HIV Prevention Continuum among MSM, New York City, Spring 2016

Zoe Edelstein, PhD MS
Kathleen Scanlin, MPH
Cameron Findlater, MPH
Paul Salcuni, MPH
Demetre Daskalakis, MD MPH
Julie Myers, MD MPH

New York City Department of Health and Mental Hygiene

IAPAC 2017
Monday, June 5 2017
Background

- New York City (NYC) has one of the largest HIV epidemics in the US
  - 2,493 new diagnoses in 2015
  - 58% among men who have sex with men (MSM)

- Pre-exposure prophylaxis (PrEP) uptake is increasing among MSM in NYC, yet gaps remain

- NYC Health Department promotes PrEP among consumers and providers, with a focus on reducing disparities in access

- Identifying gaps and missed opportunities is a priority to drive evidence-informed public health, including elucidation of:
  - Steps leading to PrEP use (continua)
  - Information on barriers experienced by priority populations

Objectives

- Using data from NYC’s Sexual Health Survey among MSM:
  - Construct an HIV Prevention Continuum that monitors steps to PrEP use
  - Among those not using PrEP, describe interest and reasons for non-use
Methods: Data Source

• **Sexual Health Survey**: Cross-sectional, anonymous survey among NYC MSM; data collected semi-annually since 2009

• **Survey types:**
  • *In-person*: Bars/clubs and a public, outdoor space popular among MSM of color; interviewer-administered; incentivized ($15 gift card)
  • *Online*: 5-7 dating/hook-up sites popular among MSM of color (e.g., BGCLive, Grindr); self-administered; not incentivized
 Methods: Sample

• **Survey eligibility**: NYC resident, assigned male sex at birth, aged 18-40, reporting anal sex with a man in previous past 6 months

• **Analytic sample**: Spring 2016 survey respondents; data aggregated across in-person and online surveys; includes those considered “PrEP eligible”

• **PrEP eligibility**: Based on response to multiple survey questions
  • HIV-negative or status unknown
  • Report of any of the following in the previous 6 months: condomless anal sex; stimulant or injection drug use; transactional sex; PEP use; HIV-positive sexual partner; or STI diagnosis in past year
  • 78% of HIV-negative/unknown status sample
Methods: HIV Prevention Continuum

• **Construction of continuum**
  - Includes steps leading up to PrEP use
  - All steps considered actionable by public health programming/policy with the onus on providers
  - Continuum includes those considered PrEP-eligible

• **Steps beyond PrEP eligibility** Over previous 6 months, report of:
  1. Provider visit
  2. Sexual history taken by provider
  3. Discussed PrEP with provider
  4. Used PrEP

• **Data analysis**
  - Each step uses PrEP-eligible respondents as the denominator
  - Stratification by race/ethnicity with differences examined using regression adjusted for age
Methods: Interest and Reasons for Non-Use

• PrEP interest
  • Asked of those who had not used PrEP in previous 6 months (“PrEP non-users”) who were aware of PrEP
  • “How interested are you in taking PrEP as a daily pill?”

• Reasons for non-use
  • Asked of those with PrEP interest responses of “Very/Somewhat/Don’t Know”
  • “What are the reasons why you are not taking it?”

• Reasons for non-interest
  • Asked of those with PrEP interest responses of “Not at all”
  • “What are the reasons why you are not interested in taking it?”

• Data measures/analysis
  • Proportion calculated among PrEP-eligible respondents
  • Interest by race/ethnicity with differences examined using regression adjusted for age
  • “Reasons” questions: response options multi-select; based on question piloting in Fall 2015; write-in option; later categorized
## Description of PrEP-Eligible Sample

