

$p=0.042$ ], side effects [adjusted OR 2.23 95% CI (1.32 to 3.74),  $p=0.002$ ] and lack of perception that the missed dose can aggravate the disease [adjusted OR 4.15, 95% CI (1.03 to 16.67),  $p=0.045$ ] have emerged as determinants of the overall non-adherence.

**Conclusion** The results are in accordance with what has already been shown. The discrepancy observed between the two methods highlights the importance of access to biological methods. The identified risk factors will through regular evaluation, better identify PLWHA at greater risk of non-compliance and to offer enhanced compliance support.

### P3.24 LYMPHOGRANULOMA VENEREUM PROCTITIS ARE STILL INCREASING IN FRANCE

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10.1136/sextrans-2017-053264.261

**Introduction** Following the emergence of *lymphogranuloma venereum* (LGV) proctitis in the Netherlands in 2003, a voluntary surveillance system for LGV has been established in France. Based on the data of the National Reference Centre (NRC) for chlamydiae, Bordeaux, France, this study aimed to describe the epidemiology of LGV and non-LGV ano-rectal infection in France and to examine the characteristics of affected populations.

**Methods** The French surveillance network includes clinicians, biologists and NRC. Biologists sent rectal CT-positive samples to the NRC where the strains were typed by using two real-time PCR targeting *pmpH* gene specific of L and L2b strains. Biologists and clinicians performed a document on patient's clinical, biological and behavioural data. Clinical, biological and sexual risk behavioural variables were compared in men with LGV and with non-LGV cases according the HIV status using appropriate statistical tests over the period 2010–2015.

**Results** A total of 2627 LGV cases and 2633 non LGV cases were recorded from 2004 to 2015. In the period 2010 to 2015, there were 1747 LGV episodes in 1570 patients, most of whom were known to be HIV-positive (841/1105, 76.1%) and 2242 non LGV episodes in 2051 patients, most of whom were known to be HIV-negative (1186/1665, 71.2%). The number of LGV diagnoses was multiplied by 2.4 between 2012 and 2015 and the number of recurrence reached 10% in 2015. LGV continues to affect a core group: HIV-infected MSM who engage in high-risk sexual practices. They were older and more often infected with syphilis than men with non-LGV cases, were usually symptomatic and mainly lived in Paris. Those who acquired LGV reinfection had concurrent hepatitis C and syphilis more often than those with a single episode.

**Conclusion** A steady annual increase in the number of LGV cases and in the number of LGV recurrences was observed since 2012, demonstrating that the LGV epidemic is not under control and requires providing better information about the

disease to affected patients and physicians of all specialties who take care them

### P3.25 QUANTIFICATION OF THE RISK OF PELVIC INFLAMMATORY DISEASE FOLLOWING A CHLAMYDIA TRACHOMATIS TEST BY DIAGNOSTIC TEST TYPE

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10.1136/sextrans-2017-053264.262

**Introduction** Nucleic Acid Amplification Tests (NAATs) are the recommended test type for diagnosing *Chlamydia trachomatis* (chlamydia). However poorer performing methods remain in use. We compared the risk of pelvic inflammatory disease (PID) in women tested for chlamydia by diagnostic test type.

**Methods** We used a sub-set of the Danish Chlamydia study that included all female residents of Denmark who were tested for chlamydia (1998–2001) when aged 15–34 years. Chlamydia tests performed on urinary or genital samples with a definitive positive or negative result were categorised as non-NAAT (ELISA; IF; “antigen”) or NAAT (PCR; SDA; TMA; LCR; DNA/RNA) and limited to each woman's first test. Test records were linked to hospital presentations for PID within 12 months. Women with previous PID or PID diagnosed on the same date as the test were excluded. We used logistic regression to compare the risk of PID by test type adjusted for age, test year and test result.

**Results** Of the 2 72 105 women in the study, 44.78% were tested using NAAT, 6.38% tested positive for chlamydia and 0.64% were diagnosed with PID within 12 months. Overall, the adjusted risk of PID within 12 months of a chlamydia test was higher following a positive test (AOR 1.40 (95%CI 1.18–1.67) and in older women (25–34 years 1.36 (1.23–1.49)) and lower in women tested using a NAAT (0.87 (0.78–0.96)) and in the more recent time interval (2000/2001 0.89 (0.80–0.99)). In women with a positive test, and presumably treated infection, the risk of PID did not differ by test type (1.25 (0.87–1.79)). In women with a negative test, the risk of PID was lower following a NAAT (0.84 (0.75–0.93)).

**Conclusion** Women with a negative result from a non-NAAT chlamydia test have a 16% higher risk of PID by 12 months compared to women with a negative result from a NAAT. This is presumably due to the increased proportion of false negative tests with the less sensitive non-NAATs. This study quantifies the health impact of using poorer performing chlamydia diagnostic tests and provides further evidence for phasing them out.

### P3.26 THE EFFICACY OF AZITHROMYCIN AND DOXYCYCLINE TREATMENT FOR RECTAL CHLAMYDIAL INFECTION: A RETROSPECTIVE COHORT STUDY IN SOUTH AUSTRALIA

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10.1136/sextrans-2017-053264.263

**Introduction** British Association for Sexual Health and HIV (BASHH) and Australian guidelines recommend either

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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10.1136/sextrans-2017-053264.264

**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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10.1136/sextrans-2017-053264.265

**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