HIV Surveillance Annual Report, 2022

New York City Department of Health and Mental Hygiene

Executive Summary

While New York City (NYC) continues to make headway toward its ending the HIV epidemic goals, progress most recently has slowed compared with previous years. This is largely due to the widespread impacts of the COVID-19 pandemic on health care access and utilization, which were most pronounced in 2020 and 2021 but persisted into 2022. In 2022, 1,624 people were newly diagnosed with HIV in NYC — a decrease of 1.3% from 2021. The relatively stable number of new HIV diagnoses from 2021 to 2022, compared with the marked one-year declines seen in previous recent years (for example, a 7.5% decrease in new HIV diagnoses from 2018 to 2019), may reflect ongoing "catch-up" of HIV diagnoses not made as readily during the height of the COVID-19 pandemic. Persistent inequities underscore the need to increase access to HIV prevention, testing, care and treatment — particularly among Black and Latino/Hispanic communities — and to accelerate efforts to improve HIV-related outcomes for all New Yorkers.

Key takeaways from the HIV Surveillance Annual Report, 2022 include:

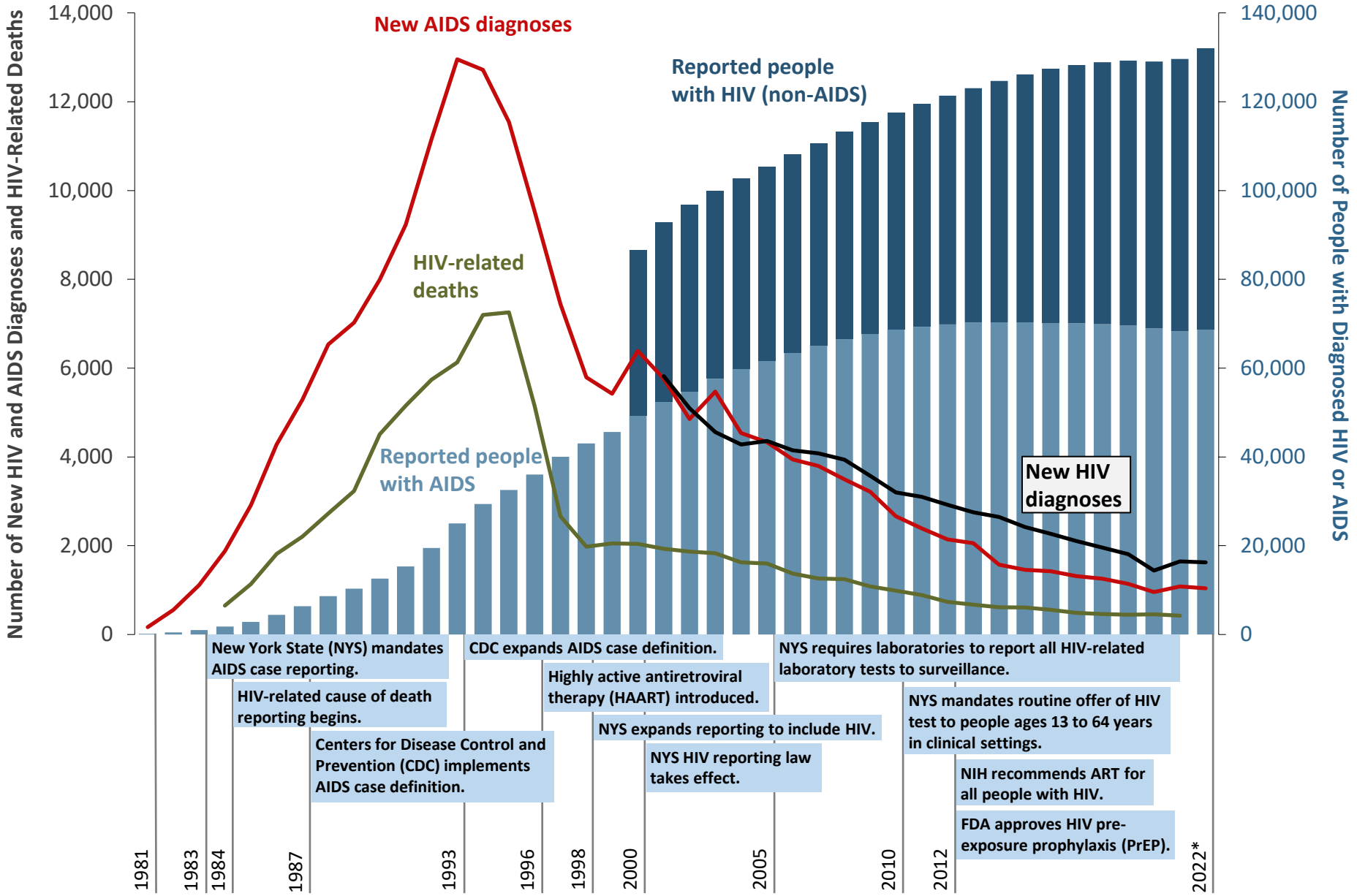
- 1,624 people were newly diagnosed with HIV in 2022.
  - Forty-three percent (43%) of newly diagnosed people were Black and 40% were Latino/Hispanic.
  - Seventy-nine percent (79%) of newly diagnosed people were men, 18% were women, 3% were transgender women, and less than 1% were transgender men.
  - Forty-nine percent (49%) of newly diagnosed people overall and 62% among men were among men who have sex with men.
  - Sixty-six percent (66%) of newly diagnosed people were ages 20 to 39 and 16% were age 50 or older.
  - Forty-one percent (41%) of newly diagnosed people lived in high or very high poverty ZIP codes at the time of diagnosis.
- Estimated HIV incidence in 2022 remained relatively stable at 1,241 new infections, similar to 2020 and 2021 estimates.
- Progress on improving HIV care outcomes has slowed, with relatively flat five-year trends in linkage to care within 30 days of diagnosis, viral suppression within 90 days of diagnosis and viral suppression overall.
- 1,603 people with HIV died in 2022.
  - The annual death rate among people with HIV (11.1 deaths per 1,000 people with HIV) was higher than the citywide all-cause death rate (7.9 deaths per 1,000 population).
- Eight percent (8%) of deaths among people with HIV were due to COVID-19 in 2021.

The data contained in the NYC HIV surveillance system come from two principal sources: (1) HIV-related laboratory tests ordered by NYC-based providers, which are reported electronically by laboratories to the surveillance system, and (2) surveillance investigations led by the NYC Department of Health and Mental Hygiene (NYC Health Department) to confirm the date and fact of diagnosis and determine whether the report represents a new or established diagnosis.

As in previous years, HIV surveillance data assist NYC in planning programs that increase the number of people who know their HIV status; increase access to HIV prevention, testing, care and treatment; and sustain and improve health outcomes for people with HIV. These data can aid our partners in prevention, care and treatment to address the challenges they face in providing services that also mitigate racism, sexism, homophobia, transphobia and other social and structural factors that contribute to disparate HIV-related health outcomes in NYC.

Contents

Figure 1. History of the HIV epidemic in NYC from 1981 to 2022



FDA=Food and Drug Administration; NIH=National Institutes of Health

***Data on 2022 deaths are incomplete.**

Figure 2. Trends in HIV diagnoses in NYC[1] from 2001 to 2022

HIV Diagnoses	2001	2022	Average Annual Percent Change[2]
Total	5,817	1,624	-5.88
Gender			
Men	3,844	1,280	-5.02
Women	1,906	289	-9.12
Transgender	67	55	-0.20
Race or Ethnicity			
Black	3,012	695	-6.98
Latino/Hispanic	1,769	651	-4.59
White	896	196	-6.69
Asian/Pacific Islander	123	64	-1.03
Native American	12	3	-8.45
Age Group (Years)			
0-12	83	3	-18.57
13-19	213	49	-6.27
20-29	1,143	530	-2.99
30-39	2,048	540	-6.96
40-49	1,500	242	-8.88
50-59	617	162	-5.60
60+	213	98	-3.34

HIV Diagnoses	2001	2022	Average Annual Percent Change[2]
Borough of Residence			
Bronx	1,262	363	-5.86
Brooklyn	1,566	452	-5.60
Manhattan	1,465	310	-7.48
Queens	709	298	-4.23
Staten Island	100	33	-4.44
Outside of NYC	597	147	-6.81
Transmission Category			
Men who have sex with men (MSM)	1,782	797	-3.21
Injection drug use history (IDU)	880	15	-17.57
MSM-IDU	154	8	-8.29
Heterosexual contact	1,548	231	-7.89
Transgender people with sexual contact	55	50	0.31
Perinatal	80	1	-18.87

The number of new HIV diagnoses reported in NYC from 2001 to 2022 decreased overall and among people of all genders, race or ethnicities, ages at diagnosis and boroughs of residence, and among all transmission categories except for transgender people with sexual contact.

[1]For more information on the categories (e.g., Gender, Age Group) please see footnotes 1-10 in Table 1.
[2]The average annual change is the geometric mean over the specified time period.

Table 1. HIV/AIDS diagnoses and deaths from January 1, 2022, to December 31, 2022; and people diagnosed with HIV, reported in NYC and presumed to be living as of December 31, 2022

	HIV Diagnoses[1]							AIDS Diagnoses[3]		People with HIV as of Dec. 31, 2022		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Total	1,624	100.0	1,331	100.0	293	100.0	18.0	1,038	100.0	132,003	100.0	1,603	100.0
Gender[5]													
Men	1,280	78.8	1,061	79.7	219	74.7	17.1	764	73.6	96,472	73.1	1,128	70.4
Women	289	17.8	220	16.5	69	23.5	23.9	246	23.7	33,047	25.0	443	27.6
Transgender women	52	3.2	47	3.5	5	1.7	9.6	28	2.7	2,429	1.8	32	2.0
Transgender men	3	0.2	3	0.2	0	0.0	0.0	0	0.0	55	0.0	0	0.0
Race or Ethnicity[6]													
Black	695	42.8	588	44.2	107	36.5	15.4	474	45.7	56,232	42.6	837	52.2
Latino/Hispanic	651	40.1	527	39.6	124	42.3	19.0	401	38.6	44,584	33.8	545	34.0
White	196	12.1	156	11.7	40	13.7	20.4	119	11.5	26,437	20.0	190	11.9
Asian/Pacific Islander	64	3.9	44	3.3	20	6.8	31.3	35	3.4	3,529	2.7	16	1.0
Native American	3	0.2	2	0.2	1	0.3	33.3	4	0.4	303	0.2	4	0.2
Multiracial	15	0.9	14	1.1	1	0.3	6.7	5	0.5	612	0.5	11	0.7
Unknown	0	0.0	0	0.0	0	0.0	0.0	0	0.0	306	0.2	0	0.0
Age Group (Years)[7]													
0-12	3	0.2	3	0.2	0	0.0	0.0	0	0.0	37	0.0	0	0.0
13-19	49	3.0	45	3.4	4	1.4	8.2	9	0.9	236	0.2	0	0.0
20-29	530	32.6	462	34.7	68	23.2	12.8	156	15.0	6,519	4.9	30	1.9
30-39	540	33.3	443	33.3	97	33.1	18.0	291	28.0	22,002	16.7	151	9.4
40-49	242	14.9	187	14.0	55	18.8	22.7	194	18.7	22,733	17.2	169	10.5
50-59	162	10.0	121	9.1	41	14.0	25.3	203	19.6	36,071	27.3	406	25.3
60+	98	6.0	70	5.3	28	9.6	28.6	185	17.8	44,405	33.6	847	52.8

[1]Excludes people known to have been diagnosed outside of NYC. [2]HIV diagnosed concurrently with AIDS (within 31 days of HIV diagnosis). Row percentage is percentage of HIV diagnoses that were concurrent with AIDS diagnoses. [3]Includes concurrent HIV/AIDS diagnoses. [4]Includes deaths from any cause in people with HIV. Death data are incomplete. [5]For information on gender identity, see Technical Notes. [6]For information on race or ethnicity, see Technical Notes. [7]For HIV and AIDS diagnoses, age at diagnosis; for people with HIV, age at the end of the calendar year; for deaths, age at death.

Table 1 (Continued). HIV/AIDS diagnoses and deaths from January 1, 2022, to December 31, 2022; and people diagnosed with HIV, reported in NYC and presumed to be living as of December 31, 2022

	HIV Diagnoses[1]							AIDS Diagnoses[3]		People with HIV as of Dec. 31, 2022		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Borough of Residence[8]													
Bronx	363	22.4	304	22.8	59	20.1	16.3	281	27.1	31,254	23.7	562	35.1
Brooklyn	452	27.8	372	27.9	80	27.3	17.7	251	24.2	31,149	23.6	409	25.5
Manhattan	310	19.1	253	19.0	57	19.5	18.4	213	20.5	32,957	25.0	319	19.9
Queens	298	18.3	230	17.3	68	23.2	22.8	174	16.8	19,779	15.0	151	9.4
Staten Island	33	2.0	26	2.0	7	2.4	21.2	17	1.6	2,542	1.9	41	2.6
Outside of NYC	147	9.1	125	9.4	22	7.5	15.0	95	9.2	14,136	10.7	78	4.9
Unknown	21	1.3	21	1.6	0	0.0	0.0	7	0.7	186	0.1	43	2.7
Area-Based Poverty Level[9]													
Low poverty	194	11.9	152	11.4	42	14.3	21.6	127	12.2	19,158	14.5	143	8.9
Medium poverty	598	36.8	472	35.5	126	43.0	21.1	382	36.8	44,795	33.9	456	28.4
High poverty	357	22.0	302	22.7	55	18.8	15.4	187	18.0	26,987	20.4	394	24.6
Very high poverty	304	18.7	256	19.2	48	16.4	15.8	240	23.1	25,504	19.3	485	30.3
Unavailable	171	10.5	149	11.2	22	7.5	12.9	102	9.8	15,559	11.8	125	7.8

[8]For HIV and AIDS diagnoses, residence at diagnosis; for people with HIV and deaths, residence based on most recent record available.
[9]Area-based poverty level is determined by the proportion of residents living below the federal poverty level (FPL) in the NYC ZIP code of residence at diagnosis or most recent residence (see footnote 8). Low poverty=<10% below FPL; Medium poverty=10 to <20% below FPL; High poverty=20 to <30% below FPL; Very high poverty=≥30% below FPL.

