Antimicrobial resistant Neisseria gonorrhoeae (NG) surveillance is critically important to determine patterns of resistance and to ensure national treatment guidelines for gonorrhea remain effective. The Thailand Ministry of Public Health, the U.S. Centers for Disease Control and Prevention, and the World Health Organization began the first Enhanced Gonococcal Antimicrobial Surveillance Programme (EGASP) in 2015 to monitor gonococcal antimicrobial susceptibility in Thailand.

Methods We describe gonococcal antimicrobial susceptibility results from November 2015 to October 2018. Symptomatic men with urethral discharge or dysuria who attended one of two sentinel sites in Thailand, Bangkrak Hospital and Silom Community Clinic @TropMed, provided specimens for culture and completed a questionnaire. Antimicrobial susceptibility testing (AST) was performed on all NG isolates to determine Minimum Inhibitory Concentrations (MIC) for Ceftriaxone (CRO), Cefixime (CFM), Azithromycin (AZI), Gentamicin (GEN), and Ciprofloxacin (CIP) using E-test.

Results A total of 2,390 specimens were collected during 2015–2018. 1,373 (57.4%) had AST results. Only one isolate had an elevated MIC (≥2 µg/mL) to AZI, 1,262 isolates (91.9%) were resistant (MIC ≥1.0 µg/mL) to CIP, and no isolate had elevated MICs to CRO (≥0.125 µg/mL), CFM (≥0.25 µg/mL), or GEN (≥16 µg/mL). The overall and each year MIC50 and MIC90 were stable for CRO (MIC50/MIC90 = 0.004/0.008 µg/mL), CFM (MIC50/MIC90 = 0.016/0.016 µg/mL) and GEN (MIC50/MIC90 = 4/8 µg/mL). The overall MIC50/MIC90 for AZI remained relatively stable changing from 0.032 µg/mL in 2015 to 0.125 µg/mL during 2016–2018; the MIC90 for AZI fluctuated between 0.125 (2015) and 0.5 (2017) µg/mL.

Conclusion Although CIP resistance was common, most isolates collected through EGASP appeared susceptible to CRO and CFM supporting the continued use of these antimicrobials to treat gonorrhea in Thailand. Continued surveillance for antimicrobial resistance is important for monitoring the emerging threat of NG resistance.

Disclosure No significant relationships.