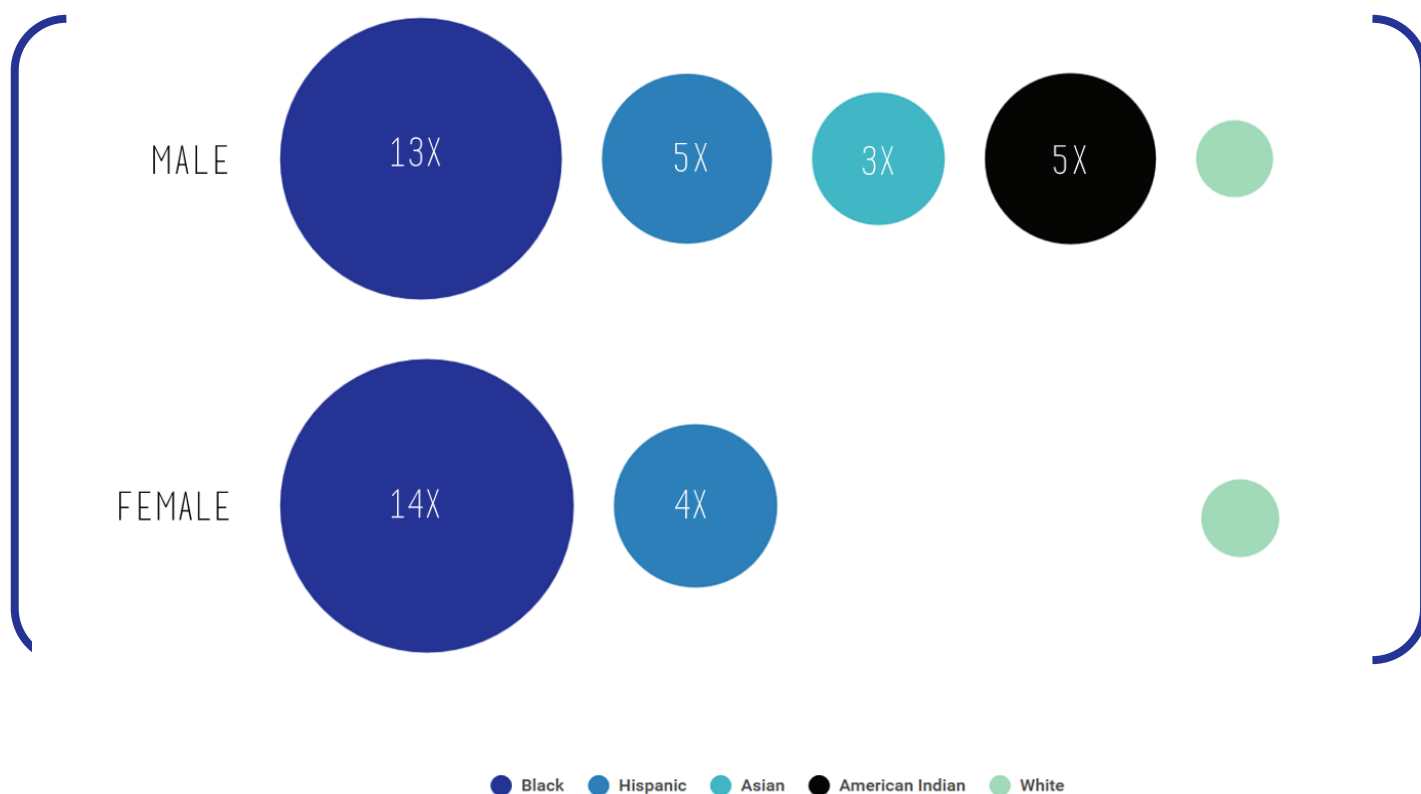


Wisconsin HIV/AIDS Surveillance Annual Review

New diagnoses, prevalent cases, and deaths through December 31, 2015

HIV diagnosis rate by sex and race/ethnicity, Wisconsin, 2015



Racial and ethnic minorities were more likely than Whites to be diagnosed with HIV during 2015. The size of the circle represents the size of the disparity, compared to Whites.



Wisconsin Department of Health Services
Division of Public Health
AIDS/HIV Program
P-00484 (April 2016)

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ABBREVIATIONS

CDC	Centers for Disease Control and Prevention
DHS	Department of Health Services
DPH	Division of Public Health
MSM	Men who have sex with men
PLHIV	People living with HIV
PWID	People who inject drugs

EXECUTIVE SUMMARY

The annual Wisconsin HIV/AIDS surveillance review presents cases of HIV newly diagnosed during 2015, prevalent cases as of December 31, 2015, and deaths through 2014 among Wisconsin residents. Reporting annually on HIV surveillance data is important for policy makers, program planners, HIV service providers, and the public to enable effective planning of HIV prevention and care services and ensure efficient use of resources. For planning HIV prevention, testing, and linkage strategies, it is important to focus on cases newly diagnosed in Wisconsin—those infections that might have been prevented or identified earlier within the state. When planning care and treatment services, the focus should be on prevalent cases—those currently living with HIV in Wisconsin—irrespective of where they were first diagnosed.



NEW DIAGNOSES

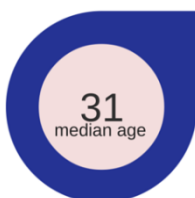
Trend: During 2015, 225 new cases of HIV infection were diagnosed in Wisconsin. Between 2009 and 2015, both the number and the rate of new infections declined. The number of new diagnoses over the last decade ranged from a low of 221 in 2014 to a high of 284 in 2009, with an average of 247 new diagnoses per year. The HIV diagnosis rate in Wisconsin was the ninth lowest among the 50 states in 2014.



Sex: Seven times as many males as females were diagnosed with HIV during 2015 (196 males and 29 females). Between 2006 and 2015, the HIV diagnosis rate increased among younger (ages 13-29) males, and declined among older (ages 30-59) males and females. The diagnosis rate fluctuated for younger females.

Gender: Since 1982, 37 known transgender individuals have been diagnosed with HIV in Wisconsin. During 2006–2015, there were 30 new HIV diagnoses in this population. Thirteen of the 30 were Black, 10 were Hispanic, and 21 were under age 30 at the time of diagnosis.

Racial/ethnic groups: HIV infection disproportionately affects racial/ethnic minorities. During 2015, 62% of new diagnoses were among racial/ethnic minorities, despite minorities making up just 17% of Wisconsin's population. During 2011-2015 the HIV diagnosis rate for males was 13-fold higher among Blacks, 6-fold higher among Hispanics, and 2-fold higher among Asians and American Indians compared to Whites. For females, the HIV diagnosis rate was 25-fold higher among Blacks and 8-fold higher among Hispanics compared to Whites.



Age: The median age at HIV diagnosis was 31 years in 2015 but varied considerably by risk exposure group. The median age at diagnosis was 29

Data highlights

New diagnoses in 2015:



80% were MSM



1 in 2 MSM were under age 30



53% were in Milwaukee

Of the **225** new cases of HIV infection diagnosed in Wisconsin during 2015:

- **80%** were attributed to men who have sex with men, including those who also injected drugs.
- **16%** were attributed to high-risk heterosexual contact.
- **4%** were attributed to injection drug use.

Reflecting national trends, MSM continue to be the population most affected by HIV in Wisconsin. During 2015:

- Young MSM accounted for 40% of all new diagnoses in Wisconsin.
- Diagnoses in young Black MSM increased from 2006 to 2015, but the annual increase was less steep in recent years.

years for men who have sex with men (MSM) overall, 33 years for those with high-risk heterosexual contact, and 54 years for those with a history of injection drug use.

Risk: After adjusting for unknown risk, MSM accounted for 80% of new diagnoses in 2015, including 3% among MSM who also injected drugs. High-risk heterosexual contact and injection drug use (excluding MSM/PWID) accounted for the other 16% and 4% of new diagnoses, respectively. From 2006 to 2015 the number of HIV diagnoses was stable among MSM, and declined among those with high-risk heterosexual contact and people who inject drugs.

Geography: During 2015, HIV cases were diagnosed in 33 of the 72 counties in Wisconsin. However, the distribution was uneven: Milwaukee County cases accounted for 53% of new diagnoses, Dane County for 9%, Kenosha County for 6% and Rock County for 4%. The Department of Corrections and all other counties each accounted for fewer than 4% of diagnoses.

Disease status at diagnosis: The proportion of individuals who progressed to AIDS within 12 months of HIV diagnosis declined from 38% in 2012 to 28% in 2014. The proportion of concurrent HIV and AIDS diagnoses also declined, from 30% in 2012 to 18% in 2015. These cases represent individuals living for several years with undiagnosed HIV infection, which may lead to poorer health outcomes and increased opportunities for disease transmission.

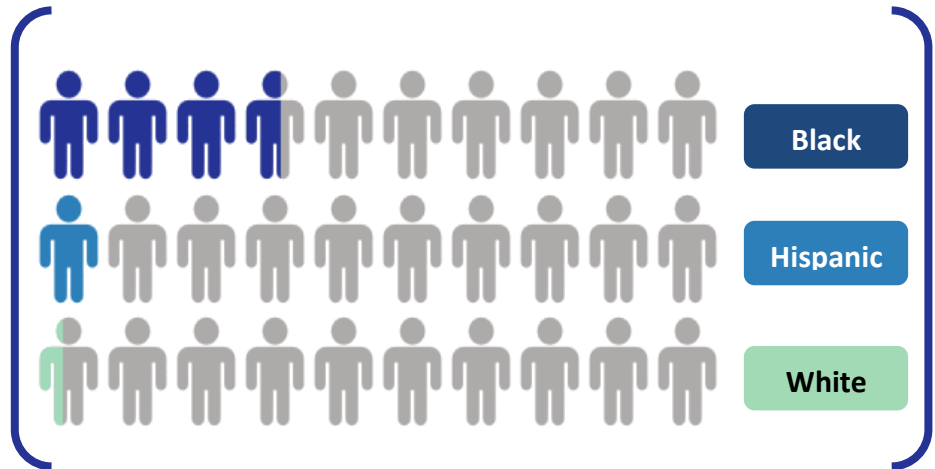
Diagnosed outside of Wisconsin: In addition to the 225 cases diagnosed in Wisconsin during 2015, 209 individuals previously diagnosed with HIV infection

moved to Wisconsin from another state.

PEOPLE LIVING WITH HIV INFECTION

As of the end of 2015, 6,868 individuals reported with HIV or AIDS were presumed to be alive and living in Wisconsin. Three-quarters (74%) of these were first diagnosed in Wisconsin; the others were initially diagnosed elsewhere. The Centers for Disease Control and Prevention (CDC) estimates that 12.8% of people living with HIV (PLHIV) are unaware of their HIV status. Thus, an estimated 1,000 individuals in the state are unaware of their HIV infection, so the total number of PLHIV in Wisconsin is estimated to be about 7,900.

HIV prevalence varies by demographic group. More than one in three (36%) Black MSM is estimated to be living with HIV, compared to 10% of Hispanic and 4% of White MSM. Fewer than 1 in 1,000 females and non-MSM males in Wisconsin are HIV-positive. Within the non-MSM groups, the prevalence is highest among Blacks, at about 1.3%.



Nearly half (47%) of all PLHIV reside in Milwaukee County. Dane County has the second highest proportion (12%), followed by Kenosha and Brown counties, with 4% each. Racine, Waukesha, and Rock counties and the Wisconsin Department of Corrections each have 3% of the state's prevalent cases. All other counties have 2% or fewer of the state's HIV cases.

Deaths

Deaths occurring in Wisconsin among people living with HIV have declined markedly since the early 1990s. Deaths peaked in 1993 (373 deaths). In 2014, the most recent year with complete data, 81 deaths among people living with HIV are known to have occurred in Wisconsin. HIV as the underlying cause of death is also on the decline—41 of the 81 reported deaths in 2014 were attributed to causes other than HIV, while 40 had HIV indicated as the underlying cause of death. The median age at death rose from age 37 in 1990 to age 45 in 2006 to age 57 in 2014, indicating that people are living longer with HIV.

IMPLICATIONS

HIV diagnoses

Trends in recent cases first diagnosed in Wisconsin should guide planning for HIV prevention. The number of new diagnoses among young Black MSM continues to increase, although the annual increase was less steep in recent years than it was in the beginning of the decade. In addition, the proportion of all new diagnoses attributed to male-male sexual contact continues to rise, meaning HIV in Wisconsin is increasingly becoming a disease of gay and bisexual men. These results suggest that MSM, especially young MSM, of color should be the top priority for HIV prevention efforts in Wisconsin.

Maintaining prevention efforts in those with high-risk heterosexual behaviors and those who inject drugs is also important. While the number of new cases of HIV in PWID continues to decline, increases in cases of hepatitis C and heroin overdoses in young adult PWIDs in rural parts of Wisconsin underscore the risk that HIV cases could increase in PWIDs. Thus it is important to provide effective prevention services to PWID to prevent both HIV and hepatitis C.

HIV prevalence

HIV prevalence data should guide planning for HIV care and treatment services. At the end of 2015, 6,868 people were reported with HIV and presumed to be living in Wisconsin. The fact that 47% of the PLHIV in Wisconsin are age 50 or older indicates that HIV care providers must attend to patients' health conditions related to aging as well as their HIV disease.

For additional information

The AIDS/HIV Program website (<https://www.dhs.wisconsin.gov/aids-hiv/data.htm>) includes annotated PowerPoint slides and county-level summary reports. Other reports regarding HIV are also available on this site.

CDC's HIV surveillance web page: <http://www.cdc.gov/hiv/statistics/index.html>

General information about HIV prevention and care services in Wisconsin:
<https://www.dhs.wisconsin.gov/aids-hiv/index.htm>

Information about hepatitis C: <https://www.dhs.wisconsin.gov/viral-hepatitis/hcv-program.htm>

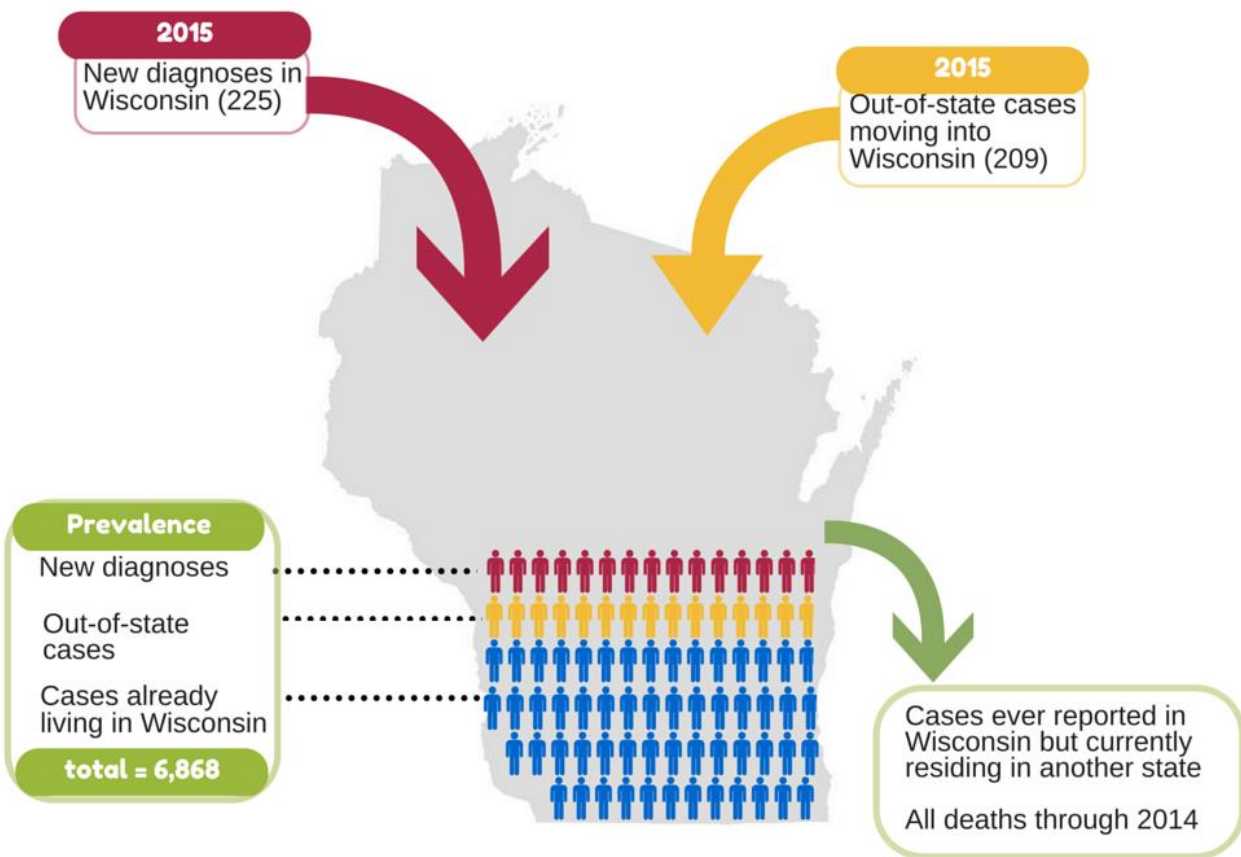
NEW DIAGNOSIS AND PREVALENT CASE DEFINITIONS

Total HIV reports

Since the beginning of the HIV epidemic, 13,334 people have been reported with HIV infection in Wisconsin. Of these, 9,664 (72%) individuals received their first verifiable HIV diagnosis while residing in Wisconsin. The other 28% were first diagnosed with HIV infection while residing in another state and subsequently moved to, and were reported in, Wisconsin.

New diagnoses refer to those individuals who received their first verifiable HIV diagnosis while residing in Wisconsin. During 2015 there were 225 new diagnoses of HIV infection among Wisconsin residents (Figure 1). In addition, there were 209 individuals already diagnosed with HIV who moved into Wisconsin and were reported during 2015. These individuals are not included in the analysis of new diagnoses but are described in the In-Migration section of the report; they are also included in the prevalence estimate if they were still alive and living in Wisconsin at the end of 2015.

Figure 1: Flow of cases of HIV infection in and out of Wisconsin, 2015



Wisconsin does not receive federal funding to conduct incidence surveillance so data are not available to determine when an infection was *acquired*, only when it was *diagnosed*. Therefore, the term *incidence* is not used in this report.

Prevalent cases refer to PLHIV whose last known address in the HIV surveillance database was in Wisconsin, and for whom the surveillance program has no evidence of death. Address information is obtained from HIV and AIDS case reports, laboratory records, death certificates, and other states' HIV surveillance programs.

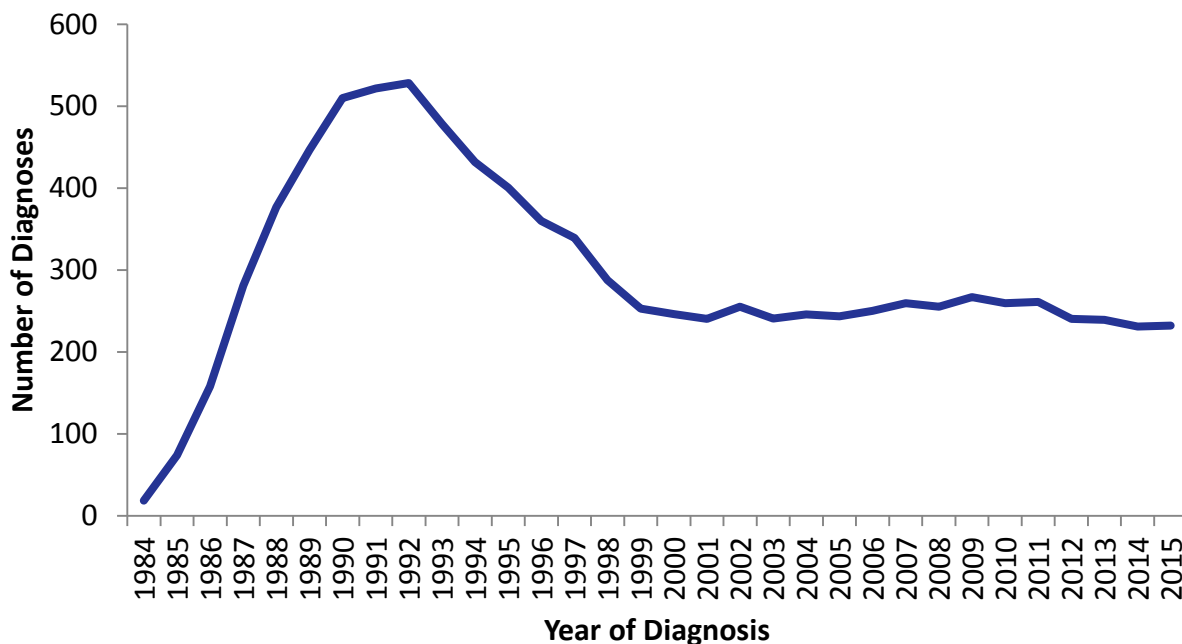
At the end of 2015 there were an estimated 6,868 people living with diagnosed HIV infection in Wisconsin. However, the CDC estimates that 12.8% of individuals living with HIV are unaware of their infection, and therefore, the actual prevalence of HIV in Wisconsin is likely closer to 7,900.

