



Falls

Standardised care process

Objective

To promote evidence-based practice in the prevention of falls for older people who live in residential aged care settings.

Why the prevention and management of falls is important

Approximately 30–50 per cent of people living in residential aged care fall each year, and 40 per cent of them experience recurrent falls. In 2016–17 an estimated 125,021 people aged 65 and over were hospitalised due to falls (AIHW 2019). Falls are commonly due to tripping, slipping and stumbling (ACSQHC 2009). A fall can result in negative outcomes including death, loss of independence and autonomy, immobilisation and depression (WHO 2021).

Definitions

Fall: an event that results in a person coming to rest inadvertently on the ground or floor or other lower level (WHO 2021).

Hip protectors: hard shields (plastic) or soft pads (foam or other material) usually fitted in pockets in specially designed underwear. They are worn to cushion a sideways fall on the hip (de Bot et al. 2020).

Restrictive practice: any practice or intervention (chemical restraint, environmental restraint, mechanical restraint, physical restraint and seclusion) that has the effect of restricting the rights or freedom of movement of a care recipient (Australian Government Department of Health 2021).

Team

Manager, registered nurses (RNs), enrolled nurses (ENs), personal care attendants (PCAs), leisure and lifestyle staff, general practitioner (GP), allied health professionals (such as a physiotherapist, occupational therapist and exercise physiologist), residents and/or family/carers.

Acknowledgement

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Brief standardised care process

Recognition and assessment

Identify a falls risk profile for all residents on admission and ongoing.

Undertake a comprehensive multifactorial falls risk assessment at admission or change of health status or after a fall that includes:

- a detailed falls history
- a comprehensive physical assessment/examination, including a pain assessment
- a functional assessment
- a cognitive assessment
- a medication review
- an environmental review.

Interventions

Falls prevention interventions include:

- exercise programs
- injury minimisation (such as hip protectors/helmets) and falls surveillance
- medication review and minimisation
- correction of visual deficits
- continence management
- foot care and safe footwear
- management of syncope, dizziness, orthostatic hypotension and vertigo
- environmental review and modification
- addressing reversible causes of acute and chronic cognitive decline
- monitoring blood glucose levels in residents with diabetes
- pain assessment and Implementation of appropriate management
- using alternatives to restrictive practice (restraint).

Referral

- RN, GP and/or geriatrician
- Physiotherapist/accredited exercise physiologist and occupational therapist or falls prevention program
- Podiatrist
- Optometrist, ophthalmologist
- Dietician
- Diabetes educator or endocrinologist
- Pharmacist, Residential Medication Management Review (RMMR)

Evaluation and reassessment

- Monitor the effectiveness of the falls prevention interventions.
- Regularly review resident's exercise programs and mobility aids.
- Review medicines annually or if a change in medication increases falls risk.
- Conduct bi-annual eye examinations.

Resident involvement

- Falls prevention measures
- Suitable footwear
- Environmental modifications and use of aids to reduce falls risk
- Understand the physical and psychological benefits of modifying falls risk
- Know where residents can seek further advice and assistance

Staff knowledge and education

- Definition of falls
- Understanding the importance of reporting falls
- Promoting safe mobility
- Risk assessment and management including post-fall follow-up
- Multidisciplinary strategies
- The correct application and care of hip protectors
- Alternatives to restraints and/or other restricted devices
- Use of a falls policy
- Awareness of frailty and impacts on mobility



Full standardised care process

Recognition

All residents are to be screened for risk of falls on admission to identify factors known to increase the risk of falls.

Assessment

Undertake a comprehensive multifactorial falls risk assessment:

- on admission
- annually
- after any fall or other change in the resident's health status.

All identified risks factors are to be addressed, even if the overall falls risk is low.

The comprehensive health assessment should be performed by health professionals with the appropriate skills and experience. It is important to use evidence-based validated tests and tools for assessing falls risk; for example, the Peninsula Health Falls Risk Assessment Tool (FRAT) and the Timed Up and Go Test.