Table 1 (Continued). HIV/AIDS diagnoses and deaths from January 1, 2022, to December 31, 2022; and people diagnosed with HIV, reported in NYC and presumed to be living as of December 31, 2022

	HIV Diagnoses[1]							AIDS Diagnoses[3]		People with HIV as of Dec. 31, 2022		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Transmission Category[10]													
MSM	797	49.1	670	50.3	127	43.3	15.9	418	40.3	60,247	45.6	446	27.8
Injection drug use history	15	0.9	13	1.0	2	0.7	13.3	66	6.4	13,917	10.5	373	23.3
MSM-IDU	8	0.5	7	0.5	1	0.3	12.5	21	2.0	3,432	2.6	82	5.1
Heterosexual contact	231	14.2	180	13.5	51	17.4	22.1	208	20.0	26,904	20.4	382	23.8
TG-SC	50	3.1	45	3.4	5	1.7	10.0	26	2.5	2,185	1.7	28	1.7
Perinatal	1	0.1	1	0.1	0	0.0	0.0	13	1.3	2,517	1.9	26	1.6
Other	1	0.1	1	0.1	0	0.0	0.0	0	0.0	192	0.1	2	0.1
Unknown	521	32.1	414	31.1	107	36.5	20.5	286	27.6	22,609	17.1	264	16.5

MSM=Men who have sex with men; MSM-IDU=Men who have sex with men and inject drugs; TG-SC=Transgender people with sexual contact

[10]"Heterosexual contact" includes people who had heterosexual sex with a person they know to have HIV, a person who has injected drugs or a person who has received blood products. For women only, it also includes history of sex work, multiple sex partners, sexually transmitted infection, crack or cocaine use, sex with a bisexual man, probable heterosexual transmission as noted in a medical chart or sex with a man and no injection drug use history. "Transgender people with sexual contact" includes people identified as transgender at any time by self-report, a medical provider or chart review, or ongoing data collection who have reported sexual contact and no injection drug use history. "Other" includes people who received treatment for hemophilia, people who received a transfusion or transplant, people with other health care-associated transmission and children with nonperinatal transmission category.

Table 2. HIV/AIDS diagnoses and deaths among men[5,11] from January 1, 2022, to December 31, 2022; and men diagnosed with HIV, reported in NYC and presumed to be living as of December 31, 2022

	HIV Diagnoses[1]							AIDS Diagnoses[3]		People with HIV as of Dec. 31, 2022		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Total	1,283	100.0	1,064	100.0	219	100.0	17.1	764	100.0	96,527	100.0	1,128	100.0
Race or Ethnicity[6]													
Black	523	40.8	447	42.0	76	34.7	14.5	320	41.9	35,889	37.2	542	48.0
Latino/Hispanic	536	41.8	438	41.2	98	44.7	18.3	312	40.8	32,865	34.0	390	34.6
White	157	12.2	129	12.1	28	12.8	17.8	99	13.0	23,853	24.7	169	15.0
Asian/Pacific Islander	55	4.3	38	3.6	17	7.8	30.9	29	3.8	2,975	3.1	13	1.2
Native American	2	0.2	2	0.2	0	0.0	0.0	3	0.4	233	0.2	4	0.4
Multiracial	10	0.8	10	0.9	0	0.0	0.0	1	0.1	476	0.5	10	0.9
Unknown	0	0.0	0	0.0	0	0.0	0.0	0	0.0	236	0.2	0	0.0
Age Group (Years)[7]													
0-12	2	0.2	2	0.2	0	0.0	0.0	0	0.0	15	0.0	0	0.0
13-19	38	3.0	36	3.4	2	0.9	5.3	5	0.7	142	0.1	0	0.0
20-29	447	34.8	391	36.7	56	25.6	12.5	123	16.1	4,975	5.2	24	2.1
30-39	456	35.5	377	35.4	79	36.1	17.3	234	30.6	17,776	18.4	105	9.3
40-49	172	13.4	130	12.2	42	19.2	24.4	137	17.9	16,506	17.1	110	9.8
50-59	107	8.3	81	7.6	26	11.9	24.3	148	19.4	25,524	26.4	284	25.2
60+	61	4.8	47	4.4	14	6.4	23.0	117	15.3	31,589	32.7	605	53.6

[1-7]Footnotes appear below Table 1.
[11]Includes transgender men. For detailed breakdown of HIV among transgender people, see Table 4.

Table 2 (Continued). HIV/AIDS diagnoses and deaths among men[5,11] from January 1, 2022, to December 31, 2022; and men diagnosed with HIV, reported in NYC and presumed to be living as of December 31, 2022

	HIV Diagnoses[1]							AIDS Diagnoses[3]		People with HIV as of Dec. 31, 2022		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Borough of Residence[8]													
Bronx	270	21.0	229	21.5	41	18.7	15.2	198	25.9	19,646	20.4	390	34.6
Brooklyn	355	27.7	297	27.9	58	26.5	16.3	180	23.6	21,137	21.9	260	23.0
Manhattan	254	19.8	208	19.5	46	21.0	18.1	170	22.3	27,954	29.0	241	21.4
Queens	232	18.1	185	17.4	47	21.5	20.3	131	17.1	14,660	15.2	111	9.8
Staten Island	27	2.1	21	2.0	6	2.7	22.2	10	1.3	1,653	1.7	26	2.3
Outside of NYC	129	10.1	108	10.2	21	9.6	16.3	72	9.4	11,328	11.7	64	5.7
Unknown	16	1.2	16	1.5	0	0.0	0.0	3	0.4	149	0.2	36	3.2
Area-Based Poverty Level[9]													
Low poverty	160	12.5	128	12.0	32	14.6	20.0	100	13.1	15,579	16.1	110	9.8
Medium poverty	452	35.2	365	34.3	87	39.7	19.2	275	36.0	33,610	34.8	327	29.0
High poverty	292	22.8	244	22.9	48	21.9	16.4	144	18.8	18,603	19.3	269	23.8
Very high poverty	231	18.0	200	18.8	31	14.2	13.4	170	22.3	16,296	16.9	321	28.5
Unavailable	148	11.5	127	11.9	21	9.6	14.2	75	9.8	12,439	12.9	101	9.0
Transmission Category[10]													
MSM	797	62.1	670	63.0	127	58.0	15.9	418	54.7	60,247	62.4	446	39.5
Injection drug use history	12	0.9	10	0.9	2	0.9	16.7	45	5.9	8,937	9.3	248	22.0
MSM-IDU	8	0.6	7	0.7	1	0.5	12.5	21	2.7	3,432	3.6	82	7.3
Heterosexual contact	47	3.7	33	3.1	14	6.4	29.8	68	8.9	6,877	7.1	133	11.8
TG-SC	1	0.1	1	0.1	0	0.0	0.0	0	0.0	35	0.0	0	0.0
Perinatal	1	0.1	1	0.1	0	0.0	0.0	4	0.5	1,218	1.3	17	1.5
Other	1	0.1	1	0.1	0	0.0	0.0	0	0.0	111	0.1	0	0.0
Unknown	416	32.4	341	32.0	75	34.2	18.0	208	27.2	15,670	16.2	202	17.9

MSM=Men who have sex with men; MSM-IDU=Men who have sex with men and inject drugs; TG-SC=Transgender people with sexual contact

[1-5,8-10]Footnotes appear below Table 1.

[11]Includes transgender men. For detailed breakdown of HIV among transgender people, see Table 4.

Table 3. HIV/AIDS diagnoses and deaths among women[5,11] from January 1, 2022, to December 31, 2022; and women diagnosed with HIV, reported in NYC and presumed to be living as of December 31, 2022

	HIV Diagnoses[1]							AIDS Diagnoses[3]		People with HIV as of Dec. 31, 2022		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Total	341	100.0	267	100.0	74	100.0	21.7	274	100.0	35,476	100.0	475	100.0
Race or Ethnicity[6]													
Black	172	50.4	141	52.8	31	41.9	18.0	154	56.2	20,343	57.3	295	62.1
Latina/Hispanic	115	33.7	89	33.3	26	35.1	22.6	89	32.5	11,719	33.0	155	32.6
White	39	11.4	27	10.1	12	16.2	30.8	20	7.3	2,584	7.3	21	4.4
Asian/Pacific Islander	9	2.6	6	2.2	3	4.1	33.3	6	2.2	554	1.6	3	0.6
Native American	1	0.3	0	0.0	1	1.4	100.0	1	0.4	70	0.2	0	0.0
Multiracial	5	1.5	4	1.5	1	1.4	20.0	4	1.5	136	0.4	1	0.2
Unknown	0	0.0	0	0.0	0	0.0	0.0	0	0.0	70	0.2	0	0.0
Age Group (Years)[7]													
0-12	1	0.3	1	0.4	0	0.0	0.0	0	0.0	22	0.1	0	0.0
13-19	11	3.2	9	3.4	2	2.7	18.2	4	1.5	94	0.3	0	0.0
20-29	83	24.3	71	26.6	12	16.2	14.5	33	12.0	1,544	4.4	6	1.3
30-39	84	24.6	66	24.7	18	24.3	21.4	57	20.8	4,226	11.9	46	9.7
40-49	70	20.5	57	21.3	13	17.6	18.6	57	20.8	6,227	17.6	59	12.4
50-59	55	16.1	40	15.0	15	20.3	27.3	55	20.1	10,547	29.7	122	25.7
60+	37	10.9	23	8.6	14	18.9	37.8	68	24.8	12,816	36.1	242	50.9

[1-7]Footnotes appear below Table 1.
[11]Includes transgender women. For detailed breakdown of HIV among transgender people, see Table 4.

Table 3 (Continued). HIV/AIDS diagnoses and deaths among women[5,11] from January 1, 2022, to December 31, 2022; and women diagnosed with HIV, reported in NYC and presumed to be living as of December 31, 2022

	HIV Diagnoses[1]							AIDS Diagnoses[3]		People with HIV as of Dec. 31, 2022		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Borough of Residence[8]													
Bronx	93	27.3	75	28.1	18	24.3	19.4	83	30.3	11,608	32.7	172	36.2
Brooklyn	97	28.4	75	28.1	22	29.7	22.7	71	25.9	10,012	28.2	149	31.4
Manhattan	56	16.4	45	16.9	11	14.9	19.6	43	15.7	5,003	14.1	78	16.4
Queens	66	19.4	45	16.9	21	28.4	31.8	43	15.7	5,119	14.4	40	8.4
Staten Island	6	1.8	5	1.9	1	1.4	16.7	7	2.6	889	2.5	15	3.2
Outside of NYC	18	5.3	17	6.4	1	1.4	5.6	23	8.4	2,808	7.9	14	2.9
Unknown	5	1.5	5	1.9	0	0.0	0.0	4	1.5	37	0.1	7	1.5
Area-Based Poverty Level[9]													
Low poverty	34	10.0	24	9.0	10	13.5	29.4	27	9.9	3,579	10.1	33	6.9
Medium poverty	146	42.8	107	40.1	39	52.7	26.7	107	39.1	11,185	31.5	129	27.2
High poverty	65	19.1	58	21.7	7	9.5	10.8	43	15.7	8,384	23.6	125	26.3
Very high poverty	73	21.4	56	21.0	17	23.0	23.3	70	25.5	9,208	26.0	164	34.5
Unavailable	23	6.7	22	8.2	1	1.4	4.3	27	9.9	3,120	8.8	24	5.1
Transmission Category[10]													
Injection drug use history	3	0.9	3	1.1	0	0.0	0.0	21	7.7	4,980	14.0	125	26.3
Heterosexual contact	184	54.0	147	55.1	37	50.0	20	140	51.1	20,027	56.5	249	52.4
TG-SC	49	14.4	44	16.5	5	6.8	10.2	26	9.5	2,150	6.1	28	5.9
Perinatal	0	0.0	0	0.0	0	0.0	0.0	9	3.3	1,299	3.7	9	1.9
Other	0	0.0	0	0.0	0	0.0	0.0	0	0.0	81	0.2	2	0.4
Unknown	105	30.8	73	27.3	32	43.2	30.5	78	28.5	6,939	19.6	62	13.1

TG-SC=Transgender people with sexual contact

[1-5,8-10]Footnotes appear below Table 1.

[11]Includes transgender women. For detailed breakdown of HIV among transgender people, see Table 4.

