HIV Surveillance Annual Report, 2021

New York City Department of Health and Mental Hygiene

Executive Summary

In 2021, New York City (NYC) continued to make steady progress toward meeting its goals to end the HIV epidemic citywide. However, inequities in HIV persist, underscoring the need to increase access to HIV prevention, testing, care and treatment, and to accelerate efforts to improve HIV-related outcomes for all New Yorkers.

Highlights from the 2021 HIV Surveillance Annual Report include:

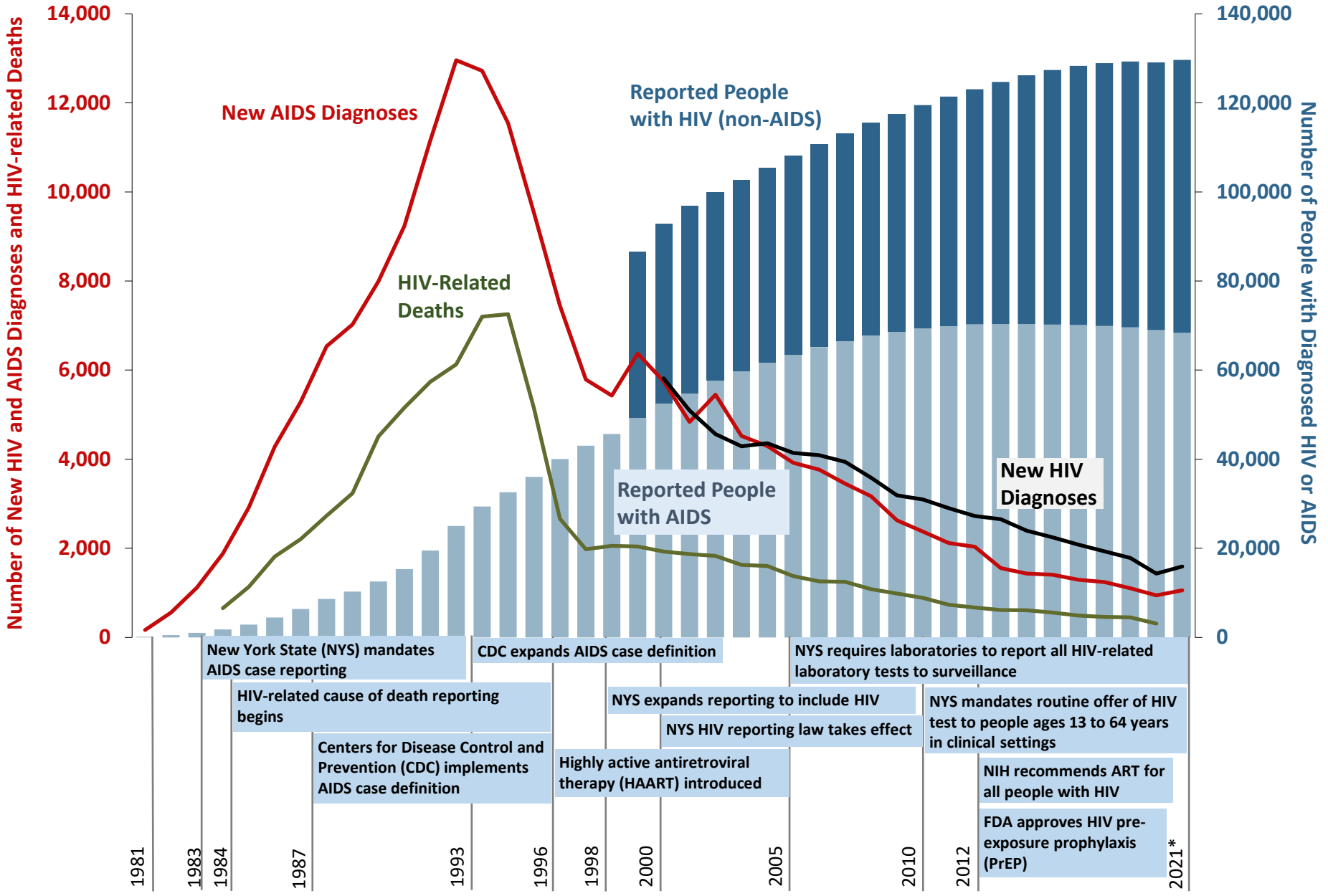
- There was a 14% increase in the annual number of new HIV diagnoses in NYC from 1,396 cases in 2020 to 1,594 cases in 2021. While a yearly increase in new diagnoses in NYC is atypical, the increase in new diagnoses in 2021 reflects a rebounding from the unexpectedly steeper drop during the first waves of the COVID-19 pandemic in 2020 when HIV testing services were less available and accessible. By 2021, many sites that had closed or paused services in 2020 reopened and resumed services, making HIV testing and diagnosis more available to New Yorkers. The number of new HIV diagnoses in 2021 may thus include diagnoses among people who had delayed seeking HIV testing during 2020 and were tested in 2021. Comparing new diagnoses in 2021 and in 2019 before COVID-19, the pace of decline was consistent with that observed during the five years prior to the COVID-19 pandemic.
- NYC saw slight increases in new HIV diagnoses from 2020 to 2021 among men, women and transgender people; Black, Latino/Hispanic, Asian/Pacific Islander and Native American people; all age groups ages 20 years and older; and nearly all transmission categories. As described above, these increases are rebounds from the artificially low numbers in 2020.
- The estimated number of new HIV infections in NYC decreased by 8% from 2019 to 2021.
- In 2021, 79% of all people with HIV in NYC were virally suppressed, meaning that they had undetectable viral loads on the last viral load measurement of the calendar year, which is a slight increase from 78% in 2020.
- In 2021, 87% of all people with HIV in NYC engaged in HIV medical care were virally suppressed, which is up 2% from 2017.

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) NYC Department of Health and Mental Hygiene (NYC Health Department)-led surveillance investigations 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 to plan 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 2021



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

***Data on 2021 deaths are incomplete.**

Figure 2. Trends in HIV diagnoses in NYC[1] from 2001 to 2021

HIV Diagnoses	2001	2021	Average annual percent change[2]
Total	5,815	1,594	-5.99
Gender			
Men	3,846	1,250	-5.09
Women	1,904	282	-9.30
Transgender	65	62	-0.24
Race or Ethnicity			
Black	3,016	704	-7.09
Latino/Hispanic	1,771	593	-4.81
White	889	187	-6.60
Asian/Pacific Islander	122	91	-0.75
Native American	12	2	-8.62
Age Group (Years)			
0-12	82	2	-19.86
13-19	209	55	-6.19
20-29	1,146	539	-2.86
30-39	2,047	496	-7.35
40-49	1,500	229	-8.99
50-59	618	179	-5.58
60+	213	94	-3.32

HIV Diagnoses	2001	2021	Average annual percent change[2]
Borough of Residence			
Bronx	1,265	371	-6.03
Brooklyn	1,571	416	-5.71
Manhattan	1,473	308	-7.53
Queens	708	295	-4.25
Staten Island	100	40	-4.43
Outside NYC	576	135	-6.91
Transmission Category			
Men who have sex with men (MSM)	1,704	748	-2.94
Injection drug use history (IDU)	827	15	-17.68
MSM-IDU	138	21	-7.68
Heterosexual contact	1,437	236	-7.53
Transgender people with sexual contact	52	57	0.32
Perinatal	81	2	-19.72

The number of new HIV diagnoses reported in NYC from 2001 to 2021 decreased overall and among people of all genders, race or ethnicities, ages at diagnosis, boroughs of residence and all transmission categories except for transgender people with sexual contact.

[1]For more information on the categories (for example, gender, age group) please see footnotes 1 to 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, 2021, to December 31, 2021; and people diagnosed with HIV, reported in NYC and presumed to be living as of December 31, 2021

	HIV Diagnoses[1]							AIDS Diagnoses[3]		PWH as of Dec. 31, 2021		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Total	1,594	100.0	1,287	100.0	307	100.0	19.3	1,054	100.0	129,660	100.0	2,178	100.0
Gender[5]													
Men	1,250	78.4	1,008	78.3	242	78.8	19.4	762	72.3	94,415	72.8	1,557	71.5
Women	282	17.7	220	17.1	62	20.2	22.0	260	24.7	32,920	25.4	587	27.0
Transgender women	57	3.6	54	4.2	3	1.0	5.3	31	2.9	2,277	1.8	34	1.6
Transgender men	5	0.3	5	0.4	0	0	0	1	0.1	48	0	0	0
Race or Ethnicity[6]													
Black	704	44.2	574	44.6	130	42.3	18.5	512	48.6	55,718	43.0	1,113	51.1
Latino/Hispanic	593	37.2	476	37	117	38.1	19.7	369	35.0	43,266	33.4	666	30.6
White	187	11.7	159	12.4	28	9.1	15.0	114	10.8	26,119	20.1	358	16.4
Asian/Pacific Islander	91	5.7	64	5.0	27	8.8	29.7	44	4.2	3,388	2.6	26	1.2
Native American	2	0.1	2	0.2	0	0	0	3	0.3	299	0.2	5	0.2
Multiracial	17	1.1	12	0.9	5	1.6	29.4	11	1.0	560	0.4	10	0.5
Unknown	0	0	0	0	0	0	0	1	0.1	310	0.2	0	0
Age Group (Years)[7]													
0-12	2	0.1	1	0.1	1	0.3	50	1	0.1	40	0	0	0
13-19	55	3.5	51	4.0	4	1.3	7.3	6	0.6	252	0.2	0	0
20-29	539	33.8	492	38.2	47	15.3	8.7	135	12.8	6,851	5.3	30	1.4
30-39	496	31.1	403	31.3	93	30.3	18.8	311	29.5	21,288	16.4	149	6.8
40-49	229	14.4	164	12.7	65	21.2	28.4	202	19.2	22,595	17.4	214	9.8
50-59	179	11.2	114	8.9	65	21.2	36.3	220	20.9	37,650	29.0	664	30.5
60+	94	5.9	62	4.8	32	10.4	34.0	179	17.0	40,984	31.6	1,121	51.5

PWH=People with HIV.

[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 PWH, age at the end of the calendar year; and for deaths, age at death.

Table 1 (Continued). HIV/AIDS diagnoses and deaths from January 1, 2021, to December 31, 2021; and people diagnosed with HIV, reported in NYC and presumed to be living as of December 31, 2021

	HIV Diagnoses[1]							AIDS Diagnoses[3]		PWH as of Dec. 31, 2021		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Borough of Residence[8]													
Bronx	371	23.3	301	23.4	70	22.8	18.9	296	28.1	31,035	23.9	623	28.6
Brooklyn	416	26.1	330	25.6	86	28.0	20.7	246	23.3	30,810	23.8	445	20.4
Manhattan	308	19.3	251	19.5	57	18.6	18.5	192	18.2	32,749	25.3	381	17.5
Queens	295	18.5	231	17.9	64	20.8	21.7	181	17.2	19,140	14.8	156	7.2
Staten Island	40	2.5	30	2.3	10	3.3	25.0	29	2.8	2,538	2.0	40	1.8
Outside NYC	135	8.5	115	8.9	20	6.5	14.8	104	9.9	13,201	10.2	79	3.6
Unknown	29	1.8	29	2.3	0	0	0	6	0.6	187	0.1	454	20.8
Area-based Poverty Level[9]													
Low poverty	195	12.2	144	11.2	51	16.6	26.2	122	11.6	18,722	14.4	144	6.6
Medium poverty	553	34.7	455	35.4	98	31.9	17.7	329	31.2	42,718	32.9	516	23.7
High poverty	377	23.7	291	22.6	86	28.0	22.8	253	24.0	27,593	21.3	424	19.5
Very high poverty	304	19.1	253	19.7	51	16.6	16.8	237	22.5	25,981	20.0	559	25.7
Unavailable	165	10.4	144	11.2	21	6.8	12.7	113	10.7	14,646	11.3	535	24.6

PWH=People with HIV.

