

Australian Fall Prevention Guidelines

Recommendations and Good Practice Points

Prepared for the Australian Commission on Quality and Safety in Health Care

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HOW WERE THESE GUIDELINES DEVELOPPED?

The recommendations in these updated and revised Australian fall prevention guidelines are based on evidence from intervention trials with falls as an outcome. The good practice points are based on expert opinion and studies with fall risk factors as an outcome.

Recommendations for aged care and hospital settings were informed by a systematic review and meta-analysis undertaken in November 2022, which was based on the relevant Cochrane Collaboration systematic review. (1) Recommendations for community settings were informed by relevant Cochrane reviews (2, 3, 4), literature searches and the 2022 World Falls Guidelines. (5) A modified GRADE system, used to evaluate strength of evidence, was adapted from the approach used by the 2022 World Falls Guidelines (5) and is shown below.

Recommendations	Strength of Recommendation	1	Strong: benefits for fall prevention clearly outweigh undesirable effects
		2	Weak or conditional: either lower quality evidence or desirable and undesirable effects are more closely balanced
	Quality of evidence	A	High: ‘further research is unlikely to change confidence in the estimate of effect’
		B	Intermediate: ‘further research is likely to have an important impact on the confidence in the estimate of effect and may change the estimate’
		C	Low: ‘further research is very likely to have an important impact on the confidence in the estimate of effect and is likely to change the estimate’

Good practice points

No quality studies with falls as an outcome are available but interventions are considered to have benefit based on expert opinion or studies with fall risk factors as an outcome.

REFERENCES

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RECOMMENDATIONS

AGED CARE SETTINGS

1. Provide multifactorial fall prevention including regular review of personal and environmental risk factors and education/ engagement of staff as part of routine care for all older people. Develop a targeted and individualised fall prevention plan of care based on the findings of the fall risk assessment. (Level 1A)
2. Provide tailored supervised exercise to older people living in aged care settings who are willing and able to participate. (Level 1B) Support continued exercise for fall prevention as the effect of structured exercise programs diminishes over time once the program has ended. (Level 1A)
3. Have dieticians assist with menu design to ensure adequate provision of dairy foods that reflect older peoples' preferences. This may involve at least three serves of dairy foods to meet protein and calcium requirements each day. (Level 1B)
4. Administer daily or weekly vitamin D supplements to all older people unless contraindicated. (Level 1A) Avoid high monthly doses or once yearly mega doses of vitamin D as they can increase the risk of falls. (Level 1A)
5. Prescribe bone treatments (unless contra-indicated) for older people with diagnosed osteoporosis or a history of low-trauma fractures. (Level 1A)
6. Consider the use of hip protectors to reduce the risk of fall-related fractures. (Level 2A)

RECOMMENDATIONS

COMMUNITY SETTINGS

1. Support all older people to undertake exercises to prevent falls. Primarily target balance and mobility and also include strength training. Encourage older people to undertake exercise 2-3 hours per week on an ongoing basis. Ensure health professionals (e.g. physiotherapists or exercise physiologists) or appropriately-trained instructors design and deliver the exercise programs. (Level 1A)*
2. Support older people at low risk of falls (e.g. older people who fall less than once a year) to attend community exercise or safely undertake home exercise. (Level 1A)
3. Provide older people at increased risk of falls (e.g. people who fall 1+ times per year) with individualised programs. These may require supervision or assistance from a health professional (e.g. physiotherapist or exercise physiologist) or appropriately trained instructor to exercise safely and effectively. (Level 1A)
4. Provide older people at increased risk of falls (e.g. older people who fall 1-2 times per year) with home and community safety education in addition to exercise. (Level 1A)
5. Provide people at high risk of falls (e.g. people who fall 2+ times per year) with an individualised assessment from a health professional. This assessment should inform tailored interventions, including exercise, home safety, assistive devices, medication reviews, podiatry and strategies to address concerns about falling, anxiety and depression. (Level 1B)
6. Provide home safety interventions, delivered by an occupational therapist, for older people at increased risk of falls, including those:
 - with severe visual impairment
 - who have fallen in the past year
 - who need help with everyday activities
 - who have been recently discharged from hospital. (Level 1A)
7. Provide single interventions for older people at increased risk of falls with particular risk factors.
 - a. Arrange cataract surgery as soon as practicable for older people with visual impairment primarily due to cataracts. (Level 1A)
 - b. Provide older people with foot problems or disabling foot pain with a multifaceted podiatry intervention. (Level 1A)
 - c. Treat older people diagnosed with the cardio inhibitory form of carotid sinus hypersensitivity with insertion of a dual-chamber cardiac pacemaker. (Level 2B)
 - d. Minimise use of psychoactive medications and other fall risk increasing drugs through collaborative medication reviews undertaken by general practitioners and pharmacists in conjunction with the older person. (Level 2B)
 - e. Advise active older people to use single-lens distance glasses (rather than bifocal, multifocal or progressive lenses) when undertaking outdoor activities. (Level 2B)
 - f. Advise older people with a change in spectacle prescription to take care mobilising while adjusting to the change. (Level 2B)

