

# Guiding the Risk Assessment and Investigation Process

## Falls Risk and Event Cue Card

- Ask resident **if s/he is injured**.
- Ask resident **what s/he was trying to do**.
- Ask resident **why they think they fell**.
- **Glasses/ hearing aids in place?**
- **Call light, frequently used items in place?**
- **Footwear**  
Shoes, socks:  
Fit well, loose, ties undone, what else
- **Barefoot – why?**
- **Foot assessment**-pain, swelling, redness,  
Open areas, blisters, in need of care?
- **Clothing**-too long, too loose, needs repair?
- **Observe position** before moving resident  
Arms, legs, head, on back, face, knees, side?
- **Staff, visitors, other residents in area?**
- **Environment** where fall happened  
Noise, clutter?  
If Bathroom – was toilet used?  
Lights on or off?
- **Floor**  
Wet, shiny, uneven-trip?  
Mat, tile, carpeting?
- **Assistive devices** – wheelchair, walker, cane

## INSTRUCTIONS FOR USE

Use the items on the card to create your immediate investigation tool to be completed at the time of the event.

Use the items on the card to create your falls risk assessment.

Instruct staff to carry card and refer to it during routine rounds to prevent falls.

Instruct staff to use immediately to begin investigation at time of fall, complete investigation tool at time of fall.

## Cardiovascular Diseases Effects on Falls

<i>Diagnosis/ Medical Condition</i>	<i>Typical Symptoms That need to be stabilized to reduce risk factors</i>	<i>Falls Risk Factors That can be caused by the diagnosis &amp; symptoms</i>
<b>Anemia</b>	<ul style="list-style-type: none"> <li>• Fatigue</li> <li>• Pale skin</li> <li>• A fast or irregular heartbeat</li> <li>• Shortness of breath</li> <li>• Chest pain</li> <li>• Dizziness</li> <li>• Cognitive problems</li> <li>• Cold hands and feet</li> <li>• Headache</li> </ul> <p>Gradual worsening if left untreated</p>	<ul style="list-style-type: none"> <li>• Fatigue</li> <li>• Dizziness</li> <li>• Weakness</li> <li>• Thinking problems</li> <li>• Memory problems</li> </ul>
<b>Angina</b>	<ul style="list-style-type: none"> <li>• Chest pain or discomfort</li> <li>• Pain in arms, neck, jaw, shoulder or back accompanying chest pain</li> <li>• Nausea</li> <li>• Fatigue</li> <li>• Shortness of breath</li> <li>• Anxiety</li> <li>• Sweating</li> <li>• Dizziness</li> </ul>	<ul style="list-style-type: none"> <li>• Fatigue</li> <li>• Dizziness</li> </ul>
<b>Cardiovascular disease</b>	<ul style="list-style-type: none"> <li>• Chest pain (angina)</li> <li>• Shortness of breath</li> <li>• Pain, numbness, weakness or coldness in legs or arms, if the blood vessels in those parts of body are narrowed</li> </ul>	<ul style="list-style-type: none"> <li>• Dizziness</li> <li>• Unsteady gait</li> <li>• Neuropathy</li> </ul>

## Cardiovascular Diseases Effects on Falls

<i>Diagnosis/ Medical Condition</i>	<i>Typical Symptoms That need to be stabilized to reduce risk factors</i>	<i>Falls Risk Factors That can be caused by the diagnosis &amp; symptoms</i>
<b>Cardiomyopathy</b>	<ul style="list-style-type: none"> <li>• Breathlessness with exertion or even at rest</li> <li>• Swelling of the legs, ankles and feet</li> <li>• Bloating (distention) of the abdomen with fluid</li> <li>• Fatigue (continued next page)</li> <li>• Irregular heartbeats that feel rapid, pounding or fluttering</li> <li>• Dizziness, lightheadedness</li> </ul>	<ul style="list-style-type: none"> <li>• Lightheadedness</li> <li>• Dizziness</li> <li>• Shortness of breath</li> <li>• Syncope</li> <li>• Weakness</li> </ul>
<b>Heart Infections</b>	<ul style="list-style-type: none"> <li>• Fever</li> <li>• Shortness of breath</li> <li>• Weakness or fatigue</li> <li>• Swelling in legs or abdomen</li> <li>• Changes in heart rhythm</li> <li>• Dry or persistent cough</li> <li>• Skin rashes or unusual spots</li> </ul>	<ul style="list-style-type: none"> <li>• Lightheadedness</li> <li>• Dizziness</li> <li>• Shortness of breath</li> <li>• Syncope</li> <li>• Weakness</li> </ul>
<b>Valvular heart disease</b>	<ul style="list-style-type: none"> <li>• Fatigue</li> <li>• Shortness of breath</li> <li>• Irregular heartbeat or heart murmur</li> <li>• Swollen feet or ankles</li> <li>• Chest pain</li> <li>• Fainting (syncope)</li> </ul>	<ul style="list-style-type: none"> <li>• Lightheadedness</li> <li>• Dizziness</li> <li>• Shortness of breath</li> <li>• Syncope</li> <li>• Weakness</li> </ul>
<b>Congestive Heart Failure (CHF)</b>	<u><b>Chronic heart failure symptoms</b></u> <ul style="list-style-type: none"> <li>• Shortness of breath (dyspnea) with exertion</li> </ul>	<ul style="list-style-type: none"> <li>• Lightheadedness</li> <li>• Dizziness</li> </ul>

