processes for GC collection, culture, sensitivity testing were implemented.

**Results** Six MTF clinics were included with geographic representation (Colorado, California (CA), North Carolina, Texas, Virginia, Washington) and project expanded to include a GC reference laboratory and respository. Study participants (n=253): 73% male, 31% white, 48% black, 18% married, 21% had STI diagnosis within the last year. At last sexual encounter, 70% was with a civilian partner, 29% met on the internet, and 66% did not use a condom. 90 plates had growth, 29 tested positive for GC. Sensitivity of GC culture testing from urine was 66%, 82.8% of isolates had resistant or decreased susceptibility profiles. Reduced susceptibility to Cefixime and Azithromycin was indentified in CA. Ceftriaxone MICs remain within susceptible ranges, but the have begun to rise. Slightly elevated MICs to Ceftriaxone have been identified at Navy sites. 3/5 (60%) of these isolates also have reduced susceptibility to Azithromycin. 10 new NG-Multi Antigen Sequence Typing types were identified.

**Conclusion** We successfully established a U.S. DoD GC resistance surveillance and repository. Urine culture testing for GC may be acceptable for identifying population level resistance. While U.S. dual therapy is currently effective, the slow rise in MICs highlights the need for novel therapeutics and continued surveillance.

## O12.2 CO-INFECTION AND MACROLIDE ANTIMICROBIAL RESISTANCE (AMR) OF *MYCOPLASMA GENITALIUM* WITH *NEISSERIA GONORRHOEAE* AND *CHLAMYDIA TRACHOMATIS*, IN FEMALES, HETEROSEXUAL MALES, AND MEN-WHO-HAVE-SEX-WITH-MEN

[1]Claire Elizabeth Broad, [2]Emma Harding-Esch, [1]Mark Harrison, [1]Marcus James Pond, [3]Ngeekeong Tan, [2]Sandra Okala, [1]Clare Soares, [1]Sebastian Fuller, [1]Syed Tariq Sadiq. *[1]St George's University of London, UK; [2]Public Health UK; [3]St George's University Hospitals NHS Foundation Trust, UK*

10.1136/sextrans-2017-053264.67

**Introduction** Population-based prevalence estimates of *Mycoplasma genitalium* (MG), *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (NG) in men and women in England are: 1.2% and 1.3%; 1.1% and 1.5%; and <0.1%, respectively. In sexual health clinics (SHCs), NG and CT are routinely tested for, whereas MG is not. Undiagnosed MG co-infection threatens and complicates empirical therapy of CT and NG, where azithromycin use may aid further spread of macrolide antimicrobial resistance (AMR). We assessed co-infection and macrolide AMR prevalence in symptomatic patients accessing three London SHCs.

**Methods** Patients aged ≥16 years with symptoms of an STI provided samples: vulvovaginal swab (females), first void urine (men-who-have-sex-with-women (MSW) and men-who-have-sex-with-men (MSM)), pharyngeal and rectal swabs (MSM). Routine clinic CT/NG results were obtained and FTD Urethritis Plus kit used for MG detection. Resistance was determined using Sanger sequencing.

**Results** Prevalence of NG only infection in females, MSW and MSM was 0.3% (95%CI 0–1.8), 3.5% (1.6–7.3) and 31.0% (21.4–42.5), respectively. MG only prevalence was 5.3% (3.3–8.4), 14.9% (10.4–21.0) and 11.3% (5.8–20.7), respectively. CT only prevalence was 5.6% (3.5–8.7), 15.5% (10.9–20.6) and 5.6% (2.2–13.6), respectively. MG-NG co-infection was in MSW only (0.6%, 0.1–3.2), representing 2.4% (0.4–12.3) of NG infections. CT-MG co-infection was in females and MSW (1.6%, 0.7–3.8% and 2.3%, 0.9–5.8, respectively), together representing 13.0% (7.0–23.0) of CT infections. CT-NG co-infection was in all groups (females: 0.3%, 0–1.8; MSW: 2.3%, 0.9–5.8; MSM 7.0%, 3.1–15.5). MG-NG-CT infection was found in females (0.7%, 0.2–2.4), representing 16.7% (4.7–44.8) of NG-CT infections. 64.9% (37/57) of MG samples sequenced were macrolide resistant (67.0% (21/31) from MSW).

**Conclusion** With 13.0% and 2.4% of CT and NG infections respectively being co-infected with MG, and two-thirds MG infections displaying macrolide AMR, use of azithromycin for symptomatic CT/NG treatment in the absence of MG testing should be reconsidered.

## O12.3 THE EMERGENCE AND SPREAD OF ANTIMICROBIAL RESISTANT *NEISSERIA GONORRHOEAE* IN HIV POSITIVE MEN WHO HAVE SEX WITH MEN

[1]Katy Town, [2]Nigel Field, [3]Martina Furegato, [3]Michelle Cole, [4]Simon Harris, [3]Gwenda Hughes. *[1]NIHR HPRU In Blood Borne and Sexually Transmitted Infections, UCL; [2]Research Department of Infection and Population Health, UCL; [3]National Infections Service, Public Health UK; [4]The Wellcome Trust Sanger Institute*

10.1136/sextrans-2017-053264.68

**Introduction** In England, men who have sex with men (MSM) who are HIV-positive are disproportionately affected by STIs, in part probably due to HIV sero-adaptive behaviours. *Neisseria gonorrhoeae* (NG) is of particular concern because treatment is threatened by antimicrobial resistance (AMR). In England, AMR NG has typically spread rapidly within sexual networks of MSM. We investigated whether the emergence and/or spread of AMR NG was associated with HIV-positive status.

**Methods** The prevalence of NG decreased susceptibility (DS) to ceftriaxone (MIC (mg/L)≥0.015), cefixime (≥0.125), and azithromycin AMR (≥1) from 2004–2015 was plotted by HIV status to investigate the emergence of DS/AMR using data from England and Wales collected within the Gonococcal Resistance to Antimicrobials Surveillance Programme. Differences were assessed using the Kolmogorov-Smirnov (KS) test. Logistic regression was used to model the association between HIV status and susceptibility to these antimicrobials in separate models adjusting for year.

**Results** Among all 5,630 MSM with NG, 25% of samples had DS/AMR to ceftriaxone, 8% to cefixime and 3% to azithromycin. A third (2024/5630) of MSM were HIV-positive. The distribution of prevalence of NG DS/AMR to ceftriaxone, cefixime and azithromycin was similar in HIV-positive and HIV-negative MSM across 2004–2015 ($p>0.05$ for each antimicrobial). In the logistic regression models, HIV-positive MSM were as likely as HIV-negative MSM to be infected with NG DS to ceftriaxone (DS/AMR prevalence in HIV-positive MSM vs HIV-negative MSM, adjusted odds ratio [95% confidence interval]) 25% vs 25%, 1.0 [0.9–1.1], cefixime 7% vs 8%, 1.1 [0.9–1.4] or azithromycin: 3% vs 3%, 0.9 [0.6–1.2].