

# Profile of HIV infection in Wisconsin

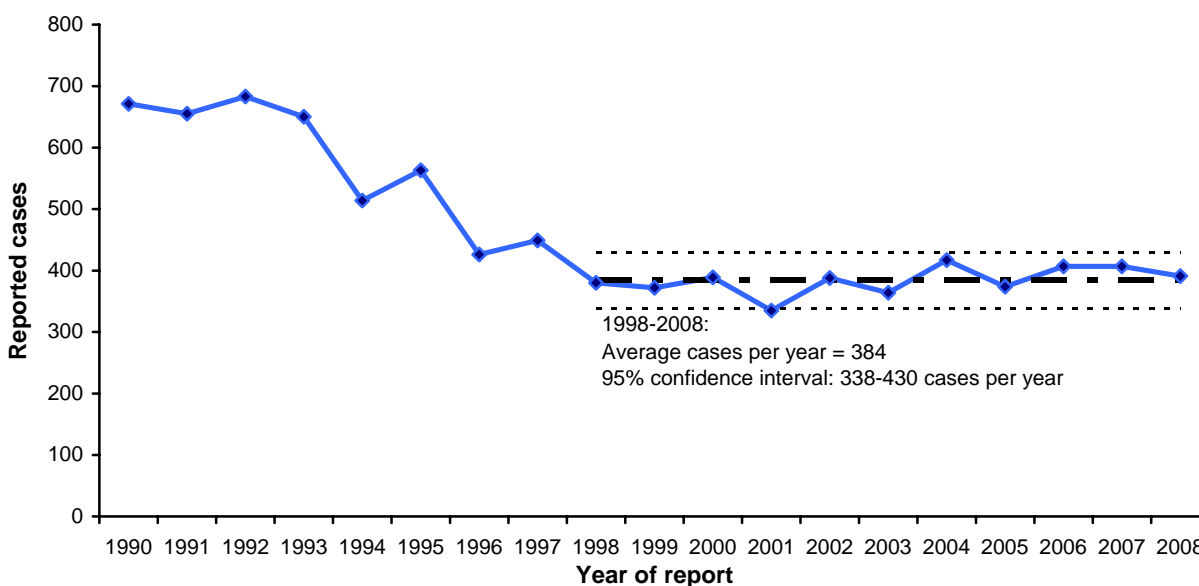
*A review of case surveillance data collected through 2008*

In the year 2008, 391 new cases of human immunodeficiency virus (HIV) infection<sup>1</sup> were reported in Wisconsin, bringing the total number of cases reported since 1983 (the year the first cases were reported in Wisconsin) to 10,316. Among all reported cases, 6,964 met the Centers for Disease Control and Prevention (CDC) criteria for acquired immune deficiency syndrome (AIDS); 3,352 persons have been reported with HIV infection but did not meet the AIDS case definition at the end of 2008.

Wisconsin has historically had a low rate of HIV/AIDS morbidity compared to other states. During the year 2006 (the latest year the national data is currently available) Wisconsin had the tenth lowest AIDS case rate in the United States. The highest rates, in Maryland and New York, were eight-fold greater than the rate in Wisconsin.

The annual number of reported cases of HIV infection reached a peak between 1990 and 1993 (average: 665 cases per year) and then declined for five years (Figure 1). For the past eleven years (1998-2008), the annual number of newly reported cases was relatively constant. During this period on average 384 new cases (95% confidence interval 338-430) were reported each year, 42% less than during the peak period.

