

2012 Focus Conference:
The Art and Science of Fall
Prevention

**Get Up and Go:
Strength and Balance**

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The Burden of Falls in Wisconsin

* Key Findings Related to Falls

* Place of Injury for Falls-related death in persons 65+, Wisconsin, 2008

- | | | | |
|--|-------|--------------------------|------|
| - Home | 55.2% | - Street or highway | 2.1% |
| - Residential institution | 25.6% | - Trade and Service Area | 3.1% |
| - School, Institution or other public area | 3.4% | | |
| - Other | 10.6% | | |

* Place of Death for Falls-related death in persons 65+, Wisconsin, 2008

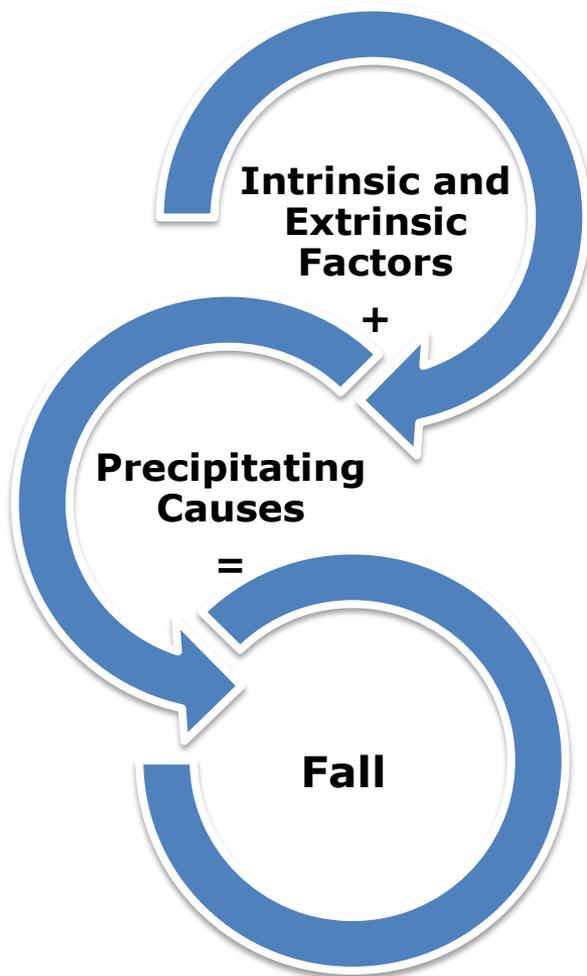
- | | | | |
|--------------------------|-------|----------------|-------|
| - Hospital | 50.3% | - Nursing Home | 25.0% |
| - CBRF | 2.5% | - Home | 5.8% |
| - Facility-based hospice | 15.0% | - Other | 1.9% |

The Burden of Falls in Wisconsin

Discharge status of fall-related inpatient hospitalizations for persons 65+, 2008:

- All discharges: 18,432
- Transferred to a nursing home 58.0%
- Home 22.6%
- Home with home health service 6.9%
- Transferred to rehab or outpatient services 4.4%
- Expired 3.2%
- Transferred to another hospital 2.5%
- Discharged to hospice 2.1%
- Left against medical advice 0.2%

Multifactorial and Interacting Causes of Falls



Intrinsic Risk Factors

Extrinsic Risk Factors

Precipitating Causes

Fall

Causes and Risk Factors for Falls

Risk factor:

“A characteristic that is found significantly more often in individuals who subsequently experience an adverse event than in individuals who do not experience the event.”

