



Evidence Search results	
<b>Search topic:</b>	Best practice for establishing risk factors and possible interventions for patients being discharged from the acute setting back into the community, with the aim of addressing falls risks and reducing risk of future falls.
<b>Date requested:</b>	10/10/2025
<b>Date completed:</b>	29/11/2025
<b>Search completed by:</b>	Hayley Hodges
<b>Number of results selected:</b>	73
<b>Time taken:</b>	18.5 hours

Citing this evidence search
<p>If you reference this search in any paper, publication or presentation, please let us know and use the following format:</p> <p>Hodges, H., (2025). <i>Evidence summary</i>: Best practice for establishing risk factors and possible interventions for patients being discharged from the acute setting back into the community, with the aim of addressing falls risks and reducing risk of future falls. Taunton, UK: Somerset NHS Foundation Trust Knowledge &amp; Library Service.</p>

Summary of results
<p>A number of documents from <a href="#">NHS Trusts and other relevant organisations</a> that outline both existing falls prevention services and falls prevention information have been included, alongside current <a href="#">NICE guidelines</a> about falls assessment and prevention.</p> <p>There are also some <a href="#">Healthwatch and NIHR reports</a> about community falls prevention projects.</p> <p>The importance of multi-modal interventions is emphasised in the evidence (<a href="#">Lamb et al.</a>; <a href="#">Niznik et al.</a>; <a href="#">Rocha et al.</a>; <a href="#">Sheth and Cogle</a>)</p> <p>The benefits and harms of psychological interventions and educational interventions for preventing falls in older people living in the community are discussed (<a href="#">Drahota et al.</a>; <a href="#">Jian-Yu et al.</a>)</p> <p>Exercise programmes reduce the rate of falls and the number of people experiencing falls in older people living in the community (<a href="#">Aleixo and Abrante</a>; <a href="#">Allen et al.</a>; <a href="#">Sherrington et al.</a>; <a href="#">Killingback et al.</a>).</p> <p>Fall hazards identification has been identified as the most commonly used method for reducing the risk of falls in community-dwelling older adults (<a href="#">Ziebart et al.</a>).</p>



This work is licensed under a [CC BY NC 4.0 license](#)

**Disclaimer:** We will endeavour to use the best, most appropriate and most recent sources available to ensure that the information supplied is accurate, up-to-date and evidence-based. It is the responsibility of the requestor to determine the accuracy, validity and interpretation of the search results. No responsibility can be taken by the library for any action taken on the basis of this information. Read our full disclaimer [here](#).



Approaches to enhance falls management after SCI in inpatient spinal rehabilitation are described, showing how hospitals can improve what they are doing about falls ([Marshall et al.](#)).

The effectiveness of various fall prevention interventions is assessed ([Clemson et al.](#); [DeWalt et al.](#); [Elliott and Leland](#); [Fritz et al.](#); [Kiernan and Freehill](#); [Stark et al.](#)).

Transitions are critical points with potential communication gaps, so coordinated interventions are vital to support a safe return home for older adults hospitalized following a fall ([Hepkema et al.](#); [Provencher et al.](#)).

Performance of everyday activities and contact with family members are of importance in the everyday lives of older people and assessments and support are of particular importance for older people who do not have close social relations at home ([Jonsson et al.](#)).

The importance of the role of the occupational therapist is highlighted in many articles that were found ([Hunter and Rhodus](#); [Keglovits et al.](#); [Keramiotou et al.](#); [Müller et al.](#); [Muller et al.](#); [Naseri et al.](#); [Schuartz et al.](#)).

Some specific interventions are discussed:

- Improving Medicare Post-Acute Care Transformation (IMPACT) Act of 2014 is reviewed, looking at prevention and reduction of falls, facilitation of community discharge and reintegration, and prevention of hospital readmission ([Lucas Molitor et al.](#))
- the MAINTAIN intervention for people living with dementia, which reveals that regular home visits increase engagement and motivation ([Greene et al.](#))
- the Safe Recovery Program, a hospital falls prevention education program, can enable health professionals to implement evidence-based falls prevention education in hospitals ([Hill et al.](#))
- the Motivational Interviewing for Fall Prevention (MI-FP) study that aims to engage older adults in fall prevention strategies ([Kiyoshi-Teo et al.](#))
- the Otago Exercise Program ([Cheng et al.](#); [Chiu et al.](#); [Lombard et al.](#))
- Tinetti Performance-Oriented Mobility Assessment (POMA) and Activity Measure for Post-Acute Care Inpatient Mobility Short Form (AM-PAC IMSF) ([Wright et al.](#))
- fall-prevention program using home floor plans in multiple acute-care hospitals ([Ueda et al.](#); [Ueda et al.](#)).

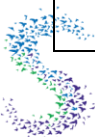
A number of technological approaches are also discussed:

- artificial intelligence (AI) and machine learning (ML) offer promising solutions for early fall prediction and continuous health monitoring ([Mohan](#); [Takeshita et al.](#))
- telehealth delivery of occupational therapy home visiting services ([Lommerzheim et al.](#))
- iPhone sensor-based mobility measures collected after ED discharge ([Suffoletto et al.](#))
- a fall-prevention patient portal providing personalized treatment advice ([Ploegmakers et al.](#))
- Smartphone technology ([Leung and Brandis](#))
- integrating electronic health record data with brief ED-based screenings ([Suffoletto et al.](#)).

However, health professionals need to assess the capacity of older people to adopt technologies and provide falls prevention interventions to accommodate the technology skills of older people ([Mackenzie and Clifford](#)).

In addition, here are links to existing search results in our search repository, which may be of relevance to this subject:

- [Falls prevention in nursing homes](#)





I hope this is helpful. Please contact the Library if you would like any further information or would like to revise your search: [library@somersetft.nhs.uk](mailto:library@somersetft.nhs.uk).

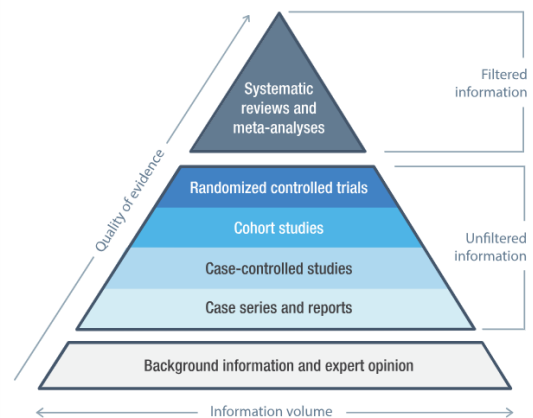
We would like to capture information about the impact this evidence search has had on your practice or decision—making. We can use this to promote this service to others within the Trust and it also ensures this service continues to develop and meet the needs of everyone who uses it. Please take a few moments to complete our short [impact survey](#).

## Search results

### Full-text access:

Abstracts are provided where available. To check if the full-text of an article is available, click on the links provided and log in with your NHS OpenAthens username and password, if prompted. You can register for an NHS OpenAthens username and password at: <https://openathens.nice.org.uk>. If there is no link, or the full-text is not available to you, please send the details of the article to [library@somersetft.nhs.uk](mailto:library@somersetft.nhs.uk) or and we will try and find it for you.

For your information, and to help you assess the quality of the research, here is a [hierarchy of the quality of evidence](#) that you may find useful:



## CONTENTS

- [GUIDANCE](#)
- [OTHER TRUSTS AND ORGANISATIONS](#)
- [REPORTS](#)
- [SYSTEMATIC REVIEWS](#)
- [REVIEWS](#)
- [JOURNAL ARTICLES](#)

## GUIDANCE

### [Falls](#)

NICE: QS86

Last updated: 29 April 2025

Quality statements:

Statement 1 People aged 50 to 64 with 1 or more factors that could increase their risk of falls and people aged 65 or over are asked about the details of any falls when they attend appointments or assessments in community or hospital settings.

Statement 2 People aged 50 to 64 with 1 or more factors that could increase their risk of falls and people aged 65 or over have a comprehensive falls assessment if they meet the criteria for a comprehensive falls assessment.





Statement 3 People aged 50 to 64 with 1 or more factors that could increase their risk of falls and people aged 65 or over have tailored interventions that address their individual risk factors if they need comprehensive falls management to reduce their risk of falling.

Statement 4 People who fall during a hospital stay are checked for signs or symptoms of fracture and potential for spinal injury before they are moved.

Statement 5 People who fall during a hospital stay and have signs or symptoms of fracture or potential for spinal injury are moved using safe manual handling methods.

Statement 6 People who fall during a hospital stay have a medical examination.

### **Falls: assessment and prevention in older people and in people 50 and over at higher risk**

NICE guideline: NG249

April 2025

#### **Overview**

This guideline covers assessing risk of falling and interventions to prevent falls in all people aged 65 and over, and people aged 50 to 64 who are at higher risk of falls. It aims to reduce the risk and incidence of falls, and the associated distress, pain, injury, loss of confidence, loss of independence and mortality.

#### **Recommendations**

This guideline includes recommendations on:

- [identifying people at risk of falls](#)
- [comprehensive falls assessment](#)
- [interventions to reduce the risk of falls](#)
- [maximising ongoing participation in falls prevention interventions](#)
- [Information and education](#)

### **Occupational therapists should assess elderly at risk of falls at home, says NICE**

BMJ

18 October 2024

The National Institute for Health and Care Excellence (NICE) has proposed more comprehensive falls assessments and management of older people at risk of falls, including using occupational therapists to carry out hazard assessments of the homes of patients who are at risk.

The updated guideline recommends that people who have fallen in the past year and are living with frailty, were injured in a fall, experienced loss of consciousness related to a fall, have been unable to get up independently after a fall, or have had two or more falls should be offered a comprehensive falls assessment. This assessment would include physical examinations, questions about possible dizziness, and balance and gait checks to look at how risk factors for falls can be removed, improved, or managed. Possible interventions following the assessment would include a falls prevention exercise programme and a home hazard assessment.

Under current recommendations home hazard assessments are conducted by health professionals. But the draft recommendations are more specific in saying that these should be carried out by occupational therapists, because modelling studies have found this approach to be less costly and more effective. The home hazard assessment includes checking for potential trip hazards to reduce the risk of falls and practical interventions such as installing handrails.





## **Falls: applying All Our Health (Guidance)**

Office for Health Improvement and Disparities  
Updated 25 Feb 2022

Contents:

1. [Introduction](#)
2. [Focusing on falls in your professional practice](#)
3. [Core principles for health and care professionals](#)
4. [Taking action](#)
5. [Understanding local needs](#)
6. [Measuring impact](#)
7. [Further reading, resources and good practice](#)

## **Occupational Therapy Guidelines for Falls in Adults: Practice Insights PowerPoint Presentation - ID:9183447** (PowerPoint presentation)

Royal College of Occupational Therapists  
2017

### **OTHER TRUSTS AND ORGANISATIONS**

#### **Preventing falls: strategies for staying on your feet**

Information for patients, relatives and carers  
Imperial College Healthcare NHS Trust  
September 2025

#### **Falls and Fall Prevention**

Home Independence Services  
2025

How Can an Occupational Therapist Help with Falls Prevention?

Most slips and falls happen in and around the home. An Occupational Therapist can carry out a home visit and assess you and your home environment, identifying risks and hazards and making recommendations for making your home a safer place.

#### **Luton Falls Prevention Service**

Cambridge Community Services NHS Trust  
2025

#### **Falls Prevention Service**

Sutton Health and Care  
2025

#### **Fall Prevention, Response and Recovery**

NHS Shropshire, Telford and Wrekin  
Last updated: 18 Dec 2024

#### **Fall prevention for the elderly**

Age UK  
Last updated: 19 Sep 2024

#### **Managing Falls After Discharge**

Ausmed  
Updated 14 Aug 2023

It is estimated that about 40% of older adults fall within six months of discharge, with 50% of these incidents resulting in injury.



**Kindness, Respect, Teamwork**  
**Everyone, Every day**



Despite these alarming statistics, most falls are preventable. In order to prevent post-discharge falls and avoid hospital re-admission for falls injuries, it is important for healthcare staff to provide appropriate education to patients and implement falls-prevention strategies as part of discharge planning.

### [Occupational Therapist highlights role for national Falls Awareness Week](#)

University Hospitals of Morecambe Bay NHS Foundation Trust  
17 September 2021

The role of the Occupational Therapist in Falls Prevention by Olivia Gell, Specialist Occupational Therapist, Medical Wards, Royal Lancaster Infirmary.

### [Your Guide to Reducing the Risk of Falling at Home: Falls Prevention Information Booklet](#)

St. James's Hospital Dublin Physiotherapy and Occupational Therapy departments  
Jan 2020

### [Preventing Falls for patients on leave or discharge Patient Information Leaflet](#)

Northumberland, Tyne and Wear NHS Foundation Trust  
March 2013 V1

### [Falls Prevention Exercise – following the evidence](#)

The evidence for falls prevention exercise and how it can be applied in practice.  
Age UK  
June 2013

The Age UK expert series is for people influencing, designing, commissioning and delivering services for later life. The reports present evidence, lessons from experience and practical solutions.

### [Falls Prevention: Falls Safety Information Booklet](#)

Health Service Executive  
Undated

### [Falls Prevention Service](#)

Lancashire and South Cumbria NHS Foundation Trust  
Undated

### [Falls](#)

Norfolk and Norwich University Hospitals NHS Foundation Trust  
Undated

### [Community Rehabilitation and Falls Service](#)

Nottingham City Care  
Undated

The Community Rehabilitation and Falls Service consists of two teams of Physiotherapists, Occupational Therapists, and Assistants. We provide a comprehensive rehabilitation and falls prevention service to people with a wide range of health conditions, to improve their safety, and to maintain or regain independence with daily living activities.

### [Falls and Bone Health Service Information Pack](#)

Your practical guide to reducing the risk of falls and injury  
Kingston and Richmond NHS Foundation Trust  
Undated





## REPORTS

### **[Steady Steps Towards a Solid Future: A report on Medway Resident's Perceptions of Frailty, Frailty Assessments and the Falls Prevention Service.](#)**

Healthwatch Medway  
Jan 2025

In July 2024, Healthwatch Medway worked in partnership with Medway Community Healthcare (MCH), Medway Foundation Trust (MFT) and Medway Public Health to talk to people about frailty, frailty assessments and the falls prevention service.

### **[Screening strategies to reduce fractures in older people are not effective](#)**

National Institute for Health and Care Research  
30 Sep 2021

Intensive interventions were no more effective at reducing fractures than a booklet containing advice on falls prevention. A large study looked at screening strategies to reduce fractures in older people at high risk of falling. It found that none of the interventions reduced the rate of fractures. The study compared a booklet sent by post, an exercise programme, and multiple assessments by a range of professionals.

The Prevention of Fall Injury Trial (Pre-FIT) included more than 9,000 people over 70 years old living in the community. Over a period of 18 months, the study found that none of the three approaches (advice alone, exercises, multiple assessments) reduced fracture rates. The exercise programme was linked with small gains in health-related quality of life, and short-term prevention of falls, which made it the most cost-effective approach.

### **[Falls Prevention & Social Isolation](#)**

Healthwatch Herefordshire 2020

Recommendations:

- More promotion across organisations of the home safety checks that are available.
- Consider the development of a simple self-assessment of hazards in the home and garden that could contribute to falls.
- More awareness around medication that protects your bones.
- More promotion and awareness across organisations and services of existing services that could really help in preventing falls.
- Promote simple tips of what people can do in a pre-frailty state to prevent falls eg. Simple exercises.
- Consider more resources and information to be communicated via online avenues.
- Consider more work to target people with dementia who are socially isolated and at further risk of falls.

### **[Engagement with Commissioning of Falls Prevention Services](#)**

North East Hampshire and Farnham NHS CCG  
Undated

Falls & fractures in older people are a costly & often preventable health issue. Data shows that emergency admissions due to falls related injuries in the over 65s is above the England average in Rushmoor and Hart. This project seeks to improve outcomes for people at risk of falls through effective commissioning.





