Welcome

This issue includes:
A report on CAREX the Aged Expo on page 2.
Falls Prevention and Osteoporosis Awareness at Port Macquarie Base Hospital, see page 3.
NSW Health has produced a new resource on falls prevention for consumers, information on the resource and details on how to obtain copies are on page 4.
A number of new resources regarding falls prevention are available on the NSW Health website these include:
- Report on the NSW Falls Prevention Baseline Survey.
- The incidence and cost of falls injury among older people in New South Wales 2006/07.
- NSW Dementia Services Framework 2010-2015
See page 5.
Abstracts on falls prevention from the recent research literature on pages 6-10.

Inside this Issue:

<table>
<thead>
<tr>
<th>Inside this Issue</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carex 2010</td>
<td>2</td>
</tr>
<tr>
<td>Falls and Osteoporosis</td>
<td>3</td>
</tr>
<tr>
<td>Consumer resource</td>
<td>4</td>
</tr>
<tr>
<td>Abstracts and Websites</td>
<td>5</td>
</tr>
<tr>
<td>Network Information</td>
<td>11</td>
</tr>
</tbody>
</table>

http://fallsnetwork.neura.edu.au/

Port Macquarie Base Hospital World Osteoporosis Day display, with Emma Foley(l) and Kate Lister (r).
CAREX 2010

Background

CAREX is an expo of products, services, programs and initiatives for residential aged care and community service providers to older people, and was held at Rosehill Racecourse on the 11th and 12th August, 2010. Entry to CAREX for attendees is free. The Falls Network had been invited to have a stall (at no cost) at the last three CAREX expos and this was our fourth.

Attendance

Lorraine Lovitt (Leader, NSW Falls Prevention Program, Clinical Excellence Commission) and Esther Vance (Project Officer, NSW Falls Prevention Program, Neuroscience Research Australia) attended the 2 day expo. We spoke to 355 participants over the 2 days (207 on the first day and 148 on the second day); this was an increase of 45% over last year. In attendance at CAREX were a large number of students studying either for Certificate IV in Aged Care or AIN TAFE Courses and their teaching staff. Aged care sector staff in attendance included managers, physiotherapists, occupational therapists as well as staff from disability services. All attendees we spoke to were aware of the problems of falls and very interested in falls prevention information.

A number of resources were handed out over the 2 days including Fact Sheets from the Australian Commission on Safety and Quality in Healthcare (ACSQHC) Preventing Falls and Harm From Falls in Older People: Best Practice Guidelines for Australian Hospitals, Residential Aged Care Facilities and Community Care 2009 as well as information on the Falls Prevention Network, Falls Prevention Equipment, Healthy Ageing pamphlets featuring Noeline Brown and CDs with Plenary Presentations from the 2010 NSW Falls Prevention Network Meeting.

Future

CAREX is an annual event with the NSW Falls Prevention Network invited to attend at no cost. This year a large number of Aged Care students attended CAREX and therefore we need to produce a flyer with key messages on falls prevention for these students. Also for next year we will provide information on the Staying Active and on Your Feet Community Resource for falls prevention as well as the Staying Active and Healthy website which has information on exercise programs that include adequate strength and balance components for falls prevention.

This year we engaged with members of the Stroke Association, Parkinson Association of NSW, Vision Australia and Guide Dogs NSW and discussed the development of a falls prevention brochure for each of these associations.
Falls Prevention and Osteoporosis Awareness at Port Macquarie Base Hospital

Port Macquarie Base Hospital recently launched two projects to raise awareness on falls prevention and Osteoporosis.

The falls prevention committee organised a permanent falls prevention information display in the main corridor of Port Macquarie Base Hospital. On display is a range of information and handouts aimed at increasing staff and public awareness and reducing the risk of both hospital and community falls. The display has been popular and invited positive comment from the public with a large number of handouts taken.

