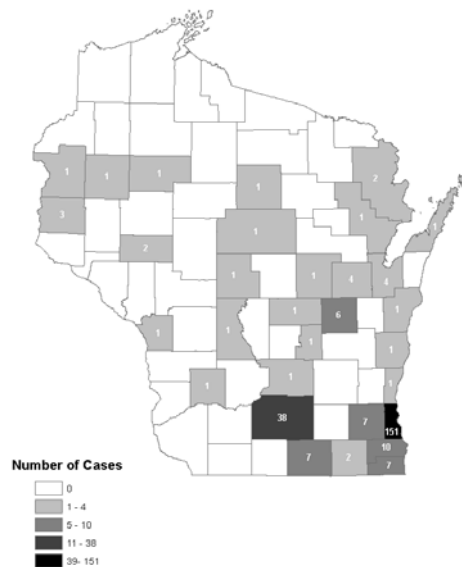
*Other includes those diagnosed in Corrections

Among cases of HIV infection reported in 2010, 178 (67%) were reported in the Southeastern region, 48 (18%) were reported in the Southern region, 23 (9%) were reported in the Northeastern region, 9 (3%) were reported in the Western region, and 3 (1%) were reported in the Northern region. An additional 4 cases were reported from a correctional facility.

2010 CASES BY COUNTY

Figure 8. Reported cases of HIV infection by county, Wisconsin, 2010

N=261*



*Excludes 4 cases diagnosed in Correctional facility

In 2010, cases were reported from 31 of the 72 counties in Wisconsin. However, the distribution of reporting is uneven; 151 (57%) new cases were reported from Milwaukee County and 38 (14%) were reported from Dane County. All other counties accounted for 4% or less of cases reported in 2010.

Four cases were diagnosed in the state correctional system.

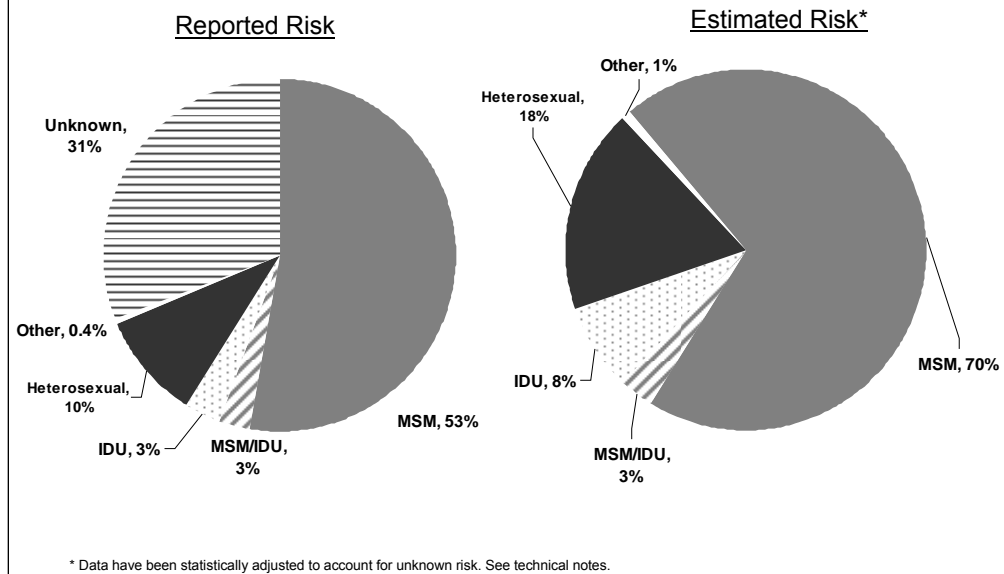
Overview Summary

- Among the 265 cases reported in 2010 (Rate: 5 cases/100,000 population):
 - 80% (n=213) were male
 - 33 years was the median age at diagnosis
 - 47% (n=125) were African American, 38% (n=102) were White, 10% (n=26) were Hispanic
 - African Americans were the *only* racial/ethnic group that had an increase in reported cases during 2010 compared to 2009.
 - Males: African Americans 14-fold and Hispanics 4-fold more likely to be reported with HIV infection compared to Whites
 - Females: African Americans 36-fold and Hispanics 4-fold more likely to be reported with HIV infection compared to Whites
 - DHS Regions: 67% (n=178) Southeastern, 18% (n=48) Southern, 9% (n=23) Northeastern, 3% (n=9) Western and 1% (n=3) Northern
- Consistent with the normal fluctuation in HIV reporting, the number of cases was lower in 2010 than in 2009, but the number of infections is still higher than a decade ago (n=238 in 2001).



RISK EXPOSURE

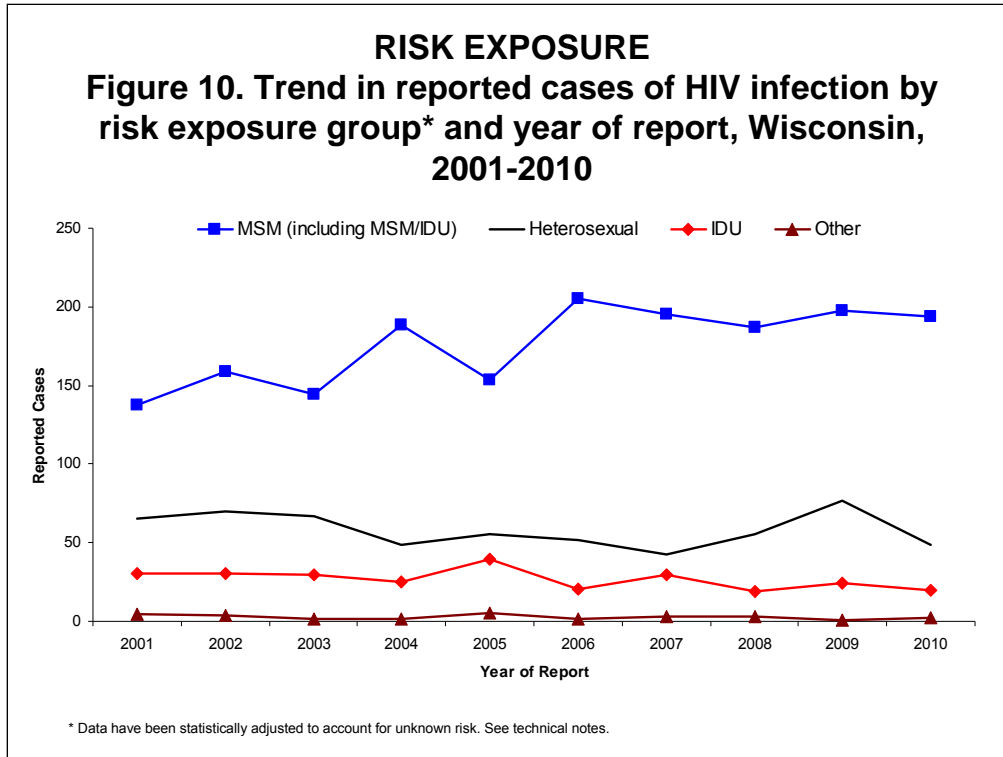
Figure 9. Reported cases of HIV infection by reported and estimated risk exposure group, Wisconsin, 2010



Historically, the population most affected by HIV infection in Wisconsin has been men who have sex with men (MSM). After adjusting for the 82 (31%) reported cases with unknown risk in 2010, 73% (n≈194) of HIV cases were among MSM, including 70% (n≈185) among MSM without a history of injection drug use, and 3% (n≈9) among MSM who reported injection drug use (MSM/IDU). High risk heterosexual contact accounted for 18% (n≈49) and injection drug use (IDU, excluding MSM/IDU) accounted for 8% (n≈20) of new cases reported in 2010.

