Fall Prevention
A Clinical Approach for Preventing Falls
Fall Prevention Program

History of Falls in Long Term Care:

According to the CDC:
About 1,800 older adults living in nursing homes die each year from fall-related injuries and those who survive frequently sustain injuries that result in permanent disability and reduced quality of life. About 10% - 20% of nursing home falls cause serious injuries. Falls result in disability, functional decline and reduced quality of life. Fear of falling can cause further loss of function, depression, feelings of helplessness, and social isolation.

Falls Defined:
Coming to rest on the ground, floor or other lower level unintentionally.
Current CMS guidelines regarding falls state that a fall is defined as anytime a resident is found on the floor whether the event was witnessed/un-witnessed.
- An episode where a resident lost balance and would have fallen were it not for staff intervention is a fall. In other words, an interrupted fall is still a fall

What are the most common causes of falls in nursing homes (not limited too)?
- Muscle Weakness
- Walking or Gait problems
- Environmental Hazards
- Medication
- Syncope
- Acute Illness
- Dizziness and/or Vertigo
- Orthostatic Hypotension
- Low Vision
- Decreased Cognition
- Fear of Falling
- Lack of Physical Activities
- Impaired Balance
- Urinary frequency and incontinence
- Delirium/depression

Assessments must be an ongoing process that includes multiple types of assessment and evaluation following a fall or intervention to prevent a fall.
Consequences of Falls (not limited too):
- Diminished quality of life
- Serious physical injury or death
- Feelings of incompetence
- Depression
- Altered Gait
- Increased Anxiety during ADLs
- Fear of falling again
- Increased Dependence on caregivers

Objectives and Goal of a Fall Prevention Program
To identify residents at high risk for falling, including but not limited to, those with poor vision, gait disturbances, weakness, cardiovascular disease, incontinence, and a history of falls.

Physical Therapy, Occupational Therapy and Speech Therapy Evaluations (not limited too):
- ADL
- Bed Mobility
- Behavioral Disturbance
- BP in supine, sitting and standing
- Continence
- Gait analysis to include a balance/gait test
- Muscle strength
- Pain using a pain scale if applicable
- Positioning in bed and out of bed
- Posture
- ROM/Contractures
- Safety and Activity tolerance
- Sensation, time, coordination and edema
- Static and dynamic sitting/standing balance
- Visual acuity/visual perception/visual spatial

Communication:
- Ability to verbally or non-verbally request assistance
- Ability to understand and use call light system
- Hearing acuity/hearing discrimination
- Multiple declines and changes in cognitive-communicative skills
- Staff approach (verbal, visual, tactile, auditory)
Cognition:
- Attention, filtering out competing stimuli
- Memory of safety strategies, precautions and mobility equipment, i.e., walkers, wheelchairs
- Orientation to time, place, self
- Organization of items/visual processing
- Sequencing of events/tasks to complete daily activities

Fall Prevention Intervention for Physical, Occupation and Speech Therapy (not limited too):
- Adaptive equipment, i.e., reacher
- Augmentation communication books
- Balance training
- Bed/wheelchair positioning
- Bedside commode/raised toilet seat
- Cognitive toolkits with individualized activities
- Cognitive training for precautions, sequencing, individualized attention and memory strategies, targeting preserved abilities
- Communication interaction programs/activities
- Dycem under cushion in chair
- Environmental modifications:
  - Dark toilet seat installed for contrast
  - Door knob/drawer handles are wrapped in color contrasting coban
  - Doors are painted a contrasting color
  - Grab bars are installed in appropriate locations(s)
  - Lighting is adequate
  - Pathways are clear and clutter free
  - Pictures of toilet is posted on bathroom door
- Establish a daily schedule
- Front/back anti-tippers on wheelchair
- Gait training with or without an assistive device
- Memory journal
- Non-skid strips
- Orthotic device(s), prosthesis
- Pain management
- Proper footwear
- Provide education to patient/family/caregiver
- Provide scheduled rest periods
- Referral to activities
- Restorative program
- Scheduled toileting program
- Therapeutic exercises
- Weighted chair to prevent tipping
- Wheelchair anti-roll back device
- Wheelchair foot rest, brake extension
Fall Scenarios:
Below are examples are non-traditional fall scenarios that you may see in skilled nursing facilities and are not all inclusive:

Example 1: Pt. found on floor by bed. Pt. attempted to get up from bed alone and their blood pressure dropped and resulted in a fall.

