

## Abstract 1352

Importation of ciprofloxacin resistant *Neisseria gonorrhoeae* into the UK: a public health challenge.

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### Background

Current UK guidelines for managing *Neisseria gonorrhoeae* (NG) infection include ciprofloxacin use if antimicrobial susceptibility is indicated, but this option would be less useful if ciprofloxacin resistant NG (CpR-NG) rates increased, for example to levels reported in some parts of Asia. CpR-NG rates in the Americas are lower than in the UK. We investigated whether having recent condomless sex in "high" CpR-NG (HCpR-NG) regions (sex abroad, but not in the Americas) was associated with being infected with CpR-NG.

### Methods

We conducted two cross-sectional surveys of UK Sexual Health Clinics (March 2015-March 2016; May 2017-June 2018). Patients aged  $\geq 16$  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). Data were collected on travel-associated sexual behaviour, including condomless sex abroad (CSA) in the past three months with a new partner. Routine clinic NG results were obtained. Resistance-associated mutations in *gyrA* (fluoroquinolones) for NG were identified using Sanger sequencing. Patients reporting CSA in HCpR-NG regions were compared to no sex abroad using Pearson's chi-squared test and multivariable logistic regression models.

### Results

Overall, 71/1055 (6.7%) reported CSA in HCpR-NG regions. Of these, 12/71 (16.9%) compared to 85/984 (8.6%) not reporting CSA had NG ( $p=0.02$ ). Among-NG positive patients, fluoroquinolone resistant mutations were found in 9/12 (75.0%) patients reporting CSA in HCpR-NG regions, compared to 35/85 (41.2%) who did not report CSA ( $p=0.03$ ). After adjustment for other risk factors, the association between fluoroquinolone resistant NG and CSA in HCpR-NG regions remained significant (aOR:2.33[95%CI:1.03-5.24]).

### Conclusion

Having recent condomless sex with a new partner in regions of high ciprofloxacin resistance was associated with being NG-positive in the UK and having ciprofloxacin resistant NG. Importation of resistance may undermine attempts to recycle older antibiotics in the management of NG infection.

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