Medical Monitoring Project (MMP)
Results from the MMP survey of people receiving HIV care in 2011-2012 in NYC

HIV Epidemiology and Field Services Program,
Bureau of HIV/AIDS Prevention and Control,
New York City Department of Health and Mental Hygiene
Background
Medical Monitoring Project (MMP)

- The Centers for Disease Control and Prevention (CDC) estimates that 1.1 million persons aged 13 years and older are living with HIV infection, including 180,900 who are unaware of their infection. CDC, HIV Surveillance Supplemental Report 2013;18(No. 5).

- In NYC, at the end of 2013, 117,618 persons were diagnosed with HIV/AIDS (NYC DOHMH, 2013)

- MMP is a national study of persons living with HIV/AIDS receiving outpatient medical care for HIV conducted by CDC with local partners
Objectives
Medical Monitoring Project (MMP)

- Develop greater understanding of the health status and health-related needs of PLWHA, and their HIV transmission risk and prevention behaviors
- Conduct analysis on locally and nationally representative samples of HIV infected adults in care
- Inform the development and planning of policy and programs for PLWHA, e.g. Ryan White CARE Act planning councils and consortia
Methods
Medical Monitoring Project (MMP)

- Multi-year (2005-open) project of US adults in outpatient care for HIV
- Cross-sectional design
- Annual multi-stage probability sample
Methods
Medical Monitoring Project (MMP): 3-stage Sample Design

1\textsuperscript{st} stage – local areas

2\textsuperscript{nd} stage - providers

3\textsuperscript{rd} stage - patients
Methods
Medical Monitoring Project (MMP): Sample Selection

• Stage 1 – Local Areas:
  – 23 areas selected (16 states, 1 US territory, and 6 cities)
  – Probability of selection is proportional to size (PPS) (# of reported living AIDS cases in 2002)
  – Includes >80% of US AIDS cases in 2002
Methods
Medical Monitoring Project (MMP): Sample Selection

• Stage 2 – Medical Providers (facilities or private providers):
  • Providers who deliver HIV medical care
    – Monitor CD4 count, viral load
    – Prescribe antiretroviral therapy (ART)
  • Probability of selection is proportional to size (facilities with higher patient loads are more likely to be selected)
Methods
Medical Monitoring Project (MMP): Sample Selection

• Stage 3 – Patients seen by a Selected Provider
  • Randomly sampled
  • Eligibility
    – HIV-infected
    – ≥18 years of age
    – received HIV medical care at facility between January 1\textsuperscript{st} and April 30\textsuperscript{th} in a given cycle year
  • Participation voluntary; $40 incentive (MetroCard or cash or Visa Card)

Note: In 2012 MMP was designated a surveillance activity and did not require informed consent for medical record abstractions
Methods
Medical Monitoring Project (MMP)

• Data collection using 2 sources:
  – Computer-based, structured face-to-face interview conducted in private or phone interview (few) by trained interviewer
  – Medical record abstractions
    – In 2011 only patients who consented to an interview had medical record abstractions (MRA) (2 interviews had no MRA)
    – In 2012 all patients were eligible for an MRA regardless of having been interviewed

• Interview data collected:
  – Clinical status including viral loads, CD-4 counts and other general health data
  – Treatment adherence
  – HIV-related service needs and utilization
  – Health behaviors (sexual, drug use, prevention)
Methods
Medical Monitoring Project (MMP)

• Analysis:
  - Descriptive statistics (frequency and percentage distributions)
  - Pearson Chi-Square test for associations between race/ethnicity and selected outcomes
  - Significance level set at P<0.05
NYC 2011 and 2012 MMP Sample

Facility Sampling Frame
N=390

Facility Sample Selected
N=35

2011 Facilities Agreeing to Participate
N= 24

2011 Patient Sample
N=800

2011 Interviews Completed *
N=274

* Interviews conducted Aug/11 to April/12

2012 Facilities Agreeing to Participate
N= 26

2012 Patient Sample
N=800

2012 Interviews Completed ** †
N=421

** Interviews conducted July/12 to April/13
† Excludes persons also interviewed in 2011

Analysis sample
2011-2012 interviews N=695
MMP Participants' Social Demographics
Participants’ Social Demographics, (N=695)
MMP, NYC, 2011/2012

(Mean age = 47.9 years, SD = 11.1, range 49-84)
Participants’ Social Demographics, (N=695)
MMP, NYC, 2011/2012 (cont’d)

Main Source of Income Past 12 Months:

- Salary/wages: 27.1%
- SSI/SSDI*: 42.7%
- Public assistance: 22.9%
- Spouse/Family: 5.2%
- Other: 1.4%
- No income: 0.6%

