and structural factors associated with not providing a specimen for chlamydia testing when a test is requested by GP.

Methods Chlamydia testing data for 16 to 29 year old patients, including test requests and whether the test was performed, were collected from 63 GP clinics participating in a trial of a chlamydia testing intervention in Australia. The primary outcome was "no test performed" when a test was requested by a GP. Logistic regression was used to investigate factors associated with no test performed.

Results During the study period there were 13225 chlamydia test requests and of these, a chlamydia test was not performed for 2545 patients (19.2%; 95% CI: 16.5%, 22.3%). Multivariate analysis found that males (adjusted OR[aOR] = 1.4; 95% CI: 1.3, 1.6), those aged 16 to 19 years (aOR = 1.3; 95% CI: 1.1, 1.4), those living in areas of increasing socio-economic disadvantage (aOR = 1.2; 95% CI: 1.1, 1.4 for each additional quintile of Index of Relative Socio-economic Disadvantage) and those attending clinics that did not provide pathology collection onsite (aOR = 1.4; 95% CI: 1.0, 1.9) had an increased odds of not testing when a test was requested.

Conclusion One in five young people did not submit a specimen for chlamydia testing despite their GP requesting it. To capitalise on efforts in general practice to increase chlamydia testing, systems need to be introduced to minimise opportunities for patients to not provide a specimen.

Disclosure of interest statement This study was conducted as part of the Australian Chlamydia Control Effectiveness Pilot (ACCEPt) which has been funded by the Commonwealth Department of Health, NHMRC, NSW Health and the Victorian Department of Health.

P08.31 SCREENING FOR CHLAMYDIA CONCURRENTLY WITH A ROUTINE PAP TEST IN PRIMARY CARE: COULD CERVICAL SCREENING CHANGES IMPACT ON CHLAMYDIA TESTING?

[1]Clarissa Moreira, [1]Caroline Van Gemert, [2]Jane S Hocking, [1]Megan S Lim, [3]Deborah Bateson, [4]Kathleen McNamee, [5]Sepehr N Tabrizi, [6]Rebecca J Guy, [1]Margaret Hellard, [1]Carol El-Hayek*. *[1]Burnet Institute, Melbourne, Victoria, Australia; [2]University of Melbourne, Melbourne, Victoria, Australia; [3]Family Planning NSW, NSW, Australia; [4]Family Planning Victoria, Australia; [5]Royal Women's Hospital Melbourne, Victoria, Australia; [6]The Kirby Institute, UNSW, Sydney, NSW, Australia*

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Introduction The current Australian National Cervical Screening Program involves regular screening of sexually active women ≥18 years using a Pap test but changes to the program, effective in 2017, will only include women aged ≥25 years. These changes could inadvertently reduce chlamydia screening which is recommended in 15–29 year-olds and often occurs during reproductive visits. Using the ACCESS surveillance system we measured the proportion of chlamydia tests that may no longer occur in primary care following changes to the National Cervical Screening Program.

Methods Consultation, Pap and chlamydia testing data were extracted from patient management systems of 18 general practice and family planning clinics in Victoria and NSW. We calculated concurrent Pap and chlamydia testing (within 7 days) by age group, and chlamydia testing frequency among concurrent testers.

Results Between January 2009 and September 2014, 10,105 chlamydia tests were conducted among 44,694 women aged 18–30 years; 63% in 18–24 year-olds and 37% in 25–30 year-olds. In the same period, 10,178 Pap tests were conducted; 47% in 18–24 year-olds and 53% in 25–30 year-olds. The proportion of chlamydia tests conducted concurrently with a Pap test was 20% (2058/10,105), similar in both age groups. For 63% (1154/1835) of women with concurrent chlamydia/Pap tests it was their only chlamydia test during the study period.

