

How serious is the problem?

AMONG OLDER VICTORIANS (AGED 65 YEARS AND OVER):

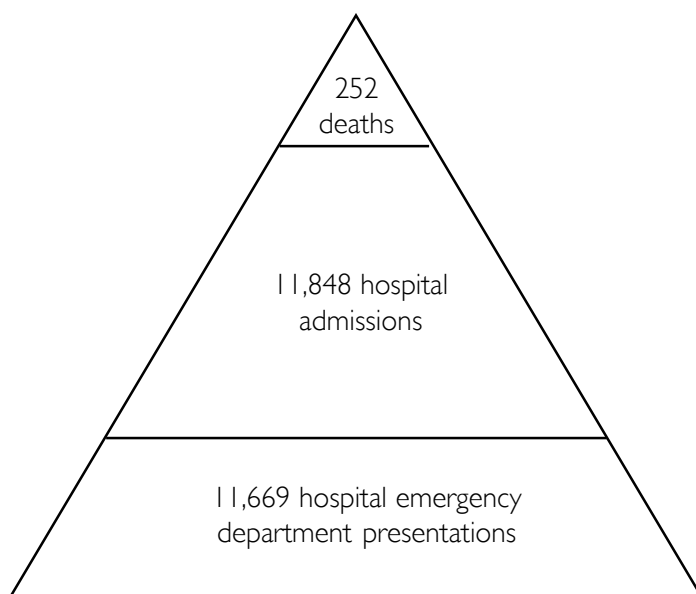
- One in three experience at least one fall each year.
- Falls are the leading cause of injury-related deaths, hospital admissions and emergency department presentations in older people.
- Annually in Victoria there are approximately 250 fall-related deaths, 12,000 fall-related hospital admissions and at least 12,000 hospital emergency department presentations for fall injuries in the age group 65+ years.
- Falls most commonly occur in the home.
- Women account for the majority of fall-related deaths, admissions and emergency department presentations.
- Fractures account for 80% of fall-related deaths, one half of hospital admissions and two thirds of emergency department presentations.
- The most common site of fractures is the hip, followed by the wrist and forearm. Fifteen percent of women and six percent of men will suffer a hip fracture during their lifetime. The probability of permanent admission to an aged care institution for community living older people who fracture their hips is twenty-eight percent in the year after fracture.
- Falls can result in loss of confidence and independence and therefore significantly reduce an older person's quality of life.
- The lifetime cost of fall injuries for Victorians aged 65 years and older is estimated at \$199.3 million including direct medical treatment costs (\$127.1 million) and indirect morbidity and mortality costs (\$72.1 million).
- As the Victorian population ages, health care costs associated with treatment, rehabilitation and care of older falls patients is expected to blow out.

FACTS ON FALLS AMONG SENIORS

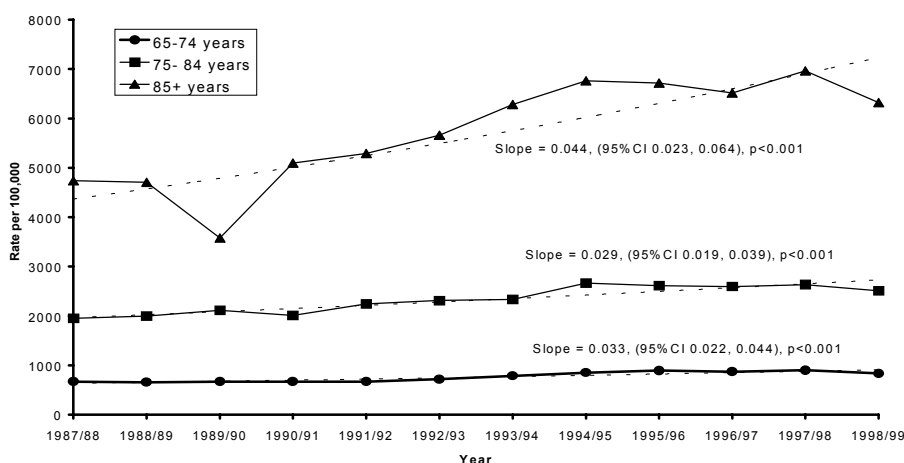


How serious is the problem?

ANNUAL FREQUENCY OF FALL-RELATED INJURY IN VICTORIANS AGED 65+ YEARS



TREND IN FALL-RELATED INJURY HOSPITAL ADMISSIONS IN VICTORIAN'S AGED 65+ YEARS



Sources of data:

Deaths: Australian Bureau of Statistics, 1998

Hospital admissions: Frequency - Victorian Admitted Episodes Dataset (VAED), 1998-9;

Trend - VAED 1987/88-1998/9 (public hospitals only)

Hospital emergency department presentations: Victorian Emergency Department Minimum Dataset (VEMD), 1999-2000

What are the risk factors?

