Positive patient outcomes: The use of a new silicone adhesive hydrocellular foam dressing* for pressure ulcer prevention and treatment

Beth Clarke, RN, MSc(A), MBA, CWOCN

smith&nephew
ALLEVYN® LIFE

The problem

- Hospital Acquired Pressure Ulcers (HAPUs) are costly and preventable complications. Those reaching stage III or IV are considered "never events" and thus treatment costs are not reimbursed.
- The average direct and indirect costs associated with the treatment of hospital acquired stage IV pressure ulcers and their related complications were found to be $129,248 per ulcer.
- Bridgepoint Active Healthcare, a 470 bed hospital, has been challenged with a high average pressure ulcer prevalence rate of over 25% over the preceding 4 years.

The study

- ALLEVYN LIFE dressings were applied the coccyx, elbows and heels of patients in the Neurological care unit in addition to the existing pressure ulcer prevention protocol.
- ALLEVYN LIFE dressings were also utilised for treatment of pressure ulcers in the wound activation unit as part of the trial.

The results

- ALLEVYN Life dressings were deemed easy to apply and remove and stayed in place well even on challenging areas such as the heel and sacrum.
- Patients reported no pain upon application or removal.
- The wounds on which the dressings were used for treatment (n=6) decreased significantly in size during the trial period.
- Patients at high risk of skin damage due to friction and shear who had the dressing in place for prevention (n=9) did not exhibit any skin breakdown during the trial period.

Conclusion

- Both patients and staff were very positive about the dressing. The dressing was deemed a useful addition to a comprehensive pressure ulcer prevention program.

Positive patient outcomes: The use of a new silicone adhesive hydrocellular foam dressing* for pressure ulcer prevention and treatment

Beth Clarke, RN, MSc(A), MBA, CWOCN

The background and challenge

Pressure ulcers are a significant issue for patients across all care settings globally. Most hospital acquired pressure ulcers are preventable when effective risk assessment is matched with appropriate interventions. It is estimated that 2.5 million patients are treated for pressure ulcers and 60,000 patients die from complications due to facility-acquired pressure ulcers in the United States each year.[1] In 2008 the Center for Medicaid and Medicare Services announced that hospital-acquired stage III and IV pressure ulcers were considered "never events" and care for these ulcers would no longer be reimbursed.[2] The average direct and indirect costs associated with the treatment of hospital acquired stage 4 pressure ulcers and their related complications were found to be $129,248 per ulcer.[3] In addition to the monetary costs, pressure ulcers have a significant impact on an individual's physical and social function, self-care, and mobility which can negatively impact quality of life and cause additional complications such as pain, depression, infection, anemia, osteomyelitis, and sepsis.[4] Therefore, prevention, in addition to early intervention and efficient, cost effective treatment modalities is essential to minimize co-morbidities and ensuing costs.

Bridgepoint Active Healthcare is a 470-bed hospital located in the greater Toronto area which manages, delivers, researches and teaches leading healthcare practices so that people with complex health conditions can live better. This facility has been challenged with a high average pressure ulcer prevalence rate of 25% over the last four years. Multiple medical conditions and low Braden scores place the patients at especially high risk for pressure ulcer development.

The goals

- To reduce the incidence of pressure ulcers
- To effectively manage existing pressure ulcers

The intervention

A new silicone adhesive hydrocellular foam dressing was recently introduced to the facility. This dressing includes a super absorbent padding layer which allows for excellent locking of wound fluid, while redistributing pressure throughout the dressing. It also contains a masking layer to diminish visible strikethrough which supports patient dignity and reduces unnecessary dressing changes. The dressing was trialed on two hospital units. The neurological care unit evaluated the dressing on the coccyx, elbows and heels of 9 patients as an addition to the existing pressure ulcer prevention protocol. The medical activation unit evaluated the dressing on 6 patients for wound management.

Criteria such as ease of use, pain upon application and removal, ability to stay in place, and overall effectiveness were evaluated. See table for results.

Results

Nurses found that the new silicone foam dressing was very gentle on the skin and was extremely easy to apply and remove. The dressing fit the contours of the body well, and was able to stay in place for several days, even on challenging locations like heels, elbows and sacral areas. Patients reported that there was no pain upon application or removal.

The wounds on which the dressings were used for treatment, decreased significantly in size during the trial period.

Patients with low Braden scores and extremely high potential for skin damage due to friction and shear, who had the dressing in place for prevention, did not exhibit any skin breakdown during the trial period.

Pressure ulcer prevention – averages

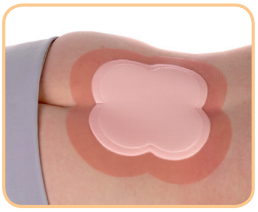
Criteria	Results
Braden score*	12.3
Ease of application**	4.7
Ease of removal**	4.7
Conformability to body contours**	4.5
Ability to remain adhered without rolling at edges**	4.5
Ease of reapplication after skin inspection**	4.2
Pain (scale of 0-10)	0.04
Average wear time	4.5 days
Skin condition	Intact

Wound management – averages

Criteria	Results
Ease of application**	4.9
Ease of removal**	4.9
Conformability to body contours**	4.8
Ability to remain adhered without rolling at edges**	4.7
Fluid management**	4.7
Appearance of wound**	4.9
Appearance of periwound skin**	4.8
Pain (scale of 0-10)	0.36
Average dressing wear time	3.1 days

*of those reported

**5=excellent 4=Very Good 3=Good 2=Fair 1=Poor



"This is the most comfortable dressing that I have ever had on!"

- Prevention patient

"The dressing made me feel confident enough that I could participate in activities without worrying about odor or leakage."

- Treatment patient

Conclusion

Both patents and staff were extremely positive about the dressing which was effective, in this patient population, for managing pressure ulcers, and as a useful addition to a comprehensive pressure ulcer prevention program.

References

1. Duncan, K. Preventing Pressure Ulcers: The Goal is Zero. The Joint Commission Journal of Quality and Patient Safety. 2007; 33(10): 605-610
2. Center for Medicare & Medicaid Services; 2008. Eliminating Serious, Preventable, and Costly Medical Errors – Never Events. http://www.cms.hhs.gov/apps/media/press/release.asp?Counter=1863
3. Brem, H., Maggi, J., Nierman, D., Rolnitzky, L., Bell, D., Rennert, R., Golinko, M., Yan, A., Lyder, C. & Bladeck, B. High Cost of Stage IV Pressure Ulcers. American Journal of Surgery. 2010 October; 200(4): 473-477
4. Franks PJ, Winterberg H, Moffatt CJ. Health-related quality of life and pressure ulceration assessment in patients treated in the community. Wound Repair Regeneration. 2002 May–June; 10(3):133–140

*ALLEVYN® Life Composite Hydrocellular Foam Dressing with Silicone Gel Adhesive – Smith & Nephew Wound Management Inc., St. Petersburg, FL

Poster presented at CAET 2013.

RA PVCE-04-0413-NAE