

6 | IMPETIGO

The Pharmacy First service in England allows community pharmacy teams to complete episodes of care for seven common conditions.

This service toolkit provides an overview of the clinical pathway, protocol and PGDs used to deliver consultations on impetigo plus essential information to aid clinical decision-making.

Next month: Infected insect bites

This toolkit is designed to support pharmacists to deliver consultations on infected insect bites and includes information on clinical assessment and management. Produced in partnership with Savlon.

The Voice of Community Pharmacy
pharmacy

Impetigo

(Non-bullous impetigo for adults and children aged 1 year and over)

Exclude: bullous impetigo, recurrent impetigo (defined as 2 or more episodes in the same year), pregnant individuals under 16 years

Confirm impetigo diagnosis through visual examination

Consider the risk of deterioration or serious illness

Patient is immuno-suppressed and infection is widespread

Severe complications suspected (such as deeper soft tissue infection)

Consider calculating NEWS2 score ahead of signposting patient to A&E or calling 999 in a life threatening emergency

GATEWAY POINT

Impetigo more likely

Does the patient follow typical progression of impetigo clinical features:

- The initial lesion is a very thin-walled vesicle on an erythematous base, which ruptures easily and is seldom observed
- The exudate dries to form golden yellow or yellow-brown crusts, which gradually thicken
- Lesions can develop anywhere on the body but are most common on exposed skin on the face (the peri-oral and peri-nasal areas), limbs and flexures (such as the axillae)
- Satellite lesions may develop following autoinoculation
- Usually asymptomatic but may be mildly itchy
- Refer to **NHS.uk** website for images of impetigo

Impetigo less likely

Consider alternative diagnosis and proceed appropriately

Does the patient have ≤ 3 lesions/clusters present?

Does the patient have ≥ 4 lesions/clusters present?

Localised non-bullous impetigo

Widespread non-bullous impetigo

FOR ALL PATIENTS:

- Offer advice on importance of good hygiene to reduce spread of impetigo
- Offer advice on how to take/apply their treatments to encourage adherence

Offer hydrogen peroxide 1% cream for 5 days (subject to inclusion/exclusion criteria in protocol) plus self-care

Offer flucloxacillin (if no allergy) for 5 days (subject to inclusion/exclusion criteria in PGD) plus self-care

Fusidic acid cream can be offered 2nd line if:

- Hydrogen peroxide is unsuitable, for example if impetigo is around the eyes
- Hydrogen peroxide treatment has been ineffective and impetigo still remains localised

or if unsuitable or ineffective

Offer fusidic acid cream for 5 days (subject to inclusion/exclusion criteria in PGD) plus self-care

Reported penicillin allergy (via National Care Record or patient/carer)

Offer clarithromycin for 5 days (subject to inclusion/exclusion criteria in PGD) plus self-care

Offer erythromycin for 5 days (subject to inclusion/exclusion criteria in PGD) plus self-care

If symptoms worsen rapidly or significantly at any time OR do not improve after completion of treatment course

Onward referral

- General practice
- Other provider as appropriate

FOR ALL PATIENTS: share self-care and safety-netting advice using British Association of Dermatologists Impetigo leaflet

Assessment, diagnosis and management of **Impetigo**

This toolkit is designed to support pharmacists and their teams to deliver the Pharmacy First and similar services in the UK for impetigo. It covers:

- ✓ Clinical assessment and decision-making
- ✓ Management of the condition
- ✓ Communicating with patients regarding treatment decisions.

After reading the toolkit you will be able to assess skin appearance and relevant history to decide whether impetigo is present; be able to decide whether antibiotic or symptomatic treatment is required; and know which conditions and red flags require referral.

KEY FACTS

- 1** Non-bullous impetigo is caused by a superficial skin infection caused by *Staphylococcus aureus*. It usually affects children aged 2-5 years
- 2** It appears as small lesions or clusters of lesions, around the nose and mouth, covered in yellowish-brownish crusts
- 3** Although uncomplicated impetigo usually clears spontaneously and heals without scarring within 2-3 weeks, antibacterial treatment is recommended to minimise the risk of spread and/or complications
- 4** Impetigo is highly contagious and good hygiene measures are required to reduce the risk of it spreading to other areas of the body and passing it on to other people. Measures include staying away from school or work until the lesions are healed or crusted over, or 48 hours after antibacterials are started.

