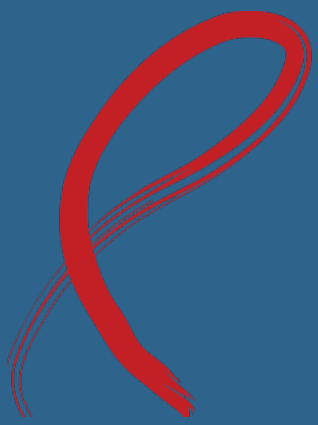


HIV SURVEILLANCE ANNUAL REPORT, 2017

NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE

EXECUTIVE SUMMARY

This report presents 2017 surveillance data on the HIV epidemic in New York City (NYC). It includes graphic trends in HIV diagnoses over time for key populations; geographic distribution of HIV in NYC; and key outcomes such as linkage to care, viral suppression and survival among people with HIV (PWH). New features include a section on re-engagement in HIV care of out-of-care PWH, NYC's progress toward the UNAIDS 90-90-90 targets, PWH with unsuppressed viral loads, sexually transmitted infections (STI) among men who have sex with men (MSM), and HIV-related stigma.

NYC continues to make progress toward meeting statewide goals to end the HIV epidemic.[1]

- The annual number of new HIV diagnoses continues to decline, from 2,279 in 2016[2] to 2,157 in 2017 (a 5.4% decrease). The estimated number of new HIV infections also continues to decline, with a 36% decrease since 2013 and an 18% decrease from 2016 to 2017.
- From 2016 to 2017, new HIV diagnoses among women decreased by 11.6%, and there were declines in the HIV diagnosis rate among Black women, Latina/Hispanic women and Asian/Pacific Islander women.
- New diagnoses among men also declined in 2017, by 3.6% from 2016. However, while new diagnoses and the HIV diagnosis rate among Black men decreased during this period, new diagnoses and the diagnosis rate increased among Latino/Hispanic men.
- New diagnoses among MSM and new diagnoses among persons with a history of injection drug use (IDU) remained stable from 2016 to 2017 (MSM: 1,236 in 2016 and 1,243 in 2017; IDU: 32 in 2016 and 37 in 2017).
- In 2017, 14% of all new diagnoses in NYC were made during the acute phase of HIV infection, an important increase from 9% in 2013. This reflects the City's efforts to promote HIV testing and HIV/STI prevention services more broadly.
- The all-cause mortality rate and rate of HIV-related deaths among PWH continue to decline, by 68.2% and 83.3%, respectively, between 2001 and 2016. Two-thirds of deaths among PWH in NYC are now attributed to a non-HIV-related cause.
- Overall, 74% of all estimated PWH were virally suppressed in 2017. Of those in care, 85% were virally suppressed in 2017 (up from 79% in 2013).

The New York City Department of Health (Health Department) has a robust program to assist eligible individuals with re-engagement in HIV care. Data presented in the report show high rates of re-engagement among out-of-care PWH. Reasons given by individuals for discontinuing care underscore the need to reduce the negative effects of individual- and structural-level barriers to accessing and sustaining optimal HIV care.

Citywide, there were more than 10,500 PWH with unsuppressed viral load at the end of 2017. Black and Latino/Hispanic people were overrepresented in this group: more than one-third were Black men, and a fifth each were Latino/Hispanic men and Black women. Black, White and Latino/Hispanic PWH in NYC reached two of UNAIDS 90-90-90 goals — those for knowledge of HIV status and viral suppression — but less than 90% of diagnosed PWH among these racial/ethnic groups were receiving antiretroviral therapy (ART) in 2017.

This report presents data on linkage to HIV care within 30 days after HIV diagnosis, a now-updated indicator that aligns with the National HIV/AIDS Strategy standard for early linkage. Looking at trends over time, we see substantial improvements in early linkage among newly diagnosed New Yorkers, from 65% in 2013 to 80% in 2017. However, disparities are evident — with fewer women; transgender people; Black, Latino/Hispanic and Asian/Pacific Islander people; older people; and people with heterosexual risk being linked to care within 30 days of diagnosis.

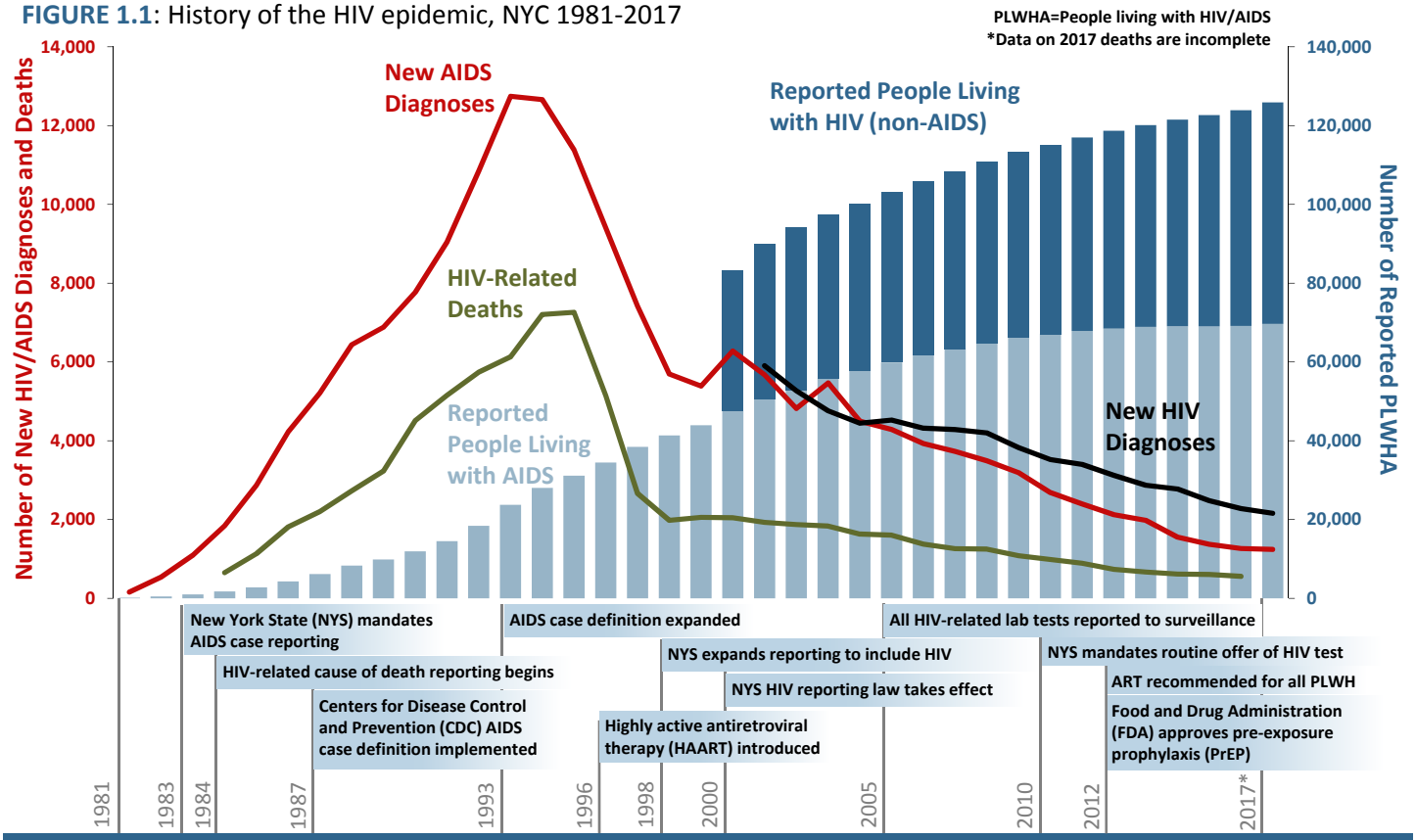
Finally, data from special surveillance projects highlight the ongoing clinical and psychosocial needs of people living with HIV. The 2017 National HIV Behavioral Surveillance study found that recent STI screening and diagnosis was common among MSM with HIV, and found high prevalence of STI on extragenital testing during the study. HIV-related stigma was frequently reported by PWH participating in NYC's 2015 and 2016 Medical Monitoring Project cycles, including concerns related to disclosure of their HIV status and with public attitudes about HIV.

[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 and Field Services Program. *HIV Surveillance Annual Report, 2015.* New York City Department of Health and Mental Hygiene: New York, NY. December 2016.

CONTENTS

HISTORY OF THE EPIDEMIC

FIGURE 1.1: History of the HIV epidemic, NYC 1981-2017



HIV DIAGNOSES OVER TIME

FIGURE 2.1: Trends in HIV diagnoses, NYC 2001-2017

HIV Diagnoses	2001	2017	EAPC	*P* Value
Total	5,911	2,157	-5.43	<0.01
Gender				
Male	3,931	1,707	-4.26	<0.01
Female	1,929	394	-9.27	<0.01
Transgender	51	56	0.78	0.25
Race/Ethnicity				
Black	3,097	919	-6.96	<0.01
Latino/Hispanic	1,774	774	-4.29	<0.01
White	904	316	-4.80	<0.01
Asian/Pacific Islander	119	124	1.15	0.01
Native American	13	9	-7.52	<0.01
Age Group (Years)				
0-12	86	2	-21.0	<0.01
13-19	199	80	-4.66	<0.01
20-29	1,135	806	-1.15	<0.01
30-39	2,090	597	-7.82	<0.01
40-49	1,549	309	-8.32	<0.01
50-59	633	238	-5.01	<0.01
60+	219	125	-2.65	<0.01

HIV Diagnoses	2001	2017	EAPC	*P* Value
Borough of Residence				
Bronx	1,328	464	-6.48	<0.01
Brooklyn	1,614	640	-5.42	<0.01
Manhattan	1,542	402	-6.79	<0.01
Queens	751	400	-3.91	<0.01
Staten Island	102	39	-5.70	<0.01
Outside NYC	464	179	-3.12	<0.01
Transmission Risk				
Men who have sex with men (MSM)	1,732	1,243	-1.07	<0.01
Injection drug use history (IDU)	850	37	-18.0	<0.01
MSM-IDU	129	27	-6.10	<0.01
Heterosexual contact	1,463	375	-6.94	<0.01
Transgender people with sexual contact	43	49	1.40	0.05
Perinatal	86	1	-20.3	<0.01

EAPC=Estimated annual percent change.

The number of new HIV diagnoses reported in New York City from 2001 to 2017 decreased overall and based on gender, race/ethnicity, age at diagnosis, borough of residence, and transmission risk. This decrease is significant (*P* value <0.01) for all subgroups except transgender people, Asian/Pacific Islanders, and transgender people with sexual contact.

DEMOGRAPHIC AND CLINICAL CHARACTERISTICS

TABLE 3.1: HIV/AIDS diagnoses and deaths occurring Jan. 1, 2017, through Dec. 31, 2017; and people diagnosed with HIV/AIDS, reported in NYC, and presumed to be living as of Dec. 31, 2017

