HIV in the city of Milwaukee

Supplement to the HIV Surveillance Annual Report, 2024

Diagnosis trends, new diagnoses, and prevalence through December 31, 2024

Wisconsin Department of Health Services | Division of Public Health | HIV Program
P-00484A (12/2025)

Table of Contents

Summary

This report describes HIV diagnosis trends, people newly diagnosed with HIV during 2024, and the population living with HIV in Milwaukee, Wisconsin as of December 31, 2024. The HIV surveillance case definition for a new diagnosis in Milwaukee, Wisconsin was updated in 2023 (see Technical Notes). This case definition change is applied to HIV cases reported in Wisconsin from January 1, 2023, and onward.

HIV surveillance data provide important information for planning HIV prevention and care services. Prevention services focus primarily on new diagnosis trends and the geographic and demographic distribution of new cases. Care and treatment services consider the total population of people living with HIV in Milwaukee (prevalent cases), regardless of when or where they were first diagnosed.

HIV Diagnosis Trends

Over the past 10 years, the number and rate of new HIV diagnoses have varied. Milwaukee had a relatively low diagnosis rate compared to cities of similar size and demographics. During 2015–2024:

- Young cisgender men and people of color were disproportionately affected by HIV.
- Male-male sexual contact was the most commonly reported factor for HIV, followed by male-female sexual contact.

New Diagnoses, 2024

During 2024, 108 people were newly diagnosed with HIV in Milwaukee.

- Five of the zip codes in Milwaukee made up 46% of the new HIV diagnoses.
- A disproportionate number of new HIV diagnoses were young cisgender men of color.
- Male-male sexual contact was the most commonly reported transmission mode for HIV, followed by male-female sexual contact.
- Approximately 94% of cases were linked to care services within three months of diagnosis.

Prevalence

A total of 2,869 people known to be living with HIV resided in Milwaukee at the end of 2024. An estimated 421 additional people may be living with HIV in Milwaukee but are not currently aware of their HIV status. The estimated HIV prevalence was 3,290 people when those who were not aware of their HIV status were included.

- In 2024, 33 people living with HIV moved into Milwaukee.
- Almost half of people living with HIV resided in five of the Milwaukee zip codes.
- Prevalent cases tended to be older than new diagnoses.
- During 2024, 80% of people living with HIV were virally suppressed (having less than 200 copies of HIV per milliliter of blood).

HIV Diagnosis Trends

Number and Rate of New Diagnoses

Number of New Diagnoses

Since 1982, 5,641 Milwaukee residents were diagnosed with HIV. HIV diagnoses rose rapidly during the 1980s, peaking during 1990 at 303 new diagnoses, and then declining steeply until the early 2000s (Figure 1).

During 2015–2024, the number of diagnoses ranged from a low of 82 (2023) to a high of 116 (2017), with an average of 104 new HIV diagnoses per year.

FIGURE 1

Over the past 10 years, the number of new HIV diagnoses reported each year in Milwaukee has remained stable.

Number of new HIV diagnoses, Milwaukee, 1982–2024

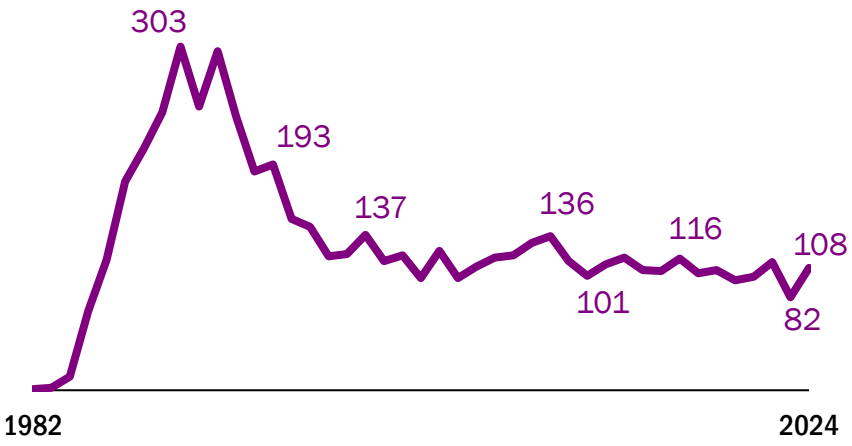
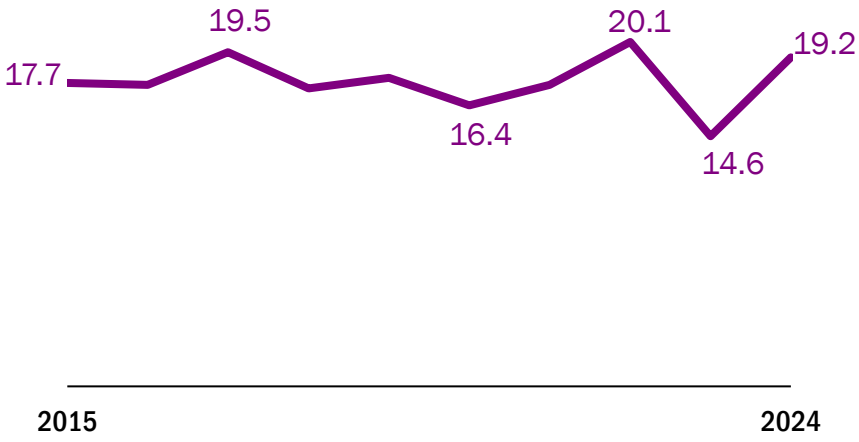


FIGURE 2

The HIV diagnosis rate in Milwaukee has varied over the past 10 years.

Rate of new HIV diagnoses per 100,000 people, Milwaukee, 2015–2024



New Diagnosis Rate

During 2015, 17.7 new HIV cases were diagnosed per 100,000 Milwaukee residents (Figure 2). The new diagnosis rate varied over time to 19.2 per 100,000 people by 2024.

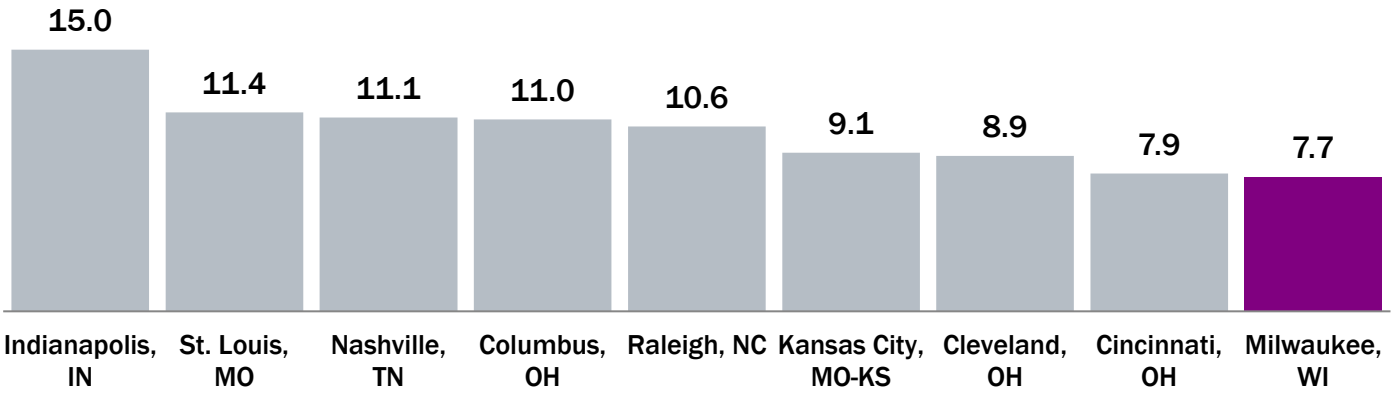
During 2015–2024, the annual diagnosis rate ranged from a low of 14.6 per 100,000 people (2023) to a high of 20.1 per 100,000 people (2022), with an average of 17.8 new HIV diagnoses per 100,000 people.

Figure 3 shows that Milwaukee's HIV diagnosis rate is lower compared to other metropolitan statistical areas (MSA) of similar size, demographics, and economic factors.

FIGURE 3

Milwaukee had the lowest HIV diagnosis rate compared to other metropolitan statistical areas with similar characteristics.

Estimated number of HIV diagnoses per 100,000 people by metropolitan area, 2023



Centers for Disease Control and Prevention. *HIV Surveillance Report Tables*, 2023. https://www.cdc.gov/hiv-data/nhss/hiv-diagnoses-deaths-and-prevalence-2025.html. Published April 29, 2025. Accessed [June 2025].

Demographics

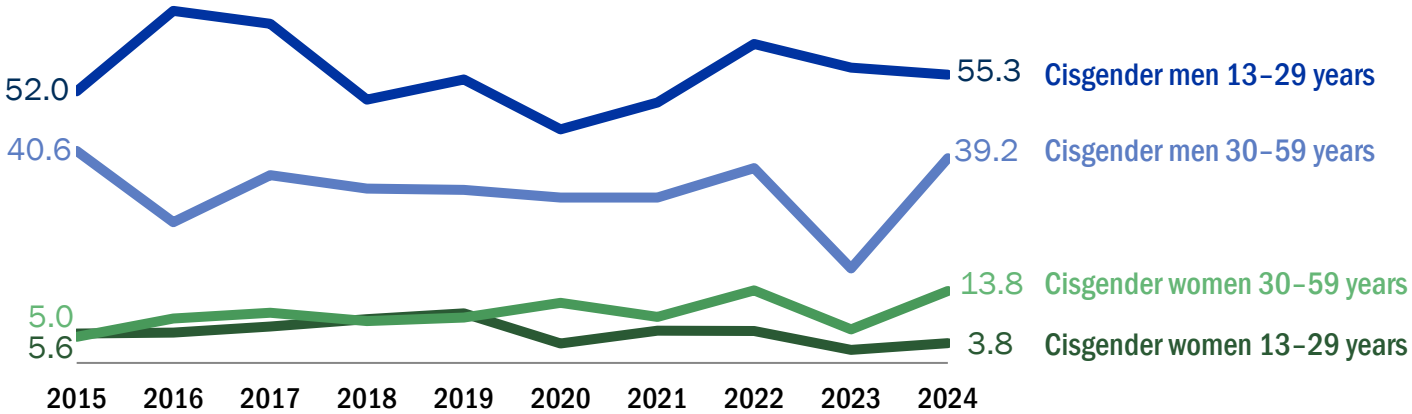
Age and Gender at Diagnosis

During 2015–2024, the HIV diagnosis rate varied among all age and gender groups (Figure 4).

FIGURE 4

Young cisgender men had the highest HIV diagnosis rate in Milwaukee.

Number of HIV diagnoses per 100,000 people by gender* and age** at diagnosis, Milwaukee, 2015–2024



*People of trans experience were excluded from these rates as population estimates are not available to calculate rates.
**Diagnosis rates among cisgender men and cisgender women ages 60 and older are not shown due to small numbers.

Race and Ethnicity

HIV **disproportionately** affects people of color in Milwaukee. People of color include people who identify as Black, Hispanic, Asian, Native American, Native Hawaiian or Pacific Islander, or Multiracial. The percentage of new HIV diagnoses affecting people of color rose from 50% in 1983 to 93% during 2024 (Figure 5). During 2024, racial and ethnic minorities made up 68% of Milwaukee's population and comprised 93% of new HIV diagnoses.

