FALLS LINKS

Welcome

This issue includes:

- 5th Biennial ANZFP Conference
- Screening for risk of falls in the ED
- April Falls Day®/Month 2013
- New Resources and websites information
- Abstracts - the latest abstracts from the research literature

The 20th NSW Falls Prevention Network Forum will be held on Friday 24th May, 2013 at the Wesley Conference Centre.

fallsnetwork.neura.edu.au

Maree   Esther   Ingrid   Lorraine

The NSW Falls Prevention Network and the NSW Falls Prevention Program wish you a safe and happy Festive Season

"Wishing you a peaceful joyful and restful Christmas and holiday break"

For your Diary:

20th NSW Falls Prevention Network Forum Friday 24th May 2013

"Falls Prevention is Everyone's Business®"

NSW FALLS PREVENTION NETWORK

5th Biennial Australian and New Zealand Falls Prevention Conference
28-30 October 2012, Adelaide Convention Centre, South Australia

Reflections from Sharon Butler, Better Balance Leader, Anglican Retirement Villages, Castle Hill NSW

I attended the pre-conference workshop on *Exercise to prevent falls: what do I do with my client?* This workshop was led by Dr Shylie Mackintosh and Dr Frances Batchelor.

There was an overview on effective interventions for falls and the work of A/Prof Cathy Sherrington regarding exercise and falls published in the Journal of the American Geriatrics Society (2008). Balance must be included in an exercise program and balance/functional strength exercises should be of moderate intensity. There should also be a least 2 hours a week devoted to these exercises.

What works?

- Tai Chi - e.g. Tai Chi for Arthritis
- Group exercise – e.g. No Falls (Day 2002), Stepping On (Clemson 2004)
- Home exercise - e.g. Otago Exercise Programme (Campbell 1997, Robertson 2001), LiFE (Clemson 2012)
- Residential Care Settings -e.g. Functional incidental Training (Schnelle 2003)

There were more programs named besides those above but our workshop discussed and worked through the 2 Group programs and the 2 Home based programs.

The No Falls has a training session if needed and a free of charge download available at:

http://www.monash.edu.au/miri/research/research-areas/home-sport-and-leisure-safety/fpru/nofalls/

The Stepping On Program developed by Prof Lindy Clemson and Megan Swann is aimed at community dwelling people and is an educational and exercise program. More information about the this program at:

http://www.steppingon.com

LiFE is a new program developed by Prof Lindy Clemson and her colleagues and is centred around everyday functional activities to improve balance and strength,and the journal article on this program is freely available online at BMJ (http://www.bmj.com/content/345/bmj.e4547). Further information on ordering the manual is available by sending an email to info@sup.usyd.edu.au

The Otago Exercise Programme is a home based program and recommends 30 minutes of exercise 3x week with walking 2x per week. The OEP manual is available at:

http://www.acc.co.nz/PRD_EXT_CSMP/groups/external_providers/documents/publications_promotion/prd_ctrb118334.pdf

The Plenary session presentation by Prof Olivier Beauchet on *Association between gait disorders, cognitive decline and Vitamin D deficiency'*, emphasised the interrelationship between these factors in older adults. Dual tasking problems, increased risk of falls and gait disorders and slower walking speeds can predict dementia. There is emerging evidence that disturbances in gait may also be related to low serum 25- hydroxy vitamin D concentrations. There appears to be a strong association of severe dementia and severe Vitamin D deficiency. He is currently conducting studies on the administration of Vitamin D supplementation in people with dementia and measuring executive function over time.

The paper by Prof Rod Barrett entitled *Biomechanics of recovery from forward loss of balance in older adults*- has helped me to look at my exercise classes. There is an increased risk of falls with people with flexed postures and small multiple steps forward. This multiple step forward is due to lower extremity weakness- hip flexors and knee extensors in particular- and exercise should also be aimed at upper body trunk stability.

Dr Daina Sturnieks paper on *Balance , sensorimotor function and falls in people with lower limb pain* showed that people with lower limb pain are twice as likely to fall than those without. Pain also contributes to poor protective stepping in response to unexpected perturbations and pain may lead to hip abduction strength. Hence the use of pain –mediating interventions.

Sarcopenia was identified as an important risk factor for falls and impaired quadriceps strength, lower limb proprioception, reaction time and balance were identified as mediators for this association in the paper by Joanne Lo on *Mediators for the relationship between sarcopenia and falls.*

Prof Ian Cameron in his presentation on *Frailty - treatment is feasible* spoke about the overlapping association of frailty and risk factors for falls. Frailty in older people can be treated with exercise combined with nutrition and support by family and with coordination of service providers.

There were excellent presentations on people with Parkinson's Disease (PD) and falls by Prof Meg Morris (*Prevention of falls in people with Parkinson's Disease*), A/Prof Colleen Canning (*Lessons learnt from the Parkinson's Disease Falls Intervention Trial [PD-FIT]*), Serene Paul (*Falls prediction in a large cohort of people with Parkinson's Disease*) and Dr Natalie Allen (*Recurrent falls in Parkinson's Disease: A systematic review.* Around 40% of people with PD have recurrent falls. The strongest predictor of falls in people with PD are a history of falls and freezing of gait. The worst outcome for someone with PD and the likelihood of falling is increased during dual tasking, freezing and turning. For those with PD, they should plan in advance to avoid dual tasks, walk with a metronome if possible, and improving lower muscle strength and have falls prevention education through strategy training. A/Prof Canning found in her trials that there was a high incidence of arthritis in people with PD.

When providing programs for people with Multiple Sclerosis (MS) both Dr Chris Barr (*The effect of walking induced fatigue on reaction time and choice stepping in people with MS*) and Prof Sheila Lennon (*The impact of group circuit training on balance mobility and falls in people with MS),* emphasized the need for a tailored falls management program for people with MS. They are usually a younger group and have associated physical fatigue. Fatigue is usually worse in the afternoons and reduces hand, foot and side stepping reaction times. People with MS also have poor temperature regulation and this impacts on physical activity programs.

In Residential Aged Care we were exposed to good programs from WA; Stay on Your Feet and in NSW; the Basic Steps training and resource package available at:

http://www.nscchealth.nsw.gov.au/healthpromotion/resources/index.html#Basic

Plenary presentations will be available shortly at http://www.anzfpsconference.com.au/index.php

Osteoporosis Australia representative and Prof Stephen Lord

Judy Coates and Patsy Bourke from Hunter New England Local Health District

Lorraine Lovitt and Cathie Sherrington enjoying the Popeye Boat Ride

Michelle Sutherland (Convenor ANZFPS Conference, Senior Project Officer, Priority Area, and Kris Spyrou, Project Assistant, Safety and Quality Unit, Department for Health and Ageing, SA

Screening for risk of falls in the Emergency Department

Dr Anne Tiedemann, Research Fellow, Musculoskeletal

Division, The George Institute for Global Health, Australia,

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Background

Approximately 18% of hospital emergency department (ED) attendances by older people are as a direct consequence of a fall. Many of these people have their fall-related injuries attending to in the ED and are then discharged home without consideration of their future risk of falling. Past studies have identified that about 50% of these people then experience further falls in the ensuing 12 months and that comprehensive assessment and intervention (not in ED) can reduce the risk of further falls.

