Falls Management

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Objectives

1. Describe the challenge of falls in long term care
2. Identify fall risk factors in older adults
3. Identify components of fall risk screening and assessment
4. Describe strategies to reduce fall risk
5. Identify components of equipment and environment safety
Trend in Older Adult Population

In the United States, there are 34.9 million people 65 years and older (13% of the total population)

By 2030, there will be 71 million older adults (20% of the total population)

The number of older adults is increasing dramatically in the US and around the world.

Those 85 years and older are the fastest growing age group.
Projected Increases in Global Population by Age

Older Adults Have a High Fall Risk

- Over 1/3 of older adults fall each year in U.S.
- 20-30% have moderate to severe injuries
- Most common cause of nonfatal injuries and hospital admissions for trauma
- 72% of fall related deaths occur in 13% of older adult population
Serious Consequences

- Serious injury such as hip fracture and traumatic brain injury (TBI)
- Increased risk of death
- Loss of independence
- Decreased ability to function
- Increased need for care
Loss of self confidence and fear

Even without injury, falls lead to fear of falling with self imposed restriction of activity and reduced social interaction. decreased quality of life
Hip Fracture

- Most common type of fracture
- Risk factors include advanced age, muscle weakness, functional limitations, environmental hazards, use of psychoactive medications and history of falls
- While women sustain 80% of all hip fractures, among both sexes, rates increase exponentially with age
- 20% of hip fracture patients die within a year of injury
- 50% of those who sustain a hip fracture never regain level of function experienced before the fall
Traumatic Brain Injury (TBI)

- Falls are most common cause of traumatic brain injuries
- In 2000, TBI accounted for 46% of fatal falls among older adults
Consequences for Facility

- Increased paperwork for staff
- Increased level of acuity
- Poor survey results
- Family dissatisfaction
- Lawsuits
- Increased insurance premiums
- Increased staff stress
Healthcare Costs

- Direct medical costs in 2000 were $19 billion for nonfatal fall injuries

- By 2020, the annual direct and indirect costs of fall injuries is expected to reach $43.8 billion
Falls in persons 65 years or older are a big public health problem in the United States and around the world.
Older Adults in Nursing Homes

- Over 50% fall each year
- Of those who fall, 30-40% will fall again
Nursing Home Residents

- Are older
  Average age at admission is 82.6 years
- Have more chronic disease
  Over 50% have 3 or more admitting diagnoses
- Are more frail
  48% receive full-time skilled nursing care under a physician’s supervision
  98% require help with bathing and 45% with eating
Fall Risk Factors

- **Intrinsic** – those factors or conditions that occur within the person
  - Underlying medical illness or chronic disease
  - Physical status and age related changes
  - Use of high risk medications

- **Extrinsic** – those factors or conditions that occur in the person’s environment, with equipment, or in a situational context
Precipitating Risk Factors

- Infections
- Delirium
- Drug toxicity
- Seizure
- Syncope
- Orthostatic hypotension
Intrinsic Risk Factors

- History of falls
- Lower extremity weakness
- Gait or balance deficit
- Use of assistive device
- Vision deficit
- Arthritis
- ADL deficit
- Depression
- Cognitive impairment
- > 80 years
Chronic Diseases

- Diabetes
- Cardiovascular disease
- Osteoporosis
- Foot problems
- Parkinson’s disease
- Alzheimer’s disease
- Other dementias
- Depression
Effects of Aging

- Vision loss
- Reduced muscle strength
- Impaired gait
- Urinary changes
Visual Changes

- Decreased acuity
- Decreased contrast sensitivity
- Decreased peripheral vision
- Decreased night vision
- Increased sensitivity to glare

*Older adults need 2-3 times the amount of light to see than younger persons.*
Gait

- Reduced arm swing
- Decreased step length
- Decreased step height
- Slowed reaction time
- Slower movements
- Reduced muscle strength
Urinary Changes

Higher risk of…

- Urgency
- Frequency
- Incontinence
High Risk Medications

- Psychotropic agents
  - Benzodiazepines
  - Sedatives and hypnotics
  - Antidepressants
  - Neuroleptics (antipsychotics)

- Anti-arrhythmics
- Digoxin
- Diuretics
Psychotropics

Residents taking antipsychotics, antidepressants or benzodiazepines are 2-3 times more likely to fall because of side effects such as:

