

# 2024 Updates to the Integrated HIV Epidemiology Profile

Bureau of Epidemiology

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**Contributors:** The following Bureau and key partners contributed to the development and publication of the 2024 Updates to the HIV epidemiology profile in the 2022-2026 Integrated HIV prevention and care Plan (IHPCP):

- **Bureau of Epidemiology, HIV Surveillance and Epidemiology**
- **Bureau of Communicable Diseases, Division of HIV Disease**

### **Key partners**

- US Department of Health and Human Services (HHS), Health Resources and Services Administration (HRSA)
- HHS, Centers for Disease Control and Prevention (CDC)
- PADOH Bureau of Communicable Diseases, STD program
- PADOH Bureau of Epidemiology, Infectious Disease Epidemiology, Hepatitis program
- Philadelphia Department of Public Health

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The PA Department of Health, Bureau of Epidemiology, Bureau of Communicable Diseases, Division of HIV Disease, and Bureau of Health Statistics and Registries specifically disclaim responsibility for any analyses, interpretations, or conclusions made by the user of this report.

## Abbreviations

ADAP	AIDS Drug Assistance Program
AIDS	Acquired immunodeficiency syndrome
BRFSS	Behavioral Risk Factor Surveillance System
CDC	Centers for Disease Control and Prevention
eHARS	enhanced HIV/AIDS Reporting System
HIV	Human Immunodeficiency virus
HRSA	Health Resources and Services Administration
IDU	Injection drug use
IHPCP	Integrated HIV prevention and care plan
MSM	Gay, bisexual, and other men who have sex with men
OMB	Office of Management and Budget
PA-NEDSS	Pennsylvania National Electronic Disease Surveillance System
PLWH	People living with HIV
PWID	People Who Inject Drugs
RWHAP	Ryan White HIV/AIDS Programs
SPBP	Special Pharmaceuticals Benefits Program
STD	Sexually transmitted disease(s)
YRBS	Youth Risk Behavior Survey

## Executive Summary

This 2024 annual update to the epidemiologic profile provides information on newly diagnosed HIV disease, people living with HIV (PLWH), HIV diagnosed prevalence rate, mortality among people diagnosed with HIV, the HIV care continuum, and unmet estimates in Pennsylvania. The data provided in this update are based on available data resources, and we will continue to update the Integrated HIV prevention and care plan (IHPCP) annually. All analyses are reported up to the year 2023. Since the inception of the HIV epidemic through the end of the year 2023, a total of 65,599 people were diagnosed with HIV disease in the Commonwealth of PA. An estimated 42,498 PLWH are currently residing in PA. The number of PLWH increased from 40,685 at year-end 2019 to 42,498 at year-end 2023. The number of PLWH continues to increase as more people are living longer because of advances in diagnosis, medical treatment, and care. On the other hand, the number of newly diagnosed HIV disease is declining. In 2019, 988 people were newly diagnosed with HIV disease compared to 785 people in 2020 or 911 people in 2021 or 934 people in 2022 or 909 people in 2023. Data for newly diagnosed HIV disease for the years 2019 to 2023 are currently evaluated in this profile. However, the years 2020 and 2021 data should be interpreted with caution because of the impact of the COVID-19 pandemic on HIV surveillance and services.

HIV affects people of different ages, sex, race, and ethnicity. Disparities exist in who is impacted the most by the disease despite the rapidly evolving changes in the epidemic since it was first reported in the 1980s. The predominant transmission mode remains men who have sex with men (MSM) with the disproportionate impact seen in individuals aged 25 to 34 years, and the minority population, which is made up of primarily Blacks/African Americans and Hispanics/Latinos. HIV diagnosis rates were highest among Black/African American males (38.5 per 100,000 Black/African American male population) and females (13.6 per 100,000 Black/African American female population). The overall rate of newly diagnosed HIV disease in Blacks/African Americans (25.7 per 100,000 population) was approximately 11 times the rate for white individuals (2.3 per 100,000 population) and 1.4 times the rate (18.9 per 100,000) for Hispanics/Latinos. Also, individuals aged 25 to 34 years and MSM are at a higher risk of acquiring HIV. MSM comprised over half (52.8% or 480/909) and individuals aged 25 to 34 years accounted for 37.7% (343/909) of all newly diagnosed HIV disease in the year 2023.

Among the 65,599 persons ever diagnosed with HIV disease while residing in PA, the cumulative total deaths by year-end 2023 was 29,296 (44.7%). These deaths may or may not have occurred in PA. The overall crude mortality rate in 2023 among persons diagnosed with HIV disease was 4.5 per 100,000 population. However, this rate was higher among males at 6.4 per 100,000 male population compared to females at 2.5 per 100,000 female population. Also, the death rate among Blacks/African Americans diagnosed with HIV disease was 10 times that of white people.

Included in this report is a section on the HIV care continuum and unmet need estimates in PA using data reported through year-end 2023. Prior to October 31, 2020, the PA HIV reporting regulations required reporting of detectable viral load (VL) tests and CD4 results that are below 200 cells/ $\mu$ l or 14 percent only. The regulations made it less likely to receive CD4 and VL test results outside these limits. The excluded test results are necessary for

assessing HIV care continuum. On October 31, 2020, PA's disease reporting regulations were changed to mandate the reporting of all CD4 and HIV viral load laboratory results. Therefore, with this regulation change, PADOH will have the data that will inform future HIV care continuum analysis.

For the HIV care continuum, we provided information on linkage to care, receipt of care, retained in care, and viral suppression. A total of 909 individuals were newly diagnosed with HIV disease in 2023, and 84.6% (769/909) were linked to care within one month after diagnosis. In the HIV care continuum, an estimated 41,491 people were diagnosed up to the year 2022 and were alive at year-end 2023 in PA. Out of these, an estimated 65.9% were in receipt of care, 44.9% were retained in care, and 57.4% were virally suppressed. Using the 2023 data, based on the population unmet need estimates in a five-year period with known address in PA, 79.9% (28,170/35,244) of PLWH had a met need and in care and 20.1% (7,074/35,244) had an unmet need. Among those in care, 76.9% (21,654/28,170) were virally suppressed and 23.1% (6,516/28,170) of PLWH who were in care were not virally suppressed.

This assessment of the epidemiology of HIV disease in PA, as outlined in this profile, is an integral part of HIV prevention and care programs in the commonwealth as it provides information to guide prevention and care activities effectively. While health disparities have been noted, greater attention needs to be placed on addressing these disparities and social determinants of health that might influence these disparities with subsequent implementation of practical interventions and prevention strategies. Therefore, concerted joint efforts by all stakeholders are necessary to end the epidemic in PA. We hope that it will assist numerous organizations in planning HIV-related programs, resource allocation for prevention and care activities, and education for PLWH, their caregivers, lawmakers, and the public.



# Introduction

This epidemiologic overview is based on the [Integrated Guidance for Developing Epidemiologic Profiles \(cdc.gov\)](https://www.cdc.gov/eid/content/18/12/2012-2013-integrated-plan.pdf), updated March 2022, issued by the Centers for Disease Control and Prevention (CDC) and Health Resources and Services Administration (HRSA).<sup>1</sup> The first edition of the integrated plan was published in the year 2012/2013. The second edition was published in 2018, and the third iteration of the epidemiologic profile was published in 2023. However, we provide annual updates to specific sections of the integrated plan.

This update to the epidemiology profile provides an in-depth description of the HIV burden in PA. Data on the annual number of newly diagnosed HIV disease, the burden of HIV disease in terms of people living with HIV (PLWH) in PA, mortality among individuals diagnosed with HIV, the HIV care continuum, and the unmet need estimates among PLWH in PA. It also provides information required to conduct needs assessments and gap analyses. The following three (3) sections were updated:

- A. **Section 2:** Epidemiology of HIV Disease in PA
  - Subsection I. Newly Diagnosed HIV disease in PA, 2023
  - Subsection II. Five-Year Newly Diagnosed HIV Disease in PA, 2019-2023
  - Subsection III. Mortality Among Individuals Diagnosed With HIV Disease
  - Subsection IV: People Living with HIV (PLWH) and HIV Diagnosed Prevalence Rate in PA
  
- B. **Section 5:** Ryan White HIV/AIDS Program (RWHAP) Part B, HIV Diagnoses in the Counties and RWHAP Part B Subrecipients Regions
  
- C. **Section 7:** HIV care continuum and unmet need estimates in PA.

Sections 1,3,4,6 and 8 were not updated in this update.

## Methods

Data for this HIV Epidemiology overview updates were obtained from the HIV surveillance data system known as Enhanced HIV/AIDS Reporting System (eHARS) in conjunction with PA National Electronic Disease Surveillance System (PA-NEDSS), U.S. Bureau of Census, vital statistics data, and the social security death master file.

This overview covers the geography and sociodemographic characteristics of the general population and the HIV burden in the Commonwealth of PA. The HIV surveillance data analyzed for use in this overview include HIV disease diagnosed through December 31, 2023, and reported by March 31, 2024.

Selection criteria for inclusion in the Epidemiology of HIV in PA section 2, subsections I and II are as follows:

- Confirmed diagnosis of HIV disease during the year 2019 to 2023, with HIV disease including HIV disease without acquired immunodeficiency syndrome (AIDS) and AIDS;
- PA residence at the time of diagnosis;
- Meeting the CDC criteria for reporting (i.e., sex, race, residence, age, and vital status); and
- Sex classified as female or male refers to sex assigned at birth.

Selection criteria for inclusion in the Epidemiology of HIV disease in PA section 2, subsection III (mortality among individuals diagnosed with HIV disease) are as follows:

- Confirmed deaths among PLWH during the year 2019 through year-end 2023;
- Confirmed HIV diagnosis in PA;
- Meeting CDC's criteria for reporting; and
- Sex classified as female or male refers to sex assigned at birth.

Selection criteria for inclusion in the Epidemiology of HIV in PA, section 2, subsection IV (People Living with HIV(PLWH) and HIV Diagnosed Prevalence rate in PA) are as follows:

- Confirmed diagnosis of HIV disease in individuals who were alive at each year-end 2019, 2020 and 2021, 2022, and 2023;
- PA residence at the current address;
- Selection meeting CDC's criteria for reporting; and
- Sex classified as female or male refers to sex assigned at birth.

Data were analyzed and presented using SAS 9.4 and Microsoft Excel 365 Apps for enterprise. A descriptive epidemiology by year of diagnosis, sex, race/ethnicity, transmission category, age group, and county were assessed and presented in this profile. All reported numbers less than 12, with the corresponding rates, should be interpreted with caution, as these numbers have underlying relative standard errors greater than 30% and are considered unreliable. In the description by race/ethnicity, Hispanic/Latino can be of any race.

## **Note About the Impact of the COVID- 19 Pandemic on Surveillance of HIV Disease**

The COVID-19 pandemic in the United States led to disruptions in HIV testing services and access to clinical services throughout 2020 and 2021. This disruption resulted in a steep, single-year decline in new HIV diagnoses in 2020 of approximately 21% fewer diagnoses compared to 2019. In 2021, Pennsylvania (PA) witnessed approximately 8% fewer diagnoses of HIV disease compared to 2019. This decline in newly diagnosed HIV disease is thought to be attributed to declines in testing caused by less frequent visits to health centers, reduced outreach services, and shifting of public health staff to COVID-19 response activities. Given these disruptions, data for 2020 and 2021 should be interpreted with caution. Trends that include 2020 and 2021 are not discussed in the commentary sections of this report although data are presented for HIV diagnoses. COVID-19 disruptions in HIV testing and care in 2020 and 2021 also made estimation of incidence, prevalence, and knowledge of HIV diagnostic status challenging.

With the end of federal COVID-19 Public Health Emergency in May 2023, it is critical that we continue our work to expand and improve HIV prevention, care, and treatment for groups who could most benefit, including transgender persons, Black/African American women, and gay, bisexual, and other men who have sex with men. We will continue our work to improve access to prevention services for people who inject drugs, a population for whom progress continues to be threatened by the nation's opioid and stimulant epidemics. Getting back on track with prevention, surveillance and care services will require scale-up of strategies to optimize health and close gaps in HIV prevention, care, and treatment.

## **Note About Data Suppression**

Restricting the release of HIV disease data for public health use, often referred to as data suppression, refers to various approaches that data scientists, statisticians, epidemiologists, and data analysts use to limit unintended disclosure of confidential information and eliminate misuse and misinterpretation of results. Some factors are considered when suppressing data released for public health use. These include population size used as the numerator or denominator or the type of information that might inadvertently identify an individual in a small population, such as sex, gender, race, ethnicity, age, or HIV transmission mode. Suppression could be primary or secondary/complementary. In primary suppression, there is direct suppression of cells, rows, or columns with small counts of less than five. A secondary suppression will be required if primary suppression fails to protect confidentiality. The cells that will be secondarily suppressed do not need to have small data counts but will serve as an additional protection layer for cells with small counts. Cells in this report that are suppressed are identified with a dash (-).

# Findings

## Section 2: Epidemiology of HIV Disease in PA

### Subsection I. Newly Diagnosed HIV disease in PA, 2023

The numbers reported in this subsection reflect only those diagnosed during the time period year 2023. This data may not be representative of all persons with HIV because not all persons with HIV have been tested or tested at a time when the disease could be detected and diagnosed. Also, reports of confidential test results may not represent all persons who tested positive for HIV in PA.

In 2023, the total number of individuals newly diagnosed with HIV was 909. Of this total, 199 (21.9%) were females, and 710 (78.1%) were males. By race/ethnicity, 408 (44.9%) were Black/African American individuals, 241 (26.5%) were white, 218 (24%) were Hispanics/Latinos, 22 (2.4%) were Asians and Native Hawaiian or Other Pacific Islander (NHPI), and 20 (2.2%) were of multiple races

The rate of newly diagnosed HIV disease in 2023 in PA was 7 per 100,000 population. The rates of newly diagnosed HIV disease differ by sex and race. The newly diagnosed HIV disease rate for males was approximately 3.7 times the rate for females (11.1 per 100,000 compared to 3 per 100,000). Black/African American males and females had the highest rates of newly diagnosed HIV disease at 38.5 per 100,000 for the Black/African American male population and 13.6 per 100,000 for the Black/African American female population compared to other races and ethnicities. Overall, the rate of newly diagnosed HIV disease in Black/African American individuals was 25.7 per 100,000 population compared to 18.9 per 100,000 population for Hispanics/Latinos and 2.3 per 100,000 population for white individuals (Table 2).

**Table 2: The Number and Rate per 100,000 population of Newly Diagnosed HIV Disease by Sex and Race/Ethnicity in PA, 2023\***

Race/Ethnicity	Sex at birth								
	Female			Male			Total		
	No.	%	Rate	No.	%	Rate	No.	%	Rate
Asian & NHPI <sup>+</sup>	-	-	-	-	-	-	22	2.4	4
Black/African American	112	56.3	13.6	296	41.7	38.5	408	44.9	25.7
Hispanic/Latino <sup>++</sup>	35	17.6	6.2	183	25.8	31.3	218	24	18.9
Multiple race	-	-	-	-	-	-	20	2.2	6.3
White	45	22.6	0.9	196	27.6	3.8	241	26.5	2.3
<b>Total</b>	<b>199</b>	<b>100</b>	<b>3</b>	<b>710</b>	<b>100</b>	<b>11.1</b>	<b>909</b>	<b>100</b>	<b>7</b>

Data source: PA HIV surveillance

Population by sex and race retrieved from U.S. Bureau of Census for 1990, 2000, and 2010. Pennsylvania State Data Center at Penn State Harrisburg for non-census years.

<https://www.phaim1.health.pa.gov/EDD/WebForms/PopCntySt.aspx>. Accessed November 5, 2024.

\* Count may be incomplete due to lag in reporting.

+NHPI=Native Hawaiian and Other Pacific Islander.

\*\* Hispanic/Latino persons can be of any race.

-: Dash indicates cell size of ≤5.

