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UPDATE

GUIDANCE AIMS TO CUT ANTIBIOTIC USE IN RESPIRATORY INFECTIONS

New NICE guidance recommends that the prescribing of antibiotics for respiratory tract infections in both adults and children should be limited. Nerys Hairon reports

NICE has published a short clinical guideline on the appropriate prescribing of antibiotics for respiratory tract infections (RTIs) in adults and children in primary care (NICE, 2008). The aim is to address inappropriate use of antibiotics for these conditions.

The guidance recommends alternative strategies for when patients present with RTIs: no antibiotic prescribing; delayed (or deferred) prescribing – in which a prescription is written for use if symptoms worsen; and immediate antibiotic prescribing.

NICE points out that evidence shows that antibiotics have limited effectiveness with a large proportion of RTIs and complications are likely to be rare if they are withheld. GP consultation rates in England and Wales show that a quarter of the population visit their GP with an RTI each year, and the infections are the reason for 60% of all antibiotic prescribing in general practice.

The guidance follows a government campaign, launched earlier this year, which reminded health professionals of the problem of antibiotic resistance. It also aimed to make clear to patients that antibiotics 'will not cure the common cold' (Department of Health, 2008; Hairon, 2008). The campaign stressed

that antibiotic resistance is still increasing, and that action is necessary to preserve the efficacy of existing antibiotics. Nurses have a vital role in reinforcing patient education on appropriate use of antibiotics and the link with healthcare-associated infections.

BACKGROUND

While antibiotic prescribing has reached a plateau in the UK, the NICE guidance points out that rates remain much higher than those in other northern European countries.

It outlines three main problems with prescribing antibiotics for most patients with acute uncomplicated RTIs:

- It may needlessly expose patients to side-effects if they are given unnecessary antibiotics;
- It could lead to a cycle of 'medicalising' self-limiting illness if patients believe they should be prescribed for most infections;
- Antibiotic resistance rates are strongly related to their use in primary care.

The guidance emphasises the necessity of maintaining antibiotic efficacy through more judicious prescription – this means prescribing only where there is clear evidence of clinical benefit. It adds that more research

is needed to identify the small number of patients who will suffer severe and/or prolonged illness or, more rarely, go on to develop complications without antibiotics. In the meantime, prescribers need to take 'safety-netting' approaches for worsening illness, either through delayed prescriptions or prompt clinical review.

CLINICAL MANAGEMENT

The guidance provides best-practice advice on the care of adults and children three months and over with RTIs, for whom immediate antibiotics are not indicated.

Respiratory tract infection is defined as any infection of the upper or lower respiratory tract. Upper RTIs include the common cold, laryngitis, pharyngitis/tonsillitis, acute rhinitis, acute rhinosinusitis and acute otitis media. Lower RTIs include acute bronchitis, bronchiolitis, pneumonia and tracheitis.

Clinical decision-making

When negotiating antibiotic prescribing strategies, practitioners should establish and address patients' or parents/carers' concerns and expectations.

NICE says the decision made between

healthcare professionals and patients depends on both the practitioner's assessment of the risk of complications if antibiotics are withheld and the patient's expectations about a prescription.

The guidance points out that a perceived advantage of delayed prescribing over no prescribing is that it offers a 'safety net' for the small proportion of patients who develop a complication. Patients who expect antibiotics may be more likely to agree with this strategy than with no prescribing. Little (2005) advocated delayed prescribing as an important management strategy to reduce inappropriate antibiotic prescribing.

No or delayed antibiotic prescribing

At the first face-to-face contact in primary care, adults and children presenting with a history suggesting the following conditions should be offered a clinical assessment:

- Acute otitis media;
- Acute sore throat/acute pharyngitis/acute tonsillitis;
- Common cold;
- Acute rhinosinusitis;
- Acute cough/acute bronchitis.

Assessment should cover: symptoms; use of over-the-counter or self-medication; previous medical history; relevant risk factors; and relevant co-morbidities. If indicated, an examination should be carried out to identify relevant clinical signs.

NICE says practitioners should agree a no prescribing or delayed antibiotic prescribing strategy for patients with these conditions.

Depending on clinical assessment of

severity, practitioners can also consider patients in the following groups for immediate antibiotic prescribing (in addition to the other two strategies):

- Bilateral acute otitis media in children under two years;
- Acute otitis media in children with otorrhoea;
- Acute sore throat/acute pharyngitis/acute tonsillitis when three or more Centor criteria (see www.nice.org.uk for details) are present.

Patient information and advice

Patient education and reassurance is vital to reduce inappropriate prescribing, and to improve patients' understanding of treatment and the strategy used.

NICE recommends that patients should be given advice on the usual natural history of the illness, including its average total length:

- Acute otitis media – four days;
- Acute sore throat/acute pharyngitis/acute tonsillitis – one week;
- Common cold – 1.5 weeks;
- Acute rhinosinusitis – 2.5 weeks;
- Acute cough/bronchitis – three weeks.

Patients should also be advised on symptom management including fever (particularly analgesics and antipyretics). For information on fever in children under five, practitioners should consult NICE (2007) guidance on feverish illness in children.

When no antibiotics are prescribed, practitioners should reassure patients that they are not required immediately as they are likely to make little difference to symptoms and may have side-effects.

REFERENCES

Department of Health (2008) *Leaflet. Get Well Soon – Without Antibiotics*. London: DH.

Hairon, N. (2008) Reducing antibiotic use in the fight against MRSA. *Nursing Times*; 104: 6, 23–24.

Little, P. (2005) Delayed prescribing of antibiotics for upper respiratory tract infection. *British Medical Journal*; 331: 301–302.

NICE (2008) *Respiratory Tract Infections – Antibiotic Prescribing. Prescribing of Antibiotics for Self-Limiting Respiratory Tract Infections in Adults and Children in Primary Care*. London: NICE.

NICE (2007) *Feverish Illness in Children: Assessment and Initial Management in Children Younger than Five Years*. London: NICE.

Patients should, however, be offered a clinical review if their condition worsens or becomes prolonged.

When delayed prescribing is used, patients should be given the same reassurance as with no prescribing, and be advised about using the delayed prescription if symptoms do not settle in accordance with the expected course of their illness or if they worsen significantly. Practitioners should advise them to re-consult if symptoms worsen significantly despite using the delayed prescription. A delayed prescription with instructions can be given to patients or left to be collected at a later date.

Immediate prescribing

NICE also outlines recommendations on identifying patients likely to be at risk of complications. It says immediate antibiotics should only be offered in certain situations, such as for patients with signs of serious illness, those at high risk of serious complications due to co-morbidity and older people (see box left for full details). The guidance also includes a care pathway. ■

IMMEDIATE ANTIBIOTIC PRESCRIBING

Healthcare professionals should offer immediate antibiotics and/or further investigation and management to adults and children in the following groups:

- Patients who are systemically very unwell;
- Those with symptoms and signs suggesting serious illness and/or complications (particularly pneumonia, mastoiditis, peritonsillar abscess, peritonsillar cellulitis, intraorbital and intracranial complications);
- Patients at high risk of serious complications due to pre-existing co-morbidity such as significant heart,

lung, renal, liver or neuromuscular disease, immunosuppression, cystic fibrosis, and young children who were born prematurely;

- Patients over 65 with acute cough and two or more of the following criteria, or those over 80 with acute cough and one or more of the following:
 - Admission to hospital in the previous year;
 - Type 1 or type 2 diabetes;
 - History of congestive heart failure;
 - Current use of oral glucocorticoids.

Source: NICE (2008)

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