

# Prescribing and Clinical Effectiveness Bulletin

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## LINCOLNSHIRE GUIDELINES FOR THE TREATMENT OF COMMONLY OCCURRING INFECTIONS IN PRIMARY CARE: WINTER 2014/15

In this issue of the *PACE Bulletin* we present an update of our *Guidelines for the treatment of commonly occurring infections in primary care*. For ease of reference, all changes to the previous edition are highlighted in red. More detailed and comprehensive guidance is available from the Health Protection Agency website with the web address provided below. Prescribers wishing to clarify children's doses are directed to the *BNF for children* (July 2014 – July 2015).

Infection	Recommended Agents	Notes
<p><b>Pharyngitis / sore throat / tonsillitis</b></p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>Average length of illness is 1 week</p> </div>	<p>Most sore throats are viral. Antibiotics are unnecessary in many cases as 90% resolve within 7 days.</p> <p><u>Where antibiotics are indicated:</u>  <b>First Line</b>  <b>Phenoxymethylpenicillin</b>                      500mg four times a day for 10 days.</p> <p><u>If allergic to penicillin:</u>  <b>Clarithromycin</b> 250 – 500mg twice daily for 5 days</p>	<p>Consider a '<b>no antibiotic</b>' or '<b>delayed antibiotic strategy</b>' and ensure that the patient knows that the average length of the illness is 1 week.</p> <p><b>Centor Criteria</b> are a set of criteria which may be used to identify the likelihood of a bacterial infection in adult patients complaining of a sore throat. Patients with 3 or 4 of the Centor criteria ((1) presence of tonsillar exudate, (2) tender anterior cervical lymphadenopathy or lymphadenitis, (3) presence of fever and (4) an absence of cough) may benefit from antibiotics. Consider immediate antibiotic therapy or delaying for 2 to 3 days.</p> <p><b>Numbers Needed to Treat</b>                      No of courses of antibiotics to prevent 1 case of quinsy &gt;4000.                      No of courses of antibiotics to prevent 1 case of AOM 200.</p>

Infection	Recommended Agents	Notes
<p><b>Acute Otitis Media (AOM)</b></p> <p>Antibiotics should not be routinely prescribed for AOM</p> <p>Average length of illness is 4 days</p>	<p>Antibiotics are unnecessary in many cases as AOM resolves in 60% of patients within 24 hours.</p> <p>Antibiotics do not prevent deafness.</p> <p><u>Where antibiotics are indicated:</u>  <b>First Line</b>  <b>Amoxicillin</b>  <b>Neonate (7-28 days old): 30mg/kg three times a day for 5 days</b>  <b>1 month to 1 year : 125mg three times a day for 5 days</b>  <b>1 to 5 years: 250mg three times a day for 5 days</b>  <b>5 to 18 years: 500mg three times a day for 5 days</b>  <u>If allergic to penicillin:</u>  <b>Erythromycin or Clarithromycin (for 5 days)</b></p>	<p>Depending on severity, <u>consider</u> prescribing antibiotics for children with:</p> <ul style="list-style-type: none"> <li>• bilateral AOM (if less than 2 years of age).</li> <li>• otorrhoea (<b>all ages</b>).</li> <li>• cystic fibrosis</li> <li>• immune suppression.</li> </ul> <p>Children who do not meet these criteria should not be given antibiotics. Use a '<b>no antibiotic</b>' or '<b>delayed antibiotic</b>' strategy.</p> <p>Reassure patients/carers that antibiotics are not needed immediately because they will make little difference to symptoms and may have side effects (e.g. diarrhoea, vomiting and rash).</p> <p>Use analgesia for symptom relief.</p>
<p><b>Acute Rhinosinusitis</b></p> <p>Antibiotics should not be routinely prescribed for sinusitis</p> <p>The average duration of symptoms is 2½ weeks</p>	<p>Antibiotics are unnecessary as 80% of cases resolve within 14 days.</p> <p><u>Where antibiotics are indicated:</u>  <b>First Line</b>  <b>Amoxicillin</b> 500mg three times daily (1g if severe) for 7 days.  <u>or</u> <b>Doxycycline</b> 200mg stat followed by 100mg daily for 7 days.  <u>or</u> <b>Phenoxymethylpenicillin</b> 500mg four times daily for 7 days.</p> <p><u>For persistent symptoms</u>  <b>Co-amoxiclav</b> 625mg three times a day for 7 days</p>	<p>Many cases of sinusitis are of viral origin.</p> <p>NICE CG 69 Respiratory Tract Infections recommends using a '<b>no antibiotic prescribing strategy</b>' or '<b>delayed antibiotic prescribing strategy</b>'.</p> <p>Patients with acute sinusitis who are likely to be at risk of developing complications should be offered an immediate antibiotic prescription in the following situations: (1) if the patient is systemically very unwell; (2) if the patient has symptoms and signs suggestive of serious illness and/or complications (3) if the patient is at high-risk of serious complications due to pre-existing co-morbidity (e.g. significant heart, lung, renal, liver or neuromuscular disease, immunosuppression, cystic fibrosis and young children born prematurely).</p> <p>Use adequate analgesia.</p> <p>When there is a purulent nasal discharge consider either a delayed or immediate course of antibiotics.</p>
<p><b>Acute cough / bronchitis</b></p> <p>The average duration of a cough is 3 weeks; if &gt; 3 weeks, consider pertussis.</p>	<p>Antibiotics have marginal benefits in otherwise healthy adults.</p> <p><u>Where antibiotics are indicated:</u>  <b>First Line</b>  <b>Amoxicillin</b> 500mg three times a day for 5 days  <u>or</u>  <b>Doxycycline</b> 200mg stat followed by 100mg daily for 5 days.</p>	<p>Routine antibiotic treatment of <u>uncomplicated</u> acute bronchitis is not recommended regardless of duration of cough.</p> <p>Use a '<b>no antibiotic</b>' or '<b>delayed antibiotic</b>' strategy.</p> <p>Antibiotics should be prescribed for patients older than 65 years with acute cough and 2 or more of the following, or older than 80 years with one or more of the following:</p> <ul style="list-style-type: none"> <li>- hospitalisation in the previous year.</li> <li>- type 1 or type 2 diabetes mellitus.</li> <li>- history of congestive heart failure.</li> <li>- current use of oral steroids.</li> </ul> <p>Antibiotics should be prescribed for patients who</p>

