What is a scoping report?
Scoping reports ascertain the quantity and quality of the published clinical and cost effectiveness evidence on health technologies under consideration by decision makers within NHSScotland. They also serve to clarify definitions related to the research question(s) on that topic. They are intended to provide an overview of the evidence base, including gaps and uncertainties, and inform decisions on the feasibility of producing an evidence review product on the topic. Scoping reports are undertaken in an approximately 1 month period. They are based upon a high level literature search and selection of the best evidence that Healthcare Improvement Scotland could identify within the time available. The reports are subject to peer review. Scoping reports do not make recommendations for NHSScotland. Further information on scoping reports is available at www.healthcareimprovementscotland.org.

Key definitions

Silver dressing: Silver has antimicrobial properties, and is incorporated in various types of wound dressing. These release silver ions or compounds into the wound. Some types of dressings also absorb exudate and bacteria. Studies included in this scoping report examine the following silver dressings:

- Contreet® silver-containing foam dressings (Coloplast A/S, Espergaerde, Denmark);
- Silvercel® silver-containing alginate dressings (Systagenix, Gatwick);
- Acticoat® nanocrystalline silver-coated dressings (Smith & Nephew, London);
- Aquacel® Ag Hydrofibre® dressings containing ionic silver (Convatec Inc, Uxbridge); and
- Actisorb Plus® activated-charcoal dressings containing silver (Systagenix, Gatwick).

Wound infection: Various definitions of wound infection are used in the reported studies. Some base their definition on measured bacterial load or ‘critical colonisation’; others use clinical opinion or signs such as pain, swelling, redness, odour and/or pus.

Healing by secondary intention: When the edges of a wound are not together, for example when there is a deep burn or ulcer, or following surgery, healing is said to occur ‘by secondary intention’. Granulation occurs in the gap, and epithelial tissue grows over it.

Background
Silver dressings are increasingly being used in NHSScotland on a wide range of wound types, although high quality evidence on their effectiveness is lacking. It is anticipated that this scoping report will help inform decision making around investment or disinvestment, and assist the development of wound-management protocols. The scoping report summarises the published evidence on silver dressings in the treatment of infected wounds and the prevention of wound infection among adults in any setting. This information is supplemented by local cost data. Consensus guidelines were published this year by Wounds International1.

The following questions were scoped:
1. Are silver dressings clinically effective for the healing of infected wounds, compared with other types of dressing?
2. Are silver dressings clinically effective for the prevention of wound infection, compared with other types of dressing?
3. If clinical effectiveness is established in the healing of infected wounds, are silver dressings cost effective relative to other types of dressing?
4. If clinical effectiveness is established in the prevention of wound infection, are silver dressings cost effective relative to other types of dressing?

In response to an enquiry from NHS Lothian Number 12 January 2013
Literature search

A systematic search of the secondary literature was carried out between 1–3 May 2012. Key resources were searched for systematic reviews, evidence-based guidance and clinical summaries. Searches were limited to items published since 2002 and written in English. Studies advised by the topic-referrer and peer reviewers were also considered. A full list of resources searched is available on request.

Evidence base

Table 1 Included evidence sources

<table>
<thead>
<tr>
<th>Publication type</th>
<th>Number of publications</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health technology assessment</td>
<td>1 study with 2 reports</td>
<td>2,3</td>
</tr>
<tr>
<td>Systematic review</td>
<td>6</td>
<td>4,9</td>
</tr>
<tr>
<td>Evidence based guidelines</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Randomised controlled trial (RCT)</td>
<td>1</td>
<td>11</td>
</tr>
</tbody>
</table>

Findings

1. Are silver dressings clinically effective for the healing of infected wounds, compared with other types of dressing?

Complete wound healing – presumed to be the most important outcome for patients – was not used as the end point in any of the included studies. It was often measured as an outcome, but follow-up periods were too short to observe complete wound healing in the majority of study participants.

