discriminating influence were *Lactobacillus*, *Anaerococcus*, and *Staphylococcus*. In crude analysis, cytokines TNF- α /IP-10/IL-10 were elevated among MSWomen ($p < 0.05$, each); IL-8 did not differ by group; IL-1 β was higher among MSM ($p = 0.03$). Cytokine concentration increased in response to *Corynebacterium* (IL-8/TNF- α /IP-10/IL-1 β), *Gardnerella* (IL-8/IP-10/IL-1 β), *Veillonella* (IL-8/IP-10/IL-1 β), and *Peptoniphilus* (IL-8/IL-1 β). Microbiome composition did not account for the difference in TNF- α , IP-10, or IL-10 between groups; the difference in IL-1 β became non-significant after accounting for taxa. Among MSWomen, IL-1 β ($p = 0.01$) and IL-8 ($p = 0.05$) were elevated if the female partner had BV.

Conclusion To our knowledge, this is the first comparison between MSM and MSWomen of penile microbiome and urinary cytokines. Future studies should examine whether microbiome and mucosal inflammation differences between MSM and MSWomen cause differential risk of HIV/STI acquisition or differential impact on efficacy of HIV/STI interventions.

Disclosure No significant relationships.

P858 2018/2019 SURVEILLANCE UPDATE ON *NEISSERIA GONORRHOEAE* ISOLATES

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Background The global prevalence of antimicrobial resistance (AMR) in *Neisseria gonorrhea* (GC) is increasing and of specific concern is the emerging resistance to third generation cephalosporins worldwide. In Africa, exceedingly limited AMR data is available. The study determined the AMR in GC isolates a public referral clinics offering HIV and STI testing and treatment to people living in Nairobi and the region

Methods The survey on men presenting with urethral discharge at the special treatment Clinic (STC-Casino Clinic) collected samples from symptomatic men, inoculated on modified Thayer martin media (MTM) and identified by standard bacteriological methods. The MICs of five antibiotics Azithromycin, Gentamycin, ciprofloxacin, cefixime and ceftriaxone are determined by the Etest method (AB Biodisk, Solna, Sweden) and results defined as susceptible, intermediate and resistant. WHO reference strains were used as controls.

Results A total of 153 samples have been collected with 96 samples having tested culture positive, giving a 62.7% prevalence on samples collected from 25th June 2018 to 5th February, 2019. The mean MIC of 0.016 was recorded for Azithromycin, cefixime, while a mean MIC of 1.41 and 2.0 was recorded for Ciprofloxacin and Gentamycin respectively. The MIC range for Ciprofloxacin and Gentamycin was from 0.004 to 6 and from 0.125 to 8 respectively.

Conclusion This is a continuous study on the Gonococcal surveillance program to describe antimicrobial resistance profiles of antibiotics used in the region. It confirms that *N. gonorrhea* isolates from Nairobi in 2018 possessed high level resistance to Ciprofloxacin an antimicrobials previously recommended for the treatment of gonorrhea. Cefixime, ceftriaxone and azithromycin are still useful drugs for treatment of gonococcal infections in Kenya. The outcome of this study together with other additional studies will enable revisions of the gonorrhea treatment guidelines in Kenya and support in antimicrobial resistance in the region.

Disclosure No significant relationships.

P859 GENOTYPING *gyrA* AND *penA* FROM REMNANT *NEISSERIA GONORRHOEAE* POSITIVE CEPHEID XPRT® CLINICAL SPECIMENS

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Background *Neisseria gonorrhoeae* (NG) has developed resistance to most antibiotics, making it increasingly difficult to treat. Molecular methods have been used to predict antimicrobial susceptibility based on the *gyrA* codon serine 91 and the mosaic XXXIV allele on the penicillin-binding protein 2 (*penA*) gene using Roche Cobas and APTIMA clinical specimens. We aimed to determine if the same methods could be successfully used on remnant NG-positive Cepheid Xpert® specimens.

Methods We tested NG-positive pharyngeal, rectal, and vaginal/urine specimens from adolescents aged 14–24 years. We extracted 100uL DNA from each sample using the Roche® MagNA Pure. The Roche LightCycler® 480 was used to genotype *gyrA* and *penA* in a multiplex PCR using high resolution melt curve analysis. The fluorescent labels of the detection probes for the *penA* mosaic XXXIV target (Cyanine-5 dye) differed from that of *gyrA* (LightCycler® 640 probe) so that both genes could be detected simultaneously at various wavelengths. We used isolates with previously confirmed presence of the NG mutant *gyrA*, NG wild type *gyrA*, and mosaic *penA* XXXIV allele for internal controls.

Results Of the clinical specimens, 62% (38/61) were successfully genotyped. Urine specimens were most likely to be genotyped (5/6, 83%) followed by rectal (19/26, 73%), pharyngeal (12/24, 50%), and vaginal specimens (2/5, 40%). Of the 38 genotyped specimen, 8 had the *penA* XXXIV allele (2/26 rectal, 6/24 pharyngeal) and 16 had a mutated *gyrA* (10/26 rectal, 3/24 pharyngeal, 2/6 urethral, 1/5 vaginal). Of the 8 *penA* XXXIV positive specimens, 6 were *gyrA* indeterminate, 1 was *gyrA* wild type, and 1 was *gyrA* mutant. Of the 30 specimens without the *penA* XXXIV mosaic allele, 15 were *gyrA* wild type and 15 were *gyrA* mutant.

Conclusion Genotyping specific NG genes from Cepheid Xpert® clinical specimens was feasible. Our study was limited by its small sample size and lack of concurrent antimicrobial testing.

