Pennsylvania
Department of Health

An Overview of Late HIV Diagnosis in Pennsylvania at Year-end 2024

Monisola Malomo, DVM, MPH
HIV Surveillance and Epidemiology
Bureau of Epidemiology

Contents

Pennsylvania
Department of Health

Quick Note

Data for the years 2020, 2021, and 2022 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).

Definitions

New HIV diagnoses: refer to the number of individuals newly diagnosed with HIV disease within a specific time, typically one year. It is important to note that this number reflects diagnoses, not necessarily the number of new HIV disease. A person diagnosed with HIV may have acquired the virus months or even years prior to the diagnosis.

Late/concurrent diagnosis: A late HIV diagnosis is defined as having AIDS (stage 3) at the time of initial HIV disease diagnosis or being diagnosed with AIDS within 91 days (3 months) of initial diagnosis. Stage 3 (AIDS) classification is based on the first CD4 test performed or documentation of an AIDS-defining condition ≤ 3 months (≤ 91 days) after HIV diagnosis. People receive an AIDS diagnosis when their CD4 cell count drops below 200 cells per milliliter of blood, or they develop certain illnesses sometimes called opportunistic infections.

General Epidemiology Overview of HIV Disease in PA

An Overview of HIV Epidemiology in PA at Year-end 2024

- There has been a downward trend in the number of newly diagnosed HIV disease since the early 1990s with a dip in the year 2020 due to the COVID-19 pandemic.

- A total of 1,171 people were newly diagnosed with HIV disease in 2015 compared to 922 people in 2024.

- This represents a 21.3% decrease in the number of newly diagnosed HIV disease from year 2015 to 2024.

- In the last 5 years from 2020-2024, a total of 4,493 people were newly diagnosed with HIV and reported in PA.

Selected Characteristics of People Newly Diagnosed with HIV Disease in PA, 2020-2024 (N=4,493)

- By sex at birth, the number of newly diagnosed individuals that were females was 957 (21.3%) while 3,536 (78.7%) were males in the five-year period.

- Considering race/ethnicity among newly diagnosed individuals, 12 (0.2%) were AI/AN* and NHPI**, 75 were Asians (1.7%), 2,041 (45.4%) were Black/African American, 952 (21.2%) were Hispanic, 182 (4.1%) were individuals of multiple races, and 1,231 (27.4%) were white.

*AI/AN: American Indian or Alaska Native
**NHPI: Native Hawaiian or Other Pacific Islander

Selected Characteristics of People Newly Diagnosed with HIV Disease in PA, 2020-2024 (N=4,493)

- By mode of transmission, 2,363 (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 806 (17.9%) newly diagnosed HIV disease, 300 (6.7%) were injection drug use (IDU) related, 170 (3.8%) were MSM&IDU, 8 (0.2%) had pediatric mode, and 846 (18.8%) other/unknown transmission risk.

- By age at diagnosis, 9 (0.2%) were aged 0-14 years old, 844 (18.8%) were aged 15 to 24 years old, 1,679 (37.4%) were aged 25 to 34 years old, 981 (21.8%) were aged 35 to 44 years old, 536 (11.9%) were aged 45 to 54 years old, 341 (7.6%) were aged 55 to 64 years old , and 103 (2.3%) were aged 65 years and older.

