HIV SURVEILLANCE ANNUAL REPORT, 2019

NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE

EXECUTIVE SUMMARY

In 2019, New York City (NYC) continued to make important progress toward meeting statewide goals to end the HIV epidemic (ETE), both citywide and among key populations.[1]

The annual number of new HIV diagnoses continued to decline, with 1,772 new HIV diagnoses made and reported in NYC in 2019 (an 8% decrease from the 1,917 new HIV diagnoses reported in 2018).[2] The estimated number of new HIV infections also continued to decline, with a 40% decrease since 2015 and a 14% decrease from 2018 to 2019. Similarly, estimated HIV incidence declined by 44% since 2015 and 13% from 2018 to 2019 among men who report sex with men (MSM).

Declines in the number of new HIV diagnoses from 2018 to 2019 were seen among men, women, and transgender people, all age groups, most racial/ethnic groups, residents of most NYC boroughs, and nearly all HIV transmission risk groups. Declines were most pronounced among women, Asian/Pacific Islander (API) people, people ages 50 to 59, residents of Brooklyn and Queens, men who report sex with men and a history of injection drug use (MSM-IDU), transgender people who report sexual contact, and people who report heterosexual contact.

A few groups experienced an increase in new HIV diagnoses between 2018 and 2019, including Native American and multiracial people, Bronx residents, and people with a history of injection drug use (IDU).

The all-cause mortality rate and rate of HIV-related deaths among people with HIV (PWH) in NYC continued to decline — by 61% and 81%, respectively — from 2004 to 2018. About one-quarter (26%) of deaths among PWH in 2018 were attributed to an HIV-related cause, down from 60% in 2004.

Overall, 82% of people newly diagnosed with HIV in NYC in 2019 were linked to HIV care within one month of diagnosis, and 53% were virally suppressed within three months. Both indicators have improved substantially since 2015 (linkage to care from 72% and viral suppression from 30%) and remained stable from 2018 to 2019. Inequities in HIV care outcomes for people newly diagnosed in 2019 persisted, with lower proportions of women and transgender people, Black, Latino, and API people, and people with a history of IDU being linked to care and virally suppressed soon after HIV diagnosis. The NYC Ending the Epidemic (ETE) plan utilizes an intersectional, strengths-based, anti-stigma, and community-driven approach to mitigate racism, sexism, homophobia, transphobia, and other systems of oppression that create and exacerbate HIV-related health inequities.

NYC's 2019 care continuum shows that 77% of the estimated total PWH in NYC were virally suppressed. Of PWH in HIV care in 2019, 87% were virally suppressed and 69% had sustained viral suppression. Inequities persisted, with lower proportions of transgender people, Black and Latino people, young people, and people with a history of IDU being virally suppressed.

Five-year survival trends among newly HIV-diagnosed women and men by race/ethnicity highlight inequities by race/ethnicity overall, along with important differences by gender. Among women, Black and Latina women experienced the lowest survival probabilities and markedly higher numbers of deaths than White and API women. Among men, differences in the numbers of deaths across race/ethnicity groups were less pronounced. However, Black men had the lowest survival probability followed by White men, Latino men and then API men.

This report also includes graphic trends in new HIV diagnoses over time for priority populations in NYC; the geographic distribution of HIV in NYC; and key HIV-related outcomes. New features include a section on needs assessment and referrals for people interviewed for HIV care re-engagement and partner services; a section on HIV testing history and HIV prevalence among heterosexually active women; and a section on barriers to maintaining viral suppression among PWH by race/ethnicity.

[1] New York State Department of Health. *2015 Blueprint to End the AIDS Epidemic,* State of New York: Albany, NY. March 2015.
[2] HIV Epidemiology Program. *HIV Surveillance Annual Report, 2018.* New York City Department of Health and Mental Hygiene: New York, NY. November 2019.
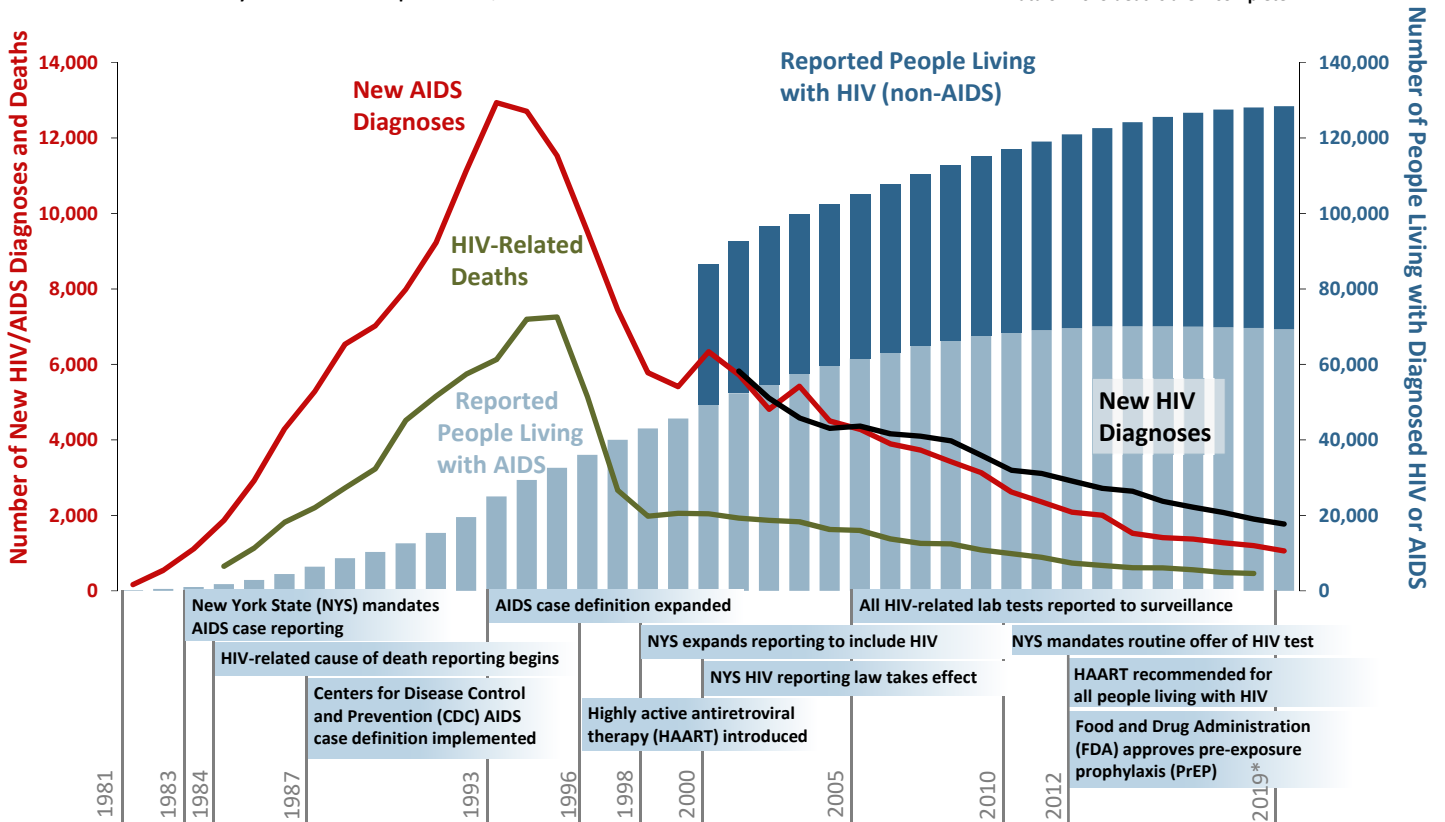
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HISTORY OF THE HIV EPIDEMIC

FIGURE 1.1: History of the HIV epidemic, NYC 1981-2019

*Data on 2019 deaths are incomplete.

New AIDS Diagnoses

HIV-Related Deaths

Reported People Living with HIV (non-AIDS)

Reported People Living with AIDS

New HIV Diagnoses

New York State (NYS) mandates AIDS case reporting

HIV-related cause of death reporting begins

Centers for Disease Control and Prevention (CDC) AIDS case definition implemented

AIDS case definition expanded

Highly active antiretroviral therapy (HAART) introduced

NYS expands reporting to include HIV

NYS HIV reporting law takes effect

All HIV-related lab tests reported to surveillance

NYS mandates routine offer of HIV test

HAART recommended for all people living with HIV

Food and Drug Administration (FDA) approves pre-exposure prophylaxis (PrEP)

HIV DIAGNOSES OVER TIME

FIGURE 2.1: Trends in HIV diagnoses, NYC 2001-2019

HIV Diagnoses	2001		2019	EAPC	P Value
Total	5,823		1,772	-5.85	<0.01
Gender					
Men	3,853		1,394	-4.84	<0.01
Women	1,906		326	-9.37	<0.01
Transgender	64		52	-0.17	0.75
Race/Ethnicity					
Black	3,021		817	-7.10	<0.01
Latino/Hispanic	1,766		659	-4.64	<0.01
White	897		200	-6.14	<0.01
Asian/Pacific Islander	122		71	-0.12	0.77
Native American	13		4	-7.77	<0.01
Age Group (Years)					
0-12	83		1	-20.8	<0.01
13-19	210		63	-5.85	<0.01
20-29	1,143		650	-2.19	<0.01
30-39	2,052		498	-7.75	<0.01
40-49	1,500		247	-8.81	<0.01
50-59	622		201	-5.39	<0.01
60+	213		112	-2.84	<0.01

HIV Diagnoses	2001		2019	EAPC	P Value
Borough of Residence					
Bronx	1,272		466	-6.03	<0.01
Brooklyn	1,572		459	-5.54	<0.01
Manhattan	1,488		344	-7.35	<0.01
Queens	710		314	-4.07	<0.01
Staten Island	100		32	-4.02	<0.01
Outside NYC	565		142	-6.34	<0.01
Transmission Risk					
Men who have sex with men (MSM)	1,703		956	-2.12	<0.01
Injection drug use history (IDU)	827		36	-17.8	<0.01
MSM-IDU	131		24	-6.81	<0.01
Heterosexual contact	1,435		318	-7.16	<0.01
Transgender people with sexual contact	51		45	0.39	0.48
Perinatal	82		1	-20.7	<0.01

EAPC=Estimated annual percent change.

The number of new HIV diagnoses reported in NYC from 2001 to 2019 decreased overall and based on all genders, ages at diagnosis, boroughs of residence and most race/ethnicity and transmission risk categories. This decrease was significant (*P* value <0.01) for all subgroups except transgender people, API people and transgender people with sexual contact.

DEMOGRAPHIC AND CLINICAL CHARACTERISTICS

TABLE 3.1: HIV/AIDS diagnoses and deaths occurring Jan. 1, 2019, through Dec. 31, 2019; and people diagnosed with HIV, reported in NYC and presumed to be living as of Dec. 31, 2019
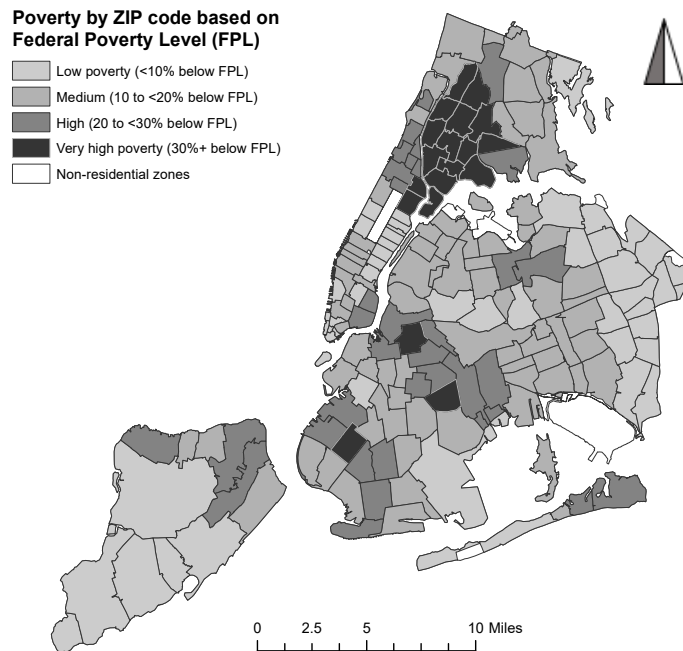
| | HIV Diagnoses[1] | | | | | | AIDS Diagnoses[3] | | PLWH as of Dec. 31, 2019 | | Deaths[4] | |
| | Total | | Without AIDS | | Concurrent with AIDS Diagnosis[2] | | | | | | | | |
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Total	1,772	100.0	1,478	100.0	294	100.0	16.6	1,057	100.0	128,419	100.0	1,780	100.0
Gender[5]													
Men	1,394	78.7	1,173	79.4	221	75.2	15.9	733	69.3	93,041	72.5	1,267	71.2
Women	326	18.4	256	17.3	70	23.8	21.5	298	28.2	33,269	25.9	487	27.4
Transgender	52	2.9	49	3.3	3	1.0	5.8	26	2.5	2,109	1.6	26	1.5
Race/Ethnicity[6]													
Black	817	46.1	689	46.6	128	43.5	15.7	529	50.0	55,723	43.4	866	48.7
Latino/Hispanic	659	37.2	541	36.6	118	40.1	17.9	376	35.6	42,469	33.1	568	31.9
White	200	11.3	175	11.8	25	8.5	12.5	102	9.6	26,033	20.3	309	17.4
Asian/Pacific Islander	71	4.0	54	3.7	17	5.8	23.9	39	3.7	3,144	2.4	18	1.0
Native American	4	0.2	4	0.3	0	0.0	0.0	1	0.1	295	0.2	6	0.3
Multiracial	21	1.2	15	1.0	6	2.0	28.6	10	0.9	439	0.3	10	0.6
Unknown	0	0.0	0	0.0	0	0.0	0.0	0	0.0	316	0.2	3	0.2
Age Group (Years)[7]													
0-12	1	0.1	1	0.1	0	0.0	0.0	0	0.0	59	0.0	0	0.0
13-19	63	3.6	59	4.0	4	1.4	6.3	11	1.0	333	0.3	0	0.0
20-29	650	36.7	597	40.4	53	18.0	8.2	166	15.7	8,322	6.5	32	1.8
30-39	498	28.1	403	27.3	95	32.3	19.1	292	27.6	20,383	15.9	124	7.0
40-49	247	13.9	189	12.8	58	19.7	23.5	203	19.2	23,836	18.6	207	11.6
50-59	201	11.3	148	10.0	53	18.0	26.4	227	21.5	40,167	31.3	519	29.2
60+	112	6.3	81	5.5	31	10.5	27.7	158	14.9	35319	27.5	898	50.4
Borough of Residence[8]													
Bronx	466	26.3	384	26.0	82	27.9	17.6	322	30.5	31,280	24.4	458	25.7
Brooklyn	459	25.9	392	26.5	67	22.8	14.6	267	25.3	30,572	23.8	401	22.5
Manhattan	344	19.4	292	19.8	52	17.7	15.1	198	18.7	32,809	25.5	308	17.3
Queens	314	17.7	243	16.4	71	24.1	22.6	163	15.4	18,818	14.7	164	9.2
Staten Island	32	1.8	27	1.8	5	1.7	15.6	17	1.6	2,564	2.0	37	2.1
Outside NYC	142	8.0	125	8.5	17	5.8	12.0	86	8.1	12,208	9.5	65	3.7
Unknown	15	0.8	15	1.0	0	0.0	0.0	4	0.4	168	0.1	347	19.5
Area-Based Poverty Level[9]													
Low poverty (<10% below FPL)	135	7.6	107	7.2	28	9.5	20.7	79	7.5	11,421	8.9	86	4.8
Medium poverty (10 to <20% below FPL)	592	33.4	491	33.2	101	34.4	17.1	312	29.5	44,220	34.4	428	24.0
High poverty (20 to <30% below FPL)	470	26.5	392	26.5	78	26.5	16.6	288	27.2	30,181	23.5	380	21.3
Very high poverty (≥30% below FPL)	414	23.4	344	23.3	70	23.8	16.9	287	27.2	28,918	22.5	472	26.5
Area-based poverty level not available	161	9.1	144	9.7	17	5.8	10.6	91	8.6	13,679	10.7	414	23.3
Transmission risk[10]													
Men who have sex with men (MSM)	956	54.0	826	55.9	130	44.2	13.6	389	36.8	54,447	42.4	465	26.1
Injection drug use history (IDU)	36	2.0	34	2.3	2	0.7	5.6	82	7.8	14,332	11.2	445	25.0
MSM-IDU	24	1.4	22	1.5	2	0.7	8.3	22	2.1	3,176	2.5	70	3.9
Heterosexual contact	318	17.9	245	16.6	73	24.8	23.0	257	24.3	25,091	19.5	345	19.4
Transgender people with sexual contact	45	2.5	43	2.9	2	0.7	4.4	22	2.1	1,809	1.4	20	1.1
Perinatal	1	0.1	1	0.1	0	0.0	0.0	17	1.6	2,559	2.0	12	0.7
Other	0	0.0	0	0.0	0	0.0	0.0	0	0.0	202	0.2	1	0.1
Unknown	392	22.1	307	20.8	85	28.9	21.7	268	25.4	26,803	20.9	422	23.7

