

**007.5 THE INDEX CASE'S PARTNERSHIP STATUS IS IMPORTANT IN PREDICTING THE LIKELIHOOD OF PERSISTENCE OF INTRODUCED XDR NG AMONG MSM**

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10.1136/sextrans-2019-sti.144

**Background** Extensively drug resistant (XDR) *Neisseria gonorrhoeae* (NG) strains have recently been isolated in the UK and Australia. We use a mathematical model to assess the importance of the index cases' partnership status in predicting the probability that an introduced XDR NG strain will persist in a population of men who have sex with men (MSM).

**Methods** We developed an individual-based, anatomical site-specific model of NG transmission in an urban MSM population in Australia. We assume an XDR NG strain is introduced into a population where treatment-sensitive NG is already endemic. We define the index case as the individual initially infected with an introduced XDR NG strain, and their partnership preferences as seeking regular partnerships only, seeking casual partnerships only, or unrestricted. We ran around 1000 simulations for each preference in relation to the index case and recorded the length of time XDR NG persists in the population.

**Results** In simulations where index cases only have regular partners, XDR NG persists for more than 0.5 years in 37% of simulations. In simulations where index cases only have casual partners, XDR NG persists for more than 0.5 years in 33% of simulations, and in 95% of these the index cases had 5+ casual partners in the past 6 months. In simulations where the index cases have both regular and casual partners, XDR NG persists for more than 0.5 years in 50% of simulations, and in 86% of these the index cases had 5+ casual partners in the past 6 months.

**Conclusion** Our modelling suggests that an introduced XDR NG is more likely to persist if the index case has a regular partner and is likely to have frequent casual partnerships. These results emphasise the need to identify and treat such individuals and their partners to prevent the initial spread of XDR NG.

**Disclosure** No significant relationships.

**007.6 A RCT TO FACILITATE PSYCHOSOCIAL CARE AMONG HIGH RISK MSM IN AMSTERDAM, A SYNDemic BASED INTERVENTION (SYN.BAS.IN STUDY)**

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10.1136/sextrans-2019-sti.145

**Background** Men who have sex with men (MSM) constitute a risk group for sexual transmitted infections(STI). Syndemic theory holds that psychosocial problems often co-occur, interact and mutually reinforce each other, thereby increasing risk behavior. We studied the prevalence of psychosocial problems and whether raising awareness of these psychosocial problems increases help seeking behavior.

**Methods** An open-label randomized controlled trial was conducted among MSM with high risk behavior recruited from the STI clinic of Amsterdam (NCT02859935). Inclusion criteria were: either two STI or PEP treatment for HIV negative MSM or one STI for HIV positive MSM in the last 24 months. The following syndemic domains were explored: alcohol, drugs and sex addiction (AUDIT, DUDIT, SCS), anxiety disorder(HADS), depression(HADS), childhood sexual abuse and partner violence. Participants received trimonthly standard STI care for one year. Additionally, the intervention group received face-to-face feedback on syndemic questionnaires.

**Results** Between September 2016 and August 2017 155 MSM were included. Median age was 43(IQR [34–51]), and 103/155(66%) were HIV positive. At baseline, 37/155(24%) tested positive for chlamydia, gonorrhoea or syphilis, 1/52(2%) for HIV, 138/148(93%) reported using drugs during sex in the preceding 3 months, and 51/155(33%) self-reported help seeking behavior. In total, 114/155(75%) scored positive for at least 1 questionnaire: 47/154(31%) for alcohol use disorder, 76/154(49%) for drug use disorder, 28/154(18%) for sexual compulsivity, 47/154(30%) for anxiety disorder, 26/154(17%) for depression, 17/154(11%) for sexual abuse and 12/154(8%) for partner violence. Between the intervention and control group, we found no significant difference in self-reported help seeking behavior (35% vs 24%  $p=0.168$ ), or in number of partners(13 IQR[5.5–30] vs 8.5 IQR[5–15] respectively,  $p=0.128$ ).

**Conclusion** Psychosocial and addiction related problems are alarmingly high in high risk MSM, and a syndemic approach seems necessary. Preliminary results indicate that our intervention did not increase self-reported help seeking behavior. Data collection on confirmed help seeking is ongoing.

**Disclosure** No significant relationships.

**008 – GETTING REAL WITH IMPLEMENTING PREP 1: GAY, BISEXUAL AND OTHER MEN WHO HAVE SEX WITH MEN**

Tuesday, July 16, 2019

10:45 AM – 12:15 PM

**008.1 PRE-EXPOSURE PROPHYLAXIS IN BRAZIL: OPPORTUNITIES AND CHALLENGES FOR MEN WHO HAVE SEX WITH MEN, BRAZIL, 2018**

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10.1136/sextrans-2019-sti.146

**Background** In Brazil Pre-exposure prophylaxis (PrEP) free-of-charge at the public health system has gained a central role in combination prevention of HIV infection. PrEP is recommended for HIV prevention for most at-risk MSM by the Public Health System (SUS). The aim of this study is to report the profile and characteristics of MSM using PrEP.

**Methods** Programmatic PrEP data from three forms for PrEP monitoring were analyzed for this study: First Service Record, First Return Record, and Clinical Monitoring Record, as well as the sociodemographic data collected from PrEP user

registration from the Medicine Logistic Control System (Siclom), collected from January 1st to October 31st, 2018.