[8]For HIV and AIDS diagnoses, residence at diagnosis. For PWH 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, 2021, to December 31, 2021; and people diagnosed with HIV, reported in NYC and presumed to be living as of December 31, 2021

	HIV Diagnoses[1]							AIDS Diagnoses[3]		PWH as of Dec. 31, 2021		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Transmission Category[10]													
MSM	748	46.9	631	49.0	117	38.1	15.6	398	37.8	56,540	43.6	573	26.3
IDU	15	0.9	14	1.1	1	0.3	6.7	54	5.1	13,330	10.3	505	23.2
MSM-IDU	21	1.3	20	1.6	1	0.3	4.8	26	2.5	3,194	2.5	100	4.6
Heterosexual contact	236	14.8	177	13.8	59	19.2	25.0	219	20.8	24,993	19.3	416	19.1
TG-SC	57	3.6	54	4.2	3	1.0	5.3	31	2.9	2,021	1.6	25	1.1
Perinatal	2	0.1	1	0.1	1	0.3	50.0	12	1.1	2,537	2.0	20	0.9
Other	0	0	0	0	0	0	0	0	0	191	0.1	4	0.2
Unknown	515	32.3	390	30.3	125	40.7	24.3	314	29.8	26,854	20.7	535	24.6

PWH=People with HIV; 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.

[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 negative history of injection drug use. "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 have a negative history of injection drug use. "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, 2021, to December 31, 2021; and men diagnosed with HIV, reported in NYC and presumed to be living as of December 31, 2021

	HIV Diagnoses[1]							AIDS Diagnoses[3]		PWH as of Dec. 31, 2021		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Total	1,255	100.0	1,013	100.0	242	100.0	19.3	763	100.0	94,463	100.0	1,557	100.0
Race or Ethnicity[6]													
Black	514	41.0	422	41.7	92	38.0	17.9	333	43.6	35,430	37.5	744	47.8
Latino/Hispanic	485	38.6	384	37.9	101	41.7	20.8	284	37.2	31,699	33.6	470	30.2
White	161	12.8	137	13.5	24	9.9	14.9	101	13.2	23,578	25.0	312	20.0
Asian/Pacific Islander	80	6.4	59	5.8	21	8.7	26.3	34	4.5	2,848	3.0	20	1.3
Native American	2	0.2	2	0.2	0	0	0	3	0.4	230	0.2	4	0.3
Multiracial	13	1.0	9	0.9	4	1.7	30.8	8	1.0	438	0.5	7	0.4
Unknown	0	0	0	0	0	0	0	0	0	240	0.3	0	0
Age Group (Years)[7]													
0-12	1	0.1	1	0.1	0	0	0	0	0	17	0	0	0
13-19	38	3.0	35	3.5	3	1.2	7.9	4	0.5	140	0.1	0	0
20-29	455	36.3	413	40.8	42	17.4	9.2	104	13.6	5,221	5.5	19	1.2
30-39	413	32.9	331	32.7	82	33.9	19.9	252	33.0	17,021	18.0	112	7.2
40-49	165	13.1	115	11.4	50	20.7	30.3	140	18.3	16,159	17.1	151	9.7
50-59	121	9.6	81	8.0	40	16.5	33.1	139	18.2	26,664	28.2	450	28.9
60+	62	4.9	37	3.7	25	10.3	40.3	124	16.3	29,241	31.0	825	53.0

PWH=People with HIV.

[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, 2021, to December 31, 2021; and men diagnosed with HIV, reported in NYC and presumed to be living as of December 31, 2021

	HIV Diagnoses[1]							AIDS Diagnoses[3]		PWH as of Dec. 31, 2021		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Borough of Residence[8]													
Bronx	270	21.5	219	21.6	51	21.1	18.9	202	26.5	19,465	20.6	417	26.8
Brooklyn	333	26.5	262	25.9	71	29.3	21.3	170	22.3	20,836	22.1	288	18.5
Manhattan	270	21.5	218	21.5	52	21.5	19.3	153	20.1	27,723	29.3	292	18.8
Queens	235	18.7	186	18.4	49	20.2	20.9	138	18.1	14,122	14.9	112	7.2
Staten Island	28	2.2	23	2.3	5	2.1	17.9	14	1.8	1,630	1.7	29	1.9
Outside NYC	98	7.8	84	8.3	14	5.8	14.3	81	10.6	10,546	11.2	60	3.9
Unknown	21	1.7	21	2.1	0	0	0	5	0.7	141	0.1	359	23.1
Area-based Poverty Level[9]													
Low poverty	155	12.4	119	11.7	36	14.9	23.2	93	12.2	15,407	16.3	114	7.3
Medium poverty	440	35.1	364	35.9	76	31.4	17.3	234	30.7	31,618	33.5	363	23.3
High poverty	315	25.1	240	23.7	75	31.0	23.8	185	24.2	19,176	20.3	287	18.4
Very high poverty	225	17.9	185	18.3	40	16.5	17.8	164	21.5	16,589	17.6	372	23.9
Unavailable	120	9.6	105	10.4	15	6.2	12.5	87	11.4	11,673	12.4	421	27.0
Transmission Category[10]													
MSM	748	59.6	631	62.3	117	48.3	15.6	398	52.2	56,540	59.9	573	36.8
IDU	7	0.6	6	0.6	1	0.4	14.3	37	4.8	8,562	9.1	354	22.7
MSM-IDU	21	1.7	20	2.0	1	0.4	4.8	26	3.4	3,194	3.4	100	6.4
Heterosexual contact	32	2.5	16	1.6	16	6.6	50.0	42	5.5	5,874	6.2	117	7.5
TG-SC	5	0.4	5	0.5	0	0	0	1	0.1	30	0	0	0
Perinatal	1	0.1	1	0.1	0	0	0	2	0.3	1,238	1.3	9	0.6
Other	0	0	0	0	0	0	0	0	0	108	0.1	3	0.2
Unknown	441	35.1	334	33.0	107	44.2	24.3	257	33.7	18,917	20.0	401	25.8

PWH=People with HIV; 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.

[1-5,8-10]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, 2021, to December 31, 2021; and women diagnosed with HIV, reported in NYC, and presumed to be living as of December 31, 2021

	HIV Diagnoses[1]							AIDS Diagnoses[3]		PWH as of Dec. 31, 2021		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Total	339	100.0	274	100.0	65	100.0	19.2	291	100.0	35,197	100.0	621	100.0
Race or Ethnicity[6]													
Black	190	56.0	152	55.5	38	58.5	20.0	179	61.5	20,288	57.6	369	59.4
Latino/Hispanic	108	31.9	92	33.6	16	24.6	14.8	85	29.2	11,567	32.9	196	31.6
White	26	7.7	22	8.0	4	6.2	15.4	13	4.5	2,541	7.2	46	7.4
Asian/Pacific Islander	11	3.2	5	1.8	6	9.2	54.5	10	3.4	540	1.5	6	1.0
Native American	0	0	0	0	0	0	0	0	0	69	0.2	1	0.2
Multiracial	4	1.2	3	1.1	1	1.5	25.0	3	1.0	122	0.3	3	0.5
Unknown	0	0	0	0	0	0	0	1	0.3	70	0.2	0	0
Age Group (Years)[7]													
0-12	1	0.3	0	0	1	1.5	100.0	1	0.3	23	0.1	0	0
13-19	17	5.0	16	5.8	1	1.5	5.9	2	0.7	112	0.3	0	0
20-29	84	24.8	79	28.8	5	7.7	6.0	31	10.7	1,630	4.6	11	1.8
30-39	83	24.5	72	26.3	11	16.9	13.3	59	20.3	4,267	12.1	37	6.0
40-49	64	18.9	49	17.9	15	23.1	23.4	62	21.3	6,436	18.3	63	10.1
50-59	58	17.1	33	12.0	25	38.5	43.1	81	27.8	10,986	31.2	214	34.5
60+	32	9.4	25	9.1	7	10.8	21.9	55	18.9	11,743	33.4	296	47.7

PWH=People with HIV.

[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, 2021, to December 31, 2021; and women diagnosed with HIV, reported in NYC, and presumed to be living as of December 31, 2021

	HIV Diagnoses[1]							AIDS Diagnoses[3]		PWH as of Dec. 31, 2021		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Borough of Residence[8]													
Bronx	101	29.8	82	29.9	19	29.2	18.8	94	32.3	11,570	32.9	206	33.2
Brooklyn	83	24.5	68	24.8	15	23.1	18.1	76	26.1	9,974	28.3	157	25.3
Manhattan	38	11.2	33	12	5	7.7	13.2	39	13.4	5,026	14.3	89	14.3
Queens	60	17.7	45	16.4	15	23.1	25	43	14.8	5,018	14.3	44	7.1
Staten Island	12	3.5	7	2.6	5	7.7	41.7	15	5.2	908	2.6	11	1.8
Outside NYC	37	10.9	31	11.3	6	9.2	16.2	23	7.9	2,655	7.5	19	3.1
Unknown	8	2.4	8	2.9	0	0	0	1	0.3	46	0.1	95	15.3
Area-based Poverty Level[9]													
Low poverty	40	11.8	25	9.1	15	23.1	37.5	29	10	3,315	9.4	30	4.8
Medium poverty	113	33.3	91	33.2	22	33.8	19.5	95	32.6	11,100	31.5	153	24.6
High poverty	62	18.3	51	18.6	11	16.9	17.7	68	23.4	8,417	23.9	137	22.1
Very high poverty	79	23.3	68	24.8	11	16.9	13.9	73	25.1	9,392	26.7	187	30.1
Unavailable	45	13.3	39	14.2	6	9.2	13.3	26	8.9	2,973	8.4	114	18.4
Transmission Category[10]													
IDU	8	2.4	8	2.9	0	0	0	17	5.8	4,768	13.5	151	24.3
Heterosexual contact	204	60.2	161	58.8	43	66.2	21.1	177	60.8	19,119	54.3	299	48.1
TG-SC	52	15.3	49	17.9	3	4.6	5.8	30	10.3	1,991	5.7	25	4
Perinatal	1	0.3	0	0	1	1.5	100	10	3.4	1,299	3.7	11	1.8
Other	0	0	0	0	0	0	0	0	0	83	0.2	1	0.2
Unknown	74	21.8	56	20.4	18	27.7	24.3	57	19.6	7,937	22.6	134	21.6

