AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE

DRAFT

Preventing Falls and Harm from Falls in Older People

Best Practice Guidelines for Australian Hospitals

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Contents

Preventing falls and harm from falls

The *Preventing Falls and Harm from Falls in Older People: Best Practice Guidelines for Australian Hospitals* (*Falls Guidelines for Hospitals*) is a support resource based on the *Falls Guidelines for Hospitals Reference Document*. They will be published as part of a suite of resources.

The Falls Guidelines for Hospitals has been developed for all people working in Australian hospitals who are involved in the care of older people.

The Falls Guidelines for Hospitals outlines the key fall prevention interventions and associated recommendations and good practice points for implementation in hospitals. This includes:

- information on fall risk assessment
- the fall risk factors to consider and interventions to address each risk factor
- how to minimise harm from falls, and
- post-fall management.

Recommendations and Good practice points

Recommendations are based on the best available evidence. The associated level of evidence is aligned to the modified GRADE approach used by the 2022 World Falls Guidelines:

- 1 indicates a strong recommendation
- 2 indicates a conditional recommendation
- A-C indicates high, intermediate, low-quality evidence respectively.

Good practice points guide all aspects of care of older people in hospitals relevant to falls and fall injury prevention and are based on expert research and current best practice.

Hospital staff have a key role to play in preventing falls

> 'A fall is an event which results in a person coming to rest inadvertently on the ground or floor or other lower level.' World Health Organization.

Falls are a common reason for older people presenting to the emergency department and also occur after admission to hospital. Falls can occur in patients of all ages and while falls can result in no harm, risk, frequency and severity of fall-related injury increases with age.

Successful fall prevention involves a multifactorial approach using a combination of fall prevention interventions tailored to the person based on an individual fall risk assessment. Using any one intervention on its own is unlikely to reduce the risk of falling.

The content of the Falls Guidelines for Hospitals should inform a hospital's fall and fall injury prevention program. Not all of the intervention categories include a recommendation. The order of interventions and strategies presented does not imply importance of one over another. Where specific health professions are named, this has been informed by evidence.

Older people

Older people are defined as those aged ≥65 years. For older Aboriginal and Torres Strait Islander peoples the age ≥50 years is used, reflecting the life expectancy gap between First Nations and non-First Nations Australians and the lower proportion of First Nations people aged ≥65 years.

It is recommended that hospitals apply a targeted approach to preventing falls in older people by considering all older people at risk of falling and individually assessing each older person to determine which fall injury interventions are necessary. Hospitals should apply a person-centred approach to all patients, including those aged less than 65 years.

Further information on best practice in fall prevention

Health service staff are encouraged to refer to the *Falls Guidelines for Hospitals Reference Document* for more detailed information on all aspects of the content of the Falls Guideline for Hospitals.

Information on falls and fall injuries in Australia and involving older people in fall management are provided at the end of this document.

Falls reduction is a focus of the National Safety and Quality Health Service Standards.

Separate Falls Guidelines and Reference Documents have been developed for community and residential aged care settings.

Terminology

The terms fall and falls may be used interchangeably. A glossary of key terms is included in the Falls Guidelines for Hospitals Reference Document.

Key messages of the Falls Guidelines for Hospitals

- **Prevention is key.** Many falls can be prevented.
- **Prevention is everyone's responsibility.** Fall and injury prevention need to be addressed at across the hospital from a multidisciplinary perspective.
- **Person-centred care relies on adequate staffing and skills mix.** Safe staffing levels and skills mix supports good clinical care in the prevention of falls and harm from falls.
- **Target older people.** People aged over 65 years should be considered at risk of falling and be individually assessed for which fall injury preventions are necessary. Hospitals should apply a person-centred approach to all patients, including those aged less than 65 years.
- **Everyone is at risk of falling.** These guidelines may also apply to younger people at increased risk of falling such as those with mobility or cognitive disability, or other medical conditions that alter functional ability.
- **Older people with delirium** are at increased risk. Preventing and managing delirium is important for prevention of injuries from falls.
- **Manage fall risks benefits the whole person.** Managing risk factors for falls, such as delirium, medicines, incontinence, poor vision, dizziness, and balance problems will have wider benefits for the person beyond fall prevention.
- **Medicines is a common cause of falls.** In hospital new medicines are started, medicines changed.
- **Engage older people, carers and family.** Engaging older people, carers and family (to the extent the older person chooses) in the assessment of fall risk and the implementation of fall prevention interventions is an integral part of preventing falls and minimising harm from falls.
- **Tailor interventions to the older person.** Personalised multifactorial fall prevention interventions based on an assessment of individual risk factors should be provided for all older people. The interventions should be resourced adequately and monitored and reviewed regularly for effectiveness.
- **All falls need review.** The consequences of falls resulting in minor or no injury also require review. Patient factors such as fear of falling and reduced activity level can profoundly affect function and quality of life and increase the risk of seriously harmful falls.
- **Educate all involved.** Providing tailored fall prevention education to staff, older people and their families contributes significantly to fall prevention in hospitals. The most effective approach to an organisation wide multifactorial fall prevention program is likely to be one that includes clinicians and non-clinicians in the development of the program.
- **Prioritise discharge planning.** Support safe transitions for people by providing strategies and referral pathways to address identified fall risk factors, such as poor vision, medication review, and osteoporosis, and home safety interventions as part of discharge planning to prevent further falls and fall injuries.
- **Results will come.** At a strategic level, results of the fall prevention program will not be immediately clear as there will be a time lag between investment in a fall prevention program and improvements in outcome measures. Align hospital programs (e.g. delirium) and ensure information is shared to inform ongoing improvement.

