January 2007

Falls Prevention

Building the Foundations for Patient Safety

Self-Learning Package

Based on the Registered Nurses' Association of Ontario Best Practice Guideline:

Prevention of Falls and Fall Injuries in the Older Adult

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- The RNAO *Prevention of Falls and Fall Injuries in the Older Adult* development panel who developed the guideline on which this resource is based.

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Overview

The purpose of this self-learning package is to enhance the understanding and knowledge of health care providers regarding best practice for patient fall prevention.

Objectives

Upon completion of this module, the learner will be able to:

- Recognize the risk factors associated with patient falls.
- Discuss the incidence and morbidity of falls occurring in hospitals.
- Inspect patient care areas to identify and remove extrinsic hazards that may lead to patient falls.
- Define the components of a comprehensive fall management plan.
- Evaluate the need for patient supports, grab bars, and other fall prevention devices to provide a safe patient environment.

The RNAO Best Practice Guideline ***Prevention of Falls and Fall Injuries in the Older Adult*** is available for free download from the RNAO website at www.rnao.org/bestpractices.

What is a Fall?

A fall is an event that results in a person coming to rest inadvertently on the ground or floor or other lower level.

Facts About Falls

- In Canada, falls are the 6th leading cause of death among older adults.
- Falls are the leading cause for injury admissions to Ontario Acute Care Hospitals.
- It is estimated that of the 1 in 40 who are hospitalized as a result of a fall, only 50% will be alive one year later.
- Falls account for up to 84% of inpatient incidents.
- Fall injuries pose a significant burden in terms of loss of life, reduced quality of life and economic cost.
- Most falls occur between the hours of 0630-1600 hrs – during peak activity times.
- Most falls occur from or near the patient's bed while trying to transfer from one location to another (i.e. the bathroom).

RNAO Best Practice Guideline Recommendations: Prevention of Falls and Fall Injuries in the Older Adult

RECOMMENDATION		LEVEL OF EVIDENCE	GRADE OF RECOMMENDATION
Practice Recommendations			
Assessment	1.0 Assess fall risk on admission.	Ib	B
	1.1 Assess fall risk after a fall.	Ib	B
Intervention ***Tai Chi***	2.0 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 LOS less than four months.	Ib	B
Exercise	2.1 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.	Ib	I
Multi-factorial	2.2 Nurses, as part of the multidisciplinary team, implement multi-factorial fall prevention interventions to prevent future falls.	Ia	B
Medications	2.3 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.	IIb	B
Hip Protectors	2.4 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.	Ib	B

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Levels of Evidence

Ia Evidence obtained from meta-analysis or systematic review of randomized controlled trials.

Ib Evidence obtained from at least one randomized controlled trial.

IIa Evidence obtained from at least one well-designed controlled study without randomization.

IIb Evidence obtained from at least one other type of well-designed quasi-experimental study.

III Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies.

IV Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities.

Grades of Recommendation

A There is **good** evidence to recommend the clinical preventive action.

B There is **fair** evidence to recommend the clinical preventive action.

C 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.

D There is **fair** evidence to recommend against the clinical preventive action.

E There is **good** evidence to recommend against the clinical preventive action.

I There is **insufficient** evidence (in quantity and/or quality) to make a recommendation, however other factors may influence decision-making.

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RECOMMENDATION		LEVEL OF EVIDENCE	GRADE OF RECOMMENDATION
Vitamin D	2.5 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.	IV	
Client Education	2.6 All clients who have been assessed as high risk for falling receive education regarding their risk of falling.	IV	
Environment	3.0 Nurses include environmental modifications as a component of fall prevention strategies.	Ib	
Education Recommendations			
Nursing Education	4.0 Education on the prevention of falls and fall injuries should be included in nursing curricula and on-going education with specific attention to: ▸ Promoting safe mobility; ▸ Risk assessment; ▸ Multidisciplinary strategies; ▸ Risk management including post-fall follow-up; and ▸ Alternatives to restraints and/or other restricted devices.	IV	
Organization & Policy Recommendations			
Least Restraint	5.0 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.	III	I
	6.0 Organizations establish a corporate policy for least restraint that includes components of physical and chemical restraints.	IV	
Organizational Support	7.0 Organizations create an environment that supports interventions for fall prevention that includes: ▸ Fall prevention programs; ▸ Staff education; ▸ Clinical consultation for risk assessment and intervention; ▸ Involvement of multidisciplinary teams in case management; and ▸ Availability of supplies and equipment such as transfer devices, high low beds, and bed exit alarms.	IV	
Medication Review	8.0 Implement processes to effectively manage polypharmacy and psychotropic medications including regular medication reviews and exploration of alternatives to psychotropic medication for sedation.	IV	