Potential Clinical Pathways:
1. Orthostatic Hypotension: Properly assess if blood pressure is affecting function mobility. ***See Hypotension Protocol in Appendix
2. Startle Reflex: Properly assess placement of mirrors, reflective surfaces, matting on ground, rugs, and other environmental barriers. Environmental modifications would need to be made if any of the above are the root cause.
3. Incontinence: Properly assess continence, even if patient is incontinent is the patient on a schedule for toileting. Refer to Bowel and Bladder Program.

Example 2: Pt fell due to liquids on floor:
Potential Clinical Pathways:
2. Balance: Properly assess using the Berg Balance Test or other Standardized Test, which can be found in the appendix of this program.
3. Low Vision: Properly assess if it is cognitive tunnel vision (See Allen Cognitive Screen) or other vision impairment. Review basic low vision techniques to identify potential barriers. To include, but not limited to: proper eyewear, correct eyewear, clean eyewear etc… Follow up with Physician regarding findings.

Example 3: Pt presents as independent however falls at random times:
Potential Clinical Pathways:
1. Aggressive Behaviors: Properly assess cognitive function (Allen Cognitive Screen), review environmental stimuli, sensory diet, and nursing discussion on medication review. Goals may be atypical and may be focused on quality of life and decrease resistance of care versus improvement in function. ***See Strategies for treating patients with behaviors in Appendix.
2. Fatigue: What time of day are the falls occurring?
3. Balance: Properly assess balance using the Berg Balance Test or other Standardized test, which can be found in the appendix. Are there color changes on the floor affecting balance? Proper footwear?

Example 4: Fall/lowered to the ground with staff member:
Potential Clinical Pathways:
1. Transfer Ability/Safety: Assess patient’s ability to transfer. Is there a staff education opportunity. Make proper recommendations on what type of transfer is most appropriate and educate staff on proper technique/approaches. ** See Allen Cognitive Level.
2. Environment and Equipment: Was a gait belt used? Where the brakes locked on wheelchair? Was there a slippery surface? Properly Assess all environmental and equipment functions.
The following assessments can be used to determine Fall Risk:

1. BERG Balance Scale (BBS)
2. Upper Extremity Reach Test
3. Timed Up and Go (TUG)
4. Tinetti
5. Pain Scale

***The below test should be done in conjunction with a full PT, OT and/or ST evaluation. Each test is to be documented under the standardized portion of optima and will eventually be scanned into optima as well. Test that are completed at eval, must be completed at minimum during every recertification visit in order to show progress using a standardized test.
**BERG BALANCE SCALE (BBS)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
<th>Location</th>
<th>Rater</th>
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**ITEM** | **DESCRIPTION** | **SCORE (0-4)**
--- | --- | ---
1. | Sitting to standing | 
2. | Standing unsupported | 
3. | Sitting unsupported | 
4. | Standing to sitting | 
5. | Transfers | 
6. | Standing with eyes closed | 
7. | Standing with feet together | 
8. | Reaching forward with outstretched arm | 
9. | Retrieving object from floor | 
10. | Turning to look behind | 
11. | Turning 360 degrees | 
12. | Placing alternate foot on stool | 
13. | Standing with one foot in front | 
14. | Standing on one foot | 

**TOTAL** | 
--- | ---

**GENERAL INSTRUCTIONS**

Please demonstrate each task and/or give instructions as written. When scoring, please record the lowest response category that applies for each item.

In most items, the subject is asked to maintain a given position for specific time. Progressively more points are deducted if the time or distance requirements are not met, if the subject's performance warrants supervision, or if the subject touches an external support or receives assistance from the examiner. Subjects should understand that they must maintain their balance while attempting the tasks. The choices of which leg to stand on or how far to reach are left to the subject. Poor judgment will adversely influence the performance and the scoring.