As part of the comprehensive health assessment, a detailed falls history can be taken that includes the circumstances of the fall(s), frequency, symptoms at the time of the fall(s), injuries and other consequences.

Undertake a **comprehensive physical assessment** in the following areas:

- gait, balance, mobility levels and lower extremity joint function
- muscle strength/weakness in the lower extremities
- neurological function – cognitive evaluation, lower extremity peripheral nerves, proprioception, reflexes and tests of cortical, extrapyramidal and cerebellar function
- pain assessment
- vitamin D and calcium levels, osteopenia and osteoporosis
- infection risk/assessment (urinary tract and foot infections), particularly in residents with diabetes
- cardiovascular status – heart rate and rhythm, orthostatic and postural hypotension
- syncope – assess for the underlying cause of unexplained falls or episodes of collapse

- visual acuity and field, for example, loss of peripheral or central vision
- examination of the feet, including checking for ill-fitting or inappropriate footwear
- a continence assessment to check for problems that can be modified or prevented
- nutrition and hydration status.

Undertake a **functional assessment** including:

- activities of daily living skills, including correct use of adaptive equipment and mobility aids
- the resident's perceived functional ability and fear related to falling
- activity levels
- diabetes self-care ability (if resident is self-caring) including blood glucose testing and administering medicines
- whether the resident is receiving adequate sunlight for vitamin D production.

Undertake a **medicine review** including:

- all prescribed and over-the-counter medications with dosages
- medicines that increase the risk of falls:
 - sedatives and hypnotics
 - neuroleptics and antipsychotics
 - antidepressants
 - benzodiazepines
 - nonsteroidal anti-inflammatory drugs
 - opioids
 - antihypertensive agents
 - diuretics
 - nitrates
- consideration of blood glucose levels, alcohol consumption and potential interactions with medicines.

Undertake an **environmental review** including:

- the resident's interaction with the environment to support mobility
- floor surfaces
- the level of illumination and functioning of lights
- the sturdiness of furniture and beds
- the use of adaptive aids and whether they work properly and are in good repair
- trip hazards (including the resident's clothing)
- physical and environmental restraint use.



Post-fall assessment

- Perform a physical assessment of the resident at the time of the fall, including vital signs (which may include orthostatic blood pressure readings), a pain assessment and an evaluation of head, neck, spine and/or extremity injuries including skin injury.
- Monitor blood glucose for residents with diabetes following a fall, especially if they are taking glucose-lowering medicines.
- Monitor vital signs every hour for four hours, then review. Vital signs are to be monitored four-hourly until 24 hours of observation have been completed.
- Commence neurological observations [Glasgow Coma Scale (GCS) and changes in level of consciousness, headache or vomiting] where a head injury is sustained as a result of the fall or if the fall was unobserved and it is not known if the head was hit.
- Monitor neurological signs every 30 minutes until GCS is within normal limits, then continue hourly for the next four hours, then two-hourly until 24 hours of observation has been reached.
- For a resident who is prescribed anticoagulant/ antiplatelet medication or has a bleeding disorder, continue observations (neurological and vital signs) four-hourly for 72 hours and continue to assess for developing haematoma.
- Increase frequency of observations (neurological and vital signs) and seek medical attention if any deterioration in GCS score or mental status (alertness, cognition or behaviour) is noted.
- The healthcare team can consider further investigation (cranial computed tomography) or transfer to hospital in accordance with the clinical evidence, the resident's wishes, the resident's advance care plan or the wishes of the resident's authorised representative.
- Perform a post-fall assessment within 24 hours of a resident's fall to identify the possible causes.

Once the assessment rules out any significant injury:

- obtain a history of the fall from the resident or a witness description and document this
- note the circumstances of the fall, its location, the time of day, the resident's activity at the time and any significant symptoms
- repeat the multifactorial falls assessment.

Review and discuss the findings from the individualised assessment with the multidisciplinary team and develop a multidisciplinary plan of care to prevent future falls.

Interventions

An individualised plan of care, based on the outcomes of the comprehensive multifactorial falls risk assessment, is developed with the resident and/or family/carers and care team.

