

Total Barrier Protection: protecting skin and budgets using a structured moisture damage treatment strategy

KEY WORDS

- ▶ Moisture-associated skin damage
- ▶ Product misuse
- ▶ Structured skin care regimen
- ▶ Total Barrier Protection

Moisture-associated skin damage occurs as a result of prolonged exposure to irritants such as urine, stool, perspiration and exudate. A considerable amount of money is spent on skin protectants in the UK, with a wide range of products available, and clinicians must understand the multiple indications, contraindications and guidelines for product usage. However, gaps in knowledge can lead to misuse, such as unnecessary application of expensive or contraindicated products, adding to ever-increasing budget pressures. This article discusses Total Barrier Protection, a moisture damage treatment strategy that aims to ensure patients consistently receive the right skin care at the right time.

Within today's NHS, the challenge of balancing increasingly limited resources with patient needs is well recognised. The considerable impact that variable care quality has on outcomes and budgets has been noted within the strategic NHS Five Year Forward View document (NHS, 2014), alongside a call for investment in long-term collaborative relationships rather than unconnected 'episodes' of care. One strategy to achieve this is encouraging models of care that offer choice to end-users from a small number of options, backed up by resources and guidance to support consistent implementation.

The principles of the NHS Five Year Forward View can be applied on a smaller scale within wound management and skin care. Research has highlighted a lack of implementation of structured regimens and misuse of product resources, which compromises prevention efforts and therefore costs and patient outcomes (Doughty et al, 2012). One area of concern is the long-term prevention and management of moisture-associated skin damage (MASD), which encapsulates a range of conditions resulting from prolonged exposure to moisture, including wound exudate, faecal or urinary incontinence, and perspiration (Dowsett and Allen, 2013).

This paper discusses Total Barrier Protection, a moisture damage treatment strategy that intends to restore the balance between meeting patient needs and managing budgets by simplifying product

choice, reducing inappropriate and incorrect product usage and issuing clear guidance and support for consistent implementation.

THE HIGH COST OF MASD

In terms of financial cost, according to Prescription Cost Analysis data (PCA, 2015) there is a considerable annual spend on skin protectants in the UK (Table 1), incorporating skin protectant ointments, barrier creams, films, and medical adhesive removers.

Moreover, MASD has high prevalence and incidence rates (Bliss et al, 2006; Borchert et al, 2010; Gray et al, 2012; Campbell et al, 2014), and poses a considerable burden to patients' quality of life (Doughty et al, 2012). Patients can experience pain and discomfort, including itching, burning or tingling in the affected area; a worsening in frequency and quantity of soiling; a disruption

Table 1. UK market overview for skin care products (community) (PCA, 2014)

Product type	Community market (net turnover)	No. of units
Skin protectants and ointments	£6,575,120	744,722
Barrier creams and films	£27,517,589	14,343,518
Medical adhesive removers	£15,992,620	9,120,946
Total	£43,510,209	24,209,186

MARIA HUGHES
Tissue Viability Lead Specialist
Nurse/Queen's Nurse

in daily activities; an inability to sleep (Bartlett et al, 2009; Minassian et al, 2013); and increased susceptibility to secondary infections such as candidiasis (Campbell et al, 2014). In addition, incontinence — one form of MASD — is a major risk factor in the development of pressure ulcers (Beeckman et al, 2014), which can incur high treatment costs and lead to extended hospital stays (Demarre et al, 2015).

THE PROBLEMS WITH EFFECTIVE SKIN CARE PROVISION

To determine an appropriate moisture damage treatment strategy, clinicians must first conduct careful patient and skin assessment to identify the cause of damage (Dowsett and Allen, 2013). An appropriate prevention and management strategy then incorporates the following:

- ▶ Adoption of a structured skin care regimen — cleanse the skin to remove the irritant, protect the skin to avoid or minimise further exposure, and restore the skin to support and maintain skin barrier function (Beeckman et al, 2015)
- ▶ Use products to absorb or keep moisture away from the skin
- ▶ Control the cause of excessive moisture
- ▶ Treat any secondary infection (Dowsett and Allen, 2011).

