PrEP Interest, Uptake and Adherence among Young Men Who Have Sex with Men (YMSM) in the United States

Sybil Hosek[1], Jaime Martinez[1], Kristine Santos[2], Christopher Balthazar[1], Pedro Serrano[1], Kelly Bojan[2], Megha Mehrotra[2], Robert Grant[2] and the Adolescent Trials Network (ATN) for HIV/AIDS Interventions[3]

[1]John Stroger Hospital of Cook County, Chicago, IL; [2]Ruth M. Rothstein CORE Center, Chicago, IL; [3]Gladstone Institute; [4]University of Alabama at Birmingham, Birmingham, AL

BACKGROUND

HIV/AIDS is a public health crisis among young men who have sex with men (YMSM) in the United States, and especially among YMSM of color. Black YMSM experienced the largest increase in diagnoses of HIV infection of all racial/ethnic groups—from 2,925 diagnoses in 2007 to 4,358 diagnoses in 2010 (Centers for Disease Control and Prevention [CDC], 2012). For Latinos, 44% of new HIV infections in 2009 were among young MSM 13 to 29 years of age (CDC, 2012). Effective interventions to prevent HIV among YMSM are urgently needed.

Pre-exposure prophylaxis (PrEP) is an efficacious, biomedical intervention for primary HIV prevention. Data released in November 2010 from a multi-national study, the PrEP Initiative (iPrEx), showed that MSM at high risk for HIV infection who took a daily tablet containing emtricitabine (FTC) and tenofovir disoproxil fumarate(TDF) or Truvada® (FTC/TDF) experienced an average of 43.8% fewer HIV infections than those who received a placebo pill (95% CI 15.4 to 62.6%; P=0.005) (Grant et al., 2010). The protective efficacy of PrEP appeared highly correlated with the level of adherence. Other clinical trials of ART prevention methods – CAPRISA, Partners PrEP & TDF2 - have also strongly linked efficacy to adherence (Abdool Karim et al., 2010; Baeten et al., 2012; Thigpen et al., 2012).

Data on interest in open label PrEP use among MSM from the iPrEx trial have been presented, yet YMSM in the United States were not included in those analyses. Understanding the interest, uptake, and adherence to PrEP among U.S. YMSM is critical for designing PrEP implementation programs domestically.

METHODS

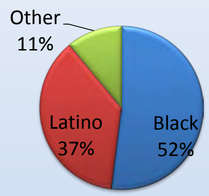
Using a 3-arm design, Project PrEPare (ATN 082) was a pilot trial of PrEP feasibility and acceptability among young men who have sex with men (YMSM) that randomized participants to daily PrEP (TDF/FTC), placebo, or no pill. Eligible participants were 18-22 year old HIV-uninfected men who reported unprotected anal intercourse (UAI) in the past year. Data were collected at baseline and every 4 weeks for 24 weeks. In November 2010, the iPrEx study results prompted the DSMB to recommend stopping enrollment into Project PrEPare and unblind participants.

In 2011, the open label extension of iPrEx (OLE) was launched. In an effort to include more young, minority MSM from the US in iPrEx OLE, the participants from Project PrEPare were invited to enroll. All HIV-uninfected participants were offered daily PrEP (TDF/FTC) along with a comprehensive package of HIV/STI testing and integrated risk reduction/adherence counseling. All participants taking PrEP were tested for tenofovir levels via plasma. Participants completed detailed computer assisted self-interviews on reasons for study participation, knowledge of PrEP efficacy, PrEP adherence and sexual behavior.

OBJECTIVE

We compared rates of self-reported adherence, tenofovir drug levels, and sexual risk behavior between the ATN 082 and iPrEx OLE.

PARTICIPANTS



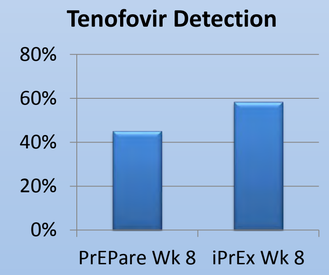
Of the 68 YMSM that had been enrolled in Project PrEPare, 46 opted to enroll in iPrEx OLE (68% of total eligible). The age range of the participants was 19-25, mean age 21.

RESULTS

Of participants enrolled into iPrEx OLE, 69.6% chose to take PrEP. The most common reasons for study participation were:

1) to help fight the HIV epidemic (74%),
2) to get tested for HIV (59%) and
3) to protect against HIV (59%)

Tenofovir detection in plasma during the first 12 weeks of iPrEX OLE was 58.3% - up from 45% during the same timeframe of ATN 082. Self-reported adherence (64.8%) was consistent with tenofovir detection. Most common reasons for missing doses were not having pills with them (28%), schedule changes (24%) and forgetting (22%).



Perceptions of PrEP efficacy increased significantly ($p<.001$) across study visits, while number of recent sex partners and episodes of unprotected anal receptive sex decreased.

Participants reported multiple social benefits from study participation and 70% stated they would take PrEP in the future if available.

CONCLUSIONS

- When offered open label access to an efficacious product, the majority ATN 082 participants chose to enroll in iPrEx OLE and take PrEP.
- While adherence among this challenging population was not optimal, it improved from ATN 082 and was consistent with self-report.
- YMSM may find both medical and social benefits to participation in PrEP programs as well as develop skills to improve adherence and decrease sexual risk behavior.
- YMSM appear interested and willing to take PrEP now that efficacy has been established.

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