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### Falls Injuries: Causes, Consequences, and Prevention

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## EDITORIAL

### Falls Injuries: Causes, Consequences, and Prevention

Falls have been and continue to be a leading cause of death among older persons in the United States, affecting at least one in three persons, or as many as one in two persons over 65 years of age each year [1-3]. In addition, of those fallers who survive, 20-30 percent will suffer moderate to severe injuries sufficient to reduce mobility and independence, and to heighten the risk of premature death [4]. As well, about two-thirds will suffer another fall within the next six months [5], 42% will be admitted to hospital with a mean length of hospital stay of 11.6 days, and about 50% of all home based fall injury events that require hospitalization will result in a nursing home discharge [2]. In addition to enormous physical costs, the direct economic costs of falling injuries are consequently enormous [6].

Fortunately, a vast body of research has pinpointed a number of modifiable factors that can help explain the high rate of falling among the elderly, both in the community and in the nursing home setting. However, as the incidence of fall-related injuries and deaths continues to escalate along with the average age of current populations, such as the United States [7], more research is needed. Indeed, it would seem imperative, more than ever, to continue to examine why falls occur and what can be done to prevent or allay the aforementioned highly deleterious cycle of events that is found to be experienced by at least one third of persons over age 65, and about one in two over age 80, each year [1].

In particular, since the risk of falling increases with the number of risk factors present [1, 8], it seems reasonable to assume reducing the number of fall-related risk factors will carry with it a proportionate reduction in fall frequency and injury risk [9]. In addition, screening to reduce the incidence of falls among the "at risk" elderly person, followed by appropriately tailored and targeted interventions [10] that address the most salient risk factors can potentially impact the rate of falling and recurrent falls positively as documented by several researchers [e.g., 1, 11, 12].

This present Special Edition thus sought to examine current research concerning the causes, consequences, and intervention approaches in the context of falls injuries among the elderly. Several submissions were forthcoming and the four papers presently selected for inclusion were deemed highly relevant to audiences interested in reducing falls among community-dwelling and hospitalized elderly, as well as for gathering further insight into mechanisms and possible strategies for preventing both the number and severity of injuries due to falls.

In terms of improving our understanding of intrinsic factors that influence falling, the first article written by Bessot *et al.* [15] entitled "Postural Control in a Fall Risk Situation in the Elderly: Stepping over an Obstacle Under Dual-task Conditions," describes the adverse effects of performing a secondary motor task while walking. It specifically focuses on trying to understand the link between performing dual-tasks while walking under challenging conditions and falling, and offers implications for future research based on these observations. In the next paper, Haines *et al.* [16] describe the perceptions of a sample of geriatric inpatients concerning falls risk in general, as well as their perceptions of their personal falls risk. The authors conclude that patients generally do not think they are at risk of falling while in hospital, thus explaining their poor adherence to falls prevention strategies. In the third paper, Scott *et al.* [13] summarize key developments in the evolution of falls prevention activities in British Columbia, Canada over the past two decades and how these sustained, collaborative efforts have resulted in the formation of comprehensive networks and the integration of evidence-based fall prevention strategies into health service delivery for seniors. In the final paper by Noonan *et al.* [14], the public health approach to preventing older adult falls is discussed. In particular, the authors highlight current United States Centers for Disease Control activities that map onto each step of the public health model including defining the problem, identifying causes, developing and testing interventions, and then implementing effective approaches on a large scale and provide directions for future programmatic efforts to prevent older adult fall injuries, including improved surveillance, support for program implementation, and enhanced partnership building.

Taken as a whole, all are thus helpful in articulating and in advancing our understanding of potentially important risk factors for falls, as well as approaches that may be useful to explore in future fall risk investigations and preventive efforts among the older population. They specifically provide some novel insights into the causes of falling and what might be studied further, as well as potentially efficacious community-wide approaches to controlling the prevalence and severity of falls among the elderly.

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