Introduction

Erlanger is a level one regional trauma center located in Chattanooga, TN. Erlanger’s Certified Wound Ostomy and Continence nurses noted an increase in hospital acquired pressure ulcers in two consecutive prevalence audits in Trauma ICU patients 50% in April and 60% in October of 2013. It was found that a disproportionate number of trauma ICU patients were spending greater than three hours in the emergency department.

Problem

Trauma ICU patients are at higher risk for pressure ulcer development due to:

- Risks from care provided at the scene
- Transport and flight time
- Equipment
- Immobilization
- Hemodynamic instability
- Surgery Time
- Recovery Time

• Average Length of stay in the Emergency Department is greater than 2 hours while a pressure ulcer can develop within two.1

Proposal

With IRB approval for study design, our primary objective was to decrease hospital acquired pressure ulcers in trauma patients admitted through the emergency department and to determine if the application of an absorbent soft silicone self adherent bordered sacral foam dressing, and standard prevention measures would reduce sacral pressure ulcer (PU) incidence when compared to standard prevention measures alone among trauma patients admitted through the Emergency department.

Method

• Participants were selected by convenience sampling. There was no randomization of the intervention and control group.
  Thirty-four characteristic data points were collected on each patient.
  • 39 patients met criteria for Level I or Level II trauma classification and were enrolled in the intervention arm (received the absorbent soft silicone self adherent bordered sacral foam dressing in the Trauma bay of the Emergency Department)
  • 83 patients met criteria for Level I or Level II trauma classification and were enrolled in the control arm (did not receive the absorbent soft silicone self adherent bordered sacral foam dressing in the Trauma bay of the Emergency Department).
  • Subjects were assigned to the intervention or control arm based on an alternating weekly schedule for either the absorbent soft silicone self adherent bordered sacral foam dressing or standard of care.
  • Certified Wound Ostomy and Continence nurses physically observed the sacrum of the trial patients three times a week until they were discharged from the ICU or for a maximum of 30 days or until decreased.

Results

Pressure ulcer incidence rate for patients in the control arm who did not receive the absorbent soft silicone self adherent bordered sacral foam dressing, was 22.9% Those patients in the intervention arm receiving the absorbent soft silicone self adherent bordered sacral foam dressing had an incidence rate of 2.6%.

Discussion

The study was used to assist in formulating changes to the pressure ulcer quality initiatives and prevention protocols. Based on these results, the soft silicone self-adherent bordered sacral foam is now applied to all Level 1 Trauma patients in the Emergency Department and is now part of the ICU pressure ulcer prevention protocol. Additionally, the Certified Wound Ostomy and Continence nursing team recently implemented application of the foam dressing on high risk surgical patients.

Conclusion

Application of the of soft silicone self-adherent multilayered border foam dressing helped reduce sacral pressure ulcer incidence from 60% to below 3% in the Trauma Unit between October 2013 through November 2014.

Sacral Pressure Ulcer Prevention in Trauma Patients

Jackie Thul RN, BS, MA, CWOCN, Esli Valero BSN, RN • Erlanger Medical Center, Chattanooga, TN