- g. Provide daily or weekly vitamin D supplements to older people if they are deficient in vitamin D or have little sunlight exposure (i.e. less than 5-15 min exposure, four to six times per week) unless contraindicated. (Level 1B).
- h. Avoid high monthly doses or once yearly mega doses of vitamin D as such doses can increase the risk of falls. (Level 1A)
- i. Prescribe bone treatments, unless contra-indicated for older people with diagnosed osteoporosis or a history of low-trauma fractures. (Level 1A)

RECOMMENDATIONS

HOSPITAL SETTINGS

1. Provide tailored education to older people without significant cognitive impairment, and to all staff and families. (Level 1B)
2. Provide personalised multifactorial fall prevention interventions for all older people based on assessment of individual risk factors. (Level 2B) Calculating a fall risk score is not necessary. (Level 2B)
3. Following a hip fracture, provide post-operative care in a geriatric orthopaedic service with multidisciplinary comprehensive geriatric assessment, management, and rehabilitation. (Level 1B)
4. 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)

RECOMMENDATIONS AND GOOD PRACTICE POINTS

AGED CARE SETTINGS

Fall risk assessment/ multifactorial intervention

Recommendations

1. Provide multifactorial fall prevention including regular review of personal and environmental risk factors and education/ engagement of staff as part of routine care for all older people. (Level 1A)
2. Develop a targeted and individualised fall prevention plan of care based on the findings of the fall risk assessment. (Level 1A)

Good practice point

- Maximise the use of fall risk assessments by implementing appropriate interventions related to the risks identified.

Balance and mobility limitations

Recommendations

Provide tailored supervised exercise to older people living in aged care settings who are willing and able to participate. (Level 1B)

Support continued exercise for fall prevention as the effect of structured exercise programs diminishes over time once the program has ended. (Level 1A)

Good practice points

- Use assessment tools to:
 - quantify the extent of balance and mobility limitations and muscle weakness
 - guide exercise prescription
 - measure improvements in balance, mobility and strength.
- Effective exercise programs:
 - are tailored to individuals' abilities and preferences
 - include balance and strength exercise
 - are of moderate intensity
 - are sufficiently resourced, safe and engaging.
- Appropriately trained personnel should supervise and deliver the exercise programs.

Cognitive impairment

Good practice points

- Ensure people with cognitive impairment should have a comprehensive fall risk

assessment.

- Ensure fall and fall injury prevention interventions are not withheld from people with cognitive impairment. Modify interventions as appropriate to maximise feasibility and efficacy.
- Address all reversible causes of acute or progressive cognitive decline. For example, follow the Australian Clinical Practice Guidelines and Principles of Care for people with Dementia.
- Assess older people presenting with an acute change in cognitive function for delirium and the underlying cause of this change.
- Undertake detailed assessment of older people with gradual-onset, progressive cognitive impairment to determine diagnosis and, where possible, identify reversible causes of the cognitive decline. Address and treat reversible causes of acute or progressive cognitive decline.
- Provide older people with delirium evidence-based interventions to manage this condition. Follow the Australian Clinical Practice Guidelines for the Management of Delirium in Older People and the Delirium Clinical Care Standard.
- Involve family and carers of older people with cognitive impairment in decisions about which fall prevention intervention to use, and how to use them (where possible and appropriate). Family and carers know the older person and may be able to suggest ways to support them.
- Reassess the cognitive status of older people with cognitive impairment if they experience a fall. Include an assessment of delirium using a validated tool such as the 4AT (rapid clinical test for delirium).

Continence

Good practice points

- Offer older people a continence assessment to check for problems that can be modified or prevented.
- Establish regular, individualised toileting plans for those at risk of falling.
- Manage problems associated with urinary tract function as part of a multifactorial approach to care.

Feet and footwear

Good practice points

- Assess foot problems and footwear as part of an individualised, multifactorial intervention for preventing falls.
- Refer older people with foot pain/ conditions to a podiatrist for assessment and treatment.
- Encourage the use of safe well-fitting footwear that includes:
 - heels that are low and square to improve stability
 - a supporting collar to improve stability
 - soles with tread to prevent slips
 - firm soles to optimise foot position sense.

Syncope

Good practice points

- A medical practitioner should assess older people who experience unexplained falls or episodes of collapse to establish the underlying cause.
- Assess and manage presyncope, syncope and postural hypotension, and review medications (including medications associated with presyncope and syncope) as part of a multifactorial assessment and management plan.
- Treat older people who are diagnosed with the cardio inhibitory form of carotid sinus hypersensitivity with the fitting of a dual-chamber cardiac pacemaker.

