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GUIDANCE ON THE PRESCRIBING OF BARRIER PREPARATIONS AND SKIN PROTECTANTS

Summary

- Barrier preparations, or skin protectants, have been developed to minimise damage to skin. They are indicated as part of the prevention and treatment of skin damage caused by pressure, incontinence and skin folds.
- NICE recommend the use of barrier preparations to prevent skin damage in adults who are at risk of developing a moisture lesion or incontinence associated dermatitis (IAD). By protecting and moisturising the skin, these products prevent and treat IAD, prevent excoriation from contact with wound fluid and around stoma sites, reduce maceration to periwound areas and prevent conditions that arise from the skin becoming too dry and fragile. NICE suggest that barrier products are no substitute for appropriate repositioning and regular clinical assessment.
- In recent years, the range of barrier products available has expanded from traditional metal oxide and silicone based creams such as *Sudocrem* to include spray and wipe formulations.
- Following a local evaluation led by Lincolnshire Community Health Services, three product ranges have been approved for inclusion in the *Lincolnshire Joint Formulary*: *Proshield Plus Skin Protective Barrier Cream*, the *LBF* range including *LBF Barrier Cream* and the *Cavilon* range including *Cavilon Durable Barrier Cream*.

SUMMARY OF PACEF DECISIONS: OCTOBER 2015 UPDATE

Product	Indication(s)	Traffic Light and Joint Formulary Status
<i>Cavilon Durable Barrier Cream</i> (28g, 92g and 2g sachets) <i>Cavilon No Sting Barrier Film</i> Foam Applicators (1ml and 3ml) <i>Cavilon No Sting Barrier Film</i> Pump Spray (28ml) (3M)	For use as a barrier against irritation from body fluids. To prevent skin damage associated with incontinence. For use as a moisturiser for severely dry or chapped skin.	GREEN Approved for inclusion in the <i>Lincolnshire Joint Formulary</i>
<i>LBF Barrier Cream</i> (30g, 100g and 2g sachets) <i>LBF Sterile No Sting Barrier Film</i> Foam Applicator (1ml and 2ml) (Clinimed Ltd)	For use as a barrier against irritation from body fluids, such as faeces, urine and wound exudate. To prevent skin damage associated with incontinence.	GREEN Approved for inclusion in the <i>Lincolnshire Joint Formulary</i>
<i>Proshield Plus Skin Protective</i> Barrier Cream (115g) (H&R Healthcare Ltd)	For use in the care of intact or injured skin associated with diarrhoea or incontinence. To moisturise and protect severely dry skin.	GREEN Approved for inclusion in the <i>Lincolnshire Joint Formulary</i>

Introduction

Barrier preparations, now known as skin protectants, are used to minimise the damage to skin around particularly sensitive areas such as stoma sites and pressure areas in the elderly. Where the skin has broken down, barrier preparations can have a limited role in helping to protect adjacent skin. With an increasing range of products available in a variety of different formulations, including sprays and wipes, local tissue viability leads have undertaken a review to identify a local list of preferred products.

Background

Traditionally, the most commonly used barrier preparations have been creams (e.g. *Sudocrem*). However, the thick consistency of these products has prevented the secure application of adhesive dressings or tape; such products can also compromise the absorbency of dressings designed to actively prevent wound exudate from coming into contact with the skin (Bolton 2004).

Newer products that apply a thin coating of polymer to the skin appear to offer an advantage over traditional thicker barrier creams. These products provide an invisible layer that dries rapidly leaving the skin area with a protective coating. Manufacturers claim that these films last for up to 72 hours, do not make the skin greasy or compromise the application and adhesion of dressings. Certain products also claim to have water repellent properties (e.g. *LBF Barrier Cream* and *Cavilon*).

Careful inspection of the skin and deployment of prevention strategies, such as regular repositioning, are essential to protect intact skin. Specialists suggest that barrier creams and films are an important factor in skin protection. NICE have emphasised that barrier products are not an appropriate substitute for regular repositioning and clinical assessment.

How do barrier preparations work?

Barrier preparations protect the skin from harmful or irritant substances such as excessive moisture, wound exudate, urine or faeces. Traditional barrier preparations are formulated as a lipid and water emulsion containing a metal oxide (e.g. zinc oxide, titanium dioxide) or a silicone (e.g. dimethicone) that will block and repel moisture. These products can be greasy and may interfere with dressing retention. Examples include: zinc and castor oil ointment, *Conotrane Cream*, *Metanium Ointment*, *Morhulin Ointment*, *Siopel Barrier Cream*, *Sprilon Spray* and *Sudocrem Cream*.

