

The Clinical and Economic Outcomes of an Integrated Care Bundle Utilising a Three-Layer Silicone Adhesive Foam Dressing for Exudate Management of Chronic Wounds: A Retrospective Cohort Analysis

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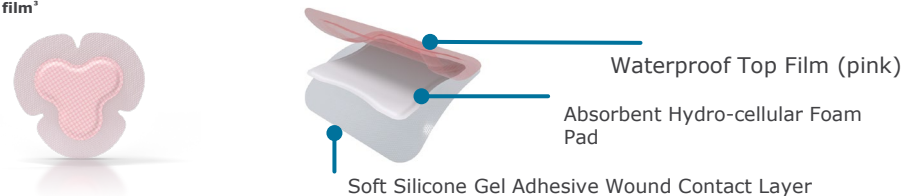
Problem

- Most wounds follow the expected pathway to healing, however those that do not progress through a normal healing trajectory and are often considered non-healing or chronic¹.
- To successfully treat and manage chronic wounds, it is fundamental to plan how care is delivered to reduce the risk of complication to the patient and, furthermore, ensure there is a cost-effective approach to care.
- One way to support health care professionals to reliably deliver a high standard of wound care is through the adoption of Integrated Care Bundles (ICB)².
- ICB's provide a guideline for clear evidence-based interventions that, when incorporated and performed together, result in improvements in overall wound management, clinical, patient, and economic outcomes.

Study Designs and Methods

- Real-world anonymized patient data from two large community care access centres was collected by contracted nursing care provider. (Dec 2015 to Mar 2018)
- Electronic medical records were analysed based on whether or not patients received an ICB with the soft silicone adhesive foam dressing* (Figure 1)
- Data was collected every 3 weeks during nursing visits, or weekly for wounds not healing as expected
- Baseline characteristics, comorbidities (Charlson index⁴), and wound severity (BWAT⁵; high scores suggest poor wound status) were recorded

Figure 1. This three-layer silicone adhesive foam dressings has a triple-layered construction which combines an absorbent hydro-cellular pad sandwiched between a perforated soft silicone gel adhesive wound contact layer and a highly permeable waterproof top film[†]



References

- ¹ Frykberg RG, Banks J. Challenges in the Treatment of Chronic Wounds. *Adv Wound Care* (New Rochelle). Sep 1 2015;4(9):560-582. doi:10.1089/wound.2015.0635
- ² Societies WUoWH. Strategies to reduce practice variation in wound assessment and management: The T.J.M.E Clinical Decision Support Tool. *Wound International*. 2020
- ³ Smith+Nephew. ALLEVYN GENTLE BORDER: Instructions for Use. 2022.
- ⁴ Charlson ME, et al. *J Chronic Dis*. 1987;40(5):373-83.
- ⁵ Bates-Jensen BM, et al. *Wound Repair Regen*. 2019;27(4):386-395

Abbreviations

BWAT = Bates-Jensen Wound Assessment Tool

*ALLEVYN® Gentle Border Foam Dressing (Smith+Nephew, UK)

Results

- Overall, 6612 patients received an ICB and 2,242 did not
- In the ICB group mean comorbidity index (2.69 vs 2.40) were slightly higher, the BWAT⁵ score was slightly higher in the non-ICB group (28.7 vs 33.2) (Figure 2)
- Mean number of days between dressing changes was longer (>1 day) using an ICB than for those who did not receive an ICB (3.5 vs 1.87 days)
- Mean time to healing/closure was shorter using an ICB than without an ICB (12.77 vs 25.49 weeks; Figure 2)
- Mean total labour cost was CAD \$1,736 per patient for wounds managed using and ICB compared with CAD \$6,488 for those whose wounds were not managed with an ICB – a difference of CAD \$4,752.

Conclusion

This real-world cohort analysis demonstrates the adoption of an ICB that included treatment with a three-layer soft silicone adhesive foam dressing improves clinical outcomes, reduces chronic wound healing times, the frequency of wound dressing changes and subsequently reduced costs. The clinical and economic outcomes presented here found that an ICB including the silicone foam dressing is useable, effective, and safe for clinicians to adopt across wound with various etiologies.

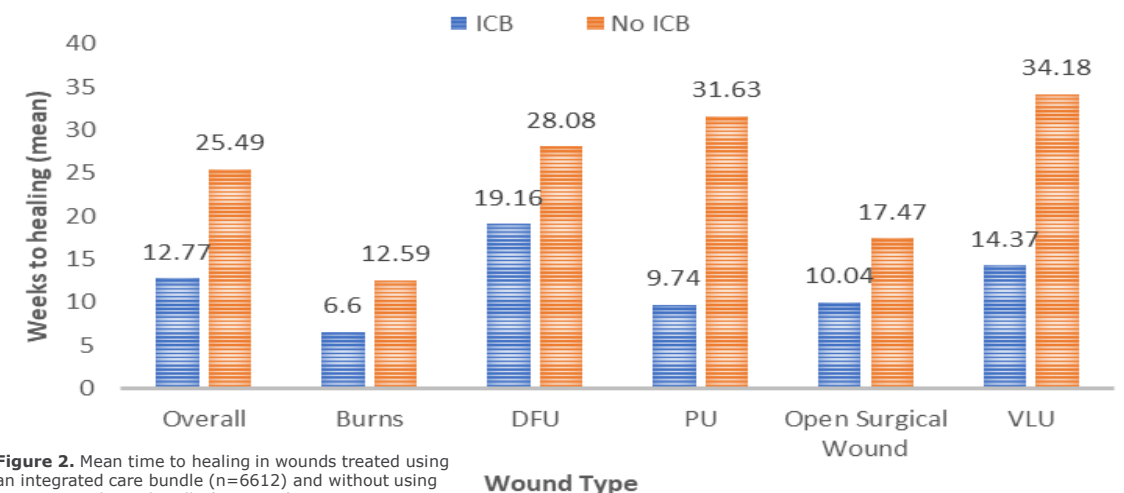


Figure 2. Mean time to healing in wounds treated using an integrated care bundle (n=6612) and without using an integrated care bundle (n=2,242).