Late/Concurrent HIV Diagnoses in PA

Number of People Newly Diagnosed with HIV Disease by Year of Diagnosis and Late HIV Diagnosis in PA, 2015-2024
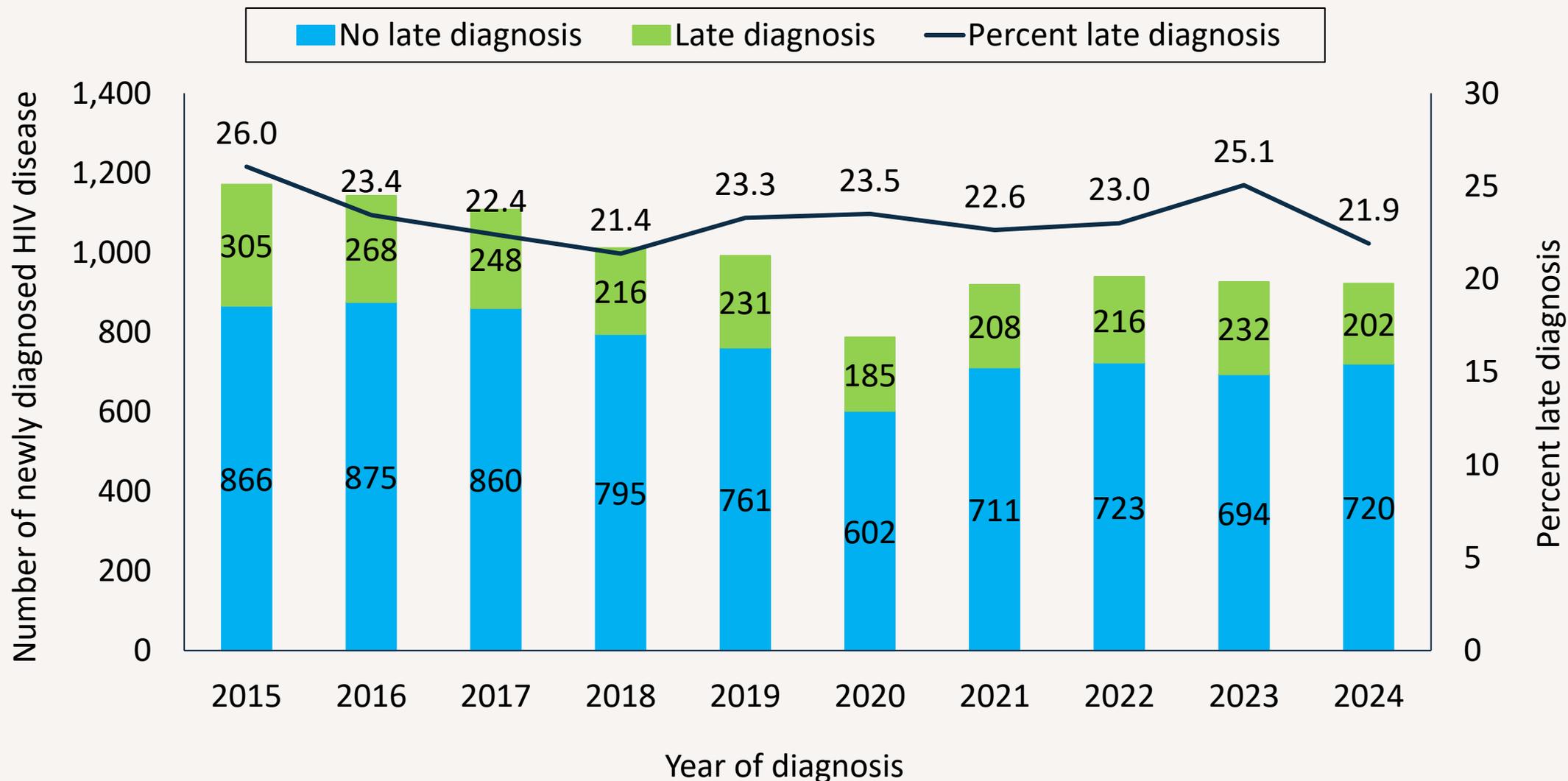
Data source: PA HIV surveillance

10

Number of People Newly Diagnosed with HIV Disease and Late HIV diagnoses by Selected Characteristics in PA, 2020-2024

Selected characteristics	New HIV diagnoses No.	Late diagnoses No.	Percent late diagnoses %
Total	**4,493**	**1,043**	**23.2**
Sex at birth			
Female	957	247	25.8
Male	3,536	796	22.5
HIV mode of transmission			
Heterosexual contact	806	270	33.5
IDU	300	51	17.0
MSM	2,363	449	19.0
MSM & IDU	170	29	17.1
Pediatric mode	8	1	12.5
Other*	846	243	28.7

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

Data source: PA HIV surveillance

Number of People Newly Diagnosed with HIV Disease and Late HIV diagnoses by Selected Characteristics in PA, 2020-2024, Cont'd