Physiotherapists Kate Lister and Emma Foley made the most of World Osteoporosis Day (October 20th) to raise awareness about the silent disease and launch their new osteoporosis project “Treasure your Bones”. All patients over 50 presenting with minimal trauma fractures now receive an osteoporosis pack raising awareness about the disease and encouraging them to have follow up with their general practitioner. Project results demonstrate this is effective in bringing about change and increasing the diagnosis and treatment of osteoporosis.

Both projects are having a positive impact on the public and are planned for rollout to both Wauchope and Kempsey District Hospitals.

Reported by Anthony Best, Physiotherapist in Charge, Port Macquarie Base Hospital, anthony.best@ncahs.health.nsw.gov.au
NEW CONSUMER RESOURCE FROM NSW HEALTH

New Resource available for older people at risk of falling
This resource was developed by an expert working group and is aimed at people over 65 years living in the community.

This resource outlines:
• Risk factors for falls
• Simple strength and balance home based exercises essential to staying active
• A Health and Lifestyle checklist
• Pictures and description of how to get up from a fall
• A home safety checklist

NSW Health Professionals are able to order this resource from:
The Resource Distribution Unit at Gladesville Hospital
Ph: 9879 0443   Fax: 9879 0994
email: TOBINFO@doh.health.nsw.gov.au
New Resources on the NSW Health Website

**New South Wales Falls Prevention Baseline Survey: 2009 Report**

Summary

In 2009 the Centre for Epidemiology and Research conducted the New South Wales Falls Prevention Baseline Survey to inform the review of the Management Policy to Reduce Falls Injury Among Older People 2003-07. The mains aims of the survey are to provide information about falls carers, falls status, risk and protective factors, consultation with health professionals, and falls knowledge, among community-dwelling older people. This report from the survey provides information about the health of 5,681 adults aged 65 years and over, which will provide a baseline measure against which policy can be developed and the effectiveness of population health initiatives can be evaluated.


**The incidence and cost of falls injury among older people in New South Wales 2006/07**


Summary

This study provides the most comprehensive population level estimate of the economic cost of falls among older people in NSW and is the first to attempt to disaggregate these costs between community and Residential Aged Care. The extremely high economic cost of falls in older people is demonstrated, highlighting the significant need for cost effective prevention of injury associated with falls in this population. Data from this study should be used in cost effectiveness studies on falls interventions, at the population level, to inform NSW falls prevention policy and the prioritisation of evidence-based prevention programs within the community.


**NSW Dementia Services Framework 2010-2015**

Summary

The NSW Dementia Services Framework 2010-2015 is a joint publication of the NSW Department of Health and Ageing, Disability and Home Care that sets the direction for improving quality of life for people with dementia, carers and families in NSW. It reviews service needs and makes recommendations along a dementia service pathway from awareness through diagnosis, assessment, community, hospital and residential care. It can be used as a checklist for reviewing the way services are currently provided and can encourage reflection on how services could be delivered differently to improve outcomes for people with dementia, carers and families.

REVIEWS

Fear of falling after hip fracture: a systematic review of measurement instruments, prevalence, interventions, and related factors.

Visschedijk J, Achterberg W, van Balen R, Hertogh C.

*J Am Geriatr Soc* 2010; 58(9): 1739-48. Affiliation: Department of Nursing Home Medicine Amsterdam, VU University Medical Centre/EMGO Institute for Research in Extramural Medicine, Amsterdam, The Netherlands. DOI: 10.1111/j.1532-5415.2010.03036.x PMID: 20863333 (Copyright © 2010, John Wiley and Sons)

