Bulletin 116 | November 2015

PrescQIPP Community Interest Company

Topical corticosteroids

This bulletin focuses on the cost effective use of topical corticosteroids. Nationally £58.9 million is spent annually on topical corticosteroid skin preparations, of which nearly £22.5 million is for combination products also containing antimicrobials (ePACT April - June 2015). QIPP projects in this area focus on ensuring good practice and rational product selection.

Support material (briefing, data collection and a patient information leaflet) is available at:
http://www.prescqipp.info/resources/viewcategory/409-topical-corticosteroids

This bulletin does not cover dermatological specials (which will be addressed as part of the specials workstream) or Dovobet® in psoriasis, which is the subject of bulletin 90 and is available at:
http://www.prescqipp.info/resources/viewcategory/326-dovobet-in-psoriasis

Recommendations

- Match the potency of topical corticosteroid to the severity of the condition, taking into account the patient's age and site of application.
- Consider patient preference, including cosmetic acceptability, when choosing a formulation.
- Where more than one alternative topical corticosteroid is clinically appropriate within a potency class prescribe the product with the lowest acquisition cost, taking into account pack size and frequency of application. Avoid prescribing products that are disproportionately costly when they offer no clinical advantage.
- Use topical corticosteroids short term or intermittently wherever possible. Regular emollient use and strategies such as treating frequently flaring atopic eczema with topical corticosteroid for two days a week, or the use of non-steroid based treatments in between topical corticosteroid courses in psoriasis can support this.
- Products containing antimicrobials should only be used for clinical infection in localised areas, for no longer than two weeks and in accordance with local antimicrobial prescribing policy. They should not be issued as repeat prescriptions.
- Use the more potent topical corticosteroids with appropriate caution. Potent or very potent topical corticosteroids may be contraindicated or restricted to use under specialist supervision depending on the age of the person, the condition being treated and the site of application.
- Use fingertip units to illustrate how much cream or ointment to apply (see table 1, page 5).
- Prescribe an appropriate quantity for specific areas of the body (see table 2, page 6).
- Review patients after an appropriate time period taking into account the severity and site of their condition and potency of topical corticosteroid being used. Repeat prescribing of topical corticosteroids should only be used if considered appropriate, and in the context of planned, timely review.
- Give patients information (perhaps written) about the potential side effects of topical corticosteroids, and advice on how to use the product in a way that minimises risk. Give reassurance that side effects are few when topical corticosteroids are used appropriately.

Background

Corticosteroids are synthetic analogues of the natural hormones produced by the adrenal cortex.[1] Topical corticosteroids are used to treat inflammatory conditions of the skin such as eczema, contact dermatitis and insect stings.[2] They also have anti-proliferative effects so are used in the treatment of psoriasis.[1] Corticosteroids are not curative and rebound exacerbation of long term conditions being treated may occur when they are discontinued.[2] Their intermittent use in long term conditions minimises side effects from the corticosteroid.[3]

Topical corticosteroids are contraindicated in acne, rosacea, perioral dermatitis and untreated bacterial, fungal, or viral skin lesions. They should not be used for the routine treatment of urticaria or pruritis of unknown cause, and they may worsen ulcerated lesions.[2]

Potency

The potency of topical corticosteroids is determined by the amount of vasoconstriction they produce, and also relates to the degree to which they inhibit inflammation and their potential to cause side effects. As well as the inherent properties of the corticosteroid and its concentration in the product, potency is also affected by formulation and factors that can increase absorption, such as occlusion or additional ingredients, e.g. salicylic acid, lactic acid and urea.[4] The BNF classification of mild, moderate, potent and very potent is used in UK national guidelines and other key information sources.

Formulation

The majority of topical corticosteroid products are formulated as ointments, creams or lotions.

Ointments are the greasiest formulation and are generally chosen for dry, lichenified or scaly lesions or where a more occlusive effect is required.[2] Their occlusive nature can increase the penetration of the steroid. Ointments can also be less prone to irritating the skin as they often do not contain preservatives.[4]

Water-miscible corticosteroid creams and lotions are suitable for moist or weeping lesions and some patients may find them more cosmetically acceptable.[2] Lotions may be preferred for larger or hair-bearing areas.[5]

Tapes and plasters are available for use on areas of very thick skin. Their occlusive effect increases the absorption of the steroid, and also the risk of adverse effects. Use should be short term and under the supervision of a specialist.[1]

Choice and use of topical corticosteroid

The choice of topical corticosteroid, including the potency and formulation, depends on the condition being treated (and its stage), the area of the body that is affected, and the age of the person.[1] In order to promote adherence, the individual patient's preference, including cosmetic acceptability should be considered.[5]

Where possible, topical corticosteroid use for long term conditions should be short term and intermittent, e.g. to treat exacerbations of eczema or to reduce the size and thickness of psoriatic plaques.[4]

Atopic eczema

- Evidence comparing different topical corticosteroids is available, but is incomplete and does not allow for determination of the 'best' topical corticosteroid or a ranking order.[6]
- Match the potency of the topical corticosteroid with the severity of the eczema, e.g. mild potency for mild disease, moderate potency for moderate disease, and potent topical corticosteroids reserved for short term use in severe eczema. The age of the patient and the body region being treated must also be considered.[7,8]

