

NSW Fall Prevention and Healthy Ageing Network Forum Research Update May 2022



Prof Cathie Sherrington

Outline: key points

- New research results
 - Residential care UK trial: effective multifaceted intervention
 - Hospitals meta-analysis: education most effective
 - Community NSW studies:
 - no effect on falls of Otago workshops, general population
 - on-line yoga acceptable to many older adults
- Gold bar update
- Falls still cost Australia 2.5 billion a year
- Can you help our collaborative advocacy project?



Health Technology Assessment

Volume 26 • Issue 9 • January 2022

ISSN 1366-5278

A multidomain decision support tool to prevent falls in older people: the FinCH cluster RCT

*Philippa A Logan, Jane C Horne, Frances Allen, Sarah J Armstrong, Allan B Clark,
Simon Conroy, Janet Darby, Chris Fox, John RF Gladman, Maureen Godfrey,
Adam L Gordon, Lisa Irvine, Paul Leighton, Karen McCartney, Gail Mountain,
Kate Robertson, Katie Robinson, Tracey H Sach, Susan Stirling,
Edward CF Wilson and Erika J Sims*

FinCH cluster RCT, Logan et al 2022

- 84 UK care homes randomised, 1657 residents consented
- GtACH program:
 - care home staff training
 - systematic use of multidomain decision support tool
 - implementation of falls prevention actions
- 43% fewer falls in GtACH program homes
incidence rate ratio of 0.57 (95% CI 0.45 to 0.71)

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Volume 51, Issue 5

May 2022

(In Progress)

Interventions to reduce falls in hospitals: a systematic review and meta-analysis

Meg E Morris , Kate Webster, Cathy Jones, Anne-Marie Hill, Terry Haines, Steven McPhail, Debra Kiegaldie, Susan Slade, Dana Jazayeri, Hazel Heng, Ronald Shorr, LEEANNE CAREY, Anna Barker, Ian Cameron

[Author Notes](#)

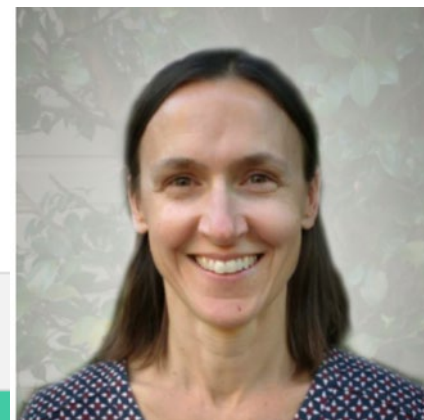
Age and Ageing, Volume 51, Issue 5, May 2022, afac077,

<https://doi.org/10.1093/ageing/afac077>

Published: 06 May 2022 **Article history ▼**


Hospitals meta-analysis, Morris et al 2022

- 43 studies in systematic review, 23 in meta-analyses
- varied interventions and study designs
- Education the only intervention to significantly reduce falls
 - 30% reduction in fall rates, $RaR = 0.70$, $0.51-0.96$
 - 35% reduction in odds of falling, $OR = 0.62$, $0.47-0.83$
- Patient and staff education studies of high quality on the GRADE tool



Research | [Open Access](#) | [Published: 26 April 2022](#)

Effectiveness of workshops to teach a home-based exercise program (BEST at Home) for preventing falls in community-dwelling people aged 65 years and over: a pragmatic randomised controlled trial

[Amanda Bates](#) , [Susan Furber](#), [Cathie Sherrington](#), [Paul van den Dolder](#), [Karen Ginn](#), [Adrian Bauman](#), [Kirsten Howard](#), [Michelle Kershaw](#), [Lisa Franco](#), [Cathy Chittenden](#) & [Anne Tiedemann](#)

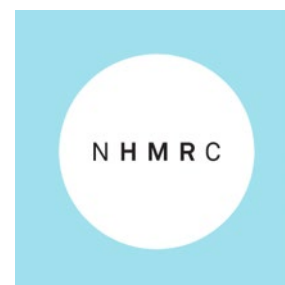
[BMC Geriatrics](#) **22**, Article number: 366 (2022) | [Cite this article](#)

