P08.16 RISK PROFILE OF PATIENTS DIAGNOSED WITH A SEXUALLY TRANSMITTED INFECTION (STI): A COMPARISON OF PATIENTS CONSULTING GENERAL PRACTICES (GP) AND SPECIALISED SEXUAL HEALTH CLINICS (SHC) IN BELGIUM, 2013

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10.1136/sextrans-2015-052270.362

Introduction Assuming that STI patients visiting SHC have different risk profiles triggered STI surveillance by GP. The aim was to compare patient characteristics and to explore the contribution of the different health care settings to STI control.

Methods STI surveillance exists since 2000 by voluntary participation of gynaecologists, dermatologists, medical centres for sex workers (SW), STI clinics, and aids reference centres (ARC), collecting socio-demographic, testing and behavioural data. They are defined as SHC.

In order to compare STI patients consulting GP and SHC, the GP sentinel network was invited to participate STI surveillance in 2013. Chi2-test for proportions was used to test for significant differences.

Results GP (N = 160) and SHC (N = 30) reported respectively 158 and 855 episodes.

Patients did not differ in gender, age, education and STI diagnosis.

GP patients consulted because of a STI plaints (GP: 67%; SHC: 42%), SHC performed more screening (GP: 17%, SHC: 36%). SHC patients mentioned more multi partnership (GP: 36%; SHC: 73%) and used more condoms (GP: 20%; SHC: 46%). The proportion of MSM, SW and drug users was higher in SHC (resp. GP: 39%, SHC: 66%; GP: 1%, SHC: 15%; GP: 0%, SHC: 3%). The proportion of MSM by STI, with exception of genital warts, was always higher in SHC and was strongest for syphilis (GP: 60%, SHC: 92%).

Conclusion STI patients were analogue for age and gender in the 2 types of health care settings. GP screened less for STI and diagnosis was made in case of a particular plaint. High risk groups (MSM, SW and drug users) were more seen in SHC than in the GP network,. The probable lower risk profile of GP patients could be dedicated to lower STI knowledge and risk awareness, by as well GP and patient not belonging to a known risk group. GP training in STI consulting and opportunistic screening with risk factor awareness and strengthen condom use in general are recommended.

Disclosure of interest statement Nothing to Declare.

P08.17 INFLUENCE OF *CHLAMYDIA TRACHOMATIS* ORGANISM LOAD ON REINFECTION RISK

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10.1136/sextrans-2015-052270.363

Background *Chlamydia trachomatis* (CT) infection remains highly prevalent. CT reinfection occurs in up to 20% of persons within months after treatment, likely contributing to sustaining the high chlamydia prevalence. Most studies evaluating predictors of reinfection have focused on epidemiological and behavioural factors. Our program is studying host immune responses and organism factors contributing to reinfection. In this study, we evaluate the influence of CT organism load on reinfection risk.

Methods In an ongoing study, women presenting to an STD Clinic in Birmingham, AL, for CT infection treatment are enrolled, treated, and return for 3- and 6-month follow-up visits. At each visit, clinical information and endocervical swabs are collected. CT detection and organism load quantification is performed using real-time PCR. To estimate organism load, a CT calibrator is run using stock CT samples with known organism counts to create cycle threshold standard curves for comparison with clinical samples, providing reliable and reproducible results that allow for relative quantification on a log scale.

Results Of 119 participants completing the study to date: 95% were African American and 56% had prior CT infection (per report and chart review). The median log10 CT load at enrollment was 5.8/mL (range 3.1 – 8.9). CT reinfection occurred in 22 (18%). The median log10 load at enrollment was significantly lower in those with subsequent reinfection compared with those without reinfection (5.05/mL vs. 6.1/mL; P = 0.012 by Wilcoxon rank sum test).

Conclusion A lower endocervical CT organism load at the time of treatment was associated with a greater CT reinfection risk. The reason for this is unclear, but it is possible lower organism loads could elicit weaker protective cellular immune responses, predisposing to greater reinfection risk. In addition to continuing organism load testing on more samples to verify this association, we will be investigating cellular immune responses in this cohort.

