Assessing Fall Risk and Reducing Falls

More than one in four American adults 65 years of age and older have reported falling and one in 10 reported a severe fall-related injury, including fractures and traumatic brain injuries. Falls account for over 50% of injury-related deaths in older adults annually (Haddad et al., 2018). Nurses play an integral role in reducing patients' fall risk by implementing a risk assessment scale, early intervention strategies and education.

Risk Factors for Fall (Lee, Lee & Khang, 2013; Kiel, 2018a; Centers for Disease Control & Prevention, 2017)

Intrinsic Factors

- Fear of falling: a geriatric syndrome that may contribute to further functional decline and may limit ambition to participate in physical activities; can lead to weakness, muscle atrophy, decreased agility, and predisposition to falls
- Advanced age
- Female sex
- Previous falls
- Muscle weakness
- Gait and balance impairments
- Visual impairment
- Postural hypotension (orthostasis)
- Chronic conditions: arthritis, stroke, incontinence, Parkinson's disease, dementia/cognitive impairment, diabetes

Extrinsic Factors

- Polypharmacy and psychoactive medications
- Lack of stair handrails and bathroom grab bars; poor stair design
- Dim lighting, obstacles and tripping hazards
- Slippery or uneven surfaces
- Improper use of assistive devices (canes or walkers)

The Community Setting

Screening for Falls Risk (Lee et al., 2013; Kiel, 2018b)

- At each visit, ask patient about history of falls, frequency of falls, and gait or balance disturbances.
- For patients who report a fall or gait/balance impairment, follow up with further risk assessment.
  - Review medical history and medications
  - Physical examination
    - Cognitive evaluation, visual acuity, and functional assessment

- Cardiovascular system, include heart rate and rhythm, postural hypotension
- Neurological impairment
- Muscular strength
- History of falls
- Feet and footwear
- Environmental hazards/Home safety evaluation
- Get Up and Go test
  - Ask patient to rise from chair, walk 9 feet, turn around, walk back to chair and sit back down
  - Normal time is 14 seconds or less
  - Observe postural stability, gait, stride length, sway, and leg strength

Falls Prevention (Lee et al., 2013; Kiel, 2018b)

- Exercise/physical therapy targeting balance, gait and strength (ideally three hours per week)
- Medication modification, as appropriate (for example, decreasing or stopping psychoactive medications)
- Vitamin D supplementation for patients deficient or a high fall risk (800-1000 international units cholecalciferol daily)
- Evaluation and modification of the home environment (most effective when directed by occupation therapist)
- Patient education

For patients with comorbidities, consider the following recommendations (Kiel, 2018b):

Comorbidity	Possible Interventions
Carotid sinus hypersensitivity	▪ Insertion of cardiac pacemaker insertion in appropriate patients
Cataracts	▪ Surgical correction
Malnutrition	▪ Refer for nutrition counseling ▪ Nutritional supplementation
Postural hypotension	▪ Fluid optimization ▪ Compression stockings ▪ Medications (fludrocortisone or midodrine)
Foot pain/neuropathy	▪ Refer to podiatry

The Nursing Care Facility or Hospital Setting

Screening for Falls Risk (Kiel, 2018a)

- Utilize standardized screening tools
  - Morse Fall Scale
  - Hendrich II Fall Risk Model

- o Schmid Fall Risk Assessment Tool
- o Johns Hopkins Hospital Fall Risk Assessment Tool
- o St. Thomas' Risk Assessment Tool (STRATIFY)

Falls Prevention (Lee et al., 2013; Berry & Kiel, 2018)

- Exercise/physical therapy
- Medication modification (I.e. decreasing or stopping psychoactive medications, if appropriate)
- Call bell in reach
- Patient's hearing aids or glasses in reach
- Hourly rounding to assess pain, positioning, toileting, and personal needs
- Early and frequent mobilization
- Nonslip footwear
- Elimination of barriers to transfer and ambulation
- Avoidance of restraints
- Use of bed alarm, when appropriate
- Bed in lowest position to the floor
- Vitamin D supplementation for patients deficient or a high fall risk (800-1000 international units cholecalciferol daily)
- Patient and family education

References:

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