Introduction Since 2000, hepatitis C virus (HCV) has emerged as a sexually transmitted infection among men who have sex with men (MSM). Although the reported HCV epidemic has largely been confined to HIV infected MSM, spread to HIV negative MSM might have gone unnoticed.
Methods HIV negative MSM at high risk for acquiring HIV who enrolled in the Amsterdam Pre-Exposure Prophylaxis (AMPrEP) demonstration project at the Public Health Service of Amsterdam were tested for the presence of HCV antibodies and HCV RNA. If positive for HCV RNA, part of the HCV NS5B gene (709 bp) was sequenced. Maximum likelihood phylogenies (GTR substitution model) were constructed to compare HCV sequences from HIV negative AMPrEP participants, Dutch HIV positive MSM with acute or chronic HCV infection (n=246; period 2000–2015) and Dutch risk groups other than MSM (n=153; period 2000–2015). Bootstrap values>70% define robust phylogenetic clusters.
Results By June 2016, all 376 HIV negative MSM had been enrolled in AMPrEP; 18 (4.8%, 95% CI 2.8%–7.5%) were positive for anti-HCV or HCV-RNA at baseline. Of those, 15/18 (83%) had detectable HCV-RNA, including one without detectable anti-HCV. HCV genotyping showed genotype 1a (73%), 4d (20%) and 2b (7%). Of the 15 participants with HCV RNA, 13 (87%) were part of 6 robust MSM-specific HCV clades containing MSM with and without HIV. This included 9/11 HIV negative MSM infected with HCV-1a (Figure 1), and all 4 MSM infected with HCV-4d and HCV-2b. Four out of 17 (24%) HCV positive participants reported injecting drugs in the 3 months preceding PrEP start, compared to 11/354 (3.1%) among HCV negative participants.
Conclusion The HCV prevalence of 4.8% among HIV-negative MSM eligible for PrEP was higher than the prevalence around 1% previously observed among Dutch HIV negative MSM attending an STI clinic and not on PrEP. HCV-mono-infected MSM were infected with the same MSM-specific HCV strains circulating among HCV/HIV co-infected MSM, suggesting spread from HIV positive to high-risk HIV negative MSM. Routine HCV testing should be offered to MSM at high risk for HIV and included in PrEP guidelines.

O01.5 ORIGIN AND PREDICTORS OF EARLY REPEAT INFECTIONS AMONG HIV NEGATIVE WOMEN WITH *TRICHOMONAS VAGINALIS* RECEIVING A 2 G DOSE OF METRONIDAZOLE

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Introduction A recent meta-analysis demonstrated superiority of multi-dose metronidazole (MTZ) over the CDC and WHO recommended 2 g dose for the treatment of *T. vaginalis* (TV). Another study among HIV+ women with TV found higher test-of-cure (TOC)+ rates among women who had asymptomatic bacterial vaginosis (BV) than those without BV. The purpose of this study was to measure the TOC TV+ rate and to examine if the presence of BV influenced that rate.
Methods HIV-/TV+ women treated with 2 g oral directly observed MTZ and who completed their TOC visit 3–12 weeks post treatment were included. Women were tested for TV using NAAT and surveyed via computer at baseline and TOC. Nugent scores≥7, calculated from vaginal gram stain, were considered BV+. MTZ susceptibility testing was performed on TOC TV+ specimens.
Results Of 227 TV+ women included baseline the mean age was 31.3 (S.D. 9.9), 95.2% were African American, 39.3% had multiple male partners in the prior 3 months, 32.3% regularly smoked, 19.4% were binge drinkers, 48.9% had BV and 5.4% had yeast on the gram stain. At TOC, 19.8% were NAAT TV+. Of the 45 TOC-TV+ women, 44 provided sexual exposure information and 10/44 (24.4%) reported sexual re-exposure to baseline partner or sexual exposure to a new partner. Two of 26 (7.7%) TOC+ specimens that underwent susceptibility testing had low to moderate MTZ resistance (50–100 ug/ml). There were no differences in TOC NAAT+ rates by BV, sexual re-exposure to a baseline partner, sexual exposure to a new partner, regular smoking, binge drinking, or by the presence of yeast (p>0.22).
Conclusion TOC NAAT+ rate after 2 g MTZ dose was high (19.8%) and isolates from these women were susceptible to MTZ (94.3%). Most TOC+ women (75.6%) reported no sexual exposure/re-exposure during follow-up suggesting that most cases were treatment failures. Selected behavioural factors and BV did not did not appear to influence TV treatment. The 2 g MTZ dose for TV recommended by CDC and WHO, should be reevaluated in light of more sensitive NAAT.

O01.6 EVALUATING CHLAMYDIA TRENDS IN THE UNITED STATES 2000–2015 USING A PAIR FORMATION TRANSMISSION MODEL

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Introduction In the United States reported cases of chlamydia have increased since reporting began, due in part to increased screening. However, the implication of these trends for the population prevalence remains unclear. We aimed to understand and reconcile the epidemiological trends, and examine counterfactuals.
Methods We developed a deterministic heterosexual pair formation model to simulate chlamydia epidemiology in the US heterosexual population aged 15-54y. The pair formation model accounts explicitly for sexual partnership dynamics, such as re-infection within the partnership, and the model is stratified by age, risk and relationship type (long-term v. casual). We used a Bayesian approach to calibrate model parameters (including time-varying screening, reporting and test sensitivity) to age- and sex-specific national case report rates from 2000–2015 (ages 15-54y), lab-measured population prevalence estimates from NHANES 1999–2014 (15-39y), and sexual behaviour data from the Youth Risk Behaviour Survey (15-18y).
Results Model estimates were able to reproduce both chlamydia prevalence and reported case rates. Results indicate an increase in chlamydia screening in women.