A Cochrane systematic review by Vermeulen et al. from 2010 on topical silver for treating infected wounds identified three RCTs: Jørgensen et al. (2005), Meaume et al. (2005) and Münter et al. (2006). All trials were considered by the review authors to be of adequate methodological quality; although follow up was short, statistical power low, and duration of infection unmeasured. The trials related to different wound types, interventions and outcomes, therefore no meta-analysis could be performed. The systematic review authors concluded that silver-containing foam dressings did not significantly increase complete ulcer healing after 4 weeks of follow up, compared with standard foam dressings or best local practice; although a greater reduction in ulcer size was observed with silver-containing foam compared with standard foam or best local practice. Insufficient evidence was available to recommend the use of silver-containing dressings for the treatment of infected or contaminated chronic wounds. Findings from the individual studies in the systematic review are described in the following paragraphs, along with other evidence specific to each wound type.

Leg ulcers and pressure ulcers

The study by Jørgensen et al. included in the Cochrane systematic review by Vermeulen et al. compared Contreet® silver-containing foam dressings with Allevyn® hydrocellular foam dressings (Smith & Nephew, London) in 129 adults with moderately or highly exuding chronic venous or mixed leg ulcers with clinical signs of critical colonisation. There was no significant difference between the Contreet® group and the Allevyn® group in the rate of complete wound healing after 4 weeks (8% versus 8%; risk difference (RD)=0.00; 95% confidence interval (CI) -0.09 to 0.09; p=0.098). There was no significant difference between groups in the median ulcer area after 4 weeks (3.0 cm² versus 4.5 cm²; [exact significance level not reported]). The median wound size reduction (relative to its original size) was significantly greater in the Contreet® group than the Allevyn® group (45.2% versus 25.4%; p=0.034). All adverse effects recorded were skin reactions; there was no significant difference in these between the groups (4/52 versus 3/57; RD=0.02; 95% CI -0.07 to 0.12; p=0.61). Use of systemic antibiotics did not differ significantly between the groups (5/65 versus 1/64; RD=0.06; 95% CI -0.01 to 0.13; p=0.093). No significant difference was found in quality of life measured using the EQ-5D health-related tool (1=perfect health; 0=death): the Contreet® group moved from a baseline mean score of 0.69 to 0.79 at week 4; and the Allevyn® group moved from 0.71 at baseline to 0.79 at week 4. The number of patients presenting with wound odour each week reduced in the Contreet® group (10/52 versus 22/57 presented odour at week 4; RD=-0.19; 95% CI -0.36 to -0.03; p=0.030). Leakage was lower in the Contreet® group at week 4 but not week 1 (10/52 versus 28/57 experienced leakage at week 4; RD=-0.30; 95% CI -0.47 to -0.13; p=0.002).
The study by Meaume et al. included in the Cochrane systematic review by Vermeulen et al. compared Silvercel® silver-containing alginate dressings with Algosteril® dressings (Les Laboratoires Brothiers, Paris) containing alginate alone, in 99 adults with leg or pressure ulcers with at least two of: continuous pain, erythema, oedema, heat, and moderate to high exudate. There was potential for bias in this trial as the groups differed at baseline in age, diabetes status, wound size and wound duration. No significant difference between Silvercel® and Algosteril® was found in the number of ulcers healed completely after 4 weeks (1/51 versus 1/48; RD=0.00; 95% CI -0.06 to 0.05; p=0.97). No significant difference between Silvercel® and Algosteril® was found in the absolute wound area decrease (8.9 cm² versus 4.4 cm²; weighted mean difference (WMD)=4.5; 95% CI -0.93 to 9.93; p=0.10). No significant difference between Silvercel® and Algosteril® was found in relative wound area decrease (23.7% versus 24.0%; WMD=0.3; 95% CI -17.08 to 16.48; p=0.97). No significant difference between Silvercel® and Algosteril® was found in use of systemic antibiotics (4/51 versus 5/48; RD=-0.03; 95% CI -0.14 to 0.09; p=0.66). Adverse effects were not significantly different between the groups (5/51 versus 5/48; RD=-0.01; 95% CI -0.12 to 0.11; p=0.92).

The Scottish Intercollegiate Guidelines Network (SIGN) produced a guideline in 2010 on the management of chronic venous leg ulcers, in which silver dressings were not recommended in the routine treatment of patients with venous leg ulcers. This was based on the Cochrane systematic review by Vermeulen et al. and an RCT by Michaels et al.