Geriatric Research Education and Clinical Center, VA Sepulveda Ambulatory Care Center and Nursing Home, North Hills, CA., 2006

Top Causes of Falls in Older Persons:

- Accident and environment related
- Gait and balance disorders or weakness
- Dizziness and vertigo
- Drop attack
- Confusion
- Postural hypotension
- Visual disorder
- Syncope
- Other specified causes
- Unknown Impairment

Top Risk Factors for Falls:

- Lower Extremity weakness
- History of Falls
- Gait deficit
- Balance deficit
- Use assistive device
- Visual deficit
- Arthritis
- Impaired ADL
- Depression
- Cognitive Impairment
- Age 80 or older

Case Study to Determine How A Fall is Reported:

**Understanding that falls are
multifactorial, how would you report
this fall? – From Stepping On:**

Mrs. Matthews' Fall in the Kitchen

Assessing for Falls Risk Factors

“Most patient falls are predictable, and simple patient risk assessment tools can predict over 70%.”

Source: Oliver D, Hopper A, Seed P. J Am Geriatr Soc. 2000 Dec; 48(12):1679-89.

Fall Risk Assessment tools generally include these factors:

- Cognitive impairment, agitation, confusion
- Age
- Incontinence/urinary frequency
- Sensory deficits
- Acute/chronic illness
- Previous history of falls
- Non-healing foot sores
- Mobility impairment, gait instability and balance problems
- Medication usage, sedatives and hypnotic drugs
- General health status
- Depression

Assessing for Falls Risk Factors

Falls Risk Assessment for Older Adults: The Hendrich II Fall Risk Model

- Recommended for use by the Agency for Healthcare Research and Quality (AHRQ)
- Intended to be used in an acute care setting to determine risk for falling based on gender and emotional status, symptoms of dizziness, and known categories of medications increasing risk.

Confusion Disorientation Impulsivity		4	
Symptomatic Depression		2	
Altered Elimination		1	
Dizziness Vertigo		1	
Male Gender		1	
Any Administered Antiepileptics		2	
Any Administered Benzodiazepines		1	
Get Up & Go Test			
Able to rise in a single movement – No loss of balance with steps		0	
Pushes up, successful in one attempt		1	
Multiple attempts, but successful		3	
Unable to rise without assistance during test (OR if a medical order states the same and/or complete bed rest is ordered) * If unable to assess, document this on the patient chart with the date and time		4	
A Score of 5 or Greater = High Risk		Total Score	
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Assessing for Falls Risk Factors

Get Up and Go Test – Subjective results

Predictive Results:

- 1 = Normal – no evidence of being at risk of falling during test
- 2 = Very slightly abnormal
- 3 = Mildly abnormal
- 4 = Moderately abnormal
- 5 = Severely abnormal – evidence of being at risk of falling during test



Indicators of possible falling:
Undue slowness, hesitancy, abnormal movements of the trunk or upper limbs, staggering, stumbling

Assessing for Falls Risk Factors

Timed Up and Go Test – Objective results

Predictive Results:

Seconds	Rating
< 10	Freely Mobile
< 20	Mostly Independent
20-29	Variable mobility
> 20	Impaired mobility



Balance problems can be distinguished by the amount of time it takes to complete the task

Timed Up and Go Test

Measures mobility in people who are able to walk on their own (assistive device permitted)

Instructions:

The person may wear their usual footwear and can use any assistive device they normally use.

1. Have the person sit in the chair with their back to the chair and their arms resting on the arm rests.
2. Ask the person to stand up from a standard chair and walk a distance of 10 feet (3 meters).
3. Have the person turn around, walk back to the chair and sit down again.

Timing begins when the person starts to rise from the chair and ends when he or she returns to the chair and sits down.

The person should be given 1 practice trial and then 3 actual trials, with the times from these three averaged.

