Falls

Standardised care process

Objective

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

Why the prevention and management of falls is important

Approximately 30–50 per cent of people living in residential aged care fall each year, and 40 per cent of them experience recurrent falls. In 2011–12 falls accounted for 21,639 residents being admitted to hospital for an injury (Tovell et al. 2014). Falls are commonly due to tripping, slipping and stumbling (ACSQHC 2009). A fall can result in negative outcomes including death, loss of independence and autonomy, immobilisation and depression (WHO 2007).

Definitions

Fall: an event that results in a person coming to rest inadvertently on the ground or floor or other lower level (WHO 2007).

Hip protectors: hard shields (plastic) or soft pads (foam or other material) usually fitted in pockets in specially designed underwear. They are worn to cushion a sideways fall on the hip (Santesso et al. 2014).

Team

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

Acknowledgement

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Brief standardised care process

Recognition and assessment

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

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

- a detailed falls history
- a comprehensive physical assessment/ examination
- a functional assessment
- a medicine review
- an environmental review.

Interventions

Fall prevention interventions include:

- exercise programs
- injury minimisation and falls surveillance
- medication review and minimisation
- correction of visual deficits
- continence management
- foot care and safe footwear
- management of syncope, dizziness, orthostatic hypotension and vertigo
- environmental review and modification
- addressing reversible causes of acute and chronic cognitive decline
- monitoring blood glucose levels in residents with diabetes
- using alternatives to restraint.

Referral

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

Evaluation and reassessment

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

Resident involvement

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

Staff knowledge and education

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

Full standardised care process

Recognition

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

Assessment

A comprehensive multifactorial falls risk assessment is undertaken on admission, annually and after any fall or other change in the resident's health status. Even when the overall falls risk is low, all identified risk factors should be addressed.

A comprehensive assessment should be performed by health professionals with the appropriate skills and experience. Validated tests and tools for assessment should be used – for example, the Peninsula Health Falls Risk Assessment Tool (FRAT) and the Timed Up and Go Test.

A detailed falls history should be taken that includes the circumstances of the fall(s), frequency, symptoms at the time of the fall(s), injuries and other consequences.

Undertake a comprehensive physical assessment in the following areas:

- gait, balance, mobility levels and lower extremity joint function
- muscle strength/weakness in the lower extremities
- neurological function – cognitive evaluation, lower extremity peripheral nerves, proprioception, reflexes and tests of cortical, extrapyramidal and cerebellar function
- vitamin D and calcium levels, osteopenia and osteoporosis
- infection risk/assessment (urinary tract and foot infections), particularly in residents with diabetes
- cardiovascular status – heart rate and rhythm, orthostatic and postural blood pressure
- syncope – assess for the underlying cause of unexplained falls or episodes of collapse
- visual acuity
- examination of the feet and for ill-fitting or inappropriate footwear
- a continence assessment to check for problems that can be modified or prevented
- nutrition and hydration status.

Undertake a functional assessment including:

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

Undertake a medicine review including:

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

Undertake an environmental review including:

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

Post-fall assessment

- Perform a physical assessment of the resident at the time of the fall, including vital signs (which may include orthostatic blood pressure readings) and an evaluation of head, neck, spine and/or extremity injuries.
- Monitor blood glucose for residents with diabetes following a fall, especially if they are taking glucose-lowering medicines.
- Vital signs should be repeated every hour for four hours then reviewed. They should be continued four-hourly until 24 hours of observation have been completed.

- Neurological observations (Glasgow Coma Scale (GCS) and changes in level of consciousness, headache or vomiting) should be commenced where a head injury is sustained as a result of the fall, or if the fall was unobserved and it is not known if the head was hit.
- Monitor neurological signs every 30 minutes until GCS is within normal limits, then continue hourly for the next four hours, then two-hourly until 24 hours of observation has been reached.
- For a resident who is prescribed anticoagulant/antiplatelet medication or has a bleeding disorder, observations (neurological and vital signs) should continue four-hourly for 72 hours.
- Any deterioration in GCS score or mental status (alertness, cognition or behaviour) should result in medical attention and increased frequency of observations (neurological and vital signs).
- The healthcare team should consider further investigation (cranial computed topography) or transfer to hospital in accordance with the clinical evidence, the resident's wishes, the resident's advance care plan or the wishes of the resident's authorised representative.
- Perform a post-fall assessment within 24 hours of a resident's fall to identify the possible causes.

Once the assessment rules out any significant injury:

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

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

Interventions

The plan of care should be individualised, based on the outcomes of the comprehensive multifactorial falls risk assessment.

Exercise program

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

Exercise programs that challenge balance training are the most effective in preventing falls, such as:

- tai chi (for permanent residents and those who have no previous history of a fall-related fracture)
- yoga
- walking programs (for those with a low falls risk)
- gait training
  - functional incidental training (FIT).

Injury minimisation includes:

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

Falls surveillance

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

Medication review and minimisation

- All medications should be reviewed and minimised, particularly high-risk medicines:
  - sedatives and hypnotics; neuroleptics and antipsychotics; antidepressants; benzodiazepines and nonsteroidal anti-inflammatory drugs.

Visual impairment

- Encourage residents with vision deficits to wear their prescription glasses.
- Undertake an environmental assessment and modification for residents with severe visual impairments (visual acuity worse than 6/24).
- Educate residents and carers that extra care is needed when visual impairment is being corrected with, for example, new glasses (falls may increase as a result of correction to visual acuity).
- Advise residents to not wear bifocals or multifocal lenses while walking, particularly on stairs.

Continence management

- Put in place an individualised continence program for residents at risk of falling.
- Ensure residents have access to continence aids.

Feet and footwear

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

Syncope

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

Dizziness, orthostatic hypotension and vertigo

- Use vestibular and balance rehabilitation therapy to treat dizziness and balance problems where indicated and available.
- Use head repositioning exercises such as the Epley manoeuvre to manage benign paroxysmal positional vertigo. Manoeuvres should only be undertaken by a trained person.

Environmental review and modification

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

For residents with dementia

- Address all reversible causes of progressive cognitive decline.
- Residents presenting with an acute change in cognitive function should be assessed for delirium and the underlying cause of this change.

For residents with diabetes

- Monitor blood glucose to detect hypo- and hyperglycaemia, then treat/manage as appropriate.

Alternatives to restraint

- Responsive behaviours should be investigated, and reversible causes of these behaviours (for example, delirium) should be treated.
- Respond to the resident's behaviour and understand the cause, rather than attempting to control it.
- Bedside rails should not be used to prevent falls because they are associated with increased fall injuries.

Post-fall interventions

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

Referral

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

Evaluation and reassessment

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

Resident involvement

Educate all residents and their families about:

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

Staff knowledge and education

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

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

Evidence base for this standardised care process

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