Equipment required for testing are a stopwatch or watch with a second hand, and a ruler or other indicator of 2, 5 and 10 inches (5, 12.5 and 25 cm). Chairs used during testing should be of reasonable height. Either a step or a stool (of average step height) may be used for item #12.
1. SITTING TO STANDING
INSTRUCTIONS: Please stand up. Try not to use your hands for support.

( ) 4 able to stand without using hands and stabilize independently ( ) 3 able to stand independently using hands
( ) 2 able to stand using hands after several tries ( ) 1 needs minimal aid to stand or to stabilize
( ) 0 needs moderate or maximal assist to stand

2. STANDING UNSUPPORTED
INSTRUCTIONS: Please stand for two minutes without holding onto any support.

( ) 4 able to stand safely 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 unassisted

If a subject is able to stand 2 minutes unsupported, score full points for sitting unsupported. Proceed to item #4.

3. SITTING WITH BACK UNSUPPORTED BUT FEET SUPPORTED ON FLOOR OR ON A STOOL
INSTRUCTIONS: Please sit with arms folded for 2 minutes.

( ) 4 able to sit safely and securely 2 minutes
( ) 3 able to sit 2 minutes under supervision
( ) 2 able to sit 30 seconds
( ) 1 able to sit 10 seconds
( ) 0 unable to sit without support 10 seconds

4. 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 uncontrolled descent
( ) 0 needs assistance to sit

5. TRANSFERS
INSTRUCTIONS: Arrange chairs(s) for a pivot transfer. Ask subject to transfer one way toward a seat with armrests and one way toward a seat without armrests. You may use two chairs (one with and one without armrests) or a bed and a chair.

( ) 4 able to transfer safely with minor use of hands
( ) 3 able to transfer safely definite need of hands
( ) 2 able to transfer with verbal cueing and/or supervision
( ) 1 needs one person to assist
( ) 0 needs two people to assist or supervise to be safe
6. **STANDING UNSUPPORTED WITH EYES CLOSED**  
**INSTRUCTIONS:** Please close your eyes and stand still for 10 seconds.

- ( ) 4 able to stand 10 seconds safely  
- ( ) 3 able to stand 10 seconds with supervision  
- ( ) 2 able to stand 3 seconds  
- ( ) 1 unable to keep eyes closed 3 seconds but stays steady  
- ( ) 0 needs help to keep from falling

7. **STANDING UNSUPPORTED WITH FEET TOGETHER**  
**INSTRUCTIONS:** Place your feet together and stand without holding.

- ( ) 4 able to place feet together independently and stand 1 minute safely  
- ( ) 3 able to place feet together independently and stand for 1 minute with supervision  
- ( ) 2 able to place feet together independently and to hold for 30 seconds  
- ( ) 1 needs help to attain position but able to stand 15 seconds feet together  
- ( ) 0 needs help to attain position and unable to hold for 15 seconds

8. **REACHING FORWARD WITH OUTSTRETCHED ARM WHILE STANDING**  
**INSTRUCTIONS:** Lift arm to 90 degrees. Stretch out your fingers and reach forward as far as you can. (Examiner places a ruler at end of fingertips when arm is at 90 degrees. Fingers should not touch the ruler while reaching forward. The recorded measure is the distance forward that the fingers reach while the subject is in the most forward lean position. When possible, ask subject to use both arms when reaching to avoid rotation of the trunk.)

- ( ) 4 can reach forward confidently >25 cm (10 inches)  
- ( ) 3 can reach forward >12.5 cm safely (5 inches)  
- ( ) 2 can reach forward >5 cm safely (2 inches)  
- ( ) 1 reaches forward but needs supervision  
- ( ) 0 loses balance while trying/ requires external support

9. **PICK UP OBJECT FROM THE FLOOR FROM A STANDING POSITION**  
**INSTRUCTIONS:** Pick up the shoe/slipper which is placed in front of your feet.

