

Borate-Based Bioactive Glass Matrix Helps Reduce Treatment Costs for Hard-to-Heal Wounds



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INTRODUCTION

A borate-based bioactive glass wound matrix (BGWM)* has demonstrated promise in healing hard-to-heal wounds,¹⁻³ potentially reducing treatment costs. We compare dressing treatment costs prior to BGWM* vs. during BGWM* therapy, based on clinical outcomes of 4 wounds treated with BGWM* after numerous failed prior treatment modalities.

METHODS

Three patients with 4 wounds were treated. Wound types were: diabetic foot ulcer (DFU) (n=3) and venous leg ulcer (VLU) (n=1). Patients received appropriate standard-of-care products/therapies in a tertiary wound care center for at least one year prior to BGWM*. Therapy was switched to BGWM* upon presentation to the clinic. Costs prior to BGWM* were estimated and compared to costs during BGWM* therapy. Estimates were based on top tier pricing for a large integrated delivery network. Costs prior to BGWM* comprised dressings and debridement costs, and not skin graft or cellular and tissue-based product costs, even if used prior to BGWM*. Dressing types included in the estimate were silver alginate and gelling fiber, absorbent, and collagen. Costs during BGWM* therapy comprised the matrix and absorbent dressing, plus collagen dressings used between final BGWM* application and wound closure. Wound debridement was performed as needed prior to BGWM* use, but not after BGWM* was initiated; therefore, debridement was not included in BGWM* cost estimates. Estimates did not consider hospitalization, antibiotics, or pain medication costs, or reimbursement rates.

RESULTS

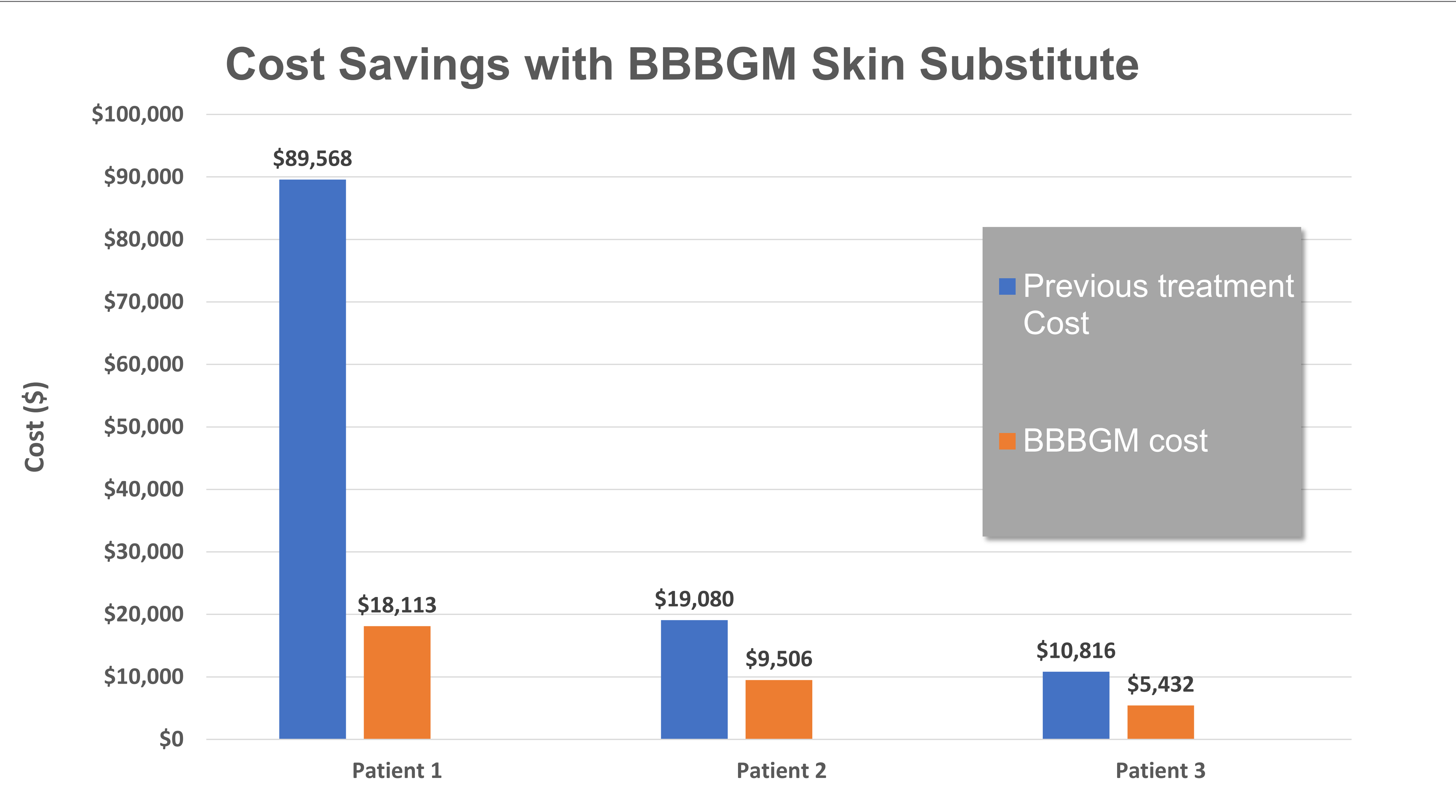
Patient 1 was a 60-year-old female with two 8-year-old DFUs. Cost prior to BGWM* was \$89,568. Cost during BGWM* therapy was \$18,113, an 80% decrease from the cost prior to BGWM*. The first DFU closed after 9 BGWM* applications over 15 weeks; the second closed after 13 BGWM* applications over 20 weeks.

Patient 2 was a 68-year-old male with a 1.5-year-old DFU. Cost prior to BGWM* was \$19,080. Cost during BGWM* therapy was \$9,506, a 50% decrease. The DFU closed after 7 BGWM* applications over 7 weeks.

Patient 3 was a 39-year-old female with a 1-year-old VLU. Cost prior to BGWM* was \$10,816. Cost during BGWM* therapy was \$5,432, a 50% decrease. The VLU closed after 4 BGWM* applications over 11 weeks.

DISCUSSION

By facilitating healing of hard-to-heal wounds, BGWM* reduced costs compared to prior treatment modalities. Patients reported reduced pain and improved quality of life during BGWM* therapy.



References:

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2. Jung S, Day T, Boone T, Buziak B, Omar A. Anti-biofilm activity of two novel, borate based, bioactive glass wound dressings. *Biomed Glas.* 2019;5(1):67-75.
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*Mirragen® Advanced Wound Matrix, ETS Wound Care, Rolla, Missouri