



# FALLS LINKS

Volume 4 issue 6  
2009

## WELCOME

This issue of Falls Links features:

- Report on the National Falls Forum held in October 2009
- Report on the Upper Cluster Hunter falls Forum
- NCAHS Falls Prevention Videoconference report
- NSCCAHS Falls Education Program 2009
- Focus report on some current falls research projects

We would like to take this opportunity to wish you all a peaceful, restful, and safe Christmas and holiday break.



### Inside this issue:



<b>Report on National Falls</b>	<b>2</b>
<b>Upper Cluster Hunter Falls Forum</b>	<b>3</b>
<b>NCAHS Falls Prevention Videoconference</b>	<b>4</b>
<b>NSCCHS Education</b>	<b>5</b>
<b>Focus Report</b>	<b>6</b>
<b>Abstracts &amp; Websites</b>	<b>9</b>
<b>ANZFPS 2010</b>	<b>18</b>
<b>Network Information</b>	<b>19</b>



### AFC Meeting November 2009



**Area Falls Coordinators, Katica Siric (SSWAHS), Jenny Bawden (SWAHS), Mary-Clare Maloney (NCAHS), Esther Vance (Falls Network), Jackie Kelly (GWAHS), Ingrid Hutchinson (CEC) and the newest member Charlie, Lorraine Lovitt (CEC) and (front) Patsy Bourke (HNEAHS) and Margaret Armstrong (NSCCH).**

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## Report on the National Falls Prevention Summit, Hilton Hotel, Brisbane 19-20 October, 2009

The National Falls Prevention Summit was organised by a private conference company. The nature of this first time event did not include a scientific committee selection process; it was two days of invited presentations. This had impact on the participant cost, which may have restricted clinicians and implementation leaders from attending.

The 80 or so who did attend were given a wide array of topics regarding current research and examples of current practice and planned investigations and reports. The smaller numbers did allow for a high level of interaction with presenters, attendees and exhibitors which enabled useful networking.

Issues covered included: the falls burden from the ageing population, the upcoming AIHW falls related hospitalisations report, falls clinic review, the NSW Ambulance Extended Paramedic Care program, the effect of delirium and dementia on falls, the National Falls Best Practice guidelines, overview of the QLD Falls Safety Officers pilot, falls prevention after stroke, *Stay on Your Feet* implementation, embedding balance and strength into daily practice, multi-media inpatient education, importance of nutrition and hydration, footwear, vision and local community falls prevention action in a rural community. There was a split session in which I attended the community presentations on: video games for balance training, Vitamin D and *Stepping On* implementation.

The most pertinent issues from the day relevant to practitioners include:

- Finding opportunities for partnerships with Council of the Ageing (COTA).
- Revised Australian Commission on Safety and Quality in Healthcare (ACSQHC), National Falls Prevention best-practice guidelines 2009, presented to the National Health Ministers on 13<sup>th</sup> November for endorsement and will be available electronically on the ACSQHC website..
- The Falls Hospitalisations report will be released by the Australian Institute of Health and Welfare in the near future.
- An electronic game challenging balance may be available by late 2010.
- An NHMRC Partnerships Project grant has been awarded to Prof Stephen Lord and colleagues for implementing falls prevention research into policy and practice.
- It is important to have enough sun exposure to enable Vitamin D activation but not too much sun exposure so that there is degradation of the Vitamin D precursors, nor increased risk of skin cancer. Several minutes of sunshine several days a week outside peak exposure times is recommended. Specific times are person ( eg skin colouring) and location specific.

Advice was well received by the organisers regarding what would be a feasible participant registration fee and that it is important not to compete with the bi-annual Australia and New Zealand Falls Prevention conference (to be held in Dunedin in November, 2010).

Patsy Bourke  
Area Falls Injury Prevention Coordinator  
Hunter New England Health  
patsy.bourke@hnehealth.nsw.gov.au



## Hunter New England Area Health Service

### Upper Hunter Cluster Falls Injury Prevention Forum

Held on **Wednesday 24 June, 2009, at the Workers Club, Muswellbrook**

On Wednesday 24 June, 2009, the Upper Hunter Cluster of HNE Health (HNEH) held two sessions of a Falls Injury Prevention forum in Muswellbrook. This was the first time this approach had been used in the Area and included a mix of presentations on implementation strategies for all HNEH and examples of local innovative interventions.

A high level of commitment was demonstrated with the day opened by Scott McLachlan, Director Primary and Community Networks, who is also an Executive Sponsor and Dr Debbie Jagers, the Cluster Manager who actively supported attendance of as many staff as possible.

Cheryl Haggarty, Quality Coordinator for the Cluster led the local organisation, with the assistance of the Falls Injury Prevention Leadership Team. Topics covered included Area approaches from the Falls Injury Prevention Coordinator, Patsy Bourke; and overview of the plans in the three settings including Kathy Bullen for Acute/Subacute; Melanie Kingsland, Active Living; and Mandy Harden, Residential Aged Care. Cluster presenters included Meredith Caelli on Cluster Falls Data, Judy Collison on physical activity support prided remotely to Murrurundi from Kurri Kurri using photo phones and Anne Reynolds on medications.

The Area Executive Team considers the prevention of falls to be a priority for the organisation – every day in HNEH facilities ten older people fall and are injured, in some cases seriously; every day at least 50 older people present to an HNEH ED following a fall; 20% of people aged 65+ who present to our ED's are there because of a fall; every year older people five people die in hospital as a consequence of a fall, with another nine dying annually from the events relating to the fall incident in the following 12 months. A lot of this is preventable.

The purpose of the forum was to further build the momentum for change and to identify what is required to make the required difference. Over 70 staff attended the 3 hour sessions one held in the morning and another in the afternoon to maximise attendance with minimal disturbance to clinical service delivery.



**Presenters at forum (left to right): Cheryl Haggarty, Mandy Harden, Judy Collison, Patsy Bourke, Kathy Bullen, Melanie Kingsland and Meredith Caelli**

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## **NSW Falls Prevention Network and North Coast Area Health Service Falls Prevention Videoconference Report**

The NSW Falls Prevention Network organised 3 videoconference sessions on Falls Prevention for staff of the North Coast Area Health Service (NCAHS). These 2 hour sessions were held across 10 sites in the NCAHS over 3 sessions in November 2009 (5<sup>th</sup>, 12<sup>th</sup> & 26<sup>th</sup>). The videoconference sites were located in Coffs Harbour, Dorrigo, Grafton, Kempsey (Nov 5<sup>th</sup> & 12<sup>th</sup>), Kyogle, Lismore, Macksville (Nov 26<sup>th</sup>), Maclean, Murwillumbah (Nov 26<sup>th</sup>), Port Macquarie, Tweed Heads (Nov 5<sup>th</sup> & 12<sup>th</sup>), Urbenville and the Clinical Excellence Commission (CEC), Sydney. The CEC was the hub for the transmission of videoconferencing and ivision was used to provide bridging to all the sites and record the sessions.

These sessions included a range of presenters with expertise in falls prevention including Professor Stephen Lord, A/Prof Jacqueline Close, A/Prof Lindy Clemson, Dr Cathie Sherrington, and Mr Bill Tyrell and Ms Anne Moehead from NCAHS and presentations on falls prevention initiatives across the North Coast Area Health Service. Lorraine Lovitt the Leader of the NSW Falls Prevention Program based at the CEC chaired each of the sessions.

A facilitator was appointed for each site. Each facilitator received information on the videoconference sessions including program, attendance sheets, media consent forms, evaluation forms and PDF versions of presentations for each session. Facilitators ensured each participant had a copy and collected and forwarded attendance and evaluation forms at the conclusion of each session.

