

# Initiating Pressure Ulcer Prevention in the High Risk Population of the Emergency Department

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## Purpose

Pressure ulcers can develop in as little as 2 hours. The average length of stay in the Emergency Department (ED) is 3 hours and can be longer than 24 hours for some patients. The purpose of this descriptive, retrospective, chart review study was to describe the use of the Static Air Overlay (SAO) surface in three large metropolitan emergency departments (EDs). Specifically, our study was designed to describe: (1) the demographic characteristics of ED patients being placed on SAO surfaces; (2) whether patient placements on SAO surfaces meet the inclusion/ exclusion criteria; (3) whether correct and timely placement of patients on SAO surfaces occurs including the performance of a "hand check" of the device's proper inflation; (4) patients' length of stay (LOS) in the ED (M = 7.8 hours; range = 2.37 hours to 28.95 hours); (5) Braden Scale scores (M = 13.43; Range = 6 to 23); (6) their ED skin assessments; and their incidence and stages of pressure ulcers.

## Significance

Identifying patients at high risk for skin breakdown and implementing evidence-based prevention strategies are high priorities in the ED. Pressure ulcers are among the top three in-hospital "never events" that may lead to patient deaths. Patients with pressure ulcers experience 2-6 times the mortality than patients without pressure ulcers.

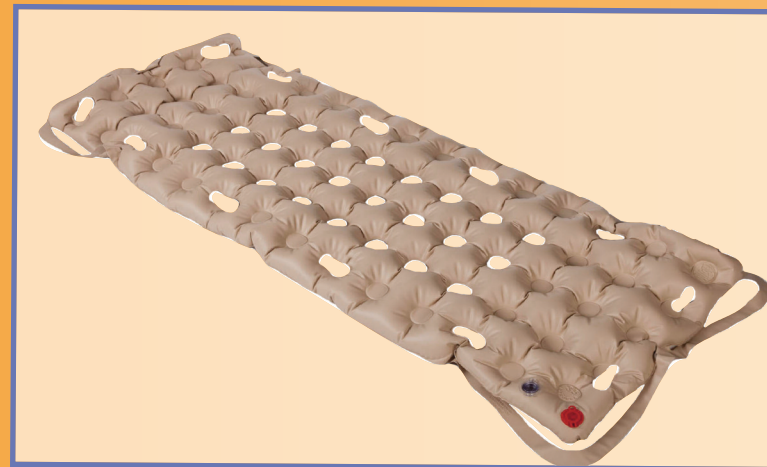
## Strategy & Implementation

Following an educational program for ED nurses, a data collection instrument was designed specifically for identifying ED patients at high risk of developing pressure ulcers. This educational program included such topics as: pressure ulcer prevention, skin assessment, use of the Braden Scale in the ED, and pressure ulcer staging. To accomplish the purpose of our IRB-approved research protocol, we used the resulting data collection instrument to collect chart data from ED patients who were placed on an SAO surface.

## Criteria for Placement

### Criteria for SAO Surface Placement

- Severe Malnutrition
- LOS  $\geq$  6 hours
- Bed Bound
- Paraplegia/Quadriplegia
- Existing or History of Pressure Ulcer(s)
- Patients Weighing > 600 pounds



## Implications for Practice

### Findings for 122 Patients Placed on SAO Surface

- 77 (63.1%) were Women; 45 (36.9%) were Men; Age Range: 19-100 years
- 122 (100%) met the Stated Criteria for being Placed on an SAO Surface
- 90 (73.8%) received Correct and Timely Placement on an SAO Surface
- 80 (71.4%) did received a "hand check;" 32 (28.6%) did not
- Length of Stay (LOS) in the ED: M = 7.8 hours (Range: 2.3 – 28.95 hours)
- 83 (68.03%) had Braden Scale Scores completed by ED Nurse
- Braden Scale Scores: M = 13.43 (Range: 6 – 23)
- 122 (100%) received Skin Assessments in the ED
- 121 (99.2%) Survived to be Admitted for Continued Care in the Hospital
- 4 (3.3%) Acquired Pressure Ulcers during their Hospitalization (1 Stage I; 2 Stage II; 1 Deep Tissue Injury (DTI))

### Most Common Admitting Diagnoses Were:

- Septicemia
- Urinary Tract Infection
- AC Diastolic Heart Failure



## Conclusion

All of the ED patients in our study who were placed on an SAO surface did meet the criteria for receiving this preventive intervention. All of these patients appropriately received skin assessments. Because just over 70% of our patients received a "hand check" for proper inflation of the SAO surface, greater vigilance seems warranted in routinely performing a "hand check." Finally, in spite of the preventive intervention of placing these patients on an SAO surface, just over 3% still developed pressure ulcers at some time during their continued care in the hospital.

## Future Research

Future research regarding the incidence of pressure ulcers as a clinical "never event" is needed. Assessment strategies and preventive interventions, including the use of SAO surfaces, should be studied further and quantified. A causal link between the use of SAO surfaces in the ED and pressure ulcer prevention is a desirable next step in planning for future research regarding this important nursing quality indicator.

## The Team