**Figure 1. Reported cases of HIV infection by year of report  
Wisconsin, 1990-2008**



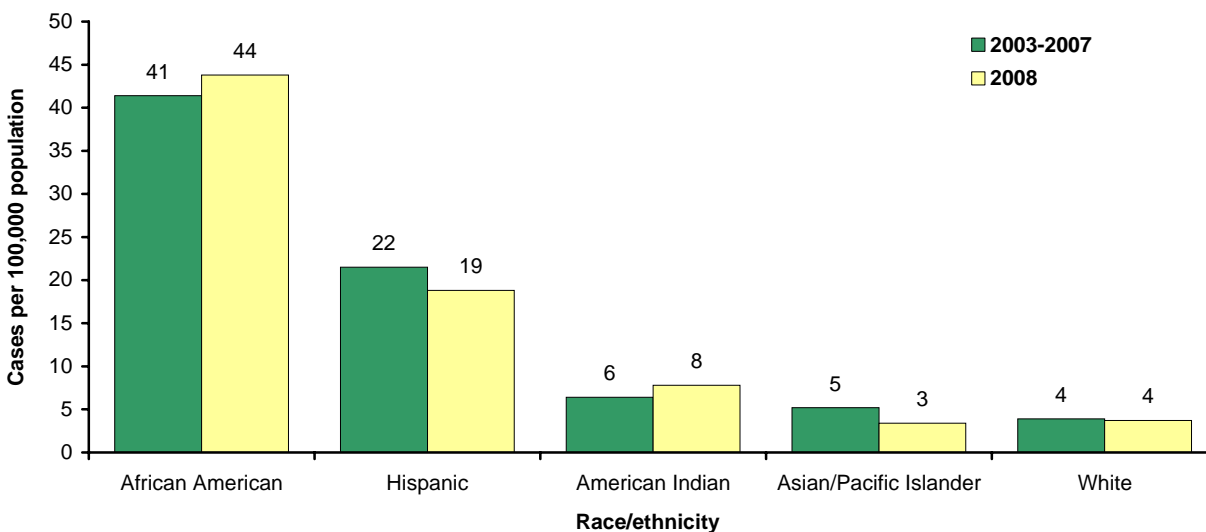
Throughout the epidemic, HIV infection has had a disproportionately high impact on minority populations in Wisconsin (Figure 2). Race/ethnic minorities comprise 12% of the Wisconsin population, but 55% of all HIV cases reported in 2008. The reported HIV infection rate in 2008 was eleven-fold greater for African Americans and five-fold greater for Hispanics compared to the rate for whites.

While the race/ethnic disparity in reported HIV infection rates affects both males and females, the magnitude is greater among females. In 2008, race/ethnic minorities represented 52% of males and 68% of females reported with HIV infection. The reported HIV infection rate among males was eleven-fold

<sup>1</sup> In this report, "HIV infection" refers to all persons with laboratory confirmed HIV infection. This includes both AIDS and non-AIDS cases. Case numbers in this report are provisional as of December 31, 2008.

greater for African Americans and four-fold greater for Hispanics compared to the rate for white males. Among females, the reported HIV infection rate was 21-fold greater for African Americans and eight-fold greater for Hispanics compared to the rate for whites.

**Figure 2. Reported HIV infection per 100,000 population by race/ethnicity, Wisconsin, 2003-2007 and 2008**



Historically, the population most affected by HIV infection in Wisconsin has been men who have sex with men (MSM)<sup>2</sup>. In 2008, 74% of HIV cases were among MSM, including 70% among MSM without a history of injection drug use, and 4% among MSM who reported injection drug use (MSM&IDU). After a significant decline in the 1990's, MSM-attributed cases have increased in recent years. Between 2000 and 2008, the number of cases reported among MSM statewide increased 36% (Figure 3).

Most of the MSM-attributed increase between 2000 and 2008 has been among young men (i.e., less than thirty years of age). Statewide, between 2000 and 2008, the estimated number of reported cases among MSM thirty years of age and older increased 6%, while the estimated number of cases among young MSM increased 143%.

