Falls prevention | Te ārai takanga

Definition of a fall

Any unintentional change in position where the person ends up on the floor, ground, or other lower level; includes falls that occur while being assisted by others (interRAI assessment system).

Key messages about fall prevention strategies

- Many falls can be prevented.
- Best practice in fall and injury prevention includes identification of fall risk implementation strategies and targeted individualised strategies that are adequately resourced, monitored and regularly reviewed.
- The outcome of the fall/risk assessment and identified preventative strategies are discussed with the older adult, their family and all health care staff and incorporated into the older adult's individualised care plan.
- The most effective approach to fall prevention is likely to be one that involves all staff and the use of a multifactorial falls prevention programme.

Falls risk factor

Environmental – request OT and PT assistance

- Unsuitable footwear
- Lighting – levels that cause glare or limit visibility
- Stairs
- Floors, surfaces that cause slips, trips, stumbling
- Patient rooms, clutter and furniture, lack of supports, eg, call bell
- Personal, frequently used items out of reach, eg, glasses, water, reading material
- Bed position, unlocked brakes
- Bathrooms: wet/slick floors, rugs/mats not properly secured
- Seating not individualised to resident's needs/abilities
- Elevators
- Required medical review if new or ongoing issues suspected despite intervention
- Reduced access to use of assistive devices.

Person centred – request medical review if new or ongoing issues suspected despite intervention

- Increasing age especially > 65 years
- History of falls, eg, two or more in previous months
- Wandering, unsafe behaviour
- Cognitive impairment
- Incontinence, UTIs
- Independent transfers
- Hyper/hypotension especially postural drop
- Impaired balance or weakness especially of lower extremities
- Unsteady gait/use of a mobility aid
- Impaired hearing or vision
- Fever/acute illness, eg, pneumonia
- 24 hours after surgery
- Depression/anxiety/delirium/confusion
- Primary cancer
- Dehydration/poor nutrition
- CHF, heart disease and/or arrhythmias
- Neurological disorders including seizures
- Dizziness, vertigo
- History of alcohol abuse and/or intoxication
- Diabetes.

Medication – request medical review if new or ongoing issues suspected despite intervention

- Over-the-counter and/or prescribed polypharmacy
- Laxatives
- Diuretics and/or increase in dose
- Antiarrhythmics
- Anticoagulants
- Antihypertensives
- Vasodilators
- Sedatives, tranquilisers, psychotropic drugs
- Antidepressants
- Opioids
- Hypoglycaemic agents
- Anaesthetics
- Antiseizure/antiepileptic.

Highest risk of falls

Residents at highest risk of falls are those who are:

- able to stand but need assistance with transfers
- incontinent
- cognitively impaired
- new to the facility.

Comprehensive multidisciplinary falls assessment

To be carried out after any fall:

- Health history and functional assessment
- Medication and alcohol consumption review
- Vital signs and pain assessment
- Vision screening
- Gait and balance screening and assessment
- Footwear assessment
- Musculoskeletal and foot assessment
- Continence assessment
- Cardiovascular assessment
- Neurological assessment
- Depression screening
- Walking aids, assistive technologies and protective devices assessments
- Environmental assessment
- Cognitive assessment
- Falls history including causes and injuries consequences
- Syncope syndrome
- Osteoporosis risks.