583 Accesses | **12** Altmetric | [Metrics](#)



BEST at home

Balance Exercise Strength Training



Community RCT: Bates et al 2022

- 307 people from the general community attended 3 one-hour workshops (weeks 1,4,12) to learn Otago home exercises from physiotherapists
- No effect on falls at 12 months, IRR 0.91, 95% CI 0.64-1.29
- Significant impacts on fear of falling and gait speed (3 months) but not other measures of physical function
- Indication of greater effects on people who had fallen previously but differences did not reach statistical significance ($p = 0.340$).
 - IRR 0.67, 95% CI 0.26 to 1.69 in those with 2+ falls,
 - IRR 1.00, 95% CI 0.70 to 1.42, in those with 0–1 falls



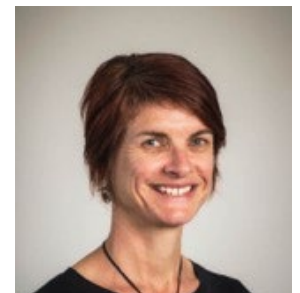
Research | [Open Access](#) | [Published: 08 March 2022](#)

What helps older people persevere with yoga classes? A realist process evaluation of a COVID-19-affected yoga program for fall prevention

[Abby Haynes](#) , [Heidi Gilchrist](#), [Juliana S. Oliveira](#), [Anne Grunseit](#), [Catherine Sherrington](#), [Stephen Lord](#)
& [Anne Tiedemann](#)

[BMC Public Health](#) **22**, Article number: 463 (2022) | [Cite this article](#)

1055 Accesses | **10** Altmetric | [Metrics](#)



SAGE yoga realist process evaluation

Haynes et al, 2022

- online delivery of a yoga program for people aged 60+
- interviews with participants ($n = 21$), yoga instructors ($n = 3$), self-report feedback forms ($n = 46$), observation of classes, routine process measures
- on-line delivery retained much of the value of face-to-face for the majority of participants, increased value for some
- continued engagement and perceived health benefits, facilitated by structured, communal nature of organised group, skilled instructor, and yoga's focus on mindfulness

Gold bar evidence scale (Prof Stephen Lord)



- One good quality RCT



- At least two good quality RCTs – little inconsistency



- Multiple RCTs and/or systematic reviews –little inconsistency

Falls prevention – evidence for what works

- Highest level of evidence given by meta-analyses of RCTs
- Gillespie LD et al. Interventions for preventing falls in older people living in **the community**. Cochrane Database Syst Rev. 2012
- Sherrington C et al. **Exercise for preventing falls in older people living in the community**. Cochrane Database Syst Rev 2019
- Hopewell S et al. **Interventions based on individual assessment of falls risk and multiple component interventions for preventing falls in older people in the community**. Cochrane Database Syst Rev. 2018
- Cameron ID et al. **Interventions for preventing falls in older people in care facilities and hospitals**. Cochrane Database Syst Rev. 2018

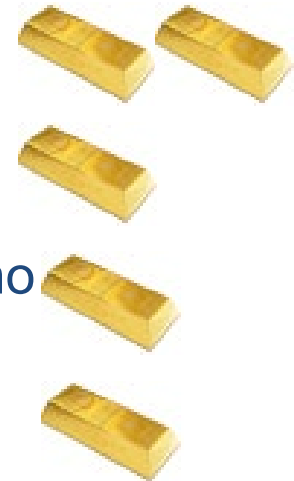
Falls prevention – what works: community

- **Tailored** balance/ functional exercise in group or home settings (balance and strength, Otago, Tai Chi)
- Voluntary and reactive step training
- Occupational therapy home safety interventions in high risk populations
- Multicomponent and multifactorial interventions in higher risk populations
- Pharmacist-led education and GP medication review



Falls prevention – what works: community dwellers with particular risk factors

- Podiatry intervention in people with disabling foot pain
- Expedited first eye cataract surgery
- Restriction of multifocal glasses use in older people who take part in regular outdoor activity *
- Withdrawal of psychoactive medications