Conclusion One in five chlamydia tests among 18–30 year-olds occurred concurrently with a Pap test and the majority of them had no other chlamydia test during the study period. Our results suggest changes to the National Cervical Screening Program could reduce opportunistic chlamydia testing in a particularly high risk group such as sexually active women aged 18–24 years. As chlamydia is mostly asymptomatic, regular and opportunistic screening is considered a key public health strategy in chlamydia control. New strategies will be needed to increase chlamydia testing in young women.

Disclosure of interest statement None.

P08.32 THE FEASIBILITY AND ACCEPTABILITY OF OFFERING OPPORTUNISTIC CHLAMYDIA SCREENING IN A NURSE-LED PRIMARY HEALTH CARE CLINIC

[1]M Lambert, [2]MJ Currie, [3]R Del Rosario*, [3]A Tyson, [3]SJ Martin. *[1]Walk in Centre, Canberra Hospital, ACT, 2605; [2]Research Centre for Nursing and Midwifery Practice, Australian National University, Canberra Hospital ACT 2606; [3]Canberra Sexual Health Centre (CSHC), Canberra, ACT, 2605*

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Introduction Chlamydia rates are highest among young people. Screening is the best method of identifying asymptomatic infection. The study aim was to determine the feasibility and case finding effectiveness of routinely offered chlamydia screening in the nurse-led ACT Health Walk in Centre (WiC).

Methods Regardless of the purpose of their visit, all WiC attendees aged 16–30 years were offered chlamydia screening. Cases were managed by CSHC. Outcome measures were: number of specimens collected, proportion of positive tests, proportion of cases treated at CSHC and contact tracing yield.

Results 4341 people in the target age range (29.1% of total WiC presentations) attended between 13/8/12 and 31/5/13; 473 (10.9%) accepted screening. Screening was associated with female gender (293 vs. 180 p = 0.0001), 20–24 year age group and no particular reason for attendance. 28 (5.9%) tested positive (19 females, 9 males, 22 aged 16–25 years). 26/28 (92.9%) attended CSHC for treatment; 2 were treated elsewhere. 39 sexual partners were nominated by the 26 patients treated at CSHC; 23 were contacted by the index cases and 16 by CSHC staff.

Conclusions Offering chlamydia screening to young people attending the WiC is feasible and demonstrated excellent case finding effectiveness. Efforts to increase screening participation are needed.

Disclosure of interest statement This project was funded by ACT Health, Population Health Division. No Pharmaceutical grant was received in the development of this study.

P08.33 AZITHROMYCIN PHARMACOKINETICS AND IMPLICATIONS FOR EXTENDED DOSES FOR *CHLAMYDIA TRACHOMATIS* AND OTHER SEXUALLY TRANSMITTED INFECTIONS

[1]FYS Kong*, [1]JA Simpson, [2]P Horner, [3]CK Fairley, [1]JS Hocking. [1]*Centre for Epidemiology and Biostatistics, Melbourne School of Population and Global Health, University of Melbourne, 3/207 Bouverie St, Melbourne 3004, Australia*; [2]*School of Social and Community Medicine, University of Bristol, 39 Whatley Road, Bristol BS8 2PS, UK*; [3]*Monash University Central Clinical School and Melbourne Sexual Health Centre, 580 Swanston St, Melbourne 3053, Australia*

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Introduction Chlamydia treatment failure remains concerning with high repeat positive diagnoses of up to 14% in women and 22% for rectal infections in men. Meta-analysis estimates of rectal chlamydia treatment efficacy suggests azithromycin may be 20% less efficacious than doxycycline, but this is based on observational data only – with no RCTs evaluating rectal chlamydia treatment nor any pharmacokinetic data for azithromycin in rectal mucosa. This systematic review will examine the dose-related pharmacokinetics of azithromycin in blood and tissues with discussions on possible considerations of extended regimens to improve efficacy for anorectal infections should a 1 g dose prove suboptimal from RCTs.

