

to additional tests on resistance mutations with AmpliSens® M.genitalium-ML/FQ-Resist-FL (Central Research Institute of Epidemiology, Russia) is shown.

**Approach** We included 13 clinical cases of *M. genitalium* infection with prevalence of men practicing sex with men patients. Clinical samples were collected from urethra, oropharynx and rectum. Extraction was performed using DNA-sorb-AM (AmpliSens, Russia). Identification of *M. genitalium* was performed using «AmpliSens® N.gonorrhoeae/C.trachomatis/M.genitalium/T.vaginalis-MULTIPRIME-FRT» (CRIE, Russia). Resistance-associated mutations were detected using AmpliSens® M.genitalium-ML/FQ-Resist-FL (CRIE, Russia) with validation against Sanger sequencing.

**Impact** *M. genitalium* was detected in all 13 studied cases of which 46.1% (n=6) in urethral swabs, 38.5% (n=5) in rectal swabs, and two with multiple sites of infection, including oropharynx. Most patients did not show clinical signs of *M. genitalium* infection while others reported urethral itching (7.7%), anal region pain (7.7%), and rectum bloody discharge after defecation (7.7%). Resistance-associated mutations were detected in ten (76.9%) cases, while seven of them (70%) contained both 23S rRNA and parC mutations. Administered treatment was chosen according to qPCR resistance mutations test and consisted of Doxycycline or Minocycline (100 mg orally 2 times a day for 10 days) for resistant *M. genitalium*, and Josamycin (500 mg orally 3 times a day for 10 day) for non-resistant *M. genitalium*. In all cases infection was completely eradicated after treatment.

**Innovation and Significance** Determination of *M. genitalium* resistance associated mutations recommended both in European guideline on Mycoplasma genitalium infections and in BASHH UK national guideline. With high prevalence of both macrolides and fluoroquinolones associated mutations in our study authors imply that application of AmpliSens® M.genitalium-ML/FQ-Resist-FL kit with simultaneous detection of both 23 rRNA and parC genes mutations is a helpful tool to a clinical practice.

P084

#### SCREENING OF ANORECTAL AND OROPHARYNGEAL SAMPLES FAILS TO DETECT BACTERIOPHAGES INFECTING NEISSERIA GONORRHOEAE

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10.1136/sextrans-2021-sti.216

**Background** There are real concerns that *Neisseria gonorrhoeae* may become untreatable in the near future due to the rapid emergence of antimicrobial resistance. Alternative therapies are thus urgently required. Bacteriophages active against *N. gonorrhoeae* could play an important role as an antibiotic-sparing therapy which may even reduce the selection pressure for the emergence of resistance against conventional antimicrobials. Furthermore, they could be used in combination with antimicrobial agents to treat multi-resistant *N. gonorrhoeae*.

To the best of our knowledge, no phages active against *N. gonorrhoeae* have ever been found.

**Methods** The aim of this study was to screen for bacteriophages able to lyse *N. gonorrhoeae* in 194 oropharyngeal and 18 anorectal ESswabs™ of 74 men who have sex with men attending a sexual health clinic in Antwerp, Belgium. ESswabs™ were enriched for bacteriophages using 11 different clinical *N. gonorrhoeae* strains. The spot test method was used as an initial indicator test to screen for the presence of phages by measuring lytic activity.

**Results** Multiple clear zones were detected as a result of anti-bacterial activity, but none of the confluent lysis zones could be replicated through further propagation. We screened 212 swabs but were unable to identify an anti-gonococcal bacteriophage.

**Conclusion** This is the first report of a large-scale screening that systematically searched for anti-gonococcal phages directly from clinical swabs. A strictly virulent *N. gonorrhoeae* phage would be of considerable utility in the fight against multi-resistant *N. gonorrhoeae* infections. Further studies may derive more success by screening for phages at other anatomical sites (e.g., stool samples, urine) or in environmental settings (e.g., toilet sewage water of sex clubs or sexually transmitted infection clinics).

P087

#### SPATIAL AND TEMPORAL EPIDEMIOLOGY OF INFECTIOUS SYPHILIS IN VICTORIA, AUSTRALIA, 2015–2018

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10.1136/sextrans-2021-sti.217

**Background** The study aims to examine the trends of syphilis infection in Victoria and the characteristics of notified cases of syphilis among different population groups stratified by risk and in different geographical distributions.

**Methods** We analysed the demographic characteristics, notification trends and geographical distribution of notified cases of syphilis in Victoria between 2015 and 2018.

Infectious syphilis cases were categorised into four population groups: men who have sex with men (MSM), men who have sex with women (heterosexual males), females, and men who have sex with men and women (bisexual males). We examined the staging of syphilis, geographic location by residence of cases, HIV status, reasons for testing, and notifying source.

**Results** Of the 4,808 notified infectious syphilis cases, there were 3,801 (64%) MSM, 593 (12%) heterosexual males, 465 (10%) females, and 118 (2%) bisexual males. Females (219% increase, p<sub>trend</sub><0.001) and bisexual males (220% increase, p<sub>trend</sub>=0.004) had the greatest increase in the number of cases, followed by heterosexual males (129% increase, p<sub>trend</sub><0.001) and MSM (21% increase, p<sub>trend</sub><0.001). Geographical mapping showed the majority of the syphilis cases in

MSM occurred in inner metropolitan Melbourne suburbs, while the cases in heterosexuals occurred in outer Melbourne suburbs.

