Characteristics of individuals who are HIV-positive, out of HIV care, and newly diagnosed with Sexually Transmitted Infections 2014-2016

New York City Department of Health and Mental Hygiene
Bureau of Sexually Transmitted Disease Control
Research and Evaluation Unit
Individuals adherent to ARTs w/ an undetectable viral load cannot transmit HIV to others

Test and Treat strategy
  ART initiation immediately after diagnosis decreases community viral load & reduce rate of new infections

Need for retention-in-care and ART adherence support

1. Determine the characteristics of persons who are not engaged in HIV care.

2. Determine the characteristics of out of care (OOC) individuals that facilitate successful re-engagement in HIV care.
People Living with HIV/AIDS (PLWHA) in NYC and Presumed Living as of December 31, 2015

121,616 PLWHA

- 28% Women (34,111)
- 72% Men (87,505)
- 54% MSM (47,432)
- 30% African-American (14,416)
- 30% Hispanic (14,073)
NYC STI Diagnoses in 2015
Cumulative Gonorrhea Cases
There were 16,913 gonorrhea (GC) cases in 2015. Among those cases 73% (12,262) were men. This equals a case rate of 302.9 per 100,000.

GC Cases by Age
76% of 2015 male GC cases were between the ages 20-39.

GC Cases by Race/Ethnicity
45% (5,476) of male cases were among Black and Hispanic men.
In 2015, there were 6,343 total syphilis cases. 90% (5,680) cases were among men.

966 (64%) were interviewed for Primary and Secondary syphilis. 79% (766) of cases interviewed reported engaging in sex with men (MSM).

1,521 Primary & Secondary syphilis cases.

Among the 766 MSM interviewed 49% were living with HIV.
NYC Partner Services Program
8 Sexual Health Centers located in four boroughs:
- Brooklyn
- Bronx
- Manhattan
- Queens

76 Partner Services Staff
**Disease Intervention Specialist**

Patients diagnosed with a STI at a BSTDC clinic

**Public Health Advisors**

Individuals diagnosed with a STI by an outside provider
- Community-based Organization
- Public Hospital
- Private Provider
Criteria for Conducting Partner Service Interviews for HIV+ Diagnoses

**HIV+ Diagnosis**
- Newly Diagnosed at BSTDC clinic
- Prevalent infection with new interviewable STI

**Interviewable STI Diagnoses**

**Syphilis**
- Pregnant women
- Neuro/Ocular symptoms
- Male w/ female partners
- Other criteria based on reactor grid

**Gonorrhea**
- Reduced susceptibility
Assessment of OOC Status

- **Self-reported HIV-care status during interviews**
  - Not based on HIV surveillance or provider confirmations
  - Documented in MAVEN

- **Partner Services staff conduct re-linkage activities**
  - Offers referrals
  - Verify linkage-to-care
Characteristics of HIV+ OOC Patients
116 prevalent HIV+ individuals diagnosed with incident STI’s
  ○ Male = 111
  ○ Female = 2
  ○ Transgender = 3

Sexual Health Center patients OR cases reported to BSTDC surveillance or by an outside providers

Investigated by 50 Partner Services staff

Following analyses consists of individuals who identified their current gender as MALE
Demographics of Previously Diagnosed HIV-Positive Males with Incident STI Infections, 2014-2016 (n=111)

- Race/Ethnicity
  - Non-Hispanic White
  - Non-Hispanic Black
  - Hispanic
  - Non-Hispanic Other
  - Missing
- Age Group
  - 18-29 years old
  - 30-39 years old
  - 40 years or older
  - Missing
- Sexual Identity
  - Heterosexual
  - Gay
  - Bisexual
  - Refused/Unknown
  - Missing
Characteristics of Previously Diagnosed HIV-Positive Males with Incident STI Infections, 2014-2016 (n=111)
Characteristics of Previously Diagnosed HIV-Positive Males with Incident STI Infections, 2014-2016 (n=111)

- Sex with anonymous partners w/n last 12 months:
  - Yes: 10%
  - No: 90%
  - Refused/Not Asked: 0%
  - Missing: 0%

- Sex with internet partners w/n last 3-12 months:
  - Yes: 25%
  - No: 75%
  - Refused/Not Asked: 20%
  - Missing: 0%

- Borough of Residence:
  - Manhattan: 30%
  - Brooklyn: 20%
  - Bronx: 15%
  - Queens: 15%

PERCENT
### Combination of STI Diagnoses among HIV-Positive Previously Diagnosed Male Patients, 2014-2016 (N=111)

