



## NATIONAL GUIDELINE CLEARINGHOUSE™ (NGC) GUIDELINE SYNTHESIS

### PREVENTION OF FALLS IN THE ELDERLY

#### GUIDELINES BEING COMPARED

1. **Health Care Association of New Jersey (HCANJ)**. [Fall management guideline](#). Hamilton (NJ): Health Care Association of New Jersey; 2007 Mar. 32 p.
2. **Hartford Institute for Geriatric Nursing (HIGN)**. [Preventing falls in acute care](#). Preventing falls in acute care. In: Capezuti E, Zwicker D, Mezey M, Fulmer T, editor(s). Evidence-based geriatric nursing protocols for best practice. 3rd ed. New York (NY): Springer Publishing Company; 2008. p. 161-98. [74 references]
3. **Registered Nurses Association of Ontario (RNAO)**. [Prevention of falls and fall injuries in the older adult](#). Toronto (ON): Registered Nurses Association of Ontario; 2005 Mar. 56 p. [77 references]

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#### AREAS OF AGREEMENT AND DIFFERENCE

A direct comparison of recommendations presented in the above guidelines for prevention of falls in the elderly is provided below.

## **Areas of Agreement**

### **Fall Risk Assessment**

All three guidelines address fall prevention in extended and/or acute care settings, and agree that older patients should undergo an extensive initial assessment for fall risk. HIGN and RNAO recommend assessment upon admission; HCANJ recommends initial assessment within 24 to 48 hours of admission and a comprehensive assessment within 14 to 21 days. RNAO states that risk screening is an effective method for identifying fall-prone individuals and that the risk assessment tool used must be appropriate for the setting and the specific client population. The guidelines agree that after a fall, an analysis of the fall and/or complete fall risk evaluation should be performed.

There is general agreement on the risk factors that are most important to assess as part of a complete fall risk evaluation. These include history of fall circumstances, medications, existing medical problems, gait and balance, neurological status, and cardiovascular status. Other risk factors to assess that are included in some but not all guidelines are fear of falls, vision, incontinence, joint function, assistive devices, pain, and foot assessment.

### **Multifactorial Interventions**

All the guidelines recommend multifactorial interventions, including gait and balance training, review and modification of medications, treatment of postural hypotension, exercise programs, use of walking aids, vision assessment/referral, and environmental modifications. HCANJ and HIGN also recommend continence promotion and toileting programs. RNAO recommends nurses provide clients with information on the benefits of vitamin D supplementation. HCANJ similarly recommends that patients be evaluated for the need for vitamin D and/or calcium supplementation.

### **Exercise**

All of the guidelines include exercise (strength and balance training) as a beneficial intervention. HIGN recommends that caregivers promote early mobility and incorporate measures to increase mobility, such as daily walking, if medically stable and not otherwise contraindicated. According to RNAO, the benefit of exercise as an isolated intervention is not supported by the research; rather, exercise needs to be part of a multifactorial approach. RNAO also recommends Tai Chi for clients whose length of stay is greater than four months and those with no history of fall fracture.

### **Assistive Devices, Hip Protectors and Restraints**

The two guidelines that address the issue of physical restraints, HIGN and RNAO, are in agreement that there is no evidence that they prevent falls. RNAO points out that physical restraints may increase risk of falls and recommends that organizations establish a policy for least restraint. With regard to hip protectors, RNAO states that although they do not prevent falls, they may decrease fall-related injuries. According to RNAO, nurses should not use side rails for the prevention of falls or recurrent falls for clients receiving care in health care facilities. They add, however, that other client factors may influence decision-

making around the use of side rails. HIGN urges that bedrails must be checked to be sure they do not collapse when used for transitioning or support.

**Patient and Carer Education**

All of the guidelines provide recommendations for patient, carer and/or professional education.

**Areas of Difference**

There are no significant areas of difference between the guidelines.