- Advise patients to start treatment as soon as signs of a flare appear, to use it only on the areas where symptoms are apparent, and to continue for 48 hours after symptoms subside.[7] Use is generally in short bursts of 3-5 days to gain control, and for up to two weeks in moderate to severe disease.[9]
- Consider tapering the potency or gradually withdrawing the topical corticosteroid after a flare, according to the needs of the individual.[1,4]
- Where more than one alternative topical corticosteroid is considered clinically appropriate within a potency class, prescribe the drug with the lowest acquisition cost, taking into account pack size and frequency of application.[7]
- On the face and neck, particularly in children, start with a mildly potent topical corticosteroid, except for short term use (3-5 days) of moderate potency for severe flares.[7]
- If using moderate or potent preparations for flares in vulnerable sites such as axillae and groin, limit use to short periods (7-14 days).[7]
- Do not use **very** potent preparations in children without specialist dermatological advice.[7]
- Do not use potent topical corticosteroids in children under 12 months without specialist dermatological supervision.[7]
- Prescribe topical corticosteroids for application only once or twice daily.[3] Some recommend starting with once daily application and only increasing to twice daily if the response is inadequate, as there is a lack of clear evidence that twice daily application gives any significant clinical advantage over once daily.[1,8]
- If flares are frequent (two or three per month) consider treating with topical corticosteroids for two consecutive days per week[7] or twice weekly[8] as maintenance treatment once the eczema has been controlled. Review this strategy every 3-6 months.[7]
- Review patients every 3-6 months (depending on steroid potency and site of application) to assess response and monitor for adverse effects.[8]

Psoriasis[5]

The use of topical corticosteroids in psoriasis is covered in more detail in PrescQIPP bulletin *B90. Dovobet® in psoriasis*, which includes treatment algorithms summarising topical treatment options for psoriasis in adults and children, as recommended by NICE.
http://www.prescqipp.info/resources/viewcategory/326-dovobet-in-psoriasis

- Aim for a break of four weeks between courses of treatment with potent or very potent corticosteroids.
- Very potent corticosteroids should only be used in a specialist setting for a maximum of four weeks.
- Do not use potent or very potent corticosteroids for psoriasis affecting the face, flexures and genitals, or in children and young people.
- Do not use continuously at any site for longer than eight weeks for potent corticosteroids or four weeks for very potent corticosteroids.
- Review adults four weeks after starting a new topical treatment, and review children after two weeks.
- Review adults using intermittent courses of potent/very potent topical corticosteroids, and children and young people using topical corticosteroids of any potency at least annually to assess for steroid atrophy or other adverse effects.
- Refer those with severe or extensive psoriasis, for example more than 10% of the body, to a specialist.
- Refer children and young people with any type of psoriasis to a specialist at presentation.

Insect bites and contact dermatitis

- Topical corticosteroids may also be used in the short term treatment of contact dermatitis caused by exposure to allergens or irritants and for small local reactions to insect bites.
- In contact dermatitis, the severity and location of the dermatitis, along with the size of the affected area and the age of the person should be considered when selecting the potency of topical corticosteroid.[10]
- Topical hydrocortisone is licensed (and can be purchased over the counter) for insect bite reactions, although evidence for this indication is lacking.[11,12]

Adverse effects

Patients often express concern about the potential side effect of topical corticosteroids.[7] However, topical corticosteroids are effective and have few adverse effects if they are used appropriately.[1] Healthcare professionals should discuss the benefits and harms of treatment of topical corticosteroids with patients, emphasising that the benefits outweigh possible harms when they are applied correctly.[7] Advice on appropriate use is therefore a key component of care.

Likelihood of side effects is related to age, duration of treatment, site of use, extent of the area of skin being treated, potency of the topical corticosteroid and use of occlusion.[1]

Local adverse effects are more common and include:[1,8]

- Transient burning or stinging
- Worsening and spreading of untreated infection
- Thinning of the skin - the skin improves over a period after stopping treatment
- Permanent stretch marks
- Allergic contact dermatitis - due to the corticosteroid or the excipient, which should be clearly documented
- Acne (or worsening of existing acne) or rosacea
- Mild depigmentation - usually reversible
- Excessive hair growth at the site of application (hypertrichosis)
- Bruising
- Perioral dermatitis.

Systemic adverse effects are rare[1] but are more likely when the potent or very potent topical corticosteroids are applied continuously and extensively (for example to more than 10% of body surface area).[5] They may include adrenal suppression, Cushing's syndrome and growth retardation in children.[1] National guidelines do not make specific recommendations regarding growth monitoring in children using topical corticosteroids. The Clinical Knowledge Summary (CKS) on topical corticosteroids recommends monitoring the height of children who are using large amounts of topical corticosteroid.[1]

Relapse or rebound of eczema or psoriasis can occur after stopping topical steroids.[1] The rare but serious side effect of severe pustular psoriasis can be precipitated when potent and very potent topical corticosteroids are discontinued in psoriasis.[2,13]

Advice to patients on appropriate use

Explain about the potency of the topical steroid prescribed and ensure that the person knows:[1,14]

- How much to apply. Explain fingertip units (see table 1, page 5), and advise the person to apply the topical corticosteroid thinly to the affected area.