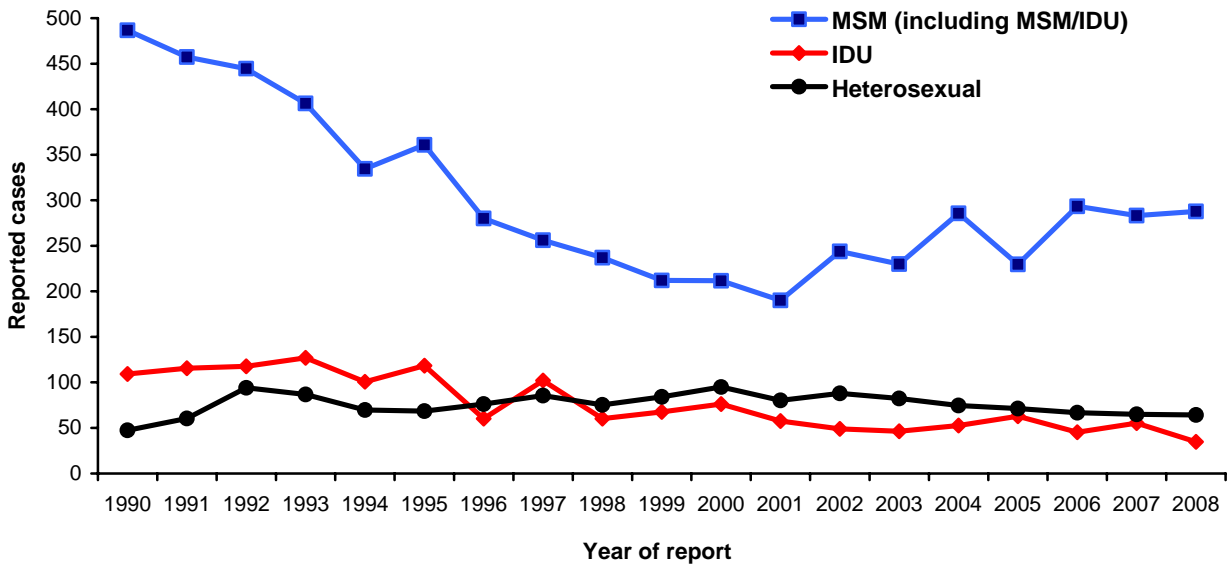
Reported cases have increased among young MSM throughout the state, however, young urban African American MSM have been disproportionately impacted. More than one half (52%) of the estimated cases among young MSM reported in 2008 has been within the Milwaukee Metropolitan Statistical Area (MSA)<sup>3</sup>. Within that area approximately 70% of young MSM reported with HIV infection in 2008 were African American. The number of young African American MSM reported with HIV infection in the Milwaukee MSA nearly tripled between 2000 and 2008.

In 2008, 9% of reported HIV cases were among non-MSM injection drug users (IDU) and 16% were among persons with a history of high-risk heterosexual contact. Between 2000 and 2008, the number of IDU and high-risk heterosexual cases both declined.

<sup>2</sup> Risk exposure data in this report is derived from imputed risk exposure estimates. Imputed risk is derived using a method that stratifies cases by sex, race/ethnicity, metropolitan category, and year of report and assumes that cases with unknown risk exposure within each stratum have risk exposures similar to cases with known risk exposure. It is important to note that imputed risk exposures are estimates not actual case counts. Imputed risk exposures are subject to change as more information becomes available.