- ( ) 4 able to pick up slipper safely and easily  
- ( ) 3 able to pick up slipper but needs supervision  
- ( ) 2 unable to pick up but reaches 2-5cm (1-2 inches) from slipper and keeps balance independently  
- ( ) 1 unable to pick up and needs supervision while trying  
- ( ) 0 unable to try/needs assist to keep from losing balance or falling

10. **TURNING TO LOOK BEHIND OVER LEFT AND RIGHT SHOULDERS WHILE STANDING**  
**INSTRUCTIONS:** Turn to look directly behind you over toward left shoulder. Repeat to the right. Examiner may pick an object to look at directly behind the subject to encourage a better twist turn.

- ( ) 4 looks behind from both sides and weight shifts well  
- ( ) 3 looks behind one side only other side shows less weight shift ( ) 2 turns sideways only but maintains balance  
- ( ) 1 needs supervision when turning  
- ( ) 0 needs assist to keep from losing balance or falling
11. TURN 360 DEGREES
INSTRUCTIONS: Turn completely around in a full circle. Pause. Then turn a full circle in the other direction.
( ) 4 able to turn 360 degrees safely in 4 seconds or less
( ) 3 able to turn 360 degrees safely one side only in 4 seconds or less
( ) 2 able to turn 360 degrees safely but slowly
( ) 1 needs close supervision or verbal cueing
( ) 0 needs assistance while turning

12. PLACING ALTERNATE FOOT ON STEP OR STOOL WHILE STANDING UNSUPPORTED
INSTRUCTIONS: Place each foot alternately on the step/stool. Continue until each foot has touched the step/stool four times.
( ) 4 able to stand independently and safely and complete 8 steps in 20 seconds
( ) 3 able to stand independently and complete 8 steps >20 seconds
( ) 2 able to complete 4 steps without aid with supervision
( ) 1 able to complete >2 steps needs minimal assist
( ) 0 needs assistance to keep from falling/unable to try

13. STANDING UNSUPPORTED ONE FOOT IN FRONT
INSTRUCTIONS: (DEMONSTRATE TO SUBJECT)
Place one foot directly in front of the other. If you feel that you cannot place your foot directly in front, try to step far enough ahead that the heel of your forward foot is ahead of the toes of the other foot. (To score 3 points, the length of the step should exceed the length of the other foot and the width of the stance should approximate the subject's normal stride width)
( ) 4 able to place foot tandem independently and hold 30 seconds
( ) 3 able to place foot ahead of other independently and hold 30 seconds
( ) 2 able to take small step independently and hold 30 seconds
( ) 1 needs help to step but can hold 15 seconds
( ) 0 loses balance while stepping or standing

14. STANDING ON ONE LEG
INSTRUCTIONS: Stand on one leg as long as you can without holding onto any support.
( ) 4 able to lift leg independently and hold >10 seconds
( ) 3 able to lift leg independently and hold 5-10 seconds
( ) 2 able to lift leg independently and hold = or >3 seconds
( ) 1 tries to lift leg unable to hold 3 seconds but remains standing independently
( ) 0 unable to try or needs assist to prevent fall

( ) TOTAL SCORE (Maximum = 56)

*References

9
Physical and Occupational therapists are often looking for quick, reliable, portable, inexpensive, and clinically relevant ways to evaluate and document the quality characteristics and magnitude of functional movement. It has been argued that measuring limits of stability during a dynamic balance task (such as reaching from a standing position) may assist a therapist in assessing balance skill and falls risk. Additional research has conveyed the added value of assessing multi-directional upper extremity reach ability. Others have cautioned against the use of reach measurements in independently determining risk of falling and frailty in older persons.

Perhaps the best use of this type of assessment tool is to employ it as part of a multi-faceted examination process, correlating its results to skilled observation of the movement, knowledge of pathomechanics, and knowledge of function in other body systems. Then, clinical judgments may be made to prioritize what tissue-level or functional component-level insufficiencies may exist that consequently limit an individual’s balance control while reaching. Knowing what may be causing abnormal or inefficient motion may directly lead to formulation of intervention plans and/or referral for services that would be most efficacious in modifying such deficits.