A number of products, indications, contraindications and guidelines for usage must be considered in making a suitable choice of treatment strategy. However, while a wide range of products are available, this diversity can make it difficult for a clinician to select an optimal product based on the severity of damage, moisture source or presence of complications (Doughty et al, 2012). Indeed, while many hospitals have protocols and procedures in place, such strategies are often not implemented correctly or at all; it is common to see multiple skin care products at the bedside, with inconsistencies in practice, overuse or misuse of products, and undue expense commonplace (Nix, 2000).

A recent case study of one hospitalised patient encapsulated some of the problems that exist within the skin barrier product market — on the 23rd day of his hospital stay, it was reported that more than a dozen skin care products were being used (including lotions, soaps, foams, and powders) (Brunner et al, 2012).

A literature review has previously been conducted to determine the extent to which 76 perineal skin care protocols were consistent with WOCN Society Practice Guidelines and estimate levels of compliance related to the use of protective perineal skin barriers to prevent skin breakdown (Nix and Ermer-Sultan, 2004). The literature review and discussion supported the following statements:

- ▶ Protocols and procedures supporting evidence-based interventions for various conditions are available; however, many of these are incomplete and under- or incorrect utilisation of skin barrier products is common
- ▶ Adherence to protocols (or lack thereof) is often a direct result of caregiver understanding; as such, systematic staff education in basic skin care, product use, and incontinence management is important
- ▶ Compliance may be improved if users accept and like given products, and usage may be more consistent where products combine steps and are easy to use* (*NB: There are some limitations to this study: sample size; sampling method; scope of data.)

It is not surprising that where there are deficits in knowledge and clinical evidence, product selection is a challenge. However, such deficiencies can lead to poor patient outcomes, as well as safety and cost implications: ongoing product misuse or incorrect application of a particular product may unnecessarily prolong skin damage, and use of expensive products that may not actually be indicated for the given level of skin damage can be costly for healthcare systems (Doughty et al, 2012). A standardised model is needed to tackle this, that offers a consistent, simple choice of products supported by guidance, that can be tailored to individual patient needs, as well as addressing budget issues. It is clear from *Table 1* that the market spend on skin care products is large; therefore, the potential for cost savings with such a model could be significant.

WHAT CAN BE DONE TO ADDRESS THESE SHORTCOMINGS?

The NHS Five-Year Forward View acknowledges that it has often operated via a ‘factory’ mode of care, with little community engagement, limited patient partnerships, and under-development

of advocacy regarding public health and wellbeing. The present focus is on harnessing the potential that positive improvements in patient outcomes could have locally and nationally in terms of public health, the future sustainability of the NHS, and wider economic prosperity. One important approach to this is targeted secondary prevention, which includes proactive primary care, improved use of evidence-based intervention strategies, and enhanced investment decisions; for example, in innovative treatment strategies that consider ways to improve patient safety and incur cost savings (NHS, 2014).

Thinking in particular about the problems with structured skin care management, a recent consensus gave a number of suggestions that could go some way to addressing the issues outlined above:

- » Provide clear guidance for the primary purpose of each product category (i.e. moisturisation or barrier protection, etc) and/or product

Box 1. Total Barrier Protection testimonial

A change that has positively impacted our budgets whilst maintaining patient safety

“The Tissue Viability Team at Buckinghamshire Healthcare Trust undertook an evaluation of barrier products last year prompted by both a continuing rise in usage and associated costs. We wanted a like-for-like range, so both a cream and film to still be available, as both were used widely across our acute areas and community. Following our evaluations, we opted to change to the Medi Derma-S range.

“Hospital spend is difficult to analyse but across our community teams this change has resulted in at least a £15,000 annual saving.”

Education was undertaken and posters given out by our local representative prior to the changeover, which went very smoothly. We have had no issues raised by staff, who all appear to be happy clinically with the change in product.

In our opinion, the products work well and, in fact, the film tends to dry slightly quicker than our previous brand. We used the barrier film very successfully on a baby in our neonatal intensive care unit with moisture-related skin damage to her face; this worked quickly and her mother was very impressed!