NEW DIAGNOSES

Number and rate

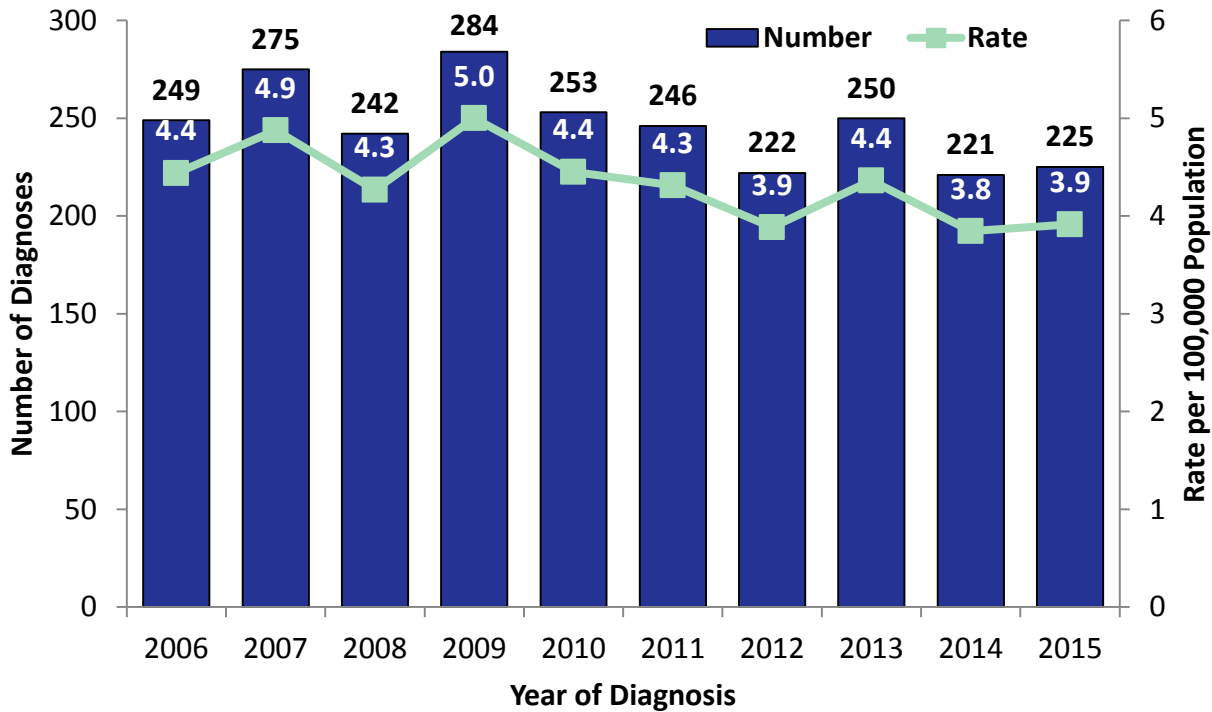
A total of 9,664 individuals were first diagnosed and reported with HIV infection in Wisconsin. Diagnoses rose rapidly during the 1980s until peaking in 1992, then declined until about 2000 (Figure 2). After a period of stability, the annual number of new diagnoses has declined in recent years.

Figure 2: Three-year rolling average of the number of new HIV diagnoses, Wisconsin, 1984 - 2015



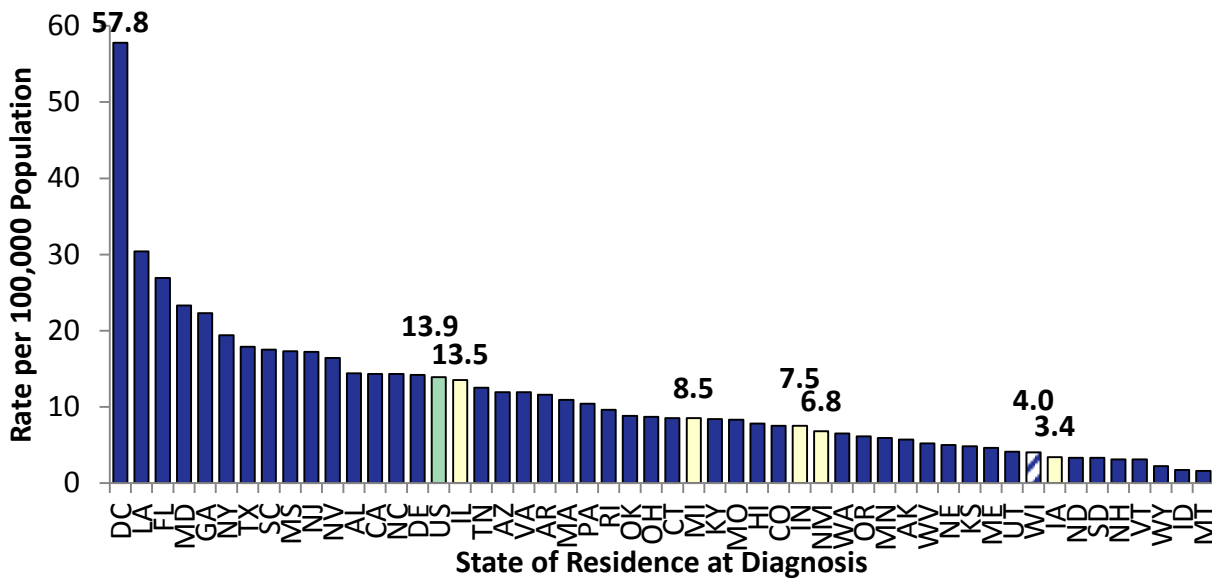
There were 225 new HIV diagnoses among Wisconsin residents during 2015, at a rate of 3.9 new infections per 100,000 population. Statewide, both the number and the rate of HIV diagnoses among Wisconsin residents have declined since 2009 (Figure 3). Between 2006 and 2015, the number of new diagnoses ranged from a low of 221 in 2014 to a high of 284 in 2009, with an average of 247 new diagnoses per year.

Figure 3: Number and rate of new HIV diagnoses, Wisconsin, 2006-2015



The HIV diagnosis rate in Wisconsin is low by national standards. The most recently available estimate for the national HIV diagnosis rate (2014)¹ is 13.9 infections per 100,000 (Figure 4). By comparison, Wisconsin’s estimated 2014 diagnosis rate was 4.0 per 100,000 population. With the exception of Iowa, Wisconsin has a lower diagnosis rate than other Midwest states.

Figure 4: Estimated HIV diagnosis rate[†] by state, 2014



[†]Data have been statistically adjusted to account for reporting delays.

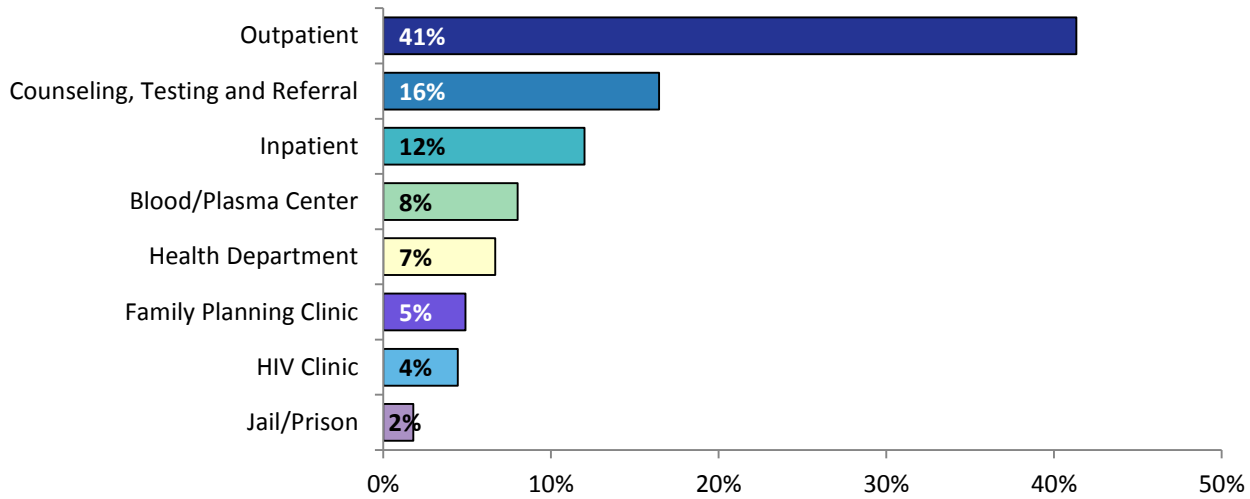
¹ Centers for Disease Control and Prevention. *HIV Surveillance Report, 2014*; vol. 26. <http://www.cdc.gov/hiv/library/reports/surveillance/>. Published November 2015.



Facility type of diagnosis

During 2015, the top settings for HIV diagnosis were outpatient setting (41%), Counseling, Testing and Referral site (16%), inpatient setting (12%), blood/plasma center (8%), and Health Department (7%). Figure 5 shows the facility type at diagnosis for over 90% of individuals first diagnosed with HIV in Wisconsin during 2015. The remaining cases were diagnosed via life insurance application (2%), Emergency Room or Urgent Care (1%) and at an out-of-state facility (1%).

Figure 5: Facility of HIV diagnosis, Wisconsin, 2015

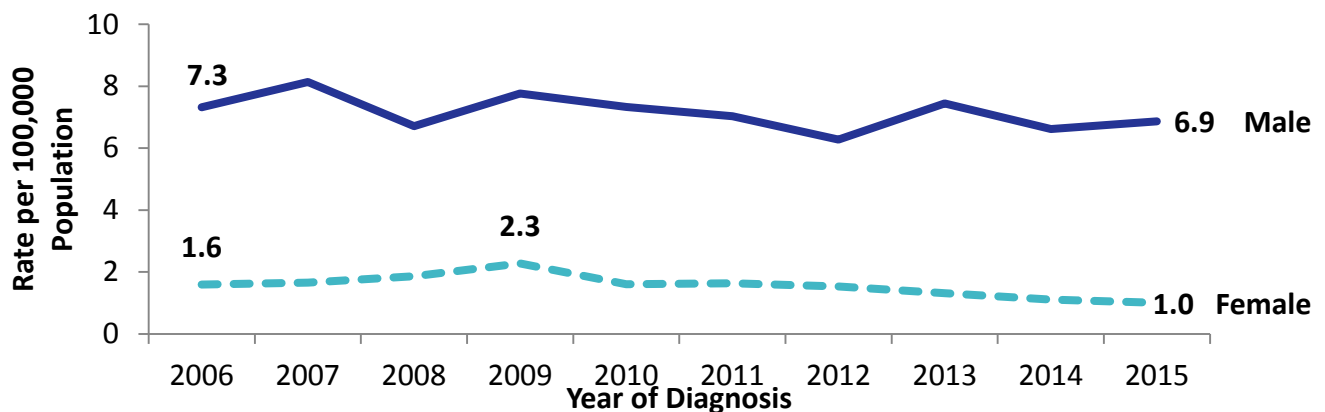


Sex and age at diagnosis

During 2015, 196 males and 29 females were diagnosed with HIV infection in Wisconsin (see Technical Notes for definition of “Sex”). Newly diagnosed males were generally younger than newly diagnosed females. During 2015, the median age at diagnosis (the age at which half of cases were older and half were younger) was 37 years for females and 30 years for males.

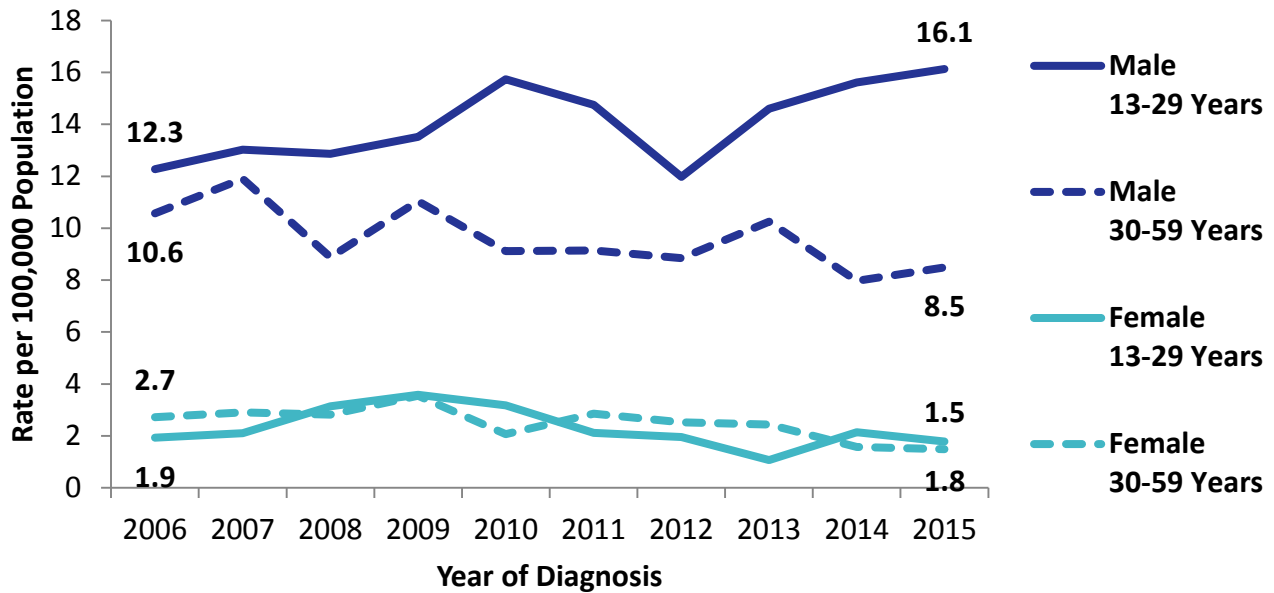
During 2015, the rate of HIV diagnosis was 1.0 per 100,000 for females and almost seven-fold higher (6.9 per 100,000) for males. The overall HIV diagnosis rate fluctuated over the last decade for males. The rate has declined among females since 2009, from 2.3 per 100,000 in 2009 to 1.0 per 100,000 in 2015 (Figure 6).

Figure 6: HIV diagnosis rate by sex, Wisconsin, 2006-2015



For both males and females, the HIV diagnosis rate varies by age. While the overall diagnosis rate for males was stable, the rate increased among younger males (ages 13-29) from 12.3 per 100,000 to 16.1 per 100,000, and declined among older males (ages 30-59) (Figure 7). The overall decline in the diagnosis rate among females is primarily due to a decline among older females. The diagnosis rate among younger females (ages 13-29) fluctuated. Diagnosis rates among males and females ages 60 and older are unreliable due to small case counts.

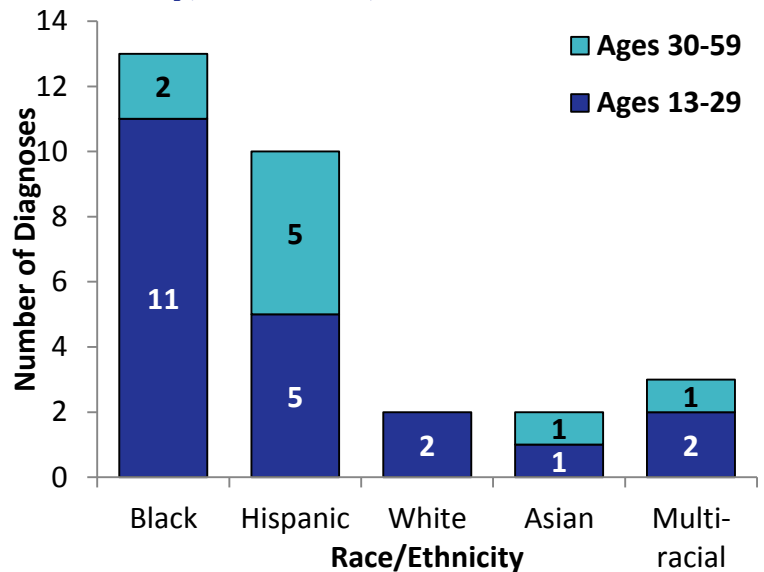
Figure 7: HIV diagnosis rate by age at diagnosis and sex, Wisconsin, 2006-2015



Transgender identity

The term “transgender” refers to people whose gender identity does not conform to their sex assigned at birth. It includes people who self-identify as male-to-female or transgender women, female-to-male or transgender men, and many other gender nonconforming identities. A transgender person may have the anatomy of their sex at birth, the other sex, or a combination. Gender identity and sexual orientation are separate, distinct concepts, with gender identity referring to an individual’s sense of themselves and sexual orientation referring to an individual’s attractions and partnering.

Figure 8: Number of HIV diagnoses among transgender individuals by age at diagnosis and race/ethnicity, Wisconsin, 2006-2015



A total of 37 known transgender individuals have been diagnosed with HIV infection in Wisconsin since the beginning of the epidemic (5 female-to-male and 32 male-to-female). While the data collection of self-reported gender identity has improved over time, this likely underestimates the true number of transgender individuals diagnosed with HIV infection in Wisconsin. Of the 37 known transgender individuals diagnosed with HIV in Wisconsin, 30 of the diagnoses occurred between 2006 and 2015 (Figure 8). Of these 30 recent diagnoses, the majority were from a racial or ethnic minority group (n=25), and were under age 30 (n=21).

Race/ethnicity

During 2015, two-thirds of individuals (62%) newly diagnosed with HIV infection were members of minority racial or ethnic groups, yet racial/ethnic minorities made up just 17% of the state’s population. This health disparity is not due to innate biologic factors—one’s race or ethnicity alone does not make one more or less susceptible to HIV infection. Rather, other determinants of health² can disproportionately affect persons of color and can put individuals at greater risk for HIV exposure.

The number and percent of new diagnoses in each racial/ethnic group are shown in Table 1. Since the early 1990s, the disproportionate impact of HIV infection on racial/ethnic minorities has continued to grow (Figure 9).

