

# Baseline characteristics of men who have sex with men (MSM) at sexual and behavioral health programs in NYC by non-occupational post-exposure prophylaxis (PEP) initiation status

Abstract #1905

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## Background

- The use of post-exposure prophylaxis (PEP) as medical treatment after non-occupational exposure to HIV (e.g. through sexual behavior or injection drug use) has been recommended by the CDC since 2005<sup>1,2</sup>
- PEP has been increasingly recognized as a tool for HIV prevention, especially for individuals at increased epidemiologic risk, including men who have sex with men (MSM)
- In 2013, the New York City Department of Health and Mental Hygiene (NYC DOHMH) began funding sexual and behavioral health (SBH) programs at NYC clinics
- Goal of SBH program:** Provide holistic, co-located sexual and behavioral health services to uninsured/underinsured MSM and other populations at risk for HIV
- SBH services include provision of PEP

## Objective

- Among program clients who are MSM**
- Describe services received, including PEP initiation
  - Describe characteristics of clients stratified by PEP initiation status
  - Examine associations with PEP initiation on multivariate level

## Methods

**Study design and population**  
Retrospective cohort of MSM clients enrolled in the SBH program in 2014. Identification as MSM was determined by self-report of sex with a male in past 12 months

- Data source**
- Entered by SBH agencies employees into an NYC DOHMH contract monitoring program
  - NYC DOHMH staff perform regular checks on the data entered by SBH agencies
  - Data included in the analysis were measured at patients' intake exam into program

- Data measures**
- PEP initiation based on receipt of first dose of PEP at intake
  - Factors examined for association with PEP initiation
    - Socio-demographic information (race/ethnicity, age, education)
    - Economic factors (current housing stability, food insecurity in past 90 days)
    - Mental health and substance use screening results, including screening positive for
      - General anxiety through Generalized Anxiety Disorder Assessment (GAD-7)
      - Depression through Patient Health Questionnaire (PHQ-9)
      - Drug use through Drug Abuse Screening Test short form (DAST-10)
      - Alcohol use through Alcohol Use Disorders Identification Test (AUDIT)
    - Report of any of the following in the past 30 days
      - Cocaine/crack use
      - Methamphetamines use
      - Ecstasy use
      - Transactional sex
    - Self-reported diagnosis with a sexually transmitted infection (STI) in past 30 days
    - SBH agency at which sought care

- Data analysis**
- Descriptive statistics to describe those who initiated PEP compared to those who did not
    - Distributions were compared using a Chi-square test
  - A multivariate logistic regression model was built to examine associations with PEP initiations
    - Used a backward stepwise selection procedure with bivariate probability value to enter the model set at 0.20
    - Model was additionally adjusted for SBH agency at intake