PLWH=People living with HIV; FPL=Federal Poverty Level. All percents are column percents unless otherwise indicated. [1]Excludes people known to have been diagnosed outside of NYC. [2]HIV diagnosed concurrently with AIDS (within 31 days of HIV diagnosis). Row percent is percent of HIV diagnoses that were concurrent with AIDS diagnoses. [3]AIDS was diagnosed in 2019 and includes concurrent HIV/AIDS diagnoses. [4]Includes deaths from any cause in people with HIV. Death data for 2019 are incomplete. [5]For information on gender identity, see Technical Notes on page 15. [6]For information on race and ethnicity, see Technical Notes on page 15. [7]For HIV and AIDS diagnoses, age at diagnosis; for PLWH, age as of Dec. 31, 2019; and for deaths, age at death. [8]For HIV and AIDS diagnoses, residence at diagnosis. For PLWH and deaths, residence based on most recent record available (most recent record is >5 years old for 27% of PLWH in 2019). [9]Area-based poverty based on NYC ZIP code of residence at diagnosis or most recent residence (*see footnote 8*). [10]"Heterosexual contact" includes people who had heterosexual sex with a person they know to be living with 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 disease, crack/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 with sexual contact reported and 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 non-perinatal transmission risk.
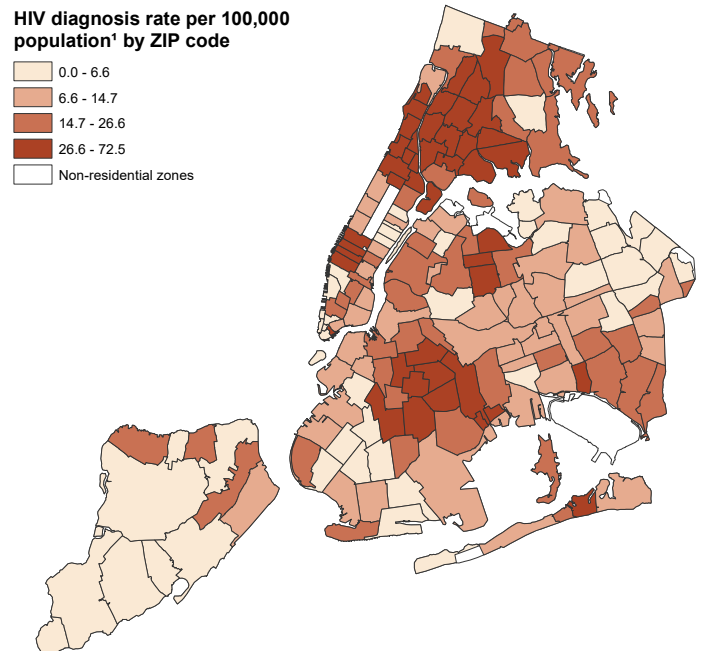
In 2019, there were 1,772 new HIV diagnoses and 1,057 new AIDS diagnoses in NYC. As of December 31, 2019, 128,419 people had been diagnosed with HIV or AIDS, reported in NYC and were presumed to be living. As of March 31, 2020, there were 1,780 deaths reported among people with HIV in 2019.

GEOGRAPHIC DISTRIBUTION OF HIV

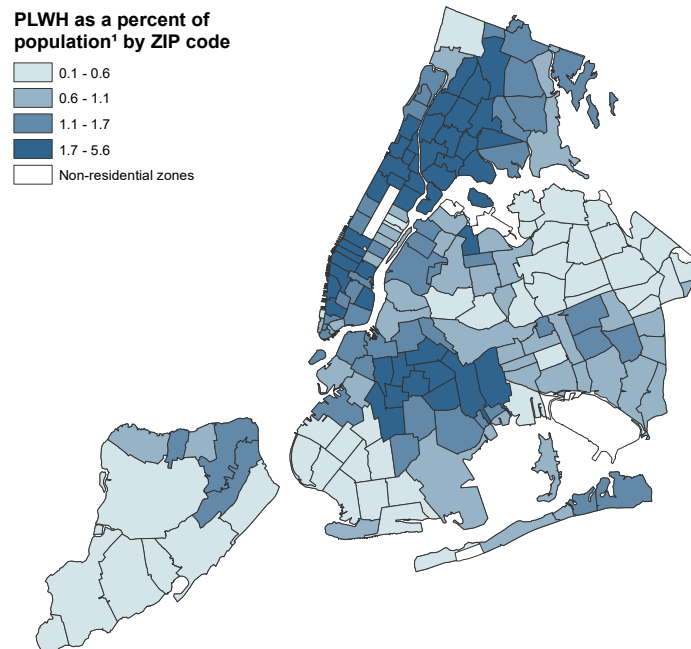**FIGURE 4.1**: Poverty level, NYC 2014-2018

Poverty by ZIP code based on Federal Poverty Level (FPL)

- Low poverty (<10% below FPL)
- Medium (10 to <20% below FPL)
- High (20 to <30% below FPL)
- Very high poverty (30%+ below FPL)
- Non-residential zones

0   2.5   5   10 Miles

FIGURE 4.2: HIV diagnosis rates, NYC 2019

HIV diagnosis rate per 100,000 population[1] by ZIP code

- 0.0 - 6.6
- 6.6 - 14.7
- 14.7 - 26.6
- 26.6 - 72.5
- Non-residential zones

Many ZIP codes with the highest poverty rates (Figure 4.1) were also among those with high HIV diagnosis rates (Figure 4.2), including those in High Bridge–Morrisania. ZIP codes in the Chelsea–Clinton, High Bridge–Morrisania and Central Harlem–Morningside Heights neighborhoods had the highest HIV diagnosis rates in 2019 (Figure 4.2). In 2019, ZIP codes in Chelsea–Clinton and West Queens had the highest HIV prevalence (Figure 4.3). ZIP codes in the Southwest Queens, South Beach–Tottenville and Flushing–Clearview neighborhoods had the highest mortality among people with HIV (Figure 4.4). However, ZIP codes in the Chelsea–Clinton neighborhood were the exception, with the highest HIV diagnosis rates but relatively low poverty and mortality rates.

FIGURE 4.3: HIV prevalence, NYC 2019

PLWH as a percent of population[1] by ZIP code

- 0.1 - 0.6
- 0.6 - 1.1
- 1.1 - 1.7
- 1.7 - 5.6
- Non-residential zones

FIGURE 4.4: Age-adjusted mortality rates among people with HIV, NYC 2019

Age-adjusted mortality rate[2] per 1,000 mid-year PLWH by ZIP code

- 0.0 - 2.9
- 2.9 - 6.0
- 6.0 - 8.9
- 8.9 - 47.6
- Non-residential zones
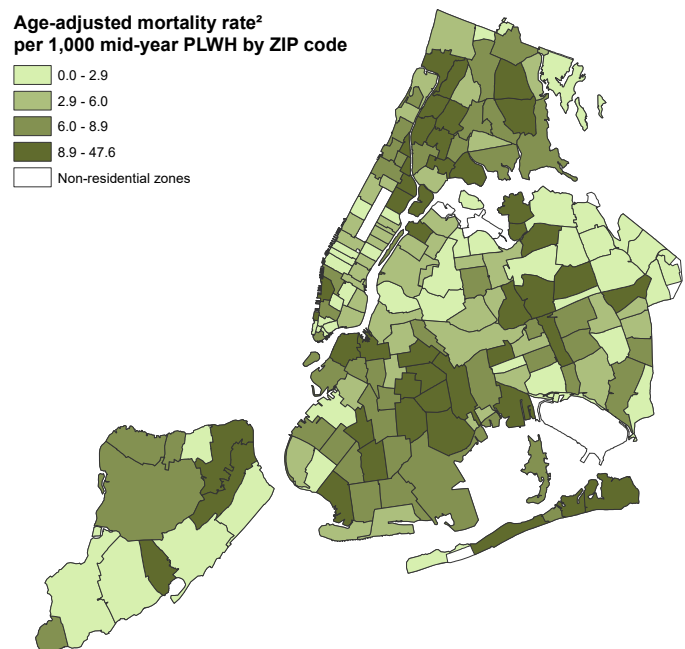
PLWH=People living with HIV.
[1]Rates calculated using NYC Health Department 2018 population estimates, modified from U.S. Census Bureau intercensal population estimates, updated September 2019.
[2]Age-adjusted to the NYC Census 2010 population. People newly diagnosed with HIV at death were excluded from the numerator. Mortality data for 2019 are incomplete.

TABLE 5.1: HIV/AIDS diagnoses and deaths among men[5, 11], Jan. 1, 2019, through Dec. 31, 2019; and men diagnosed with HIV, reported in NYC and presumed to be living as of Dec. 31, 2019

| | HIV Diagnoses[1] | | | | | | AIDS Diagnoses[3] | | PLWH as of Dec. 31, 2019 | | Deaths[4] | |
| | Total | | Without AIDS | | Concurrent with AIDS Diagnosis[2] | | | | | | | | |
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Total	1,396	100.0	1,175	100.0	221	100.0	15.8	734	100.0	93,081	100.0	1,267	100.0
Race/Ethnicity[6]													
Black	579	41.5	494	42.0	85	38.5	14.7	326	44.4	35,249	37.9	556	43.9
Latino/Hispanic	554	39.7	457	38.9	97	43.9	17.5	289	39.4	30,914	33.2	411	32.4
White	179	12.8	158	13.4	21	9.5	11.7	77	10.5	23,477	25.2	272	21.5
Asian/Pacific Islander	64	4.6	50	4.3	14	6.3	21.9	34	4.6	2,629	2.8	16	1.3
Native American	3	0.2	3	0.3	0	0.0	0.0	1	0.1	221	0.2	2	0.2
Multiracial	17	1.2	13	1.1	4	1.8	23.5	7	1.0	349	0.4	7	0.6
Unknown	0	0.0	0	0.0	0	0.0	0.0	0	0.0	242	0.3	3	0.2
Age Group (Years)[7]													
0-12	0	0.0	0	0.0	0	0.0	0.0	0	0.0	30	0.0	0	0.0
13-19	51	3.7	48	4.1	3	1.4	5.9	6	0.8	203	0.2	0	0.0
20-29	561	40.2	515	43.8	46	20.8	8.2	129	17.6	6,308	6.8	30	2.4
30-39	393	28.2	314	26.7	79	35.7	20.1	220	30.0	16,003	17.2	85	6.7
40-49	184	13.2	144	12.3	40	18.1	21.7	127	17.3	16,822	18.1	133	10.5
50-59	129	9.2	95	8.1	34	15.4	26.4	142	19.3	28,410	30.5	352	27.8
60+	78	5.6	59	5.0	19	8.6	24.4	110	15.0	25,305	27.2	667	52.6
Borough of Residence[8]													
Bronx	355	25.4	293	24.9	62	28.1	17.5	212	28.9	19,473	20.9	305	24.1
Brooklyn	354	25.4	304	25.9	50	22.6	14.1	168	22.9	20,502	22.0	259	20.4
Manhattan	293	21.0	252	21.4	41	18.6	14.0	155	21.1	27,679	29.7	234	18.5
Queens	245	17.6	194	16.5	51	23.1	20.8	118	16.1	13,840	14.9	122	9.6
Staten Island	23	1.6	21	1.8	2	0.9	8.7	11	1.5	1,657	1.8	23	1.8
Outside NYC	112	8.0	97	8.3	15	6.8	13.4	66	9.0	9,795	10.5	51	4.0
Unknown	14	1.0	14	1.2	0	0.0	0.0	4	0.5	135	0.1	273	21.5
Area-Based Poverty Level[9]													
Low poverty (<10% below FPL)	102	7.3	81	6.9	21	9.5	20.6	62	8.4	9,182	9.9	70	5.5
Medium poverty (10 to <20% below FPL)	487	34.9	409	34.8	78	35.3	16.0	222	30.2	33,656	36.2	318	25.1
High poverty (20 to <30% below FPL)	362	25.9	312	26.6	50	22.6	13.8	184	25.1	20,978	22.5	260	20.5
Very high poverty (≥30% below FPL)	316	22.6	259	22.0	57	25.8	18.0	195	26.6	18,313	19.7	294	23.2
Area-based poverty level not available	129	9.2	114	9.7	15	6.8	11.6	71	9.7	10,952	11.8	325	25.7
Transmission Risk[10]													
Men who have sex with men (MSM)	956	68.5	826	70.3	130	58.8	13.6	389	53.0	54,447	58.5	465	36.7
Injection drug use history (IDU)	22	1.6	20	1.7	2	0.9	9.1	47	6.4	9,271	10.0	289	22.8
MSM-IDU	24	1.7	22	1.9	2	0.9	8.3	22	3.0	3,176	3.4	70	5.5
Heterosexual contact	57	4.1	42	3.6	15	6.8	26.3	54	7.4	6,046	6.5	109	8.6
Transgender people with sexual contact	1	0.1	1	0.1	0	0.0	0.0	1	0.1	24	0.0	0	0.0
Perinatal	0	0.0	0	0.0	0	0.0	0.0	9	1.2	1,246	1.3	7	0.6
Other	0	0.0	0	0.0	0	0.0	0.0	0	0.0	113	0.1	0	0.0
Unknown	336	24.1	264	22.5	72	32.6	21.4	212	28.9	18,758	20.2	327	25.8