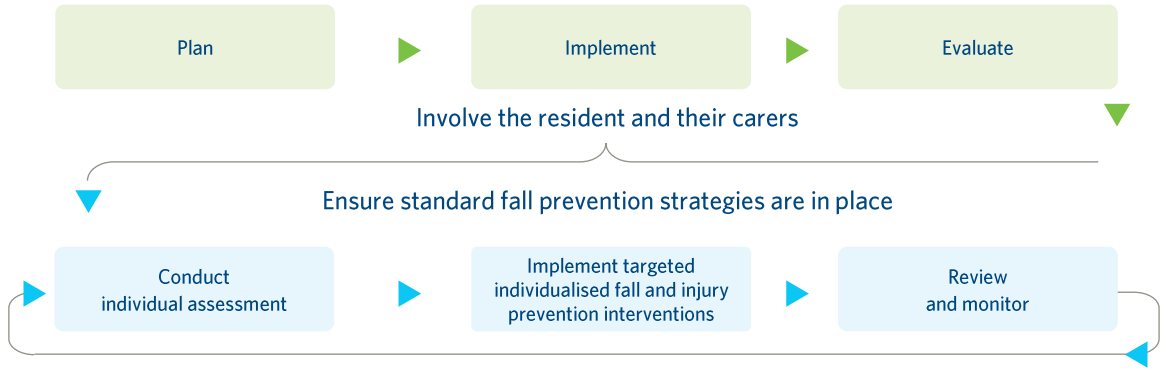
Restraints are not a method of fall prevention – retrain but do not restrain.

Identify falls risk factors that can be treated, improved or managed

Components of a falls prevention programme

- Initial assessment of all residents to identify their falls risk and develop a care plan with interventions for their individual risk factors.
- Risk assessment factors entered into all residents' health records.
- Ongoing reassessment for causes, factors and falls as part of a three-monthly clinical review or sooner if further falls, change in health status or change in environment.
- Appropriate prevention/intervention plan implemented for all residents.
- High-risk residents may be identified at the bedside with a 'fall symbol' and will have the 'high-risk' interventions implemented as appropriate.
- Consider referral to specialised gerontology service.
- Documentation of all falls and completion of incident report.
- Measuring and monitoring of fall rates/injury rates.
- Monitor and audit uptake of falls programme, eg, hip protection, vitamin D uptake, exercise programme participation, staff education.
- Attention to the environment: lighting, flooring, furniture, bathrooms and toilets.
- Staff education programmes.

