

*Canadian Agency for
Drugs and Technologies
in Health*



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des médicaments et des
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Hip Protectors in Long-Term Care: A Collaborative Approach to Fracture Risk Reduction

Overview

Presentation Objectives:

- Background: Hip Protector issues
- Hip Protectors Project
 - Project Importance & Collaborative process
 - Guidance Summary
 - Implementation Tools
- Key Messages



The Issues

Hip fractures are a significant health risk for seniors.

Hip fractures may be reduced through:

- prevention and treatment of osteoporosis
- prevention of falling
- use of hip protectors.



.....recognizing that:

- Hip protectors can be effective in preventing hip fractures when worn at the time of a fall.
- Not all hip protectors are equally effective and may be more beneficial for some
- Effectiveness of hip protectors is influenced by the consistency with which they are worn.

Background: Hip Protectors

What Are Hip Protectors?

- Garments or undergarments with pockets on each side, into which protective pads are inserted or permanently embedded.
- Protective pads may be hard or soft-shelled.
- In the event of a fall, the pad absorbs or disperses the force away from the hip.



Hip Protectors Project

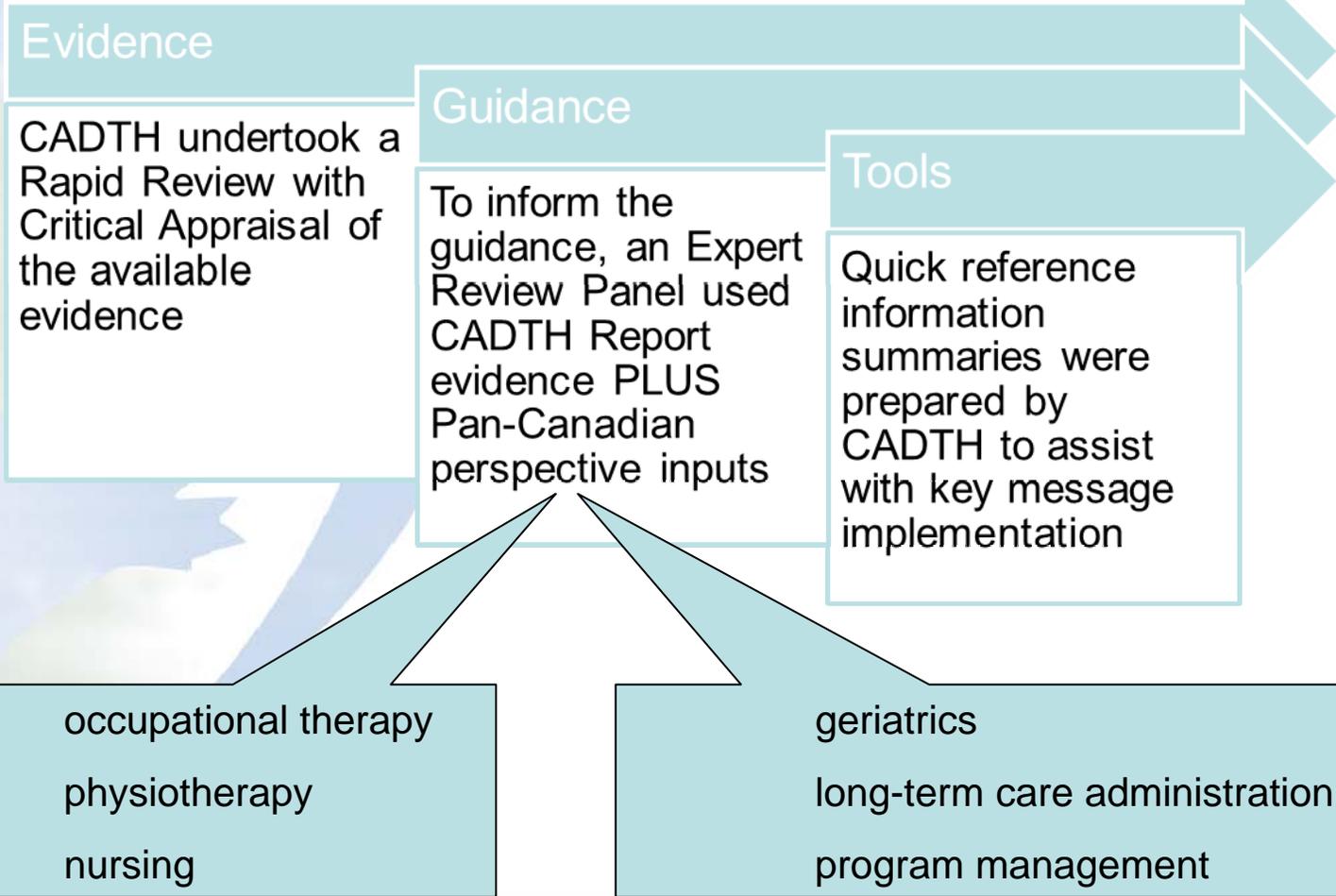
At the request of 3 provinces, CADTH recently provided policy guidance and implementation tools related to hip protector use in long-term care facilities.

This work addressed issues of how to:

- consider available hip fracture prevention DEVICE strategies in elderly residents of Long-Term Care (LTC) care facilities
- promote health and well-being of the residents
- reduce the burden on the health care system resulting from hip injuries.



