years test for *Chlamydia trachomatis* annually and on change of sexual partner. Since 2013, NCSP has also recommended re-testing three months after testing positive. We used a detailed dataset to investigate characteristics associated with repeated chlamydia testing.

Methods We used surveillance data of community-based chlamydia testing (excluding online testing and specialist sexual health services) among men and women aged 15–24 years in the Bristol area, January 2011–December 2017. Repeat-testing was defined as returning for further testing within the Bristol area, at least 42 days after initially testing. Initial tests <3 months from December 2017 were excluded. We used logistic regression to compare odds of repeat-testing by initial test result, testing service, residence, initial test result and sexual risk behaviour, adjusted for age and whether the 2013 guidance was operating.

Results 14.11% (n=76,758) of women and 7.81% (n=28,038) of men repeat-tested within the study period. Of those with a positive result, 31.21% (n=5,104) of women and 14.88% (n=2,386) of men repeat-tested. Repeat-testing was associated with positive initial tests (Females: Adjusted Odds Ratio 1.90, 95% Confidence Interval 1.76–2.05; Males: 1.98, 1.71–2.27), having ≥2 sexual partners in the last year (1.17, 1.11–1.23; 1.15, 1.02–1.31), having a new sexual partner in the last 3 months (1.31, 1.24–1.38; 1.55, 1.36–1.77), living in the city of Bristol (1.68, 1.57–1.80; 1.43, 1.25–1.65) and testing through Contraception and Sexual Health clinics, which can treat uncomplicated infections, rather than other settings (1.34, 1.28–1.41; 1.37, 1.23–1.53).

Conclusion It was encouraging that initial positive tests and riskier sexual behaviour, which mean individuals are more likely to be infected, were associated with re-testing. However, we observed low uptake of re-testing with disparities by residence and testing service. These results will inform strategies to increase the uptake of re-testing within the Bristol area.

Disclosure No significant relationships.

P463

PARTICIPATION AND RETENTION OF WOMEN IN A PROSPECTIVE MULTICENTER STUDY ON *CHLAMYDIA TRACHOMATIS* INFECTIONS (FEMCURE)

¹Nicole Dukers-Muijers*, ²Titia Heijman*, ³Hannelore Götz*, ⁴Patricia Zaandam*, ⁴Juliën Wijers*, ¹Jeanine Leenen*, ¹Geneviève Van Liere*, ¹Jeanne Heil*, ⁵Astrid Wielemaker*, ⁶Maarten Schim Van Der Loeff*, ⁷Petra Wolffs*, ⁶Sylvia Bruisten*, ⁴Mieke Steenbakkers*, ⁸Arjan Hogewoning*, ⁹Henry De Vries*, ¹Christian Hoebe*. ¹Public Health Service South Limburg, Maastricht University Medical Center (MUMC), Sexual Health, Infectious Diseases and Environmental Health, Medical Microbiology, Care and Public Health Research Institute (CAPHRI), Heerlen, Netherlands; ²Public Health Service Amsterdam, Sexual Health, Amsterdam, Netherlands; ³Public Health Service Rotterdam Rijnmond, Public Health/Sexual Health, Rotterdam, Netherlands; ⁴Public Health Service South Limburg, Sexual Health, Infectious Diseases and Environmental Health, Heerlen, Netherlands; ⁵Public Health Service Rotterdam-Rijnmond, Infectious Disease Control, Rotterdam, Netherlands; ⁶Public Health Service Amsterdam, Amsterdam University Medical Center (UMC), Infectious Diseases, Infection and Immunity (AI and II), Amsterdam, Netherlands; ⁷Maastricht University Medical Center (MUMC), Medical Microbiology, Care and Public Health Research Institute (CAPHRI), Maastricht, Netherlands; ⁸Public Health Service Amsterdam, Amsterdam University Medical Center (UMC), National Institute of Public Health and the Environment (RIVM), Infectious Diseases, Infection and Immunity Institute (AI and II), Epidemiology and Surveillance Unit, Amsterdam, Netherlands

10.1136/sextrans-2019-sti.545

Background The participation of women in prospective sexual health research is key to understanding mechanisms of their health, and best practices need to be shared. We here evaluate

participation, retention, and associated factors, of women in a multicenter prospective cohort (FemCure) providing insights in internal and external validity of this prospective study.

Methods *Chlamydia trachomatis* (CT) infected adult women, negative for HIV, syphilis and *Neisseria gonorrhoeae* were eligible to be pre-selected and included at three sexually transmitted infection (STI) clinics in The Netherlands (2016–2017). The planned follow-up for participants was 3 months with 2-weekly rectal and vaginal CT self-sampling and online questionnaires at home and at the clinic. We aimed to optimize participation by simultaneously implementing a mix of strategies (e.g. research in an existing clinical infrastructure, incentives, easy data collection, text message reminders). We calculated proportions of women pre-selected, included and retained (completed follow-up). Associations with non-pre-selection, non-inclusion and non-retention (attrition) were assessed (using logistic and Cox regression).