Figure 9: Percentage of new HIV diagnoses among Whites and persons of color, Wisconsin, 1982-2015

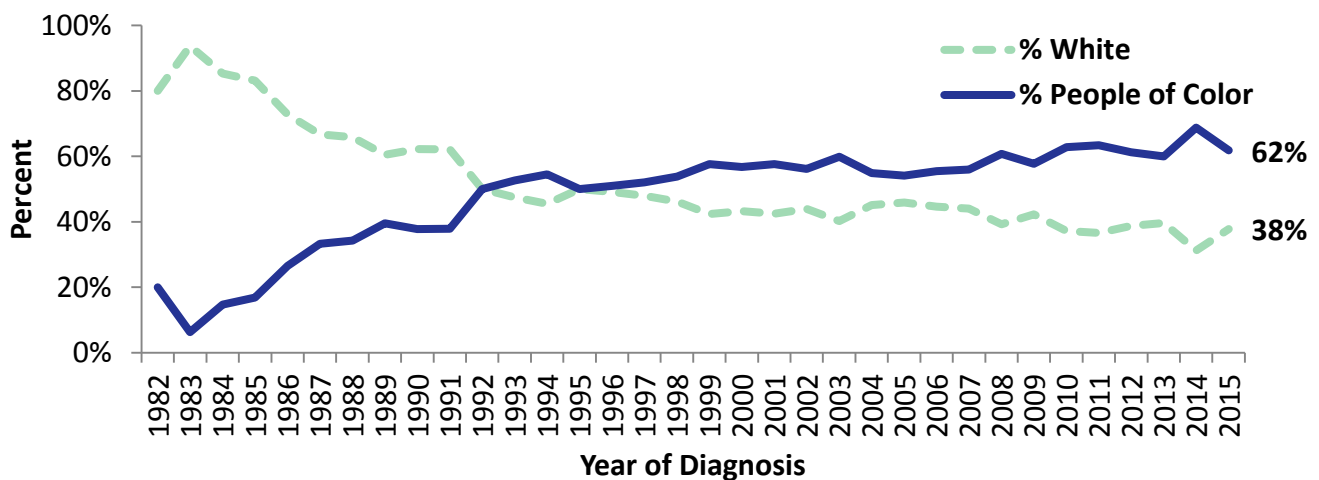


Table 1: Number and percentage of new HIV diagnoses by sex and race/ethnicity, Wisconsin, 2015

	Black	White	Hispanic	American Indian	Asian	Multi-Racial	Unknown	Total
Male	76 (39%)	74 (38%)	30 (15%)	4 (2%)	7 (4%)	4 (2%)	1 (<1%)	196
Female	13 (45%)	11 (38%)	4 (14%)	0	0	1 (3%)	0	29
TOTAL	89 (40%)	85 (38%)	34 (15%)	4 (2%)	7 (3%)	5 (2%)	1 (<1%)	225

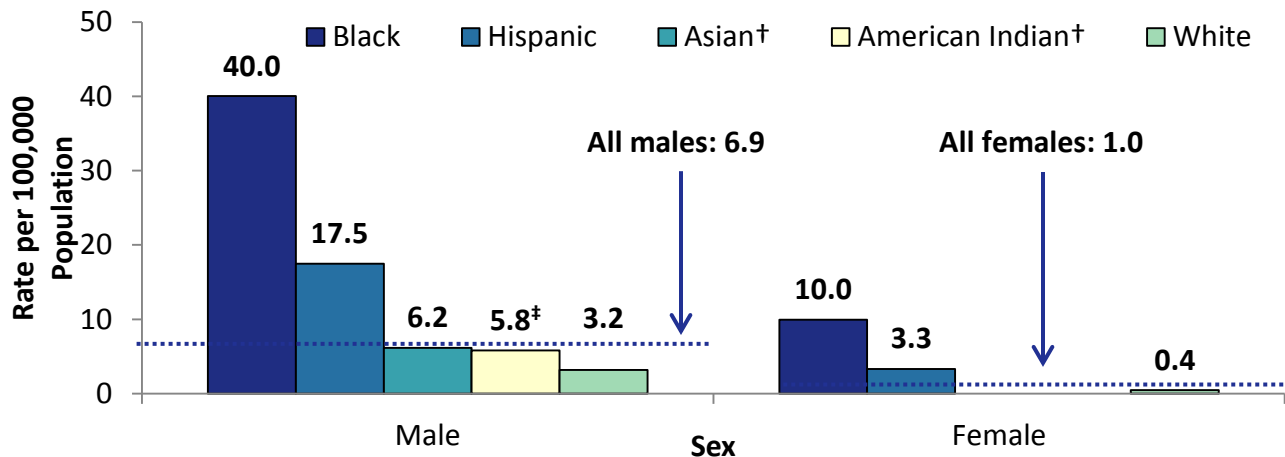
² Centers for Disease Control and Prevention. Disparities in HIV/AIDS, Viral Hepatitis, STDs, and TB. *Defining Health Disparities*. <http://www.cdc.gov/nchstp/healthdisparities/>. Published March 2014. Accessed April 2015.



Race/ethnicity and sex

The HIV diagnosis rate further highlights the disproportionate impact of HIV on racial/ethnic minorities. During 2011-2015, the HIV diagnosis rate for males was 13-fold higher among Blacks, 6-fold higher among Hispanics, and 2-fold higher among Asians and American Indians compared to Whites (Figure 10). For females, the HIV diagnosis rate was 25-fold higher among Blacks and 8-fold higher among Hispanics compared to Whites. A comparison to Whites was chosen because this is the population group with the lowest, stable rate.

Figure 10: HIV diagnosis rate by sex and race/ethnicity, Wisconsin, 2011-2015



†Rates based on case counts less than 5 have been suppressed.
‡Rates are statistically unreliable due to case count <12.

Annual HIV diagnosis rates for the larger racial/ethnic groups are shown in Table 2. The HIV diagnosis rate declined from 2009-2015 among Black females and White males. There were no statistically significant changes among the other groups.

Table 2: HIV diagnosis rate per 100,000 by sex and race/ethnicity, Wisconsin, 2006-2015

Year of Diagnosis	Black Male	White Male	Hispanic Male	Black Female	White Female	Hispanic Female
2006	39.9	4.0	20.0	10.0	0.7	7.6 [†]
2007	40.5	4.6	26.0	15.2	0.5	†
2008	39.4	3.4	17.0	17.2	0.5	3.4 [†]
2009	40.5	4.3	18.1	18.6	0.7 [†]	3.9 [†]
2010	46.5	3.6	14.2	15.1	0.4	†
2011	41.6	3.3	17.7	11.4	0.5	5.5 [†]
2012	36.7	3.0	16.2	12.8	0.6	3.0 [†]
2013	41.5	3.8	18.5	10.2	0.3 [†]	3.4 [†]
2014	41.2	2.6	19.7	9.1	0.3 [†]	2.8 [†]
2015	39.6	3.1	15.6	6.6	0.5 [†]	†

†Rates based on case counts less than 5 have been suppressed.
‡Rates are statistically unreliable due to case count <12.



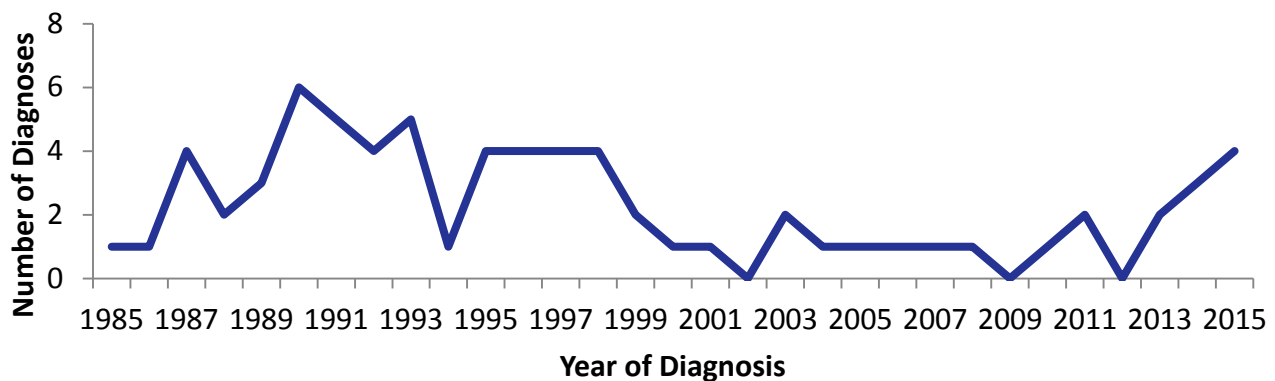
American Indians and Asians

Due to the small number of American Indians and Asians diagnosed in Wisconsin each year, these populations are excluded from many sections of the HIV/AIDS Surveillance Annual Review. Therefore, additional information for these populations is presented here, some of which covers a longer period of time than the rest of this report.

American Indians

During 1985-2015, 71 American Indians were diagnosed with HIV infection in Wisconsin, of whom 15 were diagnosed during the recent decade (2006-2015). The number of cases has fluctuated over time (Figure 11).

Figure 11: Number of HIV diagnoses among American Indians, Wisconsin, 1985-2015



Of the 71 American Indians diagnosed with HIV in Wisconsin since 1985:

- Two-thirds were male and one-third was female.
- 46% were under age 30 at the time of diagnosis.
- 57% were diagnosed in the Northeastern region, 20% in the Southeastern region, 16% in the Southern region, 11% in the Northern region, and 4% in the Western region.
- 35% of diagnoses were attributed to Men Who Have Sex with Men (MSM), 10% to MSM who also inject drugs, 21% to injection drug use, and 20% to high-risk heterosexual contact; 10% had unknown risk, and 4% were perinatally infected (before or shortly after birth).

Of the 15 recently diagnosed cases:

- 53% were under age 30 at the time of diagnosis.
- 40% were diagnosed in the Northeastern region, 33% in the Southeastern region, 13% in the Southern region, and 7% each in the Western and Northern regions.
- 10 of the infections were attributed to MSM, 1 to PWID, and 4 had unknown risk.

Asians

During 1985-2015, 106 Asians were diagnosed with HIV infection in Wisconsin, of whom 59 were diagnosed during the recent decade (2006-2015). The number of cases has fluctuated during the recent decade, with no clear trend discernable.

Of the 59 recently diagnosed cases:

- 75% were male and 25% were female.
- 37% were under age 30 at the time of diagnosis.



- 54% were diagnosed in Milwaukee County and 17% in Dane County.
- 51% of diagnoses were attributed to MSM, 3% to MSM/PWID, 2% to PWID, and 17% to high-risk heterosexual contact; 27% had unknown risk.

Reported risk exposure category and sex

Reported risk exposure categories for HIV infection include MSM, people who injected drugs (PWID), MSM who have also injected drugs (MSM/PWID), and heterosexual contact with a high-risk partner, including someone known to be HIV-positive, a PWID, or an MSM. The risk exposure profile of those diagnosed with HIV infection in Wisconsin during 2015 is shown in Table 3.

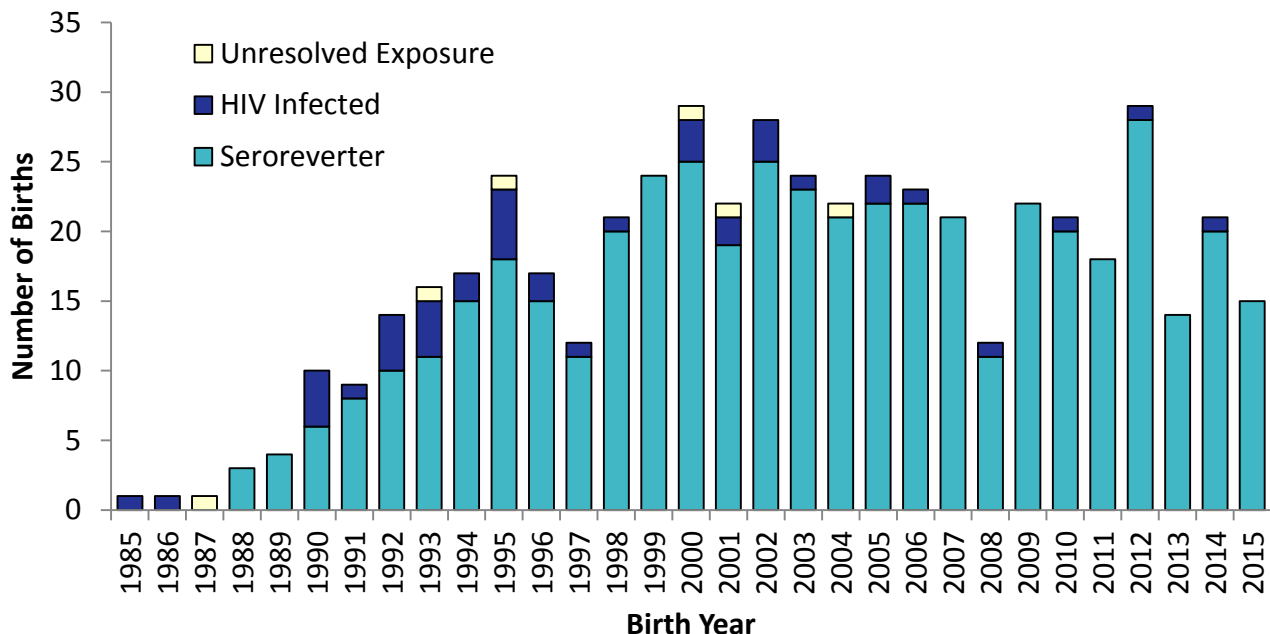
Table 3: Number and percentage of new HIV diagnoses by sex and reported risk exposure category, Wisconsin, 2015

	MSM and MSM/PWID	PWID	High-Risk Heterosexual	Unknown	Total
Male	154 (79%)	3 (2%)	9 (5%)	30 (15%)	196
Female	-	2 (7%)	14 (48%)	13 (45%)	29
TOTAL	154 (68%)	5 (2%)	23 (10%)	43 (19%)	225

Diagnostic status of HIV-exposed infants born in Wisconsin

Since the beginning of the HIV epidemic, there have been 519 infants born in Wisconsin hospitals who were known or presumed to be born to HIV-positive mothers and were reported to the HIV Surveillance Program. Of these, 42 (8%) were HIV infected (Figure 12). Six infants (1%) have an unresolved diagnostic status since the HIV Surveillance Program has been unable to obtain definitive laboratory results on these cases. The remaining 471 (91%) infants are seroreverters, meaning they are not infected with HIV.

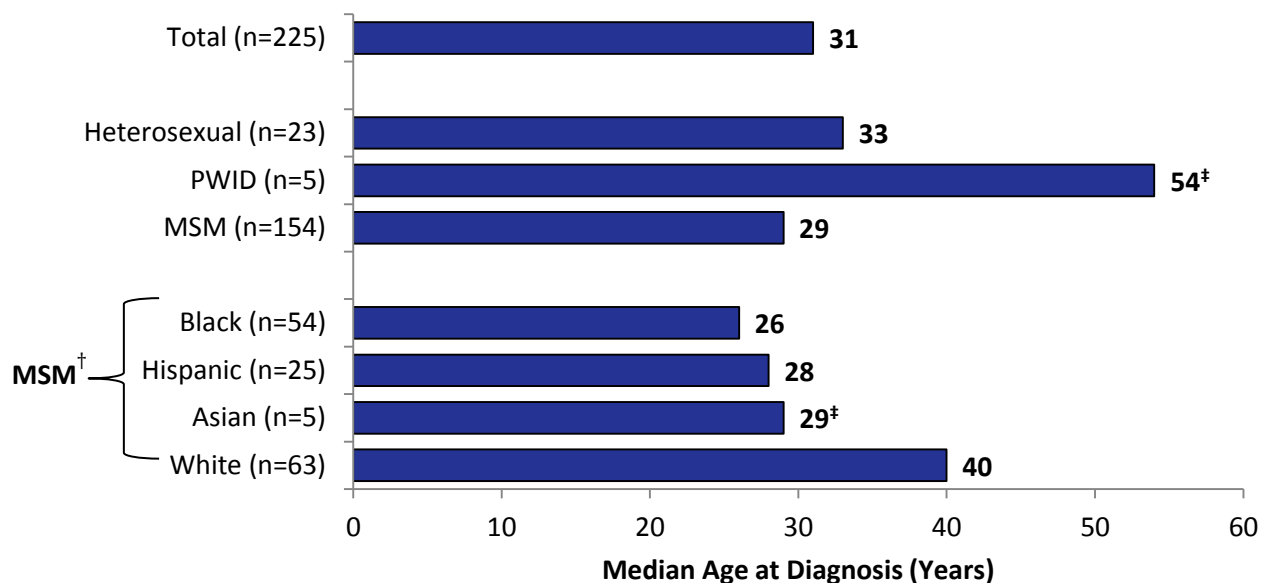
Figure 12: Diagnostic status of HIV-exposed infants born in Wisconsin, 1985-2015



Reported risk exposure category and age

The median age at HIV diagnosis during 2015 was 31 years (range 16-68 years), with variation by risk exposure group (Figure 13). The median age at diagnosis was older among those with high-risk heterosexual and PWID exposure, at 33 and 54 years, respectively. The median age at diagnosis among all MSM was 29 years, but was lower among Black and Hispanic MSM (26 and 28 years, respectively). The median age at diagnosis among MSM reflects, in part, the median age of the male population. However, differences in sexual debut, HIV prevalence, and HIV testing patterns may also explain the differing median age at diagnosis among MSM of various races/ethnicities.

Figure 13: Median age at HIV diagnosis by reported risk exposure, and among MSM by race/ethnicity, Wisconsin, 2015



[†]Includes MSM/PWID;

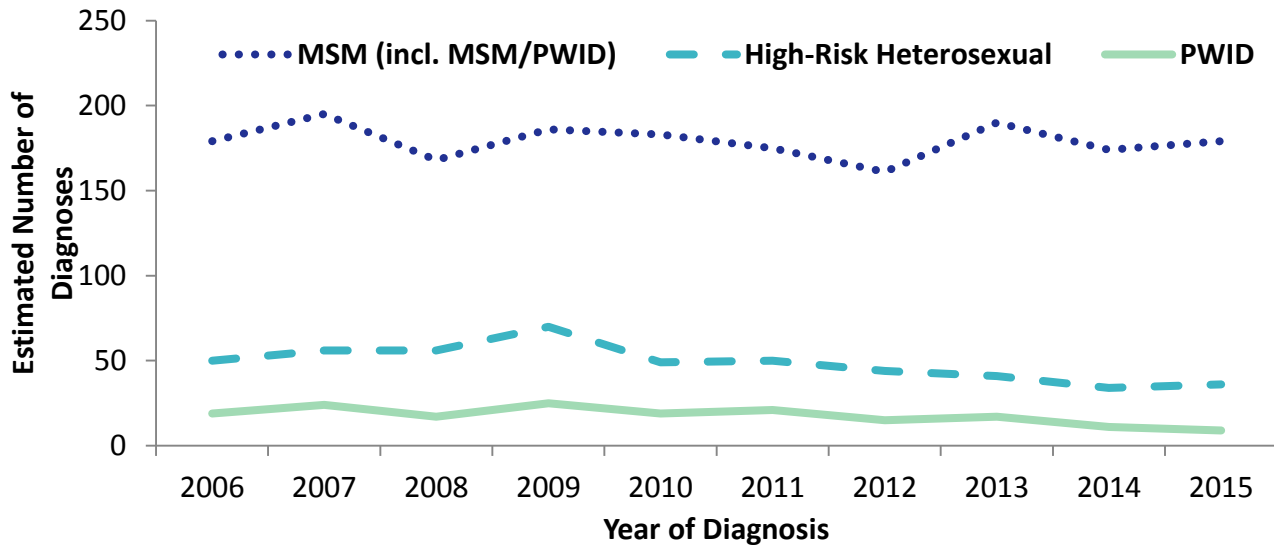
[‡]Median ages based on case count <12 are statistically unreliable.

Estimated risk exposure category

In order to include all cases in risk-based analyses, a statistical method called imputation is used to estimate the most likely risk categories for individuals with unknown risk (see Technical Notes). After adjusting to account for those with unknown risk, 80% of new diagnoses during 2015 were attributed to MSM, 16% to high-risk heterosexual contact, and 4% to injection drug use.

From 2006 to 2015, the estimated number of new diagnoses has been stable among MSM overall, and has declined among those with high-risk heterosexual contact and PWID (Figure 14). Despite stability in the *number* of new infections among MSM, the *proportion* of infections attributed to male-male sexual contact has increased over the decade, while the proportions attributed to injection drug use and high-risk heterosexual contact have decreased (data not shown).

