

Kavita Misra, PhD, MPH; Jamie S. Huang, MPH; Chi-Chi N. Udeagu, MPH

HIV Epidemiology and Field Services Program, New York City Department of Health and Mental Hygiene

Background

- PrEP uptake is increasing but remains sub-optimal among groups at risk of HIV infection, for instance, black and Hispanic MSM and women
- Monitoring and describing pre-diagnosis PrEP use history among persons newly diagnosed with HIV reveals gaps and missed opportunities in HIV prevention services
- Disease Investigation Specialists at the NYC health department HIV Field Services Unit (FSU) routinely investigate and interview persons newly diagnosed with HIV to link them to HIV care and to elicit sex or needle sharing partners (partner services/PS) for exposure notification and HIV testing
- PS investigations include assessment of PrEP use prior to HIV diagnosis

Methods

STUDY POPULATION AND DESIGN

- Cross-sectional analysis of pre-diagnosis PrEP use history of persons newly HIV diagnosed and assigned to the FSU for PS between Nov 2015 and Sept 2017
- Comparison of pre-diagnosis PrEP users and non-users

DATA SOURCES AND VARIABLES

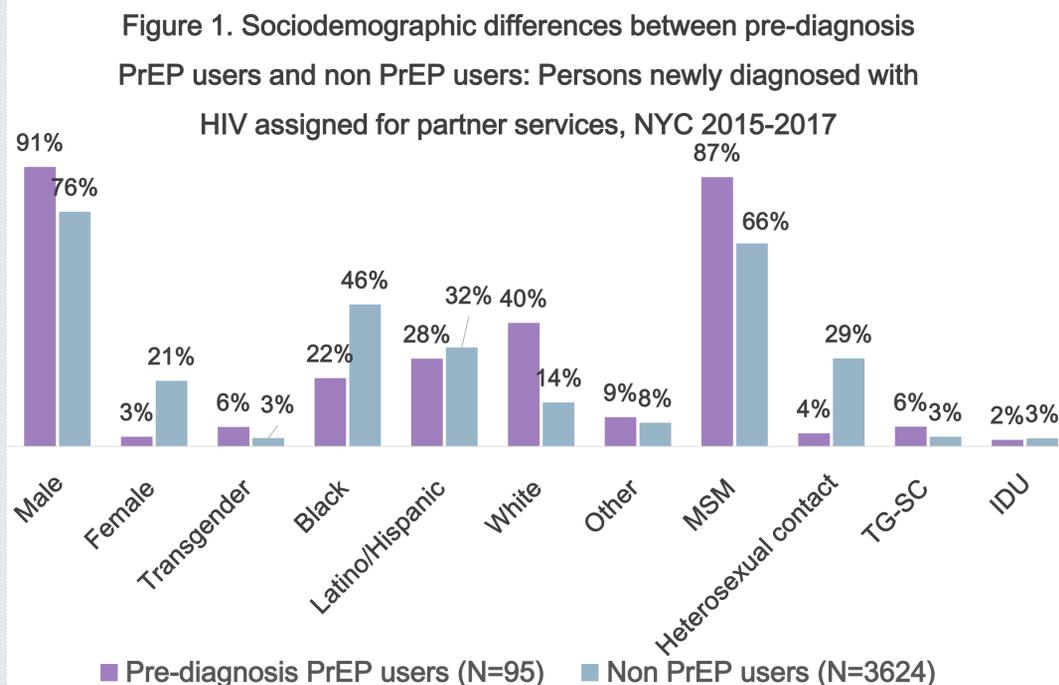
- DIS interview captures sociodemographic and HIV risk information
 - Race-ethnicity, current gender, age group
 - HIV transmission risks: men who have sex with men (MSM), heterosexual contact, injection drug use (IDU), transgender with sexual contact (TG-SC)
 - Sexual and substance use behaviors in past 12 months: condomless anal sex, sex with known HIV-positive partner, sex while drunk or high on drugs, and diagnoses of sexually transmitted infections (STIs)
 - Diagnosis in the acute phase of HIV infection (AHI)
 - Pre-diagnosis PrEP use, dates of use, adherence (average weekly pill use), reasons for discontinuing PrEP
- NYC HIV surveillance registry was used to extract missing demographic and clinical information
- Medical chart and/or interview with diagnosing provider used to supplement self-report, or if patient could not be interviewed

STATISTICAL ANALYSIS

- Prevalence of pre-diagnosis PrEP use
- Bivariate analysis to compare sociodemographic characteristics of pre-diagnosis PrEP users and non-users with chi-square distribution of proportions to assess statistically significant differences
- Univariate analysis of PrEP adherence, reasons for discontinuing PrEP, sexual and substance use behaviors, acute HIV infection (AHI) and STI diagnoses among pre-diagnosis PrEP users

