HIV/AIDS in New York City

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Trends in HIV/AIDS
New York City, 1981–2010

As reported to NYC DOHMH by September 30, 2011. PLWHA, Persons living with HIV/AIDS.
Data on deaths outside New York City are incomplete.

Number of Reported PLWHA
Number of New HIV/AIDS Diagnoses and Deaths

Calendar Year

First cases of PCP, KS reported from NYC, LA
AIDS enters the nomenclature
AIDS case definition expanded (CD4 <200, 26 OIs)
NYS HIV reporting law takes effect
HIV identified as causative agent
First commercial EIA, screening of US blood supply begins
AIDS case reporting mandated by NYS
CDC AIDS case definition (23 OIs) implemented
HIV surveillance expands to include incidence surveillance
NYS expands AIDS reporting to include HIV
New HIV Diagnoses

New HIV Diagnoses, NYC 2007-2011

As reported to the New York City Department of Health and Mental Hygiene by September 30, 2012.

Since 2007, about one-fifth of those diagnosed with HIV are concurrently diagnosed with AIDS.

Concurrent HIV/AIDS Diagnoses¹ as Percent of Total HIV Diagnoses in NYC, 2007-2011

New HIV Diagnoses among Adults and Adolescents in 2007, United States

NYC has a heavy disease burden in terms of number of new diagnoses, but a lower HIV case rate relative to other urban areas.

¹ AIDS diagnosis, HIV diagnosis at any stage of HIV disease.
² As reported to the New York City Department of Health and Mental Hygiene by September 30, 2012.
Rate based on 2010 Census population.
As reported to the New York City Department of Health and Mental Hygiene by September 30, 2012.

UHF boundaries used in this map have been updated from previous maps.

Denominators for prevalence based on 2010 Census population.
As reported to the New York City Department of Health and Mental Hygiene by September 30, 2012.

As reported to the New York City Department of Health and Mental Hygiene by September 30, 2012.

As reported to the New York City Department of Health and Mental Hygiene by September 30, 2012.

2011 Age-adjusted Death Rates

Age-adjusted to citywide population of PWHA in 2011.
As reported to the New York City Department of Health and Mental Hygiene by September 30, 2012.

New HIV Diagnoses by Sex, NYC 2007-2011

New HIV Diagnoses among Males by Transmission Risk, NYC 2007-2011

New HIV Diagnoses in Men Who Have Sex with Men (MSM) by Age, NYC 2007-2011

New HIV (Non-AIDS) Diagnoses in Men Who Have Sex with Men (MSM) by Age, NYC 2007-2011
New HIV Diagnoses among Females by Transmission Risk Category, NYC 2007-2011

% of all new HIV diagnoses in females

- Heterosexual
- Unknown
- IDU

Year of HIV Diagnosis

HIV Diagnosis Rates by Age, NYC 2007-2011

New HIV diagnoses per 100,000 pop.

Year of Diagnosis

HIV Diagnosis Rates by Race/Ethnicity, NYC 2007-2011

New HIV diagnoses per 100,000 pop.

Year of Diagnosis

HIV/AIDS among MSM in NYC, 2011

Basic Statistics

- 2,645 new HIV diagnoses among males
- 1,749 new HIV diagnoses among MSM (66% of male diagnoses)
  - Includes 265 HIV concurrent with AIDS diagnoses (15%)
  - Excludes 45 new HIV diagnoses among MSM/IDU
- 804 new AIDS diagnoses among MSM
- 39,846 MSM living with HIV/AIDS (35% of all PLWHA)
- 293 deaths among MSM with HIV/AIDS (8.0 deaths per 1,000 MSM with HIV/AIDS*)

Number of New HIV Diagnoses among Males by Race/Ethnicity and Transmission Risk in NYC, 2011

- Black (Non-Hispanic)
- Hispanic
- White
- Asian/Pacific Islander

Race/Ethnicity

Number of New HIV Diagnoses (N)
Demographics of Acute HIV Cases (N=205), NYC 2011

