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RISK FACTORS ASSOCIATED WITH GONORRHEA INFECTION AMONG PREP PATIENTS IN A MONTREAL CLINIC

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Background Pre-exposure prophylaxis (PrEP) is effective for preventing HIV transmission. Studies demonstrated high sexually transmitted infection (STI) incidence among men who have sex with men (MSM) using PrEP. We aim to identify risk factors associated with Gonorrhea infection among our PrEP cohort from 2013 to 2018.

Methods This retrospective cohort study of the PrEP cohort of Clinique médicale l'Actuel (Montreal, Canada) including MSM, ages ≥ 18 , who consulted for PrEP from January 2013 to November 2018. We defined two groups: Gonorrhea infected (during 12 months after PrEP initiation) and non-infected. Cumulative incidence of Gonorrhea during 12 months after PrEP initiation was calculated. Behavioural risks characteristics (condom use, number of partners and history of STIs before PrEP) and Gonorrhea infection odds Ratio (OR) were compared between groups. Analyses were performed by using Stata 11.

Results Among 1159 patients who consulted for PrEP, 763 (66%) had a university degree, 540 (47%) an annual revenue higher than \$55000 and the median age was 36 years (IQR: 29–44); 929 (80%) patients received daily baseline regimen. The Gonorrhea cumulative incidence was 18%. There's no significant difference between groups, infected and non-infected respectively, in condomless anal sex (95% v. 93%, $p=0.20$) and mean number of sexual partner (19 vs 20, $p=0.74$). However, infected group reported history of STIs superior than non-infected (84% vs 75%, $p=0.006$), translating to a Gonorrhea infection risk (OR: 1.77, 95%CI: 1.18–2.64, adjusted by age, condomless anal sex and number of sexual partner).

Conclusion We found Gonorrhea infection among PrEP users was significantly associated with history of STIs. PrEP reaches high-risk individuals with STIs. Our results indicate the need for support which takes into consideration contextual lifestyle. The 3-month follow-up of patients on PrEP is a great opportunity to test and treat them frequently and to provide adequate and regular counseling.

Disclosure No significant relationships.

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SUPPLEMENT: APPEARANCE AND PERFORMANCE-ENHANCING SUPPLEMENTS USE IN PEOPLE ON PRE-EXPOSURE PROPHYLAXIS

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Background Men-who-have-sex-with-men (MSM) may experience more body image dissatisfaction compared to heterosexual men. The desire to be muscular has been linked with use of appearance- and performance-enhancing supplements (APES), including muscle-building supplements, steroids, and fat-burning products. APES use has been associated with

potential health risks including serious liver and renal abnormalities. The purpose of this study was to describe the use and safety of APES among people attending an ambulatory pre-exposure prophylaxis (PrEP) clinic.

Methods All participants ≥ 18 years on tenofovir disoproxil fumarate/emtricitabine were included; pregnant subjects were excluded. Prospective cross-sectional survey was conducted between February 1, 2018 and September 30, 2018 to assess APES usage, and retrospective chart reviews were done to determine the rates of liver and renal abnormalities from January 1, 2016 to September 30, 2018. RUCAM and Naranjo scales were used to assess causality with liver and renal abnormalities, respectively.

Results Among 50 participants (median 32 years, 52% Caucasian, 86% MSM), 72% reported lifetime APES use and 52% with recent (within the past 6 months) use (APES group). Only 28% had never used APES (non-APES group). APES and non-APES groups had similar rates of liver abnormalities (mostly Grade 1), but 2 (8%) APES participants experienced Grade 3–4 elevations compared to none in the non-APES group. Liver enzyme elevations were possibly associated with creatine ($n=4$), whey protein ($n=3$), steroids ($n=2$), and weight-loss supplements ($n=2$). In the APES group, 12% had elevated serum creatinine (all stage 1) compared to none in the non-APES group. Whey protein ($n=2$), creatine ($n=1$), steroids ($n=1$), and tenofovir disoproxil fumarate ($n=1$) were possibly associated with renal abnormalities.

Conclusion APES usage among people on PrEP was high and possibly associated with liver and/or renal abnormalities. Increasing provider and consumer awareness of potential health risks of APES is encouraged to enhance safety.

Disclosure No significant relationships.

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HIV INCIDENCE, AND PRE- AND POST-EXPOSURE PROPHYLAXIS (PREP AND PEP) AMONG PEP USERS AT NEW YORK CITY SEXUAL HEALTH CLINICS

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Background Sexually transmitted disease clinics are well-suited to deliver PEP; few provide full courses (28 days) due to cost. Since 2016, NYC Sexual Health Clinic (SHC) staff have provided full-course PEP to eligible HIV-negative patients, and thereafter attempt linkage to PrEP. We examined HIV incidence and patterns of PrEP/PEP use among a PEP cohort.

Methods We matched men-who-have-sex-with-men (MSM) who received PEP at SHC (09/2016–05/2017) to the citywide HIV surveillance registry to identify new HIV diagnoses between last PEP event during this interval and 06/30/2018. We calculated HIV incidence with time-at-risk starting 28 days after PEP provision; periods of additional PEP supplied at SHC during follow-up were excluded from time-at-risk. We examined subsequent PrEP and repeat PEP use during follow-up. For MSM without PrEP/repeat PEP, we calculated the number-needed-to-treat (NNT) with PrEP for one year to prevent 1 HIV infection (assumed 73% efficacy with 90% adherence).

