Category: Cost-effectiveness

Cost-effectiveness of a microcurrent electrical stimulation therapy device^ for the stimulation of healing in non-healing wounds: a review

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Introduction: Electrical Stimulation therapy (EST) is an evidence-based advanced treatment for non-healing wounds used in addition to standard care therefore representing an additional cost. Despite this, the treatment has been reported to be cost-effective because of its ability to stimulate a higher proportion of wounds to full healing, and for wounds to achieve healing over a significantly faster timescale versus standard care alone.[1] The aim of this review was to identify common themes among several cost-effectiveness evaluations that have explored a pocket-sized, microcurrent EST device^(Figure 1).

Method: A search of the published literature was conducted to identify publications describing cost-effectiveness or health economic analysis of the microcurrent EST device^ for wound healing compared with costs associated with standard of care (SoC) only.



Figure 1. EST device

Results: Seven studies were identified[1-7] which reported cost-effectiveness models, predominantly representing treatment in the NHS (Table 1). Costs were captured over a variety of time horizons (study durations) ranging from 8-52 weeks and in a variety of wound types, predominantly venous leg ulcers (VLU). In all studies, costs of EST^ plus SoC were compared with costs of SoC alone.

Reduced overall costs were driven by reduced resource usage and reduced spend on consumables

The EST device^ was consistently reported to be cost effective (no negative values) at all durations ≥12-weeks (Figure 2).

- The overall cost of wound care in patients treated with the EST device^ plus SoC was consistently lower than those incurred with SoC alone (median 15% (dotted line) ; IQR, 10.1% - 29.7%)
- In one study, breakeven point was reached after 10 weeks [5]

- Reduced resource usage - fewer nursing visits and nursing hours needed
- The median reduction in the number of nursing visits needed following treatment with EST^ versus standard care was 34.7% (dotted line: IQR, 16.6%-51.3%, Figure 3)

- Two studies reported savings in consumables usage in wounds treated with EST^+SoC versus those treated with SoC (Figure 4) and showed reductions of 34.5% (over 20 weeks [7]) and 25.9% (over 52 weeks [3])

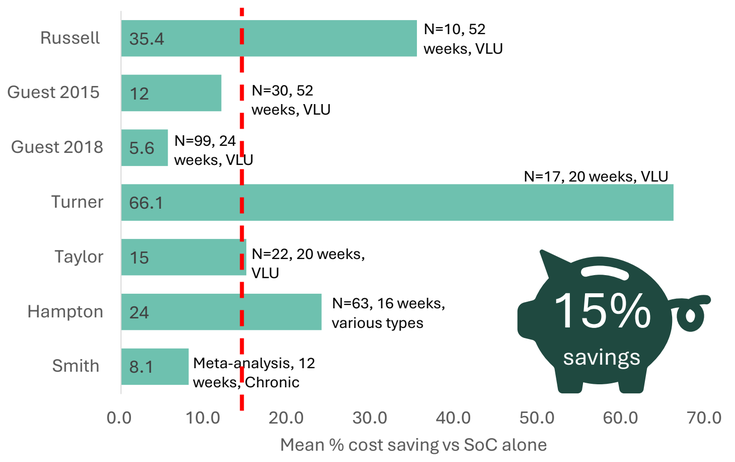


Figure 2. Mean overall cost savings following use of EST^ + SoC versus SoC alone.

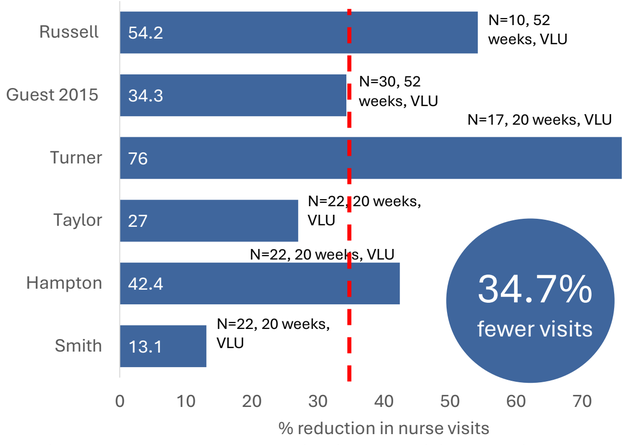


Figure 3. Mean overall reduction in nurse visits following use of EST^ + SoC versus SoC alone.

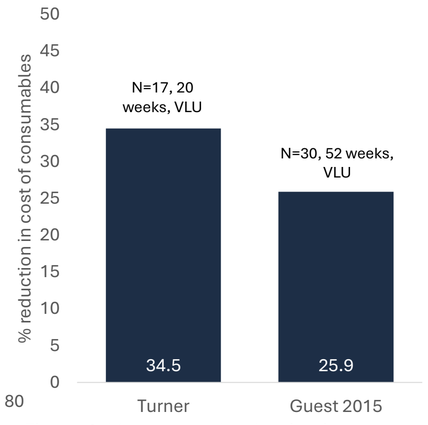


Figure 4. Mean overall reduction in consumables costs following use of EST^ + SoC versus SoC alone.

Discussion: The clinical benefits of EST^ lead to reduced nursing time across a caseload and overall reduction in consumables costs. Patients with healed wounds are also removed from community nursing caseloads, reducing the burden on community services. The clinical and cost benefits of EST^ tended to be more pronounced in wounds of less than 6-months duration. Several studies suggested that the time horizon over which cost benefit should be monitored should be longer than 10 weeks.

Conclusions:

- Across a range of wound populations and economic models, and time horizons, microcurrent EST^ was consistently associated with reduced overall wound-care costs and resource utilisation.
- Savings were driven by faster and more frequent healing, resulting in fewer nursing visits and reduced consumables use.
- These findings suggest that the additional upfront cost of the EST device^ can be offset by downstream savings and that earlier use in appropriate non-healing wounds may further increase its economic value.

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^Accel-Heal Solo, Accel-Heal Technologies Inc, Hever, Kent, UK.

Abbreviations: EST, electrical stimulation therapy; IQR, interquartile range; SoC, standard of care; VLU, venous leg ulcers.

References: 1. Smith J et al. J Mark Access Health Policy. 2025 Nov 24;13(4):59; **2.** Guest J. et al. J Wound Care. 2018;27(4):230-243; **3.** Guest J et al. J. Wound Care 2015; 24(12); **4.** Russell F et al. Poster presented at EWMA 2026, Bremen, Germany, May 6-8 2026; **5.** Hampton J. et al. Poster presented at EWMA 2026, Bremen, Germany, May 6-8 2026; **6.** Taylor R et al. J Wound Care. 2011 Oct;20(10):464, 466, 468-72; **7.** Turner N et al. Wounds UK 2017; 13(4).