In our modified test procedures:

- A standard reach target was measured at 40-inches from floor. It was felt that this height lessens the potential impact of impaired UE motion, and encourages multiple joints and motion segments to become involved in task completion.
- Excursion distances were measured to outstretched fingertips, estimated to within ½ inch.
- Safety was considered with standard clinical guarding techniques utilized at all times.
- Learning and fear-avoidance effects were minimized by offering participants a practice trial followed by recording the average of two test trials. Demonstration was also offered for learning as needed.
- Results of Right vs. Left direction of movement were recorded in each test condition to lend insight into mechanical deficits that could elude detection by qualitative observation alone.
- Four testing positions were utilized to encourage movement and drive of the center of mass through the three cardinal planes (as well as backward weight shifting).
  - Bilateral Stance with 2-handed Anterior Reach
  - Bilateral Stance with 1-handed Lateral Reach
  - Bilateral Stance with 2-handed Cross body Rotational Reach
  - Bilateral Stance with 1-handed Posterior Rotational Reach

References for Reach Testing:

* = a Buffalo Rehab Group Physical Therapy, PC and Stall Geriatrics, LLC collaborative effort - 2010
TIMED UP AND GO (TUG)

Tips
- The patient starts in a standard chair with arms, wearing his/her customary walking shoes, and using his/her usual walking aid.
- No physical assistance is given.
- The patient starts with his/her back against the chair, his/her arms resting on the arm rests, and his/her walking aid at hand.

Instructions
- Patient is instructed that, on the word “GO” he/she is to get up walk at a comfortable and safe pace to a line on the floor 3 meters away, turn, return to the chair, and sit down again.
- Timing starts with the word “GO” and ends when the subject sits down.

Equipment:
- Standard chair with arms
- Stop watch or watch with second hand
- 3 meters walking space
- Tape mark at the 3 meter mark

Age Adjusted Norms
Mean (95% confidence intervals) for 3 age groups are:
- 60-69 y/o (mean= 8.1 (7.1-9.0) seconds)
- 70-79 y/o (mean= 9.2 (8.2-10.2) seconds)
- 80-99 y/o (mean= 11.3 (10.0-12.7 seconds)

“Patients whose performance exceeds the upper limit of reported confidence intervals can be considered to have worse than average performance.”

This is what would determine relative risk level:

“Yes” if outside of high end of 95% CI

“No” if within or under 95% CI

Reference
**TINETTI BALANCE ASSESSMENT TOOL**
*Tinetti ME, Williams TF, Mayewski R, Fall Risk Index for elderly patients based on number of chronic dis- abilities. Am J Med 1986;80:429-434*

**PATIENTS NAME ____________________ D.o.b. __________ Room # __________**

**BALANCE SECTION**

Patient is seated in hard, armless chair;

