# PREVENTION OF PERINEAL SKIN INJURY IN A HIGH RISK PATIENT

Kathy Schroeder, RN, BSN, Patrice Dillow, RN, CWOCN, APN, Carol Labanco, RN, Carol Joves, RN, Teresa Dreher, RN, CCRN,
Susan Yuhase, RN, CCRN, Nancy Scarpelli, RN, April Shaw, RN, CCRN
Midwestern Regional Medical Center, Cancer Treatment Centers of America, Zion, Illinois

## ABSTRACT

### Problem

Frequent stool in patients with multiple comorbidities and immobility places skin at high risk for breakdown.

### Rationale

The goal of patient-centered nursing care is to provide early interventions post-incontinent episodes to maintain intact perineal skin.

### Methodology

An unresponsive 43-year-old BF was admitted to ICU. Medical history included diabetes, malnutrition, pancreatitis and diarrhea for 2-3 weeks. Patient was cachectic, with severe hypoglycemia, low protein and albumin. Stool occurred every 3-4 hours and was MRSA positive. Initial assessment showed intact skin.

### Results

Patient was intubated, catheterized, nasogastric (NG) tube placed for nutrition therapy and anti-diarrheal medications started. Patient was in isolation on a specialty mattress. She remained unresponsive, requiring Q2 repositioning, physical therapy and frequent care for fecal incontinence. Due to persistent diarrhea, her cleansing regimen was changed on Day 3 to washcloths with rinse-free cleanser and 3% dimethicone skin protectant and maintained throughout hospitalization. Skin was still intact and no redness noted. Patient was extubated and transferred to the medical unit on Day 6. She continued to have frequent (3 to 4 times per day) loose stools. Diapers were utilized for fecal containment. Due to Contact Isolation, frequent checking and cleaning of the patient was challenging, but the patient maintained intact skin with no redness until discharge on Day 10.

### Conclusion

Despite the patient's high risk for skin breakdown and care challenges, the washcloth with skin protectant regimen resulted in the maintenance of intact skin.

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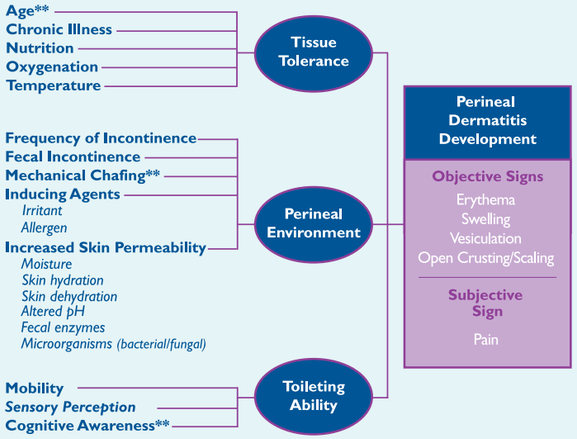
## INTRODUCTION

When patients present with multiple risk factors for skin breakdown, aggressive and early intervention can be key to preventing unfavorable skin outcomes.

There are many tools available to assist clinicians in early identification of those patients at risk for pressure ulcer development. The Braden scale is one of the most commonly used tools to score patients risk for pressure ulcers. The Braden scale does not, however, measure and provide assessment for those patients at risk for perineal dermatitis associated with incontinence.[1]

FIGURE 1: Validated Conceptual Model of Perineal Dermatitis*,1




* Items in italic were not measured in this study
** Evidence inconclusive
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Although no risk assessment tool for perineal dermatitis is currently available, Brown and Sears developed and validated a conceptual framework which identifies factors that may play a role in the development of perineal dermatitis (Figure 1).[1,2]

TABLE 1: Skin Breakdown[6]

**Q: Are all "Ulcers" Pressure Ulcers?**

**A: No. Skin breakdown may be caused by a variety of reasons including:**

- **Trauma** *(for example, skin tears)*
- **Moisture** *(excoriation and maceration)*
- **Arterial Insufficiency** *(arterial ulcers)*
- **Venous Insufficiency** *(venous ulcers)*
- **Diabetic Neuropathy** *(diabetic or neuropathic foot ulcers).*