## Cardiovascular Diseases Effects on Falls

<i>Diagnosis/ Medical Condition</i>	<i>Typical Symptoms That need to be stabilized to reduce risk factors</i>	<i>Falls Risk Factors That can be caused by the diagnosis &amp; symptoms</i>
	<p>or when lying down</p> <ul style="list-style-type: none"> <li>• Fatigue and weakness</li> <li>• Swelling (edema) in legs, ankles and feet</li> <li>• Rapid or irregular heartbeat</li> <li>• Reduced ability to exercise</li> <li>• Persistent cough or wheezing with white or pink blood-tinged phlegm</li> <li>• Swelling of abdomen (ascites)</li> <li>• Sudden weight gain from fluid retention</li> <li>• Lack of appetite and nausea</li> <li>• Difficulty concentrating or decreased alertness</li> </ul> <p><b><u>Acute heart failure symptoms</u></b> Symptoms similar to those of chronic heart failure, but more severe and start or worsen suddenly:</p> <ul style="list-style-type: none"> <li>• Sudden fluid buildup</li> <li>• Rapid or irregular heartbeat (palpitations)</li> <li>• Sudden, severe shortness of breath and coughing up pink, foamy mucus</li> <li>• Chest pain, if heart failure is caused by a heart attack</li> </ul>	<ul style="list-style-type: none"> <li>• Shortness of breath</li> <li>• Syncope</li> <li>• Weakness</li> </ul>
<p><b>Transient Ischemic Attack (TIA)</b></p>	<ul style="list-style-type: none"> <li>• Sudden weakness, numbness or paralysis in the face, arm or leg, typically on one side of the body</li> <li>• Slurred or garbled speech or difficulty understanding others</li> <li>• Sudden blindness in one or both eyes or double vision</li> <li>• Dizziness, loss of balance or coordination</li> </ul> <p>The person may have more than one TIA; the recurrent signs &amp; symptoms may vary depending on which area of the brain is involved. <i>(If signs</i></p>	<ul style="list-style-type: none"> <li>• Dizziness</li> <li>• Loss of balance</li> <li>• Vision problems</li> <li>• Loss of coordination</li> </ul>

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	<i>and symptoms last longer than 24 hours or cause lasting brain damage, it is considered a stroke.)</i>	
<b>Left-sided stroke</b>	<ul style="list-style-type: none"> <li>• Right sided weakness</li> <li>• Thinking problems</li> <li>• Not aware of deficits</li> <li>• Speaks as if nothing is wrong</li> <li>• May have memory problems</li> </ul>	<ul style="list-style-type: none"> <li>• Poor safety awareness</li> <li>• May think they can do more than they can</li> <li>• Weakness on affected side</li> </ul>
<b>Right -sided stroke</b>	<ul style="list-style-type: none"> <li>• Left-sided weakness or paralysis</li> <li>• Thinking problems</li> <li>• Expressive &amp; receptive aphasia</li> <li>• Frustrated communication</li> </ul>	<ul style="list-style-type: none"> <li>• Poor safety awareness</li> <li>• Weakness on affected side</li> </ul>
<b>Orthostatic Hypotension</b>	<p>Low blood pressure can indicate a problem with circulation, dehydration, or medications especially when it drops suddenly or there are other signs and symptoms.</p> <ul style="list-style-type: none"> <li>• Dizziness or lightheadedness</li> <li>• Fainting (syncope)</li> <li>• Lack of concentration</li> <li>• Blurred vision</li> <li>• Nausea</li> <li>• Cold, clammy, pale skin</li> <li>• Rapid, shallow breathing</li> <li>• Fatigue</li> <li>• Depression</li> <li>• Thirst ( low fluid volume, such as dehydration)</li> </ul>	<ul style="list-style-type: none"> <li>• Postural hypotension</li> <li>• Dizziness</li> <li>• Vision problems</li> <li>• Low oxygen saturation</li> </ul>

## Respiratory Diseases - Effects on Mood & Behavior

<i>Diagnosis/ Medical Condition</i>	<i>Typical Symptoms  That need to be stabilized to reduce risk factors</i>	<i>Mood &amp; Behavior Risk Factors  That can be caused by the diagnosis &amp; symptoms</i>
<b>Asthma</b>	<ul style="list-style-type: none"> <li>• Shortness of breath</li> <li>• Chest tightness</li> <li>• Poor activity endurance</li> <li>• Coughing, wheezing</li> <li>• Exacerbated occurrences of coughing and wheezing with respiratory infections</li> <li>• Sleep problems</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate oxygen (anoxia) can cause panic, anxiety</li> <li>• Depression due to loss of independence</li> </ul>
<b>Chronic obstructive pulmonary disease (COPD) – EMPHYSEMA</b>	<ul style="list-style-type: none"> <li>• Shortness of breath</li> <li>• Poor activity endurance</li> <li>• Chest tightness</li> <li>• Coughing, wheezing</li> <li>• Exacerbated occurrences of coughing and wheezing with respiratory infections</li> <li>• Sleep problems</li> </ul>	<ul style="list-style-type: none"> <li>• Social isolation</li> <li>• Inadequate oxygen (anoxia) can cause panic, anxiety</li> <li>• Depression due to loss of independence</li> </ul>
<b>Chronic obstructive pulmonary disease (COPD) – CHRONIC BRONCHITIS</b>	<ul style="list-style-type: none"> <li>• Throat clearing and coughing upon awakening</li> <li>• Chronic cough-yellow sputum</li> <li>• Shortness of breath</li> <li>• Frequent respiratory infections</li> </ul>	<ul style="list-style-type: none"> <li>• Social isolation</li> <li>• Inadequate oxygen (anoxia) can cause panic, anxiety</li> <li>• Depression due to loss of independence</li> </ul>

Neurological Diseases - Effects on Mood & Behavior		
<i>Diagnosis/ Medical Condition</i>	<i>Typical Symptoms  That need to be stabilized to reduce risk factors</i>	<i>Mood &amp; Behavior Risk Factors  That can be caused by the diagnosis &amp; symptoms</i>
<b>White matter infarcts</b>	<ul style="list-style-type: none"> <li>• Looks like mental illness</li> <li>• Visual disturbance,</li> <li>• Muscle weakness and spasms,</li> <li>• Balance problems,</li> <li>• Paralysis</li> <li>• Numbness and tingling,</li> <li>• Pain</li> <li>• Headache,</li> <li>• Seizure,</li> <li>• Cognitive decline</li> <li>• Hearing loss</li> </ul>	<ul style="list-style-type: none"> <li>• Depression</li> <li>• Anxiety</li> <li>• Communication problems</li> </ul>
<b>Parkinson's</b>	<ul style="list-style-type: none"> <li>• Slow response time</li> <li>• Retrieval memory problems</li> <li>• Flat affect-expressionless face</li> <li>• Muscle rigidity, tremors</li> <li>• Gait &amp; balance problems</li> <li>• Hallucinations / delusions related to dx or meds</li> </ul>	<ul style="list-style-type: none"> <li>• Falls</li> <li>• Poor spatial awareness</li> <li>• Thought process impaired / slow</li> </ul>
<b>Head Injury or Hit head during an accident or fall</b>	<ul style="list-style-type: none"> <li>• Depends on location of injury</li> <li>• Memory problems</li> <li>• Unpredictable behavior</li> <li>• Frustrated outbursts</li> <li>• Lack of safety awareness</li> </ul>	<ul style="list-style-type: none"> <li>• Impulsiveness</li> <li>• Frustration</li> <li>• Socially inappropriate &amp; not able to see others' point of view</li> <li>• Memory problems</li> </ul>
<b>Huntington's</b>	<p>Early symptoms:</p> <ul style="list-style-type: none"> <li>• Personality changes, such as irritability, anger, depression or a loss of interest</li> <li>• Decreased cognitive abilities, such as difficulty making decisions, learning new information, answering questions and remembering</li> </ul>	<ul style="list-style-type: none"> <li>• Depression</li> <li>• Impulsive erratic behavior</li> <li>• Isolation</li> <li>• Communication problems</li> <li>• Memory problems</li> <li>• Frustration</li> </ul>