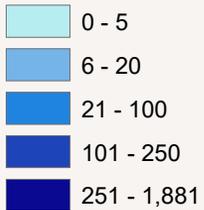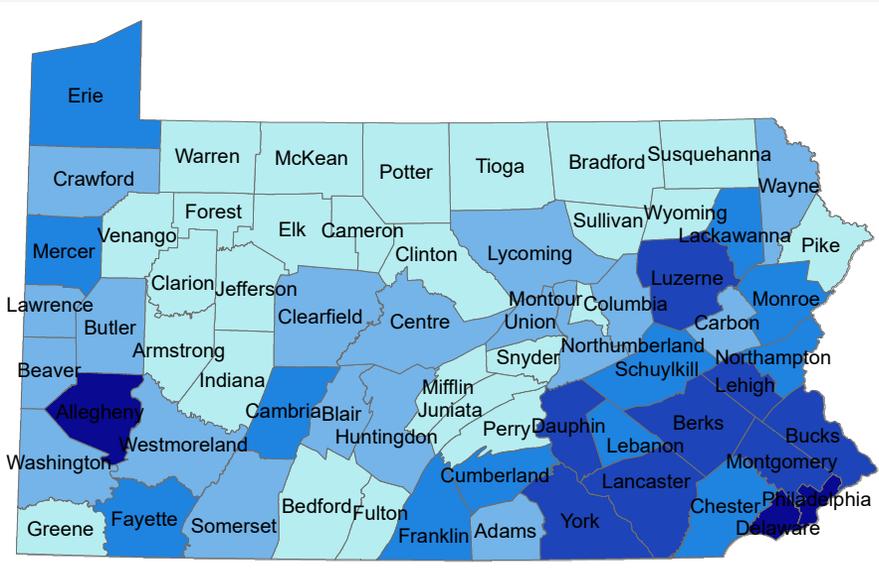| Selected characteristics	New HIV diagnoses	Late diagnoses	Percent late diagnoses
	No.	No.	%
Total	**4,493**	**1,043**	**23.2**
Race/Ethnicity			
AI/AN* & NHPI**	12	4	33.3
Asian	75	20	26.7
Black/African American	2,041	438	21.5
Hispanic	952	215	22.6
Multiple race	182	40	22.0
White	1,231	326	26.5
Age at HIV diagnosis			
0-14	9	2	22.2
15-24	844	88	10.4
25-34	1,679	302	18.0
35-44	981	257	26.2
45-54	536	209	39.0
55-64	341	148	43.4
≥65	103	37	35.9

*AI/AN: American Indian or Alaska Native
**NHPI: Native Hawaiian or Other Pacific Islander
Data source: PA HIV surveillance

Number of People Newly Diagnosed with HIV Disease by County at Diagnosis and Late HIV Diagnosis in PA, 2020-2024

Total HIV diagnosis

Number of late diagnosis

Percent late diagnosis

Total HIV diagnosis legend:
- 0 - 5
- 6 - 20
- 21 - 100
- 101 - 250
- 251 - 1,881

Number of late diagnosis legend:
- 0 - 5
- 6 - 20
- 21 - 100
- 101 - 250
- 251 - 346