Figure 14: HIV diagnoses by estimated risk exposure group[†], Wisconsin, 2006-2015



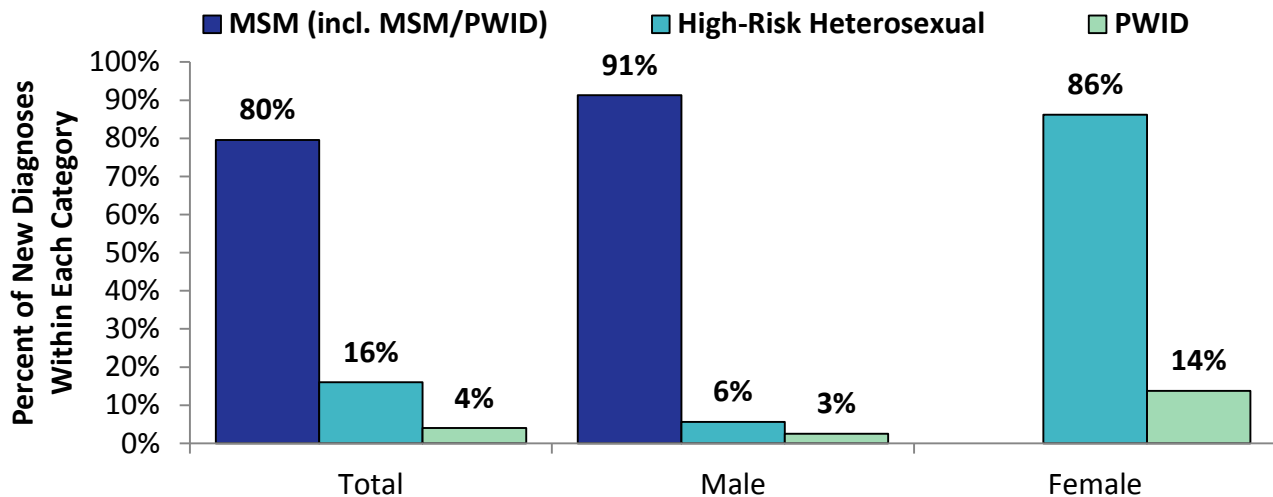
[†]Data have been statistically adjusted to account for those with unknown risk.

Estimated risk exposure category and sex

Among males, after adjusting to account for those with unknown risk, 91% of 2015 diagnoses were among MSM, including 3% who also injected drugs (Figure 15). Injection drug use alone accounted for 3%, and high-risk heterosexual contact for 6%, of diagnoses among males.

Among females, 86% of diagnoses were attributable to high-risk heterosexual contact and 14% to injection drug use.

Figure 15: Percentage of HIV diagnoses by sex and estimated risk exposure group,[†] Wisconsin, 2015



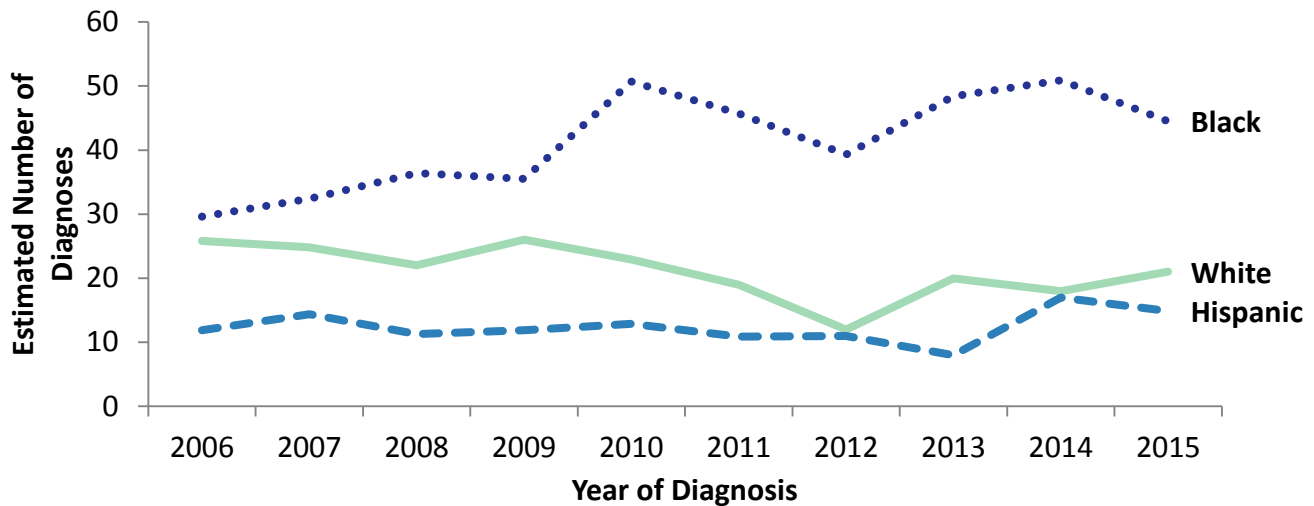
[†]Data have been statistically adjusted to account for those with unknown risk.



Young MSM by race/ethnicity

Among young MSM (ages 13-29) diagnosed with HIV infection during 2015, Blacks accounted for 50% of diagnoses, Whites for 24%, and Hispanics for 17%. The number of new diagnoses among young Black MSM has increased over the last decade. However, the annual increase has been less steep in recent years (Figure 16). The number of new diagnoses fluctuated among young White MSM and was stable among young Hispanic MSM during the decade.

Figure 16: HIV diagnoses among MSM[†], ages 13-29, by race/ethnicity, Wisconsin, 2006-2015



[†]MSM includes MSM/PWID; data have been statistically adjusted to account for those with unknown risk.

County of residence

During 2015, new HIV diagnoses were made among residents from 33 Wisconsin counties. Counties with the largest numbers of new diagnoses were Milwaukee (119), Dane (20), Kenosha (14), Rock (8), Racine (7), Brown (6), Waukesha (6) and Outagamie (5) (Table 4). All other counties had fewer than five new diagnoses each during 2015. There were three new diagnoses made within the Department of Corrections among inmates upon admission into prison.

Table 4: Number, percent and rate of new HIV diagnoses by county of residence, Wisconsin, 2015

County of Residence	Number	Percent	Rate†
Adams	1	0.4%	-
Brown	6	2.7%	2.4‡
Calumet	2	0.9%	-
Columbia	1	0.4%	-
Crawford	1	0.4%	-
Dane	20	8.9%	3.9
Dodge	1	0.4%	-
Dunn	4	1.8%	-
Eau Claire	2	0.9%	-
Fond du Lac	1	0.4%	-
Kenosha	14	6.2%	8.4
La Crosse	2	0.9%	-
Langlade	1	0.4%	-
Marathon	2	0.9%	-
Menominee	1	0.4%	-
Milwaukee	119	52.9%	12.5
Monroe	1	0.4%	-
Outagamie	5	2.2%	2.8‡
Ozaukee	1	0.4%	-
Pierce	1	0.4%	-
Portage	1	0.4%	-
Racine	7	3.1%	3.6‡
Rock	8	3.6%	5.0‡
Saint Croix	2	0.9%	-
Sheboygan	2	0.9%	-
Trempealeau	1	0.4%	-
Vernon	1	0.4%	-
Walworth	1	0.4%	-
Washington	1	0.4%	-
Waukesha	6	2.7%	1.5‡
Waupaca	2	0.9%	-
Waushara	1	0.4%	-
Winnebago	3	1.3%	-
Dept. of Corrections	3	1.3%	-
TOTAL	225	100%	3.9

†Rates calculated for counts ≥ 5 .

‡Estimate is statistically unreliable due to case count < 12 .



Birth country

Among individuals first diagnosed with HIV infection in Wisconsin during 2015, most (93%) were born in the United States or were likely born in the U.S. (unreported country of birth). The remaining 7% were born outside of the U.S., with Mexico (n=6) as the most common country of birth. Some foreign-born individuals report being diagnosed with HIV infection in their country of birth. However, in the absence of sufficient evidence, these individuals are considered to have their first verifiable HIV diagnosis in Wisconsin.

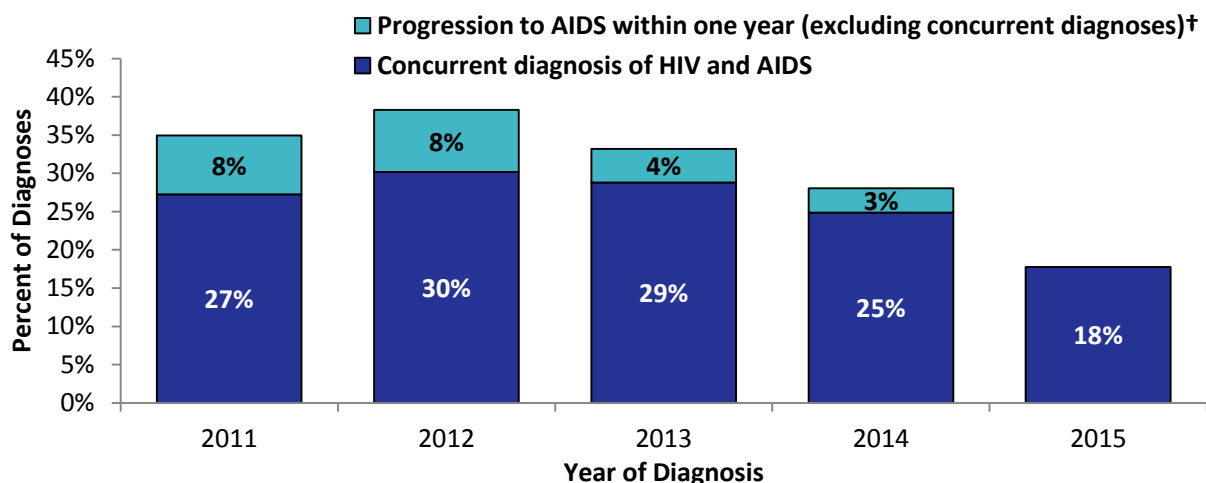
Disease status at diagnosis

According to the CDC, late testers are individuals 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. AIDS typically develops 8 to 10 years after initial HIV infection in the absence of treatment, and is determined based on very low CD4 count and/or an AIDS-defining opportunistic infection. Early diagnosis is thus important both for optimal health outcomes for the infected individual and for reducing the risk of further disease transmission.

The total percentage of people diagnosed with HIV infection in Wisconsin who were concurrently diagnosed with HIV and AIDS has declined since 2012 (from 30% to 18%) (Figure 17). This may reflect, in part, a 2014 change to the AIDS surveillance case definition, in which individuals with an AIDS defining CD4 count (<200 cells/mL) are no longer designated as an AIDS case if a negative HIV test in the previous 6 months has been documented. Instead, the recent negative suggests that a low CD4 count may reflect recent HIV infection. Individuals may be incorrectly classified as an AIDS case if recent negative tests are not documented. Collection of recent negative test status has improved over time, with only 6% of new diagnoses in 2013 having a documented recent negative, compared to 32% in 2015.

The overall percentage of individuals progressing to AIDS within one year of HIV diagnosis (including concurrent diagnoses) declined from 2012 to 2014 (38% to 28%).

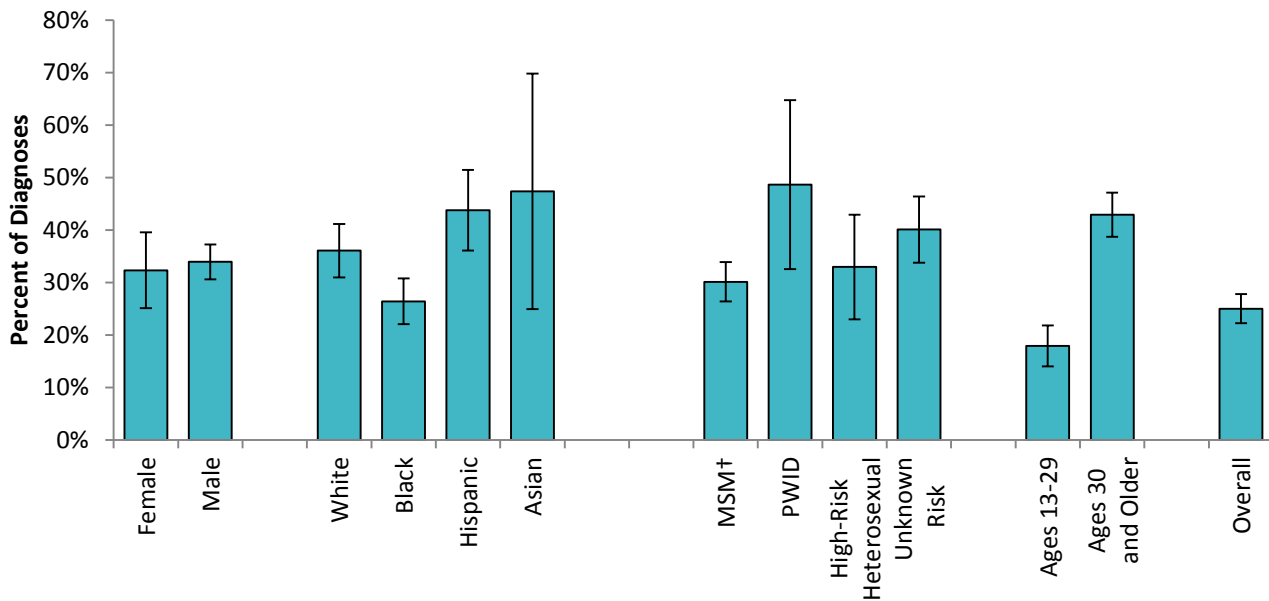
Figure 17: Percentage of new HIV diagnoses with a concurrent AIDS diagnosis or that progressed to AIDS within one year, Wisconsin, 2011-2015



†Those diagnosed with HIV infection during 2015 have not had one full year to evaluate progression to AIDS and therefore this category is excluded.

The proportion of individuals diagnosed in Wisconsin during 2011-2014 with a concurrent HIV and AIDS diagnosis or who progressed to AIDS within one year is shown in Figure 18 by demographic group. The following groups were more likely to have an AIDS diagnosis within a year of initial HIV diagnosis: Whites and Hispanics compared to Blacks, those with PWID and unknown risk compared to MSM, and people over the age of 30 at the time of diagnosis compared to people ages 13-29 years.

Figure 18: Percentage of new HIV diagnoses with a concurrent AIDS diagnosis or that progressed to AIDS within one year, by demographic group, Wisconsin, 2011-2014



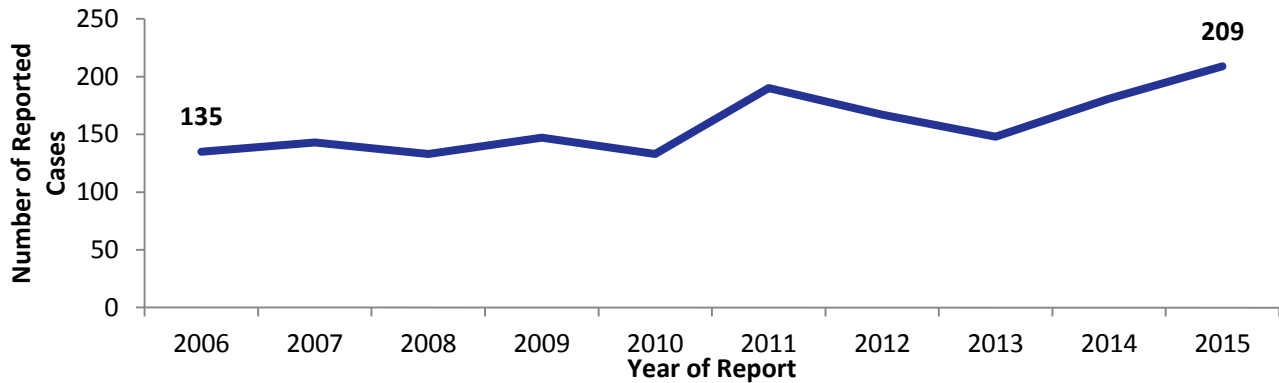
†Includes MSM/PWID

Of the 316 individuals who were concurrently diagnosed with HIV and AIDS or who progressed to AIDS within one year, 40% were diagnosed at an outpatient clinic, 27% in an inpatient setting (including Emergency Rooms), and 9% at a publicly funded Counseling, Testing and Referral (CTR) site.

IN-MIGRATION

Each year individuals who were previously diagnosed with HIV infection move into Wisconsin and are reported to the HIV Surveillance Program. During 2015, there were 209 individuals newly reported with HIV infection in Wisconsin who were first diagnosed outside of Wisconsin. The number of cases moving into Wisconsin increased from 135 in 2006 to 209 in 2015 (Figure 19).



Figure 19: Number of people previously diagnosed with HIV moving into Wisconsin, 2006-2015

A comparison of newly diagnosed cases and cases that moved into Wisconsin during 2015 is shown in Table 5. Cases moving into Wisconsin during 2015 were more likely to be older, White, and have PWID risk compared to newly diagnosed cases. The demographics of those moving into Wisconsin more closely resemble the demographics of prevalent cases rather than newly diagnosed cases.

Table 5: Comparison of new Wisconsin HIV diagnoses and cases moving into Wisconsin, 2015

	Wisconsin, Newly Diagnosed # (%)	In-migration # (%)
Total	225 (100%)	209 (100%)
Sex		
Male	196 (87%)	175 (84%)
Female	29 (13%)	34 (16%)
Median Age (Years)	31 (16-68)	43 (18-88)
Race/Ethnicity		
American Indian	4 (2%)	4 (2%)
Asian	7 (3%)	4 (2%)
Black	89 (40%)	76 (36%)
Hispanic	34 (15%)	25 (12%)
White	85 (38%)	92 (44%)
Multi-Racial	5 (2%)	8 (4%)
Risk		
MSM and MSM/PWID	154 (69%)	143 (68%)
PWID	5 (2%)	16 (8%)
High-Risk Heterosexual	23 (10%)	25 (12%)
Unknown	43 (19%)	25 (12%)



PREVALENT CASES

The total number of people living with HIV infection at a given point in time is termed “prevalence.” As described in Figure 1, prevalence includes newly infected cases, cases already living in Wisconsin, and cases that move into Wisconsin. In 2015, there were 6,868 prevalent cases of HIV in Wisconsin.

Unaware of HIV infection

Due to increased testing efforts, the number of people living with HIV who are unaware of their infection is decreasing. The most recent CDC estimates³ indicate that nationally, 12.8% of people (about 1 in 8) living with HIV are unaware of their infection—and this percentage varies considerably by demographic group. People in the younger age groups are estimated to be less aware of their positive HIV status; nearly half (44%) of people ages 13 to 24 with HIV are estimated to be unaware they are living with HIV (Figure 20).

For the first time in 2015, CDC provided state-level estimates of the percentage of people unaware of their HIV infection.⁴ The estimate for Wisconsin is 16.2% (about 1 in 6), 27% higher than the national estimate of 12.8%. When the national number (12.8%) is applied to the Wisconsin population, it yields an estimate of about 1,000 people living with HIV in Wisconsin who are unaware of their status. Use of the Wisconsin number (16.2%) yields an estimate of about 1,300 people. Figures 20 and 21 use the national number because demographic breakdowns are not available for the state-level estimates. However readers should bear in mind that numbers shown in Figures 20 and 21 may be underestimates.

These findings have implications for planning HIV testing services. Once people are aware of their infection, they are at lower risk of transmitting HIV for two reasons: they are more likely to reduce their risk behaviors, and they are more likely to receive medical care and have access to medication that reduces their viral load—the amount of virus circulating in the body. These estimates of the number unaware of their infection should guide priority-setting and population-targeting for testing services.

³ Centers for Disease Control and Prevention. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas—2013. *HIV Surveillance Supplemental Report* 2015;20(No. 2). http://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillancereport_vol20_no2.pdf. Published July 2015. Accessed March 2016.

⁴ Centers for Disease Control and Prevention. Prevalence of Diagnosed and Undiagnosed HIV Infection — United States, 2008–2012, MMWR, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6424a2.htm>, June 26, 2015 / 64(24);657-662.