**ABSTRACT**

The objective of this review was to systematically describe and analyze fear of falling (FoF) in patients after a hip fracture, focusing on measurement instruments for FoF, the prevalence of FoF, factors associated with FoF, and interventions that may reduce FoF. Fifteen relevant studies were found through a systematic literature review, in which the PubMed, Embase, PsychINFO, and CINAHL databases were searched. Some of these studies indicated that 50% or more of patients with a hip fracture suffer from FoF, although adequate instruments still have to be validated for this specific group. FoF was associated with several negative rehabilitation outcomes, such as loss of mobility, institutionalization, and mortality. FoF was also related to less time spent on exercise and an increase in falls, although knowledge about risk factors, the prevalence over a longer time period, and the exact causal relations with important health outcomes is limited. Most studies suffer from selection bias by excluding patients with physical and cognitive disorders. Hence, more research is required, including in patients who are frail and have comorbidities. Only when knowledge such as this becomes available can interventions be implemented to address FoF and improve rehabilitation outcomes after a hip fracture.

Cognitive motor interference while walking: A systematic review and meta-analysis.

Al-Yahya E, Dawes H, Smith L, Dennis A, Howells K, Cockburn J.


**ABSTRACT**

Dual-task methodology has been increasingly used to assess cognitive motor interference while walking. However, whether the observed dual-task-related gait changes are systematically related to methodological variations remains unclear and researchers still lack knowledge of what cognitive task to use in different groups for clinical purposes or for research. We systematically reviewed experimental studies that measured gait performance with and without performing concurrent cognitive task. Our results suggest that cognitive tasks that involve internal interfering factors seem to disturb gait performance more than those involving external interfering factors. Meta-analysis results show that the overall effect of different cognitive tasks was prominent in gait speed. In healthy participants, meta-regression analysis suggests strong associations between age and speed reduction under dual task conditions and between the level of cognitive state and speed reduction under dual task conditions. Standardizing research methodologies, as well as improving their ecological validity, enables better understanding of dual-task-related gait changes in different populations and improves, in turn, our understanding of neural mechanisms and gait control in general in content.

EPIDEMIOLOGY AND RISK FACTORS

Foot Pain, Plantar Pressures, and Falls in Older People: A Prospective Study.

Mickle KJ, Munro BJ, Lord SR, Menz HB, Steele JR.

*J Am Geriatr Soc* 2010; ePub(ePub): ePub. Affiliation: From the Biomechanics Research Laboratory, University of Wollongong, Wollongong, New South Wales, Australia Neuroscience Research Australia, University of New South Wales, Randwick, New South Wales, Australia Musculoskeletal Research Centre,
ABSTRACT

OBJECTIVES: To determine whether foot pain and plantar pressure are associated with falls in community-dwelling older adults. DESIGN: Community-based cohort study with 12-month prospective falls follow-up. SETTING: Sydney and Illawarra statistical regions of New South Wales, Australia. PARTICIPANTS: Randomly recruited, community-dwelling adults (158 men and 154 women) aged 60 and older. MEASUREMENTS: Manchester Foot Pain and Disability Index to establish baseline foot pain and dynamic plantar pressures. Participants were then classified as fallers (n=107) or non-fallers (n=196) based on their falls incidence over the following 12 months. RESULTS: Fallers had a significantly higher prevalence of foot pain than non-fallers (57.9% vs 42.1%; chi-square=4.0; P=.04). Fallers also generated a significantly higher peak pressure and pressure-time integral under the foot than non-fallers. In addition, individuals with foot pain had a significantly higher peak pressure and pressure-time integral under the foot than those without foot pain. CONCLUSION: High plantar pressures generated during gait may contribute to foot pain and risk of falls. Providing interventions to older people with foot pain and high plantar pressures may play a role in reducing their falls risk.

Emergency department presentation following falls: development of a routine falls surveillance system.

Johansen A, Dickens J, Jones M, Richmond P, Evans R.