## [Review of Falls Prevention Services: A year-long study of the NHS Falls Clinic and Local Authority Strength & Balance Classes](#)

Healthwatch Ealing  
Undated

Your Voice in Health and Social Care and Healthwatch Ealing are pleased to publish this report: Review of Falls Prevention Services: A year-long study of the NHS Falls Clinic and Local Authority Strength & Balance classes. The report details the findings of user feedback on the NHS Falls Clinic and its various components, Strength and Balance classes, as well as a variety of other related services in order to evaluate the benefits and impact on user confidence and health and wellbeing, and thereby offer some indication towards impact upon falls prevented.

### SYSTEMATIC REVIEWS

#### [Psychological and educational interventions for preventing falls in older people living in the community](#)

**Authors:** Amy Drahota; Julie E Udell; Heather Mackenzie; Mark T Pugh

**Publication Date:** 03 Oct 2024

**Journal:** Cochrane Database of Systematic Reviews Article no. CD013480

**Abstract:** Background Older adults are at increased risk of both falls and fall-related injuries. Falls have multiple causes and many interventions exist to try and prevent them, including educational and psychological interventions. Educational interventions aim to increase older people's understanding of what they can do to prevent falls and psychological interventions can aim to improve confidence/motivation to engage in activities that may prevent falls. This review is an update of previous evidence to focus on educational and psychological interventions for falls prevention in community-dwelling older people. Objectives To assess the benefits and harms of psychological interventions (such as cognitive behavioural therapy; with or without an education component) and educational interventions for preventing falls in older people living in the community. Search methods We searched CENTRAL, MEDLINE, Embase, four other databases, and two trials registries to June 2023. We also screened reference lists and conducted forward-citation searching. Selection criteria We included randomised controlled trials of community-dwelling people aged 60 years and older exploring the effectiveness of psychological interventions (such as cognitive behavioural therapy) or educational interventions (or both) aiming to prevent falls. Data collection and analysis We used standard methodological procedures expected by Cochrane. Our primary outcome was rate of falls. We also explored: number of people falling; people with fall-related fractures; people with falls that required medical attention; people with fall-related hospital admission; fall-related psychological outcomes (i.e. concerns about falling); health-related quality of life; and adverse events. Main results We included 37 studies (six on cognitive behavioural interventions; three on motivational interviewing; three on other psychological interventions; nine on multifactorial (personalised) education; 12 on multiple topic education; two on single topic education; one with unclear education type; and one psychological plus educational intervention). Studies randomised 17,478 participants (71% women; mean age 73 years). Most studies were at high or unclear risk of bias for one or more domains. Cognitive behavioural interventions make little to no difference to the number of fallers (risk ratio (RR) 0.92, 95% confidence interval (CI) 0.82 to 1.02; 4 studies, 1286 participants; low-certainty evidence), and there was a slight reduction in concerns about falling (standardised mean difference (SMD) -0.30, 95% CI -0.42 to -0.19; 3 studies, 1132 participants; low-certainty evidence). The evidence is very uncertain or missing about the effect of cognitive behavioural interventions on other outcomes. Motivational interviewing The evidence is very uncertain about the effect of motivational interviewing on rate of falls, number of fallers, and fall-related psychological outcomes. No evidence is available on the





effects of motivational interviewing on people experiencing fall-related fractures, falls requiring medical attention, fall-related hospital admission, or adverse events. Other psychological interventions The evidence is very uncertain about the effect of health coaching on rate of falls, number of fallers, people sustaining a fall-related fracture, or fall-related hospital admission; the effect of other psychological interventions on these outcomes was not measured. The evidence is very uncertain about the effect of health coaching, guided imagery, and mental practice on fall-related psychological outcomes. The effect of other psychological interventions on falls needing medical attention or adverse events was not measured. Multifactorial education Multifactorial (personalised) education makes little to no difference to the rate of falls (rate ratio 0.95, 95% CI 0.77 to 1.17; 2 studies, 777 participants; low-certainty evidence). The effect of multifactorial education on people experiencing fall-related fractures was very imprecise (RR 0.66, 95% CI 0.29 to 1.48; 2 studies, 510 participants; low-certainty evidence), and the evidence is very uncertain about its effect on the number of fallers. There was no evidence for other outcomes. Multiple component education Multiple component education may improve fall-related psychological outcomes (MD -2.94, 95% CI -4.41 to -1.48; 1 study, 459 participants; low-certainty evidence). However, the evidence is very uncertain about its effect on all other outcomes. Single topic education The evidence is very uncertain about the effect of single-topic education on rate of falls, number of fallers, and people experiencing fall-related fractures. There was no evidence for other outcomes. Psychological plus educational interventions Motivational interviewing/coaching combined with multifactorial (personalised) education likely reduces the rate of falls (although the size of this effect is not clear; rate ratio 0.65, 95% CI 0.43 to 0.99; 1 study, 430 participants; moderate-certainty evidence), but makes little to no difference to the number of fallers (RR 0.93, 95% CI 0.76 to 1.13; 1 study, 430 participants; high-certainty evidence). It probably makes little to no difference to falls-related psychological outcomes (MD -0.70, 95% CI -1.81 to 0.41; 1 study, 353 participants; moderate-certainty evidence). There were no adverse events detected (1 study, 430 participants; moderate-certainty evidence). There was no evidence for psychological plus educational intervention on other outcomes. Authors' conclusions The evidence suggests that a combined psychological and educational intervention likely reduces the rate of falls (but not fallers), without affecting adverse events. Overall, the evidence for individual psychological interventions or delivering education alone is of low or very-low certainty; future research may change our confidence and understanding of the effects. Cognitive behavioural interventions may improve concerns about falling slightly, but this may not help reduce the number of people who fall. Certain types of education (i.e. multiple component education) may also help reduce concerns about falling, but not necessarily reduce the number of falls. Future research should adhere to reporting standards for describing the interventions used and explore how these interventions may work, to better understand what could best work for whom in what situation. There is a particular dearth of evidence for low- to middle-income countries.

### [Safety-promoting interventions for the older person with hip fracture on returning home: A systematic review.](#)

**Authors:** Rocha P.; Baixinho C.L.; Marques A. and Henriques, M. A.

**Publication Date:** Feb 2024

**Journal:** International Journal of Orthopaedic and Trauma Nursing 52, pp. 101063

**Abstract:** BACKGROUND: Older adults with a prior history of falls that results in hip fractures have difficulties in regaining pre-fracture functional capacity. Scientific evidence has shown benefits of the implementation of multidimensional rehabilitation programs, but this evidence is not systematized with regard to continuity of care after hospital discharge. OBJECTIVE(S): To identify interventions that promote safety and functional recovery of older adults with hip fractures after hospital discharge. METHOD(S): A systematic review was carried out according to Cochrane methodology. The research strategy was predefined





for the MEDLINE and CINAHL databases. The identified articles were screened according to the eligibility criteria by two independent reviewers. The articles included in the bibliographic sample were evaluated for risk of bias. RESULT(S): Of the 10,036 articles found, 10 were included in this systematic review. The safety-promoting interventions identified were: exercise training, occupational therapy/activities of daily living training, transfer and gait training, strengthening exercises, education on assistive device use, fall prevention education, nutritional assessment, environmental modifications/adjustments at home, use of an app, medication, self-care education, and support and counseling. CONCLUSION(S): In eight studies analyzed, exercise training emerged as the most effective intervention for promoting the safety of older adults after hip fractures on returning home. Three studies associated two or more interventions, which focused on exercise training, occupational therapy/training of activities of daily living, and conventional postoperative rehabilitation with transfer and gait training, strengthening exercises, education on assistive device use and discharge planning, aiming to achieve muscle strengthening and safe gait, associated with the performance of activities of daily living.

### [Home Modifications for Older Adults: A Systematic Review](#)

**Authors:** Sheth, Sohum and Cogle, Christopher R.

**Publication Date:** May 2023

**Journal:** Journal of Applied Gerontology 42(5), pp. 1151–1164

**Abstract:** While  $\geq 10,000$  Americans turn 65 years old every day, only 10% of American homes are "aging ready." Unsafe homes can exacerbate disability, lead to falls, and increase the likelihood of hospitalization. With increased investments in home and community-based services, public health stakeholders are considering home modifications to promote successful aging. While several home modification models exist, there is significant heterogeneity between models and no consensus on critical features. PubMed, EMBASE, and Web of Science were reviewed and twelve randomized controlled trials of home modifications for older adults were identified and evaluated for model structure, reported outcomes, and risk of bias. Overall, occupational therapist-driven home modifications supplemented with clinical, physical activity, and/or behavioral components saw the greatest success. This systematic review discusses the components of these models, highlights particularly effective and frequently used features, and the practice and research needed to create effective next-generation home modification models which promote healthy longevity.

### [Environmental interventions for preventing falls in older people living in the community](#)

**Authors:** Lindy Clemson; Susan Stark; Alison C Pighills; Nicola J Fairhall; Sarah E Lamb; Jinnat Ali; Catherine Sherrington

**Publication Date:** 10 March 2023

**Journal:** Cochrane Database of Systematic Reviews Article no. CD013258

**Abstract:** Background Falls and fall-related injuries are common. A third of community-dwelling people aged over 65 years fall each year. Falls can have serious consequences including restricting activity or institutionalisation. This review updates the previous evidence for environmental interventions in fall prevention. Objectives To assess the effects (benefits and harms) of environmental interventions (such as fall-hazard reduction, assistive technology, home modifications, and education) for preventing falls in older people living in the community. Search methods We searched CENTRAL, MEDLINE, Embase, other databases, trial registers, and reference lists of systematic reviews to January 2021. We contacted researchers in the field to identify additional studies. Selection criteria We included randomised controlled trials evaluating the effects of environmental interventions (such as





reduction of fall hazards in the home, assistive devices) on falls in community-residing people aged 60 years and over. Data collection and analysis We used standard methodological procedures expected by Cochrane. Our primary outcome was rate of falls. Main results We included 22 studies from 10 countries involving 8463 community-residing older people. Participants were on average 78 years old, and 65% were women. For fall outcomes, five studies had high risk of bias and most studies had unclear risk of bias for one or more risk of bias domains. For other outcomes (e.g. fractures), most studies were at high risk of detection bias. We downgraded the certainty of the evidence for high risk of bias, imprecision, and/or inconsistency. Home fall-hazard reduction (14 studies, 5830 participants) These interventions aim to reduce falls by assessing fall hazards and making environmental safety adaptations (e.g. non-slip strips on steps) or behavioural strategies (e.g. avoiding clutter). Home fall-hazard interventions probably reduce the overall rate of falls by 26% (rate ratio (RaR) 0.74, 95% confidence interval (CI) 0.61 to 0.91; 12 studies, 5293 participants; moderate-certainty evidence); based on a control group risk of 1319 falls per 1000 people a year, this is 343 (95% CI 118 to 514) fewer falls. However, these interventions were more effective in people who are selected for higher risk of falling, with a reduction of 38% (RaR 0.62, 95% CI 0.56 to 0.70; 9 studies, 1513 participants; 702 (95% CI 554 to 812) fewer falls based on a control risk of 1847 falls per 1000 people; high-certainty evidence). We found no evidence of a reduction in rate of falls when people were not selected for fall risk (RaR 1.05, 95% CI 0.96 to 1.16; 6 studies, 3780 participants; high-certainty evidence). Findings were similar for the number of people experiencing one or more falls. These interventions probably reduce the overall risk by 11% (risk ratio (RR) 0.89, 95% CI 0.82 to 0.97; 12 studies, 5253 participants; moderate-certainty evidence); based on a risk of 519 per 1000 people per year, this is 57 (95% CI 15 to 93) fewer fallers. However, for people at higher risk of falling, we found a 26% decrease in risk (RR 0.74, 95% CI 0.65 to 0.85; 9 studies, 1473 participants), but no decrease for unselected populations (RR 0.99, 95% CI 0.92 to 1.07; 6 studies, 3780 participants) (high-certainty evidence). These interventions probably make little or no important difference to health-related quality of life (HRQoL) (standardised mean difference 0.09, 95% CI -0.10 to 0.27; 5 studies, 1848 participants; moderate-certainty evidence). They may make little or no difference to the risk of fall-related fractures (RR 1.00, 95% CI 0.98 to 1.02; 2 studies, 1668 participants), fall-related hospitalisations (RR 0.96, 95% CI 0.87 to 1.06; 3 studies, 325 participants), or in the rate of falls requiring medical attention (RaR 0.91, 95% CI 0.58 to 1.43; 3 studies, 946 participants) (low-certainty evidence). The evidence for number of fallers requiring medical attention was unclear (2 studies, 216 participants; very low-certainty evidence). Two studies reported no adverse events. Assistive technology Vision improvement interventions may make little or no difference to the rate of falls (RaR 1.12, 95% CI 0.84 to 1.50; 3 studies, 1489 participants) or people experiencing one or more falls (RR 1.09, 95% CI 0.79 to 1.50) (low-certainty evidence). We are unsure of the evidence for fall-related fractures (2 studies, 976 participants) and falls requiring medical attention (1 study, 276 participants) because the certainty of the evidence is very low. There may be little or no difference in HRQoL (mean difference 0.40, 95% CI -1.12 to 1.92) or adverse events (falls while switching glasses; RR 1.00, 95% CI 0.98 to 1.02) (1 study, 597 participants; low-certainty evidence). Results for other assistive technology - footwear and foot devices, and self-care and assistive devices (5 studies, 651 participants) - were not pooled due to the diversity of interventions and contexts. Education We are uncertain whether an education intervention to reduce home fall hazards reduces the rate of falls or the number of people experiencing one or more falls (1 study; very low-certainty evidence). These interventions may make little or no difference to the risk of fall-related fractures (RR 1.02, 95% CI 0.96 to 1.08; 1 study, 110 participants; low-certainty evidence). Home modifications We found no trials of home modifications that measured falls as an outcome for task enablement and functional independence. Authors' conclusions We found high-certainty evidence that home fall-hazard interventions are effective in reducing the rate of falls and the number of fallers when targeted to people at higher risk of falling, such as having had a fall in the past year and





recently hospitalised or needing support with daily activities. There was evidence of no effect when interventions were targeted to people not selected for risk of falling. Further research is needed to examine the impact of intervention components, the effect of awareness raising, and participant-interventionist engagement on decision-making and adherence. Vision improvement interventions may or may not impact the rate of falls. Further research is needed to answer clinical questions such as whether people should be given advice or take additional precautions when changing eye prescriptions, or whether the intervention is more effective when targeting people at higher risk of falls. There was insufficient evidence to determine whether education interventions impact falls.

### [Occupational Therapy and the IMPACT Act: Part 1. A Systematic Review of Evidence for Fall Prevention and Reduction, Community Discharge and Reintegration, and Readmission Prevention Interventions.](#)

**Authors:** Lucas Molitor, Whitney; Feldhacker, Diana R.; Lohman, Helene; Lampe, Angela M. and Jensen, Lou

**Publication Date:** 01 Jan 2022

**Journal:** American Journal of Occupational Therapy 76 (1)

**Abstract:** **IMPORTANCE:** Interventions that prevent falls, facilitate discharge after hospitalization, and reduce hospital readmissions assist occupational therapy practitioners in demonstrating professional value, improving quality, and reducing costs. **OBJECTIVE:** In this systematic review, we address three outcome areas of the Improving Medicare Post-Acute Care Transformation (IMPACT) Act of 2014: prevention and reduction of falls, facilitation of community discharge and reintegration, and prevention of hospital readmission. **DATA SOURCES:** We conducted a search of the literature published between 2009 and 2019. **Study Selection and Data Collection:** We developed operational definitions to help us identify articles that answered the search question for each outcome area. This study followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. **FINDINGS:** We found 53 articles that address the three outcome areas. Regarding the prevention and reduction of falls, low strength of evidence is available for interventions focusing on a single fall risk and for customized interventions addressing multiple risks. Moderate strength of evidence supports structured community fall risk prevention interventions. Low strength of evidence was found for community discharge and reintegration interventions that include physical activity and educational programming. Low to moderate strength of evidence was found for readmission prevention interventions for patients with four types of condition. **Conclusion and Relevance:** Several intervention themes in the three outcome areas of interest are supported by few studies or by studies with a moderate risk of bias. Additional research is needed that supports the value of occupational therapy interventions in these outcome areas. **What This Article Adds:** Our study provides important insights into the state of the evidence related to occupational therapy interventions to address three outcome areas of the IMPACT Act.

