Impetigo: antimicrobial prescribing

**Background**
- Impetigo is a contagious bacterial infection of the skin, usually caused by Staphylococcus aureus infection.
- Good hygiene measures help prevent spread of impetigo to other areas of the body and to other people.

**Prescribing considerations**
- Take into account:
  - that topical and oral antibiotics are both effective at treating impetigo.
  - the person’s preferences, including practicalities of administration and possible adverse effects.
  - that antimicrobial resistance can develop rapidly with extended or repeated use of topical antibiotics.
  - local antimicrobial resistance data.

**Microbiological testing**
- If a skin swab has been sent for microbiological testing, review and change antibiotic according to results if symptoms are not improving, using narrow-spectrum antibiotic if possible.
- For impetigo that recurs frequently:
  - send a skin swab for microbiological testing and consider taking a nasal swab and starting treatment for decolonisation.

**Localised non-bullous impetigo**
- Initial treatment:
  - Consider hydrogen peroxide 1% cream.
  - Other topical antiseptics are available for superficial skin infections, but no evidence was found.
  - If hydrogen peroxide is unsuitable, offer a short course of a topical antibiotic.

**Widespread non-bullous impetigo**
- Initial treatment:
  - Offer a short course of a topical or oral antibiotic, taking account of prescribing considerations.

**Bullous impetigo or systemically unwell or at high risk of complications**
- Initial treatment:
  - Offer a short course of an oral antibiotic.

**Refer to hospital:**
- people with symptoms or signs of a more serious illness or condition, such as cellulitis.
- people with widespread impetigo who are immunocompromised.

Consider referral or specialist advice for:
- people with bullous impetigo, particularly babies, or with impetigo that recurs frequently.
- people who are systemically unwell or at high risk of complications.

**Advise on:**
- good hygiene measures (see NICE’s clinical knowledge summary on impetigo).
- seeking medical help if symptoms worsen rapidly or significantly at any time, or have not improved after treatment.

Reassess if symptoms worsen rapidly or significantly, or have not improved after treatment, taking account of:
- alternative diagnoses, such as herpes simplex.
- any symptoms or signs suggesting a more serious illness or condition, such as a cellulitis.
- previous antibiotic use, which may have led to resistant bacteria.

If a course of hydrogen peroxide is unsuccessful, offer:
- a short course of a topical antibiotic if impetigo remains localised or
- a short course of a topical or oral antibiotic if impetigo becomes widespread.

If a course of topical antibiotic is unsuccessful:
- offer a short course of an oral antibiotic.
- consider sending a skin swab for microbiological testing.

If an oral antibiotic is unsuccessful consider sending a skin swab for microbiological testing.

**February 2020**
## Impetigo: antimicrobial prescribing

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

<table>
<thead>
<tr>
<th>Antimicrobial</th>
<th>Dosage and course length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topical antiseptic</td>
<td>Apply two or three times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Hydrogen peroxide 1%&lt;sup&gt;3&lt;/sup&gt;</td>
<td>Apply two or three times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>First-choice topical antibiotic&lt;sup&gt;5&lt;/sup&gt; if hydrogen peroxide unsuitable (for example, if impetigo is around eyes) or ineffective</td>
<td>Apply three times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Fusidic acid 2%</td>
<td>Apply three times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Alternative topical antibiotic&lt;sup&gt;5&lt;/sup&gt; if fusidic acid resistance suspected or confirmed</td>
<td>Apply three times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Mupirocin 2%</td>
<td>Apply three times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>First-choice oral antibiotic</td>
<td>250 mg twice a day for 5 days&lt;sup&gt;4,6&lt;/sup&gt;</td>
</tr>
<tr>
<td>Flucloxacillin</td>
<td>500 mg four times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Alternative oral antibiotics if penicillin allergy or flucloxacillin unsuitable</td>
<td>250 mg to 500 mg four times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Clarithromycin</td>
<td>250 mg twice a day for 5 days&lt;sup&gt;4,6&lt;/sup&gt;</td>
</tr>
<tr>
<td>Erythromycin (in pregnancy)</td>
<td>250 mg to 500 mg four times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

If MRSA suspected or confirmed – consult local microbiologist

<sup>1</sup>See [BNF](https://www.gov.uk/government/publications/nice-guidance) for appropriate use and dosing in specific populations, for example, hepatic impairment, renal impairment, pregnancy and breastfeeding.

<sup>2</sup>Oral doses are for immediate-release medicines.

<sup>3</sup>Other topical antiseptics are available for superficial skin infections, but no evidence was found.

<sup>4</sup>A 5-day course is appropriate for most people with impetigo but can be increased to 7 days based on clinical judgement, depending on the severity and number of lesions.

<sup>5</sup>As with all antibiotics, extended or recurrent use of topical fusidic acid or mupirocin may increase the risk of developing antimicrobial resistance. See BNF for more information.

<sup>6</sup>Dosage can be increased to 500 mg twice a day, if needed for severe infections.

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

<table>
<thead>
<tr>
<th>Antimicrobial</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Topical antiseptic</td>
<td>Apply two or three times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Hydrogen peroxide 1%&lt;sup&gt;3&lt;/sup&gt;</td>
<td>Apply two or three times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>First-choice topical antibiotic&lt;sup&gt;5&lt;/sup&gt; if hydrogen peroxide unsuitable (for example, if impetigo is around eyes) or ineffective</td>
<td>Apply three times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
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<tr>
<td>Fusidic acid 2%</td>
<td>Apply three times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Alternative topical antibiotic&lt;sup&gt;5&lt;/sup&gt; if fusidic acid resistance suspected or confirmed</td>
<td>Apply three times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Mupirocin 2%&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Apply three times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>First-choice oral antibiotic</td>
<td>1 month to 1 year, 62.5 mg to 125 mg four times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Flucloxacillin (oral solution or capsules&lt;sup&gt;7&lt;/sup&gt;)</td>
<td>2 to 9 years, 125 mg to 250 mg four times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Erythromycin (in pregnancy)</td>
<td>8 to 17 years, 250 mg to 500 mg four times a day for 5 days&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

If MRSA suspected or confirmed – consult local microbiologist

<sup>1</sup>See [BNF for Children](https://www.gov.uk/government/publications/nice-guidance) for appropriate use and dosing in specific populations, for example, hepatic impairment, renal impairment, pregnancy and breastfeeding. Dosing in some age groups may be off-label.

<sup>2</sup>Oral doses are for immediate-release medicines. Age bands apply to children of average size and are used in conjunction with factors such as severity of the condition and the child’s actual size.

<sup>3</sup>Other topical antiseptics are available for superficial skin infections, but no evidence was found.

<sup>4</sup>A 5-day course is appropriate for most people with impetigo but can be increased to 7 days based on clinical judgement, depending on the severity and number of lesions.

<sup>5</sup>As with all antibiotics, extended or recurrent use of topical fusidic acid or mupirocin may increase the risk of developing antimicrobial resistance. See BNF for Children for more information.

<sup>6</sup>Licenses for use in infants vary between products. See individual summaries of product characteristics for details.


<sup>8</sup>Dosage can be increased to 500 mg twice a day, if needed for severe infections.

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### Combination treatment

Do not offer combination treatment with a topical and oral antibiotic to treat impetigo.

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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