In order to direct high risk patients for further assessment, it is necessary to use a screening tool to identify the relevant population. The tool described here has been developed and externally validated in Australia and is designed for use with community-dwelling older people (i.e. not those residing in Residential Aged Care Facilities).

How was the screening tool developed?

Two separate samples of older people aged 70+ years attending one of the two participating EDs after a fall or with a history of 2 or more falls in the past year were included in this study. Only those community-dwelling people who were treated in the ED and then discharged home were included. The first group was used to develop the screening tool (219 people, mean age 81 years, 54% female) and the second group (178 people, mean age 81 years, 73% female) was used to assess the external validity of the developed tool. All participants underwent a detailed assessment of vision, balance and gait and completed a questionnaire about medical history, medication usage, mobility and need for assistance with activities of daily living, and functional status. The Aged-Care Services in Emergency Team (ASET) staff recruited and assessed all study participants. Falls were measured by the research team on a monthly basis with replied-paid calendars for a period of six months.

The results showed that people who had experienced 2 or more falls in the previous year were 4.2 times more likely to fall in the next 6 months and people who were taking 6 or more medications were 1.9 times more likely to fall in the next 6 months. The screening tool is weighted to account for the stronger association between previous falls and future faller status. The developed tool has better predictive ability than a single question about previous falls and had similar predictive ability to the FROP-Com and PROFET screening tools, yet is much simpler and quicker to administer.

The Emergency Department Falls Screen - Discharge Tool

Falls screening tool variable	Score
Has the patient had 2 or more falls in the past year?	2
Do they take 6 or more medications?	1
Total	/3

Probability of falling in the next 6 months with different scores

0=16%, 1=28%, 2=44%, 3=61%

Who should the tool be used for?

The tool is to be used to identify independent-living older people who are at high risk of future falls and who will be discharged from ED (not admitted to hospital).

Some of these patients will have risk factors that can be modified with the aim of reducing their risk of future falls, related injuries and hospital admissions. The patient is to be made aware of their risk of falls and encouraged to undergo further assessment (either in ED or with their GP or allied health professional).   This is to identify their particular risk factors and implement strategies to reduce future falls risk.

The patient should be provided with information e.g. NSW Health *Staying Active and on Your Feet* booklet, copies can be ordered through the Active and Healthy website (www.activeandhealthy.nsw.gov.au) and are free to staff in NSW Ministry of Health facilities.
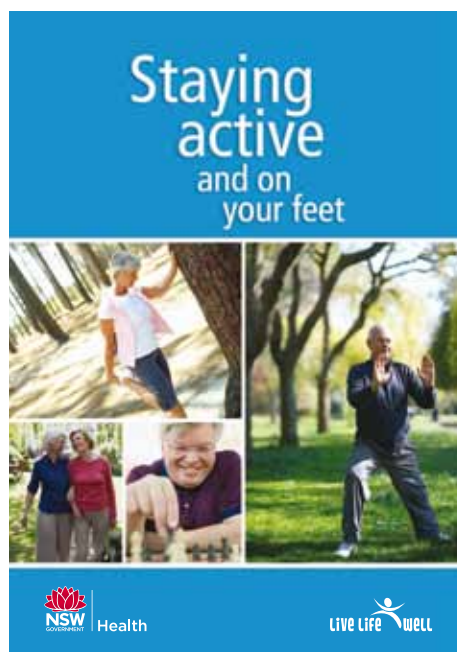
Discussions are underway with the Aged Care Unit, NSW Ministry of Health to engage with the Emergency Department AgedCare Services Emergency Teams (ASET) in the use of this tool.

Reference: Tiedemann A, Sherrington C, Orr T, Hallen J, Lewis D, Kelly A, Vogler C, Lord SR, Close JCT. Identifying older people at high risk of future falls: Development and validation of a screening tool for use in emergency departments. *Emergency Medicine Journa*l 2012; 0:1–5. doi:10.1136/emermed-2012-201783. This Journal can be accessed at http://emj.bmj.com/

3rd April 2013
APRIL FALLS DAY®

Falls Prevention is everyone's business®

A day for your Health Service to promote Falls Prevention messages to:

* Staff and Patients,
* Families and Carers,
* Community Services and
* General Community

The 1st April 2013 is on Easter Monday, therefore we encourage you to celebrate April Falls Day® on Wednesday 3rd April, 2013.

April Falls Day®/Month 2013

Building on the theme from last year's April Falls Day® *Falls Prevention and bone health,* the theme for 2013 April Falls Day® will be *Staying Active & Healthy to prevent falls*

**April Falls Day® 2012 at
Prince of Wales Hospital**

* Staying physically active is the single most important thing we can do to remain fit and independent.
* As we grow older we lose muscle strength and our sense of balance. This can lead to a fall.
* The more active we remain, the better the chance we have of keeping our muscles strong and our joints mobile.
* To reduce the risk of injury from a fall it is important to encourage older people to include activities that improve their balance and increase their strength.

Resources now available

The Clinical Excellence Commission (CEC) has developed a suite of flyers containing falls prevention information for patients and consumers. Two flyers provide information on exercise and falls prevention:

* Falls Prevention – Strength and Balance Exercises
* Falls Prevention – Home Exercises

These flyers can be found at:

http://www.cec.health.nsw.gov.au/programs/falls-prevention

There is a range of other falls prevention flyers for the general community available at the above website.

To find an exercise program in a patient/clients locality go to: complement the flyers there is also:

The Active and Healthy website at www.activeandhealthy.nsw.gov.au

This is a web-based directory of falls prevention physical activity programs in NSW and information for physical activity providers and the general community.

**Noeline Brown, Sally Castell
and the Motivators**

Staying Active and On your Feet **booklet;**

Providing key messages on:

- Simple Home Based Exercises essential to staying active;

- A Health and Lifestyle Checklist;

- A Home Safety Checklist;

- Tips for staying active and healthy.

'In 2013 the special focus for April Falls Day®/Month will be *Staying Active & Healthy to prevent falls'*

History of April Falls Day®

- April Falls Day® was initiated in the former Northern Sydney Central Coast Area Health Service (NSCCAHS) to promote falls prevention best practice with staff, community service providers and the general community.

- The Clinical Excellence Commission (CEC) has supported April Falls Day® since the 1st April 2008 and has arranged for the day/month to be gazetted in the NSW Health Calendar, in 2013 the day will be held on Wednesday April 3rd.

Further information and resources will be available in early 2013. If you would like to discuss any ideas please contact Ingrid Hutchinson E: ingrid.hutchinson@cec.health.nsw.gov.au or Ph: 02-9269 5516.

April Falls Day® 2012 at Sydney Adventist Hospital

April Falls Day® 2012 at Wollongong Hospital

New Resources and Websites

New Resources at the Australian Institute of Health and Welfare (AIHW)

Tovell A, McKenna K, Bradley C & Point er S 2012. Hospital separations due to injury and poisoning, Australia 2009-10. AIHW 2012
This report found that 52% of all fall injuries occured in adults aged over 65 years and twice as many women over 65 years sustained a fall injury compared to their male peers.   The rates of bed related falls injury rose in an exponential pattern after age 65 years for both men and women. A fracture related injury was reported for 59% of older people aged 65+The mean length of stay in hospital was 8.7 days for those over 65 years.49% of older men and women were inbjured in the home followed by residential institution (men 18%, women 24%). NSW had a standardised rate of fall injury of 705 (95% CI, 699-711)per 100,000, which was above the national average of 686 (95% CI, 682-689) per 100,000.