- Duration of use and the importance of not exceeding it.
- Frequency of application.
- Site of application.
- How to apply it - including not to mix it with other topical products and applying it in the direction of hair growth when using on hair-bearing areas to help prevent folliculitis.

A patient information leaflet on topical corticosteroids is available from the British Association of Dermatologists, via http://www.bad.org.uk/shared/get-file.ashx?id=183&itemtype=document

Adherence-related issues such as cosmetic acceptability and difficulties with administration should be considered and discussed at review, particularly where response to treatment is not as expected.[5]

Advise patients to continue using their emollient whilst using a topical corticosteroid and ensure that they are using it optimally.[7,8] The best order of application has not been determined,[15] but some recommend applying the emollient first.[16] Emphasise the need for a gap between applications (e.g. 30 minutes) to avoid dilution of the corticosteroid or spreading it to areas that do not need treatment.[1] See PrescQIPP bulletin B76 on the subject of emollients: http://www.prescqipp.info/emollients/viewcategory/344

The CKS on topical corticosteroids recommends patients carry a steroid treatment card if they are receiving long term treatment (several weeks) with a potent or very potent topical corticosteroid. CKS consider this good practice on the basis that most topical corticosteroids may, under certain circumstances, be absorbed in sufficient amounts to cause systemic adverse effects, and that the Medicines and Healthcare products Regulatory Agency (MHRA) have issued similar advice in relation to inhaled corticosteroids in the past.[17]

Quantity to apply

Topical corticosteroids should be spread thinly on the skin but in sufficient quantity to cover the affected areas. The length of cream or ointment expelled from a tube can be measured in terms of a fingertip unit (the distance from the tip of the adult index finger to the first crease, equivalent of approximately 500mg).[2] The number of fingertip units needed to cover different areas of the body with a topical corticosteroid cream or ointment according to age is shown in table 1 below. One fingertip unit can also be thought of as the amount required to treat a skin area about twice that of the flat of the hand with the fingers together.[4]

Table 1. Fingertip units of topical corticosteroid cream or ointment to apply to specific areas[4]

	Number of fingertip units				
Age	Face & neck	One arm & hand	One leg & foot	Trunk (front)	Trunk (back) inc. buttocks
Adult	2.5	4	8	7	7
3 - 6 month old child	1	1	1.5	1	1.5
1 - 2 year old child	1.5	1.5	2	2	3
3 - 5 year old child	1.5	2	3	3	3.5
6 - 10 year old child	2	2.5	4.5	3.5	5

Quantity to prescribe

Suitable quantities of corticosteroid preparations to be prescribed for specific areas of the body are shown in table 2. These amounts are usually suitable for an adult for a single daily application for two weeks.[2] The amounts relate to the practical aspect of applying the product and do not imply clinical appropriateness.

Table 2. Suitable quantities of corticosteroid preparations to be prescribed for specific areas of the body[2]

Area of the body	Quantity of creams and ointments
Face & neck	15 to 30g
Both hands	15 to 30g
Scalp	15 to 30g
Both arms	30 to 60g
Both legs	100g
Trunk	100g
Groins & genitalia	15 to 30g

Products available and price comparison

The following figures show the cost per millilitre (ml) or gram (g) of product, based on the smallest pack size (prices from MIMS/Drug Tariff November 2014). Larger pack sizes may be available at a lower price per ml or g, however pack size selection should be based on which is the most appropriate for the patient to avoid giving inappropriately excessive (or inadequate) quantities.

Products are generally listed with the generic name first, except where a brand is available at a different price to the Drug Tariff price, where brand name is listed first. This ensures brands that are more/less expensive than a generically written prescription are visible in the chart.