1 Fall Risk Assessment for Tailoring Interventions

A targeted approach to preventing falls in older people in hospital involves considering all older people at risk of falling. As soon as practical on admission to hospital, each older person should be assessed to determine the necessary fall injury interventions. Hospitals should apply a person-centred approach to patients aged less than 65 years.

Fall risk assessments aim to identify factors that increase fall risk for a person that may be addressed through a fall intervention. Assessment of fall risks alone do not prevent falls. Identified risks must be addressed by reliably planning and implementing strategies shown to minimise the risk of falling and fall-related injuries. Chapter 6 of the *Falls Guidelines for Hospitals Reference Document* includes examples of risk assessment tools and discusses principles of care in using these fall risk assessments.

Recommendations

Education: Provide tailored education about fall risk and fall prevention to older people and their carers and family (to the extent the older person chooses) and to all staff. (Level 1B)

Personalised interventions: Provide personalised multifactorial fall prevention interventions for all older people based on an assessment of individual risk factors. (Level 2B) Calculating a fall risk score is not necessary. (Level 2B)

Good practice points

- Identify fall risk factors for older people admitted to hospital, attending the emergency department or outpatient services, especially for older people with a history of falls. Consider all older people to be at risk of falls.
- Consider all people with mobility or cognitive disabilities to be at risk of falls, regardless of age.
- Implement interventions informed by a multifactorial comprehensive assessment and goals of care to systematically address fall risk factors during hospital admission, inpatient stays, discharge planning and referral to community services.
- Ensure all health professionals involved in the care of older people receive ongoing education about fall risk and fall prevention.
- Ensure older people are provided with healthy diets that contain sufficient protein to maintain muscle mass, include potassium, calcium, vitamin D, dietary fibre and vitamin B12 and contain little to no added sugar, saturated fats and sodium.
- Provide meal assistance to older people who request or require help with eating and drinking to support nutritional intake and hydration.
- Support behavioural strategies to help regulate the older person's sleep-wakefulness cycles and improve sleep quality.
- Minimise disturbing noise and disruptive care practices where possible to optimise sleep duration and quality in for all people admitted to hospital.
- Ensure delirium prevention, assessment and management is part of falls prevention programs.
- Promote regular and effective communication among members of multidisciplinary teams caring for older people at risk of falls and include the older persons carers and family (to the extent that the older person chooses).

2 Balance and Mobility

Balance plays an essential role in managing an older person's everyday activities. Increasing age, inactivity, disease processes and muscle weakness are factors that contribute to impaired balance.

Balance and mobility are often poorer when a person is in hospital and may further deteriorate during a hospital stay if the person is less active than usual due to their medical condition. Unfortunately, hospital environments can discourage mobility.

As part of a mobility assessment, it is important to establish whether a person's level of mobility in hospital is usual for them.

Chapter 7 of the *Falls Guidelines for Hospitals Reference Document* provides more detailed information about fall prevention interventions associated with balance and clinical assessments for measuring balance, mobility and strength.

Good practice points

- Assess the older person's balance, mobility and strength using validated tests to:
    - quantify the extent of balance and mobility limitations and muscle weakness
    - guide exercise prescription
    - measure improvements in balance, mobility and strength.
- Determine and provide the level of hands-on assistance required for the older person's safe mobility.
- Assess the older person to determine the need for walking aids.
- Balance the risk and benefits of restricting an older person's activity and maintaining mobility to minimise hospital-acquired deconditioning.
- Refer older people with ongoing balance and mobility problems to a post-hospital fall prevention exercise program in the community.

