

Assessing Broad-Spectrum Antibiotic Prescribing in a Primary Care Setting

Olivia Knowles¹

1. Abstract Antimicrobials are a hot topic, with resistance being an ever increasing concern. Thus, appropriate prescribing is crucial. This study aimed to assess prescribing appropriateness of cephalosporins, quinolones and co-amoxiclav (broad-spectrum antibiotics) within a GP practise in Oxfordshire over a 3-month period. Common situations in which these drugs were prescribed inappropriately were identified and discussed with the GPs at the practice. This will ultimately help to reduce future inappropriate prescriptions which may contribute towards antibiotic resistance. Based on the results of this study, recommendations for broad-spectrum prescribing were made to the GP's and changes were put into place to improve broad-spectrum prescribing in the future.

2. Background

Antimicrobials save millions of lives every year, however, no new classes of antibiotic have been discovered since the 1980s. This, in combination with over-prescribing of the drugs available means that in the future, the antibiotics we do have may no longer work, posing a significant threat to global public health and as such, dramatic action is being taken to ensure antibiotics will be of benefit to future generations.

This study was carried out to ensure optimal compliance with NICE antimicrobial stewardship¹ and the Oxfordshire CCG antibiotic prescribing guidelines². The 3 classes of broad-spectrum antibiotics included are mostly used when others have failed. It is important that these drug classes are used sparingly to avoid drug resistant bacteria developing.

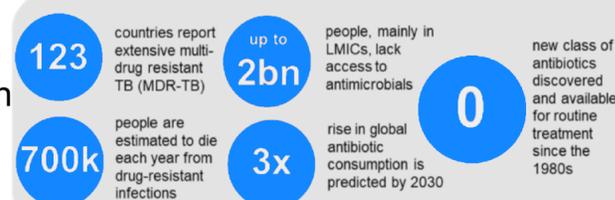
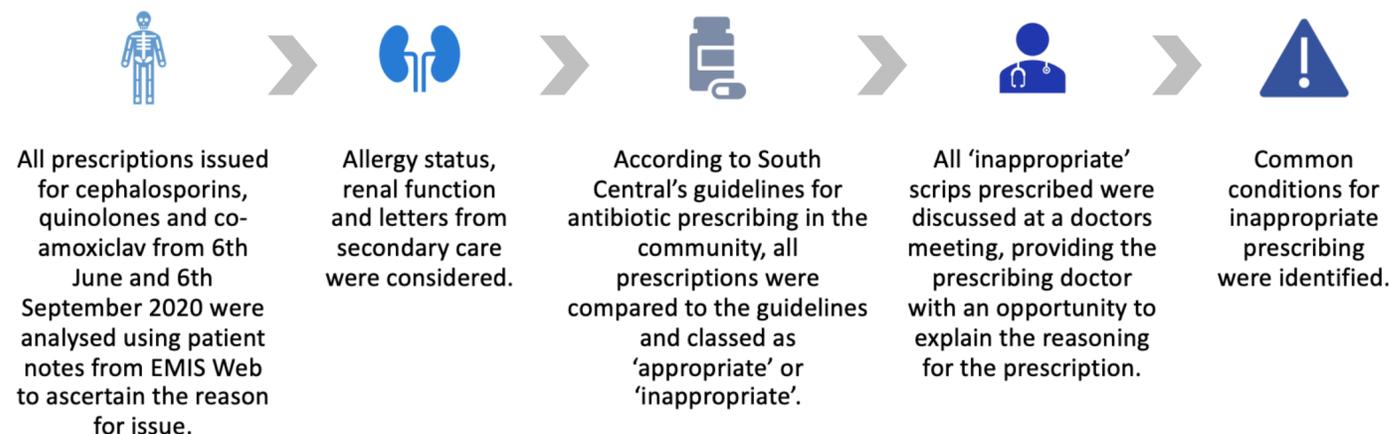


Figure 1 - Antimicrobial resistance stats³

3. Method



4. Results

76 prescriptions were issued over the analysis period. 41 for co-amoxiclav, 20 for quinolones and 15 for cephalosporins. 21 scripts issued were deemed inappropriate

Figure 2 - Breakdown of all prescriptions by appropriateness

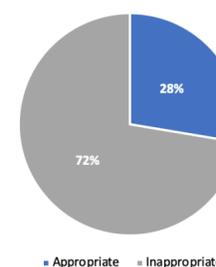


Figure 3 - Breakdown of all inappropriate prescriptions by antibiotic class

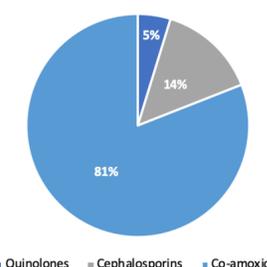
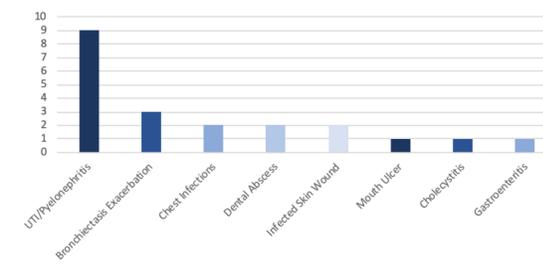


Figure 4 - Number of inappropriate Prescriptions by Indication



5. Conclusion

- 28% of broad-spectrum prescribing did not conform to the guidelines
- The most commonly drug prescribed inappropriately was co-amoxiclav
- UTI was the most common condition incorrectly prescribed for

Recommendations identified for future practise:

- Study presented at the weekly doctors meeting, each doctor made aware of their individual prescriptions deviating from guidelines and advised of corrections
- Guidelines saved to GP desktop for easy reference in future, GPs to use if in doubt
- GPs prescribing rescue pack antibiotics should refer to patient notes for any indication of what that patient has been recommended by secondary care.
- GPs must attempt to persuade patients to have the antibiotic recommended by the guidelines if demanding a certain drug
- Instate an EMIS alert on patient notes where secondary care has recommended a certain drug in order to save GP's searching letters when patients request a repeat