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RECOMMENDATION			LEVEL OF EVIDENCE	GRADE OF RECOMMENDATION
RNAO *Toolkit*	9.0	Nursing best practice guidelines can be successfully implemented only where there are adequate planning, resources, organizational and administrative support, as well as appropriate facilitation. Organizations may wish to develop a plan for implementation that includes: ▸ An assessment of organizational readiness and barriers to education. ▸ Involvement of all members (whether in a direct or indirect supportive function) who will contribute to the implementation process. ▸ Dedication of a qualified individual to provide the support needed for the education and implementation process. ▸ Ongoing opportunities for discussion and education to reinforce the importance of best practices. ▸ Opportunities for reflection on personal and organizational experience in implementing guidelines. In this regard, RNAO (through a panel of nurses, researchers and administrators) has developed the *Toolkit: Implementation of Clinical Practice Guidelines* based on available evidence, theoretical perspectives and consensus. The *Toolkit* is recommended for guiding the implementation of the RNAO guideline *Prevention of Falls and Fall Injuries in the Older Adult.*	IV	

Goals of a Fall Prevention Program

- decrease incidence of falls
- decrease severity of falls
- increase mobility and function
- improve environmental safety
- provide comprehensive assessment
- knowledgeable staff
- improve the patient's confidence

Components of a Fall Prevention Program

1. Universal Fall Prevention Interventions for **all** patients.
2. Initial assessment of **all** patients using the *Fall Scale Assessment Record-Morse Fall Scale (Patient History and Assessment Record)* to identify risk for falls.
3. Risk Assessment Scores entered into all Patient Data Profiles.
4. Appropriate interventions implemented for all low risk patients.
5. High Risk Patients:
   - Will be identified at bedside with Fall Symbol.
   - Will have the "Falls, High risk for" interventions implemented as appropriate.
6. Reassessment of patient's fall risk to be completed with any fall or significant change in condition and plan of care to be updated accordingly.
7. Documentation of all falls and completion of patient incident report.
8. Measuring and monitoring fall rates/injury rates.
9. Ongoing evaluation of the effectiveness of the fall prevention program.

Step 1 - Search for Causes

There are many causes of falls and some of them can be eliminated. Look for patterns or similarities in the falls in your workplace. Be sure to investigate:

Patient Risk Factors

1. Increased age (over 70)
2. History of falling
3. Incontinence, urinary frequency, urgency, nocturia
4. Use of assistive devices
5. History of confusion or a change in mental status, faulty judgement (impulsive)
6. History of dizziness, light- headedness, vertigo or fainting
7. History of seizures
8. History of alcohol abuse and/or intoxication
9. Medical condition
   - Acute illness
   - Dehydration
   - CHF, heart disease and/or arrhythmias
   - Pneumonia
   - Temperature elevation
   - 24 hours after surgery
   - clinical depression
   - primary cancer
   - anxiety
   - delirium
10. Impaired hearing or vision
11. Generalized weakness
12. Impaired balance, unsteady gait, or weakness of the lower extremities
13. Medications, both over-the-counter and prescription (polypharmacy)
   - Diuretics and laxatives
   - Antihypertensives
   - Sedatives, tranquilizers
   - Psychotropic drugs
   - Antidepressants
   - Antiarrhythmics, anticoagulants
   - Narcotics
   - Hypoglycemic agents
   - Anesthetics
   - Antiseizure/ antiepileptic

Environmental Causes

1. Lighting – levels that cause glare or limit visibility
2. Stairs
3. Floors – surfaces that promote slips/trips/stumbling
4. Patient Rooms – furniture, lack of supports (callbell, footwear)
5. Beds – bed position, brakes that are not locked
6. Bathrooms – wet/slick floors, rugs/mats not properly secured, etc.
7. Seating – not individualized to patient's needs/abilities
8. Elevators
9. Visual barriers and Wandering Systems

Step 2 – Use Triggers to Implement the Fall Prevention Program and Identify Patients at Risk for Falls

Screening of patients should identify triggers for the fall prevention program to be initiated. Documentation should reflect risk screening, triggers/risk factors, interventions and the patient's response.

