

An Overview of HIV Epidemiology in Pennsylvania, 2019-2023

**Monisola Malomo, DVM, MPH
Bureau of Epidemiology**

January 15, 2025

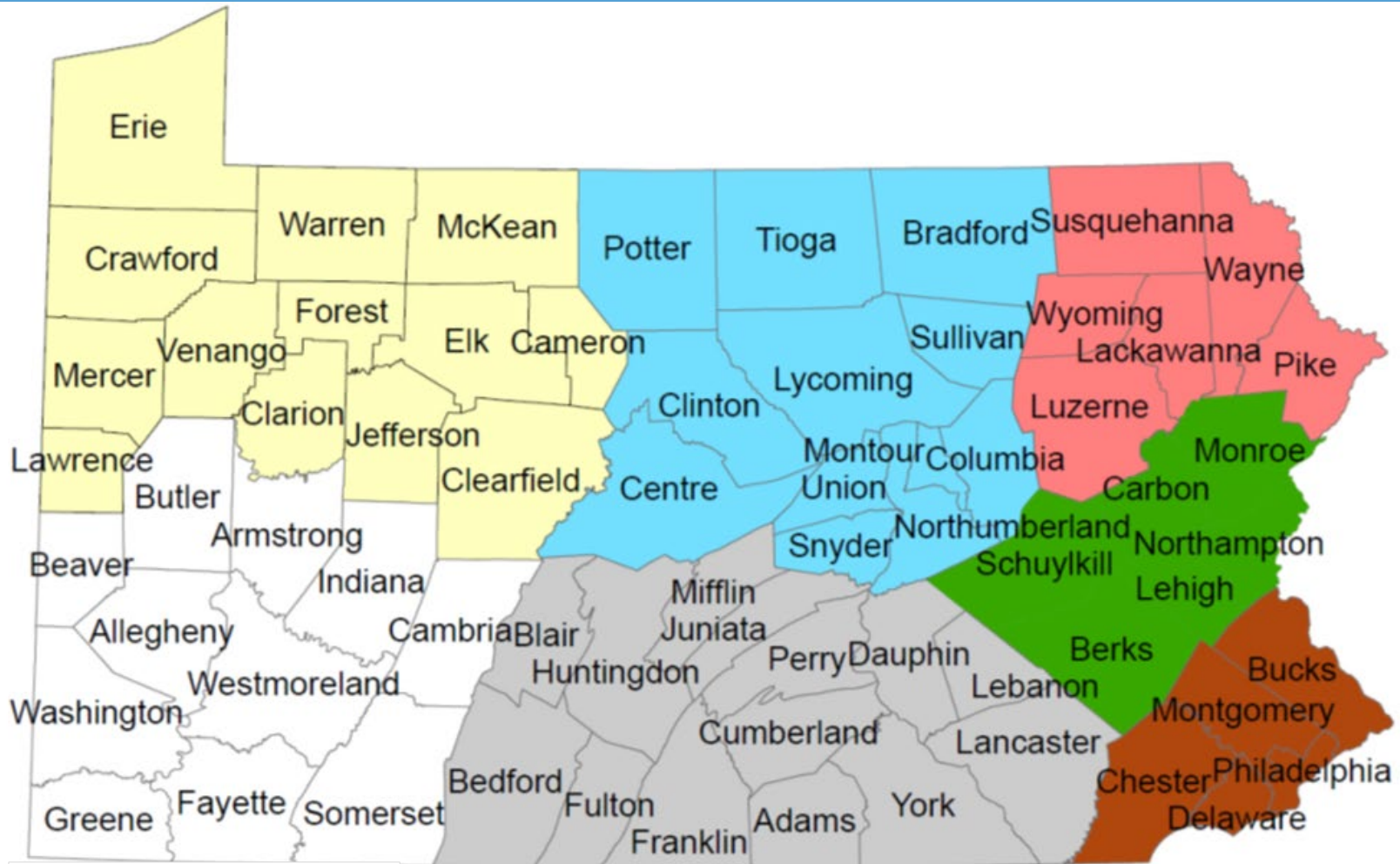


Quick Note

Data for the years 2020 and 2021 should be interpreted with caution due to the impact of the COVID-19 pandemic on access to HIV testing, care-related services, and case surveillance activities in state/local jurisdictions. Therefore, more time and data are needed to accurately assess COVID-19's impact on HIV disease in Pennsylvania (PA).