This report is available at http://www.aihw.gov.au/publication-detail/?id=60129542183

AIHW 2012. People with dementia in hospitals in New South Wales 2006-07.

This report examines the experiences of the 252,700 people aged 50 and over who stayed for at least one night in a New South Wales public hospital in 2006-07. Slightly more than 8% of patients (20,800 people) were identified as having dementia. Even allowing for age and sex differences, people with dementia had much higher hospitalisation rates than those without dementia: 26% compared with 12%. They also tended to stay longer in hospital and were more likely to enter or return to residential care on discharge from hospital, or to die in hospital.

This report is available at http://www.aihw.gov.au/publication-detail/?id=60129542287

**Unique Parkinson Home Exercise App**

This app is designed to be used by patients and exercise therapists dealing with Parkinson's Disease or other forms of Parkinsonism and provides advice and instructions for daily exercises with over 50 video and text insrtuctions. The advice and exercises have been compiled by expert researchers and therapists. The program can be individualised for each person according to their specific needs. The focus is on advice and exercises to support and improve walking, posture, changing body position (rising from a chair, turning in bed etc), balance, keeping the body flexible and relaxed and overall physical functioning.

There is special attention paid to cueing strategies to faciliate mobility and the app includes a metronome function with sound and /or vibration.

The developers of the app encourage users to keep seeking advice from professionals regarding exercises and other treatment for their condition.

The iTunes review of this app can be found at:

https://itunes.apple.com/nl/app/parkinson-home-exercises/id473641730?mt=8
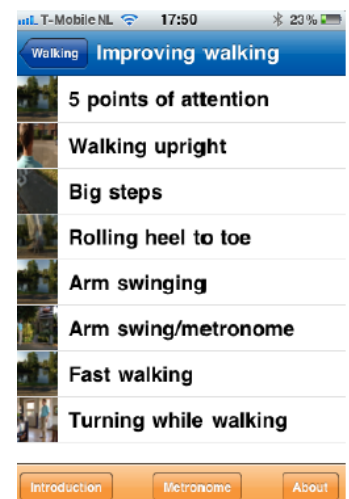
New Website

www.activeandhealthy.nsw.gov.au

Find a falls prevention exercise program in your local community.

Designed for

- General Practitioners
- Health & Community Services staff
- Community members (older people, family, friends and carers)

Search by suburb

To find a falls prevention exercise program in your local area.

Exercise programs

Have been approved for registration on this website.
Programs include: Tai Chi, Stepping On, Gentle Exercise and more.

Other highlights

- The *Staying Active and On Your Feet* booklet with exercises to do at home, and lifestyle and home safety checklists.

- Information for health professionals - falls prevention best-practice.

View the website at: **www.activeandhealthy.nsw.gov.au**

Please promote this website and provide feedback at:
www.activeandhealthy.nsw.gov.au/feedback

NSW GOVERNMENT | Health

NSW FALLS PREVENTION PROGRAM

Abstracts
Recent abstracts from the research literature
Reviews

Estimation of the risk factors for falls in the elderly: Can meta-analysis provide a valid answer?

Bloch F, Thibaud M, Tournoux-Facon C, Brèque C, Rigaud AS, Dugué B, Kemoun G.

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Abstract

The objective of this study was to analyze whether a meta-analysis could allow us to draw useful conclusions about the risk factors for falls in the elderly. A systematic review was carried out of various databases and completed manually. To satisfy the inclusion criteria, an article had to examine a population of subjects aged over 60 years to pertain to falls occurring during daily living activities, and to involve observational or interventional studies. This review identified 4405 indexed articles published between 1981 and 2011. Of the 220 studies with available data that were included in the final study, just 4% were interventional. Among these 220 studies, just 45% offered a satisfactory level of scientific proof. In total, 88 meta-analyses were carried out on the 156 potential protectors or risk factors that were identified. Our systematic review and meta-analyses ensured that high-quality results were obtained from this comprehensive literature search and included a detailed assessment of the quality of the included studies. Several factors appeared to be disproportionately represented in the literature, a fact that likely reflects the objective and precise assessment of these factors rather than their importance in the falls of the elderly. Thus, we cannot be certain that we obtained the most comprehensive analysis of the risk factors for falling with this method. Meta-analyses can help to define the association between falls and various risk factors, but they have to be used complementary to systematic review for the assessment of risk factors.

Epidemiology and risk factors

Do behavioral disturbances predict falls among nursing home residents?

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Abstract

BACKGROUND AND AIMS: The purpose of our study was to examine whether severity of dementia, behavioral and psychological symptoms and depression can predict falls among nursing home residents, such as demographic variables, activities of daily living, and use of psychotropic drugs, when potential confounders are controlled for.

METHODS: 1147 nursing home residents were examined in this one-year follow-up study. All residents were examined with the Physical Self-Maintenance scale (Activities of Daily Living - ADL), Clinical Dementia Rating Scale (CDR), Neuropsychiatric Inventory (NPI) and Cornell Scale for Depression in Dementia. Demographic data, gender, education, physical health and use of medication were collected from medical records.

RESULTS: 40% of participants had at least one fall during the one-year follow-up period. Bivariate survival analysis revealed that low level of education, severe dementia, severe behavioral and psychological symptoms, severe depression, greater functional impairment, age, worsening in physical health, and use of sedatives, significantly predict one or more falls. Multivariate Cox regression analyses showed that age, higher scores on NPI and CDR, use of sedatives and dependency in ADL were all, independently of each other, predictors of an increased risk of falling.

CONCLUSIONS: Having a high NPI score was identified as a significant and independent predictor of falls. Since falling is a common event which causes considerable morbidity and mortality in older people, these findings are

important for healthcare and for the individuals concerned. To prevent falling in nursing homes, special attention must be paid to residents with severe dementia, to behavioral symptoms and use of sedatives.

Gait and cognition: a complementary approach to understanding brain function and the risk of falling

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Abstract

Until recently, clinicians and researchers have performed gait assessments and cognitive assessments separately when evaluating older adults, but increasing evidence from clinical practice, epidemiological studies, and clinical trials shows that gait and cognition are interrelated in older adults. Quantifiable alterations in gait in older adults are associated with falls, dementia, and disability. At the same time, emerging evidence indicates that early disturbances in cognitive processes such as attention, executive function, and working memory are associated with slower gait and gait instability during single- and dual-task testing and that these cognitive disturbances assist in the prediction of future mobility loss, falls, and progression to dementia. This article reviews the importance of the interrelationship between gait and cognition in aging and presents evidence that gait assessments can provide a window into the understanding of cognitive function and dysfunction and fall risk in older people in clinical practice. To this end, the benefits of dual-task gait assessments (e.g., walking while performing an attention-demanding task) as a marker of fall risk are summarized. A potential complementary approach for reducing the risk of falls by improving certain aspects of cognition through nonpharmacological and pharmacological treatments is also presented. Untangling the relationship between early gait disturbances and early cognitive changes may be helpful in identifying older adults at risk of experiencing mobility decline, falls, and progression to dementia.