<table>
<thead>
<tr>
<th>Sex</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>179</td>
<td>88.6</td>
</tr>
<tr>
<td>Female</td>
<td>27</td>
<td>11.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race/ethnicity</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>69</td>
<td>33.7</td>
</tr>
<tr>
<td>Hispanic</td>
<td>71</td>
<td>34.6</td>
</tr>
<tr>
<td>White</td>
<td>56</td>
<td>27.3</td>
</tr>
<tr>
<td>Other*</td>
<td>9</td>
<td>4.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age group (years) at diagnosis</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>13-19</td>
<td>14</td>
<td>6.8</td>
</tr>
<tr>
<td>20-29</td>
<td>96</td>
<td>46.6</td>
</tr>
<tr>
<td>30-39</td>
<td>59</td>
<td>28.4</td>
</tr>
<tr>
<td>40-49</td>
<td>33</td>
<td>16.1</td>
</tr>
<tr>
<td>50-59</td>
<td>11</td>
<td>5.4</td>
</tr>
<tr>
<td>60+</td>
<td>1</td>
<td>0.5</td>
</tr>
</tbody>
</table>

*Other race/ethnicity includes Asian/Pacific Islander, Native American, and Multiracial

Care and clinical status of persons with HIV/AIDS in NYC in 2011 as based on HIV surveillance data.
HIV Testing in NYC Boroughs
(Percent of NYC residents, aged 18 and older, who HIV tested in the last year, 2011)

2011 NYC Community Health Survey. Bureau of Epidemiology Services, NYC DOHMH

Median CD4 Count at Diagnosis\textsuperscript{1} among Persons Newly Diagnosed with HIV in NYC, 2007–2011

Median CD4 count at HIV diagnosis in NYC increased from 2007 to 2011.\textsuperscript{2}

\textsuperscript{1}Only persons with a CD4 count reported within 12 months of their HIV diagnosis date were included. The earliest CD4 count relative to HIV diagnosis date was used in the calculation of median CD4 at HIV diagnosis. Median CD4 at diagnosis as reported to the NYC DOHMH by September 30, 2012.

Median CD4 Count at Diagnosis\textsuperscript{1} among Persons Newly Diagnosed with HIV by Sex in NYC, 2011

Males had a higher median CD4 count at diagnosis than females in 2011.\textsuperscript{3}

\textsuperscript{1}Only persons with a CD4 count reported within 12 months of their HIV diagnosis date were included. The earliest CD4 count relative to HIV diagnosis date was used in the calculation of median CD4 at HIV diagnosis. As reported to the NYC DOHMH by September 30, 2012.

Median CD4 Count at Diagnosis\textsuperscript{1} among Persons Newly Diagnosed with HIV by Race/Ethnicity in NYC, 2011

Whites had the highest median CD4 count at diagnosis in 2011.\textsuperscript{4}

\textsuperscript{1}Only persons with a CD4 count reported within 12 months of their HIV diagnosis date were included. The earliest CD4 count relative to HIV diagnosis date was used in the calculation of median CD4 at HIV diagnosis. As reported to the NYC DOHMH by September 30, 2012.

Median CD4 Count at Diagnosis\textsuperscript{1} among Persons Newly Diagnosed with HIV by Transmission Risk\textsuperscript{2} in NYC, 2011

MSM had the highest median CD4 count at diagnosis in 2011.\textsuperscript{5}

\textsuperscript{1}Only persons with a CD4 count reported within 12 months of their HIV diagnosis date were included. The earliest CD4 count relative to HIV diagnosis date was used in the calculation of median CD4 at HIV diagnosis. \textsuperscript{2}Data for persons with perinatal transmission risk not presented due to small numbers. As reported to the NYC DOHMH by September 30, 2012.

Median CD4 Count at Diagnosis\textsuperscript{1} among Persons Newly Diagnosed with HIV by Borough of Residence in NYC, 2011

By NYC borough, Manhattan and Bronx residents had the highest median CD4 count at diagnosis in 2011.\textsuperscript{6}

\textsuperscript{1}Only persons with a CD4 count reported within 12 months of their HIV diagnosis date were included. The earliest CD4 count relative to HIV diagnosis date was used in the calculation of median CD4 at HIV diagnosis. As reported to the NYC DOHMH by September 30, 2012.
Timely Initiation of Care among Persons Newly Diagnosed with HIV in NYC, 2007–2011

The proportion of persons newly diagnosed with HIV with timely initiation of care increased between 2007 and 2011. CD4 count (or percent) or HIV VL value reported to DOHMH as part of routine surveillance considered to be a proxy for receipt of HIV-related medical care. As reported to the NYC DOHMH by September 30, 2012.