Dizziness and vertigo

Good practice points

- Assess older people complaining of dizziness for gait and balance problems, postural hypotension and anxiety as well as vestibular dysfunction.
- Assess postural hypotension with lying and standing blood pressure.
- Identify if vestibular dysfunction is a cause of dizziness, vertigo and imbalance. A history of vertigo or a sensation of spinning is characteristic of vestibular pathology.
- Use vestibular rehabilitation to treat dizziness and vestibular-related balance problems where indicated and available.
- Use the Dix–Hallpike test to diagnose benign paroxysmal positional vertigo. This is the most common cause of vertigo in older people.
- An appropriately trained practitioner should use repositioning manoeuvres, such as the Epley manoeuvre, to manage benign paroxysmal positional vertigo.

Medications

Good practice points

- Ensure a pharmacist and/or a general practitioner reviews all of an older person's prescribed and nonprescribed medications :
 - at least yearly
 - after a fall
 - after initiation of medication
 - after an increase in dosage of medication.
- Avoid prescribing psychoactive drugs if possible and consider alternative strategies for promoting sleep and addressing anxiety, depression and pain. When prescribing these medications, ensure the starting dose is low, with follow-up planned and the intended stop date documented.
- In partnership with the older person and their general practitioner, consider gradually reducing or stopping the older person fall risk increasing drugs (FRIDs).

Vision

Good practice points

- Arrange eye examinations at least every two years.
- Arrange cataract surgery as soon as practicable for older people with visual impairment primarily due to cataracts.
- Ensure an occupational therapist conducts an environmental assessment and modification for those with severe visual impairments.
- When prescribing new glasses, explain to the person and their carers that extra care is needed while they get accustomed to their new glasses. Falls may increase initially as a result of a visual acuity correction.

Environmental considerations

Good practice points

- Include environmental review and modification as part of a multifactorial approach in a fall prevention program.
- Ensure procedures are in place to document environmental causes of falls and educate staff about environmental risk factors for falls in residential aged care services (RACS).
- Discuss with residents their preferred arrangement for personal belongings and furniture, and ascertain the resident's preferred sleeping arrangements.
- Ensure that personal belongings and equipment are easy and safe to access.
- Check all aspects of the environment and modify as necessary to reduce the risk of falls. This includes furniture, lighting, floor surfaces, clutter and spills, and mobilisation aids.
- Conduct environmental reviews regularly. Best practice is to combine environmental reviews with work health and safety audits.
- Arrange for older people considered to be at a higher risk of falling to be assessed by an occupational therapist and physiotherapist for specific environmental or equipment needs and training to maximise safety.

Monitoring

Good practice points

- Consider including individual observation and monitoring as components of a multifactorial fall prevention program. Many falls happen in the immediate bed or bedside area, or are associated with restlessness, agitation, attempts to transfer and stand and reduced awareness in older people with dementia or delirium.
- Consider using fall risk alert cards and symbols to flag high-risk residents as part of a

multifactorial fall prevention program.

- Consider using a volunteer sitter program for people who have a high risk of falling. Ensure volunteer roles are clearly defined.
- Observe older people with dementia or delirium frequently.
- Assist at-risk older persons in the bathroom if required.

Restraints

Good practice points

- Investigate causes of agitation or other behaviours. Treat and/or manage the reversible causes of these behaviours such as delirium, and whether the older person is in pain, thirsty, hungry, hot or cold before the use of restraint is considered.
- Focus on caring for older people with behavioural concerns by understanding the cause of the behaviour, meeting any unmet needs and treating reversible causes, before considering controlling the behaviour.
- For older people with cognitive impairment, including delirium, discuss all alternatives to restraints with family and carers. Trial all the alternatives to restraint before full implementation.
- If all alternatives to restraint are exhausted, seek appropriate consent from the person responsible. Document the rationale for using restraint and the anticipated duration agreed on by the health care team, in consultation with family and carers. Review the use of restraint regularly.
- If medicines are used specifically to restrain an older person, use the minimal dose and regularly review and monitor the older person to ensure their safety. Importantly, do not use chemical restraint as a substitute for alternative methods of management.
- Physical restraints are considered the last option for residents who are at risk of falling as physical restraints can cause death or injury and infringe autonomy.
- If restraints must be used, follow relevant local, state or national policies, procedures and regulations. Useful resources are available here:
<https://www.agedcarequality.gov.au/minimising-restrictive-practices>

Hip protectors

Recommendation

Consider hip protectors for reducing risk of fall-related fractures. (Level 2A)

Good practice points

- Consider hip protectors for older people who fall frequently, have osteoporosis and /or a low body mass index.
- Ensure hip protectors are worn correctly. Check regularly that the older person is wearing their protectors, that the hip protectors are in the correct position, and the older person is comfortable.
- Train care staff in the correct use and care of hip protectors.