Risk factors for falls in a longitudinal population-based cohort study of Japanese men and women: The ROAD Study

Muraki S, Akune T, Ishimoto Y, Nagata K, Yoshida M, Tanaka S, Oka H, Kawaguchi H, Nakamura K, Yoshimura N.

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Abstract

The objective of this study was to clarify the associations of physical performance and bone and joint diseases with single and multiple falls in Japanese men and women using a population-based longitudinal cohort study known as Research on Osteoarthritis/osteoporosis Against Disability (ROAD). A total of 452 men and 896 women were analyzed in the present study (mean age, 63.9years). A questionnaire was used to assess the number of falls during the 3-year follow-up. Grip strength, 6-m walking time, and chair stand time were measured at baseline. Knee osteoarthritis (OA) and lumbar spondylosis were defined as Kellgren Lawrence=2, 3 or 4. Vertebral fracture (VFx) was assessed with the Japanese Society of Bone and Mineral Research criteria. Osteoporosis was defined by bone mineral density using dual energy X-ray absorptiometry based on World Health Organization criteria. Knee and lower back pain were estimated by an interview. During a 3-year follow-up, 79 (17.4%) men and 216 (24.1%) women reported at least one fall, and 54 (11.9%) men and 111 (12.4%) women reported multiple falls. Knee pain was a risk factor for multiple falls in women, but not in men. VFx tended to be associated with multiple falls in women, but not in men. A longer 6-m walking time was a risk factor for multiple falls in women, whereas a longer chair stand time was a risk factor for multiple falls in men. We found gender differences in risk factors for falls.

Abstracts Continued
Recent abstracts from the research literature

Geriatric hospitalizations due to fall-related injuries

Limpawattana P, Sutra S, Thavompitak Y, Chindaprasirt J, Mairieng P.

Affiliation: Division of Geriatric Medicine, Internal Medicine Department, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand. lpanit@kku.ac.th (Copyright © 2012, Medical Association of Thailand) DOI unavailable PMID 23130461)

Abstract

BACKGROUND: Fall is a preventable condition associated with disability and mortality in elders. The overall data regarding admission rates and its impact in Thai elderly are lacking.

OBJECTIVE: To identify admission, mortality rates of older persons with fall, its causes and consequences.

MATERIAL AND METHOD: Information on illness of inpatients and casualties came from hospitals nationwide and from hospital withdrawals from the 3 health insurance schemes in fiscal 2010. The data included 96% of the population. The data were analyzed by age groups in older patients with fall.

RESULTS: There were 311,132 falls of all admissions; accounting for admission and mortality rates of 423.4 and 11.1/100,000 older persons. The number rose with age. Slipping, tripping were the major causes. The average length of stay (LOS) of fallers with and without fractures was 8.1 and 6.4 days. The average hospital costs in these same groups were 25,728 and 19,419.3 Baht.

CONCLUSION: The increasing age is related to an increased admission and mortality rates of fall. Slipping, tripping was the frequent causes. Greater LOS and hospital charges were found in fallers with fractures. Allied-healthcare workers should routinely implement a fall assessment and educate modifiable factors to elders to prevent future fall.

Fall incidence and outcomes of falls in a prospective study of adults with rheumatoid arthritis

Stanmore EK, Oldham J, Skelton DA, O'Neill T, Pilling M, Campbell AJ, Todd C.

Affiliation: School of Nursing, Midwifery and Social Work and MAHSC (Manchester Academic Health Science Centre), Jean McFarlane Building, University Place, U.K. M13 9LP. Emma.K.Stanmore@manchester.ac.uk. (Copyright © 2012, John Wiley and Sons) DOI 10.1002/acr.21892 PMID 23139011)

Abstract

OBJECTIVES: To determine the incidence of falls and to investigate the consequences of falls in adults with rheumatoid arthritis.

METHODS: 559 community dwelling adults with RA, aged 18 to 88 years (mean age 62; 69% female) participated in this prospective cohort study. Patients were followed for 1 year after a detailed clinical assessment, using monthly falls calendars and follow-up telephone calls. Follow-up took place in participants' usual place of residence in the Northwest of England. Outcome measures included fall occurrence, reason for fall, type and severity of injuries, fractures, fall location, lie-times, use of health services and functional ability.

RESULTS: 535 participants followed for 1 year had a total of 598 falls. 36.4% participants (95% CI 32% to 41%) reported falling during 1 year follow-up with an incidence rate of 1313/1000 person-years at risk or 1.11 falls per person. Age and gender were not associated with falls. Over one third of the falls were reportedly caused by hips, knees or ankle joints giving way. Over half of all the falls resulted in moderate injuries, including head injuries (n=27) and fractures (n=26). Treatment by general practitioners or other health professionals was required for 15.0% of falls and emergency services were required after 8.8% of falls.

CONCLUSIONS: These results indicate that adults with RA are at high risk of falls and fall-related injuries, fractures and head injuries. Strategies to prevent falls in adults with RA must be prioritised to reduce falls and fall-related injuries, and fractures. © 2012 by the American College of Rheumatology.

Effects of falls experience on cognitive functions and physical activities in community-dwelling individuals with chronic stroke

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Affiliation: Department of Physical Therapy, Nambu University, Gwangju, Department of Physical Therapy, College of Alternative Medicine, Jeonju University, Jeonju cDepartment of Physical Therapy, Bonifacio Hospital, Daejeon, Republic of Korea. (Copyright © 2012, Lippincott Williams and Wilkins) DOI 10.1097/MRR.0b013e32835b667e PMID 23165343)

Abstract

The purpose of this study was to examine the effects of falls experience on cognitive functions and physical activities in community-dwelling patients with chronic hemiparetic stroke. Further, the feasibility of using the Montreal Cognitive Assessment (MoCA) to predict falls in the patients was evaluated. Forty-seven patients with chronic stroke participated in this study. The participants included 25 patients with falls experience (faller group) and 22 patients without falls experience (nonfaller group) in the previous 6 months. The participants were assessed clinically using the MoCA, the Berg Balance Scale, the Dynamic Gait Index (DGI), the Timed Up-and-Go Test, the 10 Meter Walk Test, and the 6 Minute Walk Test. The individuals in the nonfaller group performed significantly better in all clinical measures than those in the faller group. In the nonfaller group, the MoCA was moderately correlated with only two measurements, that is, the 10 Meter Walk Test and the DGI. In the faller group, the MoCA was moderately correlated with four measurements, including the Timed Up-and-Go Test, the 6 Minute Walk Test, the Berg Balance Test, and the DGI. Physical and cognitive functions play a role in falls. Therefore, to decrease the risk of falls among community-dwelling stroke patients, clinicians should consider their physical activities and cognitive functions irrespective of their falls experience.

Accidental falls in the elderly and their relation with functional capacity

Fhon JR, Fabrício-Wehbe SC, Vendruscolo TR, Stackfleth R, Marques S, Rodrigues RA.