	HIV Diagnoses[1]							AIDS Diagnoses[3]		PLWHA as of 12/31/2017		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Total	2,157	100.0	1,779	100.0	378	100.0	17.5	1,239	100.0	125,884	100.0	1,343	100.0
Gender													
Male	1,707	79.1	1,415	79.5	292	77.2	17.1	899	72.6	91,093	72.4	941	70.1
Female	394	18.3	315	17.7	79	20.9	20.1	315	25.4	33,358	26.5	387	28.8
Transgender	56	2.6	49	2.8	7	1.9	12.5	25	2.0	1,433	1.1	15	1.1
Race/Ethnicity[5]													
Black	919	42.6	742	41.7	177	46.8	19.3	603	48.7	54,894	43.6	694	51.7
Latino/Hispanic	774	35.9	653	36.7	121	32.0	15.6	393	31.7	41,284	32.8	449	33.4
White	316	14.6	269	15.1	47	12.4	14.9	172	13.9	25,898	20.6	177	13.2
Asian/Pacific Islander	124	5.7	97	5.5	27	7.1	21.8	57	4.6	2,859	2.3	13	1.0
Native American	9	0.4	6	0.3	3	0.8	33.3	5	0.4	296	0.2	7	0.5
Multiracial	15	0.7	12	0.7	3	0.8	20.0	8	0.6	315	0.3	3	0.2
Unknown	0	0.0	0	0.0	0	0.0	0.0	1	0.1	338	0.3	0	0.0
Age Group (years)[6]													
0-12	2	0.1	1	0.1	1	0.3	50.0	1	0.1	83	0.1	0	0.0
13-19	80	3.7	76	4.3	4	1.1	5.0	14	1.1	446	0.4	0	0.0
20-29	806	37.4	727	40.9	79	20.9	9.8	208	16.8	9,277	7.4	30	2.2
30-39	597	27.7	483	27.2	114	30.2	19.1	327	26.4	19,046	15.1	91	6.8
40-49	309	14.3	239	13.4	70	18.5	22.7	242	19.5	25,977	20.6	176	13.1
50-59	238	11.0	158	8.9	80	21.2	33.6	291	23.5	40,929	32.5	448	33.4
60+	125	5.8	95	5.3	30	7.9	24.0	156	12.6	30,126	23.9	598	44.5
Borough of Residence[7]													
Bronx	464	21.5	387	21.8	77	20.4	16.6	306	24.7	30,429	24.2	415	30.9
Brooklyn	640	29.7	511	28.7	129	34.1	20.2	346	27.9	30,239	24.0	376	28.0
Manhattan	402	18.6	340	19.1	62	16.4	15.4	223	18.0	32,683	26.0	281	20.9
Queens	400	18.5	327	18.4	73	19.3	18.3	174	14.0	18,528	14.7	123	9.2
Staten Island	39	1.8	30	1.7	9	2.4	23.1	29	2.3	2,452	1.9	39	2.9
Outside NYC	179	8.3	151	8.5	28	7.4	15.6	129	10.4	11,381	9.0	55	4.1
Unknown	33	1.5	33	1.9	0	0.0	0.0	32	2.6	172	0.1	54	4.0
Area-Based Poverty Level[8]													
Low poverty (<10% below FPL)	144	6.7	127	7.1	17	4.5	11.8	77	6.2	12,172	9.7	91	6.8
Medium poverty (10 to <20% below FPL)	669	31.0	544	30.6	125	33.1	18.7	316	25.5	37,639	29.9	299	22.3
High poverty (20 to <30% below FPL)	611	28.3	490	27.5	121	32.0	19.8	334	27.0	29,682	23.6	368	27.4
Very high poverty (≥30% below FPL)	519	24.1	433	24.3	86	22.8	16.6	348	28.1	33,448	26.6	476	35.4
Area-based poverty level not available	214	9.9	185	10.4	29	7.7	13.6	164	13.2	12,943	10.3	109	8.1
Transmission risk[9]													
Men who have sex with men (MSM)	1,243	57.6	1,057	59.4	186	49.2	15.0	503	40.6	51,591	41.0	301	22.4
Injection drug use history (IDU)	37	1.7	31	1.7	6	1.6	16.2	71	5.7	15,265	12.1	362	27.0
MSM-IDU	27	1.3	27	1.5	0	0.0	0.0	31	2.5	3,059	2.4	51	3.8
Heterosexual contact	375	17.4	304	17.1	71	18.8	18.9	259	20.9	24,747	19.7	268	20.0
Transgender people with sexual contact	49	2.3	43	2.4	6	1.6	12.2	22	1.8	1,231	1.0	8	0.6
Perinatal	1	0.0	1	0.1	0	0.0	0.0	23	1.9	2,523	2.0	14	1.0
Other	0	0.0	0	0.0	0	0.0	0.0	0	0.0	193	0.2	3	0.2
Unknown	425	19.7	316	17.8	109	28.8	25.6	330	26.6	27,275	21.7	336	25.0

PLWHA=People living with HIV/AIDS; 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 total HIV diagnoses that were concurrent with AIDS diagnoses. [3]AIDS was diagnosed in 2017 and includes concurrent HIV/AIDS diagnoses. [4]Includes deaths from any cause in people with HIV/AIDS. Death data for 2017 are incomplete. [5]For technical notes on race/ethnicity: www1.nyc.gov/assets/doh/downloads/pdf/ah/new_race_def_dec2010.pdf. [6]For HIV and AIDS diagnoses, age at diagnosis; for PLWHA, age as of Dec. 31, 2017; and for deaths, age at death. [7]For HIV and AIDS diagnoses, residence at diagnosis. For PLWHA and deaths, residence based on most recent record available (most recent record is >5 years old for 27% of PLWHA in 2017). [8]Area-based poverty based on NYC ZIP code of residence at diagnosis or most recent residence (*see footnote 7*). [9]"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 females only, also includes history of sex work, multiple sex partners, sexually transmitted disease, crack/cocaine use, sex with a bisexual male, probable heterosexual transmission as noted in medical chart, or sex with a male and negative history of injection drug use. "Transgender people with sexual contact" includes people identified as transgender at any time by self-report, 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, and children with non-perinatal transmission risk.

In 2017, there were 2,157 new HIV diagnoses and 1,239 new AIDS diagnoses in New York City. As of the end of 2017, 125,884 people had been diagnosed with HIV/AIDS, reported in New York City and were presumed to be living. As of March 31, 2018, there were 1,343 deaths reported among people with HIV in 2017.

GEOGRAPHIC DISTRIBUTION OF HIV

FIGURE 4.1: Poverty level, NYC 2012-2016

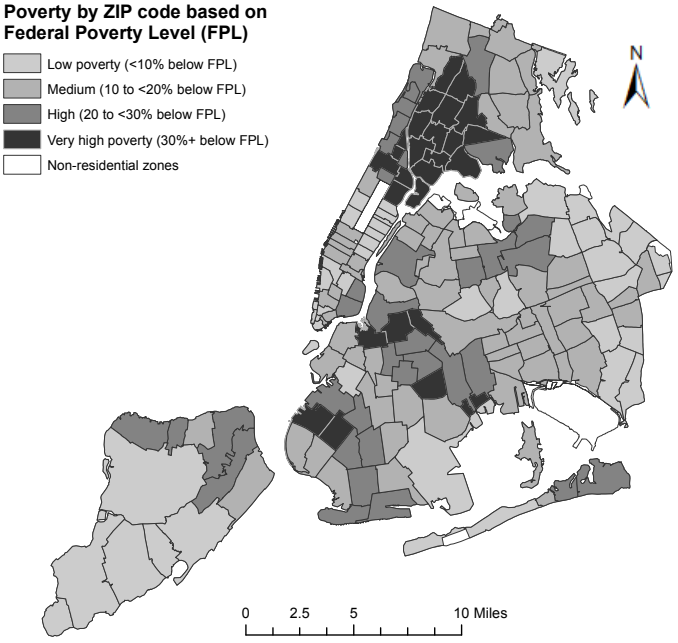
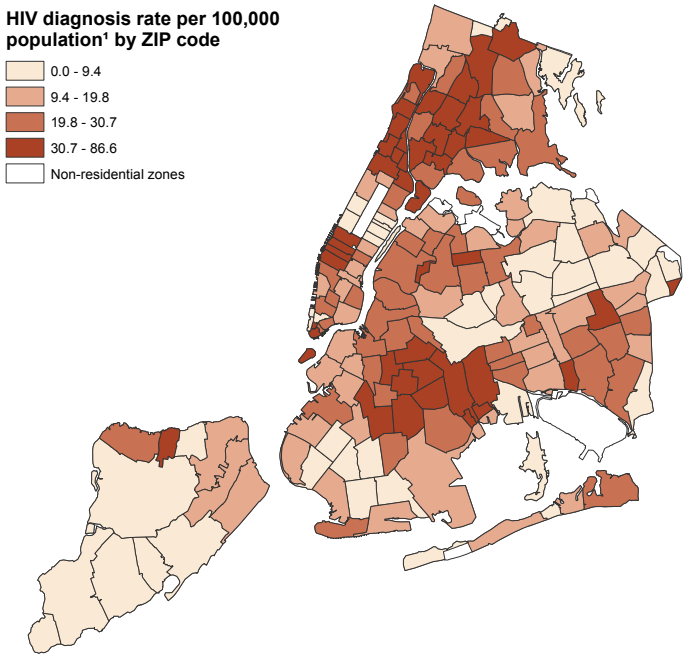


FIGURE 4.2: HIV diagnosis rates, NYC 2017



ZIP codes in the Lower Manhattan, Chelsea-Clinton and Central Harlem-Morningside Heights neighborhoods had the highest HIV diagnosis rates in 2017 (Figure 4.2). In 2017, ZIP codes in Chelsea-Clinton and Central Harlem-Morningside Heights had the highest HIV prevalence (Figure 4.3). ZIP codes in the South Beach-Tottenville, Bayside-Little Neck and Rockaway neighborhoods had the highest mortality among people with HIV (Figure 4.4). Many ZIP codes with high HIV diagnosis rates were also among those with highest poverty rates (Figure 4.1), including those in Central Harlem-Morningside Heights. However, ZIP codes in the Chelsea-Clinton neighborhoods were the exception, with the highest HIV diagnosis rates but relatively low poverty and mortality rates.

FIGURE 4.3: HIV prevalence, NYC 2017

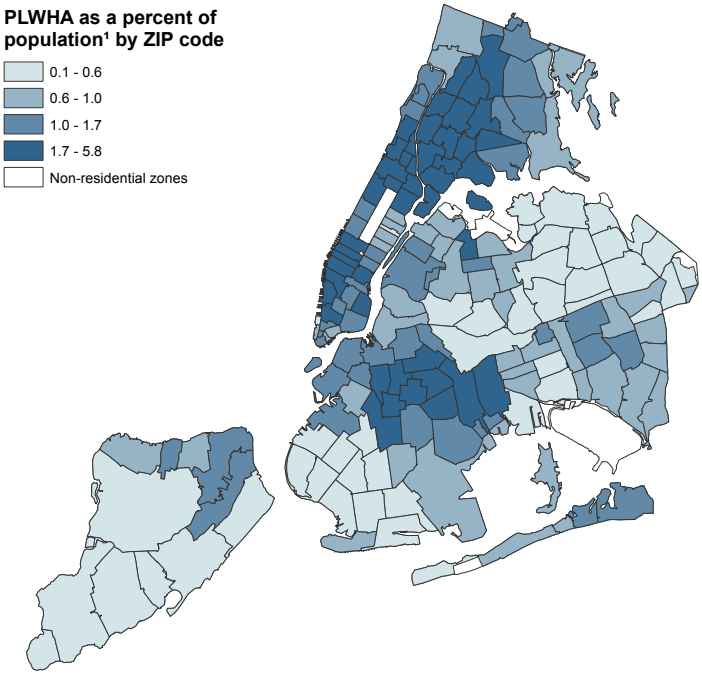
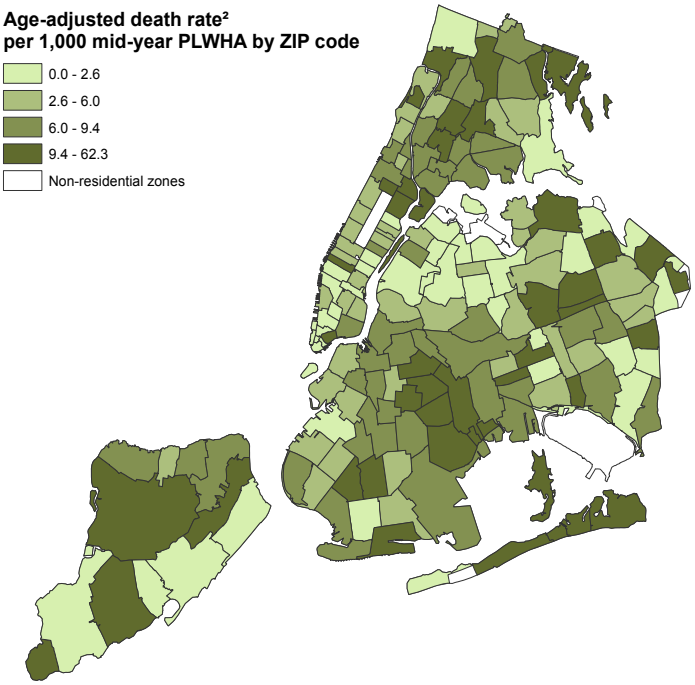


FIGURE 4.4: Age-adjusted death rates among people with HIV/AIDS, NYC 2017



PLWHA=People living with HIV/AIDS.

[1]Rates calculated using Health Department 2016 population estimates, modified from U.S. Census Bureau intercensal population estimates, updated September 2017.