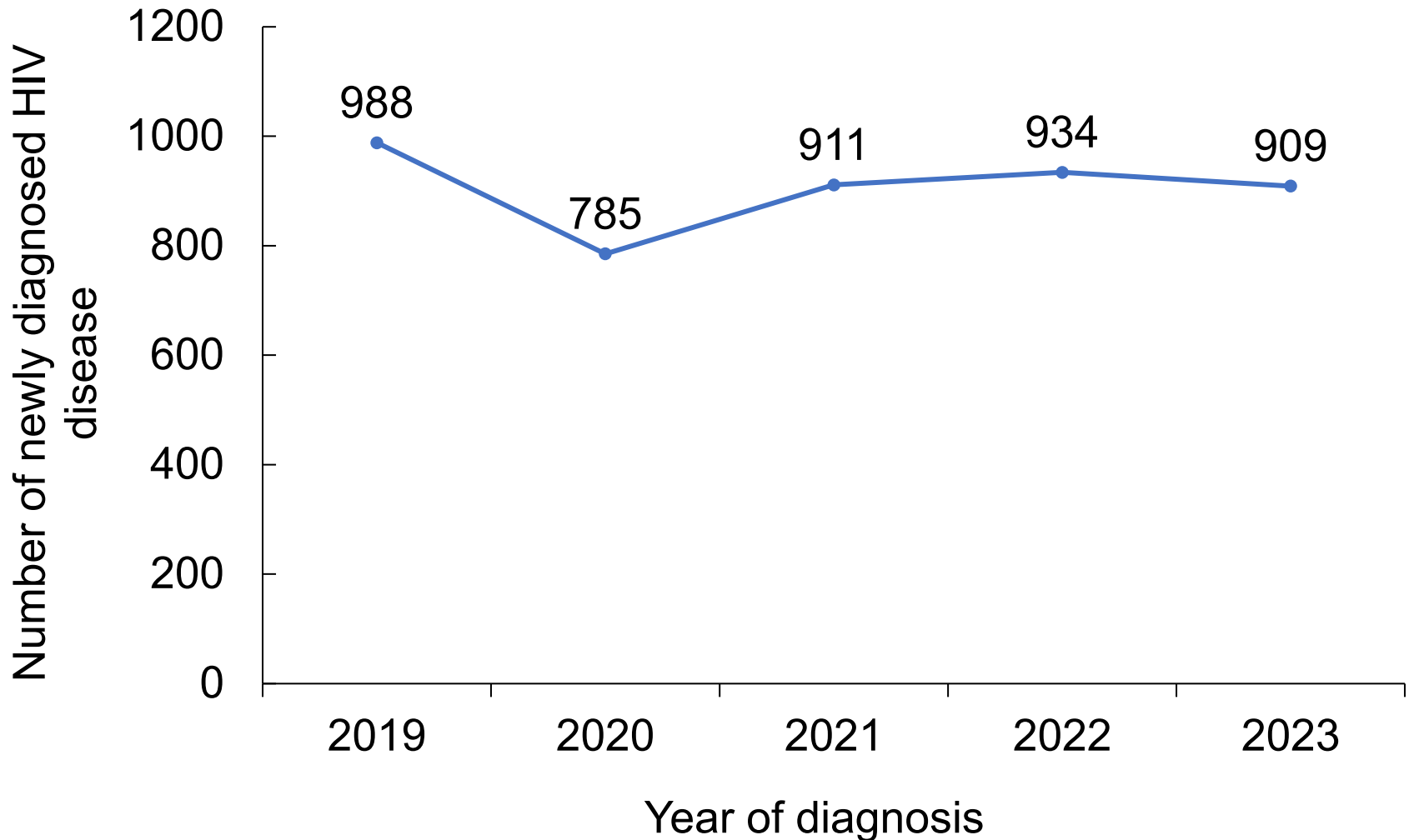
Ryan White HIV/AIDS Program Part B Regional Subrecipients in PA



An Overview of HIV Epidemiology in PA, 2019-2023

- A total of 4,527 people were newly diagnosed and reported in PA from 2019 to 2023.
- There has been an 8% decrease in the number of individuals newly diagnosed with HIV from 988 in 2019 to 909 in 2023.
- There has been an 4.5% increase in the number of people living with HIV (PLWH) in PA in the 5-year period.
- There are an estimated 42,498 PLWH in the PA by year-end 2023.

Number of People Newly Diagnosed With HIV Disease by Year of Diagnosis in PA, 2019-2023 (N= 4,527)



Selected Characteristics of People Newly Diagnosed With HIV Disease by Sex and Race/Ethnicity in PA, 2019-2023 (N= 4,527)

- By sex/gender, the number of newly diagnosed individuals that were females was 969 (21.4%), 3,499 (77.3%) were males, and 59 (1.3%) individuals were transgender and individuals with additional gender identity in the five-year period.
- Considering race/ethnicity among newly diagnosed individuals, 2,070 (45.7%) were Black/African American, 913 (20.2%) were Hispanic, 157 (3.5%) were of multiple races, 1,308 (28.9%) were White, and 12 (0.3%) were other races (AI/AN*, and NHPI**).
- In PA, 2,381 (52.6%) of all newly diagnosed HIV individuals in the five-year period were men who have sex with men (MSM). Heterosexual contact accounted for 858 (19%), 346 (7.6%) were injection drug use (IDU) related, 177 (3.9%) were MSM&IDU, 6 (0.1%) had pediatric mode, and 759 (16.8%) had unknown transmission risk.