## Neurological Diseases - Effects on Mood & Behavior

<i>Diagnosis/ Medical Condition</i>	<i>Typical Symptoms  That need to be stabilized to reduce risk factors</i>	<i>Mood &amp; Behavior Risk Factors  That can be caused by the diagnosis &amp; symptoms</i>
	<p>important information</p> <ul style="list-style-type: none"> <li>• Mild balance problems</li> <li>• Clumsiness</li> <li>• Involuntary facial movements, such as grimacing</li> </ul> <p>Later signs &amp; symptoms can include:</p> <ul style="list-style-type: none"> <li>• Sudden jerky, involuntary movements (chorea) throughout the body</li> <li>• Severe problems with balance and coordination</li> <li>• Jerky, rapid eye movements</li> <li>• Hesitant, halting or slurred speech</li> <li>• Swallowing problems</li> <li>• Dementia</li> </ul>	<ul style="list-style-type: none"> <li>• Socially inappropriate &amp; not able to see others' point</li> <li>• Difficulty making decisions</li> <li>• Weight loss</li> <li>• Choking</li> </ul>
<b>Jakob-Creuzfeldt</b>	<ul style="list-style-type: none"> <li>• Personality changes</li> <li>• Anxiety</li> <li>• Depression</li> <li>• Memory loss</li> <li>• Impaired thinking</li> <li>• Blurred vision</li> <li>• Insomnia</li> <li>• Difficulty speaking</li> <li>• Difficulty swallowing</li> <li>• Sudden jerky movements</li> </ul>	<ul style="list-style-type: none"> <li>• Anxiety</li> <li>• Depression</li> <li>• Memory loss</li> <li>• Impaired thinking</li> <li>• Choking</li> <li>• Communication problems</li> <li>• Weight loss</li> </ul>
<b>Multiple Sclerosis</b>	<ul style="list-style-type: none"> <li>• Signs and symptoms vary widely, depending on the location of affected nerve fibers.</li> <li>• Numbness or weakness in one or more limbs, which typically occurs on one side of the body at a time or the bottom half of the body</li> <li>• Partial or complete loss of vision, usually in one eye at a time, often with pain during eye</li> </ul>	<ul style="list-style-type: none"> <li>• Mood swings</li> <li>• Depression</li> <li>• Anxiety</li> <li>• Thinking problems</li> </ul>



## Neurological Diseases - Effects on Mood & Behavior

<i>Diagnosis/ Medical Condition</i>	<i>Typical Symptoms  That need to be stabilized to reduce risk factors</i>	<i>Mood &amp; Behavior Risk Factors  That can be caused by the diagnosis &amp; symptoms</i>
	<p>movement (optic neuritis)</p> <ul style="list-style-type: none"> <li>• Double vision or blurring of vision</li> <li>• Tingling or pain in parts of the body</li> <li>• Electric-shock sensations that occur with certain head movements</li> <li>• Tremor, lack of coordination or unsteady gait</li> <li>• Fatigue</li> <li>• Dizziness</li> </ul> <p>Most people with multiple sclerosis, particularly in the beginning stages of the disease, experience relapses of symptoms, which are followed by periods of complete or partial remission. Signs and symptoms of multiple sclerosis often are triggered or worsened by an increase in body temperature.</p>	
<b>Peripheral Neuropathy</b>	<ul style="list-style-type: none"> <li>• Gradual onset of numbness and tingling in feet or hands, which may spread upward into legs &amp; arms</li> <li>• Burning pain</li> <li>• Sharp, jabbing or electric-like pain</li> <li>• Extreme sensitivity to touch, even light touch</li> <li>• Poor coordination</li> <li>• Muscle weakness or paralysis if motor nerves are affected</li> <li>• Bowel or bladder problems if autonomic nerves are affected</li> </ul>	<ul style="list-style-type: none"> <li>• Irritability</li> <li>• Depression</li> </ul>

## Endocrine Diseases - Effects on Mood & Behavior

<i>Diagnosis/Medical Condition</i>	<i>Typical Symptoms  That need to be stabilized to reduce risk factors</i>	<i>Mood &amp; Behavior Risk Factors  That can be caused by the diagnosis &amp; symptoms</i>
<b>Diabetes</b>	<ul style="list-style-type: none"> <li>• Increased thirst</li> <li>• Frequent urination</li> <li>• Extreme hunger</li> <li>• Unexplained weight loss</li> <li>• Fatigue</li> <li>• Blurred vision</li> <li>• Slow-healing sores</li> <li>• Frequent infections, such as gum or skin infections and vaginal or bladder infections</li> </ul>	<p>With high or low blood sugar:</p> <ul style="list-style-type: none"> <li>• Restlessness</li> <li>• Lethargy</li> <li>• Confusion</li> <li>• Agitation</li> <li>• Anxiety</li> </ul>
<b>Hyperthyroidism</b>	<ul style="list-style-type: none"> <li>• Sudden weight loss, even when appetite &amp; diet remain normal or even increase</li> <li>• Rapid heartbeat (tachycardia) — commonly more than 100 beats a minute — irregular heartbeat (arrhythmia) or pounding of heart (palpitations)</li> <li>• Increased appetite</li> <li>• Nervousness, anxiety and irritability</li> <li>• Tremor — usually a fine trembling in hands and fingers</li> <li>• Sweating</li> <li>• Changes in menstrual patterns</li> <li>• Increased sensitivity to heat</li> <li>• Changes in bowel patterns, especially more frequent bowel movements</li> <li>• An enlarged thyroid gland (goiter), which may appear as a swelling at the base of neck</li> <li>• Fatigue, muscle weakness</li> <li>• Difficulty sleeping</li> <li>• Older adults are more likely to have either no signs or symptoms or subtle ones, such as an increased heart rate, heat intolerance and a tendency to become tired during ordinary activities. Medications called beta blockers,</li> </ul>	<ul style="list-style-type: none"> <li>• Nervousness</li> <li>• Anxiety</li> <li>• Depression</li> <li>• Agitation</li> </ul>