Methods Medline and Embase were searched from 1946 to February 2015. Inclusion criteria were: English language, adults and reported pharmacokinetics after any oral dose of azithromycin. Studies of urogenital and rectal tissue were the primary focus but other tissues (excluding eyes) were included. Dose administered and pharmacokinetic parameters such as peak concentration and area under the concentration-time curve (AUC) were extracted.

Results Studies reported high concentrations of azithromycin in cervical, urological, gynaecological, pulmonary, prostatic and oral tissue/fluid after total doses of 500 mg to >2 g. No studies of rectal tissue were reported, however studies of gastric tissue/fluid (a proxy for rectal tissue) showed high concentrations being rapidly attained and sustained for >7 days. Increasing doses results in greater tissue concentrations, which are sustained longer above chlamydia minimum inhibitory concentration (MIC) but with only modest increases in peak blood levels between high and low doses. Similar tissue concentrations were obtained whether the total dose was given over short versus longer duration, suggesting regimens beyond (e.g. >3 days) do not have absorption advantages.

Conclusion Azithromycin concentrations above the MIC are rapidly attained and sustained following treatment. While no data are available in rectal tissue, studies in gastric tissue/fluid suggest adequate rectal concentrations should be obtained. Azithromycin pharmacokinetics also suggest that total doses >1 g given over a few days can be effective in delivering high concentrations to tissues susceptible to chlamydia infections.

Disclosure of interest statement None.

P08.34 NUMBER OF SEX ACTS MATTERS FOR HETEROSEXUAL TRANSMISSION AND CONTROL OF *CHLAMYDIA TRACHOMATIS*

[1]CL Althaus*, [2,3]M Choisy, [3]S Alizon, and the CSF group. [1]*Institute of Social and Preventive Medicine (ISPM), University of Bern, 3012 Bern, Switzerland*; [2]*Laboratoire MIVEGEC (UMR CNRS 5290, IRD 224, UM), 34394 Montpellier Cedex 5, France*; [3]*Oxford University Clinical Research Unit, Hanoi, Vietnam*

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Introduction Mathematical models are frequently used to assess the impact of control interventions for *Chlamydia trachomatis* and other sexually transmitted infections (STIs). Modelling approaches that stratify the population by the number of sex partners often assume the transmission risk per partner to be constant. However, sexual behaviour data suggests that people with many partners share less sex acts per partner than people with fewer partners. This should lower the risk of transmission per partner for highly sexually active individuals and could have important epidemiological consequences for STI transmission.

Methods We devised a new epidemiological model that we fitted to chlamydia prevalence data from Natsal-2 and CSF, two population-based probability sample surveys of sexual behaviour in Britain and France.

Results Compared to a standard model where the transmission risk per partner is constant, a model with realistic numbers of sex acts per partner provided a better fit to the data. The improved model provided evidence for strong assortative mixing (ϵ = 0.83; 95% CI 0.46–0.96) among individuals with different numbers of sex partners. The basic reproduction number (R_0) exceeds the threshold of one for all individuals with one or more new heterosexual partners in the last year, and saturates around three for higher number of partners.

Conclusion Our results suggest that all chlamydia infected individuals with one or more new heterosexual partners per year contribute significantly to ongoing transmission, underlining that control interventions should be aimed towards all sexually active young adults.

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P08.35 CLUSTER ANALYSIS OF *CHLAMYDIA TRACHOMATIS* STRAINS USING TWO MULTILOCUS SEQUENCE TYPING SCHEMES SHOWS DIFFERENCES IN DISCRIMINATION OF MSM STRAINS VERSUS THOSE OF HETEROSEXUALS

[1]Bart Versteeg*, [1]Sylvia M Bruisten, [2]Arie van der Ende, [2]Yvonne Pannekoek. [1]*Public Health Laboratory, Public Health Service Amsterdam, Amsterdam, The Netherlands*; [2]*Department of Medical Microbiology, Academic Medical Center Amsterdam, The Netherlands*

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