

# Alberta Senior's Falls Prevention Network Bulletin



## Bulletin 10 (November, 2008)

### **Finding Balance Campaign**

The campaign is well underway! Premier Stelmach, along with Minister Jablonski (Seniors and Community Supports) and Minister Liepert (Health and Wellness) launched *Finding Balance* November 3 at the Alberta Legislature in front of members of the press and seniors from Edmonton and several rural Alberta communities. To date there have been 33 media stories tracked across Alberta and over 110 municipal declarations of November as 'Seniors' Falls Prevention Month'. Visit the campaign website for more information: [www.findingbalancealberta.ca](http://www.findingbalancealberta.ca)

Campaign brochures and posters are available for distribution in your area. You may contact Liza Sunley at [liza@lizasunley.com](mailto:liza@lizasunley.com) to place an order.

### **Good Morning America Falls Segment**

Good Morning America ran a segment on Falls Among Older Adults. If you have not seen the segment yet, please visit <http://www.abcnews.go.com/GMA/OnCall/story?id=6173302&page=1>.

### **Upcoming Events**

#### **Geriatric Grand Rounds: "Finding Balance: The latest in falls prevention"**

Objectives:

- To provide an overview of falls in Alberta and best practices in falls prevention
- To outline current initiatives in the Greater Edmonton area
- To consider your role as a health care provider
- To learn about the *Finding Balance* falls awareness campaign

Presenters: Lynda McPhee, Education Coordinator

Alberta Centre for Injury Control & Research  
and

Rosalie Freund-Heritage, Regional Falls Prevention Coordinator  
Alberta Health Services, Edmonton Area

Date: Tuesday, November 18, 2008

Time: 1200-1300 hours

Venue: Dr. Bill Black Auditorium, Glenrose Rehabilitation Hospital

Geriatric Grand Rounds are accessible simultaneously at the telehealth centres across the Province of Alberta, including the Misericordia, Royal Alexandra, Grey Nuns & the University of Alberta Hospitals. For more information or connection, call Darryl Jaskow, Telehealth Site Coordinator at 780-735-0863 (Email: [Darryl.Jaskow@capitalhealth.ca](mailto:Darryl.Jaskow@capitalhealth.ca)).

#### **Pills and Spills Teleconference**

The next teleconference for Alberta Seniors' Falls Prevention Network is Wednesday, January 21, 2009 at 10:00 AM. Cheryl Sadowski, Clinical Assistant Professor and Clinical Pharmacist with the University of Alberta will be presenting *Pills and Spills*. Mark your calendars and stay posted for additional information.

## **After Sex, Drugs & Rock 'n' Roll: Geriatric Psychiatry Braces for the Future**

November 20 – 21, 2008

Lister Centre, Edmonton, AB

The Glenrose Rehabilitation Hospital is pleased to announce the 2008 Geriatric Psychiatry conference After Sex, Drugs & Rock 'n' Roll: Geriatric Psychiatry Braces for the Future. We are expecting 200 delegates to attend this exciting event. Delegates will include psychiatrists, psychologists, social workers, nurses, occupational therapist, recreation therapists, pharmacists and other service providers who use mental health strategies in their practice with seniors.

The featured speaker is Dr. Shawn Christopher Shea, MD. Dr. Shea has been a dynamic force in the field of mental health for years. Recognized internationally as a preeminent leader in suicide prevention and clinical interviewing, he is now the Director of the Training Institute for Suicide Assessment and Clinical Interviewing in New Hampshire.

For more details please visit the website at: [www.capitalhealth.ca/2008GeriatricPsychiatry](http://www.capitalhealth.ca/2008GeriatricPsychiatry) **Preview**

## ***From the Literature:***

### **Good News!**

Categorized past and present article summaries appearing in the Alberta Senior's Falls Prevention Network Bulletins are now available on the Alberta Centre for Injury Control & Research website: <http://www.acicr.ualberta.ca/> Click on 'Networking' on the left-hand menu bar. Then click on 'Alberta Seniors' Fall Prevention Network'. Under 'Senior Falls Information' click on 'Article Summaries'.

### **Prevention (General)**

#### **Older people's experience of falls: understanding, interpretation and autonomy -**

Roe B, Howell F, Riniotis K, Beech R, Crome P, Ong BN. *J Adv Nurs* 2008; 63(6): 586-96.