Figure 20: Estimated percentage of those with HIV who are unaware of their HIV infection, by demographic group, United States, 2013

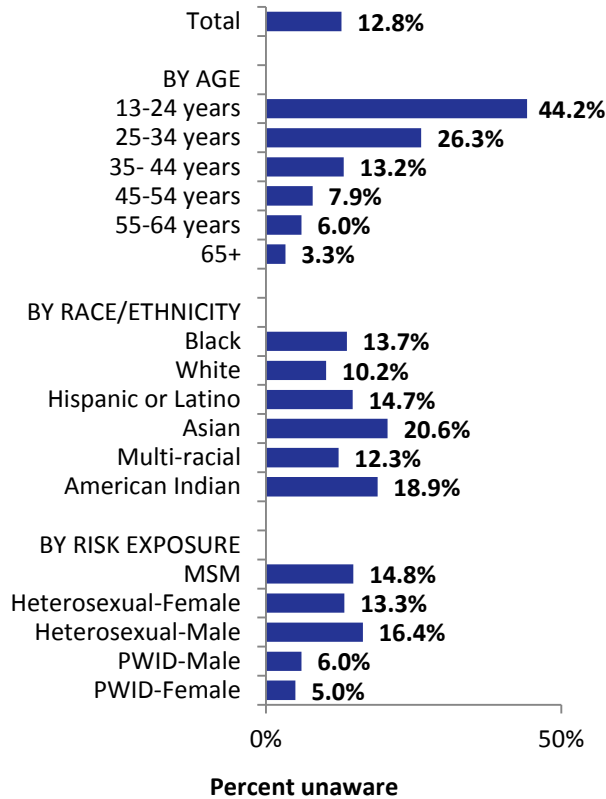
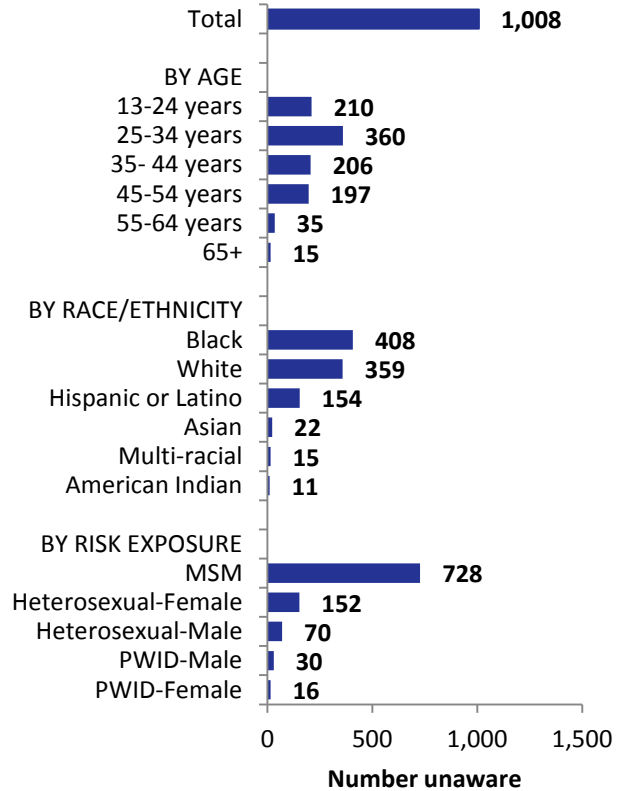


Figure 21: Estimated number unaware of their HIV infection, using CDC national estimates, by demographic group, Wisconsin, 2015

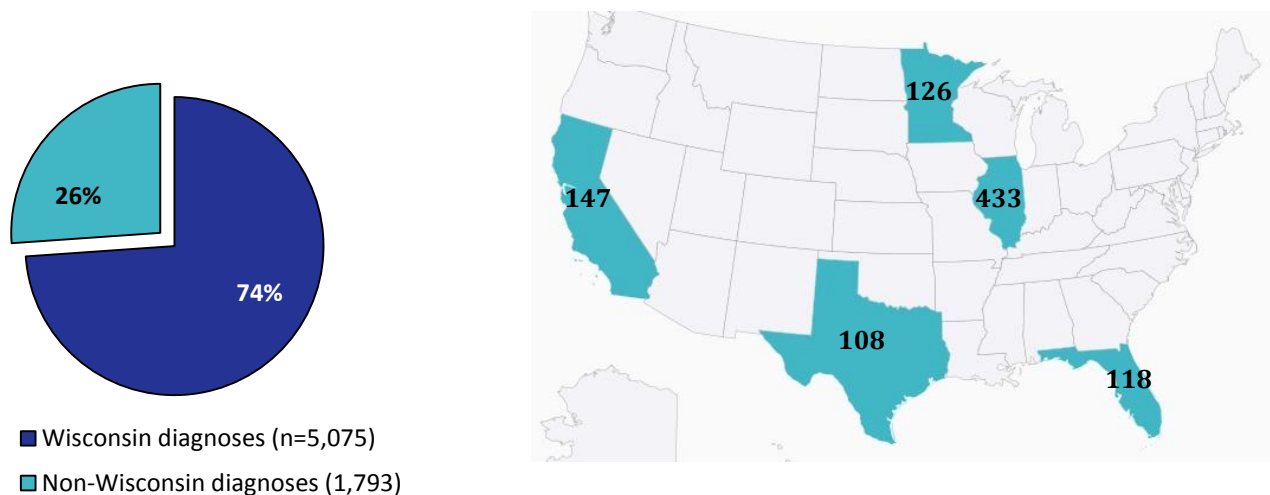


State of diagnosis

Three out of four (74%) prevalent cases in Wisconsin received their first verifiable HIV diagnosis in Wisconsin; 26% received their initial HIV diagnosis in another state and subsequently moved to Wisconsin. Of the 1,793 individuals diagnosed outside of Wisconsin, more than half were from one of the five following states: Illinois (433), California (147), Minnesota (126), Florida (118), and Texas (108) (Figure 22).



Figure 22: Number of prevalent cases who received their initial HIV diagnosis in another state, by top five states of initial HIV diagnosis, Wisconsin, 2015

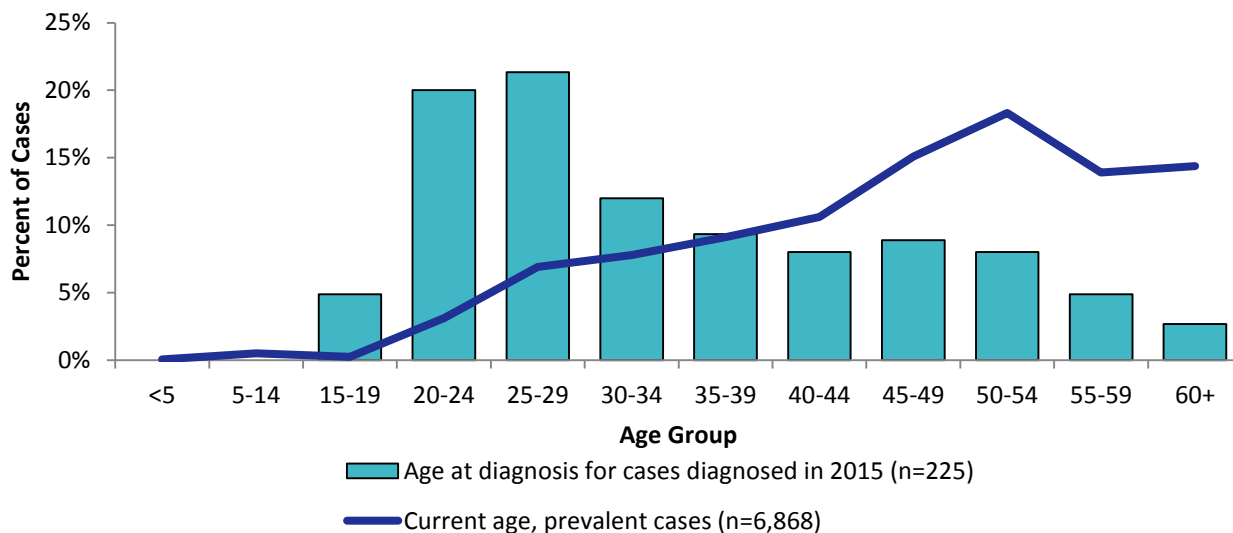


Age

Of Wisconsin’s known total PLHIV, 11% are under age 30, 43% are ages 30-49, and 47% are ages 50 and older (Figure 23). By contrast, among 2015 diagnoses, 46% were under age 30, 38% were age 30-49, and 16% were age 50 and older.

Thus, services for PLHIV need to address health conditions of aging in addition to HIV infection, while prevention efforts need to target the younger age groups.

Figure 23: Prevalent cases of HIV infection by current age as of December 31, 2015, and cases diagnosed during 2015 by age at diagnosis, Wisconsin



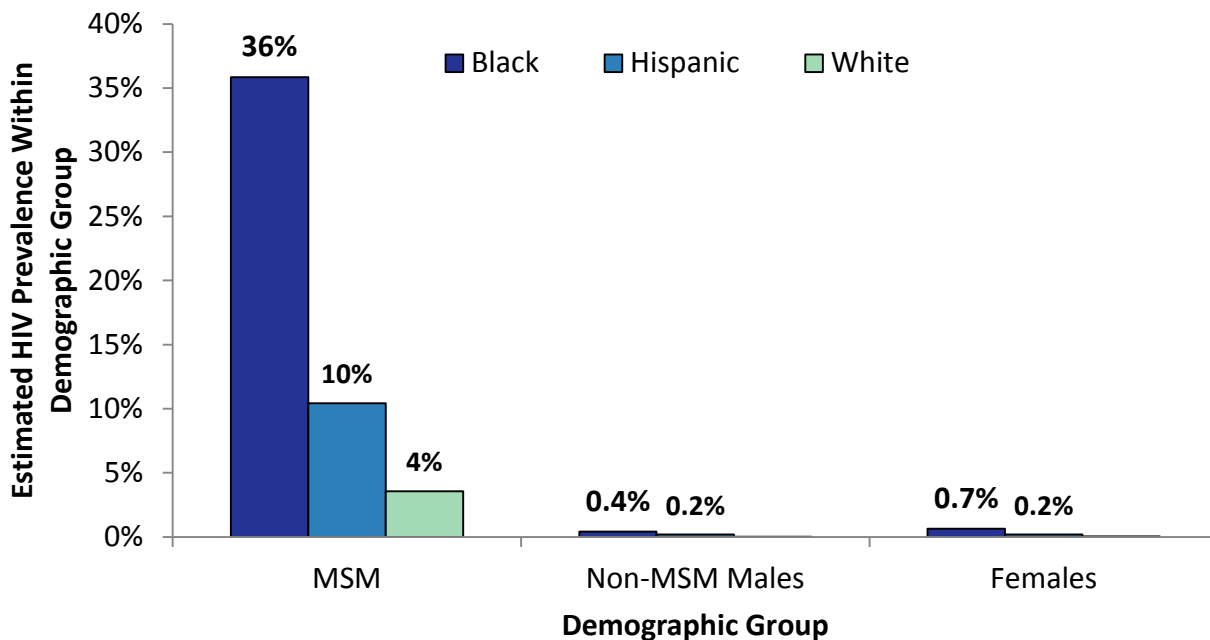
Estimated prevalence by demographic group

Disparities in HIV prevalence occur both *between* MSM and other demographic groups and by race/ethnicity *within* each demographic group (Figure 24). More than one in three (36%) Black MSM ages 15-59 is estimated⁵ to be living with HIV in Wisconsin, compared to 10% of Hispanic MSM and 4% of White MSM.

Fewer than 1 in 1,000 females and non-MSM males in Wisconsin are living with HIV. Within the non-MSM groups, the percentages are highest among Black individuals (0.4% of non-MSM males and 0.7% of females). Other races were excluded from this analysis due to small numbers.

The HIV prevalence estimates presented below may vary from estimates reported in previous years due to a change in age range and updated estimates of the proportion of individuals unaware of their HIV infection.

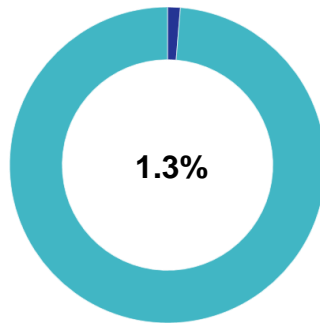
Figure 24: Estimated prevalence of HIV in selected demographic groups, ages 15-59, Wisconsin, 2015



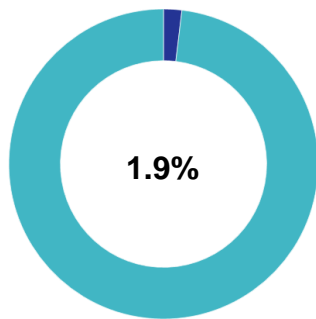
⁵ Estimates generated from surveillance data and state-specific estimates of MSM populations in: Lieb S., *et al.* Statewide estimation of populations of MSM in the United States. *Public Health Reports* 2011;126(1):60-72 and CDC's estimate that overall 12.8% of people living with HIV are unaware of their HIV infection, with variations by race/ethnicity. See Technical Notes for additional information.

While Figure 24 showcases the *between*-race/ethnicity disparities, Figure 25 contextualizes the *within*-race disparity of sub-populations in the Black population. The HIV prevalence for Black men (including Black MSM), Black women, and all Black individuals is significantly lower than for Black MSM alone.

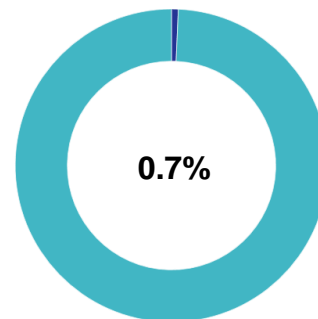
Figure 25: Prevalence of HIV in Black sub-populations, Wisconsin, 2015



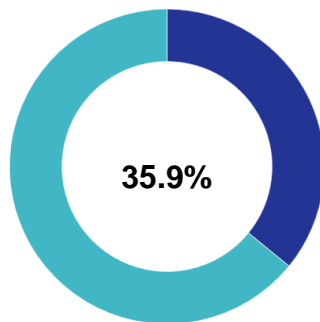
Estimated proportion of **Black individuals** ages 15-59 who are living with HIV



Estimated proportion of **Black men** ages 15-59 who are living with HIV



Estimated proportion of **Black women** ages 15-59 who are living with HIV

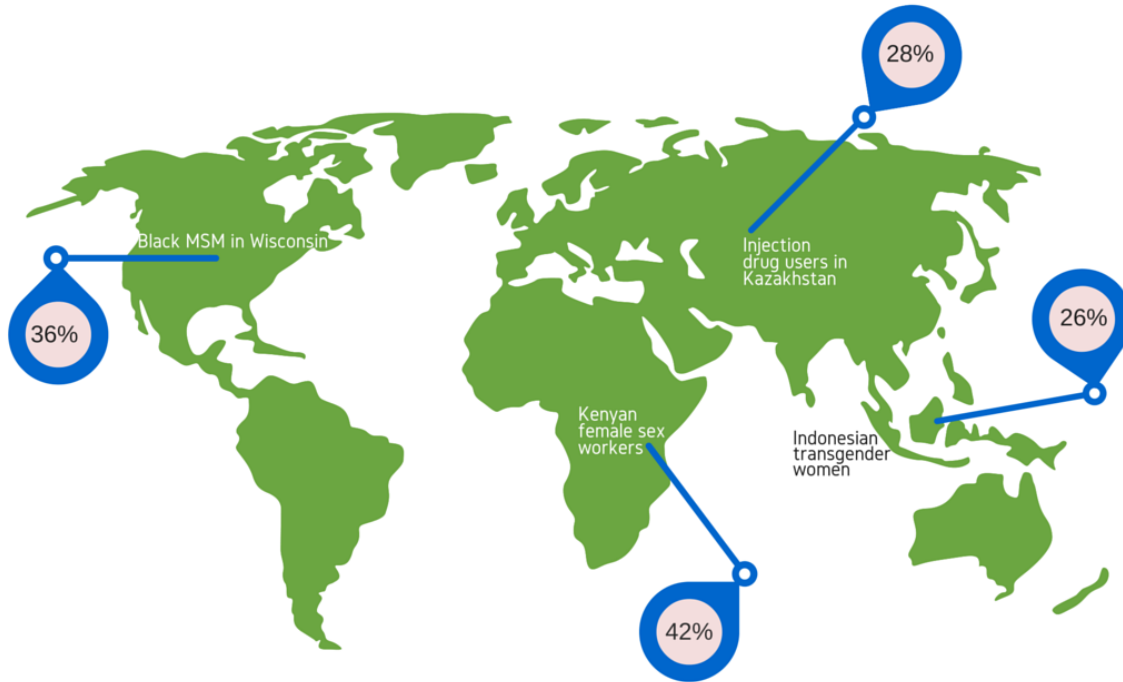


Estimated proportion of **Black men who have sex with men** ages 15-59 who are living with HIV



The prevalence of HIV in Black MSM living in Wisconsin is similar to the HIV prevalence among U.S. Black MSM (36%). This prevalence rate is comparable to that of other greatly affected populations globally (Figure 26).⁶

Figure 26: Percentage of Black MSM living with HIV in Wisconsin compared to other greatly affected populations globally



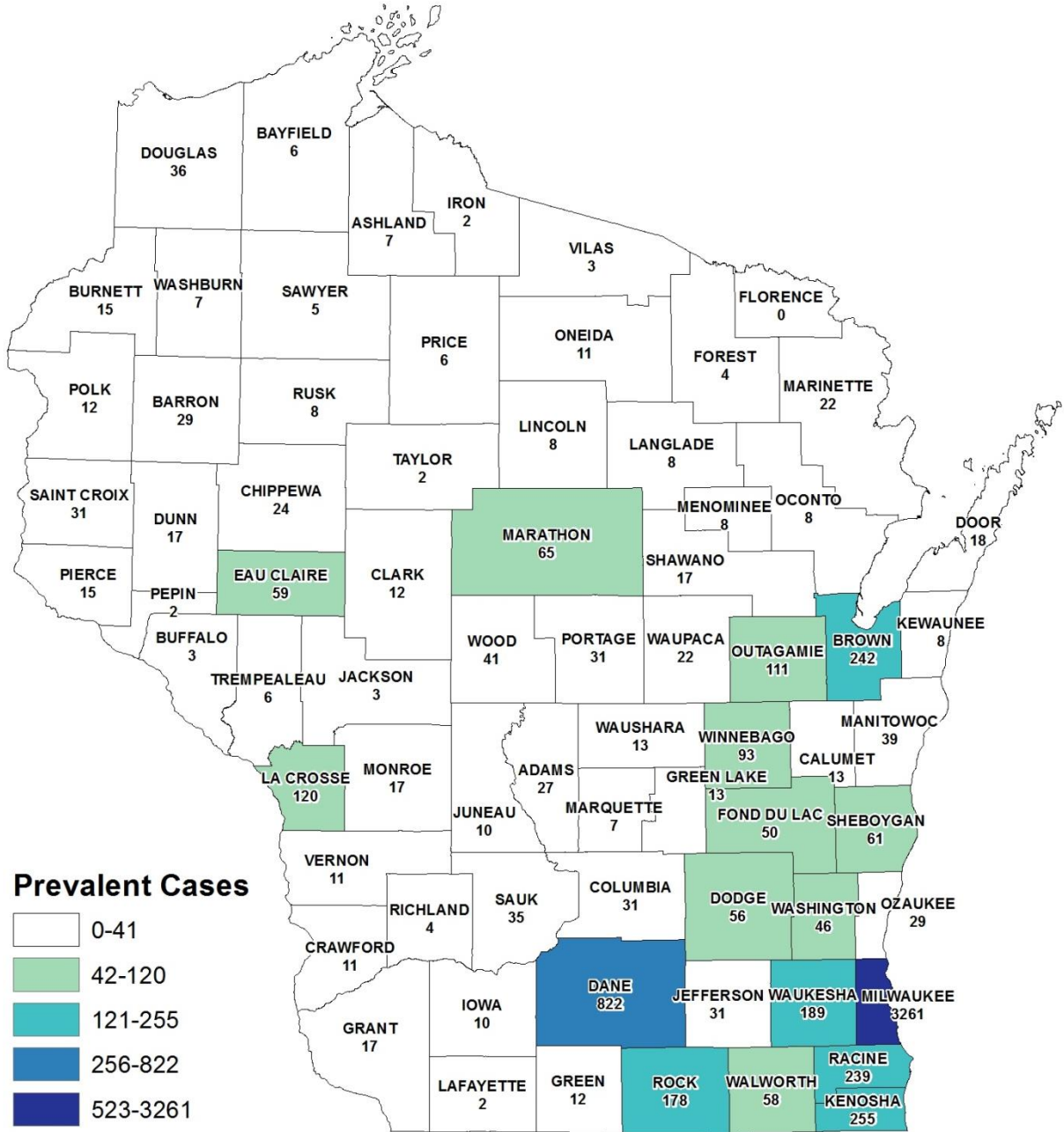
⁶ Figure 26 adapted from The Foundation for AIDS Research Issue Brief: "HIV and the Black Community: Do #Black(GAY)lives Matter?", references: Rosenberg 2014, Baral 2013, El Bassel 2013, Baral 2012.