Exercise program

Exercise programs can be individualised to the physical capabilities and health profile of the resident. Exercise can be prescribed, supervised and evaluated by appropriately qualified health professionals and delivered by trained care staff.

Exercise programs that challenge a person's balance are the most effective in preventing falls, such as:

- tai chi
- yoga
- walking programs (for those with a low- falls risk)
- gait training functional incidental training (FIT).
- weight training for balance



Injury minimisation

- Use appropriate mobility aids and safe transfer techniques.
- Use hip protectors (worn correctly, these are comfortable and can be self-managed)
- Osteoporosis management:
 - ensure residents are receiving adequate exposure to sunlight for vitamin D production
 - supplementation of at least 800 IU per day for residents with low vitamin D levels
 - vitamin D supplementation in combination with calcium supplementation for residents with osteoporosis
 - protein supplementation.
- Ensure adequate hydration.
- Undertake a pain assessment and implement appropriate management.

Falls surveillance

- Identify and regularly assess residents who have a high risk of falling, particularly residents with dementia.
- Supply fall alarm devices (personal or pressure sensors, motion sensors, out-of-bed sensors, video surveillance).
- Use falls risk alert cards and symbols to flag residents at high risk of falling.
- Ensure a staff member stays with at-risk residents while they are in the bathroom.
- Consider using a volunteer sitter program for people who have a high risk of falling and define the volunteers' roles clearly.
- Monitor falls data to manage risk.

Medication review and minimisation

- All medications should be reviewed and minimised, particularly high-risk medicines, such as sedatives and hypnotics; neuroleptics and antipsychotics; antidepressants; benzodiazepines and nonsteroidal anti-inflammatory drugs; diuretics, antihypertensive agents and nitrates; opioids.

Visual impairment

- Encourage residents with vision deficits to wear their prescription glasses.
- Ensure residents have regular eye health assessments (every two years minimum) or in response to new visual deficit.
- Undertake an environmental assessment and modification for residents with severe visual impairments (visual acuity worse than 6/24) and reduced visual field
- Educate residents and carers that extra care is required when visual impairment is being corrected with, for example, new glasses (falls may increase as a result of correction to visual acuity).
- Assess resident's accommodation if bifocals or multifocal lenses are worn while walking, particularly on stairs.

Continence management

- Put in place an individualised continence program for residents at risk of falling.
- Ensure residents have access to continence aids.
- Ensure residents have a regular, assisted toilet routine.

Feet and footwear

- Treat any identified foot problems.
- Refer to podiatrist for regular monitoring and management of foot problems.
- Ensure correctly fitted footwear is worn.
- Ensure safe footwear is worn. Safe footwear characteristics include:
 - thin and firm soles to improve foot position sense; a tread sole may further prevent slips on slippery surfaces
 - a low, square heel to improve stability
 - a supporting collar to improve stability.

Syncope

- Manage pre-syncope, syncope and postural hypotension, and review medications (including medications associated with pre-syncope and syncope).



Dizziness, orthostatic hypotension and vertigo

- Use vestibular and balance rehabilitation therapy to treat dizziness and balance problems where indicated and available.
- Use head repositioning exercises such as the Epley manoeuvre to manage benign paroxysmal positional vertigo. Manoeuvres should only be undertaken by a trained person.
- Modify routines to enable resident to rise slowly from lying to sitting to standing.
- Ensure adequate hydration by monitoring fluid intake.

Environmental review and modification

- Conduct environmental reviews regularly and consider combining them with occupational health and safety audits.
- Check all aspects of the environment and modify as necessary to reduce the risk of falls.
- Identify the resident's preferred arrangement for personal belongings and furniture, and ensure they are easily accessible.
- Use a low-rise bed that measures 14 cm from the floor for those residents at high risk (**this is a restrictive practice**)
- Use floor mats at the bedside if the resident is at risk of serious injury (such as for residents with osteoporosis).

For residents with dementia

- Address all reversible causes of progressive cognitive decline.
- When residents present with an acute change in cognitive function, assess for delirium and the underlying cause of this change.

