

New York City 2020: Ending the HIV Epidemic: A Plan for America Epidemiologic Profile

The New York City Department of Health and Mental Hygiene (NYC HD) coordinates New York City (NYC)'s response to the HIV epidemic, and its HIV Epidemiology Program is authorized by the New York State Department of Health (NYS DOH) to conduct HIV/AIDS surveillance in NYC. This New York City 2020: Ending the HIV Epidemic: A Plan for America Epidemiologic Profile (NYC 2020 EHE Epidemiologic Profile)¹ provides a snapshot of NYC's HIV epidemic. NYC's HIV epidemic is characterized by a declining number of new HIV diagnoses and estimated incident HIV infections, almost entirely sexually acquired, a large population of people with HIV (PWH), and generally high engagement across the HIV care continuum. However, stark inequities persist in the burden of new diagnoses and in clinical outcomes by race/ethnicity, gender, age, and neighborhood.

In 2018, the annual number of new HIV diagnoses fell below 2,000 in NYC for the first time since HIV annual reporting began in 2001. In 2019, 1,772 people were newly diagnosed with HIV, down 8% from 2018 to 2019, and down 70% since 2001. The estimated number of new HIV infections in NYC also continued to decline, with a 14% decrease from 2018 to 2019 and a 40% decrease since 2015. Among all people newly diagnosed with HIV in NYC in 2019, 79% were cisgender men, 46% were Black, 37% were Latino/Hispanic, 37% were ages 20-29, 26% lived in Brooklyn and 26% in the Bronx, 83% lived in areas with medium, high, or very high poverty levels,² and 54% were cisgender men who reported sex with men (MSM).³ Overall, 82% of people newly diagnosed with HIV in NYC in 2019 were linked to HIV care within one month of diagnosis (up from 72% in 2015 and no change since 2018), and 54% were virally suppressed within three months (up from 30% in 2015 and 53% in 2018).

In 2019, an estimated 91,200 PWH were living in NYC, 77% of whom were virally suppressed. Among PWH in HIV care in 2019, 87% were virally suppressed (up from 83% in 2015 and no change since 2018), and 69% had sustained viral suppression (up from 62% in 2015 and 67% in 2018). Figure 1 illustrates not only the variability in HIV diagnosis rates and viral suppression by NYC neighborhood, but also the considerable overlap in the areas most affected, with the darker colors representing neighborhoods with the highest HIV diagnosis rates (left) and lowest proportion of PWH who are virally suppressed (right). Some higher-income areas (e.g., Chelsea-Clinton in Manhattan) saw high rates of new diagnoses, but also high levels of viral suppression.

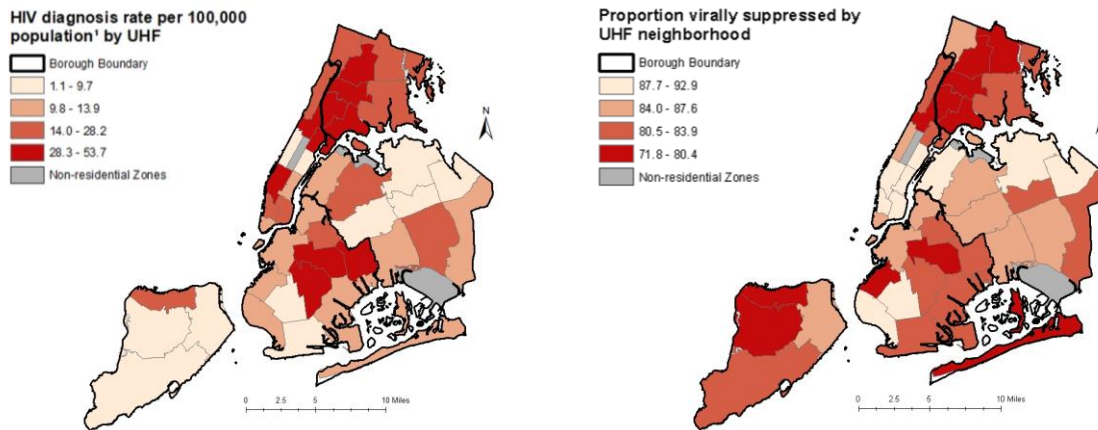
Between 2004 and 2018, the all-cause mortality rate and rate of HIV-related deaths among PWH in NYC declined by 62% and 81%, respectively. Fewer than one-third (26%) of deaths among PWH in NYC in 2018 were attributed to an HIV-related cause.