Percent late diagnosis legend:
- 0%
- 0.1% - 23.1%
- 23.2% - 36.8%
- 36.9% - 66.7%
- 66.8% - 100%
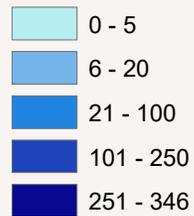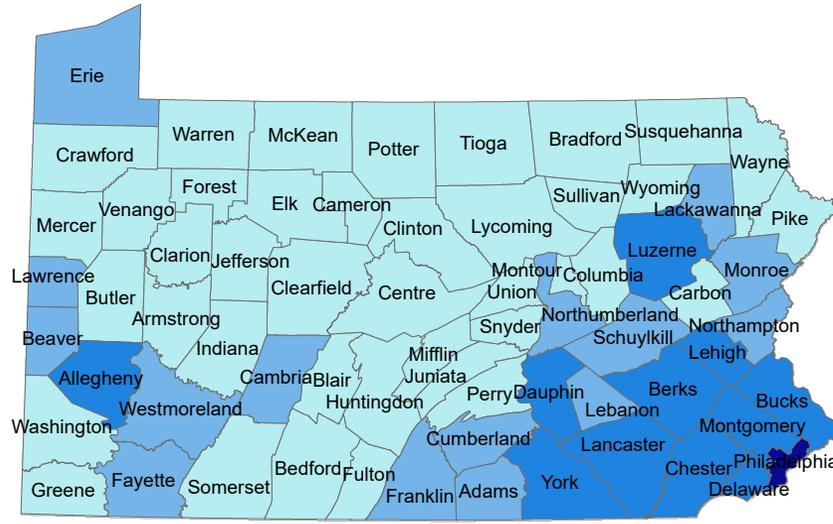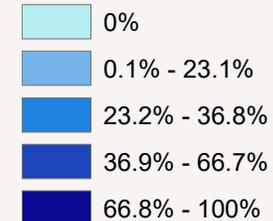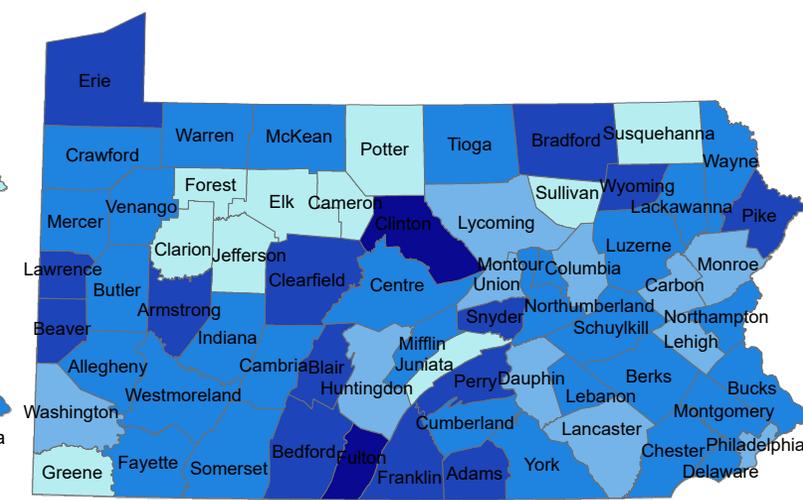
Data source: PA HIV surveillance

Newly Diagnosed HIV Disease and Late HIV Diagnoses in the Aging Population (≥50 years of age) in PA

Selected Characteristics of People Newly Diagnosed with HIV Disease Aged 50 years and Older in PA, 2020-2024 (N=698)

- Out of the 4,493 people were newly diagnosed and reported in PA from 2020 to 2024, a total of 698 (15.5%) were aged 50 years and older at the time of diagnosis.

- Females accounted for 32.8% (229/698) and males were 67.2% (469/698) of people diagnosed with HIV aged 50 years and older at the time of diagnosis.

- By race/ethnicity, 1.6% (11/698) of all newly diagnosed HIV individuals in the five-year period were AI/AN and Asian, 44.7% (312/698) are Blacks/African Americans, 15.5% (108/698) were Hispanic, 2% (14/698) were of multiple races, and 36.2% (253/698) were white.

- By mode of transmission, 32.8% (229/698) of all newly diagnosed HIV individuals in the five-year period aged 50 years and older were men who have sex with men (MSM). Heterosexual contact accounted for 26.1% (182/698), 6.6% (46/698) were injection drug use (IDU) related, 2.7% (19/698) were MSM&IDU, and 31.8% (222/698) had other/unknown transmission risk.

Selected Characteristics of Late/Concurrent Diagnoses Among People Aged 50 years and Older in PA, 2020-2024 (N=286)

- A total of 1,043 people had late/concurrent HIV diagnosis and those aged 50 years and older accounted for 27.4% (286/1,043).

- Out of the 698 people aged 50 years and older at the time of diagnoses reported in PA from 2020 to 2024, a total of 286 (41%) were late/concurrent diagnosis.

- Females accounted for 32.5% (93/286) and males were 67.5% (193/286) of the late diagnoses.

- By race/ethnicity, 3.5% (10/286) Asian and individuals of multiple races, 43.7% (125/286) are Blacks/African Americans, 16.1% (46/286) were Hispanic, and 36.7% (105/286) were white.

- By mode of transmission, 30.1% (86/286) were men who have sex with men (MSM). Heterosexual contact accounted for 28.7% (82/286), 4.9% (14/286) were injection drug use (IDU) related, 3.1% (9/286) were MSM&IDU, and 33.2% (95/286) had other/unknown transmission risk.