Table 4. HIV/AIDS diagnoses and deaths among transgender people from January 1, 2022, to December 31, 2022; and transgender people diagnosed with HIV, reported in NYC and presumed to be living as of December 31, 2022

	HIV Diagnoses[1]							AIDS Diagnoses[3]		People with HIV as of Dec. 31, 2022		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Total	55	100.0	50	100.0	5	100.0	9.1	28	100.0	2,484	100.0	32	100.0
Gender[5]													
Transgender women	52	94.5	47	94.0	5	100.0	9.6	28	100.0	2,429	97.8	32	100.0
Transgender men	3	5.5	3	6.0	0	0.0	0.0	0	0.0	55	2.2	0	0.0
Race or Ethnicity[6]													
Black	14	25.5	14	28.0	0	0.0	0.0	13	46.4	1,198	48.2	16	50.0
Latino/Hispanic	29	52.7	25	50.0	4	80.0	13.8	12	42.9	1,033	41.6	14	43.8
White	10	18.2	9	18.0	1	20.0	10.0	3	10.7	154	6.2	2	6.3
Asian/Pacific Islander	0	0.0	0	0.0	0	0.0	0.0	0	0.0	50	2.0	0	0.0
Native American	0	0.0	0	0.0	0	0.0	0.0	0	0.0	8	0.3	0	0.0
Multiracial	2	3.6	2	4.0	0	0.0	0.0	0	0.0	41	1.7	0	0.0
Age Group (Years)[7]													
0-12	0	0.0	0	0.0	0	0.0	0.0	0	0.0	0	0.0	0	0.0
13-19	1	1.8	1	2.0	0	0.0	0.0	0	0.0	3	0.1	0	0.0
20-29	24	43.6	23	46.0	1	20.0	4.2	9	32.1	416	16.7	1	3.1
30-39	20	36.4	17	34.0	3	60.0	15.0	11	39.3	946	38.1	17	53.1
40-49	5	9.1	5	10.0	0	0.0	0.0	4	14.3	586	23.6	7	21.9
50-59	4	7.3	3	6.0	1	20.0	25.0	3	10.7	370	14.9	6	18.8
60+	1	1.8	1	2.0	0	0.0	0.0	1	3.6	163	6.6	1	3.1

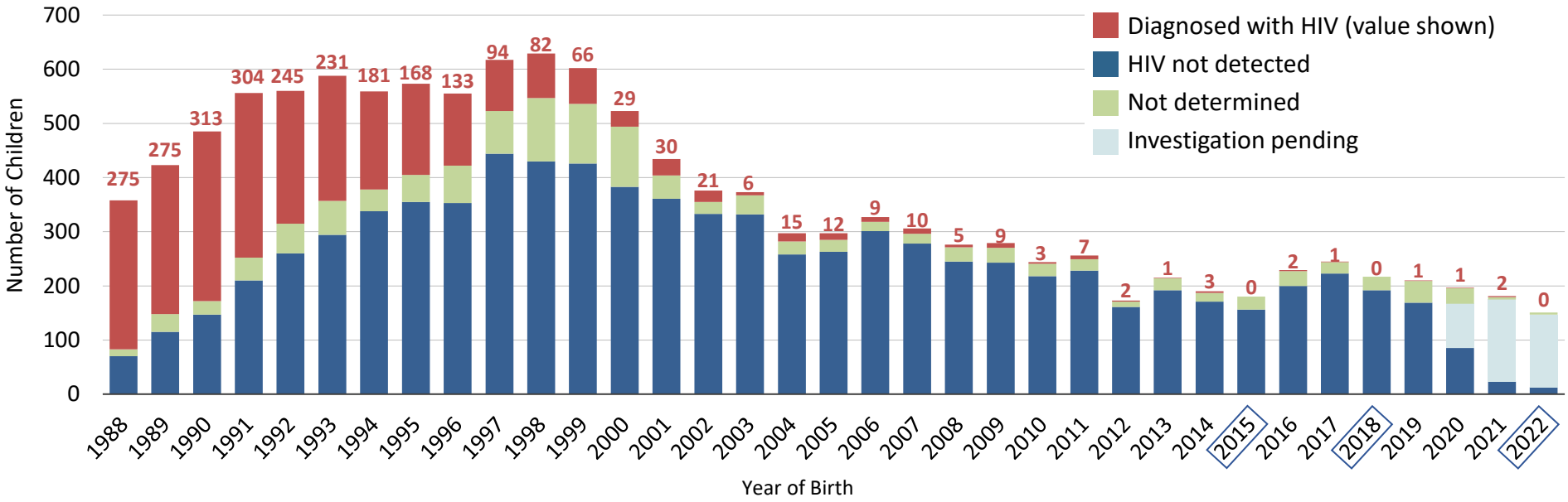
[1-7]Footnotes appear below Table 1.

Table 4 (Continued). HIV/AIDS diagnoses and deaths among transgender people from January 1, 2022, to December 31, 2022; and transgender people diagnosed with HIV, reported in NYC and presumed to be living as of December 31, 2022

	HIV Diagnoses[1]							AIDS Diagnoses[3]		People with HIV as of Dec. 31, 2022		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Borough of Residence[8]													
Bronx	11	20.0	8	16.0	3	60.0	27.3	8	28.6	853	34.3	12	37.5
Brooklyn	12	21.8	12	24.0	0	0.0	0.0	4	14.3	561	22.6	9	28.1
Manhattan	14	25.5	14	28.0	0	0.0	0.0	6	21.4	492	19.8	6	18.8
Queens	9	16.4	8	16.0	1	20.0	11.1	7	25.0	366	14.7	1	3.1
Staten Island	1	1.8	1	2.0	0	0.0	0.0	0	0.0	64	2.6	0	0.0
Outside of NYC	6	10.9	5	10.0	1	20.0	16.7	2	7.1	148	6.0	4	12.5
Unknown	2	3.6	2	4.0	0	0.0	0.0	1	3.6	0	0.0	0	0.0
Area-Based Poverty Level[9]													
Low poverty	5	9.1	5	10.0	0	0.0	0.0	4	14.3	270	10.9	4	12.5
Medium poverty	18	32.7	16	32.0	2	40.0	11.1	12	42.9	784	31.6	7	21.9
High poverty	12	21.8	12	24.0	0	0.0	0.0	2	7.1	593	23.9	5	15.6
Very high poverty	12	21.8	10	20.0	2	40.0	16.7	7	25.0	681	27.4	12	37.5
Unavailable	8	14.5	7	14.0	1	20.0	12.5	3	10.7	156	6.3	4	12.5
Transmission Category[10]													
Injection drug use history	1	1.8	1	2.0	0	0.0	0.0	1	3.6	219	8.8	4	12.5
Sexual contact	50	90.9	45	90.0	5	100.0	10.0	26	92.9	2,185	88.0	28	87.5
Perinatal	0	0.0	0	0.0	0	0.0	0.0	0	0.0	11	0.4	0	0.0
Unknown	4	7.3	4	8.0	0	0.0	0.0	1	3.6	69	2.8	0	0.0

[1-5,8-10]Footnotes appear below Table 1.

Figure 3. All HIV-exposed births in NYC and current HIV status[1] of children born to women[2] with HIV at select NYC medical facilities[3] by year of birth in NYC from 1988 to 2022[4]



Milestones in Reduction of Perinatal HIV Transmission

1985: CDC recommends that women with HIV avoid breastfeeding.[5]

1994: ACTG 076 study shows that AZT reduces perinatal transmission.

1997: Routine newborn screening begins in NYS.

1999: NYS implements expedited testing in obstetric settings.

2015, 2018 and 2022: No perinatal transmissions reported in children born in NYC.

2020 to 2022: Due to COVID-19, exposure investigations were significantly curtailed; however, all HIV-antibody-positive cases were identified.

From 2018 to 2022, less than 1% of infants born to women with HIV were diagnosed with HIV. The small number of infants with HIV reflects the success of perinatal HIV prevention interventions.

[1]Children born to women with HIV at select NYC medical facilities are followed for two years after birth to determine HIV status. HIV status is labeled as "not determined" if the child is lost to follow-up. [2]In this figure, women refers to people with female sex assigned at birth. [3]Includes data collected at high-volume NYC medical facilities that care for the majority of HIV-exposed children and children with HIV. Since 2017, NYC's perinatal surveillance program has conducted exposure investigations at 21 NYC medical facilities. Children born outside of NYC are not included in this figure. [4]Includes cases diagnosed as of December 31, 2022. [5]The World Health Organization has updated their guidelines and now supports breastfeeding among women with HIV; see **https://www.who.int/publications/i/item/9789241549707**.

Figure 4.1. Area-based poverty level[1] in NYC by United Hospital Fund neighborhood from 2018 to 2022

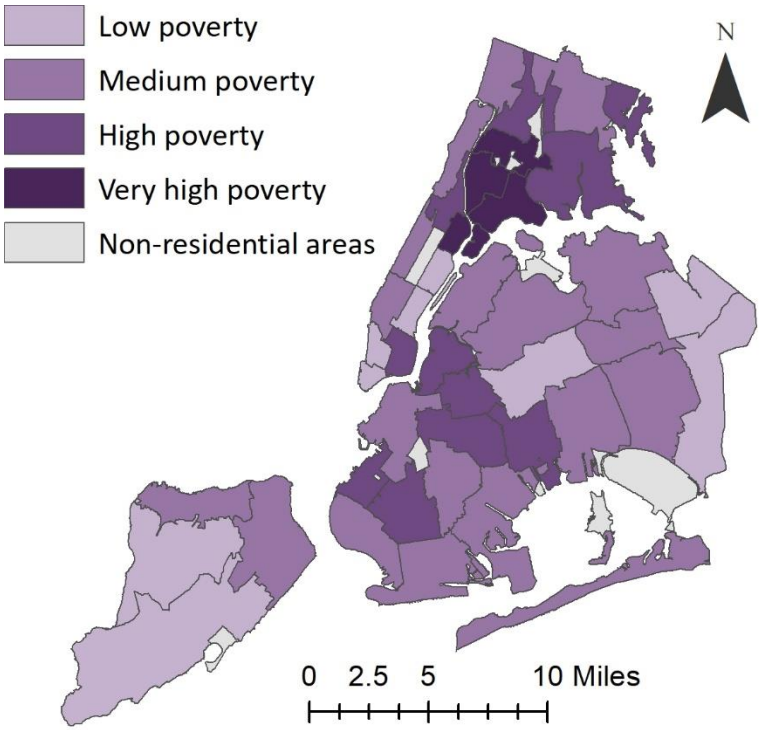
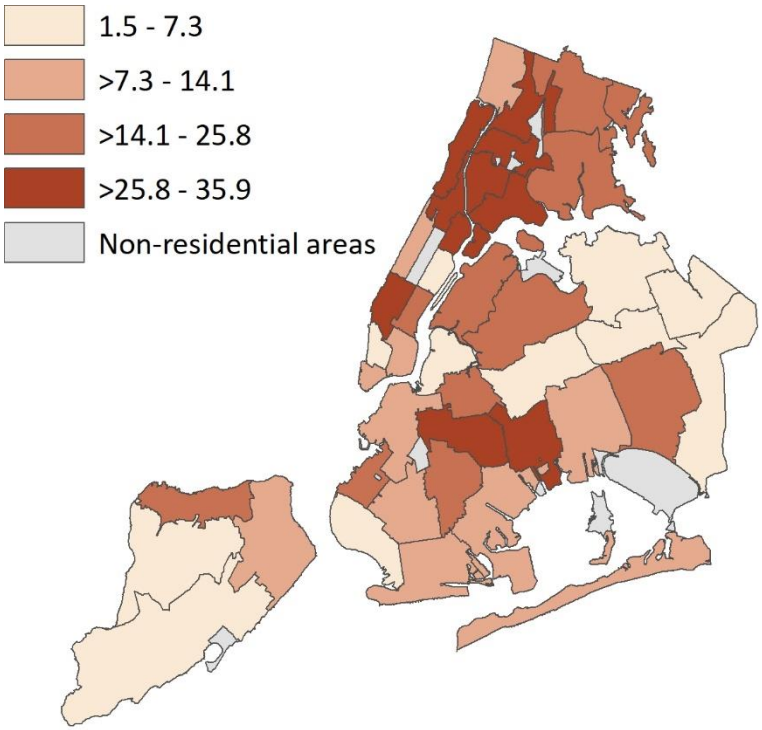


Figure 4.2. HIV diagnosis rates[2] per 100,000 people in NYC by United Hospital Fund neighborhood in 2022



Many neighborhoods with the highest poverty rates in NYC (Figure 4.1) were also among those with high HIV diagnosis rates (Figure 4.2), including those in Central Harlem–Morningside Heights, Hunts Point–Mott Haven, East Harlem, Crotona–Tremont, High Bridge–Morrisania, and East New York. Central Harlem–Morningside Heights and Hunts Point–Mott Haven had the highest HIV diagnosis rates in 2022 (Figure 4.2).

[1]Area-based poverty level is determined by the proportion of residents living below the federal poverty level (FPL) in the United Hospital Fund neighborhood of residence. Low poverty=<10% below FPL; Medium poverty=10 to <20% below FPL; High poverty=20 to <30% below FPL; Very high poverty=≥30% below FPL.
[2]Calculated using NYC Health Department 2021 population estimates, modified from U.S. Census Bureau intercensal population estimates, updated September 2022.