Early in the epidemic, HIV transmission occurred among blood transfusion recipients and persons with hemophilia who received contaminated blood products. Since screening of the blood supply began in 1985, HIV transmission among transfusion recipients and persons with hemophilia has been very rare. No new hemophilia or transfusion-associated cases have been reported since 2007.

Perinatal (mother-to-child) HIV transmission in Wisconsin has declined since the advent of treatments that reduce the likelihood of perinatal transmission were introduced in the mid-1990s. Eleven cases of HIV infection in babies born in Wisconsin were reported between 2001 and 2008, and there were no reported cases of perinatally transmitted HIV infection among children born in Wisconsin during 2009 or 2010. One baby was born with HIV infection in Wisconsin at the end of 2010, but the child was reported in 2011 and will therefore be included in the 2011 annual summary.

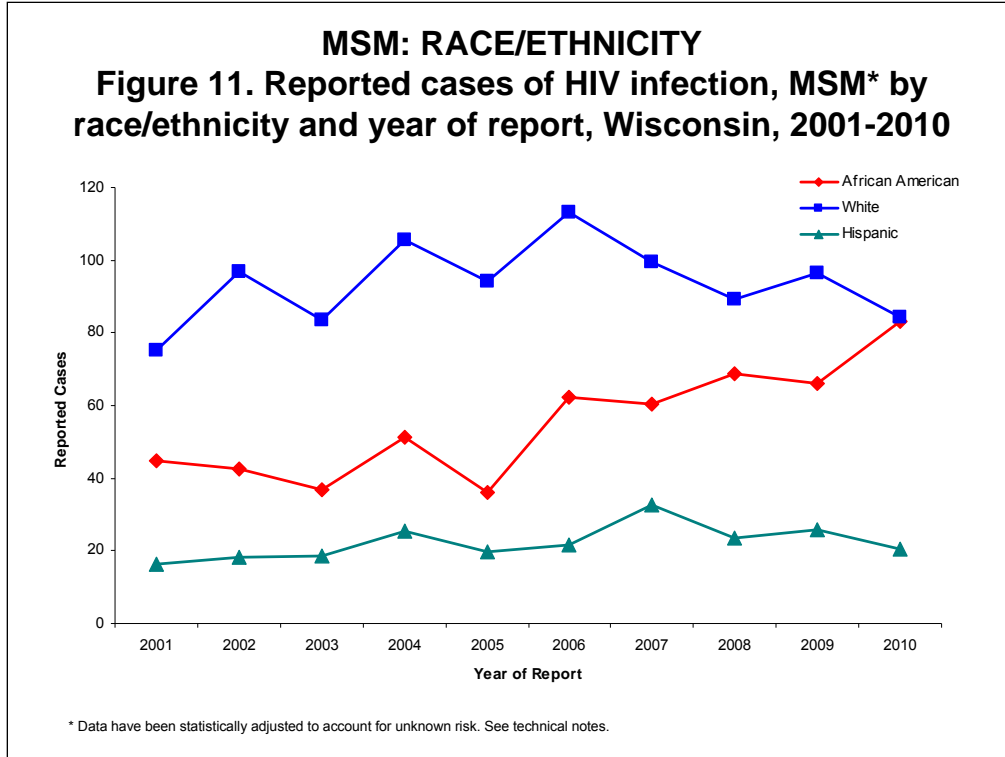


Over the past decade (2001-2010) the number of reported cases of HIV infection that were MSM increased during the first part of the decade and has been stable in recent years. However, trends vary by racial/ethnic group. The number of reported cases that are IDU has been stable and the number that are attributed to high risk heterosexual contact has fluctuated.

Nationally, among the 40 states with confidential name-based HIV reporting, the number of reported cases of HIV infection that are MSM has increased, the number that are due to IDU has decreased, and the number that are due to high risk heterosexual contact has been stable from 2006 to 2009 (the most recent national data available, *HIV Surveillance Report: Diagnoses of HIV infection and AIDS in the United States and Dependent Areas, 2009*, <http://www.cdc.gov/hiv/topics/surveillance/basic.htm>).

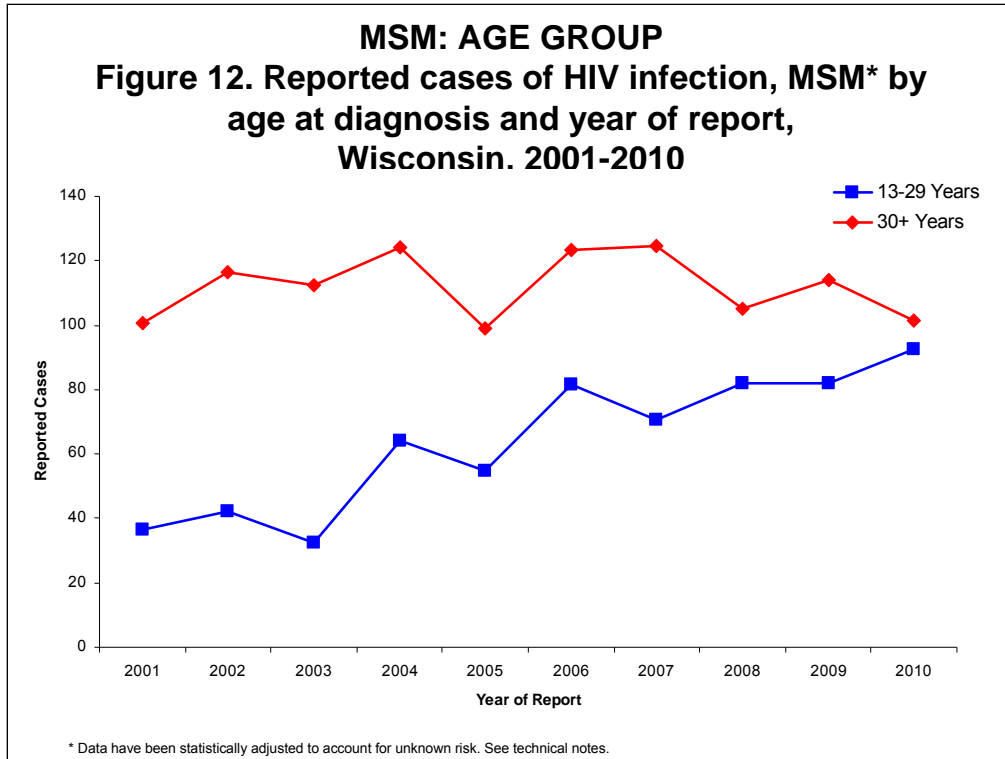


MEN WHO HAVE SEX WITH MEN (MSM)
(including MSM with a history of injection drug use,
MSM/IDU)



Trends in HIV infection among MSM varies by racial/ethnic group. For White MSM the number of reported HIV infections increased during the first part of the decade but has been decreasing since 2007. For African American MSM the number of reported infections was stable during the first part of the decade but has been increasing since 2006. The number of reported HIV infections that are Hispanic MSM has been stable throughout the decade.