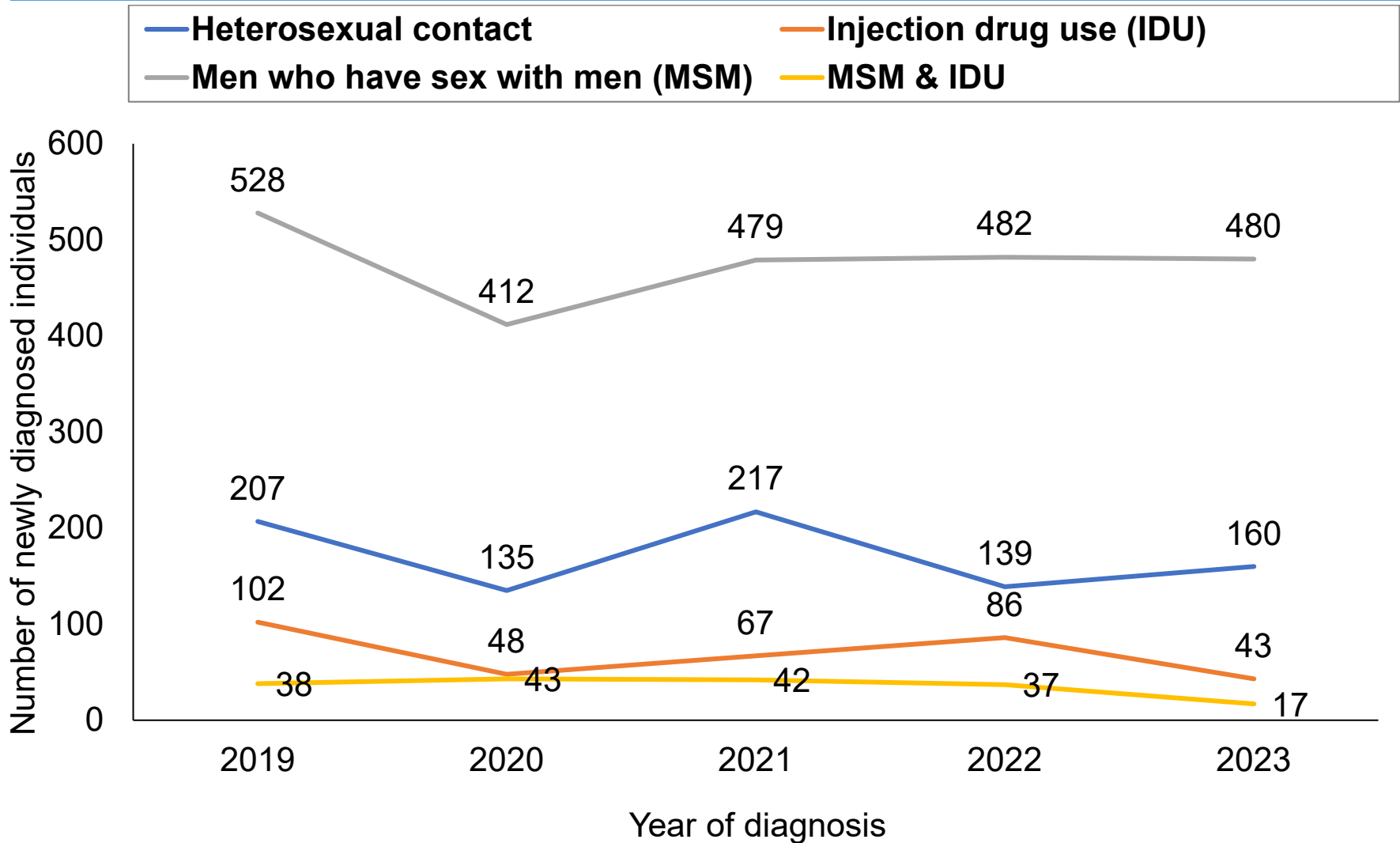
*AI/AN: American Indian or Alaska Native

