

INTRODUCTION

- **Silver-impregnated dressings (SIDs)** are often used for the treatment of **chronic wounds** (i.e. wounds present for ≥ 6 weeks) in clinical practice.
- Previous reviews that focused on the effect of SIDs on various chronic wounds found **heterogeneous findings**. However, recent trials from 2011 onwards were not included in those reviews. [1,2]

OBJECTIVE

- Scoping review to determine the evidence regarding the clinical impact of the use of SIDs in patients with chronic wounds.

METHODS

- Five-stage scoping review framework of Arksey and O'Malley^[3].
- **Ten electronic databases** were searched for comparative clinical trials. Examples of **search terms** included "wound healing", "silver compounds", "leg ulcer".
- Clinical outcomes of interest: **wound healing** (wound size, changes in tissue type, healing rate/velocity, wound recurrence), **microbiology** (bacterial load, infectious parameters), **pain, adverse events, and cost of treatment** (Figure 1).

Clinical Outcomes Evaluated

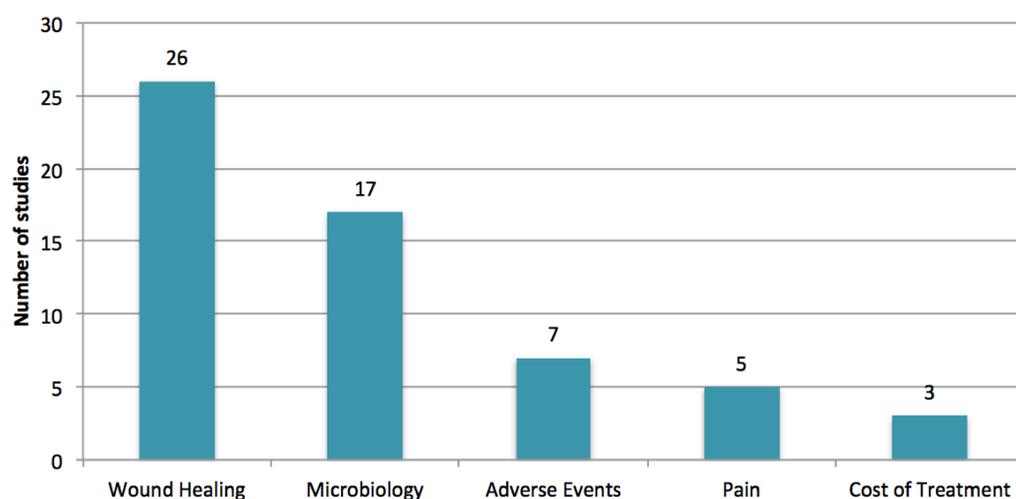


Figure 1. Total number of studies evaluating clinical outcomes.

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RESULTS

- ✓ **1,076 records were identified, 874 were screened, and 27 studies were included for qualitative synthesis.**
- ✓ All 27 studies were of a **comparative** nature, consisting of **two arm parallel group designs**.
- ✓ Types of experimental designs included **mixed interventions and single interventions**. Studies either evaluated silver vs. silver treatments or silver vs. non-silver treatments.
- ✓ Majority of studies (13/27) included a sample size of **≤ 50 individuals**.
- ✓ **16** different silver treatments were evaluated in the 27 studies, with the **most common silver treatments** being: **hydrofiber, calcium alginate and foam dressings**.
- ✓ **Comparator treatments** evaluated were: Manuka grade medical honey, saline and non-silver dressings.
- ✓ **Heterogeneous findings**: studies might have shown significant improvement for one wound healing outcome, but would not show significant improvement for other wound healing parameters evaluated within the same study.

Table 1. Number of studies that reported significant positive findings, non-significant findings, or did not report statistical values.

Outcome Measure	Significant positive findings for SIDs	Significant positive findings for comparator treatment	Non-significant findings	No statistical values reported
Wound Healing	14	0	10	2
Microbiology	3	1	9	4
Adverse events	0	0	0	7
Pain	1	0	2	2
Cost of Treatment	1	1	0	1

CONCLUSIONS

- The **heterogeneity of findings and study designs** made it challenging to draw significant **conclusions** regarding the clinical effectiveness of SIDs in comparison to standard wound care treatments (Table 1).
- Heterogeneity of findings might be attributed to the **diverse composition and mechanism of action of dressings** that were used across studies.
- Future studies need to address the safety of SIDs as well as cost-benefit analyses. Furthermore, the **development of standardized methodology for measuring outcomes of wound healing** is essential to decrease heterogeneity of interventions and study designs.

REFERENCES

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