<table>
<thead>
<tr>
<th>Survey Type</th>
<th>n/N*</th>
<th>Col %</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-person</td>
<td>229/633</td>
<td>36%</td>
</tr>
<tr>
<td>Online</td>
<td>404/633</td>
<td>64%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>n/N*</th>
<th>Col %</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-29</td>
<td>361/633</td>
<td>57%</td>
</tr>
<tr>
<td>30-40</td>
<td>272/633</td>
<td>43%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>n/N*</th>
<th>Col %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black, non-Hispanic</td>
<td>106/475</td>
<td>22%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>134/475</td>
<td>28%</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>187/475</td>
<td>39%</td>
</tr>
<tr>
<td>Other</td>
<td>48/475</td>
<td>10%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Highest Level of Education</th>
<th>n/N*</th>
<th>Col %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than Bachelors degree</td>
<td>166/481</td>
<td>35%</td>
</tr>
<tr>
<td>Bachelors degree or higher</td>
<td>315/481</td>
<td>65%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Income</th>
<th>n/N*</th>
<th>Col %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $20,000</td>
<td>83/458</td>
<td>18%</td>
</tr>
<tr>
<td>$20,000 to $59,999</td>
<td>187/458</td>
<td>41%</td>
</tr>
<tr>
<td>$60,000 or greater</td>
<td>188/458</td>
<td>41%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insured</th>
<th>n/N*</th>
<th>Col %</th>
</tr>
</thead>
<tbody>
<tr>
<td>409/482</td>
<td>85%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aware of PrEP</th>
<th>n/N*</th>
<th>Col %</th>
</tr>
</thead>
<tbody>
<tr>
<td>520/545</td>
<td>95%</td>
<td></td>
</tr>
</tbody>
</table>

*Proportions calculated among those with response to corresponding question*
*Sample includes sexually active MSM aged 18-40 years and who report HIV-negative/unknown status. PrEP-eligible defined as reporting diagnosis of an anal STI in the past year or any of the following in the previous 6 months: unprotected anal intercourse, transactional sex, use of cocaine, crack, methamphetamines or injection drugs, using PEP or having had an HIV-positive partner.
HIV Prevention Continuum among NYC MSM Eligible for PrEP* by Race/Ethnicity

*Sample includes sexually active MSM aged 18-40 years and who report HIV-negative/unknown status. PrEP-eligible defined as reporting diagnosis of an anal STI in the past year or any of the following in the previous 6 months: unprotected anal intercourse, transactional sex, use of cocaine, crack, methamphetamines, or injection drugs, using PEP or having had an HIV-positive partner.
Interest in PrEP among Non-Users* who are Eligible and Aware of PrEP

*Report not using PrEP in previous 6 months

Very interested  Somewhat interested  Not at all interested  Don't know/Not sure

Very + Somewhat= 63%

Total Sample (n=351)

*Report not using PrEP in previous 6 months
Interest in PrEP among Non-Users* who are Eligible and Aware of PrEP, By Race/Ethnicity

*Report not using PrEP in previous 6 months

Note: Interest did not differ statistically significantly by race/ethnicity using age-adjusted regression model
## Top Reasons Given for PrEP Non-Use among Potentially Interested and Eligible MSM

<table>
<thead>
<tr>
<th>Reason(s) Given</th>
<th>n/N</th>
<th>Row %*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance/financial issues</td>
<td>70/238</td>
<td>29.4%</td>
</tr>
<tr>
<td>Worry about side effects</td>
<td>64/238</td>
<td>26.9%</td>
</tr>
<tr>
<td>Not enough information to decide whether to take PrEP</td>
<td>48/238</td>
<td>20.2%</td>
</tr>
<tr>
<td>Self-perceived low risk of exposure **,†</td>
<td>35/238</td>
<td>14.7%</td>
</tr>
<tr>
<td>Inconvenience/unwilling to take a daily pill **</td>
<td>7/238</td>
<td>2.9%</td>
</tr>
<tr>
<td>Provider resistance**</td>
<td>6/238</td>
<td>2.5%</td>
</tr>
<tr>
<td>Don’t know where/how to get it**</td>
<td>6/238</td>
<td>2.5%</td>
</tr>
<tr>
<td>In the process of getting PrEP**</td>
<td>6/238</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

* Categories were multi-select and percentages are not mutually exclusive
** Recoded from write-in response
† Responses such as consistent condom use, monogamous partner, few partners
Top Reasons Given for Non-Interest in PrEP among Eligible MSM

