



Epi Data Brief

New York City Department of Health and Mental Hygiene

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HIV Viral Load Suppression among HIV-infected Persons Receiving Medical Care in New York City

A primary goal of HIV public health programs is for persons living with HIV/AIDS (PLWHA) to achieve levels of HIV in their blood below the level of detection on clinical laboratory tests, also called viral suppression. Viral suppression is associated with improved health and survival, as well as reduced risk of transmitting HIV to partners.¹ PLWHA can lower their viral load by taking antiretroviral therapy (ART) as part of regular medical care. While connecting PLWHA to medical care can be challenging, those already in care should initiate ART and become virally suppressed. This data brief presents demographic, behavioral, and clinical characteristics of PLWHA known to be receiving care in New York City (NYC) in 2013.

Most persons living with HIV in medical care are virally suppressed

- Among 421 participants in the Medical Monitoring Project (MMP) receiving care from January through April 2013, 259 (62%) were men, 205 (49%) were non-Hispanic Black, 154 (37%) were Hispanic, 233 (55%) were ages 50 or older, and 268 (64%) resided in the Bronx or Brooklyn.
- Sex, race/ethnicity, age, and borough of residence of MMP participants were comparable with adult PLWHA in NYC who were reported to HIV surveillance with at least one HIV care visit during the same period.
- Seventy-nine (19%) MMP participants were virally unsuppressed. Among these participants, 37 (47%) were Hispanic. Hispanic participants were less likely to have health insurance, 89% compared with 98% for both non-Hispanic Black and White participants, which may partially account for this pattern.
- Among 416 MMP participants with sexual orientation information, 77 (19%) were virally unsuppressed. Of these, 58 (75%) self-identified as heterosexual, 14 (18%) as homosexual, and 5 (7%) as bisexual.

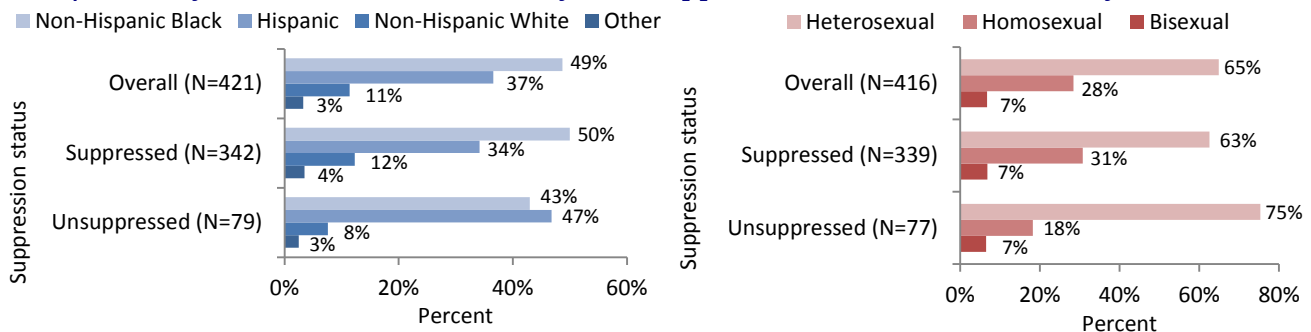
Data sources: The Medical Monitoring Project (MMP) is an ongoing, national study conducted by the Centers for Disease Control and Prevention designed to understand more about the health behaviors, outcomes, and needs of persons living with HIV/AIDS; NYC is one of 23 sites.

Participants are a sample of HIV-infected adults (ages 18 and older) in care at randomly selected medical facilities that provide HIV care who agree to be interviewed and have their medical records abstracted.

The results presented are from 421 participants in the 2013 MMP cycle. Participants had at least one outpatient care visit at a selected NYC facility between January 1, 2013 and April 30, 2013 and were interviewed 4 to 12 months later about their demographics, clinical care and status, health behaviors, and HIV-related service needs. Medical records were also reviewed to obtain clinical history from the two years preceding the interview date. Only patients with a complete interview, medical record abstraction, and viral load test data are included in these analyses.

2013 HIV surveillance data were used to create a comparison sample. These data come from a registry of all HIV/AIDS cases reported to the NYC Health Department.

Race/ethnicity[^] and sexual orientation by viral suppression status,* New York City, 2013



Source: Medical Monitoring Project interview and medical record abstraction data, 2013

[^]“Other” race/ethnicity includes non-Hispanic Asian, native Hawaiian or other Pacific Islander, American Indian, Alaska native, and multi-racial persons.

*Viral suppression, defined as viral load ≤ 200 copies/mL, is based on most recent viral load test during the 24-month period prior to the MMP interview.