¹ Unless otherwise noted, all HIV surveillance data in the NYC 2020 EHE Epidemiologic Profile are from N.Y.C. DEP'T OF HEALTH & MENTAL HYGIENE, HIV SURVEILLANCE ANNUAL REPORT, 2019 (Dec. 1, 2020), *available at* <https://www1.nyc.gov/assets/doh/downloads/pdf/dires/hiv-surveillance-annualreport-2019.pdf>, and other HIV surveillance data reported to NYC HD by Mar. 31, 2020.

² Area-based poverty based on NYC ZIP code of residence at diagnosis. Medium poverty level areas have 10% to <20% of residents living below the federal poverty line (FPL). High poverty level areas have 20% to <30% living below FPL. Very high poverty level areas have 30% to 100% living below FPL.

³ MSM in the NYC 2020 EHE Epidemiologic Profile and as reported in the N.Y.C. Dep't of Health & Mental Hygiene's HIV Surveillance Annual Report, 2019, include cisgender men only.

Figure 1. HIV diagnosis rates and proportion virally suppressed by United Hospital Fund (UHF) neighborhood in NYC⁴



Rates of sexually transmitted infections (STIs) – number of diagnosed STI per 100,000 population – in NYC are high and, in contrast to rates of new HIV diagnoses, have been increasing since 2015. In 2019, the rate (and percent change from 2015 to 2019) of chlamydia was 908.3 (increase of 22.5%), gonorrhea 345.3 (increase of 74%), primary and secondary syphilis 23.7 (increase of 33%), and early latent syphilis 43.8 (increase of 57%).⁵ Increases in STI diagnoses among MSM are the primary driver of these trends.

Although declines in the number of new HIV diagnoses in NYC from 2018 to 2019 were seen among cisgender men and cisgender and transgender women, most major racial/ethnic groups, all age groups, residents of most NYC boroughs, and most HIV transmission groups,⁶ it is important to address persistent inequities in new diagnoses and clinical outcomes among people with HIV. These and other HIV-related inequities are rooted in and fueled by structural racism and other systems of oppression. Black and Latino/Hispanic people, transgender people, MSM, and youth and young adults are disproportionately represented in new diagnoses; Black people, youth, and transgender people disproportionately experience lower viral suppression; and people ages 50 years and older are an increasingly larger proportion of PWH, many of whom have chronic comorbidities. The following sections display population-specific data for seven populations: Black MSM, Latino/Hispanic MSM, Black cisgender women, Latina/Hispanic cisgender women, transgender people, people ages 50 years and older, and youth and young adults ages 13 to 29 years. NYC HD selected these seven groups as priority populations⁷ as part of our work under the Ending the HIV Epidemic: Plan for America federal initiative using available 2019 HIV surveillance data only. For a full and more inclusive list of priority populations using 2019 HIV surveillance data; documented health inequities related to race/ethnicity, sexual orientation, and gender

⁴ As reported to the N.Y.C. Dep’t of Health & Mental Hygiene as of Mar. 31, 2020.

⁵ Prepared using frozen STI surveillance data as reported to the N.Y.C. Dep’t of Health & Mental Hygiene as of Nov. 28, 2016, for 2015 data, and as of Dec. 21, 2020, for 2019 data.

⁶ NYC HD is working to limit the use of stigmatizing, risk-based language in our discourse, documents, and presentations related to NYC’s HIV epidemic. Our HIV Surveillance Annual Reports and related surveillance data analyses currently report on “HIV transmission risk groups”; however, recognizing the EHE initiative as an important opportunity to advance these anti-stigma efforts, NYC HD will instead use “HIV transmission groups” in this NYC 2020 EHE Epidemiologic Profile.

