Cough (acute): antimicrobial prescribing

**Upper respiratory tract infection and not systemically very unwell or at higher risk of complications**
- Do not offer an antibiotic

**Acute bronchitis and not systemically very unwell or at higher risk of complications**
- Do not routinely offer an antibiotic

**Higher risk of complications (at face-to-face examination)**
- Consider:
  - an immediate antibiotic or
  - a back-up antibiotic prescription

**Systemically very unwell (at face-to-face examination)**
- Offer an immediate antibiotic

**Advise on:**
- the usual course of acute cough (up to 3 or 4 weeks)
- managing symptoms with self-care
- when to seek medical help, for example if symptoms worsen rapidly or significantly, do not improve after 3 or 4 weeks, or the person becomes systemically very unwell

If antibiotics are not prescribed, advise why not
- With an antibiotic, advise on possible adverse effects including diarrhoea
- With a back-up prescription, advise on using if symptoms worsen rapidly or significantly at any time

**Do not offer:**
- a mucolytic
- an oral or inhaled bronchodilator
- an oral or inhaled corticosteroid unless otherwise indicated

Reassess if symptoms worsen rapidly or significantly, taking account of:
- alternative diagnoses such as pneumonia
- any symptoms or signs suggesting a more serious illness or condition, such as cardiorespiratory failure or sepsis
- previous antibiotic use, which may have led to resistant bacteria

**Refer to hospital, or seek specialist advice on further investigation and management, if the person has any symptoms or signs suggesting a more serious illness or condition (for example, sepsis, a pulmonary embolism or lung cancer)**

**Background**
- Acute coughs are usually self-limiting but can last up to 3 to 4 weeks
- Antibiotics make little difference to how long a cough lasts
- Usually caused by a viral upper respiratory tract infection, such as a cold or flu
- Also caused by acute bronchitis (a lower respiratory tract infection), which is usually viral but can be bacterial

**Higher risk of complications:**
- People with a pre-existing comorbidity
- Young children born prematurely
- People older than 65 years with 2 or more of the following, or older than 80 years with 1 or more of the following:
  - hospitalisation in previous year
  - type 1 or type 2 diabetes
  - history of congestive heart failure
  - current use of oral corticosteroids

**Self-care**
Some people may wish to try the following, which have limited evidence of benefit for the relief of cough symptoms:
- honey (in people aged over 1 year)
- pelargonium (herbal medicine; in people aged 12 and over)
- over-the-counter cough medicines containing the expectorant guaifenesin (in people aged 12 and over)
- over-the-counter cough medicines containing cough suppressants, except codeine, (in people aged 12 and over with non-persistent cough and without excessive secretions)

Limited evidence suggests antihistamines, decongestants and cough medicines containing codeine do not help cough symptoms

**NICE uses ‘offer’ when there is more certainty of benefit and ‘consider’ when evidence of benefit is less clear.**
Cough (acute): antimicrobial prescribing

### Choice of antibiotic: adults aged 18 years and over

<table>
<thead>
<tr>
<th>Antibiotic</th>
<th>Dosage and course length</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First choice</strong></td>
<td></td>
</tr>
<tr>
<td>Doxycycline</td>
<td>200 mg on first day, then 100 mg once a day for 4 days (5-day course in total)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alternative first choices</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Amoxicillin</td>
<td>500 mg three times a day for 5 days</td>
</tr>
<tr>
<td>Clarithromycin</td>
<td>250 mg to 500 mg twice a day for 5 days</td>
</tr>
<tr>
<td>Erythromycin</td>
<td>250 mg to 500 mg four times a day or 500 mg to 1000 mg twice a day for 5 days</td>
</tr>
</tbody>
</table>

1. See BNF for appropriate use and dosing in specific populations, for example, hepatic impairment, renal impairment, pregnancy and breast-feeding
2. Doses given are by mouth using immediate-release medicines, unless otherwise stated
3. Doxycycline should not be given to pregnant women, and the possibility of pregnancy should be considered in women of childbearing age (BNF, December 2018)
4. Amoxicillin or erythromycin are preferred in women who are pregnant

### Choice of antibiotic: children and young people under 18 years

<table>
<thead>
<tr>
<th>Antibiotic</th>
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</tr>
</thead>
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<tr>
<td><strong>First choice</strong></td>
<td></td>
</tr>
<tr>
<td>Amoxicillin</td>
<td>1 to 11 months: 125 mg three times a day for 5 days 1 to 4 years: 250 mg three times a day for 5 days 5 to 17 years: 500 mg three times a day for 5 days</td>
</tr>
</tbody>
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</thead>
<tbody>
<tr>
<td>Clarithromycin</td>
<td>1 month to 11 years: Under 8 kg, 7.5 mg/kg twice a day for 5 days 8 to 11 kg, 12.5 mg/kg twice a day for 5 days 12 to 17 years: 250 mg twice a day for 5 days</td>
</tr>
<tr>
<td>Erythromycin</td>
<td>1 month to 11 years: 125 mg four times a day or 250 mg twice a day for 5 days 2 to 7 years: 250 mg four times a day or 500 mg twice a day for 5 days 8 to 17 years: 250 mg to 500 mg four times a day or 500 mg to 1000 mg twice a day for 5 days</td>
</tr>
</tbody>
</table>

| Doxycycline | 12 to 17 years: 200 mg on first day, then 100 mg once a day for 4 days (5-day course in total) |

1. See BNF for children for appropriate use and dosing in specific populations, for example, hepatic impairment and renal impairment
2. The age bands apply to children of average size and, in practice, the prescriber will use the age bands in conjunction with other factors such as the severity of the condition and the child’s size in relation to the average size of children of the same age. Doses given are by mouth using immediate-release medicines, unless otherwise stated
3. Amoxicillin or erythromycin are preferred in young women who are pregnant
4. Doxycycline should not be given to young women who are pregnant, and the possibility of pregnancy should be considered in young women of childbearing age (BNF for children, December 2018)

When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

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