Natural Sheepskins for Prevention or Treatment of Pressure Ulcers: Clinical Effectiveness. Cost-Effectiveness and Guidelines
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Acknowledgments:

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About CADTH: CADTH is an independent, not-for-profit organization responsible for providing Canada’s health care decision-makers with objective evidence to help make informed decisions about the optimal use of drugs, medical devices, diagnostics, and procedures in our health care system.
Research Questions

1. What is the clinical effectiveness of natural sheepskins for the prevention or treatment of pressure ulcers in adults with impaired mobility?

2. What is the cost-effectiveness of natural sheepskins for the prevention or treatment of pressure ulcers in adults with impaired mobility?

3. What are the evidence-based guidelines regarding the use of natural sheepskins for the treatment of pressure ulcers in adults with impaired mobility?

Key Findings

Four systematic reviews and three evidence-based guidelines were identified regarding natural sheepskins for the prevention or treatment of pressure ulcers in adults with impaired mobility.

Methods

A limited literature search was conducted on key resources PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases and a focused Internet search. No methodological filters were applied to limit retrieval by publication type. The search was limited to English language documents published between January 1, 2012 and November 27, 2017. Internet links were provided, where available.

Selection Criteria

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

<table>
<thead>
<tr>
<th>Table 1: Selection Criteria</th>
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<tr>
<td><strong>Population</strong></td>
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<td><strong>Intervention</strong></td>
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<td><strong>Comparators</strong></td>
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<td>Q1-2: Other treatment protocols for treatment of pressure ulcers (standard of wound care); No intervention</td>
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<td>Q2: No comparator</td>
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<td><strong>Outcomes</strong></td>
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<tr>
<td>Q1: Clinical effectiveness (e.g., improved healing, reduction in pressure ulcers), harms</td>
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<td>Q2: Cost-effectiveness</td>
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<td>Q3: Guidelines</td>
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<td><strong>Study Designs</strong></td>
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Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, economic evaluations, and evidence-based guidelines.

Four systematic reviews and three evidence-based guidelines were identified regarding natural sheepskins for the prevention or treatment of pressure ulcers in adults with impaired mobility. No relevant health technology assessments, randomized controlled trials, non-randomized studies, or economic analyses were identified.

Additional references of potential interest are provided in the appendix.

Overall Summary of Findings

Three systematic reviews (SRs)\(^1\)\(^-\)\(^3\) were identified regarding the prevention of pressure ulcers and one SR\(^4\) was identified regarding treatment. Low quality evidence was identified regarding the use of sheepskins for pressure ulcers.\(^1\) Fewer pressure ulcers were observed with the use of sheepskin\(^2\)\(^-\)\(^3\) and the only reported harm was heat discomfort.\(^3\)

The characteristics and results of the reviews are summarized in Table 2.

<table>
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<th>Table 2: Summary of Included Systematic Reviews</th>
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<tr>
<td><strong>First Author (Year)</strong></td>
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<td><strong>Pressure Ulcer Prevention</strong></td>
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</table>
| Lozano-Montoya (2016)\(^1\) | • Support surfaces (including sheepskin)  
• Repositioning  
• Nutrition interventions | 110 systematic reviews  
65 primary studies | The authors reported there was low quality evidence to support the use of Australian sheepskin versus traditional mattresses |
| McInnes (2015)\(^2\) | Any support surface for pressure ulcer prevention | 59 primary studies  
3 trials of Australian sheepskin | Results of a meta-analysis showed a reduction in pressure ulcer incidence when Australia sheepskin was used |
| Chou (2013)\(^3\) | Any preventive interventions to decrease incidence or severity of pressure ulcers | 120 primary studies | • The use of Australian sheepskin was associated with a lower incidence of pressure ulcers than standard mattresses alone  
• Heat discomfort was the only reported harm associated with the use of sheepskin |
| **Pressure Ulcer Treatment** |  |
| McInnes (2013)\(^4\) | Pressure relieving support surfaces in the treatment of pressure injury | 18 primary studies  
1 trial of sheepskin | • The authors determined the one identified trial was at high risk of bias  
• Sheepskin used under the legs significantly reduced redness |
Three evidence-based guidelines were identified. The National Pressure Ulcer Advisory Panel and the Winnipeg Regional Health Authority recommend against the use of synthetic sheepskin pads for heel elevation. These guidelines also recommend that natural sheepskins may be useful for the prevention of pressure ulcers.

The Pan Pacific Clinical Practice Guideline for the Prevention and Management of Pressure Injury recommends that medical grade sheepskin should only be considered as an addition to traditional pressure ulcer management or when low or alternating pressure support surfaces are unavailable or not tolerated by the patient.
References Summarized

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses


Randomized Controlled Trials

No literature identified.

Non-Randomized Studies

No literature identified.

Economic Evaluations

No literature identified.

Guidelines and Recommendations

See: Recommendation 14, page 14 and 6.4.5 Sheepskins, page 47

See: Use of other support surfaces in pressure ulcer prevention, page 39
Appendix — Further Information

Previous CADTH Reports


Systematic Reviews – Population Not Specified in Abstract


Economic Analyses – Sheepskin Not Specified in Abstract


Qualitative Studies


Additional References