<b>COMPARISON OF RECOMMENDATIONS</b>	
<p><b>ASSESSMENT</b>  <a href="#">Abbreviations</a>  <a href="#">Back to TOC</a></p>	
<b>Assessment of Fall Risk</b>	
<b>HCANJ (2007)</b>	<p><b>Clinical Assessment</b></p> <ul style="list-style-type: none"> <li>• Assessment form - recommend rating scale</li> <li>• Completed by registered nurse</li> <li>• Time of completion               <ul style="list-style-type: none"> <li>• Admission fall risk assessment completed within 24 to 48 hours of admission</li> <li>• If indicated, comprehensive fall risk assessment within 14 to 21 days after admission</li> </ul> </li> <li>• Frequency of reassessment               <ul style="list-style-type: none"> <li>• Upon a fall</li> <li>• Significant change likely to increase fall prediction factors</li> <li>• Quarterly for skilled nursing facilities and nursing facilities</li> <li>• Semi-annually for assisted living facilities</li> </ul> </li> </ul> <p><b>Rehabilitation Assessment</b></p> <ul style="list-style-type: none"> <li>• Completed by physical therapist (PT) or occupation therapist (OT)</li> <li>• Form: (i.e., Tinetti Gait and Balance Tool or Berg Balance Scale [refer to original guideline document for these tools])</li> <li>• Transfer evaluation</li> <li>• Time of completion (recommend 24 to 48 hours after referral)</li> <li>• Frequency of re-evaluation</li> </ul> <p><b>Continence Protocol</b></p> <ul style="list-style-type: none"> <li>• Toilet schedule</li> </ul>

	<ul style="list-style-type: none"> <li>• Bladder training, as indicated</li> </ul> <p><b>Mental Status Assessment</b></p> <ul style="list-style-type: none"> <li>• Recall</li> <li>• Judgment (safety awareness)</li> <li>• Complete mini-mental status assessment</li> </ul> <p><b>Analysis/Assess Level of Risk</b></p> <ul style="list-style-type: none"> <li>• Identify level of risk based on collective assessments and professional judgment</li> </ul>
<p><b>HIGN (2008)</b></p>	<p><b>Parameters of Assessment</b></p> <p>Assess and document all older adult patients for intrinsic risk factors to fall:</p> <ul style="list-style-type: none"> <li>• Advancing age, especially if older than 75</li> <li>• History of a recent fall</li> <li>• Specific co-morbidities: dementia, hip fracture, type II diabetes, Parkinson's disease, arthritis, and depression</li> <li>• Functional disability: use of assistive device</li> <li>• Alteration in level of consciousness or cognitive impairment</li> <li>• Gait, balance, or visual impairment</li> <li>• Use of high-risk medications (Chang et al., 2004 <b>[Level I]</b>)</li> <li>• Urge urinary incontinence (Brown, Vittinghoff, &amp; Wyman, 2000 <b>[Level III]</b>)</li> <li>• Physical restraint use (Capezuti et al., 2002 <b>[Level III]</b>)</li> <li>• Bare feet or inappropriate footwear</li> <li>• Identify risks for significant injury due to current use of anticoagulants such as Coumadin, Plavix, or aspirin and/or those with osteoporosis or risks for osteoporosis (Resnick, 2003 <b>[Level VI]</b>).</li> </ul> <p><b>Nursing Care Strategies</b></p> <p>On admission, assess/screen older adult patient for multifactorial risk factors to fall, following a change in condition, on transfer to a new unit, and following a fall (ECRI, 2006 <b>[Level VI]</b>):</p> <ul style="list-style-type: none"> <li>• Use standardized or empirically tested fall-risk tools in conjunction with other assessment tools to evaluate risk for falling (e.g., Tinetti Performance Oriented Mobility, the Timed Get Up and Go Test, [Tinetti, Williams, &amp; Mayewski, 1986] <b>[Level II]</b>; "Guideline for the prevention," 2001 <b>[Level VI]</b>).</li> <li>• Document findings in nursing notes, interdisciplinary progress notes, and the problem list.</li> <li>• Communicate and discuss findings with interdisciplinary team</li> </ul>