⁷ NYC HD has named these populations to broadly define populations which experience a disproportionate burden of HIV in order to direct funding and services equitably, and to allow for a holistic, affirming, and person-centered investment in our efforts. NYC HD recognizes that the use of the term “priority population” can be stigmatizing. In the absence of a more appropriate and communally agreed upon term, it is used here to refer to communities that experience multiple forms of systemic oppression, including racism, sexism, homophobia, and/or transphobia.

identity; and extensive community input please reference pages 5-6 in the New York City 2020: Ending the HIV Epidemic: A Plan for America Plan (NYC 2020 EHE Plan).⁸

Figure 2. Snapshot of HIV-related outcomes by priority population in NYC, 2019⁹ (groups not mutually exclusive)

Population	New HIV Diagnoses	Diagnosed PWH	Age-adjusted Death Rate ¹⁰	Timely Linkage to Care ¹¹	Viral Suppression ¹²
NYC Overall	1,772	85,241	8.9	82.0%	87.0%
Black MSM	361 (20%)	13,968 (16%)	8.1	84.6%	82.8%
Latino/Hispanic MSM	420 (24%)	13,690 (16%)	6.8	88.1%	88.9%
Black Cisgender Women	214 (12%)	13,637 (16%)	9.1	77.7%	84.9%
Latina/Hispanic Cisgender Women	84 (5%)	7,739 (9%)	9.0	79.8%	87.7%
Transgender People	52 (3%)	1,796 (2%)	14.4	82.4%	77.3%
Older People 50+					
People Ages 50-59	201 (11%)	26,148 (31%)	14.1	81.2%	88.0%
People Ages 60+	112 (6%)	21,395 (25%)	26.0	78.7%	91.8%
Youth and young adults					
Youth ages 13-19	63 (4%)	266 (0.3%)	0.0	77.8%	75.3%
Youth ages 20-24	265 (15%)	1,672 (2%)	2.9	86.8%	76.6%
Young adults ages 25-29	385 (22%)	5,036 (6%)	4.6	84.2%	80.2%

Figure 3. Snapshot of HIV-related outcomes by borough in NYC, 2019¹³

Borough	New HIV Diagnoses	Diagnosed PWH	Age-adjusted Death Rate	Timely Linkage to Care	Viral Suppression
NYC Overall	1,772	85,241	8.9	82.0%	87.0%
Bronx	466	13,968 (16%)	8.1	84.60%	82.80%
Brooklyn	459	13,690 (16%)	6.8	88.10%	88.90%
Manhattan	344	13,637 (16%)	9.1	77.10%	84.90%
Queens	314	7,739 (9%)	9	79.80%	87.70%

⁸ N.Y.C. DEP’T OF HEALTH & MENTAL HYGIENE, NEW YORK CITY 2020: ENDING THE HIV EPIDEMIC: A PLAN FOR AMERICA PLAN (last accessed Mar. 26, 2021).

⁹ As reported to the N.Y.C. Dep’t of Health & Mental Hygiene as of Mar. 31, 2020.

¹⁰ Deaths from all causes occurring in 2018 were used for these rates. Rates are presented as deaths per 1,000 mid-year PWH.

¹¹ Linkage within 30 days of diagnosis as indicated by an HIV-related laboratory test reported to surveillance.

¹² Among PWH in HIV medical care as indicated by ≥1 HIV-related laboratory test reported to surveillance in the calendar year.

¹³ As reported to the N.Y.C. Dep’t of Health & Mental Hygiene as of Mar. 31, 2020.

Figure 4. Snapshot of new HIV diagnoses by priority population and borough in NYC, 2019¹⁴

Priority Population	New HIV Diagnoses			
	Bronx	Brooklyn	Manhattan	Queens
Black MSM	88	125	78	38
Latino/Hispanic MSM	125	61	77	111
Black Cisgender Women	61	69	22	42
Latina/Hispanic Cisgender Women	30	14	14	19
Transgender People	18	10	12	5
Older People 50+	88	79	58	59
Youth and young adults (13-29)	195	195	121	114
Total	466	459	344	314

Black MSM

Of the 361 Black MSM newly diagnosed with HIV in NYC in 2019, 185 (52%) were ages 20-29, 84 (23%) were ages 30-39, 40 (11%) were ages 40-49, and 26 (7%) were ages 50 and older. By borough, 125 (35%) lived in Brooklyn, 88 (24%) in the Bronx, 78 (22%) in Manhattan, 38 (11%) in Queens, and 8 (2%) in Staten Island; 198 (55%) Black MSM lived in high or very high poverty areas. Comparing data for Black MSM from 2015 to 2019, new HIV diagnoses decreased by 17.8% (439 to 361), the age-adjusted death rate decreased by 25.0% (10.8 to 8.1 per 1,000 PWH), timely linkage to HIV care increased by 21.6% (69.6% to 84.6%), and viral suppression among PWH in care increased by 4.4% (79.3% to 82.8%).