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

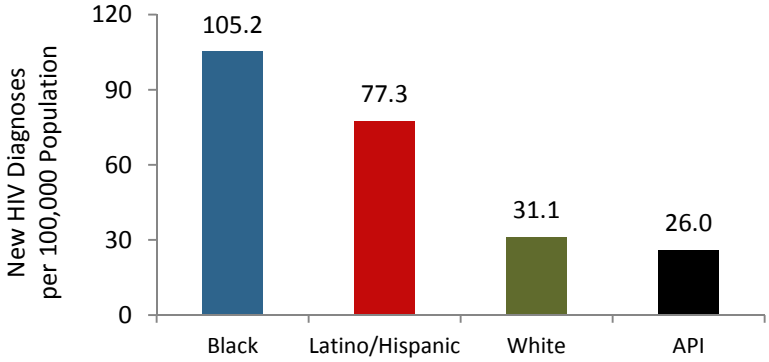
HIV AMONG MALES

TABLE 5.1: HIV/AIDS diagnoses and deaths among males[10], Jan. 1, 2017, through Dec. 31, 2017; and males diagnosed with HIV/AIDS, reported in NYC and presumed to be living as of Dec. 31, 2017

	HIV Diagnoses[1]							AIDS Diagnoses[3]		PLWHA as of 12/31/2017		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Total	1,708	100.0	1,416	100.0	292	100.0	17.1	899	100.0	91,109	100.0	941	100.0
Race/Ethnicity[5]													
Black	644	37.7	528	37.3	116	39.7	18.0	388	43.2	34,733	38.1	453	48.1
Latino/Hispanic	652	38.2	547	38.6	105	36.0	16.1	304	33.8	29,909	32.8	314	33.4
White	284	16.6	243	17.2	41	14.0	14.4	147	16.4	23,359	25.6	158	16.8
Asian/Pacific Islander	109	6.4	83	5.9	26	8.9	23.9	51	5.7	2,382	2.6	10	1.1
Native American	7	0.4	5	0.4	2	0.7	28.6	4	0.4	220	0.2	3	0.3
Multiracial	12	0.7	10	0.7	2	0.7	16.7	5	0.6	247	0.3	3	0.3
Unknown	0	0.0	0	0.0	0	0.0	0.0	0	0.0	259	0.3	0	0.0
Age Group (years)[6]													
0-12	1	0.1	1	0.1	0	0.0	0.0	0	0.0	44	0.0	0	0.0
13-19	64	3.7	61	4.3	3	1.0	4.7	8	0.9	244	0.3	0	0.0
20-29	707	41.4	635	44.8	72	24.7	10.2	169	18.8	7,095	7.8	25	2.7
30-39	484	28.3	394	27.8	90	30.8	18.6	244	27.1	14,721	16.2	64	6.8
40-49	220	12.9	170	12.0	50	17.1	22.7	178	19.8	18,321	20.1	119	12.6
50-59	156	9.1	101	7.1	55	18.8	35.3	189	21.0	28,924	31.7	285	30.3
60+	76	4.4	54	3.8	22	7.5	28.9	111	12.3	21,760	23.9	448	47.6
Borough of Residence[7]													
Bronx	333	19.5	278	19.6	55	18.8	16.5	214	23.8	19,032	20.9	285	30.3
Brooklyn	490	28.7	394	27.8	96	32.9	19.6	237	26.4	20,080	22.0	249	26.5
Manhattan	354	20.7	303	21.4	51	17.5	14.4	175	19.5	27,456	30.1	213	22.6
Queens	323	18.9	262	18.5	61	20.9	18.9	142	15.8	13,634	15.0	89	9.5
Staten Island	27	1.6	20	1.4	7	2.4	25.9	21	2.3	1,594	1.7	26	2.8
Outside NYC	156	9.1	134	9.5	22	7.5	14.1	92	10.2	9,176	10.1	38	4.0
Unknown	25	1.5	25	1.8	0	0.0	0.0	18	2.0	137	0.2	41	4.4
Area-Based Poverty Level[8]													
Low poverty (<10% below FPL)	115	6.7	103	7.3	12	4.1	10.4	61	6.8	10,252	11.3	78	8.3
Medium poverty (10 to <20% below FPL)	532	31.1	434	30.6	98	33.6	18.4	244	27.1	27,987	30.7	217	23.1
High poverty (20 to <30% below FPL)	490	28.7	394	27.8	96	32.9	19.6	246	27.4	20,863	22.9	250	26.6
Very high poverty (≥30% below FPL)	388	22.7	325	23.0	63	21.6	16.2	236	26.3	21,600	23.7	317	33.7
Area-based poverty level not available	183	10.7	160	11.3	23	7.9	12.6	112	12.5	10,407	11.4	79	8.4
Transmission Risk[9]													
Men who have sex with men (MSM)	1,243	72.8	1,057	74.6	186	63.7	15.0	503	56.0	51,591	56.6	301	32.0
Injection drug use history (IDU)	25	1.5	20	1.4	5	1.7	20.0	49	5.5	9,966	10.9	240	25.5
MSM-IDU	27	1.6	27	1.9	0	0.0	0.0	31	3.4	3,059	3.4	51	5.4
Heterosexual contact	75	4.4	53	3.7	22	7.5	29.3	67	7.5	6,077	6.7	86	9.1
Transgender people with sexual contact	1	0.1	1	0.1	0	0.0	0.0	0	0.0	12	0.0	0	0.0
Perinatal	1	0.1	1	0.1	0	0.0	0.0	11	1.2	1,232	1.4	8	0.9
Other	0	0.0	0	0.0	0	0.0	0.0	0	0.0	104	0.1	2	0.2
Unknown	336	19.7	257	18.1	79	27.1	23.5	238	26.5	19,068	20.9	253	26.9

PLWHA=People living with HIV/AIDS; FPL=Federal Poverty Level. All percents are column percents unless otherwise indicated.
[1-9]Footnotes appear at the bottom of Table 3.1. [10]Includes transgender men.

FIGURE 5.1: HIV[1] diagnosis rates[2] among 13-59 year old males[3] by race/ethnicity[4], NYC 2017



In 2017, the HIV diagnosis rate among Black males was 1.4 times higher than the rate among Latino/Hispanic males and over 3 times higher than the rate among White males.

API=Asian/Pacific Islander.
[1]Includes diagnoses of HIV without AIDS and HIV concurrent with AIDS.
[2]Rates calculated using Health Department 2016 population estimates, modified from U.S. Census Bureau intercensal population estimates, updated September 2017.
[3]Includes transgender men.
[4]Native American and multiracial groups not shown because of small numbers.

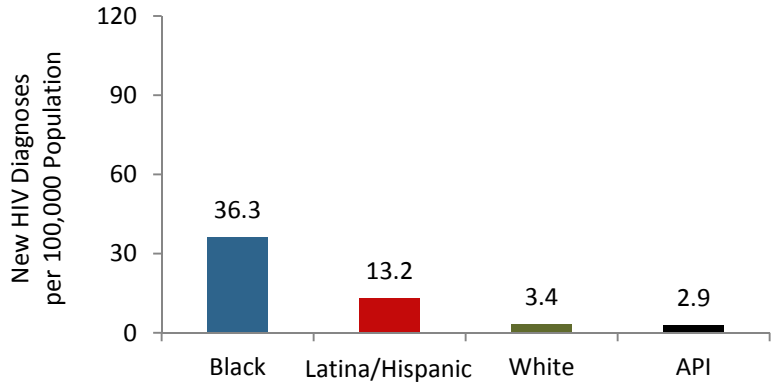
HIV AMONG FEMALES

TABLE 6.1: HIV/AIDS diagnoses and deaths among females[10], Jan. 1, 2017, through Dec. 31, 2017; and females diagnosed with HIV/AIDS, reported in NYC, and presumed to be living as of Dec. 31, 2017

	HIV Diagnoses[1]							AIDS Diagnoses[3]		PLWHA as of 12/31/2017		Deaths[4]	
	Total		Without AIDS		Concurrent with AIDS Diagnosis[2]								
	N	%	N	%	N	%	Row %	N	%	N	%	N	%
Total	449	100.0	363	100.0	86	100.0	19.2	340	100.0	34,775	100.0	402	100.0
Race/Ethnicity[5]													
Black	275	61.2	214	59.0	61	70.9	22.2	215	63.2	20,161	58.0	241	60.0
Latina/Hispanic	122	27.2	106	29.2	16	18.6	13.1	89	26.2	11,375	32.7	135	33.6
White	32	7.1	26	7.2	6	7.0	18.8	25	7.4	2,539	7.3	19	4.7
Asian/Pacific Islander	15	3.3	14	3.9	1	1.2	6.7	6	1.8	477	1.4	3	0.7
Native American	2	0.4	1	0.3	1	1.2	50.0	1	0.3	76	0.2	4	1.0
Multiracial	3	0.7	2	0.6	1	1.2	33.3	3	0.9	68	0.2	0	0.0
Unknown	0	0.0	0	0.0	0	0.0	0.0	1	0.3	79	0.2	0	0.0
Age Group (years)[6]													
0-12	1	0.2	0	0.0	1	1.2	100.0	1	0.3	39	0.1	0	0.0
13-19	16	3.6	15	4.1	1	1.2	6.3	6	1.8	202	0.6	0	0.0
20-29	99	22.0	92	25.3	7	8.1	7.1	39	11.5	2,182	6.3	5	1.2
30-39	113	25.2	89	24.5	24	27.9	21.2	83	24.4	4,325	12.4	27	6.7
40-49	89	19.8	69	19.0	20	23.3	22.5	64	18.8	7,656	22.0	57	14.2
50-59	82	18.3	57	15.7	25	29.1	30.5	102	30.0	12,005	34.5	163	40.5
60+	49	10.9	41	11.3	8	9.3	16.3	45	13.2	8,366	24.1	150	37.3
Borough of Residence[7]													
Bronx	131	29.2	109	30.0	22	25.6	16.8	92	27.1	11,397	32.8	130	32.3
Brooklyn	150	33.4	117	32.2	33	38.4	22.0	109	32.1	10,159	29.2	127	31.6
Manhattan	48	10.7	37	10.2	11	12.8	22.9	48	14.1	5,227	15.0	68	16.9
Queens	77	17.1	65	17.9	12	14.0	15.6	32	9.4	4,894	14.1	34	8.5
Staten Island	12	2.7	10	2.8	2	2.3	16.7	8	2.4	858	2.5	13	3.2
Outside NYC	23	5.1	17	4.7	6	7.0	26.1	37	10.9	2,205	6.3	17	4.2
Unknown	8	1.8	8	2.2	0	0.0	0.0	14	4.1	35	0.1	13	3.2
Area-Based Poverty Level[8]													
Low poverty (<10% below FPL)	29	6.5	24	6.6	5	5.8	17.2	16	4.7	1,920	5.5	13	3.2
Medium poverty (10 to <20% below FPL)	137	30.5	110	30.3	27	31.4	19.7	72	21.2	9,652	27.8	82	20.4
High poverty (20 to <30% below FPL)	121	26.9	96	26.4	25	29.1	20.7	88	25.9	8,819	25.4	118	29.4
Very high poverty (≥30% below FPL)	131	29.2	108	29.8	23	26.7	17.6	112	32.9	11,848	34.1	159	39.6
Area-based poverty level not available	31	6.9	25	6.9	6	7.0	19.4	52	15.3	2,536	7.3	30	7.5
Transmission Risk[9]													
Injection drug use history (IDU)	12	2.7	11	3.0	1	1.2	8.3	22	6.5	5,299	15.2	122	30.3
Heterosexual contact	300	66.8	251	69.1	49	57.0	16	192	56.5	18,670	53.7	182	45.3
Transgender people with sexual contact	48	10.7	42	11.6	6	7.0	12.5	22	6.5	1,219	3.5	8	2.0
Perinatal	0	0.0	0	0.0	0	0.0	0.0	12	3.5	1,291	3.7	6	1.5
Other	0	0.0	0	0.0	0	0.0	0.0	0	0.0	89	0.3	1	0.2
Unknown	89	19.8	59	16.3	30	34.9	33.7	92	27.1	8,207	23.6	83	20.6

PLWHA=People living with HIV/AIDS; FPL=Federal Poverty Level. All percents are column percents unless otherwise indicated.
[1-9]Footnotes appear at the bottom of Table 3.1. [10]Includes transgender women.

FIGURE 6.1: HIV[1] diagnosis rates[2] among 13-59 year old females[3] by race/ethnicity[4], NYC 2017



In 2017, the HIV diagnosis rate among Black females was 2.7 times higher than the rate among Latina/Hispanic females and over 10 times higher than the rate among White females.

API=Asian/Pacific Islander.
[1]Includes diagnoses of HIV without AIDS and HIV concurrent with AIDS.
[2]Rates calculated using Health Department 2016 population estimates, modified from US Census Bureau intercensal population estimates, updated September 2017.
[3]Includes transgender women.
[4]Native American and multiracial groups not shown because of small numbers.

