Antimicrobial Prescribing Guidelines for Primary Care

The electronic versions of this full guideline and its appendices can be accessed at: https://www.nottsapc.nhs.uk/guidelines-formularies/antimicrobial-guidelines/

Principles of Treatment

1. This guidance has been adapted from national guidelines, including the United Kingdom Health Security Agency (UKHSA NICE clinical knowledge summaries (NICE CKS) and those produced by specialist associations. It is based on the best available evidence, but its application must be modified by professional judgement and involving patients in management decisions.

2. A dose and duration of treatment are suggested but may need modification for age, weight and renal function. In severe or recurrent cases, consider a larger dose or longer course.

3. Children's doses are quoted from the age of 1 month. For neonatal doses, please consult the British National Formulary for Children.

4. Prescribe an antibiotic **only** when there is likely a **clear clinical benefit.**

5. Consider a no or backup/delayed antibiotic strategy for self-limiting upper respiratory tract infections and mild UTI symptoms.

6. Limit prescribing over the telephone to exceptional cases.

7. In severe, persistent, recurrent or unusual infections, have a high index of suspicion for immunosuppressive illness and consider an investigation, e.g., Full Blood Count or HIV testing.

8. Use simple generic antibiotics first whenever possible. **Avoid broad-spectrum antibiotics, particularly quinolones, co-amoxiclav and cephalosporins**, when narrow-spectrum antibiotics remain effective, as they increase the risk of *Clostridium difficile*, MRSA and resistant UTIs from multiresistant coliforms. Empirical use of these agents may be warranted where recommended in the guideline below.

9. **Avoid use (including empirical use) of quinolones in patients with previous *MRSA* or *Clostridium difficile* unless discussed with Microbiology**

10. Avoid widespread use of topical antibiotics, especially those agents also available as systemic preparations, e.g., topical fusidic acid.

11. Prescribing in pregnancy and breastfeeding – see Appendix 1.

12. If a patient is unable to take amoxicillin capsules due to dietary or religious reasons, consider prescribing amoxicillin liquid as an alternative. If a patient is unable to take doxycycline capsules due to dietary or religious reasons, consider doxycycline dispersible tablets. In other cases or if in doubt, contact your community pharmacy or primary care pharmacist to discuss options.

13. Patients reporting an adverse reaction to antibiotics is relatively common. It is important to record what reaction the patient has experienced in the medicine sensitivities section of the electronic record. In some cases, it will be a common adverse medicine reaction, e.g., gastric upset, rather than a true allergy, e.g., rash, angioedema or anaphylaxis. It is important to accurately document and communicate this distinction and the nature of the reaction to the patient and other healthcare

professionals so it is clear if true allergy or an adverse reaction. Patients with a true allergy to penicillins will be allergic to all penicillins. They may also have a cross-over allergy to other ß-lactams. Risk is quoted as between 0.5 and 6.5% for cephalosporins. Patients labelled as allergic to beta-lactams are at increased risk of resistance and treatment failure due to reliance on second-line agents. If a patient subsequently tolerates penicillin or other beta-lactam antibiotics, 'delabelling' is important to allow safe prescribing in the future. For further advice on antibiotic choice in allergy, please contact a Medical Microbiologist.

14. Where an empirical therapy has failed, or special circumstances exist, microbiological advice can be obtained from the Microbiology Department at Nottingham University Hospitals at 0115 9249924 ext. 81163 or Sherwood Forest Hospitals at 01623 622515 ext. 3616/3635.

15. Prescribers are encouraged to access the range of resources available in the TARGET antibiotics toolkit available here: http://www.rcgp.org.uk/clinical-and-research/toolkits/target-antibiotics-toolkit.aspx and patient information leaflets on the RCGP website: Leaflets to discuss with patients.

16. MHRA published an alert on quinolones in November 2018, with advice on prescribing in high-risk patients, due to a small increased risk of aortic aneurysm and dissection with systemic and inhaled fluoroquinolones. The MHRA warning was considered during the updated and incorporated into the relevant sections.

17. MHRA published a second alert on quinolones in March 2019, with new restrictions and precautions due to rare reports of disabling and potentially long-lasting or irreversible side effects. The use of quinolones has been limited as much as possible and restricted appropriately.

18. Concomitant use of macrolide antibiotics and statins is contraindicated due to increased risk of myopathy, including rhabdomyolysis. If treatment with these antibiotics cannot be avoided, therapy with statins must be suspended during treatment.

19. MHRA published an alert on Nitrofurantoin: a reminder of the risks of pulmonary and hepatic adverse medicine reactions on 26th April 2023, that healthcare professionals prescribing nitrofurantoin should be alert to the risks of pulmonary and hepatic adverse medicine reactions and advise patients to be vigilant for the signs and symptoms in need of further investigations.