Latino/Hispanic MSM

Of the 420 Latino/Hispanic MSM newly diagnosed with HIV in NYC in 2019, 202 (48%) were ages 20-29, 134 (32%) were ages 30-39, 41 (10%) were ages 40-49, and 27 (6%) were ages 50 and older. By borough, 61 (15%) lived in Brooklyn, 125 (30%) in the Bronx, 77 (18%) in Manhattan, 111 (26%) in Queens, and 5 (1%) in Staten Island; 195 (46%) Latino/Hispanic MSM lived in high or very high poverty areas. Comparing data for Latino/Hispanic MSM from 2015 to 2019, new HIV diagnoses decreased by 29.9% (599 to 420), the age-adjusted death rate decreased by 1.4% (6.9 to 6.8 per 1,000 PWH), timely linkage to HIV care increased by 20.5% (73.1% to 88.1%), and viral suppression among PWH in care increased by 3.6% (85.8% to 88.9%).

Black Cisgender Women

Of the 214 Black cisgender women newly diagnosed with HIV in NYC in 2019, 44 (21%) were ages 20-29, 56 (26%) were ages 30-39, 36 (17%) were ages 40-49, and 71 (33%) were ages 50 and older. By borough, 69 (32%) lived in Brooklyn, 61 (29%) in the Bronx, 22 (10%) in Manhattan, 42 (20%) in Queens, and 3 (1%) in Staten Island; 121 (57%) Black cisgender women lived in high or very high poverty areas. Comparing data for Black cisgender women from 2015 to 2019, new HIV diagnoses decreased by 14.4% (250 to 214), the age-adjusted death rate decreased by 21.6% (11.6 to 9.1 per 1,000 PLWH), timely linkage to HIV care increased by 12.4% (69.1% to 77.7%), and viral suppression among PWH in care increased by 6.8% (79.5%

¹⁴ As reported to the N.Y.C. Dep't of Health & Mental Hygiene as of Mar. 31, 2020.

to 84.9%). Among Black women¹⁵ in NYC, STI rates in 2019¹⁶ (and the percent change from 2015 to 2019) were: 1042.2 for chlamydia (a 20% increase), 260.0 for gonorrhea (58% increase), 4.5 for primary and secondary syphilis (78.4% increase), and 7.3 for early latent syphilis (52.7% increase).¹⁷

Latina/Hispanic Cisgender Women

Of the 84 Latina/Hispanic cisgender women newly diagnosed with HIV in NYC in 2019, 14 (17%) were ages 20-29, 25 (30%) were ages 30-39, 17 (20%) were ages 40-49, and 28 (33%) were ages 50 and older. By borough, 14 (17%) lived in Brooklyn, 30 (36%) in the Bronx, 14 (17%) in Manhattan, 19 (23%) in Queens, and 2 (2%) in Staten Island; 45 (54%) Latina/Hispanic cisgender women were living in high or very high poverty areas. Comparing data for Latina/Hispanic cisgender women from 2015 to 2019, new HIV diagnoses decreased by 28.8% (118 to 84), the age-adjusted death rate decreased by 21.1% (11.4 to 9.0 per 1,000 PLWH), timely linkage to HIV care increased by 10.2% (72.4% to 79.8%), and viral suppression among PWH in care increased by 5.5% (83.1% to 87.7%). Among Latina/Hispanic women,¹⁸ STI rates in 2019¹⁹ (and the percent change from 2015 to 2019) were: 601.5 for chlamydia (a 19.5% increase), 89.3 for gonorrhea (62% increase), 2.4 for primary and secondary syphilis (344.4% increase), and 4.4 for early latent syphilis (29% increase).

Transgender People

Of the 52 transgender people newly diagnosed with HIV in NYC in 2019, 50 (96%) were transgender women and 2 (4%) were transgender men. By race/ethnicity, 26 (50%) were Black, 21 (40%) were Latino/Hispanic, and 2 (4%) were White. By age group, 30 (58%) were ages 20-29, 14 (27%) were ages 30-39, 5 (10%) were ages 40-49, and 1 (2%) were ages 50 and older. By borough, 10 (19%) lived in Brooklyn, 18 (35%) in the Bronx, 12 (23%) in Manhattan, 5 (10%) in Queens, and 0 (0%) in Staten Island; 30 (58%) transgender people lived in high or very high poverty areas. Comparing data for transgender people from 2015 to 2019, new HIV diagnoses decreased by 22.4% (67 to 52), the age-adjusted death rate increased by 58.2% (9.1 to 14.4 per 1,000 PWH), timely linkage to HIV care increased by 17.5% (70.1% to 82.4%), and viral suppression among PWH in care increased by 5.3% (73.4% to 77.3%).

