Falls

Resident with fall or suspected fall (see Practice point 1)

1. Check for danger - assess the environment and situation for hazards.
2. Perform primary survey (see Practice point 2) and check vital signs - review Recognition of the deteriorating resident.
3. If not immediately life-threatening, review Checklist for contact and Principles of falls management (see Practice point 3) and verbally contact GP*.

STABLE VITALS

Clinician with appropriate scope of practice assesses if the resident has any of the following:

- New neck or back pain
- New inability to move arms or legs
- Unstable limb injuries?

YES

NO

UNSTABLE VITALS

- Review advance care plan and refer to Management of residents with unstable vital signs
- In residents with palliative goals of care, transfer to hospital may still be considered where unstable fractures are suspected - discuss with resident, family and GP

Transfer resident to bed and clinician with appropriate scope of practice assesses for injury and contributors to the fall (see Practice point 4)

RED FLAGS PRESENT

Identify and escalate Red flags for deterioration (see Practice point 5)

DEVELOPS RED FLAGS

RED FLAGS ABSENT

1. Assess for and treat pain - refer to Pain Management Pathway.
2. Address underlying contributors to fall.
3. Treat injuries related to fall.
4. Monitor vital signs including conscious level and neurological observations (see Practice point 7).
5. Notify substitute health decision maker of fall or the resident's nominated decision support person.

ESCALATION CRITERIA ABSENT

Assess for Escalation criteria (see Practice point 6)

IMPROVES

FAILS TO IMPROVE OR DEVELOPS ESCALATION CRITERIA

ESCALATION CRITERIA PRESENT

1. Review resident's falls assessment and management plan and proactively prevent future falls (see Practice point 8).
2. Where a resident has recurrent falls and is on anticoagulation and / or antiplatelet therapy, GP to review risk versus benefit of continuing such treatment - consider Geriatrician / RaSS review at GP discretion.

Refer to *HHS RaSS* at GP discretion

*Where timely, arrange telehealth or face-to-face GP review

Falls practice points

1) Identifying a fall or a suspected fall

A fall is defined by National Aged Care Mandatory Quality Indicator Program as "*an event that results in a person coming to rest inadvertently on the ground or floor or other lower level.*

E.g. A fall resulting in major injury is a fall that results in one or more of the following:

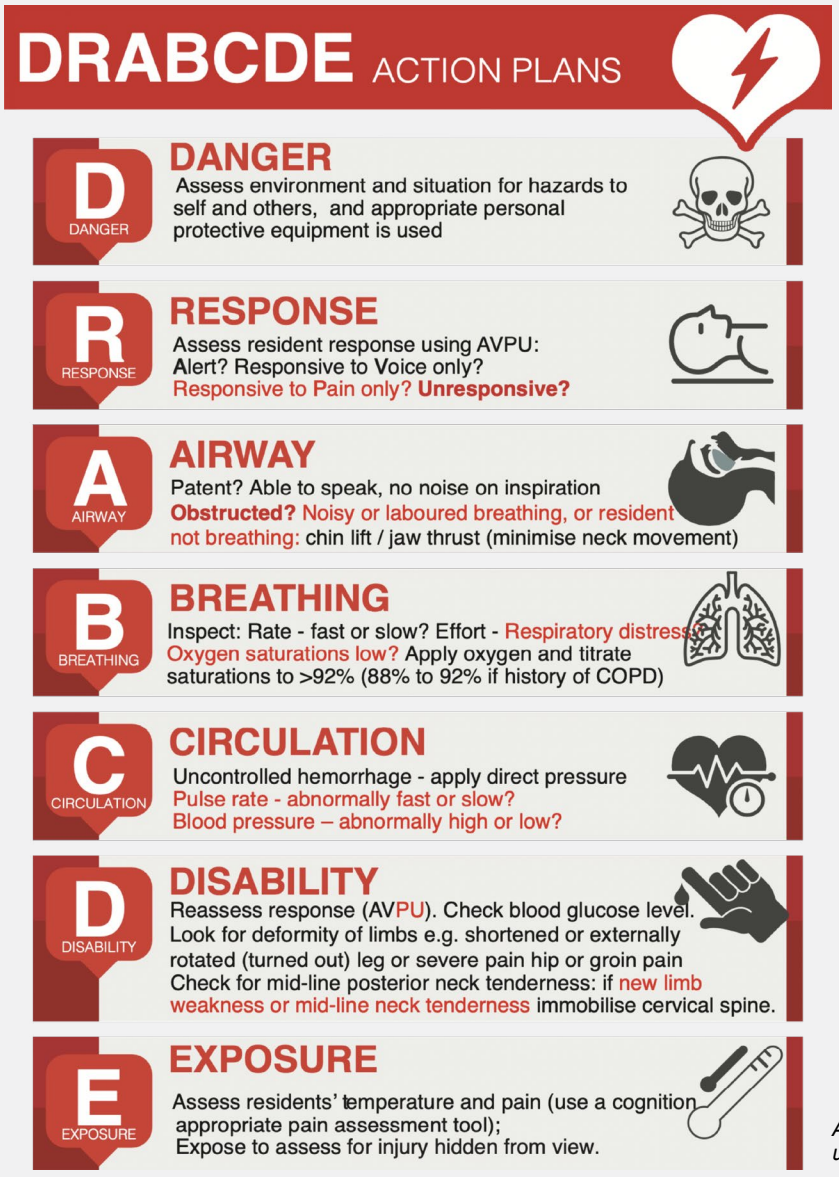
1. *Bone fractures.*
2. *Joint dislocations.*
3. *Closed head injury with altered consciousness and / or subdural haematoma".*

