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CADTH Reference List

Automated Repositioning Systems

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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.

Funding: CADTH receives funding from Canada's federal, provincial, and territorial governments, with the exception of Quebec.

Questions or requests for information about this report can be directed to **requests@cadth.ca**

Key Messages

- We did not find any studies about the clinical effectiveness of automated repositioning or patient turning technologies for patients at risk of immobility-related complications.
- We did not find any evidence-based guidelines about the use of automated repositioning or patient turning technologies for patients at risk of immobility-related complications.
- We identified other references on this topic that may be of interest, which are listed in the appendix.

Research Questions

1. What is the clinical effectiveness of automated repositioning or patient turning technologies for patients at risk of immobility-related complications?
2. What are the evidence-based guidelines regarding the use of automated repositioning or patient turning technologies for patients at risk of immobility-related complications?

Methods

Literature Search Methods

A limited literature search was conducted by an information specialist on key resources including MEDLINE, Cumulative Index to Nursing and Allied Health Literature (CINAHL), the Cochrane Database of Systematic Reviews, the International HTA Database, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search strategy comprised both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were automated repositioning systems and long-term care. No filters were applied to limit the retrieval by study type. An additional search was conducted for long-term care and immobility-related complications, in which CADTH-developed search filters were applied to limit retrieval to guidelines. Where possible, retrieval was limited to humans. The search was completed on January 12, 2023, and limited to English-language documents published since January 1, 2018. Internet links were provided, where available.

Selection Criteria

One reviewer screened literature search results (titles and abstracts) and selected publications according to the inclusion criteria presented in Table 1. Full texts of study publications were not reviewed. Open access full-text versions of evidence-based guidelines were reviewed when available.

Table 1: Selection Criteria

Criteria	Description
Population	Patients at risk of immobility-related complications (e.g., pressure injuries) in long-term care homes or home settings
Intervention	Automated repositioning or patient turning technologies
Comparator	Q1: Manual repositioning or patient turning Q2: Not applicable
Outcomes	Q1: Clinical benefits (e.g., prevention of pressure injuries, patient satisfaction) and harms (e.g., adverse events) Q2: Recommendations regarding the use of automated repositioning or patient turning technologies (e.g., how they should be used, if they should be used for specific patient groups)
Study designs	Health technology assessments, systematic reviews, randomized controlled trials, non-randomized studies, evidence-based guidelines

Results

No relevant health technology assessments, systematic reviews, randomized controlled trials, or non-randomized studies were identified about the clinical effectiveness of automated repositioning or patient turning technologies for patients at risk of immobility-related complications. No relevant evidence-based guidelines were identified about the use of automated repositioning or patient turning technologies for patients at risk of immobility-related complications.

References of potential interest that did not meet the inclusion criteria are provided in Appendix 1.

References

Health Technology Assessments

No literature identified.

Systematic Reviews

No literature identified.

Randomized Controlled Trials

No literature identified.

Non-Randomized Studies

No literature identified.

Guidelines and Recommendations

No literature identified.

Appendix 1: References of Potential Interest

Non-Randomized Studies

No Comparator

Lahmann N. Psychometric testing and evaluation of user acceptance of an automatic lateral turning device for the prevention of pressure ulcers. *J Tissue Viability*. 2021 May;30(2):216-221. https://www.sciencedirect.com/science/article/pii/S0965206X21000255?via%3Dihub Accessed 2023 Jan 13. PubMed

Case Series

Knibbe NE, Zwaenepoel E, Knibbe HJ, Beeckman D. An automatic repositioning system to prevent pressure ulcers: a case series. *Br J Nurs*. 2018 Mar 22;27(6):S16-S22. PubMed