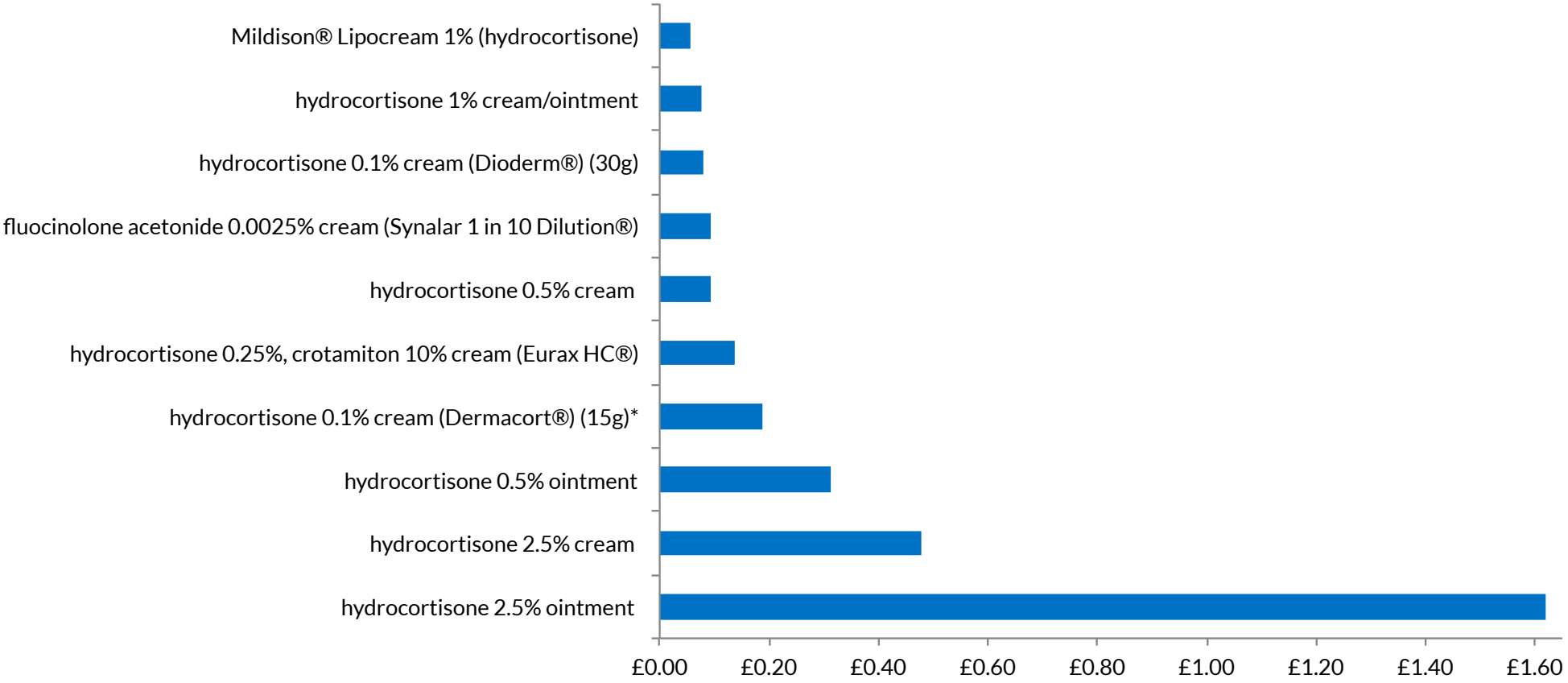
Products that are disproportionately expensive are discussed; their use should be reviewed where they offer no advantage to comparable, less costly products.

Potency of topical corticosteroids relates to formulation as well as steroid content,[2] and several products contain multiple active ingredients. In practice, many topical corticosteroids are prescribed generically, but consideration should be given locally as to whether brand prescribing will be recommended for specific products or types of product.

Mild topical corticosteroids

Hydrocortisone 2.5% skin preparations (particularly the ointment) are disproportionately expensive and unlikely to represent good value for the majority of patients. Eurax HC® cream contains hydrocortisone 0.25% plus crotamiton 10%. Crotamiton is used as an antipruritic, but is of uncertain value[18] so is unlikely to be worth the additional cost compared with a number of other mild topical corticosteroids available.