## Endocrine Diseases - Effects on Mood & Behavior

<i>Diagnosis/Medical Condition</i>	<i>Typical Symptoms  That need to be stabilized to reduce risk factors</i>	<i>Mood &amp; Behavior Risk Factors  That can be caused by the diagnosis &amp; symptoms</i>
	which are used to treat high blood pressure and other conditions, can mask many of the signs of hyperthyroidism.	
<b>Hypothyroidism</b>	<ul style="list-style-type: none"> <li>• Fatigue</li> <li>• Sluggishness</li> <li>• Increased sensitivity to cold</li> <li>• Constipation</li> <li>• Pale, dry skin</li> <li>• A puffy face</li> <li>• Hoarse voice</li> <li>• An elevated blood cholesterol level</li> <li>• Unexplained weight gain</li> <li>• Muscle aches, tenderness and stiffness</li> <li>• Pain, stiffness or swelling in joints</li> <li>• Muscle weakness</li> <li>• Heavier than normal menstrual periods</li> <li>• Brittle fingernails and hair</li> <li>• Depression</li> </ul>	<ul style="list-style-type: none"> <li>• Depression</li> </ul>

<b>Skeletal Diseases - Effects on Mood &amp; Behavior</b>		
<i>Diagnosis/ Medical Condition</i>	<i>Typical Symptoms</i>  <i>That need to be stabilized to reduce risk factors</i>	<i>Mood &amp; Behavior Risk Factors</i>  <i>That can be caused by the diagnosis &amp; symptoms</i>
<b>Degenerative joint disease (DJD)</b> <b>OSTEOARTHRITIS</b>	<ul style="list-style-type: none"> <li>• Pain during or after movement</li> <li>• Joint tenderness upon light pressure</li> <li>• Joint stiffness</li> <li>• Loss of flexibility</li> <li>• Bone spur formation around joint</li> <li>• Grating sound or sensation with movement</li> <li>• Joint contracture caused by reduced movement</li> <li>• Poor sleep</li> </ul>	<ul style="list-style-type: none"> <li>• Irritability, anxiety</li> <li>• Social isolation</li> <li>• Depression related to pain, reduced function</li> <li>• Loss of independence</li> </ul>
<b>Rheumatoid arthritis</b>	<ul style="list-style-type: none"> <li>• Joint swelling, pain, tenderness</li> <li>• Redness and puffiness – inflammation</li> <li>• Bumps, nodules under skin on arms</li> <li>• Fatigue</li> <li>• Morning stiffness that may last for hours</li> <li>• Fever</li> <li>• Weight loss</li> </ul>	<ul style="list-style-type: none"> <li>• Irritability, anxiety</li> <li>• Social isolation</li> <li>• Depression related to pain, reduced function</li> <li>• Loss of independence</li> </ul>
<b>Osteoporosis</b> <b>("porous bones")</b>	<ul style="list-style-type: none"> <li>• Back pain</li> <li>• Loss of height over time</li> <li>• Stooped posture</li> <li>• Fractured bones</li> </ul>	<ul style="list-style-type: none"> <li>• Irritability, anxiety</li> <li>• Depression related to pain, reduced function</li> <li>• Loss of independence</li> </ul>

## Sensory Problems – Vision - Effects on Mood & Behavior

Diagnosis/ Medical Condition	Typical Symptoms  That need to be stabilized to reduce risk factors	Mood & Behavior Risk Factors  That can be caused by the diagnosis & symptoms
<b>Vision loss</b>	<ul style="list-style-type: none"> <li>• Distorted perception of objects and people</li> <li>• If they also have hearing loss, they cannot rely on lip-reading and visual cues to compensate for hearing loss, therefore: <i>Difficulty understanding words</i></li> <li>• Difficulty or inability to read signs, directions, finding their way about</li> <li>• Turning up volume of TV, radio, to compensate for vision loss</li> <li>• Withdrawal from conversations</li> <li>• Avoidance of social gatherings</li> <li>• Misinterpretation of conversations and events</li> <li>• Denial of vision deficit</li> </ul>	<ul style="list-style-type: none"> <li>• Distortion of or loss of vision increases sense of isolation &amp; may cause impulsivity or poor safety awareness</li> <li>• Misinterpretation of conversation &amp; situations may cause suspiciousness, social isolation</li> <li>• Fear and defensiveness</li> <li>• Disorientation</li> </ul>

<b>Sensory Problems – Hearing - Effects on Mood &amp; Behavior</b>		
<i>Diagnosis/ Medical Condition</i>	<i>Typical Symptoms  That need to be stabilized to reduce risk factors</i>	<i>Mood &amp; Behavior Risk Factors  That can be caused by the diagnosis &amp; symptoms</i>
<b>Hearing loss</b>	<ul style="list-style-type: none"> <li>• Muffled perception of speech &amp; sounds</li> <li>• Difficulty understanding words</li> <li>• Frequent asking of others to speak up, more slowly, more clearly</li> <li>• Turning up volume of TV, radio</li> <li>• Withdrawal from conversations</li> <li>• Avoidance of social gatherings</li> <li>• Misinterpretation of conversations and events</li> <li>• Denial of hearing deficit</li> </ul>	<ul style="list-style-type: none"> <li>• Distortion of sound or sense of isolation may cause impulsivity or poor safety awareness</li> <li>• Misinterpretation of conversation &amp; situations may cause suspiciousness, social isolation</li> <li>• Fear and defensiveness</li> <li>• Disorientation</li> </ul>
<b>Tinnitus</b>	<ul style="list-style-type: none"> <li>• Ringing, buzzing, roaring, clicking, whistling, hissing, squealing</li> </ul> <p>Complications can include:</p> <ul style="list-style-type: none"> <li>• Fatigue</li> <li>• Stress</li> <li>• Trouble concentrating</li> <li>• Memory problems</li> <li>• Depression</li> <li>• Anxiety &amp; Irritability</li> <li>• Sleep problems</li> <li>• Disorientation</li> </ul>	<ul style="list-style-type: none"> <li>• Fatigue</li> <li>• Stress</li> <li>• Trouble concentrating</li> <li>• Memory problems</li> <li>• Sleep problems</li> <li>• Disorientation</li> </ul>
<b>Ear infection</b>	<ul style="list-style-type: none"> <li>• Earache</li> <li>• Feeling of blockage in ear</li> <li>• Fever</li> <li>• Dizziness</li> <li>• Temporary hearing loss</li> </ul>	<ul style="list-style-type: none"> <li>• Social isolation</li> <li>• Fear, defensiveness</li> <li>• Anxiety</li> <li>• Depression</li> <li>• Sleep problems</li> </ul>