Affiliation: Escuela Académico Profesional de Enfermería, Universidad Privada Norbert Wiener, Peru. (Copyright © 2012, Escola de Enfermagem de Ribeirao Preto, Universidade de Sao Paulo, PMID 23174838)

Abstract

AIM: This study aimed to determinate the prevalence of falls in the elderly and its relationship with the functional capacity.

METHOD: This is an epidemiological and cross-sectional study; a two-stage cluster sample of 240 male and female subjects aged over 60 years was used. Data were collected from November 2010 to February 2011. The following questionnaires were used: socio-demographic profile, assessment of falls, Functional Independence Measure, Lawton and Brody Scale. Significance was set at 0.05. To identify the occurrence of falls and their relation with functional capacity, the prevalence ratio and prevalence odds ratios were used, as well as multiple logistic regression.

RESULTS: Average age was 73.5 years (±8.4); 25% 80 years or more, with preponderance of female gender; 48.8% attended school between 1-4 years. The average was 1.33 falls (±0.472), with prevalence in women and elderly between 60 and 79 years old; the most frequently sites were the backyard and bathroom. Strong correlation between the level of functional independence and instrumental activities and age was found, but no relation between elderly victims of falls and the gender and age variables.

CONCLUSION: Women who suffered falls related to functional independence were predominant, which can be prevented through elderly health promotion strategies, a policy that serves to offer living conditions to people in the aging process.

Abstracts Continued
Recent abstracts from the research literature

Prevalence of falls and risk factors in adults with intellectual disability

Hsieh K, Rimmer J, Heller T.

Abstract

The purpose of this study was to examine the prevalence of falls and risk factors for falls in 1,515 adults (≥ 18 years) with intellectual disability using baseline data from the Longitudinal Health and Intellectual Disability Study. Nearly 25% of adults from the study were reported to have had one or more falls in the past 12 months. The prevalence of falls increased with advancing age. A series of univariate and multivariate logistic regressions were performed to identify risk factors for falls in the full sample and in subsamples. The risk factors for falls in adults with intellectual disability are being female, having arthritis, having a seizure disorder, taking more than 4 medications, using walking aids, and having difficulty lifting/carrying greater than 10 lb.

Fear of Falling

Activity limitation due to a fear of falling in older adults with eye disease

Wang MY, Rousseau J, Boisjoly H, Schmaltz H, Kergoat MJ, Moghadaszadeh S, Djafari F, Freeman EE.

Abstract

PURPOSE: To examine whether patients with age-related macular degeneration (AMD), glaucoma, or Fuchs corneal dystrophy report limiting their activity due to a fear of falling as compared to a control group of older adults with good vision.

METHODS: We recruited 345 patients (93 with AMD, 57 with Fuchs, 98 with glaucoma, and 97 controls) from the ophthalmology clinics of Maisonneuve-Rosemont Hospital (Montreal, Canada) to participate in a cross-sectional study from September, 2009 until July, 2012. Control patients who had normal visual acuity and visual field were recruited from the same clinics. Participants were asked if they limited their activity due to a fear of falling. Visual acuity, contrast sensitivity, and visual field were measured and the medical record was reviewed.

RESULTS: Between 40 and 50% of patients with eye disease reported activity limitation due to a fear of falling compared to only 16% of controls with normal vision. After adjustment for age, gender, race, number of comorbidities, cognition, and lens opacity, the Fuchs groups was most likely to report activity limitation due to a fear of falling (OR=3.07, 95% CI 1.33, 7.06) followed by the glaucoma group (OR=2.84, 95% CI 1.36, 5.96) and the AMD group (OR=2.42 95% CI 1.09, 5.35). Contrast sensitivity best explained these associations.

CONCLUSIONS: Activity limitation due to a fear of falling is very common in older adults with visually impairing eye disease. Although this compensatory strategy may protect against falls, it may also put people at risk for social isolation and disability.

Assessing the relative and absolute reliability of the Falls Efficacy Scale-International questionnaire in elderly individuals with increased fall risk and the questionnaire's convergent validity in elderly women with osteoporosis

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Abstract

The Falls Efficacy Scale-International (FES-I) is a highly reliable questionnaire for assessing fear of falling in elderly individuals with increased fall risk and has low or no convergent validity with balance performance tests and health-related quality of life (HRQL) among elderly women with osteoporosis, which indicates that both measurements should be included as they are measuring different components.

INTRODUCTION: Fear of falling is increased in elderly individuals with osteoporosis and FES-I is a widely used questionnaire to assess fear of falling. There is limited evidence of the reliability and convergent validity in elderly with increased risk of falling and osteoporosis.

METHODS: Reliability and validity study of the FES-I. Community-dwelling elderly with increased fall risk, 59 subjects, were recruited to the reliability assessment, and 81 women with osteoporosis, in the validity assessment. For the reliability assessment, two postal surveys were used. For the validity assessment, we used baseline data from an on-going study in women with osteoporosis. The FES-I was correlated to a single-item question regarding fear of falling, self-reported history of falls, balance performance tests and health-related quality of life.

RESULTS: The FES-I had very good relative reliability (intra-class correlation 0.88) and internal consistency reliability (Cronbach's alpha 0.94). The value for absolute reliability was a standard error of measure 2.9 (10.6 %), smallest real difference 7.9 (29 %). There was "little if any" to "low" correlation between the FES-I and the single-item question regarding fear of falling and self-reported history of falls, HRQL and balance performance tests.

CONCLUSION: The FES-I seems to be a highly reliable questionnaire for assessing fear of falling in elderly with increased fall risk but has low relation to/convergent validity with balance performance and HRQL among elderly women with osteoporosis.

Effects of the implementation of an evidence-based program to manage concerns about falls in older adults

Zijlstra GA, van Haastregt JC, Du Moulin MF, de Jonge MC, van der Poel A, Kempen GI.

Affiliation: *Address correspondence to G. A. R. Zijlstra, Maastricht University, Faculty of Health, Medicine and Life Sciences, Department of Health Services Research, P.O. Box 616, 6200 MD Maastricht, The Netherlands. E-mail: r.zijlstra@maastrichtuniversity.nl. (Copyright © 2012, Gerontological Society of America) DOI 10.1093/geront/gns142 PMID 23135419)

Abstract

PURPOSE OF THE STUDY: Concerns about falls and related activity avoidance are common in older people. A multicomponent program reduced these concerns and increased daily activity among older people in a randomized controlled trial. This study explored whether the effects and acceptability of the program maintain after its implementation into home care organizations.

DESIGN AND METHODS: In a pretest-post-test study, the effects and acceptability of the 8-week cognitive behavioral program was evaluated in 125 community-living older adults. Data on concerns about falls, related avoidance behavior, falls, fall-related medical attention, feelings of loneliness and anxiety, and symptoms of depression were collected prior to the start of the program and at 2 and 4 months.

RESULTS: Pretest-post-test analyses showed significant improvements at 4 months for concerns about falls, activity avoidance, number of falls in the past 2 months, feelings of anxiety, and symptoms of depression. No significant differences were shown for daily activity, feelings of loneliness, and fall-related medical attention.