Falls in older people usually result from the interaction of a number of intrinsic (personal), extrinsic (environmental) and behavioural risk factors, rather than any single factor.

Intrinsic (personal) factors that have been shown to be significantly associated with falls and fall injuries among community-dwelling older people are:

- Increasing age (from age 65 years).
- Female gender.
- A history of falls.
- Chronic medical conditions such as the effect of stroke or Parkinson's Disease.
- Decreased bone mineral density and other risk factors for osteoporosis.
- Multiple medications and specific medication types such as long-acting benzodiazepines and psychotropic medication which may lead to impaired balance and mobility.
- Sensory problems including visual acuity and depth perception and dizziness.
- Impaired cognition.
- Low levels of physical activity.

Extrinsic (environmental) risk factors include slip and trip hazards in and around the home and in public places and other factors such as contaminated, wet or slippery surfaces, poor lighting, poorly designed steps and stairs, lack of grab rails and, for injury, hardness of the landing surface. These may interact with intrinsic factors to increase the risk of falls and fall injuries.

Behavioural factors such as undertaking cleaning, DIY and gardening tasks on ladders, stepladders, chairs and tables and wearing unsuitable footwear increase the risk of falls in older men and women.

FACTS ON FALLS AMONG SENIORS



What can be done?

Summary of research evidence

EFFECTIVE INTERVENTIONS FOR FALLS REDUCTION

- **Group exercise programs that have strong balance and strength components**, for example Tai Chi and exercise programs especially designed by a physiotherapist (shown by research to be effective for both the healthy and at-risk population of community dwelling older people).
- **Individually tailored strength and resistance home exercise programs** supervised by a physiotherapist or a visiting nurse (shown by research to be effective for high risk older people aged 80 years and older living independently in their own homes).
- **Individual falls risk assessment conducted by a health professional** with expertise in falls prevention, and tailored multifactorial intervention programs that concentrate on treating postural hypotension, rationalisation of drugs and interventions to improve balance, strength and gait (shown by research to be effective for higher risk older people).

PROMISING INTERVENTIONS FOR FALLS AND FALL INJURY REDUCTION

For falls prevention

- Home environment assessment and modifications if implemented by an occupational therapist (effective for older people who have experienced one or more falls in the previous year).

For fall injury prevention

- Hip protectors (for frail older people). However, research to date shows they are only effective if the older people are receiving substantial home care. The main barrier is compliance.
- Vitamin D and calcium supplementation for older people with diagnosed deficiencies.
- Osteoporosis treatments that prevent bone resorption (for example alendronate) for men, and older postmenopausal women with osteoporosis.

References:

Feder G, Cryer C, Donovan S, Carter Y. Guidelines for the prevention of falls in people over 60. *BMJ* 2000; 321:1007-11. (Free on the web: bmj.com)

Hill K, Smith R, Murray K et al. *An analysis of research on preventing falls and falls injury in older people: community settings*. Report to the Commonwealth Department of Health and Aged Care by the National Ageing Research Centre. August, 2000. Copy can be downloaded directly from Commonwealth Department of Health and Aged Care website: www.health.gov.au/pubhlth/strateg/injury/index.htm



Exercise programs

RESEARCH EVIDENCE BASE

Two recent reviews of the research evidence on the effectiveness of falls prevention measures in community dwelling older people conclude that specific **exercise programs that incorporate strong balance retraining** components are effective in reducing falls (Feder et al., 2000; Hill et al., 2000).

Summary

- Only two programs of exercise (modified Tai Chi and a strength and balance group exercise program devised by a physiotherapist) have shown significant reduction in falls in Randomised Control Trials (RCTs) that have recruited from the general population of community-dwelling older people.
- Other stand-alone exercise programs with strong balance and strength (resistance) components have been shown to significantly reduce falls in RCTs conducted in special at-risk groups of community-dwelling older people.

Effective exercise programs for the general population of older people

• Modified Tai Chi

The Atlanta FICSIT (Frailty and Injuries: Cooperative Studies of Intervention Techniques) RCT of modified (10-form) Tai Chi found that the relative risk for falls in the participants assigned to the Tai Chi group exercise program was reduced by 47.5% compared with the control group.

The trial was conducted in a group of community-dwelling older people aged 70 years and over. Classes involved 15 participants and were held twice weekly for one hour for 15 weeks to enable participants to receive individual attention.

No other modified Tai Chi programs for older people, for example *Tai Chi for Arthritis*, have been trialed with falls as an outcome.