Disclosure of interest statement Nothing to Declare.

P08.18 REGIONAL VARIATION IN EMERGENCY DEPARTMENT PRESENTATION RATES OF CHLAMYDIA RELATED MORBIDITY IN FOUR STATES OF AUSTRALIA

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10.1136/sextrans-2015-052270.364

Background Pelvic inflammatory disease (PID) and ectopic pregnancy among women and epididymitis among men are important sequelae of chlamydia. In Australia, chlamydia prevalence is higher among younger populations, Indigenous Australians, and in regional and remote areas. The burden of chlamydia sequelae by Australian region is unknown. We assessed if rates of emergency department (ED) presentations in Australia for chlamydia sequelae vary by remoteness of residence.

Methods Age and sex specific ED rates per 100,000 population of PID, ectopic pregnancy or epididymitis among 15–44 year-old Victorian, New South Wales, Queensland and South Australian residents were calculated for the years 2009 and 2010 using hospital and Australian Bureau of Statistics estimated resident population data. Logistic regression was used to assess regional variation in rates and adjusted for age, remoteness and socio-economic group (SES) of residential postcode in deciles.

Results During 2009–2010, overall ED rates per 100,000 among 15–44 year-old residents from all four states were 76.8 (95% CI: 74.8–78.8) for PID, 73.0 (95% CI: 71.1–75.0) for ectopic pregnancy and 86.4 (95% CI: 84.3–88.4) for epididymitis. Multivariable analysis showed that PID rates in female residents: were higher in inner-regional (AOR = 1.6; 95% CI: 1.5–1.7) and outer regional/remote areas (AOR = 2.1; 95%

CI: 1.9–2.3) compared with metropolitan areas; increased by 6%(95% CI: 5%–7%) per decile of increasing disadvantage of postcode; and were higher in women aged 15–24 (AOR = 2.4,95% CI: 2.3–2.6) and 25–34 years (AOR = 1.7; 95% CI: 1.6–1.8) compared with 35–45 years. Ectopic pregnancy rates in females were higher in inner-regional (AOR = 1.3; 95% CI: 1.2–1.4) and outer regional/remote (AOR = 1.7; 95% CI: 1.5–1.8) areas; increased by 6% (95% CI: 5%–7%) per decile of increasing disadvantage; and were highest among 25–34 year-old women (AOR: 2.1; 95% CI: 2.0–2.3). In men, epididymitis rates were higher in inner-regional (AOR = 1.6; 95% CI: 1.5–1.7) and outer regional/remote (AOR = 2.3; 95% CI: 2.2–2.5) areas and did not differ by age or SES.

Conclusion Possible explanations for higher ED rates of chlamydia sequelae in non-metropolitan Australian residents could be higher chlamydia prevalence or variable access to primary healthcare in these areas.

Disclosure of interest statement These data are being analysed as part of the Australian Chlamydia Control Effectiveness Pilot (ACCEPt) study funded by the Commonwealth Department of Health and the National Health and Medical Research Council.

P08.19 RISK OF PELVIC INFLAMMATORY DISEASE FROM CHLAMYDIA AND GONORRHOEA AMONG AUSTRALIAN SEXUAL HEALTH CLINIC ATTENDEES

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10.1136/sextrans-2015-052270.365

Background Pelvic inflammatory disease (PID) is an important cause of infertility in women and can occur when micro-organisms such as chlamydia or gonorrhoea ascend to the upper genital tract. However few studies have quantified the contribution of these pathogens to PID.

We estimated the burden of PID using the population attributable risk percent (PAR%) in an Australian urban sexual health clinic population that could potentially be avoided if chlamydia or gonorrhoea infection were prevented.