PLWH=People living with HIV; FPL=Federal Poverty Level. All percents are column percents unless otherwise indicated.
[1-10]Footnotes appear at the bottom of Table 3.1. [11]Includes transgender men.

FIGURE 5.1: HIV[1] diagnosis rates[2] among 13- to 59-year-old men[3] by race/ethnicity, NYC 2019
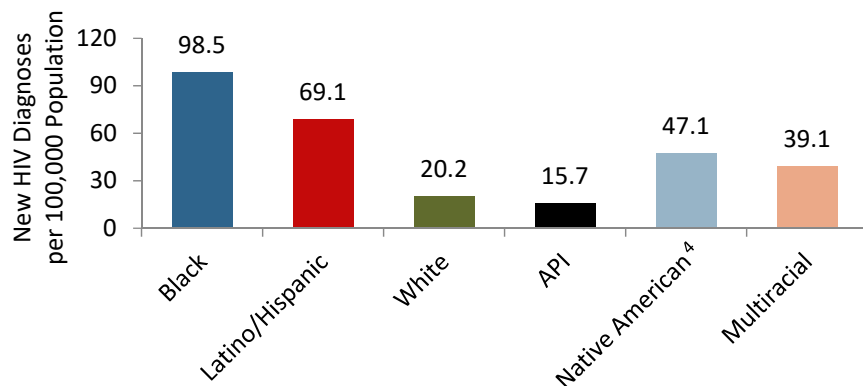
In 2019, the HIV diagnosis rate among Black men was 1.4 times higher than the rate among Latino/Hispanic men, over twice as high as the rates among Native American and multiracial men, and over four times higher than the rates among White and API men.

API=Asian/Pacific Islander. [1]Includes diagnoses of HIV without AIDS and HIV concurrent with AIDS. [2]Rates calculated using NYC Health Department 2018 population estimates, modified from U.S. Census Bureau intercensal population estimates, updated September 2019. [3]Includes transgender men. [4]Rate is based on a numerator ≤10 and should be interpreted with caution.

TABLE 6.1: HIV/AIDS diagnoses and deaths among women[5,11], Jan. 1, 2019, through Dec. 31, 2019; and women diagnosed with HIV, reported in NYC, and presumed to be living as of Dec. 31, 2019

| | HIV Diagnoses[1] | | | | | | AIDS Diagnoses[3] | | PLWH as of Dec. 31, 2019 | | Deaths[4] | |
| | Total | | Without AIDS | | Concurrent with AIDS Diagnosis[2] | | | | | | | | |
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Total	376	100.0	303	100.0	73	100.0	19.4	323	100.0	35,338	100.0	513	100.0
Race/Ethnicity[6]													
Black	238	63.3	195	64.4	43	58.9	18.1	203	62.8	20,474	57.9	310	60.4
Latina/Hispanic	105	27.9	84	27.7	21	28.8	20.0	87	26.9	11,555	32.7	157	30.6
White	21	5.6	17	5.6	4	5.5	19.0	25	7.7	2,556	7.2	37	7.2
Asian/Pacific Islander	7	1.9	4	1.3	3	4.1	42.9	5	1.5	515	1.5	2	0.4
Native American	1	0.3	1	0.3	0	0.0	0.0	0	0.0	74	0.2	4	0.8
Multiracial	4	1.1	2	0.7	2	2.7	50.0	3	0.9	90	0.3	3	0.6
Unknown	0	0.0	0	0.0	0	0.0	0.0	0	0.0	74	0.2	0	0.0
Age Group (Years)[7]													
0-12	1	0.3	1	0.3	0	0.0	0.0	0	0.0	29	0.1	0	0.0
13-19	12	3.2	11	3.6	1	1.4	8.3	5	1.5	130	0.4	0	0.0
20-29	89	23.7	82	27.1	7	9.6	7.9	37	11.5	2,014	5.7	2	0.4
30-39	105	27.9	89	29.4	16	21.9	15.2	72	22.3	4,380	12.4	39	7.6
40-49	63	16.8	45	14.9	18	24.7	28.6	76	23.5	7,014	19.8	74	14.4
50-59	72	19.1	53	17.5	19	26.0	26.4	85	26.3	11,757	33.3	167	32.6
60+	34	9.0	22	7.3	12	16.4	35.3	48	14.9	10,014	28.3	231	45.0
Borough of Residence[8]													
Bronx	111	29.5	91	30.0	20	27.4	18.0	110	34.1	11,807	33.4	153	29.8
Brooklyn	105	27.9	88	29.0	17	23.3	16.2	99	30.7	10,070	28.5	142	27.7
Manhattan	51	13.6	40	13.2	11	15.1	21.6	43	13.3	5,130	14.5	74	14.4
Queens	69	18.4	49	16.2	20	27.4	29.0	45	13.9	4,978	14.1	42	8.2
Staten Island	9	2.4	6	2.0	3	4.1	33.3	6	1.9	907	2.6	14	2.7
Outside NYC	30	8.0	28	9.2	2	2.7	6.7	20	6.2	2,413	6.8	14	2.7
Unknown	1	0.3	1	0.3	0	0.0	0.0	0	0.0	33	0.1	74	14.4
Area-Based Poverty Level[9]													
Low poverty (<10% below FPL)	33	8.8	26	8.6	7	9.6	21.2	17	5.3	2,239	6.3	16	3.1
Medium poverty (10 to <20% below FPL)	105	27.9	82	27.1	23	31.5	21.9	90	27.2	10,564	29.9	110	21.4
High poverty (20 to <30% below FPL)	108	28.7	80	26.4	28	38.4	25.9	104	32.2	9,203	26.0	120	23.4
Very high poverty (≥30% below FPL)	98	26.1	85	28.1	13	17.8	13.3	92	28.5	10,605	30.0	178	34.7
Area-based poverty level not available	32	8.5	30	9.9	2	2.7	6.3	20	6.2	2,727	7.7	89	17.3
Transmission Risk[10]													
Injection drug use history (IDU)	14	3.7	14	4.6	0	0.0	0.0	35	10.8	5,061	14.3	156	30.4
Heterosexual contact	261	69.4	203	67.0	58	79.5	22	203	62.8	19,045	53.9	236	46.0
Transgender people with sexual contact	44	11.7	42	13.9	2	2.7	4.5	21	6.5	1,785	5.1	20	3.9
Perinatal	1	0.3	1	0.3	0	0.0	0.0	8	2.5	1,313	3.7	5	1.0
Other	0	0.0	0	0.0	0	0.0	0.0	0	0.0	89	0.3	1	0.2
Unknown	56	14.9	43	14.2	13	17.8	23.2	56	17.3	8,045	22.8	95	18.5

PLWH=People living with HIV; FPL=Federal Poverty Level. All percents are column percents unless otherwise indicated.
[1-10]Footnotes appear at the bottom of Table 3.1. [11]Includes transgender women.

FIGURE 6.1: HIV[1] diagnosis rates[2] among 13- to 59-year-old women[3] by race/ethnicity, NYC 2019
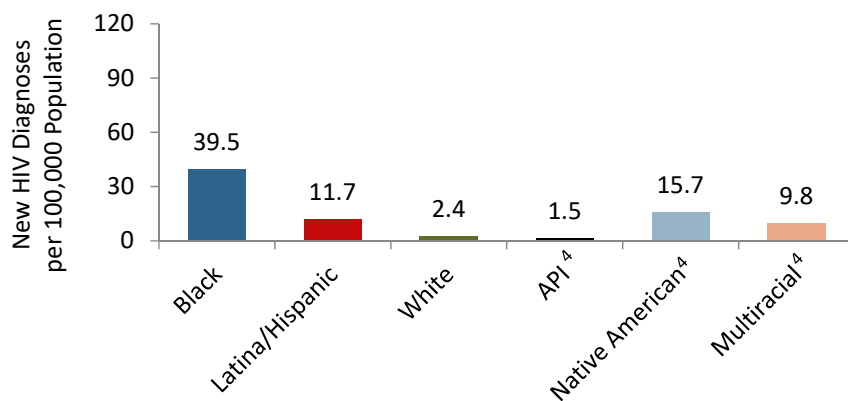
In 2019, the HIV diagnosis rate among Black women was 2.5 times higher than the rate among Native American women, over three times higher than the rates among Latina/Hispanic and multiracial women, and over 16 times higher than the rates among White and API women.

API=Asian/Pacific Islander. [1]Includes diagnoses of HIV without AIDS and HIV concurrent with AIDS. [2]Rates calculated using NYC Health Department 2018 population estimates, modified from U.S. Census Bureau intercensal population estimates, updated September 2019. [3]Includes transgender women. [4]Rate is based on a numerator ≤10 and should be interpreted with caution.

HIV AMONG TRANSGENDER PEOPLE

TABLE 7.1: HIV diagnoses among transgender people and transgender PLWH and deaths, NYC 2019

	HIV Diagnoses[1]		PLWH as of 12/31/2019		Deaths[2]	
	N	%	N	%	N	%
Total[3]	52	100	2,109	100	26	100
Transgender women	50	96.2	2,069	98.1	26	100
Transgender men	2	3.8	40	1.9	0	0.0
Race/Ethnicity						
Black	26	50	1,060	50.3	9	34.6
Latino/Hispanic	21	40.4	834	39.5	12	46.2
White	2	3.8	138	6.5	4	15.4
Asian/Pacific Islander	1	1.9	46	2.2	0	0.0
Native American	1	1.9	8	0.4	1	3.8
Multiracial	1	1.9	23	1.1	0	0.0
Age Group (years)[4]						
13-19	2	3.8	4	0.2	0	0.0
20-29	30	57.7	444	21.1	0	0.0
30-39	14	26.9	746	35.4	10	38.5
40-49	5	9.6	485	23.0	6	23.1
50-59	1	1.9	330	15.7	6	23.1
60+	0	0.0	100	4.7	4	15.4
Transmission Risk						
Sexual contact	45	86.5	1,809	85.8	20	76.9
Injection drug use history	3	5.8	217	10.3	5	19.2
Other/Unknown	4	7.7	72	3.4	1	3.8

PLWH=People living with HIV. [1]Excludes people known to have been diagnosed outside of NYC.

FIGURE 7.1: HIV diagnoses among transgender people by race/ethnicity[5] and age at diagnosis, NYC 2015-2019
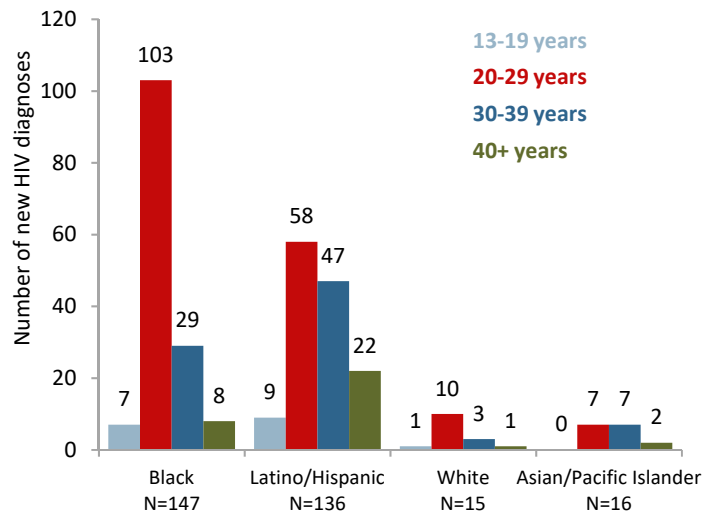
[2]Includes deaths from any cause in people with HIV. Death data for 2019 are incomplete. [3]For information on gender identity, see Technical Notes on page 15. [4]For HIV diagnoses, age at diagnosis; for PLWH, age as of Dec. 31, 2019; for deaths, age at death. [5]Native American (N=1) and multiracial (N=3) groups not shown.