A fall may be identified or suspected through any of the following:

1. Direct or indirect observation.
2. Report of resident, bystander or falls detection technologies.
3. Resident found on floor.
4. Resident identified to have injuries suspected to be the result of a fall.

2) Primary survey: DRABCDE action plan

If a life-threat / red flag or unstable vital signs are identified on primary survey, refer to Management of residents with unstable vital signs pathway. Primary survey entails the following assessments:



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Falls practice points (cont'd)

3) Principles of falls management

Best practice in falls management of this predominantly frail cohort requires the clinician to balance:

1. The clinical risks (actual from identified injury or underlying cause of the fall; and potential from risk assessment for deterioration) and,
2. The risks of hospital transfer and associated iatrogenic injury and / or psychological trauma.

Policies of routine transfer to hospital of all residents after a fall are, in the absence of a specific clinical indication, not consistent with best practice. The 2022 World Guidelines for falls prevention and management for older adults recommend avoiding unnecessary transfer of residents to acute care. Instead, such decisions should be individualised and informed by the clinical assessment, which should always be considered in the context of the individual's life trajectory and in concordance with the expressed wishes of the resident (or where relevant, their substitute health decision maker). Routine transfer of residents to ED for CT head has potential negative impacts on residents.

Two recent Australian studies of ~ 1000 residents with falls found low rates of positive findings on CT head and no residents underwent neurosurgical intervention, even where there were positive CT head findings. Routine ED transfer and routine CT head in residents with falls and no clinical evidence of head injury is not supported by evidence. Transfers to hospital after a fall should be constrained to situations where the benefits of transfer for the resident exceed the risk and should occur in consultation with the resident and their nominated decision support person or substitute health decision maker.

4) Assessment of resident with a fall: secondary survey and assessment for cause of fall

The goals of assessment of a resident with a fall are to identify:

1. Injuries resulting from the fall.
2. Causes of the fall (intrinsic and extrinsic).

Obtain a history from the resident and any witnesses about the fall and any preceding symptoms or contributors.

A. Assessment for injuries related to the falls: A secondary survey is performed when immediate life-threats identified in primary survey have been addressed. Where red flags are identified, refer to Management of residents with unstable vital signs pathway.