PWH=People with HIV; IDU=Injection drug use history; 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, 2021, to December 31, 2021; and transgender people diagnosed with HIV, reported in NYC, and presumed to be living as of December 31, 2021

	HIV Diagnoses[1]							AIDS Diagnoses[3]		PWH as of Dec. 31, 2021		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Total	62	100.0	59	100.0	3	100.0	4.8	32	100.0	2,325	100.0	34	100.0
Gender[5]													
Transgender women	57	91.9	54	91.5	3	100.0	5.3	31	96.9	2,277	97.9	34	100.0
Transgender men	5	8.1	5	8.5	0	0	0	1	3.1	48	2.1	0	0
Race or Ethnicity[6]													
Black	28	45.2	28	47.5	0	0	0	11	34.4	1,144	49.2	17	50.0
Latino/Hispanic	26	41.9	25	42.4	1	33.3	3.8	18	56.3	944	40.6	12	35.3
White	6	9.7	6	10.2	0	0	0	0	0	145	6.2	5	14.7
Asian/Pacific Islander	2	3.2	0	0	2	66.7	100.0	3	9.4	51	2.2	0	0
Native American	0	0	0	0	0	0	0	0	0	8	0.3	0	0
Multiracial	0	0	0	0	0	0	0	0	0	33	1.4	0	0
Age Group (Years)[7]													
0-12	0	0	0	0	0	0	0	0	0	0	0	0	0
13-19	5	8.1	5	8.5	0	0	0	1	3.1	6	0.3	0	0
20-29	34	54.8	34	57.6	0	0	0	8	25.0	412	17.7	1	2.9
30-39	15	24.2	14	23.7	1	33.3	6.7	13	40.6	869	37.4	10	29.4
40-49	6	9.7	4	6.8	2	66.7	33.3	7	21.9	555	23.9	5	14.7
50-59	2	3.2	2	3.4	0	0	0	2	6.3	348	15.0	11	32.4
60+	0	0	0	0	0	0	0	1	3.1	135	5.8	7	20.6

PWH=People with HIV.

[1-7]Footnotes appear below Table 1.

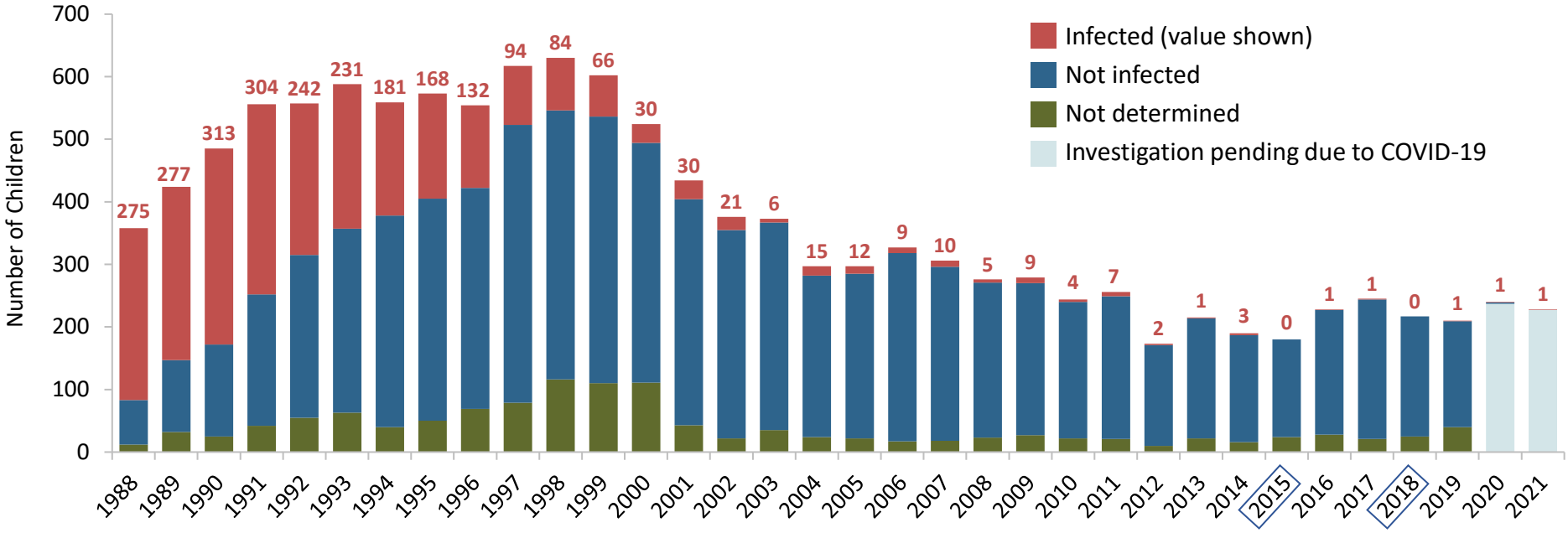
Table 4 (Continued). HIV/AIDS diagnoses and deaths among transgender people from January 1, 2021, to December 31, 2021; and transgender people diagnosed with HIV, reported in NYC, and presumed to be living as of December 31, 2021

	HIV Diagnoses[1]							AIDS Diagnoses[3]		PWH as of Dec. 31, 2021		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Borough of Residence[8]													
Bronx	14	22.6	14	23.7	0	0	0	10	31.3	815	35.1	10	29.4
Brooklyn	16	25.8	14	23.7	2	66.7	12.5	5	15.6	517	22.2	6	17.6
Manhattan	10	16.1	10	16.9	0	0	0	6	18.8	464	20.0	9	26.5
Queens	10	16.1	9	15.3	1	33.3	10.0	10	31.3	335	14.4	4	11.8
Staten Island	0	0	0	0	0	0	0	0	0	59	2.5	1	2.9
Outside NYC	10	16.1	10	16.9	0	0	0	1	3.1	133	5.7	1	2.9
Unknown	2	3.2	2	3.4	0	0	0	0	0	2	0.1	3	8.8
Area-based Poverty Level[9]													
Low poverty	3	4.8	3	5.1	0	0	0	5	15.6	243	10.5	1	2.9
Medium poverty	19	30.6	16	27.1	3	100.0	15.8	14	43.8	727	31.3	12	35.3
High poverty	16	25.8	16	27.1	0	0	0	6	18.8	527	22.7	7	20.6
Very high poverty	12	19.4	12	20.3	0	0	0	6	18.8	686	29.5	10	29.4
Unavailable	12	19.4	12	20.3	0	0	0	1	3.1	142	6.1	4	11.8
Transmission Category[10]													
IDU	3	4.8	3	5.1	0	0	0	1	3.1	215	9.2	8	23.5
Sexual contact	57	91.9	54	91.5	3	100.0	5.3	31	96.9	2,021	86.9	25	73.5
Perinatal	0	0	0	0	0	0	0	0	0	10	0.4	0	0
Unknown	2	3.2	2	3.4	0	0	0	0	0	79	3.4	1	2.9

PWH=People with HIV; IDU=Injection drug use history.

[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 2021[4]



Milestones in Reduction of Perinatal HIV Transmission

1985: CDC recommends that women with HIV avoid breastfeeding.
1994: ACTG 076 study shows that AZT reduces perinatal transmission.
1997: Routine newborn screening begins in New York State.
1999: NYS implements expedited testing in obstetrical settings.
2015 and 2018: NYC reports no perinatal transmission in children born in NYC.
2020: Due to COVID-19, exposure investigations were significantly curtailed; however, all HIV-antibody positive cases were identified.

From 2017 to 2021, less than 1% of infants born to women with HIV tested positive for 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 labelled 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, 2021.

Figure 4.1. Poverty levels in NYC from 2016 to 2020

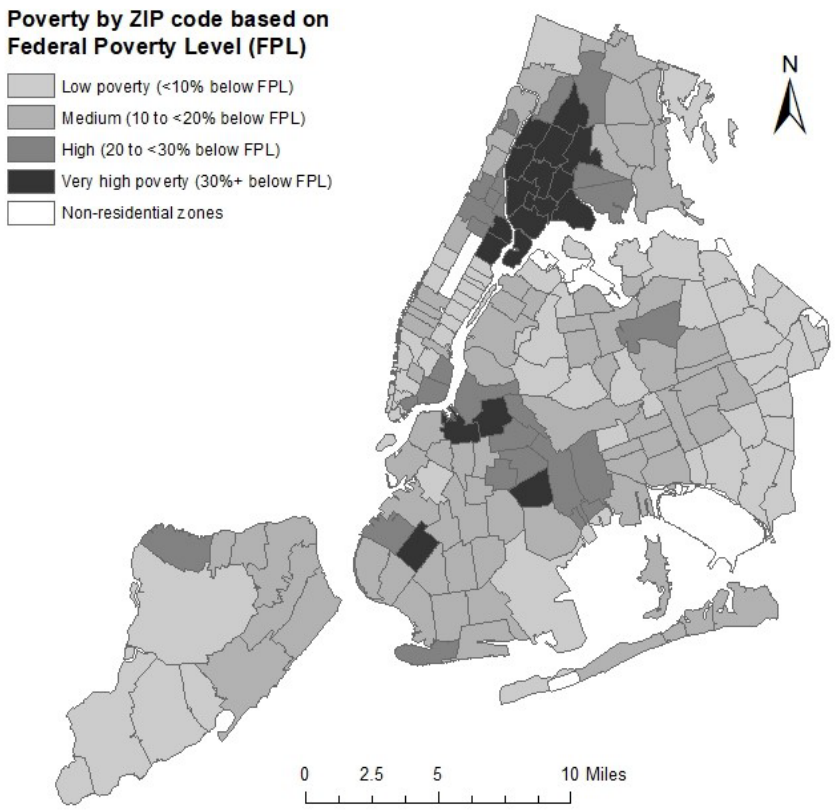
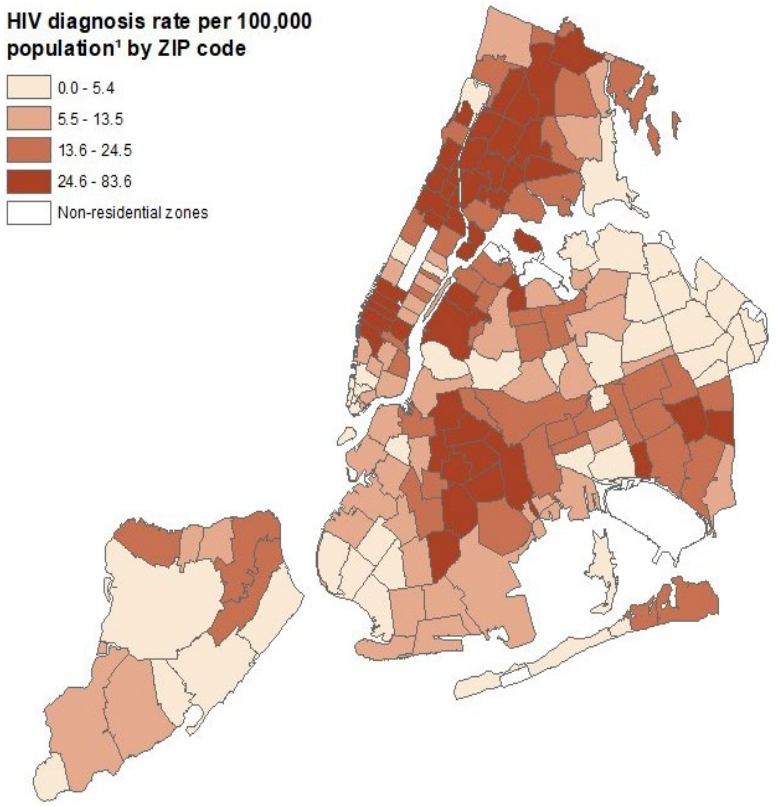


Figure 4.2. HIV diagnosis rates in NYC in 2021



Many ZIP codes 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 South Bronx, East Harlem and Bedford Stuyvesant - Crown Heights. ZIP codes in the Chelsea - Clinton, Central Harlem - Morningside Heights, and Bedford Stuyvesant - Crown Heights neighborhoods had the highest HIV diagnosis rates in 2021 (Figure 4.2).