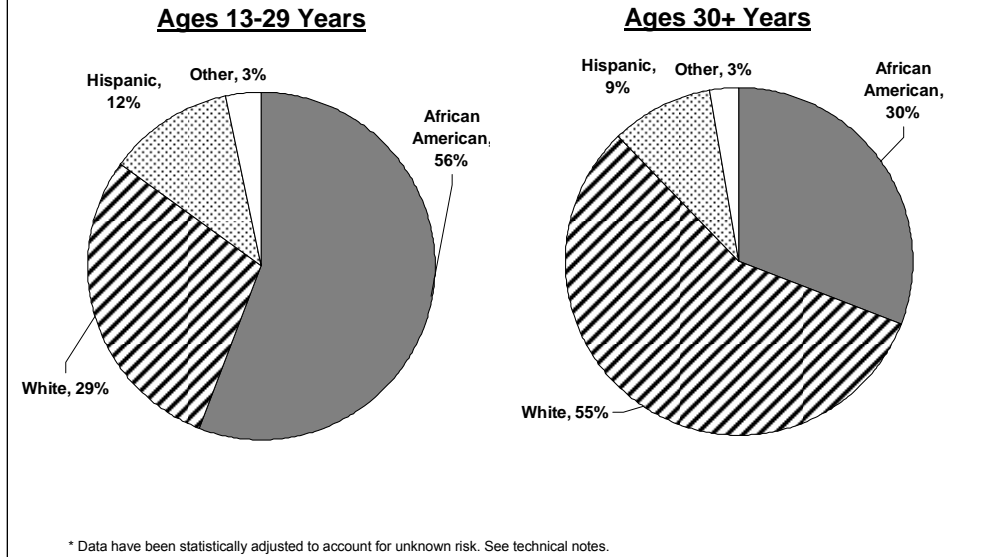
Among MSM reported with HIV infection in 2010, 44% were White, 43% were African American and 11% were Hispanic. Together, Asian/Pacific Islanders and American Indians made up less than 2% of MSM infections reported during 2010.



The number of reported cases of HIV infection that are younger MSM (ages 13-29) has been increasing since 2004 and the number that are MSM age 30 and older has fluctuated throughout the decade but appears to have decreased in recent years.

Among MSM reported with HIV infection in 2010, 52% were age 30 or older and 48% were between 13 and 29 years old.

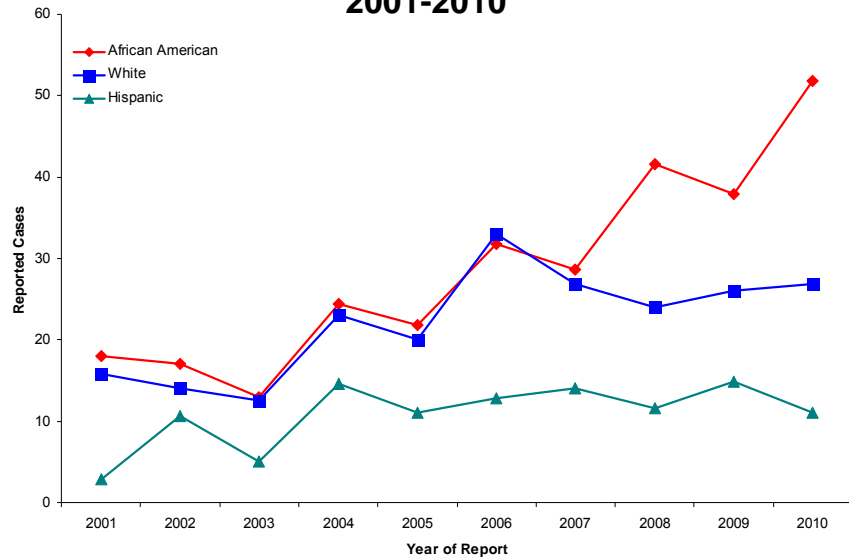
MSM: AGE GROUP AND RACE/ETHNICITY
Figure 13. Reported cases of HIV infection among MSM* by age group and race/ethnicity, Wisconsin, 2010



Of young (ages 13-29 years) MSM reported with HIV infection in 2010, 56% were African American and 29% were White, whereas among older MSM, 55% were White and only 30% were African American. Hispanics make up a similar proportion of MSM in both age groups.

YMSM: RACE/ETHNICITY

Figure 14. Reported cases of HIV infection, MSM* 13-29 years by race/ethnicity and year of report, Wisconsin, 2001-2010

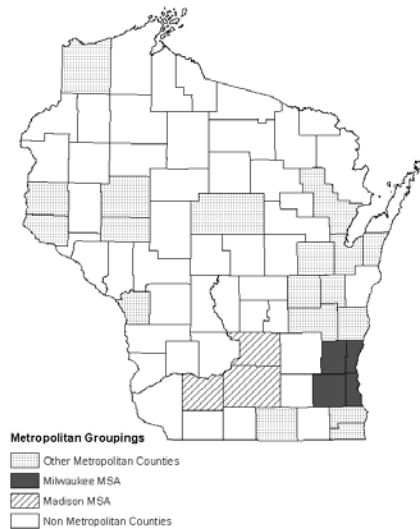


* Data have been statistically adjusted to account for unknown risk. See technical notes.

During the early part of the decade, cases of HIV infection that were young MSM were increasing in all three major racial/ethnic groups. However, the number of reported cases has stabilized for both young White and Hispanic MSM but has continued to increase for young African American MSM. CDC recommends that caution be used when interpreting trends with fewer than 12 cases.

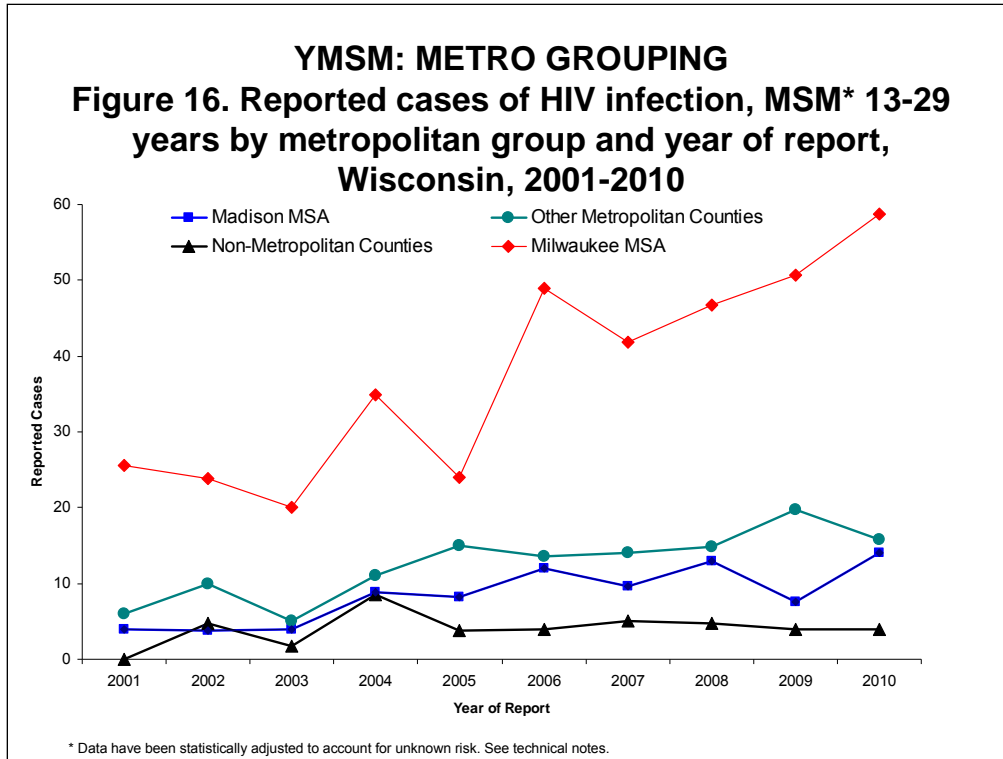
**REFERENCE
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METROPOLITAN
GROUPS**

