# Case Study Evaluation of the Results of Incorporating the Use of an Adhesive Sacral Foam* Dressing with a Sodium Carboxymethylcellulose Wound Contact Layer in a Hospital's Pressure Ulcer Prevention Program

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## Purpose

To understand the performance of a foam dressing including a Sodium Carboxymethylcellulose wound contact layer with a border when used in the sacral area as part of a comprehensive pressure ulcer prevention protocol of care to protect intact skin against skin breakdown (Chart 1).

## Objectives:

- Describe the dressing performance related to protection of the sacral area on at risk patients.
- Describe the ability of the dressing to conform to the sacral area.
- Describe the nurse response to ease of dressing application and removal.


## Abstract

The prevention of pressure ulcers has become a national focus since they are both high-cost and high volume adverse events.[1,2] CMS has named this a preventable hospital acquired condition and no longer reimburses acute care facilities for this event. This can be financially devastating to the hospital. Pressure ulcer incidence is also included as a national indicator of excellence in nursing. Patient satisfaction scores will affect the reputation of the facility.

Hospital-generated benchmarks are an emerging arena. Therefore, pressure ulcer prevention is a high priority. Traditionally, we have been limited to prevention guidelines that include support surfaces, mobilization, positioning devices, incontinence management, skin care and nutritional support.[3]

Recently, studies have been done to show prevention of pressure ulcers to the sacrum with prophylactic use of a product applied to the sacrum to prevent pressure related injury. It is hypothesized that this occurs because it is reducing friction, shear and moisture to the sacral area as well as redistributing pressure.[4,5]

**A 6-patient case study evaluation was initiated to evaluate the performance of a foam dressing including a Sodium Carboxymethylcellulose (Na-CMC) Wound contact layer with an adhesive border. The patient selection included those at risk for sacral ulcer development and patients with altered skin integrity to the sacral area with concerns for deterioration.**


## Conclusion

The dressing performed well in conforming to the sacrum and being resistant to minor fecal and urinary incontinence.

Patients with existing alteration to skin integrity in the sacral area showed improvement.

The nurse response to the dressing application and removal as well as patient response during wear time was positive. Therefore our facility will move forward with incorporating this practice as part of our Pressure Ulcer Prevention program.


**References**

1. National Pressure Ulcer Advisory Panel & European Pressure Ulcer Advisory Panel. Prevention and treatment of pressure ulcers: clinical practice guideline. Washington DC: National Pressure Ulcer Advisory Panel; 2009.
2. Pieper, B. (Ed.) with the National Pressure Ulcer Advisory Panel (NPUAP). (2012). Pressure ulcers: Prevalence, incidence, and implications for the future. Washington, DC:NPUAP. ©2012
3. Wound Ostomy and Continence Nurses Society. (2010) Guideline for Prevention and Management of Pressure Ulcers. Mount Laurel, New Jersey, WOCN publication.
4. Bouten, C.V., Oomens, C. W., Baaijens, F.P., Bader, D.L., The etiology of pressure ulcers: skin deep or muscle bound? Archives of Physical Medicine and Rehabilitation, Volume 84, Issue 4. Pages 616-619, April 2003.
5. WCET Journal Volume 30 Number 1, January/March 2010. Tod Brindle, Outliers to the Braden Scale: Identifying High Risk ICU patients and the results of prophylactic dressing use.


## Case Example

Middle aged African American woman with uncontrollable DM, severe neuropathy to lower legs was admitted to the facility. She was bed bound and had both urinary and fecal incontinence. Scattered partial thickness skin loss due to moisture effects was noted on admission.



**Area on Admission**
Note open skin due to incontinence. Patient was increasingly immobile so the use of an adhesive sacral foam dressing with a Sodium Carboxymethylcellulose contact layer was initiated after thorough cleansing of the skin to remove barrier ointment residue.


