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.

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

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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.

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

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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%)