- Drowsiness, over sedation
- Agitation, confusion, pacing
- Unsteadiness,
- Gait disturbances
- Dizziness, orthostatic hypotension
External Risk Factors

- Clutter
- Lighting
- Flooring
- Handrails
- Unstable furniture
- Hard to reach personal items
- Unsafe footwear
- New admissions
Equipment

- Missing wheelchair parts
- Incorrect wheelchair fit
- Inadequate wheelchair seating
- Broken wheelchair parts
Barriers to Fall Risk Reduction

- Staff turnover
- Staff resistance to change
- Myths, e.g., falls are inevitable, there’s nothing you can do!
- Patient load
- Time management
- Lack of knowledge and critical thinking skills
- No leadership
- Low administrative support
- Absence of physician support
Barriers to Falls Management

- Independent facilities without resources
- Lack of seating expertise
- Family resistance
- Negative culture
- Absence of teamwork
- Fear of litigation
Research Evidence

- Fall reduction programs are effective when they are **multifactorial** in design and target **individual** risk factors.

- Physical restraints do not reduce falls and are associated with soft tissue damage, injuries, fractures, delirium, and death.

*It is impossible to prevent all falls in frail, older nursing home residents ... but it is possible to reduce their risk of falling.*
Guidelines


- Quality Indicators for Assessing Care of Vulnerable Adults (ACOVE). *Quality Indicators for the Management and Prevention of Falls and Mobility Problems in Vulnerable Elders*. http://www.annals.org/cgi/content/full/137/6/546


Systems Approach to Falls

1. Organized, comprehensive approach
2. Culture of patient safety
3. High risk screening
4. Comprehensive fall risk assessment
5. Post fall assessment
6. Targeted interventions with continual monitoring and evaluation
1. Organized, comprehensive approach

- Commitment & leadership
- Interdisciplinary teamwork
- Comprehensive documentation
- Data collection, analysis and feedback
- Staff education and safety awareness
- Family and resident involvement
Commitment & Leadership

- Medical director, primary care providers
  - Leadership and support
  - Information about initiative
  - Timely and clear communication from staff
  - Response to nursing risk assessment
- DON – leader, clinical champion
- Administrator – support and funding
Proactive Administrative Support

- Upfront purchase of equipment
- Upgrade of wheelchair fleet
- Staff time for meetings
- Staff time for supervision
- Staff time for individualized care
- Staff time for education
- Standardized tools
Interdisciplinary Teamwork

- OT/PT
- Frontline staff
- Activity staff
- Social work
- Restorative staff
- Engineer/maintenance staff
Interdisciplinary Teamwork

- Regular meetings
- Leadership
- QI principles
- Critical thinking skills and creativity
- Knowledge of evidence-based practice
Comprehensive Documentation

**Evidence of…**

- Systematic process of evaluation and care planning to reduce fall risk
- Interdisciplinary team addressed risk factors and care plan reflected measures to minimize risk
- Ongoing monitoring and evaluation with changes in care plan based on resident response
Comprehensive Documentation

Evidence of…

- History of falls
- After fall, increased monitoring for 72 hours in nurses notes
- Reference to fall in physician notes and in progress notes
Defining and Analyzing Falls Data

- Fall definition clear to all staff
- Comprehensive investigative and documentation tool
- Easy data entry and analysis
- Trending over time
Fall Definition

A fall is an unintentional change in position coming to rest on the ground or onto the next lower surface (e.g. onto a bed, chair or bedside mat).

The fall may be witnessed, reported by the resident or an observer or identified when a resident is found on the floor.

A fall may or may not result in injury.
Data Collection and Analysis

- Generate monthly reports on:
  - # of falls
  - # of fallers
  - # of serious injuries, fractures
  - # of recurrent fallers
  - By unit, shift, day, location, cause, activity, etc.
Give Staff Feedback

- Monthly, quarterly, annually and trended over time
- Benchmarked with others

*To answer:*
- Where are we now?
- Where do we stand compared to other units, facilities, regions and the nation?
- What is the goal?
- By when?
- Are we sustaining our improvement?
Staff Education and Awareness

- Culture of safety
- General safety precautions
- Risk reduction interventions
- Post fall response
Resident and Family