Received Any Public Assistance Past 12 Months:
- 46.6%

Covered by Health Insurance Past 12 Months:
- 98.1%

* Supplemental Security Income (SSI); Social Security Disability Income (SSDI)
Participants’ Social Demographics, (N=695) Past 12 Months
MMP, NYC, 2011/2012 (cont’d)

Homelessness Past 12 Months:
(11.4%)

Jail Time Past 12 Months:
(7.2%)
MMP Participants' Clinical Characteristics
Antiretroviral Therapy (ART) and Adherence
MMP, NYC, 2011/2012

- Ever taken ART: 668 (96.3%)
- Currently on ART: 650 (94.5%)
- Missed ART Dose (any dose in the past 3 days): 85 (13.1%)

* Note: N based on non-missing responses
### HIV Treatment by Race/Ethnicity

**MMP, NYC, 2011/2012**

<table>
<thead>
<tr>
<th>Ever on ART</th>
<th>N=694</th>
<th>N=328</th>
<th>N=289</th>
<th>N=56</th>
<th>N=21</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Total</td>
<td>96.3%</td>
<td>96.7%</td>
<td>96.2%</td>
<td>96.4%</td>
<td>90.5%</td>
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<td>Black</td>
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<tr>
<td>Hispanic</td>
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<tr>
<td>White</td>
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</tr>
<tr>
<td>Other</td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Currently on ART</th>
<th>N=688</th>
<th>N=326</th>
<th>N=285</th>
<th>N=56</th>
<th>N=21</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Total</td>
<td>94.5%</td>
<td>94.8%</td>
<td>94.7%</td>
<td>94.6%</td>
<td>85.7%</td>
</tr>
<tr>
<td>Black</td>
<td></td>
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<tr>
<td>Hispanic</td>
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<tr>
<td>White</td>
<td></td>
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<tr>
<td>Other</td>
<td></td>
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</tr>
</tbody>
</table>

* Note: N based on non-missing responses
## Non-Adherence by Race/Ethnicity Among Those Currently on ART

**MMP, NYC, 2011/2012**

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Dosing * Non-Adherence</th>
<th>Timing ** Non-Adherence</th>
<th>Food *** † Non-Adherence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total N</td>
<td>Yes</td>
<td>%</td>
</tr>
<tr>
<td>Black</td>
<td>309</td>
<td>48</td>
<td>15.5%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>270</td>
<td>33</td>
<td>12.2%</td>
</tr>
<tr>
<td>White</td>
<td>53</td>
<td>3</td>
<td>5.7%</td>
</tr>
<tr>
<td>Other</td>
<td>18</td>
<td>1</td>
<td>5.6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>650</td>
<td>85</td>
<td>13.1%</td>
</tr>
</tbody>
</table>

* Missed any dose in the past three consecutive days; ** Did not adhere to specific medication schedule (timing); *** Did not adhere to specific food instructions; † Asked only of those with food restrictions
MMP Participants' Service Utilization
Healthcare Service Utilization by Race/Ethnicity, Past 12 Months
MMP, NYC, 2011/2012

ER Services, HIV-related

- Total: 6.33% (N=695)
- Black: 6.4% (N=328)
- Hispanic: 6.9% (N=290)
- White: 1.8% (N=56)
- Other: 9.5% (N=21)

* p = .0003

Hospitalization, HIV-related

- Total: 4.9% (N=695)
- Black: 2.7% (N=328)
- Hispanic: 7.2% (N=290)
- White: 0% (N=56)
- Other: 19.1% (N=21)

* p = .0003

* p Value refers to differences between groups for HIV-related hospitalizations
Mental Health Services Provision by Race/Ethnicity, Past 12 months
MMP, NYC, 2011/2012

People who received Mental Health Services

- Total: 34.5% (N=695)
- Black: 32.3% (N=328)
- Hispanic: 37.6% (N=290)
- White: 33.9% (N=56)
- Other: 28.6% (N=21)
Unmet Need for Mental Health Services Among Those Not Receiving the Service by Race/Ethnicity, Past 12 Months
MMP, NYC, 2011/2012

Yes = Unmet Need
No = Service Not Needed
Housing Services Provision by Race/Ethnicity, Past 12 Months
MMP, NYC, 2011/2012

People who received Housing Services

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Percentage</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>21.4%</td>
<td>695</td>
</tr>
<tr>
<td>Black</td>
<td>23.8%</td>
<td>328</td>
</tr>
<tr>
<td>Hispanic</td>
<td>21.4%</td>
<td>290</td>
</tr>
<tr>
<td>White</td>
<td>10.7%</td>
<td>56</td>
</tr>
<tr>
<td>Other</td>
<td>14.3%</td>
<td>21</td>
</tr>
</tbody>
</table>
Unmet Need for Housing Services Among Those Not Receiving the Service by Race/Ethnicity, Past 12 Months
MMP, NYC, 2011/2012

