Introduction Recurrent vulvovaginal candidiasis (RVVC) results in significant physical, financial and psychological sequelae for women, and many women report that VVC affects their intimate relationships. The aetiology of RVVC remains uncertain, and some studies suggest sexual intercourse may be responsible for transmission of *Candida* species. No publications have documented the affect of sexual intercourse on vaginal candida colonisation.
Methods Fifty nine participants who were culture positive for *Candida* spp. at screening took part in a randomised controlled trial investigating the effect of oral garlic and placebo on vaginal candidal colonisation. Participants self-collected daily vaginal swabs during the two weeks before menstruation. They kept a daily diary and recorded incidence of sexual intercourse and abnormal vaginal symptoms. Swabs were analysed for quantitative colony counts of candida before and after sexual intercourse.
Results There were 149 episodes of sexual intercourse in participants reporting sexual activity (n = 38) over the two week study period. Colonisation levels rose the day following sexual intercourse in 51 episodes, and fell in 56 episodes. In 42 episodes of sexual intercourse, the levels remained the same or women were culture negative on the day following and two days following sexual intercourse. On fifty occasions women had symptoms (itch, abnormal vaginal discharge) on the day of sexual intercourse, and 41 women reported abnormal symptoms two days after sexual intercourse. In 75 episodes, there were no abnormal symptoms the day of, or the day following sexual intercourse.
Conclusion In this study, sexual intercourse, colonisation levels and abnormal vaginal symptoms appeared to be unrelated. Further investigation is recommended into dyspareunia and abnormal vaginal symptoms following sexual intercourse experienced by women with RVVC.
Disclosure of interest statement No pharmaceutical grants were received in the development of this study.

P06.15 THE STABILITY OF THE VAGINAL MICROBIOME IN RELATION TO NEW SEXUAL EXPERIENCES

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10.1136/sextrans-2015-052270.316

Introduction The vaginal microbiome in healthy asymptomatic women can vary greatly, though in most is typically dominated by lactic acid producing *Lactobacillus* spp. which convey protection against pathogens. Few studies have examined genital bacterial communities in sexually-inexperienced women over time and particularly changes occurring upon initiation of new sexual experiences.
Methods Overall192 samples from 45 healthy women were selected as a subset of a study investigating the sexual health of 17–21 year old university students. Women who were selected included those with no previous sexual experience (n = 17), women experienced in non-coital sexual activities only (n = 15) and women who had engaged in penile-vaginal sex (n = 13). The selected participants provided self-collected vaginal swab samples every 3 months for 12 months. Bacterial communities were analysed using Roche 454 amplicon sequencing with PCR primers targeting the V3/4 variable region of the 16S rRNA gene.
Results Overall, healthy young women had differing vaginal community states. Onset of non-coital and coital sexual activities does not exert a significant effect on the composition of vaginal bacterial communities. The vaginal community-state with the greatest stability over time consisted of states predominated by L. crispatus and *L. iners* with median Bray-curtis dissimilarity values of 12.4 and 17.6 respectively (p = 0.005 and 0.024). Vaginal microbiomes dominated by other *Lactobacillus* spp. and non-*Lactobacillus* spp. gave rise to the most variability over time (dissimilarity values of 41.1 and 66.8). Non-coital and coital sexual activity within this subset of participants did not have any significant effect upon the stability of vaginal bacterial communities (p = 0.3714).
Conclusion L. crispatus and *L. iners* are most commonly found to dominate sexually inexperienced women and convey the most stable environment over time. The initiation of new sexual activities does not appear to have any persistent effect on the vaginal microbiome of young women.
Disclosure of interest statement None to declare.

P07 - STI/HIV diagnosis

P07.01 *MYCOPLASMA GENITALIUM* TESTING PATTERN AND INFECTION RATES OVER A SIX-YEAR PERIOD IN MELBOURNE, AUSTRALIA

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10.1136/sextrans-2015-052270.317

Introduction *Mycoplasma genitalium* (Mg) is an emerging sexually transmitted pathogen with a strong association with urethritis, cervicitis and pelvic inflammatory disease. Detection of this bacterium using molecular assays has been limited due to lack of readily available commercial assays. However, in house 16S rRNA gene qPCR assays have been in use at the laboratory located at the Royal Women's Hospital, in Melbourne Australia for detection of Mg since 2009. The aim of this study was to analyse Mg testing patterns and infection rates over this 6 year period.
Methods We analysed overall detection rates and site-specific positivity in clinical specimens received for testing for Mg between 1 January 2009 and 31 December 2014 from clinics at the Royal Women's Hospital and Melbourne Sexual Health Centre.
Results A total of 46,112 specimens were tested for Mg; 2,853 (6.2%) samples were tested in 2009 with an increasing trend to 13,133 (28.5%) in 2014 (p-trend <0.001). In total 54.7% were urine samples, 37.7% vaginal/cervical swabs and 7.6% were anal, urethral or from other non-specified sites. Overall positivity across all samples was 4.5% (95% CI: 4.3–4.7) without any significant change per annum (p-trend = 0.206). Overall, Mg detection rate was highest in urethral (9.0%, 95% CI: 6.7–11.7) and anal swabs (8.8%, 95% CI 6.8–11.1) followed by urine (5.8%, 95% CI: 5.5–6.7) and cervical/vaginal samples (2.6%, 95% CI: 2.4–2.8) (p < 0.001). A significant increase in positivity was observed in anal swabs, from 2.5% in 2009 to 12.7% in 2014 (p-trend = 0.005).
Conclusion Increased testing for Mg by qPCR has resulted in detection and treatment of over 2000 infections since 2009 in

Melbourne, Australia and highlights Mg as an important sexually transmitted infection. Increase in detection of Mg in anal swabs also highlights the importance of rectal testing in symptomatic males.