Reference:

Wolf SL, Barnhart HX, Kutner NG et al., Reducing frailty and falls in older persons: An investigation of Tai Chi and computerised balance training. *JAGS* 1996; 44: 489-97

• NoFalls strength and balance exercise program

The MUARC multi-component *NoFalls* RCT, involving 1,107 City of Whitehorse residents aged 70 years and older, found a favourable effect for the 15-week supervised exercise program which was devised by a physiotherapist to improve balance, flexibility and leg strength. The reduction in falls in the participants receiving the exercise intervention was associated with improved balance.

Reference:

Day L, Fildes B, Gordon I, Fitharris M, Flamer H & Lord S. Randomised factorial trial of falls prevention among older people living in their own homes. *BMJ* 2002, 325:128



Effective exercise programs for special populations of older people

Five other trials of stand-alone exercise programs targeted to especially selected at-risk groups of community-dwelling older people have reported positive results:

- Campbell and colleagues (Campbell et al 1997; Robertson et al., 2001a & 2001b) report significant reductions in falls risk from three of four controlled trials of an individually tailored home exercise program for older people, recruited through general practice groups in New Zealand. These trials investigated the effectiveness of the program in three different delivery modes:

- In the first study (a randomised controlled trial) the strength and balance retraining program was delivered by the research physiotherapist who visited participants in their own homes four times to tailor the exercise program and monitor progress (Campbell et al., 1997). The exercise group (all females aged 80 years and older) were asked to complete the 30-minute exercise regime three times a week and to walk outside the home at least three times a week. They recorded their compliance and falls on a daily calendar that was returned monthly, and received regular telephone contact from the research nurse. The control group received a similar number of social visits by a research nurse. The authors found a statistically significant reduction in the risk of falls (32%) and moderate fall injuries at the one-year follow up in the intervention group compared to controls. The reduction in falls continued in the second year for women who continued exercising.
- The second randomised controlled trial involved both men and women aged 75 years and older. In this study the home exercise program was delivered by a trained district nurse from within a home help service rather than the research physiotherapist. Falls risk was reduced by 46% in the group randomised to the exercise intervention compared to controls. Serious injuries and hospital admissions were also reduced.

- In the third controlled (non-randomised) trial, the home exercise program was delivered by trained nurses from general practices in seven centres to selected at-risk male and female patients aged 80 years and older. Falls were reduced by 30% in the general practice centres that delivered the home exercise program compared to the control centres that delivered 'usual care'. Fewer exercise centre participants had falls resulting in an injury but there was no difference in the number who had serious injuries and in hospital costs relating to falls.

- Buchner et al. (1997) trialed an exercise program in adults aged 68-85 years with at least mild deficits in strength and balance, randomly chosen from members of a USA health maintenance (health insurance) organisation. The intervention was supervised one-hour sessions, three times a week for 24-26 weeks followed by self-supervised exercise. Subjects were randomly assigned to one of three different exercise groups: strength training using weight machines; endurance training using bicycles; and combined strength and endurance training. None of the individual exercise programs showed a significant reduction in falls but when the results of all exercise groups were combined the risk of falls was reduced by 47% in the intervention group compared to the control group (who maintained usual activities).

References:

Campbell AJ, Robertson MC, Gardner MM et al. Randomised controlled trial of a general practice programme of home based exercise to prevent falls in elderly women. *BMJ* 1997; 315: 1065-9.

Robertson MC, Devlin N, Gardner MM, Campbell AJ. Effectiveness and economic evaluation of a nurse delivered home exercise programme to prevent falls. 1: Randomised controlled trial. *BMJ* 2001. Volume 332, 24 March 2001 bmj.com

Robertson MC, Devlin N, Gardner MM, Campbell AJ. Effectiveness and economic evaluation of a nurse delivered home exercise programme to prevent falls. 2: Controlled trial in multiple centres. *BMJ* 2001. Volume 332, 24 March 2001 bmj.com

Buchner DM, Cress ME, de Lauter BJ et al. The effect of strength and endurance training on gait, balance, fall risk and health service use in community living older adults. *J. Gerontol.* 1997;52A:218-214M.

Exercise programs

Barnett et al. (2003) trialed a weekly group exercise program in adults aged 65 years and older, identified as at risk of falling, who attended one of 24 general practice clinics or two acute hospital physiotherapy departments in South Western Sydney. Subjects randomised to the intervention arm attended a weekly structured exercise group run in a community setting over four terms for one year and practised at home. The class content was designed by a physiotherapist to improve balance, co-ordination, aerobic capacity and muscle strength. Particular attention was placed on balance re-training. Within the 12-month trial period the rate of falls in the intervention group was 40% lower than that of the control group who maintained usual activities.

Reference: Barnett A, Smith B, Lord SR et al. Community-based group exercise improves balance and reduces falls in at-risk older people: a randomised controlled trial. *Age and Ageing* 2003; 32: 407-414

RESOURCES

Modified Tai Chi

The style of Tai Chi that successfully reduced falls in the Atlanta FICSIT trial was especially modified by the research group, led by Stephen Wolf. The group is based at Emory University School of Medicine, Atlanta, US. They intensively investigated the elements of Tai Chi Chuan that had the potential to ameliorate the deficits in motion or posture (standing sway) often observed in older people that increase their risk of falls. They concluded that the emphasis on dynamic challenges to balance and postural control in some movements of Tai Chi could potentially reduce postural sway in older people.