**Figure 15.
Wisconsin
counties by
metropolitan group**



Wisconsin counties are grouped into four metropolitan groups:

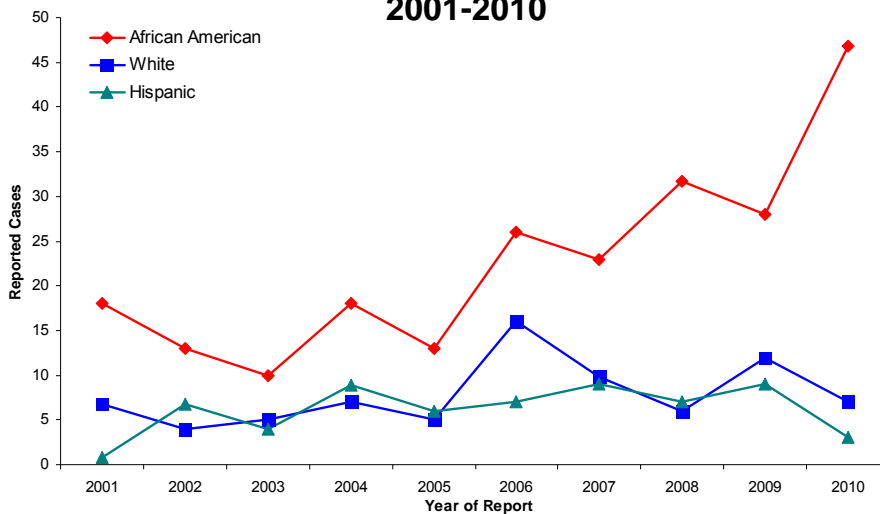
- Milwaukee Metropolitan Statistical Area (MSA): Milwaukee, Ozaukee, Washington, and Waukesha Counties
- Madison MSA: Dane, Columbia and Iowa Counties
- Other metropolitan counties (areas with a medium-sized city, such as Green Bay), and
- Non-metropolitan counties



Throughout the last decade, reported cases of HIV infection that are young MSM has increased significantly in the Milwaukee MSA and increased slightly in the Madison MSA and in other metropolitan counties. CDC recommends that caution be used when interpreting trends with fewer than 12 cases.

In 2010 nearly two-thirds (64%) of reported cases among young MSM were within the Milwaukee Metropolitan Statistical Area (MSA). The remaining 2010 cases were reported from other metropolitan counties (17%), the Madison MSA (15%), and non-metropolitan counties (4%).

YMSM: RACE/ETHNICITY AND MILWAUKEE MSA
Figure 17. Reported cases of HIV infection, MSM* 13-29 years,
by race/ethnicity and year of report, Milwaukee MSA,
2001-2010



* Data have been statistically adjusted to account for unknown risk. See technical notes.

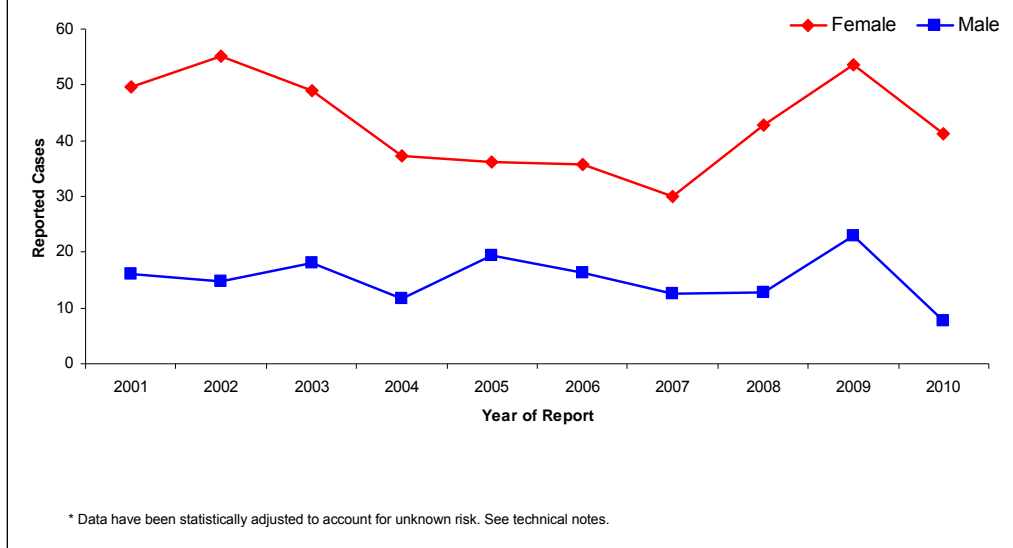
The increase in reported cases of HIV infection that are young MSM in the Milwaukee MSA is due primarily to an increasing number of HIV-infected young African American MSM. African Americans made up 80% of reported cases among young MSM in the Milwaukee MSA in 2010, while Hispanic men and White men made up 5% and 12% of cases, respectively. Young African American MSM in Milwaukee make up almost one-fifth (18%) off all cases reported in Wisconsin during 2010.



HETEROSEXUAL RISK

**(Heterosexual contact with a person known to have,
or to be at high risk for, HIV infection)**

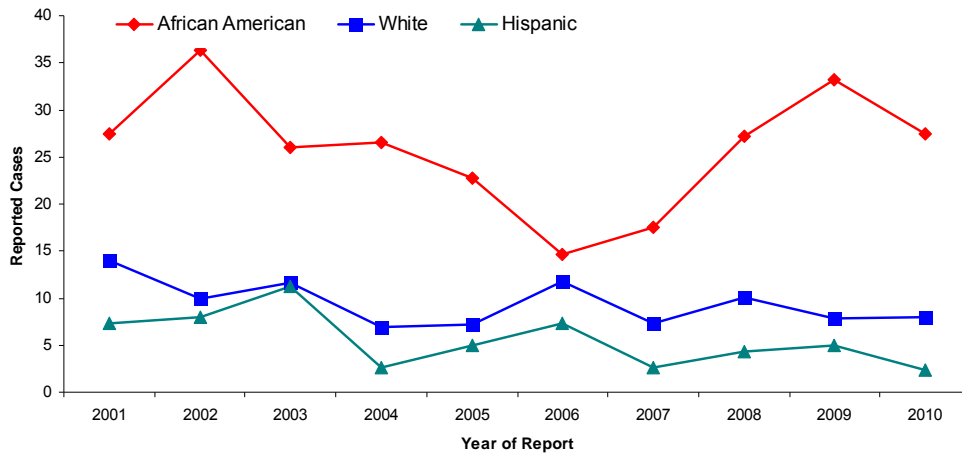
HETEROSEXUAL RISK: SEX
Figure 18. Reported cases of HIV infection, heterosexual risk* by sex and year of report, Wisconsin, 2001-2010



The number of reported cases of HIV infection attributed to high risk heterosexual contact has fluctuated for females, with a decline from 2002 to 2007 and then an increase during 2008 and 2009. The number of reported cases attributed to high risk heterosexual contact has been stable for males.