Results Eleven HIV diagnoses occurred among 520 MSM with 652 person-years (PY) follow-up; HIV incidence was 1.7/100PY (95%CI: 0.8–3.0), and highest among Hispanic MSM (2.6/100PY) and MSM aged <30 years (2.2/100PY). Median time to HIV diagnosis was 178 days (range 41–410). During follow-up, 18% (94/520) received PEP again (range 1–4 times), with 58% of PEP-repeaters (55/94) also given PrEP at some point. Of 460 MSM with SHC visits during follow-up, 202 were linked to or self-reported PrEP use, 200 were not linked to PrEP, and 58 declined navigation for PrEP. Of the 202 who linked to self-reported PrEP use, 31 (15%) had subsequent PEP event(s) at SHC. Eight of 279 MSM without evidence of PEP/PrEP during follow-up were diagnosed with HIV (incidence=2.3/100PY); NNT=61.

Conclusion Despite PrEP availability, fewer than half of PEP patients took up PrEP and a substantial proportion took PEP repeatedly; research to elucidate underlying reasons for PrEP and PEP use patterns (insurance/cost, convenience, self-perceived risk) is warranted.

Disclosure No significant relationships.

P429 DOES HIV PRE-EXPOSURE PROPHYLAXIS (PREP) INITIATION IN SEXUAL HEALTH CLINICS IMPACT SUBSEQUENT HIV RISK?

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Background Since late 2016, the PrEP program in New York City's 8 sexual health clinics (SHCs) has evolved from a model of active referral to external PrEP providers to on-site PrEP initiation (providing one month of PrEP and provider referral); this was implemented, clinic by clinic, over time. We hypothesized that HIV incidence would be lower for patients who received PrEP medication in SHCs.

Methods We matched the following groups of men-who-have-sex-with-men (MSM) who received SHC PrEP services (12/2016–06/2017) to citywide HIV and STI registries: (1) same-day PrEP initiators, (2) referred-only for PrEP, (3) never-referred (not interested in starting PrEP). We calculated HIV incidence after SHC PrEP service date, using HIV surveillance data through 06/30/2018. We assessed factors associated with HIV diagnosis using Cox models that included initiation vs referred-only status, linkage, age, race/ethnicity, incident STI (chlamydia/gonorrhea/primary or secondary syphilis), and 3-month history of condomless receptive anal sex and number of sex partners.

Results There were 267 initiators, 607 referred-only, and 96 never-referred patients; 40% of both initiated and referred-only patients linked to PrEP providers. Of all MSM (n=970; 1215 person-years [PY] of follow-up), 18 were newly diagnosed with HIV (median time to diagnosis 221 days; range 23–468). HIV incidence was 1.5/100PY (95%CI 0.9–2.3) and not significantly different by group: 1.8/100PY among initiators (linked: 1.6, non-linked: 2.0); 1.3/100PY referred-only (linked: 0.0, non-linked: 2.2); 1.8/100PY never-referred. HIV

risk did not differ for initiators versus referred-only patients, but was higher among non-linked than linked (aHR 5.6; 95% CI 1.3–25.0) and those with STI versus no STI (aHR 10.1; 95%CI 2.3–44.7).

Conclusion This examination of PrEP initiation in an episodic care setting did not find on-site PrEP provision to be associated with improved linkage and HIV outcomes. Understanding barriers to ongoing PrEP care is critical to improving linkage, and maximizing resources and the benefit of immediate PrEP access.

Disclosure No significant relationships.

P430 PREDICTORS OF INTEREST IN SWITCHING FROM DAILY TO ON-DEMAND HIV PRE-EXPOSURE PROPHYLAXIS (PREP) AMONG AUSTRALIANS

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Background The only HIV pre-exposure prophylaxis (PrEP) regimen approved in Australia is daily co-formulated tenofovir and emtricitabine. As an alternative, on-demand PrEP could offer benefits, including lower pill burden for people having sex infrequently. We surveyed PrEPX study participants to measure interest in switching from daily PrEP to on-demand PrEP.

Methods The survey asked 15 questions on demographics, sexual behaviour, interest in on-demand PrEP, and reasons for interest. Univariate regression analyses assessed associations between interest in on-demand PrEP and other survey questions, and questions with significant ($p < 0.1$) association in univariate analysis were entered in a multivariate regression model.

Results 970 responses were complete. Respondents' median age was 39 years, and 99.6% were male. All had taken daily PrEP, but 14% had ceased PrEP. 469 respondents (48%; 95% CI 45–52) reported interest in on-demand PrEP. In multivariate analysis, interest in on-demand PrEP was independently associated with having ceased PrEP (aOR 2.0, $p < 0.001$), dissatisfaction with daily PrEP (aOR 2.0, $p = 0.027$), difficulty remembering to take pills every day (aOR 1.6, $p = 0.029$), infrequently having sex that conferred HIV risk (aOR 3.7, $p < 0.001$), concerns about long term toxicity from PrEP (aOR 2.7, $p < 0.001$), and having no prior knowledge of on-demand PrEP (aOR 1.6, $p < 0.004$). Respondents who were not interested in on-demand PrEP (N=501) reported concerns about its effectiveness (67%), concerns about not remembering to take a dose at least 2 hours before sex (58%), having unplanned sex (15%), and having frequent sex and hence needing to take PrEP daily (2%).

Conclusion This is the first study of interest in switching from daily to on-demand PrEP. Half of respondents were interested, and interest was most strongly associated with infrequency of sex and concerns about long-term toxicity. However, many respondents had concerns about the effectiveness of on-demand PrEP, and about forgetting to take on-demand PrEP at least two hours before sex.

Disclosure No significant relationships.