# Medications That May Contribute To Falls

## Anticholinergic

Cyclobenzaprine (Flexeril)  
Dicyclomine (Bentyl)  
Diphenoxylate/atropine tablet (Lomotil)  
Loperamide (Imodium A-D)  
Metoclopramide (Reglan)  
Promethazine (Phenergan)  
Tamsulosin (Flomax)  
Terazosin (Hytrin [DSC])  
Tolterodine (Detrol)

## Antihistamine

Cyproheptadine (Periactin)  
Desloratadine (Clarinex)  
Diphenhydramine (Benadryl)  
Fexofenadine (Allegra)  
Hydroxyzine (Atarax, Vistaril)  
Loratadine (Claritin)  
Meclizine (Antivert)

## Antihypertensive

Amlodipine (Norvasc)  
Atenolol (Tenormin)  
Bisoprolol/hydrochlorothiazide (Zebeta)  
Candesartan (Atacand)  
Captopril (Capoten)  
Carvedilol (Coreg)  
Clonidine patch (Catapres-TTS)  
Diltiazem (Cardizem)  
Enalapril (Vasotec)  
Irbesartan (Avapro)  
Lisinopril (Prinivil, Zestril)  
Losartan/hydrochlorothiazide (Hyzaar)  
Metoprolol (Toprol-XL, Lopressor)  
Nisoldipine (Sular)  
Potassium chloride (Klor-Con)  
Ramipril (Altace)  
Reserpine  
Valsartan (Diovan)

## Antiseizure

Carbamazepine (Tegretol-XR)  
Phenobarbital  
Phenytoin (Dilantin)  
Oxycarbazepine (Trileptal)  
Valproic acid and derivatives (Depakote)

## Benzodiazepine

Alprazolam (Xanax)  
Chlordiazepoxide (Librium)  
Clonazepam (Klonopin)  
Diazepam (Valium)  
Lorazepam (Ativan)

## Cardiovascular

Amiodarone HCL (Cordarone)  
Digoxin (Digitek, Lanoxin)  
Isosorbide (Isordil)

## Diuretics

Furosemide (Lasix)  
Hydrochlorothiazide (Hydrodiuril)  
Hydrochlorothiazide/triamterene (Dyazide)  
Metolazone (Zaroxolyn)  
Spironolactone (Aldactone)  
Torsemide (Demadex)

## Hypoglycemic

Glimepiride (Amaryl)  
Glipizide (Glucotrol)  
Insulin (Novolin)  
Metformin HCL (Glucophage)  
Pioglitazone (Actos)  
Rosiglitazone (Avandia)

## Narcotic

Fentanyl patch (Duragesic)  
Hydrocodone/acetaminophen (Vicodin)  
Meperidine (Demerol)  
Oxycodone (OxyContin)  
Propoxyphene/acetaminophen (Darvocet)

## Parkinsons

Carbidopa/levodopa (Sinemet)  
Pramipexole (Mirapex)  
Ropinirole (Requip)  
Selegiline HCL (Eldepryl)

## Psychotropic

Bupropion (Wellbutrin)  
Citalopram (Celexa)  
Donepezil (Aricept)  
Escitalopram (Lexapro)  
Fluoxetine (Prozac)  
Galantamine (Reminyl [DSC])  
Haloperidol (Haldol)  
Mirtazapine (Remeron)  
Olanzapine (Zyprexa)  
Paroxetine (Paxil)  
Quetiapine (Seroquel)  
Risperidone (Risperdal)  
Rivastigmine (Exelon)  
Sertraline (Zoloft)  
Trazodone (Desyrel [DSC])  
Venlafaxine (Effexor XR)

## Sedative / Hypnotic

Zaleplon (Sonata)  
Zolpidem (Ambien)

## Miscellaneous

Prednisone

# Wheelchair Seating for Elders

## Introduction

For non-therapy staff, this booklet provides basic principles for comfortable, safe wheelchair seating that may reduce falls and injury from falls.

Falls from wheelchairs occur when a person rises from a chair unsupervised or slides from an ill-fitting chair. The need to move may be due to discomfort, pain, anxiety, boredom, the desire to look for a snack, use the toilet, assist another person or the physiologic need to move for self- stimulation.

Proper fit and maintenance of the wheelchair is one approach to reducing sliding, discomfort and pain. Alternative seating or positioning in bed, bedside recliner chair, or dining chair reduces the need to move and stretch.

Opportunities for safe movement with assisted ambulation, use of a geri walker, or stationary glider can meet the need for stimulation through movement for an individual with Alzheimer's dementia.

Ideally, all persons using a wheelchair should be evaluated by an occupational or physical therapist to achieve optimal functional mobility.

Nursing staff need to recognize inappropriate seating and be able to provide a safe wheelchair fit until or in the absence of a therapist's assessment.



## Fit the Chair to the Needs of the Person

### Challenges

- Ideal sitting posture is unnatural.
- People slide into a position of comfort and support. However . . . everyone fatigues out of the ideal sitting posture.
- Body type and disability often prevent ideal sitting posture.

### Multiple-Sized Wheelchairs

Most modern standard wheelchairs have “dual axle” adjustments for the rear wheel and three placements to adjust the front caster. This allows the chair seat to be lowered or raised two inches.

### Gravity-Assisted Seating

Use the force of gravity to prevent a person from sliding forward in a chair by lowering the back of the seat and raising the front of the seat.

Anti-tippers may be necessary to balance the center of gravity.

If raising the front of the chair prevents the elder from placing their feet flat on the floor to self propel, a lower wheelchair frame may be needed: hemi-height, super hemi-height or youth chair.

### Center of Mass Must Stay Within the Base of Support

**Example:** As this person leans forward his center of mass will be in front of the seat.

His weight will press down on the foot plates. His chair will tip

and he will fall forward out of his wheelchair.

With a deeper seat, his center of mass could be contained within the base of support when he leans forward.

### Two-Finger Rule: Seat Depth

Leave no more or less than two finger widths of space behind the back of the calf and the front edge of the wheelchair.



Seat too short



Seat is too deep

### Two-Finger Rule: Seat Width

Leave no more or less than two finger widths of space between the hip and the inside of the wheelchair arm.