3 Cognitive Impairment

Cognitive impairment, including delirium and dementia, is associated with increasing age and is a major risk factor for falls. Delirium is more common when an older person is acutely unwell and in hospital. Cognitive impairment may directly influence a person's ability to evaluate and respond to their environment and safely carry out everyday activities.

Although increased age is the strongest risk factor for cognitive impairment, older people can have cognitive impairment due to acquired brain injury, mental health conditions and other pre-existing conditions.

Chapter 8 of the *Falls Guidelines for Hospitals Reference Document* provides information on the fall risks associated with cognitive impairment, tools for assessing a person's cognitive status, and links to additional resources.

Good practice points

- Identify and assess fall risk factors for people with cognitive impairment early in the hospital admission.
- When there is a change in an older person's condition, including after a fall or surgery, regularly reassess the cognitive status of the older person.
- Use a validated tool such as the 4AT to assess older people for delirium, particularly for those older people who present with an acute change in cognitive function.
- Where delirium has been identified in an older person, use a delirium pathway to determine the cause, implement delirium prevention interventions and manage the delirium by following the evidence-based interventions in the Australian Clinical Practice Guidelines for the Management of Delirium in Older People and the Delirium Clinical Care Standard.
- Undertake detailed assessment of older people with gradual-onset, progressive cognitive impairment to determine diagnosis and, where possible, identify and address reversible causes. Use the Australian Clinical Practice Guidelines and Principles of Care for People with Dementia.
- Involve older people with cognitive impairment and substitute decision-makers in supported decision-making about which fall prevention interventions to use, and how to use them. Family and carers know the older person and may suggest ways to support them and are included (to the extent the older person chooses).Support information sharing about exercise and other fall prevention recommendations with the older persons' carers and family (to the extent that the older person chooses) to support continued engagement and participation.
- Ensure implementation of models of care that enable adequate supervision, equipment and support for the person with cognitive impairment, and respond to fluctuations in the person's mobility, cognitive state and the impact of changed behaviours on others.
- For people with cognitive impairment, use reasonable adjustments to implement the *Falls Guidelines for Hospitals*. Reasonable adjustments should include (but are not limited to):
    - Employing dementia enabling techniques to manage the physical environment that promotes people living with dementia to feel supported and engaged.
    - Using tailored communication approaches to encourage the person's participation in decision making and care planning.
    - Involving the person's family and carers in the assessment and design of fall prevention interventions (to the extent the person chooses).

4 Medicines

There is a recognised association between medication use and falls in older people.

Drug classes that increase the risk of falling in older people include opioids, sedatives and hypnotics, neuroleptics and antipsychotics, antidepressants, benzodiazepines and certain classes of cardiovascular medicines. When an older person is acutely unwell in hospital, they may need doses of their regular medicines adjusted to minimise falls risk. A review of medication should be a core part of the assessment of an older person while in the hospital.

Chapter 13 of the *Falls Guidelines for Hospitals Reference Document* details the classes of medicines which are likely to increase fall risk, principles of care in medicines safety and advice on relevant Australian professional practice standards and guidelines.

Good practice points

- Take a best possible medicines history and review all of the older person's medicines while in hospital.
- Consider adjusting, tapering or ceasing medicines that increase the older person's fall risk.
- Ensure medicines are commenced with an age-appropriate dose and doses are adjusted slowly based on regular monitoring for efficacy and emergence of adverse effects.
- Complete a medicines review to improve the likelihood of identifying medicines that increase the risk of falls (sometimes referred to as fall-risk increasing drugs). Tapering, or cessation of these medicines where possible may significantly reduce fall risk.
- Consider alternative strategies for behaviour support planning, promoting sleep, addressing anxiety, depression and pain. Psychotropic medicines are only considered for managing changed behaviours when there has been an adequate trial of non-medication strategies and they have been ineffective. Document the purpose and the plan for review. See Psychotropic Medicines in Cognitive Disability or Impairment Clinical Care Standard.
- Communicate any recent or proposed changes to a person's medicines regimen to the multidisciplinary team at transitions of care.

5 Continence

Urinary incontinence is common in older people. Older people may make extraordinary efforts to avoid an incontinent episode, including placing themselves at increased risk of falling.