In 2019, 52 transgender people were newly diagnosed with HIV and 26 deaths occurred among transgender people with HIV. About half (51%) of the 318 transgender people diagnosed with HIV from 2015 to 2019 were Black or Latino/Hispanic and ages 20 to 29 (Figure 7.1). Compared to all NYC HIV diagnoses from 2015 to 2019 (N=10,336), higher proportions of transgender people were Latino/Hispanic (43% vs. 37%) or age 20 to 29 at diagnosis (57% vs. 37%) (Figure 7.1).

HIV AMONG CHILDREN

FIGURE 8.1: All HIV-exposed births in NYC and current HIV status[1] of children born to HIV-positive women[2] at select NYC medical facilities[3] by year of birth, NYC 1988-2019[4]
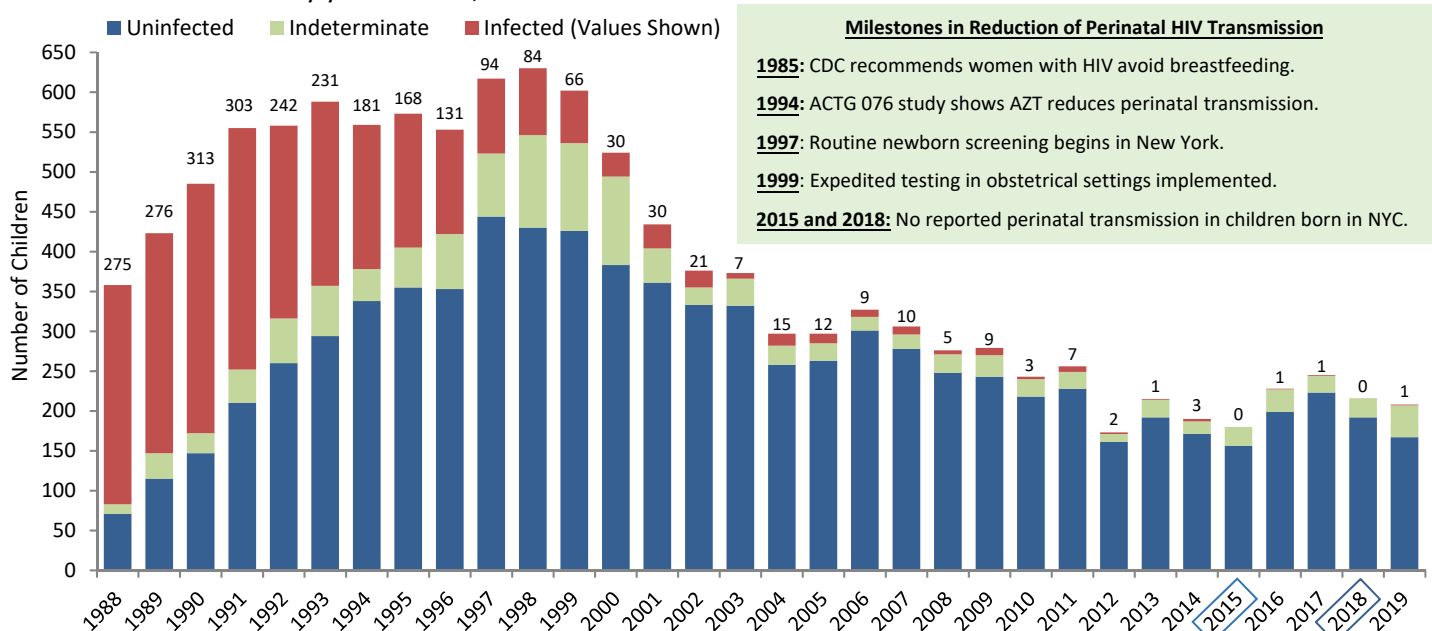
Milestones in Reduction of Perinatal HIV Transmission

1985: CDC recommends women with HIV avoid breastfeeding.

1994: ACTG 076 study shows AZT reduces perinatal transmission.

1997: Routine newborn screening begins in New York.

1999: Expedited testing in obstetrical settings implemented.

2015 and 2018: No reported perinatal transmission in children born in NYC.

[1]Children born to HIV-positive mothers are followed for two years after birth to determine HIV status. HIV status is indeterminate if the child is lost to follow-up. [2]In this figure, women refers to people with female sex at birth. [3]Includes data collected at high-volume NYC medical facilities that care for the majority of HIV-exposed children and children living with HIV. Since 2017, the perinatal surveillance program has been conducted at 21 NYC medical facilities. Children born outside of NYC are not included in this figure. [4]Includes cases diagnosed as of Dec. 31, 2019.

From 2015 to 2019, less than 1% of infants born to HIV-positive women tested positive for HIV. The small number of HIV-positive infants reflects the success of interventions for perinatal HIV prevention.
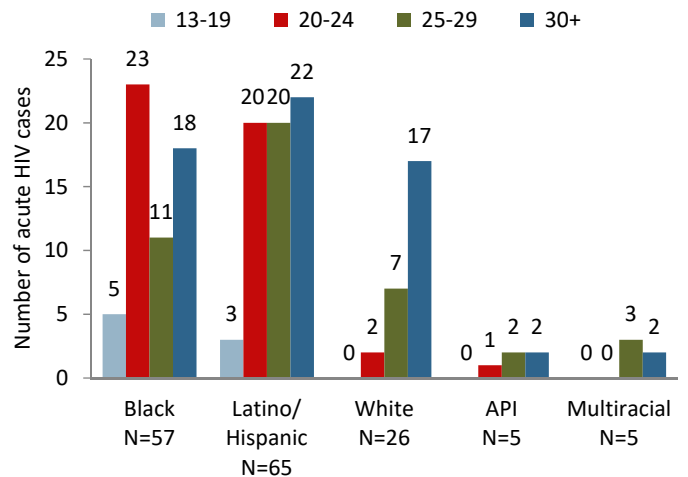
ACUTE HIV INFECTION

FIGURE 9.1: Acute HIV infection by transmission risk category[1], NYC 2019
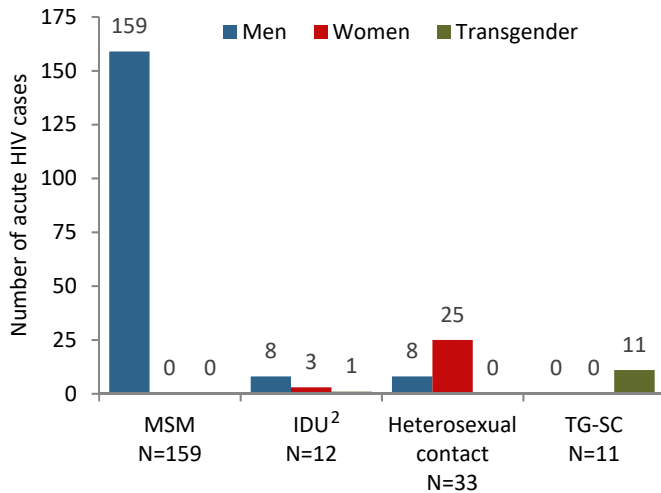
**FIGURE 9.2**: Acute HIV infection among MSM by race/ethnicity[1] and age group, NYC 2019

MSM=Men who have sex with men; IDU=Injection drug use history; TG-SC=Transgender people with sexual contact; API=Asian/Pacific Islander.
[1]There were N=34 acute HIV infection cases in 2019 that had unknown transmission risk (Figure 9.1). [2]IDU includes MSM also reporting IDU (MSM-IDU).

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. In 2019, 14% of newly diagnosed people had AHI, up from 11% of new diagnoses in 2015. MSM were overrepresented among AHI cases (Figure 9.1), in part due to higher testing frequency compared to other groups. Among MSM with AHI, a greater proportion (65%) of White MSM were over 30 years of age compared with Black, Latino/Hispanic, API and multiracial MSM with AHI (40% or less) (Figure 9.2).

ESTIMATED HIV INCIDENCE

FIGURE 10.1: New HIV diagnoses and estimated incident HIV infections[1], NYC 2015-2019[2]
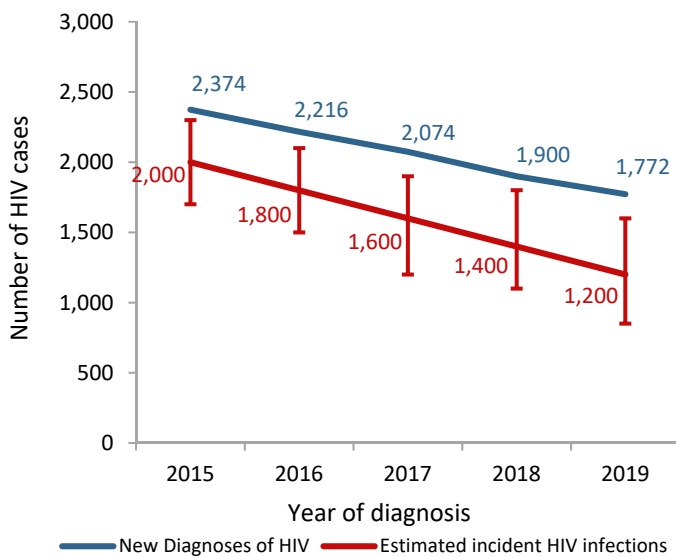
FIGURE 10.2: Trends in estimated incident HIV infections[1] by sex at birth[3] and transmission risk, NYC 2015-2019[2]
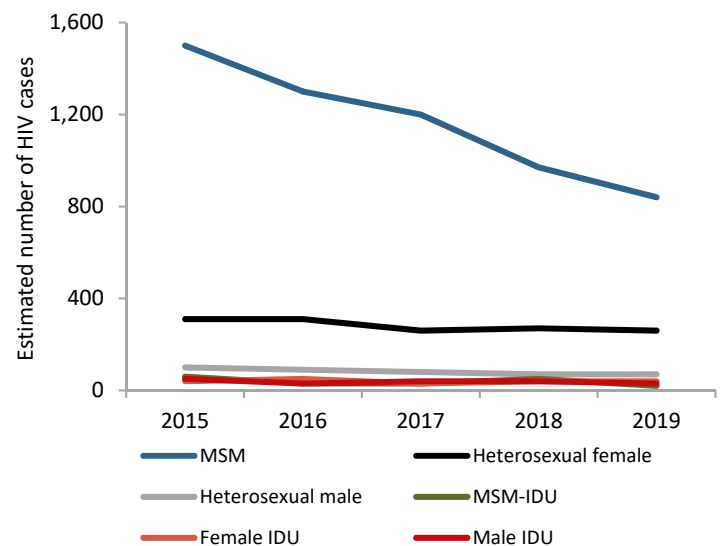
MSM=Men who have sex with men; IDU=Injection drug use history. [1]Using the method in: Song R, et al. Using CD4 data to estimate HIV incidence, prevalence, and percent of undiagnosed infections in the United States. *J Acquir Immune Defic Syndr* 2017;74(1):3-9. [2]2019 incidence estimates are preliminary. [3]CDC estimation methodology produces results by sex at birth and not gender identity.

The current method being used nationally and locally to estimate incidence is based on distribution of CD4 count at HIV diagnosis to estimate timing of HIV infection. The CD4-depletion model uses parameters based on the U.S. national population. Estimated HIV incidence overall (Figure 10.1) and by transmission risk group (Figure 10.2) declined in NYC between 2015 and 2019. MSM experienced a particularly steep decline in estimated incidence.

HIV DIAGNOSES BY PLACE OF BIRTH

FIGURE 11.1: New HIV diagnoses by country of birth, NYC 2019

Country of Birth
Number of new HIV
Diagnoses (N)

- 1 - 8
- 9 - 23
- 24 - 53
- 54 - 88
- > 1000
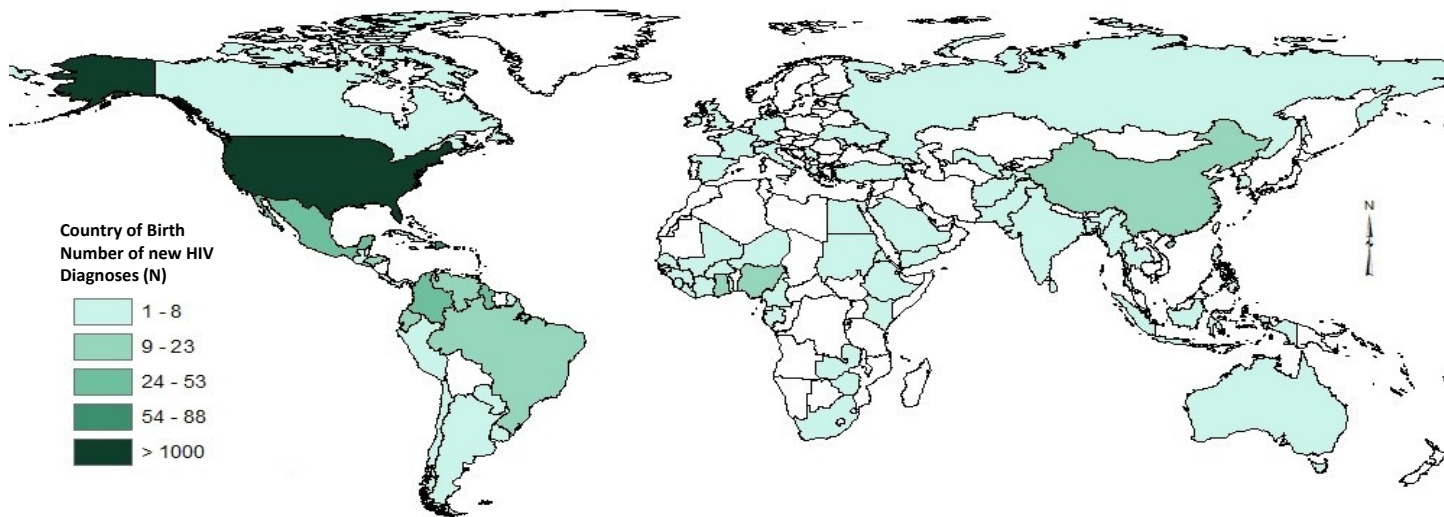
FIGURE 11.2: Average annual HIV diagnosis rates by sub-region of birth, NYC 2015-2019
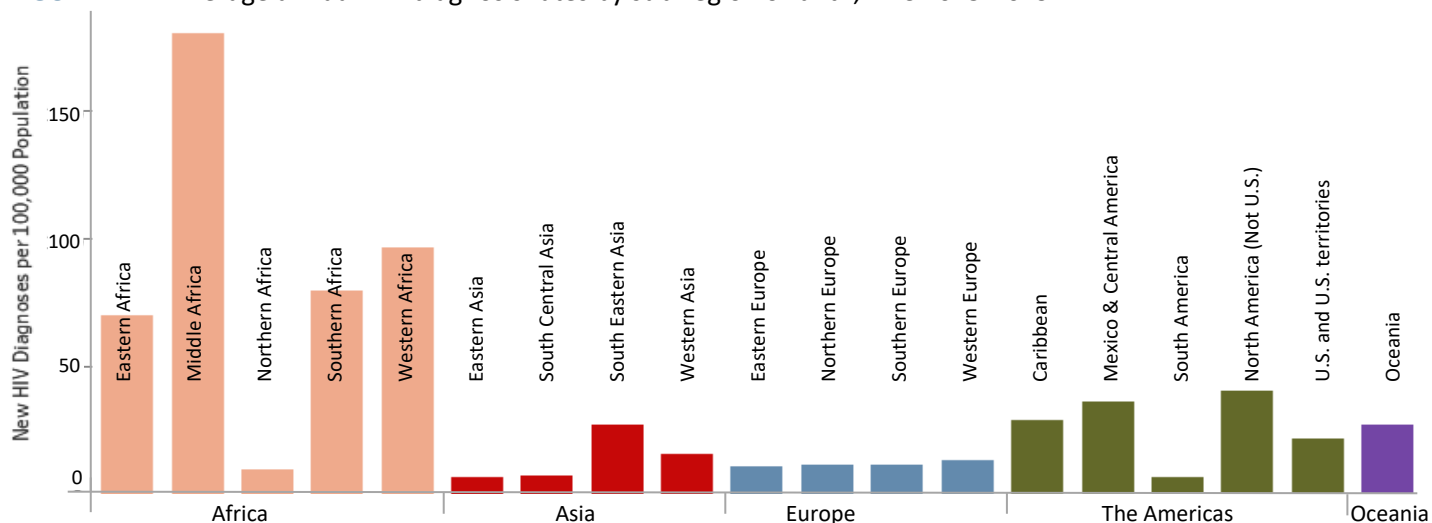
Rates calculated using 2014-2018 American Community Survey 5-Year Estimates of Sub-Regional Populations. Names of sub-regions are those used by the U.S. Census Bureau. For a list of countries included in each sub-region, see pages 95 to 104 of https://www2.census.gov/programs-surveys/acs/tech_docs/code_lists/2018_ACS_Code_Lists.pdf