Assessing for Falls Risk Factors

Berg Balance Scale – Assesses performance of functional tasks to determine balance

Predictive Results:

- 41-56 = low fall risk
- 21-40 = medium fall risk
- 0-20 = high fall risk

Berg Balance Scale

<u>Item Description</u>	<u>Score (0-4)</u>
➤ Sitting to Standing	_____
➤ Standing Unsupported	_____
➤ Sitting Unsupported	_____
➤ Standing to Sitting	_____
➤ Transfers	_____
➤ Standing with eyes closed	_____
➤ Standing with feet together	_____
➤ Reaching forward with outstretched arms	_____
➤ Retrieving object from floor	_____
➤ Turning to look behind	_____
➤ Turning 360 degrees	_____
➤ Placing alternate foot on stool	_____
➤ Standing with one foot in front	_____
➤ Standing on one foot	_____
Total	_____

Berg Balance Scale

Samples of how to score:

- Standing unsupported:

Instructions: "Please stand for two minutes without holding on."

- 4 able to stand safely for 2 minutes
- 3 able to stand 2 minutes with supervision
- 2 able to stand 30 seconds unsupported
- 1 needs several tries to stand 30 seconds unsupported
- 0 unable to stand 30 seconds unsupported

- Standing to sitting:

Instructions: "Please sit down."

- 4 sits safely with minimal use of hands
- 3 controls descent by using hands
- 2 uses back of legs against chair to control descent
- 1 sits independently but has controlled descent
- 0 needs assist to sit

Assessing for Falls Risk Factors

Falls Behavioral (FaB) Scale for the Older Person –
Self Assessment of awareness and practice of fall prevention behaviors

Predictive Results in answering questions:

Never = 1

Sometimes = 2

Often = 3

Always = 4



Applications:

- can be used as a pre and post for a falls intervention to indicate the extent the participants are using or not using safety strategies
- Used as a goal setting tool
- Used as a prompt for discussion of falls prevention and an aid for reflective learning

After a Fall - Gather Falls History with SPLATT:

Symptoms experienced at time of fall(s)

Previous number of falls or near-falls

Location of fall(s)

Activity engaged in at time of fall(s)

Time (hour of day) of fall(s)

Trauma (physical, psychological) associated with fall(s)

The primary aims of the history are to:

- Isolate the specific cause(s) for the falling event and **uncover “modifiable” risk factors (those that can be changed)**.
- Determine current and new risk factors which may predispose the elderly individual for a recurrent injury.

References:

Stone, Amy. Falls in the elderly...“S.P.L.A.T.T.” New Mexico Geriatric Education Center. 2000. Albuquerque, N.M.

Tideiksaar, Rein. Falls in older persons: prevention and management. 2002. (3rd ed.) Health Professions Press, Inc. Baltimore, MD. www.healthpropress.com

Falls Self-Assessment Tool From Metastar

Includes assessment of:

- Organizational Commitment and Teamwork
- Data Collection and Analysis
- Staff Training and Information for Primary Care Providers, Families and Residents
- Environment and Equipment Safety



Metastar.com

Modifiable Risk Factors

Common Problems

Generic Interventions

Evaluation Or Screens

Inactivity

↓ activity tolerance
↓ balance
↓ gait quality r/t occupation
hypotension

Exercise
• Stretch
• Strength
• Aerobics
• Balance
Physical Activity

- Timed GUPG
- Functional Independence Measure (FIM)
- Daily Routine

Fear of Falling

↓ confidence
↓ activity participation

↑confidence related to activity participation

SPLATT
SAFE program

Environmental Hazards

↓ safety in home & community

↓hazards

Home Hazards Checklist

Vision Deficits

↓ visual acuity related to occupation

↑remaining functional vision

Vision Screen

Medication effects

↓ arousal, alertness, balance

↑ optimal performance with minimal medication

Medication Review

Exercise for Strength and Balance: How do you decide which program is best for you?



- What are you trying to accomplish?
- What is the capacity to deliver program?
- Does **the client's physical** and cognitive level allow them to participate?
- Can you deliver and sustain the program?
- Group or individual approach?

Exercises for Strength and Balance

Strength, flexibility, balance and reaction time are considered the most readily modifiable risk factors for falls. (Otago) However, exercise alone will not decrease falls.

Balance and lower body strength exercises are aimed at improving the ability to control and maintain the body's position while standing still and moving.

