Leicester Children's Hospital

NHS University Hospitals of Leicester NHS Trust

LRI Children's Hospital

Atopic Eczema Care

Staff relevant to:	Clinical staff working within the UHL Children's Hospital.
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1. Introduction and Who Guideline applies to

General Approach to Treatment – The Stepped Approach

This guideline aims to enable optimal physical, social and emotional development of children with eczema. To improve their quality of life and enhance the family's management skills in treating eczema and in recognizing adverse skin reactions and infection.

The management of eczema should be tailored to the individual patient. Emollients should always be used even if the eczema is clear. Other treatments are based on the severity of the condition and are stepped up or down in potency according to response. Mild to moderate topical steroids are adequate in the majority of patients. These can be used long term with minimal side effects. It is important to aim for the lowest potency topical steroid that controls the eczema. Potent or very potent steroids should only be used for short periods and ideally under dermatological advice.

This guideline is intended to provide guidance for medical staff, nurses and health care assistants caring for children with eczema. This guideline is also to be used to guide them in supporting the families of children with eczema in managing the condition.

Related Documents:

Infection Prevention UHL Policy Ref: B4/2005

Consent to Examination or Treatment UHL Policy Ref: A16/2002

Food and Drug Challenge UHL Childrens Nursing Guideline Ref: C10/2010

Equality and diversity considerations

"In recommending skin treatments, healthcare practitioners should be sensitive to the cultural practices of families or carers of children with atopic eczema. For example, if families or carers use olive oil as a skin treatment (which is likely to be harmful to a child's skin) or if they rinse children after bathing (rinsing off the emollients), the reasons for using the recommended treatment and applying it correctly should be explained sensitively."

National Institute for Health and Care Excellence 2103 (NICE)

2. Assessment

Consider both physical severity and the effect on psychological wellbeing:

Be aware that areas of atopic eczema of differing severity can coexist in the same child. If this is the case, each area should be treated independently. During an assessment of psychological and psychosocial wellbeing and quality of life, healthcare professionals should take into account the impact of atopic eczema on parents or carers as well as the child and provide appropriate advice and support. Healthcare professionals should be aware that atopic eczema of any severity, even mild, can have a negative impact on psychological and psychosocial wellbeing and quality of life. This should be taken into account when deciding on treatment strategies. (NICE 2007)

Several severity scales are in use: the EASI Score and POEM Score are favoured but table 1 shows a simple classification used by NICE for both severity and wellbeing. Alternatively, the children's dermatology quality of life score is commonly used to measure the impact on daily life.

Table 1 – **NICE 2007 Guidance for the holistic assessment of eczema**

Skin/Physical Severity		**Impact on quality of life and psychosocial wellbeing**	
Clear	Normal skin, no evidence of active atopic eczema	**None**	No impact on quality of life
Mild	Areas of dry skin, infrequent itching (with or without small areas of redness)	**Mild**	Little impact on everyday activities, sleep and psychosocial wellbeing.
Moderate	Areas of dry skin, frequent itching, redness (with or without excoriation and localised skin thickening)	**Moderate**	Moderate impact on everyday activities and psychosocial wellbeing, frequently disturbed sleep
Severe	Widespread areas of dry skin, incessant itching, redness (with or without excoriation, extensive skin thickening, bleeding, oozing, cracking and alteration of pigmentation)	**Severe**	Severe limitation of everyday activities and psychosocial functioning, nightly loss of sleep

Trigger Factors

Identify potential trigger factors including:

- Irritants – Soaps, detergents, swimming and woollen / synthetic clothing*
- Skin infections
- Aeroallergens – grass, pollen, perfumes and house dust mite
- Food allergies
- Contact allergy

*Always ask about washing products and stop any soaps or detergents and prescribe soap substitutes. Most emollients can be used as soap substitutes (see below). Advise loose cotton clothing to minimise irritation.

2.1 Treatment

Emollients (Moisturisers)

Every patient is different when it comes to emollient preference and tolerance. Some prefer lighter creams and others greasier ointments. Some find certain products sting and it is often a case of trial and error. There are many emollients available. Table 2 lists some examples.

Table 2. Examples of emollients available in UHL.