- Do not share hip protectors shared among older people.as hip protectors are a personal garment.

Vitamin D and calcium

Recommendations

Have dietitians assist with menu design to ensure adequate provision of dairy foods that reflect older peoples' preferences. This may involve at least three serves of dairy foods to meet protein and calcium requirements each day. (Level 1B)

Administer daily or weekly vitamin D supplements should be administered to all older people unless contra-indicated. (Level 1A)

Avoid high monthly doses or once yearly mega doses of vitamin D as they can increase the risk of falls. (Level 1A)

Good practice points

- Assess whether residents/ service recipients are receiving adequate sunlight for vitamin D production.

Osteoporosis management

Recommendation

Prescribe bone treatments (unless contra-indicated) for older people with diagnosed osteoporosis or a history of low-trauma fractures. (Level 1A)

Good practice points

- Strengthening and protecting bones will reduce injuries from falls.
- Establish protocols to increase the rate of osteoporosis treatment in older people who have sustained a minimal trauma fracture.
- Refer older people with a history of recurrent falls and those sustaining minimal trauma fractures for a bone health check. Develop strategies for protecting bones, optimising function, minimising a long lie on the floor, improving environmental safety and vitamin D supplementation.
- When using osteoporosis treatments for an older person, co-prescribe vitamin D with calcium.

Post fall management

Good practice points

- Establish protocols or managing people immediately after a fall, reporting falls and investigating the causes of falls.
- Train and educate staff to report and document all falls.
- Train and educate staff to complete a post-fall assessment for every older person who falls.

- After the immediate follow-up of a fall, review the fall. Determine how and why the fall may have occurred, for example a blackout or a loss of balance, and implement actions to reduce the risk of another fall.
- Analyse falls to prevent further falls. Organisational learning from this analysis can inform practice and policies and prevent further falls. A post-fall analysis can inform an interdisciplinary care plan to reduce the risk of future falls and injuries, and address any identified comorbidities or fall risk factors.
- An in-depth analysis of the fall event, such as root-cause analysis, is required if there has been a serious injury following a fall, or if there has been a death from a fall.

RECOMMENDATIONS AND GOOD PRACTICE POINTS

COMMUNITY SETTINGS

Fall risk assessment/ multifactorial intervention

Recommendations

Provide older people at increased risk of falls (e.g. older people who fall 1-2 times per year) with home and community safety education in addition to exercise. (Level 1A)

Provide older people at high risk of falls (e.g. people who fall 2+ times per year) with an individualised assessment by a health professional. This assessment should inform tailored interventions, including exercise, home safety, assistive devices, medication reviews, podiatry and strategies to address concerns about falling, anxiety and depression. (Level 1B)

Good practice points

- General practitioners and other health care professionals can prescribe verbal or written instructions for fall prevention interventions, such as exercise programs, for the older person to improve or maintain independence and encourage adherence.
- Managing many of the risk factors for falls, including balance problems, vision and medication, will have wider benefits beyond fall prevention.
- Prescribe older people with concerns about falling exercise, cognitive behavioural therapy and/or occupational therapy as part of a multidisciplinary approach.

Fall risk screening

- Use fall risk screening to guide more detailed assessment and intervention. Document the outcomes of the screen and discuss the outcomes with the older person and their carer(s).
- General practitioners and other health care providers should ask older people about falls at least once every year.
- Assess older people with a history of one or more falls in the past year with a simple, validated balance test or fall risk screen.
- For older people who perform poorly on a simple test of balance or gait, or a fall risk screening tool, conduct a detailed assessment to identify contributory risk factors.

Fall risk assessment

- Systematically and comprehensively identify the factors contributing to the older person's increased risk of falling to develop an individualised plan for preventing falls.
- Implement interventions which systematically address the risk factors identified through the fall risk assessment. (Assessments will only be useful when supported by appropriate interventions related to the risks identified).
- Identify the presence of cognitive impairment as part of the fall risk assessment process.
- Modify fall prevention interventions to ensure they are suitable for the individual and involve the carer(s) and family members, who will play important roles in implementing fall prevention actions.

Balance and mobility

Recommendations

Support all older people to undertake exercises to prevent falls. Include strength training and target balance and mobility in exercise programs. Encourage the older person to undertake 2-3 hours per week, ongoing. Ensure a health professional (e.g. physiotherapist or exercise physiologist) or appropriately-trained instructor design and deliver the exercise program. (Level 1A)

Support older people at “lower” risk of falls (e.g. people who fall less than once a year) should attend community exercise or safely undertake home exercise. (Level 1A)

Provide older people at an increased risk of falls (e.g. people who fall 1+ times per year) with individualised programs. These may require supervision or assistance from a health professional (e.g. physiotherapist or exercise physiologist) or appropriately trained instructor to exercise safely and effectively. (Level 1A)