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		<p>are</p> <ul style="list-style-type: none"> <li>- systemically very unwell,</li> <li>- have symptoms or signs suggestive of serious illness and/or complications (particularly pneumonia),</li> <li>- are at high risk of serious complications because of pre-existing co-morbidity. This includes patients with significant heart, lung, renal, liver or neuromuscular disease, immunosuppression, cystic fibrosis and young children born prematurely.</li> </ul>
<p><b>Community acquired pneumonia</b></p>	<p><b>Start antibiotics immediately</b></p> <p>If CRB65 =0  <b>Amoxicillin</b> 500mg three times daily for 7 days <u>or</u>  <b>Doxycycline</b> 200mg stat/100mg daily for 7 days <u>or</u>  <b>Clarithromycin</b> 500mg twice daily for 7 days</p> <p>If CRB65 = 1 and patient at home  <b>Amoxicillin</b> 500mg three times daily for 7 - 10 days <b>and</b>  <b>Clarithromycin</b> 500mg twice daily for 7 - 10 days <u>or</u>  <b>Doxycycline</b> alone 200mg stat, 100mg daily for 7 – 10 days</p>	<p>Patients with community-acquired pneumonia (CAP) often require hospitalisation. CRB-65 is a simple and useful scoring system to predict mortality and assess risk.</p> <p>Each risk factor scores 1:</p> <ul style="list-style-type: none"> <li>• <b>Confusion</b> (Abbreviated Mental Test &lt;8)</li> <li>• <b>Respiratory rate</b> &gt;30/min.</li> <li>• <b>BP</b> systolic &lt; 90 or diastolic ≤ 60.</li> <li>• <b>Age</b>&gt;65.</li> </ul> <p>Score 0: patient is suitable for home treatment.  Score 1-2: patient requires hospital assessment or admission.  Score 3-4: patient requires urgent hospital admission.</p> <p>If no response in 48 hrs add clarithromycin first line, or tetracycline to cover Mycoplasma infection (rare in &gt;65y)</p>
<p><b>Acute exacerbation of Chronic Obstructive Pulmonary Disease (COPD)</b></p>	<p><u>First Line</u>  <b>Doxycycline</b> 200mg stat followed by 100mg daily for 5 days <u>or</u>  <b>Amoxicillin</b> 500mg three times a day for 5 days.  If the patient is allergic to penicillin and a tetracycline is contraindicated, use <b>Clarithromycin</b> 500mg twice daily for 5 days</p> <p><u>Second Line</u>  If there is a clinical failure or suspected resistance to first line antibiotics use:  <b>Co-amoxiclav</b> 625mg tablets three times daily for 5 days.  Risk factors for antibiotic resistant organisms include co-morbid disease, severe COPD, frequent exacerbations, antibiotics in last 3 months.</p>	<p>Treat exacerbations promptly with antibiotics if purulent sputum and increased shortness of breath and/or increased sputum volume.</p>
<p><b>Uncomplicated Urinary Tract Infection (UTI) in men or women (no fever or flank pain)</b></p>	<p>Where antibiotics are indicated:  <u>First Line</u>  <b>Nitrofurantoin MR capsules</b> 100mg twice daily (if GFR over 45ml /min)  If GFR is 30- 45 only use nitrofurantoin if there is suspected or proven antibacterial resistance and the benefits are considered to outweigh the risks.  <u>or</u> <b>Trimethoprim</b> 200mg twice a</p>	<p>The symptoms of UTI Include: dysuria, urgency, frequency, polyuria, suprapubic tenderness and haematuria.  <b>Mild:</b> In women with 2 or less symptoms - use dipstick and presence of cloudy urine to guide treatment.  <b>Severe:</b> In women with 3 or more symptoms of UTI - treat  In men – consider prostatitis and send pre-treatment mid-stream urine or, if symptoms are mild</p>