The research team condensed the 108 forms of Tai Chi Chuan to 10 composite forms that concentrated on movement components often restricted or absent with ageing, and were easy to learn by older people within a reasonable time frame. The 10 forms were chosen because they appeared to clearly represent progressive degrees of stress or challenge to postural stability with weight bearing moving from bilateral to unilateral supports and an increase in the magnitude of trunk and arm rotation with a diminishing base of support.

The style developed is explained and illustrated in the following journal article (available on order through any University library):

Reference: Wolf SL, Coogler C, Xu T. Exploring the basis for Tai Chi Chuan as a therapeutic exercise approach. *Arch Phys Med Rehabil.* 1997; 78: 886- 92

Key contacts

- Providers of Tai Chi programs for older people should negotiate with accredited Tai Chi instructors to teach the 10-form style developed by Steven Wolf and colleagues because no other modified Tai Chi program for older people including *Tai Chi for Arthritis* has been shown to reduce falls.

Contact: Mr Jin-Song Han,
Tai Chi Australia
Tel/fax: 9889 9999
E-mail: taichiaustralia@hotmail.com

• **Database of exercise classes for older people (including Tai Chi)**

Contact: VicFit toll free telephone number: 1800 638 594 or visit the VicFit website at: www.vicfit.com.au/

The VICFIT *Active for Life* Infoline is a free call 1800 service that provides information and resources to all Victorians on physical activity and health. The Infoline offers personalised assistance and counselling to older people who wish to develop or maintain more active lifestyles. It also offers assistance to organisations that promote physical activity.

What does the Infoline offer?

The Infoline is operated by an exercise physiologist who is qualified to respond to the diverse needs and situations of callers. The Infoline can provide:

- assistance in assessing physical activity levels
- guidance on participating in physical activity
- information about local programs and services
- printed information on a wide range of activities and health issues
- follow-up service to assist in maintaining levels of physical activity.

The Infoline was developed to provide a support, counselling and information service to assist in increasing the level of participation in physical activity in Victoria.

City of Whitehorse No Falls group exercise program

This randomised controlled trial showed a significant falls prevention benefit for exercise alone and in combination with other interventions. The exercise program was devised by a physiotherapist and was designed to

improve balance, flexibility and leg strength, with one-third of session time given to balance improvement. Exercise instructors were trained and experienced VicFit leaders. They received additional training from the physiotherapist that designed the program. Exercise sessions were held once a week for 15 weeks and participants were encouraged to do home practice. A kit is under development.

Contact by e-mail only: Dr Lesley Day,
Monash University Accident Research
Centre: Lesley.Day@general.monash.edu.au

Home strength and balance exercise program for at-risk older people (aged 80 years and older)

This individually tailored, home-based, strength (resistance) and balance retraining program was developed at the University of Otago Medical School, New Zealand by a research group led by Dr John Campbell. It is designed for delivery through general practice (by a trained nurse or physiotherapist) and has proven successful in reducing falls and moderate fall injuries in people aged 80 years and older.

A simple assessment of strength and balance and the content and delivery of the falls prevention program is described in the journal article referenced below.

The New Zealand group has available a booklet with instructions and a sheet for each exercise (\$20 plus postage) so the instructor can photocopy them and compile an activity book for each client (in a folder with clear pockets). The group also has a train-the trainer manual for physiotherapists to use to teach nurses to implement the program in a 5-day training course.

Reference: Gardner MM, Buchner DM, Robertson MC, Campbell AJ. Practical implementation of an exercise-based falls prevention programme. *Age and Ageing* 2001;30: 77-83 (Order through any University library).

Individual falls risk assessment & risk abatement

RESEARCH EVIDENCE BASE

Summary

The main conclusion from a recent review of evidence from six trials of falls risk factor assessment programs involving at-risk community-dwelling older people was that these programs are not effective in preventing falls unless there was active follow-up referral to relevant health care professionals (Feder et al., 2000). The only risk assessment programs that successfully reduced falls risk were the two that included active intervention in addition to education and advice (Carpenter & Demopoulos, 1990; Close et al., 1999).

Effective programs

- Carpenter and Demopoulos (1990) reported a successful trial involving people aged 75 years and older, recruited from two general practices. All subjects were visited at the beginning and end of the study and completed a scored activity of daily living questionnaire administered by a trained lay volunteer. Participants in the intervention group were visited at intervals of three or six months for three years and those with an increase in score greater than 5 were referred to their general practitioner. Referrals were also made to other care services such as meals on wheels and home help. Between the first and last interviews the number of falls reported in the control group doubled but remained unchanged in the intervention group. Because of study design weaknesses the reviewers

found it difficult to interpret results and generalise the potential role of home visits with referral from this study.