People Ages 50 Years and Older

Of the 313 people ages 50 years and older newly diagnosed with HIV in NYC in 2019, 105 (34%) were cisgender women and 207 (66%) were cisgender men, and 201 (64%) were ages 50-59 and 112 (36%) were ages 60 years and older. By race/ethnicity, 169 (54%) were Black, 89 (28%) were Latino/Hispanic, and 41 (13%) were White. By borough, 79 (25%) lived in Brooklyn, 88 (28%) in the Bronx, 58 (19%) in Manhattan, 59 (19%) in Queens, and 5 (2%) in Staten Island; 160 (51%) people ages 50 and older lived in high or very high poverty areas. Comparing data for people ages 50 years and older from 2015 to 2019, new HIV diagnoses decreased by 26.7% (427 to 313), the death rate decreased by 14.3% (22.4 to 19.2 per

¹⁵ Includes people with a reported (current) gender of female. Information on sex assigned at birth is not consistently collected.

¹⁶ Prepared using frozen STI surveillance data as reported to the N.Y.C. Dep't of Health & Mental Hygiene as of Nov. 28, 2016, for 2015 data, and Dec. 21, 2020, for 2019 data.

¹⁷ STI rates are available for select populations. Limitations of these data include poor ascertainment of gender identity and sex assigned at birth, and that race/ethnicity was missing/unknown for >40% of chlamydia cases and >20% of gonorrhea cases citywide in 2019.

¹⁸ Includes people with a reported (current) gender of female. Information on sex assigned at birth is not consistently collected.

¹⁹ Prepared using frozen STI surveillance data as reported to the N.Y.C. Dep't of Health & Mental Hygiene as of Nov. 28, 2016, for 2015 data and Dec. 21, 2020, for 2019 data.

1,000 PLWH), timely linkage to HIV care increased by 13.3% (70.9% to 80.3%), and viral suppression among PWH in care increased by 2.7% (87.3% to 89.7%). Among older PWH, there were inequities by race/ethnicity in death rates and the change over time in new diagnoses. The age-adjusted death rates in 2018 by race/ethnicity were 21.4 for Black people, 19.6 for Latino/Hispanic people, and 15.5 for White people. From 2015 to 2019, new HIV diagnoses decreased 45.3% for White older PWH, 16.3% for Black older PWH, and 32.1% for Latino/Hispanic older PWH. STI rates in 2019²⁰ (and percent change from 2015 to 2019) among people ages 50 years and older were: 92.4 for chlamydia (39.3% increase), 56.7 for gonorrhea (105.7% increase), 7.2 for primary and secondary syphilis (49.1% increase), and 17.4 for early latent syphilis (48.0% increase).

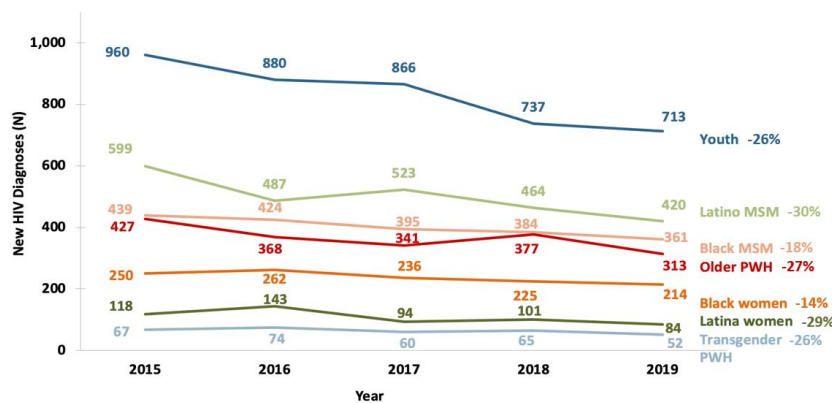
Youth and Young Adults Ages 13 to 29 Years