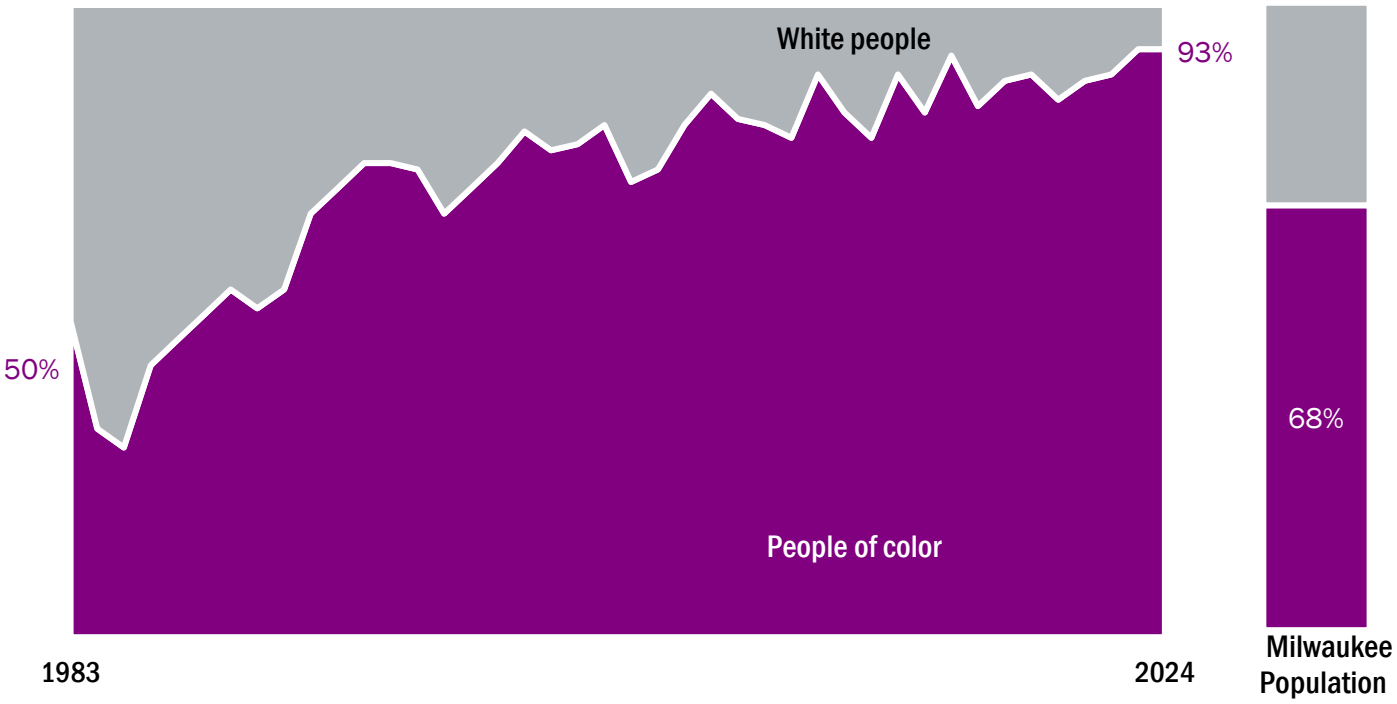
Addressing health disparities and inequities is a priority for public health. Race or ethnicity alone does not make someone more or less likely to acquire HIV. People of color have a greater likelihood of acquiring HIV due to many social and economic factors that affect people of color more than white people, such as:

- Racism
- Poverty
- Limited access to health care
- Lack of education
- Stigma
- Homelessness
- Oppression

FIGURE 5

The percentage of new HIV diagnoses among people of color is disproportionate to Milwaukee's racial and ethnic composition.

Percentage of new HIV diagnoses among white people and people of color, Milwaukee, 1983–2024



This disparity is more pronounced among cisgender men (Appendix-Table A1). During 2015–2024, cisgender women of all racial or ethnic groups had lower annual HIV diagnosis rates compared to cisgender men.

People of Trans Experience

Cisgender people have a gender identity that corresponds with their sex assigned at birth. Conversely, people of trans experience have a gender identity that does not conform to their sex assigned at birth. This includes people who self-identify as transgender women, transgender men, and other gender nonconforming identities.

Gender identity and sexual orientation are separate, distinct concepts, with gender identity referring to a person's sense of themselves and sexual orientation referring to a person's attractions and partnering.

People of trans experience face an increased risk for HIV due to stigma, discrimination, social rejection and exclusion, violence, and barriers in health care settings, such as lack of provider knowledge on people of trans experience's unique needs.[1]

Since 1982, 110 people of trans experience have been diagnosed with HIV in Milwaukee (all 110 identified as transgender women). While collection of self-reported gender identity has improved over time, the number of diagnoses among people of trans experience in Milwaukee may be underreported.

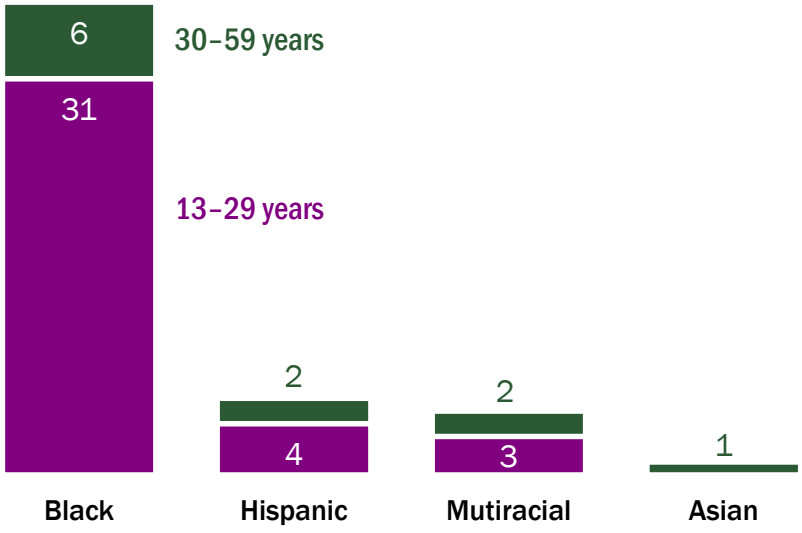
Of the 110 HIV diagnoses among people of trans experience, 49 occurred between 2015 and 2024 (Figure 6).

- All were from a racial or ethnic minority group.
- The majority of the people were under age 30 (78%).
- Ninety-eight percent of the diagnoses were attributed to sexual contact (48 of 49).

FIGURE 6

Three out of four people of trans experience diagnosed with HIV in the last 10 years were young people of color.

Number of HIV diagnoses among people of trans experience by age at diagnosis and race and ethnicity, Milwaukee, 2015–2024



[1] Centers for Disease Control and Prevention. Fast Facts: HIV and Transgender People. Fast Facts: HIV and Transgender People | HIV | CDC. Published March 2024.

Transmission Category

Adult Transmission Categories

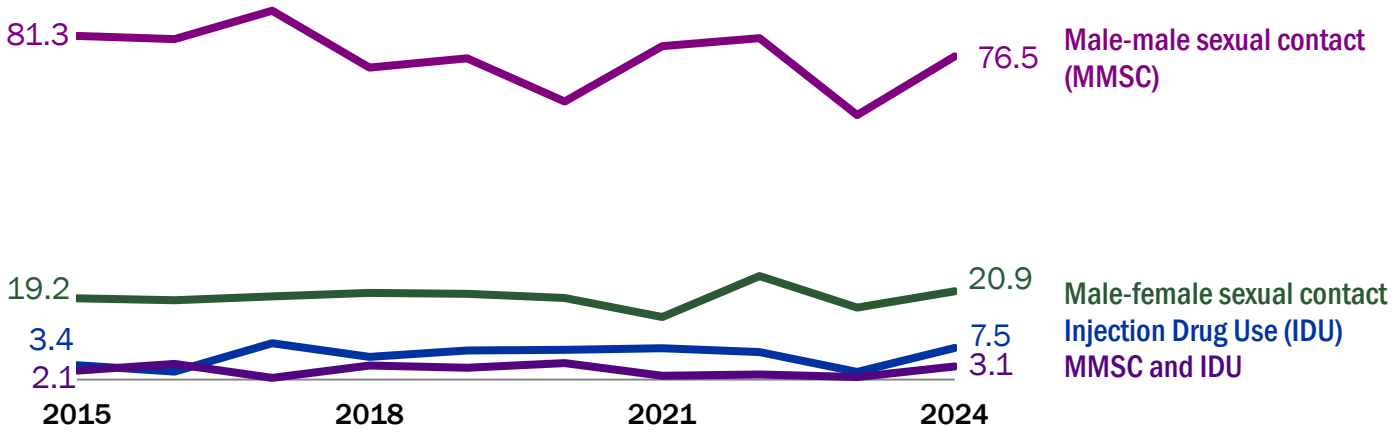
Some people newly diagnosed with HIV did not know for certain how they were exposed or did not choose to share their exposure factors for HIV with their provider. A statistical method called imputation was used to estimate the probable transmission category for people with an unknown transmission category (see Technical Notes).

During 2015–2024, the estimated number of new diagnoses varied among all transmission groups (Figure 7).

FIGURE 7

Male-male sexual contact was the most common HIV transmission mode.

New HIV diagnoses by estimated transmission category*, Milwaukee, 2015–2024



*Data have been statistically adjusted to account for those with an unknown transmission category.

Late Diagnosis

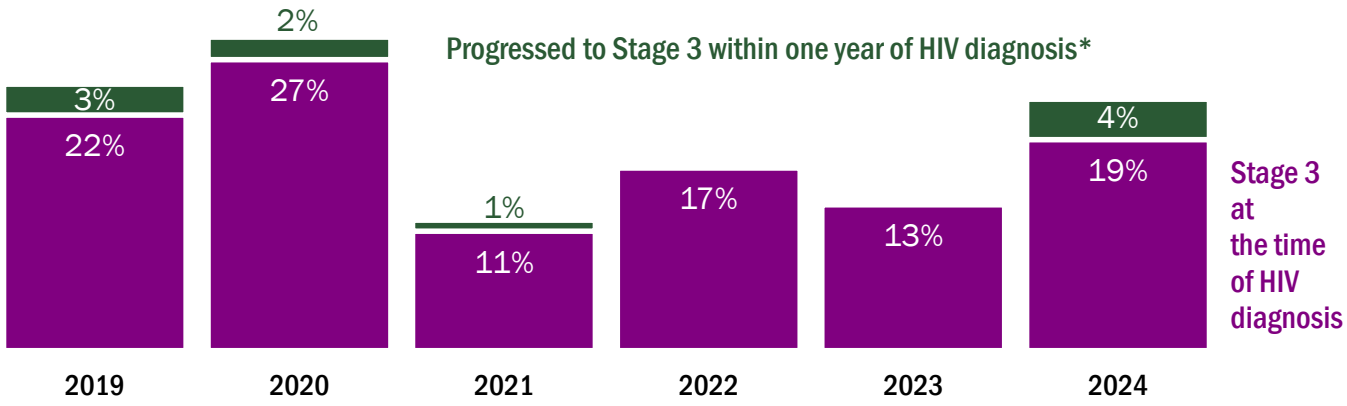
A late diagnosis occurs when a person living with HIV progressed to Stage 3 (AIDS) at the time of receiving their initial HIV diagnosis or within one year of receiving their initial diagnosis. Without treatment, progression to Stage 3 typically occurs eight to 10 years after HIV was acquired. Stage 3 status is clinically defined by having a very low CD4 white blood cell count or a Stage 3-defining opportunistic infection. Early diagnosis and access to HIV care can prevent progression to Stage 3 so that people living with HIV have longer and healthier lives.