A convenience sample of 27 older people (mean age 84 years; range 65-98) participated in semi-structured taped interviews, then follow-up interviews were undertaken to detect changes over time. People who reflected on their fall and sought to understand why and how it occurred developed strategies to prevent future falls, face their fear, maintain control and choice and continue with activities of daily living. Those who did not reflect on their fall and did not know why it occurred restricted their activities and environments and remained in fear of falling. Authors conclude that assisting people to reflect on their falls and to understand why they happened could help with preventing future falls, allay fear, boost confidence, and aid rehabilitation relating to their activities of daily living.

**Multifactorial Fall-Prevention Strategies: Time to Retreat or Advance – Tinetti M.** *J Am Geriatr Soc* 2008; 56(1): 1563–1565

In this editorial, Tinetti says “the recent spate of negative trials has cast a pall on the multifactorial fall-prevention approach” referring to recent meta-analyses of multifactorial interventions to prevent falls and injuries in older people in community and emergency care settings. Analysis shows that direct intervention seems to work much better than referral to usual care due to limited client follow-through and questionable referral expertise. Research results points to two options. The first is to return to the traditional single-intervention approach which may make it easier to show short-term effects on a single outcome. However, it is unlikely to advance the ability to maximize health and functioning in persons with multiple risk factors and competing outcomes. The second is to actively disseminate successful strategies, identifying and reducing barriers to incorporating these strategies into practice. Providers and community program staff should be trained and shown how to implement fall risk assessment and management so that when older adults are referred, providers are ready, willing, and able to act.

## Prevention (Community)

**Effectiveness of a falls-and-fracture nurse coordinator to reduce falls: a randomized, controlled trial of at-risk older adults** - Elley CR, Robertson MC, Garrett S, Kerse NM, McKinlay E, Lawton B, Moriarty H, Moyes SA, Campbell AJ. *J Am Geriatr Soc* 2008; 56(8): 1383-9.

This randomized, controlled trial showed that a falls-and-fracture nurse completing a detailed assessment and advising on the use of multiple, previously successful fall-prevention strategies, did not reduce the fall rate. The lower participant follow-through and program adherence in the current trial may have been an important factor in the failure to reduce falls. Greater attention to adherence to the components of the nurse-led program may have improved the outcome. Alternatively, attention to specific population subgroups with use of proven, effective, single interventions applied vigorously may improve success in falls prevention.

**The Winchester falls project: a randomized controlled trial of secondary prevention of falls in older people** - Spice CL, Morotti W, George S, Dent TH, Rose J, Harris S, Gordon CJ. *Age Ageing* 2008; ePub(ePub): ePub.

This cluster randomized controlled trial looked at two interventions for community dwelling older recurrent fallers (n=505), who had not attended an emergency department for their most recent fall. Eighteen general practices were randomly allocated to one of three groups. The primary care group was assessed by nurses in the community, using a risk factor review and subsequent targeted referral to other professionals. The secondary care group received a multi-disciplinary assessment in a day hospital followed by identified appropriate interventions. The control group received usual care. Follow-up was for 1 year. The structured multi-disciplinary assessment of recurrent fallers significantly reduced the number experiencing further falls, but a community-based nurse-led assessment with targeted referral to other professionals did not. The major difference apparent between the interventions in the two groups was in review of medication and recommendation for change:

**How likely are older people to take up different falls prevention activities?** - Yardley L, Kirby S, Ben-Shlomo Y, Gilbert R, Whitehead S, Todd C. *Prev Med* 2008; 47: 554-8.

A survey assessing willingness to attend classes of strength and balance training (SBT), carry out SBT at home, or accept support to reduce home hazards was sent to patients aged over 54 in ten general practices in 3 areas of the UK yielding 5,440 respondents. Over 60% of the sample would consider doing SBT at home and 36.4% said they would definitely do SBT at home. Only 22.6% would definitely attend group sessions and 41.1% would definitely not attend. Older age, recent falls and lower socioeconomic status were associated with a greater willingness to carry out SBT at home (but not in classes) and accept help with home hazards. Authors conclude that health promotion program focus on home-based performance of SBT as a method of encouraging the entire older population to engage in falls prevention, including those most in need.

**Implementing a community-based falls-prevention program: from drawing board to reality** - Filiatrault J, Parisien M, Laforest S, Genest C, Gauvin L, Fournier M, Trickey F, Robitaille Y. *Can J Aging* 2007 Fall; 26(3): 213-25.