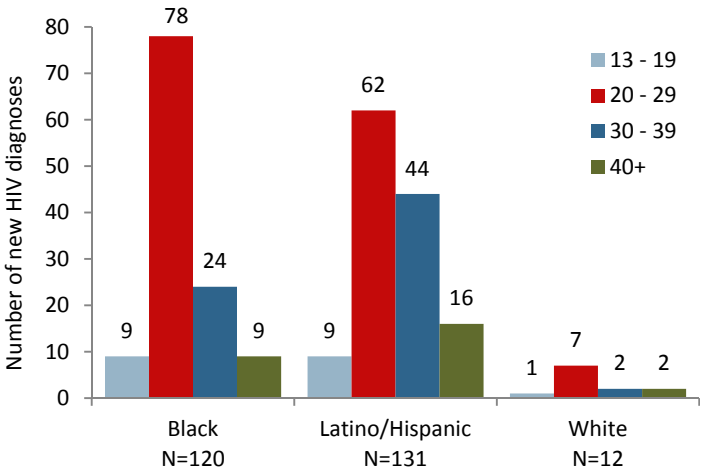
HIV AMONG TRANSGENDER PEOPLE

TABLE 7.1: HIV/AIDS diagnoses among transgender people and transgender PLWHA, NYC 2017

	HIV Diagnoses[1]		AIDS Diagnoses[2]		PLWHA as of 12/31/2017	
	N	%	N	%	N	%
Total[3]	56	100.0	25	100.0	1,433	100
Transgender women	55	98.2	25	100.0	1,417	98.9
Transgender men	1	1.8	0	0.0	16	1.1
Race/Ethnicity						
Black	23	41.1	10	40.0	677	47.2
Latino/Hispanic	24	42.9	12	48.0	607	42.4
White	2	3.6	2	8.0	92	6.4
Other[4]	7	12.5	1	4.0	57	4.0
Age Group (years)[5]						
13-19	2	3.6	0	0.0	5	0.3
20-29	29	51.8	6	24.0	324	22.6
30-39	20	35.7	12	48.0	490	34.2
40+	5	8.9	7	28.0	614	42.8
Transmission Risk						
Sexual contact	49	87.5	22	88.0	1231	85.9
Injection drug use history	3	5.4	0	0.0	148	10.3
Other/Unknown	4	7.1	3	12.0	54	3.8

PLWHA=People living with HIV/AIDS. [1]Excludes people known to have been diagnosed outside of NYC. [2]AIDS was diagnosed in 2017 and includes concurrent HIV/AIDS diagnoses. [3]Includes people identified as transgender at any time by self-report, medical provider or chart review, or ongoing data collection. Transgender women were assigned male sex at birth and currently identify as female. Transgender men were assigned female sex at birth and currently identify as male. For more information, see Technical Notes on Page 15. [4]Includes Asian/Pacific Islander, Native American and multiracial people. [5]For HIV and AIDS diagnoses, age at diagnosis. For PLWHA, age as of Dec. 31, 2017. [6]Asian/Pacific Islander, Native American and multiracial groups not shown because of small numbers.

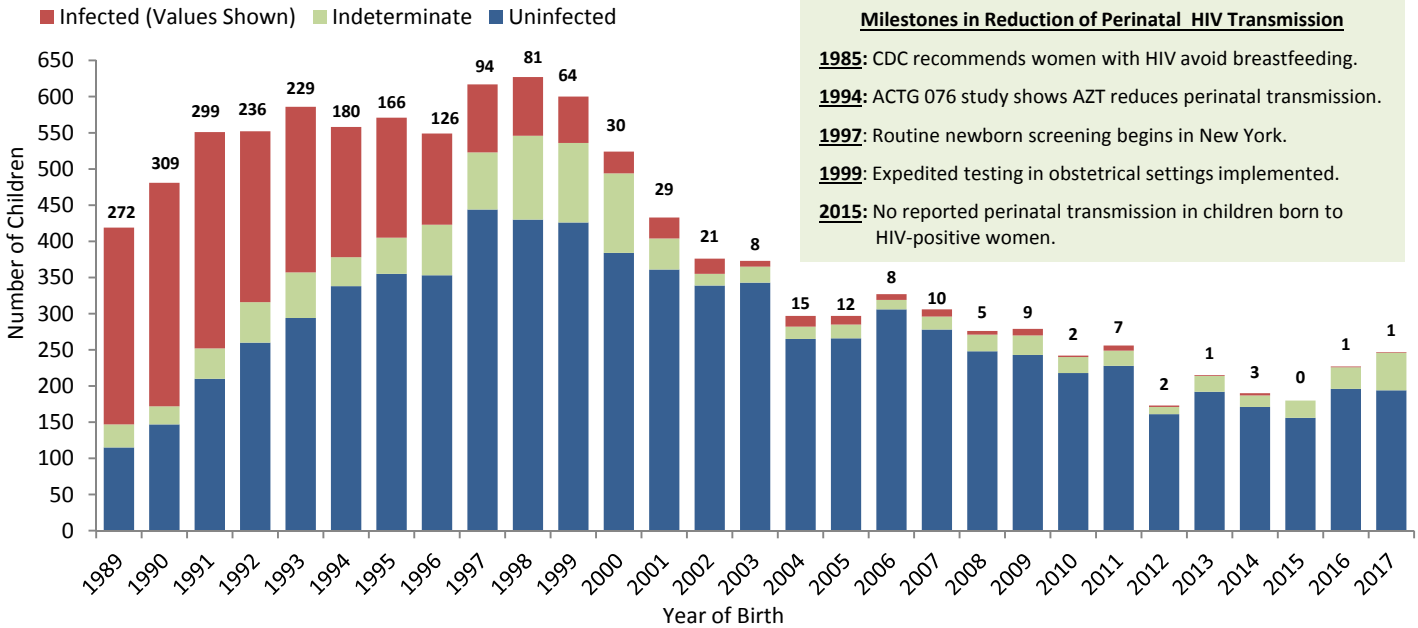
FIGURE 7.1: HIV diagnoses among transgender people by race/ethnicity[6] and age at diagnosis, NYC 2013-2017



In NYC in 2017, 56 transgender people were diagnosed with HIV, and 25 were diagnosed with AIDS. From 2013 to 2017, 281 transgender people were diagnosed with HIV. Half (50%) were Black or Latino/Hispanic people, ages 20 to 29 (Figure 7.1). Compared to all NYC HIV diagnoses from 2013 to 2017 (N=12,630), transgender people with HIV were more likely to be Latino/Hispanic (43% vs. 35%) and between ages 20 to 29 at diagnosis (52% vs. 37%).

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 1988-2017[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: No reported perinatal transmission in children born to HIV-positive women.

[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 and infected children. In 2017, four additional sites were added to the perinatal surveillance program, bringing the total to 21 sites. Children born outside of NYC are not included in this figure. [4]Includes cases diagnosed as of Dec. 31, 2017.

From 2013-2017, less than 1% of infants born to HIV-positive women were infected with 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 2017

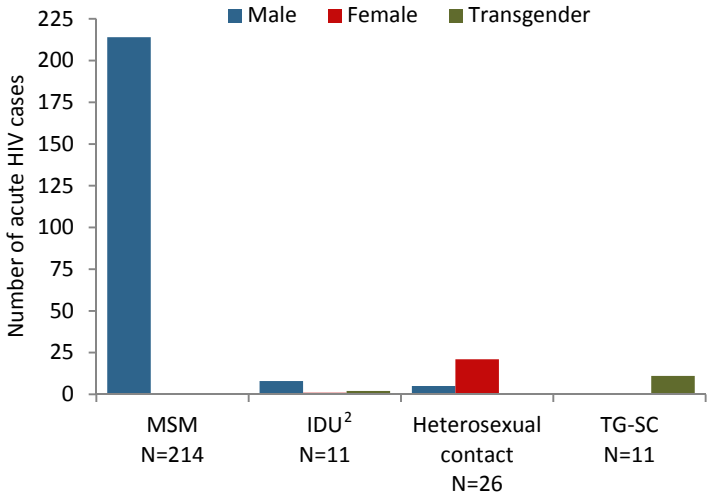
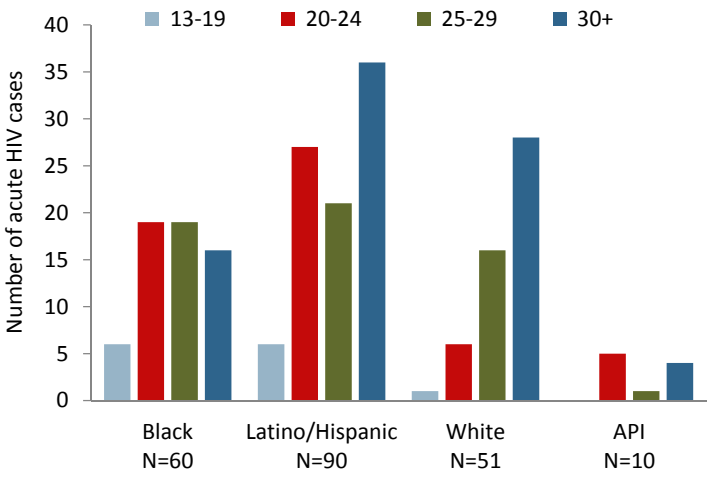


FIGURE 9.2: Acute HIV infection among MSM by race/ethnicity[3] and age group, NYC 2017



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 AHI cases in 2017 that had unknown transmission risk.
[2]IDU includes MSM also reporting IDU (MSM-IDU).
[3]Multiracial (N=2) and Native American (N=1) categories not shown because of small numbers .

Diagnosis of HIV in the acute phase (AHI) enables early treatment, which reduces morbidity and onward transmission to exposed partners. In 2017, 14% of new diagnoses were AHI, up from 9% of new diagnoses in 2013. MSM are overrepresented among AHI cases (Figure 9.1), in part due to higher testing frequency compared with other groups. Among MSM with AHI, a greater proportion of Black MSM were under 30 years of age compared with Latino/Hispanic and White MSM with AHI (Figure 9.2).

ESTIMATED HIV INCIDENCE

FIGURE 10.1: New HIV diagnoses and estimated incident HIV infections[1], NYC 2013-2017[2]

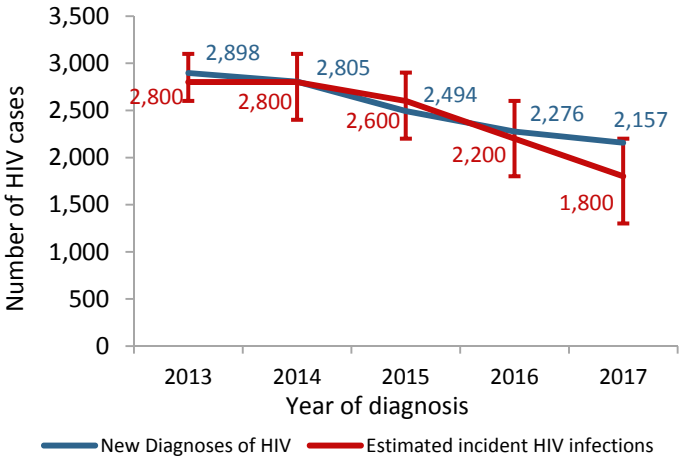
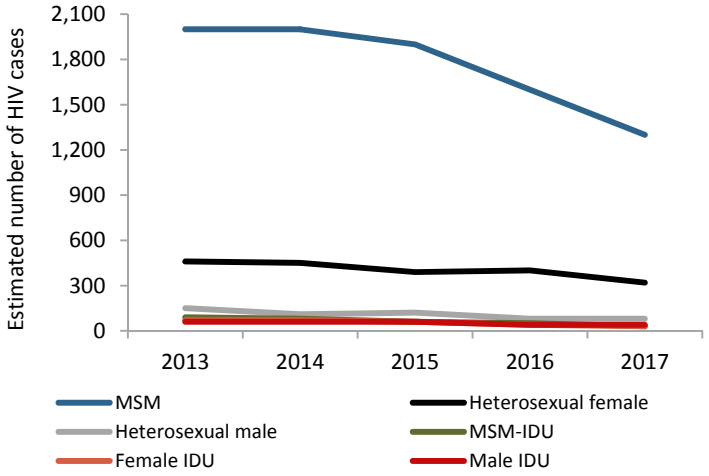


FIGURE 10.2: Trends in estimated incident HIV infections[1] by sex at birth and transmission risk, NYC 2013-2017[2]

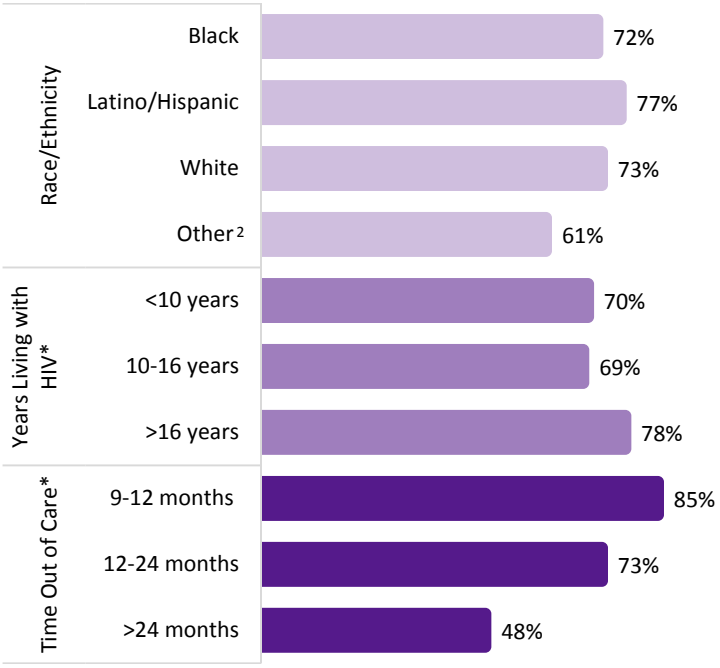


MSM=Men who have sex with men; IDU=Injection drug use history.
[1]Using the method in: Song R, et al. Using CD4 data to estimate HIV incidence, prevalence, and percent of undiagnosed infections in the United States. *J Acquir Immune Defic Syndr* 2017;74(1):3-9. [2]2017 incidence estimates are preliminary.