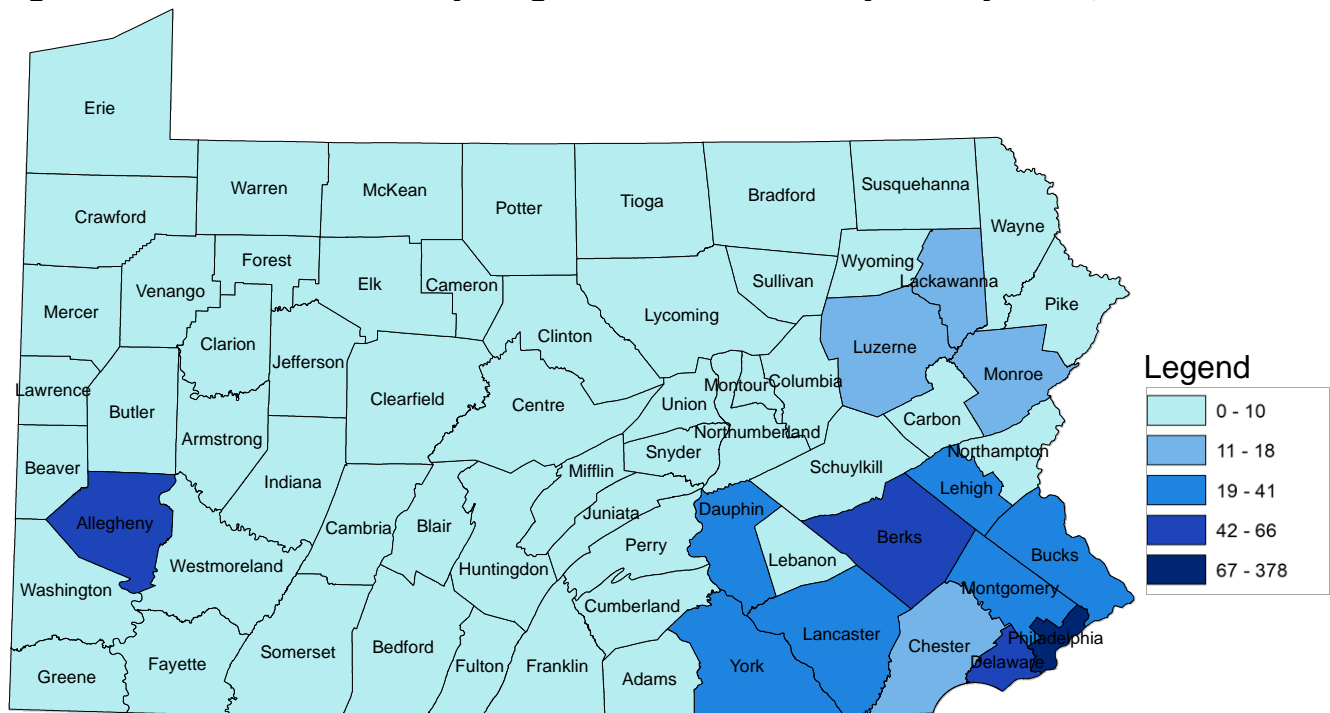
Rates are per 100,000 population.

Note: Reported numbers less than 12, as well as estimated numbers (and accompanying rates and trends) based on these numbers, should be interpreted with caution because the numbers have underlying relative standard errors greater than 30% and are considered unreliable.

### Newly Diagnosed HIV disease by County of Residence in PA

Figure 5 depicts the number of newly diagnosed HIV disease in each of the 67 counties in PA. The highest number of new diagnoses are in the counties in the southeastern region of the state and Allegheny County in the southwestern part of the state. A total of 378 (41.6%) people newly diagnosed with HIV disease were residents in Philadelphia County at the time of diagnosis. Allegheny County had 66 (7.3%) individuals with newly diagnosed HIV disease in 2023. Important epicenters were in and around urban areas with 57.6% (524/909) of people newly diagnosed with HIV disease were residents in Philadelphia County and the surrounding counties of Bucks, Chester, Delaware, and Montgomery. Figure 6 below depicts the rate of new diagnoses of HIV disease in 2023 by county of residence at diagnosis. The overall newly diagnosed HIV rate in Pennsylvania in 2023 was 7 per 100,000 population. Philadelphia, Berks, Dauphin, Delaware, Huntingdon, and Wyoming counties had rates higher than 7 per 100,000 population. The highest rate was observed in Philadelphia County at 24.4 per 100,000 population.

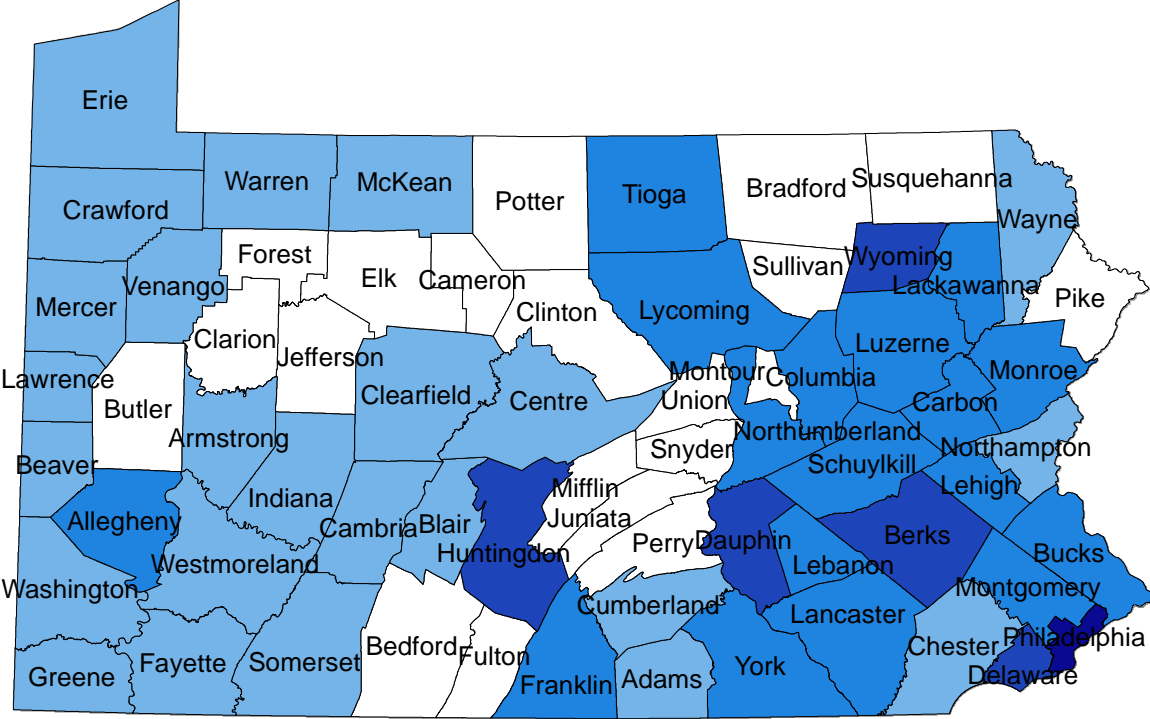
**Figure 5: The Number of Newly Diagnosed HIV Disease by County in PA, 2023\***



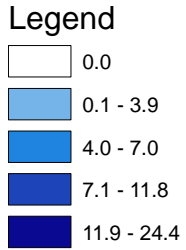
Data source: PA HIV surveillance

\* Count may be incomplete due to lag in reporting.

**Figure 6: The Rate (per 100,000 population) of Newly Diagnosed HIV Disease by County in PA, 2023\***



Data source: PA HIV surveillance  
 \* Count may be incomplete due to lag in reporting.



In 2023, the highest number and percentage of newly diagnosed HIV disease were in the 25 to 34-year-old age group. This age group accounted for 343 (37.7%) of all newly diagnosed HIV disease (Table 3) in PA but represent only 13% of the population. Among males, 39.7% of newly diagnosed HIV disease were among aged 25 to 34 years compared to 30.7% among females. Among those aged 15 to 44 years, a total of 709 newly diagnosed HIV disease were reported accounting for 78% of the total. In this age group, males accounted for 575 (81.1%) of all newly diagnosed HIV disease compared to 134 (18.9%) females (Table 3).

**Table 3: The Number of Newly Diagnosed HIV Disease by Sex and Age at Diagnosis in PA, 2023\***

Age group (years)	Sex at birth				Total	
	Female		Male			
	No.	%	No.	%	No.	%
15-24	16	8	145	20.4	161	17.7
25-34	61	30.7	282	39.7	343	37.7
35-44	57	28.6	148	20.8	205	22.6
45-54	31	15.6	78	11.0	109	12
55-64	27	13.6	42	5.9	69	7.6
≥65	7	3.5	15	2.1	22	2.4
<b>Total</b>	<b>199</b>	<b>100</b>	<b>710</b>	<b>100</b>	<b>909</b>	<b>100</b>

Data source: PA HIV surveillance

\* Count may be incomplete due to lag in reporting.

By transmission category and sex at birth, 480 (52.8%) of people newly diagnosed with HIV disease in 2023 were men who have sex with men (MSM). In addition, 160 (17.6%) persons had HIV attributed to heterosexual contact, 43 (4.7%) persons acquired HIV through injection drug use (IDU), and 17 (1.9%) through MSM&IDU contact. A total of 209 (23%) individuals newly diagnosed with HIV disease did not have any risk factor reported, or a risk factor was not identified. Among the 710 males diagnosed with HIV disease, the predominant transmission category was MSM (67.6%), followed by heterosexual contact (9.7%) and IDU (3.7%). Among the 199 females diagnosed with HIV disease, the primary transmission category was heterosexual contact (45.7%), followed by IDU (8.5%) (Table 4).

**Table 4: The Number of Newly Diagnosed HIV Disease by Sex and Transmission Category in PA, 2023\***

Transmission category	Sex at birth				Total	
	Female		Male			
	No.	%	No.	%	No.	%
Heterosexual contact	91	45.7	69	9.7	160	17.6
IDU	17	8.5	26	3.7	43	4.7
MSM	0	0	480	67.6	480	52.8
MSM&IDU	0	0	17	2.4	17	1.9
Unknown**	91	45.7	118	16.6	209	23
<b>Total</b>	<b>199</b>	<b>100</b>	<b>710</b>	<b>100</b>	<b>909</b>	<b>100</b>

Data source: PA HIV surveillance

\* Count may be incomplete due to lag in reporting.

\*\* Unknown category includes no risk factor reported, or the risk factor was not identified.

By race/ethnicity, Black/African American individuals accounted for 408 (44.9%) of all newly diagnosed HIV disease in 2023, while white individuals accounted for 241 (26.5%) and Hispanics/Latinos accounted for 218 (24%) of the disease. By transmission category, among MSM, Black/African American individuals had the highest number of diagnosed HIV disease compared to other races/ethnicities. A total of 209 (43.5%) individuals newly diagnosed HIV disease among MSM were Black/African American individuals compared to 116 (24.2%) white individuals or 126 (26.3%) Hispanics/Latinos. Likewise, Black/African American individuals accounted for 41.3% of individual newly diagnosed with HIV disease attributable to heterosexual contact compared to white individuals (26.3%) or Hispanics/Latinos at 28.1% (Table 5 & Figure 7).

**Table 5: The Number of Newly Diagnosed HIV Disease by Transmission Category and Race/Ethnicity in PA, 2023\***

Race/ethnicity	Transmission category						Total	
	Heterosexual contact	IDU	MSM	MSM& IDU	Unknown**	No.	%	
	No.	No.	No.	No.	No.	No.	%	
Asian, Multiple race & NHPI+	7	-	29	-	-	42	4.6	
Black/African American	66	6	209	2	125	408	44.9	
Hispanic/Latino++	45	-	126	-	40	218	24	
White	42	30	116	13	40	241	26.5	
<b>Total</b>	<b>160</b>	<b>43</b>	<b>480</b>	<b>17</b>	<b>209</b>	<b>909</b>	<b>100</b>	

Data source: PA HIV surveillance

\* Count may be incomplete due to lag in reporting.

\*\* Unknown category includes no risk factor reported, or the risk factor was not identified.

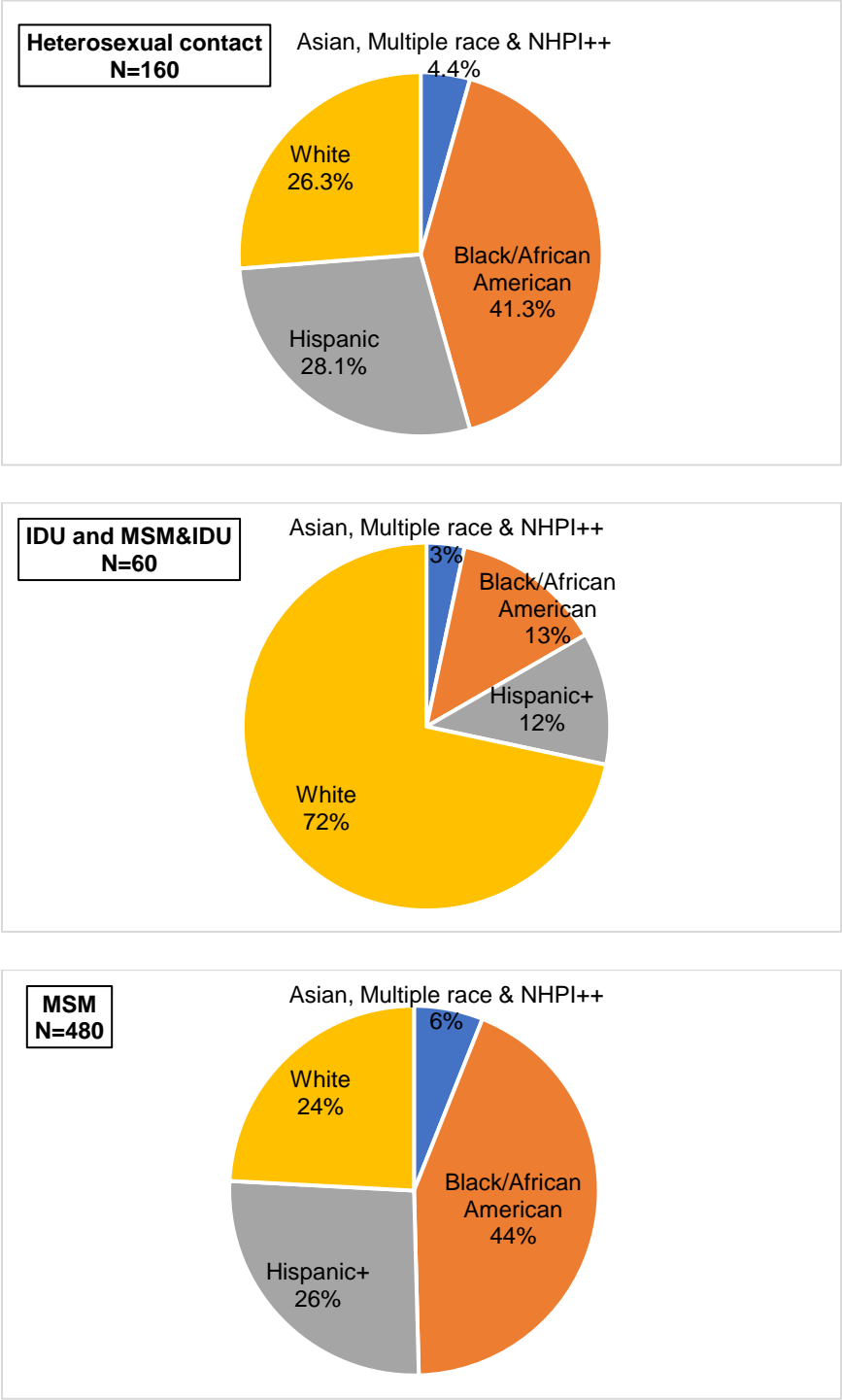
+NHPI=Native Hawaiian and Other Pacific Islander.

++ Hispanic/Latino persons can be of any race.

-: Dash indicates cell size of ≤5.



**Figure 7: The Percent of Newly Diagnosed HIV Disease by Transmission Category and Race/Ethnicity in PA, 2023\***



Data source: PA HIV surveillance  
 \* Count may be incomplete due to lag in reporting.  
 + Hispanic/Latino persons can be of any race.  
 ++NHPI=Native Hawaiian and Other Pacific Islander.

## Subsection II. Five-Year Newly Diagnosed HIV Disease in PA, 2019-2023\*

### Newly Diagnosed HIV Disease in PA, 2019-2023\*

Prior to 2019, 61,072 individuals were newly diagnosed with HIV disease. A cumulative total of 65,599 individuals have been diagnosed with HIV disease in PA by year-end 2023. From 2019 through 2023, 4,527 people were newly diagnosed, 969 (21.4%) were females, 3,499 (77.3%) were male, and 59 (1.3%) were transgender and of Additional Gender identity (AGI) (Table 6).

From 2019 to 2023, by race/ethnicity, 10 (0.2%) were American Indians/Alaska Natives (AI/AN), 67 (1.5%) were Asians, 2,070 (45.7%) were Black/African American individuals, 913 (20.2%) were Hispanics/Latinos, 159 (3.5%) were Native Hawaiians/ Other Pacific Islanders and multiple races, and 1,308 (28.9%) were white individuals. From the inception of the HIV epidemic through December 31, 2023, individuals who identified as Black/African American individuals accounted for 48.7%, 32.6% identified as white, and 14.5% identified Hispanics/Latinos (Table 7).