Good practice points

- Group exercise classes, tai chi and strength and balance retraining at home, are all options for exercise programs to prevent falls in older people who live in the community include .
- Reactive balance training is highly task-specific to fall avoidance and may be a useful component for fall prevention exercise programs.
- Cognitive-motor training such as exergames provides an option for delivering fall prevention exercise.
- Use assessment tools to:
 - quantify the extent of balance and mobility limitations and muscle weakness
 - guide exercise prescription
 - measure improvements in balance, mobility and strength
 - assess whether the older person has a high risk of falling.
- Focus fall prevention exercise on maintaining balance during functional tasks needed for daily life. The most relevant tasks for individuals vary according to lifestyle, domestic needs, physical function, environment and preferences.
- Provide individualised exercises that enable or support daily tasks or similar movements. For example, sit-to-stand, squats, reaching while standing, standing with a narrower base of support, stepping and walking in different directions, speeds, environments and while dual tasking. Weights can be added to some exercises to increase difficulty.
- Ensure exercises are challenging (to enhance neural, muscular and skeletal function), safe (to prevent injuries) and achievable (for sufficient dose and sense of mastery). Review and progress exercises regularly to ensure that optimal level of difficulty is maintained.

Cognitive impairment

Good practice points

- Ensure people with cognitive impairment should have a comprehensive fall risk

assessment.

- Ensure fall and fall injury prevention interventions are not withheld from people with cognitive impairment. Modify interventions as appropriate to maximise feasibility and efficacy.
- Assess older people presenting with an acute change in cognitive function, including people with a diagnosis of cognitive impairment or dementia, for delirium and the underlying cause of this change.
- Provide older people with delirium with evidence-based interventions to manage this condition. Follow the Australian [Clinical Practice Guidelines for the Management of Delirium in Older People](#) and the [Delirium Clinical Care Standard](#).
- Undertake detailed assessments of older people with gradual onset, progressive cognitive impairment to determine diagnosis, and where possible, identify reversible causes of the cognitive decline. Address and treat reversible causes of acute or progressive cognitive decline.
- Involve family and carers of older people with cognitive impairment in decisions about which fall prevention interventions to use, and how to use them (where possible and appropriate). Family and carers know the person and may be able to suggest ways to support them.
- Reassess the cognitive status of older people with cognitive impairment if they experience a fall. Include an assessment of delirium using a validated tool such as the 4AT (rapid clinical test for delirium).

Continence

Good practice points

- Offer older people a continence assessment to check for problems that can be modified or prevented.
- Manage problems associated with urinary tract function as part of a multifactorial approach to care.
- Check the height of the toilet(s) and the need for rails to assist the older person sitting and standing from the toilet(s) in the home.

Feet and footwear

Recommendation

Provide older people with foot problems or disabling foot pain with a multifaceted podiatry intervention. (Level 1A)

Good practice points

- Assess the older person's foot and footwear-related risk factors for falls, including: ill-fitting or inappropriate footwear, foot pain and other foot problems.
- • Include an assessment of footwear and foot problems as part of an individualised,

multifactorial intervention for preventing falls in the community.

- Provide education and information on safe shoes, foot problems and foot care to older people, and refer them to a podiatrist when necessary.
- Encourage the use of safe well-fitting footwear that includes:
 - heels that are low and square to improve stability
 - a supporting collar to improve stability
 - soles with tread to prevent slips
 - firm soles to optimise foot position sense.

Syncope

Recommendation

Treat older people diagnosed with the cardio inhibitory form of carotid sinus hypersensitivity with fitting of a dual-chamber cardiac pacemaker. (Level 2B)

Good practice points

- Ensure older people who experience unexplained falls or episodes of collapse are assessed by a medical practitioner to establish the underlying cause.
- Assess presyncope, syncope and postural hypotension, and review of medications (including medications associated with presyncope and syncope) as part of a multifactorial assessment and management plan.

Dizziness and vertigo

Good practice points

- Assess older people complaining of dizziness for gait and balance problems, postural hypotension and anxiety as well as vestibular dysfunction.
- Assess postural hypotension with lying and standing blood pressure.
- Identify if vestibular dysfunction is a cause of dizziness, vertigo and imbalance. A history of vertigo or a sensation of spinning is characteristic of vestibular pathology.
- Use vestibular rehabilitation to treat dizziness and vestibular-related balance problems where indicated and available.
- Use the Dix–Hallpike test to diagnose benign paroxysmal positional vertigo. This is the most common cause of vertigo in older people.
- An appropriately trained practitioner should use repositioning manoeuvres, such as the Epley manoeuvre, to manage benign paroxysmal positional vertigo.