Reference: Carpenter GI, Demopoulos GR. Screening of the elderly in the community: controlled trial of dependency surveillance using a questionnaire administered by volunteers. *BMJ* 1990; 300(6374): 1253-6

- Close et al. (1999) undertook a randomised controlled trial to assess the benefits of a structured interdisciplinary assessment of people who have fallen in terms of further falls. Community-dwelling older people (aged 65 years and older) who presented to a hospital ED after a fall were recruited into the study. Patients assigned to the intervention group underwent a medical examination conducted in a day hospital that included a detailed assessment of postural hypotension, visual acuity, balance, cognition, affect and medications with referral to relevant services if indicated. They also received an occupational therapy assessment conducted at home with appropriate advice and direct intervention to ameliorate identified falls risk factors. The relative risk of falls was reduced by 38% in the intervention group compared to controls.

Reference: Close J, Ellis M, Hopper R et al. Prevention of falls in the elderly trial (PROFET): a randomised controlled trial. *Lancet* 1999; 353: 93-7

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Tai Chi photos courtesy City of Melbourne and The Melbourne City Baths
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Falls risk assessment and risk abatement

RESOURCES

Key contacts

- **General Practitioners**

The Enhanced Primary Care (EPC) Package is a series of Commonwealth initiatives to enhance primary care especially for older Australians. One of the initiatives under the scheme is the provision of an additional Medicare Benefit Schedule (MBS) item to cover an extended annual health assessment (undertaken by a medical practitioner) for people aged 75 years and older (or 55 years and older for people of Aboriginal or Torres Islander descent). The health assessment includes an assessment of the patient's physical function, including the patient's activities of daily living, and whether or not the patient has fallen in the last three months. Where necessary, medical practitioners can claim additional MBS items to cover the development of a multidisciplinary community care plan to address the patient's identified health and care needs and the conduct of a case conference to organise the delivery of the additional care and services needed by the patient. All seniors aged 75 years and older should be informed that they are eligible for an extended health (falls risk) assessment by their GP.

- **Community Health Services/Centres**

- **Royal District Nursing Service**

- **Aged & Community Care department in local councils**

- **SAFE – Screening Assessment for Falls Evaluation (a risk assessment tool for community dwelling older people)**

The SAFE assessment is intended as a generic screening tool for falls risk in community-dwelling older people to guide the clinician when evaluating a client who is falling. It is intended for use by Occupational Therapists, Physiotherapists, GPs, team leaders in local council and District Nurses or Care Managers. The screening tool is designed to identify possible intrinsic and extrinsic risk factors for falls, as well as the task and support factors that may be contributing to falls. The tool has been trialed and refined by the Mt Eliza Domiciliary falls team and is being piloted in various community health care settings.

Key contact: Ms Karen Bull

Postal Address:

The Peninsula Falls Prevention Service
Mt Eliza Aged Care
& Rehabilitation Service
PO Box 192
Mount Eliza VIC 3930
Phone: 03 9788 1260
Fax: 03 9788 1212

Home and public place environmental risk assessment and reduction

RESEARCH EVIDENCE BASE

Summary

- There is little evidence that broadly targeted community home assessment and modification programs are effective in reducing falls.
- Any future investments in home environment assessment and subsidised modification programs should be focussed on schemes that target older people with a recent history of falls. The home assessments should be conducted by an occupational therapist who should take responsibility for facilitating the recommended safety modifications.
- There are no formal evaluations of public place environmental falls risk reduction programs.

PROGRAM EFFECTIVENESS: HOME ENVIRONMENT ASSESSMENT AND MODIFICATION

Recent reviews by Feder et al. (2000) and Hill et al. (2000) conclude that there is no published evidence from RCTs that stand-alone home hazard assessment and modification programs in the general population of community-dwelling older people reduce falls. A completed but unpublished WA trial of a program delivering home hazard assessments and subsidised safety modifications found that there was no significant difference in falls rates in the home modification intervention group compared with controls (personal communication, Margaret Stevens, WA Health). Also the home modifications

arm of the MUARC Whitehorse 'NoFalls' trial did not show a significant reduction in annual fall rate. Participants received a free home hazard assessment and free labour and materials to the value of A\$100 to remove or modified hazards (Day et al., 2002).