For residents with diabetes

- Monitor blood glucose to detect hypo- and hyperglycaemia, then treat/manage as appropriate.
- Refer to Diabetes Educator or General Practitioner for regular review.

Alternatives to restrictive practice (restraint)

- Responsive behaviours should be investigated, and reversible causes of these behaviours (for example, delirium) should be treated.
- Implement a Behaviour Support Plan (BSP).
- Respond to the resident's behaviour, consistent with the BSP, and understand the cause rather than attempting to control it.
- Bedside rails are a mechanical restraint and do not prevent falls. Bed rails are associated with increased fall injuries.
- Use of any restrictive practice increases the risk of falls and should be avoided.

Post-fall interventions

- Follow the facility's post-fall protocol or guideline for managing residents immediately after a fall.
- Assess the resident for pain.
- Report and document all falls on the facility incident management system and in the resident's progress notes.
- Ask the resident whether they remember the sensation of falling.
- Review the fall. This should include trying to determine how and why a fall may have occurred and implement actions to reduce the risk of another fall.
- An in-depth analysis of the fall event is required when serious injury or death has been sustained because of a fall.
- Contact the resident's family/carers.

Referral

- RN
- GP and/or geriatrician
- Physiotherapist, accredited exercise physiologist
- Falls prevention program
- Podiatry
- Optometrist, ophthalmologist
- Diabetes educator if the resident has diabetes, has low care needs and is self-caring
- Endocrinologist if the resident has brittle/unstable diabetes
- Dietitian
- Occupational therapist



Evaluation and reassessment

- Monitor the effectiveness of the falls prevention interventions instituted.
- Review the effectiveness of mobility aids.
- Regularly review the resident's exercise program, including how the resident is progressing with it and adjust as appropriate.
- Arrange regular eye examinations (every two years).
- Instigate a referral and consent to pharmacist review of medications (prescribed and non-prescribed) after a fall, after initiation or escalation in dosage of a medication, if there is multiple drug use and annually.

Resident involvement

Educate all residents and their families/carers about:

- falls prevention measures
- suitable footwear
- environmental modifications and the use of aids to reduce falls risk
- the physical and psychological benefits of modifying falls risk
- where residents can seek further advice and assistance.

Staff knowledge and education

Healthcare professionals and aged care workers dealing with residents known to be at risk of falling can develop and maintain basic professional competence in falls assessment and prevention that includes:

- the definition of falls
- understanding the importance of reporting falls
- promoting safe mobility
- a risk assessment
- multidisciplinary strategies
- the correct application and care of hip protectors
- risk management including post-fall follow-up
- alternatives to restrictive practice
- implementing the falls policy.



Evidence base

Aged Care Quality and Safety Commission 2021, *Behaviour Support Plans. A fact sheet for Residential Aged Care Providers*, Behaviour support plans – fact sheet (agedcarequality.gov.au), accessed Feb 2022.

Australian Commission on Safety and Quality in Health Care (ACSQHC) 2009, *Preventing falls and harm from falls in older people. Best practice guidelines for Australian residential aged care facilities*, ACSQHC, Sydney.

Australian Government Department of Health 2020, *Restrictive practice use in aged care facilities*, Fact sheet, Types of restrictive practice accessed Sep. 2021 <<https://www.health.gov.au/sites/default/files/documents/2021/08/types-of-restrictive-practices.pdf>>

Australian Institute of Health and Welfare (AIHW) 2019, Trends in hospitalised injury due to falls in older people, 2007–08 to 2016–17, Injury research and statistics series no. 126, Cat. no. INJCAT 206, Canberra.

Cameron, I D, Dyer, S M, Panagoda, C E, Murray, G R, Hill, K D, Cumming, R G, Kerse, N 2018, *Interventions for preventing falls in older people in care facilities and hospitals*, Cochrane Database of Systematic Reviews, John Wiley & Sons Ltd.

de Bot, R T A L, Veldman, H D, Witlox, A M, van Rhijn, L W & Hiligsmann, M 2020, 'Hip protectors are cost-effective in the prevention of hip fractures in patients with high fracture risk', *Osteoporosis International* 31(7), 1217–1229 <<https://doi.org/10.1007/s00198-019-05252-8>>.