### [Interventions for preventing falls in Parkinson's disease](#)

**Authors:** Natalie E Allen; Colleen G Canning; Lorena Rosa S Almeida; Bastiaan R Bloem; Samyra HJ Keus; Niklas Löfgren; Alice Nieuwboer; Geert SAF Verheyden; Tiê P Yamato; Catherine Sherrington

**Publication Date:** 06 June 2022

**Journal:** Cochrane Database of Systematic Reviews 9. Art. No.: CD011574.

**Abstract:** **Background** Most people with Parkinson's disease (PD) experience at least one fall during the course of their disease. Several interventions designed to reduce falls have been studied. An up-to-date synthesis of evidence for interventions to reduce falls in people with PD will assist with informed decisions regarding fall-prevention interventions for people with PD. **Objectives** To assess the effects of





interventions designed to reduce falls in people with PD. Search methods CENTRAL, MEDLINE, Embase, four other databases and two trials registers were searched on 16 July 2020, together with reference checking, citation searching and contact with study authors to identify additional studies. We also conducted a top-up search on 13 October 2021.

**Selection criteria** We included randomised controlled trials (RCTs) of interventions that aimed to reduce falls in people with PD and reported the effect on falls. We excluded interventions that aimed to reduce falls due to syncope.

**Data collection and analysis** We used standard Cochrane Review procedures. Primary outcomes were rate of falls and number of people who fell at least once. Secondary outcomes were the number of people sustaining one or more fall-related fractures, quality of life, adverse events and economic outcomes. The certainty of the evidence was assessed using GRADE.

**Main results** This review includes 32 studies with 3370 participants randomised. We included 25 studies of exercise interventions (2700 participants), three studies of medication interventions (242 participants), one study of fall-prevention education (53 participants) and three studies of exercise plus education (375 participants). Overall, participants in the exercise trials and the exercise plus education trials had mild to moderate PD, while participants in the medication trials included those with more advanced disease. All studies had a high or unclear risk of bias in one or more items. Illustrative risks demonstrating the absolute impact of each intervention are presented in the summary of findings tables.

Twelve studies compared exercise (all types) with a control intervention (an intervention not thought to reduce falls, such as usual care or sham exercise) in people with mild to moderate PD. Exercise probably reduces the rate of falls by 26% (rate ratio (RaR) 0.74, 95% confidence interval (CI) 0.63 to 0.87; 1456 participants, 12 studies; moderate-certainty evidence). Exercise probably slightly reduces the number of people experiencing one or more falls by 10% (risk ratio (RR) 0.90, 95% CI 0.80 to 1.00; 932 participants, 9 studies; moderate-certainty evidence). We are uncertain whether exercise makes little or no difference to the number of people experiencing one or more fall-related fractures (RR 0.57, 95% CI 0.28 to 1.17; 989 participants, 5 studies; very low-certainty evidence). Exercise may slightly improve health-related quality of life immediately following the intervention (standardised mean difference (SMD) -0.17, 95% CI -0.36 to 0.01; 951 participants, 5 studies; low-certainty evidence). We are uncertain whether exercise has an effect on adverse events or whether exercise is a cost-effective intervention for fall prevention.

Three studies trialled a cholinesterase inhibitor (rivastigmine or donepezil). Cholinesterase inhibitors may reduce the rate of falls by 50% (RaR 0.50, 95% CI 0.44 to 0.58; 229 participants, 3 studies; low-certainty evidence). However, we are uncertain if this medication makes little or no difference to the number of people experiencing one or more falls (RR 1.01, 95% CI 0.90 to 1.14; 230 participants, 3 studies) and to health-related quality of life (EQ5D Thermometer mean difference (MD) 3.00, 95% CI -3.06 to 9.06; very low-certainty evidence). Cholinesterase inhibitors may increase the rate of non fall-related adverse events by 60% (RaR 1.60, 95% CI 1.28 to 2.01; 175 participants, 2 studies; low-certainty evidence). Most adverse events were mild and transient in nature. No data was available regarding the cost-effectiveness of medication for fall prevention.

We are uncertain of the effect of education compared to a control intervention on the number of people who fell at least once (RR 10.89, 95% CI 1.26 to 94.03; 53 participants, 1 study; very low-certainty evidence), and no data were available for the other outcomes of interest for this comparison. We are also uncertain (very low-certainty evidence) whether exercise combined with education makes little or no difference to the number of falls (RaR 0.46, 95% CI 0.12 to 1.85; 320 participants, 2 studies), the number of people sustaining fall-related fractures (RR 1.45, 95% CI 0.40 to 5.32, 320 participants, 2 studies), or health-related quality of life (PDQ39 MD 0.05, 95% CI -3.12 to 3.23, 305 participants, 2 studies). Exercise plus education may make little or no difference to the number of people experiencing one or more falls (RR 0.89, 95% CI 0.75 to 1.07; 352 participants, 3 studies; low-certainty evidence). We are uncertain whether exercise combined with education has an effect on adverse events or is a cost-effective intervention for fall prevention.

**Authors' conclusions** Exercise interventions probably reduce the rate of falls, and probably slightly reduce the number of people falling in people with mild to





moderate PD. Cholinesterase inhibitors may reduce the rate of falls, but we are uncertain if they have an effect on the number of people falling. The decision to use these medications needs to be balanced against the risk of non fall-related adverse events, though these adverse events were predominantly mild or transient in nature. Further research in the form of large, high-quality RCTs are required to determine the relative impact of different types of exercise and different levels of supervision on falls, and how this could be influenced by disease severity. Further work is also needed to increase the certainty of the effects of medication and further explore falls prevention education interventions both delivered alone and in combination with exercise.

### [Interventions Within the Scope of Occupational Therapy to Address Preventable Adverse Events in Inpatient and Home Health Postacute Care Settings: A Systematic Review](#)

**Authors:** Hunter, Elizabeth G. and Rhodus, Elizabeth

**Publication Date:** 01 Jan 2022

**Journal:** American Journal of Occupational Therapy 76(1), pp. 1–12

**Abstract:** Importance: Practitioners need to be familiar with, and involved in, managing quality-related adverse events in postacute care. Objective: To determine interventions within the scope of occupational therapy that address preventable adverse events in adult postacute inpatient and home health settings. Data Sources: Articles published from January 1995 through 2019 identified through searches of MEDLINE, PsycINFO, CINAHL, OTseeker, and Cochrane databases. Study Selection and Data Collection: Articles were collected, evaluated, and analyzed by two independent reviewers. They were assessed and synthesized with a goal of informing clinical practice. Findings: Twenty-four articles were included in the review. Of the 10 Centers for Medicare & Medicaid Services preventable adverse events, 6 were addressed: diabetes management (n = 2), dysphagia (n = 5), infection control (n = 1), pressure ulcers (n = 6), falls (n = 5), and discharge management (n = 5). There was strong strength of evidence that exercise programs should, when appropriate, be implemented in both inpatient and home health settings to decrease the risk of falls. There was moderate strength of evidence that practitioners could consider implementing a facility wide evidence-based pressure ulcer program; providing multidisciplinary rehabilitation and swallow strengthening exercises for dysphagia; implementing a multidisciplinary, multicomponent falls program; and using a manualized depression intervention in home health to decrease hospital readmission. Conclusions and Relevance: The review highlights the importance of preventable adverse events and of occupational therapy practitioners acknowledging and managing these events to enhance health outcomes and to control health care costs. What This Article Adds: Many interventions typically performed by occupational therapy practitioners address preventable adverse events. The review highlights the importance of practitioners being aware of this category of impairment or injury. This review highlights the importance of preventable adverse events and the importance of occupational therapy practitioners acknowledging and managing these events to enhance health outcomes and control health care costs.

### [Environmental and behavioural interventions for reducing physical activity limitation and preventing falls in older people with visual impairment](#)

**Authors:** Jian-Yu E; Tianjing Li; Lianne McNally; Katie Thomson; Uma Shahani; Lyle Gray; Tracey E Howe; Dawn A Skelton

**Publication Date:** 03 Sep 2020

**Journal:** Cochrane Database of Systematic Reviews 9. Art. No.: CD009233.





**Abstract:** Background Impairment of vision is associated with a decrease in activities of daily living. Avoidance of physical activity in older adults with visual impairment can lead to functional decline and is an important risk factor for falls. The rate of falls and fractures is higher in older people with visual impairment than in age-matched visually normal older people. Possible interventions to reduce activity restriction and prevent falls include environmental and behavioral interventions. Objectives We aimed to assess the effectiveness and safety of environmental and behavioral interventions in reducing physical activity limitation, preventing falls and improving quality of life amongst visually impaired older people. Search methods We searched CENTRAL (including the Cochrane Eyes and Vision Trials Register) (Issue 2, 2020), Ovid MEDLINE, Embase and eight other databases to 4 February 2020, with no language restrictions. Selection criteria Eligible studies were randomized controlled trials (RCTs) and quasi-randomized controlled trials (Q-RCTs) that compared environmental interventions, behavioral interventions or both, versus control (usual care or no intervention); or that compared different types of environmental or behavioral interventions. Eligible study populations were older people (aged 60 and over) with irreversible visual impairment, living in their own homes or in residential settings. To be eligible for inclusion, studies must have included a measure of physical activity or falls, the two primary outcomes of interest. Secondary outcomes included fear of falling, and quality of life. Data collection and analysis We used standard Cochrane methods. We assessed the certainty of the evidence using the GRADE approach. Main results We included six RCTs (686 participants) conducted in five countries (Australia, Hungary, New Zealand, UK, US) with follow-up periods ranging from two to 12 months. Participants in these trials included older adults (mean age 80 years) and were mostly female (69%), with visual impairments of varying severity and underlying causes. Participants mostly lived in their homes and were physically independent. We classified all trials as having high risk of bias for masking of participants, and three trials as having high or unclear risk of bias for all other domains. The included trials evaluated various intervention strategies (e.g. an exercise program versus home safety modifications). Heterogeneity of study characteristics, including interventions and outcomes, (e.g. different fall measures), precluded any meta-analysis. Two trials compared the home safety modification by occupational therapists versus social/home visits. One trial (28 participants) reported physical activity at six months and showed no evidence of a difference in mean estimates between groups (step counts: mean difference (MD) = 321, 95% confidence interval (CI) -1981 to 2623; average walking time (minutes): MD 1.70, 95% CI -24.03 to 27.43; telephone questionnaire for self-reported physical activity: MD -3.68 scores, 95% CI -20.6 to 13.24; low-certainty of evidence for each outcome). Two trials reported the proportion of participants who fell at six months (risk ratio (RR) 0.76, 95% CI 0.38 to 1.51; 28 participants) and 12 months (RR 0.59, 95% CI 0.43 to 0.80, 196 participants) with low-certainty of evidence for each outcome. One trial (28 participants) reported fear of falling at six months, using the Short Falls Efficacy Scale-International, and found no evidence of a difference in mean estimates between groups (MD 2.55 scores, 95% CI -0.51 to 5.61; low-certainty of evidence). This trial also reported quality of life at six months using 12-Item Short Form Health Survey, and showed no evidence of a difference in mean estimates between groups (MD -3.14 scores, 95% CI -10.86 to 4.58; low-certainty of evidence). Five trials compared a behavioral intervention (exercise) versus usual activity or social/home visits. One trial (59 participants) assessed self-reported physical activity at six months and showed no evidence of a difference between groups (MD 9.10 scores, 95% CI -13.85 to 32.5; low-certainty of evidence). Three trials investigated different fall measures at six or 12 months, and found no evidence of a difference in effect estimates (RRs for proportion of fallers ranged from 0.54 (95% CI 0.29 to 1.01; 41 participants); to 0.93 (95% CI 0.61 to 1.39; 120 participants); low-certainty of evidence for each outcome). Three trials assessed the fear of falling using Short Falls Efficacy Scale-International or the Illinois Fear of Falling Measure from two to 12 months, and found no evidence of a difference in mean estimates between groups (the estimates ranged from -0.88 score (95% CI -2.72 to 0.96, 114 participants) to 1.00 score (95% CI -0.13 to 2.13; 59 participants); low-certainty of evidence). One trial (59 participants) assessed the European Quality of Life scale at six





months (MD -0.15 score, 95% CI -0.29 to -0.01), and found no evidence of a clinical difference between groups (low-certainty of evidence). Authors' conclusions There is no evidence of effect for most of the environmental or behavioral interventions studied for reducing physical activity limitation and preventing falls in visually impaired older people. The certainty of evidence is generally low due to poor methodological quality and heterogeneous outcome measurements. Researchers should form a consensus to adopt standard ways of measuring physical activity and falls reliably in older people with visual impairments. Fall prevention trials should plan to use objectively measured or self-reported physical activity as outcome measures of reduced activity limitation. Future research should evaluate the acceptability and applicability of interventions, and use validated questionnaires to assess the adherence to rehabilitative strategies and performance during activities of daily living.

### [Exercise for preventing falls in older people living in the community](#)

**Authors:** Catherine Sherrington; Nicola J Fairhall; Geraldine K Wallbank; Anne Tiedemann; Zoe A Michaleff; Kirsten Howard; Lindy Clemson; Sally Hopewell; Sarah E Lamb

**Publication Date:** 21 Jan 2019

**Journal:** Cochrane Database of Systematic Reviews Article no. CD012424

**Abstract:** Background At least one-third of community-dwelling people over 65 years of age fall each year. Exercises that target balance, gait and muscle strength have been found to prevent falls in these people. An up-to-date synthesis of the evidence is important given the major long-term consequences associated with falls and fall-related injuries Objectives To assess the effects (benefits and harms) of exercise interventions for preventing falls in older people living in the community. Search methods We searched CENTRAL, MEDLINE, Embase, three other databases and two trial registers up to 2 May 2018, together with reference checking and contact with study authors to identify additional studies. Selection criteria We included randomised controlled trials (RCTs) evaluating the effects of any form of exercise as a single intervention on falls in people aged 60+ years living in the community. We excluded trials focused on particular conditions, such as stroke. Data collection and analysis We used standard methodological procedures expected by Cochrane. Our primary outcome was rate of falls. Main results We included 108 RCTs with 23,407 participants living in the community in 25 countries. There were nine cluster-RCTs. On average, participants were 76 years old and 77% were women. Most trials had unclear or high risk of bias for one or more items. Results from four trials focusing on people who had been recently discharged from hospital and from comparisons of different exercises are not described here. Exercise (all types) versus control Eighty-one trials (19,684 participants) compared exercise (all types) with control intervention (one not thought to reduce falls). Exercise reduces the rate of falls by 23% (rate ratio (RaR) 0.77, 95% confidence interval (CI) 0.71 to 0.83; 12,981 participants, 59 studies; high-certainty evidence). Based on an illustrative risk of 850 falls in 1000 people followed over one year (data based on control group risk data from the 59 studies), this equates to 195 (95% CI 144 to 246) fewer falls in the exercise group. Exercise also reduces the number of people experiencing one or more falls by 15% (risk ratio (RR) 0.85, 95% CI 0.81 to 0.89; 13,518 participants, 63 studies; high-certainty evidence). Based on an illustrative risk of 480 fallers in 1000 people followed over one year (data based on control group risk data from the 63 studies), this equates to 72 (95% CI 52 to 91) fewer fallers in the exercise group. Subgroup analyses showed no evidence of a difference in effect on both falls outcomes according to whether trials selected participants at increased risk of falling or not. The findings for other outcomes are less certain, reflecting in part the relatively low number of studies and participants. Exercise may reduce the number of people experiencing one or more fall-related fractures (RR 0.73, 95% CI 0.56 to 0.95; 4047 participants, 10 studies; low-certainty evidence) and the number of people experiencing one or more falls requiring medical attention (RR 0.61, 95% CI 0.47 to 0.79; 1019 participants, 5 studies; low-certainty evidence). The effect of exercise on the number of people who