	<p>members.</p> <p>Identify specific patients requiring additional safety precautions and/or evaluation by a specialist, or:</p> <ul style="list-style-type: none"> <li>• Those with impaired judgment or thinking due to acute or chronic illness (delirium, mental illness)</li> <li>• Those with osteoporosis, at risk for fracture</li> <li>• Those with current hip fracture</li> <li>• Those with current head or brain injury (standard of care)</li> </ul>
<p><b>RNAO (2005)</b></p>	<p><b>Assessment</b></p> <p>Assess fall risk on admission.</p> <p><i>(Level of Evidence = Ib; Grade of Recommendation = B)</i></p> <p>Fall risk assessment is important as it provides direction for the multiple interventions which have been shown to reduce a person's risk of falling. Commonly identified fall risk factors for elderly patients in health care settings include confusion, tranquilizer use, hearing deficits, cognitive impairment, previous stroke, previous falls, confusion/delirium, acute diseases, and/or side effects of drugs. Risk screening is an effective method for identifying fall-prone individuals. A systematic review of fall screening tools concluded that since all residents of long term care (LTC) were likely to be at high risk of falls, universal fall prevention maneuvers should be administered in this setting, and that various tools such as the Morse Fall Scale, the STRATIFY risk assessment tool, and the Hendrich II Fall Risk Model© could be used. Assessment for fall risk is the key. The tool used must be appropriate for the setting and for the specific client population. Therefore, it is essential to assess the patient population in order to select a tool most appropriate for the setting. Appendix C in the original guideline document contains information on how to access the tools discussed above.</p>
<p><b>Post-Fall Assessment/Evaluation</b></p>	
<p><b>HCANJ (2007)</b></p>	<p><b>Post-fall Evaluation</b></p> <ul style="list-style-type: none"> <li>• Fall Management Investigation or Post Fall Assessment Tool</li> <li>• Physical assessment</li> <li>• Contributing factors to fall</li> </ul> <p><b>Reporting Mechanism/Tracking of Falls Within the Facility</b></p> <ul style="list-style-type: none"> <li>• Facility Fall Summary/Analysis</li> <li>• Action of the interdisciplinary team <ul style="list-style-type: none"> <li>• Timely modifications to the treatment plan</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• Family/resident conferences</li> <li>• Physical adaptation to room, wheelchair, and/or walking device</li> <li>• Collective review identification, and analysis of trends in resident falls throughout the facility</li> </ul> <p>Facility protocol may include falls management review and analysis by the safety committee, falls committee, interdisciplinary care (IDC) plan committee, quality improvement committee, or other established interdisciplinary group.</p> <p><b>Quality Improvement</b></p> <ul style="list-style-type: none"> <li>• Collect falls data (including near miss data) <ul style="list-style-type: none"> <li>• Post fall tool</li> <li>• Falls summary report <ul style="list-style-type: none"> <li>• Conduct interdisciplinary analysis of information to gain helpful knowledge</li> <li>• Review and revise policies and procedures as appropriate <ul style="list-style-type: none"> <li>• Retrain staff on new policies and procedures</li> </ul> </li> </ul> </li> </ul> </li> <li>• Complete Facility Falls Data summary document <ul style="list-style-type: none"> <li>• Analyze information</li> <li>• Revise policies and procedures as appropriate <ul style="list-style-type: none"> <li>• Retrain staff on new policies and procedures</li> </ul> </li> </ul> </li> </ul>
<p><b>HIGN (2008)</b></p>	<p><b>Parameters of Assessment</b></p> <p>Perform a PFA following a patient fall to identify possible fall causes (if possible, begin the identification of possible causes within 24 hours of a fall) as determined during the immediate, interim, and longitudinal post-fall intervals. Because of known incidences of delayed complication of falls, including fractures, observe all patients for about 48 hours after an observed or suspected fall ("Guideline for the prevention," 2001 [<b>Level VI</b>]; ECRI, 2006 [<b>Level VI</b>]; Gray-Miceli et al, 2006 [<b>Level III</b>]):</p> <ul style="list-style-type: none"> <li>• Perform a physical assessment of the patient at the time of the fall, including vital signs (which may include orthostatic blood pressure readings), neurological assessment, and evaluation for head, neck, spine, and/or extremity injuries.</li> <li>• Once the assessment rules out any significant injury: <ul style="list-style-type: none"> <li>• Obtain a history of the fall by the patient or witness description and document</li> <li>• Note the circumstances of the fall: location, activity, time of day, and any significant symptoms</li> <li>• Review of underlying illness and problems</li> <li>• Review medications</li> </ul> </li> </ul>

- Assess functional, sensory, and psychological status
- Evaluate environmental conditions
- Review risk factors for falling ("Guideline for the prevention," 2001; American Medical Directors Association [AMDA], 1998; ECRI, 2006; University of Iowa Gerontological Nursing Interventions Research Center [UIGN], 2004; Resnick, 2003 [**all Level VI**])

The process approach to an individualized PFA includes use of standardized measurement tools of patient risk in combination with a fall-focused history and physical examination, functional assessment, and review of medications ("Guideline for the prevention," 2001; AMDA, 1998; Resnick, 2003; UIGN, 2004 [**all Level VI**]). When plans of care are targeted to likely causes, individualized interventions are likely to be identified. If falling continues despite attempts at individualized interventions, the standard of care warrants a reexamination of the older adult and their falls.