HIV incidence surveillance based on the Stratified Extrapolation Approach (SEA) was discontinued in the U.S. as of 2017. A new method is being used nationally and locally to estimate incidence 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. It produces trends in estimated incidence that are consistent with previous SEA-based incidence trends, but annual estimated numbers of new HIV infections that are higher. Estimated HIV incidence overall (Figure 10.1) and by transmission risk group (Figure 10.2) declined in NYC between 2013 and 2017.

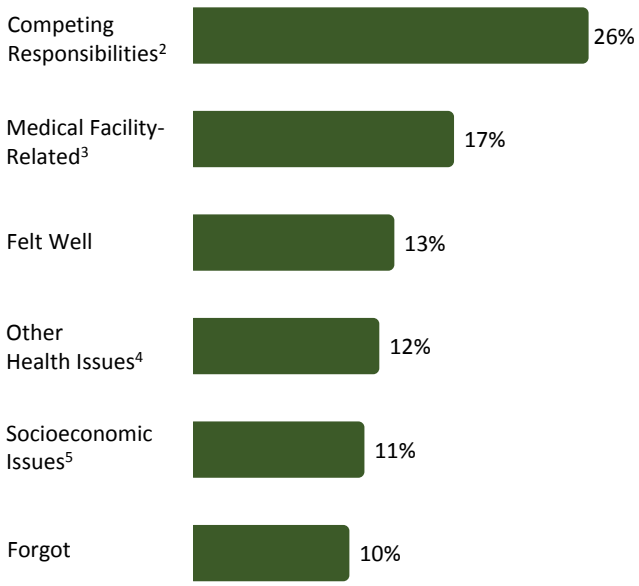
RE-ENGAGEMENT IN HIV CARE OF OUT-OF-CARE PEOPLE

FIGURE 11.1: Re-engagement in HIV care by race/ethnicity, years living with HIV, and time out of care, NYC 2016-2017[1]



[1]Patients can belong to only one subgroup of each of the three major categories.
[2]Includes Asian Pacific Islander, Native American and multiracial.
*Statistically significant differences among subgroups (P<0.05).

FIGURE 11.2: Top six reasons for being out of HIV care among interviewed PLWH (N=1,612), NYC 2016-2017[1]



[1]Categories are not mutually exclusive; each person could give multiple answers.
[2]Work, childcare, too busy, or other personal obligations.
[3]Inconvenient, no appointment availability, did not like/trust staff.
[4]Physical, mental or substance/alcohol use.
[5]Lack of health insurance or housing.

In 2016-2017, the Field Services Unit (FSU) investigated 1,804 people living with HIV and not engaged in care (no report of CD4, viral load or HIV genotype in ≥9 months); FSU re-engaged 1,317 (73%) into HIV care. Re-engagement was highest among people living with HIV >16 years (78%) and those out of care 9-12 months (85%). Fewer than half (48%) of people out of care for >24 months were re-engaged (Figure 11.1). Primary barriers to care were competing obligations/responsibilities and access to, or satisfaction with, a medical facility (Figure 11.2).

TRANSMITTED DRUG RESISTANCE

FIGURE 12.1: Proportion of new HIV diagnoses with transmitted drug resistance (TDR)[1], 2013-2017

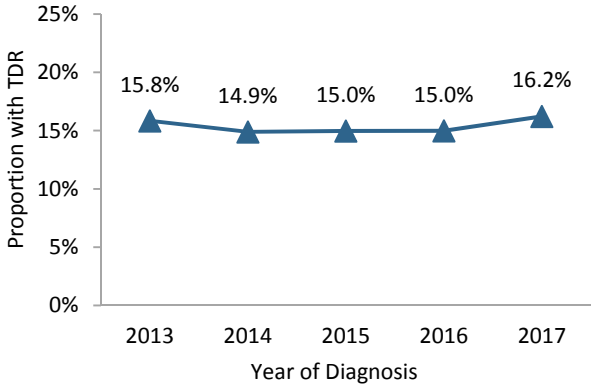
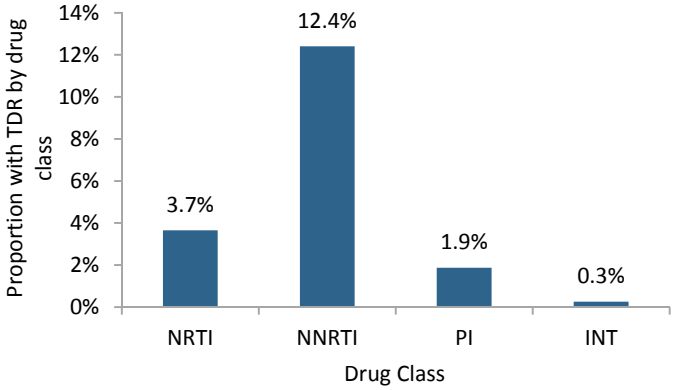


FIGURE 12.2: Proportion of new HIV diagnoses with TDR by drug class[2], 2017



NRTI=Nucleoside reverse transcriptase inhibitor; NNRTI=Non-nucleoside reverse transcriptase inhibitor; PI= Protease inhibitor; INT= Integrase inhibitor.
[1]Evidence of resistance to any antiretroviral (ARV) drug in a newly diagnosed, ARV-naïve individual. [2]HIV can be resistant to more than one drug class.

Federal guidelines for the care and treatment of persons with HIV recommend genotypic resistance testing at initiation of HIV care, both to establish a baseline and to guide therapy. In 2017, 59.6% of newly diagnosed persons received a baseline genotype, and 16.2% showed evidence of resistance to one or more antiretroviral drugs (Figure 12.1). Overall transmitted drug resistance was highest towards drugs in the NNRTI class (Figure 12.2). The data suggest that >95% of persons newly diagnosed with HIV in NYC can be expected to respond to a first-line regimen containing a dual NRTI and an INT inhibitor, as recommended in the federal guidelines.

HIV CARE

FIGURE 13.1: Timely linkage to HIV care[1] among newly diagnosed people, NYC 2013-2017

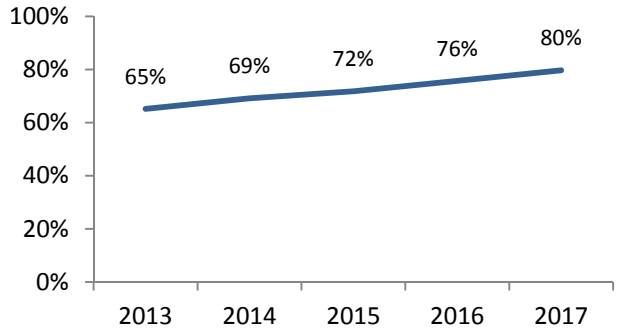
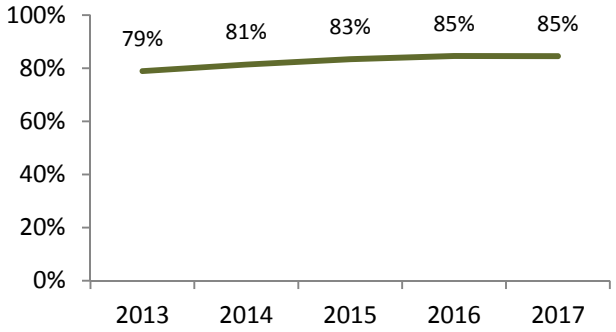


FIGURE 13.2: Viral suppression[2] among people in HIV medical care,[3] NYC 2013-2017



Timely linkage to HIV care among newly diagnosed people (Figures 13.1 and 13.3) and viral suppression among people in HIV medical care (Figures 13.2 and 13.4) increased overall in New York City from 2013 to 2017.

FIGURE 13.3: Timely linkage to HIV care[1] among newly diagnosed people, NYC 2017

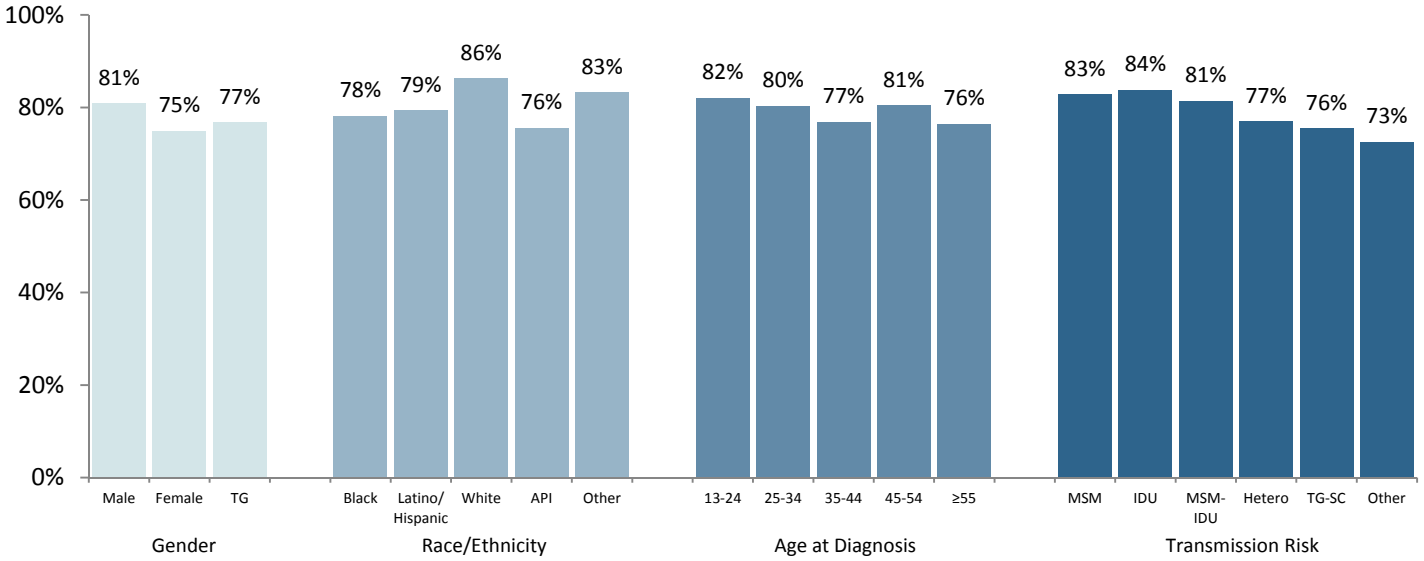
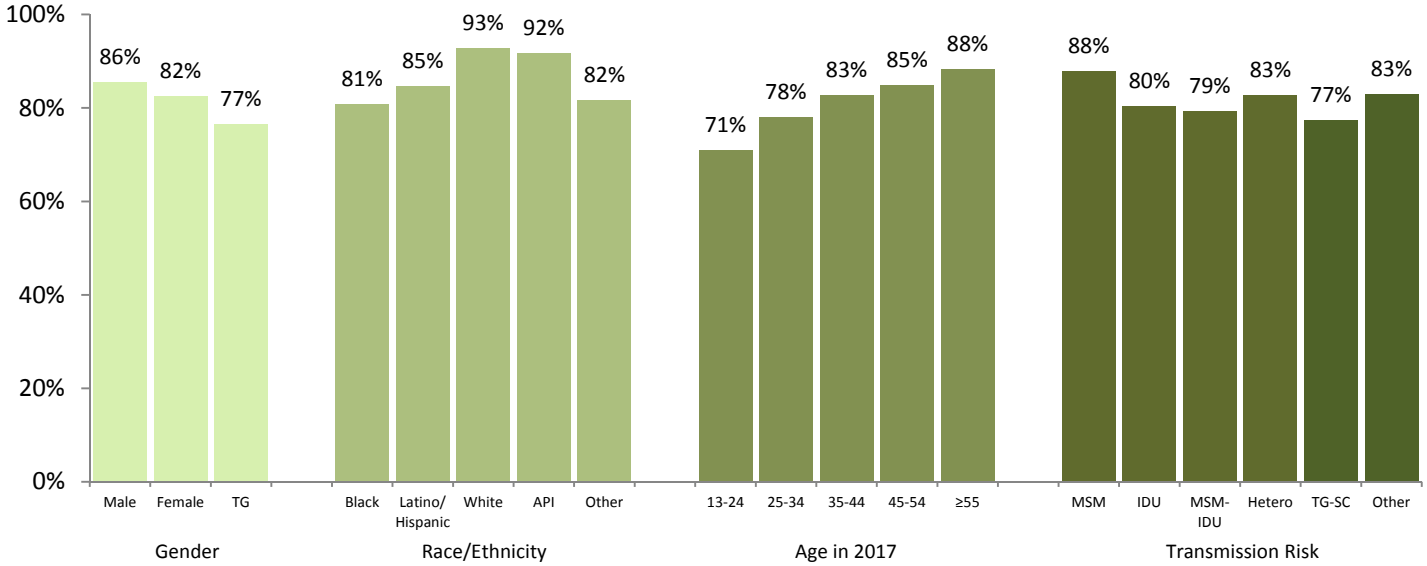