Results

- Over 22 months, 3739 (96%) of 3908 persons newly diagnosed with HIV in NYC were investigated for PS. Of these, 95 persons (3%) reported PrEP use prior to HIV diagnosis
- A significantly greater proportion of PrEP users than non-users were male, transgender women, white and MSM (figure 1)
- Among the 81% of PrEP users whose PrEP stop date preceded their HIV diagnosis date, the median period between PrEP cessation and first HIV positive test was 5 months. The median duration of PrEP use was 3 months and the average number of pills taken per week was 7
- About 33% of PrEP users were diagnosed in AHI phase, 34% were diagnosed with STIs in the past year, and 6% reported having used post-exposure prophylaxis (PEP) (figure 3)
- Condomless anal sex in the past year was reported by 77%, sex with a known HIV-positive partner by 41% and sex while drunk or high on drugs by 32% (figure 3)



Conclusions

- Pre-diagnosis PrEP use was rare among newly HIV diagnosed persons investigated for PS in NYC
- Disproportionately low percentages of black, heterosexual and female pre-diagnosis PrEP users may suggest disparities in PrEP awareness, availability and uptake
- High risk sexual behaviors and STI diagnoses were commonly reported among PrEP users, indicating the need for stronger messaging on condom use in conjunction with PrEP and substance use counseling

Figure 2. Reasons for discontinuing PrEP of pre-diagnosis PrEP users (N=95)

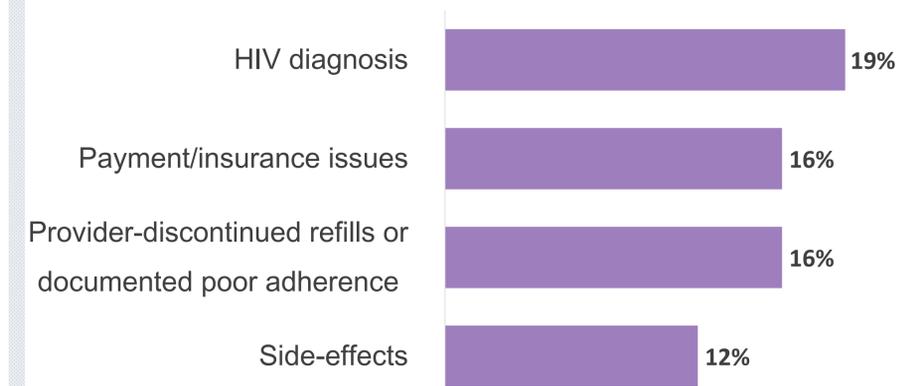
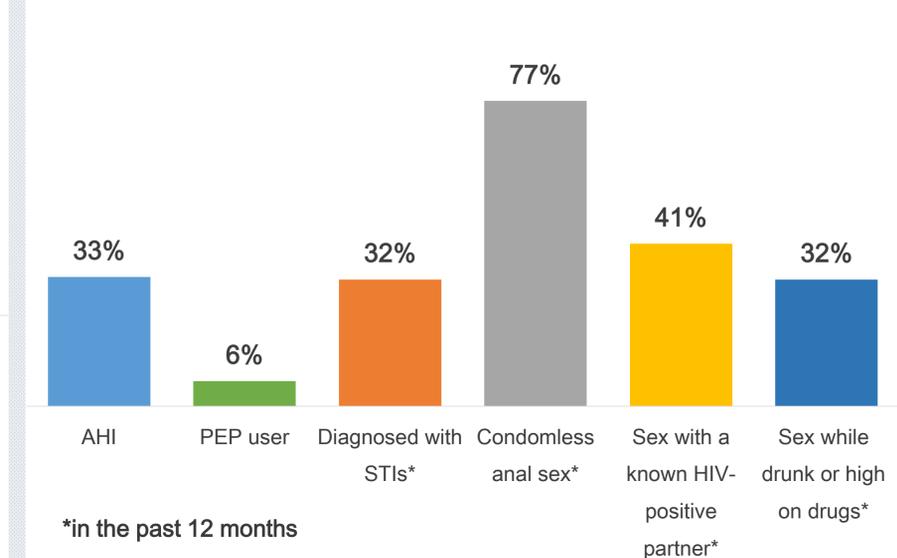


Figure 3. Acute HIV infection, PEP use and sexual and substance use behaviors of pre-diagnosis PrEP users (N=95)



Limitations

- PrEP use may be inaccurately reported due to recall, social desirability bias, or issues with the medical chart
- PrEP awareness, knowledge and reasons for not considering or using PrEP were not collected during the study period

Contact information: Kavita Misra, Senior Epidemiologist
kmisra@health.nyc.gov