Impetigo is a common skin infection, especially in young children. Parents may attend the pharmacy with their child, concerned that it is a serious or worrying condition such as scabies or cellulitis. They may also worry whether the child has an underlying skin condition such as eczema.

Most impetigo cases are uncomplicated but highly infectious. They can usually be managed with a short course of topical hydrogen peroxide or a topical antibiotic. Only more severe or complicated disease will require oral antibiotic treatment.

It is important to reassure parents once you are confident of a diagnosis, as it is usually a simple condition to treat (although, as ever, children with immunosuppression should be treated with caution).

Impetigo is caused when bacteria enter the skin through breaks caused by minor trauma such as insect bites or scratches, or underlying skin conditions such as eczema or scabies. The incubation period is 4-10 days.

There are two forms of impetigo – bullous and non-bullous. Non-bullous impetigo is caused by *Staphylococcus aureus*, *Streptococcus pyogenes* or a combination of both. Bullous impetigo is caused by *Staphylococcus aureus*. Impetigo caused by methicillin-resistant *Staphylococcus aureus* (MRSA) is becoming increasingly common.

Transmission occurs directly through close contact with an infected person or indirectly via contaminated objects such as toys, clothing or towels. Risk factors include skin trauma or pre-existing skin disease, hot/humid weather, poor hygiene and crowding.

Cases are most common in children aged between 0-14 years of age. Annual incidence is

Most impetigo cases are uncomplicated but highly infectious.

They can be managed with a short course of topical hydrogen peroxide or a topical antibiotic

around 2.8 per cent in children up to 4 years of age and 1.6 per cent in children aged 5-15 years.

The most common form of the disease is non-bullous impetigo, which makes up approximately 70 per cent of cases and where large outbreaks can occur.

Clinical progression

Impetigo starts as small, thin-walled vesicles that burst quickly, leaving an exudate that dries to form a thick yellowish (honey-coloured) or brown crust. It is often described as looking like stuck-on cornflakes (see below).



4 Pharmacy First: Impetigo

Lesions typically appear on the face, around the mouth or nose, but can also occur elsewhere on the body (e.g. axillae or trunk). Lesions often occur in clusters and can coalesce. Satellite lesions can develop as a result of autoinoculation from scratching or touching the original lesions.

The crusts dry and heal without scarring over 2-3 weeks. There may be residual redness that fades over days or weeks. A diagnosis is usually based on the clinical appearance and history.

If there is damage to the skin – for example, due to eczema, scabies or insect bites (including head lice) – the impetigo may become more widespread as the damaged skin provides a portal for entry of bacteria.

Systemic symptoms are usually absent. Patients do not have sore throats but may have regional lymphadenopathy. There is usually little or no evidence of deep-seated infection (tissue inflammation, swelling or redness).

Bacterial culture is not routinely required unless there is recurrent or poorly responsive infection or methicillin-resistant *Staphylococcus aureus* (MRSA) is suspected.

The main risk factors for impetigo are young age (under 5 years), contact with other cases, and crowded living or work conditions.



Transmission of impetigo occurs directly through close contact with an infected person or indirectly via contaminated objects such as toys, clothing or towels

Taking a history

When taking a patient history, ask about:

- The **appearance, onset, evolution, duration** and **location** of lesions
- Whether there has been contact with others with impetigo, e.g. at school, play group or gym
- Recent or pre-existing skin conditions e.g. eczema, insect bites, abrasions, scabies, chickenpox, herpes simplex
- Immunosuppression resulting from pre-existing disease or immunosuppressive treatment
- Previous episodes of impetigo – recurrent impetigo is defined as two or more episodes in one year
- Previous topical or oral treatment for this episode of impetigo
- Presence of fever.