The percentage of new HIV diagnoses that progressed to Stage 3 at the time they were first identified varied from 2019 to 2024, with a low of 11% in 2021 and a high of 27% in 2020 (Figure 8).

FIGURE 8

The percentage of people who progressed to Stage 3 at the time of diagnosis varied from 2019 to 2024.

Percentage of people who progressed to Stage 3 HIV within one year of diagnosis, Milwaukee. 2019–2024



*Those diagnosed with HIV during 2024 have not had one full year to evaluate progression to Stage 3 at the time of figure creation. The provisional 2024 data should be interpreted with caution.

Of 96 people who received a late HIV diagnosis during 2019–2023:

- The majority (72%) were cisgender men.
- Over half (57%) were Black, 22% were Hispanic, and 19% were white.
- The majority (74%) were over age 30 at the time of diagnosis.
- Half (50%) reported a transmission category of male-male sexual contact, 13% reported male-female sexual contact, and 2% reported injection drug use.

New Diagnoses, 2024

Number of New HIV Diagnoses

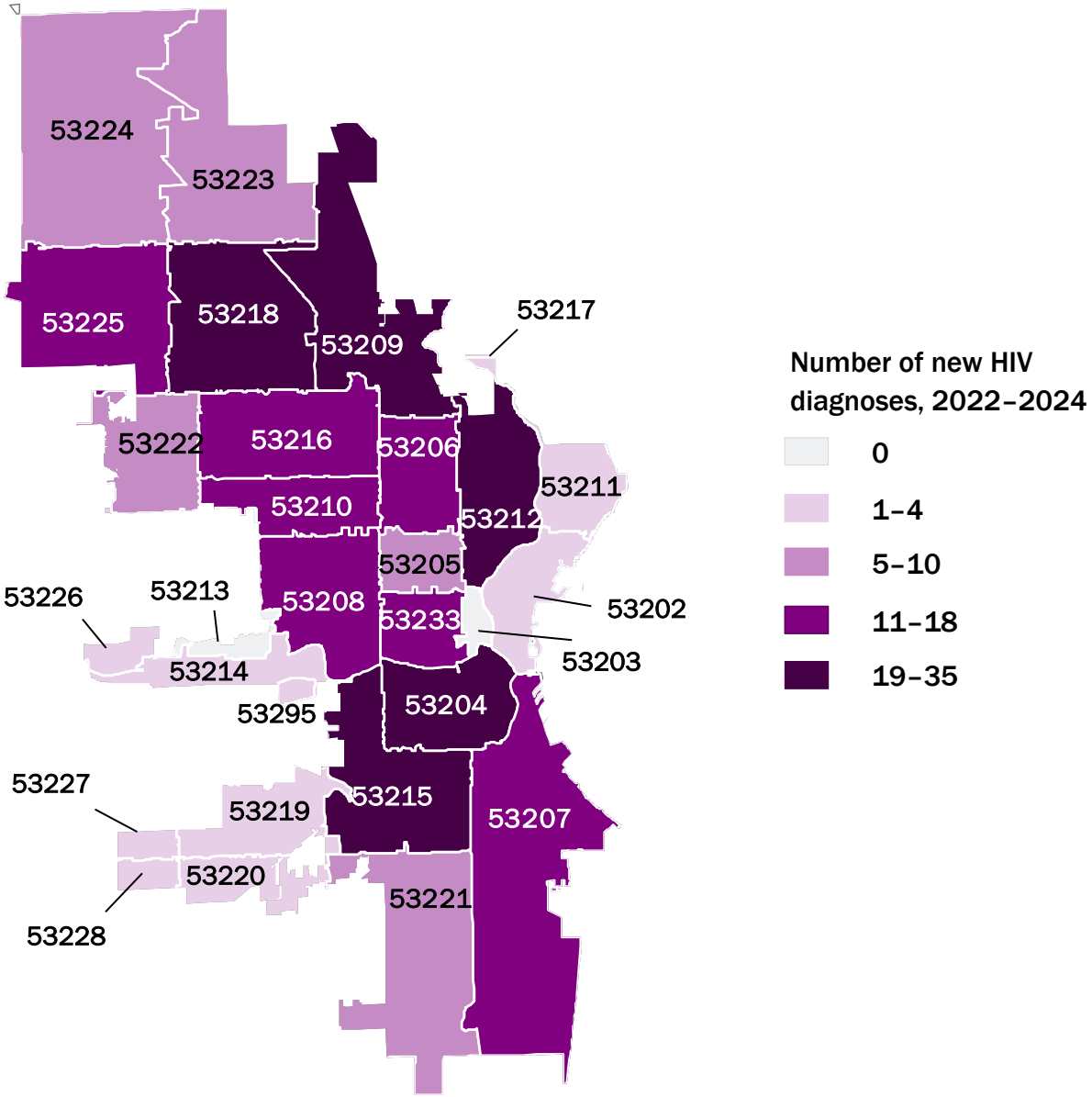
New HIV diagnoses are Milwaukee residents who received their first HIV diagnosis during the current reporting period. During 2024, 108 Milwaukee residents were newly diagnosed with HIV, or 19.2 new diagnoses per 100,000 Milwaukee residents.

During 2022–2024, new HIV diagnoses were reported among residents from 27 Milwaukee zip codes. Almost half (46%) of new HIV cases were diagnosed in five zip codes: 53218 (35), 53209 (31), 53204 (29), 53212 (23), and 53215 (21) (Figure 9, Appendix-Table A2).

FIGURE 9

Almost half of new HIV diagnoses were identified in five zip codes.

Geographic distribution of new HIV diagnoses, Milwaukee, 2022–2024



Recent and Acute Infections

Recent HIV infections are those diagnosed during the six months after HIV was acquired, as evidenced by a documented or self-reported negative HIV test during this period (see Technical Notes). Acute HIV infections are those diagnosed during the two to four weeks after HIV exposure.

People in the acute stage of HIV have a high viral load (that is, a large amount of virus in the blood) and are more able to transmit HIV to others due to high levels of virus in the body. Rapid linkage of people with acute HIV diagnoses to partner services ensures that exposed partners receive timely HIV testing.

During 2024, 14 people received a recent or acute HIV diagnosis in Milwaukee. Of these 15 people, nine were considered acute HIV diagnoses based on laboratory testing algorithms or presence of acute symptoms.

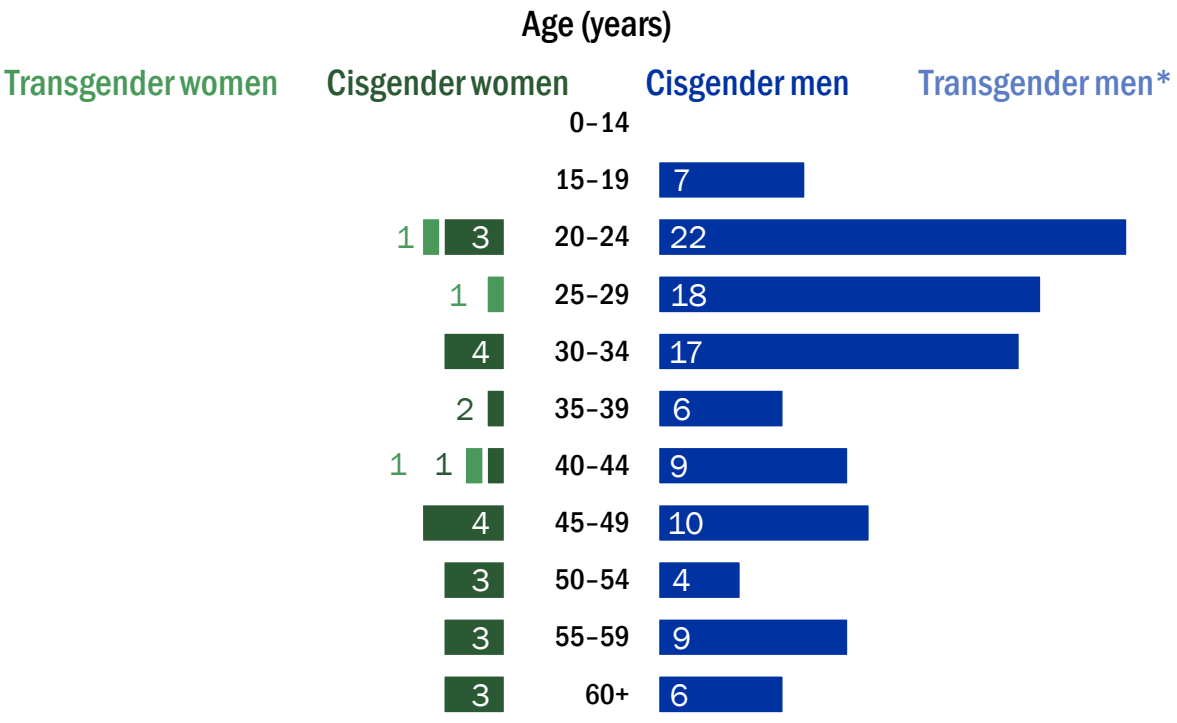
Demographics

During 2024, 84 cisgender men, 21 cisgender women, and 3 transgender women were diagnosed with HIV in Milwaukee (Figure 10, Appendix-Table A3).

FIGURE 10

Approximately four out of ten new HIV diagnoses during 2024 were among young cisgender men under 30.

Number of HIV diagnoses by age and gender*, Milwaukee, 2024



*No cases for transgender men in 2024.

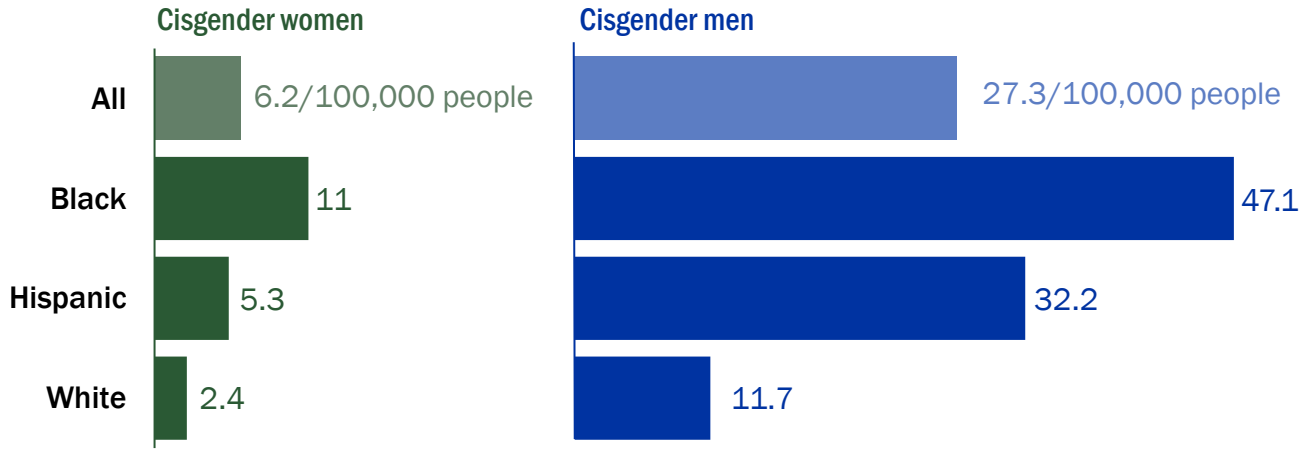
The median age at diagnosis was 31, with a range of 18–71. During 2024, newly diagnosed cisgender men had a lower median age at diagnosis than cisgender women (men, 29.5; women, 46).