Julie Sturges

Tissue Viability Lead Nurse, Buckinghamshire Healthcare NHS Trust

Figure 1. The Total Barrier Protection Wheel

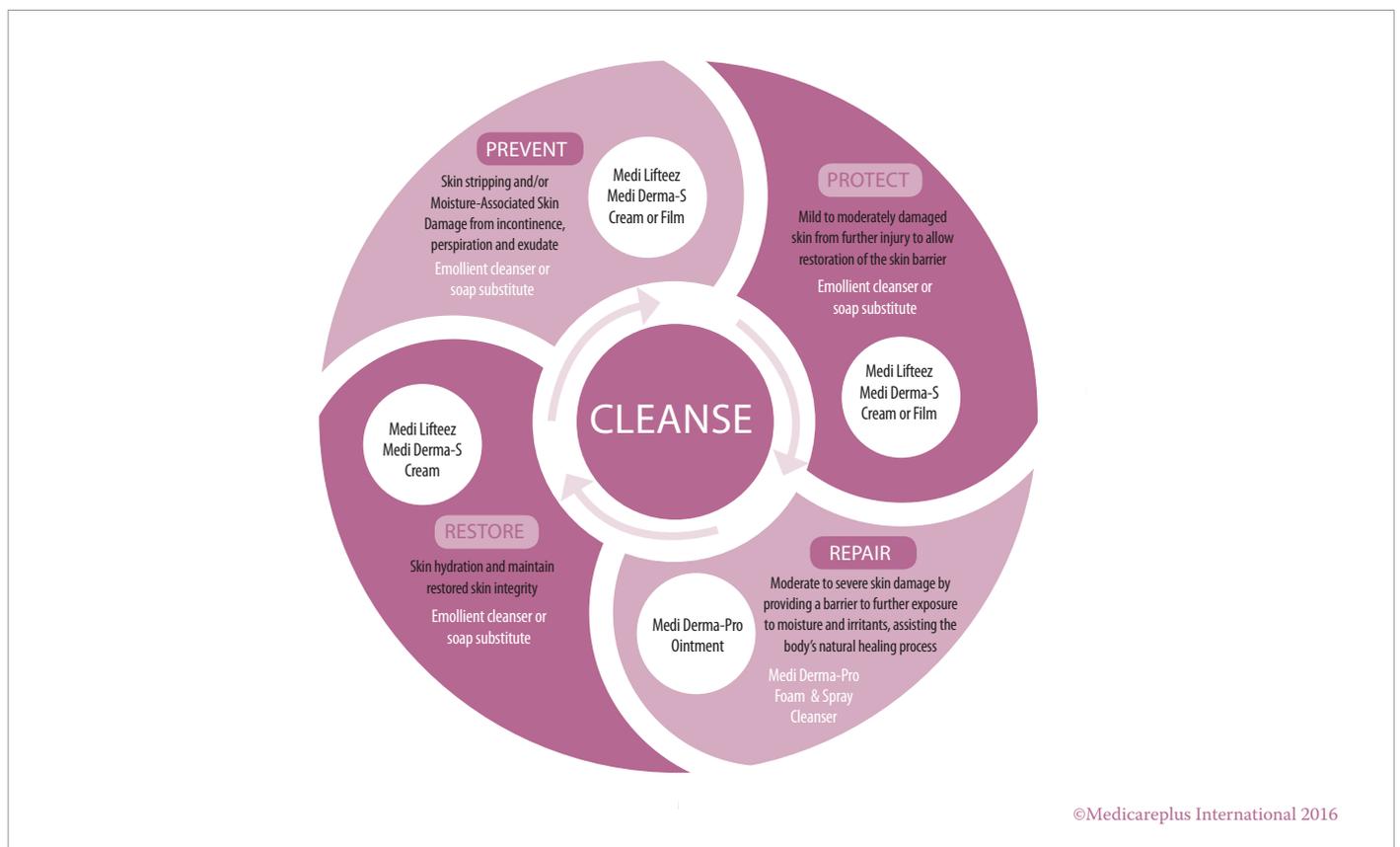


Table 2. Step-by-step guide to use of Total Barrier Protection for Prevention, Protection, Repair and Restoration of skin damage

