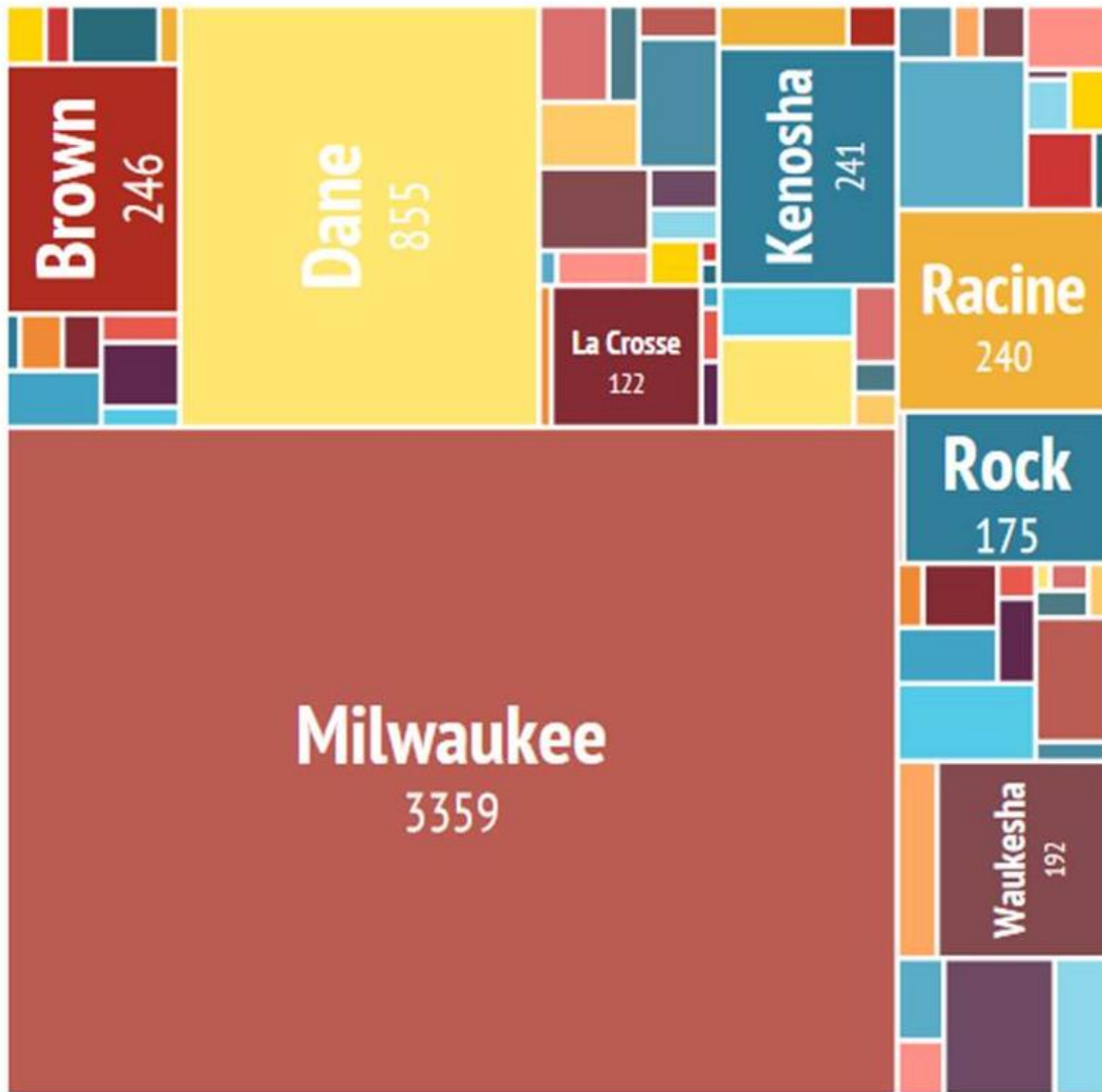


# Wisconsin HIV/AIDS Surveillance Annual Review

New diagnoses, prevalent cases, and deaths through December 31, 2014



Wisconsin Department of Health Services  
Division of Public Health  
AIDS/HIV Program  
P-00484 (April 2015)

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**ABBREVIATIONS**

AI	American Indian
AN	Alaska Native
CDC	Centers for Disease Control and Prevention
DHS	Department of Health Services
DPH	Division of Public Health
MSM	Men who have sex with men
PI	Pacific Islander
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 2014, prevalent cases as of December 31, 2014, and deaths through 2012 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

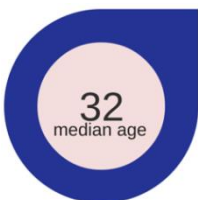
**Trend:** During 2014, 226 new cases of HIV infection were diagnosed in Wisconsin. Between 2005 and 2014, both the number and the rate of new infections remained stable. The number of new diagnoses over the last decade ranged from a low of 224 in 2012 to a high of 285 in 2009, with an average of 250 new diagnoses per year. The HIV diagnosis rate in Wisconsin is 11<sup>th</sup> lowest among the 50 states.



**Sex:** Five times as many males as females were diagnosed with HIV during 2014 (192 males and 34 females). Between 2005 and 2014, the HIV diagnosis rate was stable among older males (ages 30-59) and younger females (ages 13-29). Over the same time period, the HIV diagnosis rate increased among younger males and declined among older females.

**Gender:** Since 1982, 31 known transgender individuals have been diagnosed with HIV in Wisconsin. During 2005–2014, there were 25 new HIV diagnoses in this population. Twelve of the 25 were Black, and 17 of the 25 were under age 30 at the time of diagnosis.

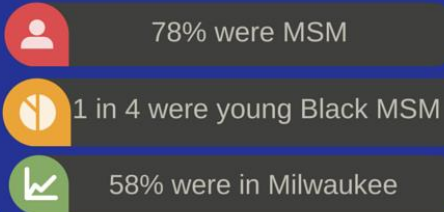
**Racial/ethnic groups:** HIV infection disproportionately affects racial/ethnic minorities. During 2014, 67% of new diagnoses were among racial/ethnic minorities, despite minorities making up just 17% of Wisconsin’s population. For males, the 2014 HIV diagnosis rate was more than 16-fold higher among Blacks and 7-fold higher among Hispanics compared to Whites. For females, the HIV diagnosis rate was 34-fold higher among Blacks and more than 9-fold higher among Hispanics compared to Whites.



**Age:** The median age at HIV diagnosis was 32 years in 2014 but varied considerably by risk exposure group. The median age at diagnosis was 29 years for men who have sex with men (MSM) overall, 43 years for those with high-risk heterosexual contact, and 53 years for those with a history of injection drug use.

## Data highlights

### New diagnoses in 2014:



Of the **226** new cases of HIV infection diagnosed in Wisconsin during 2014:

- **78%** were attributed to men who have sex with men including those who also injected drugs.
- **15%** were attributed to high-risk heterosexual contact.
- **7%** were attributed to injection drug use.

Reflecting national trends, young Black MSM in Wisconsin continue to be the population most affected by HIV in Wisconsin. During 2014:

- Young Black MSM accounted for almost one-quarter (22%) of all new diagnoses in Wisconsin.
- Diagnoses in young Black MSM more than doubled from 2005 to 2014.

Among MSM, the median age was 25 years for Blacks and Hispanics and 36 years for Whites.

**Risk:** After adjusting for unknown risk, MSM accounted for 78% of new diagnoses in 2014, including the 3% among men who MSM who also injected drugs. High-risk heterosexual contact and injection drug use (not including MSM/PWID) accounted for the other 15% and 7% of new diagnoses, respectively. HIV diagnoses more than doubled in young Black MSM between 2005 and 2014. The number of diagnoses attributed to high-risk heterosexual contact and injection drug use was stable.

**Geography:** During 2014, HIV cases were diagnosed in 26 of the 72 counties in Wisconsin. However, the distribution was uneven: Milwaukee County cases accounted for 58% of new diagnoses, Dane County for 11%, Racine for 5%, and Outagamie for 4%. The Department of Corrections and all other counties each accounted for fewer than 4% of diagnoses.

**Disease status at diagnosis:** Between 25% and 30% of all cases first diagnosed with HIV infection in Wisconsin during 2011-2014 had already progressed to AIDS by the time of diagnosis. An additional 4% to 8% of cases diagnosed during 2011-2013 progressed to AIDS within 12 months of being diagnosed with HIV infection. 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 226 cases diagnosed in Wisconsin in 2014, 173 individuals previously diagnosed with HIV infection moved to Wisconsin from another state.

## PEOPLE LIVING WITH HIV INFECTION

As of the end of 2014, 6,899 individuals reported with HIV or AIDS were presumed to be alive and living in Wisconsin. Three-quarters (75%) of these were first diagnosed in Wisconsin; the others were initially diagnosed elsewhere. The Centers for Disease Control and Prevention (CDC) estimates that 14% of people living with HIV (PLHIV) are unaware of their HIV status. Thus, an estimated 1,125 in the state are unaware of their HIV infection, so the total number of PLHIV in Wisconsin is estimated to be 8,024.

HIV prevalence varies by demographic group. Nearly one in three (30%) Black MSM is estimated to be living with HIV, compared to 9% of Hispanic and 2% of White MSM. Less than 1 in 1,000 females and non-MSM males in Wisconsin is HIV-positive. Within the non-MSM groups, the rate is highest among Blacks—about 10 in 1,000.

Nearly half (49%) of all PLHIV reside in Milwaukee County. Dane County has the

second highest proportion (12%), followed by Brown County (4%). Kenosha, Racine, and Waukesha counties each have 3% of the state's prevalent cases. The Wisconsin Department of Corrections, Rock, La Crosse, and Outagamie counties each have 2%. All other counties have 1% or fewer cases.

“Nearly **one in three** (30%) Black MSM in Wisconsin aged 18 and older is estimated to be living with HIV, compared to 9% of Hispanic MSM and 2% of White MSM in the same age group.”



### Deaths

Deaths due to any cause among people reported with HIV infection have declined markedly since the early 1990s. Deaths peaked in 1993 (373 deaths). In 2012, the most recent year with complete data, 127 deaths among people with HIV are known to have occurred in Wisconsin, consistent with the average of 127 deaths each year between 2004 and 2011. HIV as the underlying cause of death is also on the decline—75 of the 127 reported deaths in 2012 were due to non-HIV-related causes, while 52 had HIV indicated as the underlying cause of death. The median age of death rose from age 37 in 1990 to age 42 in 2002 to age 51 in 2012, 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 steep rise in diagnoses in young black MSM and the young median age at diagnosis suggest that young Black MSM should be the top priority for HIV prevention efforts in Wisconsin. The young median age at diagnosis may reflect both acquisition of HIV at a younger age and diagnosis closer to the time of infection, suggesting that recent efforts to better target HIV testing in young MSM have met with some success.

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 HIV care and treatment services. At the end of 2014, 6,899 people were reported with HIV and presumed to be living in Wisconsin. The fact that 44% 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 (<http://www.dhs.wisconsin.gov/aids-hiv/Stats/index.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:  
<http://www.dhs.wisconsin.gov/aids-hiv/>

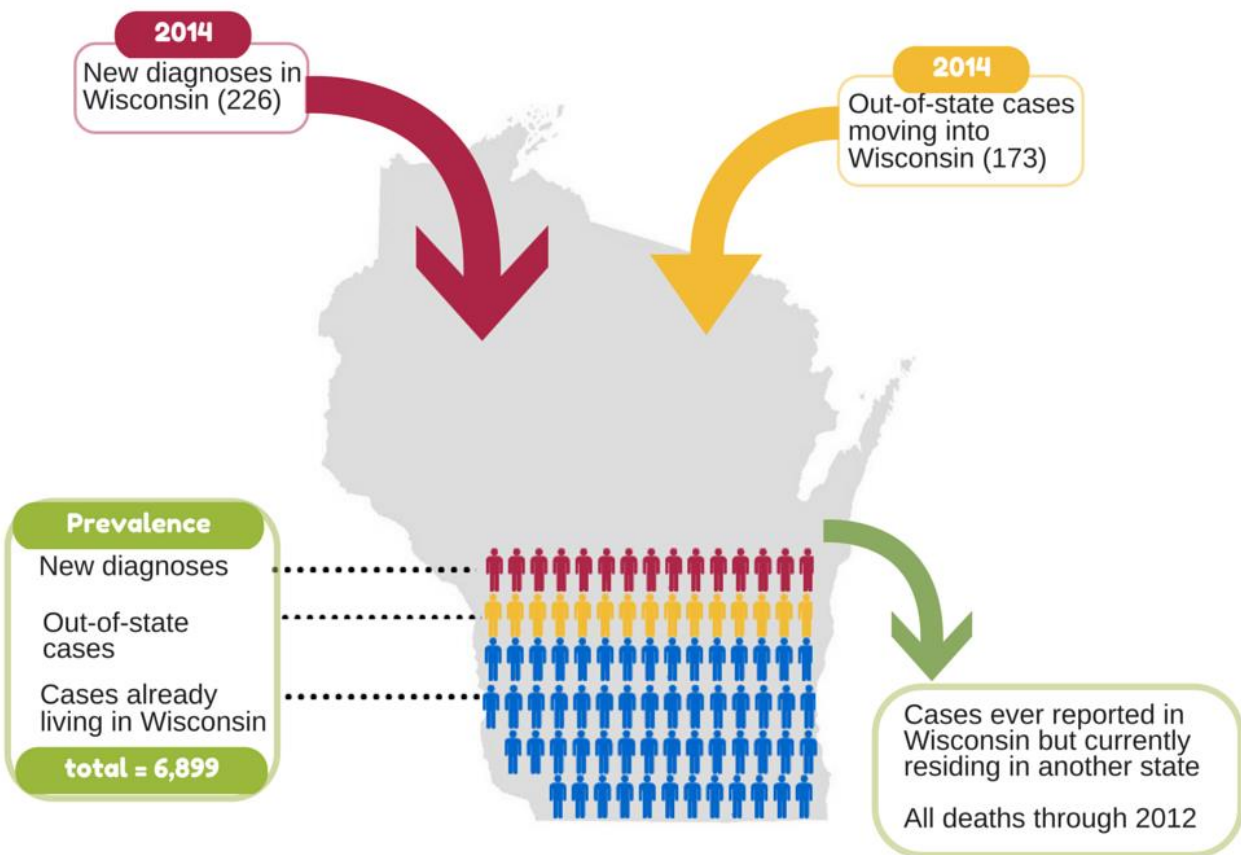
Information about hepatitis C: <https://www.dhs.wisconsin.gov/viral-hepatitis/hcv-program.htm>

### NEW DIAGNOSIS AND PREVALENT CASE DEFINITIONS

Since the beginning of the HIV epidemic, 12,844 people have been reported with HIV infection in Wisconsin. Of these, 9,447 (74%) individuals received their first verifiable HIV diagnosis while residing in Wisconsin. The other 26% 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 2014 there were 226 new diagnoses of HIV infection among Wisconsin residents (Figure 1). In addition, there were 173 individuals already diagnosed with HIV who moved into Wisconsin and were reported during 2014. 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 the year.

**Figure 1: Flow of cases of HIV infection in and out of Wisconsin, 2014**



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.

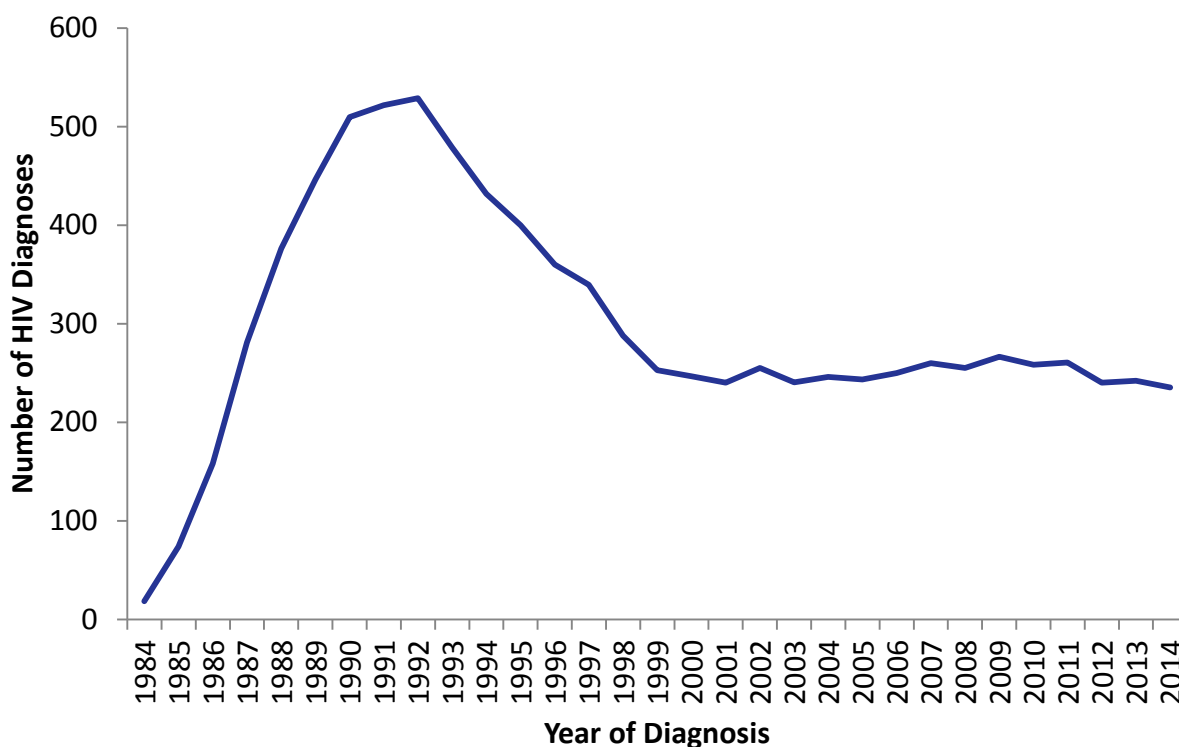
At the end of 2014 there were an estimated 6,899 persons living with diagnosed HIV infection in Wisconsin. However, the CDC estimates that 14% of individuals living with HIV are unaware of their infection, and therefore the actual prevalence of HIV in Wisconsin is likely closer to 8,000.

## NEW DIAGNOSES

### Number and rate

There have been a total of 9,447 individuals diagnosed and reported with HIV infection in Wisconsin. Diagnoses rose rapidly during the 1980s until the peak in 1992, and then declined until about 2000 (Figure 2). Since then, the annual number of new diagnoses has been relatively stable in Wisconsin.