Too Wide



Just Right

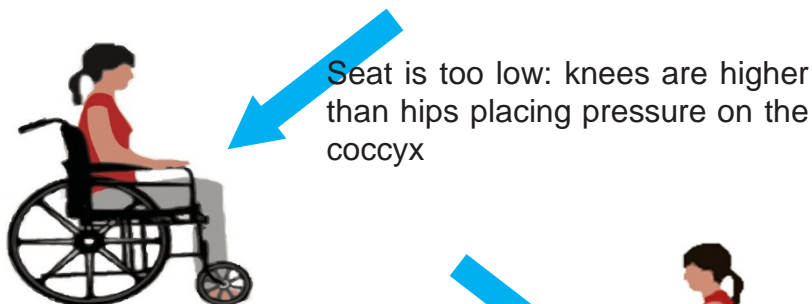


Too Narrow

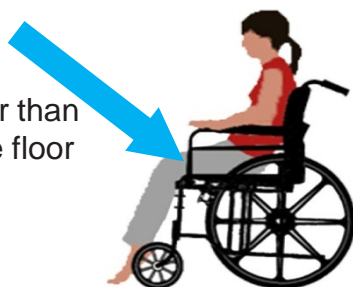


## Seat Height

Thighs should be parallel to the floor. Knees should be same height as hips. Feet should be flat on floor or foot pedal.

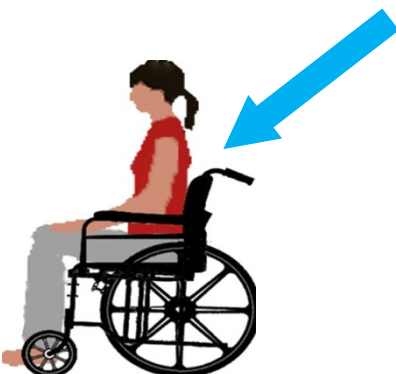


Seat is too high: knees are lower than hips contributing to a slide to the floor



## Back Support

The top of the wheelchair back should come to the midpoint of the shoulder blade



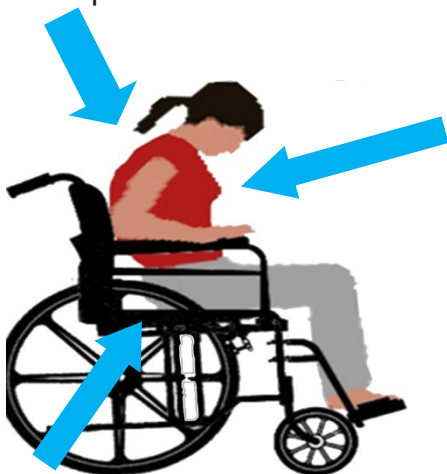
A lower height will cause the elder to lean back over the upholstery, placing them at-risk for tipping backward

## Kyphotic (Curved) Back

## Challenges

Apex of back curve will have extra pressure.

Face will be looking down at knees, making social interaction and swallowing difficult.



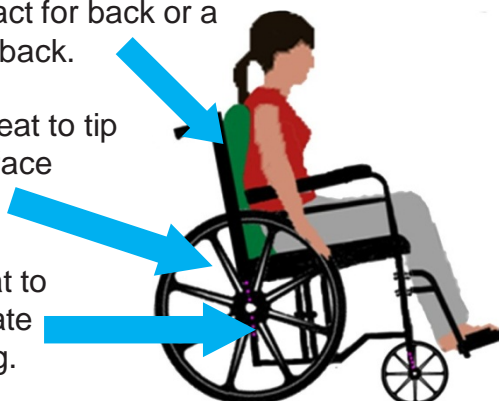
Lack of low back support causes pain.

## Solutions

To spread pressure, use total contact for back or a moldable back.

Lower back of seat to tip chair and bring face vertical.

Deepen seat to accommodate sacral sitting.

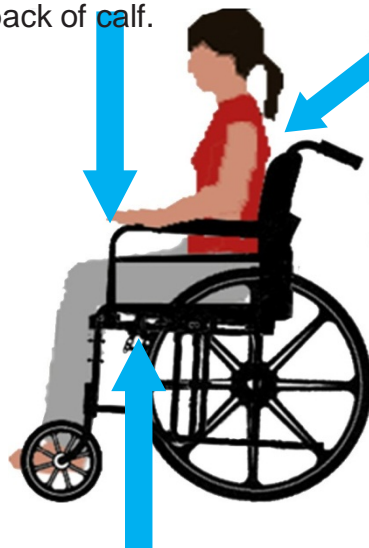


If foot propelling, use lower chair frame before tipping seat

## Tall Lean Individuals

Increase depth of seat to within 2 finger widths from back of calf.

Raise back of chair to mid scapula



Increase seat height from floor to allow thighs to be parallel to floor and feet flat on floor.

## Cardiopulmonary Compromised Individuals

### Challenges

Individuals with CHF and/or COPD have limited energy to propel chairs. Rugs and poorly maintained chairs increase drag and increase energy use for mobility. Regular wheelchairs weigh 35-50 pounds.

### Solutions

Select lightweight titanium wheelchairs and lightweight oxygen canisters. Promote smooth floor surfaces.

## Obese Persons

### Challenge

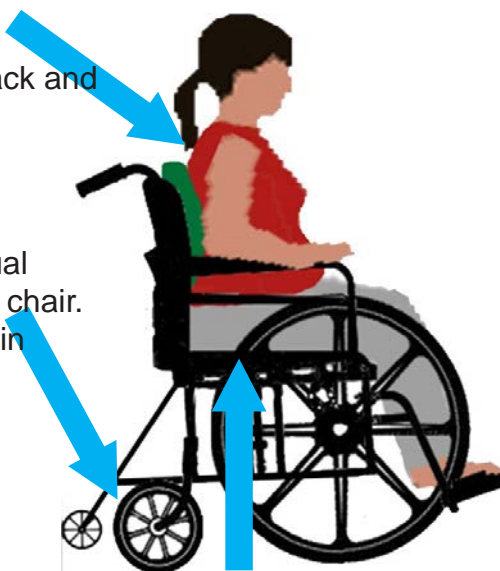
Challenge: Extra fat padding behind pelvis pushes bottom forward



### Solutions

Insert back support above buttocks to support low back and shoulders.

Tip the chair if the individual continues to slide down in chair. If needed put large wheel in front for easier propelling.



Deepen seat to accommodate extra padding.

