

CLINICAL AND ECONOMIC EVALUATION OF SELF-ADAPTIVE WOUND DRESSINGS

Data analysis of a three-month-long open label non-randomized evaluation of a new self-adaptive dressing for the local management of acute and chronic wounds

Randall D. Wolcott, MD; Victorina N. Fischenich, RN, MSN, GNP-BC, WCC

SOUTHWEST REGIONAL WOUND CARE CENTER, LUBBOCK, TX



OBJECTIVES

1. To provide clinical experience in clinical assessment of wound healing in acute and chronic wounds treated with a self-adaptive dressing.
2. To provide experience in determining economic effects of streamlining wound care dressing inventory to one dressing type as first line therapy for all wounds.

STATEMENT OF THE PROBLEM

Self-adaptive dressings are used for all types of wounds at any stage of healing.

METHODOLOGY

This was an open-label, non-randomized evaluation of a self-adaptive dressing newly introduced into the US wound care market. The study was conducted at one site. Study subjects were selected from the general population of patients with acute and chronic wounds admitted to Southwest Regional Wound Care Center.¹ Excluded were wounds with heavy arterial bleeding and patients with known allergic reactions to the dressing material components (synthetic polymers and/or polyurethane). Specific questions were asked to obtain the clinician perception of the product's performance characteristics.

RESULTS

1168 chronic and acute wounds had the self-adaptive dressing applied on 547 patients. Clinician perception of dressing's suitability for various wound types, ease of application, dressing absorbency, strike-through or leakage was assessed and recorded. Overall satisfaction and dressing preference were also assessed and recorded. Economic benefits were assessed based on the analysis of the dressing-related expenditures at the site.

CONCLUSION

The new self-adaptive dressing* was found to be suitable for wounds of any etiology, at any healing stage. The dressing was easy to apply, superior in absorbency and resulted in minimal incidence of strike-through or leakage. Overall patient and nurse satisfaction was high, with clinicians indicating they would prefer the self-adaptive dressing over other dressing types for treatment of chronic and acute wounds. Adoption of the new self-adaptive dressing resulted in reduction of the total number of primary dressing suppliers, primary dressing SKUs in the inventory and monthly spending both on primary dressings and on topical ointments.

*The product used was ENLUXTRA™ Self-Adaptive Wound Dressing manufactured by OSNovative Systems, Inc., Santa Clara, CA www.AnyWound.com



¹ Preliminary economic results of the study were first reported in an article published in Volume 8 Issue 3 of Today's Wound Clinic in April 2014: "Ultimate Standardization of First-Line Wound Dressings to a Single Type" by Randall Wolcott, MD & Vicki Fischenich RN, MSN, GNP-BC, WCC. This new article presents complete clinical, nurse workflow and economic data and results of the study.

STUDY OBJECTIVES

- The primary objective of this product evaluation was to obtain the perception of the users about the following characteristics of the self-adaptive dressing during the period of its use:
 - Suitability for treating wounds of various etiologies at various healing stages
 - Ease of application and use
 - Dressing absorbency
 - Incidence of strike-through or leakage
 - Satisfaction with dressing performance

Additionally, clinician estimation of future preference of the dressing of choice both for specific wound types and for all wounds, overall patient and nurse satisfaction, and perception of observed time saving while using the dressing were recorded and evaluated.

- The secondary objective was to determine the economic effects for a wound care clinic that chooses to replace most of its dressing inventory with self-adaptive dressing type as first line therapy for all wounds. To achieve this determination, the following data were analyzed:
 - Types of dressings used during the study treatment period
 - Total dressing expenditures throughout the duration of the study
 - Average monthly dressing expenditures during the study compared with average monthly dressing expenditures in the previous 12 months

STUDY DESIGN

- Open-label, non-randomized, uncontrolled product evaluation
- One site with 547 subjects recruited
- Eligibility of subjects defined as those with acute or chronic wounds. Excluded were wounds with heavy arterial bleeding and patients with known allergic reactions to the dressing material components (synthetic polymers and/or polyurethane); additionally patients who had just received a one-month supply of different dressing from the clinic; once these supplies were consumed, patients then received self-adaptive dressings
- The site's practice and product instructions were adhered to
- Study was held for a period of 3 months with subjects receiving self-adaptive dressings as first line dressing
- At the end of the study period, records of dressing-related expenditures were extracted from supply invoices by month for the previous 6 months
- At the end of the study period, a caregiver satisfaction survey was issued to each clinician, with the results of the survey tabulated

RESULTS

A total of 1168 wounds were treated with self-adaptive dressing on 547 patients.