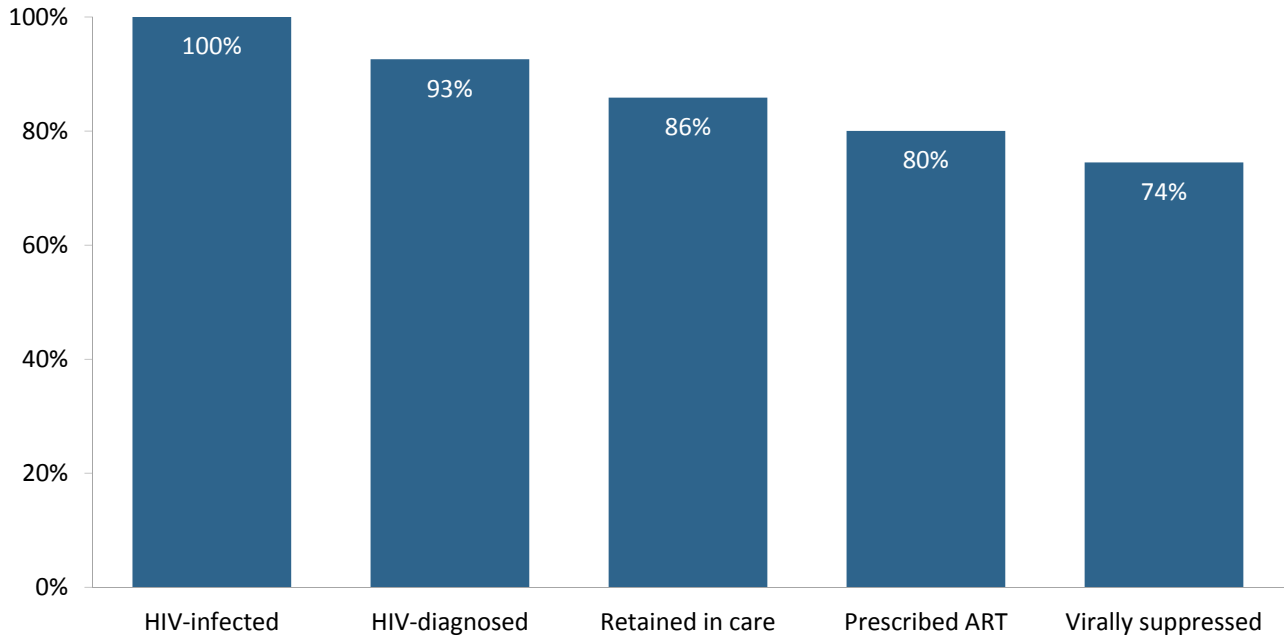
FIGURE 13.4: Viral suppression[2] among people in HIV medical care,[3] NYC 2017



TG=Transgender; 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. People newly diagnosed with HIV at death were excluded from linkage calculations. [2]Last HIV VL value in 2017 was <200 copies/mL. [3]At least one HIV VL/CD4 in 2017; includes those ages 13 and older.

NYC HIV CARE CONTINUUM

FIGURE 14.1: Proportion of PLWH in NYC engaged in selected stages of the HIV care continuum, NYC 2017

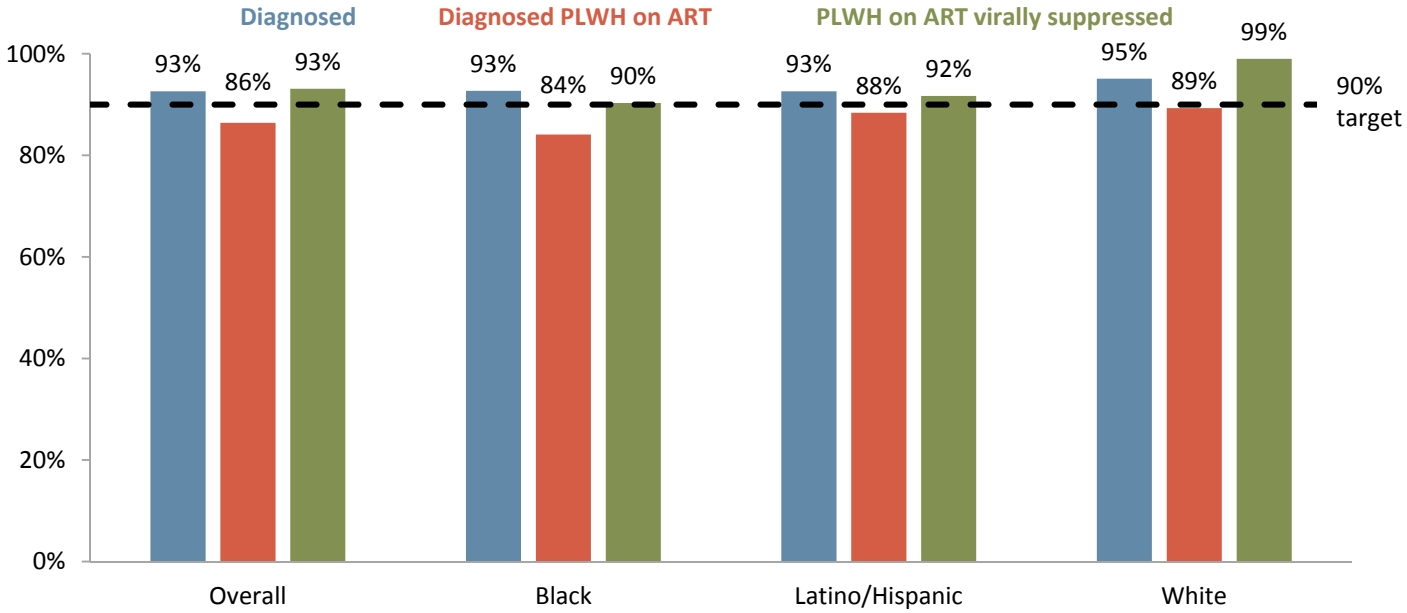


PLWH=People living with HIV.
For definitions of the stages of the continuum of care, see Technical Notes on Page 16.

Of approximately 90,500 HIV-positive people living in NYC in 2017, 74% had a suppressed viral load (Figure 14.1).

NYC PROGRESS TOWARDS UNAIDS 90-90-90 TARGETS

FIGURE 15.1: UNAIDS 90-90-90 targets for PLWH in NYC, overall and by race/ethnicity, 2017

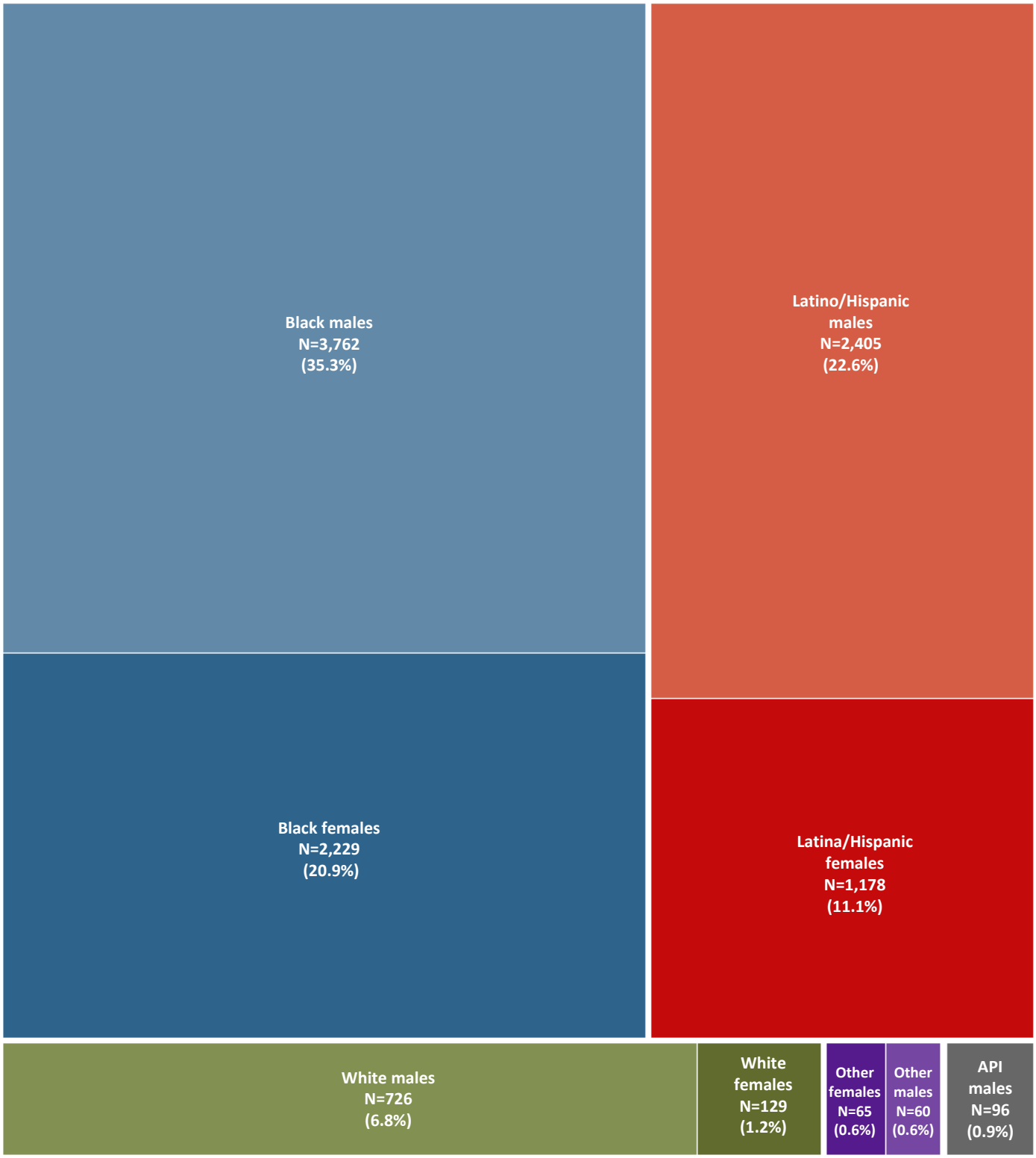


PLWH=People living with HIV; ART=antiretroviral treatment. For definitions of Diagnosed, Diagnosed PLWH on ART, and PLWH on ART virally suppressed, see Technical Notes on Page 16.

UNAIDS established the following global targets for HIV care for 2020: 90% of PLWH will know their HIV status; 90% of those diagnosed will receive ART; and 90% of those receiving ART will be virally suppressed. In NYC in 2017, all racial/ethnic groups met the HIV status and viral suppression goals, but none met the receiving ART goal, with the percentages receiving ART ranging from 84% for Black PLWH to 89% for White PLWH (Figure 15.1).

