Methods Men with urethritis, women with PID and current sexual partners of Mgen-infected patients were tested for Mgen (BASHH guidelines). The samples were tested using the Fast-Track Urethritis Basic assay for detection. Positive samples were tested by the SpeDx ResistancePlus[®] MG assay to detect the presence of MR-mutations and the SpeDx MG +ParC (beta) assay determined QR-mutations.

Results Forty-five patients tested positive for Mgen—53% of cases were men with urethritis; 29% were women with PID and 18% were asymptomatic patients. The prevalence of Mgen in men with urethritis was 18%, and in women with PID was also 18%. The prevalence of MR was 69% (31/45). The prevalence of QR was 7% (3/45); all 3 patients also had MR.

Conclusion These are the first UK data for MR and QR in Mgen from attendees to clinic at a single centre. MR was higher than previously reported in the UK and Europe. Reassuringly, QR is still low—however, this is likely to rise with increasing quinolone use. Patients with dual-class resistance pose a significant challenge as subsequent treatment options are limited. All testing for Mgen should include the detection of resistance-associated mutations so that the most appropriate agent can be used.

Disclosure No significant relationships.

P620

INCLUSIVITY, EXCLUSIVITY, STABILITY AND PROSPECTIVE TESTING OF TWO REAL-TIME PCR ASSAYS FOR MYCOPLASMA GENITALIUM

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Background *Mycoplasma genitalium* (MG) is an emerging sexually transmitted infection. It has been associated with cervicitis and PID in women and urethritis and persistent NGU in men.

Methods We evaluated two MG qPCRs, 16S rRNA and pdhD. The limit of detection (LOD) for the 16S rRNA and pdhD assays were determined with 11 MG strains. Inclusivity/exclusivity testing was performed with 11 MG strains and 43 non-MG strains. Stability testing was performed with mock vaginal and urine samples stored at +4°C and 25°C at 1.5X, 4X, 10X and 20X LOD at 0, 7, 14, 21, 28 and 35 days. These assays were employed in an ongoing prospective study examining the prevalence of MG in symptomatic and asymptomatic men and women. Positives were sequenced to determine mutation rates in the 23S rRNA gene conferring macrolide resistance.

Results The pdhD and 16S assays had LODs of 1324 and 1536 copies/ml, respectively. All inclusivity/exclusivity testing performed as expected. Detection in urine and vaginal matrix at 4°C was 100% for both assays. Detection in urine at 4°C was 100% for both assays while detection in urine at 25°C was 100% at 28 days, but was 90% at 35 days. For symptomatic men, the prevalence was 19% (4/21) and 14.3% (3/21) for the pdhD and 16S rRNA assays respectively, and was 7.14% (1/15) in symptomatic women for both assays. There

were no MG detections in asymptomatic subjects. Of the positives, 100% (5/5) were determined to be 23S mutants.

Conclusion Both assays had reasonable LODs and expected results for inclusivity/exclusivity testing. For stability testing, results were as expected up to 35 days, where a loss of positivity was observed for urine samples. We observed a high prevalence of MG in symptomatic men and women, as well as a high percentage of 23S mutants conferring macrolide resistance.

Disclosure No significant relationships.

P621

PREVALENCE OF MYCOPLASMA GENITALIUM INFECTION, ANTIMICROBIAL RESISTANCE, AND SYMPTOM RESOLUTION FOLLOWING TREATMENT

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Background *Mycoplasma genitalium* (MG) is an emerging cause of urethritis. Although an FDA-approved MG diagnostic test is now available in the U.S., syndromic management of urethritis remains widespread. Little is known about the geographic distribution of MG resistance in the U.S. and associated clinical outcomes. We evaluated the frequency of MG among men with urethritis, antimicrobial susceptibility of MG, and post-treatment symptom persistence.

Methods We enrolled men presenting with urethritis symptoms to 6 U.S. STD clinics during June 2017–July 2018. Participants with urethritis confirmed on stained urethral smear were eligible for a follow-up phone call 14–17 days post-enrollment and chart review. Urethral specimens were tested locally for *N. gonorrhoeae* and *C. trachomatis*. CDC tested specimens for MG and *T. vaginalis*. MG resistance mutations were detected by targeted amplification/Sanger sequencing of 23S rRNA loci (macrolide resistance mutations [MRM]) and *parC* and *gyrA* (quinolone resistance mutations).

Results Among 914 participants with evaluable MG results, MG was detected in 28.7% (95% CI 23.8–33.6). Men with MG were more often black (79.8% vs 66%), <30 years (72.9% vs 56.2%), and reported only female partners (83.7% vs 74.2%) than men without MG. Among MG+ participants, MRM was detected in 62.2% (range 53%–72.3%), *parC* mutations in 11.5% (range 6.6–18.4%), and *gyrA* in 0%. Among 763 participants with follow-up, 19.8% reported symptom persistence, without clinically meaningful difference by MG status. Among MG participants treated with azithromycin, those with MRM more often reported persistent symptoms (35.1%) and were more likely to return to clinic within 45 days than those without MRM.

Conclusion MG was common among men with urethritis and MRM prevalence high. Persistent symptoms were frequent among men with and without MG. Many participants with macrolide-resistant MG experienced symptom persistence and returned to clinic for evaluation.