[1]Rates calculated using NYC Health Department 2020 population estimates, modified from U.S. Census Bureau intercensal population estimates, updated October 2021.

Figure 4.3. HIV prevalence in NYC in 2021

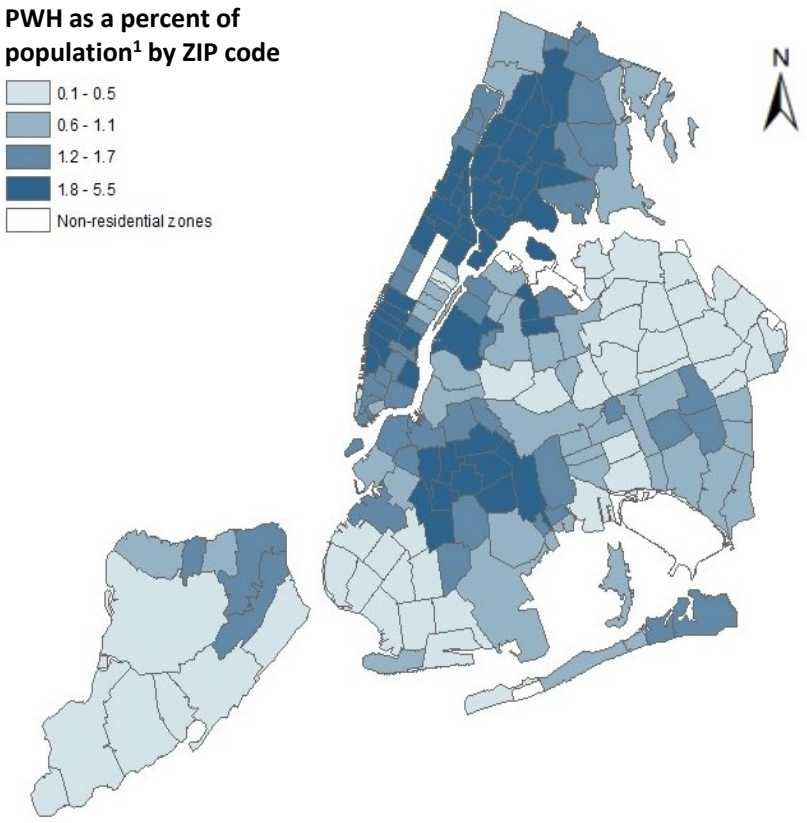
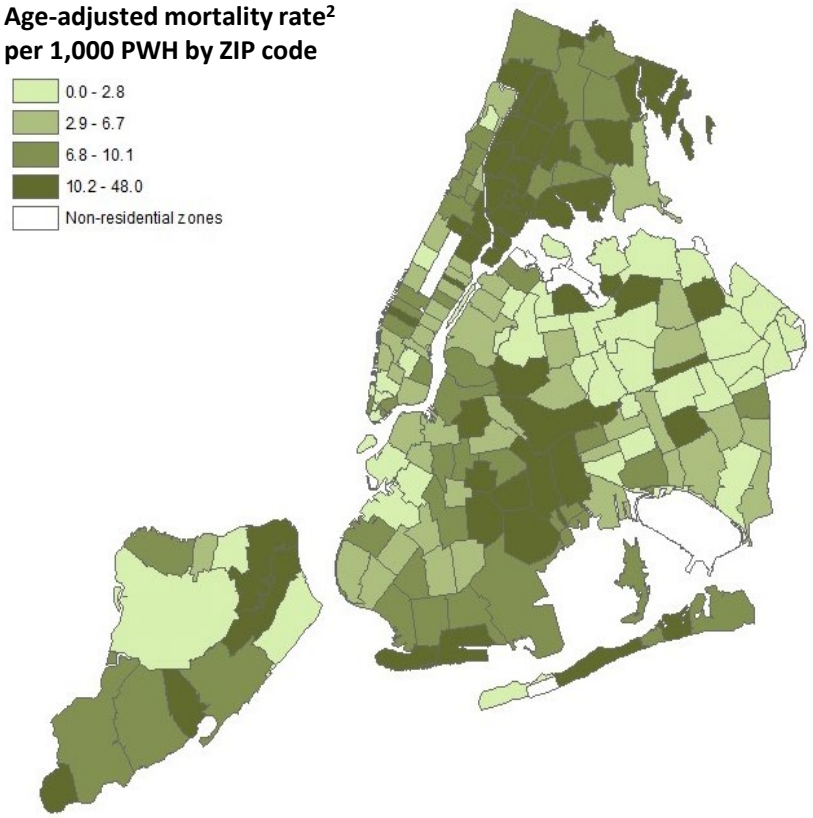


Figure 4.4. Age-adjusted mortality rates among people with HIV in NYC in 2021



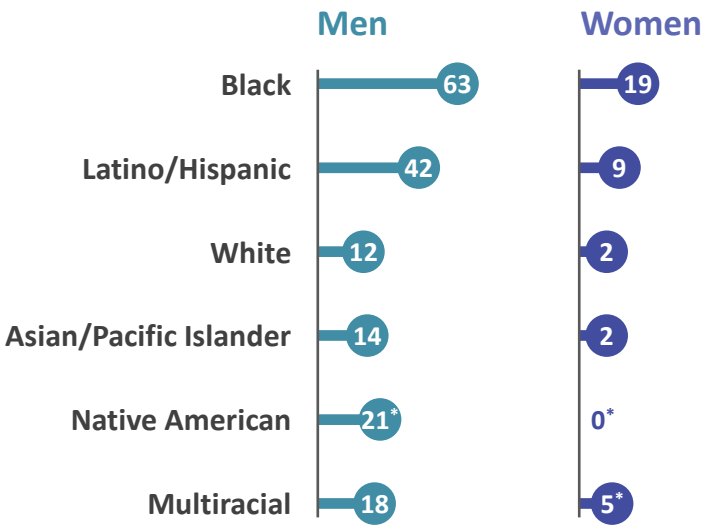
ZIP codes in Chelsea - Clinton and West Queens had the highest HIV prevalence in NYC (Figure 4.3). ZIP codes in Bayside - Little Neck, Fresh Meadows and West Queens had the highest mortality rate among people with HIV (Figure 4.4). ZIP codes in the Chelsea - Clinton neighborhood had the highest HIV diagnosis rates but relatively low poverty and mortality rates, making them an exception to the usual alignment of these outcomes in NYC.

PWH=People with HIV.

[1]Rates calculated using NYC Health Department 2020 population estimates, modified from U.S. Census Bureau intercensal population estimates and updated in October 2021.

[2]Age-adjusted to the NYC Census 2010 population. People newly diagnosed with HIV at death were excluded from the numerator. Mortality data for 2021 are incomplete.

Figure 5.1. HIV diagnosis rates[1,2] per 100,000 NYC residents by gender[3] and race or ethnicity in 2021



In 2021, the HIV diagnosis rate among Black males in NYC was 1.5 to more than 5 times higher than the rates among males from other race or ethnicity groups.

In 2021, the HIV diagnosis rate among Black females in NYC was 2 to more than 9 times higher than the rates among females from other race or ethnicity groups.

*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 2020 population estimates, modified from U.S. Census Bureau intercensal population estimates, updated in October 2021.
[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=1,361, 15.4% of people newly diagnosed).

Figure 5.2. Average annual HIV diagnosis rates[1,2] per 100,000 NYC residents by subregion of birth from 2017 to 2021[4]

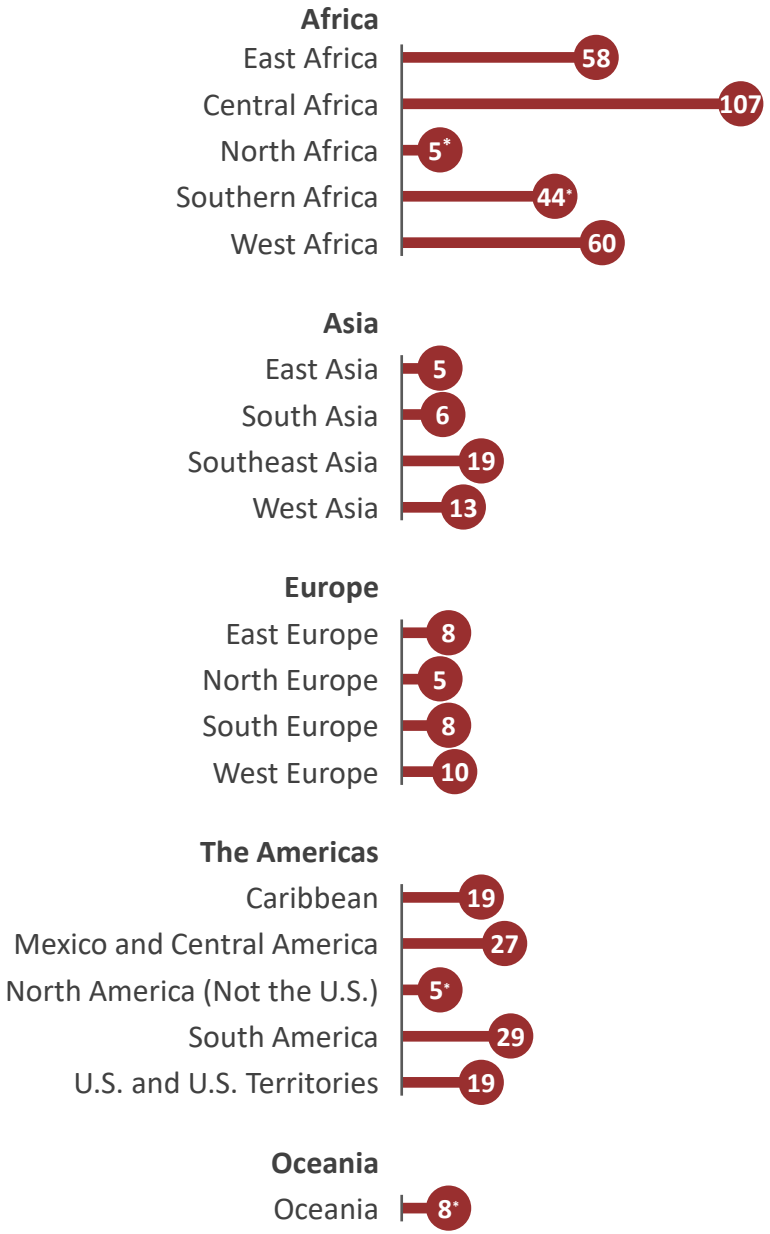


Figure 6.1. Number of acute HIV infections by transmission category and gender in NYC in 2021