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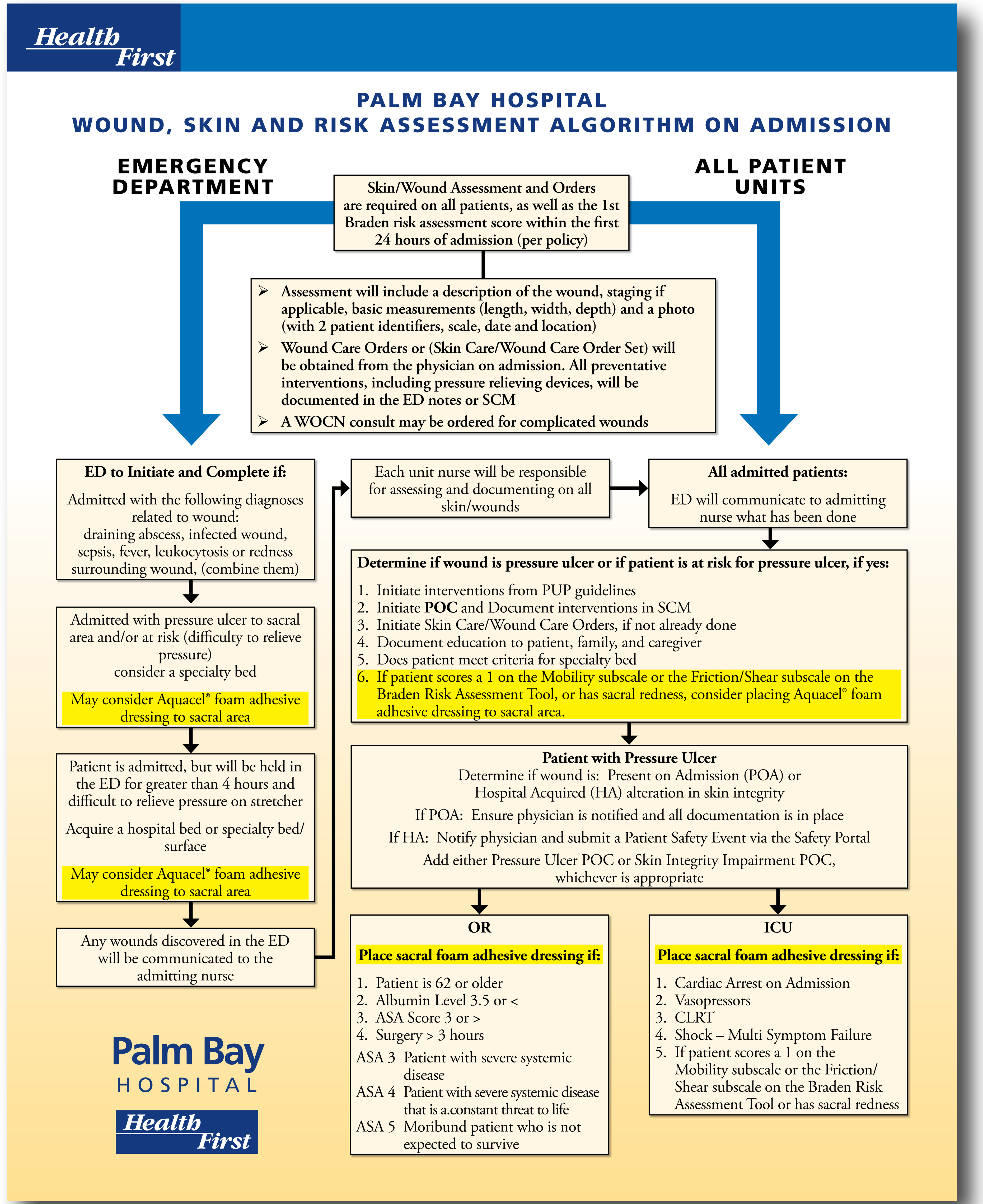
**1st Application**
Note off-center application to accommodate the location and size of the denuded areas. Careful removal of barrier ointment was crucial to success of dressing adhesion.



**Day 4**
Dressing was removed and epithelialization of all open areas is progressing. In addition, the surrounding skin is intact and protected.


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**Day 4**
The dressing was changed and a 7" x 7" square was used. We found both sizes worked well to cover and protect the area. The wound went on to heal completely.



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WOUND, SKIN AND RISK ASSESSMENT ALGORITHM ON ADMISSION
EMERGENCY DEPARTMENT
ALL PATIENT UNITS
Skin/Wound Assessment and Orders are required on all patients, as well as the 1st Braden risk assessment score within the first 24 hours of admission (per policy)
Assessment will include a description of the wound, staging if applicable, basic measurements (length, width, depth) and a photo (with 2 patient identifiers, scale, date and location)
Wound Care Orders or (Skin Care/Wound Care Order Set) will be obtained from the physician on admission. All preventative interventions, including pressure relieving devices, will be documented in the ED notes or SCM
A WOCN consult may be ordered for complicated wounds
ED to Initiate and Complete if:
Admitted with the following diagnoses related to wound: draining abscess, infected wound, sepsis, fever, leukocytosis or redness surrounding wound, (combine them)
Admitted with pressure ulcer to sacral area and/or at risk (difficulty to relieve pressure) consider a specialty bed
May consider Aquacel® foam adhesive dressing to sacral area
Patient is admitted, but will be held in the ED for greater than 4 hours and difficult to relieve pressure on stretcher
Acquire a hospital bed or specialty bed/surface
May consider Aquacel® foam adhesive dressing to sacral area
Any wounds discovered in the ED will be communicated to the admitting nurse
Each unit nurse will be responsible for assessing and documenting on all skin/wounds
All admitted patients:
ED will communicate to admitting nurse what has been done
Determine if wound is pressure ulcer or if patient is at risk for pressure ulcer, if yes:
1. Initiate interventions from PUP guidelines
2. Initiate POC and Document interventions in SCM
3. Initiate Skin Care/Wound Care Orders, if not already done
4. Document education to patient, family, and caregiver
5. Does patient meet criteria for specialty bed
6. If patient scores a 1 on the Mobility subscale or the Friction/Shear subscale on the Braden Risk Assessment Tool, or has sacral redness, consider placing Aquacel® foam adhesive dressing to sacral area.
Patient with Pressure Ulcer
Determine if wound is: Present on Admission (POA) or Hospital Acquired (HA) alteration in skin integrity
If POA: Ensure physician is notified and all documentation is in place
If HA: Notify physician and submit a Patient Safety Event via the Safety Portal
Add either Pressure Ulcer POC or Skin Integrity Impairment POC, whichever is appropriate
OR
Place sacral foam adhesive dressing if:
1. Patient is 62 or older
2. Albumin Level 3.5 or <
3. ASA Score 3 or >
4. Surgery > 3 hours
ASA 3 Patient with severe systemic disease
ASA 4 Patient with severe systemic disease that is a.constant threat to life
ASA 5 Moribund patient who is not expected to survive
ICU
Place sacral foam adhesive dressing if:
1. Cardiac Arrest on Admission
2. Vasopressors
3. CLRT
4. Shock – Multi Symptom Failure
5. If patient scores a 1 on the Mobility subscale or the Friction/Shear subscale on the Braden Risk Assessment Tool or has sacral redness
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Chart 1.

*AQUACEL® Foam dressing
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