People born in the U.S. and U.S. territories made up 57.1% (N=1,012) of those newly diagnosed with HIV in NYC in 2019. The places of birth of New Yorkers with the highest number of new diagnoses (the U.S. and Central and South America) differed from the places of birth of those with the highest rates of new diagnoses (most sub-regions of Africa, Figure 11.2).

FIGURE 11.3: Demographic characteristics of people newly diagnosed with HIV by place of birth, NYC 2019
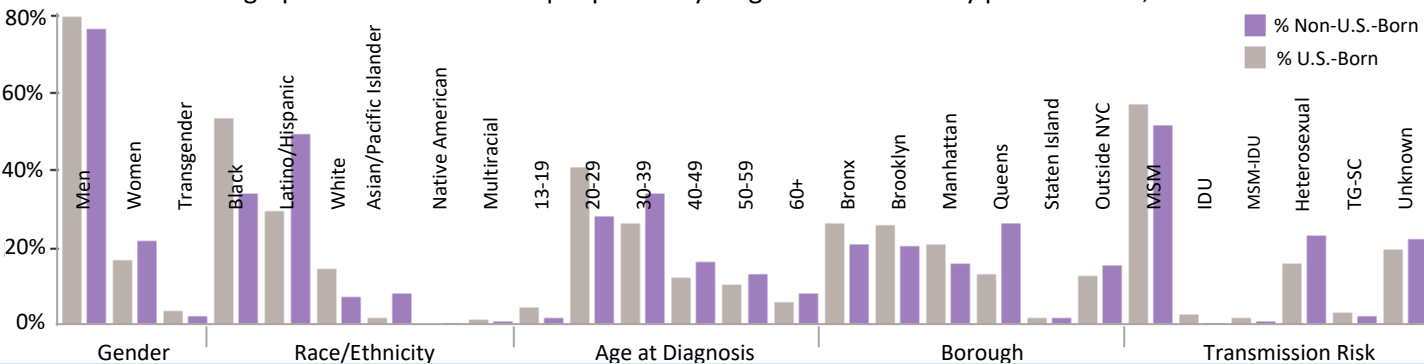
The demographic proportions of newly diagnosed people born in the U.S. (grey bars) and those born outside the U.S. (purple bars) differed in 2019 (Figure 11.3). For example, in 2019, 13% of U.S.-born newly diagnosed people resided in Queens, compared to 26% of those born outside the U.S.

Figures do not include people newly diagnosed with HIV in NYC in 2019 with an unknown country of birth (N=205, 11.6% of all people newly diagnosed).

SUPPORTIVE SERVICE NEEDS AMONG PEOPLE WITH HIV

FIGURE 12.1: Screening and referrals for not-in-care (≥13 months) people with HIV (PWH) (N=1,722)

	%	Count
Screened	23%	399
Need(s) identified	75%	298
Referred	85%	254
Accessed service(s)	56%	142
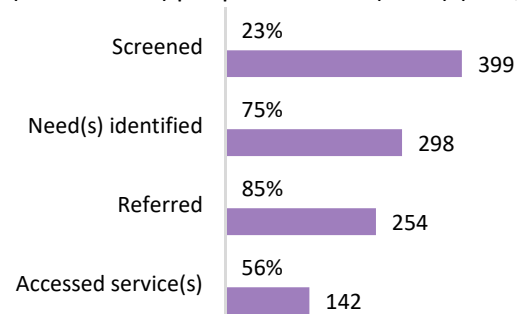
FIGURE 12.2: Screening and referrals for newly diagnosed PWH (N=1,331)

	%	Count
Screened	54%	721
Need(s) identified	41%	295
Referred	93%	274
Accessed service(s)	81%	223
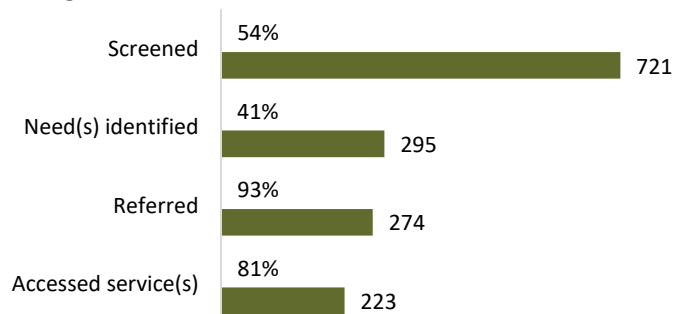
FIGURE 12.3: Service needs identified among not-in-care PWH (N=298) and newly diagnosed PWH (N=295)

	Not in Care	Newly Diagnosed
Housing Services	43%	53%
Health Insurance	45%	41%
Medication Adherence	22%	14%
Food/Nutrition	8%	21%
Mental Health Treatment	10%	15%
Transportation	16%	7%
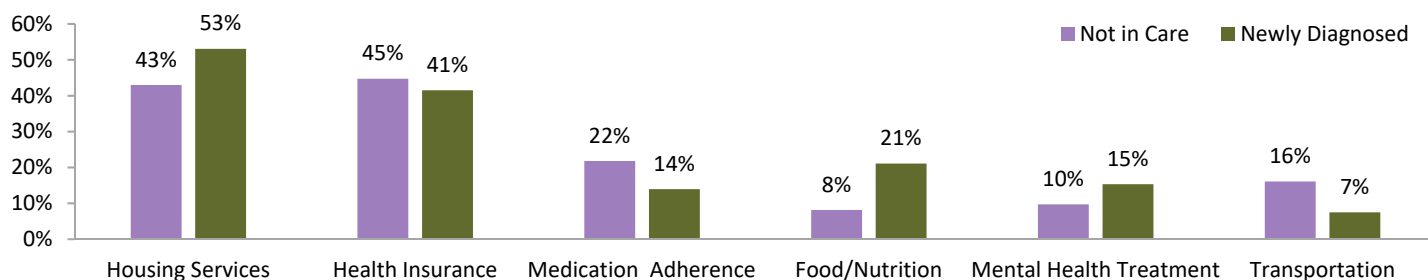
In 2019, the ACE (Assess. Connect. Engage.) Team began conducting systematic needs assessment for supportive services for PWH, alongside partner services and linkage to care. A higher proportion of not-in-care PWH (75%) expressed having unmet need(s) compared to newly diagnosed PWH (41%). Higher proportions of newly diagnosed PWH accepted service referral after needs assessment and accessed service(s) (93% and 81%) compared to not-in-care PWH (85% and 56%). The top needs identified among both groups were housing services and health insurance.

TRANSMITTED DRUG RESISTANCE

FIGURE 13.1: Proportion of people newly diagnosed with HIV genotyped within three months of diagnosis, 2019

Proportion genotyped within three months (%)

	%
Men	60%
Women	51%
Transgender	58%
Black	52%
Latino/Hispanic	65%
White	64%
API	61%
Other	48%
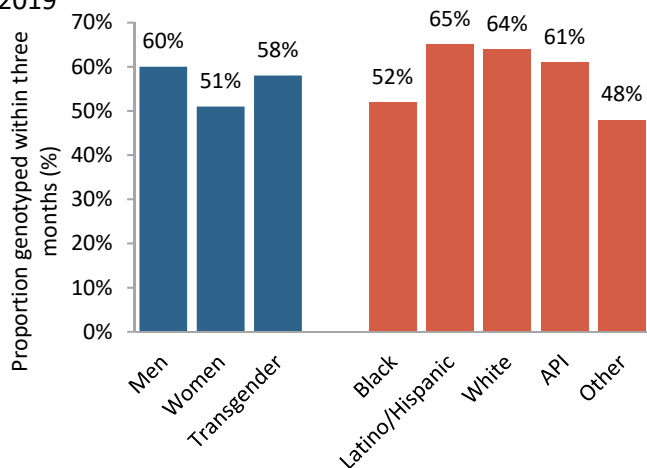
FIGURE 13.2: Proportion of people newly diagnosed with HIV with transmitted drug resistance (TDR) by drug class[1], 2015-2019

Proportion of TDR by drug class (%)

| Year	NNRTI	NRTI	PI	INT
2015	13%	4%	3%	0.1%
2016	10%	3%	2%	0.8%
2017	12%	4%	2%	0.3%
2018	9%	4%	2%	0.4%
2019	10%	3%	2%	0.3%
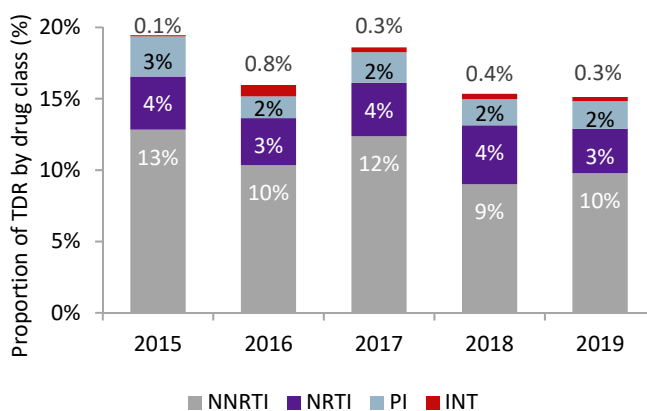
API=Asian/Pacific Islander; NRTI=Nucleoside Reverse Transcriptase Inhibitor; NNRTI=Non-nucleoside Reverse Transcriptase Inhibitor; PI=Protease Inhibitor; INT=Integrase Inhibitor. Other race includes Native American and multiracial people. [1]HIV can be resistant to more than one drug class; individuals may be represented more than once.

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 guide therapy. In 2019, 58.2% of newly diagnosed people received a genotype within three months of diagnosis (compared with 57.6% in 2018). Lower proportions of women and people identified as Black or Other race received a genotype (Figure 13.1). In 2019, 13.1% of newly diagnosed people showed evidence of resistance to one or more antiretroviral drugs (15.3% by drug class), and transmitted drug resistance was highest towards drugs in the non-nucleoside reverse transcriptase inhibitor (NNRTI) class (Figure 13.2).