Geography

Nearly half (47%) of all individuals living with HIV in Wisconsin reside in Milwaukee County; Dane County has the next highest proportion (12%), followed by Kenosha and Brown counties, with 4% each (Figure 27). Racine, Waukesha, and Rock counties, and the Wisconsin Department of Corrections, each have 3% of the state’s prevalent cases. All other counties have 2% or fewer of the state’s HIV cases.

Figure 27: Prevalent cases[†] of HIV infection by county, Wisconsin, 2015

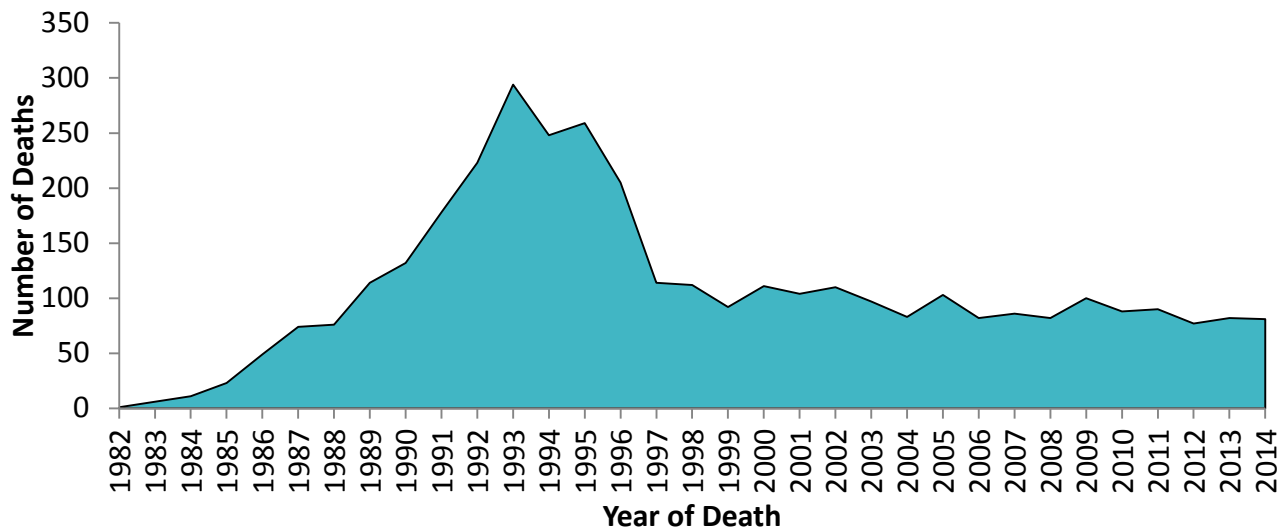


[†]Excludes 174 cases in the Department of Corrections.

DEATHS

Deaths due to any cause among PLHIV in Wisconsin have declined since the early-to-mid-1990s. During 2014 (the most recent year for which complete death data are available), 81 deaths occurred in Wisconsin among people living with HIV (Figure 28).

Figure 28: Number of deaths due to any cause among people living with HIV in Wisconsin, 1982-2014

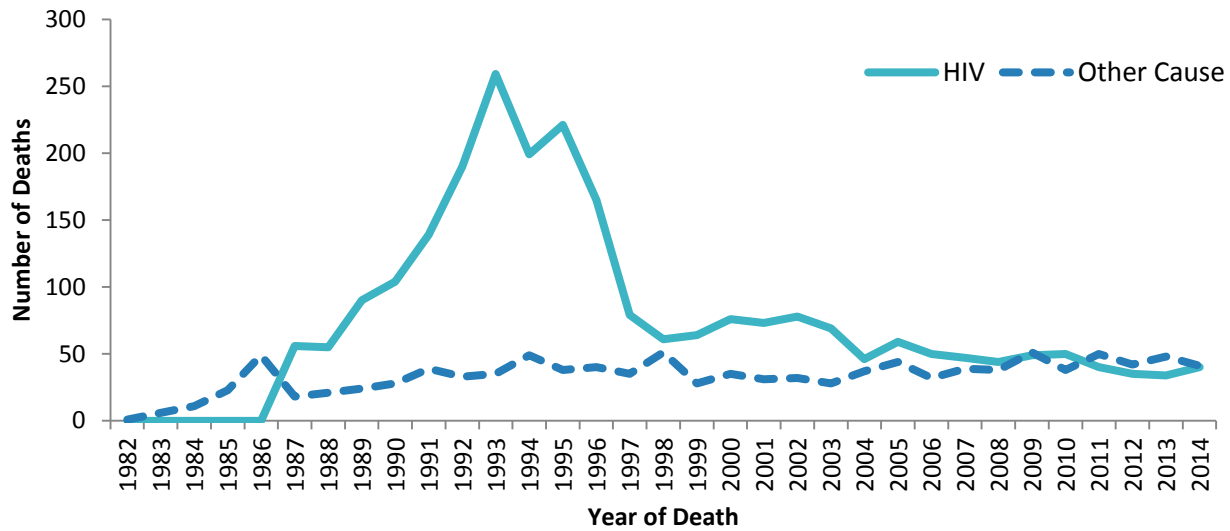


Deaths attributed to HIV⁷ have been generally declining since about 2000. During 2014, 40 of the 81 reported deaths had HIV listed as the cause of death, while 41 deaths were attributed to another cause (Figure 29).

⁷ 118 cases had an unknown cause of death and were not included in this analysis.

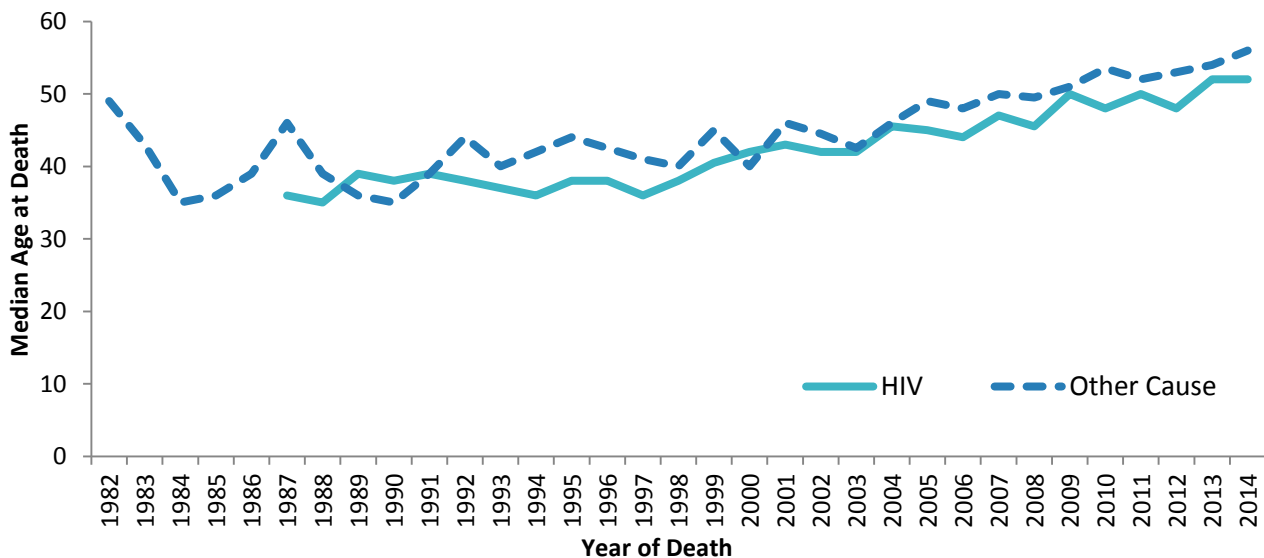


Figure 29: Number of deaths, by cause of death, among people living with HIV in Wisconsin, 1982-2014



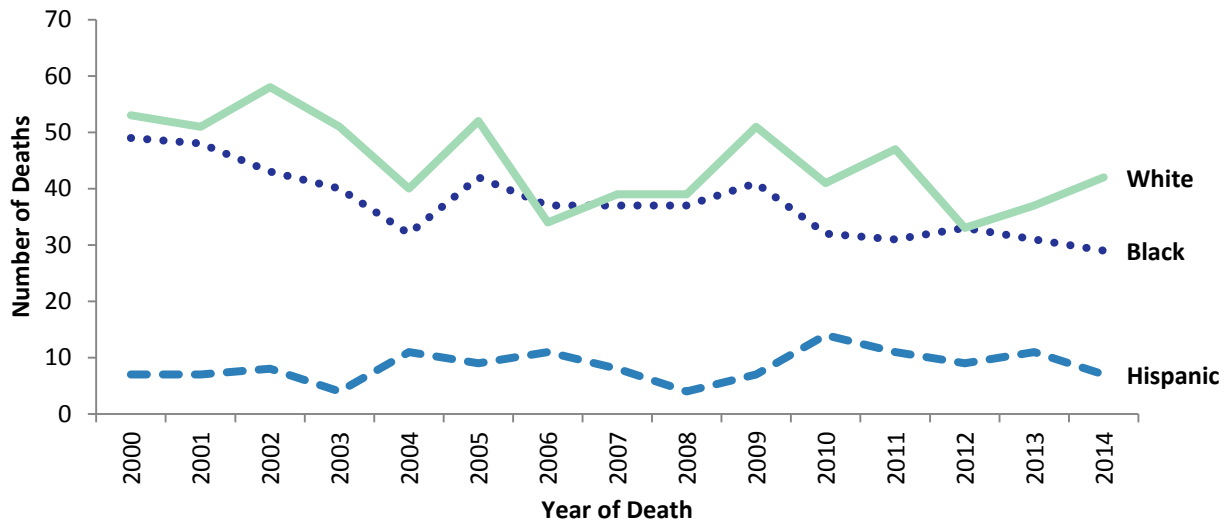
The median age at death of PLHIV who died in Wisconsin has increased steadily, both for those with and without HIV listed as the cause of death (Figure 30). The median age at death among individuals whose death was attributed to HIV (age 52) has generally been younger than those who died from other causes (age 56).

Figure 30: Median age at death, by cause of death, among people living with HIV in Wisconsin, 1982-2014



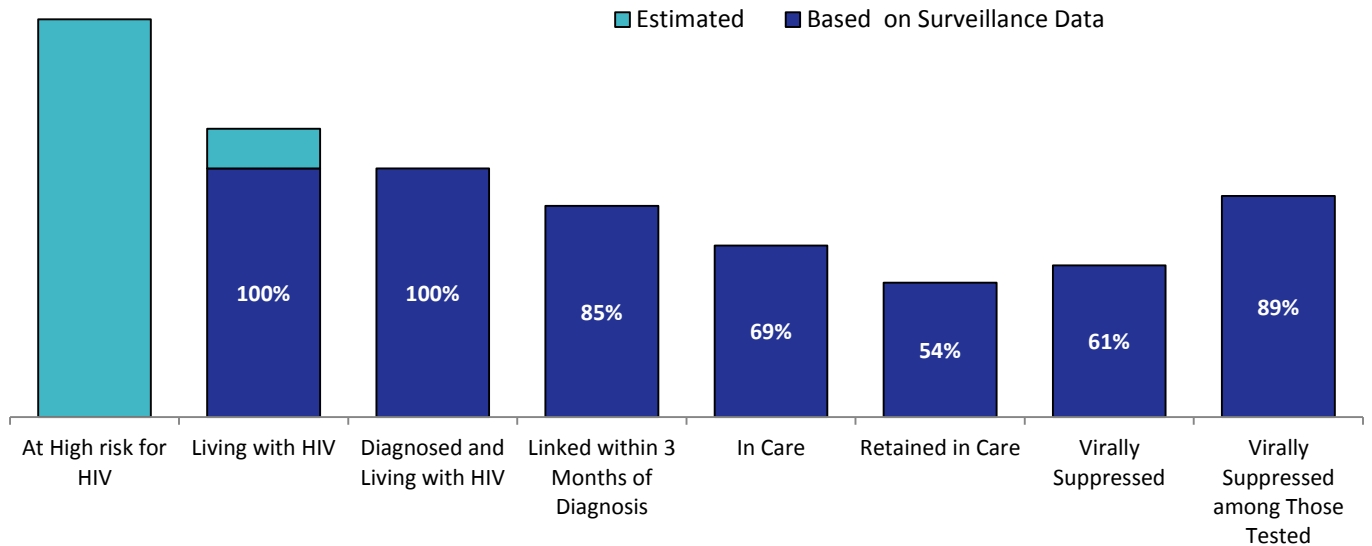
Deaths were more numerous among Whites and Blacks, reflecting the groups with the highest numbers of people living with HIV in Wisconsin. The annual number of deaths has generally declined since about 2000 in both Whites and Blacks (Figure 31) while fluctuating among Hispanics. The number of deaths fluctuated among American Indians and Asians, with 0-3 deaths per year for each group.

Figure 31: Number of deaths, by race/ethnicity, among people living with HIV in Wisconsin, 1982-2014



HIV CARE CONTINUUM

Figure 32: HIV care continuum†, Wisconsin, 2015



†Reflects laboratory data received through April 5, 2016

The HIV care continuum is used at the state, regional and local levels to measure and monitor HIV engagement and health outcomes across the continuum. The care continuum in Figure 32 depicts timely linkage among individuals diagnosed with HIV in Wisconsin during 2015, and care patterns during 2015 among 2014 prevalent cases.

Estimated Data

At High Risk for HIV: People engaging in HIV risk behaviors including unprotected male-to-male sex, sharing of injection drug-use equipment, and heterosexual sexual contact with a member of these groups or with an HIV-infected partner. The size of this population is not known.

Living with HIV: CDC estimates that 16.2% of persons living with HIV in Wisconsin are unaware of their status. This bar shows both those aware and diagnosed, and those unaware of their infection.

Based on Surveillance Data

Diagnosed and Living with HIV: All individuals reported with HIV in Wisconsin by the end of 2014 who were still alive and living in Wisconsin by the end of 2015.

Linked within 3 Months of Diagnosis: 85% of individuals newly diagnosed with HIV infection in Wisconsin during 2015 were linked to care within three months of HIV diagnosis. However,



using the definition of timely linkage described in the most recent National HIV/AIDS Strategy,⁸ only 64% of newly diagnosed individuals were linked to care within one month.

In Care: 69% of individuals diagnosed and living with HIV in Wisconsin had at least one medical visit, using laboratory data as a proxy for medical care, during 2015.

Retained in Care: 54% of individuals diagnosed and living with HIV in Wisconsin were retained in care, based on laboratory data as a proxy for medical care. Retention was defined as two or more medical visits, at least three months apart, during 2015. This definition may underestimate retention in care, as individuals who are medically stable or who are uninsured may receive care only once per year.

Virally Suppressed: 61% of individuals living with HIV in Wisconsin were virally suppressed at their last viral load test during 2015. Viral loads < 200 copies/mL were considered suppressed. Individuals whose last viral load test was prior to 2015 or who did not have a viral load test were considered to have unsuppressed viral loads.

Virally Suppressed among Those Tested: 89% of individuals who had a viral load test during 2015 were suppressed at their last measurement. This suggests that most individuals receiving some medical care are achieving viral suppression.

⁸ Office of National AIDS Policy. National HIV/AIDS Strategy for the United States: Updated to 2020. (2015). Available at <https://www.whitehouse.gov/administration/eop/onap/nhas>.



DETAILED TABLES



Table 6: Reported Cases of HIV Infection, Wisconsin, 1982-2015

	New Diagnoses by Year of Diagnosis ^a									Prevalence ^c		
	1982-2015(b)		2010-2014			2015			Cases	%	Rate(e)	
	Cases	%	Cases	Avg(d)	%	Rate(e)	Cases	%				Rate(e)
Total cases(f)	9,664	100.0%	1,192	238.4	100.0%	4.2	225	100.0%	3.9	6,868	100.0%	119.3
Disease Status(g)												
(Missing)	870	9.0%	1	0.2	0.1%	0.0	0	0.0%	0.0	3	0.0%	0.1
HIV	6,948	71.9%	876	175.2	73.5%	3.1	185	82.2%	3.2	3,436	50.0%	59.7
AIDS	1,846	19.1%	315	63.0	26.4%	1.1	40	17.8%	0.7	3,429	49.9%	59.6
Sex at Birth												
Female	1,694	17.5%	207	41.4	17.4%	1.4	29	12.9%	1.0	1,338	19.5%	46.2
Male	7,970	82.5%	985	197.0	82.6%	6.9	196	87.1%	6.9	5,530	80.5%	193.4
Race/Ethnicity												
White	4,870	50.4%	438	87.6	36.7%	1.8	85	37.8%	1.8	3,160	46.0%	66.8
African American	3,464	35.8%	505	101.0	42.4%	28.2	89	39.6%	24.6	2,568	37.4%	709.4
Hispanic	1,046	10.8%	188	37.6	15.8%	10.6	34	15.1%	9.1	896	13.0%	240.7
American Indian	71	0.7%	8	1.6	0.7%	4.0	4	1.8%	7.9	46	0.7%	91.1
Asian	106	1.1%	25	5.0	2.1%	3.5	7	3.1%	4.6	86	1.3%	56.8
Multi-racial	103	1.1%	27	5.4	2.3%	6.5	5	2.2%	5.7	109	1.6%	124.0
Unknown	4	0.0%	1	0.2	0.1%	-	1	0.4%	-	3	0.0%	-
Age(h)												
(Missing)	3	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	3	0.0%	-
<5	66	0.7%	3	0.6	0.3%	0.3	0	0.0%	0.0	3	0.0%	0.9
5-14	31	0.3%	3	0.6	0.3%	0.1	0	0.0%	0.0	34	0.5%	4.6
15-19	303	3.1%	65	13.0	5.5%	3.3	11	4.9%	2.9	17	0.2%	4.4
20-24	1,226	12.7%	245	49.0	20.6%	12.4	45	20.0%	11.1	214	3.1%	52.8
25-29	1,782	18.4%	175	35.0	14.7%	9.6	48	21.3%	13.4	475	6.9%	133.0
30-34	1,893	19.6%	158	31.6	13.3%	8.7	27	12.0%	7.2	534	7.8%	143.1
35-39	1,589	16.4%	119	23.8	10.0%	7.1	21	9.3%	6.1	625	9.1%	183.0
40-44	1,101	11.4%	107	21.4	9.0%	5.8	18	8.0%	5.2	728	10.6%	208.4
45-49	771	8.0%	124	24.8	10.4%	6.1	20	8.9%	5.2	1,036	15.1%	271.8
50-54	440	4.6%	93	18.6	7.8%	4.2	18	8.0%	4.1	1,257	18.3%	288.7
55-59	251	2.6%	59	11.8	4.9%	2.9	11	4.9%	2.6	955	13.9%	227.8
60+	208	2.2%	41	8.2	3.4%	0.7	6	2.7%	0.5	987	14.4%	79.8
Risk exposure												
MSM	5,221	54.0%	714	142.8	59.9%	-	148	65.8%	-	3,686	53.7%	-
IDU	1,157	12.0%	46	9.2	3.9%	-	5	2.2%	-	578	8.4%	-
MSM & IDU	521	5.4%	21	4.2	1.8%	-	6	2.7%	-	384	5.6%	-
Heterosexual	1,192	12.3%	109	21.8	9.1%	-	23	10.2%	-	966	14.1%	-
Other/Unknown	1,573	16.3%	302	60.4	25.3%	-	43	19.1%	-	1,254	18.3%	-

Year of Diagnosis	Cases	Rate(e)
Before 2006	7,197	-
2006	249	4.5
2007	275	4.9
2008	242	4.3
2009	284	5.0
2010	253	4.4
2011	246	4.3
2012	222	3.9
2013	250	4.4
2014	221	3.8
2015	225	3.9

Notes:

- New diagnoses include only individuals whose initial HIV report was made in Wisconsin.
- The first cases of HIV infection in Wisconsin were diagnosed in 1982. Thus, these represent cumulative cases from 1982 through the specified date.
- Prevalent cases include all cases presumed to be alive and living in Wisconsin, regardless of the state of initial HIV report.
- The average annual number of cases reported in the specified period.
- Cases per 100,000 population. Rates not available for risk exposure groups.
- Demographic and risk exposure breakdown not shown if statewide total is less than 5 cases.
- Disease status when first diagnosed with HIV infection, except for prevalent cases, where it is the current disease status.
- Age when first diagnosed with HIV infection, except for prevalent cases, where it is the current age.