Formulation	Examples	Comments
Creams	Epimax cream Oilatum Cream Zerobase	Lighter than ointments so often preferred by patients but not as good for dry skin & contain more preservatives. Creams are better for wet, infected eczema.
Ointments	Hydromol ointment 50% WSP/50%LP Zeroderm	Greasier than creams and better for dry skin. May stick to clothing so sometimes preferred for overnight use only
Gels	Isomol gel Zerodouble	Sits between creams and ointments in terms of greasiness.
Other	Dermamist (Restricted prescription)	Expensive so only use if circumstances dictate

- Some children need a combination of emollients for different body sites or time of day e.g. creams during day, greasier ointments at night.
- Prescribe in large amounts (500g every two weeks) and apply at least twice daily. In infants, suggest they are applied at each nappy change.
- Smaller quantities can be prescribed to take to nurseries and schools.
- For emollients that are contained within a tub it is important to emphasise that this remains sterile. Please advise to use a clean spoon to remove the emollient from the tub to avoid contamination with fingers.
- It is important to highlight that emollients are flammable and there is therefore a risk of severe burns, particularly the ones containing paraffin. Patients are carers need to be warned regarding this.

Soap substitutes

- Most formulary emollients can also be used as soap substitutes. Dermol and Eczmol are soap substitutes containing an antiseptic, useful in patients with recurrent secondary infection.

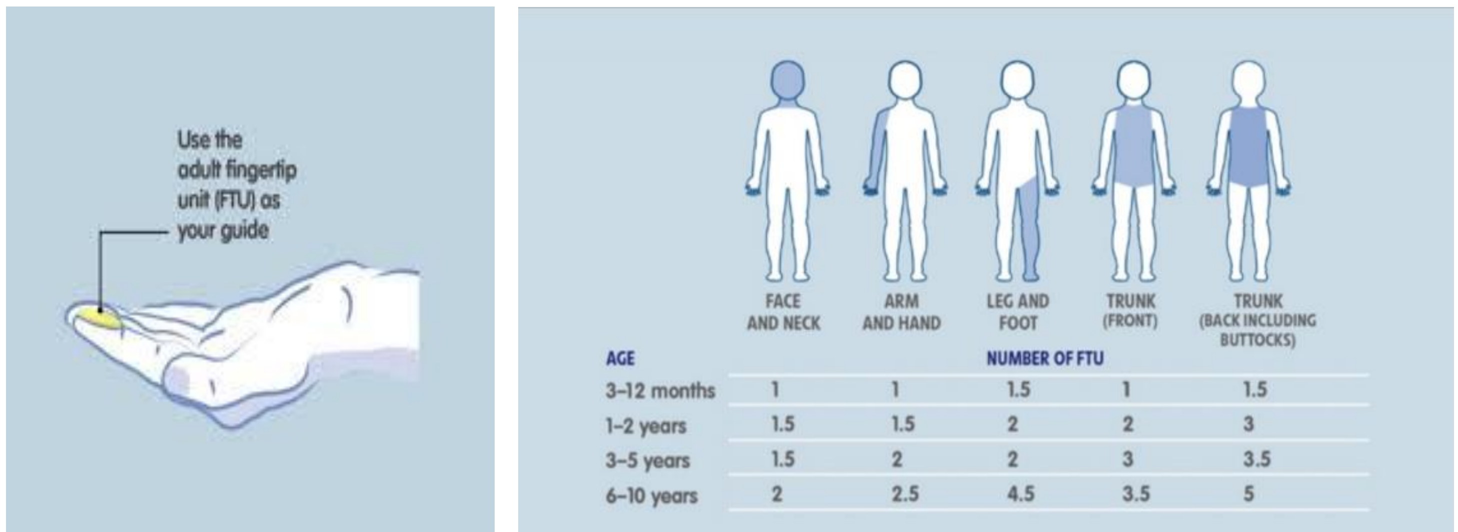
Topical Corticosteroids

- Concern regarding the use of topical steroids is common, particularly in parents of young children and even healthcare professionals! It is important to emphasise the safety of topical steroids when used correctly and highlight that untreated eczema is often far worse than any potential side effect of the treatment.
- Ointments are greasier and contain fewer preservatives so are better when the skin is dry and are generally preferred.
- Some patients prefer creams as they are less greasy.