Disclosure of interest statement No disclosure to declare.

P07.02 EVALUATION OF THE HOLOGIC TRANSCRIPTION MEDIATED AMPLIFICATION ASSAY FOR DETECTION OF *MYCOPLASMA GENITALIUM* FROM URINE SAMPLES

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10.1136/sextrans-2015-052270.318

Introduction *M. genitalium* is an emerging sexually transmitted pathogen, with a strong association with urethritis, cervicitis and pelvic inflammatory disease. Detection of this bacterium by routine culture is not practical and routine diagnosis and screening for *M. genitalium* by molecular techniques has been hampered by lack of readily available commercial assays. A preliminary version of a commercial amplification assay is currently available on the Panther platform and was evaluated against an in-house qPCR assay currently in use for routine diagnostics.

Methods Overall 1000 consecutive urine samples from men and women were utilised for this evaluation. Over the course of 3 months, urine samples were obtained from consecutive symptomatic men and women being screened for *M. genitalium* at Melbourne Sexual Health Centre, as well as women being screened prior to termination of pregnancy at the Royal Women's Hospital, Melbourne. The primary Hologic assay targeting 80bp region of 16s rRNA was compared to the in-house diagnostic assay which targets a 517bp region of 16S gene, as well as a second 16s rRNA target available on the Hologic platform.

Results The comparison of the two targets available on the Hologic platform showed very high correlation (k = 0.97 95% CI 0.93–1.00). Comparison of primary Hologic assay to in-house 16S qPCR assay, also showed very good correlation (K = 0.84 95% CI 0.75–0.93). Overall, both primary and secondary Hologic assays on Panther were more sensitive than the 16S qPCR for detection of *M. genitalium* in urine specimens.

Conclusion The *M. genitalium* assay on the Hologic platform integrated well with the laboratory procedures allowing rapid testing and possibility of rapid and accurate reporting using integration with laboratory information system. Overall the Hologic assay for detection of *M. genitalium* offers a simple, accurate and sensitive platform for diagnostic laboratories for detection of this important upcoming pathogen.

Disclosure of interest statement Hologic supplied the diagnostic kits and the Panther platform to conduct this study.

P07.03 CLINICAL PERFORMANCE EVALUATION OF A NEW, RAPID POINT-OF-CARE SYSTEM FOR DETECTING *CHLAMYDIA TRACHOMATIS*

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10.1136/sextrans-2015-052270.319

Introduction The Atlas Genetics **io**™ system is a new rapid molecular diagnostic platform designed to test for infectious diseases at Point of Care (POC). The test process is fully automated and utilises a novel nucleic acid detection technology. There is no specimen processing and it provides a result in 30 min. This preliminary evaluation compared the performance of the Atlas Genetics **io**™ *Chlamydia trachomatis* (CT) test to routine diagnostic testing using the APTIMA Combo 2 test (AC2, Hologic Gen-Probe) for the detection of CT.

Methods Two self-collected vulvo-vaginal swabs were obtained from women presenting at a genitourinary medicine clinic; swabs from alternate patients were placed in collection buffer and tested using the AC2 test or the **io**™ CT assay as the first test. Any sample giving a discrepant result was retested using the residual buffer from the **io**™ CT assay using the *artus*®*C. trachomatis* Plus RG PCR kit (Qiagen). A true positive result was defined as positive with at least two of the three tests.

Results Of the samples collected from 193 women, 18 were determined to be true positive results for *C. trachomatis*, of which one sample was positive with the AC2 and *artus* CT test but negative with the **io**™ CT test. Three **io**™ false positive results were reported out of 175 samples that were negative when tested using the AC2 and *artus* tests. Based on a provisional cut-off, this resulted in a sensitivity and specificity of 94.4% and 98.3%, respectively for the **io**™ CT test.

Conclusion The Atlas Genetics **io**™ CT test was shown to deliver laboratory-equivalent results within 30 min, on a system designed to be used in the STI clinic or similar POC setting, that is easy-to-use and gives results that require no interpretation or analysis.

Disclosure of interest statement BA, SAB, TRKE, MTG and DMP receive salaries and stock options from Atlas Genetics Ltd. This study was funded by the Technology Strategy Board, project No. 100845.

P07.04 NEW MOLECULAR POINT-OF-CARE TEST IMPROVES TIMELINESS OF TREATMENT FOR *CHLAMYDIA TRACHOMATIS* (CT) AND NEISSERIA GONORRHOEA (NG) IN A REMOTE ABORIGINAL HEALTH CLINIC

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10.1136/sextrans-2015-052270.320

Introduction High CT and NG prevalences have been observed in remote Aboriginal communities for decades. Testing and treatment are key prevention strategies, yet considerable delays in treatment occur, due to distances from laboratories and difficulties recalling patients. The TTANGO (Test, Treat ANd GO) randomised controlled trial is the first to evaluate whether a new point-of-care CT/NG test (GeneXpert) can improve the timelines of treatment and reduce re-infections rates in remote Aboriginal communities.

Methods In the context of TTANGO, we conducted an interim analysis to compare timelines of treatment before and after the point-of-care test was introduced at one of the 12 TTANGO sites. This site is one of seven remote clinics managed by Nganampa Health Council (NHC), an Aboriginal health service in South Australia.

Results Overall, 777 people were tested for CT/NG, 81 (10.4%) were positive; highest in 15–19 year olds (15.4%). In the point-of-care period, 40/40 (100%, 95% CI: 91.1–100) of people with a positive CT/NG point-of-care test received treatment, and of these 90% were treated in 24 h, with a median time-to-