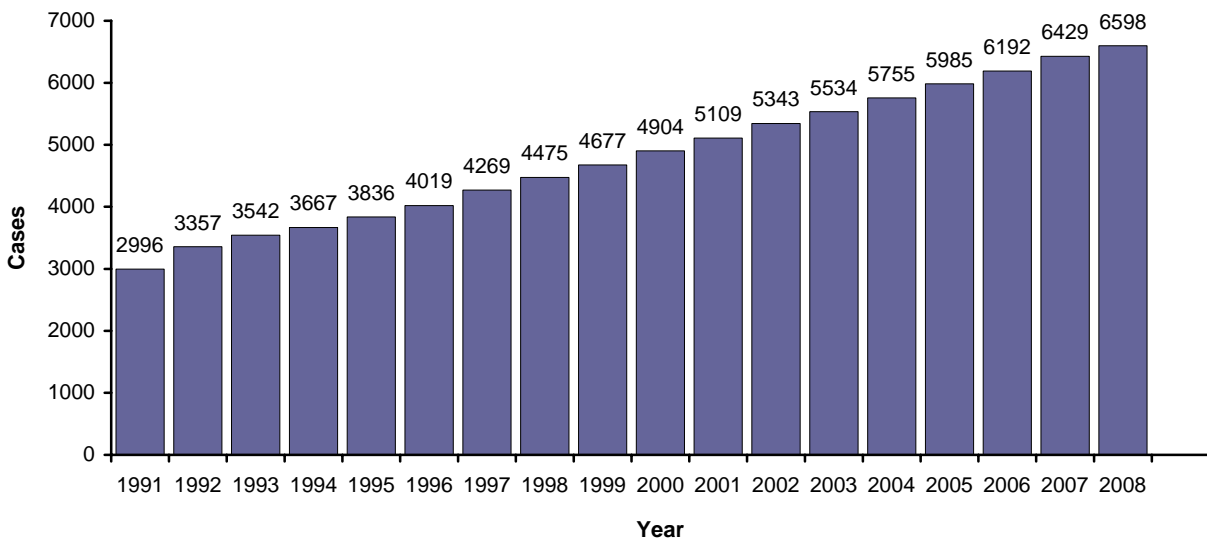
<sup>3</sup> The Milwaukee Metropolitan Area includes Milwaukee, Ozaukee, Washington and Waukesha counties.

**Figure 3. Reported cases of HIV infection, by imputed risk exposure and year of report, Wisconsin, 1990-2008**



Deaths among persons with HIV infection in Wisconsin have declined significantly. Sixty-seven deaths among persons reported with HIV infection in Wisconsin are known to have occurred in 2007<sup>4</sup>; this is 82% less than the 373 deaths in 1993, the peak year. As deaths have declined, the number of persons reported with HIV who are presumed to be alive has continually increased (Figure 4). Since the year 2000, this increase has averaged 4% per year. At the end of 2008, 6,598 persons reported with HIV infection in Wisconsin were presumed to be alive (118 per 100,000), an all time high.

**Figure 4. Reported cases of HIV infection, presumed alive at year's end, Wisconsin, 1990-2008**



<sup>4</sup> Due to delays in reporting of deaths, death data is provisional and an accurate estimate of total deaths in 2008 is not yet available.

Statewide, 80% of persons living with HIV infection are male, and MSM was the single largest risk-exposure group. Persons living with HIV infection are an ageing population, 51% were 45 years of age or older at the end of 2008. The race/ethnic disparity that has been noted for newly reported cases is also a feature of persons living with HIV infection. Race/ethnic minorities constitute 51% of persons living with HIV infection in Wisconsin and have HIV prevalence rates that are markedly higher than the rate among whites.

Persons with HIV infection are living in every part of the state, but the distribution of persons living with HIV infection is uneven. At the end of 2008, the prevalence of HIV infection was lowest in the Northeastern, Northern and Western regions of the state. Together these three regions had 1,209 persons living with HIV infection, 18% of the statewide total.

The number of persons living with HIV in the Southern Region was slightly greater than the combined total for the Northeastern, Northern and Western regions. In the Southern Region, there were 1,234 persons living with HIV infection at the end of 2008 and the HIV prevalence (118 per 100,000) was the same as the overall HIV prevalence rate for the state.

At the end of 2008, there were an estimated 3,965 persons living with HIV infection in the Southeastern Region, representing 60% of all persons living with HIV infection statewide. The HIV prevalence rate for this region was 190 per 100,000. Milwaukee County had an estimated 3,273 persons living with HIV infection (344 per 100,000 population). This was the highest number and rate for any county in Wisconsin and represented 50% of all persons living with HIV in the state.

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