By age at diagnosis from 2019 to 2023, individuals aged 14 years and younger accounted for 0.1% (7/4,527) of newly diagnosed HIV disease, and 878 (19.4%) were aged 15 to 24 years. Individuals in the age group 25 to 34 years at the time of diagnosis are disproportionately impacted by the HIV epidemic accounting for more than a third (1,704/4,527 or 37.6%) of diagnosed HIV disease during this period while making up only 13% of the general population. At the time of the diagnosis, 915 (20.2%) individuals were aged 35 to 44 years, 567 (12.5%) individuals were aged 45 to 54 years, 363 (8%) individuals were aged 55 to 65 years, and 93 (2.1%) individuals were aged 65 years and older (Table 8).

By transmission category in the five-year period from 2019 to 2023, 2,381 (52.6%) HIV disease diagnosed were among men who have sex with men (MSM), 858 (19%) acquired HIV through heterosexual contact, and 346 (7.6%) acquired HIV disease through injection drug use (IDU). MSM & IDU accounted for 177 (3.9%) HIV diagnosed disease, 6 (0.1%) were of pediatric modes (transmission of HIV from mother to child during pregnancy, at birth, and postpartum through breastfeeding) and 759 (16.8%) had unknown risk. Cumulatively, MSM accounted for the highest proportion of diagnosed HIV disease at 39.4%. In the last five years, the number of diagnosed HIV disease attributable to IDU decreased from 102 in 2019 to 43 in 2023 (Table 9). The last known documentation in PA's surveillance system of HIV transmission through blood transfusion was in 2007. Historically, 524 people were diagnosed HIV disease acquired through blood transfusion from 1980-2007.

**Table 6: The Number of People Diagnosed with HIV Disease by Sex and Year of Diagnosis in PA, 2019-2023**

Sex/Gender	Year of diagnosis									
	Cumulative cases through 2018	2019	2020	2021	2022	2023*	Five-year total from the year 2019 to the year 2023		Cumulative HIV disease through Dec. 31, 2023	
	No.	No.	No.	No.	No.	No.	No.	%	No.	%
AGI+	14	-	-	-	-	-	-	-	19	0.03
Female	14,991	227	164	190	190	198	969	21.4	15,960	24.3
Male	45,611	749	607	708	728	707	3,499	77.3	49,110	74.9
Transgender	456	11	14	11	-	-	54	1.2	510	0.8
<b>Total</b>	<b>61,072</b>	<b>988</b>	<b>785</b>	<b>911</b>	<b>934</b>	<b>909</b>	<b>4,527</b>	<b>100</b>	<b>65,599</b>	<b>100</b>

Data source: PA HIV surveillance

\* Count may be incomplete due to lag in reporting.

+AGI: Additional Gender Identity.

-: Dash indicates cell size of ≤5.

**Table 7: The Number of People Diagnosed with HIV Disease by Race/Ethnicity and Year of Diagnosis in PA, 2019-2023**

Race/ethnicity	Year of diagnosis									
	Cumulative HIV disease through 2018	2019	2020	2021	2022	2023*	Five-year total from the year 2019 to the year 2023		Cumulative HIV disease through Dec. 31, 2023	
	No.	No.	No.	No.	No.	No.	No.	%	No.	%
AI/AN+	54	-	-	-	-	-	10	0.2	64	0.1
Asian	355	14	7	10	15	21	67	1.5	422	0.6
Black/African American	29,873	460	379	422	401	408	2,070	45.7	31,943	48.7
Hispanic/Latino++	8,568	192	137	171	195	218	913	20.2	9,481	14.5
Multiple race and NHPI+++	2,158	37	29	34	38	21	159	3.5	2,317	3.5
White	20,064	284	229	272	282	241	1,308	28.9	21,372	32.6
<b>Total</b>	<b>61,072</b>	<b>988</b>	<b>785</b>	<b>911</b>	<b>934</b>	<b>909</b>	<b>4,527</b>	<b>100</b>	<b>65,599</b>	<b>100</b>

Data source: PA HIV surveillance

\* Count may be incomplete due to lag in reporting.

+AI/AN=American Indian/Alaska Native.

++ Hispanic/Latino persons can be of any race.

+++NHPI=Native Hawaiian and Other Pacific Islander.

-: Dash indicates cell size of ≤5.

**Table 8: The Number of People Diagnosed with HIV Disease by Year of Diagnosis and Age at Diagnosis in PA, 2019-2023**

Age at diagnosis (years)	Year of diagnosis									
	Cumulative HIV disease through 2018	2019	2020	2021	2022	2023*	Five-year total from the year 2019 to the year 2023		Cumulative HIV disease through Dec. 31, 2023	
	No.	No.	No.	No.	No.	No.	No.	%	No.	%
≤12	729	-	-	-	-	-	-	-	734	1.1
13-14	88	-	-	-	-	-	-	-	90	0.1
15-24	8,155	217	164	184	152	161	878	19.4	9,033	13.8
25-34	19,659	366	287	349	359	343	1,704	37.6	21,363	32.6
35-44	18,562	168	137	184	221	205	915	20.2	19,477	29.7
45-54	9,741	127	111	111	109	109	567	12.5	10,308	15.7
55-64	3,250	86	69	69	70	69	363	8.0	3,613	5.5
≥65	888	23	15	12	21	22	93	2.1	981	1.5
<b>Total</b>	<b>61,072</b>	<b>988</b>	<b>785</b>	<b>911</b>	<b>934</b>	<b>909</b>	<b>4,527</b>	<b>100</b>	<b>65,599</b>	<b>100</b>

Data source: PA HIV surveillance

\* Count may be incomplete due to lag in reporting.

-: Dash indicates cell size of ≤5.

**Table 9: The Number of People Diagnosed with HIV Disease by Transmission Category and Year of Diagnosis in PA, 2019-2023**

Transmission category	Year of diagnosis									
	Cumulative HIV disease through 2018	2019	2020	2021	2022	2023*	Five-year total from the year 2019 to the year 2023		Cumulative HIV disease through Dec. 31, 2023	
	No.	No.	No.	No.	No.	No.	No.	%	No.	%
Heterosexual contact	15,093	207	135	217	139	160	858	19	15,951	24.3
IDU	15,192	102	48	67	86	43	346	7.6	15,538	23.7
MSM	23,471	528	412	479	482	480	2,381	52.6	25,852	39.4
MSM & IDU	3,040	38	43	42	37	17	177	3.9	3,217	4.9
Other**	478	-	-	-	-	-	-	-	478	0.7
Pediatric mode***	744	-	-	-	-	-	-	-	750	1.1
Unknown	3,054	113	145	104	188	209	759	16.8	3,813	5.8
<b>Total</b>	<b>61,072</b>	<b>988</b>	<b>785</b>	<b>911</b>	<b>934</b>	<b>909</b>	<b>4,527</b>	<b>100</b>	<b>65,599</b>	<b>100</b>

Data source: PA HIV surveillance

\* Count may be incomplete due to lag in reporting.

\*\* Other transmission category included unknown risk factor, risk not reported, and no risk factor identified.

\*\*\* Pediatric mode refers to perinatal exposure, pediatric no risk reported, pediatric no risk identified, and pediatric other.

-: Dash indicates cell size of ≤5.

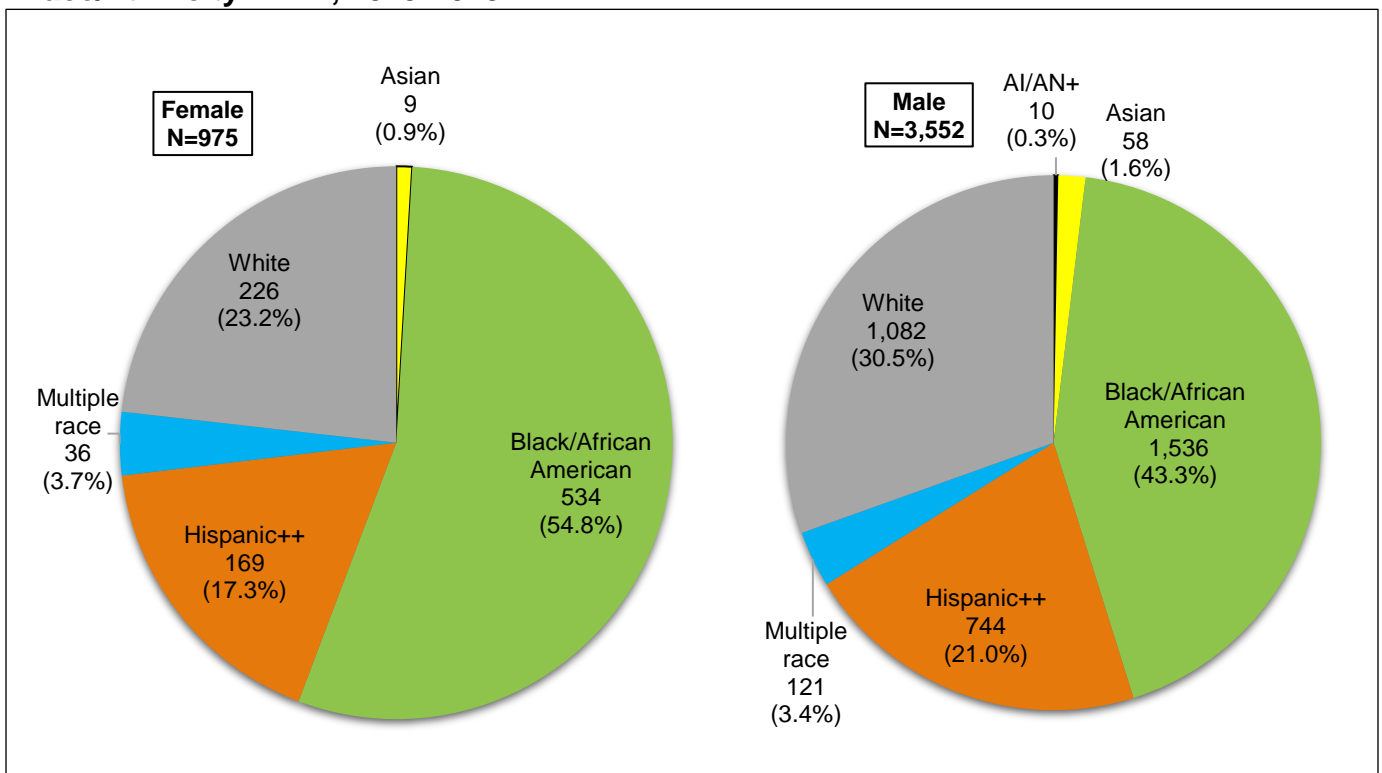
By geographic location during the five-year period from 2019 to 2023, 1,918 (42.4%) people newly diagnosed with HIV disease were residents in Philadelphia County at the time of diagnosis. Allegheny County had 383 (8.5%) individuals newly diagnosed HIV disease during this period. Important epicenters were in and around urban areas with 57.1% (2,585) of

people newly diagnosed with HIV were residents in Philadelphia and the surrounding counties of Bucks, Chester, Delaware, and Montgomery.

**Five-Year Newly Diagnosed HIV Disease by Selected Characteristics in PA, 2019-2023**

By sex and race/ethnicity, Black/African American individuals made up 45.7% (2,070/4,527) of the total number of newly diagnosed HIV disease from the year 2019 to the year-end 2023. Among 975 females diagnosed in the five years, 534 (54.8%) were Black/African American individuals, 226 (23.2%) were white individuals, 169 (17.4%) were Hispanics/Latinos, 9 (0.9%) were Asians, 36 (3.7%) were multiple races (Figure 8). Among the 3,552 males newly diagnosed in the five years, 1,536 (43.3%) were Black/African American individuals, 1,082 (30.5%) were white individuals, 744 (21%) were Hispanics/Latinos, 58 (1.6%) were Asians, 121 (3.4%) were of multiple races, and 10 (0.3%) were AI/AN (Figure 8).

**Figure 8: The Percentage of People Diagnosed with HIV Disease by Sex and Race/Ethnicity in PA, 2019-2023**



Data source: PA HIV surveillance

+AI/AN=American Indian/Alaska Native.

++Hispanic/Latino persons can be of any race.

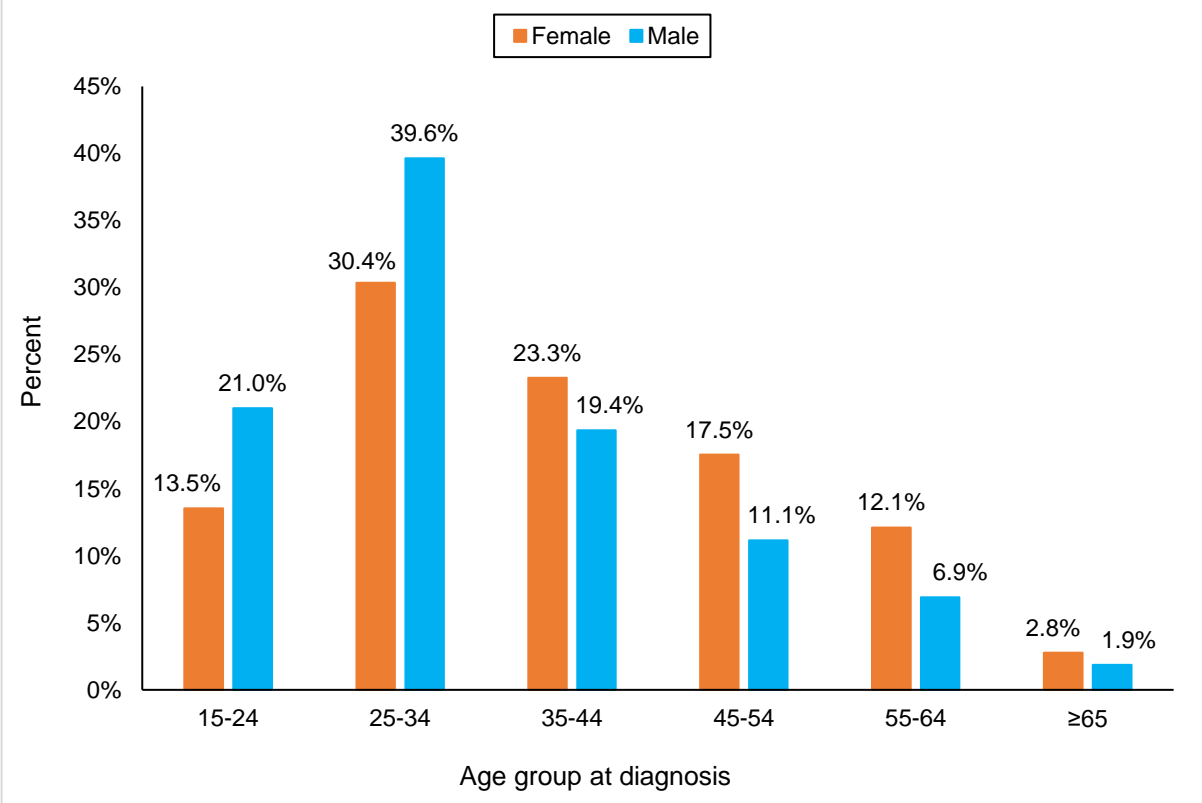
Note: For female Native Hawaiian and Other Pacific Islander and AI/AN, the count was less than 5.

Year 2023 count may be incomplete due to lag in reporting.

By sex and age group at diagnoses, there were 3,552 newly diagnosed HIV disease among males and 975 newly diagnosed HIV disease among females of all age groups between 2019 and 2023. Among males, individuals aged 25 to 34 years accounted for the highest number of newly diagnosed HIV disease, with 1,408 (39.6%) people newly diagnosed with HIV disease. The highest number of newly diagnosed HIV disease among females was 296 (30.4%) in the age group 25 to 34 years. A more significant proportion (60.7%) of males were

under aged 35 years, and a greater proportion (55.7%) of females were aged 35 years and older at the time of diagnosis. This data, along with other data presented in this overview, speaks to the importance of having tailored interventions that address the population on different levels based on age, sex, and race/ethnicity (Figure 9).