Step 3 – Implement the Program

1. Universal Fall Prevention Interventions for **all** patients.
2. If a patient is identified as High Risk for fall, choose "Fall, High risk for" interventions.
3. If a patient is identified as High Risk for fall, Fall Symbol at bedside to alert all care givers for the patient.
4. If a patient is identified as Low Risk for fall, choose fall risk interventions.

Interventions

Environmental

1. Patient Rooms
   - Eliminate obstacles between bed and bathroom.
   - Keep bathroom light on in patient room.
   - Use commodes/raised toilet seats as needed.
   - Place call bell and frequently used items within easy reach and be sure the patient knows how to use the call bell.
   - Maintain bed in lowest position.
   - Maintain locks on chairs, beds, etc.
   - Use split rails for mobility assistance only.
   - Use chairs with armrests.
   - In some cases, marking room doors with photos or bathroom doors with signs or pictures may help confused patients.
   - Add gap protectors (to bedrails) where appropriate to help prevent patient entrapment or potential fall.

Interventions for patients identified as high risk for falls appear at the end of this list, highlighted in **bold.**

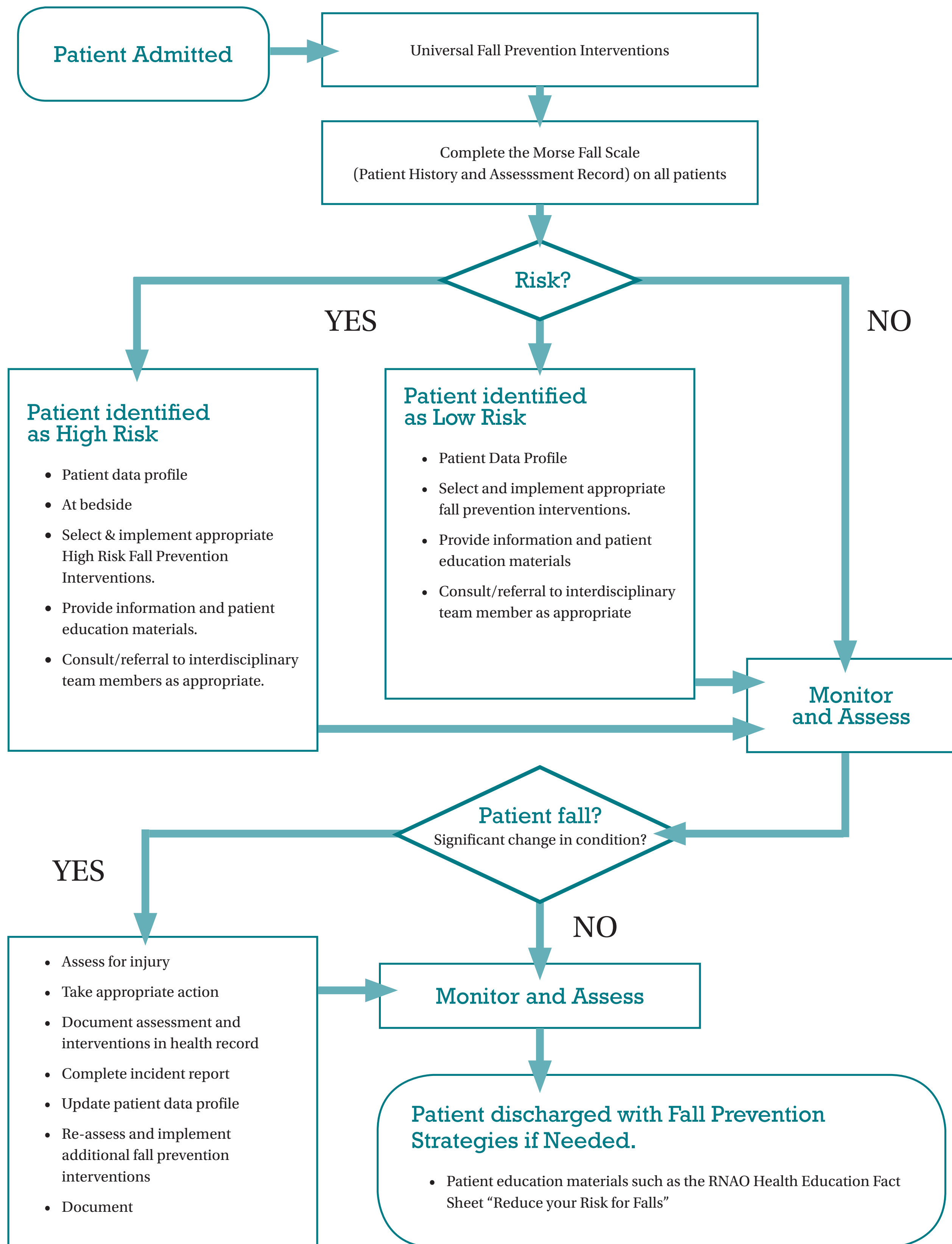
2. Ambulation
    - Evaluate gait/balance for independent activities of daily living.
    - Increase muscle tone and bone density by adding conditioning routines.
    - Provide non-skid slippers.
    - Obtain walker, cane or wheelchair from home if patient has needed assistive device prior to admission.
    - Add posture aids and cushions to facilitate proper seating and safe transfer.
    - Assist with transfers and ambulation.
    - Ensure clothing does not interfere with mobility.
    - Keep floors dry; clean up spills promptly.
    - Educate on proper use of assistive devices.
3. Re-orient to surroundings and environment as needed.
4. Instruct patient to call for assistance when needed.
5. Consider the patient's culture in determining interventions. (In some cultures asking for help may not be acceptable.)
6. Check the patient frequently.
7. **Consider bed alarms, chair alarms, sitters, floor mats, gait belts, low beds.**
8. **Consider placement in room near nursing station or in an area of high visibility.**
9. **Communicate high risk for fall status at shift report and upon patient transfer to other unit.**
10. **Orient patient/family to unit and fall prevention program.**
11. **Meet with family to encourage their cooperation (i.e. agitated patients can benefit from family members staggering their visits sop the patient is not left alone.) Use the RNAO Health Education Fact Sheet *Reduce Your Risk for Falls* to educate about fall prevention (available at www.rnao.org/bestpractices).**
12. **Consider referrals as specific risk factors are identified to reduce risk for falls or repeat falls.**
13. **Consider stop signs, door guards, wanderguard bracelets, or camouflaged exits to help reduce undesired patient exit.**