For prevention	For protection		For repair	For restoration
Of skin stripping and/or moisture-associated skin damage from incontinence, wound exudate or perspiration	Of mild skin damage from incontinence	Of moderate skin damage from incontinence; mild-to-moderate skin damage from perspiration; and erythema +/- excoriation +/- maceration from wound exudate	Of severe skin damage from incontinence or perspiration	Of skin hydration and to maintain restored skin
<ul style="list-style-type: none"> » First, it may be appropriate to remove any adhesive dressings or pouches using Lifteez medical adhesive remover to prevent any skin trauma or pain, particularly on skin being exposed to moisture » Following this, cleanse with an emollient cleanser or soap substitute then use Medi Derma-S Barrier Cream or Medi Derma-S Barrier Film for exudate and perspiration (cream is not recommended in these instances) 	<ul style="list-style-type: none"> » First, it may be appropriate to remove any adhesive dressings or pouches using Lifteez medical adhesive remover to prevent any skin trauma or pain, particularly on skin already damaged by moisture » Following this, cleanse with an emollient cleanser or soap substitute, then use Medi Derma-S Barrier Cream 	<ul style="list-style-type: none"> » First, it may be appropriate to remove any adhesive dressings or pouches using Lifteez medical adhesive remover to prevent any skin trauma or pain, particularly on skin already damaged by moisture » Following this, cleanse with an emollient cleanser or soap substitute then use Medi Derma-S Barrier Film 	<ul style="list-style-type: none"> » First, cleanse with Medi Derma-Pro Foam & Spray Cleanser then use Medi Derma-Pro Skin Protectant Ointment 	<ul style="list-style-type: none"> » First, it may be appropriate to remove any adhesive dressings or pouches using Lifteez medical adhesive remover to prevent any repeated skin trauma or pain, particularly on skin being exposed to moisture. » Following this, cleanse with an emollient cleanser or soap substitute, then use Medi Derma-S Barrier Cream or an emollient, depending on if there is continued exposure to moisture

ingredients to support clinician choice

- » Create a scale for determining when certain products should be used (much like the SPF factor used to indicate level of protection for a sunscreen product)
- » Provide labelling that indicates degree of efficacy/protection
- » Provide clearly defined, evidence-based guidelines or algorithms that promote appropriate clinical decision-making (Doughty et al, 2012).

INTRODUCTION TO TOTAL BARRIER PROTECTION

Total Barrier Protection (Medicareplus International) is a moisture-damage treatment strategy that prevents, protects, repairs and restores skin integrity

(Figure 1). This strategy has been designed:

- » To ensure patients are receiving the most appropriate product at a given time
- » To protect against misuse and drive efficiency savings
- » To be easy to implement for all caregivers
- » To be easy to roll out with support and education materials.

The range incorporates Medi Derma-S Barrier Cream, Medi Derma-S Barrier Film, Medi Derma-Pro Cleanser, Medi Derma-Pro Skin Protectant Ointment, and Medi Lifteez. These form a single, integrated range of products, delivered with clear guidance and rationale for when to use each item. Choosing the appropriate product requires understanding the intended aim for use of the Total Barrier

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Protection regimen, taking into account the type and severity of moisture exposure and level of damage to skin integrity (*Table 2*) (Medicareplus International, Data on File).

A number of published case studies support the role that Total Barrier Protection products have to play in protecting patients who are at risk of skin damage, preventing further skin breakdown, and preventing ongoing poor outcomes. For example, case study evidence from six patients with skin damage who used Medi Derma-S demonstrated: rapid and sustained improvement of the periwound skin; improved erythema and less bleeding from the surrounding skin; good ease of use, including quick drying time after application; improved dressing adhesion; and efficacy with just a small amount of product (Bianchi, 2013). In addition, recent data for Medi Derma-Pro further supports these findings, corroborating the clinical efficacy and cost-effectiveness of these products (Medicareplus International, 2016), and supporting the claim that implementation of a structured regimen such as Total Barrier Protection should be an essential part of a prevention and management toolkit for MASD.

Total Barrier Protection simplifies the choice of skin care products available, aims to reduce use of expensive products when they are not clinically necessary and prevent further deterioration in skin condition, enabling all levels of care provider to consistently implement a standardised regime (*Box 1*).

CONCLUSION

At present, there is a lack of implementation of structured regimens for the long-term prevention and management of MASD, with misuse of resources impacting on costs, patient care and clinical outcomes. As supported by NHS Five-Year Forward View, there is a need to focus on protecting both patients and budgets for the future, which can be achieved by providing an overall strategy that guides the choice of the right product for the right patient at the right time. Total Barrier Protection is an integrated, structured and defined strategy incorporating a range of skin care products that simplifies management of MASD and aims to

eliminate the existing barriers to high-quality care, thereby improving patient outcomes, reducing waste, and driving efficiencies and cost savings.



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