**NHPI: Native Hawaiian/Pacific Islander

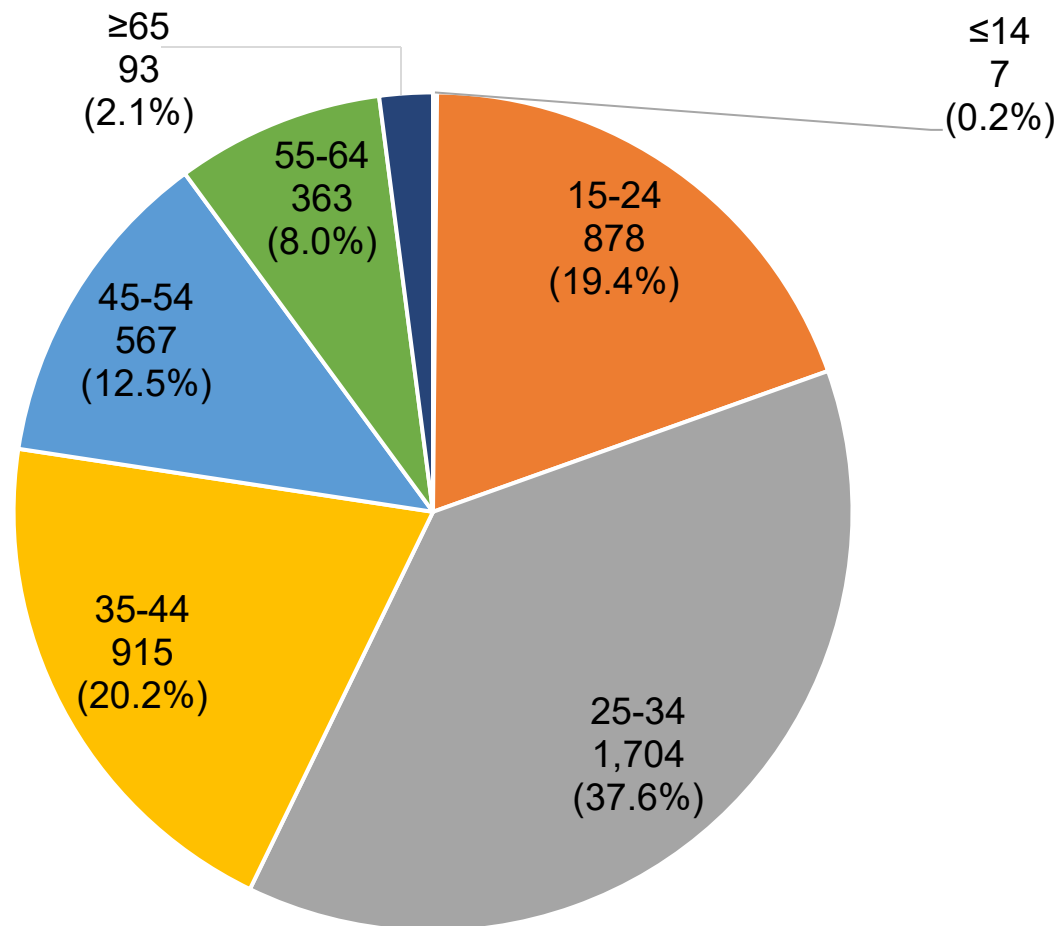
Data source: PA HIV surveillance



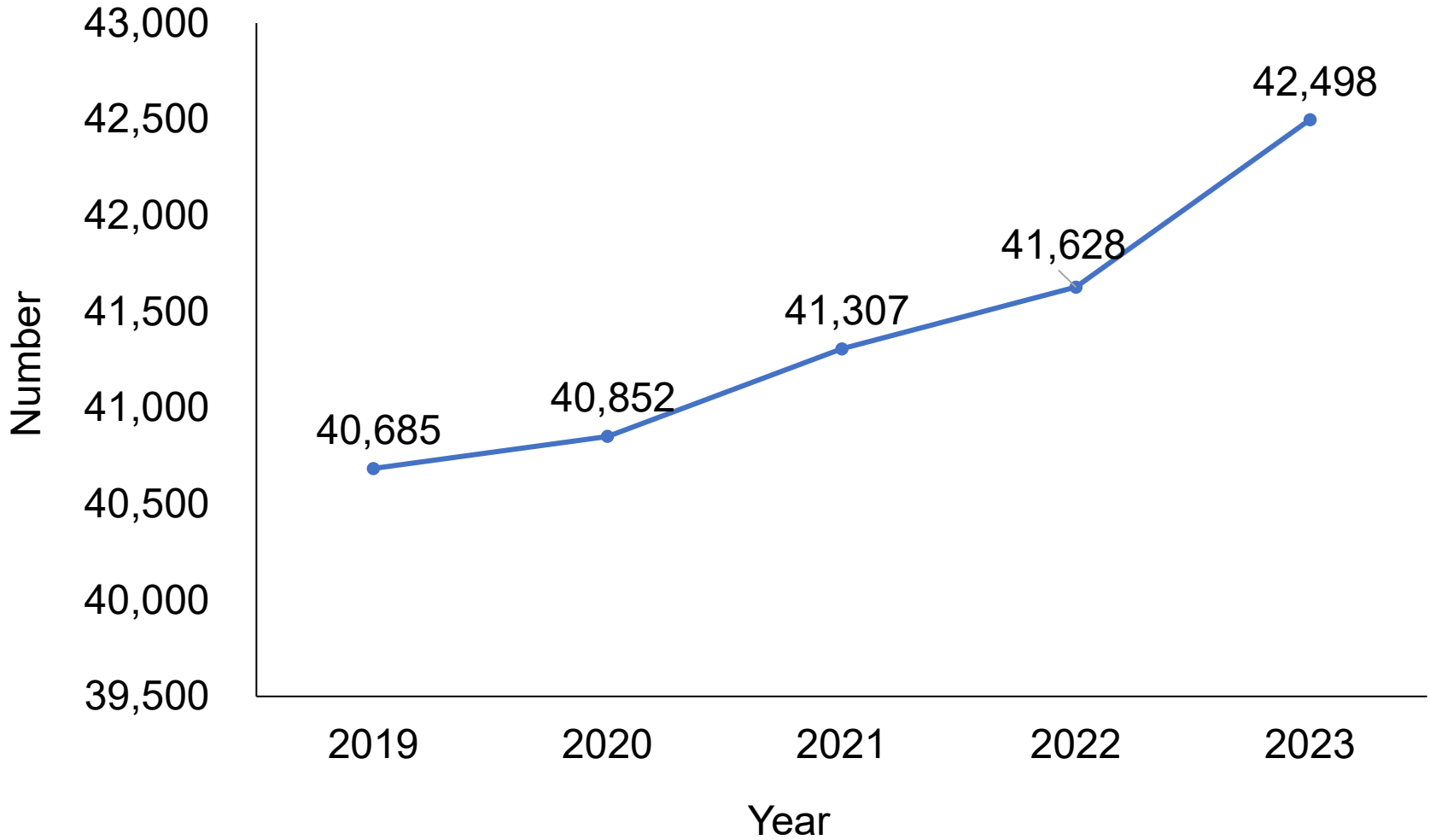
Trends in the Mode of Transmission for People Newly Diagnosed with HIV Disease by Year of Diagnosis in PA, 2019-2023



Percentage of People Newly Diagnosed With HIV Disease by Age Group at Diagnosis in PA, 2019-2023 (N=4,527)



Trends in the Number of PLWH, PA, 2019-2023



Number of PLWH by Selected Characteristics in Pennsylvania, PA, 2023

Selected characteristics	Number	Percent
Total	42,498	100.0
Sex/Gender		
Female	11,569	27.2
Male	30,394	71.5
Transgender	519	1.2
Additional gender identity	16	0.04
Transmission mode		
Heterosexual contact	11,927	28.1
IDU	6,334	14.9
MSM	17,538	41.3
MSM&IDU	1,849	4.4
Other*	4,165	9.8
Pediatric mode**	685	1.6

*Other= No Risk Reported (NRR), No Identified Risk(NIR)

**Pediatric mode=Pediatric mode, Pediatric NRR, Pediatric NIR, and pediatric other

Data source: PA HIV surveillance



Number of PLWH by Selected Characteristics in PA, 2023 (Cont'd)

Selected characteristics	Number	Percent
Race/ethnicity		
AI/AN*	53	0.1
Asian	437	1
Black/African American	19,182	45.1
Hispanic	8,230	19.4
