

Appropriate use of fluoroquinolones

Fluoroquinolones registered for use in Australia include: **ciprofloxacin, moxifloxacin and norfloxacin.**

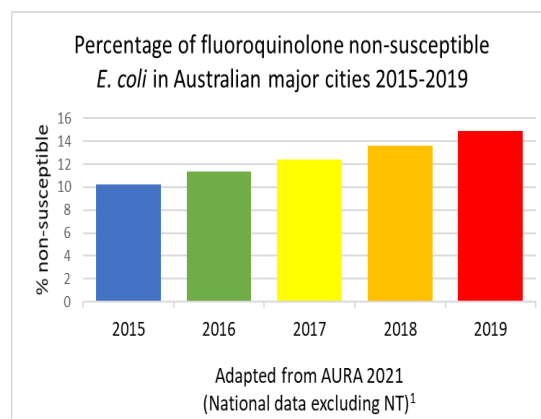
Fluoroquinolone usage

Fluoroquinolones are broad-spectrum antibiotics active against many Gram-negative and some Gram-positive bacteria. Fluoroquinolones are a class of antimicrobials amongst the most likely to drive antimicrobial resistance in hospitals. Resistance to fluoroquinolones is increasing globally. In Australia, fluoroquinolone resistance in *E. coli* blood culture isolates increased by 3.2% between 2016 and 2019,^{1,2} and *Shigella sonnei* resistance to ciprofloxacin has increased by 44% between 2015 and 2019.¹ Ensuring patients are started on the correct guideline-based therapy can help prevent further fluoroquinolone resistance from developing by limiting overuse due to inappropriate prescribing.³

Risks of fluoroquinolone use

In addition to the impact on antimicrobial resistance, fluoroquinolones are associated with the following safety risks:⁴

- Gastrointestinal side effects, including increased risk of *Clostridium difficile* associated diarrhoea
- Tendonitis and tendon rupture
- QT prolongation, especially when used concurrently with other QT-prolonging medicines
- Neurological side effects including peripheral neuropathy
- Psychiatric adverse reactions⁵
- Dissection or rupture of an aortic aneurysm⁵



Using fluoroquinolones appropriately

- **Prescribe antibiotics in accordance with local guidelines or as recommended in the *Therapeutic Guidelines: Antibiotic***
- **Direct therapy to microbiology results – Do not use fluoroquinolones for infections where other options are available**
- **If fluoroquinolone therapy is indicated, use the shortest duration clinically appropriate**
- **Review antimicrobial allergy history carefully – Do not use adverse reactions to other antimicrobials as a justification for fluoroquinolone use.** Careful assessment of patients reporting a history of antibiotic allergy (particularly to beta-lactam antibiotics) can ensure patients are not treated unnecessarily with fluoroquinolones as an alternative.

References

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2. Australian Commission on Safety and Quality in Health Care. AURA 2019: third Australian report on antimicrobial use and resistance in human health. Sydney: ACSQHC; 2019 [www.safetyandquality.gov.au/antimicrobial-use-andresistance-in-australia/resources-page/]
3. British Society for Antimicrobial Chemotherapy (2018). Antimicrobial Stewardship: From principles to practice [http://www.bsac.org.uk/antimicrobialstewardshipebook/BSAC-AntimicrobialStewardship-FromPrinciplestoPractice-eBook.pdf]
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For more information

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