## Repetitive Movement

### Challenges

Individuals, who rise from their chair repeatedly or rock their chair side-to-side or front-to-back, are often expressing their physiologic need to move. This is an extension of the self-stimulating pacing seen in ambulatory residents with dementia.

### Solution

Provide frequent opportunities to walk and/or stand with assistance. Stationary gliders and geri walkers can be used with appropriate supervision to meet this need.

## Repetitive Pelvic Thrusting

### Challenge

Repetitive pelvic thrusting is often a sign of low back or hip pain. Asymmetrical thrusting of one hip forward in the chair may represent pain from the flexed hip.

### Solution

Before modifying the seating, investigate and treat the source of discomfort.



## **Complex Seating**

Seating for individuals with high muscle tone due to Parkinson's disease, traumatic brain injury, or cerebral palsy should be assessed by a qualified physical or occupational therapist.

Seating for individuals with sudden-uncontrolled movement patterns should also be referred on to physical or occupational therapists.

Severely contracted individuals present complex challenges requiring specialty seating.

Ideally all individuals requiring wheelchair seating should be assessed by qualified physical or occupational therapists to optimize function and comfort.

## **Fall Prevention Without Use of Restraints and Alarms**

The use of the principles outlined in this booklet may be all that is needed to reduce falls without utilizing seat belts, lap buddies and alarms.

In addition to seating modification, plan care and implement interventions which reduce boredom, anxiety, confusion, paranoia, discomfort, pain and physiologic need for movement.



## Wheelchair Cushions

Use appropriate pressure redistribution cushion (foam, gel, air or combo)

Discard and replace foam cushions that do not rebound to original shape when offloaded

Ensure gel in gel cushions is evenly distributed throughout cushion when in use

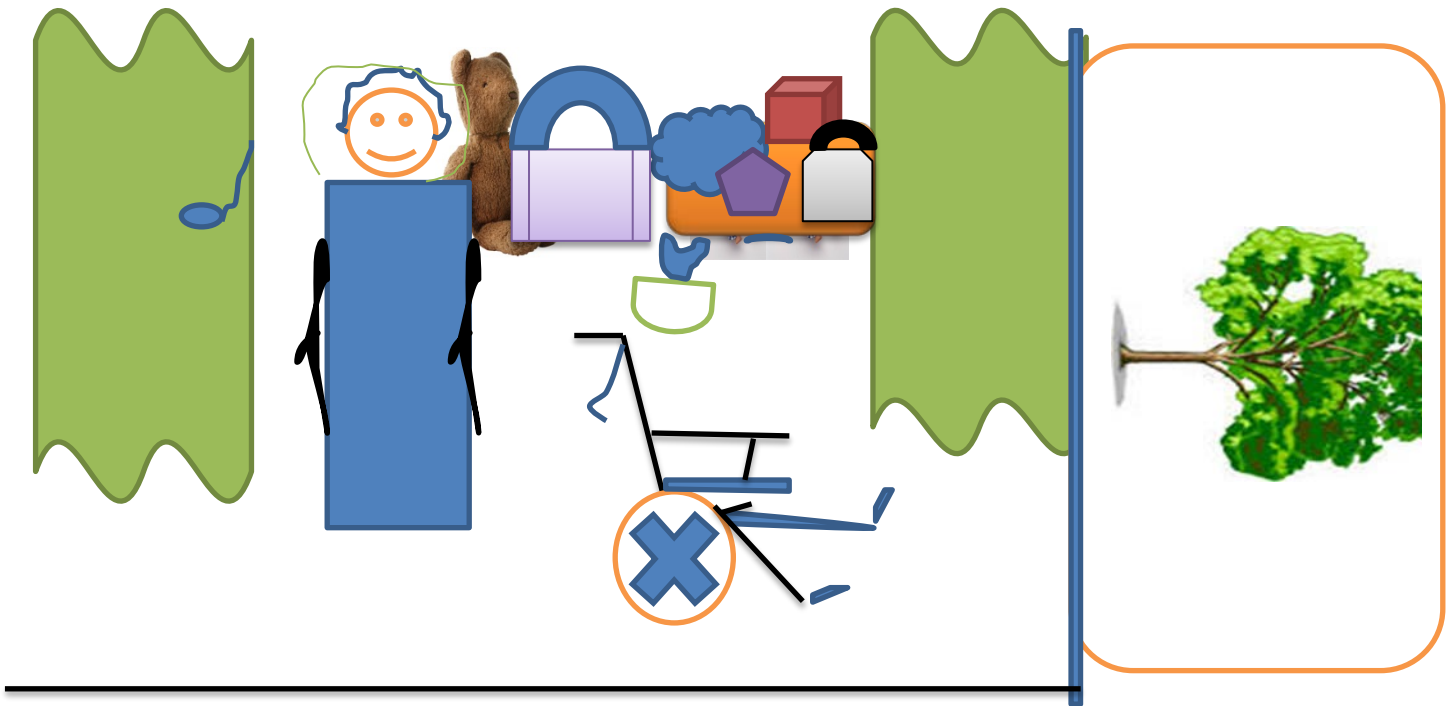
Ensure air cushions are appropriately inflated to allow resident to sit in cushion, not on cushion

Ensure approximately 2 inches of air between your fingers and individual's bony prominences if you slide your hand under the cushion and push up toward the ischial tuberosity

Always cover cushion with manufacturer's recommended moisture-repellent cover

Do not use bed pillows for wheelchair cushions or back support

# MARY



Mary fell yesterday. She was lying on her side, her head near the basket with the blue bunny she likes to keep on the floor. She couldn't explain, but you know she loves to go into the drawers in the chest by the window. She gets around in her wheelchair, propelling with her hands on the wheels. In use are bed & chair alarms.