Multiple race	2,050	4.8
NHPI**	23	0.1
White	12,523	29.5
Age at year-end 2023 (years)		
≤12	31	0.1
13-14	14	0.03
15-24	922	2.2
25-34	5,715	13.4
35-44	7,784	18.3
45-54	8,442	19.9
55-64	12,259	28.8
≥65	7,331	17.3

*AI/AN: American Indian or Alaska Native

**NHPI: Native Hawaiian or Other Pacific Islander

Data source: PA HIV surveillance



Pennsylvania
Department of Health

Number of PLWH in RW Subrecipients Region, PA, 2023

Regional subrecipients	Number	Percent
AIDSNET	4,270	10
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-JHF	5,191	12.2
Total	42,498	100

12

Data source: PA HIV surveillance



Number of PLWH by County, PA, 2023



Data source: PA HIV surveillance

Number of PLWH in RW Subrecipients Region by Gender, PA, 2023

Regional subrecipients	Gender								Total No.
	AGI*		Female		Male		Transgender		
	No.	%	No.	%	No.	%	No.	%	
AIDSNET	-	-	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	-	-	252	20.1	996	79.5	-	-	1,253
NE-UVWV	-	-	453	29.0	1,103	70.6	-	-	1,563
NW-PTP	-	-	248	24.7	758	75.3	-	--	1,006
SC-HCCP	-	-	1,491	29.4	3,562	70.2	22	0.4	5,075
SW-JHF	-	-	1,063	20.5	4,080	78.6	48	0.9	5,191
Total	16	0.04	11,569	27.2	30,394	71.5	519	1.2	42,498

