

circulating STIs within the population. To substantiate such proposition, more information is needed on (1) whether the characteristics of those single infected patients differ from the repeat infected patients and (2) the proportion of patients who were not retested.

Methods Laboratory data from all CT/NG tests by the STI clinic, general practitioners or hospital physicians between 2011–2016 of patients aged 15–64 years were obtained (24,051 tests: 2,317 CT positive, 405 NG positive). The outcome ‘repeatedly infected’ was defined as patients with ≥ 2 CT or ≥ 2 NG infections. Chi-square tests were used to compare characteristics of repeatedly infected versus single infected patients, for CT and NG separately.

Results Patients with repeat CT-infections 12%(215/1,845) were more often women, HIV positive, NG positive, diagnosed at the STI clinic or hospital compared to the GP, had ≥ 1 sex partner, reported urogenital symptoms, proctitis and oropharyngeal symptoms ($p < 0.05$). Of the patients with a single CT infection, 50%(814/1,630) was not retested. Patients with repeat NG-infections 13%(38/296) were more often men, older (≥ 25 years), living in non- and modest urban areas, HIV positive, diagnosed at the STI clinic or hospital and reporting oropharyngeal symptoms ($P < 0.05$). Of the patients with a single NG infection, 27%(69/258) was not retested.

Conclusion Patients with repeat CT/NG infections differed from patients with a single infection. Also, characteristics of repeatedly infected patients differed between CT and NG. Indeed, patients with repeat CT or NG infections have impact on STI transmission. However, 27–50% of CT/NG positive patients were not retested. Probably those patients also have impact on circulating STIs, as reinfections are common. Focus should be on infected patients who do not retest or even not test at all as they enable ongoing transmission.

Disclosure No significant relationships.

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WOMEN VISITING GENERAL PRACTITIONERS HAVE HIGHER *CHLAMYDIA TRACHOMATIS* BACTERIAL LOADS THAN WOMEN VISITING THE STI CLINIC

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Background The bacterial load of *Chlamydia trachomatis* (CT) infected individuals may indicate the likelihood of further transmission and development of sequelae. For the first time, we compared the urogenital CT-load of men and women diagnosed by general practitioners (GPs), hospital physicians and the STI clinic.

Methods All urogenital nucleic acid amplification tests (NAAT) CT-positive samples ($n=3,588$) from the Maastricht Medical Microbiology Laboratory were included in the analyses (2012–2016). The cycle quantification (Cq)-value of the NAAT was used as an inversely proportional measure for CT-load (Cq-values and CT/ml values were highly correlated, Pearson’s $r=0.8$). Multivariable linear regression analyses

were used to compare urogenital Cq-values between STI care providers (GPs, hospital physicians, STI clinic) and assess potential associated demographic- and coinfection determinants, stratified by sex. Adjusted mean differences of Cq-values are presented using betas (B) and 95% confidence intervals (95%CI).

Results Urogenital Cq-values were similar in men visiting the GPs (B:0.2;95%CI: -0.3 to 0.7) and hospital physicians (B:0.4;95%CI: -0.8 to 1.6) compared to the STI clinic. Women visiting the GP had significantly lower urogenital Cq-values (B: -1.0 ;95%CI: -1.6 to -0.3) compared to the STI clinic. Women visiting the hospital had higher urogenital Cq-values (B:1.1;95%CI: 0.2 – 2.0) compared to the STI clinic. Among women visiting the STI clinic, urogenital Cq-values were lower in women with concurrent anorectal CT (B: -3.1 ;95%CI: -3.8 to -2.3) compared to anorectal CT-negative women.

Conclusion Male patients visiting different STI care providers had similar CT-loads. The higher CT load of women visiting the GP compared to STI clinic women could be indicative for higher transmission potential and sequelae. Women visiting hospital physicians had lower CT loads likely due to time of diagnosis. Notably, STI clinic women with concurrent anorectal CT had substantially higher urogenital CT-loads. This finding indicates a missed opportunity in GP and hospital physician patient management, as they rarely test anorectally, while anorectal CT is common among women.

Disclosure No significant relationships.

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A LOWER GENITAL *CHLAMYDIA TRACHOMATIS* BACTERIAL LOAD IS ASSOCIATED WITH COINFECTIONS WITH *NEISSERIA GONORRHOEA* AND HIV

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Background The bacterial load of *Chlamydia trachomatis* (CT) infected individuals may indicate the likelihood of further transmission and development of sequelae. This is the first and largest study to date providing results of a complete overview of the bacterial CT-load of genital and extra-genital samples and its associations with *Neisseria gonorrhoeae* (NG) infection and HIV.

Methods All genital ($n=2,067$ vaginal swabs; $n=1,793$ urines), anorectal ($n=828$) and oropharyngeal ($n=61$) nucleic acid amplification test (NAAT) CT-positive samples from the Maastricht Medical Microbiology Laboratory were included in analyses (2012–2016). The NAAT cycle quantification (Cq)-value was used as an inversely proportional measure for CT-load (Cq-values and CT/ml values were highly correlated for vaginal swabs; Pearson’s $r=0.9$, and moderately correlated for urine in men; Pearson’s $r=0.6$; $p < 0.001$). Mean Cq-values were compared between anatomic locations and coinfections with HIV and NG. Mean Cq-values are presented and tested using ANOVA and independent T-tests stratified for sex. Only statistically significant associations ($p < 0.05$) are presented.

Results In men, Cq-values were higher in oropharyngeal swabs and anorectal swabs compared to urine (35.9 and 33.9 vs