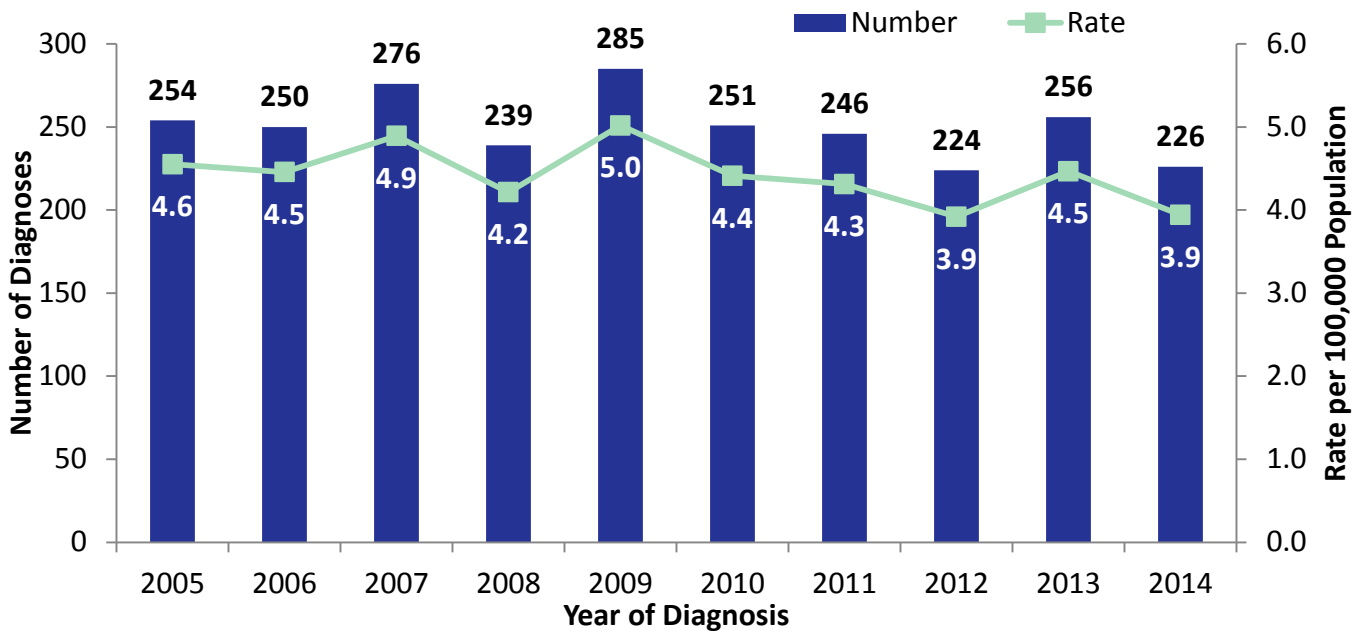
**Figure 2: Three-year rolling average of the number of new HIV diagnoses, Wisconsin, 1984 - 2014**



There were 226 new HIV diagnoses among Wisconsin residents during 2014, at a rate of 3.9 new infections per 100,000 population. Statewide, the number and the rate of HIV diagnoses among Wisconsin residents have been stable over the last decade (Figure 3). Between 2005 and 2014, the number of new diagnoses ranged from a low of 224 in 2012 to a high of 285 in 2009, with an average of 250 new diagnoses per year.

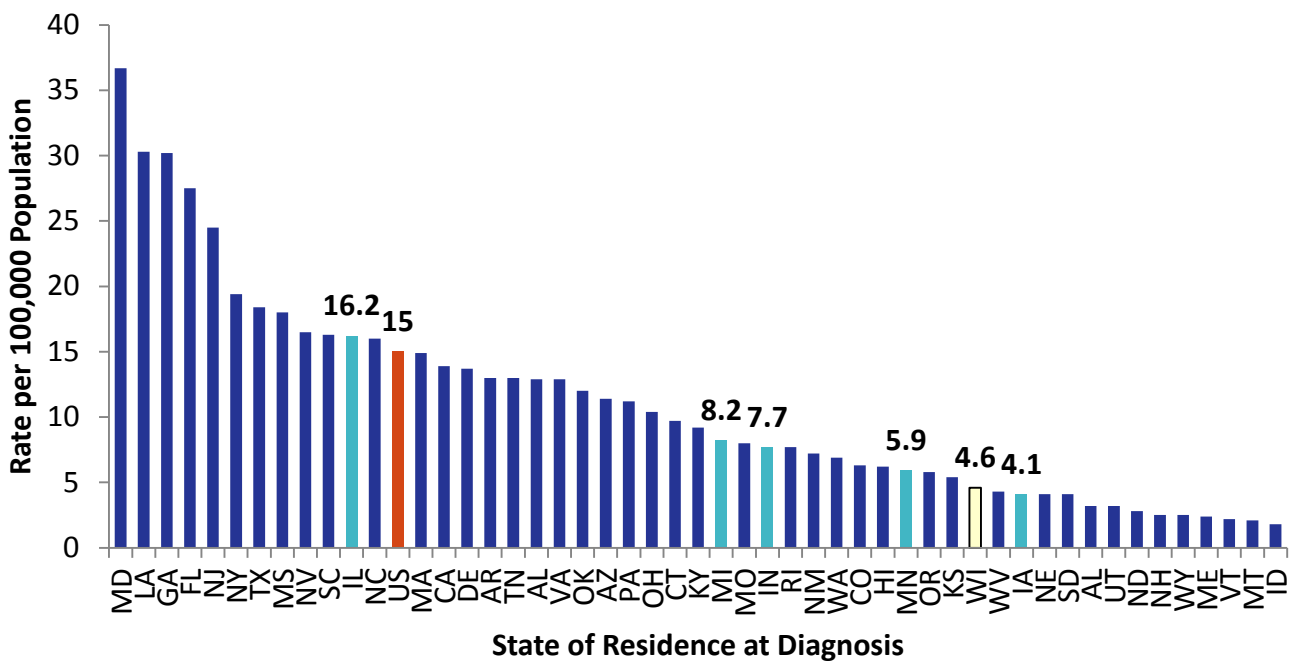


Figure 3: Number and rate of new HIV diagnoses, Wisconsin, 2005-2014



The rate of HIV infection in Wisconsin is low by national standards. The most recently available national HIV diagnosis rate (2013)<sup>1</sup> is 15 infections per 100,000 (Figure 4). By comparison, Wisconsin’s 2013 diagnosis rate was 4.6 per 100,000 population (based on 2013 data, which yields slightly different results than the more recent estimates shown above). With the exception of Iowa, Wisconsin has a lower diagnosis rate than other Midwest states.

Figure 4: HIV diagnosis rate by state, 2013



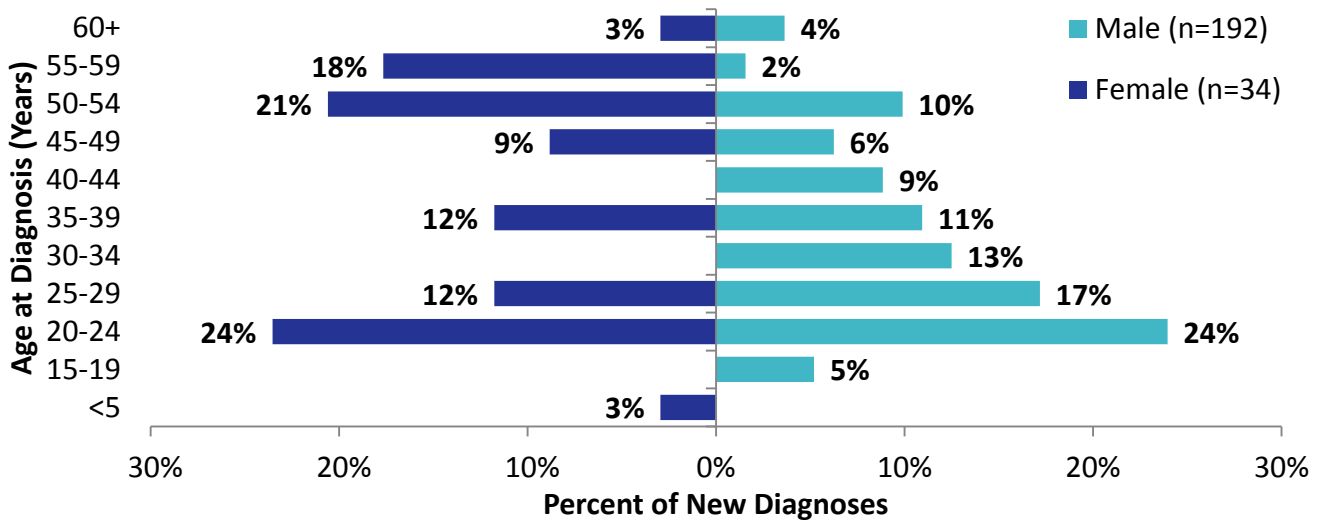
<sup>1</sup> CDC HIV Surveillance Report, 2013, V25, Table 18.



**Sex and age at diagnosis**

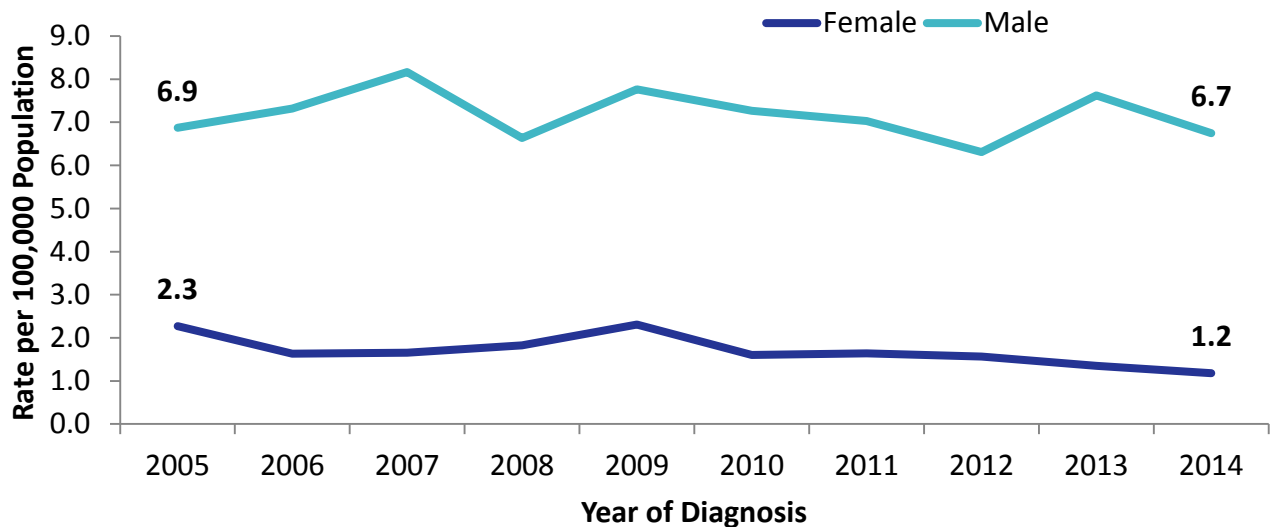
During 2014, there were 192 males and 34 females diagnosed with HIV infection in Wisconsin (see Technical Notes for definition of “Sex”). Newly diagnosed males were generally younger than newly diagnosed females. During 2014 the median age at diagnosis, the age at which half of cases were older and half were younger, was 42.5 years for females and 31 years for males. The proportion of newly diagnosed males and females by age group is shown in Figure 5.

**Figure 5: Percent distributions of new HIV diagnoses by age at diagnosis and sex, Wisconsin, 2014**



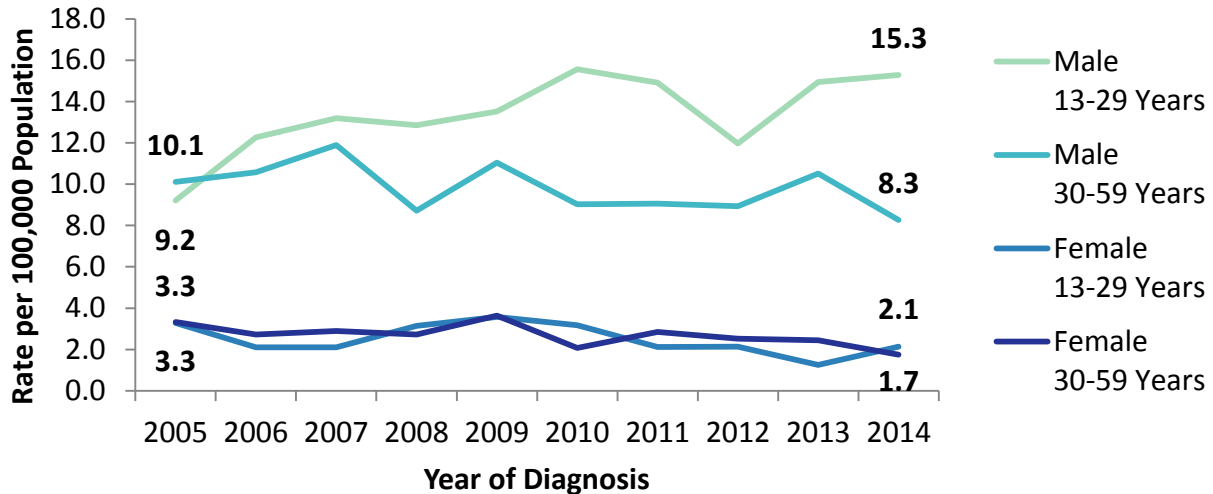
During 2014, the rate of HIV diagnosis was 1.2/100,000 for females and more than five-fold higher (6.7/100,000) for males. The overall HIV diagnosis rate has been stable over the last decade for males. The rate has declined among females, from 2.3/100,000 in 2005 to 1.2/100,000 in 2014 (Figure 6).

**Figure 6: HIV diagnosis rate by sex, Wisconsin, 2005-2014**



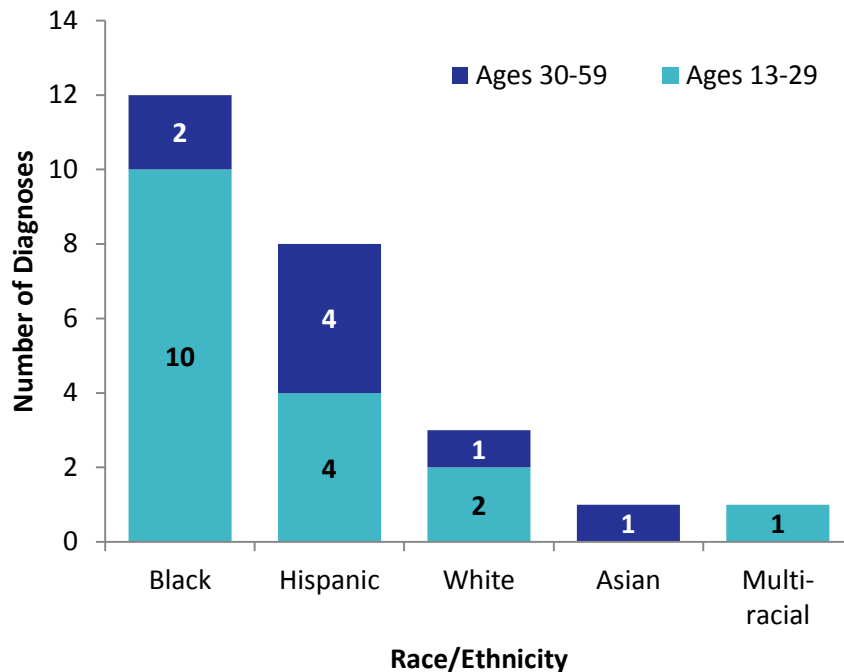
For both males and females, the HIV diagnosis rate varies by age. While the overall diagnosis rate for males was stable, the rate among younger males (ages 13-29) increased from 9.2/100,000 to 15.3/100,000, or about 30 additional cases over the decade. The rate among older males (ages 30-59) was stable (Figure 7). The overall decline in the diagnosis rate among females is primarily due to a decline in the rate among older females (ages 30-59), from 3.3/100,000 to 1.7/100,000, or about 20 fewer cases over the decade. The rate among younger females (ages 13-29) was stable.

**Figure 7: HIV diagnosis rate by sex and age, Wisconsin, 2005-2014**



**Transgender identity**

**Figure 8: Number of HIV diagnoses among transgender individuals by race/ethnicity and age, Wisconsin, 2005-2014**



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.



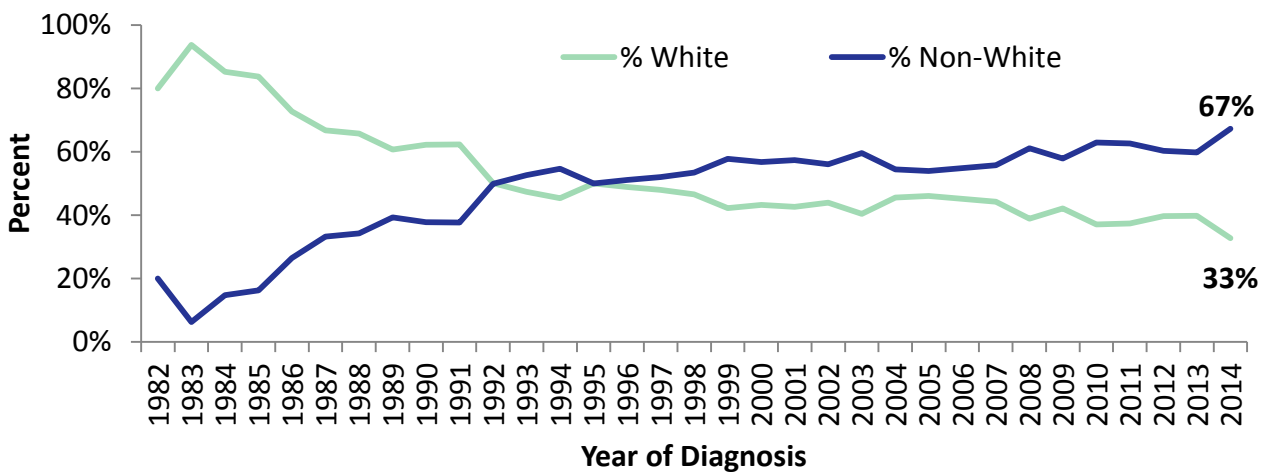
A total of 31 known transgender individuals have been diagnosed with HIV infection in Wisconsin since the beginning of the epidemic (3 female-to-male and 28 male-to-female). While the data collection of self-reported gender identity has improved over time, this likely underestimates the true number of transgender individuals diagnosed with HIV infection in Wisconsin. Of the 31 known transgender individuals diagnosed with HIV in Wisconsin, 25 of the diagnoses occurred between 2005 and 2014 (Figure 8). Of these 25 recent diagnoses, most were from a racial minority group (n=22) and under age 30 (n=17).

**Race/ethnicity**

During 2014, the majority of individuals (67%) 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 alone does not make one more or less susceptible to HIV infection. Rather, other determinants of health,<sup>2</sup> can disproportionately affect persons of color can put individuals at greater risk for HIV exposure.

The number and percent of new diagnoses by 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 non-Whites, Wisconsin, 1982-2014**



**Table 1: Number and percentage of new HIV diagnoses by sex and race/ethnicity, Wisconsin, 2014**

	Black	White	Hispanic	American Indian/Alaska Native	Asian	Multi-Racial	Total
Male	79 (41%)	66 (34%)	37 (19%)	3 (2%)	5 (3%)	2 (1%)	192
Female	20 (59%)	8 (24%)	5 (15%)	1 (3%)	0	0	34
<b>TOTAL</b>	<b>99 (44%)</b>	<b>74 (33%)</b>	<b>42 (19%)</b>	<b>4 (2%)</b>	<b>5 (2%)</b>	<b>2 (1%)</b>	<b>226</b>

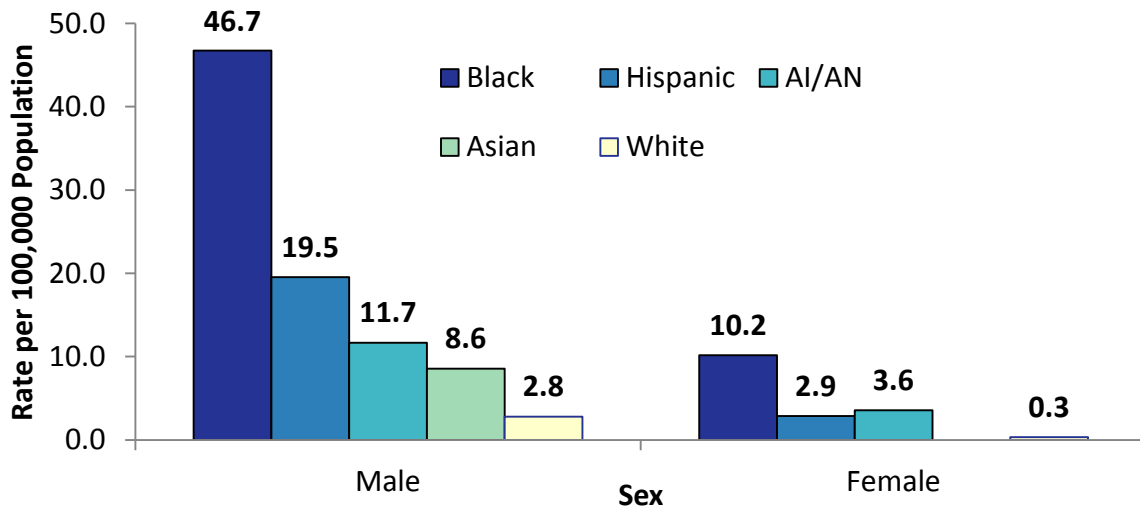
<sup>2</sup> Centers for Disease Control and Prevention. Disparities in HIV/AIDS, Viral Hepatitis, STDs, and TB. *Defining Health Disparities*. <http://www.cdc.gov/nchstp/healthdisparities/>. Published March 2014. Accessed April 2015.



**Race/ethnicity and sex**

The HIV diagnosis rate further highlights the disproportionate impact of HIV on racial/ethnic minorities. During 2014, the HIV diagnosis rate for males was more than 16-fold higher among Blacks and was 7-fold higher among Hispanics compared to Whites (Figure 10). For females, the HIV diagnosis rate was 34-fold higher among Blacks and more than 9-fold higher among Hispanics compared to Whites.

**Figure 10: HIV diagnosis rate by sex and race/ethnicity, Wisconsin, 2014**



The HIV diagnosis rate has changed over time for some groups. The HIV diagnosis rate has increased among Black males, has declined among White males and females, and has been stable among Hispanic males and females (Table 2). While there was no statistically significant change in the rate among Black females over the decade, there appears to have been an increase from 2005-2009 and then a decline from 2009 to 2014.

**Table 2: HIV diagnosis rate per 100,000 by sex and race/ethnicity, Wisconsin, 2005-2014**

Year of Diagnosis	Black Male	White Male	Hispanic Male	Black Female	White Female	Hispanic Female
2005	31.6	4.3	19.1	18.1	0.7	10.5
2006	37.3	4.1	19.4	10.6	0.7	7.6
2007	38.5	4.6	26.0	15.2	0.5	1.4
2008	38.9	3.4	17.0	16.7	0.5	3.4
2009	41.1	4.3	18.1	19.1	0.7	3.9
2010	47.2	3.5	14.2	15.1	0.4	1.9
2011	44.4	3.3	17.1	11.4	0.5	5.5
2012	39.9	3.2	15.1	12.8	0.6	3.0
2013	49.1	4.0	18.0	10.2	0.3	3.5
2014	46.7	2.8	19.5	10.2	0.3	2.9

**Reported risk exposure category and sex**

Reported risk exposure categories for HIV infection include men who have sex with men (MSM); history of injection drug use (PWID); men who have sex with men 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 2014 is shown in Table 3.

**Table 3: Number and percentage of new HIV diagnoses by sex and reported risk exposure category, Wisconsin, 2014**

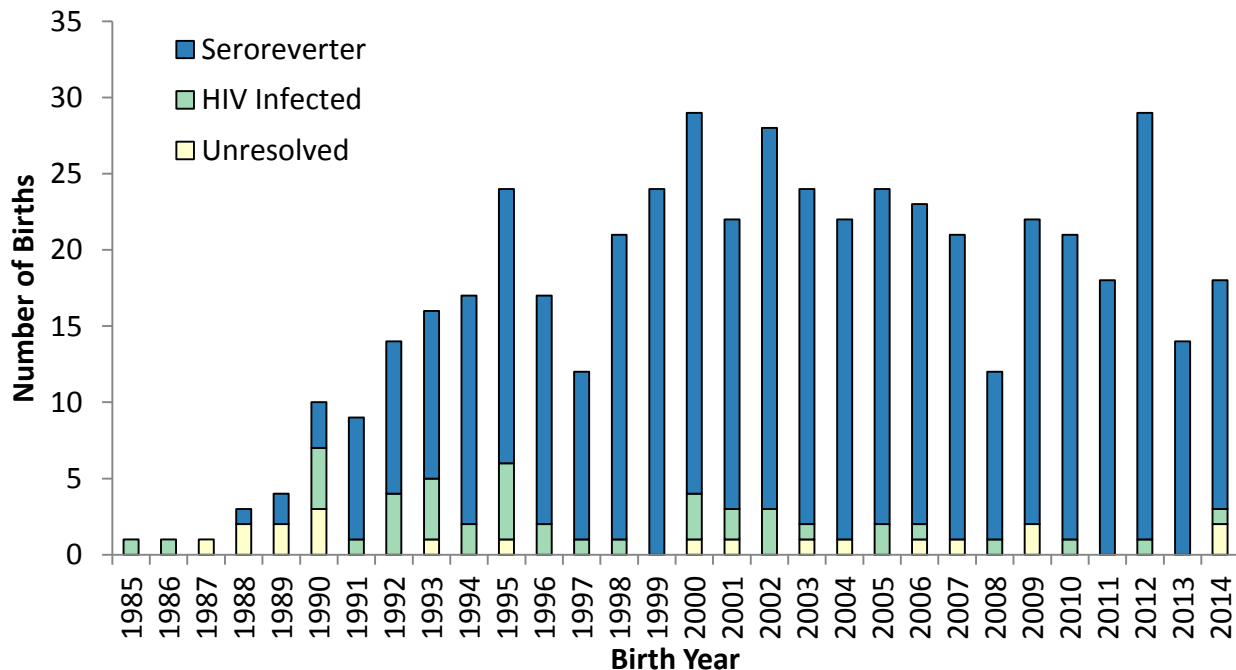
	MSM and MSM/PWID	PWID	High-Risk Heterosexual	Perinatal Exposure	Unknown	Total
Male	140 (73%)	2 (1%)	6 (3%)	0	44 (23%)	192
Female	-	4 (12%)	8 (24%)	1 (3%)	21 (62%)	34
<b>TOTAL</b>	<b>140 (62%)</b>	<b>6 (3%)</b>	<b>14 (6%)</b>	<b>1 (0.4%)</b>	<b>65 (29%)</b>	<b>226</b>

**Diagnostic status of HIV-exposed infants born in Wisconsin**

Since the beginning of the HIV epidemic, there have been approximately 502 infants born in Wisconsin hospitals who were known or presumed to be born to HIV-positive mothers. Of these, 42 (8%) were HIV infected (Figure 11). Most of the infants (87%) are seroreverters, meaning they are not infected with HIV.

A small proportion of these infants (5%) have an unresolved diagnostic status. The HIV surveillance program continues to work with medical providers to determine the final status of these exposed infants. The infants with an unresolved diagnostic status in 2014 were born late in the year and have not yet reached four months of age (the age at which HIV-exposed infants can be confirmed either HIV infected or HIV uninfected).

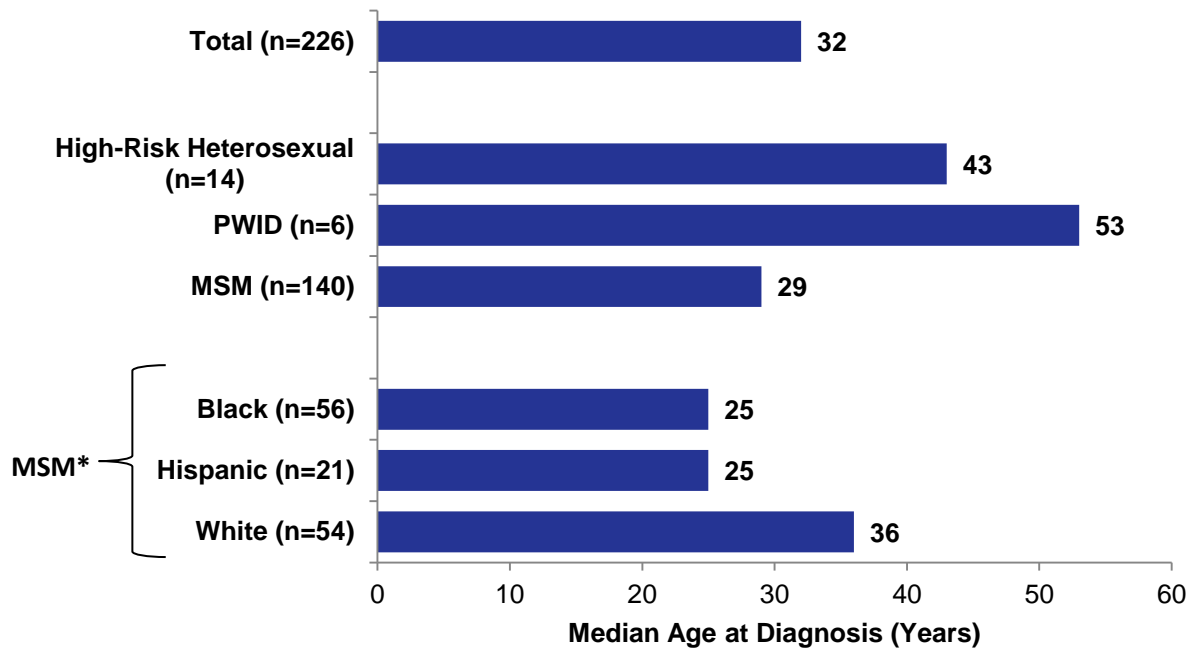
**Figure 11: Diagnostic status of HIV-exposed infants born in Wisconsin, 1985-2014**



**Reported risk exposure category and age**

The median age at HIV diagnosis during 2014 was 32 years, with variation by risk exposure group (Figure 12). The median age at diagnosis was older among those with high-risk heterosexual and PWID exposure, at 43 and 53 years respectively. The median age at diagnosis among all MSM was 29 years, but was lower among Black and Hispanic MSM (25 years).

**Figure 12: Median age at HIV diagnosis by reported risk exposure, and among MSM by race/ethnicity, Wisconsin, 2014**



\*Includes MSM/PWID

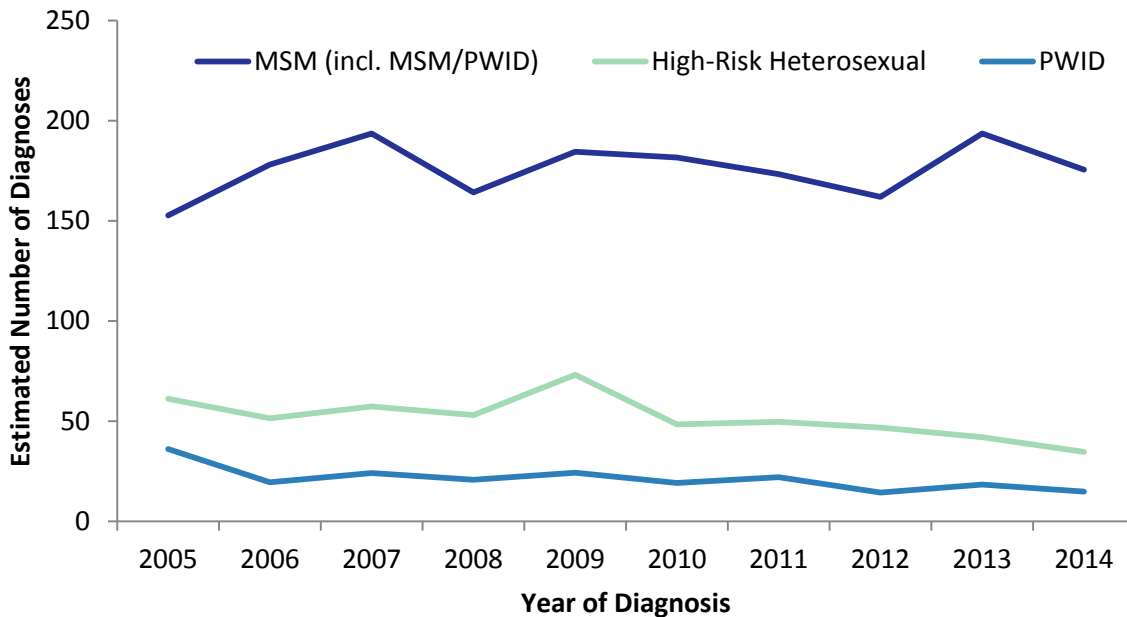
**Estimated risk exposure category**

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, 78% of new diagnoses during 2014 were attributed to MSM, 15% to high-risk heterosexual contact, and 7% to injection drug use.

From 2005 to 2014, the estimated number of new diagnoses has been stable among MSM overall, and has declined among those with high-risk heterosexual contact (from about 61 to 35 cases) and PWID (from about 36 to 15 cases) (Figure 13).



**Figure 13: HIV diagnoses by estimated risk exposure group\*, Wisconsin, 2005-2014**



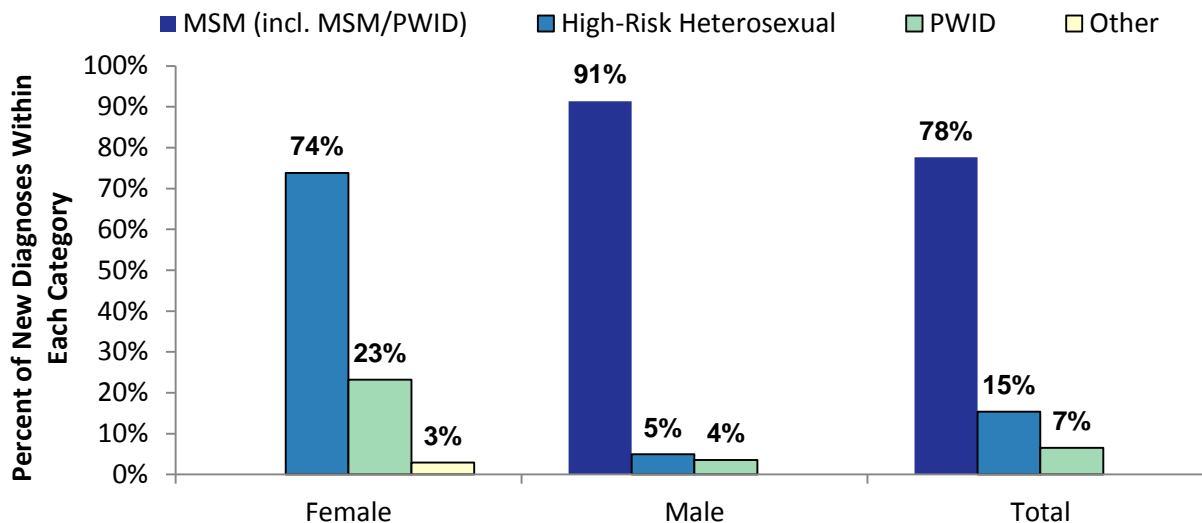
\*Data have been statistically adjusted to account for those with unknown risk.

**Estimated risk exposure category and sex**

Among males, after adjusting to account for those with unknown risk, 91% of 2014 diagnoses were among MSM, including 3% who also injected drugs (Figure 14). Injection drug use alone (non-MSM/PWID) accounted for 4%, and high-risk heterosexual exposure for 5% of diagnoses among males.

Among females, 74% of diagnoses were attributable to high-risk heterosexual contact, 23% to injection drug use, and 3% to perinatal exposure.

**Figure 14: Percentage of HIV diagnoses by sex and estimated risk exposure group\*, Wisconsin, 2014**



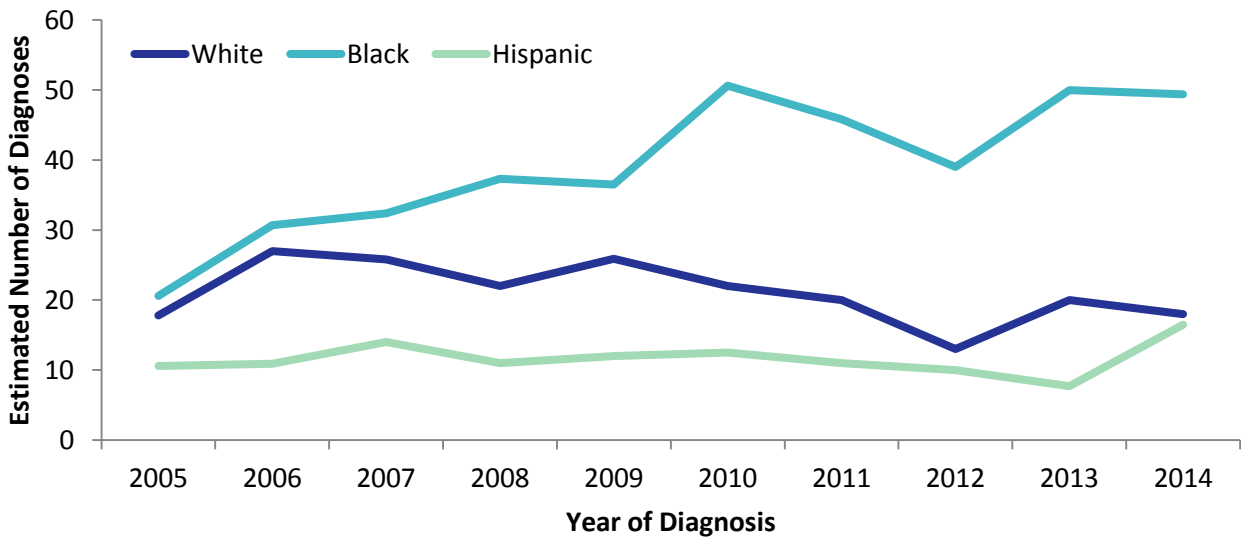
\*Data have been statistically adjusted to account for those with unknown risk.



**Young MSM by race/ethnicity**

Among young MSM (ages 13-29) diagnosed with HIV infection during 2014, Blacks accounted for 58% of diagnoses, Hispanics for 19%, and Whites for 21%. The number of new diagnoses among young Black MSM has more than doubled over the last decade, with about 21 new diagnoses during 2005 to about 50 new diagnoses during 2014 (Figure 15). The number of new diagnoses was stable among young Hispanic MSM and young White MSM over the decade.

**Figure 15: HIV diagnoses among MSM, ages 13-29, by race/ethnicity, Wisconsin, 2005-2014**



\*Data have been statistically adjusted to account for those with unknown risk; includes MSM/PWID.

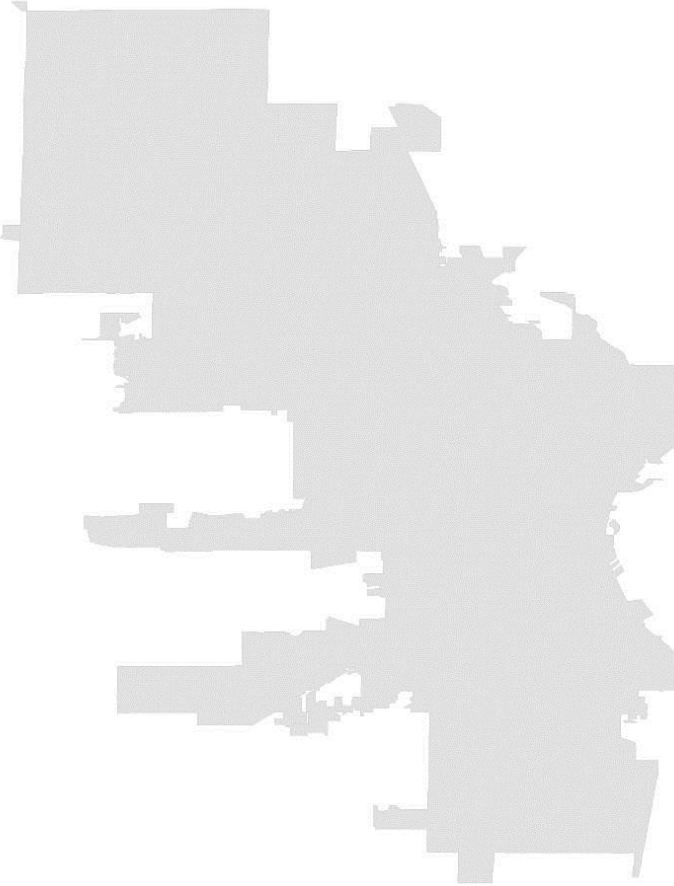
**County of residence**

During 2014, new HIV diagnoses were made among residents from 26 Wisconsin counties. Counties with the largest numbers of new diagnoses were Milwaukee (132 cases), Dane (25 cases), Racine (11 cases), Outagamie (8 cases), La Crosse (7 cases), and Waukesha (5 cases) (Table 4). All other counties had fewer than five new diagnoses each during 2014. The Department of Corrections also had fewer than five cases diagnosed in 2014.



**Table 4: Number, percent and rate of newly reported HIV diagnoses by county of residence, Wisconsin, 2014**

County of Residence	Number	Percent	Rate
Ashland Co.	1	0.4%	6.2
Brown Co.	3	1.3%	1.2
Burnett Co.	1	0.4%	6.5
Columbia Co.	1	0.4%	1.8
Dane Co.	25	11.1%	5.0
Dodge Co.	1	0.4%	1.1
Eau Claire Co.	1	0.4%	1.0
Kenosha Co.	4	1.8%	2.4
La Crosse Co.	7	3.1%	6.0
Marathon Co.	4	1.8%	3.0
Menominee Co.	1	0.4%	23.5
Milwaukee Co.	132	58.4%	13.9
Monroe Co.	1	0.4%	2.2
Outagamie Co.	8	3.5%	4.4
Ozaukee Co.	2	0.9%	2.3
Pierce Co.	1	0.4%	2.4
Portage Co.	1	0.4%	1.4
Racine Co.	11	4.9%	5.6
Rock Co.	1	0.4%	0.6
St. Croix Co.	2	0.9%	2.3
Taylor Co.	1	0.4%	4.8
Walworth Co.	3	1.3%	2.9
Waukesha Co.	5	2.2%	1.3
Waupaca Co.	1	0.4%	1.9
Winnebago Co.	2	0.9%	1.2
Wood Co.	3	1.3%	4.0
Dept. of Corrections	3	1.3%	-
<b>TOTAL</b>	<b>226</b>	<b>100%</b>	<b>3.9</b>

***Birth country***

Among individuals first diagnosed with HIV infection in Wisconsin during 2014, most (88%) were born in the United States or were likely born in the U.S. (unreported country of birth). The remaining 22% were born outside of the U.S., with the most common countries of birth being Puerto Rico (n=7), Mexico (n=5), and Brazil (n=2). Some foreign-born individuals report being diagnosed with HIV infection in their country of birth. However, in the absence of verification, these individuals are considered to have their first verifiable HIV diagnosis in Wisconsin.

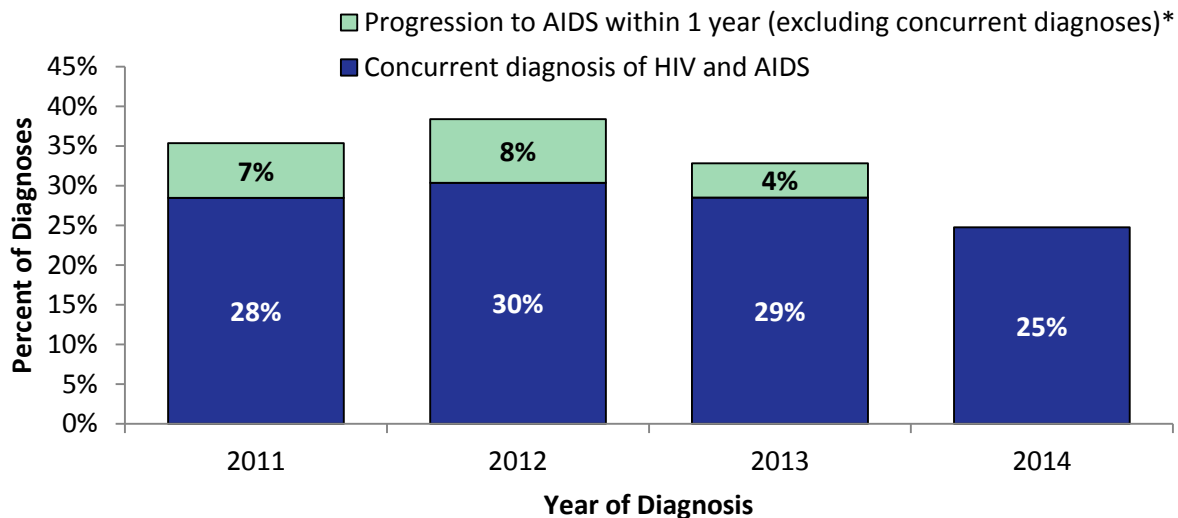


**Disease status at diagnosis**

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 infection with an opportunistic AIDS-defining 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 persons diagnosed with HIV infection in Wisconsin who progressed to AIDS within one year of HIV diagnosis, including concurrent diagnoses, remained stable from 2011 to 2013 (35-33%) (Figure 16). The number concurrently diagnosed with HIV and AIDS has remained relatively stable from 2011-2014 (28-25%).

**Figure 16: Percentage of new HIV diagnoses with concurrent AIDS diagnosis or progressing to AIDS within one year, Wisconsin, 2011-2014**



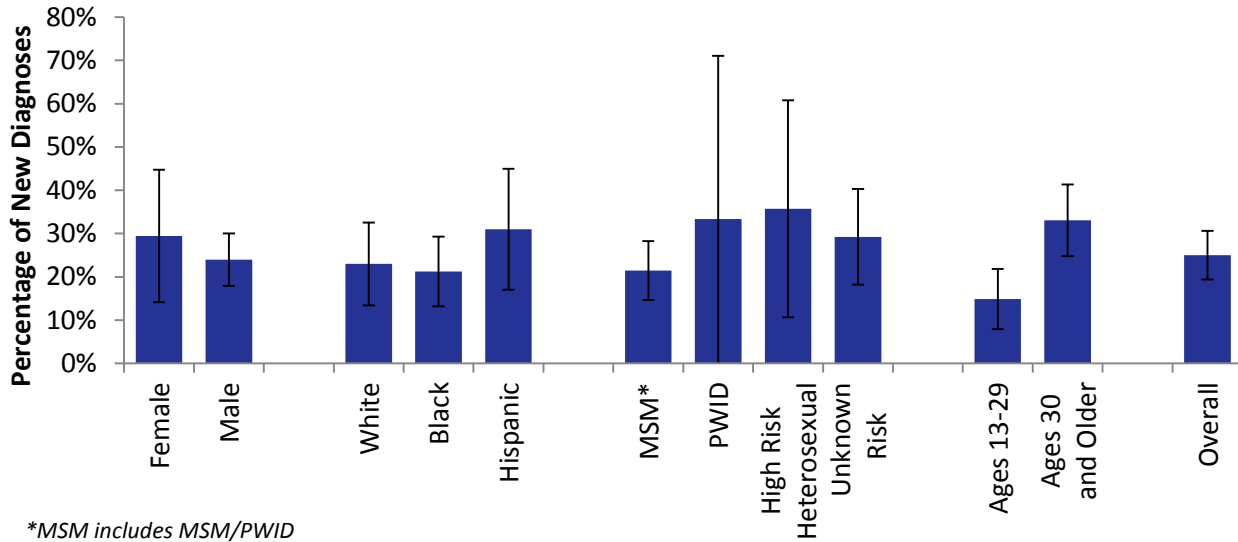
\* Those diagnosed with HIV infection during 2014 have not had one full year to evaluate progression to AIDS and therefore this category is excluded in the 2014 bar.

The proportion of individuals with a concurrent HIV and AIDS diagnosis during 2014 is shown in Figure 17 by demographic group. Due to small numbers, there were no statistically significant differences between any of the groups.

An upgrade to the national AIDS case definition may account for the lower proportion of concurrent diagnoses made during 2014. The AIDS case definition now takes into account the fact that one’s CD4 count may fall below 200 during the very early (acute) stage of HIV infection, whereas previously this person would have been considered to be infected with AIDS. With the new case definition, individuals with a negative HIV test within 6 months prior to HIV diagnosis who have a CD4 count below 200 within 6 months after diagnosis are considered to be in early HIV infection rather than having progressed to AIDS.



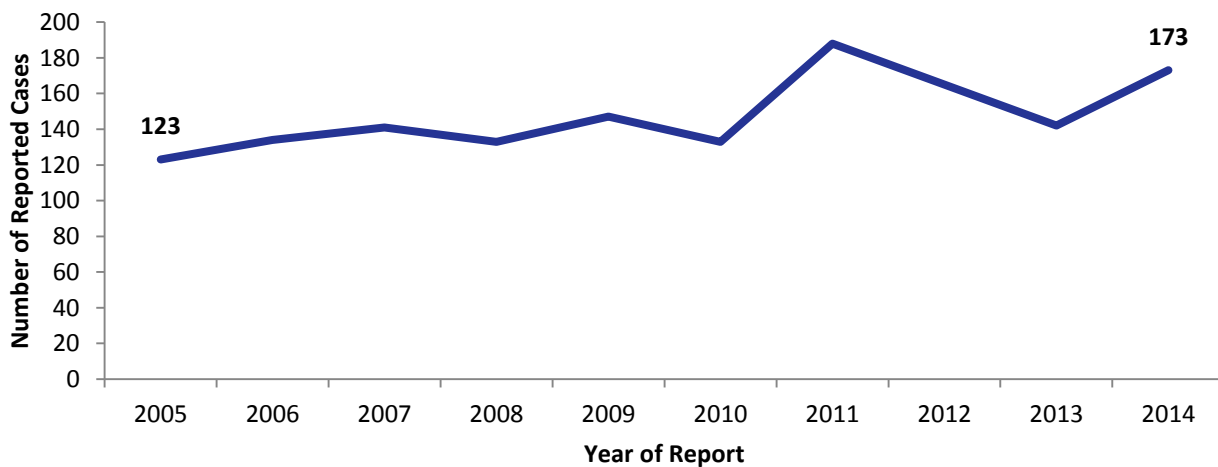
**Figure 17: Percentage of new HIV diagnoses with a concurrent AIDS diagnosis, by demographic group, Wisconsin, 2014**



**IN-MIGRATION**

Each year individuals who were previously diagnosed with HIV infection move into Wisconsin and are reported to the HIV Surveillance Program. During 2014, there were 173 individuals newly reported with HIV infection in Wisconsin who were first diagnosed outside of Wisconsin. The number of cases moving into Wisconsin increased from 123 in 2005 to 173 in 2014 (Figure 18).

**Figure 18: Number of newly reported cases of HIV infection moving into Wisconsin, 2005-2014**



A comparison of newly diagnosed cases and newly reported cases during 2014 in Wisconsin is shown in Table 5. Cases first diagnosed outside of Wisconsin were more likely to be white, and fall into one of the following risk categories: high-risk heterosexual or MSM and/or MSM/PWID. Cases first diagnosed in Wisconsin were more likely to have unknown risk.



**Table 5: Comparison of new Wisconsin HIV diagnoses and newly reported cases moving into Wisconsin, 2014**

	Wisconsin, newly diagnosed # (%)	In-migration # (%)
<b>Total</b>	<b>226 (100%)</b>	<b>173 (100%)</b>
<b>Sex</b>		
Male	192 (85%)	146 (84%)
Female	34 (15%)	27 (16%)
<b>Median Age (Years)</b>	32 (0-72)	37 (3 – 75)
<b>Race/Ethnicity</b>		
American Indian/Alaska Native	4 (2%)	2 (1%)
Asian	5 (2%)	2 (1%)
Black	99 (44%)	59 (34%)
Hispanic	42 (19%)	27 (16%)
White*	74 (33%)	80 (46%)
Multi-Racial	2 (<1%)	3 (2%)
<b>Risk</b>		
MSM and MSM/PWID*	140 (62%)	124 (72%)
PWID	6 (3%)	7 (4%)
High-Risk Heterosexual*	14 (6%)	22 (13%)
Unknown*	65 (29%)	19 (11%)
Perinatal Exposure	1 (<1%)	1 (<1%)

\*Indicates significant difference

## 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 2014, there were 6,899 prevalent cases of HIV in Wisconsin.

### *Unaware of HIV infection*

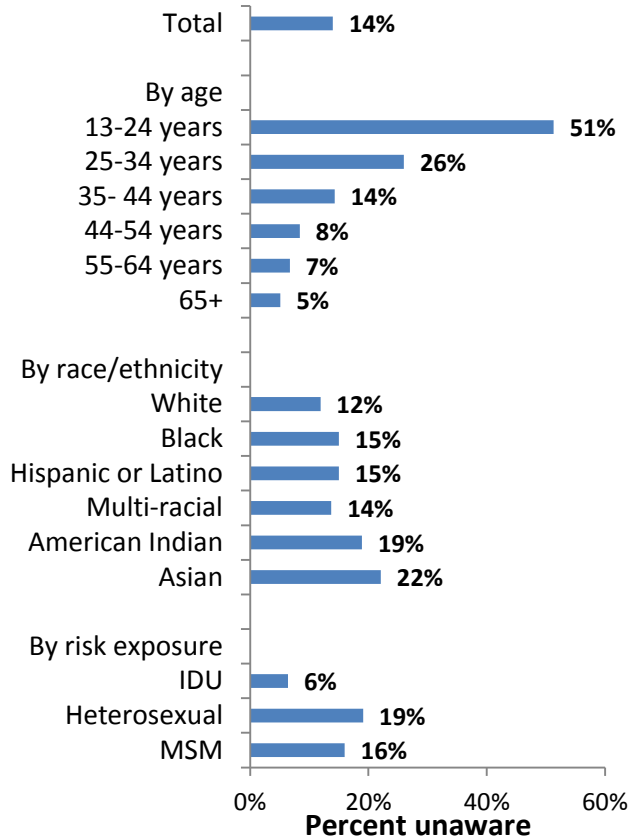
Due to increased testing efforts, the number of people living with HIV who are unaware of their infection is decreasing. However, the most recent CDC estimates<sup>3</sup> indicate that 14% of people (about 1 in 7) living with HIV are unaware of their infection—and this percentage varies considerably by demographic group. People in the younger age groups are estimated to be less aware of their positive HIV status; over half (51%) of people ages 13 to 24 with HIV are estimated to be unaware they are living with HIV (Figure 19).

<sup>3</sup> 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—2012. *HIV Surveillance Supplemental Report* 2014;19(no.3). <http://www.cdc.gov/hiv/library/reports/surveillance/>. Published November 2014. Accessed April 2015.

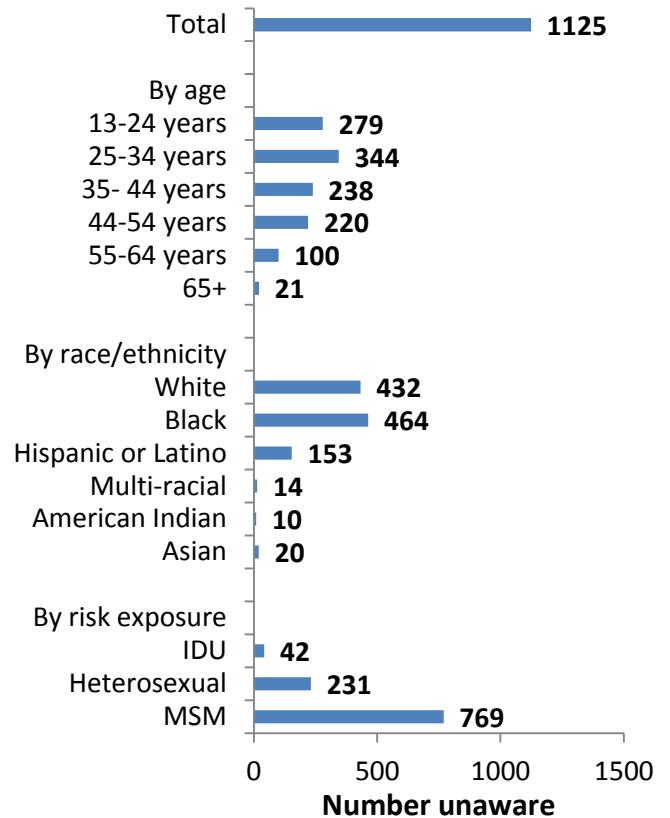




**Figure 19: Estimated percentage of those with HIV who are unaware of their HIV infection, by demographic group, United States, 2012**



**Figure 20: Estimated number unaware of their HIV infection, by demographic group, Wisconsin, 2014**



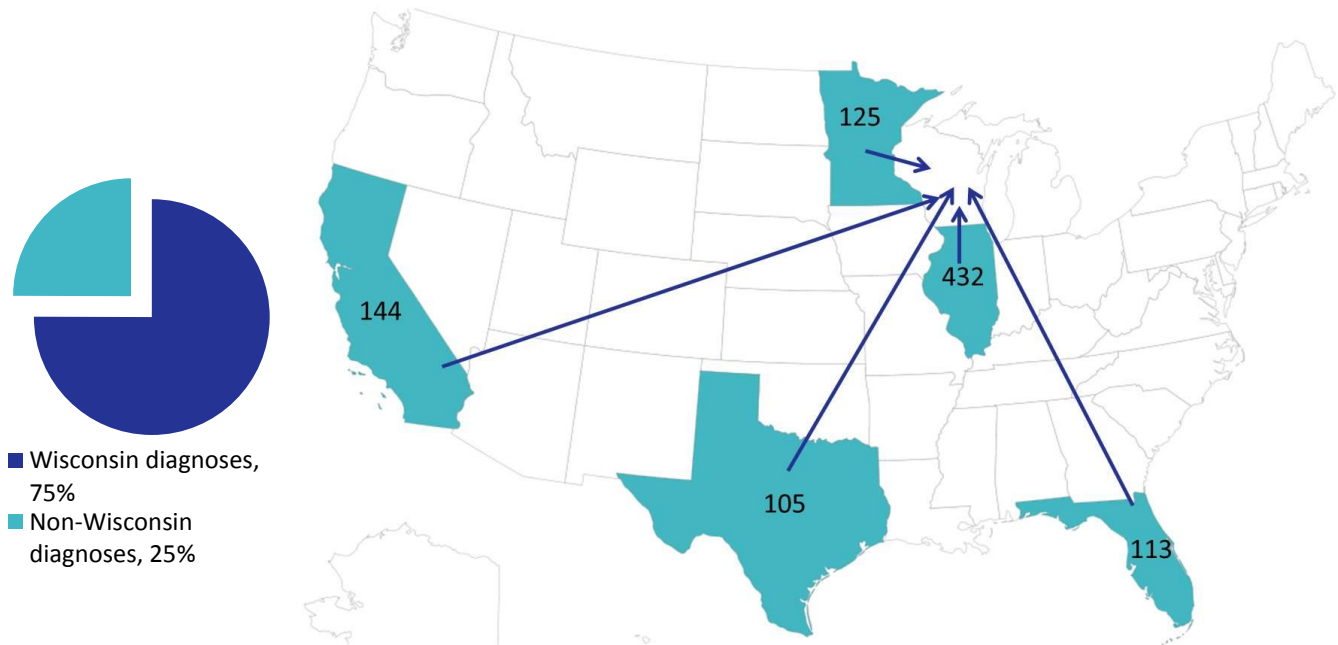
When we apply these national CDC percentage estimates to the Wisconsin population distribution, we estimate that 1,125 people living with HIV in the state are unaware of their status (Figure 20). These findings have implications for planning HIV testing services. Once people are aware of their infection, 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.

**State of diagnosis**

Three out of four (75%) prevalent cases in Wisconsin received their first verifiable HIV diagnosis in Wisconsin; 25% received their initial HIV diagnosis in another state and subsequently moved to Wisconsin. Of the 1,721 individuals infected outside of Wisconsin, more than half were from one of the five following states: Illinois (432), California (144), Minnesota (125), Florida (113), and Texas (103) (Figure 21).



**Figure 21: Number of prevalent cases in Wisconsin who received their initial HIV diagnosis in another state, by top five states of initial HIV diagnosis**

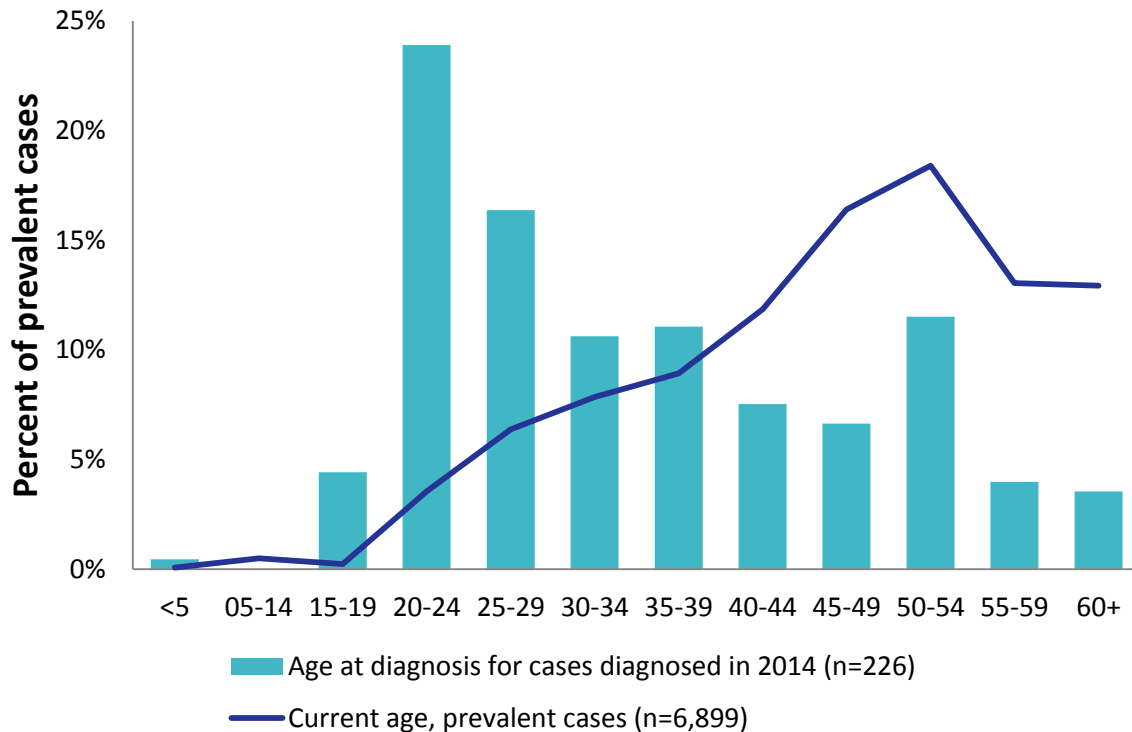


### **Age**

Of Wisconsin's known total PLHIV, 44% are ages 50 and older; 45% are ages 30-49, and 11% are under age 30 (Figure 22). By contrast, among 2014 diagnoses, 45% were under age 30, 36% were age 30-49, and 19% 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 particularly the younger age groups.

**Figure 22: Prevalent cases of HIV infection by current age as of December 31, 2014, and cases reported during 2014 by age at diagnosis, Wisconsin**



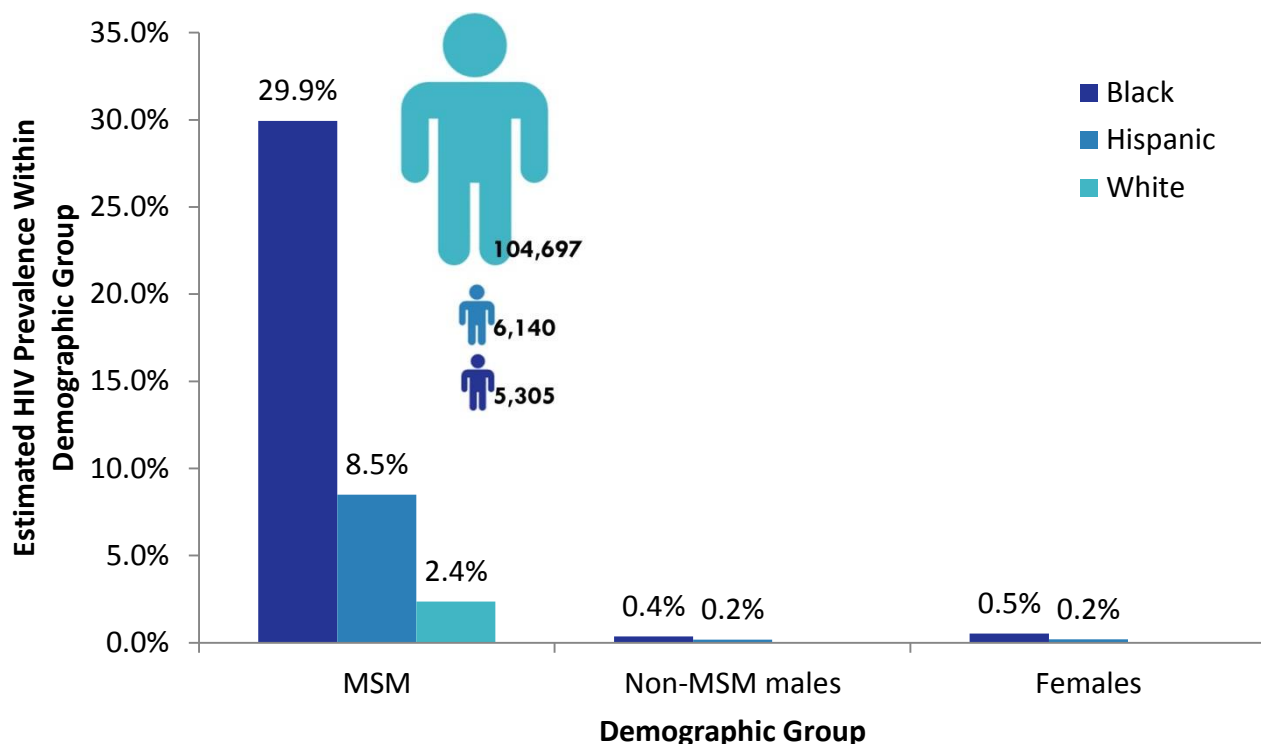
### ***Estimated prevalence by demographic group***

Disparities in HIV prevalence occur both *between* MSM and other demographic groups and by race/ethnicity *within* each demographic group (Figure 23). Nearly one in three (30%) Black MSM over age 18 is estimated<sup>4</sup> to be living with HIV in Wisconsin, compared to 9% of Hispanic MSM and 2% of White MSM. Wisconsin's population distribution overall is approximately 90% White, 5% Black, and 5% Hispanic. The population sizes (displayed next to people icons in Figure 23) of MSM within each of these racial groups are inversely proportional relative to the estimated number of people living with HIV. For example, there are an estimated 104,697 white MSM living in Wisconsin, 2% of whom are living with HIV. There are an estimated 5,305 Black MSM, 30% of whom are living with HIV. Thus, the raw numbers of White and Black MSM living with HIV are similar even though the underlying population sizes are quite different.

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% non-MSM males and 0.6% of females). Other races were excluded from this analysis due to small numbers.

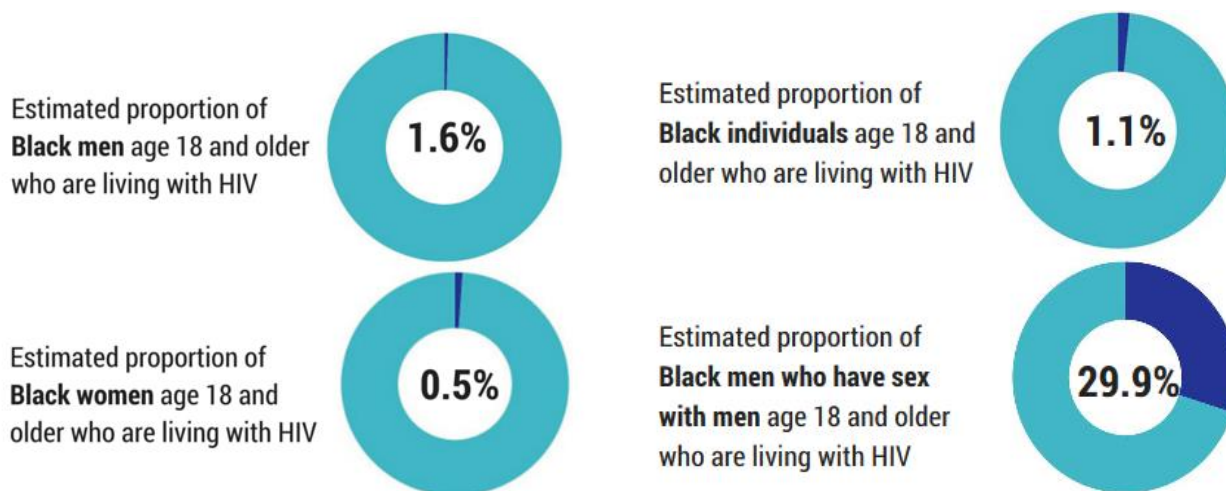
<sup>4</sup> Estimates generated from surveillance data and state-specific estimates of MSM populations in: Lieb S., *et al.* Statewide estimation of populations of MSM in the United States. *Public Health Reports* 2011;126(1):60-72 and CDC's estimate that 16% of MSM are unaware of their HIV infection, and 14% of other populations are unaware of their HIV infection. Imputed risk calculations were also used for individuals with missing risk information (see Technical Notes).

**Figure 23: Prevalence of HIV in selected demographic groups, age 18 and older, Wisconsin, 2014**



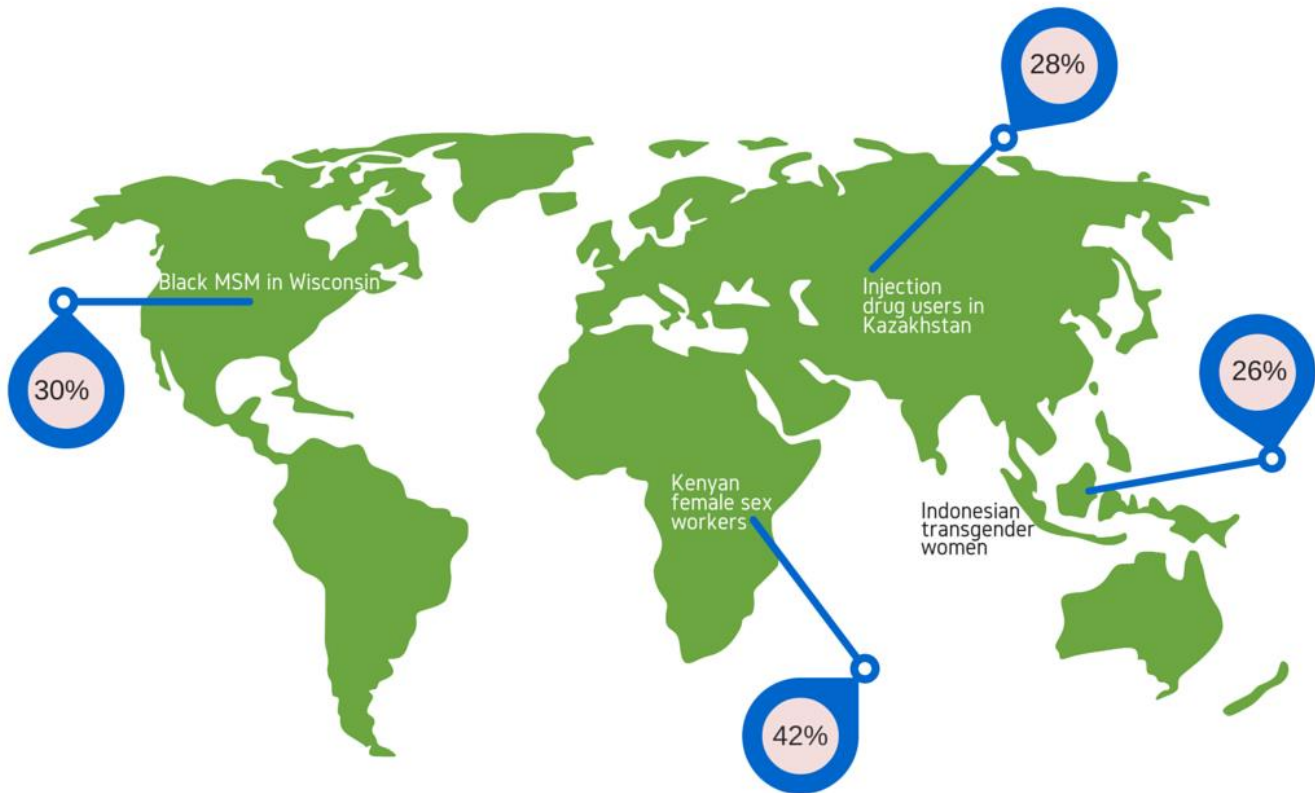
While Figure 23 showcases the *between-race/ethnicity* disparities, Figure 24 contextualizes the *within-race* disparity of sub-populations in the Black population. The HIV prevalence for Black men (including Black MSM), Black women, and all Black individuals is significantly lower than for Black MSM alone.

**Figure 24: Prevalence of HIV in Black sub-populations, Wisconsin, 2014**



The prevalence of HIV in Black MSM living in Wisconsin is similar to the HIV prevalence among U.S. Black MSM (32%), as well as the prevalence for other greatly affected populations globally<sup>5</sup> (Figure 25).

**Figure 25: Percentage of Black MSM living with HIV in Wisconsin compared to other greatly affected populations globally**



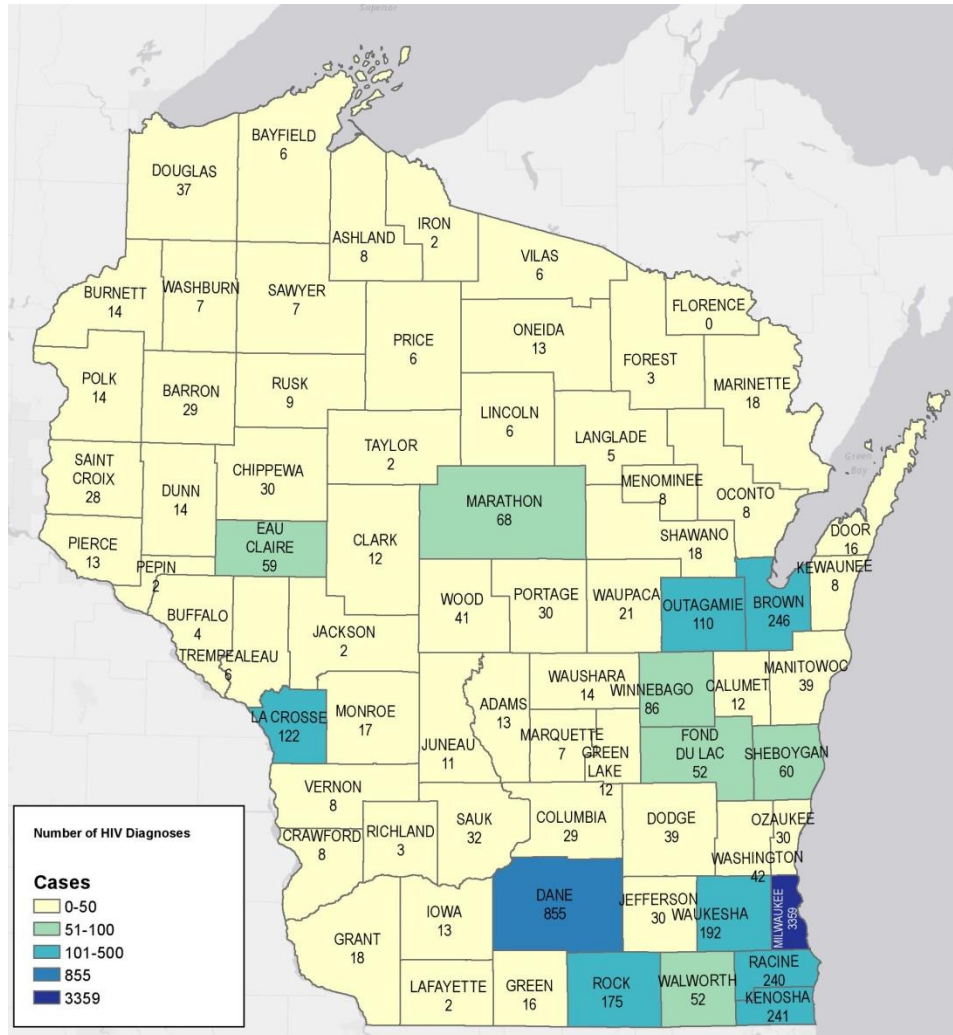
<sup>5</sup> Figure 25 adapted from The Foundation for AIDS Research Issue Brief: "HIV and the Black Community: Do #Black(GAY)lives Matter?", references: Rosenberg 2014, Baral 2013, El Bassel 2013, Baral 2012.



**Geography**

Nearly half (49%) of all individuals living with HIV in Wisconsin reside in Milwaukee County; Dane County is the next highest (12%), followed by Brown County (4%) (Figure 26). Kenosha, Racine, and Waukesha counties each have 3% of prevalent cases. The Department of Corrections, Rock, La Crosse, and Outagamie counties each have 2%, and all other counties have 1% of cases or less.

**Figure 26: Prevalent cases of HIV infection by county, Wisconsin, 2014**

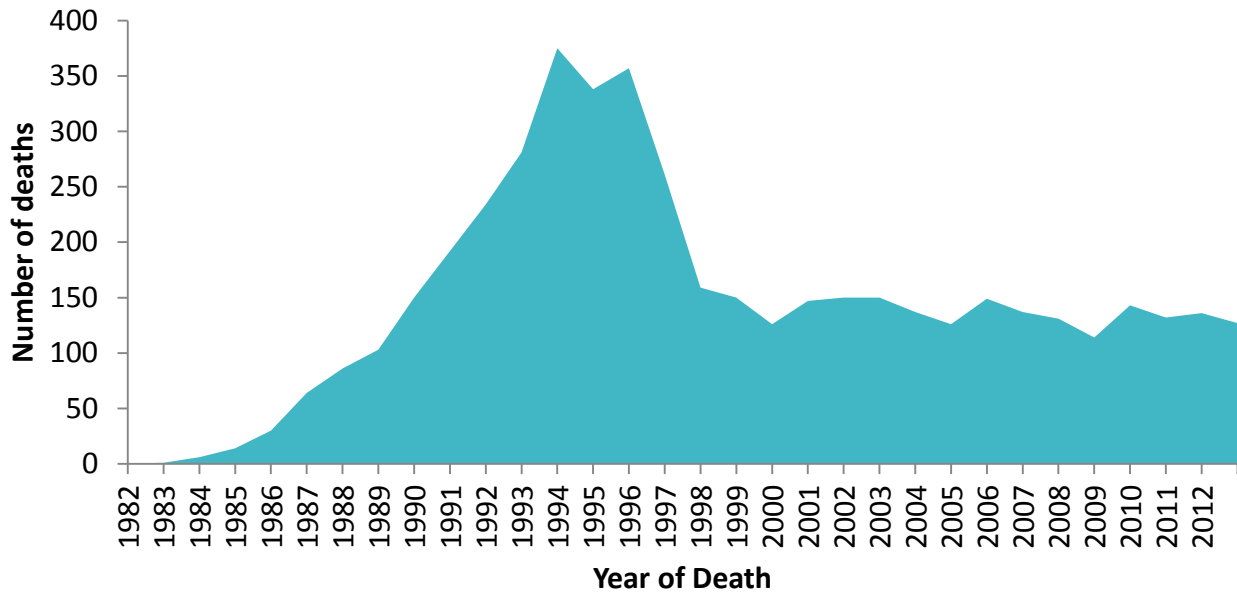


**DEATHS**

Deaths due to any cause among persons reported with HIV infection in Wisconsin have declined since the early-to-mid-1990s. During 2012 (the most recent year for which complete death data are available due to reporting delays), 127 deaths among persons ever reported with HIV infection in Wisconsin are known to have occurred (Figure 27).

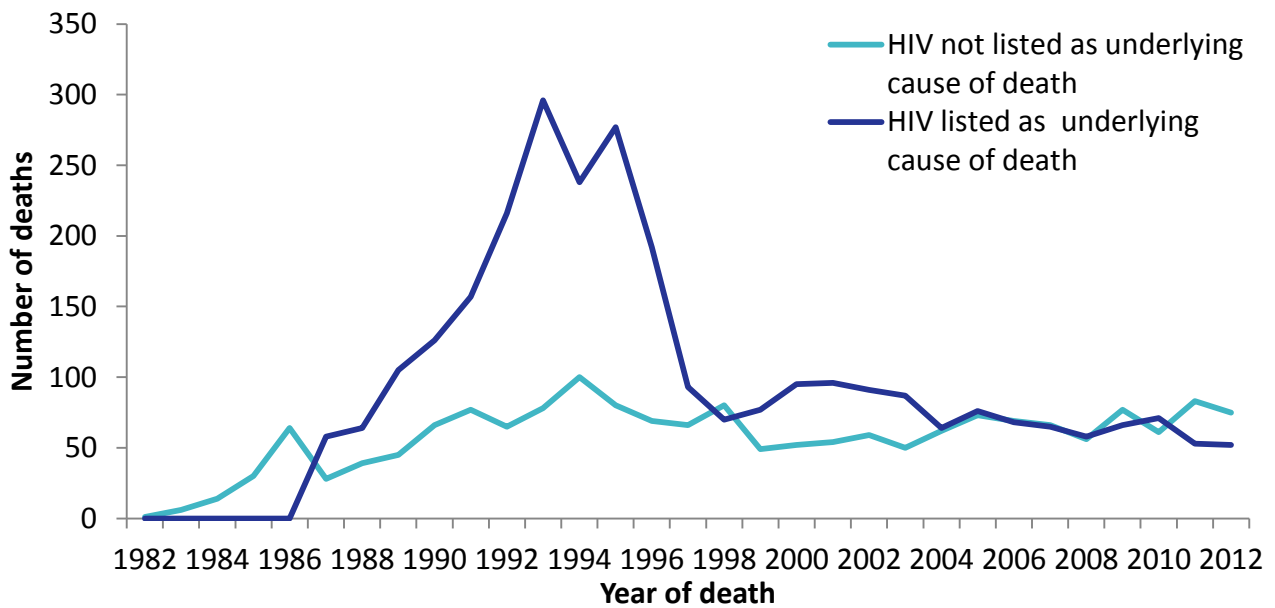


**Figure 27: Number of deaths due to any cause among people with HIV, Wisconsin, 1982-2012**



HIV as the underlying cause of death<sup>6</sup> is also on the decline—75 of the 127 reported deaths in 2012 were attributed to non-HIV-related causes, while 52 had HIV indicated as the underlying cause of death (Figure 28).

**Figure 28: Number of deaths, by cause of death, among persons ever reported with HIV in Wisconsin, 1982-2012**

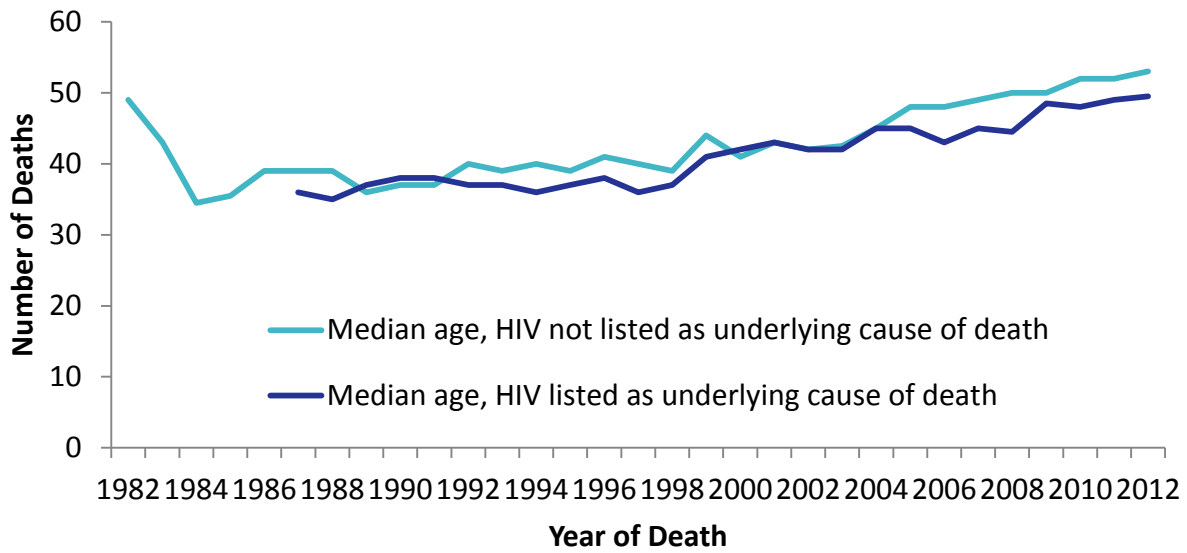


<sup>6</sup> 503 cases had an unknown cause of death and were not included in this analysis.



The median age at death of individuals ever reported with HIV in Wisconsin has increased steadily, both for those with and for those without HIV listed as the underlying cause of death (Figure 29). For those who died of other causes, the median age was 53. Those who died of HIV as the underlying cause had a median age of 49.5.

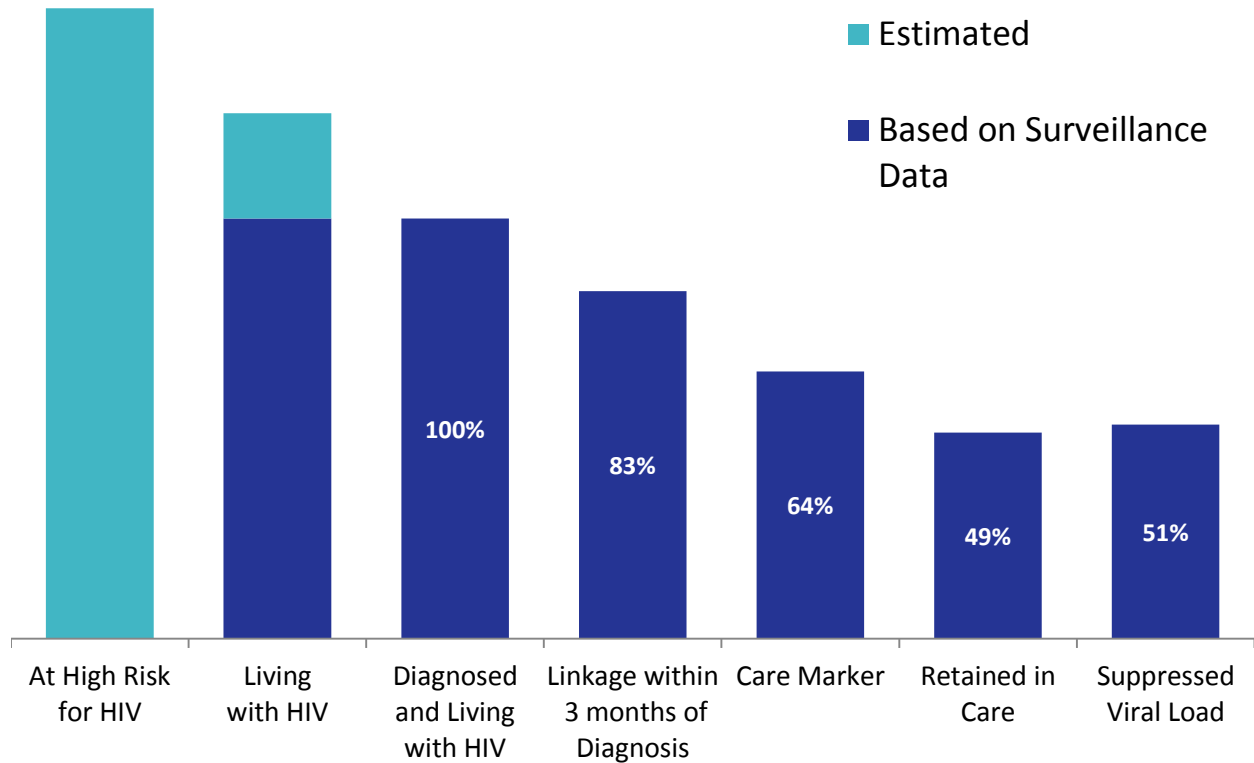
**Figure 29: Median age at death by underlying cause of death, among persons ever reported with HIV in Wisconsin, 1982-2012**





## HIV CARE CONTINUUM

**Figure 30: HIV care continuum, 2013 new diagnoses and prevalent cases, ages 13 years and older, Wisconsin**



The HIV care continuum is being increasingly 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 30 depicts timely linkage among individuals diagnosed with HIV in Wisconsin during 2013, and care patterns during 2014 among 2013 prevalent cases.

### **Estimated Data**

**High risk for HIV:** Persons 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 14% of persons living with HIV 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 2013 who were still alive and living in Wisconsin by the end of 2014.

**Linkage within 3 Months of Diagnosis:** 83% of individuals newly diagnosed with HIV infection in Wisconsin during 2013 were linked to care within three months of HIV diagnosis.



**Care Marker:** 64% 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 2014.

**Retained in Care:** 49% 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 2014.

**Suppressed Viral Load:** 51% of individuals living with HIV in Wisconsin were virally suppressed at their last viral load test during 2014. Viral loads  $\leq 200$  copies/mL were considered suppressed. Individuals whose last viral load was prior to 2014 were considered to have unsuppressed viral loads.



**TABLES**



**Table 6: Reported Cases of HIV Infection, Wisconsin, 1982-2014**

	1982-2014 <sup>b</sup>		New Diagnoses by Year of Diagnosis <sup>a</sup>						Prevalence <sup>c</sup>			
			2009-2013			2014			Cases	%	Rate <sup>e</sup>	
	Cases	%	Cases	Avg <sup>d</sup>	%	Rate <sup>e</sup>	Cases	%				Rate <sup>e</sup>
<b>Total cases<sup>f</sup></b>	9,447	100.0%	1,262	252.4	100.0%	4.4	226	100.0%	4.0	6,899	100.0%	120.8
<b>Disease Status<sup>g</sup></b>												
(Missing)	872	9.2%	2	0.4	0.2%	0.0	0	0.0%	0.0	0	0.0%	0.0
HIV	6,756	71.5%	940	188.0	74.5%	3.3	170	75.2%	3.0	3,334	48.3%	58.4
AIDS	1,819	19.3%	320	64.0	25.4%	1.1	56	24.8%	1.0	3,565	51.7%	62.4
<b>Sex at Birth</b>												
Female	1,668	17.7%	243	48.6	19.3%	1.7	34	15.0%	1.2	1,353	19.6%	47.0
Male	7,779	82.3%	1,019	203.8	80.7%	7.2	192	85.0%	6.8	5,546	80.4%	195.6
<b>Race/Ethnicity</b>												
White	4,802	50.8%	496	99.2	39.3%	2.1	74	32.7%	1.6	3,196	46.3%	67.4
African American	3,385	35.8%	523	104.6	41.4%	29.9	99	43.8%	27.9	2,629	38.1%	741.0
Hispanic	1,001	10.6%	178	35.6	14.1%	10.6	42	18.6%	12.1	869	12.6%	249.5
American Indian	70	0.7%	5	1.0	0.4%	3.4	4	1.8%	8.1	41	0.6%	83.5
Asian/Pacific Islander	100	1.1%	30	6.0	2.4%	4.5	5	2.2%	3.7	77	1.1%	56.8
Multi-racial	87	0.9%	29	5.8	2.3%	7.6	2	0.9%	2.5	86	1.2%	107.5
Unknown	2	0.0%	1	0.2	0.1%	-	0	0.0%	-	1	0.0%	-
<b>Age<sup>h</sup></b>												
<5	66	0.7%	4	0.8	0.3%	0.4	1	0.4%	0.3	5	0.1%	1.4
5-14	31	0.3%	4	0.8	0.3%	0.1	0	0.0%	0.0	34	0.5%	4.6
15-19	295	3.1%	75	15.0	5.9%	3.8	10	4.4%	2.5	16	0.2%	4.0
20-24	1,180	12.5%	238	47.6	18.9%	12.1	54	23.9%	13.9	244	3.5%	62.9
25-29	1,734	18.4%	177	35.4	14.0%	9.5	37	16.4%	10.0	437	6.3%	117.7
30-34	1,869	19.8%	175	35.0	13.9%	9.9	24	10.6%	6.7	542	7.9%	150.5
35-39	1,572	16.6%	131	26.2	10.4%	7.7	25	11.1%	7.5	615	8.9%	185.0
40-44	1,085	11.5%	133	26.6	10.5%	7.0	17	7.5%	4.5	813	11.8%	216.0
45-49	750	7.9%	139	27.8	11.0%	6.5	15	6.6%	3.6	1,131	16.4%	268.0
50-54	417	4.4%	79	15.8	6.3%	3.6	26	11.5%	5.9	1,269	18.4%	286.9
55-59	244	2.6%	67	13.4	5.3%	3.4	9	4.0%	2.3	898	13.0%	226.1
60+	204	2.2%	40	8.0	3.2%	0.7	8	3.5%	0.7	892	12.9%	79.1
<b>Risk exposure</b>												
MSM	5,051	53.5%	715	143.0	56.7%	-	137	60.6%	-	3,640	52.8%	-
IDU	1,156	12.2%	59	11.8	4.7%	-	6	2.7%	-	616	8.9%	-
MSM & IDU	510	5.4%	26	5.2	2.1%	-	3	1.3%	-	399	5.8%	-
Heterosexual	1,167	12.4%	148	29.6	11.7%	-	14	6.2%	-	977	14.2%	-
Other/Unknown	1,563	16.5%	314	62.8	24.9%	-	66	29.2%	-	1,267	18.4%	-

Year of HIV Diagnosis	Cases	Rate <sup>e</sup>
Before 2005	6,941	-
2005	254	4.6
2006	250	4.5
2007	276	4.9
2008	239	4.2
2009	285	5.0
2010	251	4.4
2011	246	4.3
2012	224	3.9
2013	256	4.5
2014	226	4.0

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 7: Reported Cases of HIV Infection, Males, Wisconsin, 1982-2014**

	New Diagnoses by Year of Diagnosis <sup>a</sup>									Prevalence <sup>c</sup>		
	1982-2014 <sup>b</sup>		2009-2013				2014			Cases	%	Rate <sup>e</sup>
	Cases	%	Cases	Avg <sup>d</sup>	%	Rate <sup>e</sup>	Cases	%	Rate <sup>e</sup>			
<b>Total cases<sup>f</sup></b>	7,779	100.0%	1,019	203.8	100.0%	7.2	192	100.0%	6.8	5,546	100.0%	195.6
<b>Disease Status<sup>g</sup></b>												
(Missing)	776	10.0%	2	0.4	0.2%	0.0	0	0.0%	0.0	0	0.0%	0.0
HIV	5,434	69.9%	742	148.4	72.8%	5.2	146	76.0%	5.1	2,642	47.6%	93.2
AIDS	1,569	20.2%	275	55.0	27.0%	1.9	46	24.0%	1.6	2,904	52.4%	102.4
<b>Sex at Birth</b>												
Female	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
Male	7,779	100.0%	1,019	203.8	100.0%	7.2	192	100.0%	6.8	5,546	100.0%	195.6
<b>Race/Ethnicity</b>												
White	4,286	55.1%	435	87.0	42.7%	3.7	66	34.4%	2.8	2,787	50.3%	118.6
African American	2,526	32.5%	391	78.2	38.4%	45.5	79	41.1%	45.4	1,939	35.0%	1,113.3
Hispanic	782	10.1%	149	29.8	14.6%	16.9	37	19.3%	20.3	679	12.2%	372.3
American Indian	46	0.6%	3	0.6	0.3%	4.1	3	1.6%	12.2	27	0.5%	110.1
Asian/Pacific Islander	73	0.9%	20	4.0	2.0%	6.2	5	2.6%	7.5	51	0.9%	77.0
Multi-racial	64	0.8%	20	4.0	2.0%	13.6	2	1.0%	5.1	62	1.1%	158.4
Unknown	2	0.0%	1	0.2	0.1%	-	0	0.0%	-	1	0.0%	-
<b>Age<sup>h</sup></b>												
<5	30	0.4%	2	0.4	0.2%	0.5	0	0.0%	0.0	3	0.1%	1.7
5-14	21	0.3%	2	0.4	0.2%	0.3	0	0.0%	0.0	15	0.3%	4.0
15-19	208	2.7%	60	12.0	5.9%	5.9	10	5.2%	4.9	10	0.2%	4.9
20-24	958	12.3%	212	42.4	20.8%	21.1	46	24.0%	23.2	205	3.7%	103.4
25-29	1,423	18.3%	148	29.6	14.5%	15.6	33	17.2%	17.5	371	6.7%	196.8
30-34	1,563	20.1%	137	27.4	13.4%	15.2	24	12.5%	13.1	424	7.6%	230.9
35-39	1,328	17.1%	106	21.2	10.4%	12.4	21	10.9%	12.5	461	8.3%	273.7
40-44	923	11.9%	100	20.0	9.8%	10.4	17	8.9%	8.9	611	11.0%	321.5
45-49	624	8.0%	110	22.0	10.8%	10.2	12	6.3%	5.7	909	16.4%	430.7
50-54	353	4.5%	63	12.6	6.2%	5.8	19	9.9%	8.6	1,042	18.8%	471.9
55-59	192	2.5%	52	10.4	5.1%	5.3	3	1.6%	1.5	747	13.5%	376.6
60+	156	2.0%	27	5.4	2.6%	1.1	7	3.6%	1.4	745	13.4%	145.2
<b>Risk exposure</b>												
MSM	5,051	64.9%	715	143.0	70.2%	-	137	71.4%	-	3,640	65.6%	-
IDU	784	10.1%	31	6.2	3.0%	-	2	1.0%	-	392	7.1%	-
MSM & IDU	510	6.6%	26	5.2	2.6%	-	3	1.6%	-	399	7.2%	-
Heterosexual	343	4.4%	47	9.4	4.6%	-	6	3.1%	-	281	5.1%	-
Other/Unknown	1,091	14.0%	200	40.0	19.6%	-	44	22.9%	-	834	15.0%	-

Year of HIV Diagnosis	Cases	Rate <sup>e</sup>
Before 2005	5,759	-
2005	190	6.9
2006	204	7.4
2007	229	8.2
2008	187	6.7
2009	219	7.8
2010	205	7.3
2011	199	7.0
2012	179	6.3
2013	217	7.7
2014	192	6.8

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 8: Reported Cases of HIV Infection, Females, Wisconsin, 1982-2014**

	New Diagnoses by Year of Diagnosis <sup>a</sup>									Prevalence <sup>c</sup>		
	1982-2014 <sup>b</sup>		2009-2013			2014			Cases	%	Rate <sup>e</sup>	
	Cases	%	Cases	Avg <sup>d</sup>	%	Rate <sup>e</sup>	Cases	%				Rate <sup>e</sup>
<b>Total cases<sup>f</sup></b>	1,668	100.0%	243	48.6	100.0%	1.7	34	100.0%	1.2	1,353	100.0%	47.0
<b>Disease Status<sup>g</sup></b>												
(Missing)	96	5.8%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
HIV	1,322	79.3%	198	39.6	81.5%	1.4	24	70.6%	0.8	692	51.1%	24.1
AIDS	250	15.0%	45	9.0	18.5%	0.3	10	29.4%	0.3	661	48.9%	23.0
<b>Sex at Birth</b>												
Female	1,668	100.0%	243	48.6	100.0%	1.7	34	100.0%	1.2	1,353	100.0%	47.0
Male	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
<b>Race/Ethnicity</b>												
White	516	30.9%	61	12.2	25.1%	0.5	8	23.5%	0.3	409	30.2%	17.1
African American	859	51.5%	132	26.4	54.3%	14.8	20	58.8%	11.1	690	51.0%	382.1
Hispanic	219	13.1%	29	5.8	11.9%	3.6	5	14.7%	3.0	190	14.0%	114.5
American Indian	24	1.4%	2	0.4	0.8%	4.1	1	2.9%	4.1	14	1.0%	56.9
Asian/Pacific Islander	27	1.6%	10	2.0	4.1%	3.0	0	0.0%	0.0	26	1.9%	37.5
Multi-racial	23	1.4%	9	1.8	3.7%	5.9	0	0.0%	0.0	24	1.8%	58.7
<b>Age<sup>h</sup></b>												
<5	36	2.2%	2	0.4	0.8%	0.6	1	2.9%	0.6	2	0.1%	1.2
5-14	10	0.6%	2	0.4	0.8%	0.3	0	0.0%	0.0	19	1.4%	5.2
15-19	87	5.2%	15	3.0	6.2%	1.5	0	0.0%	0.0	6	0.4%	3.1
20-24	222	13.3%	26	5.2	10.7%	2.7	8	23.5%	4.2	39	2.9%	20.5
25-29	311	18.6%	29	5.8	11.9%	3.2	4	11.8%	2.2	66	4.9%	36.1
30-34	306	18.3%	38	7.6	15.6%	4.4	0	0.0%	0.0	118	8.7%	66.8
35-39	244	14.6%	25	5.0	10.3%	3.0	4	11.8%	2.4	154	11.4%	93.9
40-44	162	9.7%	33	6.6	13.6%	3.5	0	0.0%	0.0	202	14.9%	108.3
45-49	126	7.6%	29	5.8	11.9%	2.7	3	8.8%	1.4	222	16.4%	105.3
50-54	64	3.8%	16	3.2	6.6%	1.5	7	20.6%	3.2	227	16.8%	102.5
55-59	52	3.1%	15	3.0	6.2%	1.5	6	17.6%	3.0	151	11.2%	76.0
60+	48	2.9%	13	2.6	5.3%	0.4	1	2.9%	0.2	147	10.9%	23.9
<b>Risk exposure</b>												
MSM	0	0.0%	0	0.0	0.0%	-	0	0.0%	-	0	0.0%	0.0
IDU	372	22.3%	28	5.6	11.5%	-	4	11.8%	-	224	16.6%	-
MSM & IDU	0	0.0%	0	0.0	0.0%	-	0	0.0%	-	0	0.0%	0.0
Heterosexual	824	49.4%	101	20.2	41.6%	-	8	23.5%	-	696	51.4%	-
Other/Unknown	472	28.3%	114	22.8	46.9%	-	22	64.7%	-	433	32.0%	-

Year of HIV Diagnosis	Cases	Rate <sup>e</sup>
Before 2005	1,182	-
2005	64	2.3
2006	46	1.6
2007	47	1.7
2008	52	1.8
2009	66	2.3
2010	46	1.6
2011	47	1.6
2012	45	1.6
2013	39	1.4
2014	34	1.2

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, 1982-2014**

	1982-2014 <sup>b</sup>		New Diagnoses by Year of Diagnosis <sup>a</sup>						Prevalence <sup>c</sup>			
			2009-2013			2014			Cases	%	Rate <sup>e</sup>	
	Cases	%	Cases	Avg <sup>d</sup>	%	Rate <sup>e</sup>	Cases	%				Rate <sup>e</sup>
<b>Total cases<sup>f</sup></b>	4,802	100.0%	496	99.2	100.0%	2.1	74	100.0%	1.6	3,196	100.0%	67.4
<b>Disease Status<sup>g</sup></b>												
(Missing)	580	12.1%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
HIV	3,198	66.6%	345	69.0	69.6%	1.5	57	77.0%	1.2	1,547	48.4%	32.6
AIDS	1,024	21.3%	151	30.2	30.4%	0.6	17	23.0%	0.4	1,649	51.6%	34.8
<b>Sex at Birth</b>												
Female	516	10.7%	61	12.2	12.3%	0.5	8	10.8%	0.3	409	12.8%	17.1
Male	4,286	89.3%	435	87.0	87.7%	3.7	66	89.2%	2.8	2,787	87.2%	118.6
<b>Race/Ethnicity</b>												
White	4,802	100.0%	496	99.2	100.0%	2.1	74	100.0%	1.6	3,196	100.0%	67.4
African American	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
Hispanic	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
American Indian	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
Asian/Pacific Islander	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
Multi-racial	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
<b>Age<sup>h</sup></b>												
<5	17	0.4%	1	0.2	0.2%	0.4	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%	0.5
15-19	74	1.5%	8	1.6	1.6%	0.6	1	1.4%	0.3	4	0.1%	1.3
20-24	433	9.0%	53	10.6	10.7%	3.4	9	12.2%	3.0	38	1.2%	12.6
25-29	818	17.0%	58	11.6	11.7%	4.0	11	14.9%	3.8	107	3.3%	36.8
30-34	943	19.6%	68	13.6	13.7%	4.9	10	13.5%	3.5	203	6.4%	71.4
35-39	888	18.5%	61	12.2	12.3%	4.5	12	16.2%	4.5	235	7.4%	88.2
40-44	603	12.6%	70	14.0	14.1%	4.4	5	6.8%	1.6	348	10.9%	109.8
45-49	451	9.4%	76	15.2	15.3%	4.0	8	10.8%	2.2	542	17.0%	146.6
50-54	261	5.4%	40	8.0	8.1%	2.0	13	17.6%	3.3	665	20.8%	167.8
55-59	156	3.2%	41	8.2	8.3%	2.3	1	1.4%	0.3	494	15.5%	136.7
60+	145	3.0%	20	4.0	4.0%	0.4	4	5.4%	0.4	555	17.4%	52.5
<b>Risk exposure</b>												
MSM	3,231	67.3%	321	64.2	64.7%	-	51	68.9%	-	2,123	66.4%	-
IDU	318	6.6%	31	6.2	6.3%	-	0	0.0%	-	177	5.5%	-
MSM & IDU	279	5.8%	15	3.0	3.0%	-	3	4.1%	-	227	7.1%	-
Heterosexual	348	7.2%	30	6.0	6.0%	-	3	4.1%	-	275	8.6%	-
Other/Unknown	626	13.0%	99	19.8	20.0%	-	17	23.0%	-	394	12.3%	-

Year of HIV Diagnosis	Cases	Rate <sup>e</sup>
Before 2005	3,788	-
2005	117	2.5
2006	113	2.4
2007	122	2.6
2008	93	1.9
2009	120	2.5
2010	93	2.0
2011	92	1.9
2012	89	1.9
2013	102	2.2
2014	74	1.6

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.



**Table 10: Reported Cases of HIV Infection, African Americans, Wisconsin, 1982-2014**

	New Diagnoses by Year of Diagnosis <sup>a</sup>									Prevalence <sup>c</sup>		
	1982-2014 <sup>b</sup>		2009-2013				2014			Cases	%	Rate <sup>e</sup>
	Cases	%	Cases	Avg <sup>d</sup>	%	Rate(e)	Cases	%	Rate <sup>e</sup>			
<b>Total cases<sup>f</sup></b>	3,385	100.0%	523	104.6	100.0%	29.9	99	100.0%	27.9	2,629	100.0%	741.0
<b>Disease Status<sup>g</sup></b>												
(Missing)	207	6.1%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
HIV	2,662	78.6%	425	85.0	81.3%	24.3	78	78.8%	22.0	1,300	49.4%	366.4
AIDS	516	15.2%	98	19.6	18.7%	5.6	21	21.2%	5.9	1,329	50.6%	374.6
<b>Sex at Birth</b>												
Female	859	25.4%	132	26.4	25.2%	14.8	20	20.2%	11.1	690	26.2%	382.1
Male	2,526	74.6%	391	78.2	74.8%	45.5	79	79.8%	45.4	1,939	73.8%	1,113.3
<b>Race/Ethnicity</b>												
White	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
African American	3,385	100.0%	523	104.6	100.0%	29.9	99	100.0%	27.9	2,629	100.0%	741.0
Hispanic	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
American Indian	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
Asian/Pacific Islander	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
Multi-racial	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
<b>Age<sup>h</sup></b>												
<5	30	0.9%	1	0.2	0.2%	3.0	1	1.0%	3.2	3	0.1%	9.6
5-14	12	0.4%	3	0.6	0.6%	1.6	0	0.0%	0.0	26	1.0%	41.2
15-19	179	5.3%	56	11.2	10.7%	32.8	5	5.1%	14.7	9	0.3%	26.4
20-24	554	16.4%	141	28.2	27.0%	91.7	34	34.3%	108.4	163	6.2%	519.7
25-29	657	19.4%	79	15.8	15.1%	58.2	18	18.2%	66.5	242	9.2%	894.3
30-34	664	19.6%	59	11.8	11.3%	47.3	8	8.1%	31.3	234	8.9%	914.9
35-39	484	14.3%	40	8.0	7.6%	34.4	6	6.1%	26.0	234	8.9%	1,013.5
40-44	352	10.4%	40	8.0	7.6%	35.3	7	7.1%	30.1	319	12.1%	1,372.3
45-49	231	6.8%	45	9.0	8.6%	40.7	5	5.1%	22.4	407	15.5%	1,826.2
50-54	120	3.5%	31	6.2	5.9%	29.6	7	7.1%	32.4	441	16.8%	2,040.7
55-59	56	1.7%	16	3.2	3.1%	19.2	5	5.1%	28.8	309	11.8%	1,782.5
60+	46	1.4%	12	2.4	2.3%	7.2	3	3.0%	8.6	241	9.2%	693.0
<b>Risk exposure</b>												
MSM	1,342	39.6%	276	55.2	52.8%	-	56	56.6%	-	1,078	41.0%	-
IDU	603	17.8%	17	3.4	3.3%	-	3	3.0%	-	295	11.2%	-
MSM & IDU	171	5.1%	6	1.2	1.1%	-	0	0.0%	-	119	4.5%	-
Heterosexual	580	17.1%	78	15.6	14.9%	-	6	6.1%	-	489	18.6%	-
Other/Unknown	689	20.4%	146	29.2	27.9%	-	34	34.3%	-	648	24.6%	-

Year of HIV Diagnosis	Cases	Rate <sup>e</sup>
Before 2005	2,379	-
2005	92	28.5
2006	89	27.3
2007	100	30.4
2008	103	31.0
2009	111	33.2
2010	114	32.3
2011	101	28.5
2012	94	26.5
2013	103	29.0
2014	99	27.9

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 11: Reported Cases of HIV Infection, Hispanics, Wisconsin, 1982-2014**

	New Diagnoses by Year of Diagnosis <sup>a</sup>									Prevalence <sup>c</sup>		
	1982-2014 <sup>b</sup>		2009-2013			2014			Cases	%	Rate <sup>e</sup>	
	Cases	%	Cases	Avg <sup>d</sup>	%	Rate <sup>e</sup>	Cases	%				Rate <sup>e</sup>
<b>Total cases<sup>f</sup></b>	1,001	100.0%	178	35.6	100.0%	10.6	42	100.0%	12.1	869	100.0%	249.5
<b>Disease Status<sup>g</sup></b>												
(Missing)	73	7.3%	2	0.4	1.1%	0.3	0	0.0%	0.0	0	0.0%	0.0
HIV	695	69.4%	121	24.2	68.0%	7.2	29	69.0%	8.3	377	43.4%	108.2
AIDS	233	23.3%	55	11.0	30.9%	3.3	13	31.0%	3.7	492	56.6%	141.3
<b>Sex at Birth</b>												
Female	219	21.9%	29	5.8	16.3%	3.6	5	11.9%	3.0	190	21.9%	114.5
Male	782	78.1%	149	29.8	83.7%	16.9	37	88.1%	20.3	679	78.1%	372.3
<b>Race/Ethnicity</b>												
White	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
African American	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
Hispanic	1,001	100.0%	178	35.6	100.0%	10.6	42	100.0%	12.1	869	100.0%	249.5
American Indian	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
Asian/Pacific Islander	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
Multi-racial	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
<b>Age<sup>h</sup></b>												
<5	12	1.2%	1	0.2	0.6%	2.3	0	0.0%	0.0	1	0.1%	2.3
5-14	5	0.5%	1	0.2	0.6%	1.3	0	0.0%	0.0	3	0.3%	3.9
15-19	36	3.6%	7	1.4	3.9%	7.9	4	9.5%	12.8	3	0.3%	9.6
20-24	143	14.3%	29	5.8	16.3%	20.0	10	23.8%	33.6	32	3.7%	107.5
25-29	202	20.2%	29	5.8	16.3%	19.2	6	14.3%	19.3	67	7.7%	215.5
30-34	211	21.1%	35	7.0	19.7%	23.5	2	4.8%	6.5	79	9.1%	255.7
35-39	165	16.5%	23	4.6	12.9%	18.0	6	14.3%	22.5	121	13.9%	453.7
40-44	108	10.8%	19	3.8	10.7%	18.5	4	9.5%	18.7	122	14.0%	569.3
45-49	55	5.5%	14	2.8	7.9%	21.4	1	2.4%	6.0	145	16.7%	874.0
50-54	26	2.6%	5	1.0	2.8%	9.9	6	14.3%	45.4	138	15.9%	1,044.7
55-59	27	2.7%	9	1.8	5.1%	24.7	2	4.8%	21.2	81	9.3%	859.1
60+	11	1.1%	6	1.2	3.4%	12.1	1	2.4%	5.9	77	8.9%	453.3
<b>Risk exposure</b>												
MSM	372	37.2%	93	18.6	52.2%	-	21	50.0%	-	358	41.2%	-
IDU	212	21.2%	9	1.8	5.1%	-	3	7.1%	-	126	14.5%	-
MSM & IDU	42	4.2%	1	0.2	0.6%	-	0	0.0%	-	40	4.6%	-
Heterosexual	187	18.7%	24	4.8	13.5%	-	5	11.9%	-	169	19.4%	-
Other/Unknown	188	18.8%	51	10.2	28.7%	-	13	31.0%	-	176	20.3%	-

Year of HIV Diagnosis	Cases	Rate <sup>e</sup>
Before 2005	626	-
2005	40	15.9
2006	39	14.8
2007	43	15.6
2008	33	11.5
2009	37	12.4
2010	28	8.3
2011	40	11.5
2012	33	9.5
2013	40	11.5
2014	42	12.1

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/Alaska Natives, Wisconsin, 1982-2014**

	New Diagnoses by Year of Diagnosis <sup>a</sup>									Prevalence <sup>c</sup>		
	1982-2014 <sup>b</sup>		2009-2013			2014			Cases	%	Rate <sup>e</sup>	
	Cases	%	Cases	Avg <sup>d</sup>	%	Rate <sup>e</sup>	Cases	%				Rate <sup>e</sup>
<b>Total cases<sup>f</sup></b>	70	100.0%	5	1.0	100.0%	3.4	4	100.0%	8.1	41	100.0%	83.5
<b>Disease Status<sup>g</sup></b>												
(Missing)	5	7.1%	0	0.0	0.0%	0.0	-	-	-	0	0.0%	0.0
HIV	49	70.0%	3	0.6	60.0%	3.1	-	-	-	21	51.2%	42.7
AIDS	16	22.9%	2	0.4	40.0%	2.0	-	-	-	20	48.8%	40.7
<b>Sex at Birth</b>												
Female	24	34.3%	2	0.4	40.0%	4.1	-	-	-	14	34.1%	56.9
Male	46	65.7%	3	0.6	60.0%	4.1	-	-	-	27	65.9%	110.1
<b>Race/Ethnicity</b>												
White	0	0.0%	0	0.0	0.0%	0.0	-	-	-	0	0.0%	0.0
African American	0	0.0%	0	0.0	0.0%	0.0	-	-	-	0	0.0%	0.0
Hispanic	0	0.0%	0	0.0	0.0%	0.0	-	-	-	0	0.0%	0.0
American Indian	70	100.0%	5	1.0	100.0%	3.4	-	-	-	41	100.0%	83.5
Asian/Pacific Islander	0	0.0%	0	0.0	0.0%	0.0	-	-	-	0	0.0%	0.0
Multi-racial	0	0.0%	0	0.0	0.0%	0.0	-	-	-	0	0.0%	0.0
<b>Age<sup>h</sup></b>												
<5	2	2.9%	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	20.0%	23.5	-	-	-	0	0.0%	0.0
20-24	11	15.7%	0	0.0	0.0%	0.0	-	-	-	2	4.9%	49.2
25-29	19	27.1%	1	0.2	20.0%	27.5	-	-	-	3	7.3%	82.5
30-34	14	20.0%	0	0.0	0.0%	0.0	-	-	-	3	7.3%	88.7
35-39	10	14.3%	0	0.0	0.0%	0.0	-	-	-	4	9.8%	126.3
40-44	5	7.1%	0	0.0	0.0%	0.0	-	-	-	7	17.1%	203.0
45-49	3	4.3%	0	0.0	0.0%	0.0	-	-	-	5	12.2%	134.3
50-54	2	2.9%	1	0.2	20.0%	28.8	-	-	-	9	22.0%	258.9
55-59	1	1.4%	1	0.2	20.0%	38.3	-	-	-	5	12.2%	180.5
60+	1	1.4%	1	0.2	20.0%	17.4	-	-	-	3	7.3%	52.3
<b>Risk exposure</b>												
MSM	23	32.9%	2	0.4	40.0%	-	-	-	-	13	31.7%	-
IDU	16	22.9%	1	0.2	20.0%	-	-	-	-	8	19.5%	-
MSM & IDU	7	10.0%	0	0.0	0.0%	-	-	-	-	4	9.8%	-
Heterosexual	15	21.4%	0	0.0	0.0%	-	-	-	-	12	29.3%	-
Other/Unknown	9	12.9%	2	0.4	40.0%	-	-	-	-	4	9.8%	-

Year of HIV Diagnosis	Cases	Rate <sup>e</sup>
Before 2005	57	-
2005	1	2.1
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	4.1
2014	4	8.1

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 13: Reported Cases of HIV Infection, Asians/Pacific Islanders, 1982-2014**

	New Diagnoses by Year of Diagnosis <sup>a</sup>									Prevalence <sup>c</sup>		
	1982-2014 <sup>b</sup>		2009-2013				2014			Cases	%	Rate <sup>e</sup>
	Cases	%	Cases	Avg <sup>d</sup>	%	Rate <sup>e</sup>	Cases	%	Rate <sup>e</sup>			
<b>Total cases<sup>f</sup></b>	100	100.0%	30	6.0	100.0%	4.5	5	100.0%	3.7	77	100.0%	56.8
<b>Disease Status<sup>g</sup></b>												
(Missing)	5	5.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
HIV	72	72.0%	20	4.0	66.7%	3.0	3	60.0%	2.2	44	57.1%	32.4
AIDS	23	23.0%	10	2.0	33.3%	1.9	2	40.0%	1.5	33	42.9%	24.3
<b>Sex at Birth</b>												
Female	27	27.0%	10	2.0	33.3%	3.0	0	0.0%	0.0	26	33.8%	37.5
Male	73	73.0%	20	4.0	66.7%	6.2	5	100.0%	7.5	51	66.2%	77.0
<b>Race/Ethnicity</b>												
White	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
African American	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
Hispanic	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
American Indian	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
Asian/Pacific Islander	100	100.0%	30	6.0	100.0%	4.5	5	100.0%	3.7	77	100.0%	56.8
Multi-racial	0	0.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
<b>Age<sup>h</sup></b>												
<5	2	2.0%	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	1.3%	4.3
15-19	1	1.0%	1	0.2	3.3%	7.8	0	0.0%	0.0	0	0.0%	0.0
20-24	18	18.0%	8	1.6	26.7%	10.5	0	0.0%	0.0	5	6.5%	31.5
25-29	19	19.0%	3	0.6	10.0%	7.6	1	20.0%	7.1	7	9.1%	49.6
30-34	23	23.0%	8	1.6	26.7%	18.0	3	60.0%	25.5	12	15.6%	102.2
35-39	15	15.0%	3	0.6	10.0%	15.4	1	20.0%	10.0	14	18.2%	139.5
40-44	7	7.0%	3	0.6	10.0%	12.0	0	0.0%	0.0	7	9.1%	80.9
45-49	6	6.0%	2	0.4	6.7%	13.9	0	0.0%	0.0	11	14.3%	152.8
50-54	5	5.0%	1	0.2	3.3%	18.5	0	0.0%	0.0	9	11.7%	166.2
55-59	3	3.0%	0	0.0	0.0%	0.0	0	0.0%	0.0	5	6.5%	108.0
60+	1	1.0%	1	0.2	3.3%	9.9	0	0.0%	0.0	6	7.8%	59.7
<b>Risk exposure</b>												
MSM	42	42.0%	11	2.2	36.7%	-	5	100.0%	-	31	40.3%	-
IDU	1	1.0%	0	0.0	0.0%	-	0	0.0%	-	1	1.3%	-
MSM & IDU	1	1.0%	1	0.2	3.3%	-	0	0.0%	-	1	1.3%	-
Heterosexual	24	24.0%	10	2.0	33.3%	-	0	0.0%	-	18	23.4%	-
Other/Unknown	32	32.0%	8	1.6	26.7%	-	0	0.0%	-	26	33.8%	-

Year of HIV Diagnosis	Cases	Rate <sup>e</sup>
Before 2005	44	-
2005	3	2.7
2006	5	4.4
2007	7	6.1
2008	6	5.0
2009	9	7.4
2010	6	4.5
2011	6	4.4
2012	3	2.2
2013	6	4.4
2014	5	3.7

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 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 Wisconsin is unable to verify the non-US 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 time of analysis (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

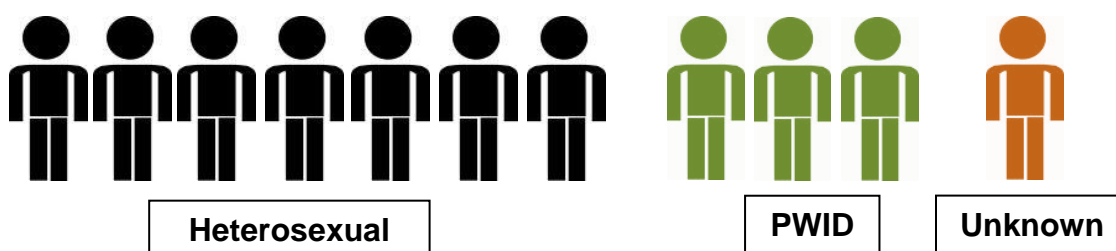
- For surveillance purposes, cases are counted only once in a hierarchy of exposure categories. Persons with more than one reported mode of exposure to HIV are classified in the first category in the hierarchy as defined by CDC.
- The risk exposure category "MSM" includes men who report having sex with 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" includes persons with hemophilia, persons 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.
- 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 demographics 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.

**Rates**

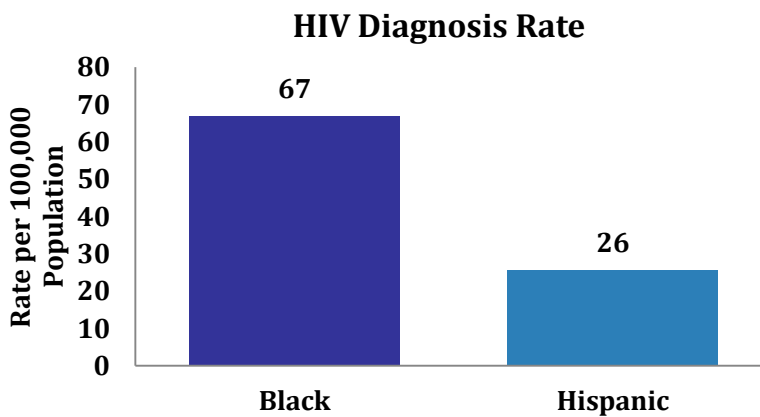
- In this report, rates are defined as cases per 100,000 population, except where noted. Population denominators used to calculate rates are from the Wisconsin Interactive Statistics on Health website (<https://www.dhs.wisconsin.gov/wish/index.htm>). Use caution when comparing rates calculated from a small number (i.e., fewer than five cases).
- 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.

**Interpreting rates**

Rates are often used when comparing the impact of HIV across two or more groups. When the population sizes of the groups being compared are different, using a rate shows what the impact of HIV *would* be if the populations sizes were identical.

*Example*

If the size of the Black and Hispanic populations were both 100,000 people, 67 Black individuals would be affected by HIV, compared to 26 Hispanics.



It is important to note that these numbers do not reflect actual cases counts, but rather an estimated case count if the populations were of identical size.

**Rate ratios**

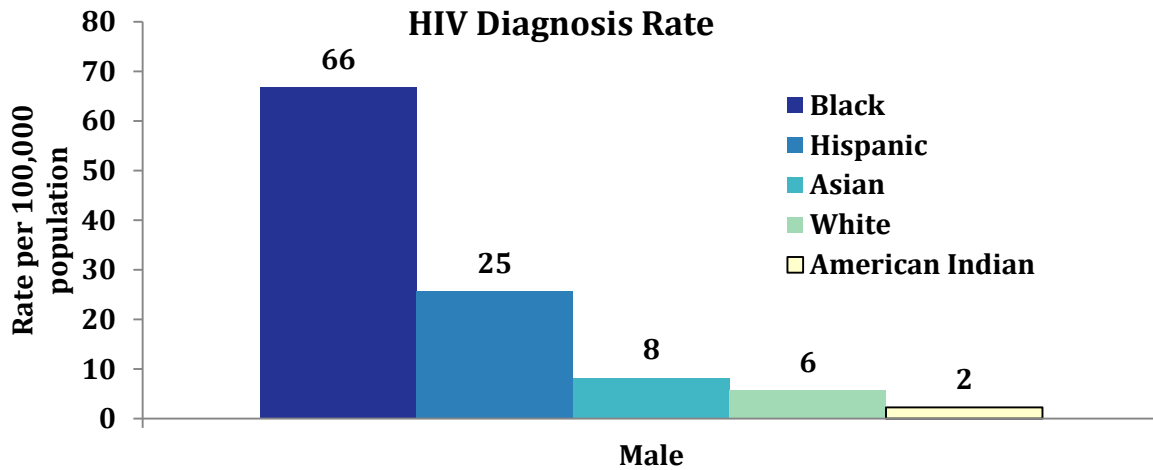
Rate ratios are another method for comparing the impact of HIV across populations. After rates have been calculated for each population, a reference group is selected, for example the group with the lowest rate or the largest population. The rate for each population is then divided by the rate for the reference population, which gives the rate ratio.

*Example*

Based on the example below, if Whites are the reference population, we would say that the HIV diagnosis rate in Black males is 11-fold higher than in White males. The 11-fold difference, or



rate ratio, was obtained by dividing the rate for Black males by the rate for White males ( $66 \div 6$ ) = 11. Similarly, the diagnosis rate in Hispanic males is 4-fold higher than the rate in White males, calculated by dividing the Hispanic rate by the White rate.

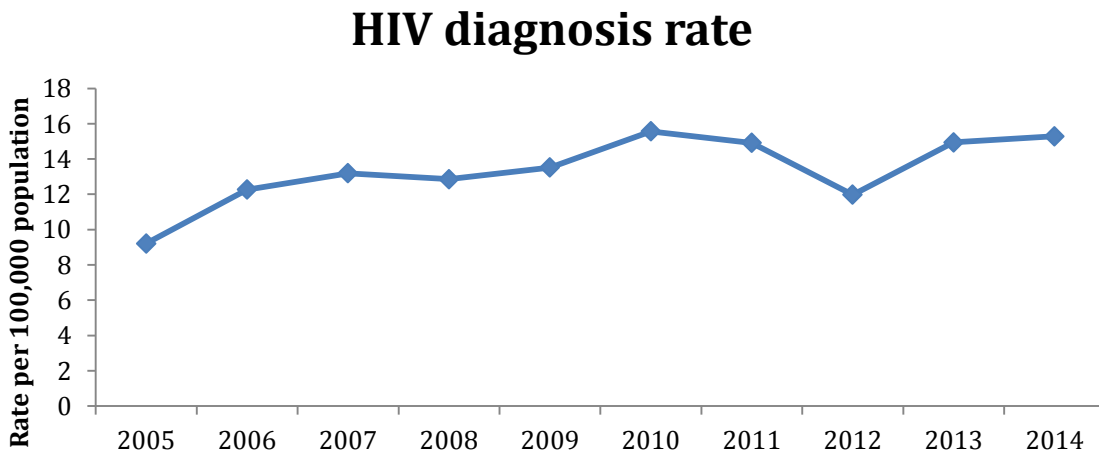


**Statistical significance**

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*

In the example below, the apparent increase in rates from 2012 to 2013 is not statistically significant. Therefore, this difference likely reflects normal fluctuations in HIV diagnoses that occur on a year-to-year basis, rather than a true increase.



In this report, statements are made about trends only if the trends are statistically significant. Non-significant trends are described as stable. When comparing groups, differences are statistically significant only if confidence intervals do not overlap.



**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.

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