assess whether this association can be explained by behavioural/sexual networking patterns, the existence of a biological substrate, or both.

Disclosure of interest statement All authors declare no conflicts of interest.

P11.19 SYPHILIS INCIDENCE AND ASSOCIATED RISK FACTORS AMONG MEN WHO HAVE SEX WITH MEN IN BANGKOK, THAILAND, 2006–2015

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Introduction Syphilis infection has been increasing among men who have sex with men (MSM) in Thailand. We assessed syphilis incidence and associated risk factors in the Bangkok MSM Cohort Study (BMCS).

Methods We enrolled Thai MSM age ≥18 years old in the BMCS from April 2006 to January 2008 (Period1) and September 2009 to December 2010 (Period2), and followed participants every 4 months for up to 60 months. *Treponema pallidum* (TP) screening was performed at enrollment, annually and at any unscheduled study visits if indicated, using the rapid plasma reagin (RPR). If the RPR was reactive, we confirmed with a TP-specific antibody test. We defined incident syphilis as a RPR titer ≥1:8 and a reactive treponemal test. We calculated risk factors for incident syphilis in all participants using a Cox proportional hazard model, adjusting for baseline demographic and behavioural characteristics, and prevalent HIV infection.

Results Among 1,502 participants who had no syphilis at baseline and had more than one follow-up visit, 54.7% reported unprotected anal intercourse (UAI). The overall syphilis incidence was 2.7 (95% CI 2.3–3.1) per 100 person-years (/100PY). There was a significant difference in syphilis incidence in the two periods (2.5/100PY in Period1 vs. 3.3/100PY in Period2, $p = 0.003$). Factors independently associated with incident syphilis were enrollment in Period2 (Adjusted HR [AHR] 1.7; 95% CI 1.2–2.4), UAI (AHR 1.4; 95% CI 1.0–2.0), amyl nitrate use (AHR 1.9; 95% CI 1.2–2.8), Viagra use (AHR 1.6; 95% CI 1.1–2.5), and prevalent HIV infection (AHR 2.3; 95% CI 1.6–3.1).

Conclusion In the BMCS, statistically significant differences in incident syphilis by enrollment period may be due to recent increases in syphilis among urban Thai MSM. Syphilis screening identifies MSM at high risk for HIV, and syphilis screening and treatment are necessary for comprehensive HIV VCT services.

Disclosure of interest statement The Bangkok MSM Cohort Study (BMCS) is funded by the Thailand Minister of Public Health (MOPH) – US Centres for Disease Control and Prevention (CDC) Collaboration. No pharmaceutical grants were received in the development of this study.

P11.20 RESURGENCE OF SYPHILIS AMONG HIV-INFECTED MEN WHO HAVE SEX WITH MEN ATTENDING STI CLINICS IN THE NETHERLANDS

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Introduction In the Netherlands, approximately 90% of all infectious syphilis (syphilis) and 70% of all new HIV infections are among men who have sex with men (MSM). As the relation between syphilis and HIV is characterised by a bidirectional synergy, we assessed syphilis trends among MSM stratified by HIV status.

Methods The national STI/HIV surveillance contains epidemiological, behavioural and clinical data from STI clinics, which provide low threshold STI/HIV testing and care for high-risk groups. We descriptively examined syphilis positivity rates between 2007 and 2014.

Results The number of MSM consultations increased each year from 11,048 in 2007 to 29,939 in 2014. Of all MSM, 83% were HIV-negative. The number of syphilis diagnoses was lowest in 2011 ($n = 426$) and highest in 2014 ($n = 693$), of which around 40% was among HIV-infected MSM each year. Among known HIV-infected MSM, the syphilis positivity rate decreased between 2007 (12.3%) and 2011 (4.5%), followed by an increase in recent years (2014: 6.6%). Among MSM newly diagnosed with HIV, this trend was roughly similar to that of known HIV-infected MSM. Among HIV-negative MSM, the syphilis positivity rate decreased between 2007 (2.8%) and 2011 (1.4%), and remained stable thereafter.

Conclusion The observed rebound in syphilis rates in a high-risk group of HIV-positive MSM is concerning at individual level, given the adverse effects on both syphilis and HIV disease progression. At public health level, this is worrisome as syphilis facilitates transmission and acquisition of HIV. Therefore, syphilis infection could be indicative to offer HIV pre-exposure prophylaxis (PrEP) among HIV-negative MSM. On the other hand, offering PrEP to a high-risk core group could promote syphilis transmission if it leads to reduced perceived vulnerability and subsequent increased risk behaviour, as seen after the introduction of cART.

Disclosure of interest statement The authors declare that they have no competing interests.

P11.21 CHARACTERISING THE EPIDEMIOLOGY OF ACTIVE HEPATITIS B VIRUS INFECTION AMONG HIGH-RISK MEN WHO HAVE SEX WITH MEN AND TRANSGENDER WOMEN IN LIMA, PERU

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Introduction Hepatitis B (HBV) infection is a major cause of chronic liver disease, which is a leading cause of death worldwide. Despite differing epidemiology, HBV infection shares routes of transmission with HIV infection. Therefore we explored factors associated with those infections among high-risk populations in Peru.