Table 3.**Topical Corticosteroids**

Steroid Potency	Steroid	Skin/physical severity &Site
Mild	Hydrocortisone 1%	Mild eczema Sensitive body sites including the face and neck
Moderate	Clobetasone butyrate 0.05% (Eumovate) Betamethasone valerate 0.025% (Betnovate RD) Fluocinoloneacetonide 0.00625% (Synalar 1 in 4)	Moderate eczema Predominantly used on torso &limbs
Potent	Betamethasone valerate 0.1% (Betnovate) Fluocinoloneacetonide 0.025% (Synalar)	Often used in short bursts to control flares of eczema.
Very Potent	Clobetasolproprionate 0.05% (Dermovate)	Only to be used under dermatological advice.

- Apply topical steroids once to twice daily to the affected areas.
- Fingertip unit guidance is useful to show how much should be applied. One fingertip unit will cover an area of skin the size of two palms. See below:



AGE	NUMBER OF FTU				
	FACE AND NECK	ARM AND HAND	LEG AND FOOT	TRUNK (FRONT)	TRUNK (BACK INCLUDING BUTTOCKS)
3–12 months	1	1	1.5	1	1.5
1–2 years	1.5	1.5	2	2	3
3–5 years	1.5	2	2	3	3.5
6–10 years	2	2.5	4.5	3.5	5

Reference: National Eczema Society (accessible https://eczema.org/)

Topical Calcineurin Inhibitors

- Used second line for treatment of moderate to severe eczema in children aged 2 years and over. Examples include 0.03% tacrolimus (Protopic) ointment and pimecrolimus (Elidel) cream.
- They do not cause skin atrophy so can be useful adjuncts when children are requiring continuous topical corticosteroids, particularly on the face, neck and flexures.

Bandages and Occlusive Medicated Dressings

- **Should not be used first line and are often initiated under dermatology advice**
- **Should not be used in the presence of active infection**
- Emollients and/or topical steroids are usually applied to the skin prior to the application of the bandage and are good at treating chronic lichenified (thickened) eczema.

  Examples include –
  - ❖ Viscopaste
  - ❖ Ichthopaste.

- Often used for treating limbs but whole body garments can be used under dermatology advice
- Wet wraps use two layers of bandages with the aim of introducing more moisture with cooling of the skin as the water evaporates.

Antihistamines

- There is not a significant amount of evidence to suggest antihistamine are helpful in the treatment of eczema but in some cases they can be used when pruritus is a significant problem, particularly at night. It is important to know they will not treat the underlying eczema.
- Non-sedating antihistamines are often prescribed during the day. Eg. cetirizine.
- We try and avoid sedating antihistamines where possible but again can be useful in certain cases. We often advise them to be taken an hour prior to bedtime to aid getting to sleep and to minimise pruritus overnight.
  Examples include:
  - ❖ Hydroxyzine (no syrup formulation)
  - ❖ Chlorphenamine

2.2 Infected Eczema

Be aware that:

- The symptoms and signs of secondary bacterial infection of eczema can include: weeping, pustules, crusts, no response to treatment, rapidly worsening eczema, fever and malaise
- Not all eczema flares are caused by a bacterial infection, so will not respond to antibiotics, even if weeping and crusts are present
- Eczema is often colonised with bacteria but may not be clinically infected
- Eczema can also be infected with herpes simplex virus (eczema herpeticum).
- If patients are using tubs for emollient, rather than pumps, then please re-prescribe new ones in case these are colonised with bacteria

Bacterial Infection

1) Manage underlying eczema and flares with treatments such as emollients and topical corticosteroids, whether antibiotics are offered or not.

2) Do not routinely take a skin swab for microbiological testing in people with secondary bacterial infection of eczema at the initial presentation, if antibiotic therapy is not commenced.

3) In people who are not systemically unwell, do not routinely offer either a topical or oral antibiotic for secondary bacterial infection of eczema. Take into account:

- the evidence, which suggests a limited benefit with antibiotics in addition to topical corticosteroids compared with topical corticosteroids alone
- the risk of antimicrobial resistance with repeated courses of antibiotics

- the extent and severity of symptoms or signs
- the risk of developing complications, which is higher in people with underlying conditions such as immunosuppression.

If topical or systemic antibiotics are prescribed after assessing the above factors, please **DO** send a bacterial skin swab prior to starting antibiotic treatment. Please note than any cultured organism may represent colonisation, rather than be the cause of infection. Results should be interpreted in the context of clinical reassessment.