<table>
<thead>
<tr>
<th></th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sitting Balance</strong></td>
<td></td>
</tr>
<tr>
<td>Leans or slides in chair</td>
<td>= 0</td>
</tr>
<tr>
<td>Steady, safe</td>
<td>= 1</td>
</tr>
<tr>
<td><strong>Rises from chair</strong></td>
<td></td>
</tr>
<tr>
<td>Unable to without help</td>
<td>= 0</td>
</tr>
<tr>
<td>Able, uses arms to help</td>
<td>= 1</td>
</tr>
<tr>
<td>Able without use of arms</td>
<td>= 2</td>
</tr>
<tr>
<td><strong>Attempts to rise</strong></td>
<td></td>
</tr>
<tr>
<td>Unable to without help</td>
<td>= 0</td>
</tr>
<tr>
<td>Able, requires &gt; 1 attempt</td>
<td>= 1</td>
</tr>
<tr>
<td>Able to rise, 1 attempt</td>
<td>= 2</td>
</tr>
<tr>
<td><strong>Immediate standing Balance (first 5 seconds)</strong></td>
<td></td>
</tr>
<tr>
<td>Unsteady (staggers, moves feet, trunk sway)</td>
<td>= 0</td>
</tr>
<tr>
<td>Steady but uses walker or other support</td>
<td>= 1</td>
</tr>
<tr>
<td>Steady without walker or other support</td>
<td>= 2</td>
</tr>
<tr>
<td><strong>Standing balance</strong></td>
<td></td>
</tr>
<tr>
<td>Unsteady</td>
<td>= 0</td>
</tr>
<tr>
<td>Steady but wide stance and uses support</td>
<td>= 1</td>
</tr>
<tr>
<td>Narrow stance without support</td>
<td>= 2</td>
</tr>
<tr>
<td><strong>Nudged</strong></td>
<td></td>
</tr>
<tr>
<td>Begins to fall</td>
<td>= 0</td>
</tr>
<tr>
<td>Staggers, grabs, catches self</td>
<td>= 1</td>
</tr>
<tr>
<td>Steady</td>
<td>= 2</td>
</tr>
<tr>
<td><strong>Eyes closed</strong></td>
<td></td>
</tr>
<tr>
<td>Unsteady</td>
<td>= 0</td>
</tr>
<tr>
<td>Steady</td>
<td>= 1</td>
</tr>
<tr>
<td><strong>Turning 360 degrees</strong></td>
<td></td>
</tr>
<tr>
<td>Discontinuous steps</td>
<td>= 0</td>
</tr>
<tr>
<td>Continuous</td>
<td>= 1</td>
</tr>
<tr>
<td>Unsteady (grabs, staggers)</td>
<td>= 0</td>
</tr>
<tr>
<td>Steady</td>
<td>= 1</td>
</tr>
<tr>
<td><strong>Sitting down</strong></td>
<td></td>
</tr>
<tr>
<td>Unsafe (misjudged distance, falls into chair)</td>
<td>= 0</td>
</tr>
<tr>
<td>Uses arms or not a smooth motion</td>
<td>= 1</td>
</tr>
<tr>
<td>Safe, smooth motion</td>
<td>= 2</td>
</tr>
</tbody>
</table>

**Balance score** /16 /16

P.T.O.
GAIT SECTION

Patient stands with therapist, walks across room (+/- aids), first at usual pace, then at rapid pace.

<table>
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<tr>
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<tbody>
<tr>
<td><strong>Indication of gait</strong></td>
<td></td>
</tr>
<tr>
<td>(Immediately after told to ‘go’.)</td>
<td></td>
</tr>
<tr>
<td>Any hesitancy or multiple attempts</td>
<td>0</td>
</tr>
<tr>
<td>No hesitancy</td>
<td>1</td>
</tr>
<tr>
<td><strong>Step length and height</strong></td>
<td></td>
</tr>
<tr>
<td>Step to</td>
<td>0</td>
</tr>
<tr>
<td>Step through R</td>
<td>1</td>
</tr>
<tr>
<td>Step through L</td>
<td>1</td>
</tr>
<tr>
<td><strong>Foot clearance</strong></td>
<td></td>
</tr>
<tr>
<td>Foot drop</td>
<td>0</td>
</tr>
<tr>
<td>L foot clears floor</td>
<td>1</td>
</tr>
<tr>
<td>R foot clears floor</td>
<td>1</td>
</tr>
<tr>
<td><strong>Step symmetry</strong></td>
<td></td>
</tr>
<tr>
<td>Right and left step length not equal</td>
<td>0</td>
</tr>
<tr>
<td>Right and left step length appear equal</td>
<td>1</td>
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<tr>
<td><strong>Step continuity</strong></td>
<td></td>
</tr>
<tr>
<td>Stopping or discontinuity between steps</td>
<td>0</td>
</tr>
<tr>
<td>Steps appear continuous</td>
<td>1</td>
</tr>
<tr>
<td><strong>Path</strong></td>
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<tr>
<td>Marked deviation</td>
<td>0</td>
</tr>
<tr>
<td>Mild/moderate deviation or uses w. aid</td>
<td>1</td>
</tr>
<tr>
<td>Straight without w. aid</td>
<td>2</td>
</tr>
<tr>
<td><strong>Trunk</strong></td>
<td></td>
</tr>
<tr>
<td>Marked sway or uses w. aid</td>
<td>0</td>
</tr>
<tr>
<td>No sway but flex. knees or back or uses arms for stability</td>
<td>1</td>
</tr>
<tr>
<td>No sway, flex., use of arms or w. aid</td>
<td>2</td>
</tr>
<tr>
<td><strong>Walking time</strong></td>
<td></td>
</tr>
<tr>
<td>Heels apart</td>
<td>0</td>
</tr>
<tr>
<td>Heels almost touching while walking</td>
<td>1</td>
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<table>
<thead>
<tr>
<th>Gait score</th>
<th>/12</th>
<th>/12</th>
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<tbody>
<tr>
<td>Balance score carried forward</td>
<td>/16</td>
<td>/16</td>
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Total Score = Balance + Gait score /28 /28