The Network Project Officer collaborated with the Area Falls Coordinator for the North Coast Area Health Service and the CEC. There were some issues relating to the technology which did take time to diagnose and resolve. Each of the session was recorded and these will be edited to prepare for duplication.

The overall attendance over the 3 sessions was 178 (75 at session 1, 54 at Session 2 and 47 at session 3). Of the 100 different participants who attended these sessions 28% attended all 3 sessions, 21% attended 2 Sessions and 51% attended 1 Session.

Participants were asked to fill in a media consent form as each of the sessions was recorded, information was also collected on the work area of participants and this is summarised in Table 1. The majority of participants worked in Allied health (total 25%) in physiotherapy or occupational therapy, and 22% of participants were involved in Nursing in the acute setting, a number of nursing students from Southern Cross University (SCU) were able to attend Session 1. A number of participants worked in Transitional Aged Care (TACS) and Aged Care Assessment Teams (ACAT) and Acute to Aged-Related Care Services (AARCS). Other work areas included Quality and Safety, Diversional Therapy, Northern Rivers GP Network, Staff development, Nurse Educator, Clinical Nurse Consultant, residential aged care, quality risk management and Activities Officer. There was thus broad representation from across all the sectors attending the sessions.

Each session was evaluated and a total of 152 evaluations were returned, an overall rate of 85.4% which is an acceptable level of return. Participants were involved in a range of falls prevention activities including physical activity programs such as Stepping On, OT Home assessments and interventions, falls risk assessment and interventions, falls prevention in acute care, community or residential health falls prevention and staff education on falls prevention. The majority of respondents (77.1%) found the sessions changed their approach to falls prevention and they will look at incorporating the information gained from these sessions into their falls prevention strategies.

Requirements to further progress falls prevention initiatives in the participants work area included extra funding for resources and staff time for falls prevention initiatives, increased provision of exercise groups, ongoing professional development of all clinical staff and provision of current evidence based information for staff, patients and families. The videoconference sessions were found to be cost effective. The cost per participant per session was about \$30 (this does not include the recording, editing and reproducing the CD).

As travel for health staff in rural area health services becomes increasingly more difficult further Falls Prevention videoconference sessions are planned for health professionals, in parts of all AHS, who have a great distance to travel to get to metropolitan meetings.

## Northern Sydney Central Coast Area Health Service Falls Education Program 2009

For many years, Northern Sydney Central Coast Area Health Service (NSCCAHS) had a clinician based, area wide falls prevention committee that provided education opportunities to staff of acute and sub-acute facilities. It was recognised, however, that there were common falls prevention issues for all staff working with older people in the settings of community and residential care, as well as acute/sub-acute. It was decided to expand these education sessions to all staff working with older persons, with the idea that bringing these staff together could facilitate a continuum of care model to be explored, and to break down the 'silo' mentality of differing settings. An area wide survey of staff determined the common topics and themes to be explored.

Commencing in 2009, a series of seminars was undertaken with each seminar being run in both the Northern Sydney and Central Coast sectors of our AHS. The 3 seminar topics were:

1. 'Delirium, Dementia, Medication & Falls in Older People'.
2. 'Nutrition, Physical Activity & falls in Older People', plus current best practice falls prevention initiatives in acute, community and residential care.
3. 'Strategies to Help Manage Challenging Behaviour to Reduce Falls'; including older person's mental health. The common link for all these was to provide 'Practical ways of dealing with these conditions in relation to falls in the acute, community & residential settings'.

Each of the 6 seminars attracted an average of 100 participants from all 3 settings, including private and non-government providers. Expo stalls for public and private service providers also enabled sharing of information and resources. This was particularly useful during "Healthy Bones Week", which linked to the seminars on Nutrition and Physical Activity. Follow-up evaluation indicated that 99% of participants felt that the seminars were informative and useful to them in their work with older people, and were keen to have further seminars in 2010.

From our perspective, this has been a valuable and cost effective model of education that has been successful in facilitating an understanding of common falls prevention issues; exploring the practical ways of dealing with them; and reaching a wide audience of staff who work with older people in differing settings. This program will continue in 2010.

For further information contact:  
Margaret Armstrong  
NSCCH Coordinator, NSW Falls Policy  
[marmstro@nscchs.health.nsw.gov.au](mailto:marmstro@nscchs.health.nsw.gov.au)



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**FEATURE FOCUS REPORT**

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**Research Project Summaries****Development and validation of a fall risk screening tool for use in Emergency Departments.**

**Investigators:** Dr Jacqui Close, Dr Stephen Lord, Dr Anne Tiedemann, Dr Cathie Sherrington

**Aim:** This study aims to develop and validate a screening tool for use in the Emergency Department (ED) to identify different levels of falls risk and thus guide onward referral for different levels of intervention.

**Introduction:** The ED represents a defined geographical area which allows for the easy identification of fallers. The evidence to date suggests that these people benefit from a multi-disciplinary assessment in a Falls Clinic type setting (Close et al 1999, Davison et al 2005). However the number of fallers presenting to the ED would generate an enormous case load for most Falls Clinics irrespective of where they are run. The development of a validated screening tool will allow for a more streamlined approach to managing falls in this high risk population. It will also provide a risk profile for ED attendees and will thus enable appropriate interventions to be instigated directly from the ED.

**Recruitment:** Potential study participants are people who are aged 70 years and over who attend and are subsequently discharged from the Prince of Wales Hospital (POWH) and Royal North Shore Hospital (RNSH) EDs. 220 people will be recruited from each site. Data obtained from the POWH sample will be used to determine the most predictive variables to be included in the screening tool. The RNSH sample will be used to externally validate the screening tool.

**Assessment:** The measures included in the study are those routinely collected on all patients aged 70 years and over presenting to the ED by the Aged Services in Emergency Team (ASET) including information about socio-demographic factors, medical, falls and fracture history, medication usage, use of community services and physical impairments. Additional study measures include five validated balance and mobility tests and a test of vision, which have previously been associated with risk of falling.

**Outcome measure:** Monthly falls questionnaires provide follow-up falls data for a period of six months.

**Statistical analysis:** Statistical analysis will be undertaken to determine which socio-demographic, psychological, physiological and medical factors distinguish between older people who do and do not fall subsequent to their initial presentation at the ED. The predictive value of each of the measures included in the developed screening tool will be examined to ensure that the final tool is an accurate and valid predictor of future fall risk.

**Progress:** Recruitment of study participants from POWH is complete and data analysis has commenced. Recruitment of participants from RNSH will cease in March 2010 and subsequent data analysis will commence in November 2010.

**References:**

Close J, Ellis M, Hooper R, Glucksman E, Jackson S, Swift C: Prevention of falls in the elderly trial (PROFET): a randomised controlled trial. *Lancet* 1999; 353: 93-7.

Davison J, Bond J, Dawson P, Steen IN, Kenny RA: Patients with recurrent falls attending Accident & Emergency benefit from multifactorial intervention--a randomised controlled trial. *Age and Ageing* 2005; 34(2): 162-168.

**Development of a fall risk screening tool for use by the Ambulance Service of NSW.**

**Investigators:** Dr Jacqui Close, Dr Stephen Lord, Dr Anne Tiedemann, Dr Cathie Sherrington

**Aim:** This study aims to develop a screening tool to identify older people at high risk of future falls who have been treated by the Ambulance Service as a result of a fall, but are not conveyed to an emergency department (ED).