During 2020–2024 (years have been combined due to the small numbers for some racial and ethnic groups), the new HIV diagnosis rate was higher for cisgender men and was higher among Black and Hispanic people compared to other race or ethnicity groups (Figure 11).

FIGURE 11

Black cisgender men were diagnosed with HIV at higher rate than other groups.

Number of new HIV diagnoses per 100,000 people by gender* and race or ethnicity, Milwaukee, 2020–2024



*Thirty-three transgender people diagnosed during 2020–2024 are excluded from these rates as population denominators are not available to calculate rates.

Transmission Category

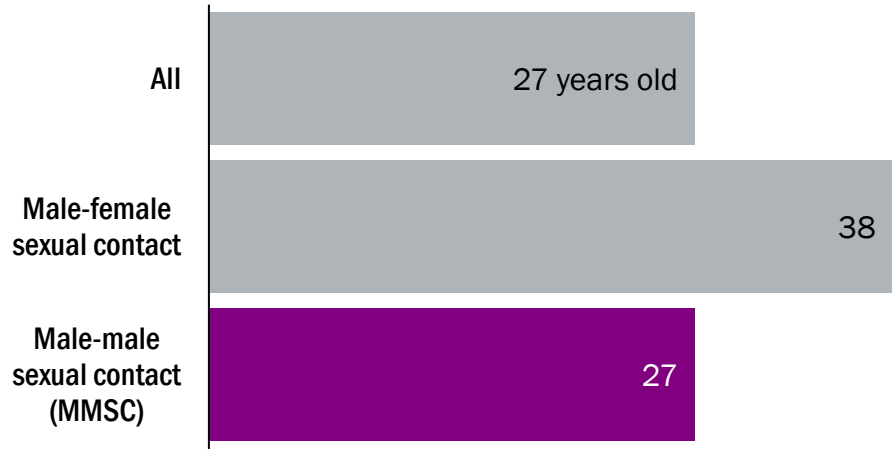
Age

Transmission categories are determined by what people disclose about behaviors that might lead to HIV exposure. People who reported male-male sexual contact as a possible route of exposure to HIV tended to be younger (Figure 12).

FIGURE 12

People who reported male-male sexual contact tended to be younger at HIV diagnosis than those who reported male-female sexual contact.

Median age at HIV diagnosis by transmission category, Milwaukee, 2024

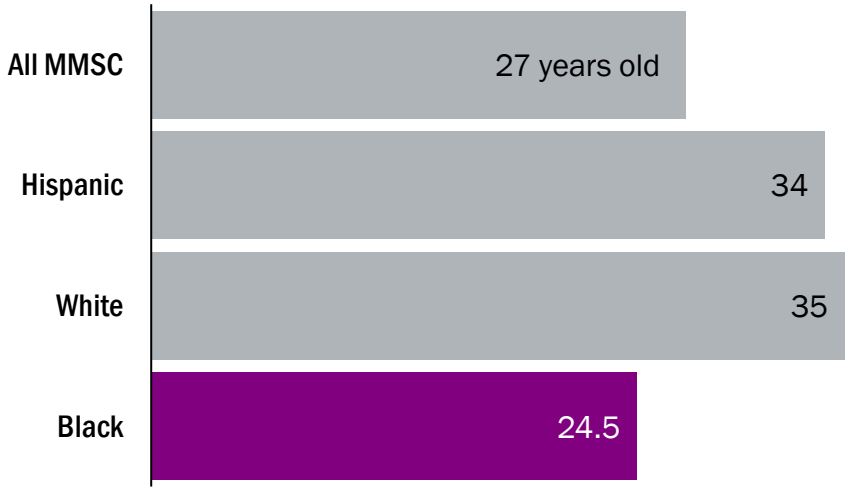


Of those who reported male-male sexual contact, Black people tended to be younger at diagnosis compared to Hispanic and white people (Figure 13).

FIGURE 13

Of those who reported male-male sexual contact (MMSC), Black people were younger at diagnosis than Hispanic and white people.

Median age at HIV diagnosis by race and ethnicity for people who reported male-male sexual contact, Milwaukee, 2024



Gender

Of cisgender men, six out of seven new HIV diagnoses were attributed to an estimated transmission category of male-male sexual contact (87%; Figure 14). The remainder was attributed to injection drug use (6%), male-female sexual contact (3%), or both male-male sexual contact and injection drug use (4%).

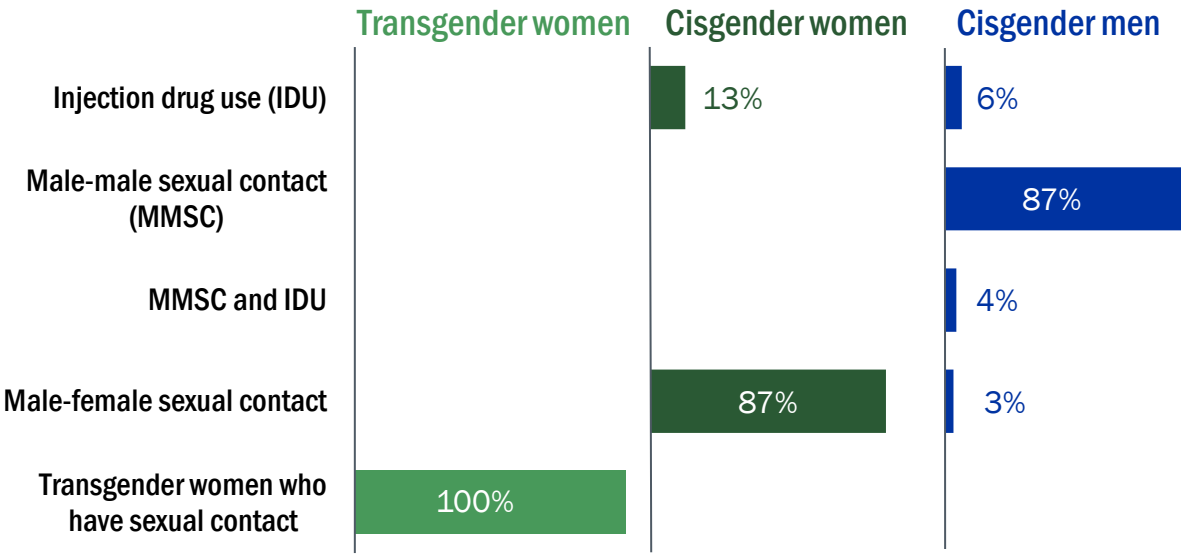
Of cisgender women, six out of seven new diagnoses were attributed to an estimated transmission category of male-female sexual contact (87%) and the remainder was attributed to injection drug use (13%).

Of transgender women, all three new diagnoses were attributed to sexual contact (100%).

FIGURE 14

Sexual contact is the most common HIV transmission mode.

Percentage of HIV diagnoses by gender and estimated transmission category*, Milwaukee, 2024



*Data have been statistically adjusted to account for those with an unknown transmission category. No cases for transgender men in 2024.

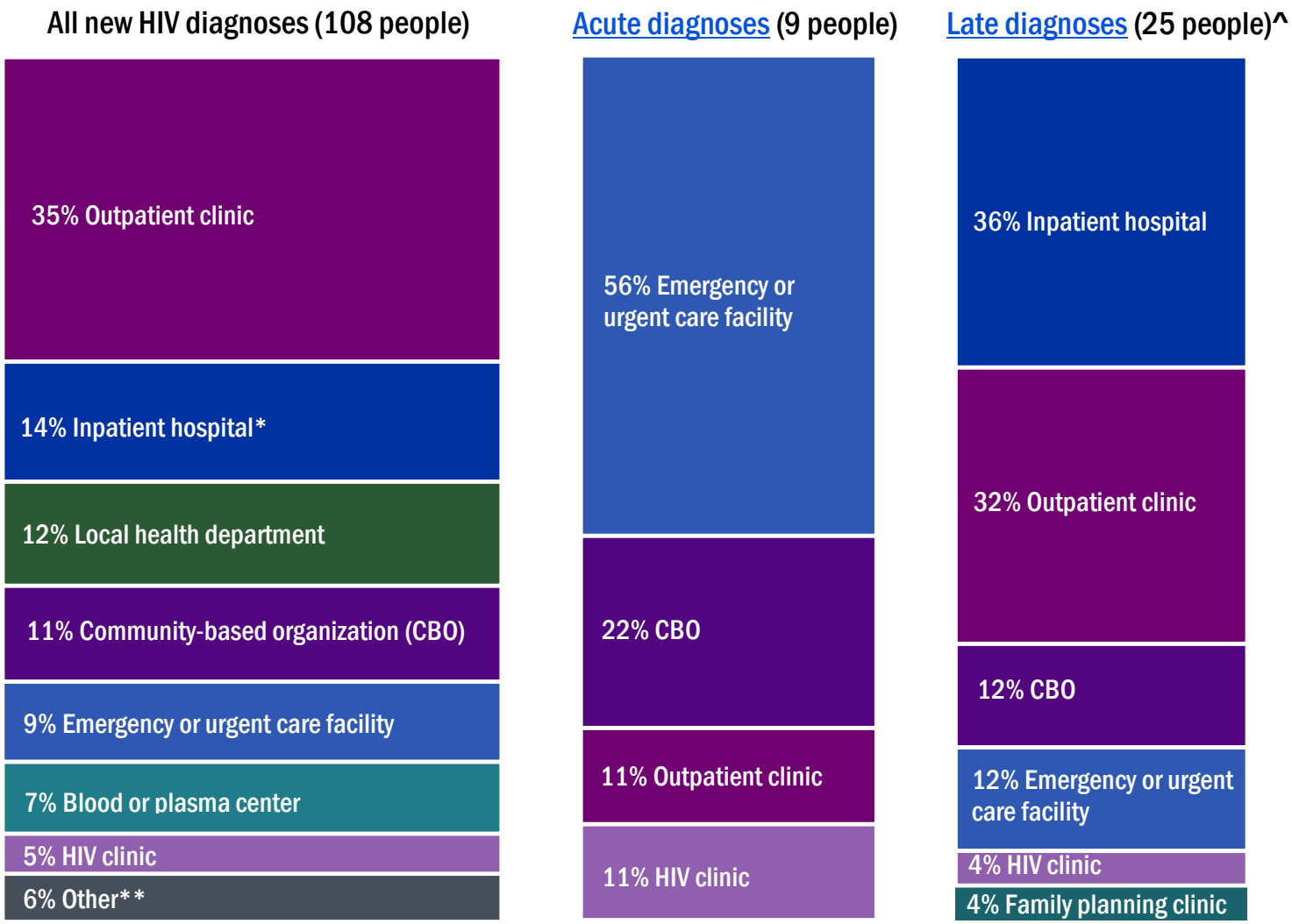
Facility at Diagnosis

HIV testing occurs in a variety of settings, including publicly funded test sites and private medical clinics. Counseling, testing, and referral (CTR) sites in the city of Milwaukee are funded by the Division of Public Health. These CTR sites include community-based organizations and the city health department. During 2024, the most common settings for HIV diagnoses were outpatient clinics (35%); inpatient facilities (14%); and local health departments (12%; Figure 15). When further grouped by stage of HIV at diagnosis, acute diagnoses in 2024 were more likely to be identified at emergency or urgent care facilities.

FIGURE 15

One out of three people were newly diagnosed with HIV at outpatient clinics during 2024.

Percent of new HIV diagnoses by facility, Milwaukee, 2024

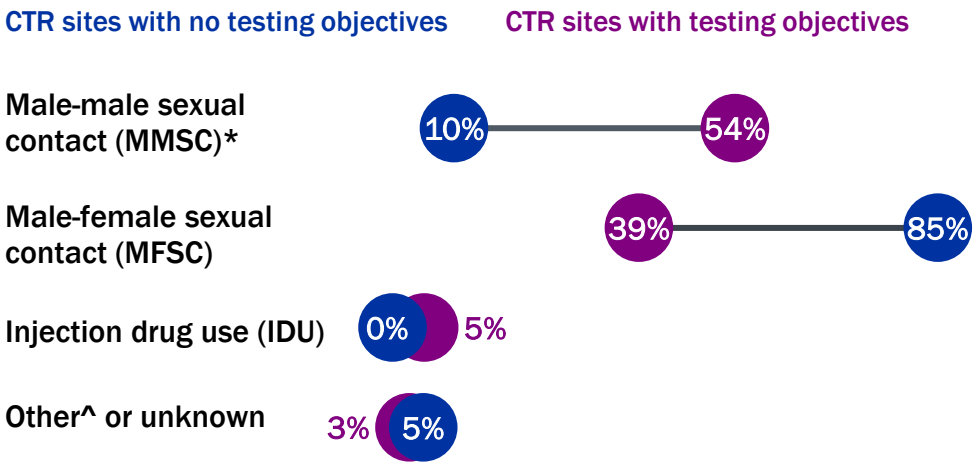


*Inpatient hospital includes diagnoses among people first seen in an emergency or urgent care facility and then admitted to a hospital.
**Other includes diagnosis at a family planning clinic (3%), jails or prisons (1%), or other locations (2%).
^Those diagnosed with HIV during 2024 have not had one full year to evaluate progression to Stage 3. These late diagnosis data are provisional and should be interpreted with caution.

FIGURE 16

CTR sites with testing objectives provided more HIV tests to people who reported male-male sexual contact and injection drug use.

Percentages of HIV test by CTR type and exposure type, Milwaukee, 2024



*MMSC includes cisgender men who reported both MMSC and IDU.
^Other includes people of trans experience, people who have sexual contact with people of trans experience, and cisgender women who have sexual contact with women.

Counseling, Testing, and Referral (CTR) Sites

The Wisconsin HIV CTR Program is designed to serve people at increased risk for HIV because their reported exposures comprise the majority of HIV cases in Wisconsin—men who have sex with men, men who have sex with men and inject drugs, and people who inject drugs among other priority groups. During 2024, one out of four new diagnoses occurred at the CTR sites (Figure 15).

Depending on the funding source, some testing sites have testing objectives. Those sites with the testing objectives provided more HIV tests among cisgender men who reported male-male sexual contact including those who also reported injection drug use, and people who only reported injection drug use than the sites without the objectives (Figure 16). The sites without testing objectives primarily tested people with reported male-female sexual contact exposure (85%).

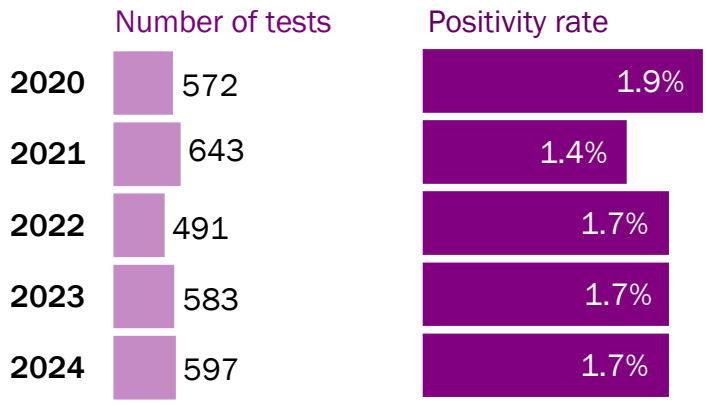
The overall positivity rate in Milwaukee—the number of new HIV diagnoses divided by the total number of HIV tests for each year—is higher among cisgender men who reported male-male sexual contact (MMSC). Of those, the positivity rate was specifically the highest among Black cisgender men followed by Hispanic cisgender men.

Among Black cisgender men who reported MMSC, the number of HIV tests conducted by CTR sites in Milwaukee has varied around a median of 583 tests per year during 2020–2024. The overall positivity rates ranged from 1.4% to 1.9% during this time period with a median of 1.7% (Figure 17).

FIGURE 17

Among Black cisgender men who reported male-male sexual contact, the number of HIV tests conducted by CTR sites varied during 2020–2024.

Number of CTR HIV tests and positivity rate among Black men who reported MMSC, Milwaukee, 2020–2024



Linkage to Care

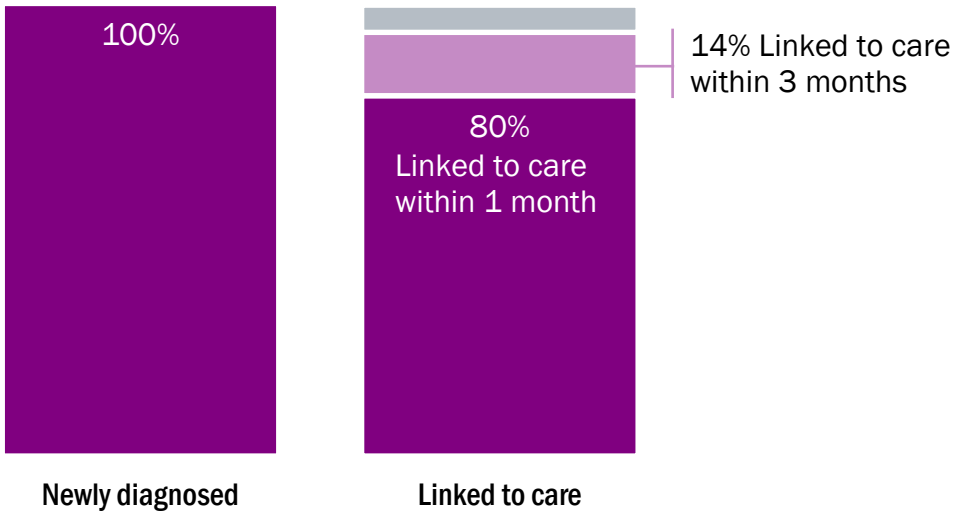
Timely linkage to care (visiting an HIV health care provider within one month [30 days] after learning they were living with HIV) can help people living with HIV have healthier lives and prevent further HIV transmission. Access to medications that reduce the amount of virus in the body can lower the risk of transmitting HIV by sexual contact.

The HIV care continuum is used at state, regional, and local levels to measure and monitor engagement in care and health outcomes for people living with HIV (Appendix-Figure A1). A portion of the care continuum specifically measures timely linkage to care (Figure 18).

FIGURE 18

Most people newly diagnosed with HIV are linked to care services within three months of diagnosis.

HIV Care Continuum* - Linkage to Care, Milwaukee, 2024



*Reflects laboratory data received through June 26, 2025

Prevalence

Number of People Living with HIV

Observed Prevalence

Prevalence is the total number of people living with HIV in Milwaukee at the end of the reporting period. Prevalent HIV cases are defined as people living with HIV who:

- Lived in Milwaukee according to lab results and report forms.
- Were alive at the end of the reporting period.

Prevalence varies due to new diagnoses, migration, and deaths (Figure 19).

At the end of 2024, 2,869 people living with HIV resided in Milwaukee.

FIGURE 19

The number of people living with HIV in Milwaukee in 2024 remains similar to 2023.

Flow of people living with HIV into and out of Milwaukee, 2024

*Specific breakdown of the number of people who died and moved to another city or state are not available at the city level; see statewide report for summary of people living with HIV during 2024.

People who are Unaware of HIV Status

Not everyone living with HIV is aware of their HIV status. The estimated prevalence of HIV in Milwaukee that includes those unaware of their status is approximately 3,290 people.

The most recent CDC estimate[2] suggests that nationally, 12.8% of people (about one out of seven) living with HIV are unaware of their status. Given the CDC's estimate, the observed prevalence likely underestimates the total population of people living with HIV in Milwaukee by approximately 421 people who are not aware of their HIV status.

[2] Centers for Disease Control and Prevention. Estimated HIV incidence and prevalence in the United States, 2018–2022. *HIV Surveillance Supplemental Report*, 2024; 29 (No.3). https://stacks.cdc.gov/view/cdc/156513. Published May 2024. Accessed October 2024

According to the CDC, awareness of HIV status may be substantially lower for younger people and slightly lower for some racial and ethnic minorities due to barriers to getting tested (Appendix-Table A4). This understanding can guide prioritization of services to populations with the highest need for HIV testing.

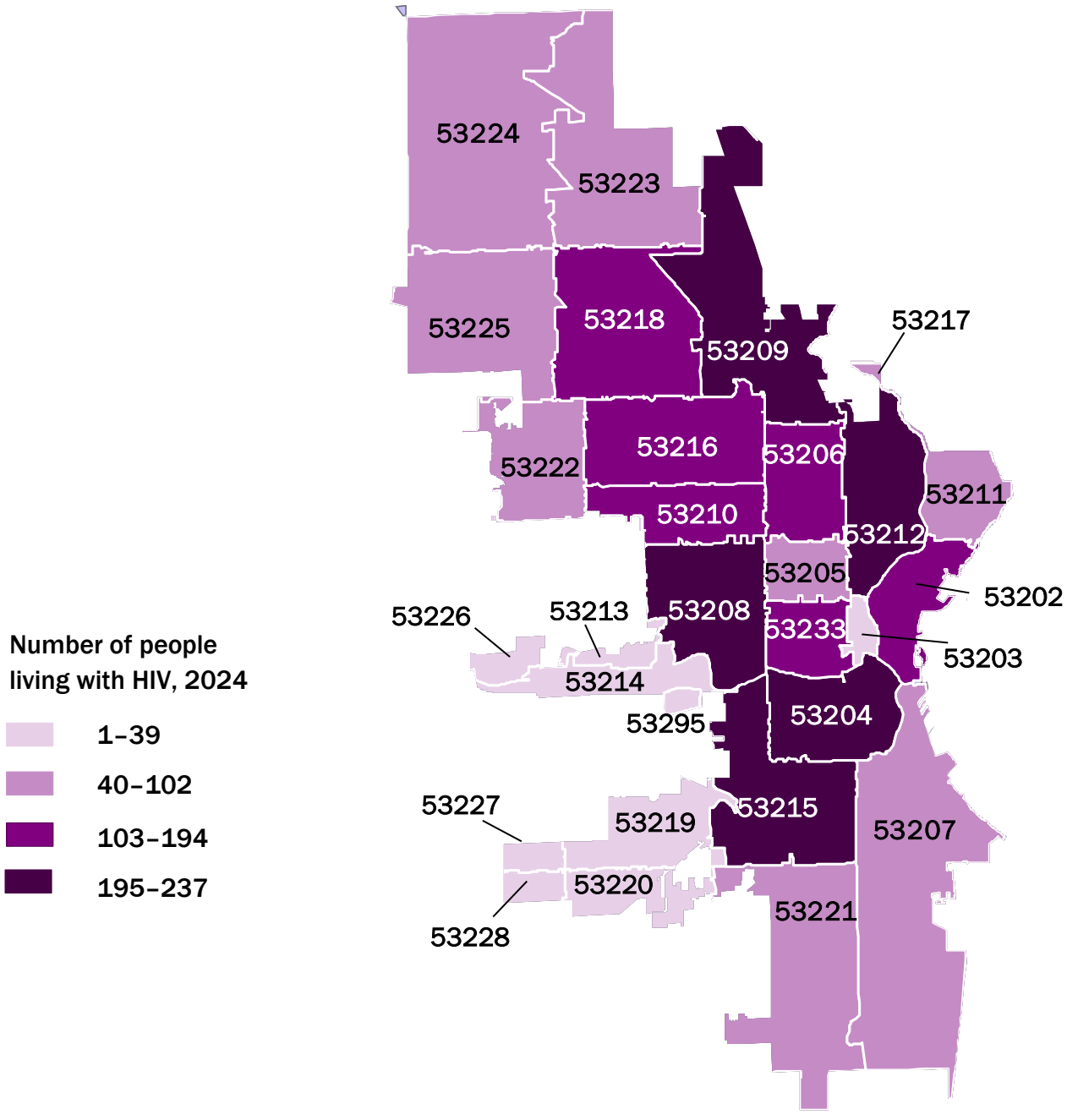
Geographic Distribution of People Living with HIV

Four out of 10 people (39%) living with HIV in Milwaukee resided in five zip codes: 53204 (8%), 53208 (8%), 53215 (8%), 53212 (7%), 53209 (7%; Figure 20).

