• Healing potential is significantly compromised in the critically ill and skin damage has the potential to create serious consequences such as infection\textsuperscript{1}

• Even minor skin injury can create discomfort and pain and add to patient suffering\textsuperscript{2,3,4}

• Skin damage constitutes a negative clinical outcome and a poor patient experience\textsuperscript{2}

• Strengthen your pressure injury prevention program and avoid costs associated with skin damage
Incontinence Associated Dermatitis (IAD) in Critical Care

Up to 95% of incontinent patients in ICU were found to have Incontinence Associated Dermatitis

Faecal incontinence and diarrhoea are a common problem in Intensive Care Units occurring in up to half of critically ill patients. The reasons include medications, lack of fibre in tube feeding formulas, physiological factors associated with stress, critical illness or disturbances in gut flora caused by antibiotics and antacids. Liquid stools are also associated with malabsorption and compromised nutrition, which has been associated with an increased likelihood of IAD in hospitalised patients. Faeces act as a direct chemical irritant to the skin and diarrhoea greatly increases the risk of skin damage and such exposure causes an irritant dermatitis. It can progress rapidly to complete loss of epidermis if the skin is left inadequately protected or faecal matter is not diverted. Microbial imbalance is also thought to occur with chronic wetness and faecal incontinence. Opportunistic fungal infection may occur, further increasing morbidity. In addition, pathogenic toxins, such as those resulting from Clostridium difficile increase the risk for secondary infections and skin damage.

Understanding and Assessing Risk of IAD

<table>
<thead>
<tr>
<th>Less Risk/Severity of Damage</th>
<th>Greater Risk/Severity of Damage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urinary Incontinence</td>
<td>Mixed Incontinence (Faecal and urinary)</td>
</tr>
<tr>
<td>Infrequent episodes</td>
<td>Frequent or continuous episodes</td>
</tr>
<tr>
<td>Skin intact, healthy</td>
<td>Skin damage present</td>
</tr>
<tr>
<td>Prompt and effective skin care after incontinence episode</td>
<td>Infrequent or inadequate skin care</td>
</tr>
</tbody>
</table>

In addition, pathogenic toxins, such as those resulting from Clostridium difficile increase the risk for secondary infections and skin damage.
Identify the RISK!

Pan Pacific Clinical Practice Guideline for the Prevention and Management of Pressure Injury, (2012) states that an imperative in the prevention of pressure injuries is the assessment and identification of patients at risk and implementation of an individualised prevention plan.13

A risk factor is any factor that either contributes to increased exposure of the skin to excessive pressure or diminishes the skin’s tolerance to pressure.

Moisture, friction and shear are identified extrinsic risk factors.13

**Moisture** – Moisture alters resilience of the epidermis to external forces by causing maceration, particularly when the skin is exposed for prolonged periods. Moisture can occur due to incontinence, wound exudate and perspiration. Some forms of moisture, particularly incontinence, create added risk by exposing the skin to a more alkaline pH which increases enzymatic activity, irritation, potential skin erosion and risk of secondary infection. Wet skin is more likely to sustain mechanical damage from friction.

**Friction** – A mechanical force that occurs when two surfaces move across one another, creating resistance between the skin and contact surface, that leads to shear.

**Shear** – A mechanical force created from a parallel load that causes the body to slide against resistance between the skin and a contact surface. The outer layers of the skin remain stationary while deep facia moves with the skeleton creating distortion in the blood vessels and lymphatic system between the dermis and deep facia. This leads to thrombosis and capillary occlusion.

