analyses were performed to determine the association between the infections and clinical manisfestations.

Results The prevalence of *M. genitalium* infection at urethral, rectal and pharyngeal sites was 17.2% (95% CI: 13.4% to 21.0%), 11.8% (95% CI: 8.4% to 15.2%), and 13.5% (95% CI: 9.9% to 17.1%), respectively. C trachomatis was more commonly detected in rectum (16.0%, 95% CI: 12.2% to 19.8%) than in urethra (9.4%, 95% CI: 6.4% to 12.3%) and in pharynx (0.8%, 95% CI: 0.1% to 1.6%). Urethral *M. genitalium* infection was significantly associated with urethral discomfort in the past 3 months (AOR: 2.22, 95% CI: 1.09–4.52) and polymorphonuclear leucocyte (PMNL) counts per high-power microscope field (AOR: 2.40, 95% CI: 1.02–5.62). Rectal *M. genitalium* infection was independently associated with rectal discharge in the past 3 months (AOR: 6.06, 95% CI: 1.59–23.11). For C trachomatis infection, PMNL counts per high-power microscope field (AOR: 4.66, 95% CI: 1.80–12.07) and having receptive anal intercourse with a male in the past 3 months (AOR: 2.27, 95% CI: 1.14–4.54) were associated with urethral and rectal C trachomatis infection, respectively.

Conclusion High prevalence of *M. genitalium* infection was observed among MSM in China at urethral, rectal and pharyngeal sites. *M. genitalium* infection was significantly associated with urethral and rectal symptoms. C trachomatis was more commonly detected in rectum and more likely to be asymptomatic.

Disclosure of interest statement No potential conflicts of interest.

O03.4 WHAT EXPLAINS ANORECTAL CHLAMYDIA DETECTION IN WOMEN: IMPLICATIONS FOR CONTROL STRATEGIES

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Introduction Anorectal *Chlamydia trachomatis* (Ct) testing in women is not standard. In some countries, women are being tested based on reported anal intercourse. However, universal anorectal Ct testing in STI clinics revealed prevalences over 10%, irrespective of anal intercourse, and showing high co-occurrence with urogenital infections. To inform control strategies in women, this study explores different transmission mechanisms that can explain the high observed Ct prevalences using mathematical modelling.

Methods We developed a pair compartmental model of heterosexuals aged 15–29 years. To inform the model, data on anorectal and urogenital infections are used from heterosexual men and women attending STI clinics. In the model, women can have urogenital and anorectal infections, men only urogenital infections. At all sites, individuals can either be susceptible (S), infected (I) or recovered (R). All partnerships engage in vaginal intercourse, and a fraction of partnerships will also have anal intercourse. We developed models including different transmission mechanisms, e.g. transmission by anal sex and autoinoculation between anatomic sites, and explored which mechanisms or combinations thereof fit the observed data best.

Results Most models did fit to the observed prevalence of male and female urogenital Ct: 13.6% (95% CI: 10.7–17.2) and 13.0% (95% CI: 12.4–13.7), female anorectal Ct: 10.6% (95% CI: 8.0–13.9) and both sites: 9.9% (95% CI: 7.4–13.1). Models that assumed autoinoculation between anatomic sites fitted the data best, compared to models that focused on anal sex only. The model will be used to further determine the impact of testing strategies (i.e. universal irrespective of anal intercourse) and treatment strategies (i.e. azithromycin or doxycycline) on population prevalence.

Conclusions The results are suggestive of a Ct autoinoculation process between anatomic sites in women. This has potential consequences for future chlamydia control strategies including testing and treatment.

Disclosure of interest statement The National Institute of Public Health and the Environment is funded by the Ministry of Health, Welfare and Sport. The authors declare no conflict of interest.

O03.5 CLINICIAN-TAKEN EXTRA-GENITAL SAMPLES FOR GONORRHOEA AND CHLAMYDIA IN WOMEN COMPARED WITH SELF-TAKEN SAMPLES ANALYSED SEPARATELY AND SELF-TAKEN POOLED SAMPLES

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Background Extra-genital sampling (rectum and pharynx) using nucleic acid amplification tests is becoming increasingly important in women as vulvovaginal swabs (VVS) alone may miss infections. We compared clinician-taken extra-genital samples in women with self-taken samples analysed both separately and as pooled samples for accuracy and cost-effectiveness.

Methods Women attending a sexual health clinic were invited into a 'swab yourself' trial. Clinician and two self-samples (analysed separately and pooled) were taken from vulvovaginal, pharyngeal and rectal sites for gonorrhoea (NG) and chlamydia (CT) using AC2. Sampling order was randomised. Patient infected status was defined as at least two positive confirmed samples.

Results 402 women recruited January–March 2015. Overall prevalence: gonorrhoea 3.2% (rectal 2.7%, pharyngeal 1.5%), chlamydia 13.7% (rectal 12.9%, pharyngeal 3.2%). One NG case (7.7%) and 7 CT cases (12.7%) were VVS negative.