Chart 1: Cost per g or ml for mild topical corticosteroid products

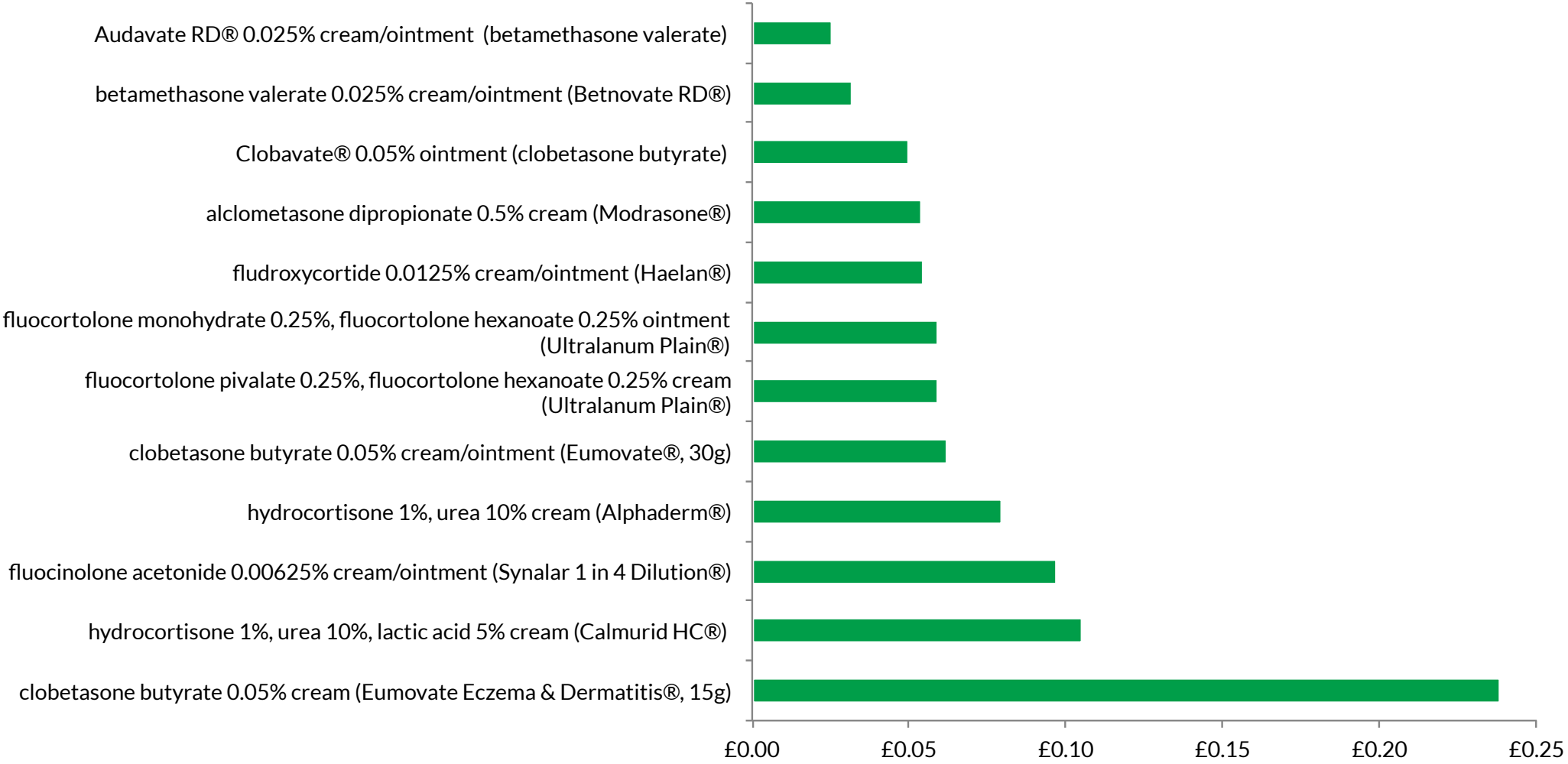


* Dermacort brand cannot be ordered on an NHS prescription, but the Drug Tariff price for hydrocortisone 0.1% cream 30g is based on this brand.

Moderate topical corticosteroids

There is a significant cost difference between different pack sizes of clobetasone butyrate 0.05% cream (Eumovate®). The smallest pack size, which can be sold over the counter, is branded as Eumovate Eczema & Dermatitis® cream. It is disproportionately costly to prescribe (15g=£3.75, compared with 30g=£1.86 and 100g=£5.44, MIMS August 2015).

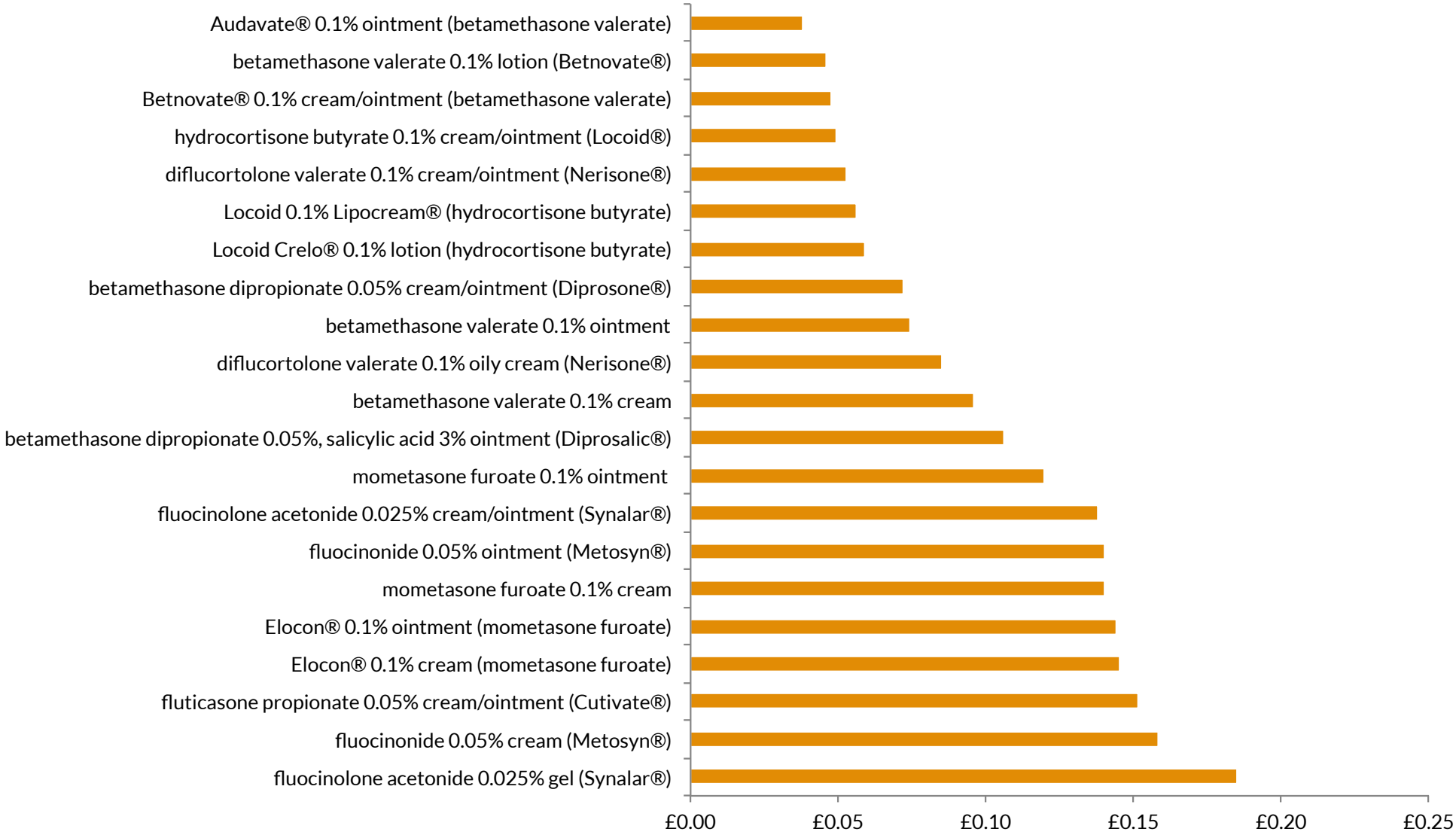
Chart 2: Cost per g or ml for moderate topical corticosteroid products