**Patients with faecal incontinence are 22x more likely to develop a Pressure Injury**14
Differentiation Between Pressure Injuries and Moisture Lesions\textsuperscript{15}

The assessment of IAD, including risk assessment and differentiation from other forms of skin damage such as pressure injuries or skin tears, remains a challenge for both expert and non-specialty nurses.\textsuperscript{11} The most clinically relevant argument for differentiating IAD versus pressure injury is the impact of accurate prevention and treatment.\textsuperscript{11}

<table>
<thead>
<tr>
<th>Location</th>
<th>Moisture Lesions</th>
<th>A combination of moisture and friction may cause moisture lesions in skin folds, but most commonly they are present in the anal cleft.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pressure Ulcers</td>
<td>A pressure ulcer is most likely to occur over a bony prominence.</td>
</tr>
<tr>
<td>Shape</td>
<td>Moisture Lesions</td>
<td>Diffuse, different superficial spots are more likely to be moisture lesions. In a kissing ulcer (copy lesion) at least one of the wounds is most likely caused by moisture.</td>
</tr>
<tr>
<td></td>
<td>Pressure Ulcers</td>
<td>Circular wounds or wounds with a regular shape are most likely pressure ulcers, however, the possibility of friction injury has to be excluded.</td>
</tr>
<tr>
<td>Depth</td>
<td>Moisture Lesions</td>
<td>Moisture lesions are superficial (partial thickness skin loss). In cases where the moisture lesion gets infected, the depth and extent of the lesion can be enlarged.</td>
</tr>
<tr>
<td></td>
<td>Pressure Ulcers</td>
<td>Pressure ulcers vary in depth depending on classification.</td>
</tr>
<tr>
<td>Necrosis</td>
<td>Moisture Lesions</td>
<td>There is no necrosis in a moisture lesion.</td>
</tr>
<tr>
<td></td>
<td>Pressure Ulcers</td>
<td>A black necrotic scab on a bony prominence is a pressure ulcer classification 3 or 4.</td>
</tr>
<tr>
<td>Edges</td>
<td>Moisture Lesions</td>
<td>Moisture lesions often have diffuse or irregular edges.</td>
</tr>
<tr>
<td></td>
<td>Pressure Ulcers</td>
<td>If the edges are distinct, the lesion is most likely to be a pressure ulcer.</td>
</tr>
<tr>
<td>Colour</td>
<td>Moisture Lesions</td>
<td>If redness is not uniformly distributed, the lesion is likely to be a moisture lesion.</td>
</tr>
<tr>
<td></td>
<td>Pressure Ulcers</td>
<td>If redness is non-blanchable, this is most likely a pressure ulcer. For people with darkly pigmented skin, persistent redness may manifest as blue or purple.</td>
</tr>
</tbody>
</table>

Defloor T., et al, Differentiation between pressure ulcers and moisture lesions, European Pressure Ulcer Advisory Panel Reviews, Volume 6, issue 3, 2005.\textsuperscript{15}
Factors Associated with Increased Risk of Pressure Injury$^{13}$


Meeting the Standards

Governments across Australia and New Zealand are looking at the implementation of safety and quality initiatives to improve the quality of healthcare. An example of this is Standard 8: Preventing and Managing Pressure Injuries from the National Safety and Quality Health Service Standards, (2011).$^{16}$

Standard 8 requires health service organisations to have governance structures and systems in place for the prevention and management of pressure injuries, in particular:

- Developing and implementing policies, procedures and/or protocols that are based on current best practice guidelines, (Standard 8.1)
- Undertaking quality improvement activities to address safety risks and monitoring the systems that prevent and manage pressure injuries, (Standard 8.3)
- Conducting a comprehensive skin inspection in timeframes set by best practice guidelines on patients with a high risk of developing pressure injuries at presentation, regularly as clinically indicated during a patient’s admission and before discharge (Standard 8.6)
- Implementing and monitoring pressure injury prevention plans and reviewing when clinically indicated (Standard 8.7)
Prevention Makes Sense!

Findings from a study that looked at the time to develop, the severity and the risk factors of Incontinence Associated Dermatitis (IAD) amongst critically ill patients with faecal incontinence encouraged critical care nurses to institute a defined skin care regimen for prevention and treatment of IAD for patients with faecal incontinence.9

Early monitoring and prevention of IAD, especially in patients with diminished cognition or with frequent leakage of loose or liquid faeces, are recommended to promote skin health.9

A consistently applied, defined, or structured skin care regimen is recommended for prevention and treatment of IAD.11

Assess for IAD risk when performing your pressure injury risk assessment.