**Delayed-healing ulcers, burns, donor sites and post-operative wounds**

The study by Münter et al. included in the Cochrane systematic review by Vermeulen et al. compared Contreet® silver-containing foam dressings with ‘best local practice’, which covered a variety of dressing types (foams and alginate 53%, hydrocolloids 12%, gauze 3%, silver dressings 17%, other antimicrobial dressings 9%, other active dressings 6%) in 619 adults with delayed-healing ulcers, burns, donor sites and postoperative wounds. The initial size of wounds was highly variable (from 0.1–700 cm² in the Contreet® group and 0.1–400 cm² in the best local practice group). A statistically significant difference was observed in the mean relative reduction in ulcer area after 4 weeks, with a reduction of 47% in the Contreet® group compared with 32% in the ‘best local practice’ group (p=0.0019). Pain was reported on a 0–10 scale (0=low; 10=high) during and between dressing changes. No information was given on the validity of this scale. A statistically significant difference in median pain score during dressing changes was reported between the groups, with 1 in the Contreet® group compared with 2 in the ‘best local practice’ group (p<0.001). A statistically significant difference in median pain score was also reported between dressing changes between the groups, with 1 in the Contreet® group and 2 in the ‘best local practice’ group (p=0.001). Quality of life, measured using the EQ-5D, improved slightly in both groups from a baseline median score of 0.62 in both groups to 0.71 in the Contreet® group and 0.69 in the best practice group (statistical comparison not reported). Wound odour resolved after 1 week in the Contreet® group and after 2 weeks in the ‘best local practice’ group (p<0.001). Leakage was considered the main reason for dressing changes in 14.8% of the Contreet® group and 25.8% of the ‘best local practice’ group (RD=-0.11; 95% CI -0.18 to -0.05; p<0.001).

**Diabetic foot ulcers**

A Cochrane systematic review by Bergin and Wraight from 2011 on silver-based wound dressings and topical agents for treating diabetic foot ulcers identified no RCTs or controlled trials meeting inclusion criteria. The review authors concluded that trials were needed to determine clinical and cost effectiveness and long-term outcomes including adverse events.

**Additional sources of evidence**

Other synthesised information was found, including from the Canadian Agency for Drugs and Technologies in Health (CADTH) health technology inquiry service and the Drugs and Therapeutics Bulletin, covering broadly the same evidence base and concurring with the conclusion of insufficient evidence of effectiveness of silver dressings for the healing of infected wounds.
2. Are silver dressings clinically effective for the prevention of wound infection, compared with other types of dressing?

A Cochrane systematic review by Storm-Versloot et al. from 2010 on topical silver for preventing wound infection compared dressings containing silver with other dressings for burns, other acute wounds and chronic wounds\(^5\). Two studies were included on burns: Innes et al. (2001) and Livingstone et al. (1990). One study was included on other acute wounds: Jurczak et al. (2007). Two studies were included on chronic wounds: Wunderlich and Orfanos (1991) and Jude et al. (2007). The methodological quality of included trials was considered by the review authors to be low; with small sample sizes, baseline dissimilarity, inadequate randomisation, lack of allocation concealment, lack of blinding of outcome assessors, and short length of follow up. Heterogeneity of treatments and outcomes precluded meta-analysis. The systematic review authors concluded that there was insufficient evidence to establish whether silver-containing dressings prevent wound infection\(^5\). Findings from the individual studies in the systematic review are described in the following paragraphs, along with other evidence specific to each wound type.

**Burns**

The study by Innes et al. included in the Cochrane systematic review by Storm-Versloot\(^5\) compared Acticoat\(^\text{®}\) nanocrystalline silver-coated dressings with Allevyn\(^\text{®}\) hydrophilic polyurethane dressings on 17 patients with 18 paired adjacent burn sites requiring a split-thickness skin graft. No patients in either group developed a wound infection (RD=0.00; 95% CI -0.11 to 0.11). The review authors noted that time-to-healing was inappropriately analysed. Significantly fewer wounds in the silver group than the comparator group were healed by the day of discharge (RD= -0.69; 95% CI -0.92 to -0.45).