<table>
<thead>
<tr>
<th>Year</th>
<th>Timely Initiation of Care (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>50%</td>
</tr>
<tr>
<td>2008</td>
<td>60%</td>
</tr>
<tr>
<td>2009</td>
<td>61%</td>
</tr>
<tr>
<td>2010</td>
<td>64%</td>
</tr>
<tr>
<td>2011</td>
<td>68%</td>
</tr>
</tbody>
</table>

By age, children were most likely to have timely care initiation. Among adults, persons aged 30-59 were most likely to have timely care initiation.

### Timely Initiation of Care among Persons Newly Diagnosed with HIV by Race/Ethnicity in NYC, 2011

Over 70% each of newly diagnosed whites, Hispanics and Asians had timely initiation of care in 2011. Native Americans and multiracial persons are not presented due to small numbers; API=Asian/Pacific Islanders.

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Timely Initiation of Care (%)</th>
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<tbody>
<tr>
<td>Black</td>
<td>62%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>72%</td>
</tr>
<tr>
<td>White</td>
<td>71%</td>
</tr>
<tr>
<td>API</td>
<td>72%</td>
</tr>
</tbody>
</table>

### Timely Initiation of Care among Persons Newly Diagnosed with HIV by Region of Birth in NYC, 2011

Overall, foreign-born persons were more likely than the US-born to initiate timely care in 2011. Among the foreign-born, the proportion initiating timely care ranged by region from 66% to 84%.

<table>
<thead>
<tr>
<th>Region of Birth</th>
<th>Timely Initiation of Care (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>US-born*</td>
<td>64%</td>
</tr>
<tr>
<td>Foreign-born</td>
<td>72%</td>
</tr>
<tr>
<td>Africa</td>
<td>60%</td>
</tr>
<tr>
<td>Asia</td>
<td>73%</td>
</tr>
<tr>
<td>Caribbean</td>
<td>72%</td>
</tr>
<tr>
<td>Central America</td>
<td>66%</td>
</tr>
<tr>
<td>Europe</td>
<td>86%</td>
</tr>
<tr>
<td>South America</td>
<td>75%</td>
</tr>
</tbody>
</table>

### Proportion of PLWHA in 2011 with ≥2 CD4 or VL Tests Ordered by an NYC Provider in 2011, at Least 3 Months Apart, NYC

Proportion of PLWHA with ≥1 CD4/VL

<table>
<thead>
<tr>
<th>Category</th>
<th>Proportion of PLWHA (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLWHA with ≥1 CD4/VL</td>
<td>63%</td>
</tr>
<tr>
<td>PLWHA with ≥2 CD4/VL, ≥3 months apart</td>
<td>57%</td>
</tr>
<tr>
<td>PLWHA with ≥2 CD4/VL, ≥3 months apart</td>
<td>54%</td>
</tr>
</tbody>
</table>

Over half of persons living with HIV/AIDS in 2011 in NYC had at least 2 CD4 or VL tests, at least 3 months apart, in 2011.

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1. MSM: Men who have sex with men; IDU: injection drug users. Persons with unknown risk not shown. See Appendix for more details on risk.
2. Proportion of population of newly diagnosed persons are not presented due to small numbers.
3. Timeliness rates were similar by HIV transmission risk in 2011.
4. Persons with unknown risk are not shown.
5. Proportion of population of newly diagnosed persons are not presented due to small numbers.
6. PLWHA are considered by the Human Resources Service Administration (HRSA) to be retained in continuous medical care if they have ≥2 medical visits at least 90 days apart within a 12-month period.
Over half of persons newly diagnosed with HIV in NYC in 2011 were virally suppressed by 12 months after diagnosis.

Viral suppression is defined as viral load ≤ 200 copies/mL. As reported to the NYC DOHMH by September 30, 2012.

Nearly three-quarters of persons living with HIV/AIDS and under clinical monitoring in NYC in 2011 had an undetectable last viral load.

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We have done it before...

Perinatally HIV-infected Children (n=3,945) by Year of Birth and Vital Status (NYC, 1977-2010)

The number of HIV-infected infants born each year decreased dramatically from the peak in 1990. This coincides with the use of perinatal prevention measures. 97% were born in NYC.