experience one or more falls requiring hospital admission is unclear (RR 0.78, 95% CI 0.51 to 1.18; 1705 participants, 2 studies, very low-certainty evidence). Exercise may make little important difference to health-related quality of life: conversion of the pooled result (standardised mean difference (SMD) -0.03, 95% CI -0.10 to 0.04; 3172 participants, 15 studies; low-certainty evidence) to the EQ-5D and SF-36 scores showed the respective 95% CIs were much smaller than minimally important differences for both scales. Adverse events were reported to some degree in 27 trials (6019 participants) but were monitored closely in both exercise and control groups in only one trial. Fourteen trials reported no adverse events. Aside from two serious adverse events (one pelvic stress fracture and one inguinal hernia surgery) reported in one trial, the remainder were non-serious adverse events, primarily of a musculoskeletal nature. There was a median of three events (range 1 to 26) in the exercise groups. Different exercise types versus control Different forms of exercise had different impacts on falls (test for subgroup differences, rate of falls:  $P = 0.004$ ,  $I^2 = 71\%$ ). Compared with control, balance and functional exercises reduce the rate of falls by 24% (RaR 0.76, 95% CI 0.70 to 0.81; 7920 participants, 39 studies; high-certainty evidence) and the number of people experiencing one or more falls by 13% (RR 0.87, 95% CI 0.82 to 0.91; 8288 participants, 37 studies; high-certainty evidence). Multiple types of exercise (most commonly balance and functional exercises plus resistance exercises) probably reduce the rate of falls by 34% (RaR 0.66, 95% CI 0.50 to 0.88; 1374 participants, 11 studies; moderate-certainty evidence) and the number of people experiencing one or more falls by 22% (RR 0.78, 95% CI 0.64 to 0.96; 1623 participants, 17 studies; moderate-certainty evidence). Tai Chi may reduce the rate of falls by 19% (RaR 0.81, 95% CI 0.67 to 0.99; 2655 participants, 7 studies; low-certainty evidence) as well as reducing the number of people who experience falls by 20% (RR 0.80, 95% CI 0.70 to 0.91; 2677 participants, 8 studies; high-certainty evidence). We are uncertain of the effects of programmes that are primarily resistance training, or dance or walking programmes on the rate of falls and the number of people who experience falls. No trials compared flexibility or endurance exercise versus control. Authors' conclusions Exercise programmes reduce the rate of falls and the number of people experiencing falls in older people living in the community (high-certainty evidence). The effects of such exercise programmes are uncertain for other non-falls outcomes. Where reported, adverse events were predominantly non-serious. Exercise programmes that reduce falls primarily involve balance and functional exercises, while programmes that probably reduce falls include multiple exercise categories (typically balance and functional exercises plus resistance exercises). Tai Chi may also prevent falls but we are uncertain of the effect of resistance exercise (without balance and functional exercises), dance, or walking on the rate of falls.

### [Occupational therapy fall prevention interventions for community-dwelling older adults: a systematic review](#)

**Authors:** ELLIOTT Sharon and LELAND Natalie, E.

**Publication Date:** July 2018

**Journal:** The American Journal of Occupational Therapy 72(4)

**Abstract:** Objective: Accidental falls among community-dwelling older adults are preventable and increase the risk of morbidity, hospitalization, and institutionalization. We updated and broadened a 2008 systematic review examining the evidence for the effectiveness of fall prevention interventions in improving fall-related outcomes, occupational performance, quality of life, and health care facility readmissions for community-dwelling older adults., Method: Literature published from 2008 to 2015 from five electronic databases was searched and analysed, Results: Fifty articles met the inclusion criteria and were critically appraised and synthesized-37 provided Level I; 5, Level II; and 8, Level III evidence. Analysis was organized into four intervention themes: single component, multicomponent, multifactorial, and population based. Mixed evidence was found for single-





component and multifactorial interventions, strong evidence was found for multicomponent interventions, and moderate evidence was found for population-based interventions., Conclusion: These findings can inform the delivery and integration of fall prevention interventions from acute care to community discharge.

## REVIEWS

### [Occupational therapist's actions in preventing falls of the elderly person at home: an integrative review of literature \(2017-2022\)](#)

**Authors:** Schuartz, Patricia; Andrade Ferreira, Ana Laura; Dias Bernardo, Lilian; Marquine Raymundo, Taiuani and del Carmen Muñoz Palm, Rosibeth

**Publication Date:** 08 Dec 2023

**Journal:** Brazilian Journal of Occupational Therapy 31, pp. 1–21

**Abstract:** Introduction: Falls in the elderly are widely discussed by health professionals, due to their physical, functional, and psychosocial consequences, which compromise participation in daily activities. Objective: To identify the intervention actions and strategies used by the occupational therapist to prevent falls in the elderly at home. Method: This is an integrative literature review, which tracked the scientific productions in the Biblioteca Virtual em Saúde (BVS), MEDLINE/PubMed, Scopus, Web of Science, CINAHL and Embase databases, in the period of January 2017 to July 2022. Results: 19 publications were identified that made up the research corpus, being categorized for analysis in the following points: assessments used by the occupational therapist and the occupational therapist's actions for the prevention of falls, including functional training integrated into daily activities, home environmental adequacy interventions, educational actions and use of technologies and devices. Conclusion: The home is the most prone place for the occurrence of falls in the elderly, where the actions of the occupational therapist are significantly important for the maintenance of safety in this context. The occupational therapist's actions contribute to the prevention of falls and maintaining the safety of the elderly at home. In addition, it was noted the incipience of national studies of occupational therapy on the subject, which shows the need to expand the publications of the profession in this field of action.

### [Fall Hazard Identification: A Scoping Review](#)

**Authors:** Ziebart, Christina; MacDermid, Joy; Bobos, Pavlos; Furtado, Rochelle; MacDermid-Watts, Sara; Bryant, Dianne; Szekeres, Mike and Suh, Nina

**Publication Date:** 24 Aug 2020

**Journal:** Physical & Occupational Therapy in Geriatrics 39(1), pp. 96–111

**Abstract:** Fall hazards identification and reduction is an important component of falls prevention. The purpose of this review is to describe the literature on fall hazards identification in older adults, characterize how it is delivered, and identify any gaps in knowledge. CINAHL, PubMed, EMBASE, Scopus, and PsychINFO were used to identify articles. Studies were selected to describe: 1) theoretical strategies related to fall hazards identification, 2) the nature of interventions, and 3) the use in community contexts. A total of 35 articles were identified spanning from 1994 to 2019. Fall hazards identification was most commonly used to reduce the risk of falls in community-dwelling older adults, focusing largely of fall reduction in the home, facilitated by occupational therapists and researchers. Establishing a clear definition of fall hazards, and developing a theoretical framework to facilitate program implementation should advance fall hazards identification.





## [A scoping review of fall hazards in the homes of older adults and development of a framework for assessment and intervention](#)

**Authors:** Keglovits, Marian; Clemson, Lindy; Hu, Yi-Ling; Nguyen, An; Neff, Anna J.; Mandelbaum, Caren; Hudson, Margaret; Williams, Rebecca; Silianoff, Tara and Stark, Susan

**Publication Date:** 09 July 2020

**Journal:** Australian Occupational Therapy Journal 67(5), pp. 470–478

**Abstract:** Introduction: Comprehensive evaluation and intervention provided by occupational therapists is effective in reducing the presence of fall hazards in the homes of older adults. The purpose of this study was to document known environmental hazards and to update a previous content analysis. A secondary goal reviewed a framework for evaluation and practice. Methods: A comprehensive scoping review of published academic articles was performed from 1996 to 2019 to answer: What environmental hazards have been associated with falls in the homes of community-dwelling older adults? Data was extracted in a standardised critical appraisal worksheet and content analysis was conducted. A review of a conceptual framework for assessment and intervention was conducted by international experts (n = 6) in face-to-face interviews. Results: Fourteen studies met the inclusion criteria for the scoping study. The studies reported 17 in-home environmental hazards: throw rugs/carpets, clutter, cords/wires, poorly placed light switches, items placed too low, items placed too high, no grab bars, toilet seats too low, uneven floor surfaces, slippery/wet surfaces, snowy/icy surfaces, backless/unsupportive shoes, unsteady stairs, inadequate lighting, inadequate heating/cooling, step stools without railings, and pets. Conclusion: A comprehensive list of specific fall hazards in and around the homes of older adults and a guiding framework offers occupational therapists an evidence-based foundation for fall prevention efforts.

### JOURNAL ARTICLES

#### [PA2026. The role of occupational therapists in fall prevention: A cost-effective investment](#)

**Authors:** Keramiotou, Kyriaki; Abela, S.; Söderström, A. and Morrissey, A. M.

**Publication Date:** 14 Nov 2025

**Journal:** European Journal of Public Health 35, pp. v58–v59

**Abstract:** Issue/Problem: Falls represent a significant public health concern across Europe, particularly among older adults and vulnerable populations. Description of problem: According to the World Health Organisation (WHO), by 2050, older people will make-up one-third of the world's population. The consequences of falls--ranging from physical injury and psychological trauma to increased healthcare service use and loss of independence--place considerable strain on health and social care systems. This abstract outlines a poster presentation that explores the vital role of occupational therapists (OTs) in fall prevention, through a comprehensive literature review. Results: Occupational Therapists are uniquely positioned to assess individual risk factors, modify environments, and deliver tailored interventions that reduce fall risk. Through strategies such as home safety assessments and modifications, functional training, and assistive technology recommendations, OTs address both intrinsic and extrinsic contributors to falls. Lessons: The poster will synthesise current literature highlighting the efficacy of occupational therapy interventions in reducing fall incidence and severity. In addition, it will present practical examples of economic arguments (from COTEC Member Associations) demonstrating that investment in the prevention of falls through occupational therapy is more cost-effective than managing the sequelae of falls, such as emergency care, hospital admissions, and long-term rehabilitation. Key messages: • Occupational therapists play a critical role in preventing falls by delivering personalised,





evidence-based interventions that address both individual and environmental risk factor • Investing in occupational therapy for fall prevention is more costeffective than managing the consequences of falls, offering both clinical and economic benefits to health and social care systems.

### [Maintaining independence at home after a fall: a process evaluation of the MAINTAIN multicomponent intervention for people living with dementia](#)

**Authors:** Greene, Leanne; Allan, Louise M.; Bingham, Alison; Sharma, Ashima; Whale, Bethany; Barber, Robert; Fox, Christopher; Goodwin, Victoria A.; Gordon, Adam Lee; Hall, Abigail J.; Harwood, Rowan H.; Hulme, Claire; Jackson, Thomas Andrew; Litherland, Rachel; Parry, Steve W.; Ukoumunne, Obi and Morgan-Trimmer, Sarah

**Publication Date:** 10 Sep 2025

**Journal:** Age & Ageing 54(9), pp. 1–10

**Abstract:** Background People with dementia who have a fall can experience both physical and psychological effects, often leading to diminished independence. Falls impose economic costs on the healthcare system. Despite elevated fall risks in dementia populations, evidence supporting effective home-based interventions remains limited. Methods Multiple-methods process evaluation within a pilot cluster randomised controlled trial informed by a realist approach. Settings included six UK sites/clusters (three intervention, three control). Fidelity checks on routine data collection and fidelity observations of intervention sessions, multidisciplinary team meetings and supervision sessions were undertaken. Semi-structured interviews were conducted with people with dementia, caregivers and intervention therapists. Results The MAINTAIN intervention demonstrated high fidelity in home assessments and intervention delivery, with participants receiving a mean of 15 of the 22 available sessions with a range of 5–25 sessions. Qualitative findings revealed that regular home visits increased engagement and motivation. Multidisciplinary team support enhanced therapists' confidence, particularly with complex cases. While most participants achieved their functional goals and reported improved confidence, challenges included geographical disparities in service delivery, carer burden and varying effectiveness of referral pathways. Therapists' attitudes towards advanced dementia influenced intervention delivery. The paired approach, involving both the person living with dementia and their carer, supported activity engagement but occasionally added extra responsibilities for caregivers. Conclusions MAINTAIN was both feasible and acceptable. Future studies should consider standardising multidisciplinary support, incorporating targeted falls-related anxiety support and establishing sustainable post-intervention maintenance strategies. Protocol adaptations, such as video consultations, showed promise in addressing workforce constraints.

### [Co-designing approaches to enhance falls management after spinal cord injury in an Australian spinal injuries unit](#)

**Authors:** Marshall, Kathryn; Liddle, Jacki; Gustafsson, Louise; Watson, Rachael; Patterson, Freyr and Fleming, Jennifer

**Publication Date:** 07 July 2025

**Journal:** Australian Occupational Therapy Journal 72(4), pp. 1–13

**Abstract:** Introduction: Persons with spinal cord injury (SCI) are at risk of falls because of changes in sensation and motor function. While research exists on the consumer and clinician perspective of falls and fall prevention, these groups have not been brought together to determine how to effectively address this issue. The study aimed to co-design approaches to enhance falls management including prevention of falls and post fall management, after SCI in inpatient spinal rehabilitation. Methods: Using an experience-based co-design process, six consumers and eight clinicians, including occupational therapists, each participated in multiple focus groups and/or individual interviews. Data were





collected over three cycles and were used to (1) share and explore the experience and perspectives of falls after SCI, (2) determine possible approaches to enhance services currently offered, and (3) develop and refine principles to enhance falls management. Data analysis followed an interpretive description approach with constant comparative analysis. Following each cycle, researchers engaged in discussion, generated themes, and tested ideas in the following cycle. Consumer and community involvement: This research was completed with people with lived experience of SCI. Co-investigators with lived experience of SCI were involved in the planning and conduct of the study. Findings: It was agreed that falls management is required lifelong for persons with SCI, although the important role of inpatient preparation was highlighted. Different perspectives were shared with consensus met on key issues and actions to address falls in the inpatient setting. Practice principles produced included getting everyone on the same page, learning to move safely through experience-based learning, understanding it is more than just falls, and the need for individualised practice. Conclusion: This work has combined experiences and perspectives from consumers and clinicians with approaches developed for future service improvement to enhance falls management for people with SCI in inpatient spinal rehabilitation

**PLAIN LANGUAGE SUMMARY** This work asked people with spinal cord injury and people working in the hospital about falls in hospital. It wanted to find ways to improve how people can plan for and deal with falls in hospital and when they leave hospital. A series of one-on-one and group interviews found out about problems with how hospitals help people with falls now and ways to make it better. We learnt that people with spinal cord injury and people working in the hospital both need to work together. Also, people with spinal cord injury want to practice tasks to prepare for and deal with falls. They want to learn about how to be assertive and want education to be made just for them. This study shows how hospitals can improve what they are doing about falls.

### [\*\*A Multimodal Fall Prevention Intervention in the Setting of the Emergency Department.\*\*](#)

**Authors:** Niznik, Joshua D.; Small, Cassandra; Kelley, Casey J.; McMullen, Jessica; Anton, Greta; Roberts, Ellen; Lourduraj, Sophia; Casey, Martin F.; Busby-Whitehead, Jan and Davenport, Katie

**Publication Date:** 27 June 2025

**Journal:** Journal of the American Geriatrics Society 73(9), pp. 2780–2788

**Abstract:** **BACKGROUND:** The emergency department (ED) is an opportune setting for fall prevention interventions. We implemented and evaluated a multimodal falls prevention intervention addressing medications, mobility, and functional risk factors among older adults presenting to the ED for fall-related injuries. **METHODS:** We implemented a quality improvement intervention at two hospitals among ED visits for adults aged 65 and older with a chief complaint of fall between May 2023 and June 2024. The intervention included: (1) medication review by a pharmacist; (2) assessment by physical therapy (PT); and (3) assessment by occupational therapy (OT). We conducted a retrospective evaluation of electronic health records and reported the proportion of patients that received screening along with risk factors, recommendations, adherence to recommendations, and return visits at 3 and 6 months. We used logistic regression to examine factors associated with return visits. **RESULTS:** We identified 686 older adults who received  $\geq 1$  screening. Most patients received PT and OT evaluations (94.8% and 93.4%), while fewer (15.2%) received medication reviews. The most common problems identified by PT and OT were fall risk, decreased mobility, and impaired balance. Discharge to a skilled nursing facility was the most common recommendation (55.5% PT, 55.1% OT) followed by home care (33.1% PT, 31.2% OT). High-risk medications most often identified were anticoagulants, antidepressants, and gabapentin. The most common recommendation was to "discuss with a primary care physician." Among those who received  $\geq 1$  intervention, 8.9% experienced a





return visit within 3 months and 12.8% within 6 months. Inpatient admission was associated with increased likelihood of return visits compared to discharge from the ED. **CONCLUSION:** The most prevalent risk factors for falls among older adults presenting to the ED are likely modifiable through PT and OT intervention. Further research is needed to address uptake barriers and longitudinal impact on outcomes.