## Results

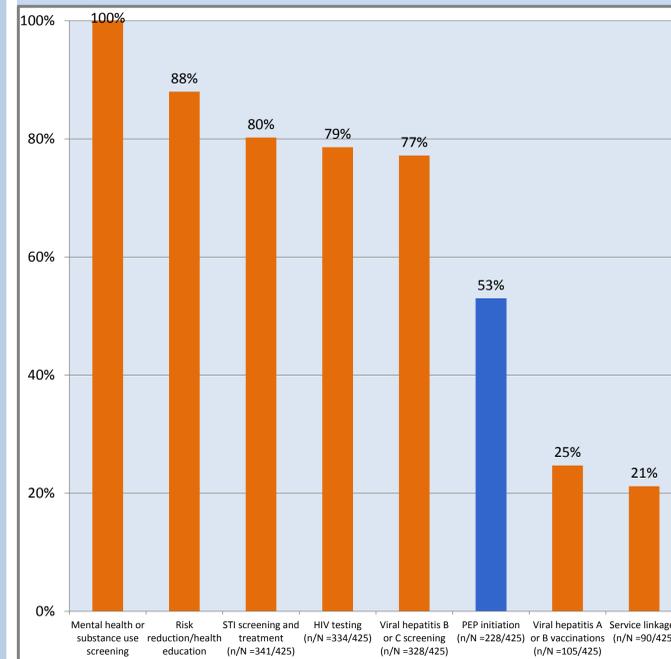
### Descriptive statistics

- 425 MSM clients were enrolled in the SBH program in 2014 (Table 1)
  - 53.4% were black or Hispanic
  - 74.4% were less than 35 years of age
  - 80.9% had at least a high school/GED education
- 226 (53%) of the clients were enrolled in the SBH program through PEP initiation (Figure 1)
  - Other services included: mental health and substance use screening, risk reduction/health education, STI screening and treatment, HIV testing, viral hepatitis B or C screening, viral hepatitis A or B vaccinations, and linkages to primary medical care, health insurance, house, employment, or legal services
- Initiation of PEP was more frequent among clients who had (Table 1)
  - More than a high school education
  - Reported food insecurity in the past 90 days
  - Screened positive for depression at intake
  - Used methamphetamines in the past 30 days
  - Sought care at certain agency

### Multivariate analysis (Table 2)

- In the multivariate model PEP initiation was associated with
  - Having more than a high school education
  - Food insecurity in the past 90 days (marginally)
  - Crystal meth use in the past 30 days
  - Attendance at a certain agency
- Depression was inversely associated with PEP initiation

**Figure 1. Services Received\* among Sexual and Behavioral Health (SBH) Program Clients who are Men who have sex with Men (MSM), 2014 (N=425)**



\*Services received are not mutually exclusive. PEP initiation was measured at intake only. Other services occurred at any time during 2014.

**Table 1. Demographics of Clients Enrolled in the Sexual and Behavioral Health (SBH) Program who are Men who have Sex with Men (MSM), overall and stratified by PEP initiation, 2014 (N=425)**

| Characteristic                             | Total (N=425)<br>n (%) | Initiated PEP at SBH (N=226)<br>n (%) | Did not initiate PEP at SBH (N=199)<br>n (%) | p <sup>1</sup> |
|--|------------------------|---------------------------------------|--|----------------|
| Race/Ethnicity                             |                        |                                       |  | 0.52           |
| White, non-Hispanic                        | 156 (36.7)             | 82 (36.3)                             | 74 (37.2)                                    |                |
| Hispanic                                   | 160 (37.6)             | 79 (35.0)                             | 81 (40.7)                                    |                |
| Black, non-Hispanic                        | 67 (15.8)              | 40 (17.7)                             | 27 (13.6)                                    |                |
| AI/AN/AS/NH/OPI, non-Hispanic              | 32 (7.5)               | 20 (8.8)                              | 12 (6.0)                                     |                |
| Other                                      | 10 (2.4)               | 5 (2.2)                               | 5 (2.5)                                      |                |
| Age Group (years)                          |                        |                                       |  | 0.64           |
| <18-24                                     | 95 (22.4)              | 49 (21.7)                             | 46 (23.1)                                    |                |
| 25-34                                      | 221 (52.0)             | 122 (54.0)                            | 99 (49.7)                                    |                |
| 35-44                                      | 83 (19.5)              | 44 (19.5)                             | 39 (19.6)                                    |                |
| 45+  | 26 (6.1)               | 11 (4.9)                              | 15 (7.5)                                     |                |
| Education                                  |                        |                                       |  | 0.01           |
| High school/GED or less                    | 81 (19.1)              | 33 (14.6)                             | 48 (24.1)                                    |                |
| More than High school/GED                  | 344 (80.9)             | 193 (85.4)                            | 151 (75.9)                                   |                |
| Homeless/unstably housed                   | 4 (0.9)                | 3 (1.3)                               | 1 (0.5)                                      | 0.40           |
| Food insecurity in past 90 days            | 28 (6.6)               | 20 (8.8)                              | 8 (4.0)                                      | 0.05           |
| Mental Health/Substance Use Screens        |                        |                                       |  |                |
| Depression                                 | 203 (47.8)             | 92 (40.7)                             | 111 (55.8)                                   | 0.08           |
| General anxiety                            | 194 (45.6)             | 96 (42.5)                             | 98 (49.2)                                    | 0.79           |
| Drug use                                   | 237 (55.8)             | 121 (53.5)                            | 116 (58.3)                                   | 0.87           |
| Alcohol use                                | 108 (25.4)             | 55 (24.3)                             | 53 (26.6)                                    | 0.52           |
| Risk behavior, past 30 days                |                        |                                       |  |                |
| Cocaine/crack use                          | 49 (11.5)              | 24 (10.6)                             | 25 (12.6)                                    | 0.78           |
| Methamphetamine use                        | 39 (9.2)               | 26 (11.5)                             | 13 (6.5)                                     | 0.03           |
| Ecstasy use                                | 30 (7.1)               | 16 (7.1)                              | 14 (7.0)                                     | 0.77           |
| Exchanged sex for drugs, money, or shelter | 15 (3.5)               | 6 (2.7)                               | 9 (4.5)                                      | 0.60           |
| Diagnosed with an STI                      | 33 (7.8)               | 13 (5.8)                              | 20 (10.1)                                    | 0.35           |
| Agency                                     |                        |                                       |  | 0.009          |
| Agency A                                   | 147 (34.6)             | 65 (28.8)                             | 82 (41.2)                                    |                |
| Agency B                                   | 79 (18.6)              | 40 (17.7)                             | 39 (19.6)                                    |                |
| Agency C                                   | 199 (46.8)             | 121 (53.5)                            | 78 (39.2)                                    |                |