Appendix
Technical notes (1)

- Data presented by borough exclude persons with unknown residence or living outside of NYC. The proximity of HIV-infected New Yorkers to HIV medical care providers with offices outside of NYC may account for differences in care initiation by borough. Because the HIV Epidemiology and Field Services Program does not receive HIV laboratory reports from providers located outside of NYC, receipt of HIV-related medical care may be underestimated for NYC residents receiving care from providers outside of NYC, and for former NYC residents who have re-located permanently to another jurisdiction where they live and receive care.
- Newly diagnosed persons who die during the follow-up period (e.g., within 3 months from diagnosis for linkage analyses) are included in the denominator.
- Heterosexual risk includes persons who had heterosexual sex with an HIV-infected person, an injection drug user, or a person who has received blood products. For females only, heterosexual risk also includes history of prostitution, 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.
- Unless otherwise noted, numbers and percents are rounded to the nearest whole number or nearest tenth.
- As noted throughout, the analyses summarized in this slide set utilized CD4 and viral load tests reported to surveillance as proxies for the receipt of HIV-related medical care. Because CD4 and viral load tests are a proxy rather than direct measure of the receipt of HIV-related medical care, some patients may be misclassified as having received HIV-related medical care when they did not, and vice versa. Additionally, the validity of CD4 and viral load tests as a proxy for HIV-related medical care may vary during the lifetime of a PLWHA.

Thank You

Acknowledgements
Sarah Braunstein
Katie Lewis
Julie Myers
Colin Shepard
Monica Sweeney
Ben Tsoi
Jay Varma
HIV/AIDS in New York City, 2011

• 3,404 new HIV diagnoses (41.6 diagnoses per 100,000 persons)
  – 2,734 HIV without AIDS
  – 670 HIV concurrent with AIDS (19.7%)
• 2,208 new AIDS diagnoses
  – Includes 670 concurrent HIV/AIDS diagnoses
• 113,319 persons living with HIV/AIDS
  – 1.4% of the population of NYC
• 1,690 deaths among persons with HIV/AIDS (14.9 deaths per 1,000 persons)

As reported to the New York City Department of Health and Mental Hygiene by September 30, 2012.

Timely Initiation of Care among Persons Newly Diagnosed with HIV in NYC, 2011

As reported to the New York City Department of Health and Mental Hygiene by September 30, 2012.

Median CD4 Count at Diagnosis among Persons Newly Diagnosed with HIV by Age in NYC, 2011

As reported to the New York City Department of Health and Mental Hygiene by September 30, 2012.
Who is Considered Transgender by NYC HIV/AIDS Surveillance?

- Persons whose current gender identity differs from their sex assigned at birth*
- Persons classified as transgender can be of any sexual orientation, and may or may not have received hormone therapy or sex reassignment surgery

* Sex assigned at birth refers to the sex an individual is assigned at birth based on their anatomy. The phrase is equivalent to “sex of record” and acknowledges that, for reasons, some transgender persons assigned male at birth and identifying as women may have the same sex as those assigned female.

How is Transgender Status* Collected by NYC HIV/AIDS Surveillance?

- Collected routinely since 2005 for newly reported cases
- Must be reported by medical provider as transgender or documented in medical record, either of which may reflect patient report
- Requires accurate collection of both sex assigned at birth and current gender identity
- Surveillance classifies all transgender persons as one of:
  - Transgender woman (MTF) = male-to-female, male sex assigned at birth and identifies as a woman
  - Transgender man (FTM) = female-to-male, female sex assigned at birth and identifies as a man

* Transgender status refers to whether a person identifies as transgender. Some refer to this as “transgender identity.”


Basic Statistics

- 191 new HIV diagnoses in 2007–2011
  - 189 transgender women (MTF; 99%)
  - 2 transgender men (FTM; 1%)
- Includes 27 diagnoses of HIV concurrent with AIDS* (14%)
- Transgender persons comprised 1% of all new HIV diagnoses in NYC in 2007–2011

New HIV Diagnoses among Transgender Persons in NYC, 2011

Basic Statistics

- 31 new HIV diagnoses in 2011
  - 31 transgender women (MTF; 100%)
  - 0 transgender men (FTM; 0%)
- Includes 5 diagnoses of HIV concurrent with AIDS* (16%)
- Transgender persons comprised 1% of all new HIV diagnoses in NYC in 2011

Number of New HIV Diagnoses among Transgender Persons by Gender Identity and Year of Diagnosis, NYC 2007-2011

Between 2007 and 2011, 191 transgender persons were newly diagnosed with HIV. This included 31-43 transgender women (MTF) and 0-1 transgender men (FTM) each year.

As reported to the New York City Department of Health and Mental Hygiene by September 30, 2012.