Older people are often reluctant or embarrassed to discuss issues around continence. Healthcare professionals and hospital staff should enquire openly and routinely about incontinence symptoms rather than rely on the older person to mention it during a consultation.

Chapter 9 of the *Falls Guidelines for Hospitals Reference Document* provides detailed information about the incontinence risk factors associated with falls in hospitals, strategies to promote continence and reduce the risk of falls and advice on where to access resources to assist in managing incontinence.

Good practice points

- Ensure that a continence assessment is completed to identify and treat factors that can cause or contribute to incontinence in the older person. Implement interventions to minimise fall risk related to incontinence and facilitate access by the older person to a specialist continence service when required.
- Develop a plan with the older person that considers what assistance is required for toileting. This may include provision of regular, proactive toileting assistance, use of continence aids, supervision in bathrooms.
- Proactively manage the older person's nocturia and frequency as part of a multifactorial approach to care.

6 Feet and Footwear

Foot problems are a contributing factor to mobility impairment in older people and are directly associated with an increased risk of falling.

Inappropriate footwear is also a contributing factor to falls and fractures in older people and is a significant issue in hospital settings with one study of 65 older people admitted to a hospital rehabilitation ward finding that 72% wore ill-fitting footwear.

Chapter 10 of the *Falls Guidelines for Hospitals Reference Document* details the characteristics of the best footwear for preventing falls, podiatry interventions and care strategies to improve foot condition and reduce falls, and advice on where to access additional resources.

Good practice points

- Assess if the older person has any foot problems and if their footwear safe and well-fitted.
- Refer older people with foot conditions and foot pain to a podiatrist for assessment and treatment in hospital or after discharge.
- Encourage the older person to use safe well-fitting footwear (in hospital and after discharge) that includes:
    - heels that are low and square to improve stability
    - a supporting ankle collar to improve stability
    - soles with tread to prevent slips
    - firm soles to optimise foot position sense
    - easy fastening and only including laces if the person can tie them
- Encourage the use of safe well-fitting footwear, as opposed to non-slip socks, as these are better for fall prevention.

7 Syncope

Syncope is a brief loss of consciousness and is commonly described as fainting or passing out. Older people are more predisposed to syncopal events due to age-related physiological changes that affect their ability to adapt to changes in cerebral perfusion.

Chapter 11 of the *Falls Guidelines for Hospitals Reference Document* details the main types of syncope, the principles of care for syncope and further information on the diagnosis and management of syncope.

Good practice points

- Ensure older people who experience unexplained falls or episodes of collapse including presyncopal or syncopal episodes (including postural hypotension) are urgently assessed by a medical practitioner to establish the underlying cause.
- Undertake a medication review, identifying medicines that may cause postural hypotension.
- Treat older people diagnosed with the cardio inhibitory form of carotid sinus hypersensitivity, including considering fitting of a dual-chamber cardiac pacemaker.

8 Dizziness and vertigo

Dizziness is a term used to describe a range of sensations such as lightheaded, foggy or unsteady. Vertigo is a sensation of spinning, The most common diagnosis for dizziness is benign paroxysmal vertigo.

Dizziness is associated with an increased risk of falling in older people. Poor sensorimotor function, impaired balance control, anxiety and neck and back pain have been identified as mediators of the relationship between dizziness and falls. Older people with dizziness are also at high risk of experiencing fall-related fractures.

Chapter 12 of the *Falls Guidelines for Hospitals Reference Document* discusses how to assess dizziness and vertigo and the associated principles of care, and details different interventions which can reduce the symptoms of dizziness.

Good practice points

- Assess older people complaining of dizziness and vertigo for vestibular dysfunction, gait and balance problems, postural hypotension and anxiety.
- Assess the older person for postural hypotension with tests of lying and standing blood pressure.
- Review the older person's medicine regimen to identify medicines causing or contributing to dizziness or postural hypotension (including but not limited to antihypertensives, antidepressants, anticholinergics, hypoglycemics).
- Facilitate access to an appropriately trained medical practitioner or vestibular physiotherapist to assess dizziness and vestibular-related balance problems and implement interventions for benign paroxysmal positional vertigo, including vestibular rehabilitation when indicated.

9 Vision

Older people with impaired vision are twice as likely to fall compared to older people without vision problems. Vision loss is the third most common chronic condition in older people. Poor vision is also associated with increased frailty.

Chapter 14 of the *Falls Guidelines for Hospitals Reference Document* discusses the eye diseases associated with an increased risk of falling, principles of care including eye screening tests, the importance of discharge planning and advice on where to get further information and helpful resources.