Stand Up! was implemented in the context of an effectiveness study in 10 community-based organizations in the Montreal metropolitan area. Data pertaining to the reach and delivery of the program as well as participation level show that a falls-prevention program addressing multiple risk factors can be successfully implemented in community-based organizations in urban and suburban areas. Although there was heterogeneity across implementation contexts, community-based organizations were successful in recruiting the target population and in delivering Stand Up! according to program guidelines. In addition, attendance rates and compliance levels were in the range required to result in measurable differences in terms of balance.

## Prevention (Residential Care)

**Does a functional activity programme improve function, quality of life, and falls for residents in long term care? Cluster randomised controlled trial** - Kerse N, Peri K, Robinson E, Wilkinson T, von Randow M, Kiata L, Parsons J, Latham N, Parsons M, Willingale J, Brown P, Arroll B. **Br Med J** 2008; 337: a1445.

This cluster randomized controlled trial assessed the effectiveness of an activity program in improving function, quality of life, and falls in 682 older people ( $\geq 65$ ) in residential care with one year follow-up. The study found that an activity program had no impact on overall function for elderly people in residential care. The difference between the activity group and social group in residents with normal cognition was of questionable clinical significance, and no changes occurred in observed function, quality of life, or falls. Neither achievement of goals nor compliance made any difference to improvement in function.

## Prevention (Acute Care)

**A multifactorial intervention did not prevent falls or fractures in elderly patients during short hospital stays** - Lee LL. **Evid Based Nurs** 2008; 11(4): 120.

In a cluster randomized controlled trial, 2047 patients in 12 wards receiving a multifactorial intervention delivered by a nurse and a physiotherapist were compared to 1952 patients in 12 wards receiving usual care. The study showed that the intervention and usual care groups did not differ in patient fall rates. Lee (commentator) points out that the study examined an intervention that was delivered during shorter inpatient stays than in previous studies and that it included exercise which was unlikely to be effective over a short period. Lee also indicated that the authors pointed out that because the intervention was only delivered over a three month period, it would have provided limited opportunity for fall prevention strategies to become embedded in the culture of the ward.

**Seniors Falls Investigative Methodology (SFIM): a systems approach to the study of falls in seniors** - Zecevic AA, Salmoni AW, Lewko JH, Vandervoort AA. **Can J Aging** 2007 Fall; 26(3): 281-90.

In this article, authors demonstrate how an adapted version of the Integrated Safety Investigation Methodology used in the transportation industry is applicable to falls in seniors. The adapted version, the Seniors Falls Investigative Methodology (SFIM) uses a systems approach to take an investigation beyond the immediate cause of an incident and reveals unsafe acts and deeply imbedded unsafe conditions that contribute to adverse outcomes. An example case study is used to describe six phases of the investigative process in detail. Authors conclude that SFIM has the potential to identify safety deficiencies; utilize existing knowledge about falls; establish a standardized reporting system; shift focus from the faller to the system; and guide targeted prevention.

## Prevention (Home Care)

**Home care clients' participation in fall prevention activities** - Smith J, Lewin G. **Australas J Ageing** 2008; 27(1): 38-42.

A mail survey of 4743 home care clients from several home care agencies was done to determine whether home care clients had accessed or been influenced by fall prevention programs. Among the clients, 47.2% completed the survey and 46% had fallen within the last year. The results of this research showed that home care clients were a group of older people particularly at risk of falling; however, few were accessing falls prevention programs. Furthermore, few of the clients who had experienced a fall and had been injured were referred to a health professional about their falls. Authors concluded that fall prevention strategies and programs needed to be provided specifically for the home care population.

## Health Management

**Actigraphy-measured sleep characteristics and risk of falls in older women** - Stone KL, Ancoli-Israel S, Blackwell T, Ensrud KE, Cauley JA, Redline S, Hillier TA, Schneider J, Claman D, Cummings SR. *Arch Intern Med* 2008; 168(16): 1768-75.

In 2978 primarily community-dwelling women 70 years and older, sleep and daytime inactivity were estimated using wrist actigraphy data collected for a minimum of 3 consecutive 24-hour periods. In multivariate-adjusted models, relative to those with "normal" nighttime sleep duration (>7 to 8 hours per night), the odds of having 2 or more falls in the subsequent year was elevated for women who slept 5 hours or less per night. Women with poor sleep efficiency (<70% of time in bed spent sleeping) had 1.36-fold increased odds of falling compared with others. The increased risk of falling was not explained by the use of benzodiazepines.

