Implementation of PrEP in STD Clinics: High Uptake and Drug Detection Among MSM in the Demonstration Project
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Background: Pre-exposure prophylaxis (PrEP) has been shown to be safe and efficacious in clinical trials. Demand for PrEP and levels of adherence in real world settings are unknown. We evaluated PrEP uptake and early drug detection among men who have sex with men (MSM) in the first year of a US PrEP Demonstration (Demo) Project.

Methodology: From 9/2012 to 9/2013, HIV-uninfected MSM and transgender women receiving services or requesting PrEP at STD clinics in San Francisco (SF) and Miami were offered the opportunity to screen for The Demo Project. Enrolled participants were offered up to 48 weeks of open-label emtricitabine/tenofovir. Predictors of PrEP uptake were assessed using multivariable logistic regression. Tenofovir diphosphate (TFV-DP) levels in dried blood spots (DBS) were assessed in a random sample of participants at the 4 week visit.

Results: Of 831 clients approached for participation in the Demo Project, 340 declined, 105 were ineligible based on behavioral or medical criteria, and 386 enrolled, for an overall uptake of 53% among potentially eligible clients (49% in SF vs. 64% in Miami). Mean age of enrolled participants was 35 years; 9% were African American, 35% Latino, and 46% white; 42% were uninsured and 73% had previously heard of PrEP. Participants in Miami were younger, more likely to be Latino or African-American, less likely to be insured, and less likely to report drug use or unprotected receptive anal sex in the prior 3 months (all p<0.05). In adjusted analyses, participants from Miami (AOR 6.5, 95% CI 2.9-14.8), with prior PrEP awareness (AOR 2.3, 95% CI 1.5-3.5), and those reporting unprotected anal sex with >5 partners (AOR 1.5, 95% CI 1.0-2.2) or >1 episode of anal sex with an HIV-infected partner (AOR 1.8, 95% CI 1.2-2.6) in the last 12 months were more likely to enroll in the Demo Project. In SF, higher risk perception (AOR 1.9, 95% CI 1.2-2.8) was also associated with enrollment. DBS samples from 87 participants at week 4 were tested: almost all had TFV-DP detected (100% in SF, 95% in Miami). Median TFV-DP levels were higher in SF than in Miami (975 vs. 658 fmol/punch, p<0.001), and a greater proportion of participants from SF had TFV-DP levels consistent with having taken at least 4 doses/week (92% vs. 57%, p<0.001) (Fig 1).

Conclusions: Demand for PrEP and rates of early drug detection are high among MSM in the first year of the Demo Project. Factors contributing to differences in PrEP uptake and adherence across sites warrant further investigation.

Figure 1: DBS TFV-DP levels, by site

*BLQ = Below limit of quantification
†Estimated using prior DBS data and pharmacokinetic modeling