**Introduction:** The Ambulance Service of NSW attend to many older people who have suffered a fall who are not subsequently conveyed to the ED (~20-25% of all fallers). A study from the UK (Halter et al, 2005) has reported that those not conveyed are a high risk group for not only falls, but also other health outcomes, yet existing support and onward referral services are limited for this particular group. On the other hand, conveying all older people treated for falls would have a significant impact on ED functioning with little evidence to support that, in the absence of a significant physical injury, ED is the right place for assessing these individuals. The development of a screening tool would allow for safe non-conveyance and the means for identifying people requiring more detailed assessment and follow-up.

**Recruitment:** Potential participants are people aged 70 years and over who are attended to by the Ambulance Service of NSW as a result of a fall but not conveyed to a hospital ED. These people are identified through the existing ambulance service records and contacted by the study research assistant soon after the fall event.

**Assessment and outcome measures:** Information that is thought to be of relevance in terms of predicting future fall risk is collected via a structured questionnaire. Participants are also followed up on a monthly basis for a 6 month period with a pre-paid postal falls diary. This reflects the period of heightened risk as well as the average duration of time that community aged care rehabilitation services offer enhanced care.

**Statistical analysis:** Statistical analysis will be undertaken to determine which socio-demographic, physiological and medical factors distinguish between older people who do and do not fall following their attendance by the Ambulance Service. The predictive value of each of the measures included in the developed screening tool will be examined to ensure that the final tool is an accurate and valid predictor of future fall risk.

**Progress:** Recruitment of 250 study participants is expected to be completed by March 2010. Data analysis will commence in November 2010.

#### **References:**

Halter M, Close J, Snooks H, Porsz S, Cheung W. Fit to be left: can ambulance staff use an assessment tool to decide if an older person who has fallen can be safely left at home? London: London Ambulance Service NHS Trust November 2005.

## **NSW Falls Prevention Program Clinical Excellence Commission Projects**

### **Falls Prevention Consumer Resource**

To develop a new falls prevention consumer resource, which encompasses the successful components of existing consumer resources but consolidates this information into a single resource.

It is intended that this will:

- Provide a solid foundation for future work to promote falls prevention in older adults.
- Support the new state-wide plan to prevent falls in older people (currently under development) and the accompanying change management strategy.
- Provide a consistent approach to the presentation of falls prevention information to consumers in NSW.
- Combine falls information and a falls safety checklist into one resource.

This project commenced in November 2009 and is expected to be completed by March 31<sup>st</sup> 2010.

### **Falls Prevention Physical Activity Web-based Resource Directory**

This project is to develop a web-based directory of community physical activity programs, which have a falls prevention component and include a strategy for the maintenance of this resource.

A project, commissioned by the Centre for Health Advancement, *Characteristics of NSW Area Health Service Physical Activity Falls Prevention Programs 2009* identified the need for a web-based directory of community physical activity programs, which have a falls prevention component. The on-line directory of falls prevention exercise programs as recommended by this project should be of use to exercise leaders, Area Health staff, other health professionals and the general public.

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It is expected that the directory will:

- be used by both consumers and health professionals,
- be a user-friendly site, intuitive and able to be easily used by older adults,
- include information on falls prevention and serve as a guide for consumers in choosing the right program for them,
- provide a listing of all community based physical activity falls prevention programs (which meet pre-determined criteria) conducted and/or supported by Area Health Services within NSW,
- provide information that will include:
  - description of the program,
  - any specific entry requirements,
  - location,
  - times,
  - contact details and
  - cost.
- include links to other evidence-based sites, and be searchable by AHSs

This project will commence in January 2010 and is expected to be completed by 30<sup>th</sup> June 2010.

### **NSW Ambulance Falls Project**

In NSW, the Ambulance Service NSW (ASNSW) is contacted for unplanned care that may require intervention either on an urgent basis requiring transport to an Emergency Department (ED), or on a non-urgent basis that may or may not be transported to an ED.

This project it to undertake an analysis of calls as a result of a fall to the ASNSW will assist in providing an estimate of the extent of the numbers of people who have had a fall. The ASNSW is in possession of routinely collected dispatch and clinical data, which provides a potential level of information in this area unsurpassed to date in any literature.

It is anticipated that this information will assist in the development of feasible strategies within current developing service models. Ultimately, it is intended to reduce unnecessary presentations to emergency departments as a result of a fall, and to improve both clinical outcomes for older people and appropriate care through timely referral to other service models.

### **Contact**

**Lorraine Lovitt**

**Leader, NSW Falls Prevention Program**

**Clinical Excellence Commission**

**Ph: 0422 002 091**

**[Lorraine.lovitt@cec.health.nsw.gov.au](mailto:Lorraine.lovitt@cec.health.nsw.gov.au)**

### **Looking to the future 2010**

#### **Australian Commission on Safety and Quality in Health Care (ACSQHC), 2009 Falls Prevention Guidelines.**

The revised 2009 guidelines were endorsed by the Australian Health Ministers in November 2009 and are now available on the ACSQHC website ( see page 17). Hard copies are currently unavailable. In NSW a dissemination and implementation strategy is being developed.

#### **NSW Department of Health plan for prevention of falls among older people.**

The Centre for Health Advancement is leading the development of a new plan, in conjunction with the Clinical Excellence Commission (CEC). Consultations have commenced on a draft plan and the final plan will set out actions to be undertaken by NSW Health for the 5 years 2010 – 2014.

## RECENT ABSTRACTS FROM THE RESEARCH LITERATURE

### REVIEWS

#### The effectiveness of Tai Chi as a fall prevention intervention for older adults: a systematic review.

Gregory H, Watson MC.

*Int J Health Promot Educ* 2009; 47(3): 94-100.

#### ABSTRACT

**Aim:** To critically appraise the evidence for the effectiveness of the use of Tai Chi as a falls prevention intervention in the older age group.

**Background:** Falls in the older population and their resulting injuries are a major public health issue. Tai Chi is an intervention that some nurses in the UK promote, but the research into its effectiveness is of varying quality with conflicting findings. It is crucial to review the evidence base for this intervention in order to inform best practice.

**Methods:** A systematic literature review was conducted using the following major inclusion criteria: Tai Chi intervention, randomized controlled trials, participants aged 60 or more, falls occurrences as outcome measure. Eight electronic databases were searched. Two reviewers independently assessed methodological quality using the Scottish Intercollegiate Guidelines Network (SIGN) critical appraisal checklist.

**Results:** 66 potentially relevant articles were identified. A total of 6 randomized controlled trials were included with a total of 1857 participants, the majority being female. Intervention period duration ranged from 15 weeks to 2 years. No completed trials in the UK were identified. The level of evidence ranged from I- to I++.

**Conclusions:** The evidence presented suggests that Tai Chi practice by older adults may be beneficial in reducing fall occurrences. However, the trials examined suggest that it may only be effective in a more robust older population and may not benefit frail participants. The implementation of Tai Chi schemes in the UK needs further investigation. Also, more research is needed with male participants.

#### Cost of falls in old age: a systematic review.

Heinrich S, Rapp K, Rissmann U, Becker C, König HH.

*Osteoporos Int* 2009; ePub(ePub): ePub. Affiliation: Health Economics Research Unit, Department of Psychiatry, University of Leipzig, Liebigstrasse 26, 04103, Leipzig, Germany, sven.heinrich@medizin.uni-leipzig.de.

DOI: [10.1007/s00198-009-1100-1](https://doi.org/10.1007/s00198-009-1100-1) PMID: 19924496 (Copyright © 2009, Springer Science+Business Media)

[ePub (volume, issue, and page range not yet available)]

#### ABSTRACT

The purpose of this study was to review the evidence of the economic burden of falls in old age. This review showed that falls are a relevant economic burden. Efforts should be directed to fall-prevention programmes.