Potent topical corticosteroids

Beclometasone dipropionate 0.025% cream and ointment have been excluded from chart 3 as they cost so much more than the other products that it is difficult to show all products clearly on the same chart. **Their price of £68.00 for a 30g pack (£2.27 per gram) is unlikely to be justifiable when there is a large range of alternative products available in this category of potency.**

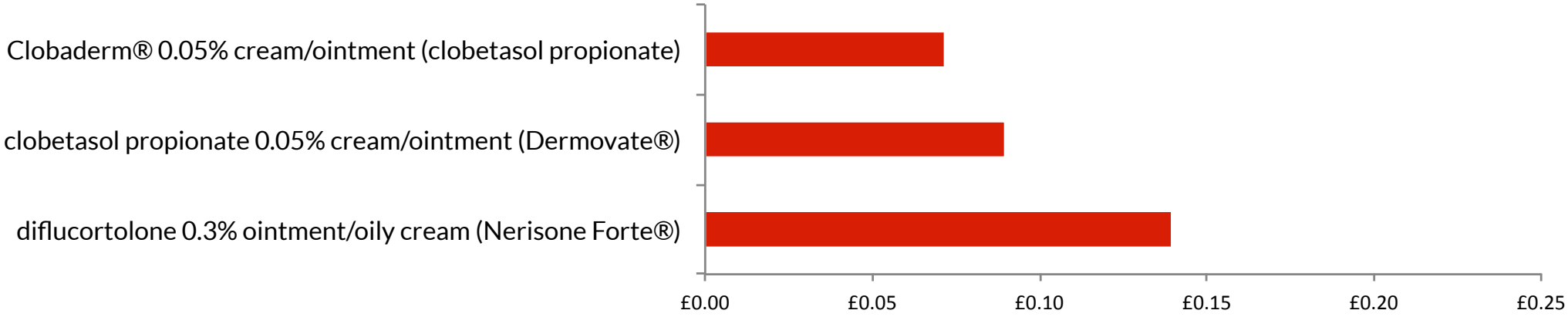
Chart 3: Cost per g or ml for potent topical corticosteroid products



Very potent topical corticosteroids

There are few products in this category and most prescribing is for clobetasol propionate products.

Chart 4: Cost per g or ml for very potent topical corticosteroid products



Products containing antimicrobials

The benefit of including antibacterials or antifungals with a topical corticosteroid is uncertain.[1] NICE advise that use of topical antibiotics in children with atopic eczema, including those combined with topical corticosteroids, should be reserved for cases of clinical infection in localised areas and limited to a maximum of two weeks treatmen.[7] Longer use increases the risk of resistance and sensitization.[1,16] Despite this, approximately 38% of prescription items for all topical corticosteroid products are for products containing antimicrobials (ePACT April - June 2015).

Choice of product should be based on sensitivity of the infecting organism[1] and selection of the appropriate potency of corticosteroid. Where more than one product is equally clinically appropriate, cost of the product should also be considered. See table 3, page 9 for details of products available, their active ingredients and their costs.

The most costly product is clobetasol with neomycin and nystatin cream/ointment (30g = £64.00). This is the only combination antimicrobial-containing product in the 'very potent' category, however there are likely to be limited circumstances where the use of a very potent topical corticosteroid (with or without an antimicrobial) is appropriate in primary care, unless use is under the guidance of a specialist.

Betamethasone and clioquinol cream/ointment (30g = £18.88) and betamethasone and neomycin cream/ointment (30g = £9.48,100g = £28.01) are the next most costly products. Both contain potent corticosteroids and there are several other combination products within this category to choose from, including some containing the same antimicrobial agents at the same concentration, so there should be a limited need for these more costly products.

Canesten hydrocortisone® cream and Daktacort hydrocortisone® cream are available for purchase over the counter (OTC). The pack size is smaller than the prescription versions, and yet more expensive. Therefore prescribing the smaller (15g) pack sizes of these products should be avoided unless there is a clear need for the smaller quantity to be provided.