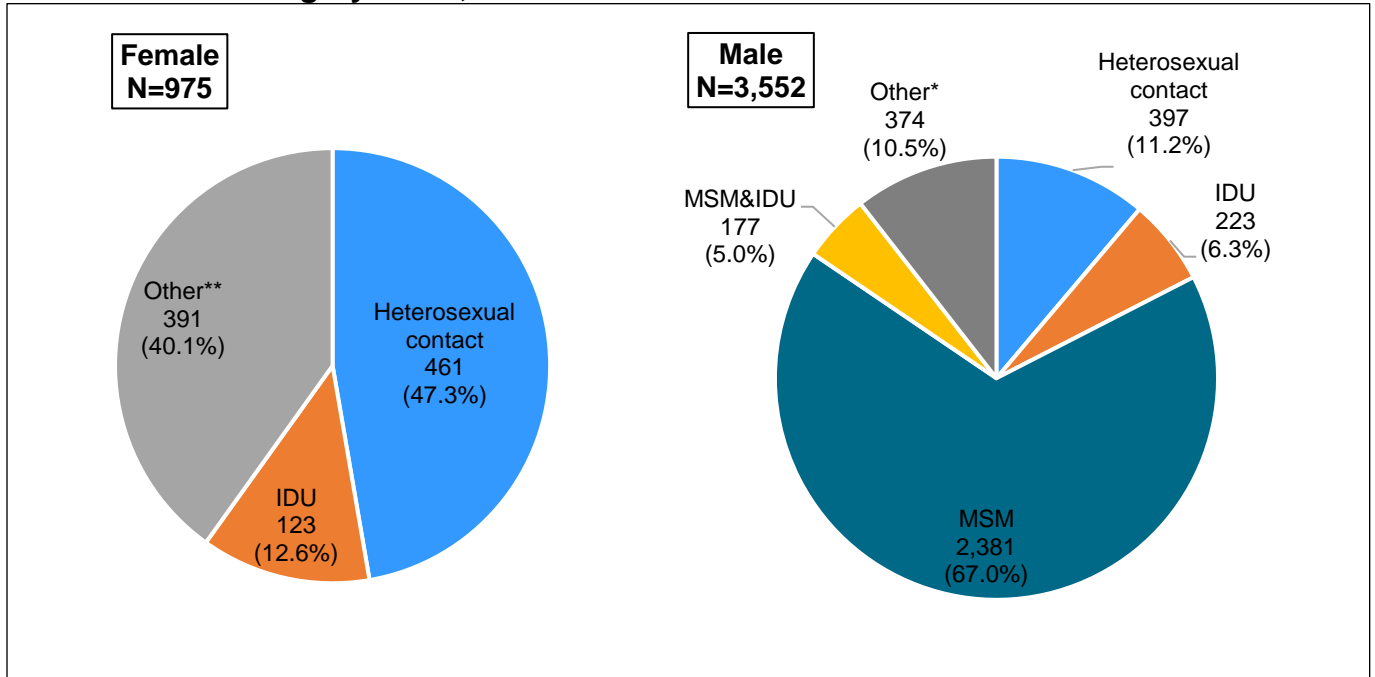
**Figure 9: The Percentage of People Diagnosed with HIV Disease by Sex and Age Group in PA, 2019-2023**



Data source: PA HIV surveillance  
 Note: Year 2023 count may be incomplete due to lag in reporting.

By sex and mode of transmission, females with heterosexual contact accounted for 47.3% (461/975) and IDU accounted for 12.6% (123/975) of all newly diagnosed HIV disease from the year 2019 to the year 2023. Among males, MSM is the predominant transmission mode accounting for 67% (2,381/3,552) of all newly diagnosed HIV disease compared to 11.2% (397/3,552) heterosexual contact or 6.3% (223/3,552) IDU or 5% (177/3,552) MSM&IDU from the year 2019 to the year 2023 (Figure 10).

**Figure 10: The Percentage of People Diagnosed with HIV Disease by Sex and Transmission Category in PA, 2019-2023**



Data source: PA HIV surveillance

\*Other includes pediatric mode and unknown transmission mode.

Note: Year 2023 count may be incomplete due to lag in reporting.

**Table 10: The Number of Newly Diagnosed HIV Disease by Race/Ethnicity and Age at Diagnosis in PA, 2019-2023**

Age group at diagnosis (years)	Race/Ethnicity							Total	
	AI/AN+	Asian	Black/African American	Hispanic/Latino++	Multiple races & NHPI+++	White	No.	%	
	No.	No.	No.	No.	No.	No.	No.	%	
≤12	-	-	-	-	-	-	-	-	
13-14	-	-	-	-	-	-	-	-	
15-24	-	-	509	202	40	123	878	19.4	
25-34	-	27	774	346	63	489	1,704	37.6	
35-44	-	17	345	188	31	330	915	20.2	
45-54	-	13	226	131	11	185	567	12.5	
55-64	-	-	167	35	13	143	363	8	
≥65	-	-	45	8	-	38	93	2.1	
<b>Total</b>	<b>10</b>	<b>67</b>	<b>2,070</b>	<b>913</b>	<b>159</b>	<b>1,308</b>	<b>4,527</b>	<b>100</b>	

Data source: PA HIV surveillance

+AI/AN=American Indian/Alaska Native.

\*\* Hispanic/Latino persons can be of any race.

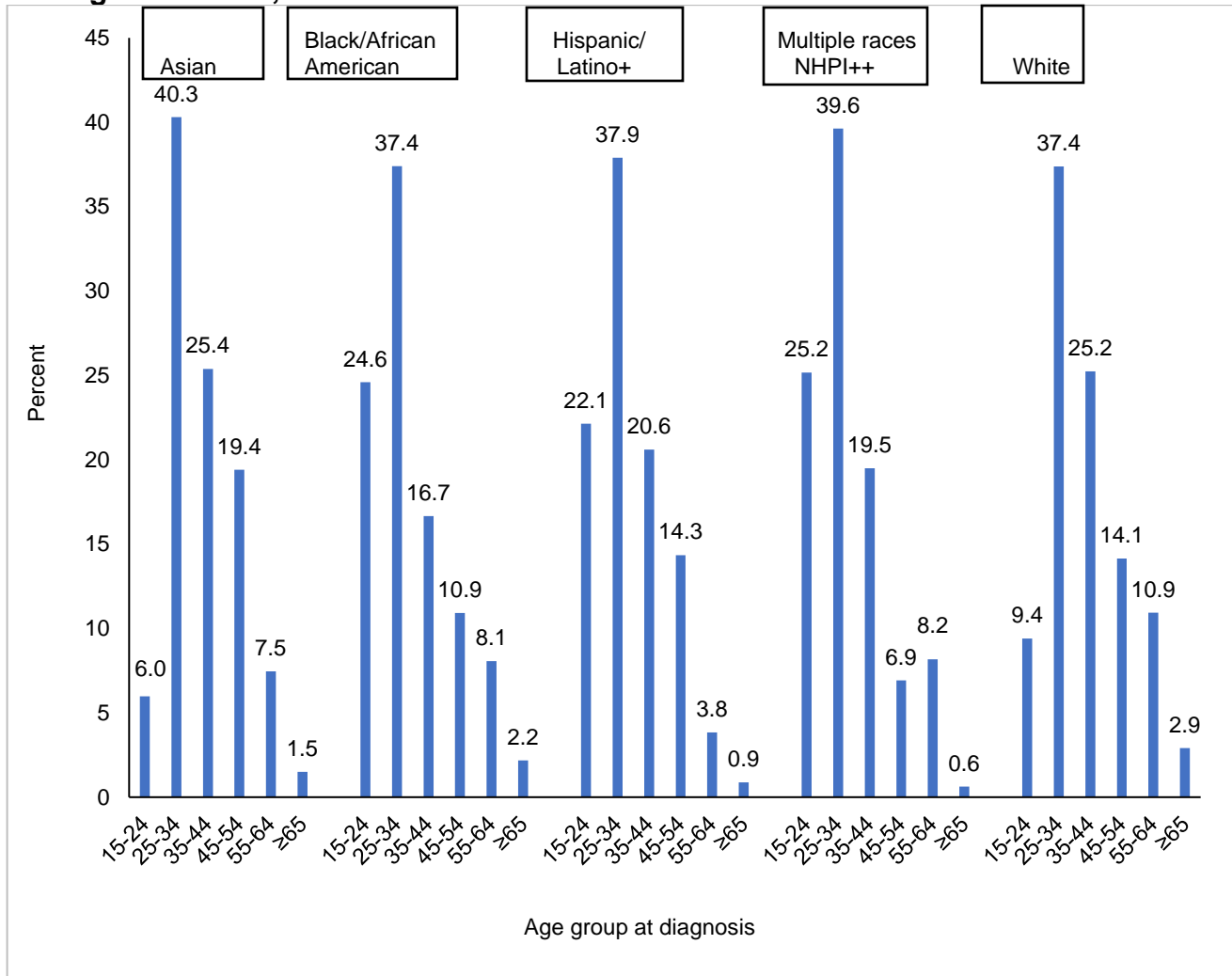
+++NHPI=Native Hawaiian and Other Pacific Islander.

-: Dash indicates cell size of ≤5 .

Note: Year 2023 count may be incomplete due to lag in reporting.

By race/ethnicity and age, out of the 4,527 individuals newly diagnosed with HIV disease from the year 2019 to the year 2023, Black/African American individuals accounted for 45.7% (2,070/4,527), and individuals in the age group 25 to 34 years accounted for 37.6% (1,704/4,527) newly diagnosed HIV disease during this period. Within each race/ethnicity, the age group that has been disproportionately impacted is the age group 25 to 34 years (Table 10 and Figure 11).

**Figure 11: The Percentage of Newly Diagnosed HIV Disease by Race/Ethnicity and Age at Diagnosis in PA, 2019-2023**



Data source: PA HIV surveillance

+ Hispanic/Latino persons can be of any race.

\*\*NHPI=Native Hawaiian and Other Pacific Islander.

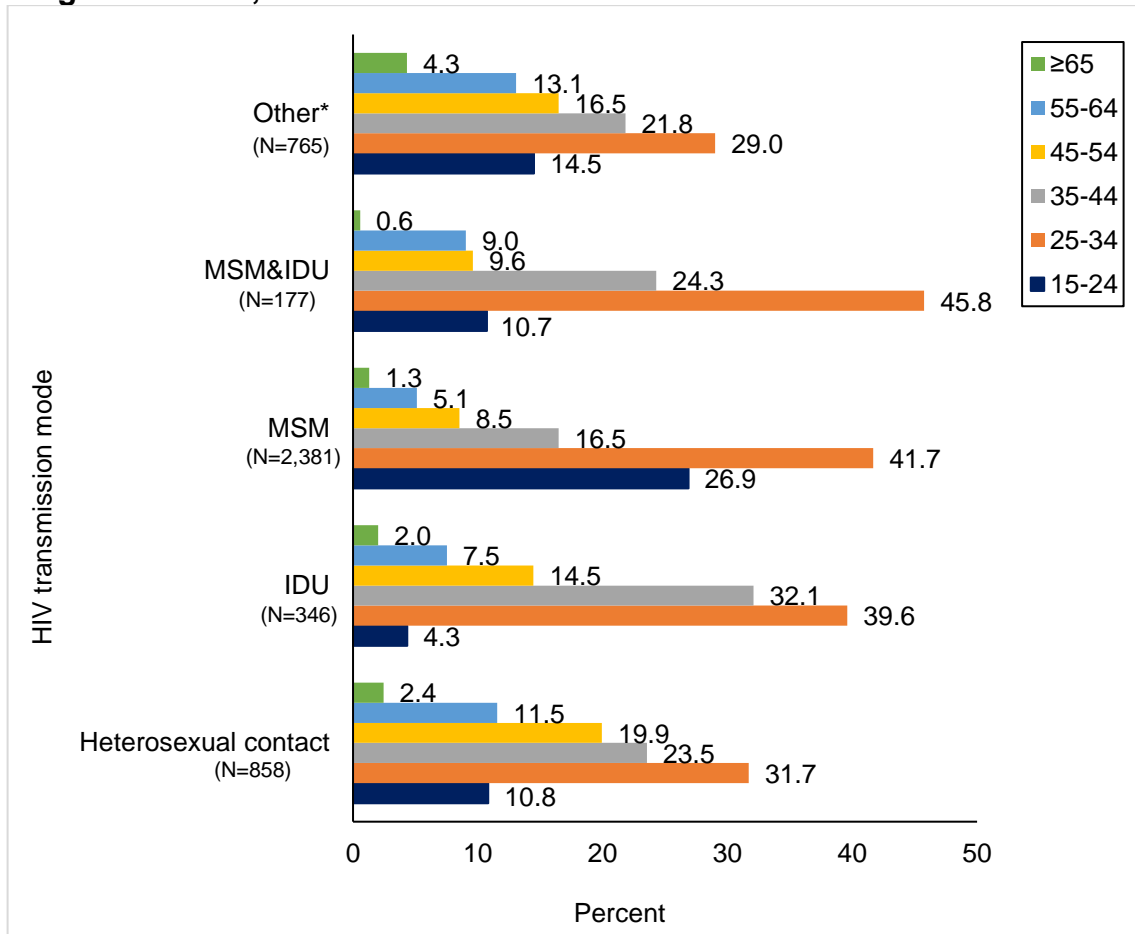
Note: Year 2023 count may be incomplete due to lag in reporting.

By age and mode of transmission, individuals aged 25 to 34 years accounted for the highest proportion of individuals newly diagnosed with HIV disease in all transmission categories. Among MSM, individuals aged 25 to 34 years accounted for 41.7% of newly diagnosed HIV disease compared to 26.9% among aged 15 to 24 years, 16.5% for individuals aged 35 to 44



years. Among individuals with IDU transmission, individuals aged 25 to 34 years and 35 to 44 years accounted for 39.6% and 32.1% of newly diagnosed HIV disease, respectively. Among heterosexual contact transmission, individuals aged 25 to 34 years and 35 to 44 years had the highest proportion of newly diagnosed HIV disease at 31.7% and 23.5%, respectively (Figure 12).

**Figure 12: Newly Diagnosed HIV Disease by Transmission Category and Age at Diagnosis in PA, 2019-2023**



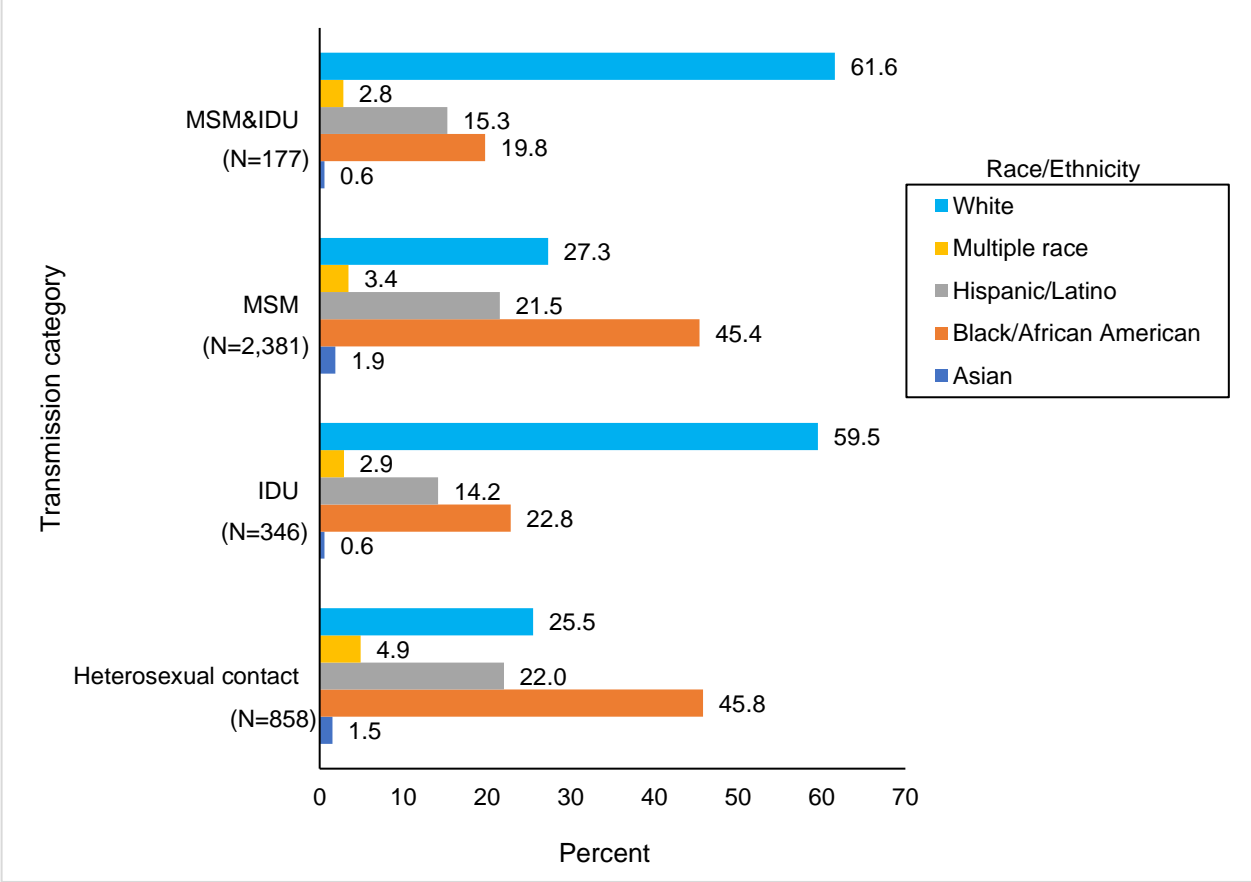
Data source: PA HIV surveillance

\*Other includes pediatric mode and unknown transmission mode

Note: Year 2023 count may be incomplete due to lag in reporting.