A visual examination should be sufficient to determine the nature and extent of the skin lesions. Look for the clinical features of impetigo and determine whether the lesions are those of localised or widespread, non-bullous impetigo:

- **Localised disease** – three or fewer lesions or clusters present
- **Widespread disease** – four or more lesions or clusters present

Table 1: Communicating with patients and parents about treatment decisions for impetigo

C Concerns – Ask directly: What are you most worried about?	Concerns about appearance and risk of spreading
H History and examination. Discuss what you see and relate to relevant history	Provide a commentary. Describe how you are confirming diagnosis of localised or widespread non-bullous impetigo
E Ask specifically about prior knowledge and Expectations . Patients who appear 'demanding' may just be seeking reassurance	Antibiotics may be expected but topical antimicrobial treatment (hydrogen peroxide 1 per cent) may be most appropriate for uncomplicated, localised impetigo
S Provide non-serious explanation for Symptoms	Impetigo is an infection of the uppermost layer of skin – it looks dramatic but is not deep seated and heals without scarring
T Be specific about illness Timeline /usual course	Impetigo clears in 2-3 weeks untreated and more quickly if treated
S Explain Shortcomings of antibiotics	Topical treatment is effective for impetigo. Hydrogen peroxide cream is appropriate for most cases of localised impetigo. Oral antibiotics are required for widespread impetigo. There is no need for topical and oral antibiotics
S Self-care advice	Good hygiene measures are important to avoid spreading infection to other sites and to other people. Patients should stay away from school/work until lesions are healed, dry and crusted, or for 48 hours after starting treatment
S Provide Safety-netting advice	Provide patients with specific information on red flag symptoms and when they should seek further help
Check understanding	Summarise what has been found and your advice. Check that the patient is reassured and satisfied with what you have advised

Derived from training materials at www.rcgp.org.uk/targetantibiotics

Also check for features of systemic involvement such as fever, lethargy or feeling unwell.

Who to refer and red flags

The Pharmacy First (England) PGDs for impetigo list specific inclusion and exclusion criteria. Most patients with suspected impetigo will not be systemically unwell, but parents/guardians may be concerned about their child's appearance.

A few patients may have symptoms suggesting more severe illness (e.g. painful, hot, swollen skin, and spreading redness) or be at risk of severe illness (e.g. immunosuppressed individuals). Some may not meet the Gateway Point under which the pharmacist is operating (such as those with recurrent or bullous impetigo). It is important to recognise severely ill patients and ensure they get urgent care.

Complications with impetigo are uncommon. The Pharmacy First clinical pathway lists conditions for urgent referral: call 999 or send patients to A&E if sepsis or deeper soft tissue infection is suspected, or if the person is immunocompromised and infection is widespread.

Management options

Antibacterial treatment is recommended for impetigo to shorten the course of illness and reduce the chances of spreading it to other sites on the body or other people.

Topical treatment with a five-day course of hydrogen peroxide 1 per cent cream is first-line treatment for **localised** non-bullous impetigo. A five-day course of oral flucloxacillin is first-line treatment for **widespread** non-bullous impetigo.

If flucloxacillin is indicated, remember to check for penicillin allergy and supply an alternative (clarithromycin or erythromycin subject to inclusion/exclusion criteria) if necessary.

Differential diagnoses

History taking and a visual examination should allow exclusion of bullous impetigo (typically, large fluid-filled blisters on the trunk, arms and legs of infants), recurrent impetigo and other skin conditions that might look similar. These could include:

- **Skin infections and infestations**
 - Bacterial skin infections — cellulitis, ecthyma, erysipelas, staphylococcal scaled skin syndrome, necrotising fasciitis
 - Fungal skin infections — candidiasis, tinea corporis/capitis
 - Parasitic infestations — scabies
 - Viral infections — varicella zoster or herpes simplex
- **Non-infective skin conditions**
 - Dermatitis — atopic or contact
 - Insect bites
 - Burns and scalds
 - Drug reactions
 - Other skin disorders — pemphigus vulgaris, bullous pemphigoid, lupus erythematosus, erythema multiforme or Sweet's Syndrome.



A useful way to think about the consultation is to cover the 3 E's - Empathise, Evaluate and Educate

While antimicrobial treatment is appropriate for impetigo, patients/parents need to understand how to use the treatment correctly. The CHESTSSS consultation structure, developed by the Royal College of General Practitioners, provides a useful framework.

A useful way to think about the consultation is to cover the 3 E's – Empathise, Evaluate and Educate. Table 1 (left) shows how the CHESTSSS framework could be tailored to structure consultations about impetigo. This also provides an opportunity to educate patients about appropriate and effective use of antibiotics and to reinforce good antimicrobial stewardship.