In 2010, females accounted for 84% of reported cases of HIV infection attributed to heterosexual transmission.

HETEROSEXUAL RISK: FEMALES BY RACE/ETHNICITY
Figure 19. Reported cases of HIV infection, females with heterosexual risk* by race/ethnicity and year of report, Wisconsin, 2001-2010



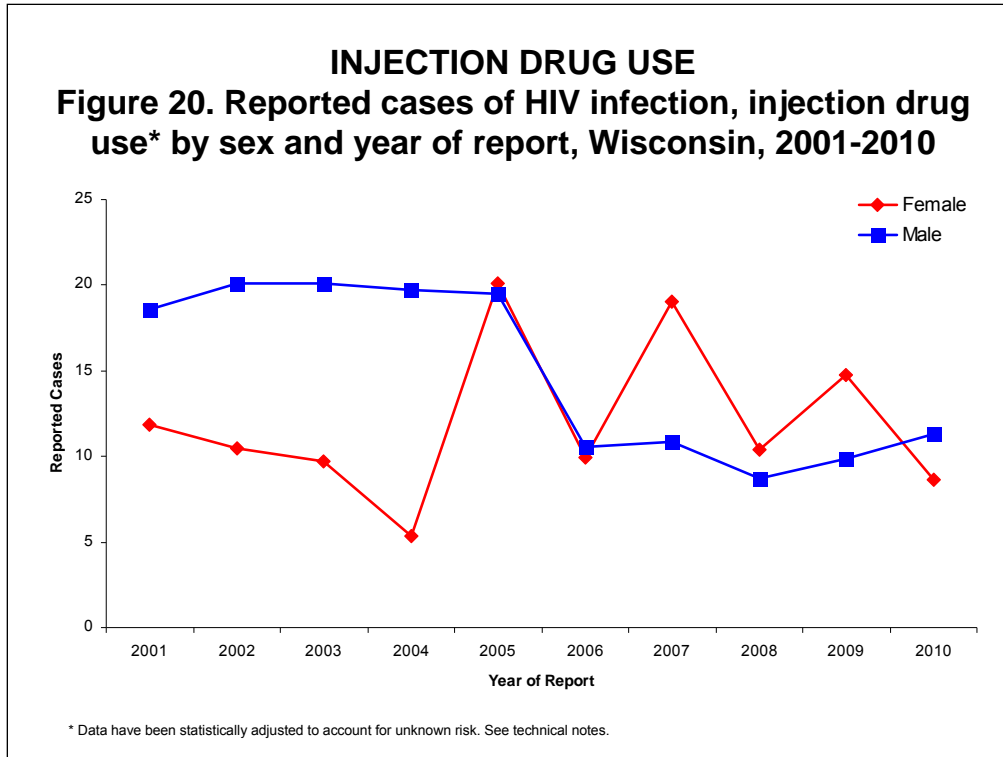
* Data have been statistically adjusted to account for unknown risk. See technical notes.

The number of reported cases of heterosexual-attributed HIV infection that were African American females decreased from 2002 to 2006 but then increased again from 2007 to 2009. The number of reported cases that were White or Hispanic has been more stable throughout the decade. Caution should be used in interpreting trends with fewer than 12 cases.

For females with heterosexually-attributed HIV infection reported in 2010, 66% were African American, 19% were White and 6% were Hispanic.



INJECTION DRUG USE
(Excludes MSM with a history of injection drug use)



The number of reported cases of HIV infection that are male IDUs decreased from 2005 to 2006 and has been stable since, and the number reported that are female IDUs has fluctuated over the decade.

In 2010, males accounted for 57% of reported cases of HIV infection attributed to injection drug use, while females accounted for 43% of reported cases.

Due to small numbers, additional trends of IDU cases are not shown. However, the breakdown of cases reported among both males and females during 2010 is as follows:

- Race/ethnicity: 42% African American, 14% Hispanic, 8% White
- Geography: 34% Milwaukee MSA, 30% other metropolitan counties, 18% non-metropolitan counties, 3% Madison MSA

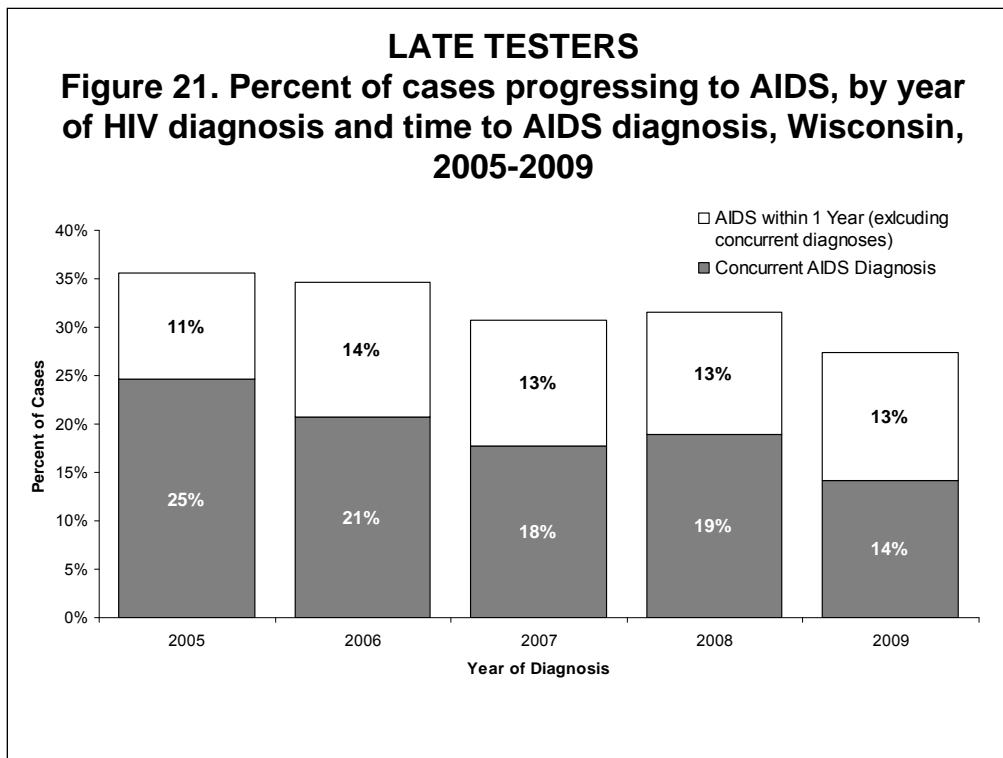
Risk Summary

- After adjusting for unknown risk of 2010 cases:
 - 73% MSM, 18% Heterosexual, 8% IDU
 - MSM: 44% White, 43% African American, 11% Hispanic
 - MSM 13-29 yrs make up 48% of MSM cases and has been increasing; MSM cases 30 and older has been decreasing in recent years
 - YMSM (13-29 yrs): 56% African American, 29% White, 12% Hispanic
 - African Americans are making up an increasing number of YMSM cases
 - 64% of YMSM cases are from the Milwaukee MSA; most (80%) YMSM cases in the Milwaukee MSA are African American and the number has been increasing
 - Heterosexual: the number of reported cases overall has fluctuated but the number that are African American females has increased in recent years
 - IDU: the number of reported cases has been stable



LATE TESTERS

**(Percent of incident cases progressing to AIDS
within 1 year of initial HIV diagnosis, including
concurrent HIV and AIDS diagnoses)**



According to the CDC, late testers are those who progress to AIDS within one year of receiving their initial HIV diagnosis, including those who receive an HIV and AIDS diagnosis at the same time.

