Falls and Mobility

Katherine Berg, PhD, PT and Arielle Berger, MD

Presented by: ***Ontario's Geriatric Steering Committee***

Key Learnings

Arielle Berger, MD

Key Learnings

- Learn approaches to falls assessment
- Understand inter-relationship between promoting safe mobility, fall prevention, functional decline and other problems common to seniors
- Understand approaches vary by population, ability and setting
- Recognize that addressing risk factors can lower risk of falls and meet other treatment goals

Why Important?

- Important public health problem: **25-35% of elderly people fall each year in the community**
- Falls are the leading cause of severe non-fatal injuries and impact on health care expenditures in terms of hospitalizations and other service use
- Impact on psychosocial well-being: fear of falling, decreased social interactions, depression
- Fall or recurrent falls may signal decline in health

Common Causes

Arielle Berger, MD

Geriatric Syndromes

Cognitive Impairment
Incontinence
Depression
Insomnia
Frailty
Falls

- Multifactorial
- Underlying Risk Factors
- Precipitating Factors

Common Causes

Risk Factors

- Age
- Sensory deficits
- Multimorbidity/Polypharmacy
- Functional Impairment
- Cognitive Impairment
- Fear of falling

Precipitating Factors

- Acute illness/ new medication
- Pain
- Environmental hazard
- Delirium
- *Hospitalization*

Single Best Predictor of a Fall

- History of a fall
- Highest risk group: multiple falls in the past 3 months

Assessment

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Screening high functioning seniors

Screen and counsel seniors in community:

- History of falls
- Low physical activity (recommendations of 30 min per day or at least 150 per week)
- Performance tests e.g. Gait Speed or EPESE battery (stance, timed walk and chair stands)

Performance tests

Examples of measures appropriate as early signs:

- **Gait speed:** recommended as fifth vital sign- Studenski et al, 2003: Predicted functional decline and hospitalizations within a year

- **Epese battery:** includes Timed walk, stance positions, chair stands: Predicted onset of new disability within 4 years among older adults aged 70+ who were independent walking ½ mile and managing stairs (Guralnik, et al. 1995)

Low physical activity

- Multiple studies have linked low physical activity to falls and functional decline
- Independent risk factor beyond physical function
- Highlights importance of exercise lifestyle counseling and link with behavioral change and health promotion knowledge

Assessment for known fallers

- Comprehensive Geriatric approach (CGA)
- Identify contributing medical conditions
  - Particular attention to cardiac, neurologic and musculoskeletal disease
  - Orthostatic vital signs
- Thorough medication review
- Functional assessment
  - Environment
  - Balance and gait
  - Cognitive function

MDS and RAI-HC approximate CGA

Nursing homes, CCC and home care settings:

- Address multiple potential problem areas with care plans triggered by CAP areas
- Focus on recent fall (within last 30 days)- suggests very high risk of falling again
- Other CAP areas address risk factors common to falls, functional decline, and other geriatric syndromes.

Management

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Management

- Core Components
- Setting Specific
  - Community
  - Home Care/CCC/LTC
  - Acute Hospitals

Core Components

- Treat modifiable risk factors

Risk Factors	Precipitating Factors
• Age • Sensory deficits • Multimorbidity/Polypharmacy • Functional Impairment • Cognitive Impairment • Fear of falling	• Acute illness/ new medication • Pain • Environmental hazard • Delirium • *Hospitalization*

Core Components

- Medication Management
- Vitamin D
- Exercise
  - Strengthening, endurance
  - Balance
  - Mobility
  - Practice tasks and activities

Balance Improvement

Intervention must be challenging:

- Seated exercise will NOT improve balance
- Activity must help individuals explore base of support and limits of stability eg leaning, changing directions or *dancing tango* or holding positions of varying base of support - *Tai Chi*
- Exercise should also be fun… diverse

Community- Well Seniors

- Physical activity/lifestyle counseling
- Encourage walking or joining community based programs
- Community initiatives to ensure safety
  - Painting cracks in sidewalks; adjusting streets lights

Home Care, CCC and Long Term Care

- Develop service plans based on assessment information and associated caps from RAI-HC and MDS-2.0
- Strong focus on physical activity and exercise
- Monitor for change in status
  - And know who to alert if concerned
- Including safety as part of routine care
- Modify environment to fit person's needs

Post Fall Review

- Complete good review of fall event and risk factors with team
- Develop action plan and anticipate potential problems/issues
- Organizations should monitor fall rates as well as other outcomes including ADL scores, continence rates, pain and re-hospitalizations

Environmental interventions

- *Successful interventions likely combine hazard removal with introduction of facilitators to improve the match between the patient and the environment.*

Environmental interventions

Home:

- **Barriers:** e.g. hazards, stairs if unable to manage, extreme temperatures, cluttered passages
- **Facilitators:** e.g. wider doorways, open spaces in rooms to allow turning radius of wheelchair, walker and other mobility aids; grab bars for safety.

Environment and assistive devices

- Must be fitted and used appropriately
- Consider both mobility devices and task assistive devices
- Electronic monitoring

Acute Care Hospitals

- Delirium management acts as Falls prevention
- Anticipation and prevention are key
- Promote safe mobility
- Team approach

Routine practice for safety

- Hourly rounding good example of routine intervention associated with reduced falls
- Hourly rounding for all patients: ask about call bell, pain, toilet use and be back in one hour.

Implications for Practice

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Implications for Practice

- Falls can be prevented but require multi-factor intervention
- Improving risk factors eg balance, medications can lower risk of falls
- Screening for early signs of decline is important

Implications for Practice

- Exercise provides greatest benefit against future falls and decline in function

- Health professionals have shared responsibility for fall and disability prevention in hospital, rehabilitation, long term care, community care, out-patient services

Thank you!

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