Department of Health 2012, *Strengthening care outcomes for residents with evidence (SCORE)*, Ageing and Aged Care Branch, State Government of Victoria, Melbourne.

Department of Health 2015, *Post-fall management guidelines in WA healthcare settings*, Health Strategy and Networks, Department of Health, Perth.

Department of Health and Human Services 2015, *Quality indicators in public sector residential aged care services*, State Government of Victoria, Melbourne.

Dunning, T, Duggan, N, Savage S 2014, *The McKellar guidelines for managing older people with diabetes in residential and other care settings*, Centre for Nursing and Allied Health, Deakin University and Barwon Health, Geelong.

Jian-Yu, E, Li, T, McNally, L, Thomson, K, Shahani, U, Gray, L, Howe, T E & Skelton, D A 2020, *Environmental and behavioural interventions for reducing physical activity limitation and preventing falls in older people with visual impairment*, Cochrane Database of Systematic Reviews, Issue 9. Art. No.: CD009233. DOI: 10.1002/14651858.CD009233.pub3.

Gale, C R, Cooper, C & Aihie Sayer, A 2016, 'Prevalence and risk factors for falls in older men and women: the English longitudinal study of ageing', *Age & Ageing* 45:789–794.

Gaspar, P & Menten, J 2020, 'Ch 12: Managing oral hydration in the older adult', in M Boltz, E Capezuti, D Zwicker & T Fulmer 2020, *Evidence-based geriatric nursing protocols for best practice*, Springer, New York.

National Institute of Health and Care Excellence (NICE) 2013, *Falls: assessment and prevention of falls in older people*, NICE clinical guideline 161, NICE, UK.

Park, H, Satoh, H, Miki, A, Urushihara, H & Sawada Y 2015, 'Medications associated with falls in older people: systematic review of publications from a recent 5-year period', *European Journal of Clinical Pharmacology*, 2015 Dec;71(12):1429-1440. DOI: 10.1007/s00228-015-1955-3. PMID: 26407688.

Registered Nurses' Association of Ontario (RNAO) 2017, *Preventing falls and reducing injury from falls*, RNAO, Toronto. <<https://rnao.ca/bpg/guidelines/prevention-falls-and-fall-injuries>>.



Sluggett, J K, Lalic, S, Hosking, S M, Ilomäki, J, Shortt, T, McLoughlin, J, Yu, S, Cooper, T, Robson, L, Van Dyk, E, Visvanathan, R & Bell, J S 2020, 'Root cause analysis of fall-related hospitalisations among residents of aged care services', *Aging clinical and Experimental Research*, 32(10), 1947-1957.

The Joanna Briggs Institute 2016, *Recommended practice: falls (older person): risk assessment*, JBI, Adelaide.

The Joanna Briggs Institute 2016, *Recommended practice: observation following falls in residential aged care: older people*, JBI, Adelaide.

World Health Organisation (WHO) 2021, WHO Falls fact sheet, WHO accessed Sep 2021 Falls (who.int)

Yoshikawa, A, Ramirez, G, Smith, M L, Foster, M, Nabil, A K, Jani, S N & Ory, M G 2020, 'Opioid Use and the Risk of Falls, Fall Injuries and Fractures among Older Adults: A Systematic Review and Meta-Analysis', *The Journals of Gerontology*, 75(10), 1989-1995 <<https://doi.org/10.1093/gerona/glaa038>>.

Important note: This standardised care process (SCP) is a general resource only and should not be relied upon as an exhaustive or determinative clinical decision-making tool. It is just one element of good clinical care decision making, which also takes into account resident/patient preferences and values. All decisions in relation to resident/patient care should be made by appropriately qualified personnel in each case. To the extent allowed by law, the Department of Health and the State of Victoria disclaim all liability for any loss or damage that arises from any use of this SCP.

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