Falls prevention process



Falls preventions/interventions for individual residents

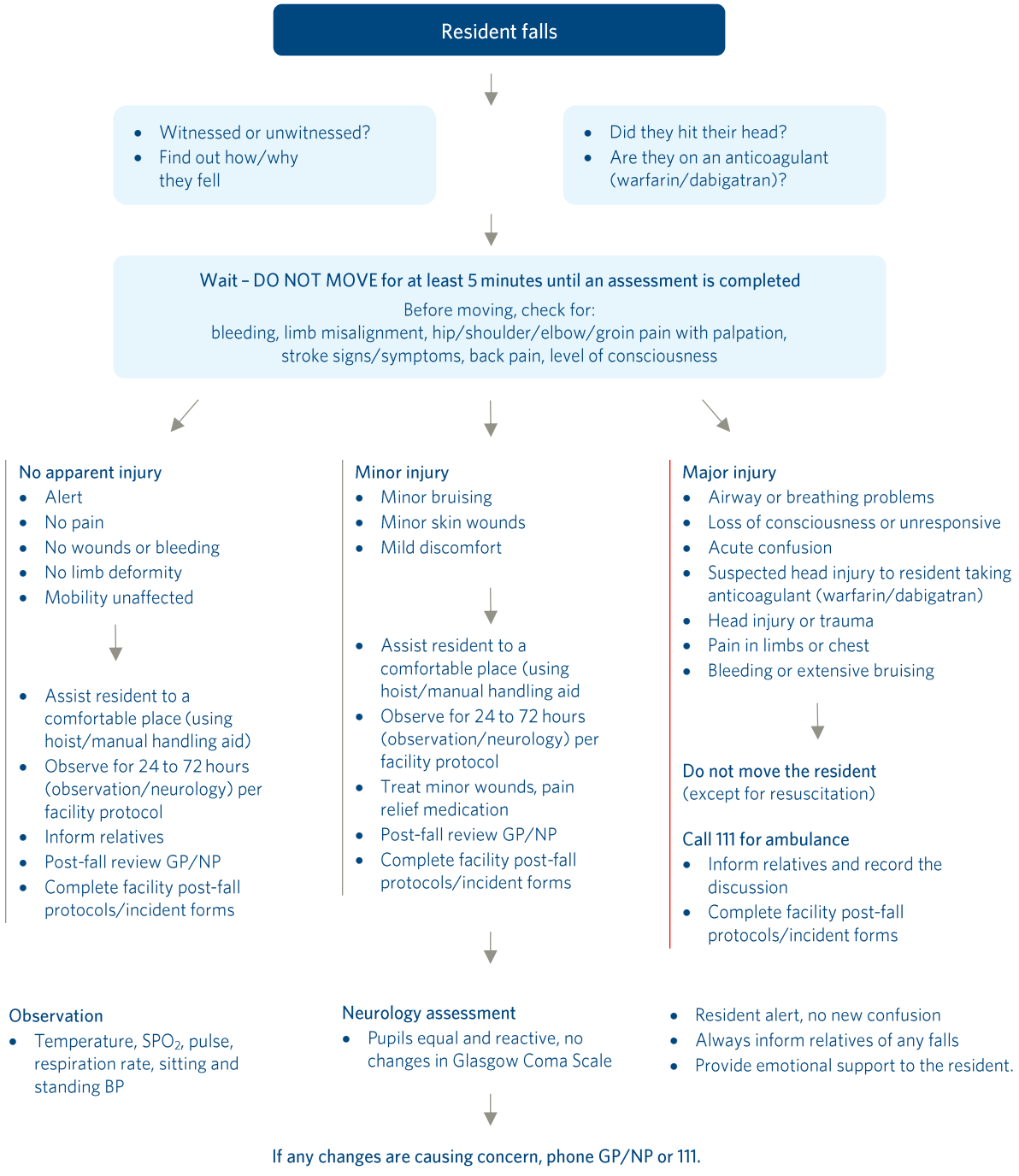
- Restraints: avoid or ensure awareness of risk
- Staff education and high level of awareness of each resident's falls and risk factors
- Resident education, eg, personal limitations and asking for assistance
- Individualised care plans and intervention programmes
- Attention to vision/visual aids, eg, annual review, use correct glasses for mobilising
- Orientation and reorientation to environment and how to obtain assistance
- Agitation, wandering and impulsive behaviour – recognise and eliminate or reduce factors that precipitate these behaviours
- Regular case conferences including all caregivers, nursing, medical and allied health staff
- Regular review of medication for elimination or dose reductions (aiming to maximise health benefits while minimising side effects, eg, falls)
- Work alongside and with high-risk residents, increasing assistance to them as needed
- Exercise – encourage participation in exercise programmes for improving balance
- Wellbeing – encourage participation in exercise programmes for improving balance
- Well fitting non-slip footwear and treatment of any foot problems – refer to a podiatrist
- Continence management – (bowel and bladder) as required
- Adequate fluid and nutrition – ensure fluid readily available
- Attention to environmental issues – general and individualised, which includes:
  - specialised advice on assistive and mobility devices
  - correct use of moving and handling equipment
  - MDT approach with management, including occupational assessment/activity/task analysis
- Hip protectors – consider the use of hip protectors amongst those clients considered at high risk of fractures associated with falls (there is no evidence to support universal use of hip protectors amongst the older adult in health care settings)
- Vitamin D is associated with a reduction in falls and fall-related fractures.

Value of exercise

Exercise to improve balance, strength and gait is a key component of fall prevention programmes.

Post-fall assessment

See https://www.hqsc.govt.nz/our-programmes/reducing-harm-from-falls/publications-and-resources/publication/2876/



Glasgow Coma Scale

Eye opening (E)	Verbal response (V)	Motor response (M)
4 = Spontaneous	5 = Orientated	6 = Obey commands
3 = To voice	4 = Confused	5 = Localises to pain
2 = To pain	3 = Words, but not coherent	4 = Normal flexion
1 = None	2 = No words, only sounds	3 = Abnormal flexion
	1 = None	2 = Extension
		1 = None
See: www.glasgowcomascale.org		Total = E+V+M

Post-fall assessment

See www.hqsc.govt.nz/our-programmes/reducing-harm-from-falls/publications-and-resources/publication/2876/

See www.hqsc.govt.nz/our-programmes/reducing-harm-from-falls/publications-andresources/publication/2879/

An editable post-falls assessment form is available to download here: www.hqsc.govt.nz/assets/ARC/PR/Frailty_care_guides/Post-falls_assessment_form_FCG_final.docx.