Figure 4.3. People with HIV as a proportion of the population[1] in NYC by United Hospital Fund neighborhood in 2022

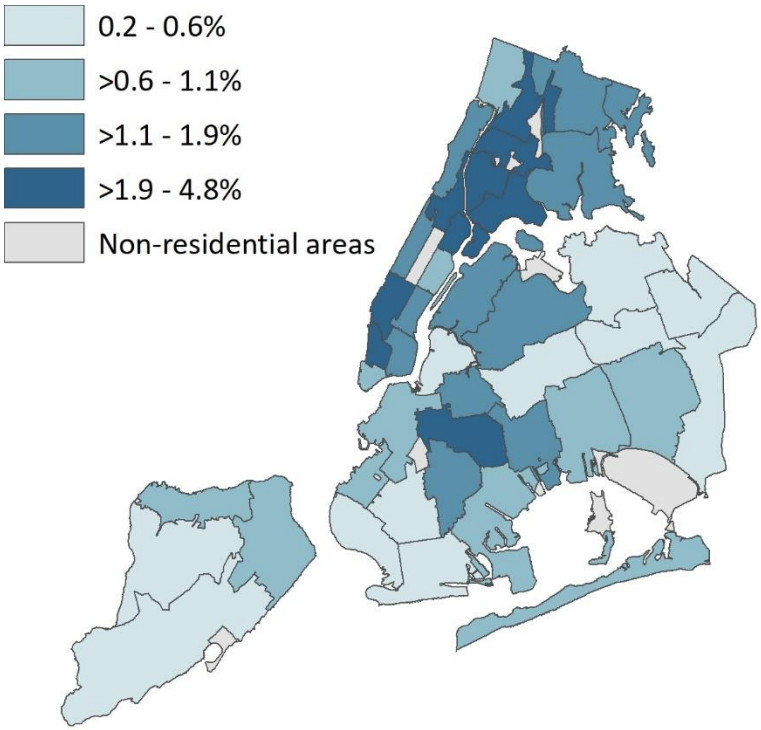
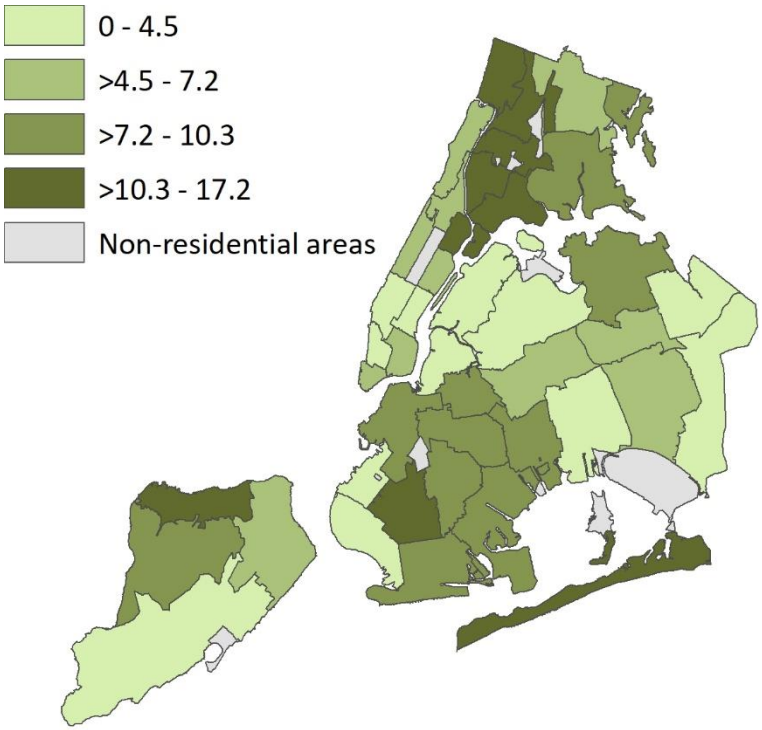


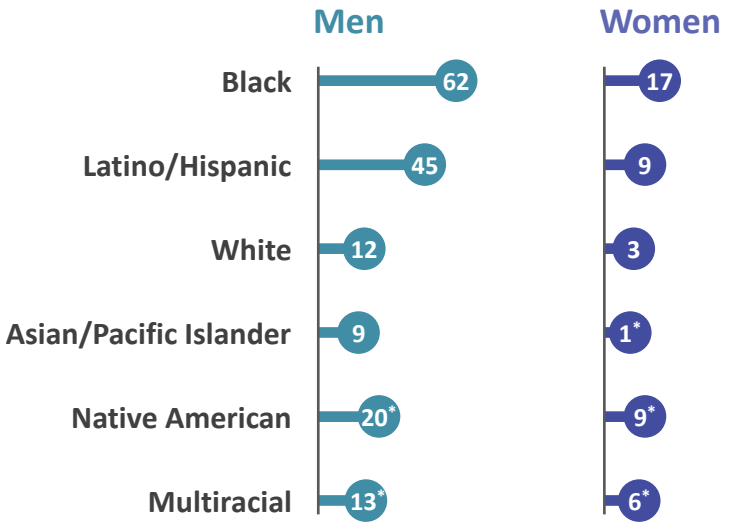
Figure 4.4. Age-adjusted death rates[1,2] per 1,000 people with HIV in NYC by United Hospital Fund neighborhood in 2022



Chelsea–Clinton, Crotona–Tremont, and High Bridge–Morrisania had the highest HIV prevalence in NYC (Figure 4.3). Kingsbridge–Riverdale, Port Richmond, and Rockaway had the highest mortality rates among people with HIV (Figure 4.4). The Chelsea–Clinton neighborhood had a high HIV diagnosis rate but relatively low poverty and mortality rates, making it an exception to the usual alignment of these outcomes in NYC.

[1]Calculated using NYC Health Department 2021 population estimates, modified from U.S. Census Bureau intercensal population estimates, updated September 2022.
[2]Age-adjusted to the 2000 U.S. standard population. People newly diagnosed with HIV at death were excluded from the numerator. Mortality data for 2022 are incomplete.

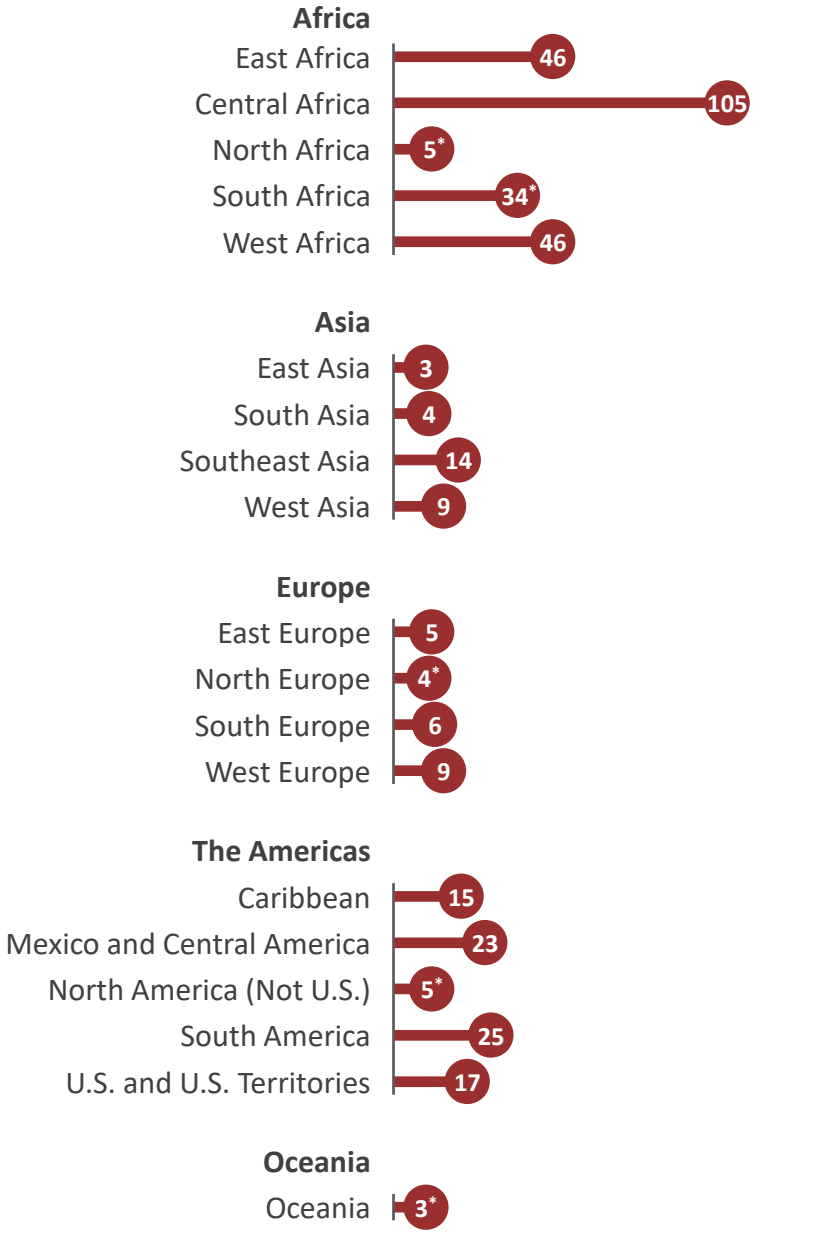
Figure 5.1. HIV diagnosis rates[1,2] per 100,000 NYC residents by gender[3] and race or ethnicity in 2022



In 2022, the HIV diagnosis rate among Black men in NYC was 1.4 to more than 5 times higher than the rates among men from other race or ethnicity groups.

In 2022, the HIV diagnosis rate among Black women in NYC was 1.9 to 17 times higher than the rates among women from other race or ethnicity groups.

Figure 5.2. Average annual HIV diagnosis rates[1,2] per 100,000 NYC residents by subregion of birth from 2018 to 2022[4]



*Rate should be interpreted with caution because of small population size.
[1]Includes diagnoses of HIV without AIDS and HIV concurrent with AIDS.
[2]Rates calculated using NYC Health Department 2021 population estimates, modified from U.S. Census Bureau intercensal population estimates, updated in September 2022.
[3]Men category includes transgender men, and women category includes transgender women.
[4]Data exclude people newly diagnosed with HIV in NYC with an unknown subregion of birth (N=1,667, 19.7% of people newly diagnosed).

Figure 6.1. Number of acute HIV infections by transmission category and gender in NYC in 2022

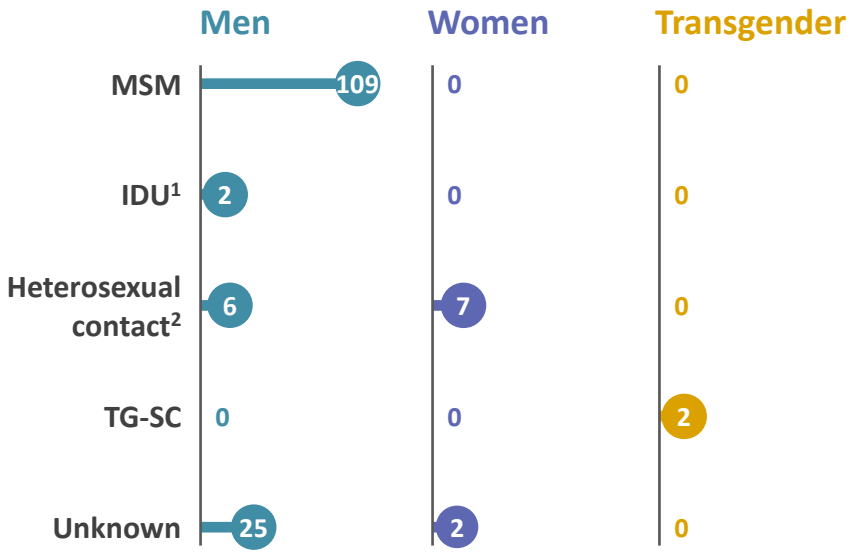
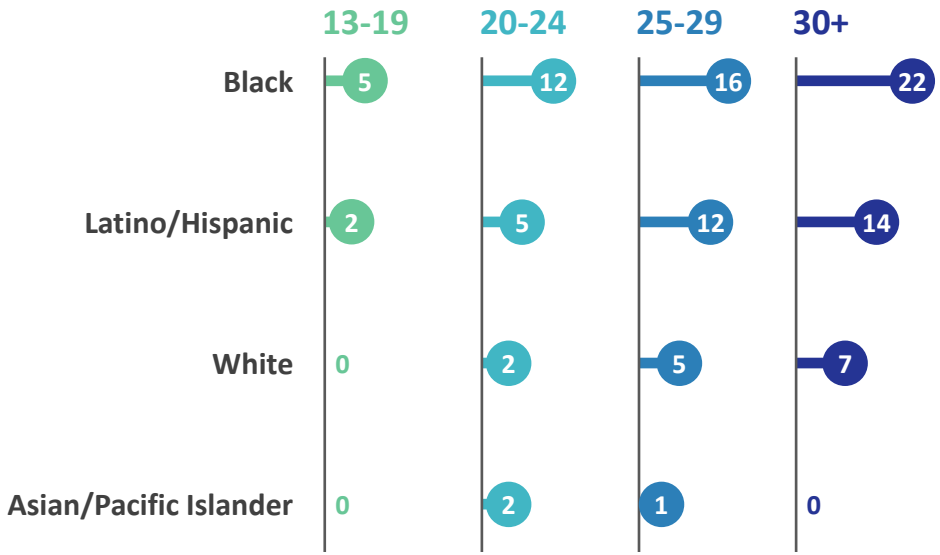


Figure 6.2. Number of acute HIV infections among MSM by race or ethnicity and age group (years) in NYC in 2022



Diagnosis of HIV in the acute phase enables early treatment, which reduces onward transmission to exposed partners and reduces morbidity by minimizing immunologic damage. Among all people newly diagnosed with HIV in NYC in 2022, 153 (9%) were diagnosed with an acute HIV infection. MSM were overrepresented among cases diagnosed in the acute phase (Figure 6.1), in part due to a higher testing frequency compared with other groups. Among MSM diagnosed with acute HIV, a greater proportion were ages 25 and older across most race or ethnicity groups (Figure 6.2).

