# Medicines Optimisation Update

## Prescribing Broad Spectrum Antibiotics

A care system support organisation

### What this includes:

**Prescribing of Co-amoxiclav, a Cephalosporin or a Quinolone.**

Please also refer to the 'Antibiotic items per STAR PU' key message document for further information on this topic.

### Identifying the problem:

ePACT2, PrescQIPP & OpenPrescribing Dashboards

NECS & NCIIS Quarterly Reports
Antimicrobial audit tools
Broad spectrum audit tools

### Suggested actions – in the consultation:

1. **Download a copy of the PHE/NICE antimicrobial guideline to your desktop PHE NICE antimicrobial-prescribing-guidelines**
2. **Only prescribe an antibiotic when there is likely to be a clear clinical benefit and give alternative self-care advice, supported with information on safety netting and use a back up /delayed script if appropriate. See: RCGP TARGET Leaflets to share with patients .**
3. **Always consider possibility of sepsis check for signs/symptoms using national tools https://sepsistrust.org/ NEWS2**
4. There are few indications for broad-spectrum antibiotics in primary care. **Use simple generic antibiotics if possible. Keep the course length within guidelines.**
5. **Reserve broad-spectrum antibiotics for the treatment of serious infections when the pathogen is not known:** Do you need to check for sensitivity? Check any previous urine culture and susceptibility results and previous antibiotic prescribing.
6. **Avoid broad spectrum agents when other antibiotics remain effective, due to ↑ risk of *C. difficile* infection (CDI), Gram-Negative Bloodstream Infection [GNBSI, e.g. E. coli bacteraemia due to Extended Spectrum Beta-Lactamase (ESBL) producing strains] and *M*RSA**
7. **ESBL enzyme-producing bacteria are resistant to many penicillins and cephalosporins and often to other types of antibiotic ESBL Gov guidance**

- **Risk factors for GNBSI E. coli bacteraemia include :** previous UTIs, RUTI, Urinary catheters, antibiotics in the previous month and older age (>65yrs)

| High Risk *C Difficile* patient | High CDI Risk environment | Antimicrobial CDI risk |
|---|---|---|
| ○ Age >65yrs Previous CDI<br>○ Long term conditions especially those requiring long term antibiotics<br>○ Immunosuppressed IBD Cancer Kidney disease<br>○ PPI/acid suppressant use ( high dose ↑ CDI risk)<br>○ CDI Risk ↑ for up to 2 weeks after starting antibiotic, may last weeks.<br>○ Others CDI risks include :Use of feeding tubes, comorbidities , laxatives use , GI procedures | ○ Contact with C diff patients<br>○ Recent hospital admission<br>○ Hospital stays or >7days<br>○ Institutionalised | **High risk**<br>• Clindamycin, Quinolones,<br>• Co-amoxiclav, Cephalosporins.<br>**Moderate risk**<br>• Macrolides & Amoxicillin<br>**Lower risk**<br>• Tetracyclines, Trimethoprim , Pen V<br>**All antibiotics have risk.**<br>↑ **Risk with longer and multiple courses** |

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### Suggested actions – in the consultation:

7. **Document clinical diagnosis, duration, dose and route in patient records. If you have prescribed broad spectrum antibiotics outside guideline recommendations based on the patient's clinical presentation, this should be added to the notes**
8. **Check BNF** for appropriate use and dosing in specific populations, for example, hepatic impairment, renal impairment.
9. **Remember to Double check patients with 'penicillin allergy'**
10. **Counsel patients about possible side effects** when using broad spectrum antibiotics, especially older people, to be alert for signs of CDI and seek medical help if diarrhoea develops. Ensure all cases of CDI are read coded as a major medical problem to inform future patient management
11. **Remember the MHRA restrictions and precautions for Fluoroquinolone antibiotics** - due to very rare reports of disabling and potentially long-lasting or irreversible side effects affecting musculoskeletal and nervous systems. Warnings include: stopping treatment at first signs of a serious adverse reaction (such as tendonitis), prescribing with special caution in people over 60 years and avoiding co-administration with a corticosteroid
12. **Check the updated PHE Diagnosis of UTI guideline** and NICE UTI guidelines. Prescribe **Pivmecillinam** and **not Co-amoxiclav** for Lower UTI where nitrofurantoin and trimethoprim are unsuitable. Cefalexin is joint 1st line with co-amoxiclav, trimethoprim & ciprofloxacin for Upper UTI. Only use Co-amoxiclav or trimethoprim if culture results are available and show susceptibility. Remember to consider safety issues with Ciprofloxacin.
13. **Review the need for a PPI especially when patients are taking an antibiotic or have CDI and consider stepping down and stopping treatment whenever possible.** Proton Pump inhibitor (PPI) use is associated with nearly doubling the likelihood of CDI, even for short term use.
14. Please also refer to the section "As a practice" in the antibiotic items per STAR PU key message document for further guidance

### Resources :

- **NICE/PHE Antimicrobial prescribing guidelines:** https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/antimicrobial-prescribing-guidelines
- **RCGP TARGET Antibiotics Toolkit:** https://elearning.rcgp.org.uk/course/view.php?id=553
- **Antibiotic and Diagnostic quick reference tools:** https://www.rcgp.org.uk/clinical-and-research/resources/toolkits/amr/target-antibiotics-toolkit/antibiotic-and-diagnostic-quick-reference-tools.aspx
- **Clostridioides difficile infection: antimicrobial prescribing NICE guideline [NG199] Published: July 2021** https://www.nice.org.uk/guidance/ng199

### References:


- **Summary of antimicrobial prescribing guidance - managing common infections** https://**www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/antimicrobial-prescribing-guidelines**
- **Respiratory tract infections (self-limiting): prescribing antibiotics NICE guidelines [CG69] Published date: July 2008 https://www.nice.org.uk/Guidance/cg69**
- **Clostridioides difficile infection: antimicrobial prescribing:NICE guideline [NG199] July 2021** https://www.nice.org.uk/guidance/ng199
- **Antimicrobial stewardship: systems and Processes for effective antimicrobial medicine use**https://www.nice.org.uk/guidance/ng15
- **Drug allergy: diagnosis and management** https://www.nice.org.uk/guidance/cg183