Medications

Recommendation

Minimise use of psychoactive medications and other fall risk increasing drugs through collaborative medication reviews undertaken by general practitioners and pharmacists in conjunction with the older person. (Level 2B)

Good practice points

- Ensure a pharmacist and/or a general practitioner reviews all of an older person's prescribed and non-prescribed medication:
 - at least yearly
 - after a fall
 - after initiation of medication
 - after an increase in dosage of medication.
- Avoid prescribing psychoactive drugs if possible and consider alternative strategies for promoting sleep and addressing anxiety, depression and pain. When prescribing these medications, ensure the starting dose is low, with follow-up planned and the intended stop date documented.
- Encourage pharmacist-led education on medication and a program of facilitated medication review by general practitioners.
- Consider prescribing acetylcholinesterase inhibitor rivastigmine to improve gait stability and reduce the frequency of falls for people with Parkinson's disease.

Vision

Recommendations

Arrange cataract surgery as soon as practicable for older people with visual impairment primarily due to cataracts. (Level 1A)

Encourage active older people to use single-lens distance glasses (rather than bifocal, multifocal or progressive lens glasses) when undertaking outdoor activities. (Level 2B).

Advise older people with a change in glasses prescription to take care mobilising while adjusting to the change. (Level 2B)

Good practice points

- Include a test of vision as part of a fall risk assessment.
- Encourage older people to have regular eye examinations (every two years) to maximise vision.
- Detailed assessment by an optometrist or orthoptist for a fall-specific eye examination includes:
 - Identifying the presence of eye diseases
 - calculating subjective refraction and determining optimum spectacle correction
 - Checking for high-contrast visual acuity using the Snellen eye chart and for contrast sensitivity using the Pelli–Robson test chart, the Melbourne Edge Test or similar
 - Assessing visual fields using the Humphrey Field Analyser or similar
 - Assessing depth perception.

Environmental factors

Recommendation

Provide home safety interventions, delivered by an occupational therapist, for older people at increased risk of falls, including those:

- with severe visual impairment
- who have fallen in the past year
- who need help with everyday activities
- who have been recently discharged from hospital. (Level 1A)

Good practice points

- Ensure an occupational therapist assesses older people considered to be at higher risk of falling for environmental or equipment needs and training to maximise safety.
- Work collaboratively with the older person to develop and implement acceptable environmental modifications.

Monitoring

Good practice points

- Consider providing a personal alarm to an older person at increased risk of falls. When worn, the personal alarm can trigger an alert that an older person has fallen so that timely assistance can be provided.
- Consider electronic sensor, video or audio monitoring/ communication systems.

Hip protectors

Good practice points

- Consider hip protectors for reducing the risk of fall-related fractures for older people who fall frequently, have osteoporosis and /or a low body mass index.
- Consider the older person's recent fall history, age, mobility, disability status, and whether they have osteoporosis or a low body mass index when assessing an older person's need for hip protectors.
- Assess the older person's cognition and independence in daily living skills, including their dexterity in dressing, to help determine whether they will be able to use hip protectors independently.
- Ensure physiotherapists or other members of the health care team teach older people and their carers how to correctly wear hip protectors to ensure their effectiveness .
- When using hip protectors as part of a fall prevention strategy, the health care team or carer should check regularly that
 - the older person is wearing their protectors
 - the hip protectors are in the correct position, and
 - that they have not stopped wearing the hip protectors because of discomfort, inconvenience or another reason.

- Do not rely on hip protectors to reduce fall-related injuries in the community setting, due to problems with adherence.

Vitamin D and calcium

Recommendations

Provide daily or weekly vitamin D supplements to older people if they are deficient in vitamin D or have little sunlight exposure (i.e., less than 5-15min exposure, four to six times per week) unless contraindicated. (Level 1B)

Avoid high monthly doses or once yearly mega doses of vitamin D as they have been shown to increase the risk of falls. (Level 1A)

Good practice points

- Consider adequacy of calcium and vitamin D as part of routine assessment of fall risk in older people living in the community.
- Encourage older people to include high calcium foods in their diet, and exclude foods that limit calcium absorption.
- Consider using a weekly dose preparation of vitamin D for older people with cognitive impairment who have problems with medication adherence.

Osteoporosis

Recommendation

Prescribe bone protective treatments, unless contra-indicated, for older people with diagnosed osteoporosis or a history of low-trauma fractures . (Level IA)

Good practice points

- Strengthening and protecting bones will reduce injuries from falls.
- Consider referring an older person with a history of recurrent falls and/or those sustaining minimal trauma fractures for a bone health check. Develop strategies for protecting bones, optimising function, minimising a long lie on the floor, improving environmental safety and vitamin D supplementation.
- When using osteoporosis treatments for an older person, co-prescribe vitamin D with calcium.

Post-fall management

Good practice points

- After the immediate follow-up of a fall, review the fall. Determine how and why a fall may have occurred, for example a blackout or a loss of balance, and implement actions to reduce the risk of another fall.
- An in-depth analysis of the fall may be required if there has been a serious injury following a fall, or if a death from a fall has occurred in the presence of a member of the health care team.