*AGI: Additional Gender Identity
 -: Dash indicates cell size of ≤5
 Data source: PA HIV surveillance

Number of PLWH in RW Subrecipients Region by Transmission Mode, PA, 2023

Regional subrecipients	Transmission mode												
	Heterosexual contact		IDU		MSM		MSM&IDU		Other*		Pediatric mode		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
AIDSNET	1,285	30.1	727	17	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	476	38	85	6.8	162	12.9	28	2.2	1,253
NE-UWWV	464	29.7	219	14	579	37	73	4.7	189	12.1	39	2.5	1,563
NW-PTP	250	24.9	127	12.6	402	40	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	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
Total	11,927	28.1	6,334	14.9	17,538	41.3	1,849	4.4	4,165	9.8	685	1.6	42,498

*Other= No Risk Reported (NRR), No Identified Risk(NIR)

**Pediatric mode=Pediatric mode, Pediatric NRR, Pediatric NIR, and pediatric other

Data source: PA HIV surveillance

Number of PLWH in RW Subrecipients Region by Race/Ethnicity, PA, 2023

Regional subrecipient	Race/Ethnicity														
	AI/AN		Asian		Black/African American		Hispanic		Multiple race		NHPI		White		Total
	No.	%	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	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
Total	53	0.1	437	1.0	19,182	45.1	8,230	19.4	2,050	4.8	23	0.1	12,523	29.5	42,498

*AI/AN: American Indian or Alaska Native

**NHPI: Native Hawaiian/Pacific Islander

Data source: PA HIV surveillance



Number of PLWH in RW Subrecipients Region by Age Group, PA, 2023

Age at year end 2023	Regional subrecipients														
	AIDSNET		DHH		NC		NE		NW		SC		SW		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
Total	4,270	10	24,140	56.8	1,253	2.9	1,563	3.7	1,006	2.4	5,075	11.9	5,191	12.2	42,498