Falls prevention – what works: hospital

- Multifactorial interventions in sub-acute hospitals
- **Education interventions**



Falls prevention – what works: residential care

- Vitamin D supplementation (excluding mega-doses)
- Multicomponent and multifactorial interventions [*Likely greater effects with more resources*]
- Medication review
- Physiotherapy exercises





Australian Government
Australian Institute of
Health and Welfare

AIHW

Falls in older Australians 2019–20: hospitalisations and deaths among people aged 65 and over



Web report | Last updated: 07 Apr 2022 | Topic: [Injury](#) | 

Over 5,000 falls deaths in 2019–20 among older Australians

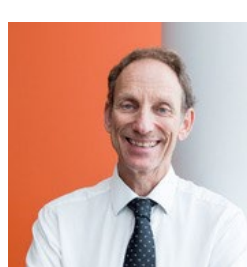
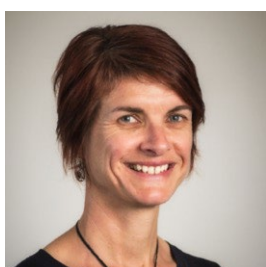
Fractures were the most common type of injury

133,000 falls hospitalisations in 2019–20 among older Australians

Falls on the same level were the most common type of fall

Working together for greater impact





Prof Cathie Sherrington Prof Anne Tiedemann Prof William Bellew Prof Adrian Bauman Prof Lucie Rychetnik Prof Vasi Naganatha Prof Richard Lindley



Prof Ben Smith

Prof Philayrath Phongsavan

Prof Lynette Mackenzie

Professor Lindy Clemson

Charlotte McLennan

Sandra O'Rourke

Prevention Research Collaboration





Prof Stephen Lord



Prof Kim Delbaere



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Dr Jasmine Menant



Dr Morag Taylor



Jamie Hallen



Prof Julie Byles



Prof Maria Crotty



Dr Suzanne Dyer



A/Prof Frances Batchelor



Prof Anne Marie Hill



Dr Anna Hatton



Dr Melanie Farlie



Lorraine Lovitt



Margaret Armstrong

Alexander Voukelatos



Cameron Hicks



Natassia Smith



Collaborative advocacy campaign

- Communication of problem and solutions to the public, organisations and policy makers
- Call for funded national fall prevention strategy
- Action plan
- Organising group
- Campaign contributors

Why we need to pay more attention to falls

Falls are a **significant problem**, yet they do not receive significant attention.

Every day
364

Australians aged 65+

have a fall that
puts them in
hospital

Every day

14

will die from a fall

Falls among those
aged 65+ cost our
health systems

\$2.5b

each year

Approx

1/3

of falls can
be prevented

Falls can **happen to anyone**, and they can have devastating consequences.

“I fell into the street, stepping off the curb...that fall was scary.”

excerpt from Annie's story, heartofida.org



Australian Government
Australian Institute of
Health and Welfare

AIHW

Coordinated efforts are needed to prevent falls.

We need better commitment and action:



Government

Policy, coordinated planning, funding, communication and awareness



Investment

Nationally-funded fall prevention strategies, frameworks, and actions



Community-wide

Commitment and action at all levels, with accessible fall prevention programs for home, community, hospitals and aged care available

Currently prevention of falls is under-funded, poorly coordinated, inadequately resourced with low awareness across government and the community.

Among the many evidence based interventions to avoid a fall, exercise that aims to improve balance and leg strength is most effective. As an individual, you can take action and reduce your risk of falling. Talk to your doctor for other effective strategies.



Balance and functional strength exercise

Incorporate balance and strength exercises
2-3 times a week into your weekly recommended
150-300 minutes of moderate exercise.

DID YOU KNOW: there are benefits to improving your balance and strength – at any age.

Safe exercises you can do at home
www.safeexerciseathome.org.au



Collaborative advocacy campaign

Let us know if you can help!

- organisations
- talks
- influential people
- social media
- other ideas



Institute for
**Musculoskeletal
Health**

**Thanks to study participants,
investigators, staff and funders!**

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