Late Diagnosis Among People Aging With HIV in PA, 2020-2024

Year of diagnosis	Age at diagnosis	New diagnoses No.	Late diagnoses No.	Percent late diagnoses %
	≤49	649	128	19.7
2020	≥50	138	57	41.3
	≤49	786	144	18.3
2021	≥50	133	64	48.1
	≤49	801	160	20.0
2022	≥50	138	56	40.6
	≤49	779	173	22.2
2023	≥50	147	59	40.1
	≤49	780	152	19.5
2024	≥50	142	50	35.2

Data source: PA HIV surveillance

Late Diagnosis Among People Aging With HIV by Sex in PA, 2020-2024

Year of diagnosis	Birth sex	Age at diagnosis	Total diagnosed No.	Late diagnoses No.	Percent late diagnoses %
2020	Female	≤49	120	23	19.2
	Male		529	105	19.8
	Female	≥50	43	18	41.9
	Male		95	39	41.1
2021	Female	≤49	154	34	22.1
	Male		632	110	17.4
	Female	≥50	39	21	53.8
	Male		94	43	45.7
2022	Female	≤49	151	29	19.2
	Male		650	131	20.2
	Female	≥50	44	17	38.6
	Male		94	39	41.5
2023	Female	≤49	144	36	25.0
	Male		635	137	21.6
	Female	≥50	52	20	38.5
	Male		95	39	41.1
2024	Female	≤49	159	32	20.1
	Male		621	120	19.3
	Female	≥50	51	17	33.3
	Male		91	33	36.3

Data source: PA HIV surveillance

Late Diagnosis Among People Aging With HIV by Race/Ethnicity in PA, 2020-2024

Year of diagnosis	Age at diagnosis	Race/ethnicity	Total diagnosed No.	Late diagnoses No.	Percent late diagnoses %
	≤49	AI/AN	-	-	-
		Asian	6	3	50
		Black/African American	320	53	16.6
		Hispanic	115	19	16.5
		Multiple race	33	6	18.2
		NHPI	-	-	-
		White	171	46	26.9
	≥50	AI/AN	-	-	-
		Asian	-	-	-
		Black/African American	54	22	40.7
		Hispanic	24	7	29.2
		Multiple race	-	-	-
		NHPI	-	-	-
2020		White	55	27	49.1
	≤49	AI/AN	-	-	-
		Asian	7	1	14.3
		Black/African American	357	64	17.9
		Hispanic	160	34	21.3
		Multiple race	41	6	14.6
		NHPI	-	-	-
		White	219	38	17.4
	≥50	AI/AN	-	-	-
		Asian	-	-	-
		Black/African American	64	35	54.7
		Hispanic	14	6	42.9
		Multiple race	-	-	-
		NHPI	-	-	-
2021		White	48	20	41.7

*AI/AN: American Indian or Alaska Native
**NHPI: Native Hawaiian or Other Pacific Islander
Data source: PA HIV surveillance

19

Late Diagnosis Among People Aging With HIV by Race/Ethnicity in PA, 2020-2024, Cont'd

| Year of diagnosis	Age at diagnosis	Race/ethnicity	Total diagnosed No.	Late diagnoses No.	Percent late diagnoses %
	≤49	AI/AN	-	-	-
		Asian	13	4	30.8
		Black/African American	331	68	20.5
		Hispanic	186	37	19.9
		Multiple race	42	7	16.7
		NHPI	-	-	-
		White	226	42	18.6
	≥50	AI/AN	-	-	-
		Asian	-	-	-
		Black/African American	63	25	39.7
		Hispanic	20	5	25
		Multiple race	-	-	-
		NHPI	-	-	-
2022		White	52	25	48.1
	≤49	AI/AN	-	-	-
		Asian	20	2	10
		Black/African American	345	70	20.3
		Hispanic	200	43	21.5
		Multiple race	22	6	27.3
		NHPI	-	-	-
		White	191	52	27.2
	≥50	AI/AN	-	-	-
		Asian	-	-	-
		Black/African American	67	21	31.3
		Hispanic	25	16	64
		Multiple race	-	-	-
		NHPI	-	-	-
2023		White	51	19	37.3

*AI/AN: American Indian or Alaska Native
**NHPI: Native Hawaiian or Other Pacific Islander
Data source: PA HIV surveillance