Among heterosexual contact and MSM of all newly diagnosed HIV disease, Black/African American individuals were disproportionately impacted, accounting for 45.8% and 45.4%, respectively. Also, among IDU and MSM&IDU transmission categories, individuals who identified as white were disproportionately impacted, accounting for 59.5% and 61.6%, respectively (Figure 13).

**Figure 13: Newly Diagnosed HIV Disease by Transmission Category and Race/Ethnicity at Diagnosis in PA, 2019-2023**



Data source: PA HIV surveillance

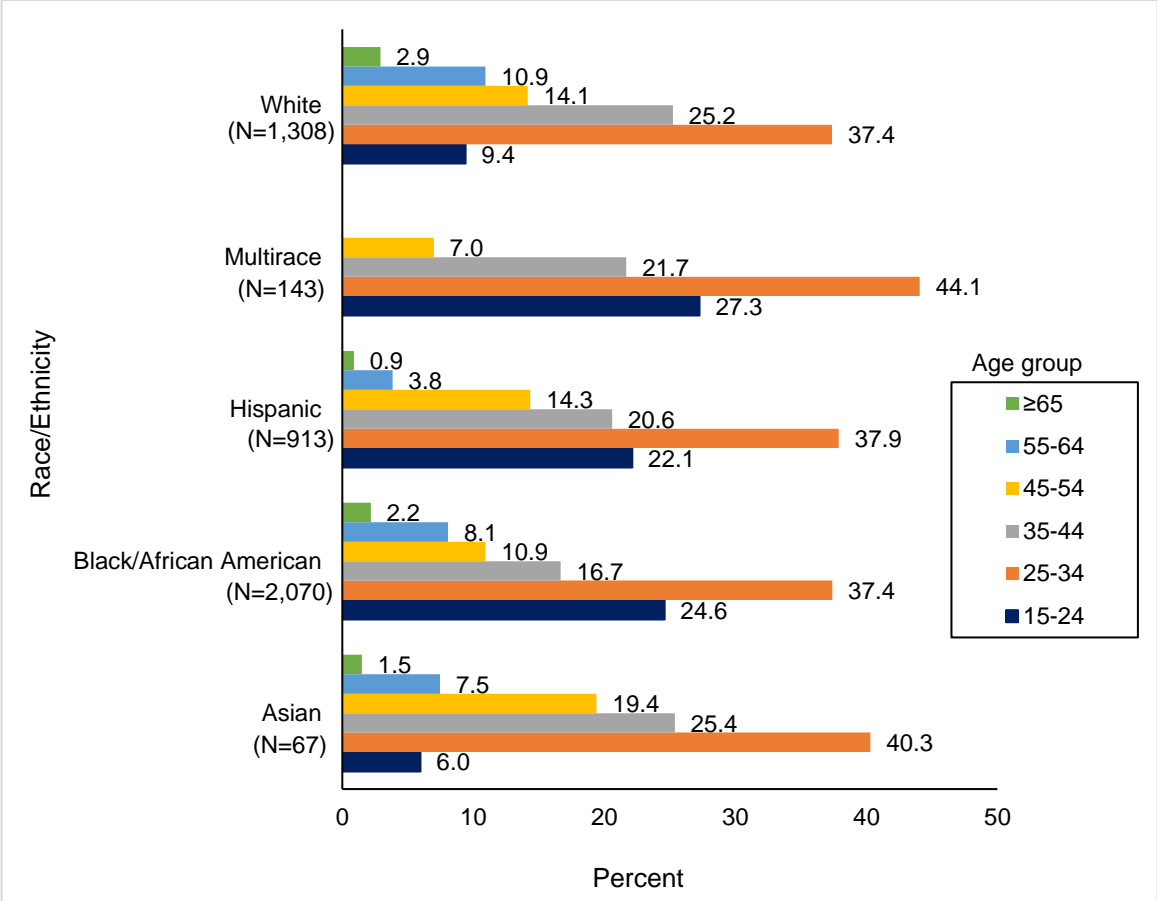
Note: Year 2023 count may be incomplete due to lag in reporting.

Hispanic/Latino persons can be of any race.

Data on race classifications American Indian/Alaska Native and Native Hawaiian and Other Pacific Islander data are not presented because of small numbers.

By race/ethnicity, the age group 25 to 34 years at diagnosis is disproportionately impacted during this five-year period (Figure 14).

**Figure 14: Newly Diagnosed HIV Disease by Age Group and Race/Ethnicity at Diagnosis in PA, 2019-2023**



Data source: PA HIV surveillance  
 Note: Year 2023 count may be incomplete due to lag in reporting.  
 Hispanic/Latino persons can be of any race.  
 Data on race classifications American Indian/Alaska Native and Native Hawaiian and Other Pacific Islander data are not presented because of small numbers.

### Subsection III. Mortality Among Individuals Diagnosed With HIV Disease

#### Mortality Among People Newly Diagnosed With HIV Disease in PA, 2023\*

Death data from the Social Security Administration Death Master File and the PA vital statistics were matched with HIV surveillance data using selected criteria to determine the number of people diagnosed with HIV disease not previously reported to be dead. Among recorded deaths in the Social Security Administration Death Master File, PA vital statistics database, and HIV surveillance data 577 people were identified as not alive at year end 2023; however, the cause of death was not cause-specific, which indicates the death may or may not be associated HIV disease. By sex, females accounted for 28.6% (165/577) of the deaths while males accounted for 71.4% (412/577). By race/ethnicity, 49.2% of the deaths were among Black/African American individuals, 32.8% were white individuals, 13% were Hispanics/Latinos, and 5% were of multiple races. By mode of transmission of HIV disease, 31.2% of deaths (180/577) were among individuals who acquired HIV through heterosexual contact, 26.5% (153/577) were among those who acquired HIV through IDU, 28.1% (162/577) were among MSM, 5.5% (32/577) were MSM&IDU, and 8.7% (50/577) had other HIV disease transmission mode. By age at death, 6.6% (38/577) were in the age group 15 to 34. A total of 42 (7.3%) individuals were in the age group 35 to 44 compared to 17.3% (100/577) among 45 to 54. Most deaths occurred among individuals aged 55 years and above, accounting for 68.8% (397/577) of the deaths. Those individuals in age group 55 to 64 years accounted for 31.5% (182/577) of the deaths, and those individuals aged 65 years and above accounted for 37.3% (215/577) of the deaths (Table 11).

**Table 11: The Number of Death Among Persons with a Diagnosis of HIV Disease by Selected Characteristics in PA, 2023\***

Selected characteristics	Number	Percent
<b>Total</b>	<b>577</b>	
<b>Sex at birth</b>		
Female	165	28.6
Male	412	71.4
<b>Race/ethnicity</b>		
Black/African American	284	49.2
Hispanic	75	13.0
Multiple race	29	5.0
White	189	32.8
<b>Transmission category</b>		
Heterosexual contact	180	31.2
Injection drug use (IDU)	153	26.5
Men who have sex with men (MSM)	162	28.1
MSM&IDU	32	5.5
Other**	50	8.7
<b>Age at death</b>		
15-34	38	6.6
35-44	42	7.3
45-54	100	17.3
55-64	182	31.5
≥65	215	37.3

Data source: PA HIV surveillance

\* Count may be incomplete due to lag in reporting.

\*\* Other transmission category includes unknown risk, pediatric mode, and other transmission mode.

The overall crude mortality rate in 2023 among persons diagnosed with HIV disease was 4.5 per 100,000 population. This rate was higher among males at 6.4 per 100,000 male population compared to females at 2.5 per 100,000 female population. By race, Black/African American individuals had the highest death rate of 17.9 per 100,000 population compared to 1.8 per 100,000 for white individuals or 6.5 per 100,000 population for Hispanics/Latinos. Overall, the death rate among Black/African American individuals diagnosed with HIV disease was 10 times that of white individuals. By race and sex, Black/African American males diagnosed with HIV disease had the highest death rate of 24.7 per 100,000 male population compared to 2.9 per 100,000 for white males and 9.1 per 100,000 for Hispanic males. Also, Black/African American females had the highest death rate of 11.5 per 100,000 female population compared to 0.8 per 100,000 white females and 3.9 per 100,000 Hispanic females (Table 12). The reasons for this disparity are unknown. However, lack of access to care, stigma, self-denial, and other social factors might be contributing to poorer health outcomes among Black/African American individuals living with HIV compared to other races/ethnicities.

**Table 12: The Number and Rate of Death Among Persons with a Diagnosis of HIV Disease by Sex and Race/Ethnicity in PA, 2023\***

Race/ethnicity	Sex at birth								
	Female			Male			Total		
	No.	%	Rate	No.	%	Rate	No.	%	Rate
Black/African American	94	57	11.5	190	46.1	24.7	284	49.2	17.9
Hispanic/Latino+	22	13.3	3.9	53	12.9	9.1	75	13	6.5
Multiple races	9	5.5	5.6	20	4.9	12.8	29	5	9.2
White	40	24.2	0.8	149	36.2	2.9	189	32.8	1.8
<b>Total</b>	<b>165</b>	<b>100</b>	<b>2.5</b>	<b>412</b>	<b>100</b>	<b>6.4</b>	<b>577</b>	<b>100</b>	<b>4.5</b>

Data source: PA HIV surveillance

\* Count may be incomplete due to lag in reporting.

+ Hispanic/Latino persons can be of any race.

Rates are per 100,000 population.

### Five-year Mortality Data Among People Diagnosed With HIV Disease in PA, 2019-2023

Among the 65,599 persons (15,979 females and 49,620 males) ever diagnosed with HIV disease while residing in PA, the cumulative total deaths by year-end 2023 was 29,296 (44.7%). These deaths may or may not have occurred in PA. By sex, out of the 15,979 females diagnosed in PA, at year-end 2023, a total of 6,245 (39.1%) deaths were reported. Among the 49,620 males diagnosed at year-end 2023, a total of 23,051 (46.5%) deaths have occurred. A total of 3,157 deaths were reported between 2019 and year-end 2023, with females accounting for 849 (26.9%) deaths and males accounting for 2,308 (73.1%) deaths. During these five years, the highest number of deaths occurred in 2021 (Table 13).

**Table 13: The Number of Deaths Among Persons with a Diagnosis of HIV Disease by Year of Death and Sex in PA, 2019-2023**

Sex at birth	Year of death									
	Cumulative deaths through 2018	2019	2020	2021	2022	2023*	Cumulative deaths from 2019-2023		Cumulative deaths through Dec. 31, 2023 (total)	
	No.	No.	No.	No.	No.	No.	No.	%	No.	%
Female	5,396	146	172	182	184	165	849	26.9	6,245	21.3
Male	20,743	411	476	524	485	412	2,308	73.1	23,051	78.7
<b>Total</b>	<b>26,139</b>	<b>557</b>	<b>648</b>	<b>706</b>	<b>669</b>	<b>577</b>	<b>3,157</b>	<b>100</b>	<b>29,296</b>	<b>100</b>

Data source: PA HIV surveillance

\* Count may be incomplete due to lag in reporting.

Black/African American individuals had disproportionately high mortality compared to other races/ethnicities. Black/African American individuals accounted for 50.1% (1,581/3,157) of all reported deaths among people diagnosed with HIV disease from 2019 through 2023. Mortality among white individuals and Hispanics/Latinos for the five-year period was 1,003 (31.8%) and 399 (12.6%), respectively (Table 14).

**Table 14: The Number of Deaths Among Persons with a Diagnosis of HIV Disease by Year of Death and Race/Ethnicity in PA, 2019-2023**

Race/ethnicity	Year of death									
	Cumulative deaths through 2018	2019	2020	2021	2022	2023*	Cumulative deaths from 2019-2023		Cumulative deaths through Dec. 31, 2023 (total)	
	No.	No.	No.	No.	No.	No.	No.	%	No.	%
AI/AN+, Asian & NHPI++	85	-	-	-	-	-	13	0.4	98	0.3
Black/African American	13,021	282	328	350	337	284	1,581	50.1	14,602	49.8
Hispanic/Latino+++	2,841	64	86	89	85	75	399	12.6	3,240	11.1
Multiple races	482	31	31	31	39	29	161	5.1	643	2.2
White	9,710	175	201	234	204	189	1,003	31.8	10,713	36.6
<b>Total</b>	<b>26,139</b>	<b>557</b>	<b>648</b>	<b>706</b>	<b>669</b>	<b>577</b>	<b>3,157</b>	<b>100</b>	<b>29,296</b>	<b>100</b>

Data source: PA HIV surveillance

\* Count may be incomplete due to lag in reporting.

+AI/AN=American Indian/Alaska Native.

\*\*NHPI=Native Hawaiian and Other Pacific Islander.

+++ Hispanic/Latino persons can be of any race.

-: Dash indicates cell size of ≤5.

Individuals aged 35 to 44 years at the time of death contributed the most (29.7%) to cumulative mortality reported at year-end 2023. However, in the five-year period from the year 2019 through the year 2023, PLWH, aged 55 to 64 years accounted for the highest number (1,074/3,157 or 34%) of deaths among individuals diagnosed with HIV (Table 15).

**Table 15: The Number of Deaths Among Persons with a Diagnosis of HIV Disease by Year of Death and Age at Death in PA, 2019-2023**

Age (years)	Year of death									
	Cumulative deaths through 2018	2019	2020	2021	2022	2023*	Cumulative deaths from 2019-2023		Cumulative deaths through Dec. 31, 2023 (total)	
	No.	No.	No.	No.	No.	No.	No.	%	No.	%
≤12	150	-	-	-	-	-	-	-	151	0.5
13-14	11	-	-	-	-	-	-	-	11	0.04
15-24	398	-	6	-	-	-	20	0.6	418	1.4
25-34	4,775	27	33	44	44	35	183	5.8	4,958	16.9
35-44	8,384	60	75	55	80	42	312	9.9	8,696	29.7
45-54	7,011	128	118	137	100	100	583	18.5	7,594	25.9
55-64	3,801	196	234	230	232	182	1,074	34	4,875	16.6
≥65	1,609	142	181	236	210	215	984	31.2	2,593	8.9
<b>Total</b>	<b>26,139</b>	<b>557</b>	<b>648</b>	<b>706</b>	<b>669</b>	<b>577</b>	<b>3,157</b>	<b>100</b>	<b>29,296</b>	<b>100</b>

Data source: PA HIV surveillance

\* Count may be incomplete due to lag in reporting.

-: Dash indicates cell size of ≤5.

Cumulative mortality among individuals diagnosed through year-end 2023 who were MSM accounted for 10,582 (36.1%) of all mortality. This was followed closely by 9,856 (33.6%) among PWID and 5,340 (18.2%) heterosexual contact. A total of 3,157 deaths were reported between the years 2019 and 2023. During this period, the total number of deaths associated with IDU was 903 (28.6%), compared to 913 (28.9%) among MSM and 949 (30.1%) among those who acquired HIV disease through heterosexual contact during these five years (Table 16).

**Table 16: The Number of Deaths Among Persons with a Diagnosis of HIV Disease by Transmission Category and Year of Death in PA, 2019-2023**

Transmission category	Year of death									
	Cumulative deaths through 2018	2019	2020	2021	2022	2023*	Cumulative deaths from 2019-2023		Cumulative deaths through Dec. 31, 2023 (total)	
	No.	No.	No.	No.	No.	No.	No.	%	No.	%
Heterosexual contact	4,392	170	177	219	203	180	949	30.1	5,341	18.2
IIDU	8,953	180	192	192	186	153	903	28.6	9,856	33.6
MSM	9,669	150	198	201	202	162	913	28.9	10,582	36.1
MSM&IDU	1,593	27	41	48	43	32	191	6.1	1,784	6.1
Other**	395	-	-	-	-	-	7	0.2	402	1.4
Pediatric mode***	204	-	-	-	-	-	12	0.4	216	0.7
Unknown	933	27	35	42	31	47	182	5.8	1,115	3.8
<b>Total</b>	<b>26,139</b>	<b>557</b>	<b>648</b>	<b>706</b>	<b>669</b>	<b>577</b>	<b>3,157</b>	<b>100</b>	<b>29,296</b>	<b>100</b>

Data source: PA HIV surveillance

\* Count may be incomplete due to lag in reporting.

\*\* Other transmission category included unknown risk factor, risk not reported, no risk factor identified, and blood transfusion.

\*\*\* Pediatric mode refers to perinatal exposure, pediatric no risk reported, pediatric no risk identified, and pediatric other.