- Involvement
- Education
- Participation in care

Open forum discussion, 1:1, family councils, care planning meetings, on admission
http://www.qualitynet.org/dcs/ContentServer?c=MQTools&pagename=

http://www.healthinsight.org/releases/assets/pdf/nhWebex/SHRestraints

2. Culture of patient safety

- Open system of reporting
- Staff empowerment
- Comprehensive investigation of falls
- Data based decisions
- Environment and equipment safety
- Staff awareness and immediate response to hazards
Four Pillars of Patient Safety Culture

- Reporting culture
- Just culture
- Learning culture
- Flexible culture

Staff Empowerment

Focus on the system, not the individual

Use Root Cause Analysis

- Environmental factors
- Organizational factors
- Caregiver factors
- Patient factors

*Train staff to analyze and make decisions*
Paradigm Shift

- Blame free environment
- Full investigation of incident
- Comprehensive analysis
- Regular evaluation of environment
- Communication across disciplines
- Adequate documentation
- Data based decisions
Environment & Equipment Safety

- Regular inspection of all rooms and bathrooms
- Regular inspection of all canes, walkers and wheelchairs
- CNA involvement
- Engineer involvement for timely repairs and modifications
- Documentation
Safety Awareness

- Person centered environment
- Noise, activity, stimulation level
- Lighting
- Flooring
- Furniture
- Bathroom safety
3. High Risk Screening

☐ To identify fall risk in advance → primary prevention

☐ When – MDS, on admission, change in condition

☐ Wide selection of tools:
  - Hendrich Fall Risk Model
  - Morse Fall Scale
  - Berg Balance Test
  - Timed Get Up & Go
  - STRATIFY
4. Comprehensive Fall Assessment

- High risk medications
- Orthostatic hypotension
- Vision
- Mobility
- Unsafe behaviors
5. Post Fall Assessment

- Comprehensive analysis
- Variety of methods
  - Post fall huddle
  - Formal team meeting
  - Fall response team

*Remember, past fall predicts future risk*
# Post Fall Investigation

<table>
<thead>
<tr>
<th>Date, time, day of week, location</th>
<th>Staff response</th>
</tr>
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<tbody>
<tr>
<td>Treatment, injury</td>
<td>Footwear</td>
</tr>
<tr>
<td>Notifications</td>
<td>Aid</td>
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<tr>
<td>Type</td>
<td>Restraint</td>
</tr>
<tr>
<td>Cause</td>
<td>Side rails</td>
</tr>
<tr>
<td>Activity</td>
<td>Mental status</td>
</tr>
<tr>
<td></td>
<td>BS, HR, BP, temp</td>
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</table>
Structured Post Fall Response

- Conduct immediate evaluation & 72 hour monitoring
- Complete comprehensive evaluation
- Record circumstances
- Alert primary care providers
- Implement immediate intervention
- Complete falls assessment
- Develop plan of care
- Monitor implementation and resident response
Immediate Post Fall Assessment

- Hip fracture – leg shortening, external rotation of leg
- Pelvic fracture or injury – pain in groin, hip, or lower back
- Wrist fracture - dislocation
- Subdural hematoma- changes in neurologic status
Immediate Post Fall Assessment

- Observation and verbalization of pain
- Swelling, bruises, lacerations, skin tears
- Unstable vital signs
- Temperature
- Changes in mental status
- Decreased ROM
- Evidence of head or neck injury
- Abnormal neurological responses
- Uncontrollable bleeding
- Incontinence
6. Targeted interventions

- Multifaceted, interdisciplinary team approach
- Individualized care strategies based on comprehensive patient assessment
- Continual monitoring and follow-up
Multifaceted means…

- Cognition
- Medications
- Unsafe behaviors
- Underlying conditions
- Age related changes
- Functional status
- Resident choice and independence
Address Underlying Conditions

Acute and chronic

- Gait problems, lower extremity weakness
- Delirium, dementia, depression
- Cardiovascular status
- Infections
- Hyperglycemia/hypoglycemia
- Elimination
- Sleep
- Nutritional status
- Pain
Interdisciplinary means…

- CNA, CNA, CNA
- Nurses
- Primary care provider
- OT/PT
- Social work
- Restorative staff
- Activities staff
- Engineer/maintenance staff
Individualized means...