Potential actions to improve the clinical appropriateness and cost effective prescribing of topical corticosteroids containing antimicrobials include:

- Having clear local guidelines on when and how to use these products, including limiting use to a maximum of two weeks
- Only issuing these items as acute issues and reviewing any currently prescribed as repeats
- Reviewing practice where the more costly products are prescribed, and using alternative, less costly products where this is clinically appropriate

Table 3. Combination products containing topical corticosteroids and antimicrobials[2,19]

Product	Active ingredients[2]	Pack size	Cost[19]
Potency of corticosteroid: Mild			
Canesten HC® cream	hydrocortisone 1%, clotrimazole 1%	30g	£2.42
Canesten hydrocortisone® cream*	hydrocortisone 1%, clotrimazole 1%	15g	£3.11
Daktacort® cream/ ointment	hydrocortisone 1%, miconazole nitrate 2%	30g cream 30g ointment	£2.49 £2.50
Daktacort hydrocortisone® cream*	hydrocortisone 1%, miconazole nitrate 2%	15g	£3.17
Fucidin H® cream	hydrocortisone acetate 1%, fusidic acid 2%	30g 60g	£5.02 £10.04
Nystaform-HC® cream	hydrocortisone 0.5%, nystatin 100 000 units/g, chlorhexidine hydrochloride 1%	30g	£2.66
Nystaform-HC® ointment	hydrocortisone 1%, nystatin 100 000 units/g, chlorhexidine acetate 1%	30g	£2.66
Terra-Cortril® ointment	hydrocortisone 1%, oxytetracycline (as hydrochloride) 3%	30g	£5.01
Timodine® cream	hydrocortisone 0.5%, nystatin 100 000 units/g, benzalkonium chloride solution 0.2%, dimeticone '350' 10%	30g	£2.80
Potency of corticosteroid: Moderate			
Trimovate® cream	clobetasone butyrate 0.05%, oxytetracycline 3% (as calcium salt), nystatin 100 000 units/g	30g = £3.29	

Product	Active ingredients[2]	Pack size	Cost[19]
Potency of corticosteroid: Potent			
Aureocort® ointment	triamcinolone acetonide 0.1%, chlortetracycline hydrochloride 3%	15g	£3.51
Betamethasone and clioquinol cream/ointment	betamethasone (as valerate) 0.1%, clioquinol 3%	30g	£18.88
Betamethasone and neomycin cream/ointment	betamethasone (as valerate) 0.1%, neomycin sulfate 0.5%	30g 100g	£13.79 £45.79
Fucibet® cream/lipid cream	betamethasone (as valerate) 0.1%, fusidic acid 2%	30g 60g	£5.32 (lipid cream £5.62) £10.63
Lotriderm® cream	betamethasone dipropionate 0.064% (?betamethasone 0.05%), clotrimazole 1%	30g	£6.34
Synalar C® cream/ointment	fluocinolone acetonide 0.025%, clioquinol 3%	15g	£2.66
Synalar N® cream/ ointment	fluocinolone acetonide 0.025%, neomycin sulfate 0.5%	30g	£4.36
Potency of corticosteroid: Very potent			
Clobetasol with neomycin and nystatin cream/ ointment	clobetasol propionate 0.05%, neomycin sulfate 0.5%, nystatin 100 000 units/g	30g	£64.00

***Version available OTC**

Tapes and plasters

The use of these products should be short term and under the supervision of a specialist:[1]

- Haelan® tape is polythene adhesive film impregnated with fludroxycortide 4 micrograms/cm^2, 7.5 cm × 50 cm = £9.27, 7.5 cm × 200 cm = £24.95.[19]
- Betesil® medicated plasters contain betamethasone (as valerate) 2.25 mg, 4 plasters = £9.92[19]

National cost savings

- Nationally £58.9 million is spent annually on topical corticosteroid skin preparations of which over £22.5 million is for combination products also containing antimicrobials (ePACT April - June 2015). Although products containing antimicrobials are not always the most costly products within a potency class, they are never the least expensive, and savings may be realised by ensuring their use is appropriate and **short term**.
- Of the products containing antimicrobials, three are notably more costly than the rest and represent 20% of spend in this category, but just 3% of items. These are:
  - Clobetasol with neomycin and nystatin cream/ointment
  - Betamethasone and clioquinol cream/ointment
  - Betamethasone and neomycin cream/ointment.

  Savings may be achieved by ensuring they are used only where there is no clinically appropriate alternative.

- Products that are disproportionately costly compared to other products within their potency class are:
  - Hydrocortisone 2.5% cream/ointment
  - Beclometasone dipropionate 0.025% cream/ointment.