-: Dash indicates cell size of ≤5.

## Subsection IV: People Living with HIV (PLWH) and HIV Diagnosed Prevalence Rate in PA

This section of the profile describes the number of people diagnosed with HIV and alive each year-end. It includes all people who are residents of PA at each year-end regardless of the place of HIV diagnosis. These estimates for PLWH in the Commonwealth of PA are based on the last known address reported in the HIV surveillance system. This estimate provides the most accurate count of PLWH in PA as it accounts for the immigration in and emigration out of PA. The number of PLWH at year-end 2023 was 42,498 (Table 17). The number of PLWH increased from 40,685 at year-end 2019 to 42,498 at year-end 2023 (Table 18). A higher proportion of PLWH reside in the southeastern part of the state and Allegheny County in the southwestern part of the state. Philadelphia County accounted for 43% (18,287/42,498) of all PLWH, followed by Allegheny with 9.3% (3,970/42,498) of PLWH. Philadelphia and the surrounding counties of Bucks, Chester, Delaware, and Montgomery in the southeastern part of the state accounted for 56.8% (24,140/42,498) of PLWH at year-end 2023 in PA (Figure 15 and Table 17). The overall diagnosed HIV prevalence rate in Pennsylvania in 2023 was 328 per 100,000 population. Philadelphia, Dauphin, Lehigh, Union, Delaware, Berks, and Carbon counties had rates higher than 328 per 100,000 population. The highest rate was observed in Philadelphia County at 1,179 per 100,000 population (Figure 16 and Table 17). Information on the PLWH/diagnosed prevalence rate of HIV at the county level will assist in making informed decisions regarding HIV prevention and care resource allocation.

**Table 17: The Number of PLWH at Year-end 2023 and Diagnosed Prevalence Rate by County in PA**

County	PLWH at year-end 2023		Estimated diagnosed prevalence rate per 100,000 county population*
	Number	Percent	
Adams	256	0.6	240
Allegheny	3,970	9.3	324
Armstrong	53	0.1	83
Beaver	186	0.4	112
Bedford	52	0.1	110
Berks	1,478	3.5	341
Blair	136	0.3	113
Bradford	64	0.2	107
Bucks	1,371	3.2	212
Butler	119	0.3	60
Cambria	193	0.5	148
Cameron	-	-	-
Carbon	216	0.5	330
Centre	307	0.7	195
Chester	761	1.8	138
Clarion	55	0.1	149
Clearfield	83	0.2	108
Clinton	41	0.1	109
Columbia	148	0.3	226



County	PLWH at year-end 2023		Estimated diagnosed prevalence rate per 100,000 county population*
	Number	Percent	
Crawford	113	0.3	138
Cumberland	437	1.0	161
Dauphin	1,308	3.1	452
Delaware	2,307	5.4	400
Elk	19	0.0	63
Erie	426	1.0	159
Fayette	162	0.4	131
Forest	11	0.0	171
Franklin	224	0.5	142
Fulton	14	0.0	97
Greene	33	0.1	96
Huntingdon	102	0.2	234
Indiana	68	0.2	82
Jefferson	-	-	-
Juniata	24	0.1	103
Lackawanna	636	1.5	294
Lancaster	1,006	2.4	180
Lawrence	99	0.2	117
Lebanon	300	0.7	208
Lehigh	1,563	3.7	414
Luzerne	653	1.5	199
Lycoming	293	0.7	260
McKean	26	0.1	66
Mercer	100	0.2	92
Mifflin	35	0.1	76
Monroe	482	1.1	290
Montgomery	1,414	3.3	163
Montour	23	0.1	129
Northampton	249	0.6	78
Northumberland	136	0.3	151
Perry	24	0.1	52
Philadelphia	18,287	43.0	1,179
Pike	176	0.4	287
Potter	10	0.0	63
Schuylkill	282	0.7	196
Snyder	30	0.1	76
Somerset	83	0.2	115
Sullivan	-	-	-
Susquehanna	39	0.1	102
Tioga	30	0.1	73
Union	170	0.4	404
Venango	39	0.1	79
Warren	27	0.1	72
Washington	146	0.3	69
Wayne	45	0.1	88

County	PLWH at year-end 2023		Estimated diagnosed prevalence rate per 100,000 county population*
	Number	Percent	
Westmoreland	178	0.4	51
Wyoming	14	0.0	54
York	1,157	2.7	249
<b>PA total</b>	<b>42,498</b>	<b>100</b>	<b>328</b>

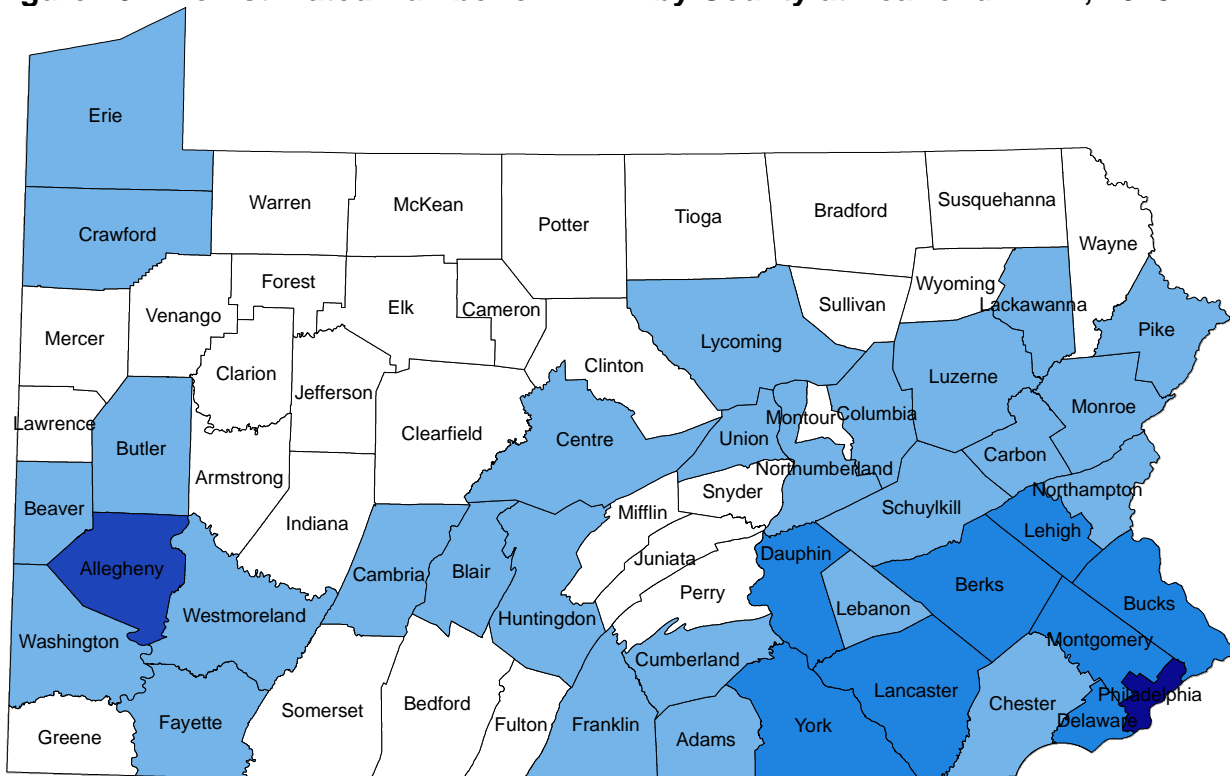
Data sources: PA HIV surveillance

PA Dept. of Health Enterprise Data Dissemination Informatics Exchange (EDDIE). Population by county. <https://www.phaim1.health.PA.gov/EDD/WebForms/PopCntySt.aspx>. Accessed November 18, 2024.

\*County population data used was for the year 2023.

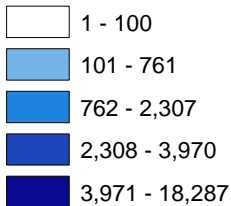
-: Dash indicates cell size of ≤5.

**Figure 15: The Estimated Number of PLWH by County at Year-end in PA, 2023**

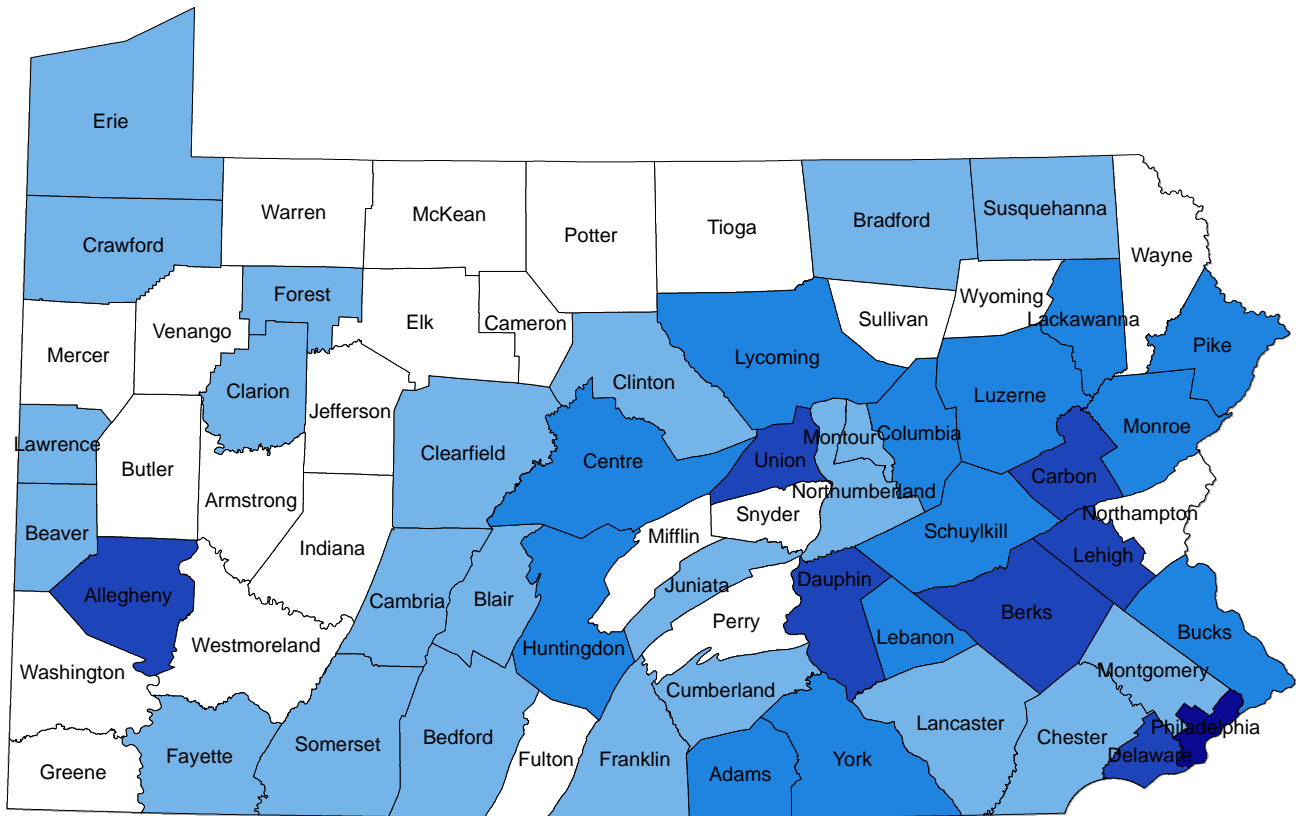


Data source: PA HIV surveillance

**Legend**

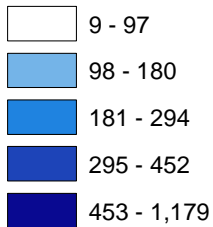


**Figure 16: The Diagnosed Prevalence Rate (per 100,000 county population) of HIV by County at Year-end in PA, 2023**



Data source: PA HIV surveillance

**Legend**



**People Living With Diagnosed HIV Disease By Selected Characteristics, PA, 2019-2023**

The number of PLWH increased from 40,685 at year-end 2019 to 42,498 at year-end 2023 (Table 18). At year-end 2023, by sex/gender, a total of 30,394 (71.5%) were males, 11,569 (27.2%) were females, 519 (1.2%) were transgender, and 16 (0.04%) were individuals with additional gender identity. By race/ethnicity, individuals who identified as Black/African American individuals are often disproportionately impacted by HIV disease. A total of 19,182 (45.1%) of PLWH at year-end 2023 were Black/African American individuals compared to individuals who identified as white (12,523 or 29.5%) or Hispanics/Latinos (8,230 or 19.4%). By current age at year-end 2023, individuals aged 45 to 64 years accounted for 48.7% (20,701) of PLWH. A total of 7,331 (17.3%) of PLWH were 65 years or older. Among PLWH, transmission through MSM still accounts for the highest number of HIV disease. A total of

17,538 (41.3%) of PLWH who were alive at year-end 2023 were MSM compared to 11,927 (28.1%) who acquired HIV through heterosexual contact, 6,334 (14.9%) through IDU or 1,849 (4.4%) through MSM&IDU. There are 4,165 (9.8%) PLWH who acquired HIV through other modes of transmission (Table 18). With advances in diagnosis, treatment options, availability of care, and implementation of prevention measures, fewer people are acquiring HIV, and more people are living longer with the disease.

**Table 18: People Living With Diagnosed HIV Disease in PA, 2019-2023**

Selected characteristics	Year					
	2019	2020	2021	2022	2023	2023
	No.	No.	No.	No.	No.	%
<b>Total</b>	<b>40,685</b>	<b>40,852</b>	<b>41,307</b>	<b>41,628</b>	<b>42,498</b>	<b>100</b>
<b>Sex/Gender</b>						
Female	11,093	11,100	11,136	11,158	11,569	27.2
Male	29,071	29,225	29,633	29,941	30,394	71.5
Transgender	509	514	523	514	519	1.2
Additional Gender Identity	12	13	15	15	16	0.04
<b>Age at year-end (years)</b>						
≤12	55	47	43	39	31	0.1
13-14	24	18	22	17	14	0.03
15-24	1,158	1,018	963	896	922	2.2
25-34	5,875	5,813	5,767	5,697	5,715	13.4
35-44	6,962	7,000	7,242	7,413	7,784	18.3
45-54	10,583	9,927	9,351	8,882	8,442	19.9
55-64	11,332	11,702	11,986	12,041	12,259	28.8
≥65	4,696	5,327	5,933	6,643	7,331	17.3
<b>Race/ethnicity</b>						
AI/AN	46	50	52	52	53	0.1
Asian	345	363	375	390	437	1.0
Black/African American	18,853	18,860	18,985	18,941	19,182	45.1
Hispanic+	7,527	7,628	7,767	7,956	8,230	19.4
Multiple race	1,996	2,012	2,044	2,052	2,050	4.8
NHPI++	17	19	20	22	23	0.1
White	11,901	11,920	12,064	12,215	12,523	29.5
<b>Transmission category</b>						
Heterosexual contact	12,126	12,090	12,112	11,992	11,927	28.1
IDU	6,965	6,784	6,624	6,469	6,334	14.9
MSM	16,312	16,574	17,006	17,307	17,538	41.3
MSM&IDU	1,886	1,887	1,895	1,873	1,849	4.4
Other*	2,699	2,825	2,976	3,298	4,165	9.8
Pediatric mode**	697	692	694	689	685	1.6

Data source: PA HIV surveillance

+ Hispanic/Latino persons can be of any race.

\*\*NHPI=Native Hawaiian and Other Pacific Islander.

\* Other transmission category included risk not reported, no risk identified risk, and received transfusion/transplant/clotting factor in adults only.

\*\* Pediatric mode refers to perinatal exposure, pediatric no risk reported, pediatric no risk identified, and pediatric other.

## **Section 5: Ryan White HIV/AIDS Program (RWHAP) Part B, HIV Diagnoses in the Counties and RWHAP Part B Subrecipients Regions**

The HIV Care section is responsible for the coordination and delivery of HIV care and support services. This is accomplished through contracts with seven regional subrecipients. These subrecipients in turn contract with local providers to provide direct services. This system provides a statewide service delivery network for persons with or impacted by HIV.

The Care section receives funding from several sources: Ryan White Part B Grant (including the Special pharmaceutical benefits program [SPBP]) provided by HRSA, Housing opportunities for persons living with AIDS (HOPWA) provided through Department of Housing and Urban Development (HUD), state funding, and rebates from SPBP. The Department receives about \$37 million each year through HRSA and is required to provide approximately \$18 million in funds to match. The SPBP generates rebates through discounted drug pricing with pharmaceutical companies. These rebates provide about \$75 million dollars to the program each year. These are the funds we use to provide services to the community.

Approximately 16,000 individuals utilize Ryan White services in PA each year. Services are defined by Core Medical Services or Support Services.