**Nursing Strategies**

- Communicate to the physician or advance practice nurse important PFA findings (ECRI, 2006 [**Level VI**]).
- Monitor the effectiveness of the falls prevention interventions instituted.
- Following a patient's fall, observe for serious injury due to a fall and follow facility protocols for management (standard of care).
- Following a patient's fall, monitor vital signs, level of consciousness, neurological checks, and functional status per facility protocol. If significant changes in patient's condition occurs, consider further diagnostic tests such as plain film x-rays, CT scan of the head/spine/extremity, neurological consultation, and/or transfer to a specialty unit for further evaluation (standard of care).

**RNAO  
(2005)**

**Assessment**

Assess fall risk after a fall.

*(Level of Evidence = Ib; Grade of Recommendation = B)*

A fall in an elderly person is often a presentation of a disease (sentinel fall), and a previous fall triples the odds of a client experiencing a future fall. A randomized controlled trial (RCT) in an American long-term care (LTC) facility has shown that resident assessment within seven days of a fall was effective at preventing subsequent hospitalization and reduced hospital days, although it did not reduce fall rate.

**FALL PREVENTION INTERVENTIONS**

**Intervention Planning**

**HCANJ  
(2007)**

**Dynamic Treatment Plan**

Specific interventions based on fall assessment results and resident preferences all interdisciplinary team members must address:

- Resident, staff, and family teaching
- Room modifications
- Resident's daily routines
- Mental status/behaviors
- Physical limitations
  - Activities of daily living (ADL) skills
  - Continence
- Pain
- Medication use
- Consistent and proper uses of assistive or protective devices based on assessments

Updated information consistently communicated to the staff, resident, and family:

- Staff
  - General classification system identifying resident's potential to fall and staff response
  - Summary of assessments/changes in plan of care
  - Verbal and written report
- Residents
  - One-to-one education and review
- Families
  - Care conferences

**HIGN  
(2008)**

**Parameters of Assessment**

In the acute-care setting, an integrated multidisciplinary team (consisting of the physician, nurse, health care provider, risk manager, physical therapist, and other designated staff) plans care for the older adult, at risk for falls or who has fallen, hinged on findings from an individualized assessment (ECRI, 2006; Joint Commission on Accreditation of Healthcare Organizations [JCAHO], 2006 [**both Level VI**]).

**Nursing Care Strategies**

Review and discuss with interdisciplinary team findings from the individualized assessment and develop a multidisciplinary plan of

	care to prevent falls (Chang et al., 2004 [ <b>Level I</b> ]).
<b>RNAO (2005)</b>	<p><b>Intervention</b></p> <p><i>Organizational Support</i></p> <p>Organizations create an environment that supports interventions for fall prevention that includes:</p> <ul style="list-style-type: none"> <li>• Fall prevention programs</li> <li>• Staff education</li> <li>• Clinical consultation for risk assessment and intervention</li> <li>• Involvement of multidisciplinary teams in case management</li> <li>• Availability of supplies and equipment such as transfer devices, high low beds, and bed exit alarms</li> </ul> <p><i>(Level of Evidence = IV)</i></p>
<b>Medication Review and Modification</b>	
<b>HCANJ (2007)</b>	<p>Included in initial clinical risk assessment by nurse:</p> <p><b>Pharmacological Assessment</b></p> <ul style="list-style-type: none"> <li>• Completed by pharmacy consultant or physician</li> <li>• Review of medication profile as needed</li> <li>• Evaluate risk for osteoporosis and recommend treatment as necessary</li> <li>• Evaluate need for Vitamin D and/or calcium supplements</li> </ul> <p><b>Dynamic Treatment Plan</b></p> <p>Specific interventions based on fall assessment results and resident preferences. The interdisciplinary team members must address:</p> <ul style="list-style-type: none"> <li>• Medication use</li> </ul>
<b>HIGN (2008)</b>	<p><b>Parameters of Assessment</b></p> <p>Assess and document all older adult patients for intrinsic risk factors to fall:</p> <ul style="list-style-type: none"> <li>• Identify risks for significant injury due to current use of anticoagulants such as Coumadin, Plavix, or aspirin and/or those with osteoporosis or risks for osteoporosis (Resnick, 2003 [<b>Level VI</b>]).</li> </ul>