One RCT in a group of community-dwelling older people has shown a significant reduction (20%) in the risk of falls in an intervention targeted at home environmental hazards (Cumming et al., 1999). The effect was confined to the group of subjects who reported having one or more falls in the year before

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FACTS ON FALLS AMONG SENIORS



recruitment into the study. The study was conducted in Sydney and subjects were recruited primarily before discharge from hospital wards. An occupational therapist, experienced in aged care, made a home visit and assessed the home for environmental hazards and facilitated any necessary home modifications. About 50% of the identified home modifications were in place at the 12-month follow-up visit.

In the high risk sub-group, the risk of having at least one fall during follow-up was reduced by 36%. The authors raise the issue that the effect may not be due to the home modifications alone, because the intervention group had fewer falls both at home and away from home. Subjects may have been influenced to change their behaviour by the implicit and explicit advice given by the occupational therapist during the visit.

References:

Cumming RG, Thomas N, Szonyi G et al. Home visits by an Occupational Therapist for assessment and modification of the home environmental hazards: A randomised controlled trial. *JAGS* 1999;47:1379-1402.

Day L, Fildes B, Gordon I, Fitharris M, Flamer H & Lord S. Randomised factorial trial of falls prevention among older people living in their own homes. *BMJ* 2002, 325:128

PUBLIC ENVIRONMENT ASSESSMENT AND MODIFICATION

There have been no formal evaluations of programs that aim to reduce falls in public places. Hill et al. (2000) comment on the considerable methodological challenges in designing evaluation trials in this area and refer to recommendations made by Gallagher & Scott (1997) on the management of fall hazards in public places.

References:

Gallagher E. & Scott V. The STEPS project: participatory action research to reduce falls in public places among seniors and persons with disabilities. *Canberra Journal of Public Health* 1997; 88: 129-33

Gallagher E, Scott V. Taking STEPS. Modifying pedestrian environments to reduce the risk of missteps and falls. Published by the University of Canada (undated). STEPS project ISBN 1-55058-102-3

RESOURCES

Home Fall Hazard Assessment

a) Self home hazard assessment forms

• Falls Prevention - Your Home Safety Checklist

Publication Number: DOH-5415
 Author : NSW Health

Home safety checklist available in the following community languages:

Arabic Chinese English
 Greek Italian

The document can be down-loaded from the Internet:

<http://www.health.nsw.gov.au/health-public-affairs/mhcs/publications/5415.html>
 and printed using Adobe Acrobat.

Contact: Multicultural Health
 Communication Service
 GPO Box 1614
 SYDNEY NSW 2001
 Phone: 02 9382 7516
 Fax: 02 9382 7517
 Email: mhcs@sesahs.nsw.gov.au
 Internet site: www.health.nsw.gov.au/health-public-affairs/mhcs/

b) Education package

- Mildura Rural City Council Plan for ageing in the home. Commonwealth Department of Health and Aged Care. 1999. A Healthy Seniors Initiative.

This educational package consists of a short video outlining ten of the major concerns identified by local occupational therapists, a booklet providing brief details on each planning tip and a pamphlet which is a condensed version of the booklet.

Information about falls prevention and safety features to look for when buying a new house or add to a new house or renovation. The package is based on the principles that by investing in safety features earlier in life, people can save money by being able to remain in their home longer as they age and are less able to afford modifications; also that builders and designers can use these safety features as selling points for their houses.

Useful for Occupational therapists, designers and architects, builders/ developers, general public.

Contact: Manager

Aged and Disability Services
Mildura Rural City Council
Madden Ave Centre
108-116 Madden Avenue
MILDURA 3502
Telephone: 5022 2777
Fax: 5021 1899

c) Home Fall Assessment tool and guide (for occupational therapists)

- Clemson L. *Home fall hazards: a guide to identifying fall hazards in the homes of elderly people and an accompaniment to the assessment tool, the Westmead Home Safety Assessment (WeHSA)*. Co-ordinates publications 1997.

The guide provides information for occupational therapists conducting home assessments for individual clients

and describes the WeHSA, its use and the research involved in its development and validation.

Cost of manual and assessment kit:
\$118.00

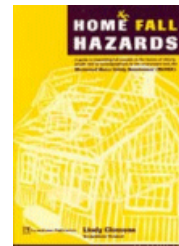
Contact: Lindy Clemson

Coordinates Therapy Services
PO Box 59
West Brunswick Victoria 3055
Phone: 03 9380 1127
Fax: 03 9387 4829
Internet:
www.therapybookshop.com

d) Assistance with home modifications

- Department of Veterans Affairs: 'Homefront' and Home Support Loan

These are complementary initiatives within the Department's home and community support programmes, and are designed to help the veteran community maintain their independence by remaining in their homes longer.



HomeFront is a falls and accident prevention program designed to provide practical help to veterans in the home. The Home Support Loan (under the Defence Service Homes Scheme) assists eligible veterans, war widows and widowers with the cost of maintenance and modifications to their own homes, and/or any other housing related purpose that encourages independent living. To qualify, Australian veterans, war widows or widowers need to be eligible for benefits under Parts II and III of the Veterans' Entitlements Act 1986, or for a home loan under the Defence Service Homes Act 1918.