IMPLICATIONS: After implementation in home care organizations, the program reduced concerns about falls, avoidance behavior, and falls in community-living older adults. These findings are highly consistent with the outcomes of a previously performed randomized controlled trial, indicating that the program can be successfully implemented in practice. Further dissemination of the program is recommended to reduce concerns about falls and related activity avoidance in community-living older people.

Abstracts Continued
Recent abstracts from the research literature

Fear of falling and balance ability in older men: the Priest Study

Klima DW, Newton RA, Keshner EA, Davey A.

Affiliation: Department of Physical Therapy, University of Maryland Eastern Shore, Princess Anne, MD. (Copyright © 2012, Human Kinetics Publishers) DOI unavailable PMID 23170754)

Abstract

Studies examining fear of falling among older adult men remain limited. The objectives of this study were to compare balance confidence in two age cohorts of older clergy and identify predictive determinants of balance confidence in a liturgical research initiative. Participants included 131 community-dwelling Roman Catholic priests aged 60-97 years living in religious communities in 10 Mid-Atlantic states. Subjects completed the Activities-specific Balance Confidence Scale (ABC), Berg Balance Scale (BBS), Timed Up and Go (TUG) Test, and 15-item Geriatric Depression Scale (GDS). Younger priests (60-74 years) demonstrated a significantly higher ABC score than the older cohort (75 and above years) of priests (89.1± 12.6 vs.78.4 ± 13.9, p =0.001). Confidence was significantly correlated with BBS (rho=0.69; p<0.01), TUG (r= -0.58; p<0.01), and GDS (r=-0.39; p<0.01) scores. A stepwise regression model demonstrated that balance ability, mood, assistive device use, and physical activity predicted 52% of the variance in balance confidence.

Risk Assessment

The test-retest reliability of gait-related dual task performance in community-dwelling fallers and non-fallers

Muhaidat J, Kerr A, Evans JJ, Skelton DA.

Affiliation: Department of Physiotherapy, Faculty of Rehabilitation Sciences, University of Jordan, Queen Rania Street, Amman 11942, Jordan. Electronic address: jenny_mheidat@hotmail.com. (Copyright © 2012, Elsevier Publishing) DOI 10.1016/j.gaitpost.2012.10.011 PMID 23146196)

Abstract

Gait-related dual task tests have been used to assess differences between fallers and non-fallers, without a thorough assessment of reliability. This study investigated the test-retest reliability of eight gait-related dual and one triple task tests in forty-four community-dwelling older adults (twenty with and twenty-four without a history of falls). The reliability of single, dual and change in performance (percentage change) from single to dual task conditions was assessed. The results showed that single and dual task walking time had fair to excellent reliability (ICC=0.53-0.92) across tasks. The percentage change in walking time (dual-task decrement) showed only poor to good reliability (ICC=-0.11 to 0.75). Cognitive task performance speed and accuracy showed poor to good reliability in single and dual task conditions (ICC=-0.16 to 0.83). The difference between the two conditions in speed and accuracy showed poor to fair reliability (ICC=-0.40 to 0.51). A secondary motor task (carrying a cup of water) ranged from slightly to moderately reliable in dual task conditions and when change in performance was measured (kappa=0.18-0.57). This study showed that simple dual task tests are reliable in the single and dual conditions but measures of change in performance, which are recommended for dual task assessment, are less reliable and is something which needs to be considered in future research. Of the nine examined, only one test, the walking while talking test, showed good reliability on primary and secondary tasks.

Fall risk six weeks from onset of stroke and the ability of the Prediction of Falls in Rehabilitation Settings Tool and motor function to predict falls

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Affiliation: Vård och bildning, Uppsala kommun, Uppsala, Sweden. (Copyright © 2012, Sage Publications) DOI 10.1177/0269215512464703 PMID 23144226)

Abstract

Objective: To investigate whether the Prediction of Falls in Rehabilitation Settings Tool (Predict FIRST) and motor

function could be used to identify people at risk of falling during the first six weeks after stroke, and to compare the risk of falling according to Predict FIRST with real falls frequency.

Design: A longitudinal, prospective study.

Patients: Sixty-eight people newly diagnosed with stroke admitted to an acute stroke unit.

Methods: The participants underwent an assessment of motor ability (Modified Motor Assessment Scale according to Uppsala University Hospital version 99 (M-MAS UAS-99)) and falls risk (Predict FIRST) on the first to fourth day at the acute stroke unit. Falls occurring in the acute stroke unit were recorded and falls occurring after discharge were reported by telephone follow-up. The prediction of falls was analysed with binary logistic regression.

Results: Fourteen of the patients (21%) fell at least once during the first six weeks after stroke. The strongest significant predictor for falls was a high score on Predict FIRST (odds ratio 5.21, confidence interval (CI) 1.10-24.78) followed by M-MAS UAS-99 parts C-E (odds ratio 0.65, CI 0.44-0.95). Predict FIRST underestimated the risk of falling as the median fall risk was 9% according to Predict FIRST.

Conclusion: Although Predict FIRST has the ability to predict falls in people with recent onset of stroke, there is some underestimation of fall risk.

Screening for injurious falls in acute care hospitals

Sheth HS, Faust-Smith K, Sanders JL, Palmer RM.

J. Patient Saf. 2012; ePub(ePub): ePub.

Affiliation: From the *Department of Medicine, School of Medicine, and †Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, Pennsylvannia.

Abstract

BACKGROUND: Injurious fall is a serious hospital-acquired condition. Screening tools for injurious falls in hospitalized patients have received limited evaluation.

OBJECTIVE: To compare operating characteristics of a succinct screening tool for injurious falls, the University of Pittsburgh Medical Center (UPMC) screening tool (based on mobility, fall history, and nursing judgment), with the ABCS injurious fall screening tool (based on Age, Bone, Coagulation, and recent Surgery).

DESIGN: Case control study.

METHODS: Hospitalized patients with injurious falls were identified from the UPMC adverse events database for 2007-2008 (N = 43). Controls (n = 86) matched for age, location, and period of fall event were selected from the hospital's administrative database. Tools were evaluated independently by 2 screeners using electronic charts. Interrater agreement, sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), and c-statistics for the screening tools were calculated. RESULTS: Case and control groups were similar in age, sex, and race. Interrater agreement was 71% for ABCS and 72% for UPMC screens. ABCS and UPMC screens had sensitivity of 60.5% (95% CI, 52.0%-68.9%) and 62.8% (95% CI, 54.5%-71.1%), specificity of 41.9% (95% CI, 33.4%-50.4%) and 58.1% (95% CI 49.6%-66.7%), and c-statistics of 51.2% and 59.3%, respectively. With a 33% prevalence of injurious fall, the PPV was 34.2%, and NPV was 67.9% for ABCS, and the PPV was 42.9%, and NPV was 75.8% for UPMC. Operating characteristics were not statistically significantly different, although the UPMC screen was 8% more accurate in predicting injurious falls and had a lower false-positive rate (44.2% versus 65.1%).

CONCLUSIONS: Compared with the ABCS screen, the UPMC screen is a simple, practical tool. Prospective studies are needed to establish the UPMC tool's predictive value in hospital practices with lower rates of injurious falls. In general, better screening tools for injurious falls should be developed to meet quality standards.