Results Of 4916 women attending the clinics, 1763 (35.9%) were pre-selected, of whom 560 (31.8%) were included. Study site, non-Western migration background, high education, and no STI history were associated with non-pre-selection and non-inclusion. Self-reported reasons for non-inclusion were: unable to attend clinic, language-barriers, or too much expected effort. Retention was 76.3% (n=427). Attrition was 10.71/100 person-months (95% confidence-interval 9.97, 12.69). Women who withdrew felt incapable or unwilling to invest more time. Attrition was associated with young age and low education. Retained women expressed a high study satisfaction.

Conclusion In an outpatient clinical setting, it proved feasible to include and retain women in an intensive prospective cohort with moderate (3 months) follow-up time. External validity may be limited as the study population was not representative (sampling-bias), but this need not affect internal validity. Selective attrition however (potential selection-bias) should be accounted for when interpreting the study-results.

Disclosure No significant relationships.

P464

TREATMENT FAILURE IN RECTAL *CHLAMYDIA TRACHOMATIS* AZITHROMYCIN TREATED WOMEN DRIVEN BY HIGH VIABLE BACTERIAL LOAD (FEMCURE)

¹Nicole Dukers-Muijers*, ²Petra Wolffs, ³Henry De Vries, ⁴Hannelore Götz, ⁵Titia Heijman, ⁶Kevin Janssen, ⁷Sylvia Bruisten, ⁸Arjan Hogewoning, ⁸Mieke Steenbakkers, ²Mayk Lucchesi, ⁷Maarten Schim Van Der Loeff, ¹Christian Hoebe. ¹Public Health Service South Limburg, Maastricht University Medical Center (MUMC), Sexual Health, Infectious Diseases and Environmental Health, Medical Microbiology, Care and Public Health Research Institute (CAPHRI), Heerlen, Netherlands; ²Maastricht University Medical Center (MUMC), Medical Microbiology, Care and Public Health Research Institute (CAPHRI), Maastricht, Netherlands; ³Public Health Service Amsterdam, Amsterdam University Medical Center (UMC), National Institute of Public Health and the Environment (RIVM), Infectious Diseases, Infection and Immunity Institute (AI and II), Epidemiology and Surveillance Unit, Amsterdam, Netherlands; ⁴Municipal Public Health Service Rotterdam Rijnmond, Public Health/Sexual Health, Rotterdam, Netherlands; ⁵Public Health Service Amsterdam, Sexual Health, Amsterdam, Netherlands; ⁶Maastricht University Medical Centre (MUMC), Department of Medical Microbiology, Care and Public Health Research Institute (CAPHRI), Maastricht, Netherlands; ⁷Public Health Service Amsterdam, Amsterdam University Medical Center (UMC), Infectious Diseases, Infection and Immunity (AI and II), Amsterdam, Netherlands; ⁸Public Health Service South Limburg, Sexual Health, Infectious Diseases and Environmental Health, Heerlen, Netherlands

10.1136/sextrans-2019-sti.546

Background Rectal infections with *Chlamydia trachomatis* (CT) are prevalent in women visiting a STI outpatient clinic.

While azithromycin is the most used treatment, microbiological treatment failure in rectal CT is common and its drivers remain unclear.

Methods This study is part of a prospective multicentre cohort study (FemCure). Current analyses included 112 women clinically-diagnosed (by nucleic acid amplification test [NAAT]) with rectal and vaginal CT, who not vomited and denied rectal and vaginal unprotected sex. Four weeks after azithromycin treatment (1g single dose) participants self-collected vaginal and rectal samples. Samples were tested for CT-DNA (NAAT) and viable CT-load (viability polymerase chain reaction [V-PCR]). We evaluated two endpoints: (1) failure by NAAT-positivity and (2) failure by V-PCR-positivity. Enrolment-risk-factors associated with failure were assessed using multivariable logistic regression; i.e., age, education, migratory-background, previous CT, NAAT Cq-value [marker CT-DNA load], culture, viable CT [V-PCR positive], viable load [$\log_{10}$ copies/ml], vaginal CT.

Results (1) Failure by NAAT (21.4%; 24/112) was independently associated with both rectal and vaginal NAAT Cq-values; both aOR: 0.8 per unit decrease in the NAAT Cq-value (95% CI:0.7–0.9, $p<0.01$). Of the 49 women with a rectal or vaginal Cq-value ≥ 36 at clinic-diagnosis (43.8% of patients), 8.1% had rectal failure, compared to 31.7% when having Cq values <36 ($p<0.01$). (2) Failure by V-PCR (16.1%;18/112) was independently associated with the rectal viable load; aOR: 1.7 per $\log_{10}$ copies/ml increase (95%CI:1.3–2.3). Of the 47 (42.0%) women without a viable rectal CT at diagnosis, 4.3% had failure, compared to 24.6% when having viable rectal CT at diagnosis ($p<0.01$). Vaginal failure by NAAT was 7.1% (8/112); failure by V-PCR was 2.7% (3/112).