RECOMMENDATIONS AND GOOD PRACTICE POINTS

HOSPITAL SETTINGS

Fall risk assessment/ multifactorial intervention/ education

Recommendations

Provide tailored education to older people without significant cognitive impairment, and to all staff and families. (Level 1B)

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

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

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

- 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 risk of falls in younger people with mobility or cognitive problems.
- Implement interventions to systematically address identified fall risk factors during hospital admission, inpatient stays, discharge planning and referral to community services. (Interventions informed by an assessment provide the benefit, not the assessment itself).
- Managing many risk factors for falls, such as delirium or balance problems, will have benefits beyond fall prevention.

Balance and mobility limitations

Good practice points

- Deliver multifactorial fall prevention programs that include safe mobility and assessment of the need for walking aids.
- Refer older people with ongoing balance and mobility problems to a post-hospital fall prevention exercise program. This should include liaison with the older person's general practitioner.
- Assess balance, mobility and strength using an assessment tool to:
 - quantify the extent of balance and mobility limitations and muscle weaknesses.
 - guide exercise prescription.
 - measure improvements in balance, mobility and strength.

Cognitive impairment

Good practice points

- Identify people with cognitive impairment and/or delirium early in the hospital admission. Reassess the older person regularly and if any change in their condition is identified, such as after a fall or surgery. Use a validated assessment tool such as the 4AT (rapid clinical test for delirium).
- Ensure fall and fall injury prevention interventions are not withheld from people with cognitive impairment. Modify interventions as appropriate to maximise feasibility and efficacy.
- Provide patients with delirium evidence-based interventions to manage this condition. This includes following the Australian [Clinical Practice Guidelines for the Management of Delirium in Older People](#) and the [Delirium Clinical Care Standard](#).
- Involve family and carers of older people with cognitive impairment in decisions about which fall prevention interventions to use, and how to use them (Family and carers know the older person and may be able to suggest ways to support them).
- Reassess the cognitive status of older people with cognitive impairment if they experience a fall. Include an assessment of delirium using a validated tool such as the 4AT (rapid clinical test for delirium).

Continence

Good practice points

- Offer older people a continence assessment to check for problems that can be modified or prevented.
- Establish regular, individualised toileting for those at risk of falling.
- Manage problems associated with urinary tract function as part of a multifactorial approach to care.

Feet and footwear

Good practice points

- Assess foot problems and footwear as part of an individualised, multifactorial intervention for preventing falls.
- Refer older people with foot pain/ conditions to a podiatrist for assessment and treatment in hospital or after discharge
- Encourage the use of safe well-fitting footwear that includes:
 - heels that are low and square to improve stability
 - a supporting collar to improve stability
 - soles with tread to prevent slips
 - firm soles to optimise foot position sense.

Syncope

Good practice points

- A medical practitioner should assess older people who experience unexplained falls or episodes of collapse to establish the underlying cause.
- Assess and manage presyncope, syncope and postural hypotension, and review medications (including medications associated with presyncope and syncope) as part of a multifactorial assessment and management plan.
- Treat older people who are diagnosed with the cardio inhibitory form of carotid sinus hypersensitivity with the fitting of a dual-chamber cardiac pacemaker.

Dizziness and vertigo

Good practice points

- Assess people complaining of dizziness for gait and balance problems, postural hypotension and anxiety as well as vestibular dysfunction.
- Assess postural hypotension with lying and standing blood pressure
- Identify vestibular dysfunction as a cause of dizziness, vertigo and imbalance needs. A history of vertigo or a sensation of spinning is characteristic of vestibular pathology.
- Use vestibular rehabilitation to treat dizziness and vestibular-related balance problems in hospital and/or after discharge, where indicated and available.
- Use the Dix–Hallpike test to diagnose benign paroxysmal positional vertigo. This is the most common cause of vertigo in older people.
- An appropriately trained practitioner should use repositioning manoeuvres, such as the Epley manoeuvre, to manage benign paroxysmal positional vertigo.

Medications

Good practice points

- Review all of an older person's prescribed and non-prescribed medications while in hospital. Communicate any medication changes and suggestions about further changes, such as cessation of pain medication, to the person's General Practitioner as part of discharge planning.
- In partnership with the older person and their General Practitioner, consider gradually reducing or stopping the older person fall risk increasing drugs (FRIDs).

Vision

Good practice points

- Identify older people with visual problems that can contribute to falls at the point of admission.
- Ensure older people who use glasses, have clean glasses and wear the glasses. If the older person has a pair of glasses for reading and a pair for distance, ensure they wear distance glasses when mobilising.
- Provide a multidisciplinary intervention for reducing falls in hospitals that includes adequate lighting, contrast and other environmental factors such as clear signage to help maximise visual clues.
- Encourage older people with impaired vision to seek help 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.
 - check that people with visual impairment primarily related to cataract are referred for cataract surgery as soon as practicable.
 - arrange home environmental assessment and modification for those with severe visual impairments.