### [A Novel Cooperative AI-Based Fall Risk Prediction Model for Older Adults](#)

**Authors:** Deepika Mohan, Peter Han Joo Chong and Jairo Gutierrez

**Publication Date:** 26 June 2025

**Journal:** Sensors 25 p. 3991

**Abstract:** Older adults make up about 12% of the public sector, primary care, and hospital use and represent a large proportion of the users of healthcare services. Older people are also more vulnerable to serious injury from unexpected falls due to tripping, slipping, or illness. This underscores the immediate necessity of stable and cost-effective e-health technologies in maintaining independent living. Artificial intelligence (AI) and machine learning (ML) offer promising solutions for early fall prediction and continuous health monitoring. This paper introduces a novel cooperative AI model that forecasts the risk of future falls in the elderly based on behavioral and health abnormalities. Two AI models' predictions are combined to produce accurate predictions: The AI1 model is based on vital signs using Fuzzy Logic, and the AI2 model is based on Activities of Daily Living (ADLs) using a Deep Belief Network (DBN). A meta-model then combines the outputs to generate a total fall risk prediction. The results show 85.71% sensitivity, 100% specificity, and 90.00% prediction accuracy when compared to the Morse Falls Scale (MFS). This emphasizes how deep learning-based cooperative systems can improve well-being for older adults living alone, facilitate more precise fall risk assessment, and improve preventive care.

### [Does telehealth delivery of an occupational therapy home visiting service provide a non-inferior alternative to in-person delivery of the same service? A matched cohort study](#)

**Authors:** Lommerzheim, Rachel; Savira, Feby; Lewis, Georgina; Taylor, Grace; Hari, Kiran; Pereira, Shanice; Heinemann, Toni; Barry, Lisa; Grant, Rebecca; Parsons, Dave; Robinson, Suzanne and Harper, Kristie

**Publication Date:** 22 March 2025

**Journal:** Australian Occupational Therapy Journal 72(2), pp. 1–16

**Abstract:** Introduction: Health services are encouraging the adoption of telehealth to improve efficiencies and health-care access for patients. Research is needed to explore clinical outcomes in telehealth occupational therapy home visiting services. The aim of this study was to determine if telehealth delivery of occupational therapy home visiting services reduces total therapy time while maintaining clinical outcomes. Methods: A retrospective matched cohort study to examine the impact of telehealth occupational therapy home visiting services on therapy time and clinical outcomes, compared to standard in-person therapy. Results: A total of 544 patients were included (telehealth services case] = 216, in-person services control] = 272, received both resulting in a hybrid service = 56). Differences in total therapy time between groups were significant: median therapy time in the telehealth (case) group was 40 minutes (IQR: 63.8) versus 160 minutes (IQR: 90) in the in-person (control) group ( $P < 0.001$ ). Patients in the hybrid group were excluded from this comparison as received mixed care. There were no significant differences between groups regarding the incidence of adverse events such as falls, delirium, and pressure injuries ( $P = 0.32$ ). Fifty-six patients (20.6%) in the case group escalated to require in-person services receiving hybrid care. Factors associated with switching from telehealth to in-person services included the need for carer education and equipment assessment and provision, which resulted in greater





therapy time and more occasions of service. Conclusion: Telehealth delivery of occupational therapy home visiting services reduced therapy time and did not increase incidences of adverse events. However, telehealth delivery of services is not appropriate for all patients, and hybrid models of care must be considered. Plain Language Summary: Occupational therapists help patients leave the hospital and live safely at home. They visit homes to see if patients can manage on their own. Therapists may suggest changes like adding grab bars or bathing aids to make the home safer. These visits take a lot of time, so telehealth is being tested as a way to reduce the need for in-person services. This study looked at whether telehealth could save time and reduce workloads. This study found telehealth visits were shorter than in-person visits. It also found there were no differences between groups for events like falls, delirium, and pressure injuries. However, some patients still needed in-person visits, especially for equipment setup or caregiver training. Telehealth is a helpful tool, but it is important to know when in-person visits are still needed.

### [Health Professional Perceptions of Delivering Hospital Falls Prevention Education—A Qualitative Study](#)

**Authors:** Hill, Anne-Marie; Loo, Cheng Yen; Coulter, Steffanie; Watson, Carol; Vaz, Sharmila; Morris, Meg E.; Flicker, Leon and Weselman, Tammy

**Publication Date:** 13 Feb 2025

**Journal:** Western Journal of Nursing Research 47(5), pp. 348–355

**Abstract:** Background: Providing patient falls prevention education can help reduce falls in hospitals, yet research exploring staff perceptions about providing falls education in hospitals is limited. Objective: We sought to determine enablers and barriers to implementing a hospital falls prevention education program (the Safe Recovery Program) from the clinical staff perspective. Methods: Purposive sampling was used to recruit health professionals (N = 40) from 12 acute medical and surgical wards at a 450-bed hospital in Perth, Western Australia. Participants were given the option to take part in a focus group or semi-structured interview. Data were analyzed via directed content analysis. Results: Findings were distinguished into 2 themes, being the barriers and enablers to implementing the Safe Recovery Program. Enabler subthemes were the mode and medium of delivering the program, the use of repetition to instill the learnings, identifying who is best to deliver the program, and utilizing the role of informal carers to reinforce the education. Barrier subthemes were patient cognitive impairments and patient illness, patient risk-taking behavior, timing of program delivery according to patient readiness, time and resource shortage, and communication barriers with non-English speaking patients. Conclusion: A comprehensive approach to program delivery can enable health professionals to implement evidence-based falls prevention education in hospitals. Extant factors must be considered during the implementation phase to ensure the Safe Recovery Program is sustainable and to optimize patient uptake of falls prevention education.

### [Machine Learning Prediction for Postdischarge Falls in Older Adults: A Multicenter Prospective Study](#)

**Authors:** Yuko Takeshita, Mai Onishi, Hirotada Masuda, Mizuki Katsuhisa, Kasumi Ikuta, Yuichiro Saizen, Misaki Fujii, Misaki Kasamatsu, Nobuyuki Inaizumi, Yuzuki Maeizumi, Yoshinobu Kishino, Tsuneo Nakajima, Eriko Koujiya, Miyae Yamakawa, Yoichi Takami, Koichi Yamamoto, Yumi Umeda-Kameyama, Shosuke Satake, Hiroyuki Umegaki and Yasushi Takeya

**Publication Date:** Feb 2025

**Journal:** Journal of the American Medical Directors Association 26 (2) 105414





**Abstract:** Objectives: The study aimed to develop a machine learning (ML) model to predict early postdischarge falls in older adults using data that are easy to collect in acute care hospitals. This may reduce the burden imposed by complex measures on patients and health care staff. Design: This prospective multicenter study included patients admitted to and discharged from geriatric wards at 3 university hospitals and 1 national medical center in Japan between October 2019 and July 2023. Setting and participants: The participants were individuals aged  $\geq 65$  years. Of the 1307 individuals enrolled during the study period, 684 were excluded, leaving 706 for inclusion in the analysis. Methods: We extracted 19 variables from admission and discharge data, including physical, mental, psychological, and social aspects and in-hospital events, to assess the main outcome measure: falls occurring within 3 months postdischarge. We developed a prediction model using 4 major classifiers, Extra Trees, Bernoulli Naive Bayes, AdaBoost, and Random Forest, which were evaluated using a 5-fold cross-validation. The area under the receiver operating characteristic curve (AUC) was used to evaluate predictive performance. Results: Among the 706 patients, 114 (16.1%) reported a fall within 3 months postdischarge. The Extra Trees classifier demonstrated the best predictive performance, with an AUC of 0.73 on the test data. Important features included the Lawton Instrumental Activities of Daily Living scale, Clinical Frailty Scale ( $\geq 4$  points), presence of urinary incontinence, 15-item Geriatric Depression Scale ( $\geq 5$  points), and preadmission residence, all assessed at admission. Conclusions and implications: To our knowledge, this is the first study to develop an ML model for predicting early postdischarge falls among older patients in acute care hospitals. The findings suggest that this model could assist in developing fall-prevention strategies to ensure seamless transition of care from hospitals to communities.

### [Development of a model predicting falls in older emergency department patients using smartphone-based mobility measures](#)

**Authors:** Brian Suffoletto, David Kim, Caitlin Toth, Waverly Mayer, Nick Ashenburg, Michelle Lin <https://pubmed.ncbi.nlm.nih.gov/39653611/> and Michael Losak

**Publication Date:** 09 Dec 2024

**Journal:** Journal of the American Geriatrics Society 73(3) pp. 791-801.

**Abstract:** Objective: While emergency departments (EDs) are crucial for identifying patients at risk for falls, existing fall risk measures are often inaccurate. This study aimed to assess whether iPhone sensor-based mobility measures collected after ED discharge can improve fall prediction compared with traditional ED-based screening measures. Methods: This single-center, observational cohort study recruited ED patients aged 60 or older who owned an iPhone. Participants completed baseline assessments, downloaded a custom app to track mobility measures from the iPhone, and were followed for 90 days post-discharge. Fall outcomes were self-reported via the app or follow-up phone calls. Logistic regression and the LASSO technique were employed to identify significant predictors. The discriminative ability of the models was assessed by comparing the C-statistics. Results: Of the 149 participants enrolled, 76.5% (N = 114) provided at least 7 days of post-discharge iPhone sensor-based mobility data. The cohort had a mean age of 73 years, with 16.7% (N = 19) experiencing a fall. Participants who fell showed a significantly greater increase in daily steps over time compared with those who did not ( $p = 0.002$ ). The extended logistic regression model, by incorporating mean gait asymmetry and change in step count, demonstrated a higher but nonsignificant improvement in discriminative ability (C-statistic = 0.84) compared with the base model (C-statistic = 0.79). Conclusions: This study demonstrates that iPhone mobility measures collected after ED discharge can enhance fall prediction relative to self-reported fall risk screening questions in older adults. The strongest mobility predictors were gait asymmetry and changes in step count. While the findings suggest that post-discharge mobility monitoring could improve fall prevention strategies, further validation in diverse populations is necessary.





## [Motivational interviewing for fall prevention \(MI-FP\) pilot study: Randomized controlled trial](#)

**Authors:** Hiroko Kiyoshi-Teo; Elizabeth Eckstrom; Deborah J. Cohen; Bryanna De Lima; Kathlynn Northrup-Snyder; Nathan F. Dieckman and Kerri Winters-Stone

**Publication Date:** 06 Nov 2024

**Journal:** Journal of the American Geriatrics Society 73 pp. 1210–1218

**Abstract:** Background: The Motivational Interviewing for Fall Prevention (MI-FP) study aimed to engage older adults in fall prevention strategies. We report on the feasibility, intervention fidelity, and preliminary impact of MI-FP. Methods: We conducted a pilot randomized controlled trial to test MI-FP among older (age  $\geq 65$ ) primary care patients at high fall risk in a Pacific Northwest clinic in the United States. The intervention group received up to eight motivational interviewing (MI) sessions by MI practitioners over 6 months and the control group received standard care. Feasibility was defined as  $\geq 75\%$  retention and  $\geq 75\%$  reporting satisfaction at 6 months. Intervention fidelity was assessed by meeting pre-determined MI proficiency standards using MI Treatment Integrity (MITI 4.2) coding scheme, and  $\geq 75\%$  of the intervention group completing  $\geq 6$  MI sessions. Preliminary impact was assessed at 6 and 12 months for changes in concern about falling, readiness to engage in fall prevention, fall prevention behaviors, physical function, and fall rates between groups. Results: Participants ( $n = 200$ ) had a mean age of 80 years and 67% were female. The overall retention rate was 75.0% ( $n = 150$ ). Among 81.3% ( $n = 122$ ) who reported satisfaction, 82.8% were satisfied ( $n = 101$ ). The intervention group had significantly lower retention than the control group at 6 months (68.3% vs. 81.8%,  $p = 0.04$ ). A proficient MI intervention was delivered, but only 57.4% ( $n = 58$ ) engaged in  $\geq 6$  MI sessions. The preliminary impact of the intervention showed promising trends, but there were no significant differences by group for any outcome measure at 6 or 12 months ( $p > 0.05$ ). Conclusions: Virtual MI-FP may improve accessibility for older adults to discuss fall prevention, but future studies are needed to improve retention and intervention completion.

## [A European survey of older peoples' preferences, and perceived barriers and facilitators to inform development of a medication-related fall-prevention patient portal](#)

**Authors:** Ploegmakers, K.J., Linn, A.J., Medlock, S., Seppala, L.J., Bahat, G., Caballero-Mora, M.A., Ilhan, B., Landi, F., Masud, T., Morrissey, Y., Ryg, J., Topinkova, E., van der Velde, N. and van Weert, J.C.M.

**Publication Date:** 08 April 2024

**Journal:** European Geriatric Medicine 15(3) pp. 817–829.

**Abstract:** Purpose Falls are a major and growing health care problem in older adults. A patient portal has the potential to provide older adults with fall-prevention advice to reduce fall-risk. However, to date, the needs and preferences regarding a patient portal in older people who have experienced falls have not been explored. This study assesses content preferences, potential barriers and facilitators with regard to using a patient portal, as perceived by older people who have experienced falls, and explores regional differences between European participants. Methods We conducted a survey of older adults attending an outpatient clinic due to a fall or fall-related injury, to explore their content preferences, perceived barriers, and facilitators with respect to a fall-prevention patient portal. Older adults ( $N = 121$ , 69.4% female, mean age: 77.9) were recruited from seven European countries. Results Almost two-thirds of respondents indicated they would use a fall-prevention patient portal. The portal would preferably include information on Fall-Risk-Increasing Drugs (FRIDs), and ways to manage other related/relevant medical conditions. Facilitators included a user-friendly portal, with easily accessible information and physician recommendations to use the portal. The most-commonly-selected barriers were privacy





issues and usage fees. A family member's recommendation to use the portal was seemingly more important for Southern and Eastern European participants compared to the other regions. Conclusion The majority of older people with lived falls experience expressed an interest in a fall-prevention patient portal providing personalized treatment advice to prevent further falls. The results will be used to inform the development of a fall-prevention patient portal. The fall-prevention patient portal is intended to be used in addition to a consultation with a physician. Future research is needed to explore how to prevent falls in older patients who are not interested in a fall-prevention patient portal.

