



Barriers and Facilitators to Hip Protector Compliance in Long-Term Care Facilities: A Systematic Review Research in Brief



Issue

Hip injuries in residents of long-term care facilities are a health concern in Canada and are likely to increase in importance as current demographic trends in aging continue. Each year, approximately 50% of residents of long-term care facilities fall at least once and 40% of residents fall twice or more. Around 10% to 25% of these falls are associated with serious injuries requiring medical treatment and about 1% of seniors who fall experience a hip fracture.¹ Of these older adults hospitalized for a hip fracture, 25% die within a year, and 50% will not return to their pre-fracture level of mobility.²

Hip protectors are effective in preventing hip fractures in elderly residents of long-term care facilities when worn at the time of a fall.¹ However, the effectiveness of hip protectors is influenced by the consistency with which they are worn.¹ As a result, there is an urgent need to identify the potential barriers and facilitators to initial acceptance and continued adherence with hip protector use.

Technology

Hip protectors consist of soft or hard shell pads embedded in an outergarment or undergarment. Hip protectors are designed to reduce femoral impact force and fracture risk by either shunting or absorbing the impact force away from the bone.

Objectives

The objectives of this systematic review were to:

- Synthesize available research to identify perceived barriers to initial acceptance and continued adherence with hip protectors, and to provide evidence-based strategies to improve these outcomes
- Interpret the findings to identify evidence-based strategies to improve acceptance and adherence with the use of hip protectors
- Package and disseminate the findings in a form that is relevant, practical, and easily interpreted by knowledge users and decision-makers.

Key Messages

The systematic review identified the following best strategies to overcome perceived barriers and improve acceptance and adherence with the use of hip protectors:

- Pursue organizational commitment at all levels
- Identify a champion/leader to motivate, mentor, and monitor
- Involve everyone responsible for resident safety
- Educate staff on the benefits of hip protectors and their correct use
- Engage and educate residents and families
- Choose from hip protector models with proven efficacy
- Put in place protocols for ensuring adequate supply, variety of models, correct fit, and laundering.

Methods

The intention of this systematic review was to identify articles encompassing a wide spectrum of evidence on barriers to and facilitators of hip protector acceptance and adherence, drawing upon published literature inclusive of qualitative, quantitative, and mixed methods research articles.

A keyword search was conducted for studies published in English between 2000 and 2011. Studies were included if they focused specifically on hip protectors as an intervention or if hip protectors were included as part of a multi-factorial intervention or subgroup analysis. The sample of interest was comprised of older adults in long-term care facilities whose age was 65 years or older, and/or their family caregivers and health care providers. For inclusion, the article must have presented findings related to hip protector acceptance and/or adherence, even though the primary purpose of the study may have been hip protector effectiveness.

Results

A total 26 studies specific to long-term care settings were found to meet the inclusion criteria. Data extraction from these studies revealed that factors influencing hip protector acceptance and adherence occurred at different levels depending on the focus of each study. The factors were sorted into four groups, according to the following levels: organization level, staff level, resident level, and hip protector level.

Organization level

Consistent commitment and leadership regarding the promotion of hip protectors by administration and staff appear to be key components of compliance. This is further enhanced by the presence of champions (a staff member or group responsible for overseeing all aspects of the hip protector program, including ordering and storage, as well as mentoring and supporting staff, residents, and family members). Additional enhancement to compliance is possible through validation of good practices by external quality control inspectors (accreditation or licensing agencies) and the prescription of hip protectors by physicians.

Staff level

Factors found to be important in supporting hip protector compliance include staff knowledge of the benefits of hip protectors combined with enthusiastic attitudes applied to sharing the positive benefits with other staff, residents, and family members.

Resident level

Factors that show a strong association with hip protector compliance tend to be those that lead to an increase in knowledge of the risk of falls and fractures. Higher compliance was also found when residents and family members were knowledgeable about the benefits of hip protectors and when residents' families visited frequently and encouraged the use of hip protectors.

Hip protector level

Evidence related to compliance centres around comfort, style/appearance, and potential side effects. To address comfort and style/appearance, new hip protector models that are currently available include pads that are thinner or made with breathable material and garments such as sweatpants, shorts, and models designed for incontinence or specifically for use in residential care. Even though uncommon, some studies reported unwanted side effects as a barrier to hip protector use, including pain, swelling, soreness, itchiness, and heat.

References

1. Canadian Agency for Drugs and Technologies in Health, *Policy Guidance on Hip Protectors in Long-Term Care*. Ottawa: Canadian Agency for Drugs and Technologies in Health; 2010.
2. Empana, J.P., et al., *Effect of hip fracture on mortality in elderly women: the EPIDOS prospective study*. *J Am Geriatr Soc*, 2004. **52**(5): p. 685-90.

About This Document:

The analysis presented in this document is based primarily on evidence from a systematic review conducted by Dr. Fabio Feldman, Fraser Health's Manager of Seniors Falls and Injury Prevention, and Dr. Vicky Scott, Senior Advisor on Fall and Injury Prevention for the Province of British Columbia with the BC Injury Research and Prevention Unit and the BC Ministry of Health Services.

For complete reports and links to a video presentation and animation video on this topic, please visit www.CADTH.ca/HipProtectors.

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