Good practice points

- Identify older people with visual problems that can contribute to falls on admission to hospital.
- Ensure older people who use glasses have accessible clean glasses and wear them in hospital. If the older person has different glasses for reading and distance, ensure they wear distance glasses when mobilising.
- Consider environmental factors such as adequate lighting, contrasting fixtures such as toilet seats and clear signage to help maximise visual cues and way finding.
- Consider increased supervision for older people with impaired vision when moving away from their immediate bed surrounds.
- As part of good discharge planning:
    - refer older people with undiagnosed visual problems to an optometrist, orthoptist or ophthalmologist.
    - facilitate timely access to cataract surgery for both eyes for older people with clinically significant visual impairment primarily due to cataracts (unless contraindicated). (Level 1A). See the Cataract Clinical Care Standard.
    - arrange for an occupational therapist to conduct a home environmental assessment and modification for those with severe visual impairments.

10 Hearing

Hearing impairment contributes to falls in older people as those with hearing impairments may fail to detect environmental hazards outside their line of sight.

Chapter 15 of the *Falls Guidelines for Hospitals Reference Document* discusses the evidence of hearing impairment in relation to fall risk and the principles of care in minimising the risk of falls by people with hearing loss when in hospital.

Good practice points

- Identify older people with hearing problems that can contribute to falls at the point of admission.
- Use a pocket talker (a device that amplifies sound closest to the listener while reducing background noise) to communicate with an older person with a hearing impairment, as required.
- Ensure older people who use hearing aids wear them when mobilising and that the hearing aids are working.
- Consider increased supervision for older people with impaired hearing when moving away from their immediate bed surrounds.
- As part of good discharge planning refer older people with undiagnosed hearing problems to an audiologist.

11 Environment

For older people, the risk of falling while in hospital may be greater than in other settings because of risk factors such as unfamiliar surroundings when combined with acute conditions.

The risk of a fall can be reduced in hospital by checking the hospital room for hazards that might cause older people to fall, and then modifying or rearranging the environment to remove or minimise these hazards and obvious risk factors. This could include removing clutter, improving lighting and installing handrails.

Environmental modification interventions are most likely to be effective in older people who already have an increased risk of falls. Chapter 16 of the *Falls Guidelines for Hospitals Reference Document* discusses the principles of care in minimising the risk of falls by older people when in hospital and following discharge from hospital.

Recommendation

Home safety after discharge: As part of discharge planning, arrange home safety interventions delivered by an occupational therapist for older people at an increased risk of falls after they have returned home. (Level 1A)

Good practice points

- Provide intentional rounding to regularly evaluate and modify the older person's environment, and provide, review and assess the older person for any care needs.
- Conduct comprehensive environmental reviews regularly and modify the environment as necessary to reduce the risk of falls. This includes clothing, furniture, lighting, floor surfaces, clutter and spills, and mobility aids. Best practice is to combine environmental reviews with work health and safety audits.
- Ensure procedures are in place to document environmental causes of falls and educate staff about environmental risk factors for falls in hospitals.
- Ensure that older people's personal belongings and equipment are easy and safe to access regularly.
- Provide orientation to the hospital environment including the layout of ward, location and operation of nurse call bells and safe operation of the hospital bed functions.
- Provide adequate signage and wayfinding prompts to support the older person to navigate their environment, as part of environmental assessments and interventions.
- Arrange for older people considered to be at an increased risk of falls to be assessed by an occupational therapist and/or physiotherapist for specific environmental or equipment needs and training to maximise safety.

12 Monitoring and Observation

Many falls in hospitals are unwitnessed and often happen in the immediate bedside area. Falls may be associated with delirium, restlessness, agitation, attempts to mobilise to the toilet, stand, turn and transfer, or due to reduced problem-solving abilities in people with dementia. Monitoring and observation approaches are useful in preventing falls when an older person is identified as being at risk of falling, particularly when getting out of a bed or a chair unsupervised.

Care must be taken to ensure that monitoring does not infringe on the older persons' autonomy or dignity. Hospitals must have clear policies and procedures in place for using monitoring and observation.

Chapter 17 of the *Falls Guidelines for Hospitals Reference Document* outlines principles of care in observing and monitoring older people in minimising the risk of falls in hospital and a range of observation systems that could be implemented.