<sup>1</sup>P value based on Chi square test stratifying by PEP initiation  
AI/AN/AS/NH/OPI, American Indian or Alaska Native/Hawaiian/Other Pacific Islander

**Table 2. Multivariate Model of Associations with PEP Initiation among Sexual and Behavioral Health (SBH) Program Clients who are Men who have Sex with Men (MSM), 2014 (N=425)**

| Characteristic                      | Adjusted OR (95% CI) | P    |
|-------------------------------------|----------------------|------|
| Education                           |                      |      |
| High school/GED or less             | Referent             |      |
| More than High school/GED           | 1.72 (1.03, 2.87)    | 0.04 |
| Food insecurity in past 90 days     | 2.27 (0.95, 5.41)    | 0.07 |
| Mental Health/Substance Use Screens |                      |      |
| Screened positive for depression    | 0.65 (0.42, 0.99)    | 0.05 |
| Methamphetamine use in past 30 days | 2.67 (1.18, 6.05)    | 0.02 |
| Agency                              |                      |      |
| Agency A                            | Referent             |      |
| Agency B                            | 0.59 (0.38, 0.92)    | 0.02 |
| Agency C                            | 0.70 (0.41, 1.21)    | 0.20 |

## Limitations

- Associations with PEP initiation were measured among the SBH patient population only
  - Unknown whether similar associations would be found with a comparison group that included other MSM
  - Generalizability of our findings to other patient populations may be quite limited
- Measure of PEP from programmatic data; may not be a complete record of PEP use
  - E.g., measured initial dose of PEP at an SBH agency, but not other locations

## Discussion

- In a patient population that is both at high risk of HIV and uninsured/underinsured, those who initiated PEP had greater odds of having markers of social service needs
- Findings highlight the importance of
  - Increasing awareness and use of biomedical interventions among those of lower socio-economic status, particularly among those with less education
  - Providing PEP as part of a holistic sexual and behavioral health strategy
- In addition to SBH, NYC DOHMH has supported awareness campaigns (Figure 2) to address disparities that may impact PEP access

**Figure 2. Examples of recent NYC DOHMH materials for potential PEP prescribers (left) and patients (right)**



## References

- Centers for Disease Control and Prevention. Antiretroviral Postexposure Prophylaxis After Sexual, Injection-Drug Use, or Other Nonoccupational Exposure to HIV in the United States. MMWR 2005;54(RR02);1-20.
- Jain, S. and K. H. Mayer. Practical guidance for nonoccupational postexposure prophylaxis to prevent HIV infection: an editorial review. AIDS 2014; 28(11): 1545-1554.

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