Fluoroquinolones MHRA alerts local audit
Has the patient been counselled?

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Background

Fluoroquinolones (Ciprofloxacin, Levofloxacin, Moxifloxacin, Ofloxacin) (FQ) are widely used broad-spectrum antibiotics that carry the risk of rare but irreversible adverse effects, including tendon rupture, suicidal thoughts, peripheral neuropathy, and central nervous system disorders.

The Medicines and Healthcare products Regulatory Agency (MHRA) had issued multiple alerts regarding these serious side effects and emphasised the importance of patient counselling when prescribing FQ to ensure informed decision-making and mitigate potential harm.

However, despite the alerts and the availability of counselling resources, it was still uncertain whether patients at Leeds Teaching Hospital (LTHT) received any form of counselling when being prescribed FQ.

Aims & Objectives

This audit aims to assess whether patients at LTHT are being counselled about the risks associated with fluoroquinolones at the time of prescribing. By evaluating current prescribing practices, the audit aims to identify potential gaps and promote safer prescribing.

Methodology

Data collection began in March 2024 over two weeks, using the electronic prescribing tool to identify patients prescribed fluoroquinolones (Ciprofloxacin, Delafloxacin, Levofloxacin, Moxifloxacin, Ofloxacin). The following data were collected.

Patient demographics	• Name, ward, age, allergy status
Antibiotics (FQ) prescribing	• Name, route, dose, indication, start date and duration • Compliance with LTHT antimicrobial guidelines & rationale for non-compliance
Counselling assessment	• Reviewed clinical notes and electronic drug chart • Method of counselling and healthcare professional role • Reason for no counselling if recorded
Risk factors	• Age >60 years old, concomitant use of corticosteroids, pre-existing psychiatric conditions and epilepsy

Inclusion criteria

- All clinical wards at LTHT including adults, paediatrics, and critical care.
- All patients prescribed any of the five fluoroquinolones specified above.

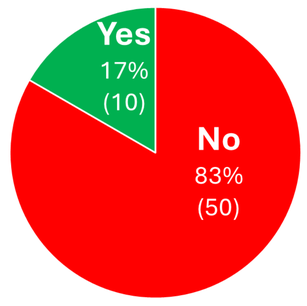
Exclusion criteria

- All patients taking fluoroquinolones for prophylaxis.

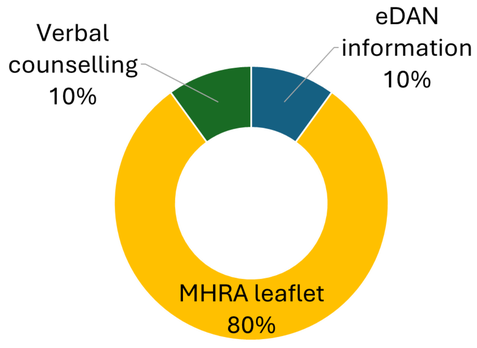
Results & Discussions

60 patients were reviewed and included in this audit. Counselling prior to fluoroquinolone initiation was documented for only 10 patients (17%), with the majority receiving an MHRA leaflet.

Has the patient been counselled?

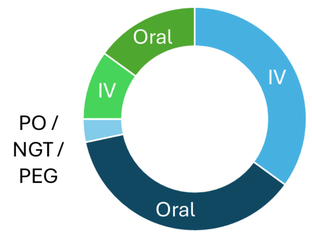


Counselling methods



Fluoroquinolones prescribed

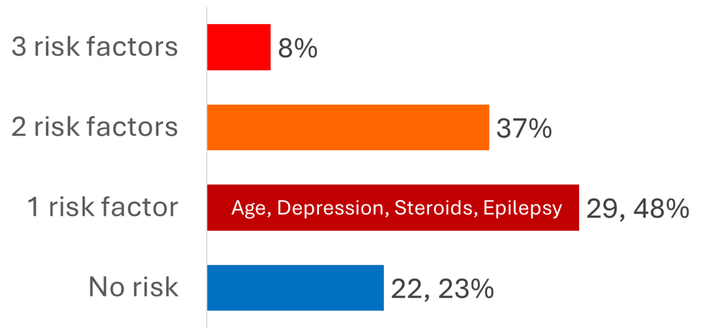
Levofloxacin (25%)



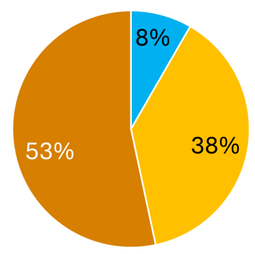
Ciprofloxacin (75%)

87% of patients were prescribed fluoroquinolones in line with Trust antimicrobial guidelines and/or microbiology input. One possible explanation for this adherence is that fluoroquinolones are first-line antibiotics in certain respiratory and urinary tract infection guidelines. However, despite following Trust guidelines, over 80% of patients did not receive counselling at the time of initiation, during treatment, or at discharge.

Percentage of patients with risk factors

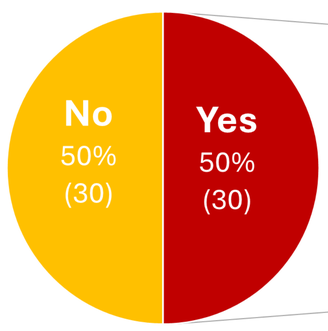


Patient demographics

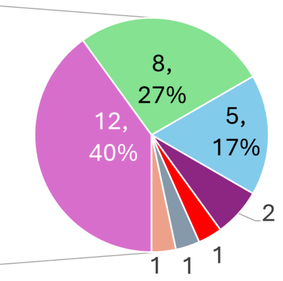


Additionally, more than 75% of patients had at least one risk factor, with more than half being over the age of 60. Only 50% of the patients prescribed FQ were allergic to penicillin. For those who had penicillin allergy recorded, 40% of the patients had no documentation of the reaction which made it difficult to delabel the allergy.

Penicillin allergy status



Reaction to Penicillins



No penicillin allergy · Not documented · Rash
Nausea and vomitting · Swelling · Anaphylaxis
Diarrhoea · Angioedema

Conclusions

The audit highlights a significant gap in adherence to MHRA alerts on fluoroquinolone counselling, with most patients receiving no documented counselling before treatment. Counselling remained remarkably low in high-risk patients including those over 60. This highlights the need for improved documentation and greater clinician awareness. The audit results have been shared in educational sessions and clinical quality forums to help raise awareness and encourage changes in practice. Moving forward, a re-audit is planned to assess improvements in prescribing practices.

References

MHRA (2024). Fluoroquinolone antibiotics: must now only be prescribed when other commonly recommended antibiotics are inappropriate. Medicines and Healthcare products Regulatory Agency. Available at: https://www.gov.uk/drug-safety-update/fluoroquinolone-antibiotics-must-now-only-be-prescribed-when-other-commonly-recommended-antibiotics-are-inappropriate (accessed 6/5/25)