The study by Livingston et al. (1990) included in the Cochrane systematic review by Storm-Versloot\(^5\) compared three treatment groups in 52 patients with open surgical wounds or open traumatic wounds all healing by secondary intention. No significant difference was found in the infection rate between groups (RD= -0.01; 95% CI -0.17 to 0.14). No significant difference was found in complete healing between groups; the Aquacel\(^\text{®}\) Ag group healed in a mean of 14.1 days compared with the povidone iodine group mean of 13.9 days. The relative difference in the number of patients with complete wound healing at 2 weeks failed to reach statistical significance at the 5% level (RD=0.13; 95% CI -0.04 to 0.31). Wound area was reduced by a mean of 551 mm\(^2\) in the Aquacel\(^\text{®}\) Ag group, and 401 mm\(^2\) in the povidone iodine group, the difference not reaching statistical significance at the 5% level (standard errors not reported). Wound depth was reduced by a mean of 9 mm in the Aquacel\(^\text{®}\) Ag group, and 10 mm in the povidone iodine group, the difference not reaching statistical significance at the 5% level (standard errors not reported). The difference in adverse events between groups failed to reach statistical significance at the 5% level (RD= -0.09; 95% CI -0.21 to 0.02). In the Aquacel\(^\text{®}\) Ag group, 70.6% of participants rated pain management as excellent (as opposed to good, fair or poor) compared with 22.6% in the povidone iodine group (p<0.001).
An RCT by Krieger et al. from 2011\textsuperscript{11} compared silver nylon with gauze dressings in 110 patients undergoing colorectal surgery. Baseline characteristics were similar between the two groups, except that the silver nylon group were older (p=0.049) and more likely to have received a blood transfusion during surgery (p=0.013). Fewer surgical site infections occurred in the silver nylon group (7/55) compared with the gauze group (18/54) (p=0.011).

**Venous leg ulcers**

The trial by Wunderlich and Orfanos included in the Cochrane systematic review by Storm-Versloot\textsuperscript{5} compared Actisorb Plus\textsuperscript{®} activated-charcoal dressings containing silver with conventional phase-adapted therapy using diverse topical modalities in 38 patients with venous leg ulcers. No differences were found in infection rates (data not reported). The difference in wound-healing rate failed to reach statistical significance at the 5\% level (RD=0.21; 95\% CI -0.04 to 0.46).

**Diabetic foot ulcers**

The trial by Jude et al. included in the Cochrane systematic review by Storm-Versloot\textsuperscript{5} compared Aquacel\textsuperscript{®} Ag Hydrofibre\textsuperscript{®} dressings containing ionic silver with Algosteril\textsuperscript{®} calcium alginate dressings (Les Laboratoires Brothiers, Paris) in 134 patients with diabetic foot ulcers. The Cochrane review authors noted baseline differences in treatment groups in respect of size of ulcers and antibiotic use, which may have biased results in favour of Aquacel\textsuperscript{®} Ag. No significant difference between groups was noted for the number of patients who developed wound infection (RD=0.04; 95\% CI -0.07 to 0.16). Mean time to complete healing was significantly lower in the Aquacel\textsuperscript{®} Ag group (Mean difference (MD) =-5.1 days; 95\% CI -5.69 to -4.51). No significant differences between groups were noted for the number of patients with complete wound healing (RD=0.09; 95\% CI -0.06 to 0.24), the mean percentage ulcer area reduction (RD=-2.4; 95\% CI -18.72 to 13.92), the mean reduction in ulcer depth (MD=0.12; 95\% CI -0.05 to 0.29) or the number of adverse events (RD=-0.01; 95\% CI -0.18 to 0.15).

**Additional sources of evidence**

Other synthesised information was found, including from a Cochrane systematic review by Dumville et al.,\textsuperscript{9} covering broadly the same evidence base and concurring with the conclusion of insufficient evidence of effectiveness of silver dressings for the prevention of wound infection.