Table 7: Reported Cases of HIV Infection, Males, Wisconsin, 1982-2015

	New Diagnoses by Year of Diagnosis ^a									Prevalence ^c		
	1982-2015(b)		2010-2014			2015			Cases	%	Rate(e)	
	Cases	%	Cases	Avg(d)	%	Rate(e)	Cases	%				Rate(e)
cases(f)	7,970	100.0%	985	197.0	100.0%	6.9	196	100.0%	6.9	5,530	100.0%	193.4
Disease Status(g)												
(Missing)	774	9.7%	1	0.2	0.1%	0.0	0	0.0%	0.0	3	0.1%	0.1
HIV	5,603	70.3%	715	143.0	72.6%	5.0	162	82.7%	5.7	2,729	49.3%	95.4
AIDS	1,593	20.0%	269	53.8	27.3%	1.9	34	17.3%	1.2	2,798	50.6%	97.8
Sex at Birth												
Male	7,970	100.0%	985	197.0	100.0%	6.9	196	100.0%	6.9	5,530	100.0%	193.4
Race/Ethnicity												
White	4,345	54.5%	386	77.2	39.2%	3.3	74	37.8%	3.2	2,756	49.8%	117.4
African American	2,593	32.5%	391	78.2	39.7%	44.5	76	38.8%	42.8	1,893	34.2%	1,065.6
Hispanic	821	10.3%	160	32.0	16.2%	17.3	30	15.3%	15.6	704	12.7%	364.9
American Indian	48	0.6%	5	1.0	0.5%	5.1	4	2.0%	15.8	34	0.6%	134.7
Asian	80	1.0%	21	4.2	2.1%	6.1	7	3.6%	9.5	59	1.1%	80.0
Multi-racial	79	1.0%	21	4.2	2.1%	10.4	4	2.0%	9.3	81	1.5%	187.5
Unknown	4	0.1%	1	0.2	0.1%	-	1	0.5%	-	3	0.1%	-
Age(h)												
(Missing)	3	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	3	0.1%	-
<5	30	0.4%	1	0.2	0.1%	0.6	0	0.0%	0.0	3	0.1%	1.7
5-14	21	0.3%	1	0.2	0.1%	0.3	0	0.0%	0.0	13	0.2%	3.5
15-19	215	2.7%	54	10.8	5.5%	5.4	10	5.1%	5.1	13	0.2%	6.6
20-24	1,000	12.5%	220	44.0	22.3%	21.9	39	19.9%	19.0	177	3.2%	86.1
25-29	1,468	18.4%	152	30.4	15.4%	16.4	45	23.0%	24.6	414	7.5%	226.7
30-34	1,584	19.9%	132	26.4	13.4%	14.3	24	12.2%	12.7	421	7.6%	222.9
35-39	1,341	16.8%	98	19.6	9.9%	11.5	17	8.7%	9.8	487	8.8%	280.4
40-44	934	11.7%	83	16.6	8.4%	9.0	14	7.1%	7.9	527	9.5%	299.2
45-49	643	8.1%	99	19.8	10.1%	9.7	18	9.2%	9.4	826	14.9%	431.4
50-54	374	4.7%	74	14.8	7.5%	6.8	16	8.2%	7.4	1,037	18.8%	478.4
55-59	199	2.5%	42	8.4	4.3%	4.2	9	4.6%	4.3	791	14.3%	378.8
60+	158	2.0%	29	5.8	2.9%	1.1	4	2.0%	0.7	818	14.8%	143.4
Risk exposure												
MSM	5,221	65.5%	714	142.8	72.5%	-	148	75.5%	-	3,686	66.7%	-
IDU	783	9.8%	25	5.0	2.5%	-	3	1.5%	-	370	6.7%	-
MSM & IDU	521	6.5%	21	4.2	2.1%	-	6	3.1%	-	384	6.9%	-
Heterosexual	354	4.4%	36	7.2	3.7%	-	9	4.6%	-	274	5.0%	-
Other/Unknown	1,091	13.7%	189	37.8	19.2%	-	30	15.3%	-	816	14.8%	-

Year of Diagnosis	Cases	Rate(e)
Before 2006	5,949	-
2006	204	7.4
2007	228	8.2
2008	189	6.8
2009	219	7.8
2010	207	7.3
2011	199	7.0
2012	178	6.3
2013	212	7.4
2014	189	6.6
2015	196	6.9

Notes:

- a. New diagnoses include only individuals whose initial HIV report was made in Wisconsin.
- b. The first cases of HIV infection in Wisconsin were diagnosed in 1982. Thus, these represent cumulative cases from 1982 through the specified date.
- c. Prevalent cases include all cases presumed to be alive and living in Wisconsin, regardless of the state of initial HIV report.
- d. The average annual number of cases reported in the specified period.
- e. Cases per 100,000 population. Rates not available for risk exposure groups.
- f. Demographic and risk exposure breakdown not shown if statewide total is less than 5 cases.
- g. Disease status when first diagnosed with HIV infection, except for prevalent cases, where it is the current disease status.
- h. Age when first diagnosed with HIV infection, except for prevalent cases, where it is the current age.



Table 8: Reported Cases of HIV Infection, Females, Wisconsin, 1982-2015

	New Diagnoses by Year of Diagnosis ^a									Prevalence ^c		
	1982-2015(b)		2010-2014			2015			Cases	%	Rate(e)	
	Cases	%	Cases	Avg(d)	%	Rate(e)	Cases	%				Rate(e)
Total cases(f)	1,694	100.0%	207	41.4	100.0%	1.4	29	100.0%	1.0	1,338	100.0%	46.2
Disease Status(g)												
(Missing)	96	5.7%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
HIV	1,345	79.4%	161	32.2	77.8%	1.1	23	79.3%	0.8	707	52.8%	24.4
AIDS	253	14.9%	46	9.2	22.2%	0.3	6	20.7%	0.2	631	47.2%	21.8
Sex at Birth												
Female	1,694	100.0%	207	41.4	100.0%	1.4	29	100.0%	1.0	1,338	100.0%	46.2
Race/Ethnicity												
White	525	31.0%	52	10.4	25.1%	0.4	11	37.9%	0.5	404	30.2%	16.9
African American	871	51.4%	114	22.8	55.1%	12.5	13	44.8%	7.1	675	50.4%	366.2
Hispanic	225	13.3%	28	5.6	13.5%	3.3	4	13.8%	2.2	192	14.3%	107.1
American Indian	23	1.4%	3	0.6	1.4%	4.0	0	0.0%	0.0	12	0.9%	47.5
Asian	26	1.5%	4	0.8	1.9%	1.9	0	0.0%	0.0	27	2.0%	34.7
Multi-racial	24	1.4%	6	1.2	2.9%	4.8	1	3.4%	2.2	28	2.1%	62.7
Age(h)												
<5	36	2.1%	2	0.4	1.0%	0.6	0	0.0%	0.0	0	0.0%	0.0
5-14	10	0.6%	2	0.4	1.0%	0.3	0	0.0%	0.0	21	1.6%	5.9
15-19	88	5.2%	11	2.2	5.3%	1.4	1	3.4%	0.5	4	0.3%	2.1
20-24	226	13.3%	25	5.0	12.1%	2.6	6	20.7%	3.0	37	2.8%	18.5
25-29	314	18.5%	23	4.6	11.1%	2.6	3	10.3%	1.7	61	4.6%	34.9
30-34	309	18.2%	26	5.2	12.6%	3.7	3	10.3%	1.6	113	8.4%	61.3
35-39	248	14.6%	21	4.2	10.1%	2.5	4	13.8%	2.4	138	10.3%	82.2
40-44	167	9.9%	24	4.8	11.6%	3.3	4	13.8%	2.3	201	15.0%	116.1
45-49	128	7.6%	25	5.0	12.1%	2.5	2	6.9%	1.1	210	15.7%	110.7
50-54	66	3.9%	19	3.8	9.2%	1.7	2	6.9%	0.9	220	16.4%	100.6
55-59	52	3.1%	17	3.4	8.2%	1.7	2	6.9%	1.0	164	12.3%	77.9
60+	50	3.0%	12	2.4	5.8%	0.4	2	6.9%	0.3	169	12.6%	25.3
Risk exposure												
MSM	0	0.0%	0	0.0	0.0%	-	0	0.0%	-	0	0.0%	0.0
IDU	374	22.1%	21	4.2	10.1%	-	2	6.9%	-	208	15.5%	-
MSM & IDU	0	0.0%	0	0.0	0.0%	-	0	0.0%	-	0	0.0%	0.0
Heterosexual	838	49.5%	73	14.6	35.3%	-	14	48.3%	-	692	51.7%	-
Other/Unknown	482	28.5%	113	22.6	54.6%	-	13	44.8%	-	438	32.7%	-

Year of HIV Diagnosis	Cases	Rate(e)
Before 2006	1,248	-
2006	45	1.6
2007	47	1.7
2008	53	1.9
2009	65	2.3
2010	46	1.6
2011	47	1.6
2012	44	1.5
2013	38	1.3
2014	32	1.1
2015	29	1.0

Notes:

- New diagnoses include only individuals whose initial HIV report was made in Wisconsin.
- The first cases of HIV infection in Wisconsin were diagnosed in 1982. Thus, these represent cumulative cases from 1982 through the specified date.
- Prevalent cases include all cases presumed to be alive and living in Wisconsin, regardless of the state of initial HIV report.
- The average annual number of cases reported in the specified period.
- Cases per 100,000 population. Rates not available for risk exposure groups.
- Demographic and risk exposure breakdown not shown if statewide total is less than 5 cases.
- Disease status when first diagnosed with HIV infection, except for prevalent cases, where it is the current disease status.
- Age when first diagnosed with HIV infection, except for prevalent cases, where it is the current age.



Table 9: Reported Cases of HIV Infection, Whites, Wisconsin, 1982-2015

	1982-2015(b)		New Diagnoses by Year of Diagnosis ^a						Prevalence ^c			
			2010-2014			2015			Cases	%	Rate(e)	
	Cases	%	Cases	Avg(d)	%	Rate(e)	Cases	%				Rate(e)
Total cases(f)	4,870	100.0%	438	87.6	100.0%	1.8	85	100.0%	1.8	3,160	100.0%	66.8
Disease Status(g)												
(Missing)	579	11.9%	0	0.0	0.0%	0.0	0	0.0%	0.0	1	0.0%	0.0
HIV	3,255	66.8%	305	61.0	69.6%	1.3	64	75.3%	1.4	1,570	49.7%	33.2
AIDS	1,036	21.3%	133	26.6	30.4%	0.6	21	24.7%	0.4	1,589	50.3%	33.6
Sex at Birth												
Female	525	10.8%	52	10.4	11.9%	0.4	11	12.9%	0.5	404	12.8%	16.9
Male	4,345	89.2%	386	77.2	88.1%	3.3	74	87.1%	3.2	2,756	87.2%	117.4
Race/Ethnicity												
White	4,870	100.0%	438	87.6	100.0%	1.8	85	100.0%	1.8	3,160	100.0%	66.8
Age(h)												
(Missing)	1	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	1	0.0%	-
<5	17	0.3%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
5-14	13	0.3%	0	0.0	0.0%	0.0	0	0.0%	0.0	3	0.1%	0.6
15-19	75	1.5%	8	1.6	1.8%	0.7	2	2.4%	0.7	1	0.0%	0.3
20-24	445	9.1%	45	9.0	10.3%	3.0	12	14.1%	3.9	37	1.2%	11.9
25-29	827	17.0%	54	10.8	12.3%	3.8	10	11.8%	3.6	106	3.4%	38.6
30-34	943	19.4%	57	11.4	13.0%	4.0	9	10.6%	3.1	187	5.9%	63.9
35-39	891	18.3%	59	11.8	13.5%	4.4	9	10.6%	3.3	228	7.2%	84.0
40-44	612	12.6%	49	9.8	11.2%	3.2	10	11.8%	3.5	306	9.7%	107.2
45-49	461	9.5%	68	13.6	15.5%	3.8	11	12.9%	3.4	489	15.5%	149.8
50-54	275	5.6%	47	9.4	10.7%	2.4	12	14.1%	3.1	661	20.9%	171.2
55-59	161	3.3%	32	6.4	7.3%	1.7	5	5.9%	1.3	537	17.0%	142.0
60+	149	3.1%	19	3.8	4.3%	0.3	5	5.9%	0.4	604	19.1%	52.4
Risk exposure												
MSM	3,292	67.6%	293	58.6	66.9%	-	60	70.6%	-	2,114	66.9%	-
IDU	320	6.6%	20	4.0	4.6%	-	3	3.5%	-	173	5.5%	-
MSM & IDU	282	5.8%	14	2.8	3.2%	-	3	3.5%	-	219	6.9%	-
Heterosexual	352	7.2%	23	4.6	5.3%	-	6	7.1%	-	275	8.7%	-
Other/Unknown	624	12.8%	88	17.6	20.1%	-	13	15.3%	-	379	12.0%	-

Year of HIV Diagnosis	Cases	Rate(e)
Before 2006	3,900	-
2006	111	2.3
2007	121	2.5
2008	95	2.0
2009	120	2.5
2010	94	2.0
2011	90	1.9
2012	86	1.8
2013	99	2.1
2014	69	1.5
2015	85	1.8

Notes:

- a. New diagnoses include only individuals whose initial HIV report was made in Wisconsin.
- b. The first cases of HIV infection in Wisconsin were diagnosed in 1982. Thus, these represent cumulative cases from 1982 through the specified date.
- c. Prevalent cases include all cases presumed to be alive and living in Wisconsin, regardless of the state of initial HIV report.
- d. The average annual number of cases reported in the specified period.
- e. Cases per 100,000 population. Rates not available for risk exposure groups.
- f. Demographic and risk exposure breakdown not shown if statewide total is less than 5 cases.
- g. Disease status when first diagnosed with HIV infection, except for prevalent cases, where it is the current disease status.
- h. Age when first diagnosed with HIV infection, except for prevalent cases, where it is the current age.



Table 10: Reported Cases of HIV Infection, Blacks, Wisconsin, 1982-2015

	New Diagnoses by Year of Diagnosis ^a									Prevalence ^c		
	1982-2015(b)		2010-2014			2015			Cases	%	Rate(e)	
	Cases	%	Cases	Avg(d)	%	Rate(e)	Cases	%				Rate(e)
Total cases(f)	3,464	100.0%	505	101.0	100.0%	28.2	89	100.0%	24.6	2,568	100.0%	709.4
Disease Status(g)												
(Missing)	208	6.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	1	0.0%	0.3
HIV	2,738	79.0%	406	81.2	80.4%	22.7	78	87.6%	21.5	1,328	51.7%	366.9
AIDS	518	15.0%	99	19.8	19.6%	5.5	11	12.4%	3.0	1,239	48.2%	342.3
Sex at Birth												
Female	871	25.1%	114	22.8	22.6%	12.5	13	14.6%	7.1	675	26.3%	366.2
Male	2,593	74.9%	391	78.2	77.4%	44.5	76	85.4%	42.8	1,893	73.7%	1,065.6
Race/Ethnicity												
African American	3,464	100.0%	505	101.0	100.0%	28.2	89	100.0%	24.6	2,568	100.0%	709.4
Age(h)												
(Missing)	1	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	1	0.0%	-
<5	30	0.9%	1	0.2	0.2%	3.3	0	0.0%	0.0	2	0.1%	6.6
5-14	12	0.3%	2	0.4	0.4%	1.6	0	0.0%	0.0	26	1.0%	41.5
15-19	182	5.3%	46	9.2	9.1%	27.7	7	7.9%	22.0	12	0.5%	37.8
20-24	578	16.7%	153	30.6	30.3%	93.9	24	27.0%	69.2	138	5.4%	398.2
25-29	679	19.6%	82	16.4	16.2%	60.0	24	27.0%	84.4	270	10.5%	949.9
30-34	672	19.4%	52	10.4	10.3%	40.6	9	10.1%	34.7	237	9.2%	912.8
35-39	491	14.2%	31	6.2	6.1%	27.0	7	7.9%	30.4	244	9.5%	1,060.8
40-44	358	10.3%	39	7.8	7.7%	33.5	6	6.7%	25.9	268	10.4%	1,155.1
45-49	235	6.8%	36	7.2	7.1%	32.8	4	4.5%	18.7	379	14.8%	1,767.7
50-54	125	3.6%	34	6.8	6.7%	31.6	4	4.5%	18.6	410	16.0%	1,901.5
55-59	56	1.6%	16	3.2	3.2%	17.8	3	3.4%	15.8	316	12.3%	1,663.2
60+	45	1.3%	13	2.6	2.6%	7.1	1	1.1%	2.5	265	10.3%	666.6
Risk exposure												
MSM	1,395	40.3%	283	56.6	56.0%	-	53	59.6%	-	1,087	42.3%	-
IDU	601	17.3%	14	2.8	2.8%	-	1	1.1%	-	260	10.1%	-
MSM & IDU	175	5.1%	6	1.2	1.2%	-	1	1.1%	-	107	4.2%	-
Heterosexual	596	17.2%	58	11.6	11.5%	-	12	13.5%	-	474	18.5%	-
Other/Unknown	697	20.1%	144	28.8	28.5%	-	22	24.7%	-	640	24.9%	-

Year of HIV Diagnosis	Cases	Rate(e)
Before 2006	2,471	-
2006	87	26.7
2007	100	30.4
2008	103	31.0
2009	109	32.6
2010	115	32.6
2011	100	28.1
2012	94	26.2
2013	99	27.5
2014	97	26.8
2015	89	24.6

Notes:

- a. New diagnoses include only individuals whose initial HIV report was made in Wisconsin.
- b. The first cases of HIV infection in Wisconsin were diagnosed in 1982. Thus, these represent cumulative cases from 1982 through the specified date.
- c. Prevalent cases include all cases presumed to be alive and living in Wisconsin, regardless of the state of initial HIV report.
- d. The average annual number of cases reported in the specified period.
- e. Cases per 100,000 population. Rates not available for risk exposure groups.
- f. Demographic and risk exposure breakdown not shown if statewide total is less than 5 cases.
- g. Disease status when first diagnosed with HIV infection, except for prevalent cases, where it is the current disease status.
- h. Age when first diagnosed with HIV infection, except for prevalent cases, where it is the current age.