Data source: PA HIV surveillance

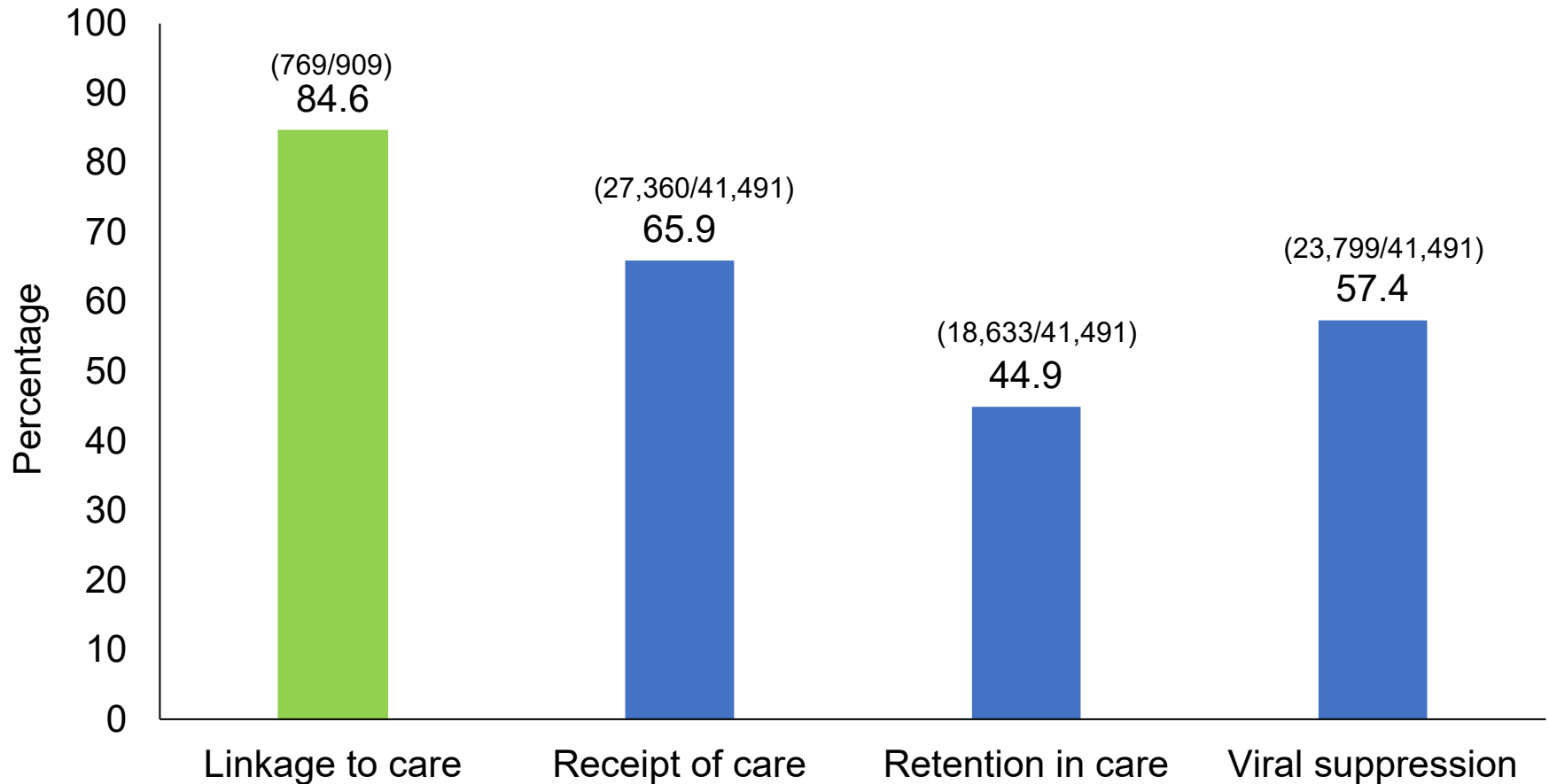


Assessing HIV Care Outcomes, Pa.

Quick notes:

- Monitoring HIV care outcomes using eHARS data is dependent upon complete reporting of HIV-related laboratory results (including CD4+ T-lymphocyte [CD4], viral load, and genotype sequences) to the HIV surveillance program.
- Caution should be used when interpreting data because PADOH just recently implemented laws and regulations that require the reporting of all results.
- Data on HIV care outcomes will be presented up to year 2023.
- This analysis was completed using the Monitoring Care Outcomes SAS program and User Guide prepared by CDC.
- Data for linkage to care is for the year 2023 only.
- 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.

Linkage to Care and the HIV Care Continuum in PA, 2023



Linkage to HIV medical care was measured by documentation of ≥ 1 CD4 or VL or genotype test ≤ 30 days after HIV diagnosis

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 ≥ 2 CD4 or VL test at least 3 months (≤ 91 days) apart in the calendar year.

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

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.

Data source: PA HIV surveillance



Pennsylvania
Department of Health

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

Characteristics	Persons alive by 12/31/2023	Receipt of care		Retention in Care	
	No.	No.	%	No.	%
Sex Assigned at Birth					
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	3.0
Gender					
Man	29,560	19,270	65.2	13,007	44.0
Woman	11,132	7,678	69.0	5,319	47.8
Transgender woman	492	374	76.0	282	57.3
Transgender man	23	12	52.2	10	43.5
Additional gender identity	15	11	73.3	7	46.7
Age at year-end 2022					
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
Race/ethnicity					
American Indian/Alaska Native	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
Native Hawaiian/Other Pacific Islander	22	11	50.0	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
Transmission Category					
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	50.0
Other					
Male	2,288	1,293	56.5	899	39.3
Female	2,022	1,262	62.4	829	41.0
Total	41,491	27,360	65.9	18,633	44.9

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 ≥2 CD4 or VL test at least 3 months (≤91 days) apart in the calendar year.

Data source: PA HIV surveillance



Pennsylvania
Department of Health

HIV Viral Suppression Among Persons Aged ≥13 Years With HIV Infection Diagnosed by 12/31/2022 and live at 12/31/2023, by Selected Characteristics in PA

Characteristics	Persons alive by 12/31/2023		VL of <200 copies/mL	
	No.	%	No.	Among persons alive by 12/31/2023 %
Sex Assigned at Birth				
Male	30,066	72.5	17,101	56.9
Female	11,156	26.9	6,685	59.9
Gender				
Man	29,560	71.2	16,779	56.8
Woman	11,132	26.8	6,674	60.0
Transgender woman	492	1.2	311	63.2
Transgender man	23	0.1	11	47.8
Additional gender identity	15	0.0	11	73.3
Age at year-end 2022				
13-24	962	2.3	591	61.4
25-34	5,791	14.0	3,265	56.4
35-44	7,469	18.0	4,044	54.1
45-54	8,834	21.3	5,056	57.2
>=55	18,435	44.4	10,843	58.8
Race/ethnicity				
American Indian/Alaska Native	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	19.0	4,433	56.2
Native Hawaiian/Other Pacific Islander	22	0.1	11	50.0
White	11,920	28.7	7,122	59.7
Multiracial	2,012	4.8	1,332	66.2
Unknown race	650	1.6	53	8.2
Transmission Category				
MSM	17,015	41.0	10,347	60.8
IDU				
Male	4,009	9.7	1,917	47.8
Female	2,296	5.5	1,309	57.0
MSM & IDU	1,833	4.4	1,009	55.0
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
Total	41,491	100.0	23,799	57.4

