

Health Economics of a Bioactive Beta-Glucan Gel

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A Bioactive Beta-Glucan Gel containing soluble Beta-Glucan (SBG), a natural polymer, is intended to be used on stalled dermal wounds where standard of care has failed. The demand for intervention in healthcare will always exceed supply, therefore evidence in respect of effectiveness and cost-effectiveness, is vital.

Data is presented from two studies

1.) Zykova et al, 2014

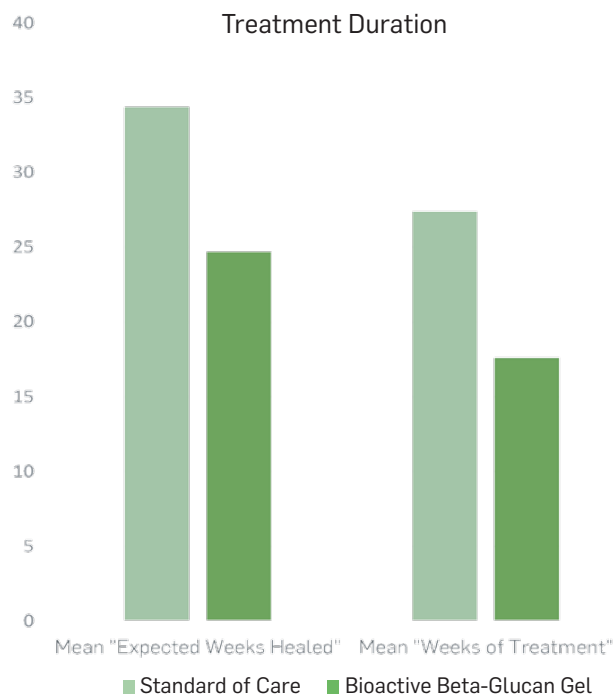
In an RCT 60 DFU patients (Zykova et al, 2014) received either standard of care plus soluble beta-glucan or standard care plus a hydrogel dressing, three times weekly for up to 12 weeks.

This data was used to populate a cost-effectiveness model. Extending the analysis to cover an annual budget cycle using a Markov extrapolation shows that the mean 'expected weeks healed' for patients treated with Bioactive Beta-Glucan Gel was 34.4 compared with 24.7 with standard of care.

The mean 'weeks of treatment' with Bioactive Beta-Glucan Gel was 17.6 compared to 27.4 for standard of care with an incremental benefit of 9.7 weeks. Over the annual period, Bioactive Beta-Glucan Gel is expected to be cost saving (approximately £500 per patient) and is the dominant treatment option.

*the Bioactive Beta-Glucan Gel is marketed as Woulgan®

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2.) King et al, 2016

In a clinical evaluation over a period of 12 weeks (King et al, 2016), wound response and cost of care were calculated in 26 wounds (DFU, LU and PU) where healing was stalled for at least 4 weeks prior to enrolment.

7 patients' wounds healed within 12 weeks. In all but 1 patient, treatment with Bioactive Beta-Glucan Gel is shown to be considerably less expensive than prior standard of care.

3 additional wounds healed after the initial 12 week period having been stalled prior to Bioactive Beta-Glucan Gel therapy.



5,5 months old leg ulcer with mixed aetiology, healed after 8 weeks of treatment with Bioactive Beta-Glucan Gel

8 wounds showed a surface area reduction of >50%, and 5 wounds showed a 10-50% reduction.

Across the 26 patients, costs over 12 weeks with Bioactive Beta-Glucan Gel were lower than the prior treatment in all but 4 cases. The accumulated prior treatment cost for the total cohort is conservatively calculated to £22,901, whereas the accumulated total cost during the Bioactive Beta-Glucan Gel treatment period was £11,657 of which £5,520 is the direct Bioactive Beta-Glucan Gel cost.

In these 26 patients, the accumulated total cost of using Bioactive Beta-Glucan Gel, in addition to the standard of care cost, is calculated to about £5,520, which is less than the total pre-treatment cost of patient no. 22 alone with a 6 year non-healing wound history.

Conclusions

Recent clinical and economic findings demonstrate that a Bioactive Beta-Glucan Gel provides evidence of cost-effectiveness in a variety of wound types.

1. Zykova et al. Journal of Diabetes Investigation 2014;5(4):392-99.
2. King, B. et al. 2016 - publication submitted to JWC