**INTRODUCTION:** Falls are a common mechanism of injury and a leading cause of costs of injury in the elderly. The purpose of this study was to review for the first time the evidence of the economic burden caused by falls in old age.

**METHODS:** A systematic review was conducted in the databases of PubMed, of the Centre for Reviews and Dissemination and in the Cochrane Database of Systematic Reviews until June 2009. Studies were assessed for inclusion, classified and synthesised. Costs per inhabitant, the share of fall-related costs in total health care expenditures and in gross domestic products (GDP) were calculated. If appropriate, cost data were inflated to the year 2006 and converted to US Dollar (USD PPP).

**RESULTS:** A total of 32 studies were included. National fall-related costs of prevalence-based studies were between 0.85% and 1.5% of the total health care expenditures, 0.07% to 0.20% of the GDP and ranged from 113 to 547 USD PPP per inhabitant. Direct costs occurred especially in higher age groups, in females, in hospitals and long-term care facilities and for fractures. Mean costs per fall victim, per fall and per fall-related hospitalisation ranged from 2,044 to 25,955; 1,059 to 10,913 and 5,654 to 42,840 USD PPP and depended on fall severity. A more detailed comparison is restricted by the limited number of studies.

**CONCLUSION:** Falls are a relevant economic burden to society. Efforts should be directed to economic evaluations of fall-prevention programmes aiming at reducing fall-related fractures, which contribute substantially to fall-related costs.

### EPIDEMIOLOGY AND RISK FACTORS FOR FALLS

#### Falls following discharge after an in-hospital fall.

Davenport RD, Vaidean GD, Jones CB, Chandler AM, Kessler LA, Mion LC, Shorr RI. *BMC Geriatr* 2009; 9(1): 53.

DOI: [10.1186/1471-2318-9-53](https://doi.org/10.1186/1471-2318-9-53) PMID: 19951431 (Copyright © 2009, BioMed Central)

**ABSTRACT**

**BACKGROUND:** Falls are the most common adverse events reported in hospitalized patients. While there is a growing body of literature on fall prevention in the hospital, the data examining the fall rate and risk factors for falls in the immediate post-hospitalization period has not been well described. The objectives of the present study were to determine the fall rate of in-hospital fallers at home and to explore the risk factors for falls during the immediate post-hospitalization period.

**METHOD:** We identified patients who sustained a fall on one of 16 medical/surgical nursing units during an inpatient admission to an urban community teaching hospital. After discharge, falls were ascertained using weekly telephone surveillance for 4 weeks post-discharge. Patients were followed until death, loss to follow up or end of study (four weeks). Time spent rehospitalized or institutionalized was censored in rate calculations.

**RESULTS:** Of 95 hospitalized patients who fell during recruitment, 65 (68%) met inclusion criteria and agreed to participate. These subjects contributed 1498 person-days to the study (mean duration of follow-up = 23 days). Seventy-five percent were African-American and 43% were women. Sixteen patients (25%) had multiple falls during hospitalization and 23 patients (35%) suffered a fall-related injury during hospitalization. Nineteen patients (29%) experienced 38 falls at their homes, yielding a fall rate of 25.4/1,000 person-days (95% CI: 17.3-33.4). Twenty-three patients (35%) were readmitted and 3(5%) died. One patient experienced a hip fracture. In exploratory univariate analysis, persons who were likely to fall at home were those who sustained multiple falls in the hospital ( $p=0.008$ ).

**CONCLUSIONS:** Patients who fall during hospitalization, especially on more than one occasion, are at high risk for falling at home following hospital discharge. Interventions to reduce falls would be appropriate to test in this high-risk population.

**A selection strategy was developed for fracture reduction programs in frail older people.**

Chen JS, Sambrook PN, Simpson JM, March LM, Cumming RG, Seibel MJ, Lord SR, Cameron ID. *J Clin Epidemiol* 2009; ePub(ePub): ePub. Affiliation: Institute of Bone and Joint Research, Royal North Shore Hospital, St Leonards, New South Wales 2065, Australia. DOI: [10.1016/j.jclinepi.2009.08.018](https://doi.org/10.1016/j.jclinepi.2009.08.018) PMID: 19926449

(Copyright © 2009, Elsevier Publishing)

**ABSTRACT**

**OBJECTIVES:** The aims of this study were to develop and evaluate a simple index for assessing the risk of fractures after a fall and to propose a selection strategy for identifying elderly individuals at high risk of both falls and fall-related fractures.

**STUDY DESIGN AND SETTING:** Two thousand five institutionalized older men and women were assessed for clinical risk factors and then followed up for falls and fall-related fractures for up to 2 years.

**RESULTS:** Our fracture risk index is derived from seven previously identified significant independent risk factors: weight, lower leg length, balance, cognitive function, type of institution, fracture history, and falls in the past year. The fracture rate was 6.5 times greater in the one-sixth of the falls with the highest index (9.7/100 falls) than in the lowest sixth (1.5/100 falls). Our proposed approach (based on balance, risk of falls, and the fracture risk index) selected a group of older people with high risk of both falls and fall-related fracture. The fracture incidence rate was 144% higher, and the falls incidence rate was 31% higher in the selected residents than in the remainder.

**CONCLUSION:** The index could help rationalize fracture prevention programs for frail older people.

**Influence of high fall-related self-efficacy on falls due to dissociation with ADL among elderly women in nursing homes.**

Kato C, Ida K, Harada A. *Nippon Ronen Igakkai Zasshi* 2009; 46(5): 428-435.

Affiliation: Department of Physical Therapy, Nagoya University School of Health Sciences.

PMID: 19920371 (Copyright © 2009, Japan Geriatrics Society).

**ABSTRACT**

**Aim:** We examined the influence of high fall-related self-efficacy on falls due to dissociation with activities of daily living (ADL) among elderly women in nursing homes.

**Methods:** We enrolled 72 female nursing home residents who were 70 years old or over and who scored 18 or higher on the Mini-Mental State Examination (MMSE).

Subjects were classified into three groups based on the relationship between ADL and fall-related self-efficacy derived from a scattergram of the Functional Independence Measure (FIM) motor items and Falls Efficacy Scale (FES). The three groups were: group I which had low ADL and high fall-related self-efficacy ( $n=25$ ); group II which had high ADL and low fall-related self-efficacy ( $n=30$ ); and group III which had a correlation of ADL and fall-related self-efficacy in the 95% confidence interval ( $n=17$ ). Then, we investigated the incidence of falls and the number of

falls after 6 months in the three groups. The risk factor of falls was also investigated using multiple logistic regression analysis.

**Results:** The incidence and number of falls were significantly different in the three groups after 6 months. Moreover, the incidence of those falling was significantly different between group I and group III. The occurrence of falls was also significantly related with a past history of falls, FES, and group I which had low ADL and high fall-related self-efficacy.

**Conclusion:** These findings suggest that the risk of falling increases in the presence of excessive fall-related self-efficacy dissociated from ADL.

### **Carotid Sinus Syndrome and falls, should we pace? A multi-centre, randomised control trial (Safespace 2).**

Ryan D, Steen N, Seifer C, Kenny RA. *Heart* 2009; ePub(ePub): ePub.

Affiliation: Dublin, Ireland. DOI: [10.1136/hrt.2009.176206](https://doi.org/10.1136/hrt.2009.176206) PMID: 19933747

(Copyright © 2009, BMJ Publishing Group)

#### **ABSTRACT**

**OBJECTIVE:** Cardioinhibitory Carotid Sinus Hypersensitivity (CICSH) is highly prevalent amongst older persons with falls. This study assessed the efficacy of dual-chamber pacing in older patients with CICSH and unexplained falls.