MSM=Men who have sex with men; IDU=Injection drug use history; TG-SC=Transgender people with sexual contact
[1]IDU includes MSM who also report IDU (MSM-IDU).
[2]For more information on heterosexual contact, please see footnote 10 in Table 1.

Figure 7.1. Annual number of estimated incident HIV infections[1] and new HIV diagnoses in NYC from 2018 to 2022[2]

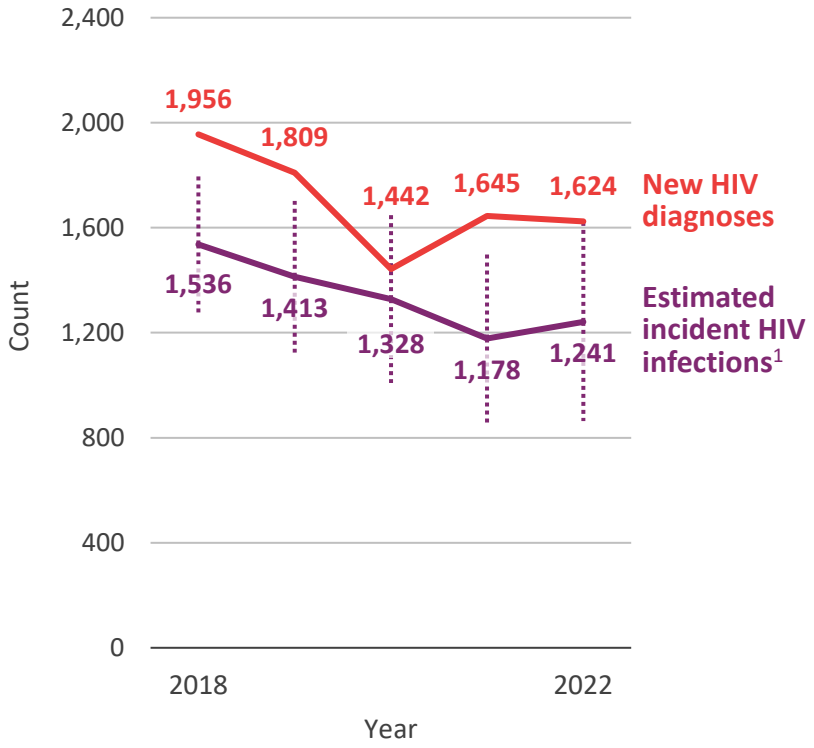
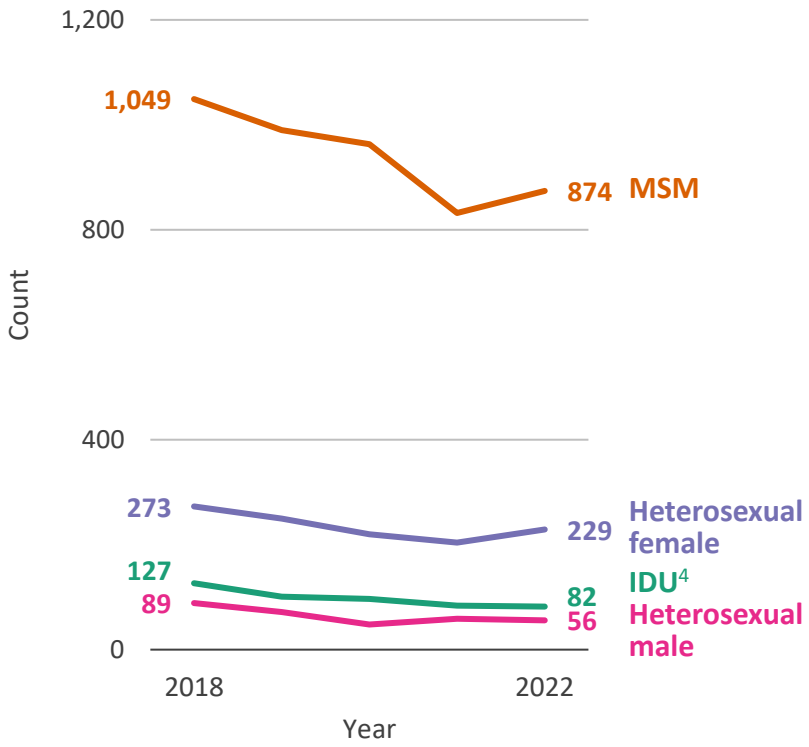


Figure 7.2. Annual number of estimated incident HIV infections[1] by sex assigned at birth[3] and transmission category in NYC from 2018 to 2022[2]



The method used nationally and locally to estimate incidence is based on the distribution of CD4 count at HIV diagnosis. Estimated HIV incidence overall (Figure 7.1) and by transmission category (Figure 7.2) declined in NYC between 2018 and 2020 but remained stable between 2020 and 2022. The estimated incidence among MSM declined the most over the time period but remains higher than other transmission categories.

MSM=Men who have sex with men; IDU=Injection drug use history

[1]Using the method in: Song R, Hall HI, Green TA, et al. Using CD4 data to estimate HIV incidence, prevalence, and percent of undiagnosed infections in the United States. *J Acquir Immune Defic Syndr.* 2017;74(1):3-9.

[2]2022 incidence estimates are preliminary.

[3]CDC estimation methodology produces results by sex assigned at birth and not gender identity.

[4]IDU includes males and females with injection drug use history, including MSM-IDU.

Figure 8.1. Proportion of people genotyped within three months of HIV diagnosis in NYC in 2022

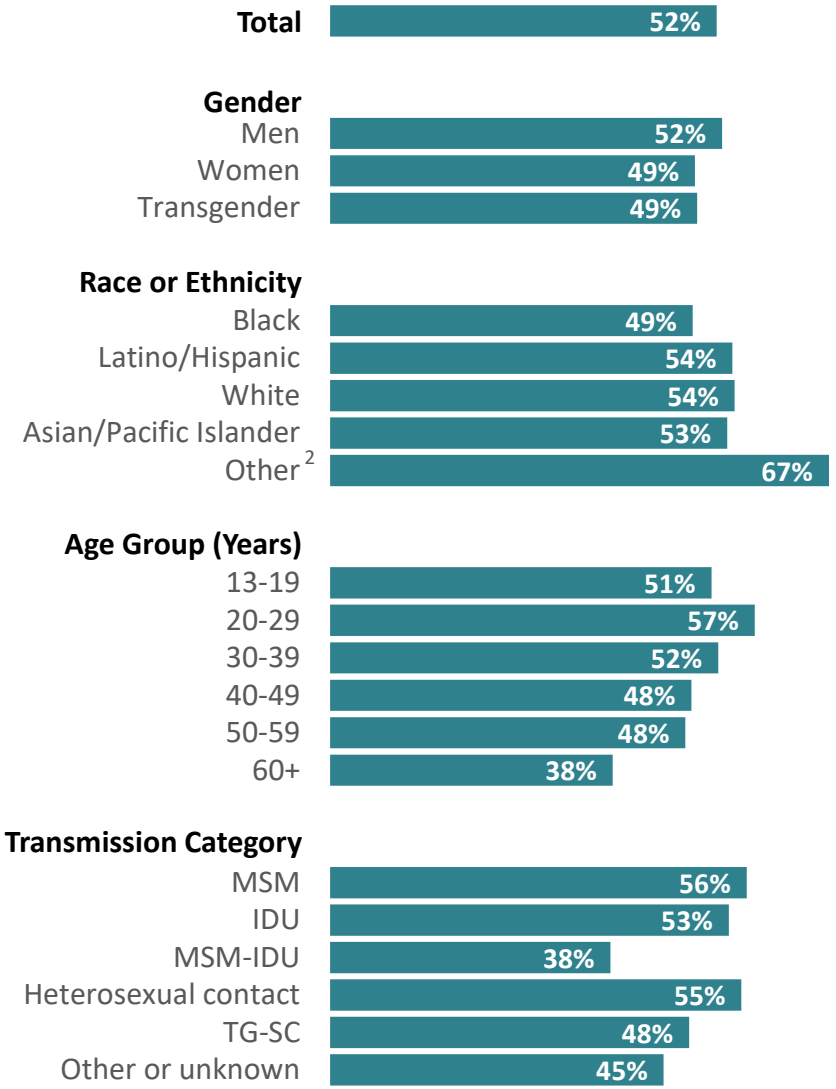


Figure 8.2. Top 10 viral mutations from people genotyped within three months of HIV diagnosis in NYC in 2022[1]

Rank	Mutation	Drug Class
1	K103N	NNRTI
2	M184V	NRTI
3	M41L	NRTI
4	T69N	NRTI
5	D67N	NRTI
6	E44D	NRTI
7	V11I	PI
8	Q58E	PI
9	G190A	NNRTI
10	Y188L	NNRTI

Federal guidelines for the care and treatment of people with HIV recommend genotypic resistance testing at initiation of HIV care, both to establish a baseline and to guide therapy. In 2022, 52% of people newly diagnosed with HIV in NYC received a genotype within three months of diagnosis (compared with 46% in 2021); lower proportions of women and transgender and Black people received a genotype (Figure 8.1). In 2022, K103N remained the most frequent clinically relevant mutation among newly diagnosed people (Figure 8.2). The K103N mutation confers resistance to non-nucleoside reverse transcriptase inhibitors (NNRTIs). The persistence of K103N among people newly diagnosed with HIV in 2022, despite the absence of NNRTIs from recommended first- and second-line HIV antiretroviral treatment (ART) regimens, may indicate that this mutation does not disadvantage transmitted virus compared with virus without the mutation.

MSM=Men who have sex with men; IDU=Injection drug use history; MSM-IDU=Men who have sex with men and inject drugs; TG-SC=Transgender people with sexual contact.
NRTI=Nucleoside Reverse Transcriptase Inhibitor; NNRTI=Non-Nucleoside Reverse Transcriptase Inhibitor; PI=Protease Inhibitor
[1]Ambiguous amino acid assignments omitted. [2]Includes Native American and Multiracial people.

Figure 9.1. Percent of newly diagnosed people[1] linked to HIV care within 30 days[2] and virally suppressed within three months[3] of diagnosis date in NYC from 2018 to 2022

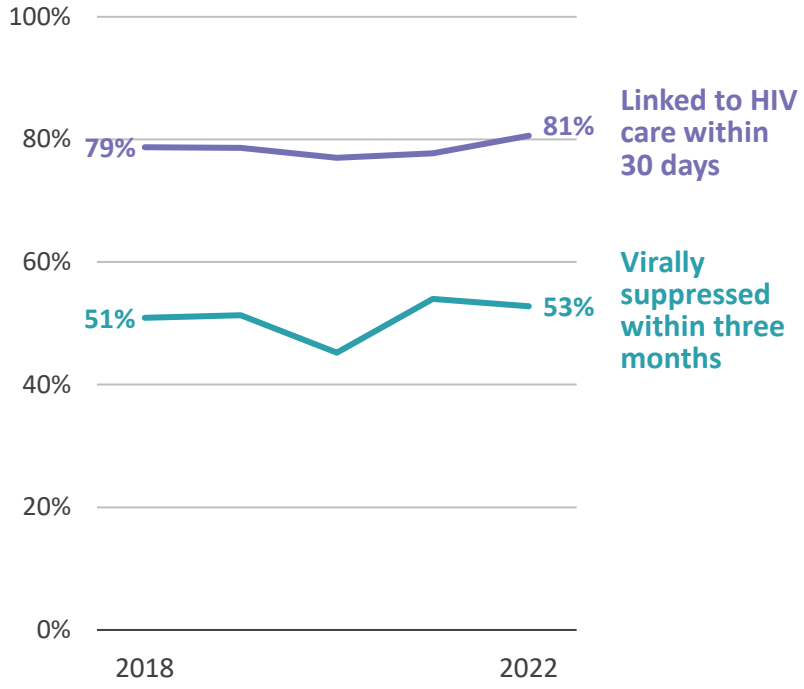
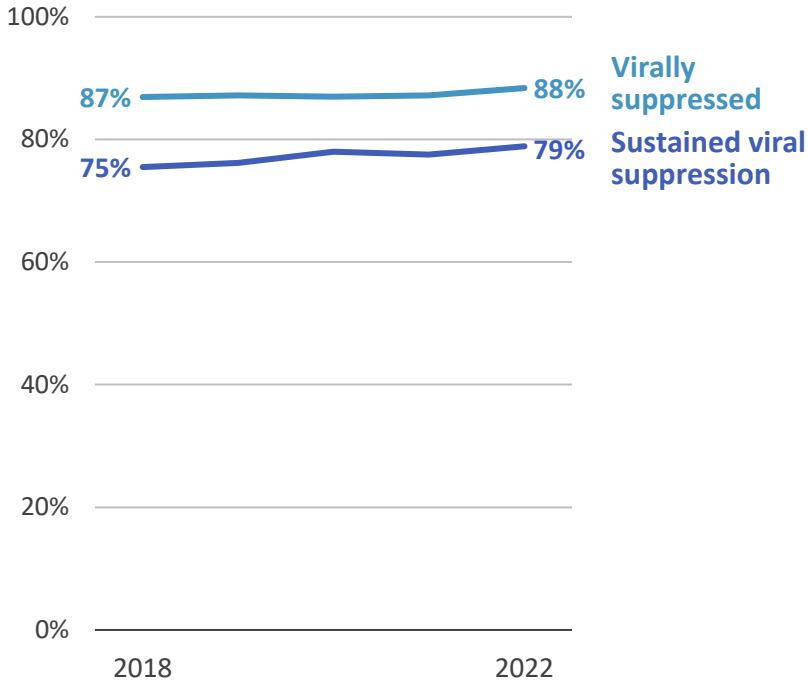


Figure 9.2. Percent of people in HIV medical care[4] who are virally suppressed[5] and who have sustained viral suppression[6] in NYC from 2018 to 2022



Linkage to HIV care within 30 days and viral suppression within three months among newly diagnosed people in NYC both remained relatively flat from 2018 to 2022 (Figure 9.1). Viral suppression among people in HIV medical care was stable, and sustained viral suppression among people in HIV medical care increased slightly in NYC from 2018 to 2022 (Figure 9.2).