Medication drill-down

Review contributing factors related to medication

Medication

General contributing factors

- New medication?
- Changes? (Dose, time, etc)
- When was last dose given?
- Has there been a medical error in the past 24 hours

Other medical-related contributing factors to consider

Side effects

Did resident exhibit signs or complaint of:

- weakness
- acute delirium
- clammy skin
- gait disturbance
- dehydration
- impaired vision
- agitation
- impulsiveness
- resistance to care

Interactions

Review for:

- drug–drug
- drug–food
- drug–supplement
- drug–herb

Medication class

Diuretics

- Edema (lower extremity)
- Lung status (CHF)
- Change in urgency and void
- Change in fluid (72 hours)

Antihypertensives/ cardiovascular

- Baseline blood pressure
- Postural blood pressure
- Vital signs including O_2 sats
- Skin – is it cold or clammy?

Psychopharmacology

- Antianxiety
- Antidepressant
- Antipsychotic
- Hypnotic

Hypo/ hyperglycaemic

- Time of last insulin/oral
- Agent dose
- CG results
- Last PO intake (time and quantity)
- Skin – is it cold and clammy?

Antipsychotics only

- Check most recent AIMS
- Consider EPS (involuntary movement)

Narcotics/ analgesics

Pain level:

- at last dose
- at time of fall

Laxatives

- Prescribed and given?

Antibiotics

- Diagnosis for use (UTI, pneumonia)

Consult pharmacist or physician (as appropriate)

If immediate risk identified
take steps to ensure resident's safety and prevent re-occurance

Bibliography | Te rārangi pukapuka

Falls prevention

Brignole M, Menozzi C, Bartoletti A, et al. 2006. A new management of syncope: prospective systematic guideline-based evaluation of patients referred urgently to general hospitals. *European Heart Journal* 27(1): 76–82. DOI: 10.1093/eurheartj/ehi647

Cameron ID, Gillespie LD, Robertson MC, et al. 2012. Interventions for preventing falls in older people in care facilities and hospitals. *Cochrane Database of Systematic Reviews* 12: CD005465. DOI: 10.1002/14651858.CD005465.pub3

Glascow Coma Scale. (nd). The Glasgow structured approach to assessment of the Glasgow Coma Scale. URL: https://www.glasgowcomascale.org/ (accessed 26 June 2019).

Hampshire County Council Adult Services. 2015. *Post-falls protocol for Hampshire County Council Adult Services.* URL: https://www.nhs.uk/NHSEngland/keogh-review/Documents/quick-guides/background-docs/4-Hampshire%20falls%20protocol.pdf (accessed 26 June 2019).

Health Quality & Safety Commission. 2017. *Topic 6 – After a fall: what should happen?* URL: https://www.hqsc.govt.nz/our-programmes/reducing-harm-from-falls/publications-and-resources/publication/2876/ (accessed 15 June 2019).

Health Quality & Safety Commission. 2017. *Topic 8 – Medicines: balancing intended benefits and increased falls risk*. URL: https://www.hqsc.govt.nz/our-programmes/reducing-harm-from-falls/publications-and-resources/publication/2879/ (accessed 15 June 2019).

Judge J, Birge S, Gloth F 3rd. 2014. American Geriatrics Society Workgroup on Vitamin D Supplementation for Older Adults. Recommendations abstracted from the American Geriatrics Society Consensus Statement on vitamin D for prevention of falls and their consequences. *J Am Geriatr Soc* 62: 147–52.

Tinetti ME. 2003. Clinical practice. Preventing falls in elderly persons. *New England Journal of Medicine* 348(1): 42–9. DOI: 10.1056/NEJMcp020719

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