HEAD

Inspect: Bruising, lacerations

Feel: Tenderness, depressed skull fractures

Bilateral bruising around eyes (Raccoon's eyes) may represent base of skull fracture

FACE

Inspect: Bruising, lacerations

Feel: Bony tenderness

Clear fluid leaking from ears or nose may represent leak of cerebrospinal fluid (CSF) from around brain

CHEST & THORACIC SPINE

Inspect: Bruising, lacerations, equal movement of chest with breathing

Feel: Tenderness ribs or midline thoracic spine, subcutaneous emphysema

Listen: Equal air entry

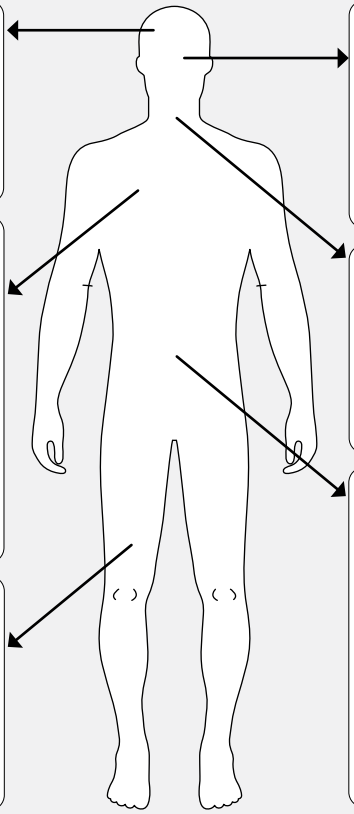
Respiratory distress or subcutaneous emphysema may indicate significant chest injury; midline thoracic spine tenderness may indicate spinal fracture

NECK

Inspect: Bruising, lacerations, swelling

Feel: Bony tenderness posterior midline

Midline tenderness of cervical spine may indicate spinal fracture



LIMBS

Inspect: Bruising, lacerations, swelling or deformity

Feel: Bony tenderness

Move: Pain on movement

Shortening & external rotation of leg and pain in hip or groin may indicate neck of femur fracture

ABDOMEN & PELVIS & LUMBAR SPINE

Inspect: Bruising (check abdomen, flanks and perineum), lacerations

Feel: Abdominal or pelvic tenderness. Check urine for visible (macroscopic) haematuria

Abdominal / pelvic tenderness / new macroscopic hematuria with hemodynamic instability may indicate significant injury. Midline thoracolumbar spine tenderness may indicate thoracic / lumbar spinal fracture

Falls practice points (cont'd)

4) Assessment of resident with a fall: secondary survey and assessment for cause of fall (cont'd)

B. Assessment for causes of the fall (intrinsic and extrinsic)

Falls in older persons are often the result of several predisposing factors placing residents at increased risk of falls and a precipitating factor, which may be intrinsic (related to an acute medical precipitant) or extrinsic (related to an environmental factor).

Type of contributor	Examples		Assessment
Intrinsic	**Acute medical condition**	Example include **infections (including COVID-19 or sepsis)**, acute exacerbations of chronic conditions, cardiac ischemia or abnormal cardiac rhythms, seizures	• Assess vital signs including, where appropriate, postural drop of blood pressure • History of any symptoms or examination findings suggestive of acute illness • Low threshold to test for COVID-19
	Cognitive impairment or delirium	Particularly impulsive behaviour, wandering, delirium	Screen for cognitive impairment using a validated tool. Where a resident has cognitive impairment, assess for impulsive behaviour, wandering, delirium
	Medication side effects		• Initiate residential medication management review (RMMR) to assess for medications that may contribute to falls such as sedatives, vasodilators, anticholinergic agents
	Chronic conditions	Parkinson disease	• Assess lying and standing BP for postural drop – where present GP to review antihypertensives, arrange compression stockings and consider increased sodium and water intake where clinically appropriate. If persists, consider introduction of fludrocortisone. • Assess motor symptoms and adjust Parkinson medications as indicated– refer to eTG neurology for guidance
		Postural hypotension	Measure lying and standing blood pressure – where postural drop, GP to review antihypertensives and correct dehydration via oral fluids, where clinically appropriate
		Urinary: **Urge incontinence** **Urinary frequency**	Continence advisor to review and assess contributors – examples of interventions may include provision of a commode at night time, wearing of incontinence pads or review of timing of diuretic medications
		Vertigo	GP to assess and where consistent with potential BPPV, arrange review by vestibular physiotherapist
		Vision and / or hearing impairment	Assess residents with recurrent falls for unaddressed impairment of vision and / or hearing
	Frailty		Assess for frailty using a validated tool
Extrinsic	**Environmental hazards**	Lighting	Assess lighting in area of fall to ensure adequacy
		Clutter	Did clutter contribute to fall?
		Flooring	Is flooring uneven or slippery?
		Height of bed, chairs or toilets	Assess height of implement from which resident fell relative to resident needs
	Unsafe equipment	Walking aids	Are walking aids in good condition and appropriate to needs of resident?
	Unsafe personal care items	Footwear	Assess footwear for fit and appropriateness