**DESIGN:** A multi-centre, double blind randomised controlled trial

**SETTING:** Selection from emergency room, geriatric medicine and orthopaedic departments.

**PATIENTS:** Patients over 50 years, with 2 unexplained falls +/- one syncopal event in the previous 12 months for which no other cause is evident apart from CICSH.

**INTERVENTIONS:** Patients randomised to either a 700/400 Kappa, rate responsive pacemaker or implantable loop recorder (Medtronic Reveal thera RDR, Medtronic, Minneapolis, Minnesota).

**MAIN OUTCOME MEASURES:** The primary outcome was the number falls post implant. Secondary outcomes were time to fall event, presyncope, quality of life and cognitive function.

**RESULTS:** 141 patients were recruited from 22 centres. Mean age was 78 years and mean follow up 24 months. The overall relative risk of falling after device implant compared with before was 0.23 (0.15-0.32). No significant falls reduction was observed between paced and loop recorder groups (RR 0.79; 95% CI: 0.41, 1.50). Data was also consistent in both groups for syncope, quality of life and cognitive function.

**CONCLUSIONS:** These results question the use of pacing in CICSH and are at variance with our seminal paper. We note, however, that the study was underpowered and also patient characteristics differed from the SAFEPACE I - participants were physically and cognitively frailer. Further work is necessary to assess cardiac pacing in this setting.

### **Predictive validity of a modified fall assessment tool in nursing homes: experience from Slovenia.**

Jakovljevic M. *Nurs Health Sci* 2009; 11(4): 430-5. Affiliation: Faculty of Health Sciences, University of Ljubljana, Ljubljana, Slovenia. [miroljub.jakovljevic@zf.uni-lj.si](mailto:miroljub.jakovljevic@zf.uni-lj.si) DOI: [10.1111/j.1442-2018.2009.00471.x](https://doi.org/10.1111/j.1442-2018.2009.00471.x) PMID: 19909453

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#### **ABSTRACT**

The aim of the study was to evaluate the predictive validity of the Modified Fall Assessment Tool (MFAT) in a nursing home setting. The study involved 83 residents from a nursing home in Slovenia with an average age of 81 years. To determine the predictive characteristics of the MFAT, a receiver operating characteristic curve analysis was applied. During the observation period of 12 weeks, 18 residents fell. The fallers had a significantly higher history of falls, a higher number of diagnoses, more medication, and a higher MFAT score than the non-fallers. Using the estimated criterion of 20 points, the sensitivity of the MFAT score was 61%, its specificity was 80%, its classification accuracy was 64%, its positive likelihood ratio was 3.1, its negative likelihood ratio was 0.5, its positive predictive value was 46%, and its negative predictive value was 88%. The results showed that the MFAT is suitable for the prediction of falls and, hence, also the prevention of falls in nursing homes, whereby the recommended criterion score is 20 points.

### **Risk Factors for Falling Among Community-Based Seniors.**

Fletcher PC, Berg K, Dalby DM, Hirdes JP. *J Patient Saf* 2009; 5(2): 61-66. Affiliation: From the \*Department of Kinesiology and Physical Education, Wilfrid Laurier University, Waterloo; daggerDepartment of Physical Therapy, University of Toronto, Toronto; and double daggerDepartment of Health Studies and Gerontology, University of

Waterloo, DOI: [10.1097/PTS.0b013e3181a551ed](https://doi.org/10.1097/PTS.0b013e3181a551ed) PMID: 19920442 , (Copyright © 2009, Lippincott Williams and Wilkins)

#### ABSTRACT

**BACKGROUND:** Falling constitutes a significant risk to the health and well-being of seniors. Although a number of risk factors have been established within the literature for falling, limited work has differentiated risk factors for 1-time versus recurrent or multiple fallers.

**METHODS:** The purpose of this research was to examine 2 relationships: (1) the risk factors for nonfallers versus fallers (1+ falls); and (2) the risk factors for nonfallers/1-time fallers versus multiple fallers (2+ falls). All participants (n = 453) were subjects within 5 different fall intervention programs funded through the Falls Prevention Initiative sponsored by Health Canada and Veterans Affairs Canada. In total, 5 project sites funded in Ontario conducted independent fall intervention programs. At the onset of their programs and at the completion of their programs, each project site assessed all of their subjects or a predetermined number of seniors (if the subject pool was extensive) using 2 instruments, namely the interRAI Community Health Assessment and the Berg Balance Scale, so that comparisons could be made between sites.

**RESULTS:** Of the 453 individuals, 67% of the sample was classified as nonfallers, with 33% classified as experiencing 1 or more falls. Risk factors significant within the model examining nonfallers versus 1+ fallers included increased medication use and a previous history of falling. For the second analyses, examining 0 falls/1 fall versus recurrent fallers, the following factors were associated with increased risk: medication use, previous history of falling, and compromised activities of daily living (ADL). Fourteen percent of the sample experienced 2+ falls.

**CONCLUSIONS:** It is important to distinguish fallers based on fall status because recurrent or multiple fallers are more likely to benefit from fall prevention efforts. Using a standardized and comprehensive tool such as the interRAI-CHA would assist researchers in making comparisons between different research groups.

#### A selection strategy was developed for fracture reduction programs in frail older people.

Chen JS, Sambrook PN, Simpson JM, March LM, Cumming RG, Seibel MJ, Lord SR, Cameron ID.

*J Clin Epidemiol* 2009; ePub(ePub): ePub. Affiliation: Institute of Bone and Joint Research, Royal North Shore Hospital, St Leonards, New South Wales 2065, Australia. DOI: [10.1016/j.jclinepi.2009.08.018](https://doi.org/10.1016/j.jclinepi.2009.08.018) PMID: 19926449 (Copyright © 2009, Elsevier Publishing)

#### ABSTRACT

**OBJECTIVES:** The aims of this study were to develop and evaluate a simple index for assessing the risk of fractures after a fall and to propose a selection strategy for identifying elderly individuals at high risk of both falls and fall-related fractures.

**STUDY DESIGN AND SETTING:** Two thousand five institutionalized older men and women were assessed for clinical risk factors and then followed up for falls and fall-related fractures for up to 2 years.

**RESULTS:** Our fracture risk index is derived from seven previously identified significant independent risk factors: weight, lower leg length, balance, cognitive function, type of institution, fracture history, and falls in the past year. The fracture rate was 6.5 times greater in the one-sixth of the falls with the highest index (9.7/100 falls) than in the lowest sixth (1.5/100 falls). Our proposed approach (based on balance, risk of falls, and the fracture risk index) selected a group of older people with high risk of both falls and fall-related fracture. The fracture incidence rate was 144% higher, and the falls incidence rate was 31% higher in the selected residents than in the remainder.

**CONCLUSION:** The index could help rationalize fracture prevention programs for frail older people.

#### Falls following discharge after an in-hospital fall.

Davenport RD, Vaidean GD, Jones CB, Chandler AM, Kessler LA, Mion LC, Shorr RI. *BMC Geriatr* 2009; 9(1): 53. DOI: [10.1186/1471-2318-9-53](https://doi.org/10.1186/1471-2318-9-53) PMID: 19951431 (Copyright © 2009, BioMed Central)

#### ABSTRACT

**BACKGROUND:** Falls are the most common adverse events reported in hospitalized patients. While there is a growing body of literature on fall prevention in the hospital, the data examining the fall rate and risk factors for falls in the immediate post-hospitalization period has not been well described. The objectives of the present study were to determine the fall rate of in-hospital fallers at home and to explore the risk factors for falls during the immediate post-hospitalization period.