<table>
<thead>
<tr>
<th>Single Diagnosis</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Syphilis</td>
<td>46</td>
<td>41%</td>
</tr>
<tr>
<td>Late Syphilis</td>
<td>33</td>
<td>30%</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>10</td>
<td>9%</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Two Diagnoses</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Syphilis &amp; Gonorrhea</td>
<td>8</td>
<td>7%</td>
</tr>
<tr>
<td>Early Syphilis &amp; Chlamydia</td>
<td>3</td>
<td>3%</td>
</tr>
<tr>
<td>Late Syphilis &amp; Gonorrhea</td>
<td>6</td>
<td>5%</td>
</tr>
<tr>
<td>Late Syphilis &amp; Chlamydia</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Gonorrhea &amp; Chlamydia</td>
<td>3</td>
<td>3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Three Diagnoses</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Syphilis, Gonorrhea and Chlamydia</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Latent Syphilis, Gonorrhea and Chlamydia</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

*Early Syphilis = Primary Syphilis (710); Secondary Syphilis (720); Early latent Syphilis (730)*

*Late Syphilis = Late latent Syphilis (745)*
Males Referred and Re-linked to Medical Care, 2014-2016 (N=111)

Males with a documented referral to HIV medical care

YES 66 59.46%
NO 33 29.73%
MISSING 12 10.81%

Males referred to HIV medical care with a documented successful linkage to HIV medical care

YES 13 21.67%
NO 14 23.33%
MISSING 33 55.00%
Multivariate Analysis of Characteristics of Males Referred-to-Care, 2014-2016

- Race/Ethnicity
- Age
- Sexual Identity
- Number of STI Diagnoses per patient
- Illicit drug use w/n past 12 months
- Length of time living with HIV/AIDS
- Total number of attempts to contact individuals
- STI Diagnoses

- Total male sex partners w/n past 12 months
- Total female sex partners w/n past 12 months
- Sex with anonymous partners w/n past 12 months
- Sex with internet partners w/n past 12 months
- Borough of residence
### Characteristics of Males who were successfully Referred-to-Care, 2014-2016

**Characteristics significantly associated with referral to care among male BSTDC patients, (N=111)**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Referred to care</th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of time living with HIV/AIDS prior to STI diagnosis</td>
<td>AOR</td>
<td>CI</td>
<td>P-value</td>
</tr>
<tr>
<td>2 years or more</td>
<td>ref</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2 years</td>
<td>1.51</td>
<td>0.32-7.2</td>
<td>0.61</td>
</tr>
<tr>
<td>Less than 1 year</td>
<td>3.21</td>
<td>1.29-7.99</td>
<td>0.01*</td>
</tr>
</tbody>
</table>

*p < 0.05
Linkage-to-care Characteristics of Males, 2014-2016

- **Age Group**
  - 18-29 years old
  - 30-39 years old
  - 40 years or older
  - Missing

- **Length of time living with HIV/AIDS prior to STI diagnosis**
  - Less than one year
  - 1-2 years
  - 2 years or more

- **STI Diagnoses**
  - Gonorrhea
  - Syphilis, only
  - Syphilis and other STIs
  - No attempts
  - One attempt
  - Two attempts
  - Three attempts
  - 4 or more attempts

- **Attempts to verify linkage-to-care**
  - Linked to care (n=13)
  - Not linked to care (n=14)
Men living with HIV
Males diagnosed within one year of STI infection were most likely to accept a referral to care.

Men living with HIV and LTC
Over 90% of those living with HIV less than a year were linked-to-care.

Successful Linkage
Linkage-to-care was highest among men 30-39 years old.

Successful LTC
Partner Services (PS) staff were only able to verify successful LTC for 22% of those referred.

STI Diagnoses
Linkage to care was more successful among men who were diagnosed with syphilis.
Programmatic Implications

- Documentation is key!
- Surveillance data is incomplete
- Partner Services staff time is valuable
- Quality vs. Quantity of attempts to contact
- Assess difference in documented LTC outcomes with new program model
Thanks!

ANY QUESTIONS?

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Examples:
Let's review some concepts

**YELLOW**
Is the color of gold, butter and ripe lemons. In the spectrum of visible light, yellow is found between green and orange.

**BLUE**
Is the color of the clear sky and the deep sea. It is located between violet and green on the optical spectrum.

**RED**
Is the color of blood, and because of this it has historically been associated with sacrifice, danger and courage.
Now you can use any emoji as an icon!
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