*: 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



Unmet Need Framework 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



Summary

- PA ranks 9th in the nation for numbers of newly diagnosed HIV disease in 2022. PA is a high HIV morbidity region.
- The newly diagnosed rate in 2023 was 7 per 100,000 population, and the prevalence at year-end 2023 was 328 per 100,000 population.
- Individuals newly diagnosed with HIV and PLWH are predominantly males, Black/African Americans, and MSM.
- The DHH region accounted for almost 3 out of 5 PLWH in PA.

KFF (2024). The HIV/AIDS Epidemic in the United States: The Basics. <https://www.kff.org/hiv/aids/fact-sheet/the-hiv-aids-epidemic-in-the-united-states-the-basics/>. Retrieved October 18, 2024

Summary, Cont'd

- Transgender men, Native Hawaiian/other Pacific Islander, male IDU had the lowest percentage of PLWH in receipt of care.
- American Indian/Alaska Native had the lowest percentage of PLWH who were retained in care.
- Transgender men, American Indian/Alaska Native, male IDU had the lowest percentage among those who were virally suppressed in 2023.
- 1 in 5 PLWH had an unmet need in the most recent 5-year period.

Questions



Contact Information

HIV/AIDS Surveillance and Epidemiology
Bureau of Epidemiology
Health and Welfare Building, Room 933
625 Forster Street, Harrisburg, PA 17120
Phone: 717-783-0481
Fax: 717-772-6975

For epidemiology data request, please email:

c-hivepi@pa.gov



Appendix A

Linkage to HIV Medical Care

Linkage to HIV medical care after HIV diagnosis is measured for persons aged ≥ 13 years whose HIV infection was diagnosed during the specified year, and who resided in the at the time of diagnosis. The numerator is the number of persons aged ≥ 13 years whose HIV infection was diagnosed during the specified year, and who had ≥ 1 CD4, VL, or HIV-1 genotype tests within ≤ 30 , ≤ 91 , ≤ 182 , and ≤ 365 days of HIV diagnosis. The denominator is the number of persons aged ≥ 13 years whose HIV infection was diagnosed during the specified year.

Receipt of HIV Medical Care

Receipt of any HIV medical care is measured for persons aged ≥ 13 years who resided, as of their most recent known address during the specified year, in the jurisdiction, and who were alive at the end of the specified year. The numerator is the number of persons aged ≥ 13 years with HIV infection diagnosed by the end of the prior year, and who had \geq CD4, VL, or HIV-1 genotype tests in the specified year. The denominator is the number of persons aged ≥ 13 years with HIV diagnosed by the end of the prior year, and who were alive at the end of the specified year.

Retention in HIV medical care is measured for persons aged ≥ 13 years who resided, as of their most recent known address during the specified year, in the jurisdiction, and who were alive at the end of the specified year. The numerator is the number of persons aged ≥ 13 years with HIV infection diagnosed by the end of the prior year, and who had ≥ 2 CD4, VL, or HIV-1 genotype tests at least 3 months (≥ 91 days) apart in the specified year. The denominator is the number of persons aged ≥ 13 years with HIV diagnosed by the end of the prior year, and who were alive at the end of the specified year.



Appendix A cont'd

Viral Suppression

Viral suppression within 6 months (≤ 182 days) of HIV diagnosis is measured for persons aged ≥ 13 years who received a diagnosis of HIV infection in the specified year and resided in the jurisdiction at the time of diagnosis. The numerator is the number of persons aged ≥ 13 years whose HIV infection was diagnosed during the specified year, and who had VL < 200 copies/mL within 6 months (≤ 182 days) of HIV diagnosis. The denominator is the number of persons aged ≥ 13 years whose HIV infection was diagnosed during the specified year.

Viral suppression at most recent test during the specified year is measured for persons aged ≥ 13 years who resided, as of their most recent known address during the specified year, in the jurisdiction, and who were alive at the end of the specified year. The numerator is the number of persons aged ≥ 13 years with HIV infection diagnosed by the end of the prior year, and who had a VL < 200 copies/mL at the most recent test in the specified year. The denominator is the number of persons aged ≥ 13 years with HIV diagnosed by the end of the prior year, and who were alive at the end of the specified year. If multiple viral load tests were performed on the same day and could thus qualify as “most recent,” the viral load with VL result of < 200 copies/mL was selected. If the numerical result was missing or the result was a logarithmic value, the interpretation of the result (e.g., below limit) was used to determine viral suppression.