Late Diagnosis Among People Aging With HIV by Race/Ethnicity in PA, 2020-2024, Cont'd

Year of diagnosis	Age at diagnosis	Race/ethnicity	Total diagnosed No.	Late diagnoses No.	Percent late diagnoses %
	≤49	AI/AN	-	-	-
		Asian	20	6	30
		Black/African American	376	58	15.4
		Hispanic	183	36	19.7
		Multiple race	30	9	30
		NHPI	-	-	-
		White	171	43	25.1
	≥50	AI/AN	-	-	-
		Asian	-	-	-
		Black/African American	64	22	34.4
		Hispanic	25	12	48
		Multiple race	-	-	-
		NHPI	-	-	-
2024		White	47	14	29.8

Number of Newly diagnosed HIV diseases by Age at the County Level in PA, 2020-2024

Total HIV diagnosis

Age 0-49 at diagnosis

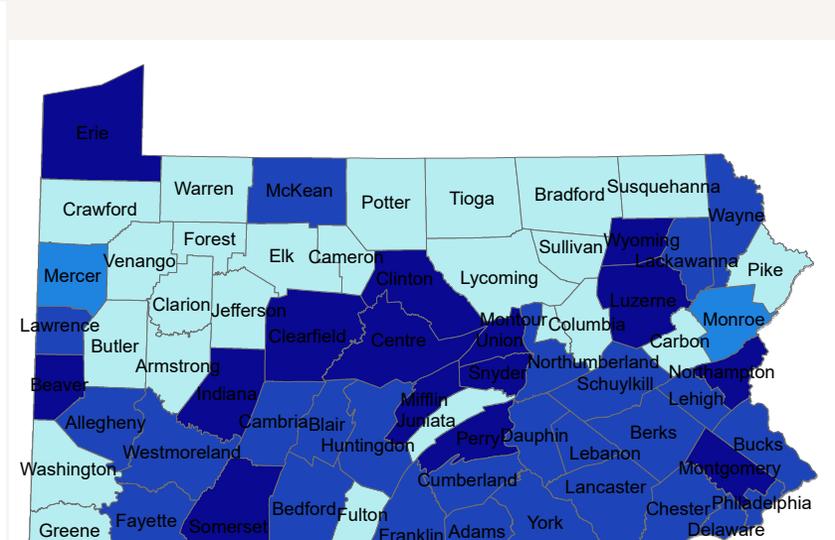Age 50+ at diagnosis
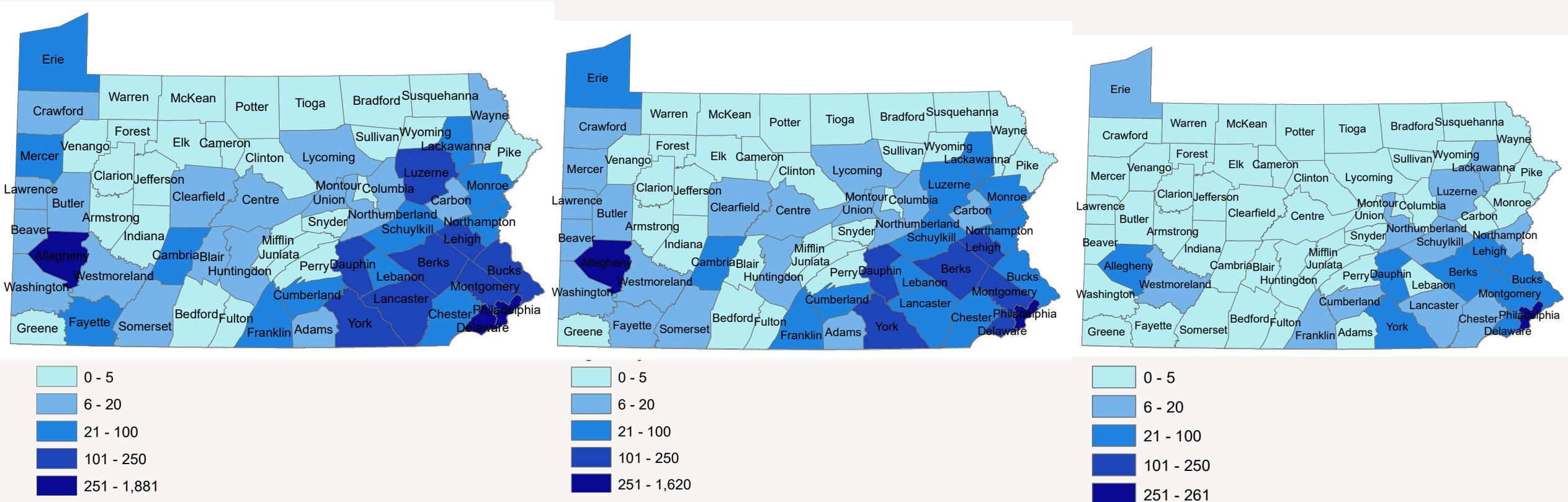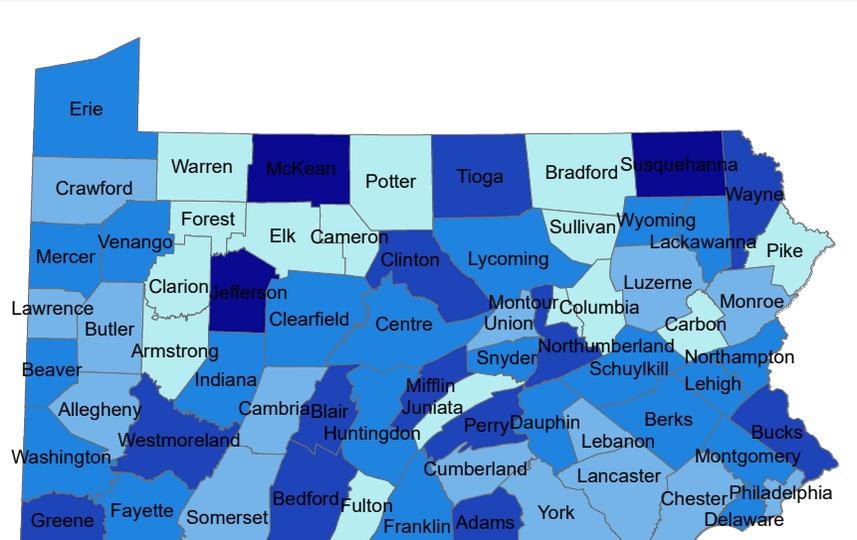
Data source: PA HIV surveillance

