Tablet Press Extra
The prescribing newsletter for GPs, nurses and pharmacists
NHS Northamptonshire ICB
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Reducing antibiotic prescribing in children with acute cough from a respiratory tract infection.

Key Points

- NICE guideline NG120 – Cough (acute): antimicrobial prescribing – recommends that clinicians do not offer an antibiotic to individuals with upper RTI or acute bronchitis who are not systemically very unwell or at higher risk of complications.
- The Caring for Children with Coughs leaflet contains information for parents / carers about how to look after a child who has a cough (not due to asthma), including symptoms of concern and information on when to see a doctor.
- The ARTIC PC trial concluded that antibiotics (amoxicillin) did not provide a clinically important benefit for symptom duration among children presenting in primary care with uncomplicated (non-pneumonic) lower respiratory tract infections.
- Antibiotics are implicated in nearly half of all emergency department (ED) visits for adverse drug events attributed to a systemic medication among children of all ages.
- The NHS Performance Assessment Framework for 2025/26 includes a new patient safety metric, reporting the percentage of children aged 0-9 years who have been prescribed at least one antibiotic in the last year in primary care. The England target is 27% or below. Although improvements have been made, Northamptonshire was above this target, at 29.5% for the 12-month rolling period to March 2025.
- Effective safety-netting is essential.

Background

Antimicrobial resistance is expected to cause 10 million deaths per year globally by 2050 unless action is taken to limit its development. Taking antibiotics leads to an increased risk of carrying antibiotic resistant bacteria which may make subsequent infections harder to treat. This risk an persist for at least 12 months. Antimicrobial resistant germs can spread from one person to another through close contact and through the environment.

- **Burden**. Consultations for acute cough (<28 days) with respiratory tract infection symptoms (such as fever and coryza) in children are common. It is normal for a child to have 8 or more colds each year.
- **Reason for prescribing antibiotics.** Many clinicians report that they prescribe antibiotics to mitigate perceived risk of future hospital admission and complications.The onset of sepsis is reported as the most concerning potential outcome of reduced antibiotic prescribing, but for children aged 0-4 years the number needed to treat (NNT) with antibiotics to avoid one case of sepsis has been estimated at 27,000-29,000 children. However, effective safety-netting is essential.
- **Lack of benefit of antibiotics**. The ARTIC PC randomised placebo-controlled trial, carried out at 56 general practices in England, confirmed that antibiotics (amoxicillin) do not provide a clinically important benefit for symptom duration among children presenting with uncomplicated lower respiratory tract infections. There was also no evidence of additional complications when antibiotics were not prescribed.

- **Potential harm from antibiotics.** A meta-analysis showed that nearly 20% of patients prescribed an antibiotic experienced an adverse effect. Common adverse effects include diarrhoea, nausea and skin rash. One study showed that antibiotics are implicated in nearly half of all emergency department (ED) visits for adverse drug events attributed to a systemic medication among children of all ages. Early antibiotic exposure (during the first 2 years of life) is also associated with an increased risk of childhood-onset asthma, allergic rhinitis, atopic dermatitis, coeliac disease, overweight, obesity, and attention deficit hyperactivity disorder.
- **NICE guidance.** NICE guideline NG120 – Cough (acute): antimicrobial prescribing – recommends that clinicians do not offer an antibiotic to individuals with upper RTI or acute bronchitis who are not systemically very unwell or at higher risk of complications.
- **Predicting risk of complications**. Identifying children at low risk of future complications, could lead to a reduced use of antibiotics in these groups of patients and protect them from the risk of antimicrobial resistance, side effects and disturbance of their natural microbiota. Equally, identifying children at higher risk of future complications could lead to improved patient safety and appropriate targeting of antibiotic treatment or hospital admission.

Patient/ Parent information

- The Caring for Children with Coughs leaflet (sometimes referred to as the Polar Bear leaflet) contains information about how to look after a child who has a cough (not due to asthma), including information on when to see a doctor.
- The When should I worry? booklet is a resource which can be used to support shared decision making discussions with parents. A trial showed that using the booklet to support consultations reduced the prescribing of antibiotics and reduced re-consultation rates. Information and training for healthcare professionals on how to use the booklet most effectively is available here.
- The Healthier Together website also has safety netting resources and information for parents. The link can be send via AccuRx

Practice Pointers

- Watch the TARGET Antibiotics for children webinar.
- Use safety netting, advising parents about the conditions under which they should reconsult. [NICE Guideline NG51, Suspected Sepsis: recognition, diagnosis and early management]
- Provide clinicians with access to a digital version of the Caring for Children with Coughs leaflet. The leaflet can be provided to patients, parents or carers via a text message hyperlink or via a QR code linked to the ‘Polar Bear leaflet’ website for parents to scan, using their smartphones during a consultation.
- The RCGP TARGET Antibiotics toolkit hub has resources to support antimicrobial stewardship in primary care, including Discussing antibiotics with patients.
- Practices can see if they have met the England target of 27% or below using the PrescQIPP dashboard. Please ask the medicines optimisation team for help with this if needed.