**Results** Out of the 5,559 PrEP users in October 2018, 82% (4,535) were MSM. A similar distribution pattern is noted in most all cities of Brazil where PrEP is implemented, having MSM as the majority of users. 19% were between 18 to 29 yo and 37% were 30 to 39 yo. Approximately 59% self declared themselves as white and 41% as black. Considering education, 84% of the MSM have at least 12 years of study. Regarding sexual practices, 47% reported a decrease in the number of partnerships and 24% reported an increase in condom use.

**Conclusion** Free-of-charge PrEP in public health system can reach a large number of MSM, but access also needs to be equitable considering intersectional risk factors. Our analyses suggest the need to invest for community-based led strategies to increase the reach of PrEP among younger, black and less educated MSM.

**Disclosure** No significant relationships.

### 008.2 SEXUAL BEHAVIOUR, RISK AND SEXUALLY TRANSMITTED INFECTIONS BEFORE AND AFTER THE INTRODUCTION OF THE PREP IMPACT TRIAL

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10.1136/sextrans-2019-sti.147

**Background** There is currently considerable interest the complex relationship between PrEP and STI incidence. Our Challenges and Opportunities of PrEP (CHOP) study uses qualitative and quantitative methods to ascertain the changes in behaviour and STI rates in high risk men/transgender/nonbinary persons who have sex with men (MSM/TPSM) before and after commencement of the PrEP Impact trial ('Impact') in our clinic (01/12/2017).

**Methods** We performed retrospective data analysis of clinic and laboratory records for MSM/TPSM attendees who attended a British sexual health clinic in a large urban area between 01/12/2016 and 28/02/2019.

We used logistic regression to compare STI diagnoses (chlamydia, gonorrhoea and syphilis at any site) and sexual risk score in two time periods (1: 01/12/2016 – 31/11/17 and 2: 01/12/2017 to 28/02/2019).

**Results** Of 72,667 attendances, 10,918 were MSM/TPSM and, excluding duplicate entries (164) and those who were already HIV positive (236), this left 3,407 individuals with 10,518 attendances: 4,378 (period 1) and 6,140 (period 2).

Mean HIV acquisition risk score at first visit in period 1 was 5.8 and 5.4 in period 2.

In period 1 at first visit 13.5% (266/1,975) had one or more STI compared with 20.2% (289/1143) in period 2, a rise of 6.7%. Logistic regression showed OR1.6 ( $p < 0.001$ , 95%CI 1.35–1.95).

STI diagnoses for subsequent visits in period 1, 6.3% (151/2403) attendances had one or more STIs diagnosed, and in period 2 10.9% (513/4708). This is a rise of 4.6% (OR 1.8 ( $p < 0.001$  95%CI 1.51–2.20)).

**Conclusion** Although risk score was similar during both time periods, STI rates were significantly higher both at first visit and at subsequent visits. The qualitative aspect of this study will explore whether this reflects attracting more high risk MSM/TPSM into the service or whether use of PrEP increases risk-taking behaviour.

**Disclosure** No significant relationships.

### 008.3 RATES OF CHLAMYDIA AND GONORRHEA TESTING AND POSITIVITY BEFORE AND AFTER INITIATION OF PREP AMONG MSM IN US PRIVATE SETTINGS

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10.1136/sextrans-2019-sti.148

**Background** The Centers for Disease Control and Prevention (CDC) recommends initial and follow-up STD and HIV testing when taking HIV pre-exposure prophylaxis (PrEP). We assessed frequencies of STD and HIV testing and rates of STDs among men who have sex with men (MSM) taking PrEP.

**Methods** We used the OptumLabs® Data Warehouse (OLDW) a comprehensive, longitudinal, real-world data asset with de-identified people from a national U.S. insurance plan. Male patients aged  $\geq 18$  years were identified as MSM if patients had rectal chlamydia or gonorrhoea tests or had an ICD-10 code for high-risk homosexual or bisexual behavior in 2016–2017. Initiation of PrEP was defined as the first date of tenofovir plus emtricitabine (Truvada) prescription in 2016–2017 if they had no previous HIV or HBV infection and had no PrEP prescription before 2016. Continuous use of PrEP was defined if there were no 14 day gaps between prescriptions. We measured STD and HIV testing in MSM who continuously used PrEP for  $\geq 180$  days.

**Results** Of 682 MSM who initiated PrEP in 2016–2017 and continuously used PrEP for  $\geq 180$  days, chlamydia, gonorrhoea, and HIV testing was 61.4%, 61.4%, and 51.3%, respectively, at 6 month follow-up. These percentages were significantly lower than testing in the same patients at PrEP initiation (67.6%, 67.6%, and 57.2%, respectively,  $p < 0.01$ ). Chlamydia and gonorrhoea positivity in MSM who were tested at 6 month follow-up was 10.0% and 9.5%, respectively, versus 6.1% and 6.7%, respectively, at PrEP initiation.

**Conclusion** MSM on PrEP are at high risk for chlamydia and gonorrhoea. STD testing at 6 month follow-up for MSM who are continuously enrolled on PrEP is sub-optimal, but that STD positivity increases versus the baseline, suggesting elevated risk. Interventions to improve provider adherence to screening recommendations in the CDC STD treatment guidelines for MSM on PrEP are urgently needed.

**Disclosure** No significant relationships.