Environmental considerations

Recommendation

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

- Include environmental review and modification as part of a multifactorial approach in a fall prevention program.
- Ensure procedures are in place to document environmental causes of falls and educate staff about environmental risk factors for falls in hospitals.
- Ensure that an older person's personal belongings and equipment are easy and safe to access.
- Reduce the risk of falls by checking all aspects of the environment and modify as necessary. This includes furniture, lighting, floor surfaces, clutter and spills, and mobilisation aids.
- Conduct environmental reviews regularly. Best practice is to combine environmental reviews with work health and safety audits.
- Arrange for older people considered to be at a higher risk of falling to be assessed by an occupational therapist and/or physiotherapist for specific environmental or equipment needs and training to maximise safety.

Monitoring

Good practice points

- Include individual observation and monitoring as components of a multifactorial fall prevention program. Many falls in hospitals are unwitnessed. Many falls happen in the immediate bed or bedside area and are associated with restlessness, agitation, attempts to transfer and stand, or reduced problem-solving abilities in people with dementia or delirium.
- Use fall risk alert cards and symbols to flag high-risk patients as part of a multifactorial fall prevention program.
- If appropriate, discuss the older person's risk of falling and their need for close monitoring with carers, family or friends.
- Give family members or carers information to use in their own discussions with the older person about falls in hospitals.
- Encourage family members or carers to spend time sitting with the older person, particularly in waking hours, and encourage them to notify staff if the older person requires assistance.
- Consider using additional staff and/or a volunteer sitter program for people who have a high risk of falling. Ensure roles are defined clearly.
- Observe older people with dementia or delirium frequently.
- Assist at-risk older people in the bathroom if required.

Restraints

Good practice points

- Investigate causes of agitation or other behaviours. Treat and/or manage the reversible causes of these behaviours such as delirium, and whether the older person is in pain, thirsty, hungry, hot or cold before the use of restraint is considered.
- Focus on caring for older people with behavioural concerns by understanding the cause of the behaviour, meeting their unmet needs and treating reversible causes, before considering controlling the behaviour.
- For older people with cognitive impairment including delirium, discuss all alternatives to restrictive practices with family and carers. Trial all the alternatives to restraint before full implementation.
- If all alternatives are exhausted, seek appropriate consent from the substitute decision maker. Document the rationale for using restrictive practices and the anticipated duration agreed on by the health care team in consultation with family and carers. Review the use of restrictive practices regularly.
- If medicines are used specifically to restrain an older person, use the minimal dose and regularly review and monitor the older person to ensure their safety. Importantly, do not use chemical restraint as a substitute for alternative methods of management.
- Physical restraints are considered the last option for residents who are at risk of falling as

physical restraints can cause death or injury and infringe autonomy.

- If restraints must be used, follow relevant local, state or national policies, procedures and regulations. Useful resources are available here:
<https://www.agedcarequality.gov.au/minimising-restrictive-practices>

Hip protectors

Good practice points

- Consider hip protectors for older people who fall frequently, have osteoporosis and/or a low body mass index.
- Ensure hip protectors are worn correctly to provide. Check regularly that the older person is wearing their protectors, the hip protectors are in the correct position, and the older person is comfortable.
- Do not share hip protectors among people as hip protectors are a personal garment.

vitamin D

Good practice points

- Consider vitamin D as part of medication reviews for older people who are unlikely to receive adequate sunlight for vitamin D production.
- Communicate any recommendations to the General Practitioner.

Osteoporosis management

Good practice points

- Strengthening and protecting bones will reduce injuries from falls.
- Refer older people with a history of recurrent falls and those sustaining minimal trauma fractures for bone mineral density testing to identify possible osteoporosis.
- Establish hospital protocols to ensure pathways for intervention and management of bone health in older people who have sustained a minimal trauma fracture.
- Communicate any recommendations to the General Practitioner.

Post fall management

Good practice points

- Establish hospital protocols for managing people immediately after a fall, reporting falls and investigating the causes of falls.
- Train and educate staff to report and document all falls.

- Train and educate staff to complete a post-fall assessment for every older person who falls.
- After the immediate follow-up of a fall, review the fall. Determine how and why the fall may have occurred, for example a blackout or a loss of balance, and implement actions to reduce the risk of another fall.
- Analyse falls to prevent further falls. Organisational learning from this analysis can inform practice and policies, to prevent future falls. A post-fall analysis can inform an interdisciplinary care plan to reduce the risk of future falls and injuries and address any identified comorbidities or fall risk factors.
- An in-depth analysis of the fall event such as root-cause analysis, is required if there has been a serious injury following a fall, or if there has been a death from a fall.