PEOPLE LIVING WITH HIV WITH UNSUPPRESSED VIRAL LOAD

FIGURE 16.1: PLWH with unsuppressed viral load[1] by gender and race/ethnicity, NYC 2017 (N=10,650)

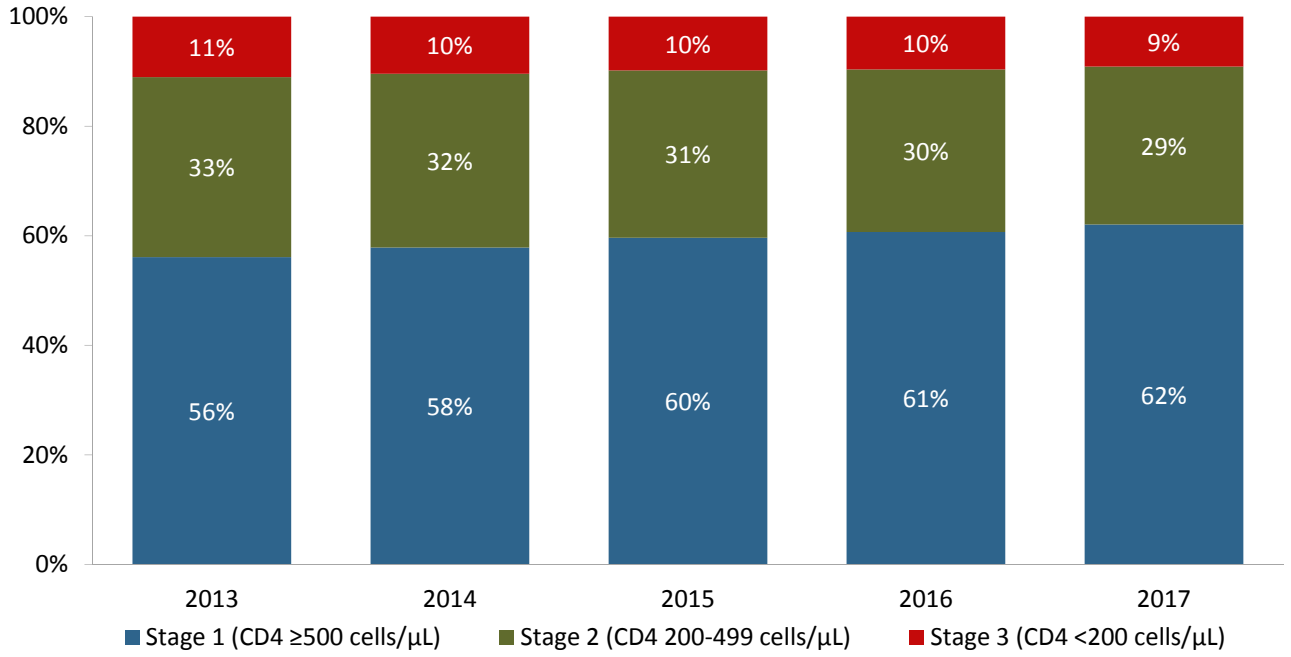


Males includes transgender men and females includes transgender women. [1]Defined as last viral load ≥200 among PLWH with at least one reported viral load in 2017.

There were 76,333 PLWH who had at least one viral load (VL) test reported to the Health Department in 2017; 14% (N=10,650) of these PLWH had an unsuppressed (≥200 copies/mL) viral load at the end of the year. The majority (57.9%) of PLWH with unsuppressed VL were Black or Latino/Hispanic males (Figure 16.1). Black and Latina/Hispanic females represented 16% and 9% of all PLWH but made up 20.9% and 11.1% of those with unsuppressed VL, respectively. Conversely, White males represented 18.6% of PLWH and just 6.8% of those with unsuppressed VL.

HIV INFECTION STAGING CLASSIFICATION OF PEOPLE LIVING WITH HIV

FIGURE 17.1: Stage of HIV infection among PLWH[1], NYC 2013-2017



PLWH=People living with HIV. [1]Based on most recent CD4 reported as of Dec. 31 of the year of interest (method: Xia, Q. et al. Using the Revised Centers for Disease Control and Prevention Staging System to Classify Persons Living With Human Immunodeficiency Virus in New York City, 2011–2015. Sex Transm Dis. 2017;44(11):653-655).

The proportion of people living with Stage 1 HIV infection (CD4 ≥500 cells/µL) steadily increased in NYC from 2013 to 2017 (Figure 17.1).

SURVIVAL AMONG PEOPLE WITH HIV

FIGURE 18.1: Survival among people newly diagnosed with HIV[1] and residing in low-poverty areas[2], by race/ethnicity[3], NYC 2012-2016

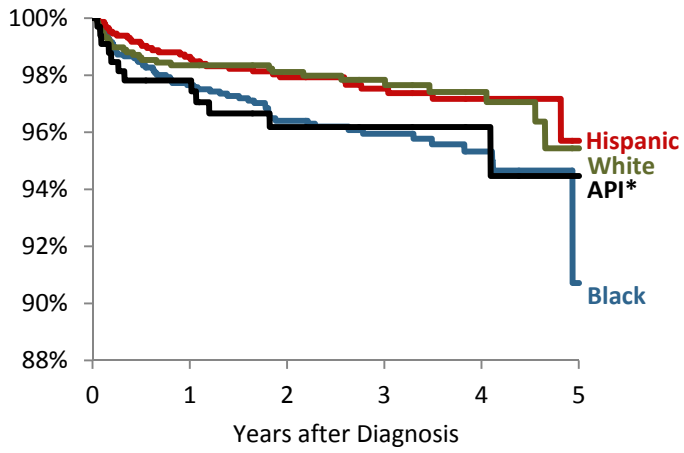
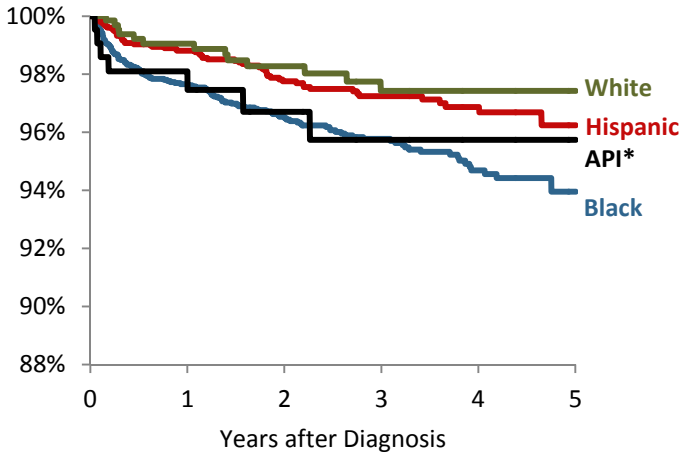


FIGURE 18.2: Survival among people newly diagnosed with HIV[1] and residing in high-poverty areas[2], by race/ethnicity[3], NYC 2012-2016

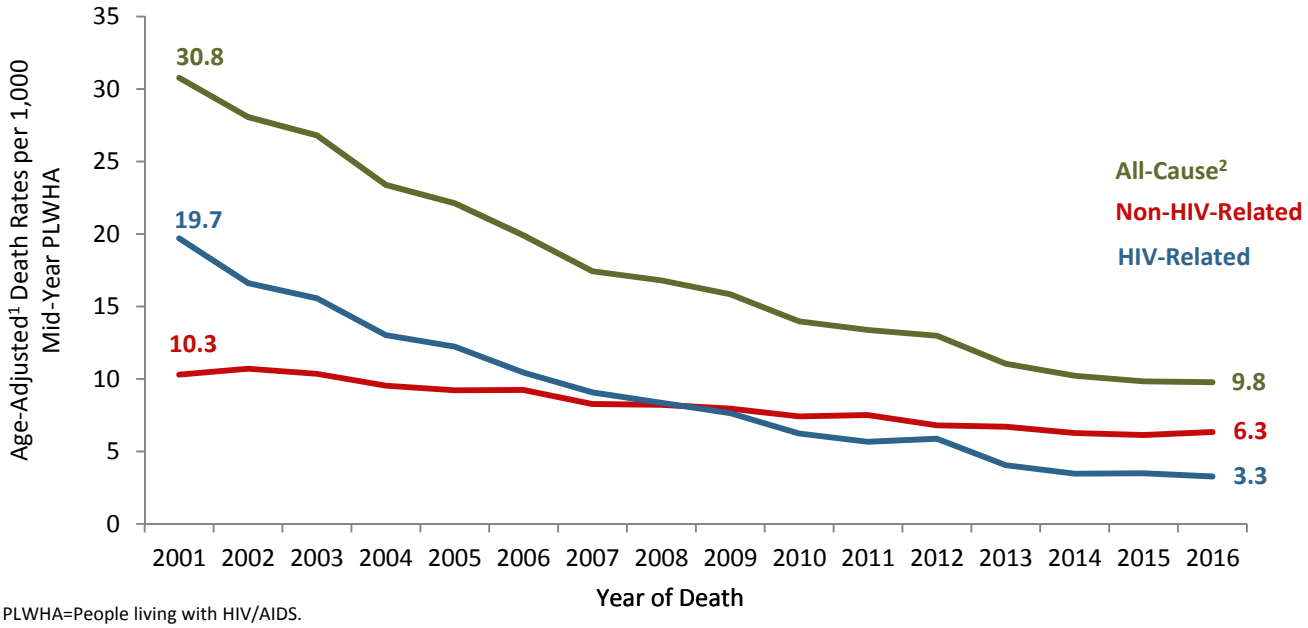


API=Asian/Pacific Islander. *Survival curves among API should be interpreted with caution due to small numbers.
[1]People newly diagnosed with HIV at death were excluded from the analysis. Curves include people diagnosed with HIV from 2012 through 2016 and followed through Dec. 31, 2016; people not known to have died were censored on Dec. 31, 2016. [2]Poverty level based on NYC ZIP code of residence at diagnosis (if available). Low-poverty area defined as <20% of population living below Federal Poverty Level; high-poverty area defined as ≥20% of population living below Federal Poverty Level. [3]Native American and multiracial groups not shown because of small numbers.

Disparities in survival by race/ethnicity persist in NYC, with Blacks dying sooner after HIV diagnosis than Whites and Latino/Hispanics. Racial/ethnic disparities are evident in both low-poverty and high-poverty areas, but are more pronounced among those living in low-poverty areas at the time of diagnosis (P <0.05).

MORTALITY AMONG PEOPLE WITH HIV

FIGURE 19.1: Age-adjusted death rates among people with HIV/AIDS, by HIV-related and non-HIV-related cause of death, NYC 2001-2016



PLWHA=People living with HIV/AIDS.
[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 (1.9% of all deaths).

The overall death rate among people diagnosed with HIV/AIDS decreased by 68% from 2001 to 2016. Although the rates of both HIV-related and non-HIV-related deaths decreased during this time, the overall decrease was driven by fewer deaths attributed to HIV (Figure 19.1).

TABLE 19.1: Trends in Proportions of Major Causes of Death Among People with HIV/AIDS, NYC 2002-2016

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total Deaths (N)	(2,918)	(2,907)	(2,725)	(2,697)	(2,470)	(2,336)	(2,356)	(2,243)	(2,079)	(2,047)	(1,904)	(1,852)	(1,798)	(1,764)	(1,790)
CAUSE OF DEATH[1]															
HIV (%)	64	63	60	59	56	54	53	48	47	43	38	36	34	34	31
NON-HIV (%)	33	34	37	38	43	46	46	51	51	55	59	61	61	63	67
CVD	7	8	9	8	10	11	12	13	13	13	15	14	15	17	19
CANCER	8	8	9	10	11	12	13	14	13	15	16	17	15	17	17
ACCIDENTAL OD	0	0	1	0	1	5	3	4	3	3	5	4	4	5	7
INFECTIOUS DISEASES	3	3	4	4	4	5	3	4	5	4	5	6	6	5	5
EXTERNAL CAUSES	2	3	3	3	4	3	4	3	5	4	5	4	4	5	4
OTHER	11	12	12	13	13	10	11	12	11	15	13	17	17	14	15

Trend within a cause of death over time

Lowest Proportion — Highest Proportion

CVD=Cardiovascular Disease
OD= Overdose
[1]For definitions of the causes of death, see Technical Notes on page 15. Deaths due to unknown causes are not shown.

In 2002, the leading underlying cause of death among people with HIV/AIDS (PWHA) was HIV, representing 64% of all PWHA deaths. At the end of 2016, although HIV was still the single leading underlying cause of death among PWHA, two-thirds (67%) of deaths among PWHA were due to non-HIV-related causes. Since 2002, there have been substantial increases in the proportions of PWHA deaths due to cardiovascular disease (19% of all PWHA deaths in 2016) and cancer (17% of all PWHA deaths in 2016) (Table 19.1).