Create and Implement an Effective Skin Damage Prevention Protocol with Cavilon No Sting Barrier Film

Cavilon No Sting Barrier Film is an alcohol-free moisture barrier that forms a waterproof, flexible coating to protect the skin from body fluids, adhesives and friction. It is breathable and transparent allowing for continuous visualisation and monitoring of skin. It is flexible and conforms to the skin during movement or position changes.

Cavilon No Sting Barrier Film is:
- Fragrance-free, preservative-free and latex free17
- Hypoallergenic17
- Non-cytotoxic17 - can be used on intact and damaged skin
- Cost effective4,18
- Compatible with chlorhexidine gluconate (CHG) and povidone iodine - will not interfere with antimicrobial preps used for patient bathing or at infusion sites

In one simple application, it can help you prevent IAD, damage due to friction, moisture and adhesive trauma.
Cavilon No Sting Barrier Film is versatile and meets the multiple skin protection needs in critical care patients.
Application of Cavilon No Sting Barrier Film

When used to protect the skin from incontinence in the critical care setting
reapply every 24 hours - For patients at higher risk of skin damage (e.g. constant diarrhoea stooling) more frequent applications (every 12 hours) may be necessary.

When used to protect skin from adhesive dressings, tapes or devices
reapply each time the dressing and/or adhesive product is changed.

When used for other skin protection needs such as peritube or periwound protection
reapply every 24 hours or as needed.

Ordering Information

<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Product</th>
<th>Size</th>
<th>Items/Box</th>
<th>Boxes/Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>3343</td>
<td>3M™ Cavilon™ No Sting Barrier Film Covers a 15cm x 15cm area</td>
<td>1.0mL wand</td>
<td>25</td>
<td>4</td>
</tr>
<tr>
<td>3344E</td>
<td>3M™ Cavilon™ No Sting Barrier Film Covers a 12.5cm x 12.5cm area (Australia Only)</td>
<td>1.0mL wipe</td>
<td>30</td>
<td>6</td>
</tr>
<tr>
<td>3344</td>
<td>3M™ Cavilon™ No Sting Barrier Film Covers a 12.5cm x 12.5cm area (New Zealand Only)</td>
<td>1.0mL wipe</td>
<td>25</td>
<td>4</td>
</tr>
<tr>
<td>3345</td>
<td>3M™ Cavilon™ No Sting Barrier Film Covers a 25cm x 25cm area (Australia Only)</td>
<td>3.0mL wand</td>
<td>25</td>
<td>4</td>
</tr>
<tr>
<td>3346</td>
<td>3M™ Cavilon™ No Sting Barrier Film</td>
<td>28mL spray</td>
<td>12</td>
<td>1</td>
</tr>
</tbody>
</table>

Evidence based: there are over 70 pieces of clinical evidence supporting the efficacy and cost effectiveness of Cavilon No Sting Barrier Film for multiple clinical uses, including prevention of IAD. This represents more evidence than any other moisture barrier or barrier film.

With Cavilon No Sting Barrier Film you can be confident that you are providing evidence based care.

Resources that are available to you in critical care include ICU Protocols, Cavilon No Sting Barrier Film Clinical Evidence Summaries, Patient Product Application Sheets etc. These resources can be made available to you from your Critical & Chronic Care Solutions Division Territory Manager.

References

17. 3M Data on File.

Critical & Chronic Care Solutions Division
3M Australia Pty Limited
ABN 90 000 100 096
Building A, 1 Rivett Road
North Ryde NSW 2113
Phone 1300 363 878
www.Cavilon.com.au

Critical & Chronic Care Solutions Division
3M New Zealand Limited
94 Apollo Drive,
Rosendale 0632
Freephone 0800 80 81 82
www.Cavilon.co.nz

3M and Cavilon are trademarks of 3M. Please recycle. © 3M 2013. All rights reserved.