Methods Men who have sex with men (MSM) and transwomen (TW) recruited from two STI clinics completed a behavioural survey on alcohol use and sexual risk-taking in the last 3 months and received HIV testing. An AUDIT score ≥ 17 determined the presence of a severe alcohol use disorder. Active hepatitis B infection was determined by detection of HBsAg using EIA UMELISA and HBsAg confirmatory testing (Tecnosuma, Cuba). Self-collected rectal swabs were used to diagnose gonorrhoea/chlamydia by NAAT. Prevalence ratios (PR) were calculated using Poisson regression.

Results Among 310 MSM and 89 TW (median age 30 years, IQR: 18–58), 5% (20/399) had active HBV infection. Of the 20 participants with active HBV infection, 50% were HIV co-infected which was significantly more than the HIV prevalence among HBsAg negatives (30%, p -value = 0.053). Rates of recent condomless anal intercourse were similar by HBV infection status (68% among those with active infection vs. 74% among HBsAg negatives p = 0.557). Rectal STI prevalence was 40% among participants with active HBV infection vs. 20% among HBsAg negative participants. (p -value = 0.034). In multivariable regression active HBV infection was associated with severe alcohol use disorders (aPR = 2.54, p -value = 0.008) and HIV diagnosis (aPR = 2.56, p -value = 0.009).

Conclusions In the context of South America's low carrier rate, the prevalence of active HBV infection among this Peruvian sample is high. Our findings emphasise the importance of revising national HBV screening and vaccination guidelines to include HIV-infected individuals and heavy drinkers since both conditions may accelerate liver disease. Educational campaigns to encourage transmission prevention are also needed since condomless anal intercourse was common in this cohort.

Disclosure of interest statement This data for this abstract was obtained from an NIH-funded study (1R01AI099727). Hepatitis tests were donated however the donating company did not contribute to the conception of this study or participate in the analysis/interpretation of the data in this abstract.

P11.22 HEPATITIS C INFECTIONS AMONG HIGH-RISK MEN WHO HAVE SEX WITH MEN AND TRANSGENDER WOMEN IN LIMA, PERU

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Introduction Disparate findings persist in the literature regarding the sexual transmission of hepatitis C virus (HCV) and the role of HIV/other STIs. Therefore we analysed the epidemiology and risk factors for HCV infection among a non-intravenous drug using, sexually active population in Peru.

Methods High-risk men who have sex with men (MSM) and transwomen (TW) recruited from two STI clinics completed a

behavioural survey on substance use and sexual risk taking in the last 3 months. Hepatitis C diagnosis was determined by detection of Anti-HCV antibodies using EIA UMELISA PLUS (Specificity: 99.93% Sensitivity: 100% Tecnosuma, Cuba). In addition to HIV testing, STI screening included rectal gonorrhoea/chlamydia (NAAT) and syphilis (RPR titer $\geq 1:16$). Chi-square tests were used to compare differences in characteristics between HCV-infected and negative individuals.

Results Among 310 MSM and 89 TW (median age 30 years, IQR: 18–58), 4% (15/399) were HCV-infected. Recent condomless anal intercourse was reported by 76% of the sample (292/393). Although more condomless anal intercourse was reported among HCV-infected vs. negative individuals (93% vs. 74%) the difference was not significant (p = 0.107). Illicit substance use for the cohort was low with 13% reporting recent cocaine use, which also was not significantly different among HCV-infected vs. negative individuals (27% vs. 13%, p = 0.120). HIV positivity was 31% for the sample (124/401) and was associated with HCV infection vs. non-infection (53% vs. 30%, p = 0.054). When comparing HCV-infected to negative individuals, neither rectal STI diagnosis (27% vs. 20%, p = 0.55) nor recent syphilis diagnosis (47% vs. 36%, p = 0.41) were significantly associated.

Conclusion The findings for this cohort in Peru did uncover an association between HCV infection and concurrent HIV infection however such associations for sexual risk behaviours and other STI diagnoses were not found. Prospective data documenting HCV seroconversion among a larger sample is needed to better understand the contribution of sexual transmission to HCV infection.

Disclosure of interest statement This data for this abstract was obtained from an NIH-funded study (1R01AI099727). Hepatitis tests were donated however the donating company did not contribute to the conception of this study or participate in the analysis/interpretation of the data in this abstract.

P11.23 EVALUATION OF HEPATITIS C VIRUS IN THE RECTUM OF HIV-INFECTED MEN WHO HAVE SEX WITH MEN

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Introduction An epidemic of Hepatitis C Virus (HCV) infection is occurring in HIV-infected men who have sex with men (MSM). Epidemiological studies suggest that sexual transmission is fueling the epidemic. Blood and semen have been considered as potential mechanisms of transmission, but there are still transmission circumstances that remain unexplained. Nothing is known about the presence of HCV in the rectal fluid of HCV-infected MSM.

Methods Written informed consent was obtained from 45 HIV-infected MSM with HCV infection. A moistened swab was inserted atraumatically into the rectum, placed into transport medium, vortexed, and the supernatant analysed for HCV using Ampiprep/COBAS TaqMan HCV test (Roche Diagnostics), lower limit of quantification 43 IU/mL, lower limit of detection 7 IU/mL.

Results Successful virological analysis was performed on 43 rectal swabs. HCV was detected in 20 out of 43 (47%) specimens. The HCV viral load (VL) in the rectal fluid ranged from $<2.92 - 5.52 \log_{10}$ IU/mL. Rectal HCV detection was associated with