Abstracts Continued
Recent abstracts from the research literature

Should one measure balance or gait to best predict falls among people with Parkinson disease?

Duncan RP, Earhart GM.

Parkinsons Dis. 2012; 2012(ePub): 923493.

Abstract

Introduction: We aimed to determine whether gait velocity is as useful as a balance test, a self-report measure of freezing of gait (FOG), and/or a measure of motor symptom severity for predicting falls among people with Parkinson Disease (PD).

Methods: Fifty-six individuals with idiopathic PD completed a baseline assessment consisting of these measures: (1) MDS-UPDRS III, (2) Mini-BESTest, (3) gait velocity (forward, backward, dual task, and fast), and (4) FOGQ. Retrospective fall history was collected at baseline and six months later. Participants were considered fallers if they had two or more falls in the surveillance period. Ability of the tests to discriminate between fallers and nonfallers was determined using ROC curves followed by pairwise statistical noninferiority comparisons (P = .05) of the area under the ROC curve (AUC) for each test.

Results: At six months, 22% (n = 21) of the sample were fallers. Fallers differed significantly from nonfallers on the MDS-UPDRS III, Mini-BESTest, backward gait velocity, and FOGQ. The Mini-BESTest had the highest AUC and was superior to all gait velocity measures at identifying fallers.

Conclusion: A single measure of gait velocity, even in a challenging condition, may not be as effective as the Mini-BESTest in identifying fallers among people with PD.

Intervention Studies

Long-term effects of new progressive group balance training for elderly people with increased risk of falling - a randomized controlled trial

Halvarsson A, Franzén E, Farén E, Olsson E, Oddsson L, Ståhle A.

Clin. Rehabil. 2012; ePub(ePub): ePub.

Abstract

OBJECTIVE: To evaluate the long-term effects of a progressive and specific balance group-based program in healthy elderly individuals with increased risk of falling.

DESIGN: Follow-up of a randomized controlled trial at nine and 15 months on a population that has previously been described at three months.

SETTING: The study was conducted in Stockholm, Sweden.Subjects:59 community-dwelling elderly (age 67-93 years), recruited by advertisement, were randomly allocated to training or to serve as controls.

INTERVENTION: Group balance training three times per week during 12 weeks with a 15 month follow-up time.

MAIN MEASURES: Participants were assessed at baseline, three, nine, and 15 months thereafter for gait function (preferred and fast walking), rapid step execution (single and dual task), fear of falling, and likelihood of depression.

RESULTS: Fast gait speed (p = 0.004), dual task step execution (p = 0.006) and fear of falling (p = 0.001) were still improved in the training group at nine months follow-up. Only self-perceived fear of falling remained significantly improved (p = 0.012) at 15 months follow-up. Although fast gait speed had decreased to baseline level in the training group (1.49 m/s) it remained significantly higher than in the control group (1.37 m/s) at the end of the study, a difference between the groups that was not seen at baseline.

CONCLUSION: This training program provided important positive short and long-term benefits to gait, balance function, and fear of falling.

Frequently observed risk factors for fall-related injuries and effective preventive interventions: a multihospital survey of nurses' perceptions

Tzeng HM, Yin CY.

J. Nurs. Care Qual. 2012; ePub(ePub): ePub.

Affiliation: College of Nursing, Washington State University, Spokane (Dr Tzeng); and Department of History, Chinese Culture University, Taipei, Taiwan (Mr Yin). (Copyright © 2012, Lippincott Williams and Wilkins) DOI 10.1097/NCQ.0b013e3182780037 PMID 23117794)

Abstract

There is an urgent need to prioritize the risk factors for injurious falls and effective interventions in nursing practice. Registered nurses perceived that the most frequently observed risk factors were confusion, gait problems, Alzheimer disease, disorientation, and inability to follow safety instructions. The most effective interventions were keeping hospital bed brakes locked, keeping floor surfaces clean/dry, using appropriate footwear for patients, maintaining a call light within reach, and reducing tripping hazards.

Why not use your own body weight to prevent falls? A randomized, controlled trial of balance therapy to prevent falls and fractures for elderly people who can stand on one leg for ≤15 s

Sakamoto K, Endo N, Harada A, Sakada T, Tsushita K, Kita K, Hagino H, Sakai A, Yamamoto N, Okamoto T, Liu M, Kokaze A, Suzuki H.

J. Orthop. Sci. 2012; ePub(ePub): ePub.

Affiliation: Department of Orthopaedic Surgery, Showa University School of Medicine, 1-5-8 Hatanodai, Shinagawa-ku, Tokyo, 142-8666, Japan, kz-saka@mug.biglobe.ne.jp. (Copyright © 2012, Springer Science+Business Media) DOI 10.1007/s00776-012-0328-3 PMID 23138409)

Abstract

BACKGROUND: Maintaining or improving motor (balance) ability is essential to extending the healthy lifespan of elderly people, and developing effective and efficient strategies to prevent falls of elderly people is an urgent. The purpose of this study was to determine the effects of balance exercise on fall and fracture prevention for elderly people with poor balance.

METHODS: A 6-month, randomized controlled trial was conducted to verify whether one-leg standing with eyes open for a total of 1 min, three times a day (dynamic flamingo exercise) prevents falls and fractures. Setting and participants were elderly people ≥75 years of age and one-leg standing time ≤15.0 s living in their own home. They were visiting orthopaedic clinics for orthopaedic handicaps. Subjects with poor balance were allowed to hold on to something. If a subject's lifted leg touched the ground during the exercise, they were allowed to lift it again and continue so that they stood on one leg for a total of 60 s.

RESULTS: The dynamic flamingo exercise group (410 people; 86 men, 324 women) and the no exercise group (455 people; 78 men, 377 women) were compared. After dynamic flamingo exercise for 6 months, significant differences were seen in the increase in one-leg standing time with eyes open (men right/left, women right/left), in the improvement in independence in daily living (women), number of people who fell during the 6 months (women), and adverse events (women). The number of fractures was not significantly different for men or women.

CONCLUSIONS: Dynamic flamingo exercise prevents falls but no significant difference was demonstrated in fracture prevention in elderly women with poor balance.

Support and assessment for fall emergency referrals (SAFER 2) research protocol: cluster randomised trial of the clinical and cost effectiveness of new protocols for emergency ambulance paramedics to assess and refer to appropriate community-based care

Snooks H, Anthony R, Chatters R, Cheung WY, Dale J, Donohoe R, Gaze S, Halter M, Koniotou M, Logan P, Lyons R, Mason S, Nicholl J, Phillips C, Phillips J, Russell I, Siriwardena AN, Wani M, Watkins A, Whitfield R, Wilson L.

BMJ Open 2012; 2(6): 2012-00216.

Abstracts Continued
Recent abstracts from the research literature

Abstract

INTRODUCTION: Emergency calls to ambulance services are frequent for older people who have fallen, but ambulance crews often leave patients at the scene without ongoing care. Evidence shows that when left at home with no further support older people often experience subsequent falls which result in injury and emergency-department attendances. SAFER 2 is an evaluation of a new clinical protocol which allows paramedics to assess and refer older people who have fallen, and do not need hospital care, to community-based falls services. In this protocol paper, we report methods and progress during trial implementation. SAFER 2 is recruiting patients through three ambulance services. A successful trial will provide robust evidence about the value of this new model of care, and enable ambulance services to use resources efficiently.