The percent of persons diagnosed with HIV infection in Wisconsin who progressed to AIDS within one year of HIV diagnosis has decreased from 36% of cases diagnosed in 2005 to 27% of cases diagnosed in 2009. This decrease is attributed primarily to a decrease in persons receiving concurrent diagnoses, which has decreased from 25% of cases diagnosed in 2005 to 14% of cases diagnosed in 2009.

Among those diagnosed with HIV in Wisconsin in 2009, the following demographic groups have a greater percentage of late testers than the overall percentage: those diagnosed in the Northern region (n=5, 46%), those diagnosed in the Northeastern region (n=15, 35%), males (n=70, 32%), Whites (n=38, 31%) and those with unknown risk (n=19, 29%).

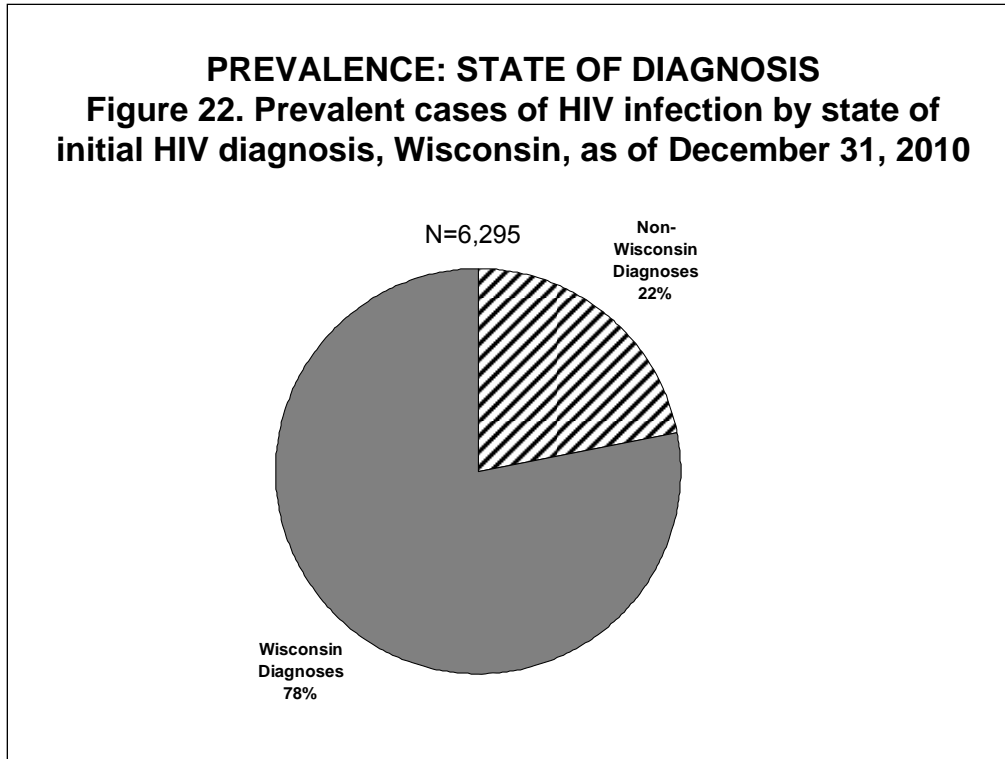
The following demographic groups experienced a decreasing percentage of late testers between 2005 and 2009: those with heterosexual risk, those diagnosed in the Southeastern region, and Hispanics. All other groups had steady or fluctuating percentages of late testers between 2005 and 2009.



PREVALENT CASES

Prevalence is the number of people living with HIV infection at the end of a given year.

PREVALENCE: STATE OF DIAGNOSIS
Figure 22. Prevalent cases of HIV infection by state of initial HIV diagnosis, Wisconsin, as of December 31, 2010

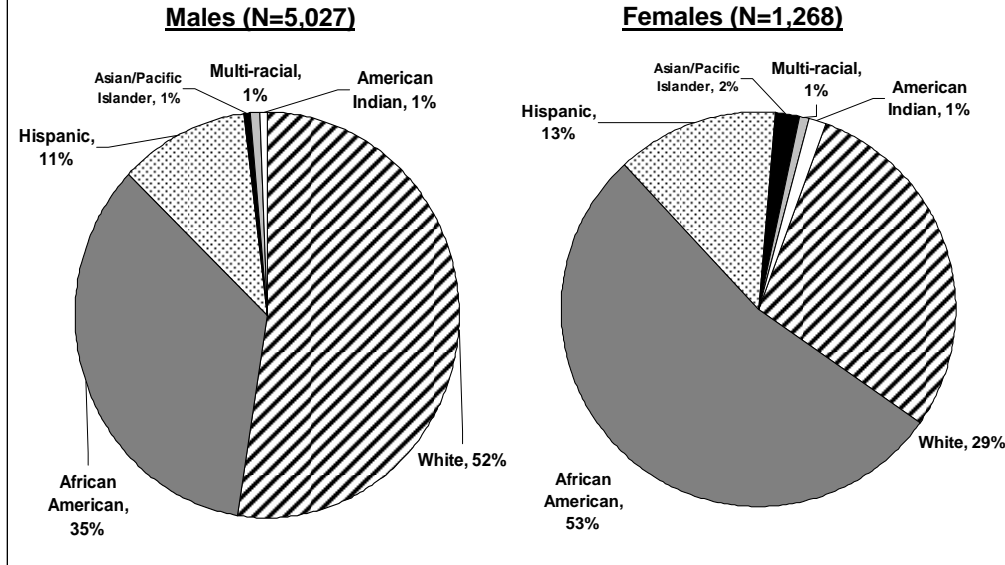


As of December 31, 2010, 6,295 individuals with HIV or AIDS are presumed to be alive and living in Wisconsin.

The number of prevalent cases:

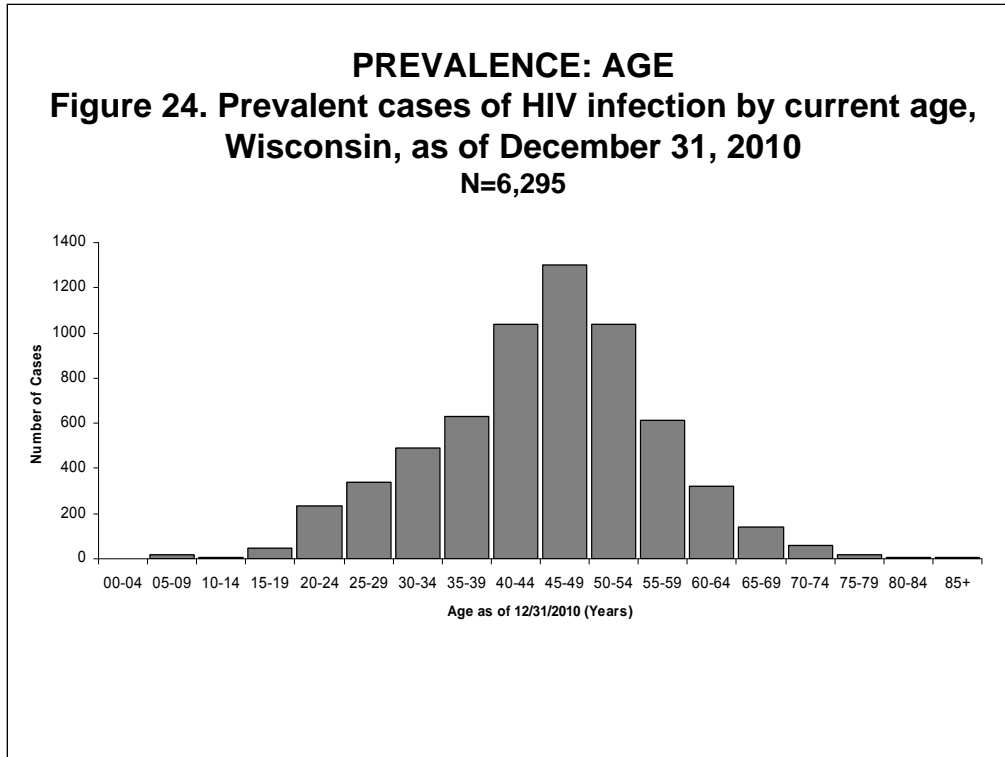
- Includes 4,918 (78%) individuals who received their first verifiable HIV diagnosis in Wisconsin and 1,377 (22%) individuals who received their initial HIV diagnosis in another state and subsequently moved to Wisconsin. The proportion of persons living with HIV in Wisconsin who were diagnosed in Wisconsin versus those who received their first HIV diagnosis in another state has been stable since 1999.
- Excludes those who are known to have died or who are known to have moved to another state.
- Excludes those who do not know they are infected with HIV. The CDC estimates that 21% of all persons living with HIV do not know they are infected, meaning an additional 1,670 people are estimated to be living with HIV in Wisconsin but are unaware of their status.