	<p><b>Nursing Care Strategies</b></p> <ul style="list-style-type: none"> <li>In the interdisciplinary discussion, include review and reduction or elimination of high-risk medications associated with falling.</li> </ul>
<p><b>RNAO (2005)</b></p>	<p><b><u>Intervention</u></b></p> <p><b>Medications</b></p> <p>Nurses, in consultation with the health care team, conduct periodic medication reviews to prevent falls among the elderly in health care settings. Clients taking benzodiazepines, tricyclic antidepressants, selective serotonin-reuptake inhibitors, trazodone, or more than five medications should be identified as high risk. There is fair evidence that medication review be conducted periodically throughout the institutional stay.</p> <p><i>(Level of Evidence = IIb; Grade of Recommendation = B)</i></p> <p><b><u>Organization and Policy Recommendations</u></b></p> <p><b>Medication Review</b></p> <p>Organizations implement processes to effectively manage polypharmacy and psychotropic medications including regular medication reviews and exploration of alternatives to psychotropic medication for sedation.</p> <p><i>(Level of Evidence = IV)</i></p>
<p><b>Gait, Balance, and Exercise Interventions</b></p>	
<p><b>HCANJ (2007)</b></p>	<p><b>Rehabilitation Assessment</b></p> <ul style="list-style-type: none"> <li>Form: (e.g., Tinetti Gait and Balance Tool or Berg Balance Scale)</li> </ul> <p><b>Dynamic Treatment Plan</b></p> <p>Specific interventions based on fall assessment results and resident preferences. The interdisciplinary team members must address:</p> <ul style="list-style-type: none"> <li>Physical limitations</li> <li>Consistent and proper uses of assistive or protective devices based on assessments</li> </ul>
<p><b>HIGN (2008)</b></p>	<p><b>Nursing Care Strategies</b></p>

	<ul style="list-style-type: none"> <li>• Promote early mobility and incorporate measures to increase mobility, such as daily walking, if medically stable and not otherwise contraindicated.</li> <li>• Explore with the older patient and/or family caregiver avenues to maintain mobility and functional status; consider referral to home-based exercise or group exercises at community senior centers. If discharge is planned to a subacute or rehabilitation unit, label the older adult's mobility status, functional status, and other forms of activity in the home to increase gait or balance on the transfer form.</li> </ul>
<p><b>RNAO (2005)</b></p>	<p><b><u>Intervention</u></b></p> <p><b>Tai Chi</b></p> <p>Tai Chi to prevent falls in the elderly is recommended for those clients whose length of stay (LOS) is greater than four months and for those clients with no history of a fall fracture. There is insufficient evidence to recommend Tai Chi to prevent falls for clients with length of stay less than four months.</p> <p><i>(Level of Evidence = Ib; Grade of Recommendation = B)</i></p> <p><b>Exercise</b></p> <p>Nurses can use strength training as a component of multi-factorial fall interventions; however, there is insufficient evidence to recommend it as a stand-alone intervention.</p> <p><i>(Level of Evidence = Ib; Grade of Recommendation = I)</i></p>
<p><b>Environmental Modification</b></p>	
<p><b>HCANJ (2007)</b></p>	<p><b><u>Assessments</u></b></p> <p><b>Environment</b></p> <ul style="list-style-type: none"> <li>• Physical room lay out</li> <li>• Equipment and assistive devices</li> <li>• Lighting</li> <li>• Other</li> </ul> <p><b><u>Dynamic Treatment Plan</u></b></p> <p>Specific interventions based on fall assessment results and resident preferences. All interdisciplinary team members must address:</p>

	<ul style="list-style-type: none"> <li>• Room modifications</li> </ul>
<p><b>HIGN (2008)</b></p>	<p><b>Parameters of Assessment</b></p> <p>Assess and document patient-care environment routinely for extrinsic risk factors to fall and institute corrective action:</p> <ul style="list-style-type: none"> <li>• Floor surfaces for spills, wet areas, and unevenness</li> <li>• Proper level of illumination and functioning of lights (night light works)</li> <li>• Table tops, furniture, beds are sturdy and are in good repair</li> <li>• Grab rails and grab bars are in place in the bathroom</li> <li>• Use of adaptive aides work properly and are in good repair</li> <li>• Bedrails do not collapse when used for transitioning or support</li> <li>• Patient gowns/clothing do not cause tripping</li> <li>• Intravenous (IV) poles are sturdy if used during ambulation and tubing does not cause tripping</li> </ul> <p><b>Nursing Care Strategies</b></p> <p>Assess the patient care environment routinely for extrinsic risk factors and institute appropriate corrective action:</p> <ul style="list-style-type: none"> <li>• Use standardized environmental checklists to screen; document findings</li> <li>• Communicate findings to risk managers, housekeeping, maintenance department, all staff and hospital administration, if needed</li> <li>• Re-evaluate environment for safety (ECRI, 2006 [<b>Level VI</b>])</li> </ul> <p>Institute general safety precautions according to facility protocol, which may include:</p> <ul style="list-style-type: none"> <li>• Use of a low-rise bed that measures 14 inches from floor</li> <li>• Use of floor mats if patient is at risk for serious injury, such as osteoporosis</li> <li>• Easy access to call light</li> <li>• Use of rubber-sole heeled shoes or nonskid slippers</li> <li>• Reduction of clutter in traffic areas</li> </ul>
<p><b>RNAO (2005)</b></p>	<p><b>Environment</b></p> <p>Nurses include environmental modifications as a component of fall prevention strategies.</p> <p><i>(Level of Evidence = Ib)</i></p>