SEXUALLY TRANSMITTED INFECTIONS (STI) AMONG MSM

FIGURE 20.1: Self-reported 12-month STI testing and diagnosis history among HIV-positive NHBS study participants[1] (N=86), MSM 2017

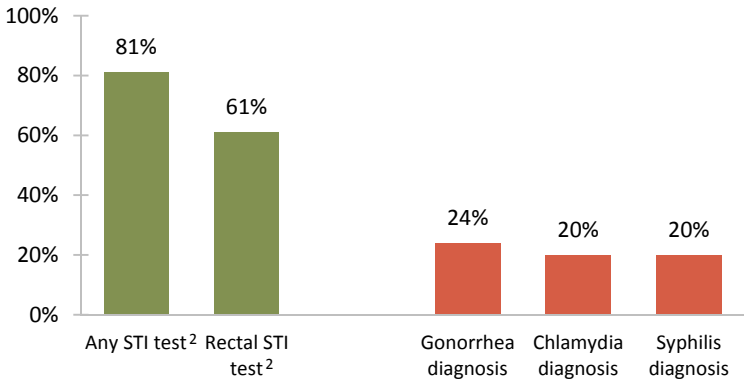
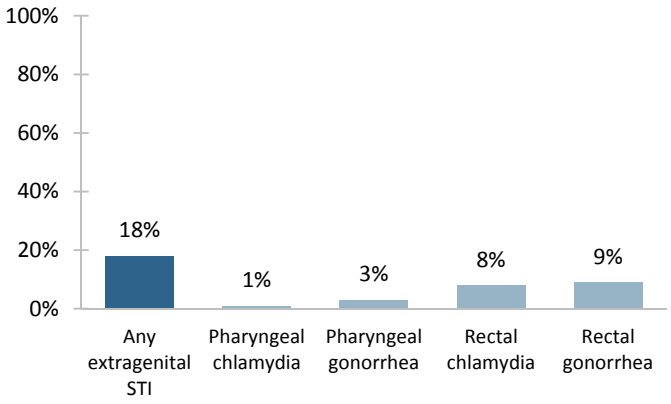


FIGURE 20.2: Extragenital STI test results among HIV-positive NHBS study participants[1,3] (N=75), MSM 2017

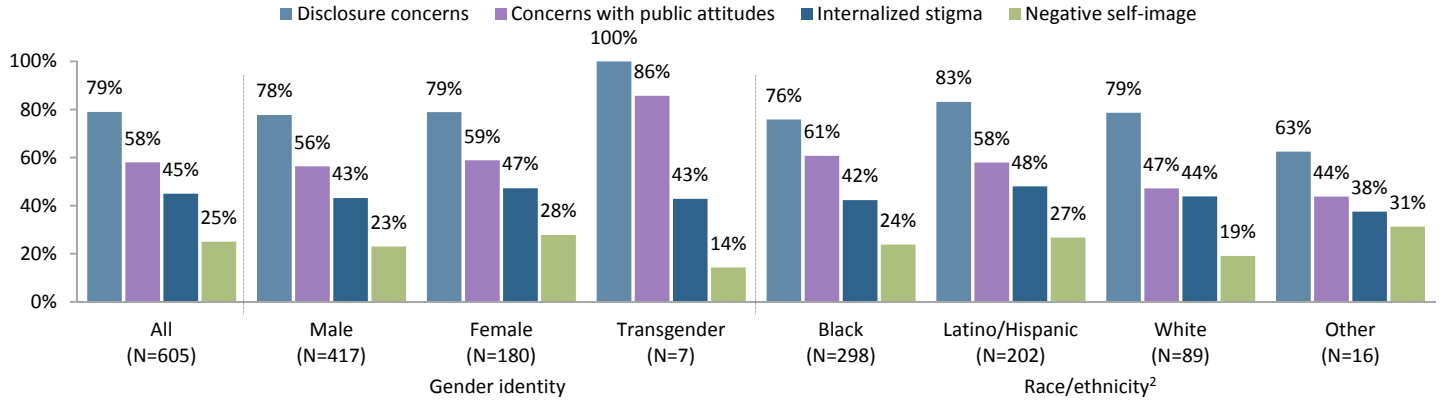


[1]Eligible participants were men reporting lifetime history of sex with another man, were ≥18 years old at interview and lived in the NYC metropolitan statistical area. Men were recruited through venue-based sampling. The analytic sample is restricted to participants who either self-reported HIV-positive status or had a positive HIV test result through optional HIV testing as part of the study. [2]Included chlamydia, gonorrhea, and syphilis. [3]Among those who agreed to optional extragenital STI testing.

The National HIV Behavioral Surveillance (NHBS) project is a national, ongoing study of people at high risk for HIV. The 2017 cycle was among men who have sex with men (MSM). Among interviewed HIV-positive MSM (N=86), 81% reported receiving an STI test and 61% reported receiving a rectal STI test in the past 12 months (Figure 20.1). Nearly a quarter reported a gonorrhea diagnosis and 20% reported chlamydia or syphilis diagnoses in the past 12 months. Among participants who agreed to optional extragenital STI testing (N=75), 8% and 9% tested positive for rectal chlamydia and gonorrhea, respectively, and 18% tested positive for either STI at either anatomical site (Figure 20.2).

STIGMA AMONG PEOPLE LIVING WITH HIV

FIGURE 21.1: Prevalence of stigma measures[1] by gender and race/ethnicity among Medical Monitoring Project participants (N=605), 2015 and 2016



For inclusion in each category participants must have answered "agree" or "strongly agree" to the following questions by category:
Disclosure concerns: "I am very careful who I tell that I have HIV" or "I worry that people who know I have HIV will tell others."
Concerns with public attitudes: "Most people think that a person with HIV is disgusting" or "Most people with HIV are rejected when others find out."
Internalized stigma: "I have been hurt by how people reacted to learning I have HIV," "I have stopped socializing with some people because of their reactions of my having HIV" or "I have lost friends by telling them I have HIV."
Negative Self-image: "I feel that I am not as good a person as others because I have HIV," "Having HIV makes me feel unclean" or "Having HIV makes me feel that I'm a bad person."
[1]Stigma measures are not mutually exclusive; participants could report more than one stigma category.
[2]Other race/ethnicity includes Asian/Pacific Islander, Native American and multiracial categories.

The Medical Monitoring Project (MMP) is an ongoing annual national surveillance study of people with HIV. Among the 657 MMP participants interviewed in the 2015 and 2016 cycles, 605 (92%) answered all HIV-related stigma questions. Overall, a higher proportion of participants had disclosure concerns and concerns with public attitudes than other stigma measures. The prevalence of disclosure concerns, concerns with public attitudes about HIV, and internalized stigma were highest among transgender people. The prevalence of negative self-image was highest among females and among persons identifying with a race/ethnicity classified as "Other." Higher proportions of Latino/Hispanics reported disclosure concerns and internalized stigma than any other race/ethnicity. Concerns with public attitudes were highest among Black people.

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 New York City Health Department as of March 31, 2018, and are for calendar year 2017 unless otherwise noted.

HIV SURVEILLANCE: The NYC HIV Epidemiology and Field Services Program (HEFSP) manages the HIV surveillance registry, a population-based registry of all people diagnosed with AIDS (since 1981) or HIV infection (since 2000) and reported to the Health Department according to standard Centers for Disease Control and Prevention (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: www1.nyc.gov/site/doh/data/data-sets/hiv-aids-annual-surveillance-statistics.page.

TRANSGENDER HIV SURVEILLANCE: 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 status has been collected routinely since 2005 for newly reported cases. Reported numbers of new transgender HIV diagnoses and transgender PLWHA are likely to be underestimates. For more information, see the "HIV/AIDS among Transgender people in New York City" surveillance slide set available at: www1.nyc.gov/assets/doh/downloads/pdf/dires/hiv-in-transgender-persons.pdf.

PERINATAL AND PEDIATRIC HIV SURVEILLANCE: HEFSP collects data on HIV-exposed and -infected infants 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-infected 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 INFECTION SURVEILLANCE: Since 2008, HEFSP has conducted routine surveillance and field investigation of individuals diagnosed in the acute stage of HIV infection (AHI) in NYC. For NYC's AHI case definition see: www1.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. Death data for 2017 are incomplete.

CAUSE OF DEATH: Cause of death used for analyses 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 2016, 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 Health Department's Office of Vital Statistics, see: https://www1.nyc.gov/assets/doh/downloads/pdf/vs/2016sum.pdf.

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 whose household income is below the Federal Poverty Level. This measure is not available for people missing 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 in 2006-2009, 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, and ACS 2012-2016 for events occurring in 2014-2017. Cut-points for categories of area-based poverty in NYC were defined by a Health Department workgroup.[3]

NATIONAL HIV BEHAVIORAL SURVEILLANCE: National HIV Behavioral Surveillance (NHBS) is a national, ongoing surveillance activity sponsored by the CDC and collects data on behavioral risk factors for HIV, HIV testing behaviors, and the receipt and/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 at increased risk for HIV: 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 infection. For more information on NHBS see: www.cdc.gov/hiv/statistics/systems/nhbs/index.html.

[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]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 PLWHA; 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 HIV-positive adults known to the HIV surveillance registry. The project is cross-sectional and is conducted yearly. For more information on the Medical Monitoring Project see: www.cdc.gov/hiv/statistics/systems/mmp/.

NYC HIV CARE CONTINUUM: "HIV-infected" is calculated as the number of HIV-diagnosed divided by the estimated proportion of PLWHA who had been diagnosed (92.6%), 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 PLWHA retained in care plus the estimated number of PLWHA who were out of care, based on a statistical weighting method. This estimated number aims to account for out-migration from NYC, and therefore is different from the total number of people diagnosed and reported with HIV/AIDS 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). "Retained in care" is defined as PLWHA with ≥1 VL or CD4 count or CD4 percent drawn in 2017, and reported to NYC HIV surveillance (Source: NYC HIV Surveillance Registry). "Prescribed ART" is calculated as the number of PLWHA retained in care multiplied by the estimated proportion of PLWHA prescribed ART in the previous 12 months (93.2%), based on the proportion of NYC Medical Monitoring Project participants whose medical record included documentation of ART prescription (Source: NYC HIV Surveillance Registry and NYC Medical Monitoring Project, 2016). "Virally suppressed" is calculated as PLWHA in care with a most recent viral load measurement in 2017 of <200 copies/mL, plus the estimated number of out-of-care 2017 PLWHA with a viral load <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 total HIV-positive represents an estimate of all HIV-positive people living in NYC at the end of 2017. The number of PLWHA presented elsewhere represents people ever diagnosed with HIV, reported in NYC, and not known to have died as of December 31, 2017. Viral suppression estimates in the care continuum are among all HIV-positive New Yorkers. These differ from Figures 13.2 and 13.4 which show viral suppression among PLWHA in care in 2017.

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/AIDS to the 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 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 New York State provider portal: https://commerce.health.state.ny.us. Instructions for accessing the portal are available here: www.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 Health Department.

DISCUSS PARTNER SERVICES AND REPORT PARTNERS: The Health Department's Field Services Unit 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 Health Department to all people diagnosed with HIV, helps 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 Health Department so that partners can be notified of their potential exposure to HIV.

To report partners, call the 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/last name (alias, if applicable), date of birth/estimated age, gender and domestic violence screening result.

For more information on HIV provider reporting, see: www1.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 (>6 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 four care status outcomes include: Follow-up needed; No follow-up needed – In Care; No follow-up needed – Deceased; or Non-case. 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 www1.nyc.gov/site/doh/health/health-topics/aids-hiv-care-status-reports-system.page.

CARE CONTINUUM DASHBOARDS: The HIV Care Continuum Dashboards (HIV 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 61 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 www1.nyc.gov/site/doh/health/health-topics/care-continuum-dashboard.page.

ADDITIONAL HEALTH DEPARTMENT RESOURCES ON HIV IN NYC:

NYC HIV Epidemiology and Field Services Program:
www1.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:
www1.nyc.gov/site/doh/health/health-topics/aids-hiv.page

ADDITIONAL HEALTH DEPARTMENT DATA RESOURCES:

Data and Statistics: www1.nyc.gov/site/doh/data/data-sets/data-sets-and-tables.page

EpiQuery, NYC Interactive Health Data System: https://a816-healthpsi.nyc.gov/epiquery/

Geographical Information System (GIS) Center Map Gallery: www1.nyc.gov/site/doh/data/health-tools/maps.page

OTHER HIV RESOURCES:

National HIV surveillance, including CDC's case definitions for HIV surveillance: www.cdc.gov/hiv/statistics/

Ending the Epidemic, New York State Data Dashboard: http://etedashboardny.org/

AIDSVu, including interactive online maps illustrating the prevalence of HIV in the United States: http://aidsvu.org/

Fast-Track Cities Initiative, tracking progress against UNAIDS's 90-90-90 targets: http://www.iapac.org/category/fast-track-cities/

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