- Knowing the person
- Viewing the world through their eyes
- Careful assessment of person and environment

“To individualize care requires learning about the individual’s life history, assessing the individual’s current strengths and needs, developing plans with resident and/or family input, and designing care around the resident’s wishes and needs—not facility, staff, or family needs. “

Complex, changing needs of frail residents with multiple chronic conditions and meds require:

- Systematic approach
- Multifaceted assessment
- Interdisciplinary teamwork
- Critical thinking skills
- Creative responses
- Continual reassessment
- Expert help
- Equipment and resources
Safety When Using the Toilet

- Clear, easy path to bathroom
- Height of toilet seat
- Grab bars for support
- Lighting
- Non-skid shoes, socks, slippers
- Non-skid flooring
- Toileting schedules, assistance
- Medications
- Toileting rounds (4 P’s)
- Prompted voiding
Safety When Exiting the Bed

- Lowered bed height
- Lighting (day and night)
- Skid-proof floor, non-skid socks, well fitting shoes and slippers with non-slip soles
- Short rail, grab bar
- Clear pathways
- Mats
Safety When Promoting Function

- Maximum functional level
- Balance
- Gait and transfer training
- Muscle strengthening
- Protective gear like hip protectors, helmets and wrist protectors

Remember to identify the risk, take steps to reduce it, involve the resident and family and document your process carefully.
Safety When Using a Wheelchair

Individualized wheelchair seating

- Pressure relieving seat cushion
- Specialized seat cushions
- Lateral supports or cushions
- Leg panel
- Head extension
- Tilting back
- Drop seats

Wheelchair Seating Positions

- Correct position with two 90° angles
- Sliding down
- Leaning over
- Leaning to one side
Wheelchair Seating

Lateral Support

Figure 4.11  Leaning of the trunk

Figure 4.12  Trunk supported

Propelling with Feet

Propelling with Arms

Figure 4.7 Problem: Inefficient propulsion

Figure 4.8 Solution: Modifications to enhance propulsion

Kyphosis

Safety for Residents with Dementia

- Maintain calm, personalized environment
- Use communication skills
- Apply basic dementia care concepts
- Assess behaviors and implement individualized strategies
Unskilled Caregiving

Increases behavioral symptoms and unsafe behaviors

- Increases falls and injuries
- Decreases quality of life
- Increases staff workload
Meaningful Activity

The facility must provide for an ongoing program of activities designed to meet, in accordance with the comprehensive assessment, the interests and the physical, mental, and psychosocial well-being of each resident.

483.15 (f)(1) CMS, 2006
Meaningful Activities for Persons with Dementia

- Activity interests and preferences
- Cognitive level
- Physical functional abilities
- Psychiatric symptoms
- Communication abilities
- Behavioral and psychological symptoms
- Daily patterns and rhythms

N.E.S.T. Approach

Needs, Environment, Stimulation, Technique
80 therapeutic protocols in 10 categories
- Feelings
- Nurturing
- Relaxation
- Adventure
- Physical exercise
- Cognitive
- Life roles
- Psychological clubs
- Simple pleasures

Simple Pleasures

- Wanderer’s cart
- Table ball game
- Looking inside purses and fishing boxes
- Wave machine
- Polar fleece hot water bottle
- Hand muff
- Sensory vest
- Stuffed fish and butterflies
- Home decorator books
- Sewing cards
- Stress balls
- Picture dominoes
- Tether ball game
- Sensory stimulation box
- Message magnets
Safety When Using Equipment

- Range of chairs
- Seating and mobility devices
- Adaptable wheelchairs
- Hi-low beds
- Floor mats
- Transfer poles, ¼ side rail
Equipment (cont.)

- Protective devices (e.g., Helmets, wrist protectors, hip protectors)
- Signage
- Monitoring devices
- Range of activity supplies
When Considering Devices

Alarm use

- No clear evidence of fall prevention
- Disadvantages
- As substitute call light
- Temporary
- New admissions
Person Centered Care

Knowledge of resident
- Culture, language, spirituality
- Social context
- Mental and physical status

Knowledge of EBP
- Clinical pathways for acute and chronic disease management
- Prevention of geriatric syndromes

Response to Individual Needs
- Treatment of acute conditions
- Symptom management of chronic disease and age related changes
- Promotion of highest level of physical function and personal autonomy

Resident Safety with Identified Risk
THANK YOU