Conclusion In an outpatient clinical setting, azithromycin rectal CT microbiological treatment failure was common and associated with higher pre-treatment (viable) loads. The lower azithromycin treatment failure in patients with NAAT Cq-values ≥ 36 or non-viable rectal CT might result in different treatment choices.

Disclosure No significant relationships.

P465

CHLAMYDIA-SCREENING FOR WOMEN UNDER THE AGE OF 25 YEARS IN GERMANY – HOW ARE WE DOING?

¹Martyna Gassowski*, ²Christina Poethko-Mueller, ³Sandra Dudareva, ⁴Viviane Bremer, ²Martin Schlaud, ³Klaus Jansen. ¹Robert Koch Institute, Postgraduate Training for Applied Epidemiology, Berlin, Germany; ²Robert Koch Institute, Department of Epidemiology and Health Monitoring, Berlin, Germany; ³Robert Koch Institute, Infectious Disease Epidemiology, Berlin, Germany; ⁴Robert Koch Institute, Berlin, Germany

10.1136/sextrans-2019-sti.547

Background An opportunistic screening program for *Chlamydia trachomatis* (CT) was introduced in Germany in 2008, targeting sexually active women under the age of 25. The program suffers from low coverage (~12%) and its impact on the epidemiology of CT in the German setting remains unclear. As CT is not notifiable in Germany, we used alternative data sources to describe CT-epidemiology in the context of the screening program.

Methods Urine-PCR results from two population-based, nationwide health surveys of adults (DEGS, 2008–2011, subsample=2,364) and minors (KiGGS-Wave 2, 2014–2017, subsample=619) were analyzed. Weighted CT-prevalences were estimated for adults. Prevalence estimation for age-subgroups and adolescents was not possible due to high coefficients of variation, instead unweighted CT-positive proportions were

calculated in an explorative analysis. Data from a CT laboratory sentinel system were used to obtain the number of screening tests performed and the proportion of positive results by age and year.

Results The weighted prevalence of CT in the general German population aged 18–44 was estimated at 1.2% (95% confidence interval (95%CI): 0.6%–2.2%) among women and 1.9% (95%CI: 1.2%–3.0%) among men. The highest unweighted CT-positive proportions were found in the younger age groups in both women (18–24y: 2.4%, 95%CI 1.1%–5.0%; 25–34y: 1.5%, 95%CI 0.7%–3.3%) and men (18–24y: 2.0%, 95%CI 0.9%–4.4%; 25–34y: 2.9%, 95%CI 1.6%–5.2%). Among 15- to 17-year-old girls, an unweighted CT-positive proportion of 6.2% (95%CI 2.9%–12.6%) was found. Sentinel data from 2014–2016 (467,474 screening-tests of 15–24 year-old women) showed positive-result proportions of 3.4% (95%CI 3.1%–3.7%), 6.1% (95%CI 5.9%–6.4%) and 3.9% (95%CI 3.7%–4.0%) among 15-, 19- and 24-year-olds, respectively.

Conclusion The German screening program seems to correctly target the women most at risk and may thus prevent cases of CT-sequelae. However, through its low coverage and the exclusion of men, who serve as a reservoir for the infection, the program is not likely to reduce CT-prevalence effectively.

Disclosure No significant relationships.

P466

HIGH PREVALENCE OF EXTRAGENITAL CHLAMYDIA TRACHOMATIS (CT) IN HETEROSEXUAL WOMEN: VALIDATION OF POOLED SAMPLES

¹Selena Singh*, ²Mark Hopkins, ¹Liat Sarner. ¹Bart's Health NHS Trust, Sexual Health, London, UK; ²Bart's Health NHS Trust, Virology, London, UK

10.1136/sextrans-2019-sti.548

Background Studies have shown high rates of concurrent rectal CT in women with urogenital infection. Extra-genital STI testing in women is not routine, and would be cost-prohibitive for all women. Pooling of samples from different anatomical sites is an effective method of testing for bacterial STIs, however is most commonly used in men who have sex with men. Before implementing pooled sampling within our services we performed a small validation comparing triple site sampling with pooled sampling for detection of CT and *Neisseria gonorrhoea* (NG) in women <25 years.

Methods This validation was performed at a level 3 genito-urinary medicine clinic in London from January – March 2018. Patients were both symptomatic and asymptomatic. Samples were taken by either clinician or patient. All samples were tested using Aptima Combo 2 nucleic acid amplification tests.

Results 99 cisgender women were included with a median age of 22. 56 women (57%) had symptoms that could indicate an acute STI. None reported rectal symptoms 19 patients tested positive for CT at any site (19% prevalence). Genital only (2) rectal only (7) pharynx only (1) genital + rectal (6) triple site (3). Pooled sampling detected CT RNA in 18/19 patients (95%) and was equivocal in 1/19 patients (sensitivity 95% specificity 100%).

Conclusion We demonstrated high prevalence of extra-genital CT infection in women. 2/19 had genital infection alone; genital sampling would miss 8/19 (42%) of CT infection. In this small evaluation, pooled sampling has been shown to be sensitive and specific for detection of CT. 16/19 women (84%)