[1]People newly diagnosed with HIV at death were excluded.
[2]HIV viral load (VL), CD4, or genotype test drawn within one month (30 days) of HIV diagnosis.
[3]At least one HIV VL within three months (91 days) of HIV diagnosis was <200 copies/mL.
[4]At least one HIV VL, CD4, or genotype test in the calendar year.
[5]Last HIV VL value in the calendar year was <200 copies/mL.
[6]All VL values were <200 copies/mL in the calendar year.

Figure 9.3. Percent of newly diagnosed people[1] linked to HIV care within 30 days[2] and virally suppressed within three months[3] of diagnosis date in NYC in 2022

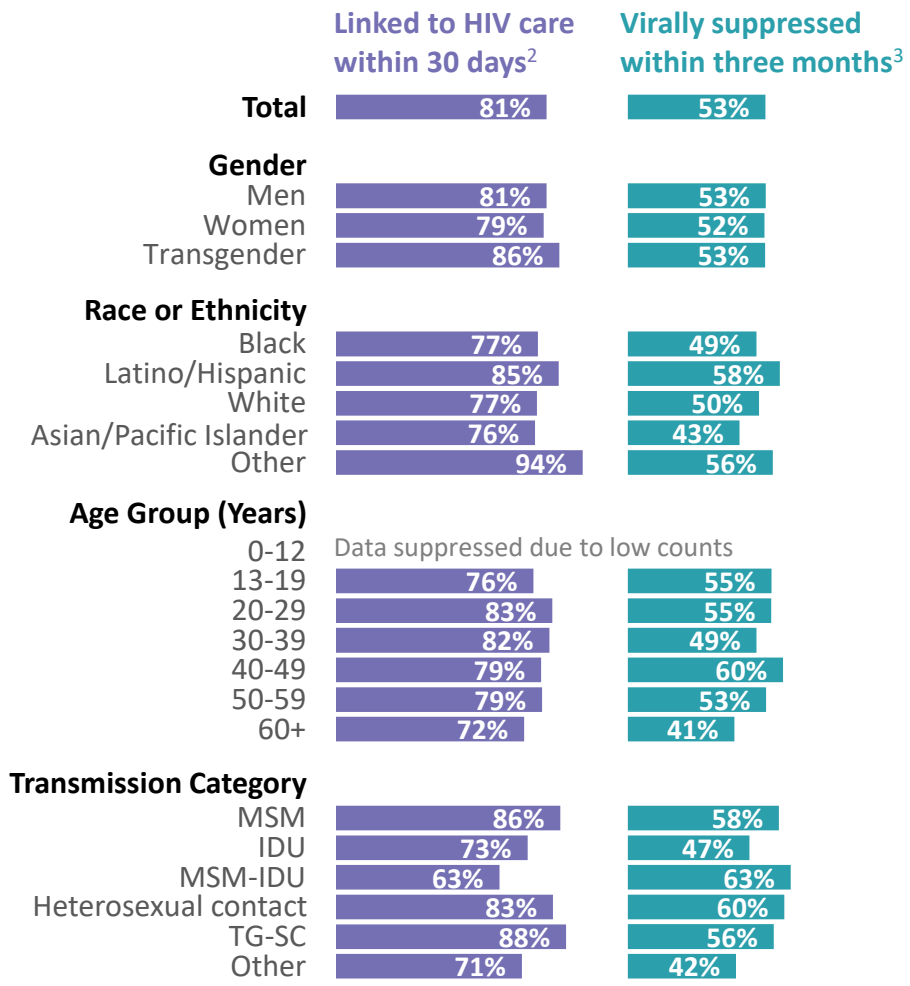
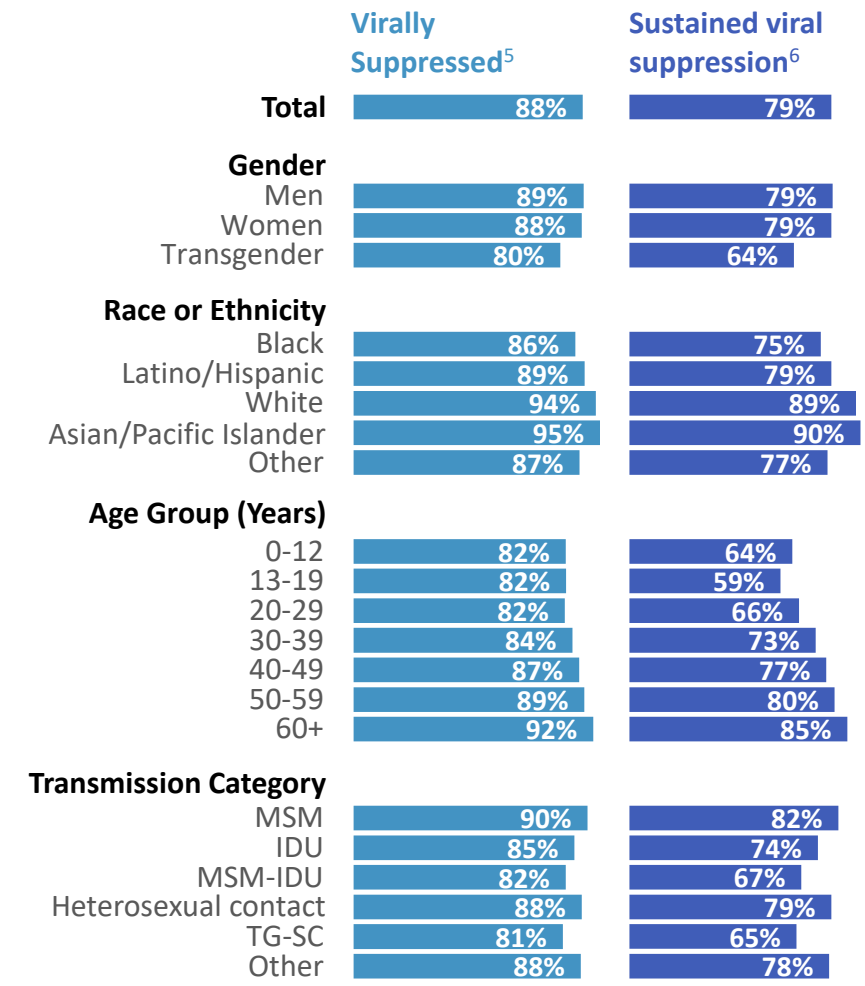


Figure 9.4. Percent of people in HIV medical care[4] who are virally suppressed[5] and who have sustained viral suppression[6] in NYC in 2022



MSM=Men who have sex with men; IDU=Injection drug use history; MSM-IDU=Men who have sex with men and inject drugs; TG-SC=Transgender people with sexual contact

[1]People newly diagnosed with HIV at death were excluded.

[2]HIV viral load (VL), CD4, or genotype test drawn within one month (30 days) of HIV diagnosis.

[3]At least one HIV VL within three months (91 days) of HIV diagnosis was <200 copies/mL.

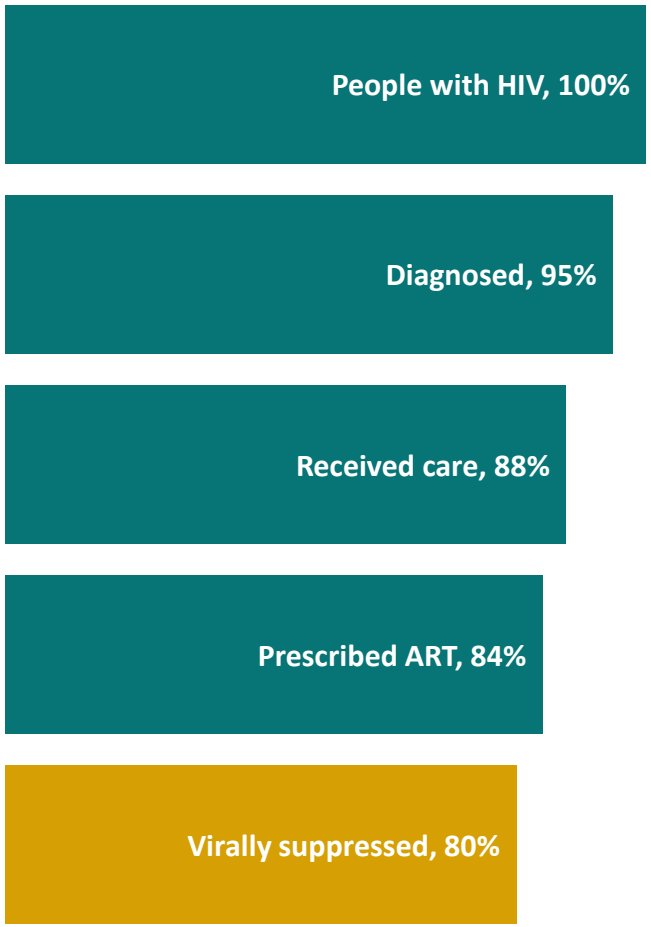
[4]At least one HIV VL, CD4, or genotype test in the calendar year.

[5]Last HIV VL value in the calendar year was <200 copies/mL.

[6]All VL values were <200 copies/mL in the calendar year.

HIV Care Continuum in New York City

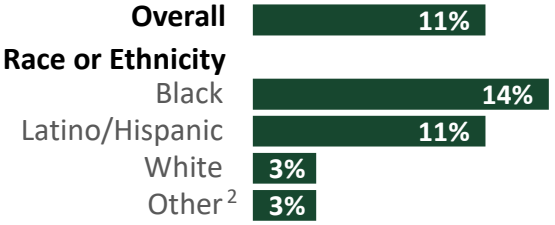
Figure 10. Proportion of people with HIV engaged in selected stages of the HIV care continuum[1] in NYC in 2022



Of approximately 87,000 people with HIV in NYC in 2022, 80% had a suppressed viral load.

Medical Monitoring Project in New York City

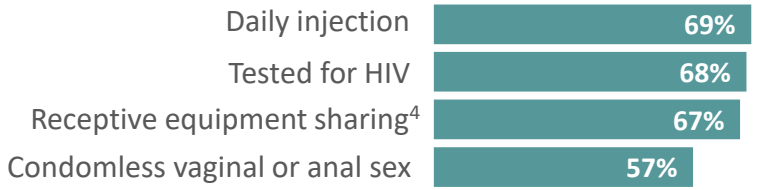
Figure 11. Proportion of people with HIV experiencing homelessness in NYC from 2017 to 2021



The Medical Monitoring Project is a national surveillance activity of people with HIV, conducted in conjunction with the CDC. During the cycles from 2017 to 2021, 1,556 people in New York City participated, of whom 11% reported experiencing homelessness, with inequities by race or ethnicity.

National HIV Behavioral Surveillance Study in New York City

Figure 12. Proportion of people who inject drugs interviewed for the National HIV Behavioral Surveillance Study in NYC reporting sexual and drug use behaviors during the 12 months prior to interview in 2022[3]



The National HIV Behavioral Surveillance project is an ongoing national study of people at increased risk for HIV. In the 2022 cycle, participants included 67 people who inject drugs. During the previous 12 months, only 68% of respondents tested for HIV, and more than half had condomless sex, shared syringes or other injection equipment, or injected at least once a day.

[1]For definitions of the stages of the continuum of care, see Technical Notes.
[2]Includes Asian/Pacific Islander, Native American, and Multiracial people. [3]Eligible participants had a history of injecting drugs not prescribed to them in the previous 12 months, were ≥18 years old at the time of the interview and lived in the NYC metropolitan statistical area. Participants were recruited via respondent-driven sampling. Estimates are weighted using population weights that take into account differential recruitment by network size. Participants who self-reported being diagnosed with HIV were excluded from the analysis (n=6). [4]Includes syringes and other injection equipment.

