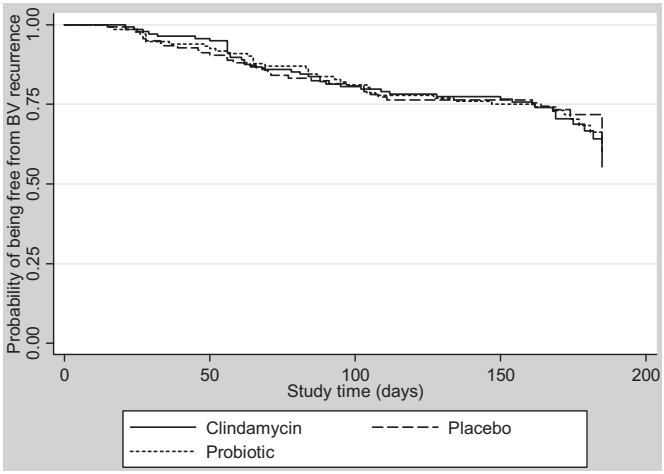
participant demographic or behavioural characteristics between arms. Adherence to study medication did not differ between arms: 382 (91%) took all or most oral metronidazole and 330 (80%) all or most vaginal therapy. Retention rates were high, with 77 (17%) lost to follow-up over 6 months, and did not differ between arms. Participants contributed 153.7 person years of follow-up to analyses. On exit survey 88% of participants did not know or correctly guess the vaginal therapy they had received. Six month cumulative BV recurrence rates did not differ between study arms by per protocol analysis: MetPlac (32%, 95% CI 24% to 41%) MetProb (33%, 25% to 42%) and MetClin (34%, 26% to 42%), p>0.05 (Abstract O3-S5.06 figure 1), or intention-to-treat analysis (noncompleter=recurrence) [recurrence range 44-9%].



Abstract O3-S5.06 Figure 1

Conclusions The addition of vaginal clindamycin or a vaginal probiotic to oral metronidazole does not improve 6 month BV recurrence rates. This is the first RCT to evaluate the efficacy of combination clindamycin/metronidazole for BV treatment, and has important implications for clinical practice. Combination therapy is often used in patients with recurrent BV, but evidence to support this practice has not been available.

Clinical sciences oral session 6—clinical advances in diagnosis & screening

O3-S6.01 IMPROVED DIAGNOSTICS OF BACTERIAL VAGINOSIS WITH MOLECULAR TECHNIQUES

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Background *Bacterial vaginosis* (BV) is a disturbance of the vaginal microflora. BV can cause discharge complaints and lead to pelvic inflammatory disease, ectopic pregnancy and premature birth. We evaluated a combination of PCR assay's and whole bacterial community analysis with the standard diagnostic algorithm to validate a molecular assay for the determination of BV.

Methods 160 women with vaginal discharge complaints were included. 80 women were classified as BV and 80 as non-BV according to Amsel criteria. Gram stains from vaginal smears were made for Nugent scoring. Vaginal swabs were tested with PCR assays for *Gardnerella vaginalis*, *Atopobium vaginae*, BV associated bacterium type 2 (BVAB2) and Megaspheara type 1 (MS1). Whole bacterial community analysis was performed by fluorescent Terminal Restriction Fragment Length polymorphism (TRFLP) of 16S-rDNA. TRFLP patterns and predictive fragments of a number of BV associated bacteria were analysed with Bionumerics software (Applied Maths, Belgium).

Results Compared to Amsel criteria, the highest sensitivity of 100% was achieved with a duplex PCR for G. vaginalis and/or *A vaginae* and the highest specificity of 86% was found with a singleplex BVAB2 specific PCR. Best overall performance was shown using a duplex real time PCR for BVAB2 and/or MS1 with a sensitivity of 90% and a specificity of 78% with respect to Amsel criteria. Using Nugent criteria as a standard, this duplex PCR has a sensitivity of 84% and specificity of 86%. From TRFLP results, the presence of predictive fragments of *Prevotella, Aerococcus, Megaspheara, Mycoplasma, Peptostreptococcus, Leptotrichia, Eggerthella, Gardnerella, Atopobium* and *Dialister* was most associated with BV positive samples. Cluster analysis of microbial profiles revealed clear differences between BV and non-BV and indicated possible intermediate or transition stages.

Conclusions A combination of bacterial species are involved in BV. For molecular diagnostics a duplex PCR of Gardnerella en/of Atopobium can be used for initial screening confirmed by a BVAB2 specific PCR. A more effective alternative is a real time duplex PCR targeting BVAB2 and/or MS1. Microbial profiling supports most targets used in the PCR assays. Cluster analysis of microbial profiles can be used to interpret discordant validation results and possibly for diagnosis.

O3-S6.02 SCREENING FOR *MYCOPLASMA GENITALIUM*, *CHLAMYDIA TRACHOMATIS* AND *BACTERIAL VAGINOSIS* IN A PUBLIC HOSPITAL, PREGNANCY TERMINATION SERVICE

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Garland SM1, Marceglia AH2, Tabrizi SN1Costa AM1 1 Microbiology Infectious Diseases, 2 Choices and Sexual Health Service, Royal Women's Hospital, Parkville, Victoria, Australia The Royal Women's Hospital is the largest public provider of therapeutic abortions in Victoria, Australia. Prior to their medical or surgical termination, all women presenting to the Pregnancy Advisory Service (PAS) have been screened for *Mycoplasma genitalium* utilising an in-house PCR assay 1 in addition to *Chlamydia trachomatis* using a commercial PCR and bacterial vaginosis (BV) by Gram stained smear of posterior fornix secretions. From August 2009 to December 2010, the prevalence for *M genitalium* was 4.6% (CI 3.5% to 5.6%), *C trachomatis* 5.3% (CI 4.2% to 6.4%) and BV 16.2% (CI 14.4% to 18.0%). Most women had a normal genital tract on clinical examination. Of the women infected with *C trachomatis* and *M genitalium*, 42% and 34% respectively had abnormal genital tract signs. The average age of women attending the PAS clinic was 26.4 years, with 45.3% of the women being under 25. The average age for women with *M genitalium* was 24.6 years, whilst for those with *C trachomatis* it was 22.4 years. The 50 test of cures completed after treatment for *M genitalium* to date have all been negative. This is in contrast to local treatment failure rates in similar aged males (symptomatic with nonspecific urethritis in a sexual health clinic) and females (screening within a general practitioner setting) of 28% and a population treatment failure rate of 12%. We are uncertain what role our direct observed patient treatment plays in this low failure rate. This presentation will report on the first 17 months of screening for *M genitalium* in the PAS clinic and its implications for service provision within The Women's. Given the role of *M genitalium* in cervicitis, and the increasing evidence for its role in upper