Methods Data were extracted from the clinic's electronic patient database for all females aged 16–49 at first visit to an urban sexual health clinic between Jan2006-Jun2013. Chlamydia and gonorrhoea tests were based on clinical and risk assessment. PID diagnosis was based on clinical examination findings. Two analyses were undertaken; one among chlamydia-tested women and one among a subset of the chlamydia-tested group who were also tested for gonorrhoea (chlamydia/gonorrhoea tested). Univariable and multivariable logistic regression was conducted to identify factors associated with PID. The PAR% for PID from a current chlamydia or gonorrhoea infection was calculated and adjusted for demographic and behavioural factors using multivariable logistic regression.

Results Among 15690 chlamydia-tested women, 1279 (8.2%, 95% CI 7.7–8.6) tested chlamydia-positive, 436 (2.8%, 95% CI 2.5–3.0) had PID diagnosed. The PAR% for chlamydia was 14.1% (95% CI 9.9–18.1). Among 8839 chlamydia/gonorrhoea-tested women, 681 (7.7%, 95% CI 7.2–8.3) had chlamydia only, 30 (0.3%, 95% CI 0.2–0.5) gonorrhoea only, 22(0.2%, 95% CI 0.2–0.4) chlamydia and gonorrhoea; 419 (4.7%, 95% CI 4.3–5.2) had PID diagnosed. The PAR% was highest for chlamydia only (12.5%, 95% CI 8.5–16.3) compared with gonorrhoea only (0.9%, 95% CI-0.1–1.8) or concurrent infections (1.0%, 95% CI 0.0–1.9).

Conclusion In this low gonorrhoea prevalence population, chlamydia control would have the greatest impact on reducing PID.

Disclosure of interest statement The authors declare that they have no commercial or other association that might pose a conflict of interest.

P08.20 PATHOGEN NEGATIVE PELVIC INFLAMMATORY DISEASE: IS IT PID?

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10.1136/sextrans-2015-052270.366

Background Pelvic inflammatory disease (PID) occurs when pathogens (often sexually transmitted) ascend from the cervix to the upper genital tract. No pathogen is detected in up to two thirds of PID cases yet few studies have assessed the characteristics of pathogen-negative PID. We assessed the characteristics of pathogen-negative compared to pathogen-positive PID using data from females attending a large urban sexual health clinic in Melbourne.

Methods Data were extracted from the clinic's electronic patient database for women aged 16–49 and tested for chlamydia (CT), gonorrhoea (NG), *mycoplasma genitalium* (MG) and bacterial vaginosis (BV) and diagnosed with PID at first clinic visit between Jan 2006–June 2013. PID diagnosis was clinical: based on uterine, cervical motion, or adnexal tenderness in sexually active women with pelvic pain where no cause beside PID was identified. Multivariable logistic regression was conducted to identify demographic, sexual behavioural factors and whether vaginal inflammation (defined as ≥5 polymorphonuclear leukocytes (PMNL) per 1000 high powered field from high vaginal swabs) was associated with pathogen- negative PID.

Results Between 2006–2013, a total of 326 new females patients were diagnosed with PID and tested for CT, NG, MG and BV; 203 (62%; 95% CI: 57%–68%) tested negative for the four infections (pathogen-negative PID). Among pathogen-positive PID cases, 49.6% (95% CI: 40.6–58.6) had CT, 6.5% (95% CI: 2.1–10.9) had NG, 12.2% (95% CI: 6.3–18.1) had MG, 56.1% (95% CI: 47.2–65.0) had BV. Multivariate analysis showed that pathogen-negative PID cases were less likely to have vaginal inflammation (OR = 0.5, 95% CI: 0.3–0.8), to report unprotected sex with non-regular sexual partners in the past three months (OR = 0.6, 95% CI: 0.4–1.0) or to present as an STI contact (OR = 0.4, 95% CI: 0.2–1.0).

Conclusion These findings suggest that pathogen-negative PID is associated with a lower sexual risk and inflammation then pathogen-positive PID cases. In the clinical setting, consideration of PMNS in diagnosing PID may improve diagnostic precision.

Disclosure of interest statement The authors declare that they have no commercial or other association that might pose a conflict of interest.