

# Prevalence of High-Risk Behaviors and Anti-Retroviral Therapy Non-Adherence among HIV-Positive Men who Have Sex with Men who are Linked to Care

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## INTRODUCTION

- Men who have sex with men (MSM) account for the majority of new HIV infections in the U.S.<sup>1</sup>
- Antiretroviral therapy (ART) non-adherence is associated with increased risk of HIV-disease progression, transmission, and development of resistance<sup>2-5</sup>
- High-risk sexual behaviors and recreational drug use may be associated with ART non-adherence<sup>5-8</sup>

## OBJECTIVE

- Examine the prevalence of high-risk sexual behaviors and recreational drug use and their associations with ART non-adherence among a cohort of HIV-positive MSM who are linked to care

## METHODS

### Study design, setting, and population

- Cross-sectional study of HIV-positive MSM attending an HIV clinic at an academic medical center in Columbus, Ohio
- March 2015 – February 2016
- Eligibility
  - Male
  - HIV-positive
  - 18 years or older
  - Sexual contact with another male in the last year

### Study measures

- Through a self-administered survey participants reported current ART use, ART adherence (number of doses missed in the previous 7 days), recent sexual behaviors (last 3 months), and recent recreational drug use (last 3 months)

### Data management and analysis

- Survey data were captured using REDCap<sup>9</sup>
- All data were analyzed using SAS (Version 9.4, Cary, NC)
- Compared categorical variables using  $\chi^2$  or Fisher's exact tests; compared medians of continuous variables using Mann-Whitney tests

### Ethical approval

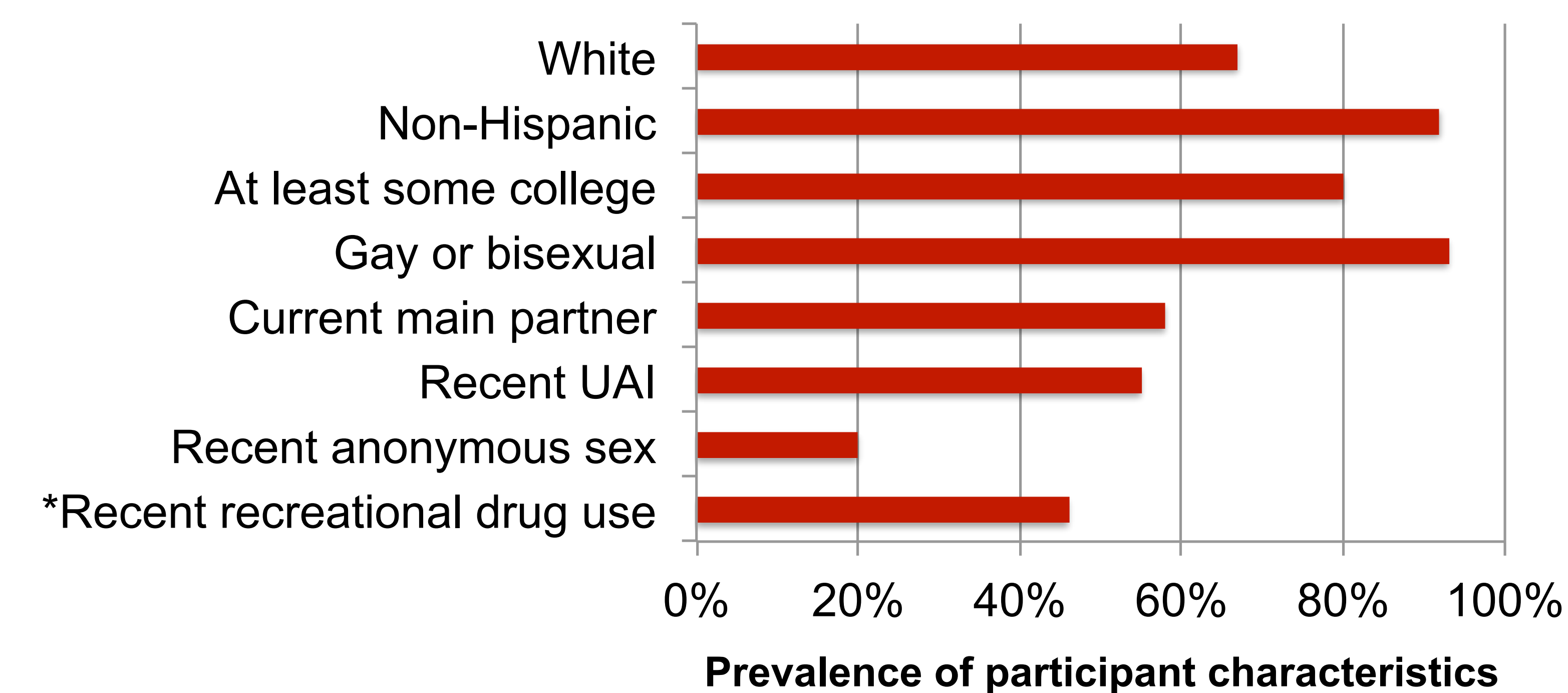
- The study was approved by the Ohio State University Institutional Review Board (IRB)