For more information about the Home Support Loan call 1800 722 000.

Internet site:
www.dva.gov.au/housing/housing.htm

The Veterans' Home Maintenance Helpline (the Helpline) provides property maintenance advice and referral to reliable and efficient tradespeople where necessary. It can also arrange home inspections to identify current or possible future maintenance problems.

The property maintenance and home inspection advice is available Monday to Friday between 9am and 5pm. Emergency property advice is available 7 days a week 24 hours a day. The Freecall number within Australia is 1800 80 1945. The Helpline advice is free but work done by trades people, including callout fees, are paid by the home owner.

- **Department of Human Services and Archicentre: Home Renovation Service**

The program assists home owners who are over 60 years, those with disabilities and households supporting people with disabilities. It aims to help people remain independent in their homes. A free home inspection and report is available through the Archicentre Home Service. Loan assistance is also available to eligible applicants for health or safety related modifications or repairs.

Contact: Department of Human Services
 6th Floor, 555 Collins St
 Melbourne 3000
 Phone: 03 815 1900
 or 1800 134 872 (toll free)
 Fax: 03 9616 9844
 Internet: www.archicentre.net.au

Or Contact:
 Archicentre Home Services
 530 Glenferrie Rd
 Hawthorn Vic 3122
 Phone: 03 9815 1900
 Fax: 03 9819 5413

- **Home and Community Care Program**

The Commonwealth and State governments, through the Home and Community Care (HACC) program, provide a wide range of supports to assist frail older people including maintenance, repairs and minor modifications to people's homes such as cleaning spouting, fixing security locks and installing ramps and rails. Information is available from local councils and information can be accessed through councils, community health centres, migrant resources centres, ethnic or koori organisations, carers' associations and nursing services.

Public Place Hazard Assessment

- **Manual, survey and audit tools**

The manual *Taking STEPS: Modifying pedestrian environments to reduce the risk of missteps and falls* (Gallagher & Scott, undated) covers personal and environmental risk factors for falls, provides an overview of the philosophies and strategies underlying the use of risk management approaches (including soliciting public input and improving communication between stakeholders), outlines specific environmental hazards which cause people to fall in public places and provides solutions for reducing or eliminating the problem.

Contact: Dr Elaine Gallagher
 School of Nursing
 University of Victoria
 PO Box 1700, Victoria, BC
 CANADA V8W 2Y2
 Phone: (250) 721-7966
 Fax: (250) 721-6231
 e-mail: egallagh@HSD.UVIC.ca

Cost: \$15 (Cdn) plus postage



Education and training

RESEARCH EVIDENCE BASE

Summary

There is no evidence that community education as a stand-alone measure reduces the risk of falls in older people. Education should be implemented in tandem with other effective strategies, such as increasing the access of older people to local exercise programs that concentrate on developing balance and leg strength.

Group community education sessions usually aim to:

- raise awareness among older people of the potential adverse effects of fall injuries on their health and independence;
- raise awareness of the risk factors for falls; and
- give participants practical advice on ways to reduce their personal falls risk profile.

A recent review of the effectiveness of fall injury prevention interventions targeted to community-dwelling older people, conducted by the National Ageing Research Institute (NARI), concluded that while there is some research evidence that community education increases knowledge there is no evidence that community education, as a stand-alone strategy, has any effect on falls rates (Hill et al., 2000).

Reference:

Hill K, Smith R, Murray K et al. *An analysis of research on preventing falls and falls injury in older people: community settings*. Report to the Commonwealth Department of Health and Aged Care by the National Ageing Research Centre. August, 2000. Copy can be downloaded directly from Commonwealth Department of Health and Aged Care website: www.health.gov.au/pubhlth/strateg/injury/index.htm

Although not shown to be effective as a stand-alone falls prevention measure, education (information) sessions may provide older people who have a high level of knowledge with the impetus to take action to prevent themselves from falling. The impact evaluation of the *Up and About* peer presented falls prevention information sessions (conducted in the City of Greater Geelong in the mid 1990s), indicated that those who attended the sessions displayed a higher level of knowledge about the factors that prevent falls than the controls at the 12-month follow-up, made more changes to their home or yard and took more action at both the 3 and 12 month follow-up. Actions included installing grab rails, non-slip surfaces, tidying walkways and buying safer footwear. The evaluation was a non-randomised pre-test and post-test design.

Reference:

Deery, HA, Day, LM, Fildes, BN. An impact evaluation of a falls prevention program among older people. *Accident Analysis & Prevention*, 2000; 32:427-433

Produced with support from Esso and Mobil



Accident Research Centre

Tai Chi photos courtesy City of Melbourne and The Melbourne City Baths
Updated Oct, 2003



Education and training

RESOURCES

Education sessions for seniors

- Kit: *Standing on your own two feet. Older people talk about how to prevent falls.* Australian Pensioners' and Superannuants Federation, 1995.