4) In people who are systemically unwell, offer an oral antibiotic for secondary bacterial infection of eczema. See below for antibiotic choices.

5) Reassess if worsening or not resolving despite antibiotic treatment and ensure a skin swab has been sent.

6) If a skin swab has been sent for microbiological testing:

- review the choice of antibiotic when results are available **and**
- change the antibiotic according to results if symptoms are not improving, using a narrow-spectrum antibiotic if possible

7) For people with secondary bacterial infection of eczema that occurs more than once a month:

- send a skin swab for microbiological testing **and**
- consider taking a nasal swab, looking for *Staph Aureus* colonisation, and starting treatment for decolonisation if positive. Please refer to NICE CKS guidance on *Staphylococcal* carriage for further information.

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Table 1 **Choice of antibiotics for children and young people aged from 1 month to under 18 years**

Treatment	Antibiotic, dosage and course length
For secondary bacterial infection of eczema in people who are not systemically unwell	Do not routinely offer either a topical or oral antibiotic.
First-choice topical if a topical antibiotic is appropriate	Fusidic acid 2%: Apply three times a day for 5 days. For localised infections only. Antimicrobial resistance develops rapidly.
Second choice topical if fusidic acid resistance suspected or confirmed.	Mupirocin As per BNFc
First-choice oral if an oral antibiotic is appropriate	Flucloxacillin: (Note oral solution is unpalatable, use capsules if able to swallow): Dose as per BNFc (Indication - impetigo) Treat for 5 days.
Second choice oral if mild penicillin allergy (eg rash without systemic symptoms), or flucloxacillin not tolerated	Cefalexin Dose as per BNFc (Indication - Susceptible infections due to Gram positive and Gram negative bacteria) Treat for 5 days.

Alternative oral antibiotic if the person has a severe penicillin allergy (eg anaphylaxis or Stephens-Johnsons Syndrome)	Clarithromycin: Dose as per BNFc (Indication - impetigo) Treat for 5 days.
If *Methicillin-Resistant Staphylococcus aureus* (MRSA) is suspected or confirmed	Consult a local microbiologist.

Infections (Viral)

HSV Infection

Consider infection with herpes simplex virus if a child's infected atopic eczema fails to respond to treatment with antibiotics and an appropriate topical corticosteroid, and/or if typical vesicular lesions are present.

If a child with atopic eczema has a lesion on the skin suspected to be herpes simplex virus, treatment with oral aciclovir should be started even if the infection is localised. A viral swab should be sent for HSV prior to starting treatment.

If eczema herpeticum (widespread herpes simplex virus) is suspected in a child with atopic eczema, the child should be referred for same-day specialist dermatological advice and treatment with aciclovir should be started immediately. Intravenous treatment may be needed in severe/widespread infection (See BNFc for dosage, Indication Herpes Simplex - Treatment). If IV treatment is started then a switch to PO aciclovir can be considered once no new lesions are appearing and patient is clinically improving; antiviral treatment should be for a minimum of 5 days but continued for longer until lesions are crusted. If lesions are continuing to develop after 5 days of therapy, please discuss with virology.

If secondary bacterial infection is also suspected, treatment with appropriate systemic antibiotics should also be started (see section above).

If eczema herpeticum involves the skin around the eyes, the child should be treated with IV aciclovir and should be referred for same-day ophthalmological and dermatological advice.

- Herpes simplex virus can spread rapidly within an area of eczema
- Any areas of localised herpes simplex should be promptly treated with oral aciclovir.
- Consider eczema herpeticum (widespread infection) in rapidly worsening and painful eczema that develops multiple papules, blisters and erosions with systemic upset.

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- Eczema herpeticum involves inpatient admission with IV acyclovir and same day ophthalmology assessment if there is involvement of the skin around the eyes.

2.3 Food Allergy

- Food allergy can be associated with eczema particularly in children less than 12 month old.
- Food allergy should be considered in infants who have early onset moderate to severe eczema not responding to adequate treatment, or if there are immediate type I symptoms after food.
- Associated gut dysmotility and failure to thrive should also raise suspicion of food allergies.
- Patient's diets should not be modified without dietician support.
- If food allergy is suspected they should be referred to the paediatric allergy service.

3. Emollient Application Procedure

Initial skin assessment by a qualified competent children's nurse or doctor experienced in skin assessment and application of treatments.