<b>Assistive/Protective Devices, Hip Protectors, and Restraints</b>	
<b>HCANJ (2007)</b>	<p><b><u>Assessments</u></b></p> <p><b>Environment</b></p> <ul style="list-style-type: none"> <li>• Equipment and assistive devices</li> </ul> <p><b>Dynamic Treatment Plan</b></p> <p>Specific interventions based on fall assessment results and resident preferences. The interdisciplinary team members must address:</p> <ul style="list-style-type: none"> <li>• Consistent and proper uses of assistive or protective devices based on assessments</li> </ul>
<b>HIGN (2008)</b>	<p><b>Nursing Care Strategies</b></p> <p>Institute general safety precautions according to facility protocol, which may include:</p> <ul style="list-style-type: none"> <li>• Minimization and/or avoidance of physical restraints</li> <li>• Use of personal or pressure sensors alarms</li> <li>• Use of rubber-sole heeled shoes or nonskid slippers</li> </ul>
<b>RNAO (2005)</b>	<p><b>Hip Protectors</b></p> <p>Nurses could consider the use of hip protectors to reduce hip fractures among those clients considered at high risk of fractures associated with falls; however, there is no evidence to support universal use of hip protectors among the elderly in health care settings.</p> <p><i>(Level of Evidence = Ib; Grade of Recommendation = B)</i></p> <p><b>Least Restraint</b></p> <p>Nurses should not use side rails for the prevention of falls or recurrent falls for clients receiving care in health care facilities; however, other client factors may influence decision-making around the use of side rails.</p> <p><i>(Level of Evidence = III; Grade of Recommendation = I)</i></p> <p>Organizations establish a corporate policy for least restraint that includes components of physical and chemical restraints.</p>