Good practice points

- Provide a clear monitoring plan that specifies the vital signs and other relevant physiological observations to be recorded on an observation and response chart including the frequency of observation to match the older person's needs. See the National Consensus Statement: Essential elements for recognising and responding to acute physiological deterioration.
- Provide frequent monitoring and observation of older people with dementia or delirium and those who have been administered a general anaesthetic or sedation. Consider using fall risk alert cards and symbols to flag older people at risk of a fall in the clinical record, where appropriate.
- Discuss the older person's risk of falling and their need for close observation with carers and family to the extent the person chooses and develop a collaborative management plan to reduce identified risks.
- Provide family members or carers information to use in their own discussions with the older person about falls in hospitals.
- Encourage carers and family to notify staff if the older person requires assistance.
- Consider using additional staff for people who have a high risk of falling. Ensure policies are in place and roles are defined clearly.

13 Restrictive Practices

Restrictive practices refers to any practice or intervention that restricts the rights or freedom of movement of individuals. Restrictive practices are mechanisms used to control or modify a person's behaviour, including reducing a person's risk of fall. Mechanical restraints include lap belts, tabletops, meal trays and backwards-leaning chairs (or 'stroke chairs') that are difficult to get out of, and possibly bed alarm devices.

If used, restraints should be the last option considered. The use of physical restraints during hospitalisation has been linked to an increased risk of adverse hospital outcomes.

If medicines are used specifically to restrain an older person, a minimal dose should be used, and the older person should be reviewed and monitored to ensure their safety. Importantly, chemical restraint must not be a substitute for alternative methods of restraint outlined below.

Hospitals should have clear policies and procedures on the use of restraints aligned with state or territory legislation and guidelines and use of restraints documented clearly.

Chapter 18 of the *Falls Guidelines for Hospitals Reference Document* outlines principles of care in assessing the need for restrictive practices and considering alternatives in minimising the risk of falls by older people in hospital.

Good practice points

- When an older person exhibits changed behaviours, assess and respond to any immediate risks to the person or others.
- Conduct a comprehensive assessment to identify possible causes of changed behaviours. Treat and/or manage any causes of these behaviours such as delirium, or other unmet needs, including pain, thirst, hunger or feeling hot or cold. Use the Clinical Practice Guidelines for the Management of Delirium in Older People. Non-medication strategies should always be used as the primary strategies for managing changed behaviours. See the Delirium Clinical Care Standard and the Clinical Care Standard on Psychotropic Medicines in Cognitive Disability or Impairment.
- Use a person-centred behaviour support plan for an older person with cognitive impairment including delirium. If a behaviour support plan is not available discuss all appropriate behaviour support strategies with the older person, family, carers and substitute decision maker. Focus on caring for older people with changed behaviours by understanding the cause of the behaviour.
- Restrictive practices must only be used as a last resort, in the least restrictive form and for the shortest possible time to prevent harm to the older person or others. See the Clinical Care Standard on Psychotropic Medicines in Cognitive Disability or Impairment. Follow relevant national, local or state policies, procedures and regulations.
- If alternatives to restrictive practices are exhausted, discuss options and explain the benefits and risks of restrictive practices to be used and document informed consent from the older person or substitute decision maker. Document the rationale for using restrictive practices, the anticipated duration and criteria for cessation agreed on by the health care team.
- Continue behaviour support strategies in the event a restrictive practice is used.

14 Hip Protectors

Hip fractures are usually the result of a fall and are one of the more severe injuries associated with a fall.

Hip protectors are one approach to reducing the risk of hip fracture. Hip protectors aim to reduce the risk of hip fracture by absorbing or dispersing forces away from the hip if a fall onto the hip area occurs.

Chapter 19 of the *Falls Guidelines for Hospitals Reference Document* outlines the evidence for the use of hip protectors in preventing hip fractures in older people in hospitals, the types of hip protectors and the risks associated with their use, and the principles of care in using hip protectors to help prevent hip fractures in older people in hospital.

Good practice points

- Consider hip protectors for older people who fall frequently, have osteoporosis and/or a low body mass index.
- When using hip protectors, the health care team or carer should check regularly that:
    - the older person is wearing their protectors
    - hip protectors are in the correct position
    - the hip protectors are not causing pressure on the skin that may contribute to pressure injuries
    - hip protectors do not impact on the ability to toilet independently
    - the older person has not stopped wearing the hip protectors because of discomfort, inconvenience or another reason.
- Provide training in the correct use and care of hip protectors.
- Do not share hip protectors among people as they are a personal garment.

15 Vitamin D and Calcium

Low vitamin D levels are associated with increased risk of hip fracture from a fall and is significantly more common among older people with dementia and older people from culturally and linguistically diverse groups.