Risk Indicators:

<table>
<thead>
<tr>
<th>Tinetti Tool Score</th>
<th>Risk of Falls</th>
</tr>
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<tbody>
<tr>
<td>≤18</td>
<td>High</td>
</tr>
<tr>
<td>19-23</td>
<td>Moderate</td>
</tr>
<tr>
<td>≥24</td>
<td>Low</td>
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Instructions for Usage

Explain to the person that each face represents a person who has no pain (hurt), or some, or a lot of pain.

Face 0 doesn’t hurt at all. Face 2 hurts just a little bit. Face 4 hurts a little bit more. Face 6 hurts even more. Face 8 hurt a whole lot. Face 10 hurts as much as you can imagine, although you don’t have to be crying to have this worst pain.

Ask the person to choose the face that best depicts the pain they are experiencing.
In a comprehensive multi-system screening process for falls risk, several markers of possible cardiovascular, neurological, sensory, and/or vestibular involvement may be encountered. These indicators may be in either the participant self-assessment or in clinician-directed physical performance screening procedures. The examining clinician may be given the option to utilize some or all of these supplemental screens at their discretion following completion of the basic home safety, medical review, and gross motor examinations.

Examples of yellow flags in a falls risk assessment that would lead to ‘additional screening’ being recommended include:

- lightheadedness/ dizziness/ nausea reported
- intolerance to changes in body and/or head position
- disequilibrium in gait/ ataxic gait/ shuffling gait
- recent visual changes/ visual changes with head movement
- recent hearing changes
- history of loss of consciousness
- migraine-type headache linked to dizziness or visual change

**NOTE:** Screening procedures described are meant solely to indicate possible involvement and dysfunction of a particular body system, but are not designed or intended to adequately formulate a diagnosis or intervention strategy. Such clinical decision-making should be undertaken by the clinical specialist best suited to diagnose and treat the given set of symptoms or conditions.
Protocol for Orthostatic (Postural) Vital Sign Measurement

Policy

1. Orthostatic vital signs may be indicated to evaluate patients who are at risk for hypovolemia (vomiting, diarrhea, bleeding), have had syncope or near syncope (dizziness, fainting), or are at risk for falls. A significant change in vital signs with a change in position also signals increased risk for falls.

Orthostatic vital signs are not indicated in patients who: e. Have supine hypotension.
   a) Have a sitting blood pressure ≤90/60.
   b) Have acute deep vein thrombosis.
   c) Exhibit the clinical syndrome of shock.
   d) Have severely altered mental status.
   e) Have possible spinal injuries.
   f) Have lower extremity or pelvic fractures.
   g) Are not mobile enough to get out of bed.

Orthostatic vital signs (blood pressure, pulse, and symptoms) will be obtained and recorded while the patient is in the supine position as well as in the standing position. If the patient is unable to stand, orthostatics may be taken while the patient is sitting with feet dangling.

Equipment

- Noninvasive blood pressure measurement device.
- Blood pressure cuff of correct size for the patient.