FIGURE 20

The majority of people living with HIV resided in the central part of the city in 2024.

Geographic distribution of people living with HIV in Milwaukee, 2024



Migration

New HIV reports refer to Milwaukee residents living with HIV who were identified to public health for the first time during the reporting period. These include both new diagnoses and people who were diagnosed in another state or other country prior to moving to Milwaukee.

Of the 141 new HIV reports received during 2024, 33 (23%) were previously diagnosed in another state or country prior to moving to Milwaukee. As compared to those newly diagnosed in Milwaukee, a higher percentage of people living with HIV who moved to Milwaukee during 2024 identified as Hispanic, but both groups were the same age in 2024 (Appendix Table A3).

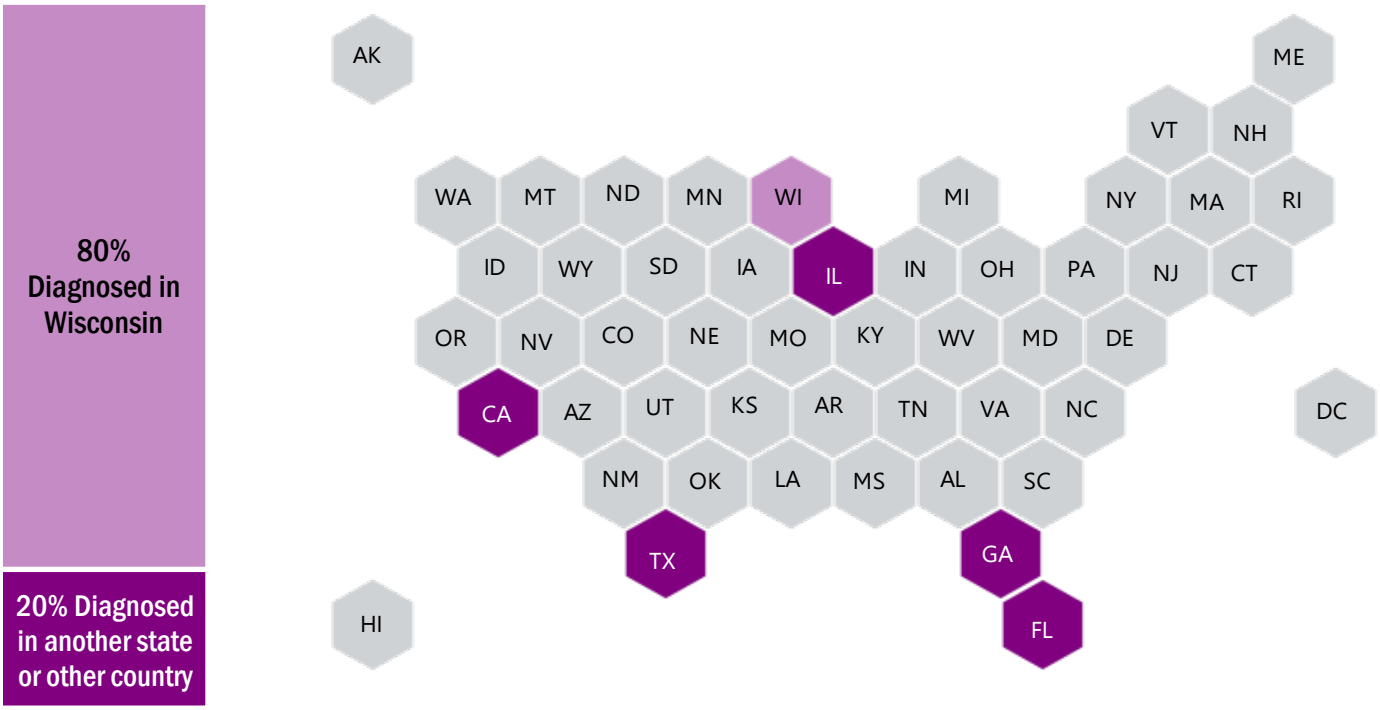
Four out of five (80%) of the 2,869 people living with HIV in Milwaukee during 2024 were diagnosed in the state. The remaining 564 people (20%) were diagnosed in these locations (Figure 21):

- Illinois (132)
- California (41)
- Georgia (34)
- Florida (30)
- Texas (28)
- Another state (216)
- Other country (83)

FIGURE 21

Most people living with HIV in Wisconsin were diagnosed in Wisconsin, or in Illinois, California, Georgia, Florida, or Texas.

Diagnosis location of people living with HIV in Milwaukee during 2024.



Demographics

Of 2,869 people living with HIV in Milwaukee during 2024:

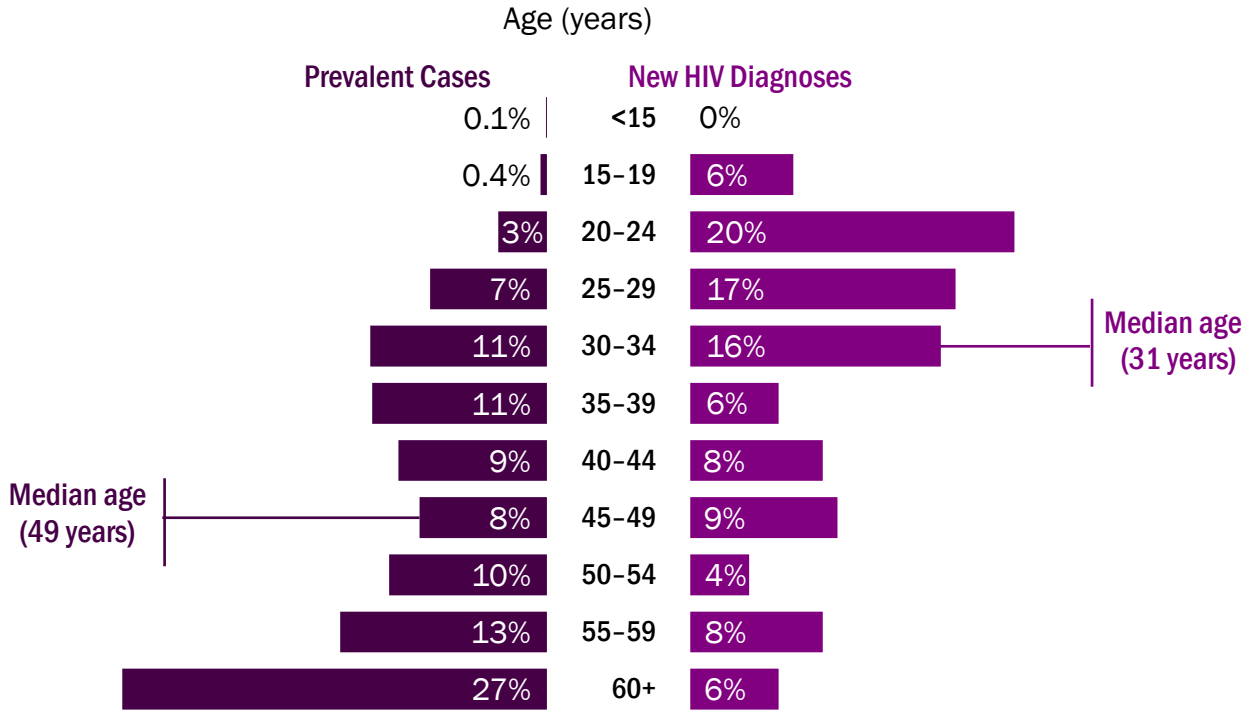
- The majority (79%) were cisgender men.
- The majority were over age 30 (89%) and half (51%) were over age 50.
- Three out of five (59%) were Black, 18% were white, and 18% were Hispanic.
- Three out of five (65%) had a transmission category of male-male sexual contact, 14% had a transmission category of male-female sexual contact, and 9% had a transmission category of injection drug use or both injection drug use and male-male sexual contact.

People living with HIV are living longer and healthier lives. This has resulted in a shift in the median age of prevalent cases compared to those being newly diagnosed (Figure 22). Services for people living with HIV need to address health conditions associated with aging in addition to HIV, while prevention efforts need to prioritize younger age groups.

FIGURE 22

The population of all people living with HIV in Milwaukee tended to be older than people newly diagnosed with HIV during 2024.

Age distribution of people currently living with HIV in Milwaukee (prevalent cases) compared to age at diagnosis for people newly diagnosed during 2024



Retention in Care

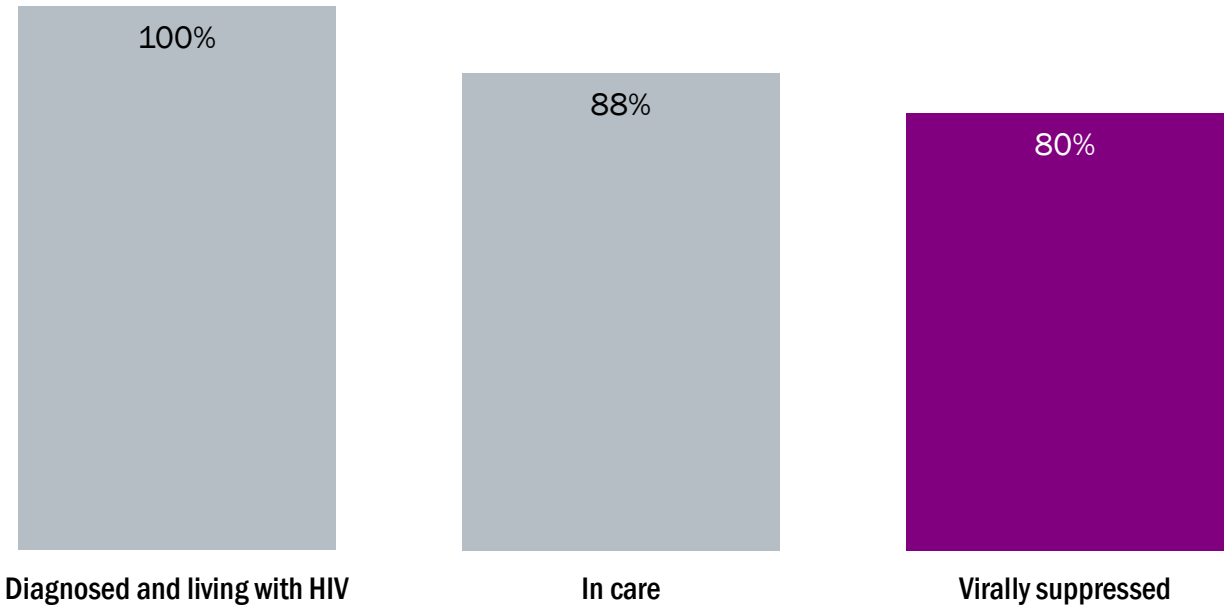
Access to HIV care and medications that reduce the amount of virus in the body benefit both the health of people living with HIV and HIV prevention efforts. People with a viral load that cannot be detected by standard laboratory diagnostic testing (that is, are virally suppressed) have a negligible risk of transmitting HIV through sexual contact.