Gray also presents a guideline for the presumed risk factors associated with perineal dermatitis which does correlate with some of the risk factors found in pressure ulcer assessment tools.[3]

Many patients will be at risk for multiple skin injuries (Table 1) including pressure ulcers and perineal dermatitis. Therefore, a review of co-morbidities as well as the risk factors for both should be considered (Table 2 & 3). Once established, those patients at risk for one or multiple skin injuries can benefit from early and consistent intervention.[4]

Those patients on contact isolation present an additional challenge for healthcare workers. A study from the University of Toronto Department of Medicine, which examined the quality of medical care received by patients isolated for infection control (MRSA), found that those patients were twice as likely as control patients to experience adverse events during their hospitalization.[5]

Patients on isolation suffering from frequent episodes of fecal incontinence should be managed very closely. Containment devices such as under-pads and briefs should be used only when frequent intervention (checking and cleaning of the patient) can occur.

TABLE 2

**Pressure Ulcer Risk Factors [7-9]**

- **Immobility**
- **Friction & Shearing**
- **Incontinence of urine or stool**
- **Poor nutritional status and hydration deficits**
- **Impaired Sensory Perception or Cognitive Impairment**
- **Co-morbid conditions & medications that affect quantity or quality of peripheral blood flow.**
- **Advanced Age**
- **History of prior Pressure Ulcer**

TABLE 3

**Perineal Dermatitis Presumed Risk Factors [3]**

- **Chronic exposure to moisture**
- **Fecal & urinary incontinence**
- **Use of a containment device**
- **Alkaline pH**
- **Overgrowth or infection with pathogens**
- **Friction**

The following case study presents a patient at risk for skin breakdown due to frequent fecal incontinence. The patient presented with additional risk factors and was positive for MRSA. The goal of the healthcare provider following a thorough risk assessment was to maintain skin integrity throughout the patient stay (in the ICU and on the medical unit) despite isolation precautions.

## METHODOLOGY

An unresponsive 43-year-old BF was admitted to MRMC with a diagnosis of malnutrition and wasting syndrome. The patient was placed on mechanical ventilation. Her medical history included diabetes, pancreatitis and diarrhea for 2-3 weeks. The patient was cachectic (87 lbs.) and admission labs showed a total protein of 5.8 (nl range 6.3 – 8.2) and albumin 2.7 (nl range 3.5 – 5.0). Stool cultures were positive for MRSA. The patient was incontinent with large, loose stools more than 6 times per day. Although patient had evidence of a healed coccyx pressure ulcer, the initial skin assessment showed intact skin without breakdown.

## CARE PLAN

Upon admission to the ICU, the patient was placed in isolation. A Foley catheter was inserted and a nasogastric (NG) tube placed for nutritional therapy. Liquid Immodium 2 mg through NG was ordered and administered after each bowel movement. The patient was placed on a specialty mattress (Plexus® P2500, Gaymar Industries, Orchard Park, NY). She was unresponsive during much of the hospitalization and required turning and repositioning Q2 hours, physical therapy, and frequent perineal care.

FIGURE 2: Day 3

Due to persistent diarrhea, perineal care with disposable washcloths premoistened with a rinse-free cleanser and 3% dimethicone skin protectant (Comfort Shield® Perineal Care Washcloths, Sage Products, Inc, Cary IL) was started on Day 3 of the patient's hospitalization (Figure 2).

## RESULTS

The patient continued to have frequent loose stools during her ICU stay. She was weaned from mechanical ventilation, extubated (Figure 3) and then transferred to the medical unit on Day 6. Patient's skin remained healthy and intact.

Care for the patient on the medical unit was a challenge due to isolation precautions and persistent stooling (3 or 4 times per day) through the remainder of her hospitalization (Figure 4). Adult briefs were used for fecal containment. Due to contact isolation, frequent checking and cleaning of the patient was challenging. However, the patient's skin integrity was maintained with no redness noted through the patient discharge on Day 10.

FIGURE 3: Day 6

## CONCLUSION

FIGURE 4: Day 8

Even those patients at greatest risk for skin breakdown due to fecal incontinence and other associated risk factors can have favorable outcomes if managed appropriately through proper skin care interventions.

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