3. **If clinical effectiveness has been established, are silver dressings cost effective for the healing of infected wounds, relative to other types of dressing?**

The clinical effectiveness of silver dressings has not been established in the healing of infected wounds. In the absence of direct evidence which considers costs and benefits together in this indication, some cost and resource use data are presented on silver dressings and antimicrobial wound products generally.

Work is ongoing in NHSScotland to establish the cost and budget impact of silver dressings (P Hornby, Strategic Sourcing Manager, NHS National Procurement. Personal Communication, 10 May 2012). Antimicrobial wound products were measured as a National Therapeutic Indicator in 2012\textsuperscript{10}. The median prescription of antimicrobial wound products as a percentage of total wound products was 16\% over NHSScotland as a whole during the last quarter of 2011\textsuperscript{10}.

The data presented in Table 2 (see page 7) and Table 3 (see page 8) are based on preliminary analysis of ISD data underway within National Procurement assessing 6 months (January–June 2012) community spend on silver dressings. National annual community spend (2011–2012) on silver dressings is estimated to be just over £3 million, approximately a fifth of total wound management spend for NHSScotland (P Hornby, Strategic Sourcing Manager, NHS National Procurement. Personal Communication, 25 Sep 2012). Table 2 shows 6-month total wound management and silver dressing community spend broken down by NHS board. Table 3 summarises most frequently procured silver dressing types and approximate share of silver dressing spend.

Community spend figures are based on dispensing data from community pharmacies. This represents only a sub-set of spend on silver dressing products as it does not include either supplies of dressings to community nursing staff or supplies within acute hospitals (P Hornby, Strategic Sourcing Manager, NHS National Procurement. Personal Communication, 30 Aug and 17 Sep 2012).
Following an intervention aimed at reducing silver dressing prescriptions in NHS Borders (R Anderson, Senior Pharmacist, NHS Borders. Personal Communication, 10 Jul 2012), the median prescription of antimicrobial wound products as a percentage of total wound products for NHS Borders was the lowest of all NHS boards at 9%11. The impact of this change in practice on patient outcomes and total expenditure is not known.

NHS Fife has successfully reduced expenditure on silver dressings following the use of local guidelines and a nursing protocol. These resulted in a 58% decrease in prescription and General Practitioner (GP) stock order expenditure from £353.00 per 1,000 patients between October and March 2012, to £146.46 per 1,000 patients during the same period in 2011 (S Tyson, Primary Care Development Pharmacist, NHS Fife. Personal Communication, 26 Jun 2012). This corresponds to an annual saving of around £150,000 based on the patient population of 377,000 in Fife. The impact of this change in practice on patient outcomes and total expenditure is not known.

No direct evidence was found in relation to the cost effectiveness of silver dressings for the healing of infected wounds. However, a study by Michaels et al. examined their cost effectiveness for the healing of venous leg ulcers without reference to infection2,3. Because wound infection is likely to be a factor in the slow healing of leg ulcers, and no other cost-effectiveness evidence was found in relation to silver dressings, it is included in this scoping report. Two-hundred and thirteen patients were enrolled in the VULCAN RCT which compared silver dressings from a variety of manufacturers with non-microbial low-adherence dressings, both applied beneath compression bandages or hosiery, for complete ulcer healing at 12 weeks. A United Kingdom NHS and social services perspective was adopted for the cost-effectiveness analysis, with an index year of 2007. Costs of items were obtained from the British National Formulary. Costs of ulcer clinic visits were obtained by observing clinics in Sheffield and Exeter and considering duration, throughput, and type and grade of staff. Dressings were assumed to have been changed at each clinic/home visit. Costs and benefits were discounted at 3.5% per year. A full probabilistic sensitivity analysis was undertaken. There was no difference between groups in the proportion of ulcers healed at 12 weeks (59.6% for silver (95% CI 50.2% to 69.1%) versus 56.7% for control (95% CI 47.2% to 66.3%)). The relative risk (RR) of healing for silver versus control was 1.06 (95% CI 0.80 to 1.40). Results at 6 months and 1 year were also not significant. There was no significant difference between groups in EQ-5D or SF-6D utility scores. The mean cost of each silver dressing was £30.62 (95% CI £25.47 to £35.80), which was significantly higher than the control dressings figure of £5.73 (95% CI £2.96 to £8.49). The mean total cost per patient of dressings was significantly higher in the silver group than the control group (£417.97 (95% CI £375.01 to £460.93) versus £320.12 (95% CI £277.42 to £362.82)). There were no significant differences between groups in community nurse visits, GP contacts and chiropody contacts. Patients with silver dressings made more ulcer clinic visits than those in the control group (8.00 versus 5.61 respectively). Prescriptions for hosiery, antibiotics and other medicines did not differ between groups. The incremental cost was £97.85 and the incremental quality adjusted life year (QALY) gained was 0.0002, giving an incremental cost-effectiveness ratio for silver dressings relative to control dressings of £489,250 per QALY gained. Estimates from the cost-effectiveness acceptability curve suggested a probability of 0.4 that silver dressings would be cost effective at a ceiling ratio of £30,000 (the usual threshold for the National Institute for Health and Clinical Excellence). The authors concluded that there was no evidence to support the routine use of silver dressings beneath compression for venous leg ulcers2,3. As this study did not assess wound infection, it is of limited applicability to the current research question.