### [Construction of Fall Prevention Exercise Training Scheme for Elderly Discharged Patients Using Self-Efficacy Theory Framework](#)

**Authors:** Haiying Cheng, Ming Shi and Fengyan Pu

**Publication Date:** Feb 2024

**Journal:** Alternative Therapies in Health and Medicine 30(2) pp. 56-63.

**Abstract:** Objective: We conducted this study to help older discharged patients recover better, reduce the risk of falls, and improve quality of life through self-efficacy intervention and the Otago exercise program. The purpose of this study was to address specific challenges in rehabilitation and quality of life in older patients. Methods: 60 elderly patients discharged from January 1 to June 10, 2022, were selected as the study subjects and randomly divided into the experimental group (n = 30) and the controls (n = 30). We studied the impact of a self-efficacy intervention combined with the Otago Exercise Program (OEP) in older discharged patients. We included patients aged 65 and above who understood the study protocol and randomly divided them into two groups: one group received a combined self-efficacy intervention and OEP, and the other group received only OEP treatment. The intervention period is 12 weeks, 3 times a week, 30-45 minutes each time. We focused on the exercise capacity, fall risk, quality of life, and well-being of patients in both groups after the intervention. The aim of the study was to determine whether this combined intervention could improve recovery and quality of life in older discharged patients. Results: Comparison of clinical data between the two groups: there were no differences in gender, age, ethnicity, education, residence, family income, complications, and chronic diseases ( $P > .05$ ). Self-efficacy increased significantly between the two groups after the intervention, but there was no difference before the intervention ( $P > .05$ ). The self-efficacy of the experimental group was higher than that of the control group on days 15, 30, 45, and 60 ( $P < .05$ ). Berg balance scale, TUG, PSMS, IADL, ADL, and total fall risk scores were significantly improved, but there was no difference before intervention ( $P > .05$ ). All indicators of the experimental group were better than those of the control group on days 15, 30, 45, and 60 ( $P < .05$ ). EAQ scores were significantly improved, but there was no difference between the two groups before intervention ( $P > .05$ ). The EAQ of the experimental group was higher than that of the control group on days 15, 30, 45, and 60 ( $P < .05$ ). Conclusions: This study found that a self-efficacy-based intervention combined with the Otago Exercise Program (OEP) was of value to older discharged patients. This comprehensive intervention approach can improve patients' self-efficacy, balance, walking speed, daily functioning, reduce fall risk, and improve quality of life. For healthcare providers and institutions, this means that this approach could be considered to improve the care of older discharged patients. By enhancing patients' self-efficacy and physical function, it can promote better recovery and independent living, reduce the risk of readmissions, and thus reduce the burden on the healthcare system. This study provides important practical guidance for improving the recovery and quality of life of older discharged patients.

### [Proprioceptive and Strength Exercise Guidelines to Prevent Falls in the Elderly Related to Biomechanical Movement Characteristics](#)

**Authors:** Pedro Aleixo and João Abrantes

**Publication Date:** 12 Jan 2024

**Journal:** Healthcare 12(2) p. 186

**Kindness, Respect, Teamwork  
Everyone, Every day**





**Abstract:** Falls are a major concern in the elderly and walking is an important daily activity in which falls occur, with tripping and slipping being the most frequent causes. Gait biomechanical parameters have been related to the occurrence of falls in the elderly. Moreover, there is evidence that falls can be prevented through exercise programs, which have been shown to be also effective in improving gait biomechanical parameters. However, a question remains: "What types of exercises must be included in exercise programs to prevent falls?". The purpose of this manuscript was to present guidelines for a fall prevention exercise program for the elderly, which was created with the aim of improving the gait biomechanical parameters related to falls. The critical review performed during the preparation of this manuscript collected important evidence and knowledge in order to create a structural basis for the development of a fall prevention exercise program. This type of program should last 6 or more weeks and be prescribed based on four movement pillars (locomotion, level changes, pulling and pushing, and rotations); however, the locomotion pillar must be the focus of the program. Proprioceptive and functional strength exercises should be included in this program. Based on the theoretical rationale, a proposal for a fall prevention exercise program is presented.

**[The smart-home study: A feasibility study to pilot the use of smartphone technology to identify environmental falls risk factors in the home](#)**

**Authors:** Leung, Ka Ho Marco and Brandis, Susan

**Publication Date:** 07 Feb 2023

**Journal:** Hong Kong Journal of Occupational Therapy 36(1), pp. 3–12

**Abstract:** Introduction: While occupational therapy home assessments are effective to identify environmental falls risk factors, patients may not receive these services due to workforce distribution and geographical distances. Technology may offer a new way for occupational therapists to conduct home assessments to identify environmental fall risks. Objectives: To (i) explore the feasibility of identifying environmental risk factors using smartphone technology, (ii) develop and pilot a suite of procedures for taking smartphone images and (iii) examine the inter-rater reliability and content validity between occupational therapists when assessing smartphone images using a standardised assessment tool. Method: Following ethical approval a procedure was developed and participants recruited to submit smartphone images of their bedroom, bathroom and toilet. Two independent occupational therapists then assessed these images using a home safety checklist. Findings were analysed using inferential and descriptive statistics. Results: Of 100 volunteers screened, 20 individuals participated. A guideline for instructing patients to take home images was developed and tested. Participants averaged 9.00 minutes (SD 4.401) to complete the task, whilst occupational therapists took approximately 8 minutes to review the images. The inter-rater reliability between the two therapists was 0.740 (95% CI: 0.452-0.888). Conclusion: The study found that use of smartphones was to a large extent feasible and conclude that the use of smartphone technologies is a potential complimentary service to traditional home visits. The effective prescription of equipment in this trial was identified as a challenge. The impact on costs and potential falls incidents remains uncertain and more research is warranted in representative populations.

**[Exploring the Outcomes Of an Occupational Therapy Led Falls Education Group in the Acute Hospital Setting...22nd International Conference on Integrated Care, May 23-25, 2022, Odense, Denmark](#)**

**Authors:** Kiernan, Niamh and Freehill, Lauren

**Publication Date:** 04 Nov 2022

**Journal:** International Journal of Integrated Care (IJIC) 22, pp. 1–2





**Abstract:** Background: Falls in older people can have life changing consequences, and most are likely to suffer serious injuries, disability, psychological consequences and death following a fall. The risk of falling increases with age with one in three older people sustaining a fall every year and two thirds falling again within six months (1). Falls remain the most commonly reported incident within the HSE and HSE funded services with 35,187 falls reported in 2018, including 15,773 in acute hospitals and 15,027 in social care (1). In St. Vincent's University Hospital, Occupational Therapists' working in the Medicine for the Older Person's service provide falls education to patients on a one-to-one level, however, this can be time consuming. There is emerging evidence that falls prevention groups delivered in hospital which include patient education can reduce falls and associated injuries, while also increasing knowledge and capability amongst older adults (2). Method: Both quantitative and qualitative measures were used. The falls efficacy scale was administered to participants' pre and post group to measure any changes in their fear of falling after falls education. A post group questionnaire was also completed by participants to gain qualitative information regarding their learning outcomes from the group. Results: The falls efficacy scale recorded that 66.6% (n=4) of participants had a reduced fear of falling post group. In the post group questionnaire, 66.6% (n=4) of participants identified changes they would make to their home environment on discharge based on information provided in the group. Conclusion: Falls are the cause of injury in 75% of older adults, with 5.2% of hospital bed occupied due to fall related injuries in older adults. This review aimed to showcase the impact of falls education delivered in the inpatient setting as a means of increasing knowledge and awareness of the risk factors contributing to falls. The falls education group reduced the majority (66.6%) of participant's fear of falling which was accredited to increased insight into the risk factors and impact of falls. The majority of participants reported that they increased their knowledge around falls and would make changes to their home environment after attending the group. Overall the group helped to reduce fear of falling amongst the majority of participants and was an effective use of therapist's clinical time. Future Implications: Given the prevalence of falls amongst older adults, it is imperative to ensure Occupational Therapy staff contribute to reducing falls through inpatient falls education. A standardized falls education pathway would be beneficial. Group education is also an effective use of therapist's clinical time. However, these findings are preliminary and further research is recommended.

### [Everyday activities at home: Experiences of older repeatedly readmitted people.](#)

**Authors:** Jonsson, Marie; Holmefur, Marie and Fredriksson, Carin

**Publication Date:** Oct 2022

**Journal:** Scandinavian Journal of Occupational Therapy 29(7), pp. 555–562

**Abstract:** INTRODUCTION: Limitations in everyday activities are a risk factor for hospital readmission. Despite this, few studies have focussed on everyday activities of repeatedly readmitted older people. The experiences and specific needs of this group have been poorly described regarding their everyday activities at home. A deeper understanding may help occupational therapists and other health professions to facilitate readiness for this group at and after discharge. The aim of this study was, therefore, to describe the experiences of performing everyday activities of older people repeatedly readmitted to hospital and discharged to home. METHODS: A qualitative interview study was used to collect data from sixteen participants (75 years and older). Data were analysed using qualitative content analysis. RESULTS: One theme 'trying to manage an unpredictable everyday life' and two categories describe experiences of everyday activities at home. The participants expressed the importance of continuing everyday activities after discharge where support from relatives and healthcare seemed to be of importance. CONCLUSION: It was found that performance of everyday activities and contact with family members were of importance in their everyday life. Therefore, assessments and support were of particular importance for the group of older people who do not have close social relations at home.





## [Fall Prevention Program Using Home Floor Plans in an Acute-Care Hospital: A Preliminary Randomized Controlled Trial](#)

**Authors:** Tetsuya Ueda, Yumi Higuchi, Tatsunori Murakami, Wataru Kozuki, Gentoku Hattori and Hiromi Nomura

**Publication Date:** 04 Sep 2022

**Journal:** International Journal of Environmental Research and Public Health 19 (17) pp. 11062.

**Abstract:** We provided fall prevention programs using home floor plans for older adult patients discharged from an acute-care hospital and verified the fall prevention measures' effectiveness six months after discharge. The research design was a preliminary randomized controlled trial. Orthopedic patients with a falls' history were randomized to the control ( $n = 30$ ) or the intervention groups ( $n = 30$ ). Before discharge, the control group was treated with general physiotherapy for their disease characteristics. The intervention group received the same programs before discharge; additionally, a simple house evaluation was conducted using the subject's home floor plan. A six-month follow-up survey was conducted on falls and near-falls after discharge, completed by 51 of the 60 subjects (85%). Within two months, falls occurred in 7.7% of the control group but not in the intervention group, after which, falls occurred in the intervention group, and no significant difference was noted between the two groups (three-month ( $p = 0.322$ ) and six-month ( $p = 0.931$ ) follow-ups). The intervention group had significantly fewer near-falls than the control group within three months ( $p = 0.034$ ), but no significant difference was observed after three months. The results suggested that our program effectively expanded the role of an acute care hospital for discharged patients who need to transition from hospital care to home health care.

## [Development of a Fall Risk Score for Older Adults Incorporating Electronic Health Record and Emergency Department Screening Measures](#)

**Authors:** Brian Suffoletto, Micaela Steube, Waverly Mayer, Caitlin Toth, Nick Ashenburg, Michelle Lin and Michael Losak

**Publication Date:** 18 Aug 2022

**Journal:** Academic Emergency Medicine acem.70121

**Abstract:** Background: Older adults have high rates of falls after Emergency Department (ED) discharge; yet existing screening tools either underperform or are too difficult to deploy. This study aimed to evaluate a parsimonious predictive model for falls within 6 months post-ED discharge, utilizing both typical electronic health record (EHR) data and brief ED-based screenings. Methods: In a prospective cohort study from September 2023 to May 2024, 412 community-dwelling adults aged  $\geq 60$  years who ambulate without assistance were enrolled during ED visits. Baseline data included EHR-derived variables (e.g., comorbidities, medication use) and ED screens (e.g., living situation, fall history). Participants were followed for 6 months to document fall occurrences. Multivariable LASSO logistic regression models to predict any fall were then constructed: Model 1 (EHR), Model 2 (ED screens), and Model 3 (combined). Model performance was evaluated using discrimination and calibration metrics, including area under the receiver operating characteristic (AUC) curves. Results: Of the 356 participants with complete follow-up, 104 (29.2%) experienced at least one fall. Model 3 demonstrated superior predictive performance (AUC = 0.75) compared to Model 1 (AUC = 0.67) and Model 2 (AUC = 0.71). Significant predictors in the combined model included anemia (OR = 3.19), use of oral hypoglycemics (OR = 2.26), living with less than two other people (OR = 3.79), infrequently leaving home (OR = 1.97), and a history of  $\geq 3$  falls in the prior 6 months (OR = 12.11). A risk score made up of 9 items (6 EHR; 3 ED screen) categorizing participants as high risk (score 6-25) or low risk (score 0-5) resulted in sensitivity = 64%, specificity = 75%, positive likelihood ratio = 2.54, and negative likelihood ratio = 0.49. Conclusions: Integrating EHR data with brief ED-based screenings enhances





the prediction of fall risk among older adults post-ED discharge. The developed risk score effectively stratifies patients into low versus high risk, facilitating targeted prevention interventions. Further validation in independent cohorts is needed.

### [Feasibility of a new multifactorial fall prevention assessment and personalized intervention among older people recently discharged from the emergency department](#)

**Authors:** Bouke W Hepkema, Lydia Köster, Edwin Geleijn, Eva VAN DEN Ende, Lara Tahir, Johan Osté, Bernard Prins, Nathalie VAN DER Velde, Hein VAN Hout and Prabath W B Nanayakkara

**Publication Date:** 09 June 2022

**Journal:** PLoS One 17(6): e0268682.

**Abstract:** Background and importance: Falls among older people occur frequently and are a leading cause of Emergency department (ED) admissions, disability, death and rising health care costs. Multifactorial fall prevention programs that are aimed to target the population at risk have shown to effectively reduce the rate of falling and fall-related injuries in community-dwelling older people. However, the participation of and adherence to these programs in real life situation is generally low. Objective: To test the feasibility of a transitionally organized fall prevention assessment with accompanying personalized intervention initiated at the ED. Design, settings and participants: A process evaluation, of a non-randomized controlled pilot trial for implementing a transitionally organized multifactorial fall prevention intervention, was performed using the Reach, Effectiveness, Adoption, Implementation, Maintenance (RE-AIM) framework to gain insight into the barriers and facilitators of implementation. Older fallers (>70yrs) presenting at the ED were selected based on ZIP-code and after obtaining informed consent, data for the evaluation was collected through questionnaires and interviews. Furthermore, feedback was collected from the healthcare providers. Main results: The consent was obtained by 24 (70%) of the patients approached directly at the ED and 17 (26%) of the patients approached later by phone. Adherence to the protocol by the participants, clinical assessors and family practice were all more than 90%. After three months, nine (26%) of the participants had at least one recurrent fall: three (20%) patients in the intervention group and six (32%) in the control group. Conclusion: ED presentation due to a fall in older persons provides a window of opportunity for optimizing adherence to a multifactorial fall prevention program as willingness to participate was higher when the patients were approached at the ED during their stay. Implementing a transitionally organized multidisciplinary fall prevention program was successful with a high protocol adherence.

### [Transitions from healthcare to self-care: a qualitative study of falls service practitioners' views on self-management](#)

**Authors:** Killingback, Clare; Thompson, Mark A.; Chipperfield, Sarah; Clark, Carol and Williams, Jonathan

**Publication Date:** June 2022

**Journal:** Disability & Rehabilitation 44(12), pp. 2683–2690

**Abstract:** The aim of this study was to understand the views of falls service practitioners regarding: their role in supporting self-management of falls prevention; and a transition pathway from National Health Service (NHS) exercise-based falls interventions to community-run exercise programmes. Semi-structured interviews were conducted with physiotherapists, nurses, and rehabilitation assistants (n = 8) who worked in an NHS falls service. Data were analysed using thematic analysis. Certain aspects of supporting patients in self-management were deemed to be within or beyond the scope of falls service practitioners. Challenges in supporting transition to community-run programmes included: practitioner awareness and buy in; patient buy in; and patient suitability/programme





availability. Practitioners sought to be patient-centred as a means to engage patients in self-management of falls prevention exercises. Time-limited intervention periods and waiting list pressures were barriers to the promotion of long-term self-management approaches. A disconnect between falls service interventions and community-run programmes hindered willing practitioners from supporting patients in transitioning. Unless falls risk and prevention is seen by healthcare providers as a long-term condition which requires person-centred support from practitioners to develop self-management approaches, then falls services may only be able to offer short-term measures which are potentially not long lasting. Falls rehabilitation practitioners need to take a person-centred approach to engage patients in self-management of falls prevention exercises. Providing information and signposting to exercise opportunities such as community-run programmes following falls service interventions should be viewed as being within the scope of the role of falls service practitioners. Rehabilitation practitioners should consider viewing falls risk as a long-term condition, to promote longer-term behavioural change approaches to ongoing engagement of exercise for falls prevention.