The resource includes a 21 minute video targeted to community dwelling older people and a 50 page resource kit.

Contact: Australian Pensioners' and Superannuants Federation
24 Kippax St
Surry Hills NSW 2010
Phone: (02) 6262 5393

- The video from the *Standing on your own two feet* resource kit has been translated into the following community languages:

Arabic	Cantonese	(English)
Greek	Italian	Polish
Turkish	Vietnamese.	

Contact: Video Record
Richmond, Victoria
Phone: (03) 9429 5899

Cost: \$120 per set

- **Booklet**

Peninsula Falls Prevention Service.
Enjoy the best years of your life. A guide to preventing falls. Mt Eliza Aged Care and Rehabilitation Service.

This 27 page booklet covers questions on falls and the risk factors (medical problems, balance and strength deficits, fear of falling, mobility

problems, vision problems, feet and footwear and nutrition), where to go for help, environmental hazards, what to do if a fall occurs (including local list of services).

Key contact: Ms Karen Bull
Postal Address: The Peninsula Falls Prevention Service
Mt Eliza Aged Care & Rehabilitation Service
PO Box 192
Mount Eliza VIC 3930
Phone: 03 9788 1260
Fax: 03 9788 1212

Training Sessions for Health and Care Professionals and Workers

- **Foothold on Safety: A Falls Prevention Training Manual**

Produced by the Inner South East Partnerships in Community and Health (ISEPICH) Foothold on Safety project. The manual contains information for training sessions and workshops, sample training session, overheads, handouts, case studies, resources, information about local service providers, references.

Contact: The Manager
Caulfield Community Health Service
240 Kooyong Rd
CAULFIELD VIC 3162
Phone: (03) 9523 6666
Fax: (03) 9532 8540

- Centre for Education & Research on Ageing (CERA) *Putting your best foot forward. A manual for workers in residential care*

Contact: Mari Wright

Centre for Education &
Research on Ageing (CERA)
NSW

Phone: (02) 9767 7212

Fax: (03) 9767 5419

e-mail: www.cera.usyd.edu.au

Training for Peer Educators

- Inner South Community Health & Arthritis Foundation *Foothold on Safety Falls Prevention Program: Peer Education Manual*. Inner South East Partnerships in Community and Health (ISEPICH), 1999.

Manual contains: background information on falls prevention and risk factors, sample presentations, working with interpreters, communication and public speaking, bibliography and resource list.

Contact: The Manager

Caulfield Community Health
Service

240 Kooyong Rd

CAULFIELD VIC 3162

Phone: (03) 9523 6666

Fax: (03) 9532 8540

This kit is produced by Monash University Accident Research Centre (MUARC). Annual updates will be published on the MUARC website: <http://www.general.monash.edu.au/muarc>. We welcome your input especially information or access to useful resources and web sites. Multiple copies of the Facts on Falls brochures may be ordered through VISAR (contact details below). Local area fall injury data are available from Victorian Injury Surveillance and Applied Research (VISAR) at MUARC. Phone 9905 1805 or visit the VISAR website <http://www.general.monash.edu.au/muarc/visar/>

USEFUL WEBSITES

<http://www.health.gov.au/pubhlth/strateg/injury/index.htm> –

Commonwealth Department of Health and Ageing website includes information on national falls prevention programs and activities and downloadable documents

<http://www.dhs.vic.gov/acmh/aged/maintaining/falls.htm> – Victorian

Department of Human Services website covering information about falls, tips to avoid falls, details of the Victorian Falls Prevention program and funded projects

<http://www.general.monash.edu.au/muarc/hazard/haz45.pdf> – Edition No.

45 of the the Victorian Injury Surveillance and Applied Research (VISAR) publication *Hazard*, entitled *Prevention of falls injuries among older community-dwelling Victorians* (Monash University Accident Research Centre).

www.preventinghomefalls.gov.uk – web

site set up by the UK Department of Trade & Industry (DTI). Contains downloadable information and resources including about falls on stairs and a useful document on evaluating health promotion programs for older people.

www.hc-sc.gc.ca/seniors-aines/ – website of the Division of Aging and Seniors, Health Canada. Programs and publications relating to the Canadian senior population.

[www.cdc.gov/ncipc/pub-res/toolkit/](http://www.cdc.gov/ncipc/pub-res/toolkit/toolkit.htm)

[toolkit.htm](http://www.cdc.gov/ncipc/pub-res/toolkit/toolkit.htm) – website of U.S. Centres for Disease Control and Prevention. A toolkit of materials designed for falls prevention programs. To order visit the CDC website.