HIV CARE AMONG PEOPLE NEWLY DIAGNOSED WITH HIV

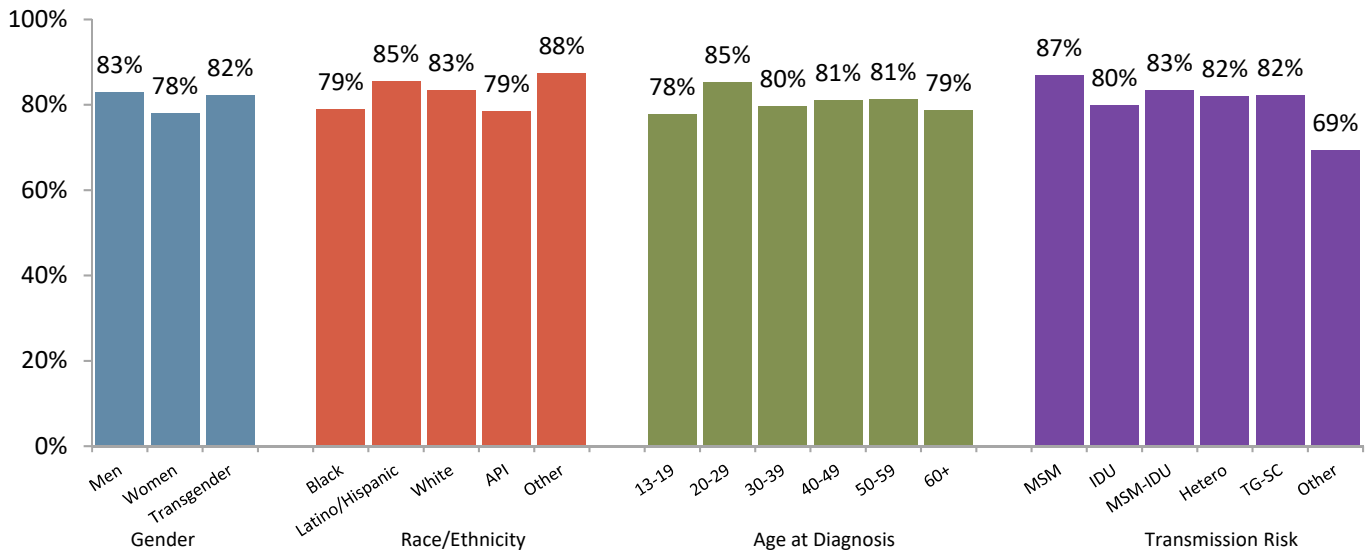**FIGURE 14.1**: Linkage to HIV care[1] within 30 days among newly diagnosed people, NYC 2015-2019

Values: 72% (2015), 76% (2016), 79% (2017), 82% (2018), 82% (2019)
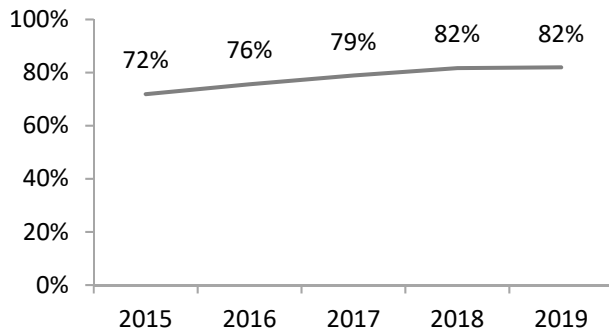
FIGURE 14.2: Viral suppression[2] within three months among newly diagnosed people, NYC 2015-2019

Values: 30% (2015), 36% (2016), 44% (2017), 53% (2018), 54% (2019)
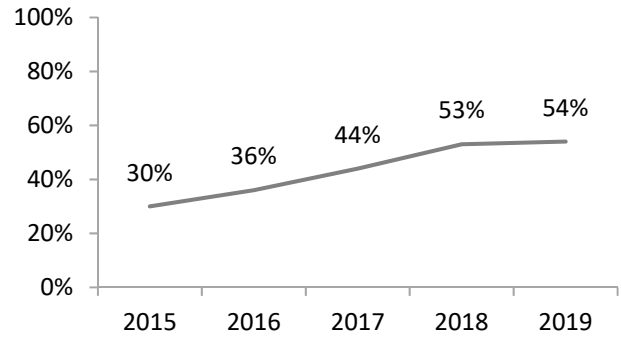
Timely linkage to HIV care (Figures 14.1 and 14.3) and timely viral suppression among (Figures 14.2 and 14.4) newly diagnosed people increased overall in NYC from 2015 to 2019.

FIGURE 14.3: Linkage to HIV care[1] within 30 days among newly diagnosed people, NYC 2019

Gender: Men 83%, Women 78%, Transgender 82%
Race/Ethnicity: Black 79%, Latino/Hispanic 85%, White 83%, API 79%, Other 88%
Age at Diagnosis: 13-19 78%, 20-29 85%, 30-39 80%, 40-49 81%, 50-59 81%, 60+ 79%
Transmission Risk: MSM 87%, IDU 80%, MSM-IDU 83%, Hetero 82%, TG-SC 82%, Other 69%

FIGURE 14.4: Viral suppression[2] within three months among newly diagnosed people, NYC 2019
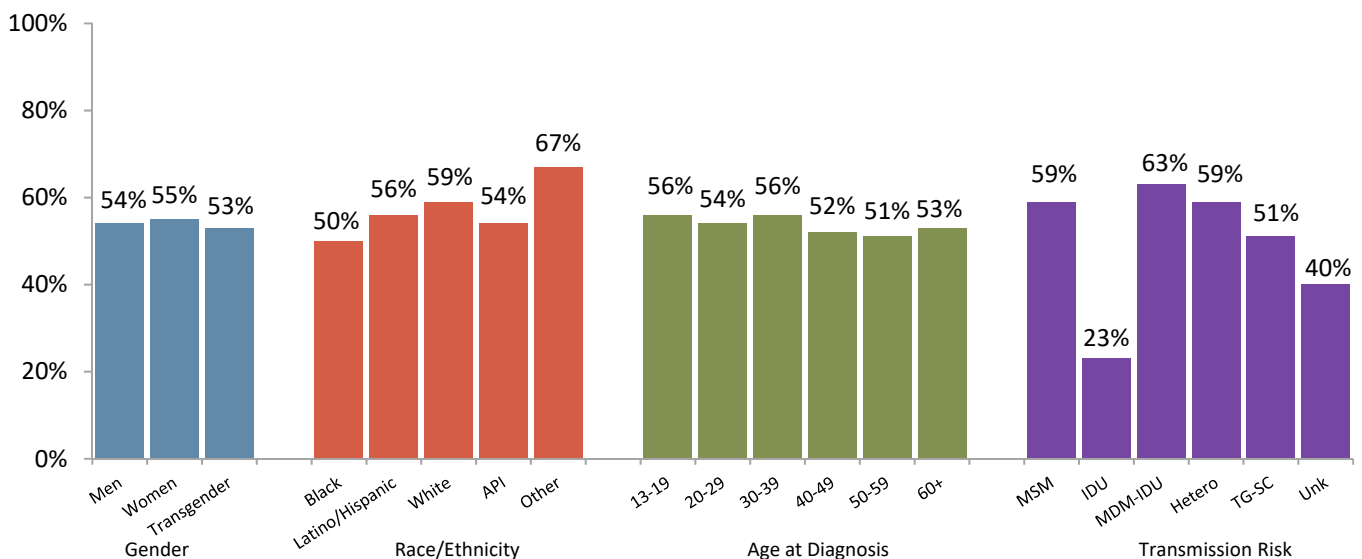
Gender: Men 54%, Women 55%, Transgender 53%
Race/Ethnicity: Black 50%, Latino/Hispanic 56%, White 59%, API 54%, Other 67%
Age at Diagnosis: 13-19 56%, 20-29 54%, 30-39 56%, 40-49 52%, 50-59 51%, 60+ 53%
Transmission Risk: MSM 59%, IDU 23%, MDM-IDU 63%, Hetero 59%, TG-SC 51%, Unk 40%

API=Asian/Pacific Islander; MSM=Men who have sex with men; IDU=Injection drug use history; TG-SC=Transgender people with sexual contact. [1]HIV viral load (VL), CD4 or genotype test drawn within one month (30 days) of HIV diagnosis; includes those ages 13 and older. People newly diagnosed with HIV at death were excluded from linkage to care and timely viral suppression calculations. [2]At least one HIV VL within three months (91 days) of HIV diagnosis was <200 copies/mL; includes those ages 13 and older.

HIV CARE AMONG PEOPLE LIVING WITH HIV

FIGURE 15.1: Viral suppression[1] among people in HIV medical care[2], NYC 2015-2019
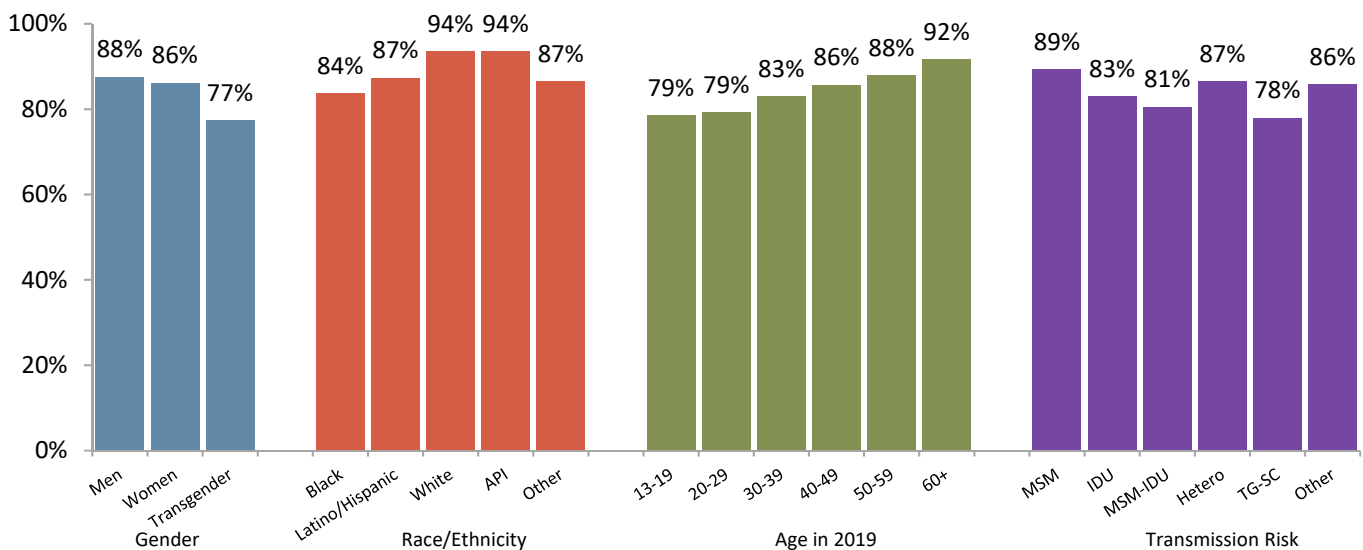
83% 85% 85% 87% 87%

2015 2016 2017 2018 2019
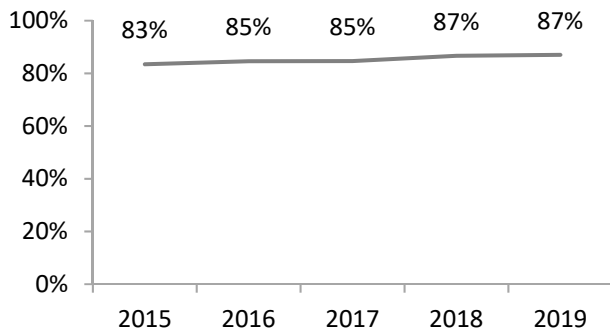
FIGURE 15.2: Sustained viral suppression[3] among people established in HIV medical care[4], NYC 2015-2019
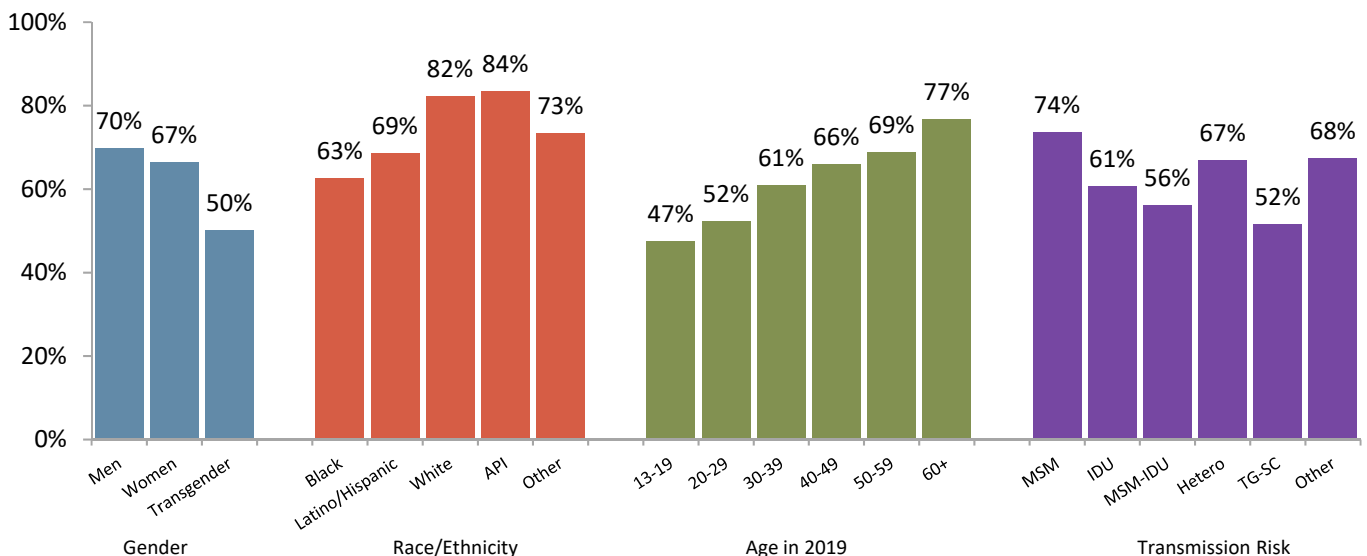
62% 64% 66% 67% 69%

2015 2016 2017 2018 2019
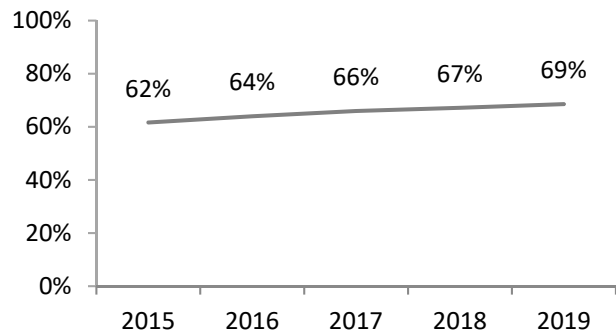
Viral suppression among people in HIV medical care (Figures 15.1 and 15.3) and sustained viral suppression among people established in HIV medical care (Figures 15.2 and 15.4) increased overall in NYC from 2015 to 2019.