Of the 713 youth and young adults ages 13 to 29 years newly diagnosed with HIV in 2019, 71 (10%) were cisgender women, 610 (86%) were cisgender men, and 32 (5%) were transgender people. By race/ethnicity, 330 (46%) were Black, 286 (40%) were Latino/Hispanic, and 66 (9%) were White. By age group, 63 (9%) were ages 13-19, 265 (37%) were ages 20-24, and 385 (54%) were ages 25-29. By borough, 195 (27%) lived in Brooklyn, 195 (27%) in the Bronx, 121 (17%) in Manhattan, 114 (16%) in Queens, and 16 (2%) in Staten Island; 339 (52%) youth lived in high or very high poverty areas. Comparing data for youth and young adults ages 13 to 29 years from 2015 to 2019, new HIV diagnoses decreased by 25.7% (960 to 713), the death rate increased by 18.7% (3.4 to 4.0 per 1,000 PLWH), timely linkage to HIV care increased by 17.8% (71.8% to 84.6%), and viral suppression among young PWH in care increased by 10.0% (72.0% to 79.2%). Among youth and young adults, MSM are heavily affected by HIV and experience racial/ethnic inequities: new HIV diagnoses decreased 53.7% for White MSM ages 13-29, 23.6% for Black MSM ages 13-29, and 24.0% for Latino/Hispanic MSM ages 13-29 from 2015 to 2019. STI rates in 2019²¹ (and the percent change from 2015 to 2019) among youth and young adults ages 13 to 29 years were 2,856.2 for chlamydia (a 22.9% increase); 848.3 for gonorrhea (65.3% increase); 40.1 for primary and secondary syphilis (26.0% increase); and 56.6 for early latent syphilis (57.5% increase).

Comparisons across Priority Populations

This section displays data from 2015 to 2019 for the seven priority populations highlighted above.

Figure 5. Trends in number of new HIV diagnoses by priority population in NYC, 2015-2019²²



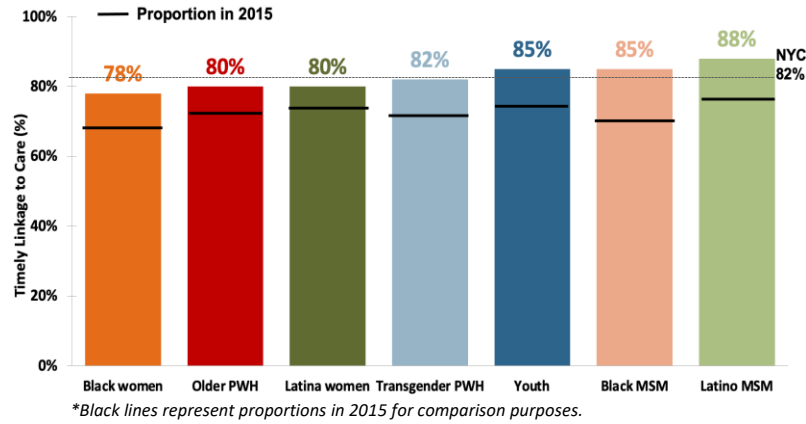
From 2015 to 2019, all priority populations experienced declines in numbers of new HIV diagnoses. The highest number of new HIV diagnoses across priority populations was among youth ages 13 to 29 years, followed by Latino/Hispanic MSM. Although diagnoses decreased in NYC overall by 25% from 2015 to 2019, Black cisgender women only saw a decrease of 14% and Black MSM saw a decrease of 18% during this time period.

²⁰ Prepared using live STI surveillance data as reported to the N.Y.C. Dep’t of Health & Mental Hygiene as of Jan. 22, 2021.

²¹ Prepared using live STI surveillance data as reported to the N.Y.C. Dep’t of Health & Mental Hygiene as of Jan. 22, 2021.

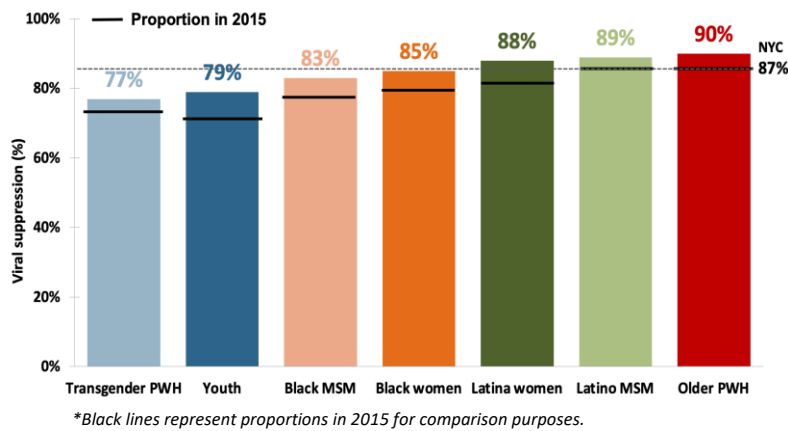
²² As reported to the N.Y.C. Dep’t of Health & Mental Hygiene as of Mar. 31, 2020.