### **Association of a Perioperative Multicomponent Fall Prevention Intervention With Falls and Quality of Life After Elective Inpatient Surgical Procedures**

**Authors:** Fritz, Bradley A.; King, Christopher R.; Mehta, Divya; Somerville, Emily; Kronzer, Alex; Ben Abdallah, Arbi; Wildes, Troy; Avidan, Michael S.; Lenze, Eric J. and Stark, Susan

**Publication Date:** 11 March 2022

**Journal:** JAMA Network Open 5(3), pp. e221938

**Abstract:** Key Points: Question: Is an intervention that incorporates patient education, home medication review, and hazard identification in the home environment associated with reductions in falls during the first year after an elective inpatient surgical procedure? Findings: In this cohort study involving 1396 patients (698 pairs) presenting for elective inpatient surgical procedures, 33% of patients in the intervention group and 32% of patients in the control group experienced a fall within 1 year after undergoing a surgical procedure, representing a nonsignificant difference. Meaning: These results suggest that other interventions may need to be developed to reduce postoperative fall incidence among patients receiving elective inpatient surgical procedures. Importance: Falls after elective inpatient surgical procedures are common and have physical, emotional, and financial consequences. Close interactions between patients and health care teams before and after surgical procedures may offer opportunities to address modifiable risk factors associated with falls. Objective: To assess whether a multicomponent intervention that incorporates education, home medication review, and home safety assessment is associated with reductions in the incidence of falls after elective inpatient surgical procedures. Design, Setting, and Participants: This prospective propensity score–matched cohort study was a prespecified secondary analysis of data from the Electroencephalography Guidance of Anesthesia to Alleviate Geriatric Syndromes (ENGAGES) randomized clinical trial, which was conducted at a single academic medical center between January 16, 2015, and May 7, 2018. Patients in the intervention group of the present study were enrolled in either arm of the ENGAGES clinical trial. Patients in the control group were selected from the Systematic Assessment and Targeted Improvement of Services Following Yearly Surgical Outcomes Surveys prospective observational cohort study, which created a registry of patient-reported postoperative outcomes at the same single center. The propensity score–matched cohort in the present study included 1396 patients (698 pairs) selected from a pool of 2013 eligible patients. All patients underwent elective surgical procedures with general anesthesia and had a hospital stay of 2 or more days. Data were analyzed from January 2, 2020, to January 11, 2022. Interventions: The multicomponent safety intervention (offered to all patients in the ENGAGES clinical trial) included patient education on fall prevention techniques, home medication review by a geriatric psychiatrist (with communication of recommended changes to the surgeon), a self-administered home safety assessment, and targeted occupational





therapy home visits with home hazard removal (offered to patients with a preoperative history of falls). Main Outcomes and Measures: The primary outcome was patient-reported falls within 1 year after an elective inpatient surgical procedure. The secondary outcome was quality of life 1 year after an elective surgical procedure, which was measured using the physical and mental composite summary scores on the Veterans RAND 12-item health survey (score range, 0-100 points, with 0 indicating lowest quality of life and 100 indicating highest quality of life). Results: Among 1396 patients, the median age was 69 years (IQR, 64-75 years), and 739 patients (52.9%) were male. With regard to race, 5 patients (0.4%) were Asian, 97 (6.9%) were Black or African American, 2 (0.1%) were Native Hawaiian or Pacific Islander, 1237 (88.6%) were White, 3 (0.2%) were of other race, and 52 (3.7%) were of unknown race; with regard to ethnicity, 12 patients (0.9%) were Hispanic or Latino, 1335 (95.6%) were non-Hispanic or non-Latino, and 49 (3.5%) were of unknown ethnicity. Adherence to individual intervention components was modest (from 22.9% for completion of the self-administered home safety assessment to 28.2% for implementation of the geriatric psychiatrist's recommended medication changes). Falls within 1 year after surgical procedures were reported by 228 of 698 patients (32.7%) in the intervention group and 225 of 698 patients (32.2%) in the control group. No significant difference was found in falls between the 2 groups (standardized risk difference, 0.4%; 95% CI, -4.5% to 5.3%). After adjusting for preoperative quality of life, patients in the intervention group had higher physical composite summary scores (3.8 points; 95% CI, 2.4-5.1 points) and higher mental composite summary scores (5.7 points; 95% CI, 4.7-6.7 points) at 1 year compared with patients in the control group. Conclusions and Relevance: In this cohort study, a multicomponent safety intervention was not associated with reductions in falls within the first year after an elective surgical procedure; however, an increase in quality of life at 1 year was observed. These results suggest a need for other interventions, such as those designed to increase adherence, to lower the incidence of falls after surgical procedures. This cohort study assesses whether a multicomponent intervention incorporating education, home medication review, and home safety assessment is associated with reductions in the incidence of postoperative falls among patients receiving elective inpatient surgical procedures.

### [Simulation Versus Written Fall Prevention Education in Older Hospitalized Adults: A Randomized Controlled Study](#)

**Authors:** Nancy C DeWalt, Kenneth A Stahorsky, Susan Sturges, James F Bena, Shannon L Morrison, Laura Droblich Sulak, Lynn Szczepinski and Nancy M Albert

**Publication Date:** 16 March 2022

**Journal:** Clinical Nursing Research 32(2) pp. 278-287.

**Abstract:** Using a randomized controlled, non-blinded, two-group design, differences in fall risk assessment, post-discharge sustainable fall risk changes, fall events and re-hospitalization were examined in 77 older adults who received a simulation ( $n = 36$ ) or written ( $n = 41$ ) education intervention. Between-group differences and changes in pre-versus post-fall risk assessment scores were examined using Pearson's chi-square, Wilcoxon rank sum or Fisher's exact tests (categorical variables) and two-sample  $t$ -tests (continuous variables). There were no statistically significant differences between groups in demographic characteristics. Patients who received simulation education had higher fall risk post-assessment scores than the written education group,  $p = .022$ . Change in fall risk assessment scores (post-vs.-pre; 95% confidence intervals) were higher in the simulation group compared to the written education group, 1.43 (0.37, 2.50),  $p = .009$ . At each post-discharge assessment, fall events were numerically fewer but not significantly different among simulation and education group participants. There were no statistically significant between-group differences in re-hospitalization.





## [Planning for Safe Hospital Discharge by Identifying Patients Likely to Fall After Discharge](#)

**Authors:** Jonathan R Wright, Trisha Koch-Hanes, Ciera Cortney, Kathryn Lutjens, Kristopher Raines, Guogen Shan and Daniel Young

**Publication Date:** 01 Feb 2022

**Journal:** Physical Therapy and Rehabilitation Journal 102 (2): pzab264.

**Abstract:** Objective: Acute care physical therapists recommend discharge locations and services in part to help prevent falls during post-discharge recovery. Therapists may use standardized tests to inform their recommendation decisions, but evidence linking test scores with fall risk after discharge is lacking. The primary purpose of this study was to explore the associations between Tinetti Performance-Oriented Mobility Assessment (POMA) and Activity Measure for Post-Acute Care Inpatient Mobility Short Form (AM-PAC IMSF) scores and falls in the first 30 days after hospital discharge. Anticipating that agreement between therapist recommendations and discharge locations and services (discharge agreement), age, and sex could impact those associations, these factors were included in this investigation. Methods: In this observational cohort study, 258 hospitalized patients consented to medical record data extraction and answered a phone survey 30 days after discharge to report whether they had experienced a fall since leaving the hospital. POMA and AM-PAC IMSF tests were administered for every patient. Participants' age, sex, diagnosis, last POMA score, last AM-PAC IMSF score, physical therapist discharge recommendations, actual discharge location and services, discharge date, and phone number were collected from their medical records. Results: When analyzed alone, higher POMA scores were associated with lower odds of falling, but the association was not significant after adjustment for other factors. Neither AM-PAC IMSF scores, age, nor sex were associated with falls. Discharge agreement, however, was associated with 59% lower odds of falling after adjustment for other factors. Conclusion: Participants, who were discharged to the location with the services recommended by their physical therapist, were less likely to fall. Tinetti POMA and AM-PAC IMSF scores did not discriminate well participants who would fall. Impact: Findings in this study inform those involved in discharge planning on the value of implementing physical therapist recommendations in reducing fall risk after hospital discharge.

## [Effectiveness of a Tailored Fall-Prevention Program for Discharged Older Patients: A Multicenter, Preliminary, Randomized Controlled Trial](#)

**Authors:** Tetsuya Ueda, Yumi Higuchi, Gentoku Hattori, Hiromi Nomura, Gen Yamanaka, Akiko Hosaka, Mina Sakuma, Takato Fukuda, Takanori Fukumoto and Takashi Nemoto

**Publication Date:** 30 Jan 2022

**Journal:** International Journal of Environmental Research and Public Health 19(3) p.1585.

**Abstract:** This multicenter, preliminary, randomized controlled trial investigated the effect of a tailored fall-prevention program using home floor plans for discharged orthopedic patients aged  $\geq 65$  years who experienced  $\geq 1$  fall(s) in the past year ( $n = 72$ ) at five acute-care hospitals. The control group received standard care (exercise to prevent recurrent falls), whereas the intervention group received a tailored fall-prevention program in addition to usual care. A physical therapist conducted the tailored education program using each patient's home floor plans before discharge. A follow-up survey of falls and near-falls at home was performed using a monthly fall calendar for the 1-month period after discharge. Data on 81.5% of participants remained for the final analyses. No falls occurred in the intervention group; however, 4.3% of those in the control group experienced a fall. Near-falls were reported by 3.7% and 26.9% of the participants in the intervention and control groups, respectively. The proportion of participants who did not experience near-falls in the 1st





month after discharge was lower in the intervention than in the control group ( $p = 0.018$ ). In conclusion, the tailored fall-prevention program using home floor plans in multiple acute-care hospitals was effective in reducing falls and near-falls in discharged orthopedic patients.

### [The effects of the Otago Exercise Programme on actual and perceived balance in older adults: A meta-analysis](#)

**Authors:** Huei-Ling Chiu, Ting-Ting Yeh, Yun-Ting Lo, Pei-Jung Liang and Shu-Chun Lee

**Publication Date:** 06 Aug 2021

**Journal:** PLoS ONE 16(8): e0255780.

**Abstract: Objective** Falls are serious issues in older populations. Balance problems are a major cause of falls and may lead to fear of falling and decreased balance confidence. The Otago Exercise Programme (OEP) is an effective fall prevention program that benefits balance function and fear of falling. The primary aim of the meta-analysis was to investigate the effectiveness of the OEP intervention on actual balance performance (i.e., static, dynamic, proactive or reactive balance) and perceived balance ability (i.e., balance confidence or fear of falling) for older adults; the secondary aim was to examine which OEP protocol most improves balance in older adults. **Methods** A systematic electronic review search was performed in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-analysis guidelines to identify randomized controlled trials (RCTs) investigating the effects of the OEP on actual balance performance and perceived balance ability in healthy older adults, and examining which OEP training protocol and intervention format most improves balance. **Results** A total of 12 RCTs were included in the analyses. The OEP exerted significant effects on static balance (Hedges's  $g = 0.388$ ; 95% confidence interval [CI] = 0.131 to 0.645), dynamic balance ( $g = -0.228$ ; 95% CI = -0.352 to -0.1.4), proactive balance ( $g = 0.239$ ; 95% CI = 0.061 to 0.416) and perceived balance ( $g = -0.184$ ; 95% CI = -0.320 to -0.048) in older adults. Subgroup analysis indicated that the group format for the OEP was more effective for improving static ( $p = 0.008$ ), dynamic ( $p = 0.004$ ) and perceived balance ( $p = 0.004$ ) than was the individual format. Sessions of >30 minutes were more effective in improving static ( $p = 0.007$ ) and perceived balance ( $p = 0.014$ ) than were sessions of  $\leq 30$  minutes. However, the effects of the OEP on balance were unrelated to the types of control group, training frequency and training period. **Discussion** The OEP is helpful for improving actual balance including static, dynamic, and proactive balance; enhancing confidence in balance control; and reducing fear of falling in older adults. In particular, administering the OEP in a group setting in >30-minute sessions may be the most appropriate and effective exercise protocol for improving balance.

### [Home Hazard Removal to Reduce Falls Among Community-Dwelling Older Adults: A Randomized Clinical Trial](#)

**Authors:** Stark, Susan; Keglovits, Marian; Somerville, Emily; Hu, Yi-Ling; Barker, Abigail; Sykora, Dave and Yan, Yan

**Publication Date:** 31 Aug 2021

**Journal:** JAMA Network Open 4(9), pp. e2122044

**Abstract: Key Points:** Question: What is the effect of a home hazard removal program on hazard of a fall in community-dwelling older adults at risk for falling? Findings: This randomized clinical trial included 310 older adults. There was no difference in the primary outcome, risk of falling, between the intervention and control groups. The intervention group had a 38% reduction in falls, a secondary outcome, compared with usual care. Meaning: This randomized clinical trial found that this low-cost behavioral intervention did not result in a significant difference in risk of falling or the number of home hazards removed. This randomized clinical trial examines the effectiveness of a home hazard removal program in reducing risk of falls among older adults. Importance: Falls are the leading preventable





cause of morbidity, mortality, and premature institutionalization for community-dwelling older adults. Objective: To test the effectiveness of a behavioral intervention on fall risk among older adults receiving services from an Area Agency on Aging. Design, Setting, and Participants: This randomized clinical trial examined a home hazard removal intervention in the community using a race- and sex-stratified randomization design. Older adults receiving services from the Area Agency on Aging in urban St Louis, Missouri, were assigned to a home hazard removal intervention delivered over 2 weeks with a 6-month booster or usual care control. Eligible participants were adults aged 65 years or older who did not have dementia, were at high risk for falling, and resided in the community. Enrollment occurred from January 2015 to September 2016; 12-month follow-up occurred from February 2016 to October 2017. Data were analyzed from February 2019 to July 2021. Interventions: The intervention was a home hazard removal program delivered by an occupational therapist in the home that included a comprehensive clinical assessment and a tailored hazard removal plan. Usual care control consisted of annual assessments and community referral. Main Outcomes and Measures: The primary outcome was the hazard of a fall over 12 months. Prespecified secondary outcomes included the rate of falls over 12 months, daily activity performance, falls self-efficacy, and self-reported quality of life. Results: A total of 310 participants (mean SD] age, 75 7.4] years; 229 74%] women; 161 Black participants 52%]) were randomized, with 155 participants assigned to the intervention and 155 participants assigned to usual care. Retention was 127 participants (82%) in the intervention group and 126 participants (81%) in the control group. There was no difference for our primary outcome of fall hazard (hazard ratio, 0.90; 95% CI, 0.66-1.27). There was a 38% reduction in the rate of falling in the intervention group compared with the control group (relative risk, 0.62; 95% CI, 0.40-0.95; P =.03). At 12 months, the rate of falls per person-year was 1.5 (95% CI, 1.32-1.75) in the intervention group and 2.3 (95% CI, 2.08-2.60) in the control group. There was no difference in daily activity performance (adjusted difference, -0.20; 95% CI, -0.95 to 0.55; P =.60), falls self-efficacy (adjusted difference, -0.12; 95% CI, -1.25 to 1.01; P =.84), or quality of life (adjusted difference, 0.84; 95% CI, -0.95 to 2.64; P =.35). Conclusions and Relevance: This randomized clinical trial found that a brief home hazard removal program did not reduce the hazard of falls among community-dwelling older adults at high risk for falling. The intervention was effective in achieving a reduced rate of falls, a prespecified secondary outcome. This effectiveness study has the potential for delivery through the national aging services network.