Step 4 – Assess and Reassess the Patient

Step 5 – Report Falls

1. Report through risk management – use the patient incident form.
2. Assess severity of injury/injuries resulting from fall.
   - None – no adverse outcome
   - Minor – contusion, abrasion, small skin tear, laceration requiring little care or observation
   - Moderate/significant – sprain, deep laceration, skin tear, contusion, fracture, loss of consciousness, change in mental status requiring medical/nursing intervention
   - Severe – fall results in death
3. Revise fall prevention plan and implement any additional measures to prevent further incidences of falling.

Fall Prevention Decision Tree



Fall Prevention Program: Test

True or False

		T	F
1.	Falls are the leading cause of death in the elderly.	T	F
2.	Falls in acute care settings account for 50% of all inpatient incidents.	T	F
3.	Risk assessments should be performed on all admissions to hospitals and nursing homes.	T	F
4.	Anytime there is a change in the patient's treatment, medication or condition, the fall assessment should be updated.	T	F
5.	Laxative use can increase fall risk.	T	F
6.	Relocating a patient to a new room may increase their risk for falling.	T	F
7.	Whenever possible, reduce or change medications to ones not associated with sedation, disorientation or hypotension.	T	F
8.	With a well established fall prevention plan, it is not necessary to include the patient or the family and friends in fall prevention efforts.	T	F
9.	Electronic monitors which activate call lights and/or an audible alarm when the patient exits the bed, are effective as fall prevention tools, and may help reduce restraint use.	T	F
10.	Restraint use is an effective fall prevention strategy.	T	F
11.	A successful fall prevention program includes assessment, minimization or elimination of hazards, intervention strategies, procedures and policies, staff and patient/family education, fall prevention devices and monitoring of program effectiveness.	T	F

ANSWERS 1.F 2.F 3.T 4.T 5.T 6.T 7.T 8.F 9.T 10.F 11.T