	Sensitivity	Specificity	PPV	NPV
NG Rectal Clinician	100%	100%	100%	100%
NG Rectal Self	100%	100%	100%	100%
NG Pharynx Clinician	83.3%	100%	100%	99.8%
NG Pharynx Self	100%	100%	100%	100%
NG Self Pooled	100%	100%	100%	100%
CT Rectal Clinician	98.1%	100%	100%	99.7%
CT Rectal Self	100%	99.7%	98.1%	100%
CT Pharynx Clinician	92.3%	99.7%	92.3%	99.7%
CT Pharynx Self	84.6%	100%	100%	99.5%
CT Self Pooled	98.2%	99.4%	96.4%	99.7%

McNemar test showed no difference between clinician-taken and self-taken rectal or pharyngeal samples, or between self-taken samples analysed separately or pooled.
Conclusion This on-going work is the first randomised study showing women's self-taken extra-genital samples are comparable to clinician-taken and can be analysed accurately as a pooled sample. High levels of extra-genital infections were found with 12.7% of CT infections being missed on VVS. Trebling diagnostic costs with rectal, pharyngeal, and VVS samples would be unaffordable for many health systems but a pooled sample has the same laboratory cost as the current VVS.
Disclosure of interest statement Dr Janet Wilson has received honoraria and travel and accommodation expenses from BD Diagnostics, and research grants in the form of diagnostic kits from Hologic/Gen-Probe.

O03.6 TIMING OF TEST OF CURE FOR ANOGENITAL *NEISSERIA GONORRHOEAE* INFECTIONS - A PROSPECTIVE COHORT STUDY USING NUCLEIC ACID AMPLIFICATION TESTS

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Introduction The use of nucleic acid amplification tests (NAATs) to diagnose *Neisseria gonorrhoeae* (Ng) infections has rapidly replaced culture. This complicates performance of test of cure (TOC) to monitor treatment failure. As evidence for the timing of TOC using modern Ng NAATs is highly limited, we assessed the time to Ng-clearance when using modern NAATs.
Methods We included patients attending the STI Clinic Amsterdam from March–October 2014 with anogenital Ng. We collected swabs or urine for RNA-based NAAT (Aptima Combo 2 assay [AC2], Hologic) and DNA-based NAAT (Cobas 4800 NG/CT assay [C4800], Roche). Treatment for Ng was ceftriaxone 500 mg. Upon treatment, patients self-collected daily samples for both NAATs for 28 days, and recorded sexual contact in a diary. After 28 days, patients returned to the clinic with their samples, and we collected final samples for culture and NAAT. Clearance was defined as two consecutive negative results. Reinfection was defined as >2 positive results after clearance, with at least one result positive in both DNA and RNA-based NAAT. A blip was defined as a positive RNA or DNA result after clearance without reinfection.
Results We included 77 patients of whom 62 completed the study. The median number of self-collected samples was 27. Anatomical locations were distributed evenly (urethra: 20, vagina: 21, rectum: 21). 23 (37%) patients had a *Chlamydia trachomatis* co-infection. All patients cleared Ng during the study and median time to clearance was 2 days (range: 1–9) for both NAATs. 95% of patients cleared before day 6 (AC2) and day 7 (C4800). Reinfection was observed in one patient. Blips occured in 6 (AC2) and 15 (C4800) patients, respectively.
Conclusion With modern RNA- or DNA-based NAATs, a TOC of anogenital gonorrhoea can be performed after 7–9 days. However, intermittent positive test results after clearance occurred in 10–25% of patients.
Disclosure of interest statement This study was funded by the Public Health Service Amsterdam. Aptima products and test kits were provided by Hologic. Roche PCR products and Cobas 4800 test kits were provided by Roche.

O04 - Adolescent sexual health

O04.1 LONGITUDINAL EXPERIENCES OF SOCIAL SUPPORT AND SEXUAL RISK IN A SAMPLE OF YOUNG BLACK GAY AND BISEXUAL MALES

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Introduction Social support is key to the development of young gay and bisexual men's positive health outcomes. Little work has explored how contextual factors of social support during first same-sex promote sexual health behaviours in young Black gay and bisexual men (YBGBM).
Methods 50 YBGM aged 15–19 were recruited to complete an ACASI survey, baseline in-depth and 3 follow up qualitative interviews over the course of 1 year about the context of lived experiences (Black and gay), social support, recent sex, and sexual health experiences. 42 (84%) YBGBM completed all 4 interviews. Data were analysed to explore constructs and definitions that emerged from the data over multiple time points and then categorised into themes that emerged.
Results At baseline, participant's mean age was 17.6 years (SD = 1.3). Participants mostly self-identified as gay (62%, N = 31) or bisexual (34%, N = 17) bisexual, and reported a mean number of lifetime sexual partners at time of baseline interview as 13.3 (SD = 14.5, Median 8.5) and mean age at first sex of 13.9 (SD = 2.6). Participants reported an average number of partners in the last 4 months of 4.4 (SD = 5.7), 2.1 (SD = 2.0), and 1.4 (SD = 1.7) partners at first, second, and third follow-up, respectively. All participants were able to describe some level of social support; but experiences of social support were inconsistent. Social support varied within economic, geographic, and racial contexts. Participants with consistent social support over follow-up were more likely to report: 1) recent STI/HIV screening; 2) condom-use with partner; and 3) overall fewer partners than youth experiencing inconsistent social support.
Conclusions Intersecting social contexts impact social support during sexual development and this may be critical to promoting positive sexual health in YBGBM.
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