Resources needed:

- Prescribed bath emollients
- shampoo
- topical steroids and emollients
- disposable non-sterile gloves
- plastic disposable aprons +/- paste bandages
- wet wraps

3. Procedure for Application of Emollient	
N	**Action**
1	Nurse child in side room wherever possible to maintain privacy and dignity during treatments.
2	Bath child once daily in warm water for10-15 minutes with prescribed bath emollient and soap substitute. Pat dry skin after bath with a clean towel. Consider health and safety: emollients & soap substitutes can make surfaces extremely slippery.

3	Observe skin, compare to initial assessment and document findings in child's records to provide evaluation of care. Note: in Asian, black Caribbean and black African children, atopic eczema can affect the extensor surfaces rather than the flexures Management can be stepped up or down, according to the severity of symptoms
4	• Apply a layer of emollient to the skin first in a gentle, downward motion. • Never rub up and down as this could trigger itching and block hair follicles. • A generous amount should be applied when occlusive dressings are in use. • When bandages are not in use, emollients should be applied liberally at least four times daily or as prescribed. • If a large tub of emollient is in use it should be removed from the tub with a spatula to prevent bacterial contamination. • Emollients should form the basis of atopic eczema management and should always be used, even when the atopic eczema is clear
5	Wait 20 minutes and then apply the prescribed topical steroid to affected areas only, using disposable non-sterile gloves. There are four topical steroid strengths. Ensure you are familiar with the potency of the treatment being applied.
6	Apply additional treatments if prescribed e.g. Ichthopaste/ Viscopaste bandages or wet wraps, **Occlusive therapy on infected skin is contraindicated – seek advice**
7	Administer antibiotic as prescribed; ensure any requested skin swabs are collected prior to commencement of antibiotic.
8	Provide parents with general management advice for the home environment including: • Bedding/clothing • Sunblock • Nails • School/playgroup advice • Pets Ensure parents are able to recognize infected eczema and take appropriate action i.e. stop bandaging and obtain advice.
9	Refer to dietician if there are parental or medical concerns about dietary factors.

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Patient Education

- Adherence to treatment is paramount to clinical improvement and patients and parents/carers should be educated on the following:
    - How much and how often treatment should be applied
    - Recognition of infections
    - Stepped management depending on severity of eczema
- Consider involving paediatric dermatology nurse specialist to aid patient education and follow-up

Advice

- For clinical advice, contact the Dermatology on call service via switchboard or Wendy Swanson Dermatology Nurse Specialist on UHL Ext 16910 or 15147.

4. Education and Training

The Children's Dermatology Specialist Nurse will offer initial training sessions to all new nurses and health care assistants within the trust induction days and will offer support and training when patients are identified to reinforce this training. Training sessions will also be offered to medical staff within the trust as requested.

5. Monitoring Compliance

What will be measured to monitor compliance	How will compliance be monitored	Monitoring Lead	Frequency	Reporting arrangements
Adherence to guideline on admitted children with infected eczema	Notes review	Dr James Miller	3 yearly	CMG Audit Meetings

6. Supporting References

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NICE September 2013. Atopic eczema in under 12s. qs44 nice.org.uk/guidance/qs44

NICE March 2021 Secondary bacterial infection of eczema and other common skin conditions: antimicrobial prescribing. https://www.nice.org.uk/guidance/ng190/resources/secondary-bacterial-infection-of-eczema-and-other-common-skin-conditions-antimicrobial-prescribing-pdf-66142075429573

Nottingham Support Group for Carers of Children with Eczema. Resource aimed at parents and carers and includes numerous documents on frequently asked questions. Available at: www.nottinghameczema.co.uk

7. Key Words

Atopic Eczema, Eczema, Emollients

The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.
As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.

CONTACT AND REVIEW DETAILS	
Guideline Lead (Name and Title) James Miller - Consultant	**Executive Lead** Chief medical officer
Details of Changes made during review: Table 2. Examples of emollients : In the Creams section : 'Creams' added to comment box to clarify that creams are better for wet, infected eczema **2.2 Infected Eczema –** addition of • If patients are using tubs for emollient, rather than pumps, then please re-prescribe new ones in case these are colonised with bacteria **Table 1 Choice of Antibiotics:** Mupirocin – changed from apply three times a day for 5 days to 'as per BNFc' Minor typographical correction on page 11 Hyperlinks updated Monitoring and Compliance added	

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