Falls practice points (cont'd)

5) Red flags for deterioration in resident with fall

If any of the following red flags are identified in residents who have had a fall, review the resident's advance care plan, consult resident (with nominated decision support person) or substitute health decision maker and refer to Management of residents with unstable vital signs pathway:

- Vital signs in the red or danger zone including new severe pain - refer to Recognition of the deteriorating resident
- New altered mental state (e.g. drop in Glasgow Coma Scale or difficult to rouse) relative to baseline
- New, painful bony deformity or hip pain with reduced range of motion or shortening / leg rotation (turned out) or a resident with a sudden change in their mobility post-fall
- Suspected head injury (witnessed head strike or any clinical signs head injury) in a resident with a known bleeding disorder or on anticoagulant or anti-platelet agent
- Major head trauma as indicated by any of:
  - Signs of base of skull fracture (bruising around both eyes, cerebrospinal fluid / clear fluid leaking from ear or nose, bruising over mastoid process or bony prominence behind ear)
  - Post-traumatic seizure
  - New focal neurological deficit (e.g. limb weakness or paralysis or facial droop)
  - Severe headache
  - Persistent vomiting (2 or more vomits)
- Fall from > 1 metre
- Witnessed loss of consciousness
- Suspected spinal injury
- Uncontrolled bleeding or concern for concealed haemorrhage (e.g. unstable vital signs)

Note: A decision to transfer a resident to hospital after a fall should always consider resident goals of care and be respectful of informed choice by the resident (or substitute decision maker).

6) Escalation criteria

First screen for red flags as above - where red flags are identified in residents who have had a fall, review the resident's advance care plan, consult resident (with nominated decision support person) or substitute health decision maker and refer to Management of residents with unstable vital signs pathway.

Escalate to HHS RaSS at GP discretion if any of (outside of HHS RaSS operational hours discuss with GP or after-hours GP service whether referral to ED or awaiting HHS RaSS opening hours is more appropriate in the individual resident's context):

- Red flags in a resident who has conservative goals of care and does not wish to be transferred to hospital
- Resident with known bleeding disorder or on anticoagulant or anti-platelet therapy with either:
  - Delay to GP ability to attend secondary survey or
  - An unwitnessed fall with no clinical signs of head injury
- Wounds outside of scope of GP to manage independently of the hospital sector
- Suspected minor fracture

7) Vital signs monitoring after a fall

Each resident should have an individualised monitoring plan that considers life trajectory and goals of care and should be developed in consultation with the GP. In all residents, initial assessment should include a full set of vital signs including respiratory rate, oxygen saturation, heart rate, blood pressure, Glasgow Coma Scale (GCS), blood glucose level (BGL) and cognition-appropriate pain assessment.

Vital signs monitoring (Heart rate, blood pressure, respiratory rate, oxygen saturation, pain assessment) should then continue unless alternate medical orders provided:

- Hourly for 4 hours
- Then, if clinically stable, 2nd hourly for 6 hours, and if normal, 4th hourly until 24 hours post-injury

Falls practice points (cont'd)

7) Vital signs monitoring after a fall (cont'd)

Neurological signs monitoring (conscious level, behaviour change, vomiting, pupils) is indicated where there is any one of the following: concern for a head injury (clinical signs of head injury or history of head strike) or unwitnessed fall in a cognitively impaired resident or where a resident is on anticoagulants or anti-platelet agents:

- Every 30 minutes for a minimum of 2 hours - escalate if remains below usual conscious level 2 hours after injury or if conscious level deteriorates at any time
- Then hourly for 4 hours, followed by 2-hourly for 4 hours and then 4-hourly for 40 hours

Note: If a resident is deteriorating on serial observations, escalate as per Management of residents with unstable vital signs pathway.