Figure 13.1. Proportion of people with HIV contacted by the ACE Team (N=1,583) who were out of care[1] and subsequently reengaged[2] in HIV care in NYC from 2020 to 2022

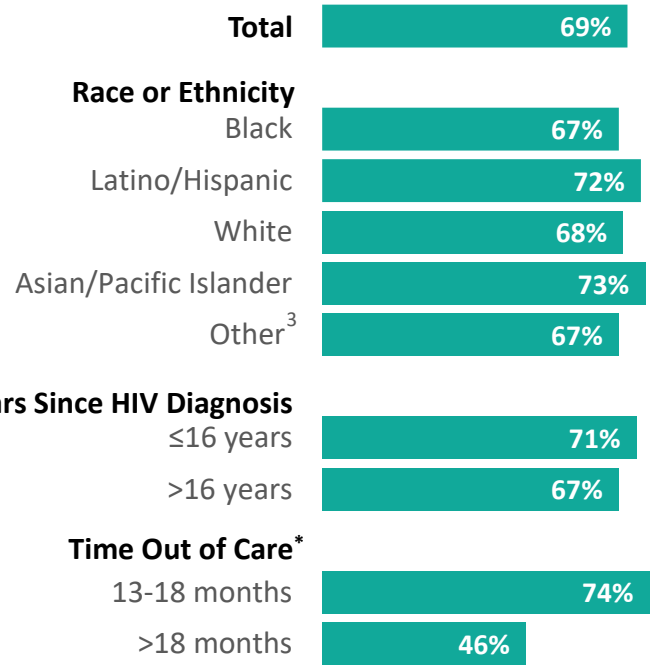
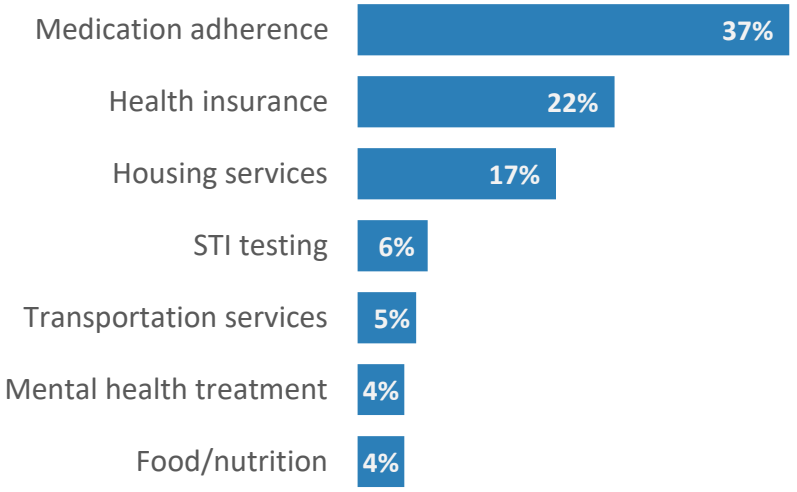


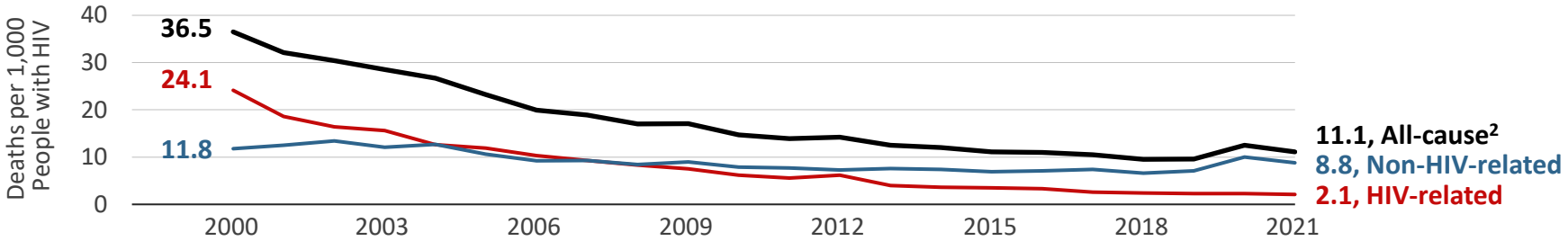
Figure 13.2. Top unmet needs[4] among people with HIV contacted by the ACE Team (N=572) who were out of care in NYC from 2020 to 2022



From 2020 to 2022, the ACE (Assess. Connect. Engage.) Team contacted 1,583 people with HIV who were out of care.[1] Among those contacted, 1,094 (69%) were successfully reengaged in HIV care (Figure 13.1). Reengagement was highest among Asian/Pacific Islander people (73%) and those out of care for 13 to 18 months (74%) versus longer (46%); less than half (46%) of people out of care for more than 18 months were reengaged in HIV care. Additionally, the ACE Team systematically conducted needs assessments for people with HIV who were successfully contacted and offered referrals when unmet needs were identified. The top unmet needs identified among people with HIV who were out of care were medication adherence support, health insurance and housing services (Figure 13.2).

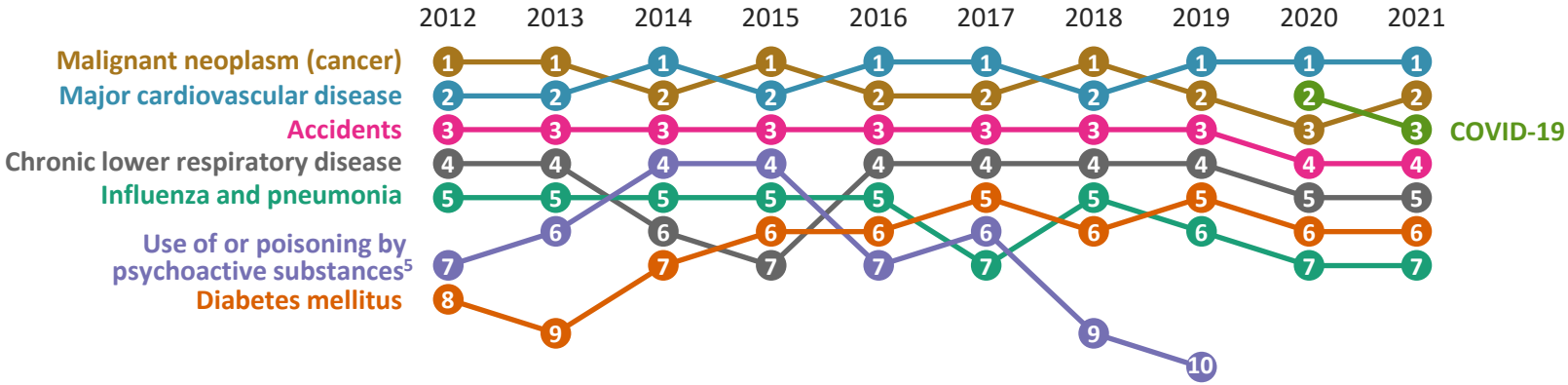
STI=Sexually transmitted infections
*Statistically significant differences among subgroups ($P<0.05$).
[1]No reported HIV viral load, CD4, or genotype test result in 13 or more months.
[2]Reported HIV viral load, CD4, or genotype test result or attending an HIV care appointment within six months of successful contact by the ACE Team.
[3]"Other" includes Native American and Multiracial people.
[4]Categories are not mutually exclusive; each person could give multiple answers.

Figure 14.1. Annual age-adjusted death rate[1] per 1,000 people with HIV by HIV-related and non-HIV-related causes of death in NYC from 2000 to 2021



The all-cause death rate (11.1 per 1,000 in 2021) among people with HIV in NYC decreased by 70% from 2000 to 2021 but remained higher than the death rate for the overall NYC population (7.9 in 2020[3]). Although the rates of both HIV-related and non-HIV-related causes of death decreased during this time, the decrease in the all-cause death rate was driven by increasingly fewer deaths attributed to HIV. All-cause and non-HIV-related death rates increased starting in 2020, the first year of the COVID-19 pandemic. Among all people with HIV who died in NYC in 2021, 173 (8%) were due to COVID-19, a large decrease from 2020 when 441 (18%) deaths were due to COVID-19.

Figure 14.2. Ranked leading non-HIV-related causes of death[4] among people with HIV in NYC from 2012 to 2021



In 2021, 1,765 (79%) of 2,233 total deaths among people with HIV were attributed to a non-HIV-related cause. Since 2012, malignant neoplasm (cancer), major cardiovascular disease and accidents have been among the top non-HIV-related causes of death for people with HIV in NYC. COVID-19 was in the top three causes of death among people with HIV in NYC in both 2020 and 2021.

[1]Age-adjusted to the 2000 U.S. standard population. People newly diagnosed with HIV at death were excluded from the numerator. [2]Includes people with unknown causes of death (3.5% of all deaths). [3]Li W, Onyebeke C, Castro A, et al. Summary of vital statistics. New York, NY: Bureau of Vital Statistics, New York City Department of Health and Mental Hygiene. 2020.1-160. [4]Non-HIV-related causes of death that appear in the top five are tracked for all years until they fall out of the top ten leading causes of death. [5]Excludes the use of tobacco or alcohol.

Figure 14.3. Age-adjusted HIV-related death rate[1] per 1,000 people with HIV in NYC by race or ethnicity[2] among men[3] from 2017 to 2021

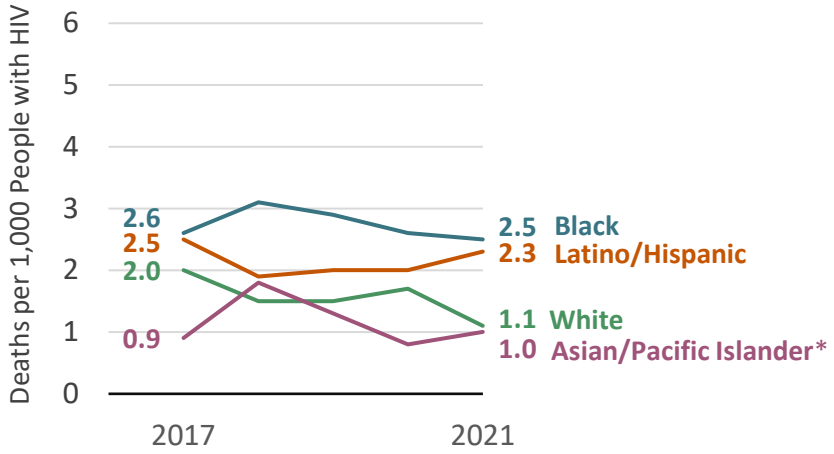
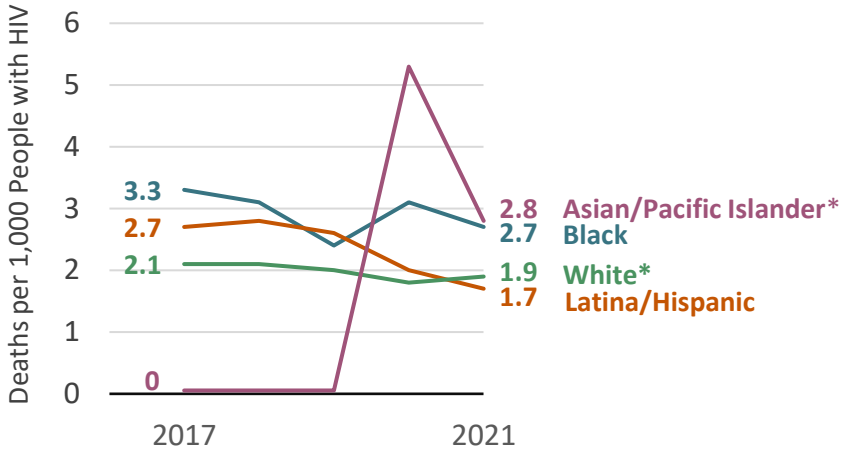


Figure 14.4. Age-adjusted HIV-related death rate[1] per 1,000 people with HIV in NYC by race or ethnicity[2] among women[3] from 2017 to 2021



Black and Latino/Hispanic men experienced higher age-adjusted HIV-related death rates than White and Asian/Pacific Islander men (Figure 14.3). Black women consistently had one of the highest age-adjusted HIV-related death rates (Figure 14.4). HIV-related death rates decreased or remained relatively stable across all groups from 2017 to 2021, excluding Asian/Pacific Islander women, who experienced highly varied rates across years. Data for this group, White women, and Asian/Pacific Islander men should be interpreted with caution due to small population sizes.

*Data should be interpreted with caution because of small population size.
[1]Age-adjusted to the 2000 U.S. standard population. People newly diagnosed with HIV at death were excluded from the analysis.
[2]Native American and Multiracial people are excluded due to unstable rates.
[3]Men category includes transgender men, and women category includes transgender women.

About This Report: This report provides an overview of the HIV epidemic in NYC using HIV surveillance data and presents highlights for the reporting period (calendar year) based on core surveillance activities. All data are based on information received by the NYC Department of Health and Mental Hygiene (NYC Health Department) as of March 31, 2023.

HIV Surveillance: The NYC Health Department's HIV Epidemiology Program (HEP) manages the NYC HIV Surveillance Registry, a population-based registry of all people diagnosed with AIDS (since 1981) or HIV (since 2000) and reported to the NYC Health Department according to standard CDC case definitions.[1] The registry contains demographic, HIV transmission category and clinical information on people diagnosed with HIV, as well as all diagnostic tests, viral load tests, CD4 counts and HIV genotypes reportable under New York State (NYS) law.[2] For a list of surveillance definitions and technical notes, see **nyc.gov/site/doh/data/data-sets/hiv-aids-annual-surveillance-statistics.page**. While surveillance data capture the entire population diagnosed with HIV in NYC and show the differential effect of HIV on subpopulations by age, race and gender, they do not assist us in explaining the social and structural factors underlying the differences in impact and how those differences affect important outcomes, such as timely initiation of care and viral suppression, that are known to affect long-term prognosis.