Study subjects

Table 1. Demographic summary of the subjects recruited for this study.

	N	Age, yrs (SD)
Total	547	63 (17.6)
Female	250	65 (17.6)
Male	297	61 (17.4)

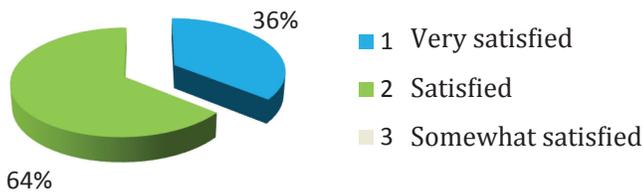
Wound types

Table 2. Types of wounds treated with self-adaptive dressing.

Number	Type
432	Diabetic ulcer
259	Venous insufficiency ulcer
241	Chronic wound
122	Pressure ulcer
60	Surgical wound
17	Osteomyelitis
9	Calciphilaxis
3	Soft tissue radionecrosis
2	Neuropathic ulcer
1	Arterial ulcer with osteomyelitis

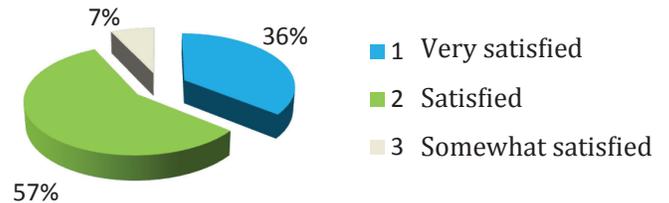
Clinician satisfaction

Figure 1. Overall clinician satisfaction with self-adaptive dressing.



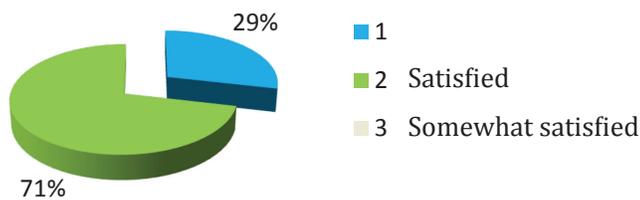
Satisfaction with dressing performance

Figure 2. Clinician satisfaction with overall self-adaptive dressing performance.



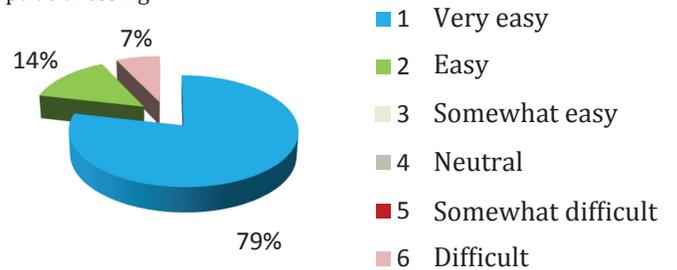
Patient satisfaction

Figure 3. Overall patient satisfaction with self-adaptive dressing.



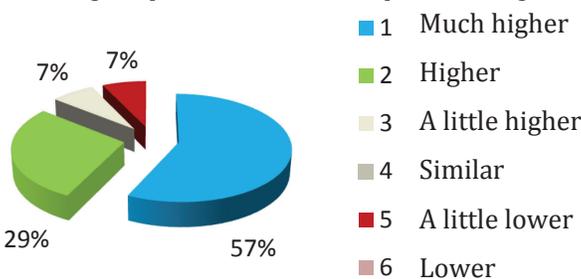
Ease of application of self-adaptive dressing

Figure 4. Clinician perception on the ease of application of self-adaptive dressing.



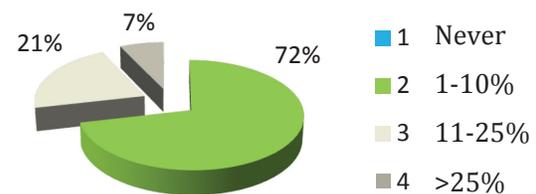
Absorbency of self-adaptive dressing

Figure 5. Clinician perception on the absorbency of self-adaptive dressing compared with other absorptive dressings.