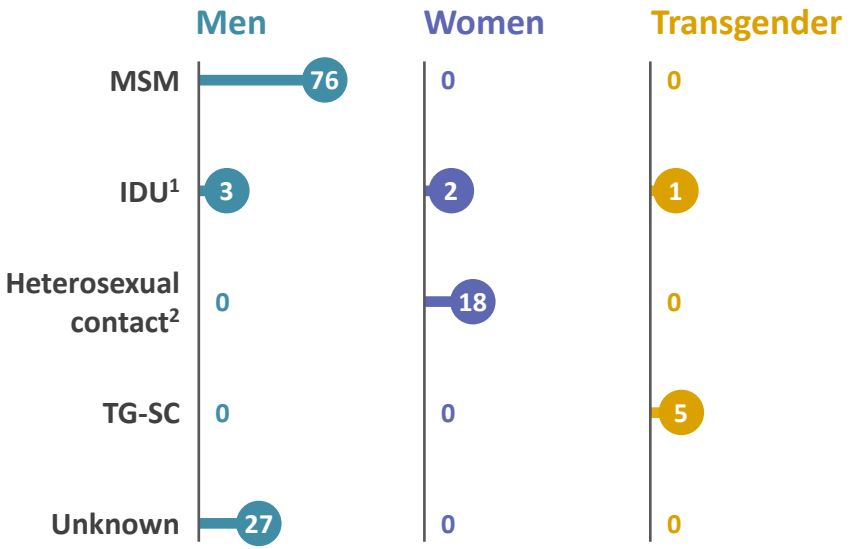
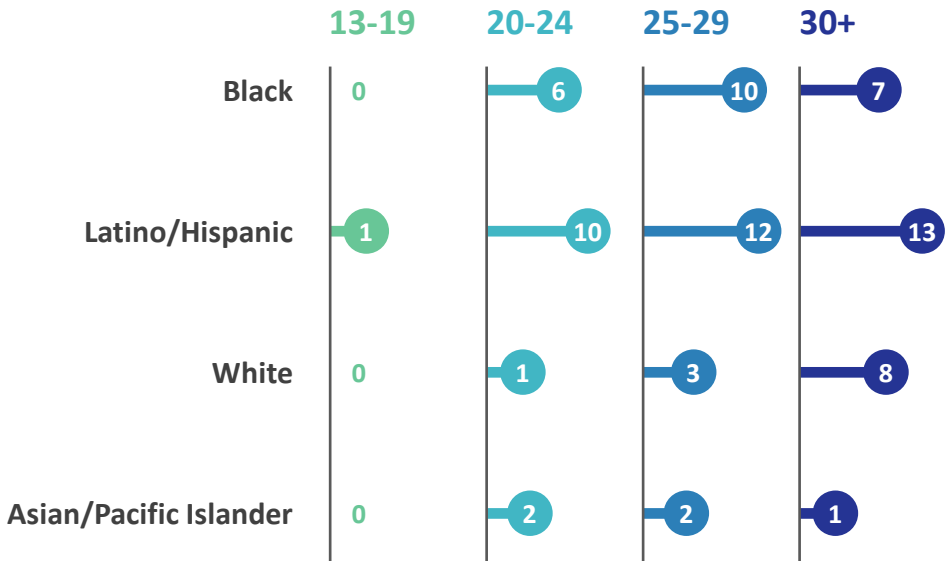


Figure 6.2. Number of acute HIV infections among MSM by race or ethnicity and age group (years) in NYC in 2021



Diagnosis of HIV in the acute phase (AHI) 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 2021, 132 (8%) were diagnosed with an acute HIV infection. MSM were overrepresented among AHI cases (Figure 6.1), in part due to higher testing frequency than other groups. Among MSM with AHI, a greater proportion were ages 25 years and older across most racial and ethnic 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 footnotes 10 in Table 1.

Figure 7.1. Annual number of estimated incident HIV infections[1] and new HIV diagnoses in NYC from 2017 to 2021[2]

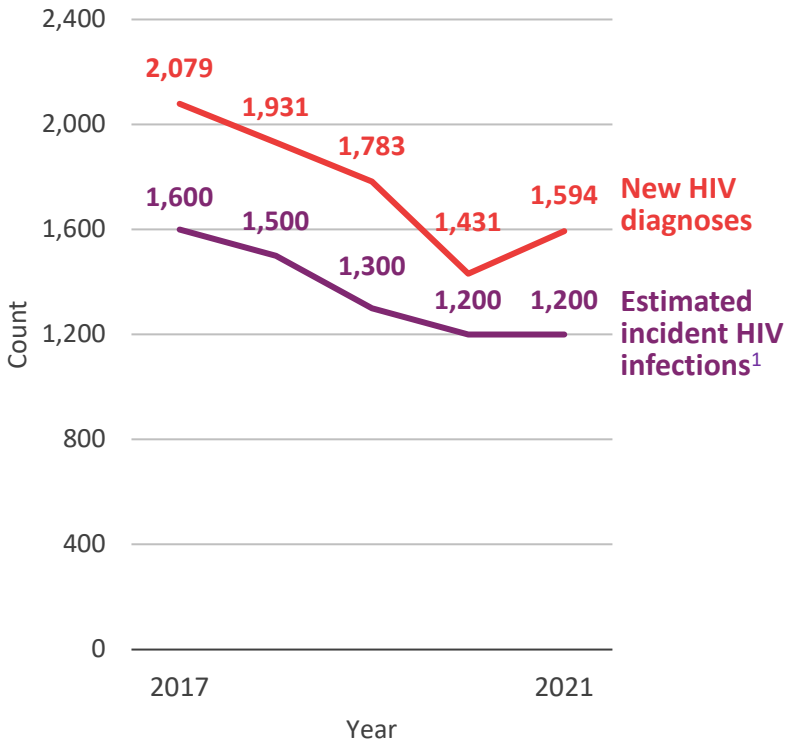
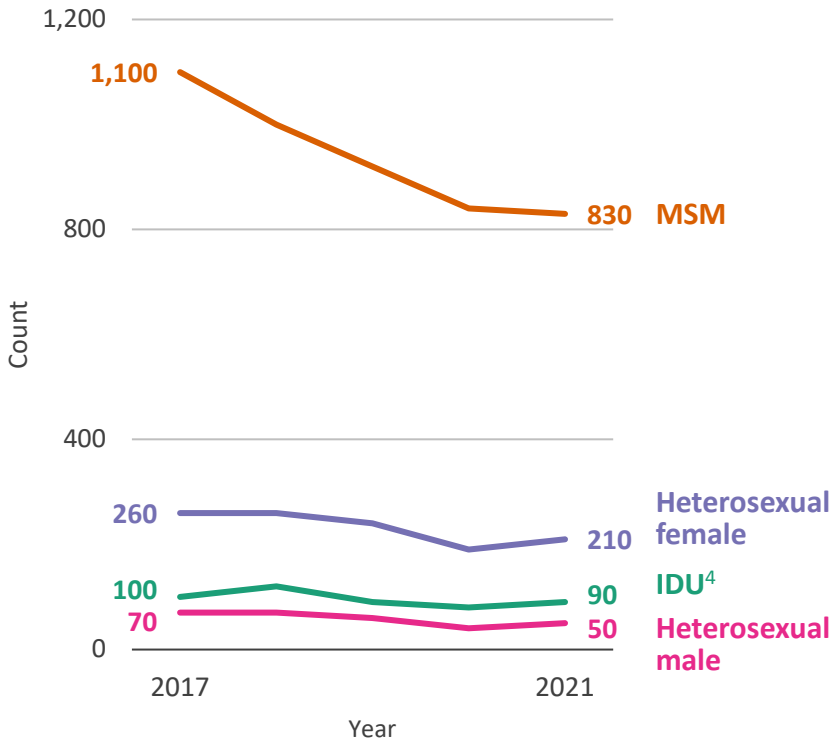


Figure 7.2. Annual number of estimated incident HIV infections[1] by sex assigned at birth[3] and transmission category in NYC from 2017 to 2021[2]



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 2017 and 2021. The estimated HIV 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]2021 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. Outcomes among people newly diagnosed with HIV in NYC from 2019 to 2021[1]

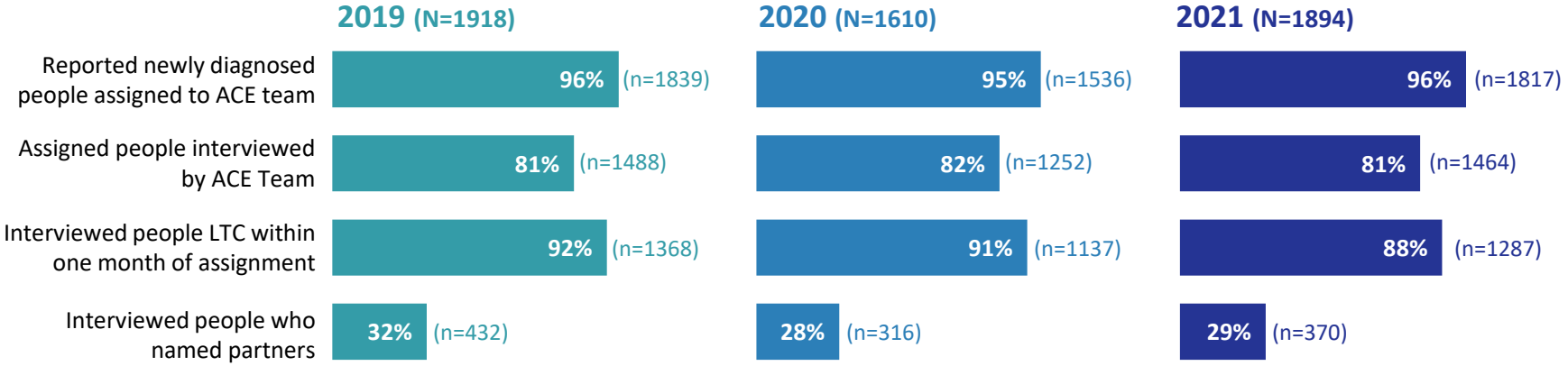
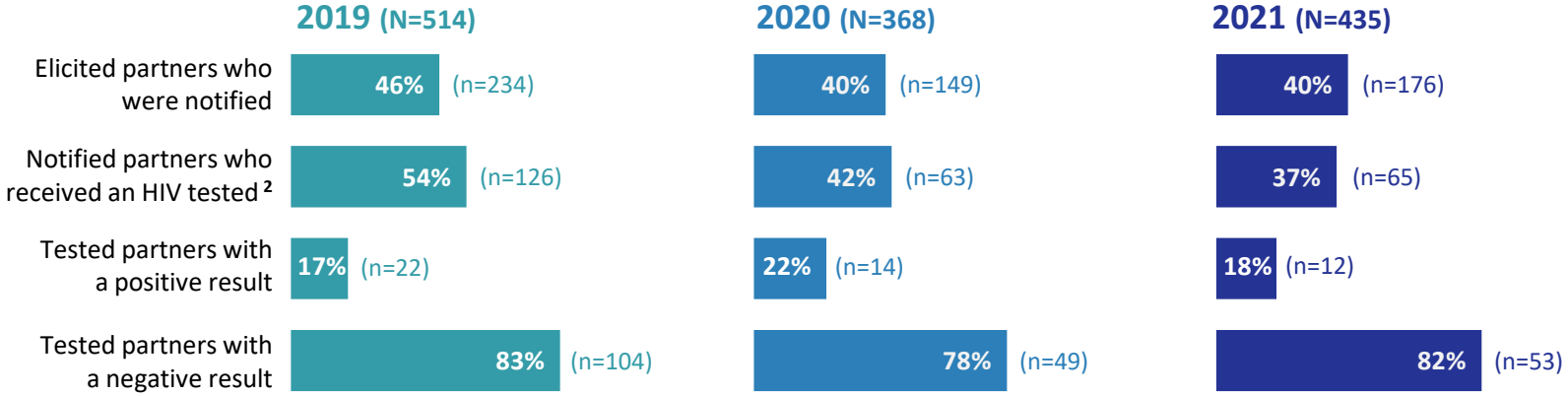


