Canadian Agency for Drugs and Technologies in Health

Health Technology Inquiry Service

Health Technology Assessment HTA

TITLE: Hip Protectors in Long-Term Care: Clinical and Cost-Effectiveness

DATE: 14 January 2010

RESEARCH QUESTIONS:

1. What is the clinical effectiveness of hip protectors to prevent injuries for residents in long-term care facilities and assisted/supervised care?

2. What is the cost-effectiveness of hip protectors to prevent injuries for residents of long-term care facilities and assisted/supervised care?

3. What are the guidelines and criteria for patient selection for use of hip protectors?

METHODS:

A limited literature search was conducted on key health technology assessment resources, including PubMed, the Cochrane Library (Issue 4, 2009), University of York Centre for Reviews and Dissemination (CRD) databases, ECRI, EuroScan, international health technology agencies, and a focused Internet search. The search was limited to English language articles published between 2008 and January 2010. No filters were applied to limit the retrieval by study type in the main search of hip protectors in long-term care. However, filters were used to limit the retrieval to economic and clinical guidelines in a general search on hip protectors. Internet links were provided, where available.

RESULTS:

This report is an update to a peer-reviewed summary with critical appraisal published in May 2008 entitled, “Hip Protectors In Long-Term Care: A Clinical and Cost-Effectiveness Review and Primary Economic Evaluation” and includes published literature starting from April 1, 2008.

HTIS 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, controlled clinical trials, observational studies, economic evaluations, and evidence-based guidelines.

Disclaimer: The Health Technology Inquiry Service (HTIS) is an information service for those involved in planning and providing health care in Canada. HTIS responses are based on a limited literature search and are not comprehensive, systematic reviews. The intent is to provide a list of sources of the best evidence on the topic that CADTH could identify using all reasonable efforts within the time allowed. HTIS responses should be considered along with other types of information and health care considerations. The information included in this response is not intended to replace professional medical advice, nor should it be construed as a recommendation for or against the use of a particular health technology. Readers are also cautioned that a lack of good quality evidence does not necessarily mean a lack of effectiveness particularly in the case of new and emerging health technologies, for which little information can be found, but which may in future prove to be effective. While CADTH has taken care in the preparation of the report to ensure that its contents are accurate, complete and up to date, CADTH does not make any guarantee to that effect. CADTH is not liable for any loss or damages resulting from use of the information in the report.

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One systematic review, one randomized controlled trial, three observational studies, one economic evaluation, and one evidence-based guideline were identified pertaining to the use of hip protectors to prevent injuries for residents in long-term care facilities and assisted/supervised care. No relevant health technology assessment reports or controlled clinical trials were identified. Additional information that may be of interest has been included in the appendix.

Health technology assessments
No literature identified.

Systematic reviews and meta-analyses

1. Medical Advisory Secretariat. *Prevention of falls and fall-related injuries in community-dwelling seniors: an evidence-based analysis* [Internet]. Toronto: Ministry of Health and Long-Term Care; 2008. (Ontario Health Technology Assessment Series; vol.8 no.2). [cited 2010 Jan 6]. Available from: http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_aic_falls_20081002.pdf
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Randomized controlled trials

2. Koike T, Orito Y, Toyoda H, Tada M, Sugama R, Hoshino M, et al. External hip protectors are effective for the elderly with higher-than-average risk factors for hip fractures. *Osteoporos Int*. 2009 Sep;20(9):1613-20. PubMed: PM19137351

Controlled clinical trials
No literature identified.

Observational studies

3. Juby AG. The challenges of interpreting efficacy of hip protector pads in fracture prevention in high-risk seniors. *Clin Rheumatol*. 2009 Jun;28(6):723-7. PubMed: PM19240980

4. Bentzen H, Bergland A, Forsen L. Risk of hip fractures in soft protected, hard protected, and unprotected falls. *Inj Prev*. 2008 Oct;14(5):306-10. PubMed: PM18836047

5. Garfinkel D, Radomislsky Z, Jamal S, Ben-Israel J. High efficacy for hip protectors in the prevention of hip fractures among elderly people with dementia. *J Am Med Dir Assoc*. 2008 Jun;9(5):313-8. PubMed: PM18519111

Economic evaluations

6. Gandjour A, Weyler EJ. Cost-effectiveness of preventing hip fractures by hip protectors in elderly institutionalized residents in Germany. *Value Health*. 2008 Dec;11(7):1088-95. PubMed: PM19602215

Guidelines and recommendations

7. Mak JC, Cameron ID, March LM. Evidence-based guidelines for the management of hip fractures in older persons: an update. *Med J Aust*. 2010 Jan 4;192(1):37-41. PubMed: PM20047547

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APPENDIX – FURTHER INFORMATION:

Ongoing randomized controlled trials

8. Barton BA, Birge SJ, Magaziner J, Zimmerman S, Ball L, Brown KM, et al. The Hip Impact Protection Project: design and methods. *Clin Trials*. 2008;5(4):347-55. PubMed: PM18697849

Review articles

9. Parkkari J, Kannus P. Hip protectors for preventing hip fractures among elderly adults. *Aging Health*. 2009;5(4):509-17.

Additional references

10. Sawka AM, Boulos P, Beattie K, Papaioannou A, Gafni A, Cranney A, et al. Erratum to: "Hip protectors decrease hip fracture risk in elderly nursing home residents: a Bayesian meta-analysis". *J Clin Epidemiol*. 2008;61(8):854.

11. Birks C, Lockwood K, Cameron I, Kurrle S, Burnside W, Easter S, et al. Hip protectors: Results of a User Survey. *Australas J Ageing*. 1999;18(1):23-6.