The HIV care continuum is used at state, regional, and local levels to measure and monitor HIV engagement in care and health outcomes (Appendix-Figure A1). A portion of the care continuum specifically measures engagement in care and successful attainment of viral suppression (Figure 23).

FIGURE 23

Eight out of ten people living with HIV in Milwaukee were virally suppressed during 2024.

HIV Care Continuum* - Retention and Care Outcomes, Milwaukee, 2024



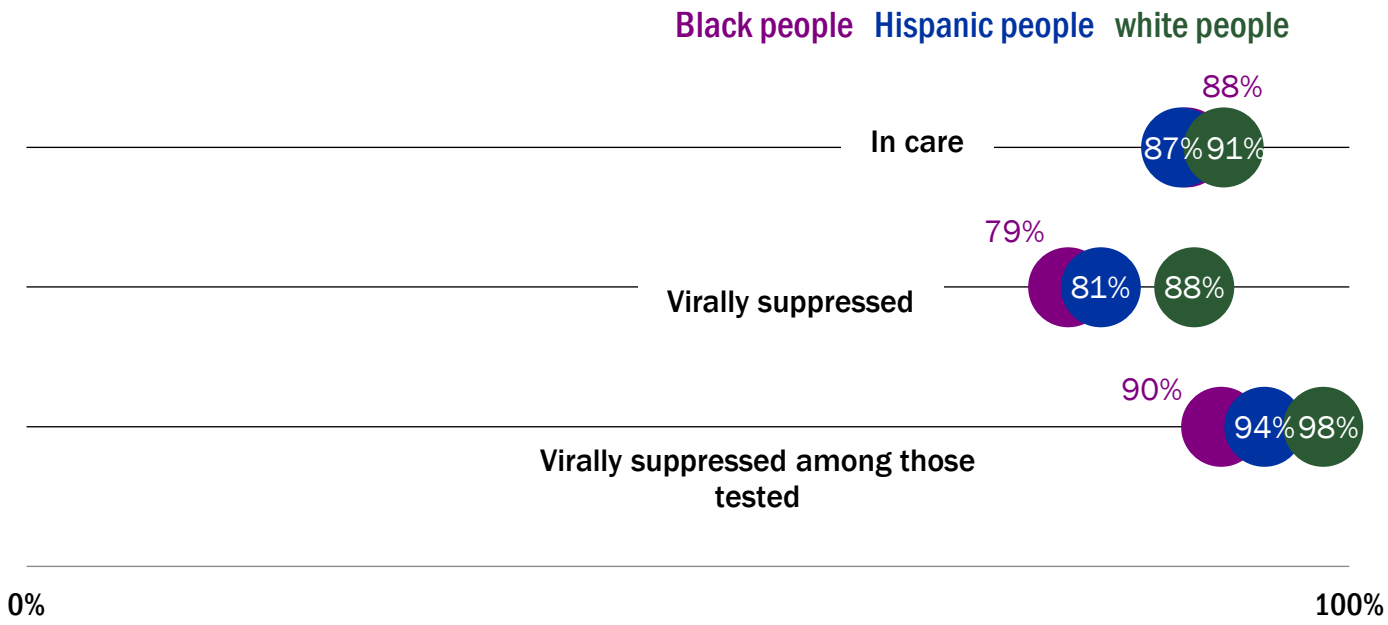
*Reflects laboratory data received through June 26, 2025

Similar to national data, there are disparities in HIV care by race and ethnicity in Milwaukee. Hispanic and Black people are less likely than white people to meet the desired outcomes across the care continuum with the exception of timely linkage to care and being in HIV medical care. Black people were also the least likely of the three racial and ethnic groups to be virally suppressed among those with a viral load test done.

FIGURE 24

With the exception of in care, white people over the age of 30 had better care continuum outcomes than Black and Hispanic people over the age of 30.

HIV Care Continuum* - Care Outcomes by age and race and ethnicity, Milwaukee, 2024



*Reflects laboratory data received through June 26, 2025

The overall trends by race and ethnicity mostly held true for adults ages 30 and older (Figure 24). White people were more likely to be in care, virally suppressed, and virally suppressed among those with a viral load test done than both Black and Hispanic people. There were no meaningful differences in care outcomes between racial and ethnic groups for younger people, ages 13–29.

Technical Notes

Background

This report was prepared by the Wisconsin HIV Program. Wisconsin statutes require health care providers and laboratories to report confirmed or suspected HIV cases. Data in this report are compiled from laboratory results and report forms completed by health care providers. Risk information is self-reported by patients.

HIV reporting in Milwaukee is estimated to reflect 99% of diagnosed people, but completeness of reporting may vary by geographic region, transmission category, and demographic group. Data reported here are based on the information available as of April 2025. Results are provisional and subject to change as additional information becomes available.

New Diagnoses

Prior to 2023, new HIV diagnoses were included in the annual report if they met all of the following criteria:

- The person was diagnosed with HIV during the year of analysis.
- The person was a resident of the city of Milwaukee at the time of diagnosis.
- Wisconsin is the earliest state of verifiable report. People who report being first diagnosed with HIV in another country, but whose diagnosis cannot be definitively documented, are included as new diagnoses. These practices conform to the CDC's guidelines for residency assignment.

Starting in 2023, new HIV diagnoses were included in the annual report if they met all of the following criteria:

- The person was diagnosed with HIV during the year of analysis.
- The person was a resident of the city of Milwaukee at the time of diagnosis.
- Wisconsin is the earliest state of verifiable report. People who report being first diagnosed with HIV in another country, but whose **year** of diagnosis cannot be definitively documented, are included as new diagnoses. These practices conform to the CDC's guidelines for residency assignment.

Prevalence

Observed Prevalence

People living with HIV are included in the observed prevalence if they meet the following criteria:

- The person was confirmed to be living with HIV.
- The person was presumed to be alive at the end of the analysis year.
- The last known address available for the person is a Milwaukee address.

Because of delays in reporting deaths to local and national databases, the number of people presumed alive should be considered provisional. Due to periodic data cleaning, prevalence may decrease as people thought to be living with HIV in Milwaukee are found to be deceased or living elsewhere.

Estimated Prevalence

The estimated prevalence is a measure that takes into account that a proportion of people who are living with HIV are not aware of their diagnosis. The calculation consists of:

- Number of people known to be living with HIV.
- Estimated proportion of people living with HIV who are unaware.

The estimated prevalence is calculated as:

$$\frac{Number\ known\ to\ be\ living\ with\ HIV}{Proportion\ unaware}$$

Rates

In this report, rates are defined as the number of cases per 100,000 people, except if noted otherwise. Population denominators used to calculate rates are from the U.S. Census. Rates published by the CDC for Wisconsin, Milwaukee, and Madison cannot be compared to those prepared by the Division of Public Health and local health departments because they may use different data sources.

Demographic Variables

Age

For new diagnoses, age refers to the age at the time of HIV diagnosis. For people living with HIV, age refers to the age on December 31 of the year of analysis.

Gender

Consistent with the Council of State and Territorial Epidemiologists' position statement on transgender HIV surveillance,[3] this report used gender identity rather than sex at birth.

Gender is determined based on information in case records. People are counted as transgender for this report if they identified as transgender on an HIV report or laboratory document, or if there was a mismatch or difference in sex assigned at birth and the sex or gender reported on any of the previously mentioned documents. Some people may be mistakenly counted as a transgender person in this report if sex or gender was incorrectly reported on any document or if data entry errors occurred.

Race and Ethnicity

Generally, the CDC uses race and ethnicity terminology aligning with the 1997 Office of Management and Budget (OMB) standards[4] on race and ethnicity. At a minimum, data on the following race categories are collected: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or other Pacific Islander, and white. For this report, Native American is used to describe people reported with a race of American Indian or Alaska Native. In addition to data on race, data on two categories of ethnicity should be collected: Hispanic or Latino and not Hispanic or Latino.

This report also presents data for people for whom multiple race categories were reported, and they are referred to as "multiracial". In this report, people categorized by race were not Hispanic or Latino. Conversely, people who identify their origin as Hispanic, Latino, or Spanish may be of any race and they are referred to as "Hispanic" in this report.

Residency

People who met the definition of newly diagnosed (see *New Diagnoses* section above) were assigned to the county of residence listed on the HIV report form when first diagnosed and reported with HIV.

People who met the prevalence definition (see *Prevalence* section above) were assigned to the county of their last known address.

Vital Status

Information about deaths was 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 was listed as the underlying cause of death on the death certificate. Deaths are described as being due to other causes if HIV was not listed as the underlying cause of death. However, HIV may have been listed as one of the 19 possible contributing causes of death.

---

[3] Council of State and Territorial Epidemiologists. Transgender HIV Surveillance. 17-ID-06. http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/2017PS/2017PSFinal/17-ID-06.pdf. Accessed May 10, 2019.

[4] Office of Management and Budget. Revisions to the standards for the classification of federal data on race and ethnicity. Federal Register 1997;62:58782-58790. https://www.govinfo.gov/content/pkg/FR-1997-10-30/pdf/97-28653.pdf. Accessed August 2022.

Transmission Category

Observed Transmission Category

Transmission category is the term that the CDC uses to summarize a person's possible HIV exposure factors; the summary category results from selecting, from a hierarchical order of probability, the single exposure factor most likely to have been responsible for transmission. For monitoring HIV burden in Wisconsin, an HIV diagnosis is counted only once in the hierarchy of transmission categories. People with more than one reported exposure factor for HIV are classified in the transmission category listed first in the hierarchy. The exception is people who have had male-male sexual contact and injected drugs; this group makes up a separate transmission category. Transmission categories are defined as follows:

- **Male-male sexual contact** includes people assigned male sex at birth, regardless of current gender identity, who have ever had sexual contact with other males and who have ever had sexual contact with both males and females (bisexual contact).
- **Injection drug use** includes people who have ever reported injecting drugs or sharing injection equipment.
- **Male-male sexual contact and injection drug use** includes people assigned male sex at birth, regardless of current gender identity, who have had sexual contact with other males and injected drugs or shared injection equipment.
- **Male-female sexual contact** includes people who have ever had male-female sexual contact with a person known to have been diagnosed as living with HIV or a potential exposure factor for HIV (for example, someone who injects drugs). This category does not include males who have ever had sexual contact with both males and females.
- **Perinatal transmission** refers to HIV transmitted from birthing parents to babies during pregnancy, childbirth, or breastfeeding/chestfeeding.
- **Other** is used to group less common transmission categories, including people with hemophilia and people who were exposed to HIV through a blood transfusion or tissue/organ transplant.
- **Unknown** includes people without an exposure factor listed in the hierarchy of transmission categories. People may have an unknown transmission category because they did not identify potential exposure modes, identified exposure factors were not part of the transmission hierarchy, died before they could be interviewed, or were lost to follow-up and could not be interviewed.

The Wisconsin HIV Program recognizes current gender identity when trying to understand HIV transmission. When this report presents the data by both transmission category and gender, additional categories are defined as follows:

- **Transgender women who have sexual contact** includes transgender women who had sexual contact with people.
- **Transgender men who have sexual contact** includes transgender men who had sexual contact with people.