Vitamin D may prevent falls by improving muscle strength and maintaining bone mineral density. Improving calcium and protein intake has also been shown to reduce falls and harm from falls in older people. Nutrition management can play an important role in fall prevention. Hospital staff should monitor older peoples' dietary intake and refer them to a dietitian if their nutritional intake is of concern.

Chapter 20 of the *Falls Guidelines for Hospitals Reference Document* outlines the evidence for Vitamin D supplementation in preventing falls, including sun exposure, and the principles of care in using vitamin D as an intervention in preventing falls in older people in hospital.

Good practice points

- Consider vitamin D supplementation for older people who are unlikely to receive adequate sunlight for vitamin D production.
- Calcium supplementation should be restricted to a maximum dose of 500 – 600 mg elemental calcium per day if dietary calcium intake is insufficient. There is concern that calcium supplementation increases the risk of cardiovascular events.

16 Osteoporosis

A small proportion of falls result in fractures and most fractures occur after falls. For people with osteoporosis or osteopenia (low bone density), fracture risk increases with each additional fall. In these cases, hospital staff should consider bone densitometry and specific anti-osteoporosis therapy. Interventions that reduce the risk of falls in older people in hospital may prevent fractures, even if bone density is not altered.

Bone mineral density (BMD) is an important measure in predicting fractures in both men and women, as is quadriceps strength and postural sway. No therapy is likely to normalise bone mineral density, but small improvements can reduce fracture risk.

Chapter 21 of the *Falls Guidelines for Hospitals Reference Document* details the medicines shown to be effective as first-line treatments for osteoporosis, discusses the principles of care in managing osteoporosis in the context of minimising falls in older people in hospital and provides information about additional resources to help in managing osteoporosis.

Recommendation

Hip fracture care: Following a hip fracture in an older person, provide post-operative care in a geriatric orthopaedic service with multidisciplinary comprehensive geriatric assessment, management and rehabilitation. (Level 1B)

Good practice points

- Develop strategies for strengthening and protecting the older person's bones to reduce bone injuries from falls when appropriate. This includes improving muscle strength, optimising function and improving environmental safety.
- Refer older people with a history of recurrent falls for bone mineral density testing to identify possible osteoporosis.
- Review medicines as part of reducing osteoporosis risk (e.g. corticosteroids, long term anticonvulsant treatment). There may be alternative medicines that do not confer this risk.
- Establish hospital protocols to ensure pathways for intervention and management of bone health in older people who have sustained a minimal trauma fracture, in partnership with the older person's general practitioner. Refer to the fracture liaison service where available.
- Ensure that before a person leaves hospital after a hip fracture, they receive a falls and bone mineral densitometry assessment / Dual Energy X-Ray (DXA) scan and management plan, with appropriate referral for secondary fracture prevention. Involve the older person's general practitioner. See the Hip Fracture Clinical Care Standard.
- Communicate any recommendations to people involved in the older person's care at transitions.

17 Post-fall management

Hospital staff must take all falls seriously. Falls may be the first and main indication of another underlying and treatable problem in an older person. Older people who fall are also more likely to fall again.

All hospital staff should be aware of:

- what constitutes a fall
- what to do when a person falls
- what follow-up is necessary, including completing incident management processes
- the need to reassess the older person for their risk of falls and harm from falls following a fall.

Chapter 22 of the *Falls Guidelines for Hospitals Reference Document* includes a checklist for managing the older person immediately after a fall, outlines what should be included in a hospital's falls policy and practice guidelines and discusses important considerations for the older person after the fall including loss of confidence.

Good practice points

- Provide post-fall response and management immediately after a fall, including consideration of relevant assessment, investigations and increasing the frequency of monitoring vital signs and other relevant physiological observations to be recorded on an observation and response chart to match the older person's needs.
- Identify, investigate and report the cause and the consequences of the fall. See also Hip Fracture Clinical Care Standard where appropriate.
- Complete a comprehensive assessment for every older person who has fallen that includes a medicines review. Use this assessment to inform a multidisciplinary care plan that addresses comorbidities and fall risk factors to reduce the risk of another fall. Implement immediate actions to reduce the risk of subsequent falls. Where appropriate, include the older person in decision-making to reduce risk of further falls.
- Conduct an in-depth analysis of any fall event particularly if there has been a serious injury or death. Analyse falls with a view to informing how changes to organisational practices and policies can prevent falls more broadly.
- Train and educate staff in post fall management, reporting and documentation.
- Analyse fall data and delirium data to inform how changes to organisational practices can prevent falls.
- At discharge or transitions of care, ensure communication of any in-hospital falls or identification of fall risk with all relevant members of the older person's primary health care team and include in the discharge summary. See also Principles for safe and high-quality transitions of care.