PREVALENCE: SEX AND RACE/ETHNICITY
Figure 23. Prevalent cases of HIV infection by sex and race/ethnicity, Wisconsin, as of December 31, 2010



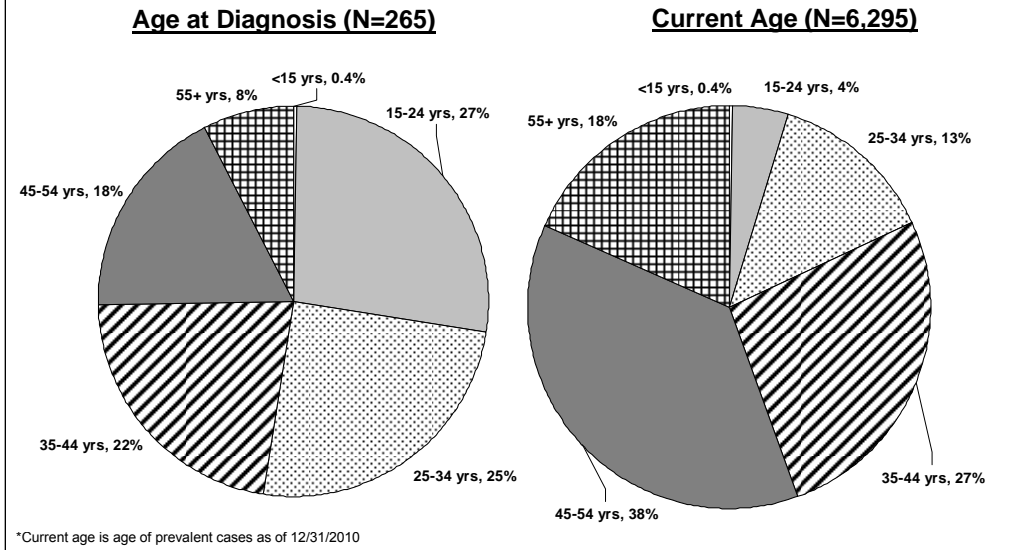
Of males presumed to be alive and living in Wisconsin as of December 31, 2010, 52% (n=2,639) are White, 35% (n=1,738) are African American, and 11% (n=547) are Hispanic.

Of females presumed to be alive and living in Wisconsin as of December 31, 2010, 53% (n=675) are African American, 29% (n=371) are White, and 13% (n=169) are Hispanic.



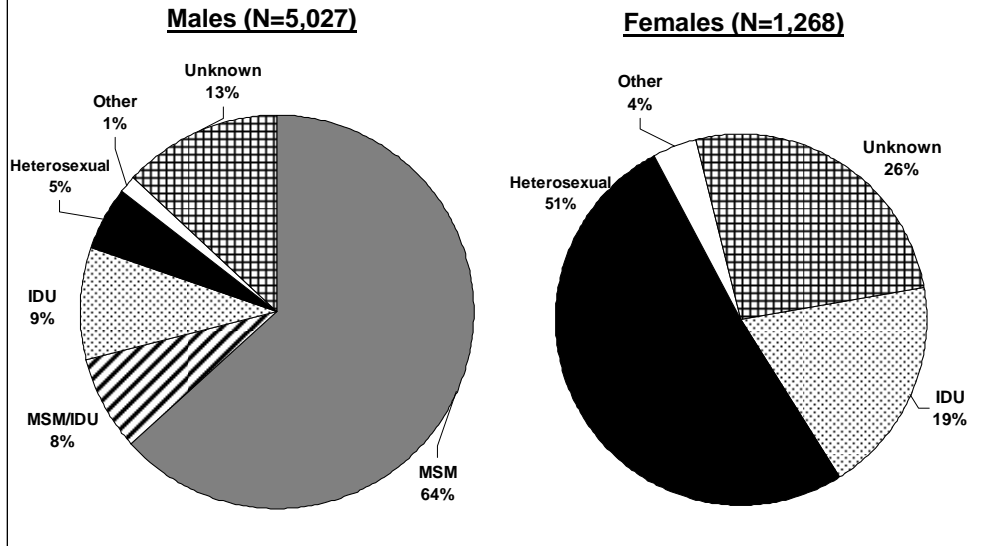
The overall median age among prevalent cases as of December 31, 2010 is 46 years. However, the median age of prevalent cases varied by racial/ethnic group: 44 years among African Americans, 47 years among Whites, 43 years among Hispanics, 38 years among Asian/Pacific Islanders and 44 years among American Indians.

PREVALENT & INCIDENT AGE COMPARISON
Figure 25. Comparison of age at diagnosis for cases reported during 2010 versus current age* of prevalent cases, Wisconsin



There is a significant difference in the age distribution among those being newly diagnosed with HIV compared to those currently living with HIV, meaning that HIV prevention and care providers may be targeting different populations. Among those being newly diagnosed with HIV infection, more than half (52%) are less than 34 years of age. Among those currently living with HIV infection, 83% are 35 years of age and older.

PREVALENCE: SEX AND RISK
Figure 26. Prevalent cases of HIV infection by sex and reported risk, Wisconsin, as of December 31, 2010



As of December 31, 2010, among prevalent males with HIV infection in Wisconsin, the risk breakdown is as follows: 72% MSM (including those that also have a history of injection drug use), 9% IDU, 5% heterosexual and 13% unspecified risk.