FIGURE 15.3: Viral suppression[1] among people in HIV medical care[2], NYC 2019

Gender
- Men: 88%
- Women: 86%
- Transgender: 77%

Race/Ethnicity
- Black: 84%
- Latino/Hispanic: 87%
- White: 94%
- API: 94%
- Other: 87%

Age in 2019
- 13-19: 79%
- 20-29: 79%
- 30-39: 83%
- 40-49: 86%
- 50-59: 88%
- 60+: 92%

Transmission Risk
- MSM: 89%
- IDU: 83%
- MSM-IDU: 81%
- Hetero: 87%
- TG-SC: 78%
- Other: 86%

FIGURE 15.4: Sustained viral suppression[3] among people established in HIV medical care[4], NYC 2019

Gender
- Men: 70%
- Women: 67%
- Transgender: 50%

Race/Ethnicity
- Black: 63%
- Latino/Hispanic: 69%
- White: 82%
- API: 84%
- Other: 73%

Age in 2019
- 13-19: 47%
- 20-29: 52%
- 30-39: 61%
- 40-49: 66%
- 50-59: 69%
- 60+: 77%

Transmission Risk
- MSM: 74%
- IDU: 61%
- MSM-IDU: 56%
- Hetero: 67%
- TG-SC: 52%
- Other: 68%

API=Asian/Pacific Islander; MSM=Men who have sex with men; IDU=Injection drug use history; TG-SC=Transgender people with sexual contact. [1]Last HIV viral load (VL) value in 2019 was <200 copies/mL. [2]At least one HIV VL/CD4 in 2019; includes those ages 13 and older. [3]At least two VL tests ≥14 months apart and all VLs <200 copies/mL in 2018 and 2019. [4]At least two VL tests in 2018 and 2019; includes those ages 13 and older.

NYC HIV CARE CONTINUUM

FIGURE 16.1: Proportion of PLWH in NYC engaged in selected stages of the HIV care continuum, NYC 2019
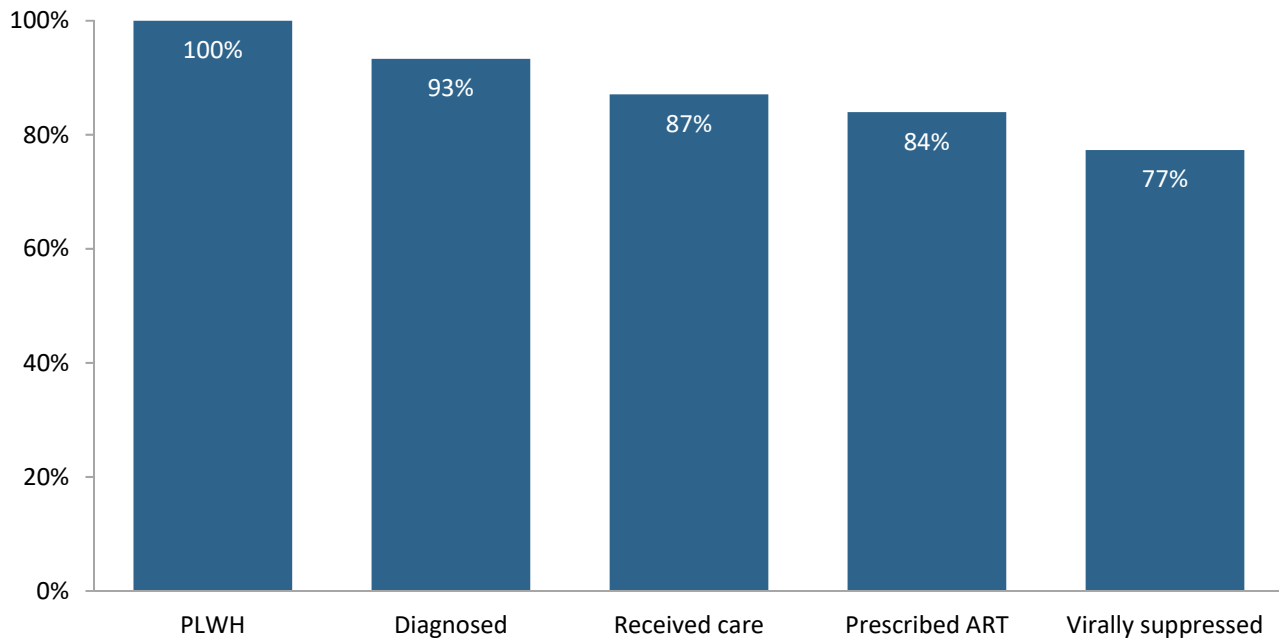

PLWH=People living with HIV; ART=antiretroviral therapy. For definitions of the stages of the continuum of care, see Technical Notes on page 16.

Of approximately 91,200 people living with HIV in NYC in 2019, 77% had a suppressed viral load (Figure 16.1). NYC maintained its progress towards UNAIDS 90-90-90 goals (unaids.org/en/resources/909090); 90% of diagnosed PLWH were prescribed ART and 92% of PLWH prescribed ART were virally suppressed (data not shown).

SURVIVAL AMONG PEOPLE NEWLY DIAGNOSED WITH HIV

FIGURE 17.1: Survival among women[1] newly diagnosed with HIV,[2] by race/ethnicity[3], NYC 2014-2018
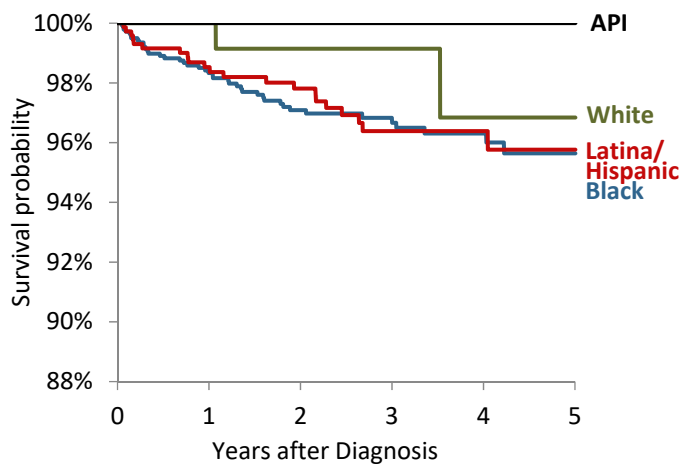
FIGURE 17.2: Survival among men[1] newly diagnosed with HIV,[2] by race/ethnicity[3], NYC 2014-2018
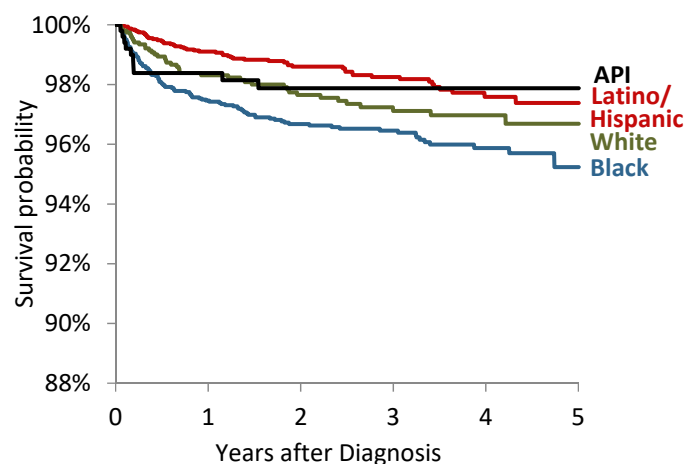
API=Asian/Pacific Islander. [1]Women include transgender women and men include transgender men. [2]People newly diagnosed with HIV at death were excluded from the analysis. Curves include people diagnosed with HIV from 2014 through 2018 and followed through Dec. 31, 2018. [3]Number of new diagnoses (Dx) and deaths from any cause (Dth) among women from 2014-2018: Black (Dx=1,422; Dth=42), Latina/Hispanic (Dx=729; Dth=21), White (Dx=145; Dth=2), API (Dx=67; Dth=0), Native American (Dx=4; Dth=1; not shown), Multiracial (Dx=15; Dth=1; not shown). Number of new diagnoses (Dx) and deaths from any cause (Dth) among men from 2014 to 2018: Black (Dx=3,270; Dth=110), Latino/Hispanic (Dx=3,289; Dth=53), White (Dx=1,556; Dth=40), API (Dx=510; Dth=10), Native American (Dx=22; Dth=0; not shown), Multiracial (Dx=92; Dth=1; not shown).

Figures 17.1 and 17.2 display the proportion of newly diagnosed women and men who were still alive (y-axis) by race/ethnicity over a 5-year period (x-axis). Each survival curve begins at 100% survival at HIV diagnosis and steps down as members of a race/ethnicity group die over the 5-year period. Inequities in survival by race/ethnicity and gender differences were apparent. Black and Latina women had the lowest survival probabilities and markedly higher numbers of deaths than White and API women. Differences in numbers of deaths across race/ethnicity groups among men were less pronounced, but Black men had the lowest survival probability followed by White, Latino and API men.

MORTALITY AMONG PEOPLE WITH HIV

FIGURE 18.1: Age-adjusted death rates among people with HIV by HIV-related and non-HIV-related cause of death, NYC 2004-2018
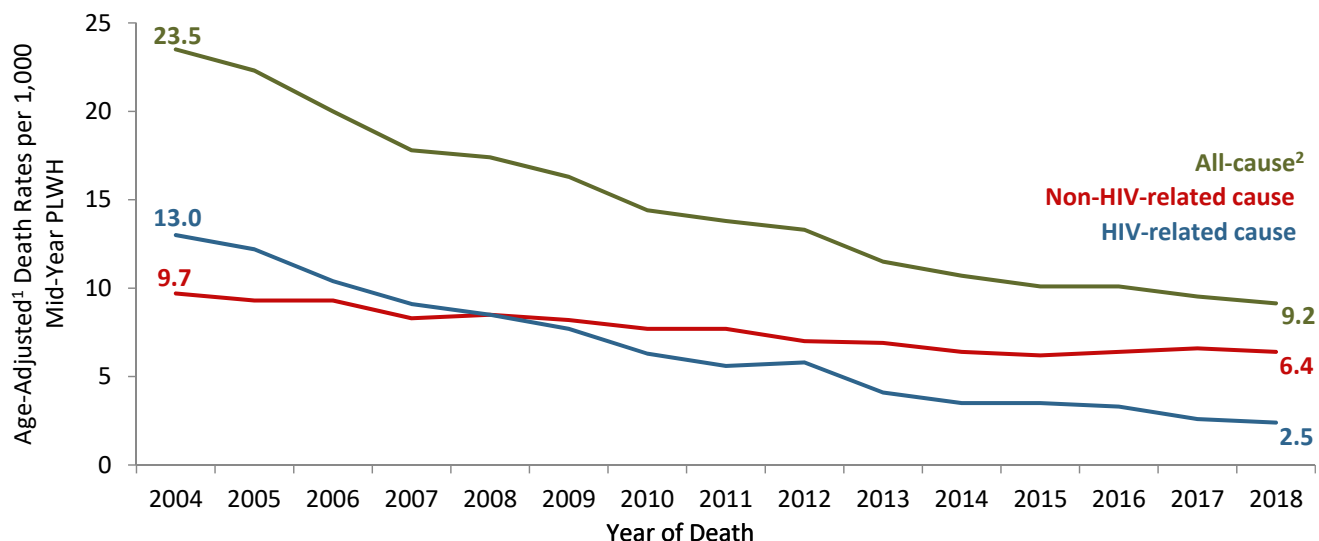
PLWH=People living with HIV. [1]Age-adjusted to the NYC Census 2010 population. People newly diagnosed with HIV at death were excluded from the numerator. [2]Includes people with unknown cause of death (3.2% of all deaths).

The all-cause death rate (9.2 per 1,000 in 2018) among people with HIV decreased by 61% from 2004 to 2018 but remained higher than the death rate for the overall NYC population (5.5 in 2017). 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 (Figure 18.1). During this time, the median age at death from all causes among PWH increased from 48 years in 2004 to 59 years in 2018 and was lower than the median age at death for NYC overall (77 years in 2017). Age at death increased by a similar amount for people with an HIV-related cause of death (by 10 years) and a non-HIV-related cause of death (by nine years) from 2004 to 2018.

TABLE 18.1: Trends in proportions of major causes of death among people with HIV, NYC 2004-2018

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total Deaths (N)	(2,718)	(2,701)	(2,482)	(2,370)	(2,378)	(2,269)	(2,090)	(2,087)	(1,925)	(1,894)	(1,845)	(1,799)	(1,836)	(1,803)	(1,758)
CAUSE OF DEATH[1]															
HIV-RELATED (%)	60	59	55	53	52	48	47	43	38	35	33	34	30	27	26
NON-HIV-RELATED (%)	37	38	43	45	46	50	50	54	58	60	60	62	66	69	70
CVD	9	9	10	11	12	13	13	13	15	14	15	16	19	22	18
CANCER[2]	9	10	11	12	13	14	13	14	16	16	15	17	16	17	18
ACCIDENTAL OD	0	0	1	5	3	4	3	3	5	3	4	5	7	8	7
INFECTIOUS DISEASES	4	4	4	5	3	4	5	4	5	5	6	5	5	3	5
EXTERNAL CAUSES	3	3	4	3	4	3	5	3	5	4	4	5	4	4	4
OTHER	12	13	13	9	11	12	11	15	12	16	16	14	14	15	17

Trend within a cause of death over time

Lowest — Middle — Highest

CVD=Cardiovascular diseases; OD=overdose. [1]For definitions of the causes of death, see Technical Notes on page 15. Deaths due to unknown causes are not shown. [2]Deaths due to HIV-related cancers are included in HIV-related cause of death.

In 2004, the leading cause of death among people with HIV (PWH) was HIV, representing 60% of all deaths. At the end of 2018, although HIV was still the single leading cause of death among PWH, the majority (70%) of deaths were due to non-HIV-related causes. Since 2004, there have been substantial increases in the proportions of deaths due to cardiovascular diseases (18% of all deaths in 2018) and non-HIV-related cancers (18% of all deaths in 2018) among PWH (Table 18.1).