For N=7 subjects, viral load tests were unavailable on the medical record and self-reported viral load result was used. The distributions of participants by race/ethnicity and sexual orientation groups by viral suppression status are not statistically significant (see [Data Table](#)).

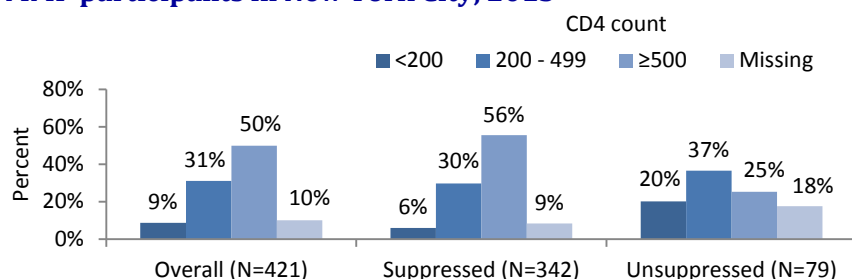
Risk factor prevalence did not differ by viral suppression status

- The prevalences of risk behaviors associated with HIV transmission were similar among those who were virally suppressed and unsuppressed, such as sex without a condom (21% vs. 22%), non-injection drug use (27% vs. 23%), and alcohol use (49% vs. 46%) in the past year.
- While homelessness was not found to be associated with viral suppression status, the prevalence of homelessness was high; one in eight participants reported having lived on the street, in a shelter, in a single-room occupancy hotel, or in a car in the past year.

Antiretroviral therapy (ART) prescription and CD4 cell count were lower among virally unsuppressed participants

- Nearly all participants (97%) reported ever being prescribed ART, and 95% reported currently taking ART when they were interviewed for MMP.
- These percentages were slightly lower among the 79 virally unsuppressed participants, with 73 (92%) reporting ever being prescribed ART, and 65 (82%) reporting currently taking ART.
- Among virally unsuppressed participants, median viral load was 1,355 copies per milliliter of blood.
- Overall, participants had a median CD4 count of 531 cells/mm³. Median CD4 count was 564 cells/mm³ among virally suppressed participants compared with 352 cells/mm³ among unsuppressed patients.
- Over 20% of virally unsuppressed participants had a CD4 count of less than 200 cells/mm³, indicating stage 3 HIV (AIDS),² compared with 6% of those that were virally suppressed.

CD4 count, overall and by viral suppression status* among MMP participants in New York City, 2013



Source: Medical Monitoring Project interview and medical record abstraction data, 2013

*Viral suppression, defined as viral load ≤ 200 copies/mL, is based on most recent viral load test during the 24-month period prior to the MMP interview. For 7 subjects, viral load tests were unavailable on the medical record and self-reported viral load result was used. CD4 counts were measured on the same date as the viral load results used to calculate viral suppression status.

Definitions:

Viral load: Viral load is a measure of how much HIV virus is in a person's blood. Viral load suppression refers to when the amount of virus is very low; in this analysis, a viral load test result less than or equal to 200 viral copies per milliliter (mL) of blood was considered suppressed.

CD4 count: A CD4 count test indicates how well a person's immune system is expected to function. A healthy person usually has 500 to 1,200 CD4 cells per cubic millimeter (mm³) of blood;³ a lower count corresponds to impairment of the immune function.

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Other DOHMH HIV/AIDS Resources:

NYC HIV/AIDS Surveillance Statistics: nyc.gov/html/doh/html/data/epi-reports.shtml

NYC MMP Reports: nyc.gov/html/doh/html/data/epi-reports.shtml#research

NYC DOHMH HIV/AIDS Information: nyc.gov/html/doh/html/living/std-hiv.shtml

References:

1. Attia S, Egger M, Muller M, Zwahlen M, Low N. Sexual transmission of HIV according to viral load and antiretroviral therapy: Systematic review and meta-analysis. *AIDS*. 2009; 23(11): 1397-1404.
2. Selik RM, Mokotoff ED, Branson B, Owen MS, Whitmore S, Hall HI. Revised surveillance case definition for HIV infection – United States, 2014. *MMWR Recomm Rep*. 2014; 63(3): 1-10.
3. Understanding Your Test Results: CD4 Count. U.S. Department of Health and Human Services. aids.gov/hiv-aids-basics/just-diagnosed-with-hiv-aids/understand-your-test-results/cd4-count Updated September 23, 2014. Accessed June 26, 2015.

MORE New York City Health Data and Publications

- For complete tables of data presented in this Brief, visit nyc.gov/html/doh/downloads/pdf/epi/datatable60.pdf
- Visit EpiQuery – the Health Department's online, interactive health data system at nyc.gov/health/EpiQuery

Data & Statistics at nyc.gov/health/data