ABSTRACT

INTRODUCTION: Falls are recognised as a major public health issue, particularly among older people, and have been targeted for attention by national service frameworks and National Institute for Health and Clinical Excellence guidelines in the UK. However, reliable epidemiological data are not easily available, and it remains difficult to monitor the effect of interventions that seek to reduce the public health impact of falls. METHOD: In a 1-year study based in the emergency department (ED) of the University Hospital of Wales all Cardiff residents who described their presentation as following a fall were identified. From a catchment population of 305,353 people a total of 86,031 such ED presentations were recorded, 20,154 (23.4%) of which followed a fall. RESULTS: This gives an overall falls incidence of 66/1000 population per year, meaning that in just a year one resident in 15 attended the ED following a fall. The impact of falls was greatest in the oldest age groups, and in women aged over 75 years the falls incidence of 139/1000 per year was significantly higher than the figure of 99/1000 per year observed in men of the same age. CONCLUSIONS: This study describes a simple way for ED to establish routine falls surveillance. It offers the first estimate of the impact of falls on ED in the UK, suggesting that such services are dealing with 4 million falls-related attendances every year.

A multifactorial approach to understanding fall risk in older people.


ABSTRACT

OBJECTIVE: To identify the interrelationships and discriminatory value of a broad range of objectively measured explanatory risk factors for falls. DESIGN: Prospective cohort study with 12-month follow-up period. SETTING: Community sample. PARTICIPANTS: Five hundred community-dwelling people aged 70 to 90. MEASUREMENTS: All participants underwent assessments on medical, disability, physical, cognitive, and psychological measures. Fallers were defined as people who had at least one injurious fall or at least two non-injurious falls during a 12-month follow-up period. RESULTS: Univariate regression analyses identified the following fall risk factors: disability, poor performance on physical tests, depressive symptoms, poor
executive function, concern about falling, and previous falls. Classification and regression tree analysis revealed that balance-related impairments were critical predictors of falls. In those with good balance, disability and exercise levels influenced future fall risk—people in the lowest and the highest exercise tertiles were at greater risk. In those with impaired balance, different risk factors predicted greater fall risk—poor executive function, poor dynamic balance, and low exercise levels. Absolute risks for falls ranged from 11% in those with no risk factors to 54% in the highest-risk group. CONCLUSIONS: A classification and regression tree approach highlighted interrelationships and discriminatory value of important explanatory fall risk factors. The information may prove useful in clinical settings to assist in tailoring interventions to maximize the potential benefit of falls prevention strategies.

FEAR OF FALLING

Reconceptualizing the Role of Fear of Falling and Balance Confidence in Fall Risk.

Hadjistavropoulos T, Delbaere K, Dever Fitzgerald T.


**ABSTRACT**

**OBJECTIVE:** This article aimed to critically examine preexisting conceptualizations of the relationship among fear of falling, falls efficacy, and falls and to offer a new theoretical model incorporating findings from the recent literature. **METHOD:** This is a theoretical article based on a review of preexisting findings pertaining to fear of falling and falls efficacy. **RESULTS:** Traditional conceptualizations consider avoidance of activity and deconditioning to be mediators in the relationship between fear of falling and falls, but recent findings suggest that this mediational conceptualization may not be accurate. Moreover, the terms falls efficacy and fear of falling are often used interchangeably in the literature, which is conceptually problematic. **DISCUSSION:** We conclude with the presentation and discussion of an alternative predictive model of fear of falling that incorporates important findings from the recent literature.

Perceived pain, fear of falling and physical function in women with osteoporosis

Huebscher M, Vogt L, Schmidt K, Fink M, Banzer W


**ABSTRACT**

The aim of this cross-sectional study was to evaluate pain intensity-related differences in physical performance and fear of falling in elderly women with osteoporosis. A sample of 82 osteoporotic women (73.8 ± 8.1 years) with and without vertebral fractures was included. Numeric rating scale (NRS) measures (0 = no pain, 10 = unbearable) were applied to obtain actual pain intensity and to stratify between patients with mild (0-3), moderate (4-6) and severe (7-10) pain. Activity-related fear of falling was evaluated with the Falls Efficacy Scale-International Version (FES-I). Physical performance measures included maximum voluntary quadriceps strength, postural sway and gait speed measures. Controlling for age, fractures, and history of falls ANCOVA with Scheffes post hoc test indicated significant slower walking velocities and greater postural sway for patients with severe pain. Furthermore, significant group differences could be detected for muscle strength and fear of falling. Patients with more intense pain (NRS >=5) were 6.4 times (odds ratio; 95%CI: 1.5 - 26.7) more likely to score below average in fall-related self-efficacy and all physical performance tests. Among women with osteoporosis, heightened back pain intensity increases fear of falling and decreases physical performance irrespective of vertebral fractures and history of falls.

