

azithromycin or doxycycline for the treatment of rectal chlamydia. We investigated treatment efficacy of two treatments for rectal chlamydial infection.

**Method** A retrospective cohort of male and female patients diagnosed with rectal chlamydial infection between 2009 and 2015 was created at the STI services (Clinic 275) in Adelaide, Australia. Patients were included in the analysis if they were treated with azithromycin (1 g single dose) or doxycycline (100 mg twice a day for 10 days) and returned for repeat testing 14 to 180 days after treatment commenced. Log binomial models were used to estimate the relative risk (RR) of recurrent rectal chlamydia associated with the treatment with azithromycin versus doxycycline.

**Results** Of 526 patients diagnosed with rectal chlamydial infections over the study period, 73% (n=384) were men and 27% (n=142) were women; 419 (79.7%), 93 (17.7%) and 14 (2.6%) patients were treated with doxycycline, azithromycin or other medication respectively. Of these patients, 173 (41.3%) of 419 doxycycline-treated patients and 31 (33.3%) of 93 azithromycin-treated patients were retested between 14 and 180 days after treatment commenced ( $p=0.16$ ). Among these patients, the repeat rectal chlamydia test was less commonly positive in those treated with doxycycline (5.8%; 95% Confidence Interval (CI) 0.03–0.10) compared with those treated with azithromycin (19.4%; 95% CI 0.09–0.36) and ( $p=0.01$ ). In the multivariate analysis, azithromycin-treated patients had a significant higher risk of a positive test in the 14 and 180 days after treatment commenced (adjusted relative risk (aRR) 2.78, 95% CI 1.10–7.05).

**Conclusion** The findings suggest that doxycycline may be more effective than azithromycin in treating rectal chlamydial infection.

### P3.27 LYMPHOGRANULOMA VENEREUM IN SWEDEN 2004–2016: INCREASED RATES AMONG HIV-NEGATIVE MEN WHO HAVE SEX WITH MEN AND CHANGED GENOTYPES

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**Introduction** Lymphogranuloma venereum (LGV) has become prevalent among men who have sex with men (MSM) in Europe since an outbreak in The Netherlands in 2003. The aim of this study was to describe the development of LGV in relation to HIV since 2004, and genotypes of LGV and other *Chlamydia trachomatis* (Ct) genovars in a MSM population in 2014/15.

**Methods** All testing for LGV in Sweden is referred to Uppsala University Hospital. LGV-specific pmpH-gene PCR was used for detection. High-resolution genotyping based on *ompA* gene and multilocus sequence typing (MLST) was performed on all Ct-positive cases from an STI clinic for MSM in Stockholm between 1.9. 2014 and 1.7.2015.

**Results** The annual numbers of detected LGV cases in Sweden were 2 in 2004 to 2006, between 5 and 20 in 2007 to 2012, and between 23 and 38 in 2013 to 2016. The number of LGV-tests increased from 68 in 2008 to 268 in 2016. During the study in 2014/15 31 LGV cases were identified in 309 patients with successful PCR-results. In 39% (12/31) LGV was unexpected and had not been detected without extended screening. The HIV-prevalence among LGV-positive patients

decreased from 88% 2006–2013% to 68% 2014–2015. Of *ompA* genotyped LGV cases 69% were L2% and 31% were L2b type. This contrasts to earlier Swedish and European data from 2004–2009 when only L2b was found. Complete genotyping, including *ompA* and MLST, was obtained for 151 patients with non-LGV Ct and resulted in genovar D, 27%; E, 14%; G, 30% and J 21%. MLST resulted in 27 STs of which 3 predominated and accounted for 51%. Eight STs were new when compared to the database <http://mlstdb.bmc.uu.se> comprising 540 STs from >3300 specimens.

**Conclusion** In Sweden LGV has gone from sporadic import cases to a probable endemic spread among HIV-negative MSM, which emphasises the need for LGV-testing. This emphasises the need for LGV-testing within this high risk group. LGV has developed from being of clonal nature to occur as different strains among MSM.

### P3.28 IMPROVING THE EVIDENCE-BASE TO UNDERSTAND STI RISK REDUCTION CAPACITY: THE FEASIBILITY AND ACCEPTABILITY OF LINKING ONLINE BEHAVIOURAL SURVEY DATA TO ELECTRONIC PATIENT RECORDS

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**Introduction** Behavioural surveys can provide insight into the attitudes and context associated with risk of sexually transmitted infections (STIs), but interpretation is hampered by their reliance on self-reported STI history rather than confirmed diagnoses. We aimed to determine the feasibility and acceptability of linking clinic patients' online survey data on STI risk factors with the national surveillance dataset on STI diagnoses (GUMCADv2), which contains electronic patient record (EPR) data routinely submitted to Public Health England by sexual health clinics.

**Methods** Between May and September 2016, attendees at 16 sexual health clinics across England were invited to complete an online survey on knowledge, attitudes, and behaviours around STI risk, using a clinic tablet or personal device (e.g. smartphone). Participants were given a unique study identifier (ID) to type into the survey, and provided consent to participate and to data linkage. Screening questions routed eligible participants,  $\geq 15$  years old and sexually active in the past year, to the full survey. Recruiting clinic staff kept record of study IDs and corresponding patient IDs. We linked survey data to GUMCADv2 with deterministic and probabilistic methods, using the recorded ID numbers as well as age, gender, and clinic attendance date. We examined recruitment and linkage success for a target of 7500 eligible attendees, and used univariable logistic regression and Z-test for proportions to assess selection bias.