### **The Core Medical services include:**

- Early intervention services (EIS)
- Health insurance premiums and cost sharing assistance
- Home and community-based health services
- Home health care
- Hospice
- Medical case management (including treatment adherence)
- Medical nutrition therapy
- Oral health care
- Outpatient/ambulatory health services
- Mental health services
- Substance abuse service-outpatient

### **Support services include:**

- Childcare services
- Emergency financial assistance
- Food bank/home delivered meals
- Health education/risk reduction
- Housing services
- Linguistic services
- Medical transportation
- Non-medical case management
- Other professional services (ex. legal services)
- Outreach services
- Psychosocial support services
- Referral for health care and support services
- Rehabilitation services

- Respite care
- Substance abuse services - residential

The program is required to validate the eligibility of an individual every 12 months along with ensuring our funds are used as the payer of last resort. The Program must also provide client level data to HRSA each year. HOPWA funding is provided to regional grantees for rental assistance, short term mortgage payments and other housing-related services for people infected with or affected by HIV.

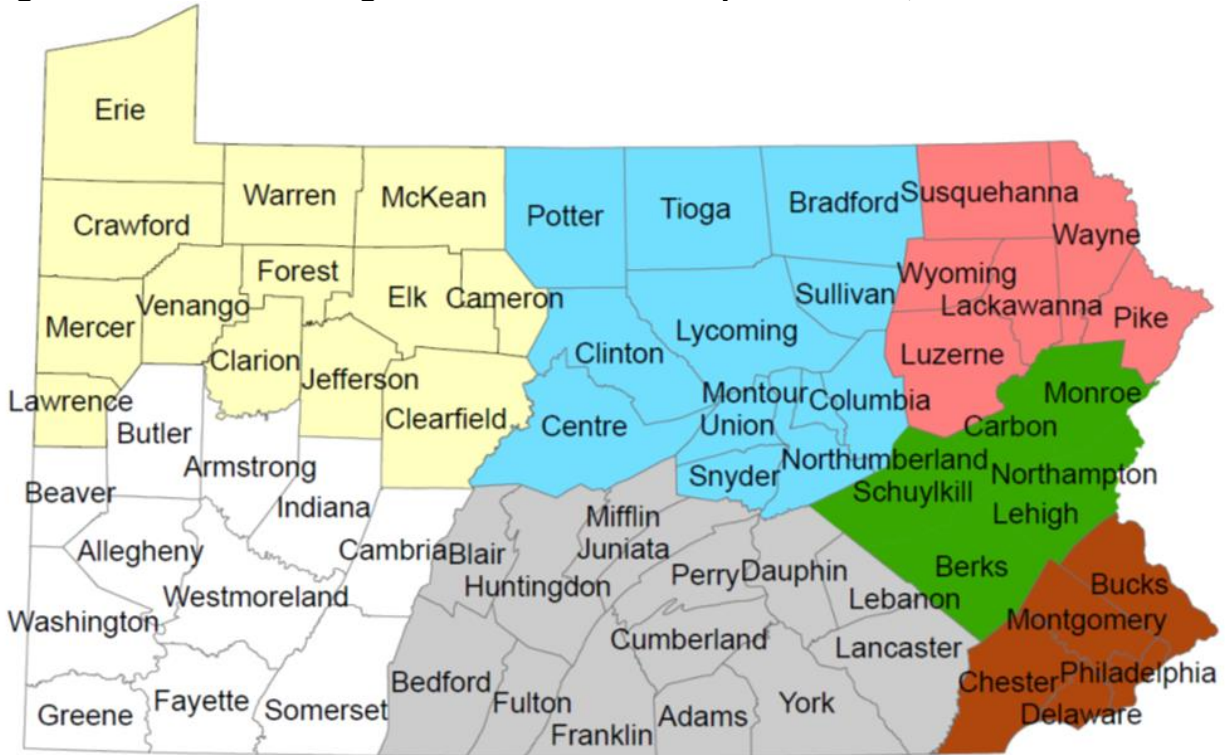
Funding includes resources for:

- Tenant Based Rental Assistance (TBRA)
- Short Term Rent/Mortgage/Utility (STRMU)
- Permanent housing placement
- Supportive services – case management

In 2023, HOPWA helped 640 households receive housing assistance through the HUD HOPWA program and 94 percent of all clients receiving HOPWA housing assistance established or maintained a stable living situation.

The Commonwealth of PA has seven regional HIV care subrecipients (Figure 17) supported by the RWHAP Part B. These subrecipients roles include providing a statewide service delivery network to PLWH and their families. They are the Division of HIV Health (DHH), AIDSNET, Northeast United Way of the Wyoming Valley (NE-UWWV), Southcentral-Family Health Council of Central PA (SC-FHCCP), Southwestern-Jewish Healthcare Foundation (SW-JHF), Northwest-PA Thrive Partnership (PTP), and Northcentral District Allied Connections (Northcentral). DHH, encompassing Philadelphia, Chester, Delaware, Montgomery, and Bucks counties, provides services in the region with the highest estimated number of PLWH. A total of 24,140 (56.8%) of PLWH at year-end 2023 resided in the region served by DHH (Table 24). Out of this, a total of 6,640 (27.5%) were females, 17,062 (70.7%) were males, 422 (1.7%) identified as transgender, and 16 (0.07%) had additional gender identity (AGI) (Table 25). A total of 14,084 (58.3%) PLWH residing in the DHH region were Black/African American individuals, 4,979 (20.6%) were white individuals and 3,871 (16%) were Hispanics/Latinos (Table 26). In addition, 11,208 (46.4%) were aged 55 years and older at year-end 2023 (Table 27). By transmission mode, 9,744 (40.4%) were MSM; 3,935 (16.3%) acquired HIV disease through IDU and 7,310 (30.3%) acquired HIV through heterosexual contact (Table 28). The breakdown of PLWH in other subrecipients regions are highlighted in tables 24 to 28

**Figure 17: The Seven Regional HIV Care Subrecipients in PA, 2023**



Data source: PA Department of Health, Division of HIV disease.

**Legend**

- Division of HIV Health (DHH)
- AIDSNET
- Northeast-United Way of Wyoming Valley (NE-UWWV)
- Southcentral-Family Health Council of Central Pennsylvania (SC-FHCCP)
- Southwest-Jewish Healthcare Foundation (SW-JHF)
- Northwest- PA Thrive Partnership (NW-PTP)
- North Central District Allied Connections (NCDAC)

**Table 24: The Number of PLWH in RWHAP Part B Subrecipients Region, PA, 2023**

Regional Subrecipients	Number	Percent
AIDSNET	4,270	10.0
DHH	24,140	56.8
NCDAC	1,253	2.9
NE-UWWV	1,563	3.7
NW-PTP	1,006	2.4
SC-FHCCP	5,075	11.9
SW-JGF	5,191	12.2
<b>Total</b>	<b>42,498</b>	<b>100</b>

Data source: PA HIV surveillance

**Table 25: The Number of PLWH in RWHAP Part B Subrecipients Region by Sex/Gender, PA, 2023**

Regional subrecipients	Sex/Gender								
	AGI*		Female		Male		Transgender		Total
	No.	%	No.	%	No.	%	No.	%	No.
AIDSNET	0	0	1,422	33.3	2,833	66.3	15	0.4	4,270
DHH	16	0.07	6,640	27.5	17,062	70.7	422	1.7	24,140
NCDAC	0	0	252	20.1	996	79.5	-	-	1,253
NE-UWWV	0	0	453	29.0	1,103	70.6	7	0.4	1,563
NW-PTP	0	0	248	24.7	758	75.3	-	-	1,006
SC-FHCCP	0	0	1,491	29.4	3,562	70.2	22	0.4	5,075
SW-JHF	0	0	1,063	20.5	4,080	78.6	48	0.9	5,191
<b>Total</b>	<b>16</b>	<b>0.04</b>	<b>11,569</b>	<b>27.2</b>	<b>30,394</b>	<b>71.5</b>	<b>519</b>	<b>1.2</b>	<b>42,498</b>

Data source: PA HIV surveillance

\* AGI: Additional Gender Identity.

-: Dash indicates cell size of ≤5.

**Table 26: The Number of PLWH in RWHAP Part B Subrecipients Region by Race/Ethnicity in PA, 2023**

Regional subrecipient	Race/Ethnicity														Total No.
	AI/AN+		Asian		Black/African American		Hispanic++		Multiple race		NHPI+++		White		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
AIDSNET	-	-	20	0.5	877	20.5	1,938	45.4	222	5.2	-	-	1,210	28.3	4,270
DHH	41	0.2	303	1.3	14,084	58.3	3,871	16.0	847	3.5	15	0.1	4,979	20.6	24,140
NCDAC	-	-	14	1.1	355	28.3	252	20.1	64	5.1	-	-	566	45.2	1,253
NE-UWWV	-	-	10	0.6	376	24.1	373	23.9	100	6.4	-	-	702	44.9	1,563
NW-PTP	-	-	-	-	281	27.9	113	11.2	63	6.3	-	-	545	54.2	1,006
SC-FHCCP	-	-	40	0.8	1,246	24.6	1,307	25.8	383	7.5	-	-	2,093	41.2	5,075
SW-JHF	-	-	47	0.9	1,963	37.8	376	7.2	371	7.1	-	-	2,428	46.8	5,191
<b>Total</b>	<b>53</b>	<b>0.1</b>	<b>437</b>	<b>1.0</b>	<b>19,182</b>	<b>45.1</b>	<b>8,230</b>	<b>19.4</b>	<b>2,050</b>	<b>4.8</b>	<b>23</b>	<b>0.1</b>	<b>12,523</b>	<b>29.5</b>	<b>42,498</b>

Data source: PA HIV surveillance

\*AI/AN=American Indian/Alaska Native.

\*\* Hispanic/Latino persons can be of any race.

\*\*\*NHPI=Native Hawaiian and Other Pacific Islander.

-: Dash indicates cell size of ≤5.



**Table 27: The Number of PLWH in RWHAP Part B Subrecipients Region by Age Group in PA, 2023**

Age at year end 2023	Regional subrecipients														
	AIDSNET		DHH		NCDAC		NE-UWWV		NW-PTP		SC-FHCCP		SW-JHF		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
≤12	-	-	15	48.4	-	-	-	-	-	-	-	-	-	-	31
13-14	-	-	6	42.9	-	-	-	-	-	-	-	-	-	-	14
15-24	107	11.6	489	53.0	35	3.8	33	3.6	26	2.8	115	12.5	117	12.7	922
25-34	499	8.7	3,240	56.7	144	2.5	233	4.1	128	2.2	638	11.2	833	14.6	5,715
35-44	650	8.4	4,570	58.7	218	2.8	292	3.8	175	2.2	851	10.9	1,028	13.2	7,784
45-54	882	10.4	4,612	54.6	279	3.3	327	3.9	203	2.4	1,135	13.4	1,004	11.9	8,442
55-64	1,338	10.9	6,911	56.4	377	3.1	421	3.4	310	2.5	1,505	12.3	1,397	11.4	12,259
≥65	788	10.7	4,297	58.6	200	2.7	254	3.5	162	2.2	824	11.2	806	11.0	7,331
<b>Total</b>	<b>4,270</b>	<b>10.0</b>	<b>24,140</b>	<b>56.8</b>	<b>1,253</b>	<b>2.9</b>	<b>1,563</b>	<b>3.7</b>	<b>1,006</b>	<b>2.4</b>	<b>5,075</b>	<b>11.9</b>	<b>5,191</b>	<b>12.2</b>	<b>42,498</b>

Data source: PA HIV surveillance

-: Dash indicates cell size of ≤5.

**Table 28: The Number of PLWH in RWHAP Part B Subrecipients Region by Transmission Category in PA, 2023**

Regional subrecipients	Transmission mode													Total
	Heterosexual contact		IDU		MSM		MSM&IDU		Other*		Pediatric mode**			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
AIDSNET	1,285	30.1	727	17.0	1,344	31.5	166	3.9	665	15.6	83	1.9	4,270	
DHH	7,310	30.3	3,935	16.3	9,744	40.4	988	4.1	1,797	7.4	366	1.5	24,140	
NCDAC	277	22.1	225	18.0	476	38.0	85	6.8	162	12.9	28	2.2	1,253	
NE-UWWV	464	29.7	219	14.0	579	37.0	73	4.7	189	12.1	39	2.5	1,563	
NW-PTP	250	24.9	127	12.6	402	40.0	73	7.3	132	13.1	22	2.2	1,006	
SC-FHCCP	1,363	26.9	743	14.6	2,055	40.5	201	4.0	611	12.0	102	2.0	5,075	
SW-JHF	978	18.8	358	6.9	2,938	56.6	263	5.1	609	11.7	45	0.9	5,191	
<b>Total</b>	<b>11,927</b>	<b>28.1</b>	<b>6,334</b>	<b>14.9</b>	<b>17,538</b>	<b>41.3</b>	<b>1,849</b>	<b>4.4</b>	<b>4,165</b>	<b>9.8</b>	<b>685</b>	<b>1.6</b>	<b>42,498</b>	

Data source: PA HIV surveillance

\* Other transmission category included unknown risk factor, no risk reported, no identified risk factor and received blood transfusion/transplant.

\*\* Pediatric mode refers to perinatal exposure, pediatric no risk reported, pediatric no risk identified, and pediatric other.

## Section 7: HIV care continuum and unmet need estimates in PA

**Note:** The title for section 7 was also updated to include unmet need estimates in PA. Three additional tables were included in this update that were not in the most recently published epidemiology profiles. These were included in this section.

These are :

- Table 36: Receipt of HIV Medical Care Among Persons Aged  $\geq 13$  Years With HIV Diagnosed by 12/31/2022 and Alive at 12/31/2023, by Selected Characteristics in PA.
- Table 37: HIV Viral Suppression Among Persons Aged  $\geq 13$  Years With HIV Infection Diagnosed by 12/31/2022 and live at 12/31/2023, by Selected Characteristics in PA.
- Table 38: Unmet Need Framework Using HIV Surveillance Data in PA, 2023.

Please note that these tables 36, 37, and 38 are not comparable to the tables in the 2023 epidemiologic profile.

### HIV care continuum

According to HIV.gov ([HIV Care Continuum | HIV.gov](https://www.hiv.gov)), “the HIV care continuum is a public health model that outlines the steps or stages that people with HIV go through from diagnosis to achieving and maintaining viral suppression.”

As per CDC’s guidance, there are two approaches to monitor the HIV care continuum : prevalence-based and diagnosed-based. The prevalence-based HIV care continuum describes the number of people who are at each step of the continuum as a percentage of the total number of people with HIV (known as HIV prevalence). Prevalence includes both people whose HIV has been diagnosed and those who have HIV but don’t know it. The diagnosis-based HIV care continuum depicts each step as a percentage of the number of people with diagnosed HIV disease. For the purposes of this profile, a diagnosed-based HIV care continuum will be utilized. An assessment of the HIV care continuum requires complete reporting of all HIV-related laboratory data. Prior to October 31, 2020, the PA HIV regulation required only reporting of detectable viral load (VL) tests and CD4 results that were below 200 cells/ $\mu$ l or 14 percent. This makes it less likely to receive CD4 and VL test results outside these limits. The excluded test results are essential for assessing HIV Care Continuum. However, on October 31, 2020, PA’s disease reporting regulations were changed to mandate the reporting of all CD4 and HIV viral load laboratory results. With this regulation change, PADOH will have the data that will inform future HIV care continuum analysis. Also, data on prescribed antiretroviral therapy (ART) will not be provided because ART prescription data is limited and would not be representative of the number of people living with HIV prescribed ART. Therefore, the data provided for the HIV care continuum demonstrates a minimum estimate of the HIV Care Continuum for people living with HIV in PA.

### Steps in the HIV Care Continuum

**Diagnosed:** Number of persons aged  $\geq 13$  years with HIV at the end of the calendar year. Diagnosed prevalence is defined as the number of persons with HIV diagnosed through the end of 1 year and are living through the end of the next year.

**Linked to Care:** Percentage of persons with newly diagnosed HIV who were linked to care within one month after diagnosis as evidenced by a documented CD4 count or viral load.

- Numerator: Number of persons aged  $\geq 13$  years with newly diagnosed HIV during the calendar year who were linked to care within one month of their diagnosis date as evidenced by a documented test result for a CD4 count or viral load.
- Denominator: Number of persons aged  $\geq 13$  years with newly diagnosed HIV during the calendar year.

**Receipt of Care:** Percentage of persons with diagnosed HIV who had at least one CD4 or viral load test during the calendar year.

- Numerator: Number of persons aged  $\geq 13$  years with diagnosed HIV who had a care visit during the calendar year, as measured by documented test results for CD4 count or viral load.
- Denominator: Number of persons aged  $\geq 13$  years with HIV diagnosed by previous year-end and alive at year-end.