The study by Münter et al. included in the Cochrane systematic review by Vermeulen et al.4 comparing Contreet® silver-containing foam dressings with best local practice included comparative estimates of resource use. Dressing wear time was 3.1 days in the Contreet® group compared with 2.1 days in the 'best local practice' group (p<0.001). The time spent on applying a typical dressing was 0–10 minutes in the Contreet® group and 10–20 minutes in the 'best local practice' group (p=0.003).
### Table 2 Silver dressings preliminary community and total wound management spend (January–June 2012)

<table>
<thead>
<tr>
<th>NHS board</th>
<th>Total wound management spend (£)</th>
<th>% total NHSScotland wound management spend</th>
<th>Silver spend (£)</th>
<th>% total wound management spend on silver dressings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ayrshire &amp; Arran</td>
<td>605,702</td>
<td>8.8</td>
<td>102,067</td>
<td>16.9</td>
</tr>
<tr>
<td>Borders</td>
<td>125,628</td>
<td>1.8</td>
<td>18,808</td>
<td>15.0</td>
</tr>
<tr>
<td>Dumfries &amp; Galloway</td>
<td>179,668</td>
<td>2.6</td>
<td>35,522</td>
<td>19.8</td>
</tr>
<tr>
<td>Fife</td>
<td>482,611</td>
<td>7.0</td>
<td>61,299</td>
<td>12.7</td>
</tr>
<tr>
<td>Forth Valley</td>
<td>318,052</td>
<td>4.6</td>
<td>42,173</td>
<td>13.3</td>
</tr>
<tr>
<td>Greater Glasgow &amp; Clyde</td>
<td>1,431,195</td>
<td>20.7</td>
<td>288,654</td>
<td>20.2</td>
</tr>
<tr>
<td>Grampian</td>
<td>828,497</td>
<td>12.0</td>
<td>218,615</td>
<td>26.4</td>
</tr>
<tr>
<td>Highland</td>
<td>461,894</td>
<td>6.7</td>
<td>132,048</td>
<td>28.6</td>
</tr>
<tr>
<td>Lanarkshire</td>
<td>765,019</td>
<td>11.0</td>
<td>190,629</td>
<td>24.9</td>
</tr>
<tr>
<td>Lothian</td>
<td>1,151,621</td>
<td>16.6</td>
<td>337,524</td>
<td>29.3</td>
</tr>
<tr>
<td>Orkney</td>
<td>20,983</td>
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<td>6,347</td>
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</tr>
<tr>
<td>Shetland</td>
<td>16,835</td>
<td>0.2</td>
<td>3,203</td>
<td>19.0</td>
</tr>
<tr>
<td>Tayside</td>
<td>493,029</td>
<td>7.1</td>
<td>93,843</td>
<td>19.0</td>
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<tr>
<td>Western Isles</td>
<td>39,655</td>
<td>0.6</td>
<td>8,877</td>
<td>22.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6,920,389</strong></td>
<td><strong>100</strong></td>
<td><strong>1,539,609</strong></td>
<td>n/a</td>
</tr>
</tbody>
</table>
# Table 3 Community spend by silver dressing type (preliminary)