Severe impetigo on a child's elbow. Antibacterial treatment is needed to minimise the risk of spreading and/or further complications

Self-care advice

Ensure that patients and parents/carers get the best out of treatment by providing self-care advice:

- Gently remove crusts by washing with antibacterial soap/liquid skin wash before applying the hydrogen peroxide cream
- Avoid touching patches of impetigo as this may spread the infection to other areas
- Always wash hands with soap after accidentally touching the area



Always wash hands with soap after touching the affected area

- Wash hands before and after putting the cream or ointment on the impetigo
- Don't share towels or flannels until the infection has cleared. Always use a clean cloth each time to dry the affected area
- Launder the patient's towels and bed linen on the hottest available setting (at least 60 °C) with the addition of laundry bleach
- Children with impetigo should be kept off school or nursery until affected areas have healed, or 48 hours after starting antibiotic treatment.

Using the impetigo **protocol & PGDs**

For patients in whom impetigo is likely and so pass the Gateway Point, there are two topical and three antibiotic treatment options:

- **For localised non-bullous impetigo (three or fewer lesions/clusters present) in children over 1 year and adults who are systemically well and not at high risk of complications**
 1. Hydrogen peroxide 1 per cent cream
 2. Fusidic acid 20mg/g (2 per cent) cream – where hydrogen peroxide 1 per cent cream is unsuitable (e.g. impetigo around the eyes) or ineffective
- **For widespread non-bullous impetigo (four or more lesions/clusters present) in children aged 1 year and over and adults who are systemically well and not at high risk of complications.**
 3. Flucloxacillin
 4. Clarithromycin – where flucloxacillin is not appropriate due to hypersensitivity
 5. Erythromycin – where pregnancy is suspected and where flucloxacillin is not appropriate due to hypersensitivity.

Check the patient meets the criteria for inclusion, then determine whether they might be excluded from treatment.

General criteria for exclusion include:

- Individuals under 1 year of age
- Pregnancy or suspected pregnancy in individuals under 16 years of age
- Currently breastfeeding with impetigo lesion(s) present on the breast
- Individuals who are immunosuppressed or are currently taking immunosuppressants (including systemic corticosteroids) or immune modulators
- Severely immunosuppressed individuals (as defined in Chapter 28a of the Green Book – see panel).
- Recurrent impetigo (two or more episodes in the same year)
- Failed previous topical or oral treatment (including antimicrobials) for the current episode of impetigo

- Currently active underlying skin condition (e.g. uncontrolled eczema or contact dermatitis, or current episode of scabies, chickenpox or eczema herpeticum)
- Any open wounds affecting the application area or the immediate vicinity
- Bullous impetigo (characterised by flaccid fluid-filled vesicles and blisters (often with

Definition of severe immunosuppression

Individuals with primary or acquired immunodeficiency states due to conditions including:

- Acute and chronic leukaemias, and clinically aggressive lymphomas (including Hodgkin's lymphoma) who are less than 12 months since achieving cure
- Individuals under follow-up for chronic lymphoproliferative disorders including haematological malignancies such as indolent lymphoma, chronic lymphoid leukaemia, myeloma and other plasma cell dyscrasias
- Immunosuppression due to HIV/AIDS with a current CD4 count of below 200 cells/ml
- Primary or acquired cellular and combined immune deficiencies – those with lymphopaenia or with a functional lymphocyte disorder
- Those who have received an allogeneic (cells from a donor) or an autologous (using their own cells) stem cell transplant in the previous 24 months
- Those who have received a stem cell transplant more than 24 months ago but have ongoing immunosuppression or graft versus host disease (GVHD).

Individuals on immunosuppressive or immunomodulating therapy including:

- Those who are receiving or have received in the past 6 months immunosuppressive chemotherapy or radiotherapy for any indication
- Those who are receiving or have received in the previous 6 months immunosuppressive therapy for a solid organ transplant
- Those who are receiving or have received in the previous 3 months targeted therapy for autoimmune disease, such as JAK inhibitors or biologic immune modulators including B-cell targeted therapies, monoclonal tumour necrosis factor inhibitors (TNFi), T-cell co-stimulation modulators, soluble TNF receptors, interleukin (IL)-6 receptor inhibitors, IL-17 inhibitors, IL 12/23 inhibitors, IL 23 inhibitors.

