

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

Lateral Rotation Mattresses for the Prevention and Treatment of Pressure Injuries: Clinical Effectiveness and Guidelines

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Research Questions

1. What is the clinical effectiveness regarding the use of lateral rotation mattresses for preventing and treating pressure injuries?
2. What are the evidence-based guidelines regarding the use of lateral rotation mattresses for preventing and treating pressure injuries?

Key Findings

No relevant literature was identified regarding the clinical effectiveness of using lateral rotation mattresses for preventing and treating pressure injuries. Additionally, no evidence-based guidelines were identified regarding the use of lateral rotation mattresses.

Methods

A limited literature search was conducted by an information specialist on key resources including Medline via OVID, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the websites of Canadian and major international health technology agencies, as well as a focused Internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were mattresses and pressure ulcers. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2014 and August 20, 2019. 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 1: Selection Criteria

Population	Adult patients with or at risk of pressure injuries (including pressure ulcers)
Intervention	Lateral rotation mattresses
Comparator	Q1: Alternate pressure injury control measures (e.g., therapeutic mattresses, overlays, surfaces etc.) Q2: Not applicable
Outcomes	Q1: Clinical effectiveness Q2: Evidence-based guidelines and recommendations
Study Designs	Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies and evidence-based guidelines

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 and evidence-based guidelines.

No health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, and non-randomized studies were identified regarding the clinical effectiveness of using lateral rotation mattresses for preventing and treating pressure injuries. Additionally, no evidence-based guidelines were identified regarding the use of lateral rotation mattresses.

References of potential interest are provided in the appendix.

Overall Summary of Findings

No relevant literature was found regarding the clinical effectiveness of using lateral rotation mattresses for preventing and treating pressure injuries, therefore no summary can be provided. Additionally, no evidence-based guidelines were found regarding the use of lateral rotation mattresses.

References Summarized

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

No literature identified.

Randomized Controlled Trials

No literature identified.

Non-Randomized Studies

No literature identified.

Guidelines and Recommendations

No literature identified.

Appendix — Further Information

Previous CADTH Reports

1. Emerging technologies for the prevention of pressure ulcers in acute care settings: a review of clinical and cost-effectiveness and guidelines. (*CADTH Rapid response: summary with critical appraisal*). Ottawa (ON): CADTH; 2016: <https://cadth.ca/emerging-technologies-prevention-pressure-ulcers-acute-care-settings-review-clinical-and-cost-0>. Accessed 2019 Sept 5.
2. Kinetic beds for patients at risk of complications due to immobility: a review of the clinical effectiveness and cost-effectiveness. (*CADTH Rapid response: summary with critical appraisal*). Ottawa (ON): CADTH; 2015: <https://www.cadth.ca/kinetic-beds-patients-risk-complications-due-immobility-review-clinical-effectiveness-and-cost>. Accessed 2019 Sept 5.

Overview of Reviews – Unclear Intervention

3. Lozano-Montoya I, Velez-Diaz-Pallares M, Abraha I, et al. Nonpharmacologic interventions to prevent pressure ulcers in older patients: an overview of systematic reviews (The Software ENgine for the Assessment and optimization of drug and non-drug Therapy in Older peRsons [SENATOR] Definition of Optimal Evidence-Based Non-drug Therapies in Older People [ONTOP] Series). *J Am Med Dir Assoc*. 2016;17(4):370.e371-310. [PubMed: PM26857298](#)
4. Velez-Diaz-Pallares M, Lozano-Montoya I, Abraha I, et al. Nonpharmacologic interventions to heal pressure ulcers in older patients: an overview of systematic reviews (The SENATOR-ONTOP Series). *J Am Med Dir Assoc*. 2015;16(6):448-469. [PubMed: PM25737261](#)

Systematic Reviews and Meta-analyses – Unclear Intervention

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6. McInnes E, Jammali-Blasi A, Bell-Syer SE, Leung V. Support surfaces for treating pressure ulcers. *Cochrane Database Syst Rev*. 2018;10:CD009490. [PubMed: PM30307602](#)
7. Rae KE, Isbel S, Upton D. Support surfaces for the treatment and prevention of pressure ulcers: a systematic literature review. *J Wound Care*. 2018;27(8):467-474. [PubMed: PM30086254](#)
8. Shi C, Dumville JC, Cullum N. Support surfaces for pressure ulcer prevention: a network meta-analysis. *PLoS ONE*. 2018;13(2):e0192707. [PubMed: PM29474359](#)

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[PubMed: PM24700291](#)

Evidence-Based Guidelines – Unclear Intervention

12. Qaseem A, Humphrey LL, Forciea MA, Starkey M, Denberg TD, Clinical Guidelines Committee of the American College of Physicians. Treatment of pressure ulcers: a clinical practice guideline from the American College of Physicians. *Ann Intern Med.* 2015;162(5):370-9.
[PubMed: PM25732279](#)
13. Qaseem A, Mir TP, Starkey M, Denberg TD, Clinical Guidelines Committee of the American College of Physicians. Risk assessment and prevention of pressure ulcers: a clinical practice guideline from the American College of Physicians. *Ann Intern Med.* 2015;162(5):359-369.
[PubMed: PM25732278](#)
14. National Institute for Health Care Excellence. Pressure ulcers: prevention and management (*Clinical guideline CG179*) 2014:
<https://www.nice.org.uk/guidance/cg179/chapter/1-Recommendations#management-adults>. Accessed 2019 Sept 5.
See: Pressure redistributing devices
15. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel, Pan Pacific Pressure Injury Alliance. Prevention and treatment of pressure ulcers: clinical practice guideline. Osborne Park (AU): 2014;
<http://internationalguideline.com/static/pdfs/NPUAP-EPUAP-PPPIA-CPG-2017.pdf>. Accessed 2019 Sept 5.
See: Mattress and Bed Support Surfaces for Pressure Ulcer Prevention

Clinical Practice Guidelines – Unclear Intervention

16. NHS Northamptonshire Healthcare. Guidelines for the prevention and management of pressure ulcers in all care settings. Northamptonshire (UK): NHS Foundation Trust; 2017: <https://www.nhft.nhs.uk/download.cfm?doc=docm93jjm4n1851.pdf&ver=18988>. Accessed 2019 Sept 5.
See: Appendix 4 – Generic Recommendations for Pressure Relieving Mattresses and Cushions
17. British Columbia Provincial Nursing Skin and Wound Committee. Guideline: assessment and treatment of pressure ulcers in adults & children. 2014:
<https://www.clwk.ca/buddydrive/file/guideline-pressure-ulcers/>. Accessed 2019 Sept 5.
See: 6 - Promote Pressure Redistribution

Review Article – Unclear Intervention

18. Tran JP, McLaughlin JM, Li RT, Phillips LG. Prevention of pressure ulcers in the acute care setting: new innovations and technologies. *Plast Reconstr Surg*. 2016;138(3 Suppl):232S-240S.
[PubMed: PM27556767](#)

Additional References

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