[Development of a lifestyle-integrated physical exercise training and home modification intervention for older people living in a community with a risk of falling \(Part 1\): the FIT-at-Home fall prevention program](#)

**Authors:** Müller, Christian; Lautenschläger, Sindy; Dörge, Christine and Voigt-Radloff, Sebastian

**Publication Date:** May 2021

**Journal:** Disability & Rehabilitation 43(10), pp. 1367–1379

**Abstract:** In this paper, we report on the development and refinement of a progressive physical exercise training and home modification intervention for older people with a risk of falling located in Germany by using the United Kingdom's Medical Research Council framework. The process was iterative and six phases of development emerged: (1) establishing an intervention development group, (2) identifying the evidence on interventions, (3) identifying a theory to underpin the intervention, (4) designing the intervention components, (5) drafting the intervention manual and training course, and (6) piloting and refining of intervention components. The result was an evidence-based, theory-informed, and user-endorsed intervention: FIT-at-Home. This intervention comprised nine individual sessions over 12 weeks and two follow-up booster sessions delivered by trained occupational therapists. A feasibility study demonstrated the acceptance and feasibility of intervention delivery. Users responses were generally favorable and included





recommendations about the intervention manual, mode of delivery of the home hazard assessment, and producing a manual for older people. We developed a feasible home-based lifestyle-integrated physical exercise training and home modification intervention for older people with a risk of falling by using a systematic approach. Implications include how this intervention could enrich occupational therapy fall prevention strategy in older people living at home. Falls in older people represent a major public health concern and occupational therapists in rehabilitation practice are encouraged to apply evidence-based interventions that reduce the risk of falls in older people living in a community. Many physical and environmental fall risks are modifiable by lifestyle changes such as physical exercise training, home safety assessment, and home modification. We developed a home-based balance and strength exercise training and home modification intervention that aims to improve strength, balance, and home safety. This study indicates that older people, at risk of falling, with functional limitations, and limited mobility, who participated in the FIT-at-Home intervention, felt that exercising at home suited them best.

**[A feasibility study of a home-based lifestyle-integrated physical exercise training and home modification for community-living older people \(Part 2\): the FIT-at-Home fall prevention program](#)**

**Authors:** Müller, Christian; Lautenschläger, Sindy; Dörge, Christine and Voigt-Radloff, Sebastian

**Publication Date:** May 2021

**Journal:** Disability & Rehabilitation 43(10), pp. 1380–1390

**Abstract:** This study was conducted in a home-based context where trained occupational therapists delivered progressive physical exercise training and home modification intervention for preventing falls, namely the FIT-at-Home intervention. We assessed the feasibility of the intervention's content and mode of delivery from the occupational therapists' perspective as well as the feasibility of study procedures. We used a mixed-methods approach, which generated qualitative data from 14 OTs' after delivering the intervention via interviews and quantitative data of the study procedures via questionnaires and documentation sheets. In total, 16 of the 17 older people completed the intervention. Of 9 recorded falls, no serious physical problems occurred. Qualitative data suggested that the intervention content and mode was feasible. Only minor adaptations to the program are needed based on the users' feedback. The main benefit was seen in the fact that simple exercises can be integrated into everyday life for older people with restricted mobility. The FIT-at-Home intervention comprising lifestyle-integrated balance and strength exercises and home safety is feasible for occupational therapists to deliver. The findings will help to further refine the intervention and study procedures. Falling is a frequent and serious health problem for many community-living older people, and the incidence of injurious falls increases with advancing age. Home visiting programs comprising physical exercise training and home modification appear to be beneficial for older people with poor health, functional limitations, and limited mobility. This study indicates that it is feasible to introduce lifestyle-integrated balance and strength exercises, performed as part of daily routine for older people at risk of falling. Behavioural self-management strategies have the potential to improve the implementation of exercises during the course of rehabilitation treatment and afterward.

**[Understanding the positive outcomes of discharge planning interventions for older adults hospitalized following a fall: a realist synthesis](#)**

**Authors:** Véronique Provencher, Monia D'Amours, Matthew Menear, Natasa Obradovic, Nathalie Veillette, Marie-Josée Sirois and Marie-Jeanne Kergoat

**Publication Date:** 29 Jan 2021

**Journal:** BMC Geriatrics 21(1): 84.





**Abstract:** Background: Older adults hospitalized following a fall often encounter preventable adverse events when transitioning from hospital to home. Discharge planning interventions developed to prevent these events do not all produce the expected effects to the same extent. This realist synthesis aimed to better understand when, where, for whom, why and how the components of these interventions produce positive outcomes. Methods: Nine indexed databases were searched to identify scientific papers and grey literature on discharge planning interventions for older adults (65+) hospitalized following a fall. Manual searches were also conducted. Documents were selected based on relevance and rigor. Two reviewers extracted and compiled data regarding intervention components, contextual factors, underlying mechanisms and positive outcomes. Preliminary theories were then formulated based on an iterative synthesis process. Results: Twenty-one documents were included in the synthesis. Four Intervention-Context-Mechanism-Outcome configurations were developed as preliminary theories, based on the following intervention components: 1) Increase two-way communication between healthcare providers and patients/caregivers using a family-centered approach; 2) Foster interprofessional communication within and across healthcare settings through both standardized and unofficial information exchange; 3) Provide patients/caregivers with individually tailored fall prevention education; and 4) Designate a coordinator to manage discharge planning. These components should be implemented from patient admission to return home and be supported at the organizational level (contexts) to trigger knowledge, understanding and trust of patients/caregivers, adjusted expectations, reduced family stress, and sustained engagement of families and professionals (mechanisms). These optimal conditions improve patient satisfaction, recovery, functional status and continuity of care, and reduce hospital readmissions and fall risk (outcomes). Conclusions: Since transitions are critical points with potential communication gaps, coordinated interventions are vital to support a safe return home for older adults hospitalized following a fall. Considering the organizational challenges, simple tools such as pictograms and drawings, combined with computer-based communication channels, may optimize discharge interventions based on frail patients' needs, habits and values. Empirically testing our preliminary theories will help to develop effective interventions throughout the continuum of transitional care to enhance patients' health and reduce the economic burden of avoidable care.

### [Screening and Intervention to Prevent Falls and Fractures in Older People](#)

**Authors:** Sarah

E. Lamb, Julie Bruce, Anower Hossain, Chen Ji, Roberta Longo, Ranjit Lall, Chris Bojke, Claire Hulme, Emma Withers, Susanne Finnegan, Ray Sheridan, Keith Willett and Martin Underwood

**Publication Date:** 04 Nov 2020

**Journal:** New England Journal of Medicine 383 (19) pp.1848-1859

**Abstract:** Background Community screening and therapeutic prevention strategies may reduce the incidence of falls in older people. The effects of these measures on the incidence of fractures, the use of health resources, and health-related quality of life are unknown. Methods In a pragmatic, three-group, cluster-randomized, controlled trial, we estimated the effect of advice sent by mail, risk screening for falls, and targeted interventions (multifactorial fall prevention or exercise for people at increased risk for falls) as compared with advice by mail only. The primary outcome was the rate of fractures per 100 person-years over 18 months. Secondary outcomes were falls, health-related quality of life, frailty, and a parallel economic evaluation. Results We randomly selected 9803 persons 70 years of age or older from 63 general practices across England: 3223 were assigned to advice by mail alone, 3279 to falls-risk screening and targeted exercise in addition to advice by mail, and 3301 to falls-risk screening and targeted multifactorial fall prevention in addition to advice by mail. A falls-risk screening questionnaire was sent to persons assigned to the exercise and multifactorial fall-prevention groups. Completed screening questionnaires were returned by





2925 of the 3279 participants (89%) in the exercise group and by 2854 of the 3301 participants (87%) in the multifactorial fall-prevention group. Of the 5779 participants from both these groups who returned questionnaires, 2153 (37%) were considered to be at increased risk for falls and were invited to receive the intervention. Fracture data were available for 9802 of the 9803 participants. Screening and targeted intervention did not result in lower fracture rates; the rate ratio for fracture with exercise as compared with advice by mail was 1.20 (95% confidence interval [CI], 0.91 to 1.59), and the rate ratio with multifactorial fall prevention as compared with advice by mail was 1.30 (95% CI, 0.99 to 1.71). The exercise strategy was associated with small gains in health-related quality of life and the lowest overall costs. There were three adverse events (one episode of angina, one fall during a multifactorial fall-prevention assessment, and one hip fracture) during the trial period. Conclusions Advice by mail, screening for fall risk, and a targeted exercise or multifactorial intervention to prevent falls did not result in fewer fractures than advice by mail alone.

### [Perspectives of older adults regarding barriers and enablers to engaging in fall prevention activities after hospital discharge](#)

**Authors:** Chiara Naseri, Steven M McPhail, Terry P Haines, Meg E Morris, Ronald Shorr, Christopher Etherton-Ber, Julie Netto, Leon Flicker, Max Bulsara, Den-Ching A Lee, Jacqueline Francis-Coad, Nicholas Waldron, Amanda Boudville and Anne-Marie Hill

**Publication Date:** Sep 2020

**Journal:** Health and Social Care in the Community 28(5) pp. 1710-1722.

**Abstract:** Older adults recently discharged from hospital are at high risk of functional decline and falls. A tailored fall prevention education provided at hospital discharge aimed to improve the capacity of older adults to engage in falls prevention activities. What remains unknown are the factors affecting behaviour change after hospital discharge. This study identified the perceived barriers and enablers of older adults to engagement in fall prevention activities during the 6-month period post-discharge. An exploratory approach using interpretative phenomenological analysis focused on the lived experience of a purposive sample (n = 30) of participants. All were recruited as a part of an RCT (n = 390) that delivered a tailored fall prevention education program at three hospital rehabilitation wards in Perth, Australia. Data were collected at 6-month post-discharge using semi-structured telephone surveys. Personal stories confirmed that some older adults have difficulty recovering functional ability after hospital discharge. Reduced physical capability, such as experiences of fatigue, chronic pain and feeling unsteady when walking were barriers for participants to safely return to their normal daily activities. Participants who received the tailored fall education program reported positive effects on knowledge and motivation to engage in fall prevention. Participants who had opportunities to access therapy or social supports described more positive experiences of recovery compared to individuals who persevered without assistance. A lack of physical and social support was associated with apprehension and fear toward adverse events such as falls, injuries, and hospital readmission. The lived experience of participants following hospital discharge strongly suggested that they required more supports from both healthcare professionals and caregivers to ensure that their needs were met. Further research that evaluates how to assist this population to engage in programs that will mitigate the high risk of falls and hospital readmissions is required.

### [Irish occupational therapists use of evidenced-based falls prevention programmes](#)

**Authors:** Lombard, Kim; Desmond, Laura; Phelan, Ciara and Brangan, Joan

**Publication Date:** 08 June 2020

**Journal:** Irish Journal of Occupational Therapy 48(1), pp. 17–30





**Abstract:** Purpose -- As one ages, the risk of experiencing a fall increases and poses a number of serious consequences; 30 per cent of individuals over 65 years of age fall each year. Evidence-based falls prevention programmes demonstrate efficacy in reducing the rate and risk of falls among older adults, but their use in Irish occupational therapy practice is unknown. This study aims to investigate the implementation of falls prevention programmes by occupational therapists working with older adults in Ireland.

Design/methodology/approach -- A cross-sectional survey was used to gather data on the use of falls prevention programmes among occupational therapists working with older adults in any clinical setting across Ireland. Purposeful, convenience and snowball sampling methods were used. The Association of Occupational Therapists of Ireland acted as a gatekeeper. Descriptive statistics and summative content analysis were used to analyse quantitative and qualitative data, respectively. Findings -- In all, 85 survey responses were analysed. Over 85 per cent of respondents reported "Never" using any of the evidence-based falls prevention programmes. The "OTAGO" Exercise Programme was the most "Frequently" used programme (9.5 per cent, n = 7); 29 respondents reported using "in-department" developed falls prevention programmes and 14 provided additional comments regarding current falls prevention practices in Ireland. Originality/value -- In the absence of Irish data on the subject, this study provides a benchmark to describe the use of evidence-based falls programmes by Irish occupational therapists with older adults.

### [Perceptions of older people in Ireland and Australia about the use of technology to address falls prevention](#)

**Authors:** Mackenzie, Lynette and Clifford, Amanda

**Publication Date:** Feb 2020

**Journal:** Ageing & Society 40(2), pp. 369–388

**Abstract:** Falls are common events with serious consequences for older people. With an ageing population and increasing health-care costs, information and communication technologies (ICT) will have a potential role in future health-care delivery. However, research on technology acceptance in health care for older people is limited and its application to falls prevention is unknown. The aims of this study were to explore and describe the perceptions of community-dwelling Australian and Irish older people about their current use of technology, and the potential use of technology for falls prevention. Qualitative data were collected from three focus groups conducted in and around Limerick in Ireland, and three in the Sydney area, Australia. A total of 35 older people participated. Data were analysed using thematic analysis. Four themes emerged from the data: (a) perceptions of vulnerability to falls, (b) preferences for exercise interventions, (c) participation in and ownership of technology, and (d) perceptions about applications of technology for falls prevention. As the use of technology is an instrumental activity of daily living, health professionals need to assess the capacity of older people to adopt these technologies, and provide falls prevention interventions to accommodate the technology skills of older people. Some participants were reluctant to embrace technology and barriers to the effective use of technology to assist in preventing falls may conflict with future health service trends.

### [Reasons for readmission to hospital after hip fracture: implications for occupational therapy](#)

**Authors:** LOCKWOOD Kylee, J.

**Publication Date:** 11 March 2018

**Journal:** British Journal of Occupational Therapy 81(5), pp. 247–254.





**Abstract:** Introduction: The aim of this study was to determine the rate of readmission to hospital after hip fracture. The relationship between readmission to hospital and a range of social and functional variables, including receiving a home visit by an occupational therapist prior to discharge from hospital, was explored. Method: A retrospective cohort study was conducted of 154 patients returning to community living following hip fracture. Multivariate logistic regression identified variables associated with risk of readmission to hospital. Results: One in three patients was readmitted to hospital within 12 months after discharge, with 7% readmitted within 30 days. The most common reason for readmission was another fall. A low level of mobility prior to hip fracture was the strongest independent predictor of risk of readmission to hospital. There was no association between receiving a pre-discharge home visit by an occupational therapist and risk of readmission to hospital. Conclusion: Rates of readmission to hospital are high after hip fracture, and falls are the single most common reason for readmission. Interventions provided by occupational therapists, including home visits, should emphasise and incorporate evidence-based falls prevention strategies.






**OFFICE USE ONLY**

Keywords/search strategy	Limits used
"Occupational Therap*" "best practice" intervention* prevention "risk factor*" "fall* risk*" "risk of future falls" "fall* management" "fall* prevention" discharge*	Last 5 years Peer-reviewed

Databases/sources used		
<input checked="" type="checkbox"/> Pubmed	<input type="checkbox"/> HMIC	<input type="checkbox"/> BMJ Best Practice
<input checked="" type="checkbox"/> MEDLINE	<input checked="" type="checkbox"/> Social Policy & Practice	<input type="checkbox"/> UpToDate
<input checked="" type="checkbox"/> Emcare	<input checked="" type="checkbox"/> CINAHL	<input checked="" type="checkbox"/> Trip Pro
<input checked="" type="checkbox"/> Embase	<input type="checkbox"/> PsycINFO	<input checked="" type="checkbox"/> Cochrane Library
<input checked="" type="checkbox"/> Knowledge & Library Hub	<input checked="" type="checkbox"/> Google Advanced/Scholar	
<b>Other (please list):</b> Patient Experience Library; NIHR; NICE		

inSPIRE repository	
	<p>The Knowledge &amp; Library Service have a growing archive of completed evidence summaries on <a href="#">inSPIRE</a> – the organisation’s knowledge, research and evidence repository. You can browse the evidence summaries <a href="#">here</a>.</p> <p>The (anonymised) results of this search will only be shared in the repository if you have given your permission to do so (we ask this in the evidence search request form).</p>
Has permission to share these results been given?	
<input checked="" type="checkbox"/> Yes – share	<input type="checkbox"/> No – do not share

Contact us	
<b>SFT Knowledge &amp; Library Services</b>	Email: <a href="mailto:library@somersetft.nhs.uk">library@somersetft.nhs.uk</a> Tel: 01823 342433 (MPH) Tel: 01935 384495/4697 (YDH) Web: <a href="https://somersetft-nhs.libguides.com/home">https://somersetft-nhs.libguides.com/home</a>
<b>Improvement Team</b>	Email: <a href="mailto:Jessica.Pawley@somersetft.nhs.uk">Jessica.Pawley@somersetft.nhs.uk</a> Web: <a href="https://somersetcollaborationhub.org/">https://somersetcollaborationhub.org/</a>
<b>Primary Care/ICB</b>	Email: <a href="mailto:Roxanne.hart3@nhs.net">Roxanne.hart3@nhs.net</a>