Yes = Unmet Need
No = Service Not Needed
MMP Participants' Drug Use Profile
Drug and Alcohol Use (N=695), Past 12 Months
MMP, NYC, 2011/2012

- Injection Drug use: 15 (2.2%)
- Non-Injection Drug Use: 156 (22.4%)
- Alcohol Use: 351 (50.5%)
- Alcohol Binge Use: 84 (12.1%)

* For men, binge drinking was defined as 5 or more drinks in one sitting in the past 30 days. For women, binge drinking was defined as 4 or more drinks in one sitting in the past 30 days.
Non-Injection Drug Use* (N=695), Past 12 Months
MMP, NYC, 2011/2012

* Includes patients using one or more drugs; categories are not mutually exclusive
Sexual Activity and Sexual Risk Behaviors
Sexually Active Participants by Gender Sex Partners’, Past 12 Months
MMP, NYC, 2011/2012

- **Male and Female Combined (N=674)**:
  - Male (N=419):
    - Same-Sex Only: 21.7%
    - Heterosexual Only: 33.2%
    - Both: 1.9%
    - Not Active: 30.6%
  - Female (N=255):
    - Same-Sex Only: 37.8%
    - Heterosexual Only: 33.7%
    - Both: 49.8%
    - Not Active: 0.8%
- **Transgender (N=14)**:
  - Same-Sex Only: 35.7%
  - Heterosexual Only: 2.8%

*Note: N based on non-missing responses*
Among the Sexually Active, Number of Sex Partners by Partnership Gender Type, Past 12 Months
MMP, NYC, 2011/2012

<table>
<thead>
<tr>
<th>Partnership Type *</th>
<th>N</th>
<th>Median</th>
<th>Min, Max</th>
<th>IQR **</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male w/ Female</td>
<td>152</td>
<td>1</td>
<td>1, 10</td>
<td>(1, 2)</td>
</tr>
<tr>
<td>Male w/ Male</td>
<td>146</td>
<td>3</td>
<td>1, 60</td>
<td>(1, 6)</td>
</tr>
<tr>
<td>Female w/ Male</td>
<td>120</td>
<td>1</td>
<td>1, 20</td>
<td>(1, 1)</td>
</tr>
</tbody>
</table>

* Partnership types are not mutually exclusive  ** Interquartile Range
Partner Gender Among Participants Reporting Sexual Activity by Participant Gender, Past 12 Months
MMP, NYC, 2011/2012

Male Participants (N = 291)

- Male sex partners only: 47.8%
- Female sex partners only: 48.4%
- Both: 3.8%

Female Participants (N = 128)

- Male sex partners only: 93%
- Female sex partners only: 5.5%
- Both: 1.5%

Transgender Participants (N = 5)

- Any gender partner: 100%
<table>
<thead>
<tr>
<th>Sexual Behaviors by Partnership Gender Among Sexually Active Male Participants, Past 12 Months*</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMP, NYC, 2011/2012</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Male Sex Partner (N = 150)</th>
<th>Any anal</th>
<th>Any unprotected anal</th>
</tr>
</thead>
<tbody>
<tr>
<td>125 (83.3%)</td>
<td></td>
<td>64 (42.7%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Female Sex Partner (N = 152)</th>
<th>Any vaginal</th>
<th>Any unprotected vaginal</th>
<th>Any anal</th>
<th>Any unprotected anal</th>
<th>Any unprotected anal or vaginal</th>
</tr>
</thead>
<tbody>
<tr>
<td>146 (96.1%)</td>
<td>33 (21.7%)</td>
<td>24 (15.8%)</td>
<td>9 (5.9%)</td>
<td>36 (23.7%)</td>
<td></td>
</tr>
</tbody>
</table>

* Male sex and female sex partners n's are not mutually exclusive
Sexual Behaviors by Partnership Gender among Sexually Active Female Participants with Male Partners, Past 12 Months
MMP, NYC, 2011/2012

Male Sex Partner (N = 121)

- Any vaginal: 118 (97.5%)
- Any unprotected vaginal: 36 (29.8%)
- Any anal: 12 (9.9%)
- Any unprotected anal: 2 (1.7%)
- Any unprotected anal or vaginal: 37 (30.6%)
Exposure to Individual Counseling or Group Prevention
Exposure to Prevention (N=695), Past 12 Months
MMP, NYC, 2011/2012

