infection for testing antibiotics that utilize free time above MIC as the pharmacokinetic (PK) driver to predict efficacy. We further established the mouse model for antibiotic testing by defining the *in vivo* efficacy of ciprofloxacin (CIP), an antibiotic that uses the free area under the curve over MIC (fAUC/MIC).

Methods Lower genital tract infection with Ng strain FA1090 was established in female mice using published methods for two days, after which increasing oral doses of CIP (or controls) were administered (n = 10–20 mice/group) and infection was quantified for 8 days. Plasma drug levels from uninfected mice were measured after administration of similar doses of CIP, and PK parameters (modeled using WinNonlin software) were correlated with observed efficacy.

Results Single oral doses ranging from 5 to 60 mg/kg CIP showed significant activity against strain FA1090, with the highest doses (15, 30, and 60 mg/kg) clearing 100% of infections within 8 days; these correspond to predicted fAUC/MICs of 66–264. The 60 mg/kg dose cleared infection in all mice within 48 h, which we defined previously as the endpoint in the model that best correlates with *in vivo* exposures required for successful CRO/CFX treatment regimens.

Conclusion The gonorrhea mouse model shows a dose-dependent response for CIP against a CIP^S strain with a dose of 60 mg/kg required to clear infection in 48 hrs. PK modeling suggests that achieving exposures necessary for effective treatment of CIP^R strains (mic ≥ 1 μ g/ml) would be challenging. These data that establish PK/PD correlations for CIP - with a fAUC/MIC driver- further strengthens the usefulness of this mouse model to test novel antimicrobial compounds against gonorrhea.

Disclosure No significant relationships.

P691

WIDESPREAD USE OF HIGH-DOSE CEFTRIAXONE THERAPY FOR UNCOMPLICATED GONORRHEA WITHOUT REPORTED CEFTRIAXONE TREATMENT FAILURE

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Background Antimicrobial resistance (AMR) to *N. gonorrhoeae* has emerged for each of the antibiotics following their introduction into clinical practice recommended as first-line therapies. To improve rational and effective clinical antibiotic treatment, we analyzed the prescription patterns of antibiotics and its therapeutic effect in the treatment of uncomplicated gonorrhea in China.

Methods We obtained data from a follow-up multicenter-surveillance program. Multinomial logistic regression analyses were conducted to explore the associations between demographic/clinical variables with the levels of sensitivity to ceftriaxone and prescription of high-dose ceftriaxone.

Results In this study, 1686 patients infected with *N. gonorrhoeae* were recruited in a surveillance network during the

period of 1 January 2013 through 31 December 2017 in 7 hospitals distributed in 5 provinces. The prevalence of isolates with decreased susceptibility to ceftriaxone was 9.8% (131/1333), fluctuating between 5.6%–12.1%. Injectable ceftriaxone was chosen as the first-line treatment among 83.1% patients, and most of them (72.7%, 1018/1401) received more than 1000 mg dosage. Patients who were infected with gonorrhea or infected with other STDs before (AOR 1.611 95%CI [1.103–2.352]; AOR 2.329 95%CI [1.553–3.494]) or who used already antibiotics for this infection (AOR 1.597, 95%CI [1.04–2.452]) were associated with higher prescribed ceftriaxone dosage prescribed. All of the patients recruited in this study were cured regardless of the isolates' susceptibility to ceftriaxone or the dosage of ceftriaxone they received.

Conclusion No ceftriaxone failure treatment for uncomplicated gonorrhea were reported in China, however, high-dose ceftriaxone were widely used in China, its impacts needs further studies.

Disclosure No significant relationships.

P692

GENTAMICIN SUSCEPTIBILITY TO *NEISSERIA GONORRHOEAE* IN MALAWI AFTER TWENTY-FIVE YEARS OF SUSTAINED USE

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Background Gentamicin has been used exclusively for the treatment of *Neisseria gonorrhoeae* (GC) in Malawi, since 1993. Previous gentamicin susceptibility testing in 1993, 1996 and 2007, showed $\geq 95\%$ susceptibility by both agar dilution and E-test. However, clinical cure rates 1–2 weeks following treatment, have been in the 90% range. We are in the process of repeating this assessment to inform treatment guidelines.

Methods We are enrolling HIV-infected men presenting with acute urethritis at the sexually transmitted infections (STI) clinic at Bwaila District Hospital in Lilongwe, Malawi. All participants provide urethral swabs for STI etiologic testing, and are treated syndromically per Malawian standard of care, with gentamicin 240 mg IM, doxycycline 100 mg, BID for 7 days, and metronidazole 2g single dose. Patients are seen one week post-treatment for repeat clinical exam and GC culture. All specimens with a positive GC culture are tested locally for gentamicin susceptibility via E-test. E-test inhibition with ranges from 0–4, 4–16, and ≥ 16 are categorized as high, moderate, and low susceptibility, respectively. Clinical cure is determined by genital examination.

Results 42 men with gonococcal urethritis have been enrolled to date. Baseline gentamicin E-test results: high susceptibility: 0–1: 21%; 1–2: 60%; 2–4: 19%; moderate or low susceptibility ≥ 4 : 0%. 37/42 men (88%) returned for follow-up. 4/37 (11%) were culture positive for GC, including 2 (5%) symptomatic men. 3/4 (75%) of the week one E-test results were in the high susceptibility range, and 1/4 (25%) was in the low susceptibility range (≥ 16).