Incidence of strike-through or leakage

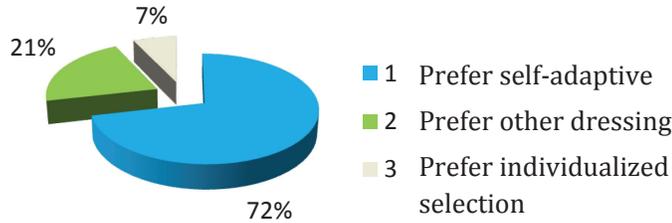
Figure 6. Clinician observation of the incidence of self-adaptive dressing strike-through or leakage.



CLINICIAN ESTIMATION OF A FIRST-LINE DRESSING PREFERENCE FOR ALL WOUNDS AND FOR SPECIFIC WOUND TYPES

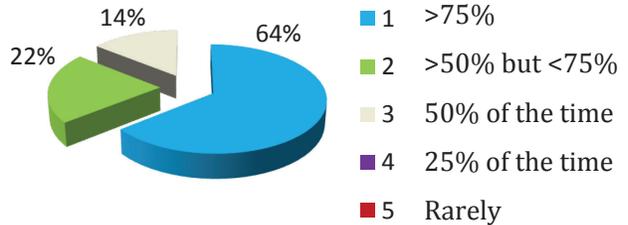
All wounds

Figure 7. Clinician's choice of first-line dressing for all wounds.



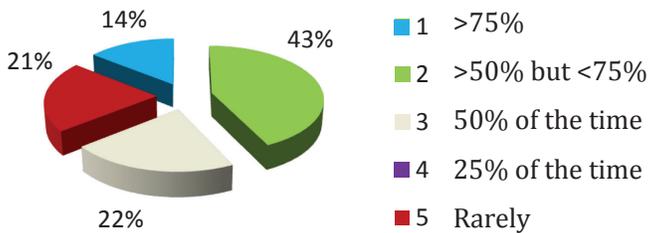
Venous ulcer

Figure 8. Clinician would choose a self-adaptive dressing.



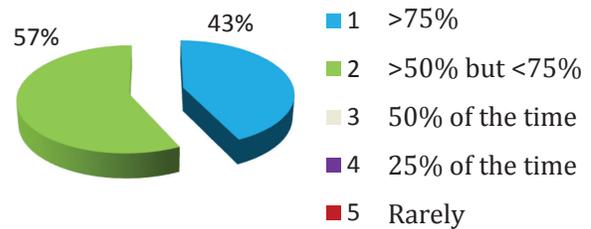
Diabetic ulcer

Figure 9. Clinician would choose a self-adaptive dressing.



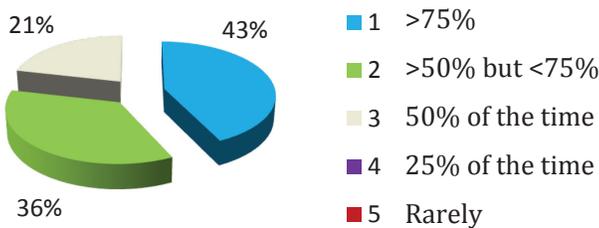
Surgical wound

Figure 10. Clinician would choose a self-adaptive dressing.



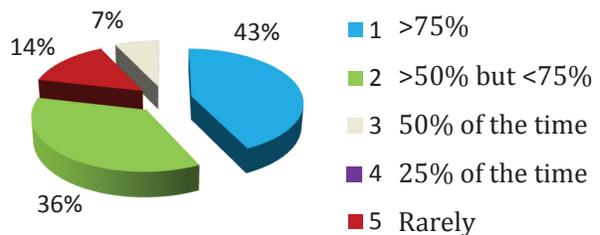
Acute wound

Figure 11. Clinician would choose a self-adaptive dressing.



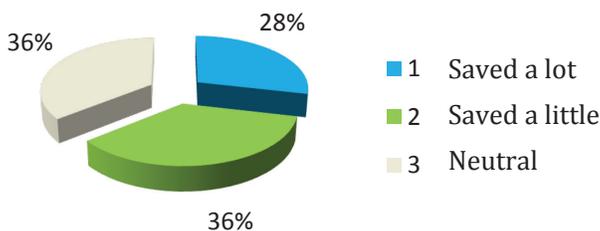
Pressure ulcer

Figure 12. Clinician would choose a self-adaptive dressing.



