Registered Nurses' Association of Ontario:
Nursing Best Practice Guidelines Program
Preventing Falls and Reducing Harm from Falls
September, 2017

Systematic Review Search Strategy

Concurrent with the review of existing guidelines, a systematic review for recent literature relevant to the scope of the guideline was conducted by a health sciences librarian.

Databases Searched: Cumulative Index to Nursing and Allied Health (CINAHL), Cochrane Database of Systematic Reviews, Medline, Medline In-Process, EMBASE, Cochrane Central Register of Control Trials (used only for research question four) and Educational Resource Information Centre (ERIC) (used only for research question four)

Inclusion Criteria:

The following criteria were used to guide the literature search:

- A primary focus on falls in adults aged 18 years or older, specifically in relation to:
    - fall risk assessment (gait assessments)
    - fall prevention or injury reduction
    - effectiveness of an assessment tool or the best time to use the tool
    - care following a fall
    - falls occurring in high risk populations or during specific health-care timeframes
    - general principles of the environmental design relevant to fall prevention education
    - classes of medications and vitamin D and calcium if directly related to fall injury prevention
- Published between January 2011 and May-August 2016
- Published in English
- Accessible for retrieval
- Applicable across health settings/sectors where nurses provide direct clinical care to adults
- Primary focus on Nurses (RN, RPN, NP, CNS)
- Secondary focus on other health-care providers (whose scope of practice overlaps with nursing)
- Applicable to a Canadian context
- Study methodology limited to: meta-analysis, systematic reviews, integrative reviews, critical reviews, and review of qualitative, quantitative or mixed methods studies that address search terms.

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Exclusion Criteria:

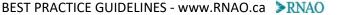The following criteria were used to exclude literature from the search:

- Topics that focussed on fall prevalence, falls in children, sports related falls, workplace related falls, intentional falls, fall prevention in otherwise healthy people not at risk, environmental design, not relating to educating individuals, clinical diagnostic tests to confirm conditions, that put individual at risk of falls, population-level fall prevention, validating/building assessment tools, and specific pharmacologic interventions.
- Dissertations, commentaries, narrative, discussion papers, single qualitative or quantitative studies
- 1-2 page reports
- Non-English studies
- Unpublished (grey literature)
- No lab studies with any type of animal
- Articles related to building or validating assessment/screening tools

Search Terms

Below are selected and condensed key search terms used for each research question in MEDLINE. Comparable terms were used in all other databases searched.

Question 1: What are the most effective ways to identify adults at risk for falls or at risk for injury due to falls?

Population	Condition	Assessment	Limits
Adults aged 18 years and older All sectors where nurses provide direct care, such as: primary care, emergency, acute care, home care (community dwelling), alternative level of care (ALC)/ complex continuing care, long-term care Nurses (RN, RPN, NP, CNS)	People at risk for injury from falls: • Frail Elderly • Geriatric Assessment • Needs Assessment • Nursing Assessment • Patient outcome assessment • Risk assessment • Risk factors • Symptom assessment • Mass screening	• Referral and Consultation • Documentation • Re-assess • Secondary care • Following • Follow up • Monitor • Procedure • Huddle • Debrief	• Meta-analysis, systematic reviews, integrative reviews, critical reviews, and review of qualitative, quantitative or mixed methods studies that address search terms • Not animals • Age 18 and over • English • 2011-2016

Question 2: What interventions are effective in preventing falls and reducing the risk of falls or falls-related injury (among people at risk for falls)?

Population	Condition	Intervention	Limits
Adults aged 18 years and older All sectors where nurses provide direct care, such as: primary care, emergency, acute care, home care (community dwelling), alternative level of care (ALC)/ complex continuing care, long-term care Nurses (RN, RPN, NP, CNS)	People at risk for injury from falls: • Frail Elderly • Geriatric Assessment • Needs Assessment • Nursing Assessment • Patient outcome assessment • Risk assessment • Risk factors • Symptom assessment • Mass screening	Actions aimed at (1) preventing falls or reducing the number of falls (among people at risk for falls); (2) preventing injury from falls; (3) reducing the risk of serious injury from falls (among people at risk for injury from falls). • Accident prevention • Safety • Safety management • Primary prevention • Secondary prevention • Tertiary prevention • Protective factors • Patient care planning • Nursing care • Patient care team • Nursing Diagnosis • Protective devices • Equipment, supplies • Patient education	• Meta-analysis, systematic reviews, integrative reviews, critical reviews, and review of qualitative, quantitative or mixed methods studies that address search terms • Not animals • Age 18 and over • English • 2011-2016

Question 3: What interventions or processes should occur immediately following a fall?