Process Used



Evidence-Informed Findings

- Hip protectors had a protective effect on hip fractures for elderly in residential care (5 systematic reviews).
- Four of six clinical practice guidelines recommended the use of hip protectors (varying grades of evidence).
- Evaluations done in Canadian settings found hip protectors likely to be cost-saving (3 economic evaluations) but did not compare hard versus soft-shell.
- Compliance and impact on ADLs were important issues in hip protector research and implementation.
- **Hip protectors (if used consistently) may reduce the risk of hip fractures by 23% (for women over 70 years of age in long-term care facilities, assuming typical rates of compliance).**

Baseline Primary Economic Model results for an 80- to 84-year-old osteoporotic woman living in LTC with a previous osteoporotic fracture

	Incremental Cost per QALY		
	Hip Protectors versus No Intervention	Hip Protectors versus Alendronate	Hip Protectors and Alendronate versus Alendronate
Base case	\$14,000	Dominated	\$40,000
70 to 74 years old with previous fracture	\$31,000	Dominated	\$67,000
75 to 79 years old with previous fracture	\$19,000	Dominated	\$49,000
85 to 89 years old with previous fracture	\$11,000	Dominated	\$34,000
80 to 84 years old with no previous fracture	\$22,000	Dominated	\$53,000
RR of hip fracture=0.86	\$35,000	Dominated	\$77,000
Compliance of 20%	\$36,000	Dominated	\$79,000
Compliance of 92%	\$15,000	Dominated	\$42,000
4 hip protectors required per annum	Dominant	Dominated	\$14,000
14 hip protectors required per annum	\$47,000	Dominated	\$98,000

QALY=quality-adjusted life year; RR=relative risk.

Guidance Summary

Consider the inclusion of hip protectors as an element of seniors' injury prevention strategies, allowing provision of hip protectors to long-term care residents assessed as being at increased risk of falling.

Clinicians should employ a specific set of criteria for determining which residents of long-term care are at the greatest risk of falling, and for which of those residents hip protectors would not interfere with ADLs.

Decision makers may consider targeting...

LTC facility residents with these risk factors (most likely to benefit from hip protectors):

- Hypertension
- Incontinence
- Previous history of falls and fractures
- Cognitive impairment
- Stroke (especially hemiplegia)
- Dementia, disorders of gait and balance
- Parkinson's disease
- Peripheral neuropathy
- Lower extremity weakness or sensory loss
- Lower body mass indexes
- Substantial vision loss.

Implementation Tools (Guidance Cards)

MORE INFORMATION

Fractures of the hip — A significant health risk for seniors:

- Each year, approximately 50% of all residents in long-term care facilities will fall at least once.
- About 1% of seniors who fall experience a hip fracture.
- 20% of those experiencing a hip fracture will die within one year, 7% die within 30 days.
- Following a hip fracture, seniors may experience fear, anxiety, reduced mobility, and the need for additional care and resources (e.g., mechanical lifts, wheelchairs).

Hip fractures may be reduced through:

- Prevention and treatment of osteoporosis
- Prevention of falling
- Use of hip protectors.

OTHER RESOURCES AND PROJECT INFORMATION

www.cadth.ca/hipprotectors

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Hip Protection of long-term care facilities

- Hip protectors clinically over 70% reduce the compliance
- Compliance worn correct to range
- Reasons to include d and toile education
- By involving long-term hip protect

HIP PROTECTORS IN LONG-TERM CARE FACILITIES

WHAT ARE HIP PROTECTORS?

- Hip protectors are garments or undergarments with pockets for protective pads that protect the hips in the case of a fall.
- The pads can either be “hard-shelled” or “soft-shelled.”
- In the event of a fall, the pad absorbs or disperses the force away from the hip.

KEY MESSAGES

1. Hip protectors should be considered as one element of effective institutional, regional, or provincial/territorial injury prevention strategies for seniors in long-term care facilities.
2. Hip protectors benefit some long-term care residents more than others. Specific criteria should be applied to determine which seniors would benefit most (e.g., residents with previous falls or fractures, osteoporosis, cognitive impairment; women over 70; and where hip protectors will not greatly interfere with activities of daily living).
3. Long-term care staff and clinicians need to work closely with long-term care residents and their families to determine which type of hip protector best suits the needs of the resident. The preference of the resident must be considered.
4. To allow for consistent use by residents in long-term care facilities, an adequate number of hip protectors need to be provided.



For more project information, visit the CADTH website:

www.cadth.ca/hipprotectors

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Visit the CADTH exhibit for guidance on hip protectors:

<http://www.cadth.ca/index.php/en/hta/reports-publications/recommendations/policy-guid-hip-protect>

Collaboration for Fracture Prevention

- Hip Protectors may be an excellent evidence-informed intervention to add into existing falls prevention program planning or strategies in facilities or regions
- Awareness building and education opportunities for both residents and families about potential value may support uptake and consistent usage
- When combined with other interventions (bisphosphonates; and comprehensive falls preventions strategies), definitive enhanced benefits in fracture prevention may be realized
- Practical implementation factors need to be further considered on a patient-by-patient basis