Gender Identity Ascertainment: NYC HIV surveillance collects information about individuals' current gender identity, when available. This report displays the following gender categories: men, women and transgender people. People whose current gender identity differs from their sex assigned at birth are considered transgender people. Classifying transgender people in surveillance requires accurate collection of both sex assigned at birth and current gender identity. Sex and gender information are collected from people's self-reports, their health care providers or medical chart reviews. This information may or may not reflect self-identification. Transgender identity has been collected routinely since 2005 for newly reported cases. Reported numbers of new HIV diagnoses among transgender people and transgender people with HIV are likely to be underestimates. For more information, see **nyc.gov/assets/doh/downloads/pdf/dires/hiv-in-transgender-persons.pdf**. NYC HIV surveillance collects information on other gender identity categories, including "Non-binary or gender non-conforming." In this report, data for these individuals at the time of publication are displayed by sex assigned at birth.

Race or Ethnicity: NYC HIV surveillance derives data on race or ethnicity from multiple sources including medical charts, provider reporting, vital statistics records and patient interviews. Black, White, Asian/Pacific Islander, Native American, and Multiracial race categories exclude Latino/Hispanic ethnicity. Cases with the ethnicity Latino/Hispanic are grouped in the Latino/Hispanic race or ethnicity category, regardless of their race classification. For more information on race definitions, see **nyc.gov/assets/doh/downloads/pdf/ah/new_race_def_dec2010.pdf**.

Perinatal and Pediatric HIV Surveillance: NYC HIV surveillance collects data on infants exposed to or diagnosed with HIV and children diagnosed with HIV before 13 years of age. Data are used to monitor perinatal HIV transmission, measure perinatal HIV transmission rates and describe morbidity and mortality among children with HIV. Perinatal and pediatric surveillance data are informed by routine HIV and AIDS case surveillance, as well as a range of other activities and data sources, including longitudinal case follow-up, the NYS Department of Health Newborn Screening Program and CDC-funded special projects related to pediatric HIV.

Acute HIV Surveillance: Since 2008, NYC HIV surveillance has collected data on people diagnosed in the acute stage of HIV. For NYC's acute HIV infection case definition, see **nyc.gov/assets/doh/downloads/pdf/ah/definition-acute-hiv-infection.pdf**.

Death Data: NYC HIV surveillance collects data on deaths occurring in NYC through matches with the NYC Vital Statistics registry, medical chart reviews and provider reports, including on autopsies of people with HIV by the NYC Office of Chief Medical Examiner. Data on deaths occurring outside of NYC are from matches with the U.S. Social Security Administration's Death Master File and CDC's National Death Index. At the time of publication of this report, death data for the reporting period are incomplete. They include preliminary NYC death data, National Death Index data and partial Death Master File data.

[1]Centers for Disease Control and Prevention. Revised surveillance case definition for HIV infection — United States, 2014. *MMWR*. 2014;63:1-10.
[2]State of New York Laws. HIV Testing and Counseling. Public Health Law Section 2130 et seq. Albany, NY: State of New York.

Cause of Death: In this report, cause of death is a person's underlying cause of death. For deaths occurring between 1984 and 1986, ICD9 code 279.1 was used to denote AIDS-related deaths. For deaths occurring between 1987 and 1998, ICD9 codes 042-044 were used to denote HIV/AIDS-related deaths. For deaths occurring between 1999 and the most recent year, ICD10 codes B20-B24 were used to denote HIV/AIDS-related deaths. For technical notes on cause of death by the NYC Health Department Bureau of Vital Statistics, see **nyc.gov/assets/doh/downloads/pdf/vs/2020sum.pdf**. HIV infection and its management may contribute to causes of death classified as non-HIV-related, such as cardiovascular disease and certain cancers.[3,4]

Area-Based Poverty: Area-based poverty is based on NYC ZIP code of residence and is defined as the percentage of the population in a ZIP code with a household income that is below the Federal Poverty Level. This measure is not available for people missing a ZIP code or living outside of NYC. Income data used in this report are from the five-year American Community Survey (ACS) estimates centered on the year of the numerator data (for example, 2014 to 2018 ACS five-year estimate for 2016 data); if the preferred five-year file was not available, the most recent five-year ACS file was used. Cut points for area-based poverty categories in NYC were defined by a NYC Health Department work group.[5]

Medical Monitoring Project: The Medical Monitoring Project (MMP) is a national, ongoing supplemental surveillance activity sponsored by the CDC and designed to collect data to better understand the health behaviors, outcomes and needs of people with HIV. NYC is one of 23 MMP sites. A two-stage sampling design is used to obtain a probability sample of in-care and out-of-care adults with HIV known to the NYC HIV Surveillance Registry. The project is cross-sectional and conducted yearly. For more information on MMP, see **cdc.gov/hiv/statistics/systems/mmp**.

National HIV Behavioral Surveillance: National HIV Behavioral Surveillance (NHBS) is a national, ongoing surveillance activity sponsored by the CDC and designed to collect data to better understand behaviors related to HIV risk, HIV testing and the receipt or use of HIV prevention services and strategies. NYC is one of 22 NHBS sites. Surveillance is conducted in rotating annual cycles in three different populations: gay, bisexual and other men who have sex with men; people who inject drugs; and heterosexual people at increased risk of HIV. For more information on NHBS, see **cdc.gov/hiv/statistics/systems/nhbs/index.html**.

NYC HIV Care Continuum: "People with HIV" is calculated as the number of HIV-diagnosed divided by the estimated proportion of people with HIV who had been diagnosed, based on a CD4 depletion model.[6] "HIV-diagnosed" is calculated as the number of people with HIV retained in care plus the estimated number of people with HIV who were out of care, based on a statistical weighting method. This estimated number aims to account for migration out of NYC, and therefore is different from the total number of people diagnosed and reported with HIV in NYC.[7] "Received care" is defined as people with HIV with ≥1 viral load or CD4 count or CD4 percent drawn in the calendar year and reported to NYC HIV surveillance.[8] "Prescribed ART" is calculated as the number of people with HIV retained in care multiplied by the estimated proportion of people with HIV prescribed ART in the previous 12 months, based on the proportion of NYC MMP participants whose medical record included documentation of ART prescription.[9] "Virally suppressed" is calculated as people with HIV in care with a most recent viral load measurement in the calendar year of <200 copies/mL, plus the estimated number of out-of-care people with HIV in the calendar year with a viral load of <200 copies/mL, based on a statistical weighting method.[7]

[3]Petoumenos K, Worm SW. HIV infection, aging, and cardiovascular disease: Epidemiology and prevention. *Sex Health*. 2011;8(4):465-473. [4]Deeken JF, Tjen-A-Looi A, Rudek MA, et al. The rising challenge of non-AIDS-defining cancers in HIV-infected patients. *Clin Infect Dis*. 2012;55(9):1228-1235. [5]Toprani A, Hadler JL. Selecting and applying a standard area-based socioeconomic status measure for public health data: Analysis for New York City. New York City Department of Health and Mental Hygiene: Epi Res Report. May 2013; 1-11. [6]Source: NYC HIV Surveillance Registry; method: Song R, Hall HI, Green TA, et al. Using CD4 data to estimate HIV incidence, prevalence, and percent of undiagnosed infections in the United States. *J Acquir Immune Defic Syndr.* 2017;74(1):3-9. [7]Source: NYC HIV Surveillance Registry; method: Xia Q, Kersanke LS, Wiewel EW, et al. Proportions of patients with HIV retained in care and virally suppressed in New York City and the United States: Higher than we thought. *J Acquir Immune Defic Syndr.* 2015;68(3):351-358. [8]Source: NYC HIV Surveillance Registry. [9]Source: NYC HIV Surveillance Registry and NYC MMP.

Technical Notes (Continued)

Notes About Care Continuum-Specific Estimates: The number of people with HIV (first bar in Figure 10) represents an estimate of all people with HIV in NYC at the end of the calendar year. The number of people with HIV presented elsewhere in the report (for example, Table 1) represents people ever diagnosed with HIV, reported in NYC and not known to have died as of the end of the calendar year. Viral suppression estimates in the care continuum are among all New Yorkers with HIV. These differ from Figures 9.2 and 9.4, which show viral suppression among people in HIV medical care in the calendar year.

HIV Provider Reporting

All diagnostic and clinical providers (for example, physicians, physician assistants, nurse practitioners, nurses, midwives) and laboratories are required by NYS law to report specific HIV-related events.

Report HIV/AIDS Cases: NYS law requires providers to report cases of HIV or AIDS to the NYC Health Department within 14 days. Provider report forms (PRFs) must be completed for the following events: 1) new diagnosis of HIV (that is, acute HIV infection or first report of an HIV antibody positive test result); 2) new diagnosis of AIDS (CD4<200 or opportunistic infection); or 3) patient with previously diagnosed HIV or AIDS during their first visit. PRFs can be submitted electronically (ePRF) by accessing the NYS provider portal at **commerce.health.state.ny.us**. For instructions on accessing the portal, see **health.ny.gov/diseases/aids/providers/regulations/partner_services/docs/partner_services_materials.pdf**. For assistance with the provider portal or to request paper copies of the PRF (DOH-4189 rev 09/2016), call the NYS Department of Health at 518-474-4284. To arrange for pickup of a completed paper PRF, call the NYC HIV Surveillance Provider line at 212-442-3388. To protect patient confidentiality, PRFs must not be mailed or faxed to the NYC Health Department.

Discuss Partner Services and Report Partners: The NYC Health Department ACE (Assess. Connect. Engage.) Team was established in 2006 to assist HIV medical providers and patients diagnosed with HIV with partner services and linkage to care. Partner services, a free program offered to all people diagnosed with HIV, helps people with HIV determine how best to notify their sex or needle-sharing partners. The NYS Public Health Law requires providers to report all known sex or needle-sharing partners to the NYC Health Department so that partners can be notified of their potential exposure to HIV.

To report partners, call the NYC Health Department Contact Notification Assistance Program (CNAP) at 212-693-1419 or complete the PRF whenever partner information is available (either at the time of the reportable event or at a follow-up visit). Essential partner information to report includes: each partner's first and last name (and alias, if applicable), date of birth or estimated age, gender and domestic violence screening results.

For more information on HIV provider reporting, see **nyc.gov/site/doh/data/data-sets/hiv-aids-how-to-report-a-diagnosis.page**.

Additional Resources

Care Status Reports: The Care Status Report (CSR) is a program designed to assist providers in identifying patients who are out of care in NYC. The CSR system is a secure, web-based application that enables facilities to electronically submit eligible out of care patients (patients out of care less than six months) to the NYC Health Department for a query against the NYC HIV Surveillance Registry for return of limited-outcome information on the patients' current HIV care status in NYC. The care status outcomes include: follow-up needed; possibly in care; established in care; no follow-up needed — deceased; non-case; or pending further investigation by the NYC Health Department. The outcomes are based on HIV-related laboratory test data (CD4 counts and viral load tests) reported to the NYC HIV surveillance system and information on vital status. For more information on the CSR, see **nyc.gov/site/doh/health/health-topics/aids-hiv-care-status-reports-system.page**.

Additional Resources (Continued)

HIV Care Continuum Dashboards: The HIV Care Continuum Dashboards (CCDs) use NYC HIV surveillance data to show the performance of providers who give HIV care to the majority of New Yorkers with HIV. The CCDs contain information on how quickly New Yorkers newly diagnosed with HIV are linked to care and how well their viral loads are controlled. Currently, data are available for 62 NYC HIV care providers. The goal of the CCDs is to improve HIV care and accelerate efforts to end the HIV epidemic in NYC. For more information on the CCDs, see **nyc.gov/site/doh/health/health-topics/care-continuum-dashboard.page**.

Additional NYC Health Department Resources on HIV and Sexual Health in NYC:

For information on the NYC Health Department, see **nyc.gov/site/doh/index.page**
For information on HIV and AIDS, including HIV testing, prevention and treatment, see **nyc.gov/site/doh/health/health-topics/aids-hiv.page**
For information on the NYC HIV Epidemiology Program, see **nyc.gov/site/doh/data/data-sets/aids-hiv-epidemiology-and-field-services.page**
For information on NYC Sexual Health Clinics, see **nyc.gov/health/sexualhealthclinics**

Additional NYC Health Department Data Resources:

For NYC Health Department datasets, see **nyc.gov/site/doh/data/data-sets/data-sets-and-tables.page**
For EpiQuery, an interactive NYC Health Data System, see **a816-health.nyc.gov/hdi/epiquery**
For Geographical Information System (GIS) data files for download, see **nyc.gov/site/doh/data/health-tools/maps.page**

Additional HIV Resources:

National HIV surveillance, including the CDC's case definitions for HIV surveillance: **cdc.gov/hiv/statistics**
New York State Ending the Epidemic (ETE) Dashboard: **etedashboardny.org**
AIDSVu, including interactive online maps illustrating the prevalence of HIV in the U.S.: **aidsvu.org**
Fast-Track Cities Initiative, tracking progress against HIV/AIDS (UNAIDS) 95-95-95 targets: **fast-trackcities.org**

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