HIV TESTING AND PREVALENCE AMONG WOMEN

FIGURE 19.1: HIV testing history and prevalence among heterosexually active women with lower socioeconomic status[1] in NYC, National HIV Behavioral Surveillance Study, 2010-2019
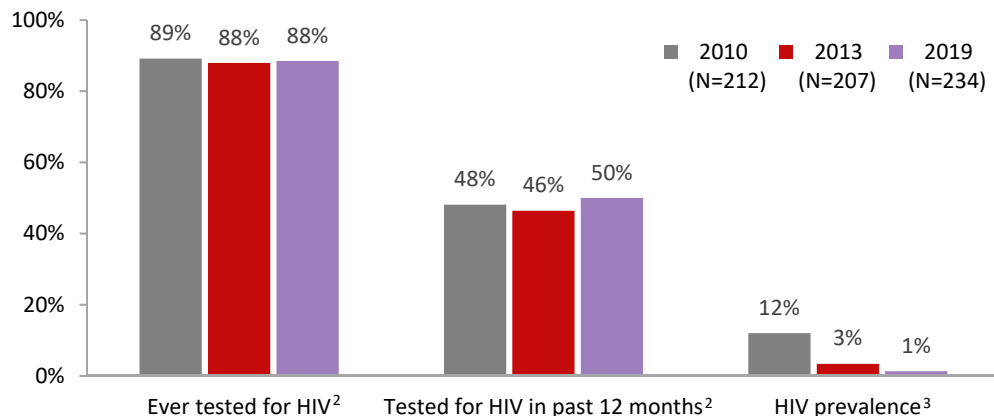

[1]Includes participants whose self-identified gender was female, were ≥18 years old at the time of the interview, reported vaginal or anal sex with a man in the past 12 months, did not inject non-prescription drugs in the past 12 months, and lived in the NYC metropolitan statistical area. Eligibility criteria changed between cycles and included the following: for 2010 and 2013, household income below Health and Human Services (HHS) poverty guidelines or less than high school education; for 2019, household income <150% HHS poverty guidelines adjusted for city-level cost of living. [2]Among those who did not self-report a positive HIV status. [3]Among those who agreed to undergo HIV testing (including those who self-reported a positive HIV status).

The National HIV Behavioral Surveillance (NHBS) project is a national, ongoing study measuring HIV prevalence and behaviors and social factors related to HIV risk. The 2010, 2013 and 2019 cycles were conducted among heterosexually active adults. Among women, between 2010 and 2019, the proportions reporting HIV testing remained relatively stable, ranging from 46% to 50% (tested in past 12 months) and 88% to 89% (ever tested). HIV prevalence overall among women decreased from 2010 (12%) to 2019 (1%) (Figure 19.1).

PATIENT VULNERABILITIES AND VIRAL SUPPRESSION

FIGURE 20.1: Vulnerabilities and viral suppression among Medical Monitoring Project participants (N=1,044), overall and by race/ethnicity, 2015-2018
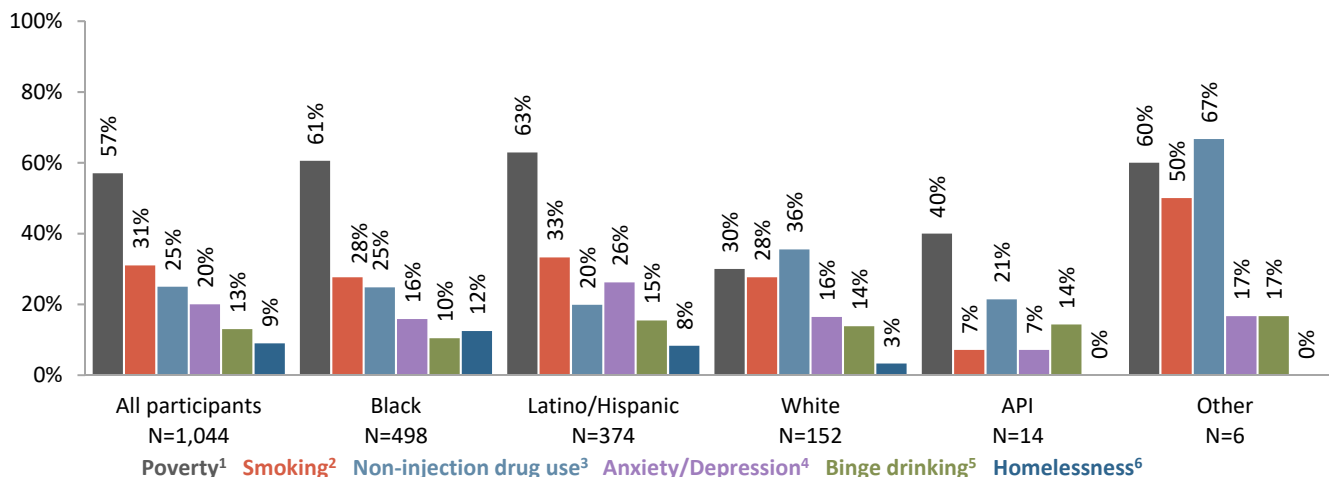
API=Asian/Pacific Islander. Categories are not mutually exclusive. "Other" race/ethnicity includes Native American and Multiracial participants. [1]The level of poverty is based on yearly income and number of household dependents. This measure uses the DHHS Poverty Guidelines to determine whether respondent is above or below the poverty level. [2]Smoking refers to people who currently smoke. [3]Non-injection drugs include marijuana, crack, cocaine, methamphetamine, other amphetamines, club drugs, poppers, painkillers and tranquilizers (in the past 12 months). [4]Depression/anxiety measure was created from the sum score of the Generalized Anxiety Disorder seven-item (GAD-7) scale (in the past two weeks). [5]Binge drinking is defined as five or more alcoholic drinks in one sitting for men, or four or more alcoholic drinks in one sitting for women (in the past 30 days). [6]Past 12 months.

The Medical Monitoring Project (MMP) is an ongoing, annual, national surveillance study of people with HIV. Among 1,336 MMP participants interviewed in the 2015-2018 cycles, 1,044 (87%) were virally suppressed. Most (N=915, 88%) virally suppressed participants reported at least one of the identified structural and psychosocial vulnerabilities during the interview; more than half (57%) reported living at or below the poverty threshold, nearly one-third (31%) reported currently smoking and a quarter (25%) reported non-injection drug use (Figure 20.1). Greater proportions of Black and Latino/Hispanic participants reported living at or below the poverty threshold and experiencing homelessness compared with White and API participants.

TECHNICAL NOTES

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 based on core surveillance activities. All data are based on information received by the NYC Department of Health and Mental Hygiene (Health Department) as of Mar. 31, 2020 and are for calendar year 2019 unless otherwise noted.

HIV SURVEILLANCE: The NYC HIV Epidemiology Program (HEP) manages the 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 risk and clinical information on HIV-diagnosed people, as well as all diagnostic tests, viral load tests, CD4 counts and HIV genotypes reportable under New York State 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.

GENDER IDENTITY ASCERTAINMENT: Surveillance collects information about individuals' current gender identity, when available. This report displays the following gender categories: men, women and transgender. People whose current gender identity differs from their sex assigned at birth are considered transgender. 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-report, their diagnosing provider or medical chart review. This information may or may not reflect the individual's self-identification. Transgender identity has been collected routinely since 2005 for newly reported cases. Reported numbers of HIV diagnoses among transgender people and transgender PLWH are likely to be underestimates. For more information, see the "HIV among People Identified as Transgender in New York City" surveillance slide set available at nyc.gov/assets/doh/downloads/pdf/dires/hiv-among-transgender-people-2019.pdf. Surveillance collects information on other gender identity categories, including "Non-binary/Gender non-conforming." In this report, data for these individuals (N=8 at the time of publication) are displayed by sex at birth.

RACE/ETHNICITY: Data on race/ethnicity are derived from multiple sources including patient 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 were grouped in the race/ethnicity category Latino/Hispanic, 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: HEP collects data on infants exposed to HIV or living with HIV and children diagnosed with HIV before 13 years of age. Data are used to monitor mother-to-child HIV transmission, measure perinatal HIV transmission rates and describe morbidity and mortality among HIV-positive children. In addition to routine HIV and AIDS case surveillance, perinatal and pediatric surveillance data are informed by a range of other activities and data sources, including longitudinal case follow-up, the New York State Department of Health's Comprehensive Newborn Screening Program and CDC-funded special projects related to pediatric HIV.

ACUTE HIV SURVEILLANCE: Since 2008, HEP has conducted surveillance and investigation of individuals diagnosed in the acute stage of HIV (AHI) in NYC. For NYC's AHI case definition, see nyc.gov/assets/doh/downloads/pdf/ah/definition-acute-hiv-infection.pdf.

DEATH DATA: Data on deaths occurring in NYC are from matches with the NYC Vital Statistics Registry, medical chart reviews and provider reports, including HIV-positive autopsies by the Office of the Chief Medical Examiner. Data on deaths occurring outside NYC are from matches with the Social Security Death Master File and National Death Index. As of the time of publication of this report, death data for 2019 are incomplete. They include preliminary NYC death data, National Death Index data and partial Social Security Death Master File data.

CAUSE OF DEATH: Cause of death used in this report 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 2018, ICD10 codes B20-B24 were used to denote HIV/AIDS-related deaths. "Other" category includes anemia, chronic liver diseases, chronic lower respiratory disease, diabetes mellitus and other known causes not otherwise listed. For technical notes on cause of death by the NYC Health Department's Office of Vital Statistics, see nyc.gov/assets/doh/downloads/pdf/vs/2017sum.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 percent 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 NYC. Income data used in this report are from the 2007-2011 American Community Survey (ACS) for events (e.g., diagnoses, deaths, care indicators) occurring between 2006 and 2009, ACS 2008-2012 for events occurring in 2010, ACS 2009-2013 for events occurring in 2011, ACS 2010-2014 for events occurring in 2012, ACS 2011-2015 for events occurring in 2013, ACS 2012-2016 for events occurring in 2014, ACS 2013-2017 for events occurring in 2015, and ACS 2014-2018 for events occurring between 2016 and 2019. Cut-points for area-based poverty categories in NYC were defined by an NYC Health Department workgroup.[5]

[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.
[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.

TECHNICAL NOTES (CONTINUED)

MEDICAL MONITORING PROJECT: The Medical Monitoring Project (MMP) is a national, ongoing supplemental surveillance study sponsored by the CDC and designed to understand more about the health behaviors, outcomes and needs of PLWH; NYC is one of 23 sites. A two-stage sampling design is used to obtain a probability sample of in-care and out-of-care adults living with HIV known to the 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 CDC and collects data on behaviors related to HIV risk and HIV testing, and the receipt or use of prevention services and strategies. NYC is one of 22 NHBS sites. Surveillance is conducted in rotating, annual cycles in three different populations: 1) gay, bisexual, and other men who have sex with men; 2) people who inject drugs (PWID); and 3) heterosexuals at increased risk for HIV. For more information on NHBS, see cdc.gov/hiv/statistics/systems/nhbs/index.html.

NYC HIV CARE CONTINUUM: "People living with HIV" is calculated as the number of HIV-diagnosed divided by the estimated proportion of PLWH who had been diagnosed (93.3%), based on a CD4 depletion model (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). "HIV-diagnosed" is calculated as the number of PLWH retained in care plus the estimated number of PLWH 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 (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). "Received care" is defined as PLWH with ≥1 VL or CD4 count or CD4 percent drawn in 2019 and reported to NYC HIV surveillance (Source: NYC HIV Surveillance Registry). "Prescribed ART" is calculated as the number of PLWH retained in care multiplied by the estimated proportion of PLWH prescribed ART in the previous 12 months (96.4%), based on the proportion of NYC MMP participants whose medical record included documentation of ART prescription (Source: NYC HIV Surveillance Registry and NYC MMP, 2018). "Virally suppressed" is calculated as PLWH in care with a most recent viral load measurement in 2019 of <200 copies/mL, plus the estimated number of out-of-care PLWH in 2019 with a VL<200 copies/mL, based on a statistical weighting method (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).

NOTES ABOUT CARE CONTINUUM-SPECIFIC ESTIMATES: The number of PLWH (first bar of the care continuum) represents an estimate of all people living with HIV in NYC at the end of 2019. The number of PLWH presented elsewhere (e.g., Table 3.1) represents people ever diagnosed with HIV, reported in NYC and not known to have died as of Dec. 31, 2019. Viral suppression estimates in the care continuum are among all New Yorkers living with HIV. These differ from Figures 15.1 and 15.3, which show viral suppression among PLWH in care in 2019.

HIV PROVIDER REPORTING

All diagnostic and clinical providers (e.g., doctors, nurses, physician assistants and all others diagnosing HIV or providing care to HIV-positive people) and laboratories are required by law to report specific HIV-related events.

REPORT HIV/AIDS CASES: Providers are required by law 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 (i.e., acute HIV 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 New York State provider portal at commerce.health.state.ny.us. Instructions for accessing the portal are available here: 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), please call 518-474-4284. To arrange for pickup of a completed paper PRF, call the NYC HIV Surveillance Provider line at 212-442-3388. In order to protect patient confidentiality, PRFs may not be mailed or faxed to the NYC Health Department.

DISCUSS PARTNER SERVICES AND REPORT PARTNERS: The NYC Health Department's 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 by the NYC Health Department to all people diagnosed with HIV, help people with HIV determine how to best notify their sex or needle-sharing partners. As required by New York State Public Health Law, providers must 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's 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

NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE WEBSITE: nyc.gov/health.

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 the Health Department for a query against the HIV 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 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 about the CSR, visit nyc.gov/site/doh/health/health-topics/aids-hiv-care-status-reports-system.page.

CARE CONTINUUM DASHBOARDS: The HIV Care Continuum Dashboards (CCDs) use Health Department HIV surveillance data to show the performance of providers who give HIV care to the majority of New Yorkers living with HIV. The CCDs contain information on how quickly New Yorkers newly diagnosed with HIV are linked to care and how well their viral load is 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/AIDS epidemic in NYC. For more information about the CCDs, visit nyc.gov/site/doh/health/health-topics/care-continuum-dashboard.page.

ADDITIONAL HEALTH DEPARTMENT RESOURCES ON HIV IN NYC:

NYC HIV Epidemiology Program:
nyc.gov/site/doh/data/data-sets/aids-hiv-epidemiology-and-field-services.page

Other information on HIV/AIDS, including HIV testing sites in NYC, condom distribution and Health Department Sexual Health Clinics:
nyc.gov/site/doh/health/health-topics/aids-hiv.page

ADDITIONAL HEALTH DEPARTMENT DATA RESOURCES:

Data and Statistics: nyc.gov/site/doh/data/data-sets/data-sets-and-tables.page

EpiQuery, NYC Interactive Health Data System: a816-healthp.nyc.gov/hdi/epiquery

Geographical Information System (GIS) Center Map Gallery: nyc.gov/site/doh/data/health-tools/maps.page

OTHER 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 System: 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

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