<table>
<thead>
<tr>
<th>Reason(s) Given</th>
<th>n/N</th>
<th>Row %*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-perceived low risk of exposure †</td>
<td>91/113</td>
<td>80.5%</td>
</tr>
<tr>
<td>Worry about side effects</td>
<td>30/113</td>
<td>26.6%</td>
</tr>
<tr>
<td>Don’t have enough information about it</td>
<td>7/113</td>
<td>6.2%</td>
</tr>
<tr>
<td>Inconvenience/unwilling to take a daily pill**</td>
<td>5/113</td>
<td>4.4%</td>
</tr>
<tr>
<td>Concerns about efficacy**</td>
<td>4/113</td>
<td>3.5%</td>
</tr>
<tr>
<td>Insurance/financial issues**</td>
<td>2/113</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

*Categories were multi-select and percentages are not mutually exclusive

** Recoded from write-in response

† Responses such as consistent condom use, monogamous partner, few partners
Summary

• Using a new framework, the HIV Prevention Continuum among NYC MSM, we observed
  • High engagement in prevention among NYC MSM
  • Drop-offs from sexual history taking to discussing PrEP with a provider to using PrEP
  • Limited differences observed by race/ethnicity

• Over half of PrEP non-users who appeared to be eligible for PrEP were interested in PrEP

• Among those potentially interested and eligible for PrEP, top reasons given for non-use included:
  • Insurance/financial issues
  • Worry about side effects (also non-interest)
  • Not enough information (also non-interest)
  • Self-perceived low risk of exposure (also non-interest)
Limitations

• Limitations inherent to the study design of the data source: self-reported data, convenience sample, cross-sectional

• Continuum does not account for all possible steps to PrEP or steps beyond PrEP use; constructed to include key actionable steps in public health context

• Reasons for non-use and non-interest analysis was exploratory; refinement to response options an iterative process

• Generalizability may be limited
Discussion and Next Steps

Discussion

• Gaps identified through the Continuum that suggest the need for continued education of providers
• High interest in PrEP among non-users, suggesting demand is not yet met
• Barriers to information or access reported by those non-users reveal the importance of PrEP outreach and navigation

Next steps

• Continue promotion among priority populations and providers
• Support PrEP navigation through a network of community-based organizations, testing sites, and clinical sites
• Continue to collect data to monitor progress; data incorporated into NYC’s status neutral continuum*

Acknowledgments

Julie Myers
Kathleen Scanlin
Cameron Findlater
Paul Salcuni
Demetre Daskalakis
Bisrat Abraham
Nana Mensah
Emily Gerda Appel

Research assistants:
Alitasha Younger, Andrea Hernandez, Carla Hernandez, Dennis Rivera-Cash, Nicole Gathany, Luis Valle, Michael Manacop, and Reggie Idlett

Survey participants!
Thank you!

Contact:
Zoe Edelstein
zedelst1@health.nyc.gov

Questions?
Extra Slides
Measuring PrEP on SHS

• **Awareness**: “Sometimes people who do not have HIV take HIV medications on a daily basis before sex to keep from getting HIV. This is called pre-exposure prophylaxis, or PrEP. Have you ever heard of PrEP?”

• **Use**: “In the past 6 months, have you used PrEP to prevent yourself from becoming infected with HIV?”

• **Interest**: “How interested are you in taking PrEP as a daily pill?”

• **Reasons for non-use among Interested and Not Sure**: “What are the reasons why you are not taking it?”

• **Reasons for non-use among not Interested**: “What are the reasons why you are not interested in taking it?”
NEW YORK CITY’S HIV STATUS NEUTRAL PREVENTION & TREATMENT CYCLE

All New Yorkers

At risk of HIV exposure

Aware of PrEP

Risk assessed by provider

Discussed PrEP with prescriber

Prevention Engagement

HIV/STI Testing

On PrEP

On daily PrEP

Negligible risk of acquiring HIV

People at risk of HIV exposure taking daily PrEP and people with HIV with sustained viral load suppression do not acquire or transmit HIV.

Use condoms to prevent STDs and further reduce HIV risk.

Diagnosed with HIV

Retained in HIV care

On ART

Viral load suppression achieved

Negligible risk of transmitting HIV

Retained in IST care

On ART with sustained VLS

Quality Care

Treatment Engagement

NYC Health