INTERVENTION STUDIES

Cost-effectiveness of a day hospital falls prevention programme for screened community-dwelling older people at high risk of falls.

ABSTRACT

BACKGROUND: multifactorial falls prevention programmes for older people have been proved to reduce falls. However, evidence of their cost-effectiveness is mixed. DESIGN: economic evaluation alongside pragmatic randomised controlled trial. Intervention: randomised trial of 364 people aged ≥70, living in the community, recruited via GP and identified as high risk of falling. Both arms received a falls prevention information leaflet. The intervention arm were also offered a (day hospital) multidisciplinary falls prevention programme, including physiotherapy, occupational therapy, nurse, medical review and referral to other specialists. MEASUREMENTS: self-reported falls, as collected in 12 monthly diaries. Levels of health resource use associated with the falls prevention programme, screening (both attributed to intervention arm only) and other health-care contacts were monitored. Mean NHS costs and falls per person per year were estimated for both arms, along with the incremental cost-effectiveness ratio (ICER) and cost effectiveness acceptability curve. RESULTS: in the base-case analysis, the mean falls programme cost was £349 per person. This, coupled with higher screening and other health-care costs, resulted in a mean incremental cost of £578 for the intervention arm. The mean falls rate was lower in the intervention arm (2.07 per person/year), compared with the control arm (2.24). The estimated ICER was £3,320 per fall averted. CONCLUSIONS: the estimated ICER was £3,320 per fall averted. Future research should focus on adherence to the intervention and an assessment of impact on quality of life.

Modelling the population-level impact of tai-chi on falls and fall-related injury among community-dwelling older people

Day L, Finch CF, Harrison JE, Haoreau E, Segal L, Ullah S.


ABSTRACT

OBJECTIVE: To model the population level impact of tai-chi on future rates of falls and fall related injury in older people as a tool for policy development. DESIGN: An epidemiological and economic model for estimating population level effectiveness of tai-chi. SETTING: Australia, 2009. Patients or subjects Australian community dwelling population aged 70+years, ambulatory and without debilitating conditions or profound visual defects. INTERVENTION: Group based tai-chi, for 1h twice weekly for 26 weeks, assuming no sustained effect beyond the intervention period. MAIN OUTCOME MEASURE: Total falls and fall related hospitalisation prevented in 2009. RESULTS: Population wide tai-chi delivery would prevent an estimated 5,440 falls and 109 fall related hospitalisations, resulting in a 0.18% reduction in the fall related hospital admission rate for community dwelling older people. The gross costs per fall and per fall related hospital admission prevented were Australian Dollars 4414 (Euro 3013) and Australian Dollars 220,712 (Euro 150,684), respectively. A total investment of Australian dollars 24.01 million (Euro 16.39 million), equivalent to 4.2% of the cost of fall-related episodes of hospital care in 2003/4, would be required to provide tai-chi for 31,998 people and achieve this effect. CONCLUSIONS: Substantial investment in, and high population uptake of, tai-chi would be required to have a large effect on falls and fall related hospitalisation rates. Although not accounted for in this study, investment in tai-chi is likely to be associated with additional significant health benefits beyond falls prevention. This approach could be applied to other interventions to assist selection of the most cost effective falls prevention portfolio for Australia and other countries.

LiFE Pilot Study: A randomised trial of balance and strength training embedded in daily life activity to reduce falls in older adults.