**Results** 6283 clinic attendees agreed to take part in the study, of whom 73.6% (4626) completed the survey. 95.9% (4437) of survey respondents were eligible; 59.2% of our recruitment target. Survey completion among those agreeing to participate was higher in the 9 clinics that recruited  $\geq 50\%$  of their target than those that did not (84.9% vs 53.0%). Survey completion was also higher in those who agreed to fill in the survey in clinic than in those who agreed to do so at home (87.3% vs

16.8%). 91.2% (4048/4437) of participants consented to data linkage; of these 83.7% (3391) could be linked to GUMCADv2. Consent did not differ by age or gender, but was higher among men who have sex with men than heterosexual men (95.5% vs. 88.4%;  $p < 0.01$ ), and lower among Black Caribbean than white participants (87.1% vs 93.8%,  $p < 0.01$ ). Compared to all clinic attendees at study sites in the study period, a higher proportion of participants were  $< 25$  years (30.8% vs 37.1%,  $p < 0.001$ ), were black Caribbean (8.1% vs 14.5%,  $p < 0.001$ ), and had a same-day sexual health screen (70.2% vs 77.4%,  $p < 0.001$ ) or a chlamydia/gonorrhoea diagnosis (6.4% vs 7.7%,  $p < 0.01$ ) recorded on GUMCADv2.

**Conclusion** Online behavioural surveys with data linkage to EPRs are highly acceptable to sexual health clinic attendees and technically feasible, and could improve the knowledgebase needed to tailor STI risk reduction efforts. However participants with higher risk profiles may be oversampled. Poor recruitment in some clinics was likely due to limited availability of clinic staff to facilitate and encourage use of clinic tablets

### P3.29 PREVALENCE OF HIV, SIFILIS, HEPATITIS B AND HEPATITIS C IN THE INMATES OF THE PENITENTIARY COMPLEX OF VALE DO ITAJÁ-SC

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**Introduction** To establish prevalence and identify risk factors for HIV, Syphilis, Hepatitis B and Hepatitis C infections in the Private Population of Freedom (PPF) in the Complexo Penitenciário do Vale do Itajaí-Canhanduba, Itajaí, Santa Catarina, Brazil.

**Methods** In the period between December of the year 2015 and August of the year 2016 a research was carried out at the Canhanduba penitentiary, Itajaí-SC, with quantitative and prospective character. The data collection was performed through a review of 921 medical records and rapid tests provided by the Ministry of Health - Brazil and the State Department of Health - SC. There were 655 interns participating initially, of these 170 did not want to be part of the research and 470 accepted to perform the tests.

**Results** The prevalence of infections in this population was 2.9% for HIV, 5.9% for Syphilis, 1.0 for HBV and 2.5% for HCV. This population were consisted of men, mostly in the age group between 20 and 40 years. It was possible to identify a high consumption of all kind of drugs in this population, being alcohol, marijuana and cocaine the most reported.

**Conclusion** In view of the observed aspects, it was possible to conclude that PPLF has a higher prevalence for infectious diseases when compared to the free population, since most of them present with a few years of studies, in use of illicit drugs and in activity unprotected sex. In addition to being exposed to a crowded environment, precarious and with a high turnover of people. The statistical data on this subject in Brazil are rare and out of date, thus not demonstrating the real epidemiological and serological situation of this population as a whole, so studies in several areas must be carried out in order to formulate new strategies of action.

### P3.30 PREVALENCE AND RISK BEHAVIOURS FOR SYMPTOMATIC SEXUALLY TRANSMITTED INFECTION AMONG THE RURAL POPULATION IN CENTRAL BRAZIL

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**Introduction** A million people every day worldwide contract a Sexually Transmitted Infection (STI). In Brazil, studies show that rural living presents adverse conditions and promotes life behaviours that favour the acquisition of such diseases. The objective of this investigation was to estimate the prevalence of symptomatic STIs and to analyse the risk behaviours for these infections among rural settlers from the southwest of Goiás, Central Brazil.

**Methods** This is an observational, analytical and cross-sectional study. From May to June 2011, 395 individuals aged 12 years or older living in settlements in southwestern Goiás, Central Brazil, were recruited. All participants were interviewed by means of a structured questionnaire, containing questions about sociodemographic data and risk behaviours for STIs. The outcome variable was the clinical presentation of one of the following STI symptoms over the previous 12 months: vaginal discharge, urethral discharge, genital ulcers, pelvic inflammatory disease, and anogenital warts. The study was approved by the Research Ethics Committee of the Federal University of Goiás.

**Results** Of the total, 51.6% were male, 39.5% were aged between 12 and 40 years, and 42.5% had 4 or fewer years of study. The majority were married (68.4%), from Goiás (79%), and were Catholic (51.9%). The prevalence for symptomatic STIs among the settlers was 20.5%. It was observed that being male (adjusted OR: 0.17,  $p = 0.00$ ), drinking alcohol (adjusted OR: 1.75,  $p = 0.05$ ), and life history in rural encampment. (adjusted OR: 2.78,  $p = 0.00$ ) were variables associated with STIs.

**Conclusion** The results support the need for effective strategies for prevention and control of STIs among the rural population, especially settlers, a population with significant potential in the chain of transmission of sexual infections. Health education and rapid testing for STIs should be implemented for individuals of rural encampment in Brazil.

### P3.31 HIGH RISK BEHAVIOURS AND SYPHILIS/HIV INFECTION AMONG MEN WHO HAVE SEX WITH MEN AGED 50 YEARS AND OLDER IN SHENZHEN, CHINA

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**Introduction** The national average HIV prevalence among men who have sex with men in China increased from 1.4% in 2005 to 8.0% in 2015. There is a significant increase in the number of HIV new infections in individuals over 50 years of age in China and other countries. In China the prevalence of syphilis/HIV infection among MSM over 50 years is increasingly high but few reports pay attention to it. Our study was to investigate the high risk behaviours and syphilis/HIV