

# **Evaluation of Routine Use of an Alcohol-Free Barrier Film on Patients with Urinary and/or Fecal Incontinence**

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## Introduction

In acute care settings, fecal and urinary incontinence can lead to skin changes such as incontinence dermatitis, yeast infections and pressure ulcers. These complications are uncomfortable for the patients, and expensive for the health care system.

Incontinence dermatitis is thought to result from the interaction of several factors exacerbated by the occlusive environment of a brief or underpad. Moisture (urine), pH changes, and irritants (stool, or stool and urine) contribute to skin damage. Friction occurs as skin rubs against itself, bed linens or absorbent products, with wet skin being twice as likely to be damaged as dry skin.<sup>1</sup> Moisture and friction are also implicated as risk factors in pressure ulcer development. In order to prevent incontinence dermatitis, as well as mechanical damage, skin must be protected from moisture, irritants and friction.

Creams and ointments, and to a lesser degree, pastes are the most commonly used products for prevention of incontinence dermatitis. While traditionally considered effective, these formulations have significant limitations. Products vary markedly in ability to repel moisture and irritants.<sup>2</sup> They readily transfer off the skin compromising the absorbent interface of incontinence garments necessary for managing wetness. In addition, they do not relieve or reduce friction, and in some cases may actually adhere skin to the absorbent product.

For skin protection, the only alternative to moisture barriers is use of a barrier film. Barrier films apply a protective polymeric coating onto the skin by means of a solvent. The solvent then evaporates off upon application. The majority of film products utilize alcohol as a solvent and are unsuitable for incontinence skin care. A product containing a unique terpolymer and an alcohol-free solvent is available.\* It can be used on healthy, irritated or eroded skin as it is non-cytotoxic and allows painless application. It is also fast drying, making it practical for this indication.

## Background and Objective

In our acute care setting, incontinence skin care included application of barrier creams and ointments. These products were messy to use and interfered with patient cleanup. Also, we observed that they transferred to clothing, linens and briefs, leaving the skin unprotected. They must be applied at least 2–3 times during a 24-hour period. Maintaining this regimen was difficult for staff and not always followed, leading to more serious skin deterioration.

Treatment was often not started until after skin damage began. Multiple, partially-used tubes of product were often found at the bedside, generating excessive cost of care.

Taking a proactive approach, we wanted to evaluate the effectiveness of a novel protocol for preventative care. We were familiar with the performance of the alcohol-free barrier film from successful experiences with ostomy patients. Our objective was to demonstrate the clinical and cost-effective value of routine use of an alcohol-free film barrier for incontinence skin care.

## Method

A case series was conducted. Five patients (ages 50–80) who were considered to be at high risk for breakdown from incontinence were identified. Assessment of risk was based on expert clinical judgement. While Braden scores were obtained upon admission, they have been shown to lack predictive value for incontinence skin breakdown.<sup>3</sup> Patients with mixed incontinence of urine and feces, or frequent fecal incontinence have been shown to be at high risk and were included in this series.<sup>4,5</sup> All patients were bed-bound or mobility-impaired in some way. All patients had multiple medical problems.

A daily regime of cleansing with mild soap and water, followed by application of the alcohol-free barrier film was initiated. In addition, skin was cleansed after each incontinent episode. Care was performed by the general nursing staff. Patients were evaluated daily by the ET nurse.

## Findings and Conclusion

After five days, skin remained intact without signs of breakdown. Patient and family satisfaction was very positive. With a simplified regimen, we attained better compliance from the nursing staff. Materials and labor costs were reduced. This resulted in a change in practice at our hospital and the protocol described earlier has been initiated. This treatment is also included in our protocol for Stage II ulcers.

While many clinicians reserve this product for patients with skin breakdown, our findings demonstrated that the alcohol-free barrier film could be clinically and economically effective when used as part of a preventative protocol.

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**Patient 2** — 2/14/02 Initial assessment



**Patient 2** — 2/16/02 skin remains intact  
Note: Pink discoloration over sacrum represented healed pressure ulcer.



**Patient 3** — 2/14/02 Initial assessment



**Patient 3** — 2/18/02 skin remains intact



**Patient 5** — 3/6/02 Initial assessment



**Patient 5** — 3/9/02 skin remains intact

### **Incontinence Skin Care Protocol**

1. Cleanse daily and after every incontinent episode with mild soap and water.
2. Daily after cleansing, apply 3M™ Cavilon™ No Sting Barrier Film to perineal area.



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