<table>
<thead>
<tr>
<th>Silver dressings type</th>
<th>Spend £</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyurethane foam dressing plus silver with soft adherent contact layer</td>
<td>589,826</td>
<td>38.3</td>
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<tr>
<td>Fibrous hydrocolloid dressing with silver</td>
<td>297,824</td>
<td>19.3</td>
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<tr>
<td>Alginate with hydrocolloid plus silver</td>
<td>126,667</td>
<td>8.2</td>
</tr>
<tr>
<td>Polyurethane foam dressing plus silver non-adhesive</td>
<td>111,656</td>
<td>7.3</td>
</tr>
<tr>
<td>Silver donating contact layer – short term</td>
<td>89,961</td>
<td>5.8</td>
</tr>
<tr>
<td>Charcoal activated absorbent dressing plus silver</td>
<td>64,873</td>
<td>4.2</td>
</tr>
<tr>
<td>Alginate cavity dressing with silver</td>
<td>64,238</td>
<td>4.2</td>
</tr>
<tr>
<td>Polyurethane foam dressing plus silver adhesive</td>
<td>62,837</td>
<td>4.1</td>
</tr>
<tr>
<td>Silver donating contact layer – long term</td>
<td>54,637</td>
<td>3.6</td>
</tr>
<tr>
<td>Protease modulating dressing with collagen plus silver</td>
<td>42,312</td>
<td>2.8</td>
</tr>
<tr>
<td>Polyurethane foam heel dressing soft adherent contact layer with silver</td>
<td>12,960</td>
<td>0.8</td>
</tr>
<tr>
<td>Wound contact dressing (WCD) polyester mesh impregnated with hydrocolloid particles in petroleum jelly with soft adherent contact area and silver sulphadizine</td>
<td>8,120</td>
<td>0.5</td>
</tr>
<tr>
<td>Moisturising surfactant foam dressing non-adhesive with silver</td>
<td>5,968</td>
<td>0.4</td>
</tr>
<tr>
<td>WCD polyester mesh impregnated with hydrocolloid particles in petroleum jelly with soft adherent contact area, silver and absorbent backing</td>
<td>5,255</td>
<td>0.3</td>
</tr>
<tr>
<td>Polyurethane foam dressing with soft polymer contact layer containing hydrocolloid plus silver - non-adhesive</td>
<td>1,938</td>
<td>0.1</td>
</tr>
<tr>
<td>WCD polyester mesh impregnated with hydrocolloid particles in petroleum jelly with soft adherent contact area and silver</td>
<td>538</td>
<td>0.04</td>
</tr>
<tr>
<td>Total</td>
<td>1,539,609</td>
<td>100</td>
</tr>
</tbody>
</table>
4. If clinical effectiveness has been established, are silver dressings cost effective for the prevention of wound infection, relative to other types of dressing?

The clinical effectiveness of silver dressings for the prevention of wound infection has not been established. No evidence was found on cost effectiveness of silver dressings for the prevention of wound infection.

Summary

No studies were found which used complete wound healing as the end point. Based on studies with short follow-up periods, we found insufficient evidence to determine whether or not silver dressings are any more effective than other types of dressing for the healing of infected wounds or the prevention of wound infection. Silver dressings are more expensive than many other types of dressing.

Further work for Healthcare Improvement Scotland

As the included systematic reviews were recent and there is no directly applicable cost-effectiveness evidence, no further work on this topic is anticipated.

Equality and diversity

Healthcare Improvement Scotland is committed to equality and diversity in respect of the nine equality groups defined by age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion, sex, and sexual orientation. As a scoping report summarises information and does not provide recommendations a full EQIA assessment is not deemed necessary.

The scoping report process has been assessed and no adverse impact across any of these groups is expected. The completed equality and diversity checklist is available on www.healthcareimprovementscotland.org

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References