Figure 8.2. Outcomes among named partners of people newly diagnosed with HIV conducted by partner services, 2019-2021[1]



In 2021, the ACE (Assess. Connect. Engage.) Team assigned 1,817 out of 1,894 people reported newly diagnosed with HIV, to be interviewed and offered with HIV services. Compared to 2020, the number of newly diagnosed people reported to the ACE Team increased by 15% in 2021. The proportions assigned, interviewed and linked to HIV care within one month remained consistent across the three years (Figure 8.1). The proportions of partners notified and tested for HIV were lower in 2021 than in 2020. In 2021, 40% of elicited partners were notified of exposure and 37% of those notified received HIV testing. The number of partners who tested HIV positive in 2021 decreased (18%) compared with 2020 (22%) (Figure 8.2).

LTC=Linked to HIV care within one month of assignment.

[1]See Executive Summary for COVID-19 effects on 2020 and 2021 data.

[2]Prior to March 17, 2020, the ACE Team provided OraQuick home test kits via courier or in-person to partners who declined 4th generation testing by ACE. Due to the COVID-19 pandemic, community-based HIV testing was suspended as of March 17, 2020. Beginning from June 22, 2020, ACE Team staff offer OraQuick coupon codes to partners, so they can receive home test kits directly from the company via mail, in addition to linking them to providers for testing.

Figure 9.1. Proportion of people genotyped within three months of HIV diagnosis in NYC in 2021

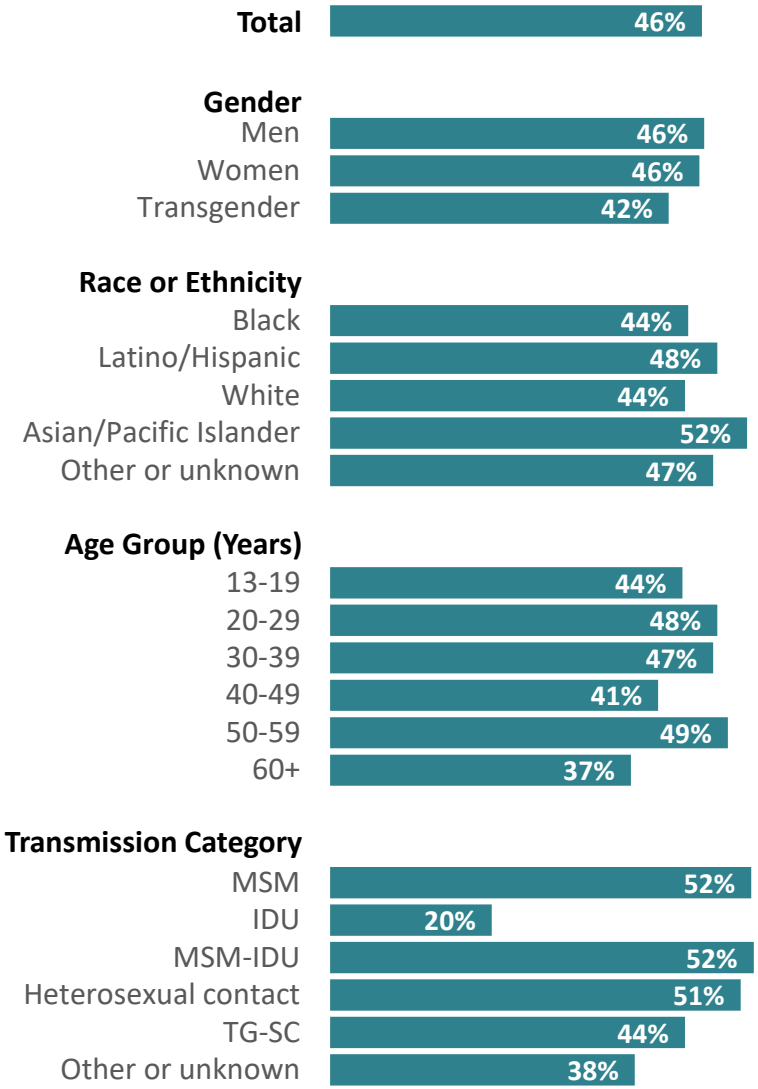


Figure 9.2. Top 10 viral mutations from people genotyped within three months of HIV diagnosis in NYC in 2021*

Rank	Mutation	Drug class
1	K103N	NNRTI
2	G190A	NNRTI
3	M184V	NRTI
4	Y181C	NNRTI
5	M41L	NRTI
6	K101E	NNRTI
7	D67N	NRTI
8	E44D	NRTI
9	T74S	PI
10	T215S	NRTI

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 2021, 46% of people newly diagnosed with HIV in NYC received a genotype within three months of diagnosis (compared with 40.3% in 2020). Lower proportions of transgender, Black and White people received a genotype (Figure 9.1). In 2021, K103N was the most frequent clinically relevant mutation among newly diagnosed people (Figure 9.2). The K103N mutation confers resistance to non-nucleoside reverse transcriptase inhibitors (NNRTI). The persistence of K103N among people newly diagnosed with HIV in 2021, despite the absence of NNRTIs from recommended first- and second-line HIV antiretroviral treatment (ART) regimens, may indicate that maintaining this mutation does not confer a fitness cost on the transmitted virus.

Other race includes Native American and multiracial people; 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.
*Ambiguous amino acid assignments omitted.

Figure 10.1. 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 2017 to 2021

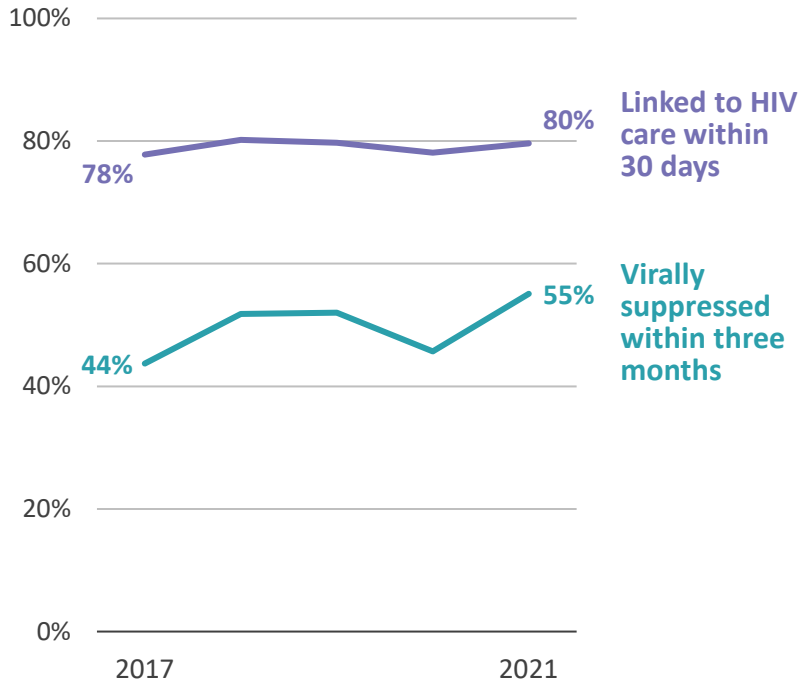
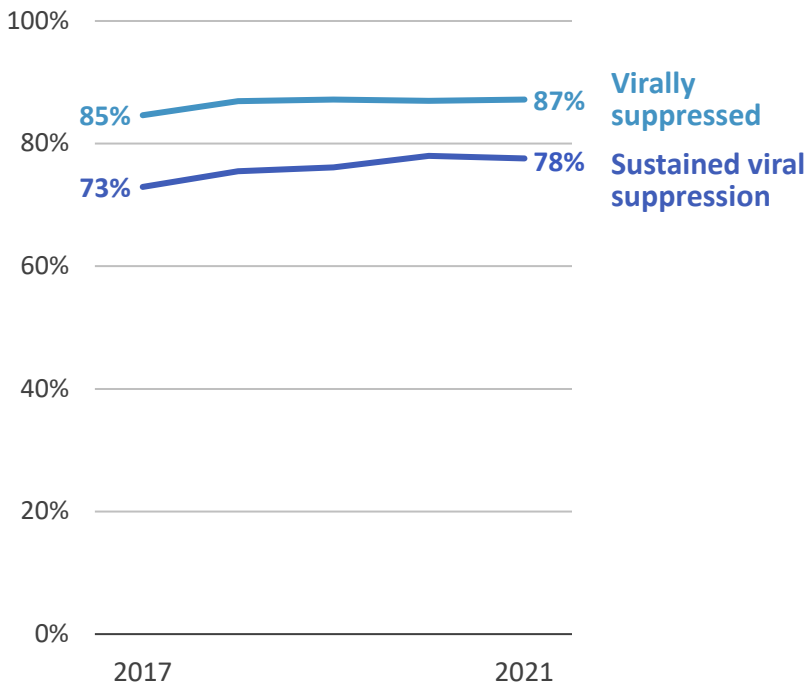


Figure 10.2. Percent of people in HIV medical care[4] who are virally suppressed[5] and who have sustained viral suppression[6] in NYC from 2017 to 2021



Linkage to HIV care within 30 days remained relatively flat and viral suppression within three months increased among newly diagnosed people (Figure 10.1) in NYC from 2017 to 2021. Viral suppression and sustained viral suppression slightly increased among people in HIV medical care (Figure 10.2) in NYC from 2017 to 2021.