**Effects of walking speed, strength and range of motion on gait stability in healthy older adults** - Kang HG, Dingwell JB. *J Biomech* 2008; 41: 2899-2905.

This study investigated if older adults improved their dynamic stability by walking slower, and how leg strength and flexibility affected this relationship. The older subjects walked with the same preferred walking speeds as the younger subjects; however, they remained more locally unstable even after adjusting for declines in both strength and passive range of motion. Both younger and older adults exhibited decreased instability by walking slower, in spite of increased variability. Older adults may not improve their stability by walking slower, or other age-related factors may outweigh the benefits of walking slower. Increases in dynamic instability might be more sensitive indicators of future fall risk than changes in gait variability.

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

An observational study was conducted within the framework of a cluster randomized trial in 18 nursing homes. The study showed that hip fracture risk in soft and hard protected falls was almost 60% lower than in unprotected falls. Authors conclude that both types of hip protector have the potential, when worn correctly, to reduce the risk of a hip fracture in falls by nearly 60% and that both can be recommended to nursing-home residents as a means of preventing hip fractures.

## Risk Assessment Tools

**Lateral balance factors predict future falls in community-living older adults** - Hilliard MJ, Martinez KM, Janssen I, Edwards B, Mille ML, Zhang Y, Rogers MW. *Arch Phys Med Rehabil* 2008; 89(9): 1708-13.

This study showed that laboratory tests of mediolateral stepping performance and associated neuromusculoskeletal factors were significant predictors of the prospective falls among community-living older people. The findings also showed that any 2-variable models combining the use of 100% multiple steps, FAR physical axial rotation, and peak isokinetic hip abductor torque improved prediction of fall risk compared with the most optimal single variable model, 100% multiple steps. The assessment of lateral balance factors is useful not only for identifying fall risk, but also for specifying target areas for clinical interventions to prevent falls.

**Five times sit to stand test is a predictor of recurrent falls in healthy community-living subjects aged 65 and older** - Buatois S, Miljkovic D, Manckoundia P, Gueguen R, Miget P, Vançon G, Perrin P, Benetos A. *J Am Geriatr Soc* 2008; 56(8): 1575-7.

This population-based study which included 2,735 consecutive voluntary subjects aged 65 and older in an apparently good state of health consulting for a medical examination showed that the threshold of 15

seconds for the Five Times Sit to Stand (FTSS) test was useful for the detection of elderly subjects at higher risk of recurrent falls independent of the other main risk factors for falls. The slower FTSS test time observed in recurrent fallers could reflect postural balance disorders or muscular weakness of the lower limbs in these individuals. This study did not find a significant predictive value for recurrent falls for the One-Leg Balance and Timed "Up & Go" tests.

## Exercise

**Gaze behavior of older adults during rapid balance-recovery reactions** - Zettel JL, McIlroy WE, Maki BE. *J Gerontol A Biol Sci Med Sci* 2008; 63(8): 885-91.

Rapid stepping reactions are a prevalent response to sudden loss of balance and play a crucial role in preventing falls. This study showed that both the 12 older adults (61-73 years) and the 12 young adults (22-29 years) were able to guide these stepping reactions amid challenging environmental constraints using "stored" visuospatial information. Although the study indicated that healthy older adults were usually successful in using stored visuospatial information to guide the stepping movements, their capacity to do so could be challenged if the environment was more complex and less predictable. From a fall-prevention perspective, further research is needed to determine whether the ability of older adults to execute effective compensatory steps in "cluttered" environments could be enhanced with training to rapidly fixate on potential step landing sites in reaction to postural perturbation and/or to monitor one's surroundings more attentively.

**Exercise and risk of injurious fall in home-dwelling elderly** - Iinattiemi S, Jokelainen J, Luukinen H. *Int J Circumpolar Health* 2008; 67(2-3): 235-44.

A prospective study of 512 Finish home-dwelling subjects aged 85 years or older was conducted to examine the relationship between different types of physical exercise and the risk of subsequent fall-related injury. This study showed that habitual exercise other than walking (home exercise, group exercise, gardening, cross-country skiing, dancing, swimming, bicycling) conducted as part of everyday life is associated with a reduced risk of fall-related injuries, while female gender, fall-related injuries in the recent past and problems with near-vision acuity seem to increase the risk. The effect of novel types of exercise on the fall-related injury risk among the elderly remains to be shown.