	(Level of Evidence = IV)
<b>Other Interventions</b>	
<b>HCANJ (2007)</b>	<p><b>Pharmacological Assessment</b></p> <ul style="list-style-type: none"> <li>Evaluate need for Vitamin D and/or calcium supplements</li> </ul>
<b>HIGN (2008)</b>	<p><b>Nursing Care Strategies</b></p> <p>Institute general safety precautions according to facility protocol, which may include:</p> <ul style="list-style-type: none"> <li>Increased observation and surveillance</li> <li>Regular toileting at set intervals and/or continence program; provide easy access to urinals and bedpans</li> <li>Observation during walking rounds or safety rounds</li> <li>Use of corrective glasses for walking</li> </ul>
<b>RNAO (2005)</b>	<p><b>Vitamin D</b></p> <p>Nurses provide clients with information on the benefits of vitamin D supplementation in relation to reducing fall risk. In addition, information on dietary, life style, and treatment choice for the prevention of osteoporosis is relevant in relation to reducing the risk of fracture.</p> <p>(Level of Evidence = IV)</p>
<b>Patient, Carer, and Professional Education</b>	
<b>HCANJ (2007)</b>	<p><b>Education/Awareness</b></p> <p><i>Falls Program In-Service</i></p> <ul style="list-style-type: none"> <li>Staff members <ul style="list-style-type: none"> <li>Intervals for review of Fall Management Program: <ul style="list-style-type: none"> <li>Upon orientation</li> <li>Semiannual</li> <li>Post fall evaluation as necessary</li> </ul> </li> <li>Contents of review: <ul style="list-style-type: none"> <li>Policies and procedures</li> <li>Documentation expectations</li> </ul> </li> </ul> </li> <li>Resident <ul style="list-style-type: none"> <li>Intervals for review of Fall/Safety Information: <ul style="list-style-type: none"> <li>Admission</li> <li>Care plan meetings</li> </ul> </li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• Quarterly resident population education on falls management</li> <li>• After a fall</li> <li>• Contents of review: <ul style="list-style-type: none"> <li>• Instructions and information concerning safety awareness</li> <li>• Proper use of call bells, walking devices, wheelchairs, and other assistive devices</li> </ul> </li> <li>• Family <ul style="list-style-type: none"> <li>• Intervals for review of Fall/Safety Information: <ul style="list-style-type: none"> <li>• Upon admission of the resident</li> <li>• Address with family as resident presents need to discuss</li> <li>• Upon discharge of resident</li> </ul> </li> <li>• Contents of review: <ul style="list-style-type: none"> <li>• Reasonable expectations from the facility</li> <li>• How they can assist</li> </ul> </li> </ul> </li> <li>• Department of Health and Senior Services (DHSS) <ul style="list-style-type: none"> <li>• Inform the Department of Health and Senior Services staff about the facility's Fall Program and what is the level of implementation</li> </ul> </li> </ul>
<p><b>HIGN (2008)</b></p>	<p><b>Nursing Care Strategies</b></p> <ul style="list-style-type: none"> <li>• Upon discharge, review with the older patient and/or family caregiver the fall risk factors and measures to prevent falls in the home. Provide patient literature/brochures if available. If not readily available, refer to the Internet for appropriate Web sites and resources.</li> <li>• Provide staff with clear, written procedures describing what to do when a patient fall occurs.</li> </ul>
<p><b>RNAO (2005)</b></p>	<p><b>Client Education</b></p> <p>All clients who have been assessed as high risk for falling receive education regarding their risk of falling.</p> <p><i>(Level of Evidence = IV)</i></p> <p><b>Nursing Education</b></p> <p>Education on the prevention of falls and fall injuries should be included in nursing curricula and on-going education with specific attention to:</p> <ul style="list-style-type: none"> <li>• Promoting safe mobility</li> <li>• Risk assessment</li> <li>• Multidisciplinary strategies</li> </ul>

	<ul style="list-style-type: none"> <li>• Risk management including post-fall follow-up</li> <li>• Alternatives to restraints and/or other restricted devices</li> </ul> <p><i>(Level of Evidence = IV)</i></p> <p><b>Organizational Support</b></p> <ul style="list-style-type: none"> <li>• Staff education</li> </ul> <p><i>(Level of Evidence = IV)</i></p>
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<b>STRENGTH OF EVIDENCE AND RECOMMENDATION GRADING SCHEMES</b> <a href="#">Abbreviations</a> <a href="#">Back to TOC</a>	
<b>HCANJ (2007)</b>	Not applicable
<b>HIGN (2008)</b>	<p><b>Levels of Evidence</b></p> <p><b>Level I:</b> Systematic reviews (integrative/meta-analyses/clinical practice guidelines based on systematic reviews)</p> <p><b>Level II:</b> Single experimental study (randomized controlled trials [RCTs])</p> <p><b>Level III:</b> Quasi-experimental studies</p> <p><b>Level IV:</b> Non-experimental studies</p> <p><b>Level V:</b> Care report/program evaluation/narrative literature reviews</p> <p><b>Level VI:</b> Opinions of respected authorities/Consensus panels</p>
<b>RNAO (2005)</b>	<p><b>Levels of Evidence</b></p> <p><b>Level Ia:</b> Evidence obtained from meta-analysis or systematic review of randomized controlled trials</p> <p><b>Level Ib:</b> Evidence obtained from at least one randomized controlled trial</p> <p><b>Level IIa:</b> Evidence obtained from at least one well-designed controlled study without randomization</p>