Reducing the risk of skin damage

Skin stripping is painful for the patient and, if unchecked, will increase wound size, compromise the skin's natural barrier function and increase trans-epidermal water loss (TEWL). In addition, proteases in wound exudate can cause excoriation of the skin resulting in delayed wound healing, increased need for nursing intervention/ active wound management and adverse effects on the patient's quality of life.

Skin damage can also occur around stoma sites and in those who are incontinent of urine or faeces. Continuous contact with moisture can cause painful irritation of the skin, particularly in the more vulnerable. These superficial wounds produce high levels of exudate and may become easily infected. Damage to the surrounding skin can also occur due to sweating into skin folds such as axilla perineum, inflammatory creases and abdominal folds, for example in the obese or overweight.

There are many skin cleaners and barrier preparations available in the UK with little evidence to suggest that one preparation is significantly superior to another (Bliss 2005).

Local Product Evaluation

Lincolnshire Community Health Services have evaluated twelve products through the Community Nursing Teams in an attempt to identify those that are the most clinically effective and best value for money. The results of the evaluation are summarized in Appendix 1. As a result of this process, the following products are approved for use and are included in the *Lincolnshire Joint Formulary*:

Product	Evaluation performance	Product size	Product costs
<i>Proshield Plus Skin Protective Barrier Cream</i> (H&R Healthcare)	Performed well in all elements of the evaluation	115g	£9.84
<i>LBF Barrier Cream</i> (Clinimed Ltd)	Performed well particularly against the criteria of protection, comfort and drying on application	30g 100g	£3.39 £7.30
<i>Cavilon Durable Barrier Cream</i> (3M Healthcare Ltd)	Performed well on speed of drying, protection / excoriation from urine and reduced inflammation	28g 92g	£3.98 £8.12

Indications for use

Skin protectants or barrier preparations have been developed to minimise damage to the skin due to irritation caused by exudate, adhesive trauma, frictional forces and bodily fluids. Evidence has shown that chronic wound fluid has a negative effect on healing and can lead to further tissue breakdown.

Adherence of adhesives and dressing materials to the wound bed and peri-wound skin can also cause damage to newly formed cells. Clinical evaluations and case studies have shown that application of barrier products will protect against the skin stripping caused by repeated application and removal of adhesive dressings.

Additionally moisture lesions, moisture ulcers and incontinence associated dermatitis are all associated with skin damage caused by excessive moisture exposure (Ousey, 2012).

Specialists consider that barrier creams and films provide an important role in the protection of skin at risk from exposure to incontinence, wound fluids and adhesive dressing removal.

Traditional barrier creams, such as *Sudocrem*, have been widely used historically in the treatment of nappy rash and moist eczema. However these products have been shown to clog the skin and to compromise the effectiveness of certain dressings, such as hydrocolloids; in addition, they do not provide a sufficiently effective barrier to protect fragile skin.

In more recent years barrier films, such as *Cavilon No Sting Barrier Film Pump Spray*, *Proshield Plus Skin Protective Barrier Cream* and *LBF No Sting Barrier Film* have been developed in spray and wipe formulations. These products provide a skin barrier for ostomates and continence patients, but can also be used on peri-wound skin. Newer products provide a quick drying second skin with thin layers of polymers. As they are not greasy they should not interfere with dressings. *Proshield Plus* appears to be the only barrier product that can be applied as a barrier cream to both broken and intact skin.

The protective film produced by these products provides a breathable, transparent, protective film that usually lasts for approximately 72 hours. As the newer products are not petroleum based, they should not clog the skin, make it greasy or make application of adhesive dressings or tapes difficult.

Products that are silicon based also provide water repellent properties (e.g. *Cavilon Durable Barrier Cream*). Skin should be completely dry before application and the film should be completely dry before dressings, tapes or pads are applied.

Traditional barrier creams, such as emollients, can cause sensitisation reactions to specific ingredients in some individuals (i.e. due to arachis oil, sodium lauryl sulphate (SLS) etc) and should not be used as barrier protection. If used, they should be applied sparingly.

Conclusion

It is important to detect skin damage in the early stages as this allows for preventative measures to be put in place to inhibit further deterioration. There is currently no national guidance on the prevention and treatment of moisture lesions. NICE acknowledge the lack of robust evidence around all wound management treatments and advocate that dressing selection should be made after careful clinical assessment of the individual's wound and their clinical condition. In the absence of clinical evidence to guide product choice, prescribers should routinely choose the dressing with the lowest acquisition cost and the performance characteristics appropriate for the wound and its stage of healing'. Prescribers are asked to ensure that formulary approved product ranges are used as first preference.