**METHOD:** We identified patients who sustained a fall on one of 16 medical/surgical nursing units during an inpatient admission to an urban community teaching hospital. After discharge, falls were ascertained using weekly telephone surveillance for 4 weeks post-discharge. Patients were followed until death, loss to follow up or end of study (four weeks). Time spent re-hospitalized or institutionalized was censored in rate calculations.

**RESULTS:** Of 95 hospitalized patients who fell during recruitment, 65 (68%) met inclusion criteria and agreed to participate. These subjects contributed 1498 person-days to the study (mean duration of follow-up = 23 days). Seventy-five percent were African-American and 43% were women. Sixteen patients (25%) had multiple falls during hospitalization and 23 patients (35%) suffered a fall-related injury during hospitalization. Nineteen patients (29%) experienced 38 falls at their homes, yielding a fall rate of 25.4/1,000 person-days (95% CI: 17.3-33.4). Twenty-three patients (35%) were readmitted and 3(5%) died. One patient experienced a hip fracture. In exploratory univariate analysis, persons who were likely to fall at home were those who sustained multiple falls in the hospital ( $p=0.008$ ).  
**CONCLUSIONS:** Patients who fall during hospitalization, especially on more than one occasion, are at high risk for falling at home following hospital discharge. Interventions to reduce falls would be appropriate to test in this high-risk population.

### The incidence, risk factors and consequences of falling injury among the community elderly in Shihpai, Taiwan.

Chang NT, Yang NP, Chou P. *Aging Clin Exp Res* 2009; ePub(ePub): ePub. Affiliation: Community Medicine Research Center, National Yang-Ming University, Taipei, Taiwan, R.O.C. DOI: [10.3275/6627](https://doi.org/10.3275/6627) PMID: 19934620 (Copyright © 2009, Editrice Kurtis)

#### ABSTRACT

**Background and aims:** Falls causing injuries among older people and the consequences of those injuries are of increasing concern to public health practitioners. The aims of this study were to determine the incidence, characteristics, and risk factors for falling injuries among the community-dwelling elderly in Shihpai, Taiwan; the impacts on quality of life and health service utilization were also comprehensively investigated.

**Methods:** 1,361 community-dwelling elderly who had been enrolled in the Shihpai eye study (1999-2000) were included. The subjects were interviewed and examined by trained interviewers, and data such as demographics, medical conditions, blood pressure, ophthalmic examination, falling history and quality of life (SF-36) were collected. Chi-square tests, analyses of covariance and multiple logistic regressions were performed as the main statistical methods.

**Results:** The mean age of the participants was 72.2 (range, 65-91) years old. 16.3% of the elderly persons interviewed had experienced at least one episode of falling; among those, up to half had suffered mild injuries, and the incidence of remarkable injury was 27.6%. There were no significant differences in the location and time of falling, but there were different risk factors and consequences among the injury severity strata. Fallers with remarkable injuries had a higher incidence of hospitalization and a greater fear of falling. No statistically significant decline in quality of life with increasing severity of falling injury was identified after a 12-month follow-up period.

**Conclusions:** Gender, visual impairment and orthostatic hypotension were identified as the major risk factors of falling injury for the elderly. These identified factors should be emphasized in order to assist the prevention of falling injury in geriatrics.

### GAIT

#### Can people with Parkinson's disease improve dual tasking when walking?

Brauer SG, Morris ME. *Gait Posture* 2009; ePub(ePub): ePub.

Affiliation: Division of Physiotherapy, School of Health and Rehabilitation Sciences, The University of Queensland, Building 84A, Brisbane, Qld 4072, Australia.

DOI: [10.1016/j.gaitpost.2009.10.011](https://doi.org/10.1016/j.gaitpost.2009.10.011) PMID: 19969461 (Copyright © 2009, Elsevier Publishing)

#### ABSTRACT

**BACKGROUND:** Gait disorders in people with Parkinson's disease (PD) are accentuated when they perform another task simultaneously. This study examines whether practice enables people with PD to walk with large steps while performing added tasks, and to determine if training people with PD to walk with added working memory tasks leads to improvements in gait when walking and performing other tasks simultaneously.

**METHODS:** Walking patterns were recorded pre and post a 20min dual task training session in 20 people with PD. Participants performed a series of 10m walking trials under seven conditions: gait only, and with six different added tasks varying by task type (e.g. motor, cognitive), domain (e.g. postural, manual manipulation, language, calculation, auditory, visuospatial), and difficulty level. Dual task training aimed to improve step length while simultaneously undertaking a variety of language and counting working memory tasks that were different to those used in assessment.

**RESULTS:** Following training, step length increased when performing five of the six added tasks, indicating transfer of dual task training when walking occurred across task types and domains. Improvements in gait speed

occurred in three of the six added tasks. When other gait variables were examined, such as step length variability, few improvements with training were found.

**CONCLUSIONS:** Training can lead to larger steps when walking under dual task conditions in people with PD. The gait variable emphasised during dual task training appears to be an important factor in enabling the transfer of training improvements across tasks.

### **The effect of gait velocity on calcaneal balance at heel strike; Implications for orthotic prescription in injury prevention.**

Shanthikumar S, Low Z, Falvey E, McCrory P, Franklyn-Miller A.

*Gait Posture* 2009; ePub(ePub): ePub. Affiliation: Centre for Health, Exercise and Sports Medicine, University of Melbourne, Parkville, Victoria 3010, Australia. DOI: [10.1016/j.gaitpost.2009.08.003](https://doi.org/10.1016/j.gaitpost.2009.08.003) (Copyright © 2009, Elsevier Publishing) [ePub (volume, issue, and page range not yet available)]

#### **ABSTRACT**

Exercise related lower limb injuries (ERLLI), are common in the recreational and competitive sporting population. Although ERLLI are thought to be multi-factorial in aetiology, one of the critical predisposing factors is known to gait abnormality. There is little published evidence comparing walking and running gait in the same subjects, and no evidence on the effect of gait velocity on calcaneal pronation, even though this may have implications for orthotic prescription and injury prevention. In this study, the walking and running gait of 50 physically active subjects was assessed using pressure plate analysis. The results show that rearfoot pronation occurs on foot contact in both running and walking gait, and that there is significantly more rearfoot pronation in walking gait ( $p < 0.01$ ). The difference in the magnitude of rearfoot pronation affected foot orthoses prescription. A 63% fall in computerized correction suggested by RScan D3D software prescription was seen, based on running vs. walking gait. The findings of this study suggest that in the athletic population orthoses prescription should be based on dynamic assessment of running gait.

### **Outdoor and indoor falls as predictors of mobility limitation in older women**

Manty M, Heinonen A, Viljanen A, Pajala A, Koskenvuo M, Kaprio J, Rantanen T

*Age Ageing* 2009 38: 757-761; doi:10.1093/ageing/afp178

#### **ABSTRACT**

Falls in old age often cause physical injuries, which may lead to hospitalisation and institutionalisation [1]. However, whether falls in general have an impact on mobility decline has been little studied [2, 3]. It has been suggested that outdoor falls are more common among healthy and active older people, whereas indoor falls are often related to intrinsic risk factors, such as poor health and impaired balance [4–6]. As poor health and low functional ability are known to be risk factors for both indoor falls [4, 5] and mobility disability [7], it can be hypothesised that, compared to outdoor falls, indoor falls are more likely to be associated with mobility decline. However, to date it is not known whether indoor and outdoor falls in old age have a different impact on mobility. The objective of this study was to determine the association of outdoor and indoor falls with the incidence of mobility limitation in older women.

### **Visuomotor adaptation of voluntary step initiation in older adults.**

Tseng SC, Stanhope SJ, Morton SM. *Gait Posture* 2009; ePub(ePub): ePub.

