Preventing Sacral Pressure Ulcer Development in the Surgical Patient Population

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INTRODUCTION

It is estimated that 23% of Hospital Acquired Pressure Ulcers (HAPU) are the result of the patient undergoing a surgical procedure[1]. Numerous factors place the surgical patient at greater risk for developing a HAPU: transfer shear, moisture, ambient room and body temperature, fluid-filled warming/cooling devices, patient's BMI and other comorbidities. However, the most significant factor is the amount of time a boney prominence, such as the sacrum, is exposed to pressure[2] . The majority of surgical patients are positioned in the supine position. This is the rational for this sacral pressure ulcer improvement project (IP).

LITERATURE REVIEW

As far back as 1959, researchers theorized a causal relationship between surgery and the development of post-surgical pressure ulcers (PU)[3] . Over the decades, numerous pressure-reducing devices have been used in one form or another to minimize pressure ulcers risks, such as air mattresses, viscoelastic foam, gels and/or a combination of the aforementioned. The devices had varying degrees of success and some devices actually increased PU risks[4] . Not all pressure ulcers can be prevented.

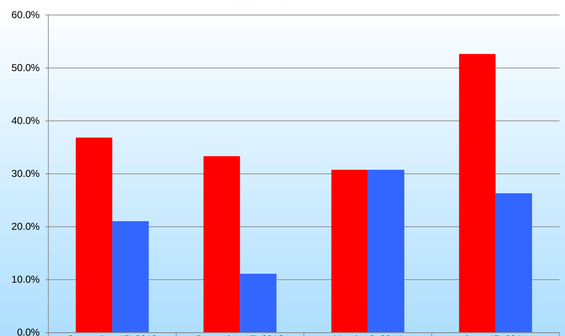
DISCUSSION

The average cost to treat one PU is $38,000 and even more staggering is approximately 60,000 deaths are attributed to PUs each year in the U.S. alone[5] .

Recent evidence-based practice research utilizing a silicone-foam dressing has shown promise in the prevention of PUs[2]. One academic medical center in the Southeast implemented this IP to evaluate the use of these dressings as a preventive measure at reducing PU incidence in its surgical patient population.

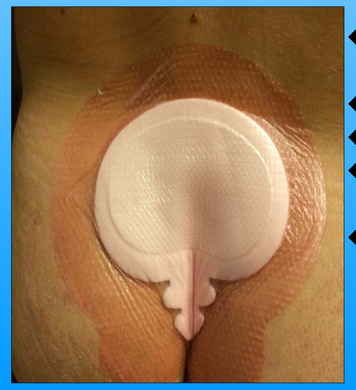
For this IP, all patients at the Ashley River Tower (ART) who were scheduled for a procedure lasting > 3 hours and in the supine position received a silicone hydrocellular foam sacral dressing. A preoperative and postoperative assessment tool was used to determine the clinical effectiveness of preventing erythema/skin breakdown over the sacrum. The tool rated the patients skin from intact thru Stage IV. The assessment also tracked the number of days the dressing was in place and ease of re-applying after daily routine skin assessments.

Pre-intervention: Percent of OR Patients with Hospital Acquired Pressure Ulcers at both the Main and ART OR's 2013-2014



	September 17, 2013	December 17, 2013	March 18, 2014	June 17, 2014
HAPU - All Sites	36.8%	33.3%	30.8%	52.6%
HAPU - Sacral	21.1%	11.1%	30.8%	26.3%

The silicone hydrocellular foam sacral dressing was implemented within the perioperative area as part of an overall PU prevention program. The silicone hydrocellular foam sacral dressing has numerous PU protective and preventative properties which can help prevent the development of PUs in the surgical patient[6]:



- Hyperabsorbent padding layer
- Pressure distribution
- Moisture/Shear protection
- Re-adherence after assessment
- Adherence average 4.5 days, providing protection post-procedure

CONCLUSION

During the IP 143 patients received the intervention. Of the 143 post-assessments, only one patient was noted to have a Stage I (persistent redness). Further research, to include random controlled trials, are needed to validate the efficacy of the dressing. However, initial evidence shows promise as a PU prevention technique.

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