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	<p>day. Treatment length: <b>3 days in women</b> <b>7 days in men.</b></p> <p><u>Second Line</u> Dependent upon sensitivities. Amoxicillin resistance is common; only use if susceptible. Community multi-resistant Extended-spectrum Beta-lactamase <i>E.coli</i> are increasing; microbiologist advice must be sought.</p>	<p>or non-specific, use a negative dipstick test to exclude UTI. NB a negative dipstick result can help to rule out UTI, but false positive dipsticks are very common and should not automatically lead to antibiotic treatment.</p>
<b>UTI in pregnancy</b>	<p><u>First Line</u> <b>Nitrofurantoin MR capsules 100mg</b> twice daily (if GFR <u>over 45ml /min</u>) If GFR is 30- 45 only use nitrofurantoin if there is suspected or proven antibacterial resistance and the benefits are considered to outweigh the risks. <b>or Amoxicillin 500mg capsules</b> three times daily for 7 days (if known to be susceptible) <u>Second Line</u> <b>Co-amoxiclav</b> for 7 days. <u>Third line</u> <b>Cefalexin 500mg</b> twice daily for 7 days.</p>	<p>Send MSU for culture and sensitivities and start empirical antibiotics.</p> <p>Trimethoprim is not recommended in early pregnancy even with folic acid cover.</p> <p>Short-term use of nitrofurantoin in pregnancy is unlikely to cause problems to the foetus.</p>
<b>UTI in children</b>	<p><b>Lower UTI</b> <u>First line for child over 3 months of age with uncomplicated lower urinary tract infection:</u> <b>Trimethoprim or Nitrofurantoin</b> for 3 days or <b>Amoxicillin</b> if known to be susceptible for 3 days <u>Second line</u> <b>Cephalexin</b> for 3 days</p> <p><b>Upper UTI</b> <u>First line</u> <b>Co-amoxiclav</b> for 7 -10 days.</p>	<p>Re-assess child if unwell 24-48 hours after initial assessment.</p>

### References:

*BNF for Children* (July 2014 – July 2015)

Health Protection Agency, *Management of Infection Guidance for Primary Care* (October 2014). Accessible via the Public Health England website [www.gov.uk/government/organisations/public-health-england](http://www.gov.uk/government/organisations/public-health-england).

MHRA, *Drug Safety Update* (September 2014): *Nitrofurantoin now contraindicated in most patients with an estimated glomerular filtration rate (eGFR) of less than 45ml/min*

### Acknowledgements

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