Introduction to Falls in Primary Care

"There is no such thing as a trivial fall…the next one might be devastating."[1]

Background and Significance

Falls are among the most common and serious problems facing elderly persons. Falling is associated with considerable mortality, morbidity, reduced functioning, and premature nursing home admissions. The following statistics on Seniors' falls in Canada[2] highlight the magnitude of the problem:

- Almost 62% of injury-related hospitalizations for seniors are the result of falls.
- The fall-related injury rate is nine times greater among seniors than among those less than 65 years of age.
- Almost half of seniors who fall experience a minor injury, and 5% to 25% sustain a serious injury such as a fracture or a sprain.
- Falls cause more than 90% of all hip fractures in seniors and 20% die within a year of the fracture.
- Families are often unable to provide care, and 40% of all nursing home admissions occur as a result of falls by older people.
- A 20% reduction in falls would translate to an estimated 7,500 fewer hospitalizations and 1,800 fewer permanently disabled seniors. The overall national savings could amount to $138 million annually.
- This year Ontario will spend $1.9 Billion on falls – the most costly cause of injury.
- Over 2000 seniors die every year as a direct result of a fall.

The incidence of falls and the severity of fall-related complications rise steadily after about age 60. In the age 65-and-over population as a whole, approximately 35-40% of community-dwelling, generally healthy elderly persons fall annually. After age 75 the rates are higher.

A key concern is not simply the high incidence of falls in elderly persons but rather the combination of high incidence and a high susceptibility to injury.

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[1] Goldlist, B.J. (2003). Falls: A perfect paradigm for multifaceted management. Geriatrics & Aging, 6, 7.
[2] Division of Aging and Seniors (2005). *Report on seniors' falls in Canada*. Minister of Public Works and Government Services, Public Health Agency of Canada. Ottawa, Ontario. Retrieved, July 4, 2008, fromhttp://www.phac-aspc.gc.ca/seniors-aines/pubs/seniors_falls/index.htm.

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This propensity for fall-related injury in elderly persons stems from a high prevalence of co-morbid diseases (e.g., osteoporosis) and age-related physiological decline (e.g., slower reflexes) that make even a relatively mild fall particularly dangerous.

Even without an injury, a fall can cause a loss in confidence and a curtailment of activities, which can lead to a decline in health and function and contribute to future falls with more serious outcomes.[3] The loss of self-confidence to ambulate safely and the anxiety or fear of falling that accompanies a fall can result in self-imposed functional limitations.

Despite the fact that falls are common, have a tremendous adverse impact on an elderly individual's physical functioning and quality of life, and result in a tremendous burden upon society and the health care system, most falls are *predictable and preventable.*

Risk Factors for Falling

Falls generally result from an interaction of multiple risk factors, predisposing age-related changes, and environmental contributors. Risk factors can be classified as predisposing (normal age-related changes) intrinsic, or extrinsic.

As important as identifying modifiable risk factors is appreciating the interaction and synergism between multiple risk factors. The risk of falling dramatically increases as the number of risk factors increases.[4]

[3],[4] Laird, R.D. & Robinson, B.E. (2006). Falls in Older Adults: Evaluation and Management in Primary Practice 3rd Edition. In *The Practicing Physician Education Project – Tools for the Evaluation and Management of Geriatric Patients in Primary Practice*. Robinson, B.E. & Levine, S. A. (Eds). Merck Institute of Aging and Health.

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Predisposing	Intrinsic	Extrinsic
⇩ sensory input (vision, hearing and proprioception) ⇩ nerve conduction ⇩ number motor neurons ⇩ fast twitch fibers ⇩ muscle mass Vascular changes - prone to postural hypotension	▪ Lower extremity weakness ▪ Balance / gait problems ▪ Visual deficits ▪ Acute or chronic illness ▪ Decreased sensation ▪ Depression ▪ Hearing loss ▪ Dizziness / postural hypotension ▪ Foot problems ▪ Cognitive impairment ▪ Functional / ADL impairment **Certain medications:** ▪ Psychotropics/Benzodiazepines ▪ Digoxin ▪ Diuretics ▪ Class 1a anti-arrhythmics ▪ Polypharmacy (5 or more) **Behavioural:** ▪ History of falls ▪ Excessive alcohol use (≥14 / wk) ▪ Fear of falling ▪ Risk-taking behaviours (lack of insight)	▪ Use of assistive device ▪ Stairs ▪ Home hazards (kitchen, bathroom, bedroom) ▪ Outdoor hazards ▪ Public / community hazards ▪ Use of assistive device ▪ Improper footwear

What Primary Care Practitioners Can Do to Decrease Falls Risk

Primary care providers can significantly decrease the fall risk of their elderly patients by:

- Screening for fall risk once a year in individuals aged 65 and above
- Conducting a comprehensive falls assessment to identify contributory causes and risk factors
- Implementing multidisciplinary management strategies that target modifiable risk factors.