  Total annual spend on these products is over £1.5 million and savings may be achieved by using alternatives where clinically appropriate.
- Savings may also be achieved by avoiding prescribing products aimed at the over the counter market:
  - Eurax HC cream
  - Eumovate eczema and dermatitis cream (15g)
  - Daktacort hydrocortisone cream (15g)
  - Canesten hydrocortisone cream (15g).
- Total annual spend on these items is £759,000 and savings may be achieved by using alternative products/pack sizes where clinically appropriate.
- Savings may be realised by identifying inappropriate continuous use of topical steroids and reviewing treatment. **A 30% reduction in prescribing could release savings of £17.6 million annually which equates to £30,990 per 100,000 patients.**
- Small packs of hydrocortisone 1% (alone or combined with other ingredients) and clobetasone butyrate 0.05% are available over the counter for short-term use (maximum seven days) in skin conditions such as mild to moderate eczema, dermatitis and insect bites. The licence of OTC products is more restrictive, but when appropriate patients can be directed to purchase items for self care.[20,21]

Summary

The best topical corticosteroid for an individual is one of a potency that matches the severity of their condition, taking into account their age and the site being treated, and that is acceptable to them. Use should be intermittent wherever possible. Overuse of combination products containing antimicrobials increases the risk of bacterial resistance and sensitization, and can increase the cost of treatment. Best use of resources can be made by both observing good clinical practice and by avoiding disproportionately expensive products when they offer no clinical advantage.

References

1. National Institute for Health and Care Excellence, Clinical Knowledge Summaries. Corticosteroids – topical (skin), nose, and eyes. Last revised August 2010. Accessed March 2015 via www.cks.nice.org.uk
2. Joint Formulary Committee. British National Formulary (online). Accessed March 2015 via https://www.medicinescomplete.com/mc/bnf/current/
3. National Institute for Health and Care Excellence (NICE): Frequency of application of topical corticosteroids for atopic eczema [TA81], August 2004. Accessed March 2015 via: https://www.nice.org.uk/guidance/ta81
4. MeReC. Using topical corticosteroids in general practice. MeReC Bulletin 1999;10(6):21-24
5. National Institute for Health and Care Excellence (NICE): Psoriasis – the assessment and management of psoriasis [CG153], October 2012. Accessed March 2015 via: https://www.nice.org.uk/guidance/cg153
6. National Institute for Health and Care Excellence, Clinical Knowledge Summaries. Eczema - atopic, last revised March 2013. Accessed March 2015 via www.cks.nice.org.uk
7. National Institute for Health and Care Excellence (NICE): Atopic eczema in children - Management of atopic eczema in children from birth up to the age of 12 years. [CG57] London: National

Collaborating Centre for Women's and Children's Health; 2007. Accessed March 2015 via: http://www.nice.org.uk/guidance/CG57/chapter/1-Guidance

8. Scottish Intercollegiate Guidelines Network (SIGN). Management of atopic eczema in primary care. SIGN no. 125. March 2011. Accessed March 2015 via http://sign.ac.uk/pdf/sign125.pdf
9. Baron S E, Cohen S N et al. Guidance on the diagnosis and clinical management of atopic eczema. Clinical and Experimental Dermatology 2012;37(supplement 1):7-12
10. National Institute for Health and Care Excellence, Clinical Knowledge Summaries. Dermatitis – contact. Last revised March 2013. Accessed April 2015 via www.cks.nice.org.uk
11. National Institute for Health and Care Excellence, Clinical Knowledge Summaries. Insect bites and stings. Last revised November 2011. Accessed April 2015 via www.cks.nice.org.uk
12. Anon. Management of simple insect bites: Where's the evidence? Drug and Therapeutics Bulletin 2012;50(4):45-48
13. Scottish Intercollegiate Guidelines Network (SIGN). Diagnosis and management of psoriasis and psoriatic arthritis in adults. SIGN no.121. October 2010. Accessed March 2015 via http://sign.ac.uk/guidelines/fulltext/121/contents.html
14. British Association of Dermatologists Patient information leaflet on topical corticosteroids, revised March 2015 accessed via http://www.bad.org.uk/shared/get-file.ashx?id=183&itemtype=document
15. Ladva S, Wan Y. UKMi Medicines Q&A 258.2 Can topical steroids be applied at the same time as emollients? Accessed February 2015 via www.evidence.nhs.uk
16. Eczema: atopic eczema, Primary Care Dermatology Society, last revised 16/3/15. Accessed April 2015 via www.pcds.org.uk
17. CHM. High dose inhaled steroids: new advice on supply of steroid treatment cards. Current Problems in Pharmacovigilence;31:5 (as sited by reference 1)
18. Brayfield A, editor. Martindale: The Complete Drug Reference – crotamiton monograph (latest modification 12/5/14). Accessed March 2015 via www.medicinescomplete.com
19. MIMS (online) accessed August 2015 via www.mims.co.uk
20. Summary of Product Characteristics. HC45 Hydrocortisone cream®. Reckitt Benckiser Healthcare (UK) Limited. Date of revision of the text: 24/9/12. Accessed March 2015 via www.emc.medicines.org.uk
21. Summary of Product Characteristics. Eumovate Eczema & Dermatitis 0.05% Cream®. GlaxoSmithKline Consumer Healthcare. Date of revision of the text: 19/1/10. Accessed March 2015 via www.emc.medicines.org.uk

Additional PrescQIPP resources

 Briefing

 Data pack

 Audit

Available here: http://www.prescqipp.info/resources/viewcategory/409-topical-corticosteroids

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