Affiliation: Department of Physical Therapy & Rehabilitation Science, University of Maryland School of Medicine, Baltimore, MD, USA; Graduate Program in Physical Therapy & Rehabilitation Science, University of Iowa Carver College of Medicine, Iowa City, IA, USA.

DOI: [10.1016/j.gaitpost.2009.10.001](https://doi.org/10.1016/j.gaitpost.2009.10.001) PMID: 19889542

(Copyright © 2009, Elsevier Publishing) [ePub (volume, issue, and page range not yet available)]

#### **ABSTRACT**

It has been suggested that feedforward planning of gait and posture is diminished in older adults. Motor adaptation is one mechanism by which feedforward commands can be updated or fine-tuned. Thus, if feedforward mechanisms are diminished in older adults, motor adaptation is also likely to be limited. The purpose of the study was to compare the ability of healthy older versus young adults in generating a voluntary stepping motor adaptation in

response to a novel visual sensory perturbation. We recorded stepping movements from 18 healthy older and 18 young adults during baseline and adaptation stepping blocks. During baseline, the stepping target remained stationary; in adaptation, a visual perturbation was introduced by shifting the target laterally during mid-step. We compared adaptation between groups, measured by improvements in endpoint accuracy and movement duration. Older adults adapted stepping accuracy similarly to young adults (accuracy improvement: 29.7+/-27.6% vs. 37.3+/-22.9%, older vs. young group respectively,  $p=0.375$ ), but showed significant slowness during movement. Thus older adults were able to achieve accuracy levels nearly equivalent to younger adults, but only at the expense of movement speed, at least during the early adaptation period (movement duration: 1143.7+/-170.6ms vs. 956.0+/-74.6ms,  $p<0.001$ ). With practice, however, they were able to reduce movement times and gain speed and accuracy to levels similar to young adults. These findings suggest older adults may retain the ability for stepping adaptations to environmental changes or novel demands, given sufficient practice

## **FEAR OF FALLING**

### **Fear of falling, fall-related self-efficacy, anxiety and depression in individuals with chronic obstructive pulmonary disease.**

Hellström K, Vahlberg B, Urell C, Emtner M. *Clin Rehabil* 2009; ePub(ePub): ePub.

Affiliation: Department of Neuroscience, Section of Physiotherapy, Uppsala University, Uppsala, Sweden.

DOI: [10.1177/0269215509342329](https://doi.org/10.1177/0269215509342329) PMID: 19906765 (Copyright © 2009, Sage Publications)

#### **ABSTRACT**

**Objective:** To examine the risk and frequency of falls, prevalence of fear of falling and activity avoidance, the magnitude of fall-related self-efficacy, and anxiety and depression in patients with chronic obstructive pulmonary disease.

**Design and settings:** A cross-sectional study in patients with a diagnosis of chronic obstructive pulmonary disease who visited a lung clinic at a university hospital in Sweden. Subjects: Successive inclusion from autumn 2005 to spring 2006 of 80 patients with a mean age of 65 years. Intervention: Nil.

**Main Measures:** A questionnaire about fall history and consequences of fall, The Falls Efficacy Scale, Swedish version, and the Hospital Anxiety and Depression Scale were used.

**Results:** Twenty patients (25%) reported at least one fall in the last year and 29% displayed fear of falling. Odds ratio for falling was 4-5 times higher in patients with severe chronic obstructive pulmonary disease. Older patients, women and patients with previous falls had a higher rate of fear of falling, and those with fear of falling had lower fall-related self-efficacy, increased level of anxiety and depression, more activity avoidance and use of assistive device.

**Conclusion:** The increased risk of falls in patients with chronic obstructive pulmonary disease warrants attention in order to reduce serious and adverse health consequences of falls.

## **INTERVENTION STUDIES**

### **The Effect of a program of Multifactorial Fall Prevention on Health Related Quality of Life, Functional Ability, Fear of Falling and Psychological Well-being. A Randomized Controlled Trial.**

Bonnerup Vind A, Elkjaer Andersen H, Damgaard Pedersen K, Joergensen T, Schwarz P.

*Aging Clin Exp Res* 2009; ePub(ePub): ePub. Affiliation: Research Centre for Aging and Osteoporosis, Glostrup University Hospital, Denmark. [anbovi01@glo.regionh.dk](mailto:anbovi01@glo.regionh.dk). DOI: [10.3275/6628](https://doi.org/10.3275/6628) PMID: 19934621

(Copyright © 2009, Editrice Kurtis)

#### **ABSTRACT**

**Background and aims:** Falls among older people are associated with injury, functional decline, fear of falling, and depression. This study aims to evaluate the effect of multifactorial fall prevention on function, fear of falling, health related quality of life and psychological well-being.

**Methods:** 392 older people  $\geq 65$  years sustaining a fall leading to treatment in emergency room or hospitalization were included in a randomized, controlled intervention study on multifactorial fall prevention. The intervention consisted of systematic assessment and individualized treatment aimed at reducing risk factors for falls, and was performed at the geriatric outpatient department of a university hospital. The control group received usual care. Outcome measures were functional ability; Barthel Index and Frenchay Activity Index, fear of falling; Activities Balance Confidence Scale, Health related quality of life; SF-36, and psychological well-being; SCL-92 and were

recorded at interviews 6 and 12 months after inclusion.

**Results:** Only physical function of SF-36 was slightly positively affected by the intervention ( $p=0.04$ ), while there was no effect on general health ( $p=0.49$ ) or mental health ( $p=0.39$ ) items, Barthel Index ( $p=0.10$ ), Frenchay Activity Index ( $p=0.71$ ), balance confidence ( $p=0.77$ ), anxiety ( $p=0.92$ ), depression ( $p=0.90$ ) or somatization ( $p=0.13$ ).

**Conclusions:** This program of multifactorial fall prevention could have an effect on the physical function item of health related quality of life in favour of the intervention group, but no effect on other measures of health related quality of life, daily function, fear of falling or psychological well-being.

### **Falls reduction in long-term care facilities: a preliminary report of a new internet-based behavioral technique.**

Mansdorf IJ, Sharma R, Perez M, Lepore AM.

*J Am Med Dir Assoc* 2009; 10(9): 630-3. Affiliation: Park Avenue Medical Associates, White Plains, NY, USA. imansdorf@gmail.com DOI: [10.1016/j.jamda.2009.06.005](https://doi.org/10.1016/j.jamda.2009.06.005) (Copyright © 2009, Lippincott Williams and Wilkins)

#### **ABSTRACT**

**OBJECTIVE:** To investigate an Internet-based psychological intervention targeting behavioral factors related to falls among residents of long-term care communities.

**DESIGN:** Retrospective A-B design with 90-day look-back.

**SETTING:** Long-term care communities in New York State (N=4, 3 SNF, 1 ALF).

**PARTICIPANTS:** Nursing home residents (N=26).

**INTERVENTION:** Internet-based programmed learning system using cognitive- and behavioral-based techniques.

**MEASUREMENTS:** Direct measures of documented falls in the medical record, perceived risk and burden scales, Falls Efficacy Scale-International (FES-I), Attitudes to Falls-Related Interventions Scale (AFRIS).

**RESULTS:** Reductions in documented falls by 52% along with substantial reductions in staff ratings of risk and burden.

**CONCLUSION:** Behavioral treatment of risk factors related to falls within a structured delivery using Internet-based intervention may be an effective and efficient mechanism for treating fall risk in long-term care settings.

### **Design of a continuous quality improvement program to prevent falls among community-dwelling older adults in an integrated healthcare system**

Ganz DA, Yano EM, Saliba D, Shekelle PG. *BMC Health Serv Res* 2009; 9(1): 206.

