Impetigo: antimicrobial prescribing

NICE National Institute for Health and Care Excellence

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

Impetigo

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

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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

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Choice of antimicrobial: adults aged 18 years and over

Antimicrobial[1]	Dosage and course length
Topical antiseptic	
Hydrogen peroxide 1%[2]	Apply two or three times a day for 5 days[3]
First-choice topical antibiotic[4] if hydrogen peroxide unsuitable (for example, if impetigo is around eyes) or ineffective	
Fusidic acid 2%	Apply three times a day for 5 days[3]
Alternative topical antibiotic[4] if fusidic acid resistance suspected or confirmed	
Mupirocin 2%	Apply three times a day for 5 days[3]
First-choice oral antibiotic	
Flucloxacillin	500 mg four times a day for 5 days[3]
Alternative oral antibiotic if penicillin allergy or flucloxacillin is unsuitable (for people who are not pregnant)	
Clarithromycin	250 mg twice a day for 5 days[3,5]
Alternative oral antibiotic for penicillin allergy in pregnancy	
Erythromycin	250 mg to 500 mg four times a day for 5 days[3] Erythromycin is preferred if a macrolide is needed in pregnancy, for example, if there is true penicillin allergy and the benefits of antibiotic treatment outweigh the harms. See the Medicines and Healthcare products Regulatory Agency (MHRA) Public Assessment Report on the safety of macrolide antibiotics in pregnancy
If MRSA suspected or confirmed – consult local microbiologist	

[1]See the BNF for appropriate use and dosing in specific populations, for example, hepatic impairment, renal impairment, pregnancy and breastfeeding.
[2]Other topical antiseptics are available for superficial skin infections, but no evidence was found.
[3]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.
[4]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.
[5]Dosage can be increased to 500 mg twice a day, if needed for severe infections.

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.

Choice of antimicrobial: children and young people under 18 years

Antimicrobial[1]	Dosage and course length[2]
Topical antiseptic	
Hydrogen peroxide 1%[3]	Apply two or three times a day for 5 days[4]
First-choice topical antibiotic[5] if hydrogen peroxide unsuitable (for example, if impetigo is around eyes) or ineffective	
Fusidic acid 2%	Apply three times a day for 5 days[4]
Alternative topical antibiotic[5] if fusidic acid resistance suspected or confirmed	
Mupirocin 2%[6]	Apply three times a day for 5 days[4]
First-choice oral antibiotic	
Flucloxacillin (oral solution or capsules[7])	1 month to 1 year, 62.5 mg to 125 mg four times a day for 5 days[4] 2 to 9 years, 125 mg to 250 mg four times a day for 5 days[4] 10 to 17 years, 250 mg to 500 mg four times a day for 5 days[4]
Alternative oral antibiotic if penicillin allergy or flucloxacillin is unsuitable (for example, if oral solution unpalatable or unable to swallow capsules; for people who are not pregnant)	
Clarithromycin	1 month to 11 years: under 8 kg, 7.5 mg/kg twice a day for 5 days[4] 8 to 11 kg, 62.5 mg twice a day for 5 days[4] 12 to 19 kg, 125 mg twice a day for 5 days[4] 20 to 29 kg, 187.5 mg twice a day for 5 days[4] 30 to 40 kg, 250 mg twice a day for 5 days[4] 12 to 17 years, 250 mg twice a day for 5 days[4,8]
Alternative oral antibiotic for penicillin allergy in pregnancy	
Erythromycin (in pregnancy)	8 to 17 years, 250 mg to 500 mg four times a day for 5 days[4] Erythromycin is preferred if a macrolide is needed in pregnancy, for example, if there is true penicillin allergy and the benefits of antibiotic treatment outweigh the harms. See the Medicines and Healthcare products Regulatory Agency (MHRA) Public Assessment Report on the safety of macrolide antibiotics in pregnancy
If MRSA suspected or confirmed – consult local microbiologist	

[1]See the BNF for Children 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.
[2]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.
[3]Other topical antiseptics are available for superficial skin infections, but no evidence was found.
[4]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.
[5]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.
[6]Licenses for use in infants vary between products. See individual summaries of product characteristics for details.
[7]See Medicines for Children, Helping your child to swallow tablets.
[8]Dosage can be increased to 500 mg twice a day, if needed for severe infections.