**Retained in Care:** Percentage of persons with documentation of 2 or more CD4 or viral load tests performed at least 3 months apart during the calendar year.

- Numerator: Number of persons aged  $\geq 13$  years with diagnosed HIV who had two care visits that were at least 90 days apart during the calendar year, as measured by documented test results for CD4 count or viral load.
- Denominator: Number of persons aged  $\geq 13$  years with HIV diagnosed by previous year-end and alive at year-end.

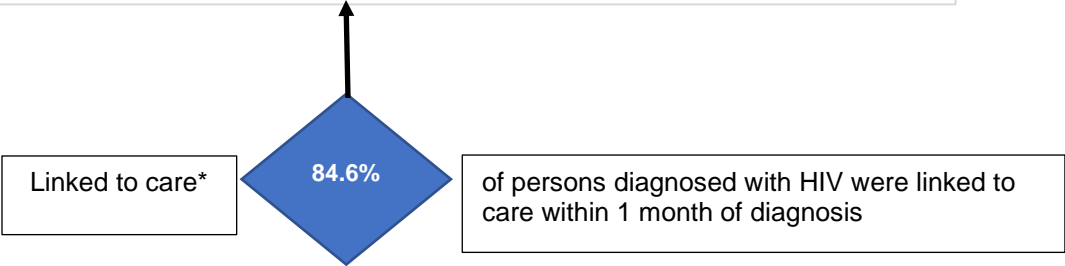
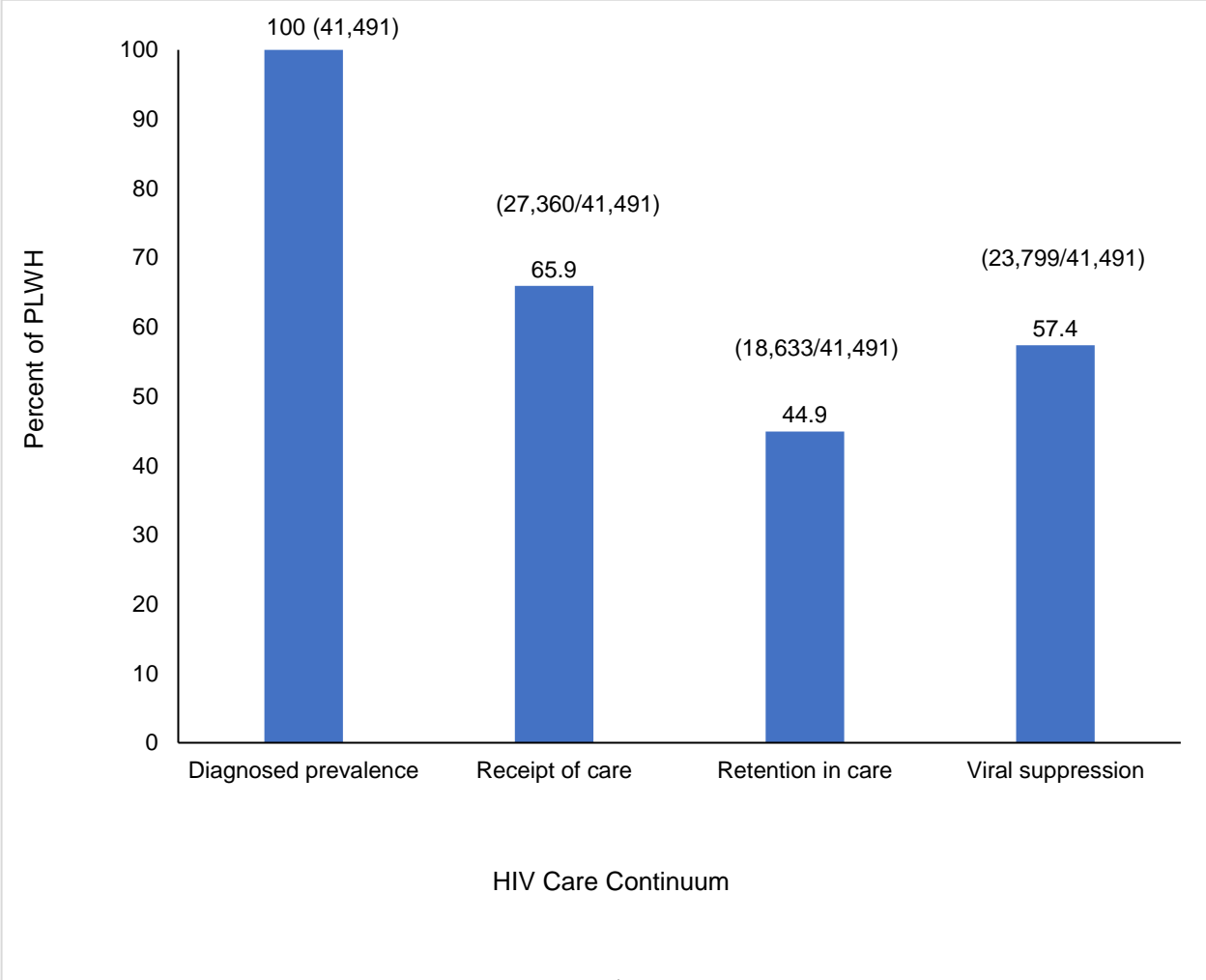
**Viral Suppression:** Percentage of persons aged  $\geq 13$  years with HIV who had a viral load test result of  $< 200$  copies/mL at the most recent viral load test during the calendar year.

- Numerator: Number of persons aged  $\geq 13$  years with diagnosed HIV whose most recent viral load test in the calendar year showed that HIV viral load was suppressed.
- Denominator: Number of persons aged  $\geq 13$  years with HIV diagnosed by previous year-end and alive at year-end.

### **Linkage to care and the HIV care continuum in PA, 2023**

A total of 909 individuals were newly diagnosed with HIV in 2023, and 84.6 % (769/909) were linked to care within one month after diagnosis. In the HIV care continuum, an estimated 41,491 people were diagnosed up to the year 2022 and were alive at year-end 2023 in PA. Out of these, an estimated 65.9% were in receipt of care, 44.9% were retained in care, and 57.4% were virally suppressed (Figure 33). Receipt of care is defined as at least one care visit during the calendar year. Retention in care is defined as two or more visits at least three months ( $\leq 91$  days) apart in the calendar year. A viral load (VL) test result of  $< 200$  copies/mL indicates HIV viral suppression. VL test results are from the most recent test during the specified year. In this report, data for receipt of care, retention in care and viral suppression was among persons aged  $\geq 13$  years with HIV disease diagnosed by December 31, 2022, and alive by December 31, 2023.

**Figure 33: Linkage to Care and the HIV Care Continuum in Pennsylvania, PA, 2023**



Data source: PA HIV surveillance data

\*Data for linked to care is for the year 2023 only

Note: Data for receipt of care, retention in care and viral suppression was among persons aged ≥13 years with HIV disease diagnosed by December 31, 2022, and alive by December 31, 2023.

Estimates were derived from using CDC’s monitoring HIV care outcomes using HIV surveillance data.

**Table 36: Receipt of HIV Medical Care Among Persons Aged ≥13 Years With HIV Diagnosed by 12/31/2022 and Alive at 12/31/2023, by Selected Characteristics in PA.**

Selected characteristics	Persons alive by 12/31/2023	Receipt of care*		Retention in Care**	
	No.	No.	%	No.	%
<b>Sex Assigned at Birth</b>					
Male	30,066	19,655	65.4	13,296	44.2
Female	11,156	7,690	68.9	5,329	47.8
Missing/Unknown	269	15	5.6	8	3
<b>Gender</b>					
Man	29,560	19,270	65.2	13,007	44
Woman	11,132	7,678	69	5,319	47.8
Transgender woman***	492	374	76	282	57.3
Transgender man****	23	12	52.2	10	43.5
Additional gender identity*****	15	11	73.3	7	46.7
<b>Age at year-end 2022 (years)</b>					
13-24	962	694	72.1	464	48.2
25-34	5,791	3,980	68.7	2,524	43.6
35-44	7,469	4,823	64.6	3,125	41.8
45-54	8,834	5,769	65.3	3,865	43.8
≥55	18,435	12,094	65.6	8,655	46.9
<b>Race/ethnicity</b>					
AI/AN+	51	31	60.8	20	39.2
Asian	384	225	58.6	163	42.4
Black/African American	18,566	12,324	66.4	8,408	45.3
Hispanic/Latino++	7,886	4,984	63.2	3,558	45.1
NHPI+++	22	11	50	10	45.5
White	11,920	8,175	68.6	5,392	45.2
Multiracial	2,012	1,548	76.9	1,045	51.9
Unknown race	650	62	9.5	37	5.7
<b>Transmission Category</b>					
MSM	17,015	11,840	69.6	7,800	45.8
IDU					
Male	4,009	2,214	55.2	1,609	40.1
Female	2,296	1,544	67.2	1,081	47.1
MSM&IDU	1,833	1,196	65.2	854	46.6
Heterosexual contact					
Male	4,921	3,112	63.2	2,134	43.4
Female	6,838	4,884	71.4	3,419	50
Other++++					
Male	2,288	1,293	56.5	899	39.3
Female	2,022	1,262	62.4	829	41
<b>Total</b>	<b>41,491</b>	<b>27,360</b>	<b>65.9</b>	<b>18,633</b>	<b>44.9</b>

Data source: PA HIV surveillance data

\*Receipt of care was measured by documentation of ≥1 CD4 or VL test during the calendar year.

\*\*Retention in care was measured by documentation of  $\geq 2$  CD4 or VL test at least 3 months ( $\leq 91$  days) apart in the calendar year.

\*\*\*Transgender women" includes individuals who were assigned "male" sex at birth but have ever identified as a woman.

\*\*\*\*Transgender men" includes individuals who were assigned "female" sex at birth but have ever identified as a man.

\*\*\*\*\*Additional gender identity examples include "nonbinary", "gender queer," and "two-spirit."

+AI/AN: American Indian/Alaska Native.

++Hispanic/Latino persons can be of any race.

+++NHPI: Native Hawaiian/Other Pacific Islander.

++++Other risk factors including hemophilia, blood transfusion, perinatal exposure, and risk factor not reported or not identified.

Note. Caution should be used when interpreting results of care outcomes analyses produced using an eHARS dataset produced less than 12 months from the year of interest. Accuracy of care outcomes depend on complete reporting of laboratory results and deaths.

**Table 37: HIV Viral Suppression Among Persons Aged  $\geq 13$  Years With HIV Infection Diagnosed by 12/31/2022 and Alive at 12/31/2023, by Selected Characteristics in PA**

Selected characteristics	Persons alive by 12/31/2023		VL of <200 copies/mL*	
			Persons alive by 12/31/2023	
	No.	%	No.	%
<b>Sex Assigned at Birth</b>				
Male	30,066	72.5	17,101	56.9
Female	11,156	26.9	6,685	59.9
Missing/Unknown	269	0.6	13	4.8
<b>Gender</b>				
Man	29,560	71.2	16,779	56.8
Woman	11,132	26.8	6,674	60
Transgender woman**	492	1.2	311	63.2
Transgender man***	23	0.1	11	47.8
Additional gender identity****	15	0	11	73.3
<b>Age at year-end 2022 (years)</b>				
13-24	962	2.3	591	61.4
25-34	5,791	14	3,265	56.4
35-44	7,469	18	4,044	54.1
45-54	8,834	21.3	5,056	57.2
$\geq 55$	18,435	44.4	10,843	58.8
<b>Race/ethnicity</b>				
AI/AN+	51	0.1	24	47.1
Asian	384	0.9	212	55.2
Black/African American	18,566	44.7	10,612	57.2
Hispanic/Latino++	7,886	19	4,433	56.2
NHPI+++	22	0.1	11	50
White	11,920	28.7	7,122	59.7
Multiracial	2,012	4.8	1,332	66.2

Selected characteristics	Persons alive by 12/31/2023		VL of <200 copies/mL*	
			Persons alive by 12/31/2023	
	No.	%	No.	%
Unknown race	650	1.6	53	8.2
<b>Transmission Category</b>				
MSM	17,015	41	10,347	60.8
IDU				
Male	4,009	9.7	1,917	47.8
Female	2,296	5.5	1,309	57
MSM & IDU	1,833	4.4	1,009	55
Heterosexual contact				
Male	4,921	11.9	2,711	55.1
Female	6,838	16.5	4,295	62.8
Other++++				
Male	2,288	5.5	1,117	48.8
Female	2,022	4.9	1,081	53.5
<b>Total</b>	<b>41,491</b>	<b>100</b>	<b>23,799</b>	<b>57.4</b>

Data source: PA HIV surveillance data

\* A VL test result of < 200 copies/mL indicates HIV viral suppression. VL test results are from the most recent test during the specified year

\*\*Transgender women" includes individuals who were assigned "male" sex at birth but have ever identified as a woman.

\*\*\*Transgender men" includes individuals who were assigned "female" sex at birth but have ever identified as a man.

\*\*\*\*Additional gender identity examples include "nonbinary", "gender queer," and "two-spirit."

+AI/AN: American Indian/Alaska Native

\*\*Hispanic/Latino persons can be of any race

+++NHPI: Native Hawaiian/Other Pacific Islander

++++Other risk factors including hemophilia, blood transfusion, perinatal exposure, and risk factor not reported or not identified

Note. Caution should be used when interpreting results of care outcomes analyses produced using an eHARS dataset produced less than 12 months from the year of interest. Accuracy of care outcomes depend on complete reporting of laboratory results and deaths.

## The Unmet Need Estimates for PLWH in PA, 2023

The unmet need estimate provided in this application was prepared using the CDC’s HIV Incidence and Case Surveillance Branch unmet need SAS programs to support the Ryan White program in producing unmet need estimates. Unmet need was defined as the number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address without any CD4 or VL test in the most recent calendar year (Table 38).

**Table 38: Unmet Need Framework Using HIV Surveillance Data in PA, 2023**

	Years of Data	
Care Patterns: Most recent calendar year for which data are available	2023	
Population size: Most recent 5 calendar year period for which data are available	2019	2023
Definition/Description	Number	Percent
Population Size		
Population size: Number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address who had an HIV diagnosis or any other HIV-related lab data (e.g., CD4, VL, genotype, or HIV test even if already diagnosed) reported to the HIV surveillance program during the most recent five calendar year period.	35,244	
Care Patterns		
Met need (In care): Number of people living with diagnosed HIV infection in the jurisdiction with a CD4 test or VL test in the most recent calendar year.	28,170	79.9%
Unmet need: Number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address without any CD4 or VL test in the most recent calendar year.	7,074	20.1%
In Care, Viral Suppression		
Virally suppressed: Number of people living with diagnosed HIV infection in the jurisdiction who are in care and whose most recent viral load test was <200 copies/mL in the most recent calendar year.	21,654	76.9%
Not virally suppressed: Number of people living with diagnosed HIV infection in the jurisdiction who are in care and whose most recent viral load test was >=200 copies/mL in the most recent calendar year.	6,516	23.1%

Data source: PA HIV surveillance data

Attached to this profile in Appendix A, is the unmet need estimate.

## The Needs of PLWH in PA

Using the 2023 data, an estimated 25.2% (229/909) of individuals newly diagnosed with HIV disease in the year 2023 were late diagnoses. This means about 1 in 4 newly diagnosed individuals had documentation of an AIDS-defining condition or CD4 test result of less than 200 cells/mL or CD4 percentage of total lymphocytes of less than 14% at the time of diagnosis. Also, based on the population estimates in a five-year period with known address in PA, 79.9% (28,170/35,244) /of PLWH were in care and 20.1% 7,074/35,244) had an unmet



need. Among those in care, 76.9% (21,654/28,170) were virally suppressed and 23.1% (6,516/ 28,170) of PLWH who were in care were not virally suppressed.

Based on the data, the following steps will ensure that the goals of the HIV care continuum are being met:

- Reduction in barriers to access to care such as transportation, homelessness/housing, and stigma
- Expansion of HIV testing among close contacts of individuals living with HIV
- Ensuring that all persons living with HIV have access to antiretroviral therapy and are engaged in care
- Ensuring that those retained or engaged in care have access to services that will help alleviate other challenges that might otherwise become barriers to accessing care, such as transportation, housing, and food.
- Expansion of case management services

## References

1. Centers for Disease Control and Prevention and Health Resources and Services Administration. Integrated Guidance for Developing Epidemiologic Profiles: HIV Prevention and Ryan White HIV/AIDS Program Planning. Atlanta, Georgia: Centers for Disease Control and Prevention; 2022.

# Appendix

## Appendix A: The Unmet Need Estimates in PA, 2023



The Unmet Need  
Estimates in PA, 2023