## RESULTS

### Participant characteristics

- Among the 158 HIV-positive MSM enrolled, the median age was 43.5 (IQR: 33, 52)

**Figure 1: Prevalence of characteristics of HIV-positive MSM who are linked to care (n = 158)**

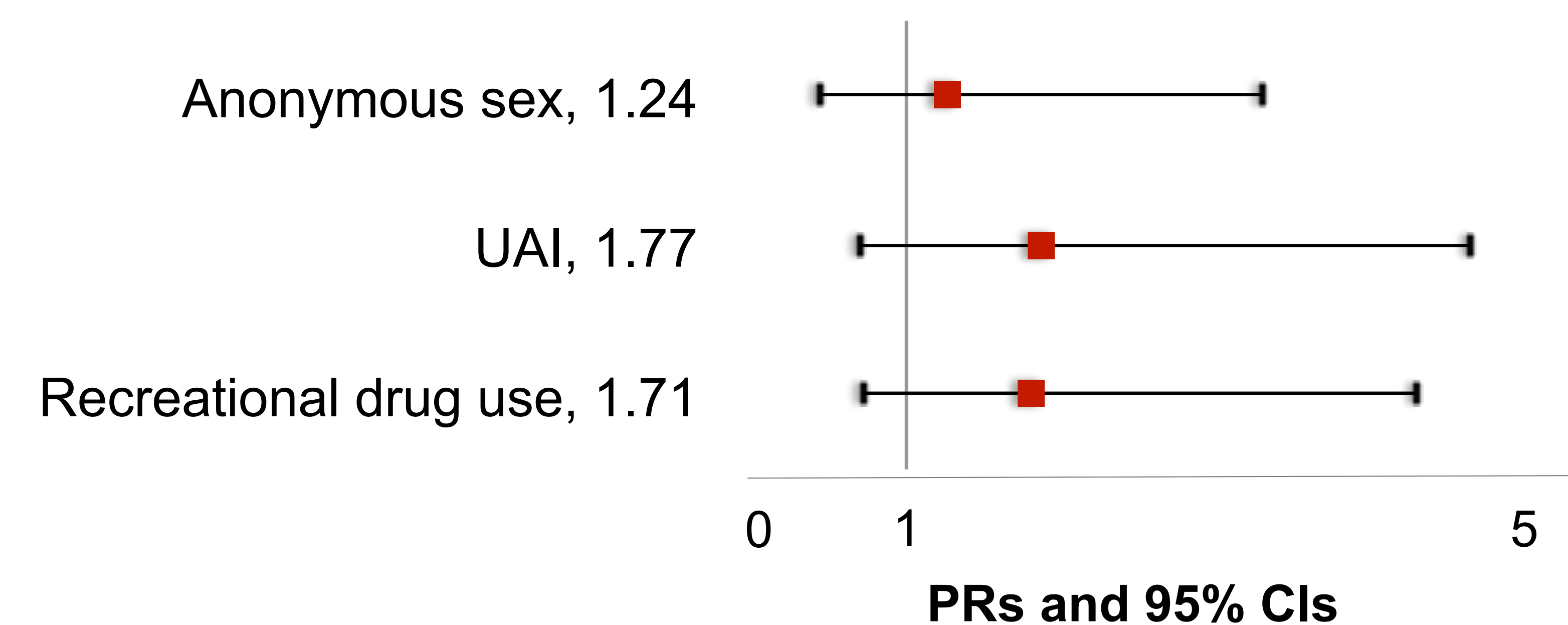


\* Recent recreational drug use includes marijuana, MDMA (ecstasy), methamphetamines, cocaine, alkyl nitrites, and nitrous oxide

### ART use and adherence

- 80% (n = 127) of participants reported currently being on ART
  - Among those taking ART, 82% (n = 104) reported never missing a dose in the previous 7 days

**Figure 2: Unadjusted prevalence ratios (PRs) and 95% confidence intervals (CIs) of high-risk behaviors and ART non-adherence**



## CONCLUSIONS

- A high-proportion of HIV-positive MSM who are linked to care reported engaging in recent high-risk sexual behaviors such as anonymous sex and unprotected anal intercourse (UAI)
- Recent recreational drug use of marijuana, MDMA (ecstasy), methamphetamines, cocaine, alkyl nitrites, or nitrous oxide was common among this group of HIV-positive MSM
- Though not statistically significant, MSM engaging in high-risk behaviors such as UAI may have increased likelihood of ART non-adherence and subsequently increased risk of more rapid HIV disease progression, HIV transmission to susceptible partners, and development of ART resistance.

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