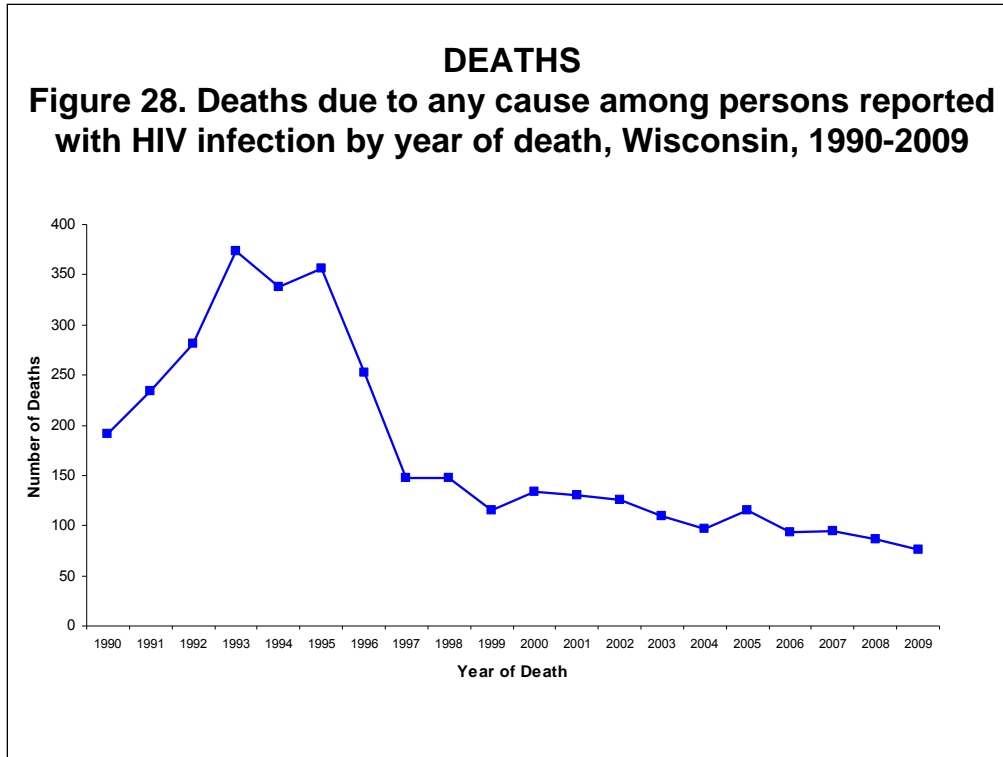
Among prevalent females with HIV infection in Wisconsin, the risk breakdown is as follows: 51% heterosexual, 19% IDU, and 26% unspecified risk.

ESTIMATED PREVALENCE by DEMOGRAPHIC GROUP
Table 9. Estimated HIV prevalence¹
rate per 1,000 population, by demographic group, ages
15-59 years, Wisconsin, as of December 31, 2010

	MSM³	Non-MSM Males	Females	Total
African American	300	8	7	13
Hispanic/Latino	105	4	2	5
White	45	0	0	1
Total	65	1	1	2

1. The estimated prevalence is adjusted to account for the CDC's estimate that 21% of HIV-infected persons are unaware of their infection and therefore not reported.
2. Rates greater than 50 have been rounded to the nearest 5.
3. The MSM population for each racial ethnic group uses the CDC's estimate that 4% of adult males are MSM.

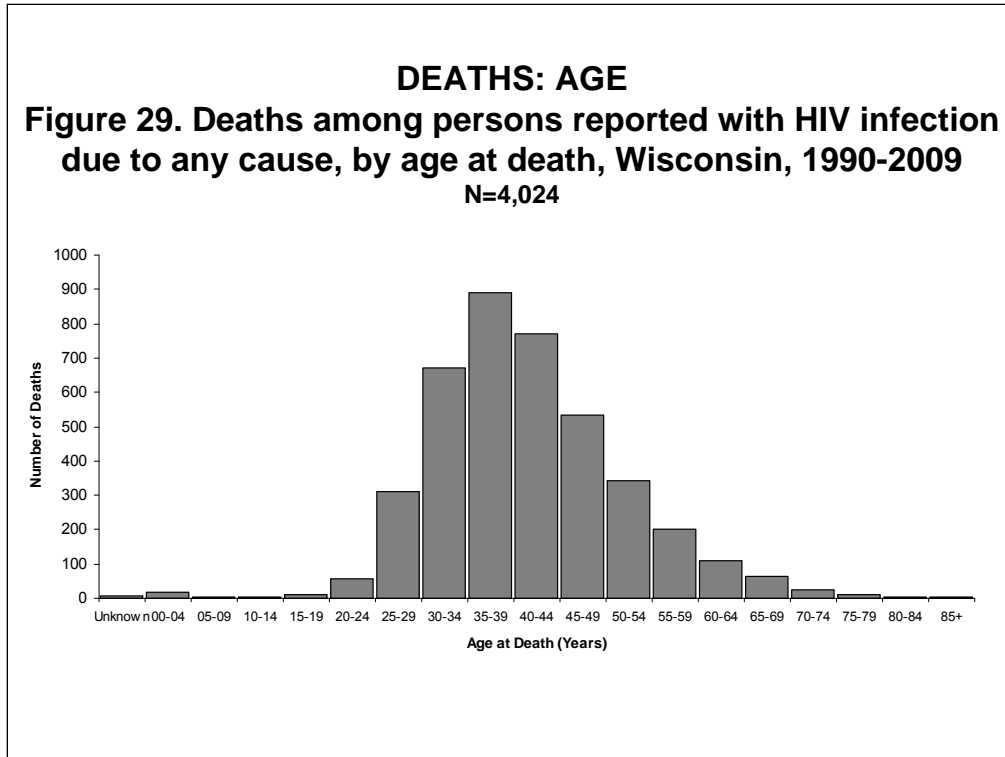
Three hundred out of 1,000 African American MSM in Wisconsin are estimated to be HIV positive, compared to 105 Hispanic MSM and 45 White MSM. This figure is based on CDC's estimates that 4% of adult males are MSM and that 21% of people living with HIV are unaware of their status. The table shows that disparities in HIV prevalence occur both between MSM and other demographic groups and by race/ethnicity within each demographic group.



Deaths due to any cause among persons reported with HIV infection in Wisconsin have declined since the early- to mid-1990s. Seventy-six deaths among persons reported with HIV infection in Wisconsin are known to have occurred in 2009; this is 80% fewer than the 373 deaths in 1993, the peak year.

The overall death rate per 100,000 population has been decreasing since 1996 and continues to decrease. The death rate in 2009 was 1.2/100,000 population. During 2009, the death rate was 7.9/100,000 for African Americans (28 deaths), 0.7/100,000 for Whites (36 deaths), and 3/100,000 for Hispanics (9 deaths). The disparity in the death rate is a reflection of the disparity in the incidence and prevalence of HIV infection by racial/ethnic group.

Due to delays in reporting of deaths, death data are provisional and an accurate estimate of total deaths in 2010 is not yet available. All known deaths among persons with HIV infection are included, whether or not the death was HIV related.



The overall median age at death is 40 years. The median age at death was similar across racial/ethnic groups: 40 years among African Americans, 40 years among Whites, 38 years among Hispanics, 36 years among Asian/Pacific Islanders and 37 years among American Indians.

Prevalence Summary

- Of the 6,295 persons presumed alive and living with HIV infection in WI:
 - 78% of prevalent cases received their initial HIV diagnosis in WI
 - Male: 52% White, 35% African American, 11% Hispanic
Female: 29% White, 53% African American, 13% Hispanic
 - Median age is 46 years
 - DHS Regions: 61% in Southeastern, 18% Southern, 10% Northeastern, 6% Western, 3% Northern
- 76 deaths due to any cause in 2009
 - Median age at death 40 years
 - Overall death rate is 2.1/100,000 and has been decreasing
 - 2009 deaths: 36 White, 28 African American, 9 Hispanic, 1 American Indian, 2 Multi-racial