Disclosure No significant relationships.

P861 NOVEL MUTATION CONFERRING HIGH-LEVEL AZITHROMYCIN RESISTANCE IN *NEISSERIA GONORRHOEAE*

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Background Azithromycin resistance in *Neisseria gonorrhoeae* has been attributed to several resistance-associated mutations

including mutations in the 23S rRNA genes conferring varying levels of azithromycin resistance. Here, we report the emergence of a novel A to G mutation at the 2058 nucleotide residue (A2058G) in the 23S rRNA genes, in two gonococcal isolates, that confers high-level resistance to azithromycin (HLAziR; ≥ 256 mg/ml).

Methods The collection and antimicrobial susceptibility testing of *N. gonorrhoeae* isolates were performed as part of the Gonococcal Isolate Surveillance Project (GISP). Isolates with elevated minimum inhibitory concentration to azithromycin (≥ 2 mg/ml) were subjected to molecular analysis using Sanger PCR sequencing and/or whole genome sequencing analysis. Etest[®] was performed to confirm azithromycin susceptibility level and to determine the hetero-resistance phenotype (a concentration-dependent response to antibiotic) of the reported isolates.

Results Molecular analysis of GISP isolates from 2014–2018 revealed two isolates collected from two patients having the A2058G mutation in the 23S rRNA genes. One isolate had the HLAziR phenotype and A2058G mutations in all four 23S rRNA. The second isolate had the A2058G mutation in three of the four alleles and displayed a hetero-resistance phenotype (azithromycin MIC ranging from 4 mg/ml to ≥ 256 mg/ml). The wild-type allele was very conducive to A2058G conversion and resulted in a complete HLAziR phenotype. This mutational nucleotide conversion occurred in less than twenty hours after exposure to azithromycin using Etest[®].

Conclusion HLAziR in *N. gonorrhoeae* had largely been confined to isolates harboring a point mutation at nucleotide residue A2059G of the 23S rRNA genes. The newly discovered A2058G mutation further illuminates the genomic plasticity in *N. gonorrhoeae* when responding to antibiotic exposure and suggests a rapid recombination frequency between the 23S rRNA alleles at this nucleotide residue.

Disclosure No significant relationships.

P862

FEMALE SEX WORKERS AND THEIR ATTITUDE TOWARDS ORAL PRE-EXPOSURE PROPHYLAXIS

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Background Pre-exposure prophylaxis (PrEP) provides protection to sexually active persons at risk of acquiring HIV. Eligible female sex workers (FSWs) are a key population in which oral PrEP is indicated. The aim of this study was to evaluate knowledge levels of oral PrEP and the likelihood of its use among FSWs.

Methods A cross-sectional study in HIV uninfected FSWs was conducted. Interviews assessing awareness and intention to use PrEP were conducted initially. A description of PrEP as an HIV prevention strategy would be given after assessing awareness. Relative importance index was used to assess levels of knowledge, likelihood and barriers to PrEP use. A bivariate logistic regression model was utilized to identify predictors of PrEP use.

Results One hundred and thirty-one FSWs with a median age of 25 years (IQR: 21 – 31) participated. Most participants were single (78%), 10% being married, and 11% being either divorced or widowed. FSWs reported a median 5 (IQR: 3 – 6) daily sexual partners. Fifty-three (40%) participants reported having at least one encounter of unprotected casual sexual intercourse within the preceding three months. Only 71 (54%) participants had ever heard about PrEP. Of the FSWs that had heard about PrEP, 46 (35%) had adequate knowledge on its use. A total of 102 (78%) of the participants revealed that they would be willing to always use oral PrEP if it was provided to them for free. Likelihood of PrEP use increased among participants who had unprotected sex in the last 3 months ($r = 0.0448$, $p = 0.026$). Participants that were more knowledge about PrEP had an increased likelihood for PrEP use ($r = 0.21$, $p = 0.0153$).

Conclusion Knowledge of PrEP among FSWs in Zimbabwe was low. To increase uptake of PrEP as an HIV prevention strategy there will be need to further sensitize FSWs on this intervention.

Disclosure No significant relationships.

P863

TRANSGENDER WOMEN IN LEBANON: A QUALITATIVE STUDY TO UNDERSTAND HIV/STIS RISK

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Background In the Middle East and North Africa region, there is a scarcity of studies that focus on transgender individuals. Not only this group is regarded as one of the most at risk for HIV infection, but the burden of social stigma in this area of the world regarding transgender persons is very high. A single study by Kaplan et al. that focused on HIV related risk and resilience among 10 transgender women (TW) in Lebanon reported 0% HIV rate. The aim of this study was to characterize TW, a hard-to-reach population, and to understand HIV/STIs risky behavior in a sample in Lebanon.

Methods Interviews were conducted with 18 Lebanese TW using an STI clinic and checkpoint in Lebanon. Data were analyzed using Qualitative Thematic Analysis.

Results Three principal themes were raised: social issues; stigma, discrimination/trauma and mental health issues; health-care access. High risky behavior as condomless sexual intercourse were mentioned due to social and family rejections, difficult to access healthcare services, and stigma with discrimination. However, according to the findings, access to HIV/STIs services was considered better when compared to other health services.

Conclusion This qualitative study investigated HIV/STIs risk behaviors of TW in Lebanon. Our findings about social and family issues, discrimination and stigma, health care access difficulty even from LGBT community should help local programs to better understand the TW population in Lebanon and their needs. Special services addressing TW in non-medical and medical issues, taking into consideration an overall comprehensive and multi-disciplinary intervention appears to be the most useful.

Disclosure No significant relationships.