## Medical Diagnoses

Anemia  
CHF  
Dementia  
Osteoarthritis  
Diabetes

## Medications

Iron supplement  
Lasix  
Exelon patch  
Ibuprophen  
Metformin

## Laboratory Tests

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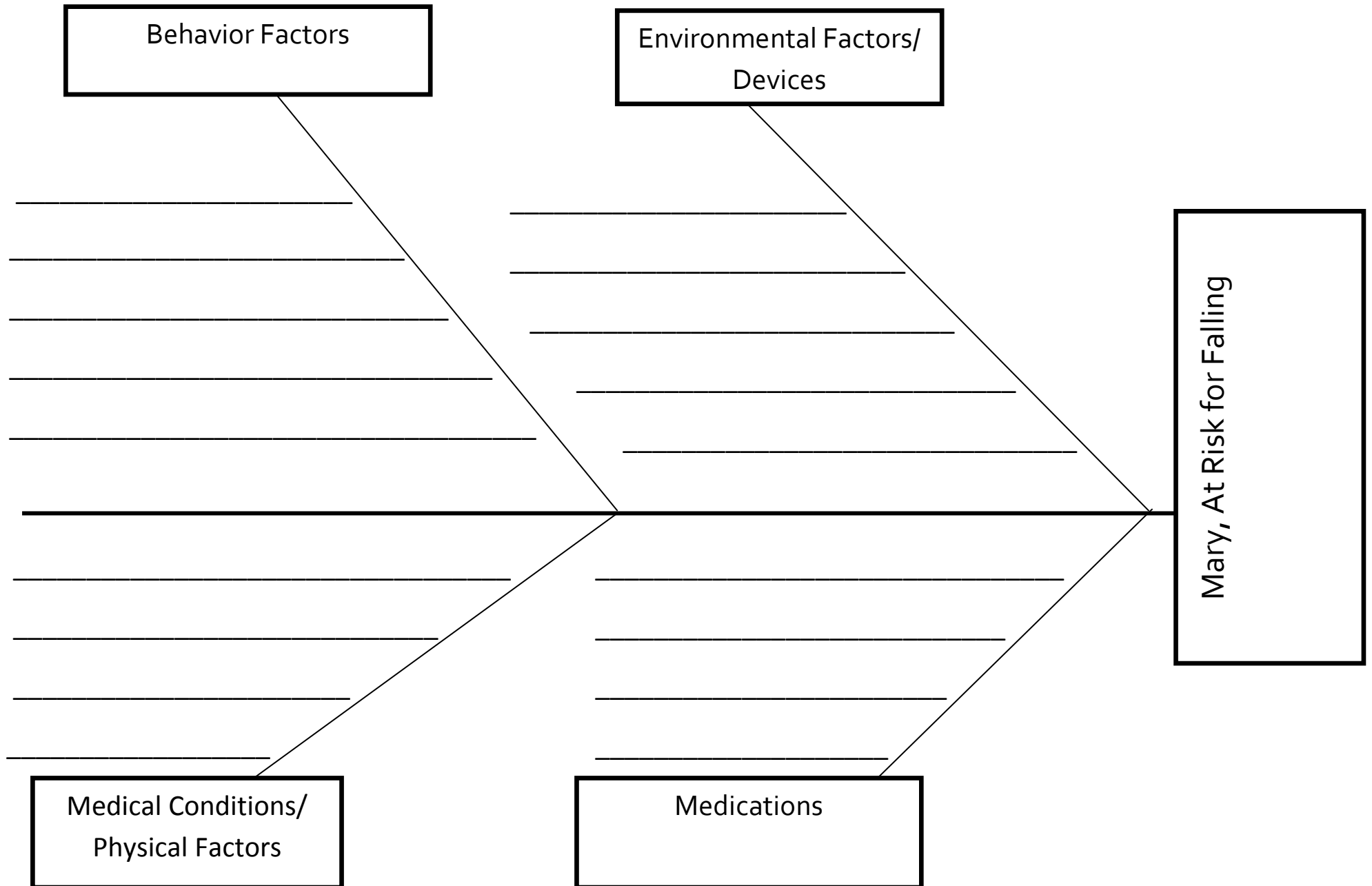
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Based on the above information & what you see, identify possible causes of the fall, & what you can do to reduce fall risks.

What immediate actions can you take, add to the care plan and communicate to staff, resident and family? Use fishbone for analysis.

Root Cause Analysis Fishbone – PIP: \_\_\_\_\_ Date: \_\_\_\_\_

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## 5 WHYS TOOL

Problem statement:

(One sentence description of event)

**WHY?**

**WHY?**

**WHY?**

**WHY?**

**WHY?**

**ROOT CAUSE(S)**

- 1.
- 2.
- 3.

**To validate Root Causes-Ask the following:**

If you removed this Root Cause, would this event have been prevented?

# FALLS PREVENTION PROGRAM WORKSHEET

## Pre-Admission / Admission Commitment:

### Expectations

Staff will:

Family will:

Resident will:

## Features of Falls Reduction Program

### **Preadmission**

Referral sources/physicians know your focus and features

Discussion of program with tours and prospective admissions

### **Admission**

Immediate greeting with emphasis on safety

Falls prevention handout

Resident/family teaching components

Assessment components

Assessment results incorporated in care plan and communicated

On-going, Facility-Wide Safety Measures

Staff Education components

# FALLS PREVENTION PROGRAM WORKSHEET

## Protocol When Falls Occur

## Falls Prevention Process Improvement Process

### Notes

Prototype Case

Pre-Admission/ Admission

Communicate Commitment and Rationale for Assessment

Required Assessment Data

History & Root Causes

Current Status

- Footwear – Comfortable, supportive, in good repair
- Seating – Comfortable, supportive, tilted if needed
- Standing - Balanced
- Transfers
- Walking
- Toileting status

Resident & family response to commitment, immediate care plan measures

ADLs – Transfers, Foot Assessment, Footwear, Seating

Cognition – Safety Awareness, Memory

Continence – Assistance, Equipment

Environment – Surfaces, Lighting, Safety Features, Furniture

History of falls – Circumstances, Patterns, RCA

Locomotion – Independence ≠ Safety, Equipment, Assistance

Chris Osterberg 2013 Fall JPSt

# **FALLS PREVENTION PROGRAM WORKSHEET**

**Medical Conditions – Stability, Impairments**

**Medications – Reasons-Necessity, Side Effects, Reasons for Recent Changes, Required Monitoring**

**Fishbone**

**5WHYs**

**Person-Centered Care Plan**

**Communication Process**

**Person-Centered Care Plan**

<b>Problem Statement (list risks)</b>	<b>Goals</b>	<b>Interventions (correspond to each risk)</b>	<b>Responsible Staff</b>



## RISK MANAGER UPDATE

The furniture was rearranged and now resident friendly.

Foot rests removed to accommodate to get close to her dolls and drawers.

Therapy picked her up.

The one thing I did notice yesterday is that she is not using her feet to propel herself.

It's not that she can't, it's probably because she is not used to having the foot rests off.

Also I took the bed rails off.

She was found moving to the end of bed, getting up and walking around her bed.

The string alarm removed because she takes it off. Not helpful.

Only has loose fitting slippers.

Having her family bringing in tie shoes