Individuals with chronic immune mediated inflammatory disease who are receiving or have received immunosuppressive therapy:

- Moderate to high dose corticosteroids (equivalent ≥ 20 mg prednisolone per day) for more than 10 days in the previous month
- Long-term moderate dose corticosteroids (equivalent to ≥ 10 mg prednisolone per day for more than 4 weeks) in the previous 3 months
- Any non-biological oral immune modulating drugs e.g. methotrexate >20 mg per week; azothioprine >3.0 mg/kg/day; 6-mercaptopurine >1.5 mg/kg/day, mycophenolate >1 g/day) in the previous 3 months
- Certain combination therapies at individual doses lower than stated above, including those on ≥ 7.5 mg prednisolone per day in combination with other immunosuppressants (other than hydroxychloroquine or sulfasalazine) and those receiving methotrexate (any dose) with leflunomide in the previous 3 months.

Individuals who have received a short course of high dose steroids (equivalent >40 mg prednisolone per day for more than a week) for any reason in the previous month.



Useful resources

NHS Pharmacy First service specification, clinical pathways and PGDs:

www.england.nhs.uk/publication/community-pharmacy-advanced-service-specification-nhs-pharmacy-first-service

Community Pharmacy England: <https://cpe.org.uk>

NHS A-Z: www.nhs.uk/conditions/impetigo

Patient UK: www.patient.info/childrens-health/impetigo-leaflet

British Association of Dermatologists: www.bad.org.uk/pils/impetigo

Clinical Knowledge Summaries, NICE, updated August 2023. Impetigo :

<https://cks.nice.org.uk/topics/impetigo>

Primary Care Dermatology Society – Impetigo:

www.pcds.org.uk/clinical-guidance/impetigo

Note: For a comprehensive compendium of useful service and clinical resources, see online version of this toolkit plus the CPD module at www.pharmacy-magazine.co.uk/pharmacy-first

a diameter of 1-2cm), which can persist for 2-3 days

- Systemically unwell
- Signs/symptoms of a more serious condition/illness (e.g. swelling, large blisters, pain, pus or spreading redness).

Additionally, for antibiotic PGDs:

- Hypersensitivity reactions (e.g. anaphylaxis) to beta-lactam or macrolide antibiotics
- Individuals following a ketogenic diet
- Previous or current known methicillin-resistant *Staphylococcus aureus* (MRSA) colonisation or infection
- Known or suspected liver disease
- Known chronic kidney disease (CKD) stages 4 or 5 (eGFR <30ml/min/1.73m²)
- Less than 3 days before receiving, or within 3 days after receiving, oral typhoid vaccine.

Refer to the PGDs for a specific list of exclusions for:

- Hydrogen peroxide 1% cream
- Fusidic acid 20mg/g (2%) cream
- Flucloxacillin
- Clarithromycin
- Erythromycin.

In addition to medication, each patient treated under a PGD (or their parent/ carer) should be:

1. Given the appropriate medicine patient information leaflet
2. Provided with the British Association of Dermatologists Impetigo leaflet www.bad.org.uk/pils/impetigo
3. Signposted to NHS Health A-Z: Impetigo www.nhs.uk/conditions/impetigo
4. Offered self-care advice:
 - Impetigo stops being contagious:
 - o 48 hours after starting to use hydrogen peroxide cream or antibiotics
 - o When patches dry out and crust over
 - To help stop impetigo spreading or getting worse while it's still contagious:

- o Stay away from school or work
- o Keep sores, blisters and crusty patches clean and dry
- o Cover them with loose clothing or gauze bandages
- o Wash hands frequently, especially after accidentally touching the area
- o Wash flannels, sheets and towels at a high temperature (at least 60 °C) with the addition of laundry bleach
- o Wash or wipe down toys with detergent and warm water if children have impetigo

- Do not touch or scratch sores, blisters or crusty patches
- Do not have close contact with children or people with diabetes or a weakened immune system
- Do not prepare food for other people (food handlers are required by law to inform employers immediately if they have impetigo)
- Do not go to the gym or play contact sports such as rugby or football
- Always use a clean cloth to dry the affected area if necessary.