Percent of Late Diagnosis Among People Aged 50 and Older at the County Level in PA, 2020-2024

Number of 50+ at diagnosis

Percentage of 50+ at diagnosis

Percent late diagnosis among aged 50+

Legend (Number):
- 0 - 5
- 6 - 20
- 21 - 100
- 101 - 250
- 251 - 261

Legend (Percentage):
- 0% - 5%
- 6% - 15%
- 16% - 25%
- 26% - 50%
- 51% - 100%

Legend (Percent late diagnosis):
- 0% - 5%
- 6% - 15%
- 16% - 25%
- 26% - 50%
- 51% - 100%

Data source: PA HIV surveillance

Summary

Summary

- About 1 in 5 individuals newly diagnosed with HIV in PA had a late diagnosis.
- Females and those who acquired HIV through heterosexual contact had a higher proportion of late diagnosis compared to males or MSM.
- Asians and individuals aged 55-64 at the time of diagnosis had a higher proportion of late diagnosis. So many factors including access to care, behavioral/social factors may be responsible for the proportions and differences observed.
- 19.9% of those aged 49 years old or less had a late HIV diagnosis compared to 41% among individuals aged 50 years and older.
- Counties that show that the proportion of those diagnosed in these counties during the 5-year period with late diagnosis at 23.2% or higher cuts across most counties, especially the rural counties bearing in mind that rural counties have smaller numbers of new diagnoses.
- Late diagnoses represent multiple missed opportunities to diagnose and treat HIV disease and to prevent transmission. Late HIV diagnosis is associated with poor outcomes, an increased risk of ongoing HIV transmission and high healthcare costs.

Recommendations

- Routine Screening

- Opt-Out Testing

- Targeted Testing

- Education and awareness

Questions?

Contact Information

HIV/AIDS Surveillance and Epidemiology
Bureau of Epidemiology
Health and Human Services 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