[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 10.3. 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 2021

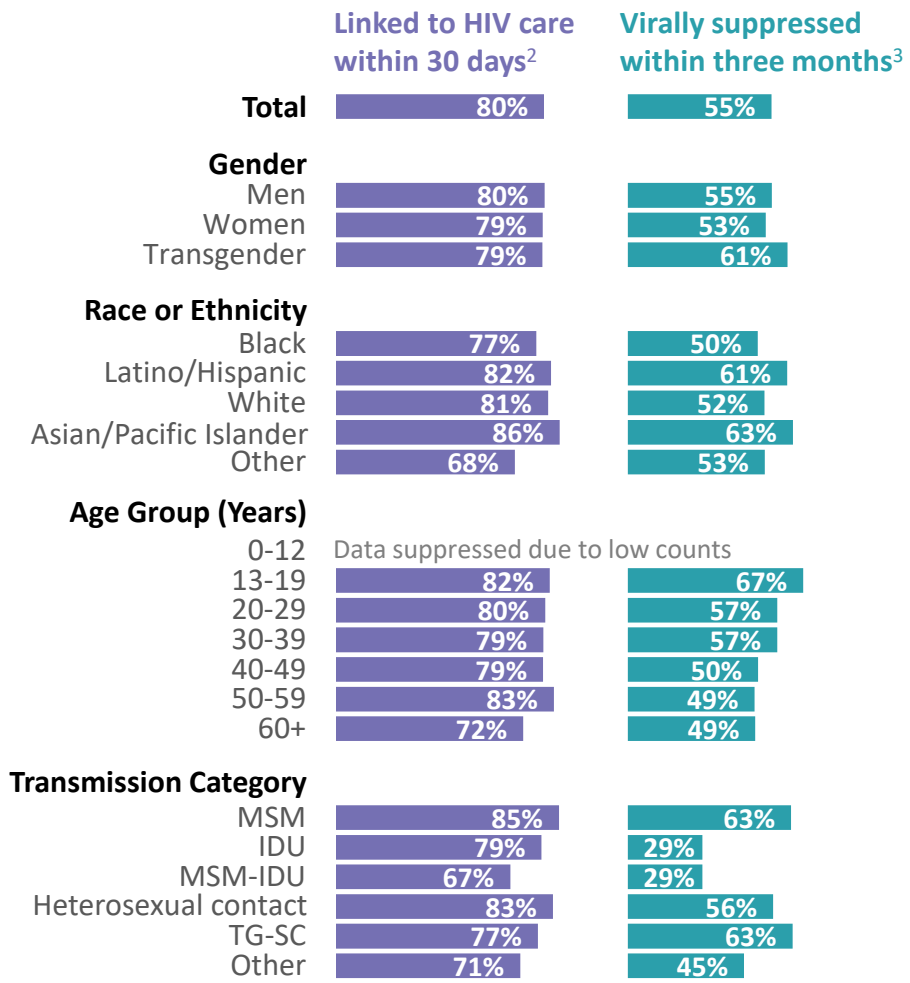
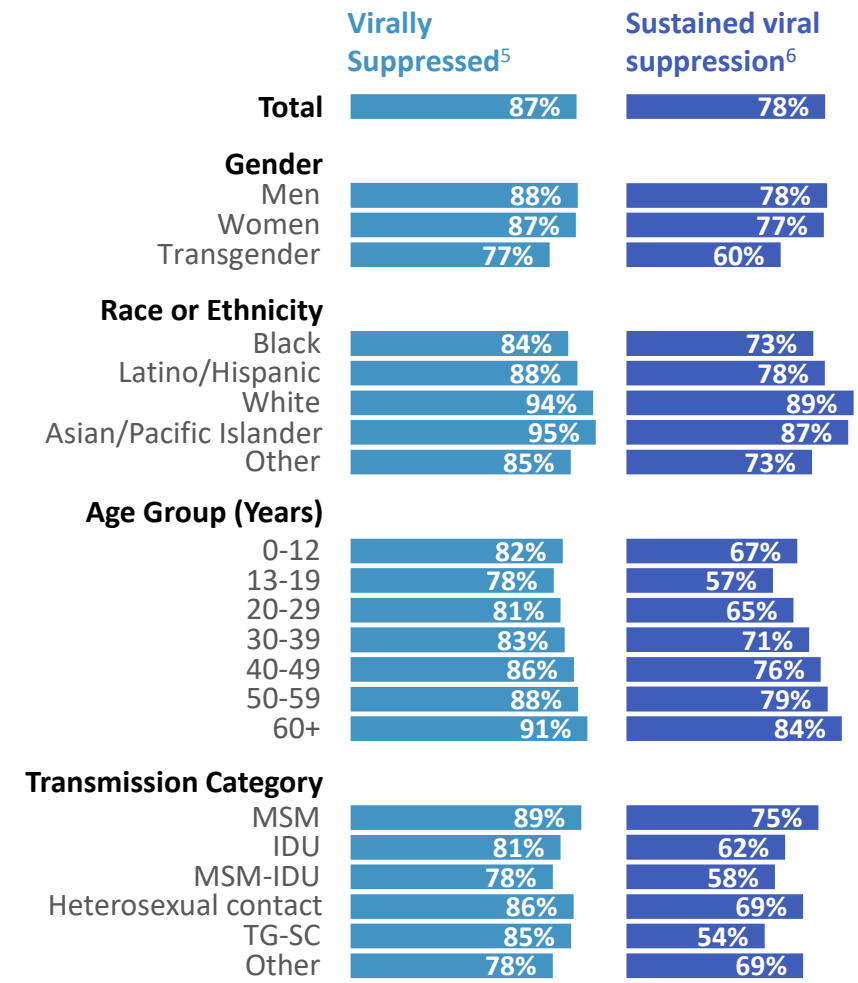


Figure 10.4. Percent of people in HIV medical care[4] who are virally suppressed[5] and who have sustained viral suppression[6] in NYC in 2021



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.

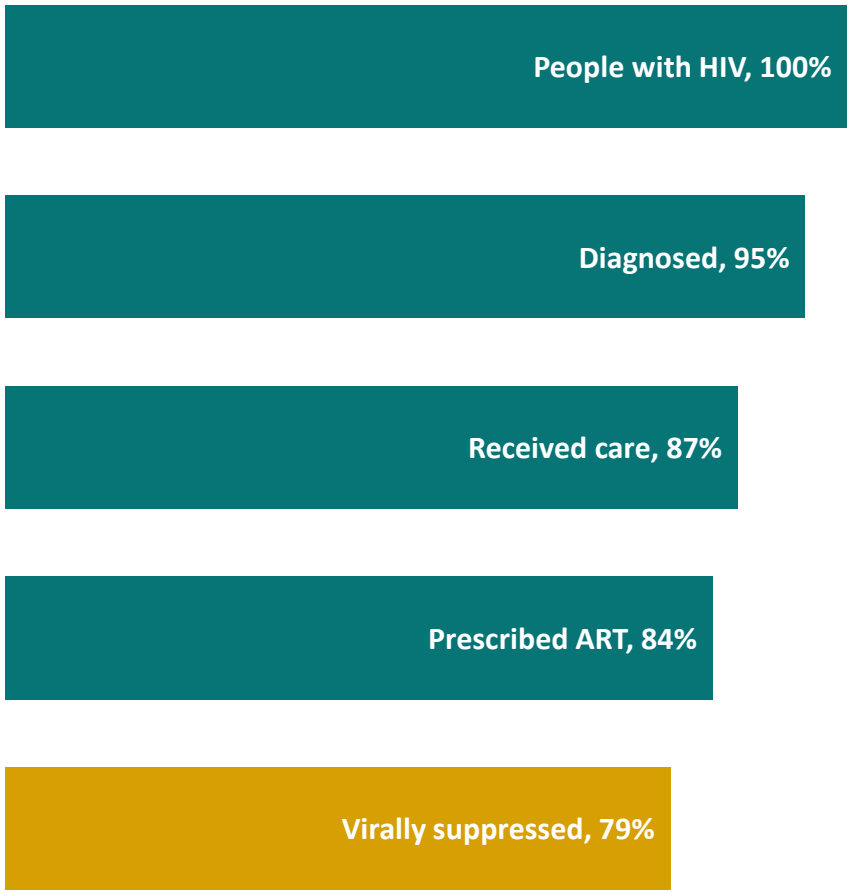
[3]At least one HIV VL within three months (91 days) of HIV diagnosis was <200 copies/mL.

[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.

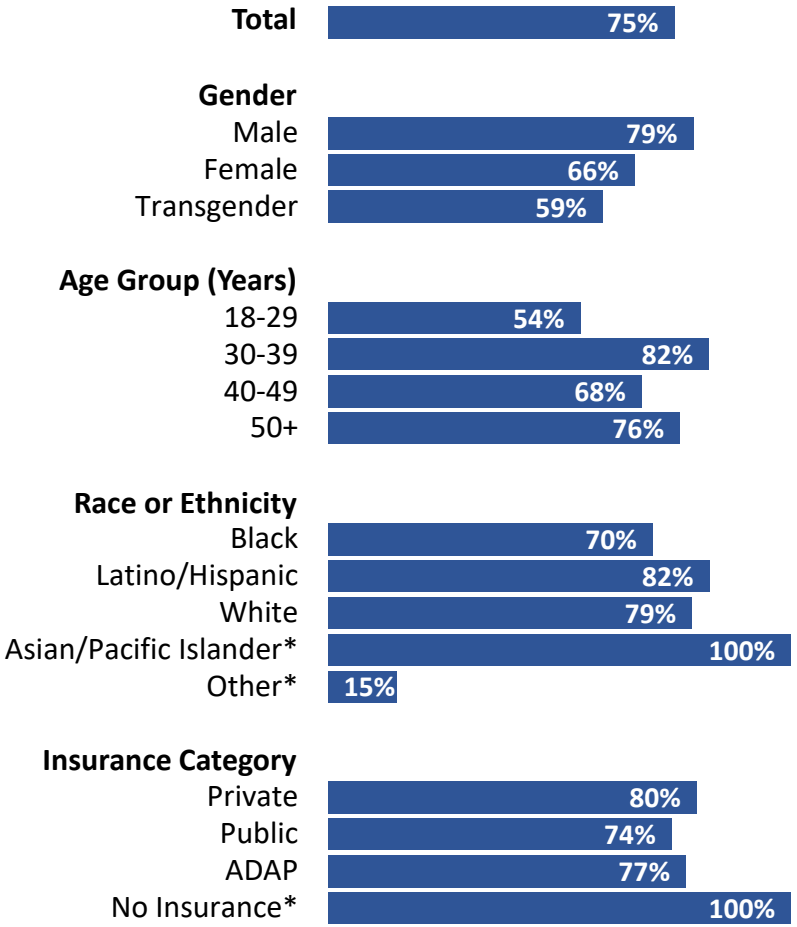
Figure 11. Proportion of people with HIV engaged in selected stages of the HIV care continuum in NYC in 2021



Of approximately 87,500 people with HIV in NYC in 2021, 79% had a suppressed viral load.