8) Individualised comprehensive falls risk management plan

All residents should be considered at high risk of falls and have a comprehensive multifactorial assessment at admission to identify factors contributing to falls risk and implement appropriate interventions to avoid falls and fall-related injuries. This should be reviewed after each fall or with significant change in resident's physical health and/ or mobility and/ or cognition, with adjustment of the intervention strategy for the resident.

There should be active consideration and proactive management of risk factors for falls including:

1. **Prevent falls** through:
   - Individualised exercise program, where appropriate, with emphasis on exercises that challenge balance and improve strength, e.g. Sunbeam Program of progressive resistance training and high challenge balance exercise
   - Residential Medication Management Review (RMMR) to identify and review indication for medications that are sedating or that may contribute to postural hypotension; in residents with recurrent falls, GP to review indications for anti-platelet and anticoagulation medications to ensure benefit outweighs risk
   - Ensuring well-fitted footwear - consider podiatry review
   - Environmental review and modification
   - Individualised continence program including regular toileting and, where indicated, continence aids
   - Where indicated:
     - Individualised mobility aid fitted with the assistance of physiotherapist
     - Visual aids
     - Dietitian review to address or prevent malnutrition and optimise calcium and protein intake
2. **Prevent injury** through:
   - Safe transfer techniques
   - Hip protectors
   - Vitamin D supplementation where levels are low or where residents are at risk of low vitamin D (minimal exposure to sunlight or malnourished)
   - Osteoporosis management with vitamin D combined with calcium
   - Protein supplementation
3. **Identify falls** through:
   - Fall alarm devices
   - Visual observation

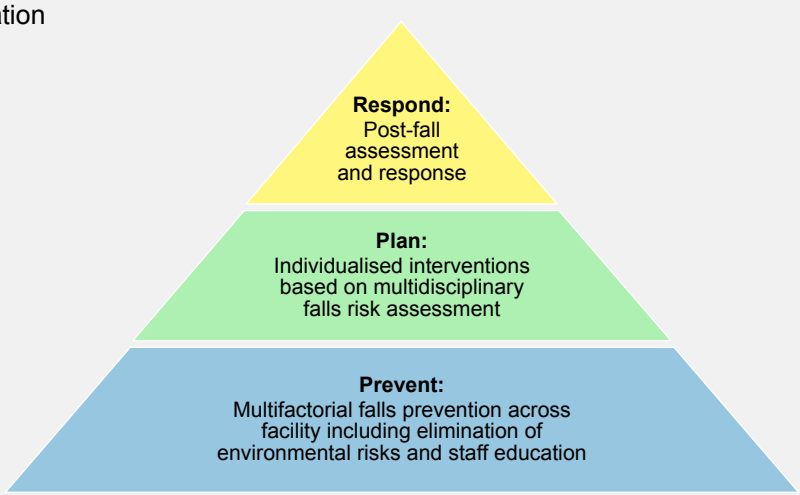


Figure 1: Preventing falls and harm from falls in aged care

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Falls version control

Pathway	Falls in aged care facility residents				
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Author	Author: Improving the quality and choice of care setting for residents of aged care facilities with acute healthcare needs steering committee in collaboration with Queensland Surgical Advisory Committee				
Custodian	Queensland Dementia, Ageing and Frailty Clinical Network				
Supersedes	Falls v1.0.0				
Applicable to	Residential aged care facility registered nurses and General Practitioners in Queensland RACFs, serviced by a RACF acute care support service (RaSS)				
Document source	Internal (QHEPS) and external				
Authorisation	Executive Director, Healthcare Improvement Unit				
Keywords	Falls, injurious falls				
Relevant standards	Aged Care Quality Standards: Standard 2: ongoing assessments and planning with consumers Standard 3: personal care and clinical care Standard 8: organisational governance				