

The platform was validated by testing *Chlamydia trachomatis* infection from patient-collected vaginal swab samples. Volunteers enrolled in an internet-based Chlamydia screening program, where two sets of swabs were self-collected and mailed back to our lab. One set of swabs was analysed using the gold standard Gen-Probe AC2 CT assay. The second set of swabs was tested using the mobiLab platform. The two results were in agreement for 20 out of 20 samples at a time threshold of 30 min, demonstrating that the droplet assay performance is comparable to the gold standard for the samples tested. To our knowledge, this abstract presents the first smartphone-based NAAT platform that integrates sample preparation, amplification and data processing. **Disclosure of interest statement** None to disclose.

## 003 - Extragenital STIs

### 003.1 CORRELATES OF REPEAT ANORECTAL INFECTIONS AMONG MEN WHO HAVE SEX WITH MEN

<sup>1</sup>FYS Kong\*, <sup>2</sup>S Tabrizi, <sup>3</sup>CK Fairley, <sup>2</sup>S Phillips, <sup>4</sup>W Huston, <sup>1,3</sup>LA Vodstrcil, <sup>3</sup>G Fehler, <sup>3</sup>M Chen, <sup>3</sup>CS Bradshaw, <sup>1</sup>JS Hocking. <sup>1</sup>Melbourne School of Population and Global Health, University of Melbourne, Victoria, Australia; <sup>2</sup>Royal Women's Hospital, Victoria, Australia; <sup>3</sup>Melbourne Sexual Health Centre, University of Melbourne, Victoria, Australia; <sup>4</sup>Queensland University Technology, Queensland, Australia

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**Introduction** There is increasing concern about azithromycin treatment failure for rectal chlamydia. Higher organism loads have been reported at the rectal site compared to other sites (genital/oral) and higher organism load may be associated with treatment failure in women, but little data are available among men who have sex with men (MSM). This study examined the association between organism load and repeat rectal chlamydia infection in order to investigate possible mechanisms for treatment failure.

**Methods** Stored rectal chlamydia positive samples from men attending Melbourne Sexual Health Centre between July 2008 to October 2013 were analysed for organism load and chlamydia serovar. Men were included if they had a follow-up test within 100 days of the index infection.

**Results** There were 292 chlamydia positive index rectal swabs available for analysis. Organism load and serovar were assessable for 284 swabs — 44 cases had one repeat positive result, 5 cases had two repeat positives and 181 MSM had a negative result within 100 days of their index positive result. Among the 230 index infections, 33% were serovar G, 30% were D, 15% were J, 9% were E, 7% were L2, 3% were B and 2% were F. The cumulative incidence of repeat rectal chlamydia within 100 days was 21%. Among those men who had a repeat positive result, all but three (3%) were the same serovar. Organism load was higher in index cases of men who had a repeat infection compared with those who did not ( $p < 0.01$ ).

**Conclusion** Repeat rectal chlamydia is common within 100 days among MSM attending MSHC. Most repeat infections were of the same serovar suggesting these infections were either treatment failure or re-infection from an infected partner. High organism load was associated with repeat infection suggesting a possible role in treatment failure.

**Disclosure of interest statement** None.

### 003.2 THE CONTRIBUTION OF *MYCOPLASMA GENITALIUM* TO THE AETIOLOGY OF SEXUALLY ACQUIRED PROCTITIS IN MEN WHO HAVE SEX WITH MEN

<sup>1,2</sup>M Bissessor\*, <sup>3,4</sup>SN Tabrizi, <sup>1,5</sup>CS Bradshaw, <sup>1,5</sup>CK Fairley, <sup>4</sup>J Twin, <sup>4</sup>M Poljak, <sup>1</sup>J Peel, <sup>2</sup>JS Hocking, <sup>3</sup>SM Garland, <sup>1,5</sup>MY Chen. <sup>1</sup>Melbourne Sexual Health Centre, Alfred Health, Victoria, Australia; <sup>2</sup>Melbourne School of Population and Global Health, University of Melbourne, Melbourne, Victoria, Australia; <sup>3</sup>Department of Obstetrics and Gynaecology, University of Melbourne, Victoria, Australia; <sup>4</sup>Department of Microbiology, Infectious Diseases, The Royal Women's Hospital, Murdoch Childrens Research Institute; <sup>5</sup>Central Clinical School, Monash University, Melbourne, Victoria, Australia

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**Background** To determine the contribution of *Mycoplasma genitalium* to the aetiology of sexually acquired proctitis in HIV positive and HIV negative men who have sex with men (MSM).

**Methods** Consecutive MSM diagnosed clinically with proctitis between May 2012 and August 2013 were tested for: rectal *M. genitalium* by real time PCR assay; chlamydia by strand displacement assay; gonorrhoea by culture; and herpes simplex virus (HSV) by in-house PCR. *M. genitalium* load was determined by qPCR assay targeting the MgPa gene. The loads of rectal *M. genitalium* in men with symptomatic proctitis were compared to those in a control group of men (ratio 1:1) with rectal *M. genitalium* but no symptoms of proctitis.

**Results** Among 154 MSM with proctitis, rectal *M. genitalium* was detected in 12% (18/154, 95% CI: 6.9–17.1). Rectal *M. genitalium* was significantly more common among HIV positive men (10/48, 21%; 95% CI: 9.5–32.6) compared with HIV negative men (8/106, 8%; 95% CI: 2.9–13.1,  $p = 0.02$ ). Among HIV positive men the rate of *M. genitalium* was comparable to that for chlamydia (21%), gonorrhoea (25%) and HSV (19%). The median load of *M. genitalium* among 18 men with symptomatic proctitis was significantly higher than the median load among 18 controls who had asymptomatic rectal *M. genitalium* (4.82 log<sub>10</sub> load/sample versus 3.81 log<sub>10</sub> load/sample,  $p = 0.016$ ).

**Conclusion** *M. genitalium* was common among MSM with symptomatic proctitis, especially those with HIV. Comprehensive testing for multiple sexually acquired pathogens in MSM presenting with proctitis is required and should include testing for *M. genitalium*.

**Disclosure of interest statement** None to disclose.

### 003.3 THE PREVALENCE OF *MYCOPLASMA GENITALIUM* AND *CHLAMYDIA TRACHOMATIS* AT VARIOUS ANATOMICAL SITES OF MEN WHO HAVE SEX WITH MEN IN FIVE CITIES OF CHINA

J Jiang\*, P Liu, NX Cao, XD Gong. Institute of Dermatology, Chinese Academy of Medical Sciences & Peking Union Medical College, National Center for STD Control

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**Introduction** To determine the prevalence of *Mycoplasma genitalium* and *Chlamydia trachomatis* in urethra, rectum and pharynx of men who have sex with men (MSM) in China, and to analyse the association between the agents detection and clinical manifestations.

**Methods** 388 MSM were recruited at gay bars in five cities of China from September 2007 to November 2008. Rectal and pharyngeal swabs and first void urine were tested for *M. genitalium* and *C. trachomatis* by PCR. Bivariate and multivariable