Table 11: Reported Cases of HIV Infection, Hispanics, Wisconsin, 1982-2015

	New Diagnoses by Year of Diagnosis ^a									Prevalence ^c		
	1982-2015(b)		2010-2014				2015			Cases	%	Rate(e)
	Cases	%	Cases	Avg(d)	%	Rate(e)	Cases	%	Rate(e)			
Total cases(f)	1,046	100.0%	188	37.6	100.0%	10.6	34	100.0%	9.1	896	100.0%	240.7
Disease Status(g)												
(Missing)	71	6.8%	1	0.2	0.5%	0.3	0	0.0%	0.0	0	0.0%	0.0
HIV	734	70.2%	124	24.8	66.0%	7.0	30	88.2%	8.1	401	44.8%	107.7
AIDS	241	23.0%	63	12.6	33.5%	3.5	4	11.8%	1.1	495	55.2%	133.0
Sex at Birth												
Female	225	21.5%	28	5.6	14.9%	3.3	4	11.8%	2.2	192	21.4%	107.1
Male	821	78.5%	160	32.0	85.1%	17.3	30	88.2%	15.6	704	78.6%	364.9
Race/Ethnicity												
Hispanic	1,046	100.0%	188	37.6	100.0%	10.6	34	100.0%	9.1	896	100.0%	240.7
Age(h)												
<5	12	1.1%	1	0.2	0.5%	2.4	0	0.0%	0.0	1	0.1%	2.4
5-14	5	0.5%	1	0.2	0.5%	1.3	0	0.0%	0.0	2	0.2%	2.4
15-19	37	3.5%	8	1.6	4.3%	8.4	1	2.9%	2.9	4	0.4%	11.8
20-24	151	14.4%	35	7.0	18.6%	23.6	5	14.7%	16.2	26	2.9%	84.2
25-29	213	20.4%	27	5.4	14.4%	18.1	10	29.4%	34.7	77	8.6%	267.6
30-34	220	21.0%	35	7.0	18.6%	22.6	6	17.6%	19.0	80	8.9%	253.3
35-39	170	16.3%	23	4.6	12.2%	16.8	4	11.8%	13.8	122	13.6%	420.1
40-44	109	10.4%	15	3.0	8.0%	13.4	1	2.9%	4.1	126	14.1%	514.8
45-49	60	5.7%	16	3.2	8.5%	18.4	4	11.8%	21.0	127	14.2%	666.1
50-54	30	2.9%	10	2.0	5.3%	14.5	2	5.9%	13.3	156	17.4%	1,037.0
55-59	28	2.7%	10	2.0	5.3%	23.7	1	2.9%	8.6	80	8.9%	686.5
60+	11	1.1%	7	1.4	3.7%	9.3	0	0.0%	0.0	95	10.6%	443.1
Risk exposure												
MSM	406	38.8%	101	20.2	53.7%	-	25	73.5%	-	383	42.7%	-
IDU	214	20.5%	10	2.0	5.3%	-	1	2.9%	-	122	13.6%	-
MSM & IDU	44	4.2%	0	0.0	0.0%	-	0	0.0%	-	40	4.5%	-
Heterosexual	192	18.4%	20	4.0	10.6%	-	4	11.8%	-	170	19.0%	-
Other/Unknown	190	18.2%	57	11.4	30.3%	-	4	11.8%	-	181	20.2%	-

Year of HIV Diagnosis	Cases	Rate(e)
Before 2006	671	-
2006	40	15.1
2007	43	15.6
2008	33	11.5
2009	37	12.4
2010	28	8.3
2011	41	11.8
2012	35	9.8
2013	41	11.3
2014	43	11.6
2015	34	9.1

Notes:

- New diagnoses include only individuals whose initial HIV report was made in Wisconsin.
- The first cases of HIV infection in Wisconsin were diagnosed in 1982. Thus, these represent cumulative cases from 1982 through the specified date.
- Prevalent cases include all cases presumed to be alive and living in Wisconsin, regardless of the state of initial HIV report.
- The average annual number of cases reported in the specified period.
- Cases per 100,000 population. Rates not available for risk exposure groups.
- Demographic and risk exposure breakdown not shown if statewide total is less than 5 cases.
- Disease status when first diagnosed with HIV infection, except for prevalent cases, where it is the current disease status.
- Age when first diagnosed with HIV infection, except for prevalent cases, where it is the current age.



Table 12: Reported Cases of HIV Infection, American Indians, Wisconsin, 1982-2015

	New Diagnoses by Year of Diagnosis ^a									Prevalence ^c		
	1982-2015(b)		2010-2014			2015			Cases	%	Rate(e)	
	Cases	%	Cases	Avg(d)	%	Rate(e)	Cases	%				Rate(e)
Total cases(f)	71	100.0%	8	1.6	100.0%	4.0	4	100.0%	7.9	46	100.0%	91.1
Disease Status(g)												
(Missing)	5	7.0%	0	0.0	0.0%	0.0	-	-	-	0	0.0%	0.0
HIV	50	70.4%	5	1.0	62.5%	3.3	-	-	-	24	52.2%	47.5
AIDS	16	22.5%	3	0.6	37.5%	2.0	-	-	-	22	47.8%	43.6
Sex at Birth												
Female	23	32.4%	3	0.6	37.5%	4.0	-	-	-	12	26.1%	47.5
Male	48	67.6%	5	1.0	62.5%	5.1	-	-	-	34	73.9%	134.7
Race/Ethnicity												
American Indian	71	100.0%	8	1.6	100.0%	4.0	-	-	-	46	100.0%	91.1
Age(h)												
<5	2	2.8%	0	0.0	0.0%	0.0	-	-	-	0	0.0%	0.0
5-14	1	1.4%	0	0.0	0.0%	0.0	-	-	-	0	0.0%	0.0
15-19	1	1.4%	1	0.2	12.5%	23.6	-	-	-	0	0.0%	0.0
20-24	11	15.5%	1	0.2	12.5%	23.1	-	-	-	2	4.3%	46.1
25-29	20	28.2%	2	0.4	25.0%	25.7	-	-	-	4	8.7%	100.8
30-34	15	21.1%	0	0.0	0.0%	0.0	-	-	-	5	10.9%	144.0
35-39	10	14.1%	0	0.0	0.0%	0.0	-	-	-	4	8.7%	126.5
40-44	5	7.0%	1	0.2	12.5%	30.8	-	-	-	5	10.9%	154.2
45-49	1	1.4%	0	0.0	0.0%	0.0	-	-	-	7	15.2%	199.9
50-54	2	2.8%	1	0.2	12.5%	28.7	-	-	-	9	19.6%	251.5
55-59	2	2.8%	1	0.2	12.5%	38.3	-	-	-	5	10.9%	157.9
60+	1	1.4%	1	0.2	12.5%	15.9	-	-	-	5	10.9%	75.0
Risk exposure												
MSM	25	35.2%	4	0.8	50.0%	-	-	-	-	16	34.8%	-
IDU	15	21.1%	1	0.2	12.5%	-	-	-	-	11	23.9%	-
MSM & IDU	7	9.9%	0	0.0	0.0%	-	-	-	-	5	10.9%	-
Heterosexual	14	19.7%	0	0.0	0.0%	-	-	-	-	9	19.6%	-
Other/Unknown	10	14.1%	3	0.6	37.5%	-	-	-	-	5	10.9%	-

Year of HIV Diagnosis	Cases	Rate(e)
Before 2006	56	-
2006	1	2.1
2007	1	2.1
2008	1	2.0
2009	0	0.0
2010	1	2.1
2011	2	4.1
2012	0	0.0
2013	2	4.0
2014	3	5.9
2015	4	7.9

Notes:

- New diagnoses include only individuals whose initial HIV report was made in Wisconsin.
- The first cases of HIV infection in Wisconsin were diagnosed in 1982. Thus, these represent cumulative cases from 1982 through the specified date.
- Prevalent cases include all cases presumed to be alive and living in Wisconsin, regardless of the state of initial HIV report.
- The average annual number of cases reported in the specified period.
- Cases per 100,000 population. Rates not available for risk exposure groups.
- Demographic and risk exposure breakdown not shown if statewide total is less than 5 cases.
- Disease status when first diagnosed with HIV infection, except for prevalent cases, where it is the current disease status.
- Age when first diagnosed with HIV infection, except for prevalent cases, where it is the current age.



Table 13: Reported Cases of HIV Infection, Asians, 1982-2015

	New Diagnoses by Year of Diagnosis ^a									Prevalence ^c		
	1982-2015(b)		2010-2014			2015			Cases	%	Rate(e)	
	Cases	%	Cases	Avg(d)	%	Rate(e)	Cases	%				Rate(e)
Total cases(f)	106	100.0%	25	5.0	100.0%	3.5	7	100.0%	4.6	86	100.0%	56.8
Disease Status(g)												
(Missing)	5	4.7%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
HIV	77	72.6%	15	3.0	60.0%	2.1	6	85.7%	4.0	53	61.6%	35.0
AIDS	24	22.6%	10	2.0	40.0%	1.8	1	14.3%	0.7	33	38.4%	21.8
Sex at Birth												
Female	26	24.5%	4	0.8	16.0%	1.9	0	0.0%	0.0	27	31.4%	34.7
Male	80	75.5%	21	4.2	84.0%	6.1	7	100.0%	9.5	59	68.6%	80.0
Race/Ethnicity												
Asian	106	100.0%	25	5.0	100.0%	3.5	7	100.0%	4.6	86	100.0%	56.8
Age(h)												
<5	2	1.9%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
5-14	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	1	1.2%	4.1
15-19	2	1.9%	1	0.2	4.0%	7.8	1	14.3%	8.1	0	0.0%	0.0
20-24	18	17.0%	6	1.2	24.0%	9.4	1	14.3%	5.7	5	5.8%	28.4
25-29	21	19.8%	3	0.6	12.0%	6.8	2	28.6%	12.7	6	7.0%	38.0
30-34	23	21.7%	7	1.4	28.0%	13.5	0	0.0%	0.0	12	14.0%	80.9
35-39	15	14.2%	2	0.4	8.0%	9.4	0	0.0%	0.0	13	15.1%	114.7
40-44	8	7.5%	2	0.4	8.0%	11.3	1	14.3%	10.1	10	11.6%	101.3
45-49	7	6.6%	2	0.4	8.0%	13.2	1	14.3%	12.3	12	14.0%	147.9
50-54	5	4.7%	1	0.2	4.0%	16.0	0	0.0%	0.0	13	15.1%	195.9
55-59	4	3.8%	0	0.0	0.0%	0.0	1	14.3%	19.0	7	8.1%	133.2
60+	1	0.9%	1	0.2	4.0%	8.7	0	0.0%	0.0	7	8.1%	56.7
Risk exposure												
MSM	49	46.2%	16	3.2	64.0%	-	4	57.1%	-	35	40.7%	-
IDU	1	0.9%	0	0.0	0.0%	-	0	0.0%	-	2	2.3%	-
MSM & IDU	2	1.9%	0	0.0	0.0%	-	1	14.3%	-	2	2.3%	-
Heterosexual	22	20.8%	3	0.6	12.0%	-	0	0.0%	-	19	22.1%	-
Other/Unknown	32	30.2%	6	1.2	24.0%	-	2	28.6%	-	28	32.6%	-

Year of Diagnosis	Cases	Rate(e)
Before 2006	47	-
2006	5	4.4
2007	7	6.1
2008	6	5.0
2009	9	7.4
2010	6	4.6
2011	6	4.4
2012	2	1.4
2013	6	4.1
2014	5	3.3
2015	7	4.6

Notes:

- New diagnoses include only individuals whose initial HIV report was made in Wisconsin.
- The first cases of HIV infection in Wisconsin were diagnosed in 1982. Thus, these represent cumulative cases from 1982 through the specified date.
- Prevalent cases include all cases presumed to be alive and living in Wisconsin, regardless of the state of initial HIV report.
- The average annual number of cases reported in the specified period.
- Cases per 100,000 population. Rates not available for risk exposure groups.
- Demographic and risk exposure breakdown not shown if statewide total is less than 5 cases.
- Disease status when first diagnosed with HIV infection, except for prevalent cases, where it is the current disease status.
- Age when first diagnosed with HIV infection, except for prevalent cases, where it is the current age.



TECHNICAL NOTES

This report is compiled by the Wisconsin AIDS/HIV Program and is based primarily on HIV infection case surveillance data collected by the Wisconsin Division of Public Health (DPH). In Wisconsin, state statutes require health care providers and laboratories to report cases of AIDS and HIV infection to the DPH. Data in this report are compiled from case report forms completed by health care providers. Risk information is usually self-reported by patients. Data reported here are based on the information available on the date the data were frozen for analysis. Therefore all data are provisional and subject to change as additional case information becomes available.

Completeness of reporting for HIV infection in Wisconsin is estimated to be over 99% but may vary by geographic region, risk exposure category, and demographic group. Thus, at any time, reported cases of HIV infection represent only part of the total number of diagnosed cases. Because additional cases remain undiagnosed, reported HIV infection underestimates total HIV infection morbidity.

Newly diagnosed cases

New HIV diagnoses are included in the annual report if:

- The case was diagnosed in Wisconsin during the year of analysis; and
- The case was determined to be a *confirmed* case of HIV or AIDS; and
- Wisconsin is the first state of verifiable, name-based, HIV report. Also included are individuals who report being first diagnosed with HIV in another country, but for whom evidence is lacking to support a foreign residence at diagnosis. These practices conform to CDC's guidelines for case residency assignment.

Prevalent cases

Cases of HIV infection are included in the prevalence calculation for a given year if:

- The case was determined to be a confirmed case of HIV or AIDS; and
- The case was presumed to be alive at the end of the analysis year (i.e., no documentation of death has been received and the case did not match any records in local or national death data); and
- The most recent address information available for the case suggests that he/she currently resides in Wisconsin.
- Because of delays in reporting of deaths, the number of cases presumed alive should be considered provisional.

Current disease category

In this report, "HIV infection" refers to all persons with laboratory-confirmed HIV infection. This includes both AIDS and non-AIDS cases. Cases classified as "AIDS" include only cases that meet the CDC surveillance case definition for AIDS.

Age

For new diagnoses, age refers to the age at time of HIV diagnosis. For prevalent cases, or those presumed alive, age refers to the age on December 31 of the year of analysis.



Sex

Sex designations in this report are based on a person's sex at birth, unless otherwise specified.

Risk exposure

- For surveillance purposes, cases are counted only once in a hierarchy of exposure categories. Persons with more than one reported mode of exposure to HIV are classified in the first category in the hierarchy as defined by CDC.
- The risk exposure category "MSM" includes men who report having sex with men with no history of injection drug use. This includes men who report sex with both men and women.
- The risk exposure category "MSM/PWID" includes men who report having sex with men who also have a history of injection drug use.
- The risk exposure category "PWID" includes females and non-MSM males who report a history of injection drug use.
- The risk category "high-risk heterosexual contact" is restricted to males and females who report a history of heterosexual contact with a high-risk partner, such as an injection drug user, a bisexual male, a person with hemophilia, or a person with HIV infection.
- The risk exposure category "Other" may be used to group less common risk categories, including people with hemophilia, people who have been exposed to HIV through a blood transfusion or tissue/organ transplant, and children who were born to mothers with, or at risk of, HIV infection.
- Perinatal infection refers to HIV transmitted from mother to child during the perinatal period, which spans from 22-28 weeks of gestation to seven days after birth. This category is also used for children presumed to be infected during breastfeeding.
- The risk exposure category "Unknown" includes cases currently under investigation; cases with incomplete exposure history because the patients refused interview, died before they could be interviewed, or were lost to follow-up; cases for whom follow-up exposure history is available but no exposure mode was identified; and cases with exposure categories not listed in the hierarchy.

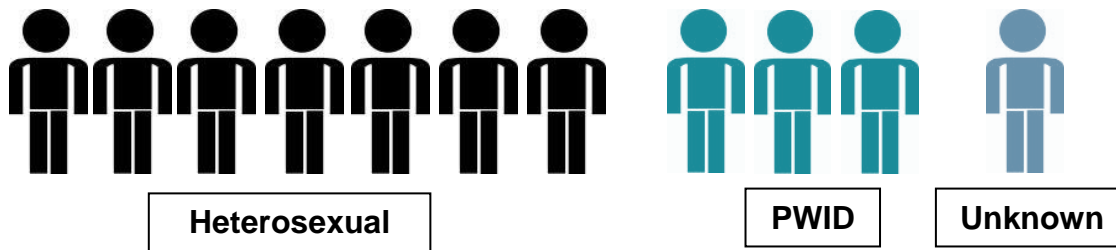
Imputed risk exposure

Because a substantial proportion of cases of HIV infection are reported in Wisconsin with an unknown risk exposure category, multiple imputation is used to assign possible transmission categories. Multiple imputation is a statistical method in which the known risks of individuals with similar demographic characteristics are used to estimate the most plausible transmission categories for those with unknown risk.

Example

Assume there were 11 Black women ages 45-64 diagnosed with HIV infection, and 7 of them were known to have high-risk heterosexual exposure, 3 of them were known to have PWID exposure, and 1 had unknown risk exposure (see figure below). The 10 known risks will be applied to the 1 person with unknown risk. In this case 70% of those with known risk were heterosexual and 30% were PWID, so the person with unknown risk will be assigned 70% heterosexual and 30% PWID.





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. This method conforms to CDC's method of addressing cases with unknown risk.

Estimated Prevalence of HIV by Demographic Group

The estimated HIV prevalence is dependent upon the most recent estimate of the proportion of individuals unaware of their HIV infection, the age group of interest, population size or source of MSM population estimate, and HIV prevalence. Since several of these measures change over time (e.g., estimated proportion unaware, HIV prevalence), estimates may not be comparable from year to year. The calculation consists of:

- Number of cases living with HIV in Wisconsin at year end, using imputed estimates for risk groups.
- Estimated number unaware, calculated as the number living with HIV/proportion unaware, using the more recent national estimate.
- Population size: actual population size from the Wisconsin Interactive Statistics on Health (WISH, <https://www.dhs.wisconsin.gov/wish/index.htm>) or estimated population size for risk groups using available estimates.

The estimated prevalence for each demographic group is calculated as:

$$\frac{\text{Number of cases living with HIV} + \text{estimated number unaware}}{\text{Population size}}$$

Rates

- In this report, rates are defined as cases per 100,000 population, except where noted. Population denominators used to calculate rates are from the Wisconsin Interactive Statistics on Health website (<https://www.dhs.wisconsin.gov/wish/index.htm>). Rates are not shown when based on case counts <5. Rates based on case counts of between 5-11 cases are considered statistically unreliable.
- Rates published by the CDC for Wisconsin, Milwaukee, and Madison cannot be compared to those prepared by the Wisconsin Division of Public Health and local health departments because they use different data sources.

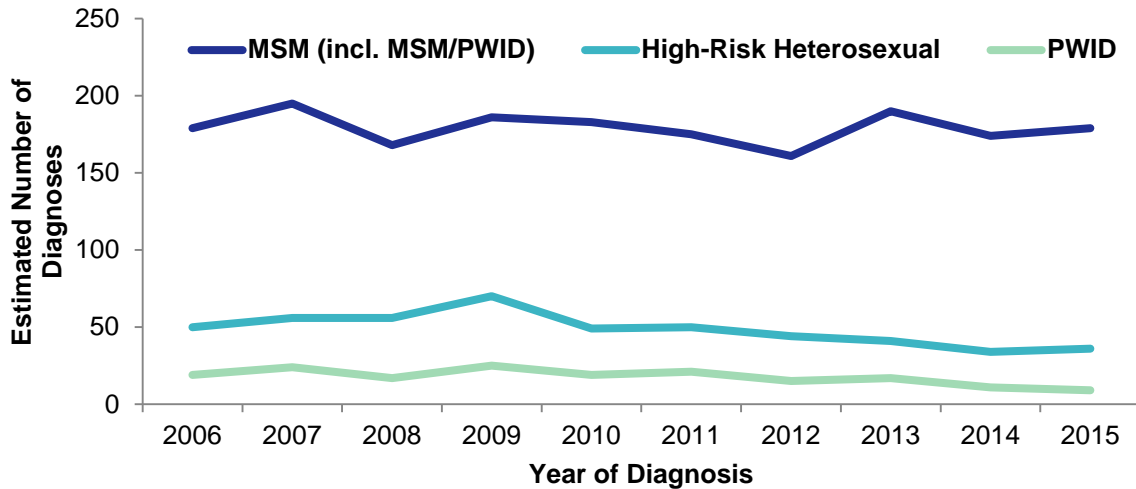
Statistical significance

Statements about statistical significance are sometimes made when looking at a change over time or when comparing groups. Tests of statistical significance allow us to determine whether the observed change over time or difference between groups is most likely due to random fluctuation or whether it is likely to be a real difference.



Example

Looking at the figure below, it is difficult to tell whether the overall number of diagnoses for each risk group changed over the last decade; therefore, a statistical test is used to help distinguish true trends from annual fluctuation. In this case, statistical tests (not shown) indicate that the number of diagnoses was stable among MSM and declined for those with high-risk heterosexual contact and those who have injected drugs.



In this report, statements are made about trends only if the trends are statistically significant. Non-significant trends are described as stable or fluctuating. When comparing groups, differences are statistically significant if confidence intervals do not overlap. However, if confidence intervals do overlap, we cannot say whether or not the two groups are statistically different without doing additional statistical tests.

Case Residency

- Cases that meet the definition of newly diagnosed (see *Newly diagnosed cases* section above) are assigned to the county of residence listed on the HIV case report form when first diagnosed and reported with HIV infection.
- Cases that meet the prevalent case definition (see *Prevalent cases* section above) are assigned to the county of their last known address.

Death Data

Information about deaths are obtained from the Wisconsin Vital Records Office, the National Death Index, and the Social Security Death Master File. Deaths described in this report include only those that occurred in Wisconsin among people living with HIV. Deaths are described as being due to HIV, or caused by HIV, if HIV or AIDS were listed as the underlying cause of death on the death certificate. Deaths are described as being due to other causes if HIV or AIDS was *not* listed as the underlying cause of death. However, HIV or AIDS may have been listed as one of the 19 possible contributing causes of death.

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