Conclusion This analysis is the first to fit a chlamydia transmission model to national sex- and age- specific prevalence and case report time trends. The results suggest screening would have to achieve a higher coverage, or we should investigate novel strategies to reduce chlamydia prevalence further. This model could be used to investigate the impact of novel prevention interventions, such as improved partner notification strategies and targeted screening programs.

Oral Presentation Session 2

Sexual Behaviour in Men Who Have Sex with Men

O02.1 DIMENSIONALITY OF STIGMA AND ASSOCIATED ATTITUDES TOWARDS ANTICIPATED PARTNER NOTIFICATION AMONG MSM IN LIMA, PERU: AN EXPLORATORY FACTOR ANALYSIS

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10.1136/sextrans-2017-053264.6

Introduction Partner notification (PN) is a key component of STI prevention efforts, yet, is underutilised by MSM, a population at-risk for STIs and HIV in Peru. To understand limiting mechanisms, we examined the dimensionality and latent factor structure of perceived STI and HIV stigma and attitudes towards PN among MSM in Lima, Peru.

Methods Between 2012–2014, 1,625 MSM in Lima were screened for HIV, syphilis, genital herpes and/or gonorrhoea/chlamydia and completed a survey assessing sociodemographics, attitudes towards PN, recent sexual practices, and STI and HIV-related stigma. Analytic plan included exploratory factor analysis (EFA) to assess dimensionality and interpretability of factor loadings on an item pool (n=30) inquiring about anticipated PN and its perceived importance. All analyses conducted in MPlus v.7.

Results Participants (median age: 27, IQR: 23–34) reported median of 3 sexual partners (IQR: 1–5) and 64% HIV seroprevalence. Of participants reporting sexual role: 334 (20%) *activo* (top/insertive), 487 (30%) *pasivo* (bottom/receptive), and 743 *moderno* (versatile). Eigenvalue analysis and EFA suggested a 3-factor model with simple structure best fit the observed covariance matrix (all loadings>0.70, 67% of variability in data, CFI: 0.89, X2: 1 00 690.

Conclusion Findings suggest the importance of underlying mechanisms linking STI-related enacted stigma and norms surrounding anticipated partner notification. Our results contribute to the existing knowledge on factors associated with anticipated PN in Peru and underscore the need for efforts to mitigate shame surrounding HIV and STI status, which may be important to improve acceptability and scale-up of PN and an HIV prevention interventions for MSM in Lima, Peru.

O02.2 SYPHILIS AND SEXUAL GEOGRAPHIES: MAPPING THE SEXUAL TRAVELS, NETWORKS, AND KNOWLEDGE OF GAY, BISEXUAL AND OTHER MEN WHO HAVE SEX WITH MEN IN TORONTO, CANADA

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10.1136/sextrans-2017-053264.7

Introduction A complex, persistent syphilis epidemic has affected gay, bisexual and other men who have sex with men (gbMSM) in major urban centres in North America for over a decade. Our objective was to explore the sexual travels, networks, and knowledge of gbMSM in Toronto.

Methods We conducted in-depth interviews between June and July 2016 with 31 gbMSM who were ≥18 years, actively seeking sexual partners, and living, working or socialising in downtown Toronto. We asked participants to map their egocentric sexual network, share their sexual partner-seeking strategies and knowledge of STIs. We analysed travel patterns between participants and their sexual partners, including in relation to the core area of elevated syphilis rates, and used interview transcripts to interpret and explore the context from which observed patterns emerged.

Results Four geosexual archetypes dominated the egocentric sexual network maps, namely, hosters, two types of travellers: house-callers and rovers, and geoflexibles. These archetypes were observed in both core and noncore areas. Hosters usually or always hosted sex at their residence, creating a centralised sex phenomenon. Travellers rarely or never had sex at their residence. House-callers usually or always had sex at the residence of their sex partners; rovers also had sex at venues and other public spaces. Travellers created a dispersed sex phenomenon and bridging core, peripheral, and distant areas. Geoflexibles had sex anywhere (i.e.,home, venues, partner residences, public spaces). Participants practiced 1–2 online or in-person partner seeking strategies with little regard for syphilis because of overwhelming concern for HIV, lack of awareness of the syphilis epidemic, and treatability of the syphilis.

Conclusion Geo-sexual patterns and travel between sexual partners suggest specific archetypes exist comprising the larger gbMSM sociocentric sexual network. Future research should better define and characterise these archetypes and explore how each may impact STI transmission and intervention.

O02.3 UNDERSTANDING FUCKBUDDIES AMONG MEN WHO HAVE SEX WITH MEN

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10.1136/sextrans-2017-053264.8

Introduction The term 'fuckbuddy' has been widely used in the men who have sex with men (MSM) population; however, this term is often classified as either 'regular' or 'casual' partnerships in sexual health research. We aimed to examine the