DESIGN: Pragmatic cluster randomised trial.

METHODS AND ANALYSIS: We randomly allocated 25 participating ambulance stations (clusters) in three services to intervention or control group. Intervention paramedics received training and clinical protocols for assessing and referring older people who have fallen to community-based falls services when appropriate, while control paramedics deliver care as usual. Patients are eligible for the trial if they are aged 65 or over; resident in a participating falls service catchment area; and attended by a trial paramedic following an emergency call coded as a fall without priority symptoms. The principal outcome is the rate of further emergency contacts (or death), for any cause and for falls. Secondary outcomes include further falls, health-related quality of life, 'fear of falling', patient satisfaction reported by participants through postal questionnaires at 1 and 6 months, and quality and pathways of care at the index incident. We shall compare National Health Service (NHS) and patient/carer costs between intervention and control groups and estimate quality-adjusted life years (QALYs) gained from the intervention and thus incremental cost per QALY. We shall estimate wider system effects on key-performance indicators. We shall interview 60 intervention patients, and conduct focus groups with contributing NHS staff to explore their experiences of the assessment and referral service. We shall analyse quantitative trial data by 'treatment allocated'; and qualitative data using content analysis.

ETHICS AND DISSEMINATION: The Research Ethics Committee for Wales gave ethical approval and each participating centre gave NHS Research and Development approval. We shall disseminate study findings through peer-reviewed publications and conference presentations. Trial Registration: ISRCTN 60481756.

Development of STEADI: A Fall Prevention Resource for Health Care Providers

Stevens JA, Phelan EA.

Abstract

Falls among people aged ≥65 years are the leading cause of both injury deaths and emergency department visits for trauma. Research shows that many falls are preventable. In the clinical setting, an effective fall intervention involves assessing and addressing an individual's fall risk factors. This individualized approach is recommended in the American and British Geriatrics Societies' (AGS/BGS) practice guideline. This article describes the development of STEADI (Stopping Elderly Accidents, Deaths, and Injuries), a fall prevention tool kit that contains an array of health care provider resources for assessing and addressing fall risk in clinical settings. As researchers at the Centers for Disease Control and Prevention's Injury Center, we reviewed relevant literature and conducted in-depth interviews with health care providers to determine current knowledge and practices related to older adult fall prevention. We developed draft resources based on the AGS/BGS guideline, incorporated provider input, and addressed identified knowledge and practice gaps. Draft resources were reviewed by six focus groups of health care providers and revised. The completed STEADI tool kit, Preventing Falls in Older Patients-A Provider Tool Kit, is designed to help health care providers incorporate fall risk assessment and individualized fall interventions into routine clinical practice and to link clinical care with community-based fall prevention programs.

Sustainability of Motor Training Effects in Older People with Dementia

Zieschang T, Schwenk M, Oster P, Hauer K.

Affiliation: Agaplesion Bethanien Hospital, Center for Geriatric Medicine at the University of Heidelberg, Heidelberg, Germany. (Copyright © 2012, IOS Press) DOI 10.3233/JAD-120814 PMID 23202438)

Abstract

Evidence for sustainability of motor training effects in people with dementia is lacking. To examine whether the substantial improvements in motor performance achieved through a three-month specialized, standardized motor training were sustained, the participants of the randomized controlled trial were re-evaluated nine months after training had ceased. As part of a comprehensive study, participants with confirmed mild to moderate dementia underwent a progressive resistance and functional group training specifically developed for patients with dementia (intervention, n = 40) compared to a low-intensity motor placebo activity (control, n = 51). Primary and secondary outcome measures for maximal strength and function were measured before the start of the training (T1), directly after training ceased (T2), three months after training ceased (T3) and-the focus of this paper-nine months after training ceased (T4). Even after nine months without training, the gains in functional performance were sustained with significant group differences in the primary endpoint (five-chair-rise, relative change: IG: -8.54 (22.57) versus CG: +10.70 (45.89) s, p = 0.014, effect size $p2 = 0.067$). Other functional tests, such as walking speed and POMA (Tinetti), confirmed this result in the secondary analysis. Strength, as measured by the primary endpoint 1-Repetition Maximum (1RM) was still elevated (time effect for T1 versus T4: 148.68 ± 57.86 versus 172.79 ± 68.19 kg, p < 0.001, effect size $p2 = 0.157$), but between-group differences disappeared (relative change: maximal strength, IG: 22.75 (40.66) versus CG: 15.60 (39.26), p = 0.369). The study found that intensive dementia-specific motor training sustainably improved functional performance of patients with dementia nine months after cessation of training.

Strategy for prevention of hip fractures in patients with Parkinson's disease

Iwamoto J, Sato Y, Takeda T, Matsumoto H.

Affiliation: Jun Iwamoto, Tsuyoshi Takeda, Hideo Matsumoto, Institute for Integrated Sports Medicine, Keio University School of Medicine, Tokyo 160-8582, Japan. (Copyright © 2012, Baishideng Publishing Group) DOI 10.5312/wjo.v3.i9.137 PMID 23173109

Abstract

Hypovitaminosis D and K due to malnutrition or sunlight deprivation, increased bone resorption due to immobilization, low bone mineral density (BMD) and an increased risk of falls may contribute to an increased risk of hip fractures in patients with Parkinson's disease. The purpose of the present study was to clarify the efficacy of interventions intended to prevent hip fractures in elderly patients with Parkinson's disease. PubMed was used to search the literature for randomized controlled trials (RCTs) regarding Parkinson's disease and hip fractures. The inclusion criteria were 50 or more subjects per group and a study period of 1 year or longer. Five RCTs were identified and the relative risk and 95% confidence interval were calculated for individual RCTs. Sunlight exposure increased serum hydroxyvitamin D [25(OH)D] concentration, improved motor function, decreased bone resorption and increased BMD. Alendronate or risedronate with vitamin D supplementation increased serum 25(OH)D concentration, strongly decreased bone resorption and increased BMD. Menatetrenone (vitamin K(2)) decreased serum undercarboxylated osteocalcin concentration, decreased bone resorption and increased BMD. Sunlight exposure (men and women), menatetrenone (women), alendronate and risedronate with vitamin D supplementation (women) significantly reduced the incidence of hip fractures. The respective RRs (95% confidence intervals) according to the intention-to-treat analysis were 0.27 (0.08, 0.96), 0.13 (0.02, 0.97), 0.29 (0.10, 0.85) and 0.20 (0.06, 0.68). Interventions, including sunlight exposure, menatetrenone and oral bisphosphonates with vitamin D supplementation, have a protective effect against hip fractures elderly patients with Parkinson's disease.

Falls Network Information

fallsnetwork.neura.edu.au

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 Vance 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 listserv. Remember to put a short description in the subject line.

Recently some posts to the listserv have bounced due to email address changes, 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.

NSW Falls Prevention Network Background

The NSW Falls Prevention Network was established in 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 Ministry of 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 Ministry of Health.

"Falls Prevention is Everyone's Business®"

NSW FALLS PREVENTION NETWORK