Sample Exercise Programs:

- Stepping On
- Otago
- Tai Chi
- Matter of Balance
- Healthy Moves for Aging Well
- Enhance Fitness

Practicing the Exercises (From Stepping On program)

- Lower extremity strength exercises
- Lower extremity balance exercises

Brainstorm: How you can use these exercises in your setting with your consumers?

Interventions in Residential Care and Nursing Homes

Multifactorial Interventions Often Include Prevention Strategies:

- Exercises for balance and strength, gait training and teaching the use of assistive devices if needed
- Medication review and modification, especially psychotropic meds
- Treatment of postural hypotension and cardiovascular disorders
- Continence management
- Provision of hip protectors
- Facility-level modification of environmental hazards
- Falls risk alert icon to identify high-risk residents
- Fall prevention education for staff
- Fall prevention education sessions for cognitively intact persons

Resource:

<http://www.ahrq.gov/qual/ptsafety/ltc/>



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You Are Here: [AHRQ Home](#) > [Quality & Patient Safety](#) > [Improving Patient Safety in Long-Term Care Facilities: Training Modules](#)

Improving Patient Safety in Long-Term Care Facilities Training Modules

Detecting and promptly reporting changes in a nursing home resident's condition are critical for ensuring the resident's well-being and safety. Such changes may represent a patient safety problem, and they can be a signal that the resident is at increased risk for falling and other complications.

Training nursing home staff—particularly nursing staff—to be on the lookout for changes in a nursing home resident's condition and to effectively communicate those changes is one tool nursing home administrators can employ to improve patient safety, create a more resident-centered environment, and reduce the number of falls and fall-related injuries.

Course Content

These new educational materials are intended for use in training front-line personnel in nursing homes and other long-term care facilities. The materials were developed for the Agency for Healthcare Research and Quality (AHRQ) under a contract to the RAND Corporation. They are organized into three modules:

- [Module 1: Detecting Change in a Resident's Condition.](#)
- [Module 2: Communicating Change in a Resident's Condition.](#)
- [Module 3: Falls Prevention and Management.](#)

The [Instructor Guide](#) comprises all three modules, including suggested slides and pre- and post-tests to gauge the student's knowledge level before and after training. Separate student workbooks are available for each module.



Resource from US Dept. of Veterans Affairs:

<http://www.patientsafety.gov/SafetyTopics/fallstoolkit/>

Includes:

- Who should be included on the interdisciplinary fall prevention team
- Responsibilities of each team member
- What to look for in falls risk assessments
- Compared different fall risk assessment scales
- Intervention strategies
- What to do after a consumer falls
- How to measure the success of your program/intervention
- Resource list



National Center for Patient Safety 2004 Falls Toolkit



Falls Toolkit Menu

>> [Home](#)

>> [Falls Notebook](#)

>> [Media Tools](#)

>> [Resources](#)

>> [Contact Us](#)



Falls are one of the most common adverse events in hospitals.

Many facilities are working to find ways to reduce the number of falls as well as the severity of the falls that do occur. In an effort to help facilities, we created the Falls Toolkit.

The Falls Toolkit provides information on:

- Designing a falls prevention and management program
- Effective interventions for high-risk fall patients
- Implementing hip protectors for high-risk fall patients
- Educating patients, families and staff on falls and fall-injury prevention

The web edition of the Falls Toolkit includes:

Falls Notebook	Media Tools	Resources	Contact Us
The complete Falls Notebook in PDF and MS Word format for easy viewing and downloading.	Posters, fliers, and button designs to promote fall-injury prevention.	Educational materials and links to helpful web sites.	Support for your questions and feedback concerning the toolkit.



Brainstorm of Interventions

- What are some possible interventions you can implement in your setting to reduce falls that are currently not being used?
- What is one thing you need to do today to get at least one of the interventions started?
- What is one barrier to implementing that intervention?
- How can you overcome that barrier?

Questions?

Thank You.

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