**Conclusion** Notified cases of syphilis infection had significantly increased across all population groups but particularly in heterosexual males and females. Campaigns and control measures should be specific for each population group with targeted screening and education in areas with a high number of syphilis cases.

P088

#### AUSTRALIAN GENERAL PRACTITIONERS' CONSIDERATION OF PELVIC INFLAMMATORY DISEASE IN WOMEN DIAGNOSED WITH AN STI, AND BARRIERS TO PROVIDING PELVIC EXAMINATIONS

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10.1136/sextrans-2021-sti.218

**Background** Pelvic inflammatory disease (PID) comprises a range of inflammatory disorders of the female upper genital tract, often occurring after a sexually transmissible infection (STI). When left untreated, PID can cause reproductive complications including ectopic pregnancy and infertility. PID is under-diagnosed globally and requires a clinical diagnosis. Speculum and bimanual pelvic examinations are recommended to support a diagnosis.

**Methods** In 2019, an online survey about chlamydia, including PID diagnosis and management, was distributed to Australian-based general practitioners (GPs). From 323 respondents, 85.8% (n=277) responded to multiple-choice questions about PID and 74.6% (n=241) responded to a free-text question regarding barriers to performing pelvic examinations. We used multivariable logistic regression to analyse factors associated with the frequency GPs conducted pelvic examinations for women reporting symptoms of PID. Qualitative free-text data were explored using thematic analysis.

**Results** Most GPs routinely ask female patients with an STI about symptoms suggestive of PID, including pelvic pain (86.2%), abnormal vaginal discharge (95.3%), abnormal vaginal bleeding (89.5%), and dyspareunia (79.6%). Over half reported routinely conducting speculum (69.0%) and bimanual pelvic (55.3%) examinations for women reporting pelvic pain or dyspareunia. Female GPs were more likely to routinely perform speculum (adjusted odds ratio (AOR) 4.6; 95%CI: 2.6–8.2) and bimanual pelvic examinations (AOR 3.7; 95%CI: 2.1–6.5). GPs with additional sexual health training were more likely to routinely perform speculum (AOR 2.2; 95%CI: 1.1–4.2) and bimanual pelvic examinations (AOR 2.1; 95%CI: 1.2–3.7). Barriers to pelvic examinations included patient reluctance, GP gender, patient health concerns, time pressure, and GP hesitancy to perform an examination due to inexperience and/or uncertainty that it would add to their assessment.

**Conclusions** Encouragingly, many GPs routinely asked patients diagnosed with an STI about PID symptoms. However, many GPs in this study did not consistently perform pelvic examinations to support a diagnosis, potentially reducing capacity to diagnose PID.

P089

#### ACCURACY OF INTERPRETATION AND HOME TEST KIT RESULT REPORTING FOR SCREENING OF HUMAN IMMUNODEFICIENCY VIRUS INFECTION

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10.1136/sextrans-2021-sti.219

**Background** Men who have sex with men (MSM) and individuals identifying as Black or Hispanic/Latino experience the largest burden of Human Immunodeficiency Virus (HIV) infection. The OraQuick In-Home HIV Test (OraSure Technologies®, Pennsylvania, USA) is the only HIV self-test approved by the US Food and Drug Administration. Self-testing can supplement HIV prevention to increase identification of infections among at-risk groups. During a larger study on social media and HIV prevention, we assessed the accuracy of participants' interpretations of their results.

**Methods** We recruited Black and Latino MSM between 18–30 years through advertisements on internet-based social media, informational sites, and dating sites. Participants ordered a free OraQuick self-test. They tested and interpreted their results following kit instructions. Participants submitted a test kit photograph to a secure online platform to report their results. Two trained researchers reviewed the photographs and interpreted results independently. We calculated the proportion of agreement and kappa coefficient between reviewers and between reviewers and participants.

**Results** We enrolled 271 participants, 191 (70%) ordered a kit, 159 (83%) used it. Of those, 113 (71%) submitted readable test result images. Among those submitting images, 71.3% were Black and 30.4% were Hispanic/Latino, mean age 25 years (SD 3.6). The proportion of agreement in result interpretation between reviewers was 100% (113/113), kappa coefficient 1.0. The proportion of agreement in result interpretation between participants and reviewers was 97.3% (110/113). Of the concordant results, 101 (89.4%) were negative, 7 (6.2%) were positive, 2 (1.8%) were invalid. Of the 3 discordant results, 2 participants interpreted their positive results as invalid and 1 participant interpreted their positive result as negative. The kappa coefficient was 0.85 (95% CI 0.67–1.0).

**Conclusion** Most participants submitted results online. The level of agreement of interpretation between participants and researchers was good. Prevention programs could use self-testing during disruptions of care.

P090

#### CONDYLOMA ACUMINATA IN AN INFANT : CASE REPORT IN A RESOURCE LIMITED SETTING

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10.1136/sextrans-2021-sti.220