Bibliography:

- Bianchi. J (2012) 'Top tips for identifying a moisture lesion' *Wound Essentials*. Vol 7 (2).
- Bliss. D.Z (2005) An economic evaluation of skin damage prevention regimes amongst home residents with incontinence: labour costs. *Journal Wound Ostomy Continence Nurse* 32 (supp3) 51.
- Flynn. D and Williams. S (2011) 'Barrier creams for skin breakdown'. *Nursing and Residential Care* 13 (11) page 553 – 558.
- Gray. M (2007) Incontinence related skin damage: essential knowledge. *Ostomy Wound Management* 53 (12) pg. 28 – 32.
- Harm Free Care – accessed via <http://harmfreecare.org>
- *MeRec Bulletin* (2010) *Evidence based prescribing of advanced wound dressings for chronic wounds in primary care* Vol 21.
- NHS Midlands and East (2012) '*Stop the Pressure*' *The NHS Midlands and East Pressure Ulcer Prevention Collaborative Programme. Getting Started Guide*.
- NHS Midlands and East – Learning to Stop the Pressure accessed via www.stopthepressure.com/learning .
- NICE (2012) *Clinical Guideline 139. Infection. Prevention and control of healthcare-associated infections in primary and community care*.
- NICE 2015 *Wound Care Products* accessed via www.nice.org.uk on 24th April, 2015.
- *Nursing Times* 17.07.12 / Vol 108 No 29 / www.nursingtimes.net page 14
- Yates. S (2012) 'Differentiating between pressure ulcers and moisture lesions'. *Wound Essentials*. Vol 7 (2).
- Wounds UK (2012) *Best Practice Statement Care of the Older Person's Skin*. 2nd Edition.
- *Wound Care Handbook* 2014 – 2015.

Appendix 1

CCG Annual Costs 2014 / 2015

Organisation	Product	Total number of items	Total Cost
Lincolnshire East CCG	All barrier products	19,525	£206,791.97
Lincolnshire West CCG	All barrier products	14,640	£144,844.27
South Lincolnshire CCG	All barrier products	13,430	£130,294.88
South West Lincolnshire CCG	All barrier products	8,246	£86,515.73
Lincolnshire Community Health Services	All barrier products	2,287	£22,386.89
Total across Lincolnshire		58,128	£590,833.74

The products that are prescribed most commonly across the county are *Cavilon Durable Barrier Cream* and *Proshield Plus Skin Protective Barrier Cream*

Appendix 2

List of Products Evaluated

Formulary products

Product name or range	Product and size	Cost
<i>Proshield Plus</i> (H & R Healthcare Ltd)	<i>Proshield Plus Skin Protective Barrier Cream</i> 115g	£9.65
<i>LBF</i> products (Clinimed Ltd)	<i>LBF Barrier Cream</i> 100g	£7.30
	<i>LBF Barrier Cream</i> 30 g	£3.39
	<i>LBF Barrier Cream</i> 20 x 2g sachets	£6.56 (33p per sachet)
	<i>LBF Sterile No Sting Barrier Film Foam Applicator</i> 1ml (5)	£3.78 (76p per applicator)
	<i>LBF Sterile No Sting Barrier Film Foam Applicator</i> 2ml (5)	£5.01 (£1 per applicator)
<i>Cavilon</i> products (3M Healthcare Ltd)	<i>Cavilon Durable Barrier Cream</i> 92g	£8.12
	<i>Cavilon Durable Barrier Cream</i> 28g	£3.98
	<i>Cavilon Durable Barrier Cream</i> 20 x 2g sachets	£7.47 (37p per sachet)
	<i>Cavilon No Sting Barrier Film Foam Applicators</i> 1ml x 5	£5.00 (£1 per applicator)
	<i>Cavilon No Sting Barrier Film Foam Applicators</i> 3ml x 5	£8.03 (£1.61 per applicator)
	<i>Cavilon No Sting Barrier Film Pump Spray</i> 28ml	£6.70

Non-Formulary Products

Product name	Size	Cost
<i>Cavilon Barrier Cream with Honey</i> (3M Healthcare Ltd)	28g tube	£4.07
	92g tube	£8.28
	20 x 2g sachets	£7.47 (38p per sachet)
<i>Cutimed Protect</i> (BSN Medical)	<i>Cutimed Protect</i> Foam	£4.34 (87p per applicator)