**Received any free condoms**
- Yes (66%)
- No (34%)

**Talked with a counselor (one-on-one) about HIV prevention**
- Yes (44.3%)
- No (55.7%)

**Participated in group sessions to talk about HIV prevention**
- Yes (22.7%)
- No (77.3%)

**Participated in group sessions or talked with a counselor about HIV prevention**
- Yes (51.9%)
- No (48.1%)
Exposure to Prevention Among Sexually Active Participants (N=418), Past 12 Months
MMP, NYC, 2011/2012

- **Received any free condoms**
  - Yes (79%)
  - No (21%)

- **Talked with a counselor (one-on-one) about HIV prevention**
  - Yes (47.6%)
  - No (52.4%)

- **Participated in group sessions to talk about HIV prevention**
  - Yes (24.6%)
  - No (75.4%)

- **Participated in group sessions or talked with a counselor about HIV prevention**
  - Yes (52%)
  - No (48%)
Provision of Condoms and Questions Asked by Physicians or Other Medical Providers about Prevention, Past 12 months
MMP, NYC, 2011/2012

- Provided Condoms: 50.9%
- Condom Use: 59.0%
- Partner Disclosure of HIV Status: 51.5%
- # of sex partners: 52.9%
- # of new sex partners: 47.6%
- Having any STIs: 43.4%
- Testing for STIs: 47.1%
- Drugs/Alcohol use: 36.8%
- Drugs/Alcohol before sex: 29.5%
Type of Action Taken by Sexually Active Respondents Who Took Actions to Reduce the Transmission of HIV (N=304), Past 12 Months
MMP, NYC, 2011/2012

- Used Condoms all the Time: 53.3%
- Used Condoms Frequently: 24.3%
- Only one Sex Partner: 17.4%
- Adhered to Medication: 6.6%
- Abstinence: 6.3%
- Reduced # of Sex Partners: 4.0%
- Disclosed HIV Status: 3.3%
- Stopped/Reduced IV Drug Use: 1.6%
- Sought other HIV + Partners: 0.3%
Awareness and use of NYC Condom, Ever
MMP NYC, 2011/2012

Have you ever heard of or seen the NYC Condom?

- Yes: 74.9%
- No: 24.8%
- Don't Know/Refused to Answer: 0.3%

N=690*

Have you or your sexual partner ever used the NYC Condom?

- Yes: 40.1%
- No: 58.8%
- Don't Know/Refused to Answer: 1.0%

N=690*

* Note: N based on non-missing responses
Reasons for Not using the NYC Condom, Past 12 Months
MMP NYC, 2011/2012

Don’t Use Condoms: 13.2%
Would Rather Buy Them: 11.3%
Prefer other Brand: 23.6%
Poor Quality: 29.3%
Other: 17.9%
Don’t Know/Refused to Answer: 4.7%

N=106*

* Among the sexually active who had seen or heard of the NYC condom, but not used it.
Exposure to and Use of NYC Condom, Last 6 months
MMP, NYC, 2011/2012

Have you ever seen or heard of an NYC Condom (Among Everyone)
N = 690*

Have you taken or been given an NYC Condom (Among the Sexually Active)
N = 417*

Have you or your sexual partner used the NYC condom (Among the Sexually Active)
N = 417*

On a scale of 1 to 5 † how would you rate the NYC Condom (Among the Sexually Active who have used the NYC Condom)
N = 174

†1 = very poor; 5 = very high quality
* Note: N based on non-missing responses
Do you think that taking your medication regularly affects how well it works?

- Yes: 88.1%
- No: 9.3%
- Don’t Know/Refused to Answer: 2.6%

N=695

Do you know about resistance to HIV antiretroviral medicines?

- Yes: 73.6%
- No: 24.8%
- Don’t Know/Refused to Answer: 1.6%

N=695

Have you ever been told by a provider that you are resistant to any HIV antiretroviral medicines?

- Yes: 77%
- No: 20.6%
- Don’t Know/Refused to Answer: 2.5%

N=695
Analysis and Data Limitations

- Data are based on self-report
- Stigmatized behaviors (e.g., sex and drug risk behaviors) may be underreported
- Cross-sectional design, therefore cannot determine causal relationships
- Caution is required in making generalizations to all NYC HIV-infected patients receiving care for HIV:
  - Some sampled facilities did not participate
  - Low response rate in patient sample
  - Unweighted data are drawn from a complex survey design — sample prevalences may differ from weighted population prevalence estimates
References

Centers for Disease Control (CDC), *HIV Surveillance Supplemental Report 2013;18*(No. 5).

## The MMP Research Team

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