Disclosure No significant relationships.

P622 THE USE OF SEEGENE'S ALLPLEX™MG & AZIR ASSAY FOR THE DETECTION OF MYCOPLASMA GENITALIUM AND MACROLIDE RESISTANCE IN WALES

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Background *Mycoplasma genitalium* (Mgent) is a sexually transmitted bacteria, associated with cervicitis and pelvic inflammatory disease in women and non-gonococcal urethritis in men. These bacteria lack cell walls and many prokaryotic metabolic pathways, mediating inherent resistance to most antimicrobials. Furthermore, Mgent has garnered concern as the prevalence of both fluoroquinolone and macrolide resistance has increased significantly in recent years, further restricting possible therapeutic avenues. In January 2019, Public Health Wales deployed the Seegene Allplex™MG & AziR assay to determine the presence of MG and its susceptibility to macrolides from genitourinary samples. This kit is novel in its ability to not only detect MG, but also define which specific 23S rRNA gene macrolide-resistance mediating mutations (MRM) are present without requirement for sequencing.

Methods 170 clinical samples (collected Jan-March 2019) were investigated: 83 clinical samples submitted from symptomatic patients (suspected MG infections by BASHH guidelines) combined with 87 samples randomly selected from clinical samples submitted for Cobas gonorrhoea/chlamydia (NG/CT) testing (non-targeted). All samples were from patients attending a genitourinary medicine (GUM) clinic in South Wales. Samples were extracted and prepared using the Hamilton Microlab Nimbus, STARMag universal cartridge extraction kit and Allplex™MG & AziR assay. Amplification and detection were performed by a Bio-Rad CFX96 equipped with SeeGene interpretative software.

Results Mgent prevalence with suspected NG/CT patients was 5/87 (5.7%) with 4 (80%) containing MRM (2x A2058G and 2x A2059G), while prevalence within the Mgent-suspected group was 11/83 (13.3%) with 5 (45.5%) containing MRM (4x A2059G and 1x A2058G mutations). Further up-to-date cumulative data to be presented at IUSTI.

Conclusion Mgent prevalence was 5.7% in the non-targeted cohort, while targeted patients gave 13.3% prevalence for a South Wales GUM clinic. Macrolide resistance prevalence was 56% on average. These results justify the implementation of routine Mgent and macrolide resistance testing in South Wales, abiding by European and BASHH guidelines.

Disclosure No significant relationships.

P623 POST-TRANSCRIPTIONAL REGULATION OF GENES BY NON-CODING RNA IN NEISSERIA GONORRHOAE, AN OBLIGATE HUMAN PATHOGEN

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Background Small non-coding RNAs (sRNAs) play an important role in bacterial gene expression and regulation. The

knowledge of sRNA in *Neisseria gonorrhoeae* is scarce despite of its clinical significance. We utilized the available RNA-seq data under aerobic and anaerobic condition to identify non-coding RNA. We further identified sRNAs which are differentially expressed under anaerobic condition and their mRNA targets.

Methods The normalized reads (RPKM) under aerobic and anaerobic conditions were compared and a three-fold or greater difference in the expression level of sRNAs was scored as differentially expressed sRNA. sRNA targets were found using online available tools (CoproRNA, targetRNA2). We further predicted the sRNA-mRNA interactions using intaRNA tool.

Results A total of 26 sRNAs were identified. Out of which, ten sRNAs were differentially expressed under anaerobic condition, physiologically important stage during infection. We further identified mRNA targets of these sRNAs based on deep sequencing of *N. gonorrhoeae* transcriptome under aerobic and anaerobic conditions. These results indicated that several sRNAs target genes that are involved in energy metabolism processes, stress response and various other networks.

Conclusion Our results provide new insights into the post-transcriptional regulation of genes by sRNAs in *Neisseria gonorrhoeae*.

Disclosure No significant relationships.

P624 CULTURE FOR URETHRAL GONORRHEA FROM ASYMPTOMATIC MEN POSITIVE FOR NEISSERIA GONORRHOAE BY URINE APTIMA COMBO 2 TESTING

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Background In a previous study of men attending Melbourne Sexual Health Centre who had *N. gonorrhoeae* detected by urine Aptima Combo 2 (AC2) testing, 11% were asymptomatic, reporting no urethral symptoms. This study aimed to determine if *N. gonorrhoeae* can be cultured from asymptomatic men screening positive for *N. gonorrhoeae* by nucleic acid amplification testing (NAAT) of urine.

Methods Between 1 July 2017 and 30 September 2018, men reporting sex with men attending Melbourne Sexual Health Centre who did not report urethral symptoms were screened for *N. gonorrhoeae* by AC2 testing of urine. NAAT positive men were recalled and a urethral swab performed for gonococcal culture using modified Thayer Martin media with determination of minimum inhibitory concentrations (MICs) for penicillin, azithromycin, ceftriaxone and ciprofloxacin by agar dilution.

Results There were 612 cases (538 individuals) positive for *N. gonorrhoeae* by urine AC2: 548 (90%) reported urethral symptoms; 64 (10%) did not report symptoms. Thirteen asymptomatic cases were excluded because of antibiotic use at or following screening. Of the remaining 51 asymptomatic men, 25 (49%) had a urethral swab performed a median of 4 days after screening. Thirteen men had urethral discharge at the return visit, 7 of whom reported the discharge at the return visit. Of the 25 men who were swabbed, 18 (72%) were culture positive for *N. gonorrhoeae*. Among the 12 men who remained asymptomatic with no discharge at the return