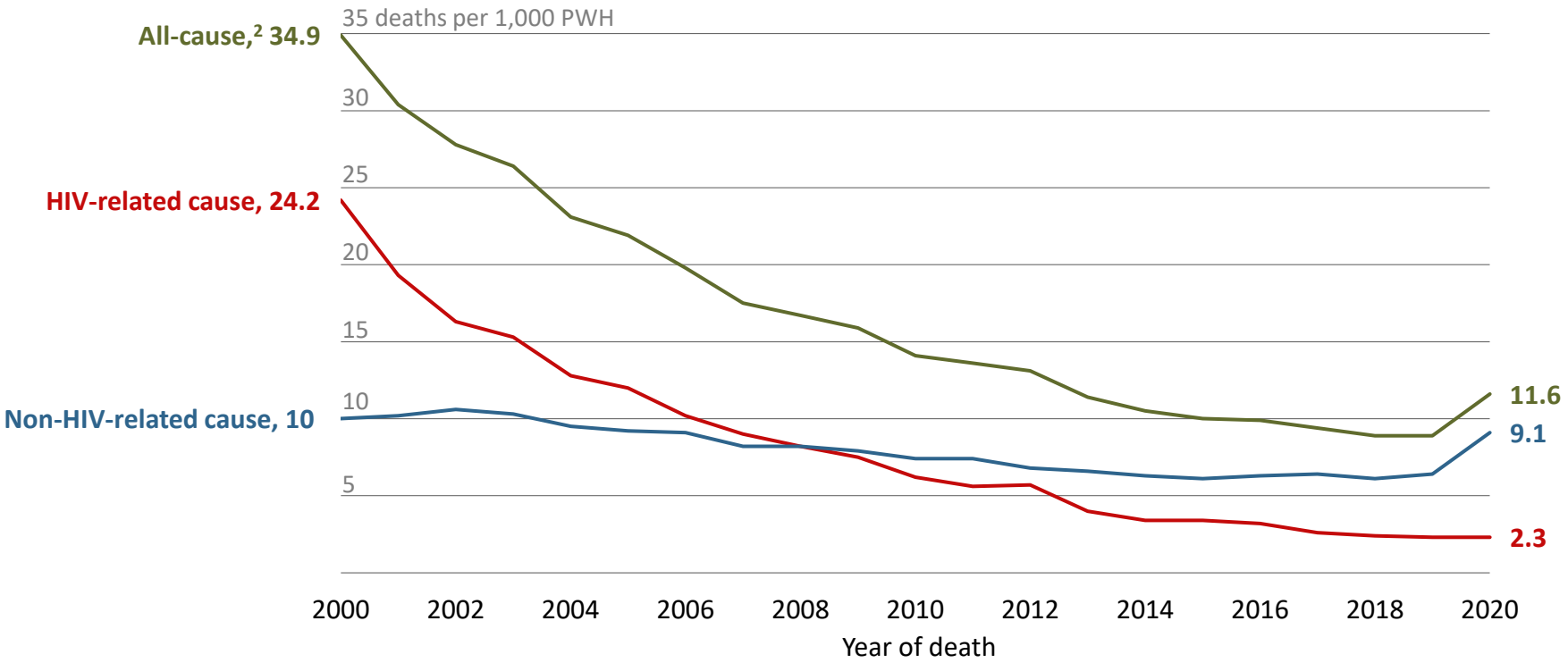
ART=antiretroviral therapy; ADAP=AIDS Drug Assistance Program.
*Proportion is based on a small sample size and should be interpreted with caution.
For definitions of the stages of the continuum of care, see Technical Notes.

Figure 12. Percent of people interviewed for the Medical Monitoring Project (N=244) who received flu vaccines in NYC in 2021



The Medical Monitoring Project is a national surveillance activity of people with HIV, conducted in conjunction with the Centers for Disease Control and Prevention. During the 2020 data cycle, 244 participants answered questions related to influenza vaccinations, of whom 75% reported being vaccinated.

Figure 13. Annual age-adjusted death rates per 1,000 people with HIV by HIV-related and non-HIV-related causes of death in NYC from 2000 to 2020



The all-cause death rate (11.6 per 1,000 in 2020) among people with HIV in NYC decreased by 67% from 2000 to 2020 but remained higher than the death rate for the overall NYC population (5.6 in 2019[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 fewer deaths attributed to HIV. All-cause and non-HIV-related death rates increased in 2020, the first year that SARS-CoV-2, the virus that causes COVID-19, was detected in NYC. Among all deaths in 2020, 422 (17.3%) were due to COVID-19.

PWH=People with HIV.

[1]Age-adjusted to the NYC Census 2010 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, Huynh M, et al. Summary of vital statistics. New York City Department of Health and Mental Hygiene, Bureau of Vital Statistics. 2019. 1-144.

Figure 14.1. Survival among men[1] newly diagnosed with HIV,[2] by race or ethnicity[3] in NYC from 2016 to 2020

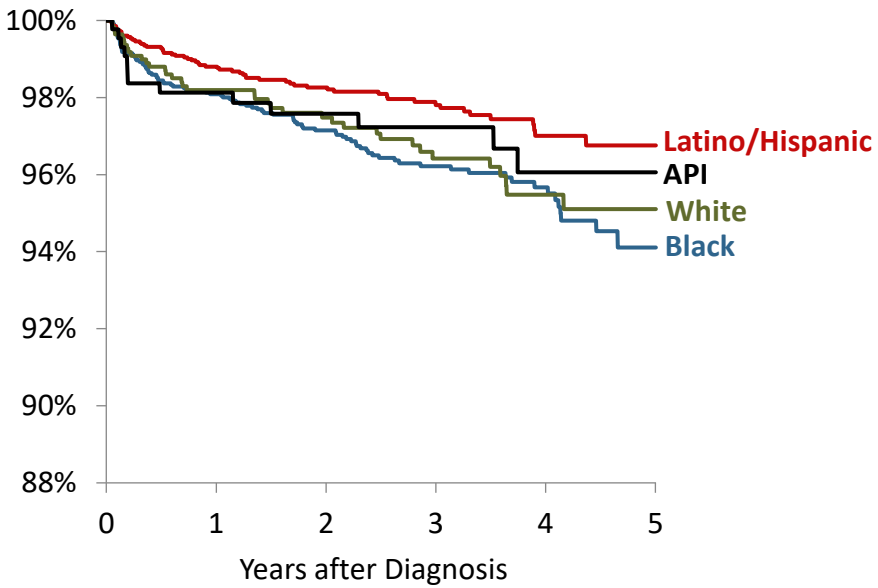
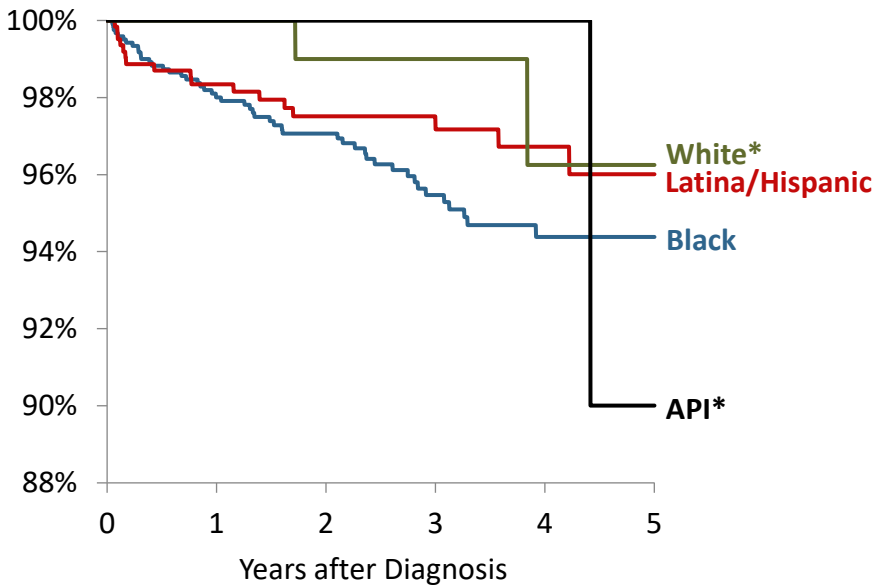


Figure 14.2. Survival among women[1] newly diagnosed with HIV,[2] by race or ethnicity[3] in NYC from 2016 to 2020



Figures 14.1 and 14.2 display the proportion of newly diagnosed men and women who were still alive (Y-axis) by race or ethnicity over a five-year period (X-axis). Each survival curve begins at 100% survival at HIV diagnosis and steps down as members of a race or ethnicity group die over the 5-year period. Inequities in survival by race or ethnicity and gender differences were apparent. Black and Latino/Hispanic men had markedly higher numbers of deaths than White and API men, while Black men had the lowest survival probability followed by White, API and Latino/Hispanic men. Black and API women had the lower survival probabilities than Latina/Hispanic and White women, while Black and Latina/Hispanic women had markedly higher numbers of deaths than White and API women.

API=Asian/Pacific Islander.

*Data should be interpreted with caution because of small population size.

[1]Men category includes transgender men, and women category includes transgender women.

[2]People newly diagnosed with HIV at death were excluded from the analysis. Curves include people diagnosed with HIV from 2016 through 2020 and followed through December 31, 2020.

[3]Number of new diagnoses (Dx) and deaths from any cause (Dth) among men from 2016 to 2020: Black (Dx=2,874; Dth=75), Latino/Hispanic (Dx=2,851; Dth=51), White (Dx=1,128; Dth=34), API (Dx=446; Dth=15), Native American (Dx=18; Dth=0; not shown), Multiracial (Dx=71; Dth=2; not shown). Number of new diagnoses (Dx) and deaths from any cause (Dth) among women from 2016 to 2020: Black (Dx =1,244; Dth=43), Latina/Hispanic (Dx=636; Dth=18), White (Dx=127; Dth=3), API (Dx=59; Dth=0), Native American (Dx=1; Dth=1; not shown), Multiracial (Dx=1; Dth=1; not shown).

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, 2022.

HIV Surveillance: The NYC Health Department 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 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 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 to explain 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, which 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 the "HIV Among People Identified as Transgender in New York City, 2021" surveillance presentation available at **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 Comprehensive Newborn Screening Program and the 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 2021 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 2020, 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/2019sum.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 is not available, the most recent five-year ACS file will be 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 and 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; 1-12.

[6]Source: NYC HIV Surveillance Registry; method: Song R, 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 Jan 1;74(1):3-9.

[7]Source: NYC HIV Surveillance Registry; method: Xia Q, et al. Proportions of patients with HIV retained in care and virally suppressed in New York City and the United States. *JAIDS.* 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 11) 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 10.2 and 10.4, 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 law to report specific HIV-related events.

Report HIV/AIDS Cases: 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 to best 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). Key partner information to report includes: each partner's first and last name (alias, if applicable), date of birth or estimated age, gender and domestic violence screening result.

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 (less than six months) to 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 NYC Health Department, see **nyc.gov/health**.
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 the NYC Sexual Health Clinics, see **nyc.gov/health/clinics**

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 NYC Interactive 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 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 UNAIDS 90-90-90 targets: **fast-trackcities.org**

Acknowledgments

This report was prepared by the NYC Health Department HIV Epidemiology Program. We would like to acknowledge staff in the HIV Epidemiology Program's Surveillance Unit, ACE (Assess. Connect. Engage.) Team, and Data Support Unit, whose work is the foundation of this report.

Additionally, the HIV Epidemiology Program's work would not be possible without the contributions of NYC providers and people with HIV.

Suggested Citation:

HIV Epidemiology Program. *HIV Surveillance Annual Report, 2021*. New York City Department of Health and Mental Hygiene: New York, NY. December 2022.

HIV Epidemiology Program
New York City Department of Health and Mental Hygiene
42-09 28th St., CN-44, Queens, NY 11101
hivreport@health.nyc.gov

Published December 2022