Ltd)	Applicator (1ml x 5)	
	<i>Cutimed Protect Foam Applicator (3ml x 5)</i>	£6.99 (£1.40 per applicator)
	<i>Cutimed Protect Spray 28ml</i>	£5.15
	<i>Cutimed Protect Cream 28g</i>	£3.20
	<i>Cutimed Protect Cream 90g</i>	£6.10
Medi Derma-S (Medicare Plus International Ltd)	<i>Medi Derma-S Barrier Cream 28g</i>	£2.98
	<i>Medi Derma-S Barrier Cream 90g</i>	£5.95
	<i>Medi Derma-S Barrier Cream 20 x sachets</i>	£5.85 (30p per sachet)
	<i>Medi Derma-S Non-Sting Medical Barrier Film Applicators 1ml x 5</i>	£3.70 (74p per applicator)
	<i>Medi Derma-S Non-Sting Medical Barrier Film Applicators 3ml x 5</i>	£5.95 (£1.19 per applicator)
LaVera (Opus Healthcare)	<i>LaVera Barrier Cream 100g</i>	£10.33
	<i>LaVera Barrier Cream 30 x sachets</i>	£11.62 (39p per sachet)
Medihoney (Derma Sciences Europe Ltd)	<i>Medihoney Barrier Cream 50g</i>	£4.80
	<i>Medihoney Barrier Cream 20 x sachets</i>	£6.00 (30p per sachet)
Secura (Smith & Nephew Healthcare Ltd)	<i>Secura Foam Applicator 1ml x 5</i>	£4.11 (82p per applicator)
	<i>Secura Foam Applicator 3ml x 5</i>	£6.59 (£1.32 per applicator)
	<i>Secura Pump Spray 28ml</i>	£5.67
Sensi-Care (ConvaTec Ltd)	<i>Sensi-Care Sting Free Protective Skin Barrier Foam Applicator 5 x 1ml</i>	£4.43 (89p per applicator)
	<i>Sensi-Care Sting Free Protective Skin Barrier Foam Applicator 5 x 3ml</i>	£6.44 (£1.29 per applicator)
	<i>Sensi-Care Spray Barrier 28ml</i>	£5.50
SkinSafe (Opus Healthcare)	<i>SkinSafe Non Sting Protective Film Spray 50ml</i>	£11.84
Sorbaderm (Aspen Medical Europe Ltd)	<i>Sorbaderm Barrier Cream 28g</i>	£3.56
	<i>Sorbaderm Barrier Cream 92g</i>	£7.19
	<i>Sorbaderm Barrier Cream 2g sachets x 20</i>	£6.66 (34p per sachet)
	<i>Sorbaderm No-Sting Barrier Film Spray 28ml</i>	£5.99
	<i>Sorbaderm No-Sting Barrier Film Foam Applicator 1ml x 5</i>	£4.45 (89p per applicator)
	<i>Sorbaderm No-Sting Barrier Film Foam Applicator 3ml x 5</i>	£7.20 (£1.44 per applicator)
Superskin Barrier Film (Advanced Medical Solutions)	10 x Sachets	£7.98 (80p per sachet)

Appendix 3

Evaluation Results

<u>Product</u>	<u>Overall performance</u>	<u>Comments</u>
<u>Barrier Creams</u>		
<i>Proshield Plus Skin Protective Barrier Cream</i>	90%	Performed well in all elements
<i>LBF Barrier Cream</i>	80%	Performed well on comfort and protection. Dries well on application.
<i>Cavilon Durable Barrier Cream</i>	78%	
<i>Secura</i>	71%	Performed well on comfort and resistance to washing
<i>Cutimed Protect Cream</i>	70%	Performed well with speed of drying, comfort and protection
<i>LaVera Barrier Cream</i>	<50%	Scored poorly on all elements
<u>Barrier Creams with Honey</u>		
<i>Medihoney Barrier Cream</i>	83%	Performed well on moisturising and reducing inflammation
<i>Cavilon Barrier Cream with Honey</i>	90%	Performed well on speed of drying, protection and excoriation
<u>Barrier film spray / wipes / wands</u>		
<i>Cutimed protect</i>	93%	Scored highly in protection, comfort, drying on application and resistance to washing
<i>LBF spray</i>	85%	Scored highly for comfort on application, speed of drying, protection and resistance to washing off.
<i>Cavilon</i>	80%	
<i>Secura</i>	70%	Scored highly on comfort on application, protection and resistance to washing
<i>Derma S</i>	66%	Discomfort on application. Poor speed of drying

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