Clemson L, Singh MF, Bundy A, Cumming RG, Weisset E, Munro J, Manollaras K, Black D.

ABSTRACT

BACKGROUND: Exercise as a falls prevention strategy is more complex with people at risk than with the general population. The Lifestyle approach to reducing Falls through Exercise (LiFE) involves embedding balance and lower limb strength training in habitual daily routines. METHODS: A total of 34 community-residing people aged ≥70 years were randomised either into the LiFE programme or into a no-intervention control group and followed up for six months. Inclusion criteria were two or more falls or an injurious fall in the past year. RESULTS: There were 12 falls in the intervention group and 35 in the control group. The relative risk (RR) analysis demonstrated a significant reduction in falls (RR = 0.23; 0.07-0.83). There were indications that dynamic balance (P = 0.04 at three months) and efficacy beliefs (P = 0.04 at six months) improved for the LiFE programme participants. In general, secondary physical and health status outcomes, which were hypothesised as potential mediators of fall risk, improved minimally and inconsistently. CONCLUSIONS: LiFE was effective in reducing recurrent falls in this at-risk sample. However, there were minimal changes in secondary measures. The study was feasible in terms of recruitment, randomisation, blinding and data collection. A larger randomised trial is needed to investigate long-term efficacy, mechanisms of benefit and clinical significance of this new intervention.

REPORTS

Falls cause nearly 60 per cent of hospital admissions for fractures in the UK

Falls cause nearly 60 per cent of hospital admissions for fractures, provisional figures show Provisionally between June 2009 and May 2010, falls accounted for 57 per cent (196,052) of instances where the main reason for admission was a fracture. Of those, over a third involved patients aged 80 or over and of those 79 per cent were female. The same pattern is visible in the previous 12 month period. Provisionally between June 2009 and May 2010 there were 343,536 admissions due to fractures, which accounted for 2.4 per cent of all admissions. This compares to 327,746 in the previous 12 month period, which accounted for 2.3 per cent of all admissions. The report also shows that provisionally between June 2009 and May 2010, of all admissions due to fractures: NHS Information Centre chief executive Tim Straughan said “Falls are the cause of more than half of all hospital admissions for fractures and although provisional, this data will help the NHS understand the reasons for admissions due to fractures and plan the use of resources accordingly”. These figures represent the most serious of fractures, as there will of course be a number of patients who attend accident and emergency but are not admitted to hospital.

WEBSITES

NSW Falls Prevention Program

Information on Australian Commission on Safety and Quality in Healthcare (ACSQHC) 2009 Falls Prevention Best Practice Guidelines

These revised guidelines are evidence based and were developed by a national panel of experts in falls prevention and designed to assist hospital, residential aged care facilities and community care providers to implement best practice in falls prevention. They are extensive and include evidence-based intervention recommendations and cost-effectiveness evidence where available.

There is a Guideline, Guidebook and Fact Sheets for each of the care settings, Hospital, Community and Residential Aged Care. There is also an Implementation guide for Hospital and residential Aged care Facilities.

ACSQHC Falls Prevention Guidelines 2009

The Clinical Excellence Commission is supporting the distribution and implementation of the ACSQHC 2009 Falls Prevention Best Practice Guidelines in NSW. A targeted distribution strategy was developed in consultation with the Area Falls Prevention Coordinators.

There are also 1 page summaries of best practice for both Hospital and Community Care. These are available at: http://www.cec.health.nsw.gov.au/programs/falls-prevention.html in the Resources Area.
Network Information

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 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.

Joining the Network

To join the NSW Falls Prevention Network listserv, send an email to: 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 send an e-mail to the above address and in the body of the message type unsubscribe nsw-falls-network on the next line type end

If you have any problems, contact Esther at e.vance@neura.edu.au.

Share your news and information/ideas

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@neura.edu.au

The Network Listserv

It is great to see the increased activity on the listserv and we 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

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 shown on this page.