Figure 6. Timely linkage to care among newly diagnosed people by priority population in NYC, 2019²³



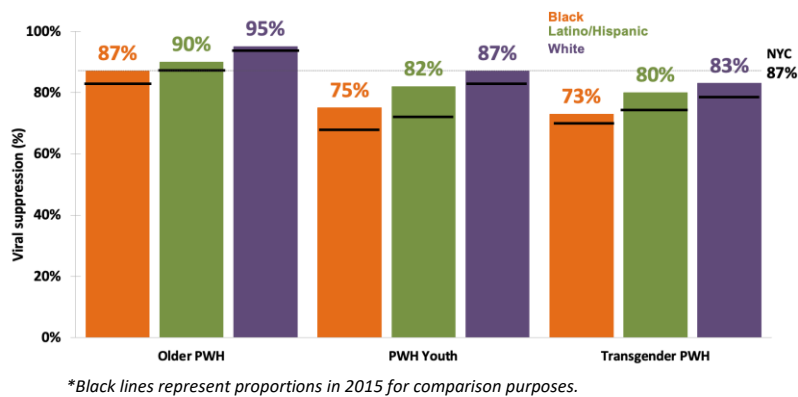
In 2019, Latino/Hispanic MSM had the highest proportion linked timely to care (88%) relative to other priority populations, and Black cisgender women had the lowest (78%). Youth, Black MSM, and Latino/Hispanic MSM had higher linkage proportions in 2019 than NYC PWH overall. From 2015* to 2019, Black MSM experienced the largest increase in timely linkage proportions (22%) and Latina/Hispanic women experienced the smallest increase (10%) compared to other priority populations.

Figure 7. Viral suppression among PWH in care by priority population in NYC, 2019²⁴



In 2019, older PWH had the highest proportion virally suppressed (90%) relative to other priority populations, and transgender PWH had the lowest (77%). Latina/Hispanic women, Latino/Hispanic MSM, and older PWH had higher viral suppression proportions in 2019 than NYC PWH overall. From 2015* to 2019, youth experienced the largest increase in viral suppression proportion (10%) compared to other priority populations.

Figure 8. Racial/ethnic inequities in viral suppression within priority populations in care in NYC, 2019²⁵



Racial/ethnic inequities are apparent across all priority populations. Black people had the lowest viral suppression across older PWH, PWH youth, and transgender PWH. Encouragingly, Black and Latino/Hispanic PWH saw the greatest increases in viral suppression among PWH youth and older PWH from 2015 to 2019.*

²³ As reported to the N.Y.C. Dep’t of Health & Mental Hygiene as of Mar. 31, 2020.

²⁴ As reported to the N.Y.C. Dep’t of Health & Mental Hygiene as of Mar. 31, 2020.

²⁵ As reported to the N.Y.C. Dep’t of Health & Mental Hygiene as of Mar. 31, 2020.

Summary

In summary, as noted above the HIV epidemic in NYC is characterized by a declining number of annual new HIV diagnoses and estimated incident HIV infections, a large population of PWH, and generally high but inequitable achievement of outcomes along the care continuum, such as linkage to care and viral suppression. Despite overall progress in reducing new HIV diagnoses and increasing viral load suppression, 2019 NYC HD surveillance data document significant and persistent inequities among certain groups, including stark racial/ethnic inequities in new HIV diagnoses and HIV-related health outcomes, many of which are persistent over time and across age, transmission, and racial/ethnic groups. The geographic distribution of HIV in NYC is also inequitable, with certain NYC neighborhoods and boroughs persistently experiencing higher HIV diagnosis rates and often lower levels of viral suppression among PWH. Advancing equity is a key strategic priority of NYC HD's HIV response and integral to many of the key activities described and put forth in the NYC 2020 EHE Plan.