DOI: [10.1186/1472-6963-9-206](https://doi.org/10.1186/1472-6963-9-206) PMID: 19917122 (Copyright © 2009, BioMed Central)

#### **ABSTRACT**

**BACKGROUND:** Implementing quality improvement programs that require behavior change on the part of health care professionals and patients has proven difficult in routine care. Significant randomized trial evidence supports creating fall prevention programs for community-dwelling older adults, but adoption in routine care has been limited. Nationally-collected data indicated that our local facility could improve its performance on fall prevention in community-dwelling older people. We sought to develop a sustainable local fall prevention program, using theory to guide program development.

**METHODS:** We planned program development to include important stakeholders within our organization. The theory-derived plan consisted of 1) an initial leadership meeting to agree on whether creating a fall prevention program was a priority for the organization, 2) focus groups with patients and health care professionals to develop ideas for the program, 3) monthly workgroup meetings with representatives from key departments to develop a blueprint for the program, 4) a second leadership meeting to confirm that the blueprint developed by the workgroup was satisfactory, and also to solicit feedback on ideas for program refinement.

**RESULTS:** The leadership and workgroup meetings occurred as planned and led to the development of a functional program. The focus groups did not occur as planned, mainly due to the complexity of obtaining research approval for focus groups. The fall prevention program uses an existing telephonic nurse advice line to 1) place outgoing calls to patients at high fall risk, 2) assess these patients' risk factors for falls, and 3) triage these patients to the appropriate services. The workgroup continues to meet monthly to monitor the progress of the program and improve it.

**CONCLUSION:** A theory-driven program development process has resulted in the successful initial implementation of a fall prevention program.

## Falls prevention through community intervention – A Swedish example.

Larsson TJ, Hågvide ML, Svanborg M, Borell L.

*Safety Sci* 2010; 48(2): 204-208.

DOI: [10.1016/j.ssci.2009.08.002](https://doi.org/10.1016/j.ssci.2009.08.002) PMID: unavailable (Copyright © 2010, Elsevier Publishing)

### ABSTRACT

In order to control and reduce fall-related injuries, particularly among women over the age of 55, a safety management and falls prevention campaign was structured and implemented during 2006–2007 in the small industrial town of Södertälje, Sweden. A local campaign was launched to recruit falls prevention agents, to inform key target groups in the local community, and to educate older people about fall risks. A survey showed that the campaign had a greater impact among professionals with a special relation to fall risk than among the general population. Medical records were used in the evaluation of the outcomes. The results show that between 2005 and 2007 there was a drop of fractures related to falls in the council: an overall drop of 16.7% in the population; among men 55 or older a drop of 12%, among women 55 or older a drop of 15%, among home-dwelling women 55 or older a drop of 5.7% and among women in special accommodation a drop of 44.4%. Expressed in terms of years lost to disability (YLD), the overall drop in hip fractures treated at the local hospital between 2005 and 2007 was 48%. A comparison with National medical records for the same period shows the drop for the intervention area to be much larger than that for Sweden as a whole, although the effect was not statistically significant. The study demonstrates the advantages of a broad, community-based approach to injury prevention.

### WEBSITES

#### Australian Commission on Safety and Quality in Health care

#### *Preventing Falls and Harm from Falls in Older People: Best Practice guidelines for Australian Hospitals, Residential Aged Care Facilities and Community Care 2009*

These guidelines were endorsed by the Australian Health Ministers at their meeting in November 2009.

There are separate complete guidelines and shorter guidebooks for Hospitals, Residential Aged Care Facilities and Community Care as well as fact sheets and an Implementation guideline. These are available to download at: <http://www.safetyandquality.gov.au/internet/safety/publishing.nsf/Content/FallsGuidelines>

Hard copies of these guidelines and guidebooks are not currently available, however in NSW the development of a strategy for printing, distributing and implementation is being developed. Updates of this process will be provided to this network.





**4th Australian & New Zealand Falls Prevention Society Conference  
University of Otago, Dunedin, New Zealand  
21–23 November 2010**

The three previous ANZFPS conferences have been a resounding success, each attended by over 500 delegates from a wide range of health professions and research areas.

Plenary speakers: Professor David Buchner (University of Illinois at Urbana-Champaign, USA)  
Professor Karim Khan (Centre for Hip Health and Mobility, University of British Columbia)  
Key falls prevention experts from Australia and New Zealand

We are preparing an exciting programme with results from the latest falls prevention research, plus relevant and practical issues for clinicians, researchers, healthcare funders and providers.

Sunday 21 November  
Workshops 2–4pm  
Welcome function 5pm

Monday 22 November  
Presentations, posters  
Conference dinner at Larnach Castle

Tuesday 23 November  
Presentations, posters, "Ask the Expert" session (geriatrician/GP), closing 5pm

Online registration, submission of abstracts for presentations and posters will open mid February.

[www.otago.ac.nz/fallsconference](http://www.otago.ac.nz/fallsconference)

We look forward to welcoming you to Dunedin, New Zealand. Plan your trip now!





[www.powmri.edu.au/  
fallsnetwork](http://www.powmri.edu.au/fallsnetwork)



### **NSW FALLS PREVENTION NETWORK BACKGROUND**

The NSW Falls Prevention Network has existed since 1993. The role of this network has grown since its inception and now includes:

- Meetings for discussion of falls related issues;
- Dissemination of research findings both local and international;
- Sharing resources developed and exploration of opportunities to combine resources in joint initiatives;
- Encouragement of collaborative projects and research;
- To act as a group to influence policy;
- To liaise with NSW Health to provide information on current State/Commonwealth issues in relation to falls and
- Maintenance of resources pertinent to the field

The main purpose of the network is to share knowledge, expertise, and resources on falls injury prevention for older people.

**The NSW Falls Prevention Network activities are part of the implementation of the NSW Falls Prevention Policy funded by the NSW Department of Health**

## **NETWORK INFORMATION**

### **JOINING THE NETWORK**

**To join the NSW Falls Prevention Network listserv :**

- Send an email to :  
[majordomo@lists.health.nsw.gov.au](mailto:majordomo@lists.health.nsw.gov.au)
- In the body of the message type **subscribe nsw-falls-network** on the next line type **end**
- Do not put anything in the subject line
- You will receive an e-mail to confirm you have been added to the listserv

**To unsubscribe from the listserv:**

- send an e-mail to the above address and in the body of the message write  
**unsubscribe nsw-falls-network** on the next line type **end**

If you have any problems contact Esther at [e.vance@powmri.edu.au](mailto:e.vance@powmri.edu.au).

### **SHARE YOUR NEWS AND INFORMATION/IDEAS ON FALLS PREVENTION**

Do you have any news on Falls Prevention you want to share with others on the network, or do you want to report on a project that is happening in your area.

Please email Esther with your information. We also welcome suggestions for articles and information you would like to see in this newsletter.

Send your information to  
[e.vance@powmri.edu.au](mailto:e.vance@powmri.edu.au)

### **THE NETWORK LISTSERV**

It is great to see the increased activity on the listserv and want to continue to promote this. To send an item to the listserv where all members of the network can see it, send an email to:

[nsw-falls-network@lists.health.nsw.gov.au](mailto:nsw-falls-network@lists.health.nsw.gov.au)

You need to be a subscriber to the listserv to send an email that will be distributed to all members of the on the listserv. Remember to put a short description in the subject line.

Recently some posts to the listserv have bounced due to email address changes in the area health services, you need to re-subscribe with your new e-mail address and unsubscribe from your old address following the Join the Network instructions as