Time savings with self-adaptive dressing

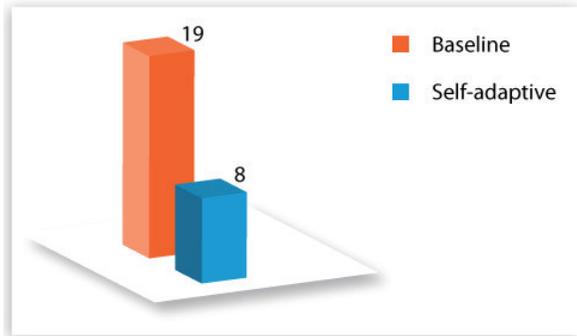
Figure 13. Clinician perception of time savings observed while using self-adaptive dressing.



ECONOMIC RESULTS

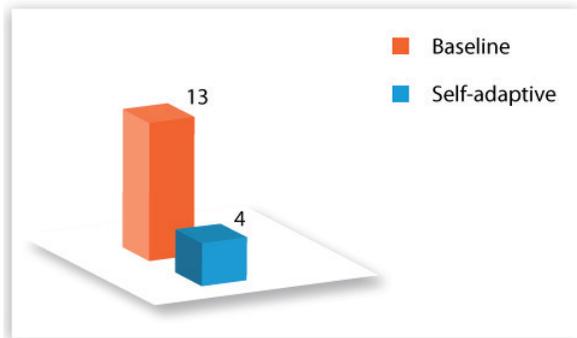
Reduction of primary dressing SKUs in inventory

Figure 14. Reduction of the number of primary dressing SKUs in inventory after adoption of self-adaptive dressing.



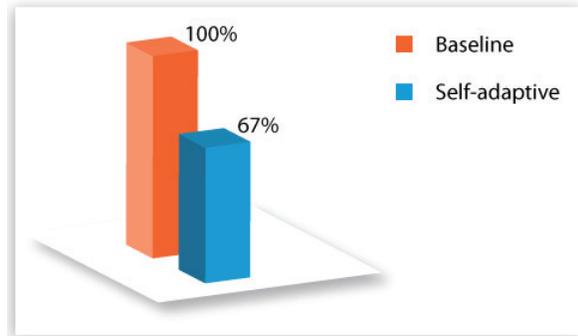
Reduction of primary dressing suppliers

Figure 16. Reduction of the number of primary dressing suppliers after adoption of self-adaptive dressing.



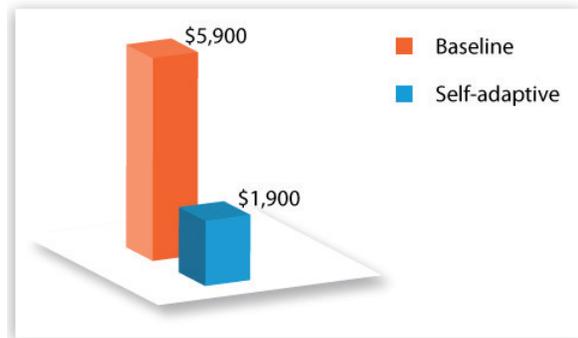
Reduction of monthly expenses on primary dressings

Figure 15. Reduction of monthly expenses on primary dressings after adoption of self-adaptive dressing.



Reduction of monthly spending on topical ointments

Figure 17. Reduction of referring LTAC monthly spending on adjunctive topical ointments after adoption of self-adaptive dressing.



CONCLUSION

The new self-adaptive dressing † was found to be suitable for wounds of any etiology, at any healing stage. The dressing was easy to apply, superior in absorbency and resulted in minimal incidence of strike-through or leakage. Overall patient and nurse satisfaction was high, with clinicians indicating they would prefer the self-adaptive dressing over other dressing types for treatment of chronic and acute wounds. Adoption of the new self-adaptive dressing resulted in reduction of the total number of primary dressing suppliers, primary dressing SKUs in the inventory and monthly spending both on primary dressings and on topical ointments.

The study results were presented at the
Symposium of Advanced Wound Care
 September 27-29, 2013
 Las Vegas NV



OSNOVATIVE SYSTEMS, INC.
 500 Laurelwood Road, Suites 1 and 4
 Santa Clara, CA 95054 • 888.519.2297

† FINANCIAL ASSISTANCE/DISCLOSURE
 OSNovative Systems, Inc. supported this clinical presentation by providing the products (self-adaptive wound dressings) for the study.
 The support of OSNovative Systems, Inc. for this clinical presentation is gratefully acknowledged.