Imputed Transmission Category

Some people diagnosed with HIV were reported in Milwaukee with insufficient risk information to assign a transmission category. Multiple imputation is a statistical method in which the known transmission categories of people with similar demographic characteristics are used to estimate the most plausible values for those with unknown transmission category (See Box 1).

Counts estimated by imputed transmission category are reported rounded to the nearest whole number of people but are still considered to be estimates, not counts. Imputed transmission categories may change as new information becomes available. This method conforms to the CDC's method of addressing people with unknown transmission category.

Box 1: Multiple Imputation Example

Assuming 30 women aged 45–64 were diagnosed with HIV, 18 of them had diagnoses attributed to male-female sexual contact; nine had diagnoses attributed to injection drug use; and three had unknown transmission categories. The 27 known transmission categories were applied to the three people with an unknown transmission category. Of the three persons with unknown transmission categories, two were assigned male-female sexual contact (67%) and one was assigned injection drug use (33%). To conclude, two persons with unknown transmission categories were estimated to have male-female sexual contact and one person with injection drug use.

HIV Stage at Diagnosis

Recent and Acute HIV Diagnoses

Recent HIV is defined as having been diagnosed during the six months after HIV was acquired. Recent HIV is suspected when a newly diagnosed person reports a negative test within the previous six months, or when the initial viral load test is high.

Acute HIV is defined as having been diagnosed with HIV in the two to four weeks after HIV was acquired. This time period immediately after acquiring HIV is characterized by high viral load, undetectable HIV-1 antibodies, and presence of viral nucleic acids (that is, RNA) or p24 antigen.

Late (Stage 3) HIV Diagnosis

In this report, an HIV case is any person with a laboratory-confirmed HIV diagnosis. This is all stages of HIV, including Stage 3 HIV (AIDS). People diagnosed with Stage 3 HIV include only those that met the CDC's Stage 3 HIV surveillance definition.

According to the CDC, a late diagnosis occurs among people who progressed to Stage 3 HIV within one year of receiving their initial HIV diagnosis, including those progressed to Stage 3 by the time they are first diagnosed with HIV. Stage 3 HIV typically occurs eight to 10 years after acquiring HIV in the absence of treatment and is clinically defined by a very low CD4 count or a Stage 3-defining opportunistic infection.

During 2014, the Stage 3 HIV surveillance definition changed to exclude people with a Stage 3-defining CD4 count (<200 cells/mL) if a negative HIV test in the previous six months had been documented. Instead, the low CD4 count may reflect recently acquired HIV. People may be incorrectly classified as having progressed to Stage 3 if recent negative tests are not documented. Collection of recent negative tests has improved over time.

Statistical Significance

Statements about statistical significance are sometimes made when looking at a change over time or when comparing groups. Tests of statistical significance determine whether the observed trend or difference is due to chance or is a true pattern. Linear regression on rolling three-year averages was used to assess trends over time and chi-squared analysis was used to assess differences between groups. Statements about increasing or decreasing trends or differences between groups were only made if the pattern was statistically significant.

Appendix

TABLE A1

Number of new HIV diagnoses per 100,000 people by year of diagnosis, gender, and race or ethnicity, Milwaukee, 2015–2024

	Cisgender Men			Cisgender Women		
Year	Black	White	Hispanic	Black	White	Hispanic
2015	51.7	16.2	21.2	6.3**	*	*
2016	58.7	5.8**	22.5	9.6**	*	*
2017	53.1	15.7	31.5	10.2**	*	5.3**
2018	50.8	8.9**	31.3	9.0**	*	*
2019	55.1	9.9**	25.7	13.0	*	*
2020	43.8	11.1**	20.3	11.5	*	5.3**
2021	36.1	11.1**	40.9	9.0**	*	5.3**
2022	51.3	9.5**	39.9	11.6	*	7.1**
2023	37.8	7.0**	31.1	6.3**	*	*
2024	59.9	7.0**	29.4	14.4	*	*

* Rates based on counts less than five have been suppressed.

** Rates based on counts less than 12 should be interpreted caution.

TABLE A2

Geographic distribution of new HIV diagnoses by zip code of diagnosis, Milwaukee, 2022–2024

Zip Code of Residence	Number	Percent of Cases
53218	35	11.6%
53209	31	10.2%
53204	29	9.6%
53212	23	7.6%
53215	21	6.9%
53206	18	5.9%
53210	18	5.9%
53208	17	5.6%
53216	15	5.0%
53225	13	4.3%
53233	12	4.0%
53207	11	3.6%
53205	9	3.0%
53221	7	2.3%
53223	7	2.3%
53222	6	2.0%
53224	6	2.0%
53211	5	1.7%
53202	4	1.3%
53228	4	1.3%
53220	3	1.0%
53226	3	1.0%
53214	2	0.7%
53217	1	0.3%
53219	1	0.3%
53227	1	0.3%
53295	1	0.3%
TOTAL	303	100%

TABLE A3

Comparison of new HIV reports by location of diagnosis, Milwaukee, 2024

	Diagnosis Location	
	Milwaukee	Migration into Milwaukee
	Number (%)	Number (%)
Total	108 (100%)	32 (100%)
Gender		
Cisgender Men	84 (78%)	26 (81%)
Cisgender Women	21 (19%)	5 (16%)
Transgender Women	3 (3%)	1 (3%)
Median Age (Range)	31 (18–71)	31 (21–60)
Race and Ethnicity		
Asian	3 (3%)	2 (6%)
Black	76 (70%)	13 (41%)
Hispanic	20 (19%)	14 (44%)
White	8 (7%)	3 (9%)
Multiracial	1 (1%)	0 (0%)
Transmission Category		
Male-Male Sexual Contact (MMSC)	61 (56%)	18 (56%)
Injection Drug Use (IDU)	3 (3%)	1 (3%)
MMSC and IDU	2 (2%)	2 (6%)
Male-Female Sexual Contact	10 (10%)	4 (13%)
Unknown	32 (29%)	7 (22%)

TABLE A4

Observed and estimated prevalence of people living with HIV in Milwaukee, 2024

		Milwaukee		
	United States Estimated % Unaware*	Observed Prevalence	Estimated # Unaware**	Estimated Prevalence
Total	12.8%	2,869	421	3,290
Age (years)				
13–24	43.7%	101	78	179
25–34	28.4%	530	210	740
35–44	15.7%	583	109	692
45–54	8.0%	515	45	560
55–64	4.4%	780	36	816
65+	2.3%	359	8	367
Race and Ethnicity				
White	10.8%	499	60	559
Black	12.4%	1691	239	1930
Hispanic or Latino	16.0%	542	103	645
Multiracial	11.3%	76	10	86
Asian	7.2%	53	4	57
Native American	22.7%	6	2	8
Transmission Category				
Male-Male Sexual Contact (MMSC)	14.3%	1,864	311	2175
Male-Female Sexual Contact	12.0%	625	85	710
Injection Drug Use (IDU)	8.5%	252	23	275
MMSC and IDU	8.3%	100	9	109

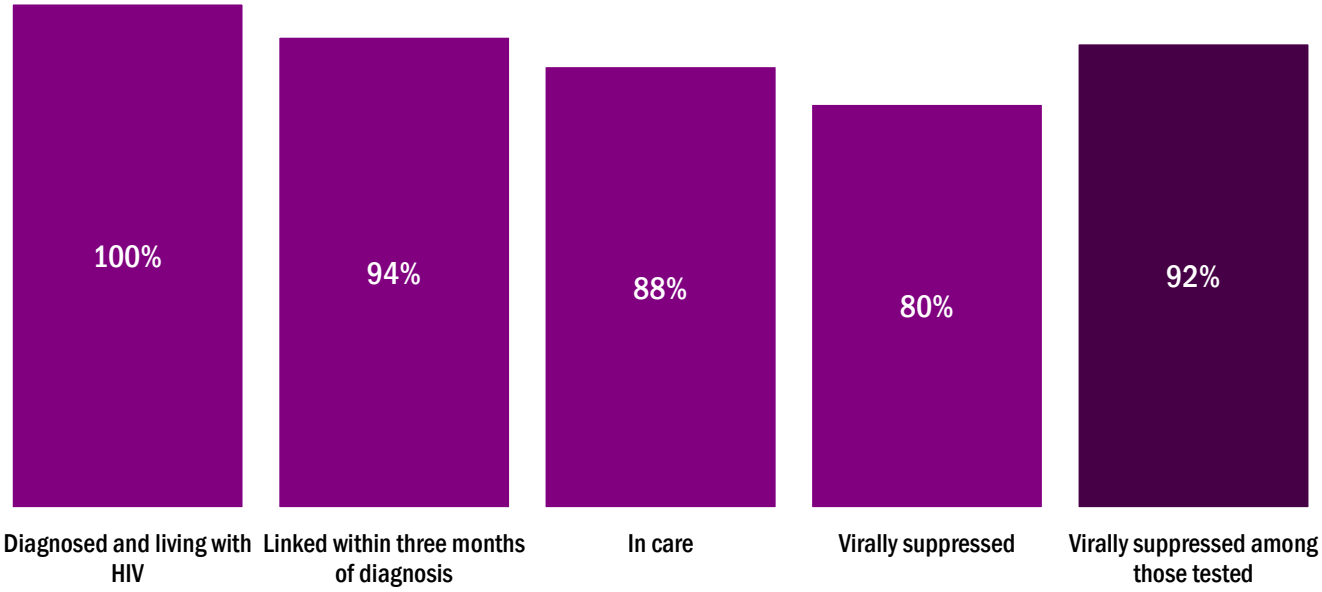
* Centers for Disease Control and Prevention. Estimated HIV incidence and prevalence in the United States, 2018–2022. *HIV Surveillance Supplemental Report*, 2024; 29 (No.3). https://stacks.cdc.gov/view/cdc/156513. Published May 2024. Accessed October 2024

** Details about calculation of estimated unaware and estimated prevalence can be found in the Technical Notes.

FIGURE A1

The majority of people living with HIV who were engaged in care were virally suppressed.

HIV Care Continuum*, Milwaukee, 2024



*Reflects laboratory data received through June 26, 2025

Values Based on Surveillance Data

Diagnosed and living with HIV: All people reported living with HIV in Milwaukee by the end of 2023 who were still alive and living in Milwaukee by the end of 2024 (2,513 people) who had been in care in Wisconsin in the last 10 years.

Linked within three months of diagnosis: Of 108 people diagnosed with HIV in Milwaukee during 2024, 94% (101 people) were linked to care within three months of diagnosis. Eight out of 10 (86/108 people or 80%) newly diagnosed people were linked to care within one month of diagnosis. Linkage is defined as one or more CD4 or quantitative viral load or genotype test on or after the date of diagnosis.

In care: Of 2,513 people diagnosed and living with HIV in Milwaukee during 2024 who had care in Wisconsin in the last 10 years, 88% had at least one medical visit that included one or more laboratory test that was available in the HIV surveillance system as evidence of receiving care.

Virally suppressed: Of 2,513 people living with HIV in Milwaukee during 2024 who had care in Wisconsin in the last 10 years, 80% had viral loads (a test that documents the number of virus copies in the blood) that were less than 200 copies/mL, indicating attainment of viral suppression. People whose last viral load test was prior to 2024 or who did not have a viral load test recorded were considered to have unsuppressed viral loads.

Virally suppressed among those tested: Of 2,190 people who had a viral load test during 2024, 92% were virally suppressed at their last measurement. This suggests that most people receiving some medical care achieved viral suppression. Viral suppression improves the health of the people living with HIV and prevents them from transmitting HIV sexually to partners.

For more information, contact:

Wisconsin HIV Program
HIV Surveillance Unit
Email: dhshivsurveillance@dhs.wisconsin.gov