	<p><b>Level IIb:</b> Evidence obtained from at least one other type of well-designed quasi-experimental study.</p> <p><b>Level III:</b> Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies, and case studies</p> <p><b>Level IV:</b> Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities</p> <p><b>Grades of Recommendations</b></p> <p><b>A:</b> There is good evidence to recommend the clinical preventive action.</p> <p><b>B:</b> There is fair evidence to recommend the clinical preventive action.</p> <p><b>C:</b> The existing evidence is conflicting and does not allow making a recommendation for or against use of the clinical preventive action; however other factors may influence decision-making.</p> <p><b>D:</b> There is fair evidence to recommend against the clinical preventive action.</p> <p><b>E:</b> There is good evidence to recommend against the clinical preventive action.</p> <p><b>I:</b> There is insufficient evidence (in quantity and/or quality) to make a recommendation, however other factors may influence decision-making.</p>
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<b>COMPARISON OF METHODOLOGY</b>		
<i>Click on the links below for details of guideline development methodology</i>		
<a href="#"><u>HCANJ</u></a> <b>(2007)</b>	<a href="#"><u>HIGN</u></a> <b>(2008)</b>	<a href="#"><u>RNAO</u></a> <b>(2005)</b>
<p>All three groups performed searches of electronic databases to collect and select the evidence. HIGN and RNAO also performed hand searches of published literature (primary sources). To assess the quality and strength of the evidence, HCANJ employed expert consensus. HIGN and RNAO both weighted the evidence according to a rating scheme and provide the scheme. Methods used by HIGN and RNAO to analyze the evidence were identical as well, with both performing a systematic review and reviewing published meta-analyses. HCANJ performed a review. None of the groups provides details of the methods used to analyze the evidence.</p>		

With regard to formulation of guideline recommendations, all three groups utilized expert consensus; HCANJ and RNAO provide a description of the process. RNAO is the only group to grade the strength of their recommendations according to a rating scheme.

None of the groups performed a cost formal cost analysis nor reviewed published cost analyses during the development of their guidelines. The two groups to specify method(s) of guideline validation, RNAO and HIGN, both used external peer review. HIGN also used internal peer review; RNAO also used clinical validation through pilot testing. Only RNAO provides a description of the guideline validation process.

### SOURCE(S) OF FUNDING

[Abbreviations](#)

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<b>HCANJ (2007)</b>	Health Care Association of New Jersey
<b>HIGN (2008)</b>	Supported by a grant from the John A. Hartford Foundation.
<b>RNAO (2005)</b>	Funding was provided by the Ontario Ministry of Health and Long Term Care.

### BENEFITS AND HARMS

[Abbreviations](#)

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#### Benefits

<b>HCANJ (2007)</b>	Appropriate pharmacologic and surgical management of obesity in primary care
<b>HIGN (2008)</b>	<p><b>Patient</b></p> <ul style="list-style-type: none"> <li>• Safety</li> <li>• Avoidance of falls</li> <li>• Absence of s serious injury outcomes from a falls that occur</li> <li>• Knowledge of their risks for falling</li> <li>• Prepared at discharge to prevent falls in their homes</li> <li>• Prehospitalization level of mobility at discharge</li> <li>• Promptly assessment and treatment of fall-related complications to</li> </ul>

	<p>prevent adverse outcomes</p> <p><b>Nursing Staff</b></p> <ul style="list-style-type: none"> <li>• Accurate detection, referral, and management of older adults at risk for falling or who have experienced a fall</li> <li>• Integration into their practice comprehensive assessment and management approaches for prevention of falls in the institution</li> <li>• Gained appreciation for older adults' unique experience of falling and how it influences their daily living, functional, physical, and emotional status</li> <li>• Education of older adult patients anticipating discharge about falls prevention strategies</li> </ul>
<b>RNAO (2005)</b>	<p><b>Overall Benefits</b></p> <ul style="list-style-type: none"> <li>• Increased nurses' confidence, knowledge, skills, and abilities in the identification of adults at risk of falling and the ability to define interventions to prevent falls</li> <li>• Decreased falls in older adults</li> <li>• Decreased morbidity, mortality, and hospitalization rates related to falls</li> </ul> <p>Nurses, other health care professionals, and administrators who are leading and facilitating practice changes will find this document valuable for the development of policies, procedures, protocols, educational programs, assessment and documentation tools, etc.</p>
<b>Harms</b>	
<b>HCANJ (2007)</b>	Not stated
<b>HIGN (2008)</b>	Not stated
<b>RNAO (2005)</b>	Not stated

**Abbreviations**

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HCANJ, Health Care Association of New Jersey

HIGN, Hartford Institute for Geriatric Nursing

PFA, post-fall assessment

This Synthesis was prepared by ECRI on August 30, 2006. The information was reviewed by: UIGN on September 6, 2006, HCANJ on September 20, 2006, and JHF on September 29, 2006. The most current version of this Synthesis removes the American Geriatric Society, British Geriatrics Society, and American Academy of Orthopaedic Surgeons (AGS/BGS/AAOS) guideline, which has now been archived. This synthesis was updated most recently on September 15, 2008 to update HIGN recommendations and remove AMDA recommendations. This Synthesis was updated in October 2009 to update HCANJ recommendations and remove NICE and UIGN recommendations.

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