

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

Fall Prevention Strategies in Obstetric Populations: Clinical Effectiveness and Guidelines

Service Line: Rapid Response Service
Version: 1.0
Publication Date: January 8, 2020
Report Length: 5 Pages

Authors: Shannon Hill, Charlene Argáez

Cite As: *Fall prevention strategies in obstetric populations: clinical effectiveness and guidelines*. Ottawa: CADTH; 2019 Jan. (CADTH rapid response report: summary of abstracts).

Disclaimer: The information in this document is intended to help Canadian health care decision-makers, health care professionals, health systems leaders, and policy-makers make well-informed decisions and thereby improve the quality of health care services. While patients and others may access this document, the document is made available for informational purposes only and no representations or warranties are made with respect to its fitness for any particular purpose. The information in this document should not be used as a substitute for professional medical advice or as a substitute for the application of clinical judgment in respect of the care of a particular patient or other professional judgment in any decision-making process. The Canadian Agency for Drugs and Technologies in Health (CADTH) does not endorse any information, drugs, therapies, treatments, products, processes, or services.

While care has been taken to ensure that the information prepared by CADTH in this document is accurate, complete, and up-to-date as at the applicable date the material was first published by CADTH, CADTH does not make any guarantees to that effect. CADTH does not guarantee and is not responsible for the quality, currency, propriety, accuracy, or reasonableness of any statements, information, or conclusions contained in any third-party materials used in preparing this document. The views and opinions of third parties published in this document do not necessarily state or reflect those of CADTH.

CADTH is not responsible for any errors, omissions, injury, loss, or damage arising from or relating to the use (or misuse) of any information, statements, or conclusions contained in or implied by the contents of this document or any of the source materials.

This document may contain links to third-party websites. CADTH does not have control over the content of such sites. Use of third-party sites is governed by the third-party website owners' own terms and conditions set out for such sites. CADTH does not make any guarantee with respect to any information contained on such third-party sites and CADTH is not responsible for any injury, loss, or damage suffered as a result of using such third-party sites. CADTH has no responsibility for the collection, use, and disclosure of personal information by third-party sites.

Subject to the aforementioned limitations, the views expressed herein do not necessarily reflect the views of Health Canada, Canada's provincial or territorial governments, other CADTH funders, or any third-party supplier of information.

This document is prepared and intended for use in the context of the Canadian health care system. The use of this document outside of Canada is done so at the user's own risk.

This disclaimer and any questions or matters of any nature arising from or relating to the content or use (or misuse) of this document will be governed by and interpreted in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein, and all proceedings shall be subject to the exclusive jurisdiction of the courts of the Province of Ontario, Canada.

The copyright and other intellectual property rights in this document are owned by CADTH and its licensors. These rights are protected by the Canadian *Copyright Act* and other national and international laws and agreements. Users are permitted to make copies of this document for non-commercial purposes only, provided it is not modified when reproduced and appropriate credit is given to CADTH and its licensors.

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

Research Questions

1. What is the clinical effectiveness of strategies to reduce the risk of falling in obstetric populations?
2. What are the evidence-based guidelines regarding the use of strategies to reduce the risk of falling in obstetric populations?

Key Findings

One non-randomized study was identified regarding the clinical effectiveness of strategies to reduce the risk of falling in obstetric populations. No evidence-based guidelines were identified regarding the use of strategies to reduce the risk of falling in obstetric populations.

Methods

A limited literature search was conducted by an information specialist on key resources including PubMed, 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 pregnancy and accidental falls. No filters were applied to limit the retrieval by study type. The search was also limited to English language documents published between January 1, 2014 and December 16, 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	Obstetric populations (pre-delivery and post-delivery)
Intervention	Fall prevention strategies (e.g., balance training exercises, patient education, medication reviews)
Comparator	Q1: Other strategies to reduce the risk of falling; no use of fall prevention strategies for risk of falling Q2: No comparator required
Outcomes	Q1: Clinical effectiveness (e.g., relative risk of falling) Q2: Evidence-based guidelines
Study Designs	Health technology assessments, systematic reviews, meta-analyses, randomized control trials, non-randomized studies, 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.

One non-randomized study¹ was identified regarding the clinical effectiveness of strategies to reduce the risk of falling in obstetric populations. No evidence-based guidelines were identified regarding the use of strategies to reduce the risk of falling in obstetric populations.

Additional references of potential interest are provided in the appendix.

Overall Summary of Findings

One non-randomized study¹ was identified regarding the clinical effectiveness of strategies to reduce the risk of falling in obstetric populations. The authors of the non-randomized study¹ evaluated the effect of maternity support belts on postural balance during pregnancy using a Biodex Stability System. Pregnant women were stratified based on trimester and stability measurements were compared with pregnant women wearing the maternity support belts and not wearing the maternity support belts. Four stability measurements were gathered which included overall stability, anterior-posterior stability index, medial-lateral stability index, and fall risk test. The authors found that in all trimester groups, the fall risk test scores were lower for pregnant women with a maternity support belt compared to those without a maternity support belt.¹ The authors concluded that maternity support belts are useful for fall prevention during pregnancy.¹

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

1. Cakmak B, Inanir A, Nacar MC, Filiz B. The effect of maternity support belts on postural balance in pregnancy. *PM R*. 2014 Jul;6(7):624-628.

[PubMed: PM24412671](#)

Guidelines and Recommendations

No literature identified.

Appendix — Further Information

Review Articles

2. Cakmak B, Ribeiro AP, Inanir A. Postural balance and the risk of falling during pregnancy. *J Matern Fetal Neonatal Med.* 2016;29(10):1623-1625.
[PubMed: PM26212584](#)
3. Gaffey AD. Fall prevention in our healthiest patients: assessing risk and preventing injury for moms and babies. *J Healthc Risk Manag.* 2015;34(3):37-40.
[PubMed: PM25630284](#)

Clinical Practice Guidelines

4. Alberta Health Services. Maternal and infant fall prevention and management (*guideline*). Edmonton (AB): Alberta Health Services; 2019 Oct:
<https://extranet.ahsnet.ca/teams/policydocuments/1/clp-maternal-infant-fall-prevention-management-ps-96-01-guideline.pdf>
Accessed 2019 Dec 19.
See: 3. Process to Support Fall Prevention, p4