Population	Condition	Intervention	Limits
Adults aged 18 years and older All sectors where nurses provide direct care, such as: primary care, emergency, acute care, home care (community dwelling), alternative level of care (ALC)/ complex continuing care, long-term care Nurses (RN, RPN, NP, CNS)	People at risk for injury from falls: • Frail Elderly • Geriatric Assessment • Needs Assessment • Nursing Assessment • Patient outcome assessment • Risk assessment • Risk factors • Symptom assessment • Mass screening	Immediate response to a fall when it occurs; including falls that are witnessed or not witnessed. • Safety • Safety management • Secondary prevention • Tertiary prevention • Protective factors • Patient care planning • Nursing care • Patient care team • Nursing Diagnosis • Protective devices • Equipment and supplied • Patient education	• Meta-analysis, systematic reviews, integrative reviews, critical reviews, and review of qualitative, quantitative or mixed methods studies that address search terms • Not animals • Age 18 and over • English • 2011-2016

Question 4: What content and educational strategies are necessary to effectively educate nurses and other health-care providers to prevent falls and injury from falls?

Population	Condition	Intervention	Limits
Nurses and other health-care providers who deliver health care services to people at risk of falls or injury from falls; those working across the spectrum of care: public health, primary care, home care, hospital care, and long-term care • Nurse educators, Professors, RNs, RPNs, NPs, CNSs, other health-care providers who scope of practice overlaps with nursing	People at risk for injury People at risk for injury from falls: • Frail Elderly • Geriatric Assessment • Needs Assessment • Nursing Assessment • Patient outcome assessment • Risk assessment • Risk factors • Symptom assessment • Mass screening	• Education • Education, professional • Education, continuing • Education, distance • Models, educational • Educational measurement • Education department, hospital • Hospitals, teaching • Clinical Clerkship • Inservice training • Staff development • Program development • Preceptorship • Teaching • Teaching materials • Curriculum • Videoconferencing • Webcasts as topic • Mentors • Learning	• Meta-analysis, systematic reviews, integrative reviews, critical reviews, and review of qualitative, quantitative or mixed methods studies that address search terms • Not animals • English • 2011-2016

Question 5: What organizational policies and system-level supports are required to effectively prevent falls and injury from falls (among those at risk for falls/injury from falls)?

Population	Condition	Intervention	Limits
Health care organizations or system-level supports (policies and procedures) for adults aged 18 years and older to prevent falls and injury from falls Health-care leaders positioned to advocate and change policy and structures (in all sectors where nurses provide direct,	People at risk for injury from falls: • Frail Elderly • Geriatric Assessment • Needs Assessment • Nursing Assessment • Patient outcome assessment • Risk assessment • Risk factors • Symptom assessment • Mass screening	• Health policy • Organizational policy • Organizational innovation • Organizational culture • Organizational objectives • Legislation • Legislation as topic • Legislation, hospital • Legislation, medical • Legislation, nursing • Decision making, organizational • Health planning support	• Meta-analysis, systematic reviews, integrative reviews, critical reviews, and review of qualitative, quantitative or mixed methods studies that address search terms • Not animals • English • 2011-2016

clinical care, such as: primary care, emergency acute care, home care, (community dwelling), alternative level of care (ALC)/complex continuing care, long-term care) (note: Nurses include RN, RPN, NP, and CNS)		• Health planning • Financial support • National health programs • Government programs • Environment design • Delivery of health care • Delivery of health care integrated • Quality indicators, health care • Standard of care • Risk management • Safety • Patient safety • Accident prevention • Primary prevention • Secondary prevention • Tertiary prevention	

Hand Search

Panel members were asked to review personal libraries to identify key articles not found through the above search strategies. Articles identified by panel members were included in the search results if two nursing research associates independently determined the articles had not been identified by the literature search and met the inclusion criteria. Two (n = 2) articles were submitted, however, no hand search articles for any of the five research questions were included in the final results.

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