Medicines that can be supplied, dose and frequency

Duration of treatment – five days

Medication	Dose and frequency
Hydrogen peroxide 1 per cent (10mg/1g) cream (e.g. Crystacide 1 per cent cream)	Apply a thin layer to the affected area(s) up to 3 times a day. Use enough of the cream to cover the lesion(s) with a thin layer. Wash hands after application.
Fusidic acid 20mg/g (2 per cent) cream	
Flucloxacillin 250mg capsules 500mg capsules 125mg/5ml oral soln or susp x 100ml 250mg/5ml oral soln or susp x 100ml (or sugar free alternatives)	Children aged 1 year and over and under 2 years of age: 125mg four times a day Children 2-9 years: 250mg four times a day Children 10-17 years and adults: 500mg four times a day
Clarithromycin 250mg tablets 125mg/5ml oral susp or soln x 70ml 250mg/5ml oral susp or soln x 70ml	Children 1-11 years: Body weight: • up to 8kg: 7.5mg/kg twice daily • 8-11kg: 62.5mg twice daily • 12-19kg: 125mg twice daily • 20-29kg: 187.5mg twice daily • 30-40kg: 250mg twice daily. Children 12-17 years and adults: 250mg twice daily
Erythromycin 250mg tablets 250mg gastro-resistant tablets 500mg tablets 125mg/5ml oral susp or soln x 100ml 250mg/5ml oral susp or soln x 100ml 500mg/5ml oral susp or soln x 100ml (or sugar free alternatives)	Young people and adults aged 16 years and over: 500mg four times daily

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Case study



Gabriella, aged 8 years, has been brought in by her mum to see you, as she thinks her daughter has a skin infection on her arm.

1 On examination, you suspect she has impetigo. What features would mean that you need to refer Gabriella to her GP practice?

- If there are 4 or more lesions
- If she is immunocompromised
- If this is the first time she has had impetigo
- If she has recurrent impetigo

2 Gabriella is not immunocompromised, this is the first time she has had impetigo and there are more than four lesions. What is the most appropriate management option?

- Offer hydrogen peroxide 1 per cent cream
- Offer a 5-day course of oral antibiotic
- Provide information and advice
- Offer fusidic acid cream

3 Because Gabriella has widespread (4 or more lesions), you offer a course of oral flucloxacillin and provide appropriate information and advice. Which statements below are correct?

- She should seek medical advice if symptoms worsen rapidly or significantly at any time or have not improved after the course has been completed
- Impetigo is not contagious so there is no need to worry about

it being transmitted to family members

- Gabriella should stay off school until 48 hours after treatment has started
- She should stop the course of antibiotics once symptoms improve

MCQs

4 What is the first-line treatment for localised impetigo?

- Hydrogen peroxide 1% cream
- Oral flucloxacillin for 5 days
- Fusidic acid cream
- Oral erythromycin

5 Which of the listed impetigo diagnoses and treatments are correctly matched?

- Localised non-bullous impetigo — topical hydrogen peroxide 1% cream
- Widespread non-bullous impetigo — topical fusidic acid cream
- Widespread non-bullous impetigo — oral flucloxacillin
- Mild localised non-bullous impetigo — fusidic acid cream

6 Which of the following correctly describes the clinical features associated with bullous and non-bullous impetigo?

- In non-bullous impetigo lesions begin as thin-walled vesicles or pustules
- In bullous impetigo lesions are restricted to the face
- In non-bullous impetigo lesions are most common on the trunk
- For both types of impetigo, healing usually occurs within 2-3 weeks without scarring

7 What length of course of antibiotics should be provided to treat impetigo?

- 10 days
- 7 days
- 5 days
- 3 days

8 Under what circumstances should patients be referred to their GP?

- If they are aged under 10 years
- If bullous impetigo is suspected
- The person is immunosuppressed
- The person is severely immunosuppressed

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SOFTWARE

Answers at www.pharmacymagazine.co.uk/pharmacy-first. Case study and questions provided by Agilio, author of NICE Clinical Knowledge Summaries (CKS), which has developed free Pharmacy First e-learning courses. Register at <https://learn.clarity.co.uk/Courses/pharmacy-first>

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