Falls and fall injuries in Australia

Falls in hospital are a major issue for hospitals in Australia and worldwide. Up to 60% of falls in hospitals result in injury which leads to increased length of stay, loss of independence and sometimes death.

Characteristics of falls

The relationship between time of fall and level of staffing suggests that most falls in hospitals occur in daylight hours when staffing levels are at their highest but when there is the greatest level of concurrent work demands. The pattern of falls also depends on setting and case mix.

Reported fall data for hospitals shows:

- The bedside is the most common place for falls to occur, followed by the bathroom.
- A high percentage of falls are associated with elimination and toileting.
- Falls occur across all age groups with an increasing prevalence of falls in older people.
- A high percentage of falls are unwitnessed.

Risk factors for falling in hospitals

Intrinsic risk factors are factors that relate to the person's behaviour or condition, and include:

- Previous fall
- Increased age
- Deterioration in performance of activities of daily living
- Cognitive impairment, including delirium
- Urinary frequency, incontinence
- Reduced lower extremity strength or balance
- Unsteady gait or use of a mobility aid
- Independent transfers or wheelchair mobility
- Use of antidepressant medication, psychotropic medicines, polypharmacy or medicine side effects
- Impaired vision
-
- Postural hypotension.

Extrinsic risk factors are factors that relate to a person's environment or their interaction with the environment, and include:

- Extended hospitalisation (19 days or more).
- Environmental risk factors. Most falls in hospital occur around the bedside and in the bathroom.
- Time of day. Falls occur most commonly at times when observational capacity is low. Such as at shower and mealtimes, and outside visiting hours.

Falls after discharge

Fall rates in older people after hospital discharge can be as high as 15% within a month of discharge, with 11% of these falls resulting in serious injury. To ensure safe transition for people at risk of falling after hospital discharge, fall prevention strategies should continue after discharge. Best practice supports the coordination and continuity of care between the hospital, the older person, their carers and family (to the extent the older person chooses), the older person's general practitioner and the receiving health service. By working in an integrated manner, the needs of the older person across the broader spectrum of health service delivery are more likely to be achieved.

Involving older people, carers and family in fall prevention

Partnering with older people in all aspects of their own care is central to safe, high-quality and person-centred care. Good clinical care can optimise an older person's quality of life, reablement and maintenance of function. Improved health and wellbeing support older people to continue to participate in activities that are enjoyable and give life meaning.

Fall prevention interventions should be planned and delivered in a way that is culturally safe and trauma-aware, using healing informed care and tailored to the needs of each older person. Carers, family and substitute decision makers may play an important role in facilitating fall prevention and should be included as partners in the older person's care, to the extent that the older person chooses.

A range of health professionals, medical and nurse practitioners and aged care workers may be involved as part of the multidisciplinary team. Communication with and between the multidisciplinary team, including the older person and their carers and family is critical to effectively preventing falls and responding to change or deterioration in the older person's condition.

Best practice approach

Best practice approaches for health professionals to support older people to partner in fall prevention include:

- Present the fall prevention message in the context of staying independent for longer.
- Be aware that the term 'fall prevention' could be unfamiliar or difficult to understand for many people and support the person's understanding through tailored communication.
- Identify older people's individual communication needs (including cognitive impairment) and preferences and provide information in a way they understand. This may include providing information in the person's own language, using alternative communication approaches such as written formats (e.g. easy read, easy English and accessible formats), multimedia (e.g. images, animation and video), and facilitating access to interpreters and translations.
- Identify older people's needs, goals and preferences and enable older people and their carers and families (to the extent that the older person chooses) to engage in discussions and decision-making about preventing falls.
- Support older people to exercise dignity of risk in the context of an acceptable risk of falling to achieve their goals, maintain independence and quality of life.
- Find out what changes older people are willing to make to prevent falls and support the provision of appropriate options using shared and supported decision making. Changes can include changes to the older person's behaviour, environment, clothing and footwear.
- Explore the potential barriers that make it difficult for older people to take action to reduce falls (such as low self-efficacy and fear of falling) and provide support to overcome these barriers.
- Develop fall prevention programs that are flexible to accommodate older peoples' individual needs, goals, circumstances and interests.
- Trial a range of fall and fall harm prevention interventions and review their effectiveness in partnership with older people, carers and family.

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