Methods A cohort study was conducted among heterosexual STI clinic visitors aged 18–24 years. Risk classes based on behavioural and psychological characteristics, and transitions between classes three weeks after chlamydia testing, were identified using latent transition analysis. We developed a pair compartmental model with a susceptible-infected-susceptible structure informed by the cohort study. We estimated the impact of sustaining the found short-term effects of testing and of interventions enhancing these effects in those diagnosed, in those tested negative, or in all tested on chlamydia prevalence after five years relative to no effect.

Results Four classes were identified ($n=810$, 13% chlamydia positive (CT+)): 19% of people were in class 1 (5% CT+), 15% in class 2 (10% CT+), 47% in class 3 (16% CT+), and 19% in class 4 (17% CT+). The number of new partners in the past year was higher in class 3 and 4, compared to class 1 and 2. Class 2 and 4 had lower intentions to use condoms, reported less condom use, and were more impulsive, compared to class 1 and 3. Chlamydia positives were more likely to move to a lower risk class after testing, compared to chlamydia negatives. Sustaining this short-term effect resulted in an estimated relative reduction in chlamydia prevalence of 27%. The impact of interventions enhancing behaviour change in those tested negative (–45%) or in all tested (–48%) was estimated to be larger than in those diagnosed (–31%).

Conclusion Testing has strong short-term effects in chlamydia positives, but not in chlamydia negatives. Sustaining these effects is vital in controlling chlamydia transmission, as are interventions enhancing behaviour change in chlamydia negatives.

Disclosure No significant relationships.

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GENITAL CHLAMYDIA TRACHOMATIS AND MYCOPLASMA GENITALIUM AMONG INFERTILE WOMEN IN UNIVERSITY COLLEGE HOSPITAL, IBADAN

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Background *Chlamydia trachomatis* and *Mycoplasma genitalium* are both intracellular pathogen of Sexually Transmitted Infection (STI) that has been reportedly associated with various gynaecological morbidities. The asymptomatic carrier state of *Chlamydia trachomatis* and *Mycoplasma genitalium* facilitates infertility sequelae and perinatal transmission among other complications. Due to the fastidious nature of both organisms, Polymerase Chain Reaction (PCR) are considered more reliable for accurate diagnosis. The aim was to determine the prevalence and risk factors for *Chlamydia trachomatis* and *Mycoplasma genitalium* infection among infertile women in University College Hospital, Ibadan, Nigeria.

Methods A Cross-sectional hospital-based study conducted at the Infertility clinic of the University College Hospital, Ibadan, Nigeria using random sampling technique. Ethical approval was received from UI/UCH ethical approval committee.

Information was collected from the 150 consenting women using structured questionnaire, on sociodemographic and behavioral characteristics of the respondents. Endocervical swabs were obtained for DNA extraction. The presence of *Chlamydia trachomatis* and *Mycoplasma genitalium* were detected from the extracted DNA by the use of conventional PCR. Bands corresponding to 241 and 495kb were documented as positive for *Chlamydia trachomatis* and *Mycoplasma genitalium* respectively. All data were analyzed using SPSS version 20.0. Associated risk factors were assessed with logistic regression.

Results Among the infertile women 11(7.30%) had evidence of *Chlamydia trachomatis* and 32(21.3%) *Mycoplasma genitalium*. Only 1(0.7%) had co-infection. Associated risk factors of *Chlamydia trachomatis* included past history of gonorrhea (OR=8.37, p value = 0.002) and Multiple sex partners (OR=6.67, p value= 0.007). No associated risk factors were found for *Mycoplasma genitalium*.

Conclusion Considering the prevalence of *Chlamydia trachomatis*, the high rates identified for *Mycoplasma genitalium* as a single infection and the low co-infection among the participants, their screening should be included in the microbiological evaluation of infertile women. The risk factors for the infections are similar to those peculiar to other STI

Disclosure No significant relationships.

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TOWARDS A UNIVERSAL TOOL FOR ESTIMATING CHLAMYDIA PREVALENCE FROM SURVEILLANCE DATA: A SYSTEMATIC COMPARISON OF MODELS

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Background Chlamydia is the most commonly-diagnosed bacterial STI worldwide. Models have been developed to estimate chlamydia prevalence from surveillance data in Australia and the UK, respectively, by Ali, Cameron et al. (AC) and Lewis & White (LW). To assess robustness, we compared the models' prevalence estimates when applied to the same data.

Methods The models were applied to Australian 2001–2016 surveillance data to produce annual prevalence estimates in age-sex categories of 15–19, 20–24, 25–29 years for each sex. Two sets of input parameters (the “prior” and “posterior” parameters from the AC modelling study) were used.

Results The LW model produced higher prevalence estimates than the AC model in every age-sex category, with both “prior” and “posterior” parameterisation. Prevalence estimates for Australian women aged 15–29 in 2015 were 2.5%(95% CrI:2.4%–2.7%) and 5.1%(95%CrI:4.0%–6.0%) from the AC model and LW model (using “prior” parameters), respectively; the corresponding empirical estimate from literature was 3.3% (95%CI:2.1%–4.5%). Averaging over all years, the LW model produced prevalence estimates that were 2.5x higher than the