Procedure

1. Instruct the patient on the process of orthostatic blood pressure measurement and its rationale.
2. Assess by verbal report and observation the patient’s ability to stand.
3. Have patient lie in bed with the head flat for a minimum of 3 minutes, and preferably 5 minutes.
4. Measure the blood pressure and the pulse while the patient is supine.
5. Instruct patient to sit for 1 minute.
   a. Ask patient about dizziness, weakness, or visual changes associated with position change. Note diaphoresis or pallor.
   b. Check sitting blood pressure and pulse.
   c. If the patient has symptoms associated with position change or sitting blood pressure ≤90/60, put patient back to bed.
6. Instruct patient to stand.
   a. Ask patient about dizziness, weakness, or visual changes associated with position change. Note diaphoresis or pallor.
b. If patient is unable to stand, sit patient upright with legs dangling over the edge of the bed.
c. The patient should be permitted to resume a supine position immediately if syncope or near syncope develops.

7. Measure the blood pressure and pulse immediately after patient has stood up, and then repeat the measurements 3 minutes after patient stands. Support the forearm at heart level when taking the blood pressures to prevent inaccurate measurement.

8. Assist patient back to bed in a position of comfort.

9. Document vital signs and other pertinent observations on the nursing flowsheet or in the medical record. Note all measurements taken and the position of the patient during each reading.

Evaluation

1. Subtract values 3 minutes after standing (or if patient cannot stand, then sitting) from lying values.

- A decline of ≥20mm Hg in systolic or ≥10 mm Hg in diastolic blood pressure after 3 minutes of standing = orthostatic hypotension.
- A heart rate increase of at least 30 beats per minute after 3 minutes of standing may suggest hypovolemia, independent of whether the patient meets criteria for orthostatic hypotension.
- A blood pressure drop immediately after standing that resolves at 3 minutes does not indicate orthostatic hypotension. However, this finding may be useful to confirm a patient’s complaint of feeling dizzy upon standing and may lead to patient education about using caution when arising from a lying or sitting position.
- Report all findings to the treating medical provider, including all sets of blood pressure and pulse results, and whether the patient experienced pallor, diaphoresis, or faintness when upright.

Sometimes it may be difficult to determine if the resident/patient has orthostatic hypotension when checking only at one point in time. If the resident/patient does not show evidence of orthostatic hypotension during the assessment but has complained of lightheadedness or dizziness, perform the measurements when the resident/patient complains or within 2 hours of the start of a meal.
Strategies for Treating Patients with “Behaviors”

Three Syndromes of Agitation:
1. Aggressive Behaviors: Hitting, kicking, biting, tearing things up, cursing
2. Physically Non-Aggressive Behaviors: Pacing, Inappropriate dressing, trying to get somewhere else, restlessness
3. Verbally Agitated: Complaining, requests for attention, screaming

***All are manifested in medical, psychosocial and environmental. Causes are related to unmet needs.

Delirium and Acute Problematic Behavior in the Long Term Setting: An algorithm by the American Medical Directors Association

**Recognition:** ID behavior, mood, cognition and function; determine urgency and need for testing.

**Assessment:** ID causes; assess for medical and psychiatric conditions; establish a working diagnosis.
- When does the behavior happen?
- Where does the behavior happen?
- Who is around when the behavior happen?
- Why does the behavior happen?
- How does the resident act out?

**Treatment:** Provide symptomatic and cause-specific management; medicate appropriately

**Monitoring:** Adjust interventions PRN; re-evaluate; prevent

**How to respond when a patients is exhibiting “behaviors”**
1. Remain Calm: Keep your tone of voice and body language calm
2. Revise: Divide tasks into small steps. Present one step at a time
3. Reflect: Reflect back the resident’s feelings with words and actions
4. Repeat: Find new ways to repeat the same information
5. Remind: Encourage the resident to reminisce about the past
6. Respond: Show that you are listening. Tell the resident what you heard them say
7. Reference: Validate or support the resident’s point of view
8. Redirect: Guide the resident to the task at hand, or to a new task
9. Reassure: Make positive statements. Use a happy upbeat tone of voice
10. Reinforce: Validate or support the resident’s statements and behaviors
Prevention of “Behaviors”

- Monitor personal comfort
- Avoid being confrontational
- Redirect the person’s attention
- Create a calm environment
- Allow adequate rest
- Provide a security object
- Acknowledge requests
- Look for reasons behind each behavior
- Explore various solutions
- Don’t take the behavior personally

References: