



Health Quality Ontario Home and Community Care Reducing Falls

Best Practices

Created on August 28, 2017

"Insanity is doing things the way we've always done them and expecting different results"

Albert Einstein

Falls in long-stay home patients. [<http://indicatorlibrary.hqontario.ca/Indicator/Detailed/Percentage-home-care-patients-fell-last-90-days/EN>] in home care is a priority indicator for the QIP. This is the percentage of long-stay home care patients who say they have fallen in the last 90 days. In Ontario [<http://www.hqontario.ca/System-Performance/Home-Care-Performance/Falls>] 31.4% of patients receiving publicly funded home care for at least 60 days (such as chronic/complex illnesses) have fallen at least once during the three months since their last assessment.

Below are best practices for patient involvement in primary care. They are graded according to [Type of Evidence](#) [<http://qualitycompass.hqontario.ca/Documents/EN/QualityCompassLevelsOfEvidence.pdf>]. Evidence-informed best practices are based on quality evidence, they can optimize outcomes and should be implemented into practice where possible.

To help you move from best evidence to best practice you can refer to either Health Quality Ontario's [Quality Improvement Road Map to Preventing Falls](#) [<http://www.hqontario.ca/portals/0/Documents/qi/rf-change-package-falls-en.pdf>], the RNAO's Best Practice Guideline on [Preventing Falls and Fall Injuries in the Older Adult](#) [[http://mao.ca/sites/mao-ca/files/Prevention of Falls and Fall Injuries in the Older Adult.pdf](http://mao.ca/sites/mao-ca/files/Prevention%20of%20Falls%20and%20Fall%20Injuries%20in%20the%20Older%20Adult.pdf)] or browse the interactive table below for a quick summary of preventing falls in the home.

EVIDENCE-INFORMED BEST PRACTICES

Recognition and Assessment

Evidence-Informed Best Practice	Change Ideas	Toolbox
Assess the risk of Falls	<ul style="list-style-type: none"> Assess risk of fall on admission to home care. Assess risk following a change in health status. Assess risk following a fall. <p>If a falls risk is identified, or an actual fall occurs:</p> <ul style="list-style-type: none"> Record risk of fall Refer to Occupational Therapy (OT) and Physiotherapy (PT) assessments Ensure there is ongoing assessment of risk and actual falls 	<ul style="list-style-type: none"> Preventing Falls: From Evidence to Improvement in Canadian Health Care. [https://secure.cihi.ca/free_products/FallsJointReportAugust6_2014_CPHI_EN_web.pdf] Safer Healthcare Now!'s Reducing falls and injuries from falls: Getting started kit. [http://www.patientsafetyinstitute.ca/en/toolsresources/pages/falls-resources-getting-started-kit.aspx] Seniors Fall Prevention. [http://www.injuryresearch.bc.ca/events/seniors-fall-prevention-awareness-month/] Falls Prevention: Health Care Providers. Community: Screening Tools [https://www.saskatoonhealthregion.ca/locations_services/Services/Falls-Prevention/providers/Pages/Assessment-Tools.aspx]
Visual Assessment	<ul style="list-style-type: none"> Regularly evaluate visual acuity. Optimize vision with appropriate corrective aids. Consult with an Optometrist. 	<ul style="list-style-type: none"> JAMA Screening for Impaired Visual Acuity in Older Adults. [http://jamanetwork.com/journals/jama/fullarticle/2497913]
Cognitive Assessment	<ul style="list-style-type: none"> Screen for cognitive impairment. Implement treatment and prevention plan based on needs. 	<ul style="list-style-type: none"> Mini-Mental Status Exam, Confusion Assessment Method Instrument. [http://www.sciencedirect.com/science/article/pii/S022395675900266] Clarifying Confusion. [http://annals.org/aim/article/704335/clarifying-confusion-confusion-assessment-method-new-method-detection-delinium]

Osteoporosis Assessment	<ul style="list-style-type: none"> Assess diet, lifestyle and risk of osteoporosis. Consider: age, bone mineral density, height loss, history of falls and family history of fractures. Assess and discuss treatment options for prevention of osteoporosis. 	<ul style="list-style-type: none"> Osteoporosis Canada 2015 Quick Reference Guide. http://media.vix.com/ugd/4542ae_727f997ec88342e092b1209c8e853067.pdf Osteoporosis Assessment Tool http://www.fpnotebook.com/Rheum/Bone/OstprEvtn.htm
Medication Review	<ul style="list-style-type: none"> Review medication list for elderly clients taking 4 or more medications, and identify any medication-related falls risk. Take note and review medication lists for clients taking psychotropic medications, non-steroidal anti-inflammatory drugs (NSAIDs), antihypertensive drugs or other medications contributing to impaired balance. Risk-benefit assessment of clients at risk of falls. Regularly consult with physician and pharmacist regarding medication-related risk of falls. 	<ul style="list-style-type: none"> Drug related Falls: Implications, consequences and prevention https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4125318/. CEMFIA: Drugs and the Risk of Falling http://www.hiphealth.ca/media/research_cemfia_drugs_and_the_risk_of_falling15714.pdf. Medications' Impact on Falls in Older Adults http://www.todaysgeriatricmedicine.com/archive/110909p8.shtml. Four or more medicines (FOMM) http://pubmedcentralcanada.ca/pmc/articles/PMC4682463/ CPSI Reducing Falls http://www.patientsafetyinstitute.ca/en/toolsresources/pages/falls-resources-getting-started-kit.aspx.

Care Planning for Prevention

Evidence-Informed Best Practice	Change Ideas	Toolbox
Exercise Programs for Better Balance	<p>Use a diabetes flow sheet:</p> <ul style="list-style-type: none"> Exercise programs should include those to improve gait, balance, coordination, muscle strengthening, and functional tasks. Exercise should be targeted to individuals based on age and functional capacity. Exercise should be structured and individually tailored. 	<ul style="list-style-type: none"> Safer Healthcare Now!'s Reducing falls and injuries from falls: Getting started kit. http://www.patientsafetyinstitute.ca/en/toolsresources/pages/falls-resources-getting-started-kit.aspx Tenetti Gait and Balance Scale http://geriatrics.uthscsa.edu/tools/TI NETTI.pdf. Berg Balance Scale http://www.veterans.gc.ca/eng/forms/document/437. Physical Activity & Arthritis http://arthritis.ca/manage-arthritis/educational-resources-tools/printed-publications/physical-activity-arthritis.

<p>Mobility Aids</p>	<ul style="list-style-type: none"> • Appropriate use of mobility aids for clients. • Support and reinforce use of mobility aids as required. 	<ul style="list-style-type: none"> • Safer Healthcare Now's Reducing falls and injuries from falls: Getting started kit. [http://www.patientsafetyinstitute.ca/en/toolsresources/pages/falls-resources-getting-started-kit.aspx] • Facts: Mobility Aids & Falls [https://www.saskatoonhealthregion.ca/locations_services/Services/Falls-Prevention/Pages/Tips/Mobilityaids!mproveIndependence.aspx]. • Video: Safe use of a Wheeled Walker [https://www.youtube.com/watch?v=hmFudCrqXjc].
<p>Vitamin D and Calcium Supplements</p>	<ul style="list-style-type: none"> • Assess risk of falls. • Assess diet and lifestyle. • Provide vitamin D and calcium supplements to those at higher risk of falls. 	<ul style="list-style-type: none"> • American Geriatrics Society Guidance on Vitamin D and Falls [http://onlinelibrary.wiley.com/doi/10.1111/jgs.12631/full]
<p>Multifactorial Interventions (Risk Profile)</p>	<ul style="list-style-type: none"> • Complete a falls risk assessment. • Create an individualized care plan. • Include an exercise component and a consultation with an Occupational or Physical therapist(s). • Assess environment, activity equipment (i.e. mobility aids) and clothing/footwear. Consider modifications as necessary, tailoring to specific context and client. • Health management including: medications, vision, bone health, nutrition, hydration and chronic disease management. 	<ul style="list-style-type: none"> • Safer Healthcare Now's Reducing falls and injuries from falls: Getting started kit. [http://www.patientsafetyinstitute.ca/en/toolsresources/pages/falls-resources-getting-started-kit.aspx] • HCO's QI Road Map for Preventing Falls. [http://www.hqontario.ca/portals/0/Documents/qi/ri-change-package-falls-en.pdf] • Falls: assessment and prevention of falls in older people. Social Care Institute for Excellence (SCIE). [http://beta.scie-socialcareonline.org.uk/falls-assessment-and-prevention-of-falls-in-older-people/r/a11G000002vTAAlA0]

Educate Clients, Family and Healthcare Providers

Evidence-Informed Best Practice	Change Ideas	Toolbox

<p>Educate Clients and Family Caregivers</p>	<ul style="list-style-type: none"> • Share risk information with clients and families • Clients assessed as being at high risk for falling receive education about the risk of falling. • Consider: disease, conditions, language difficulties, personality changes, mood swings, and progressive decline in ability to perform activities of daily living when creating a program to reduce falls and educate clients and families. 	<ul style="list-style-type: none"> • CHATS family and client education [http://www.chats.on.ca/ClientEducation]. • RESOURCE GUIDE ON FALLS PREVENTION FOR CLIENTS AND FAMILY CAREGIVERS [http://www.patientsafetyinstitute.ca/en/toolsresources/homecaresafety/documents/resources%20for%20family%20caregivers%20and%20clients%20-%20resource%20guide%20on%20falls%20prevention.pdf]. • RNAO Falls Prevention and Management Best Practices Toolkit [http://mao.ca/bpg/guidelines/prevention-falls-and-fall-injuries-older-adult]. • Safer Healthcare Now!'s Reducing falls and injuries from falls: Getting started kit. [http://www.patientsafetyinstitute.ca/en/toolsresources/pages/falls-resources-getting-started-kit.aspx]
<p>Educate Healthcare Providers (Nurse, OT, PT, PSW)</p>	<ul style="list-style-type: none"> • Educate new staff during orientation. • Provide education about falls in the home during regular intervals. • Topics include: routine practices, protocols, prevention interventions, risk management and post falls follow-up. 	<ul style="list-style-type: none"> • RNAO Preventing Falls Self-Learning Package [http://mao.ca/sites/mao-ca/files/Falls_Prevention_-_Building_the_Foundations_for_Patient_Safety_A_Self_Learning_Package.pdf] • HQO's QI Road Map for Preventing Falls [http://www.hqontario.ca/portals/0/Documents/qi/rf-change-package-falls-en.pdf] • Falls Management Exercise Programme (FaME) [https://www.cambridge.org/core/journals/primary-health-care-research-and-development/article/communitybased-falls-management-exercise-programme-fame-improves-balance-walking-speed-and-reduced-fear-of-falling/54298851AF5401E200D6E573C3DF2C63]

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Measurement

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“While all changes do not lead to improvement, all improvement requires change”

Institute for Healthcare Improvement

How do we know if a change is an improvement? Measurement is a critical step in QI to assess the impact of a change. Quality indicators are used in the QIPs to measure how well something is performing. There are three types of quality indicators used to measure QI efforts:

- **Outcome Indicators:** capture clinical outcomes and or system performance,
- **Process Indicators:** track the processes that measure whether the system is working as planned, and
- **Balancing Indicators:** ensure that changing one part of the system does not cause new problems in another.

Indicator	Falls in long-stay home patients [http://indicatorlibrary.hqontario.ca/Indicator/Detailed/Percentage-home-care-patients-fell-last-90-days/EN]
Topic	Patient Safety and Never Events
Quality Dimension	Safe
Type of Indicator	Outcome
Measure	Percentage (%)
Data Source	Home Care Reporting System [https://www.cihi.ca/en/home-care-reporting-system-metadata] (HCRS)
Data Collection Instrument	Collected by the Canadian Institute for Health Information (CIHI)
How to Calculate	The unadjusted indicator is calculated as (Numerator/Denominator) x 100 Numerator: # of long-stay home care patients who record a fall in the last 90 days. Denominator: Number of all eligible long-stay home care patients. <i>*excludes patients totally dependent in bed mobility</i>
Target	Lower is better
Range	0 – 100%
HQO Reporting Tool	Public Reporting, and Quality Improvement Plans (QIPs)

Tools & Resources

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Safer Healthcare Now! provides a comprehensive resource to help providers reduce falls and injuries in the home care, hospitals and long-term care settings: [Safer Healthcare Now!'s Reducing falls and injuries from falls: Getting started kit](http://www.patientsafetyinstitute.ca/en/toolsresources/pages/falls-resources-getting-started-kit.aspx) [<http://www.patientsafetyinstitute.ca/en/toolsresources/pages/falls-resources-getting-started-kit.aspx>]

Tools

- [Berg Balance Test](http://www.veterans.gc.ca/eng/forms/document/437) [<http://www.veterans.gc.ca/eng/forms/document/437>]
Veteran Affairs Canada
- [Falls Screening and Referral Algorithm and Fall-Risk Screening: Multi-factor Falls Questionnaire](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3563374/) [<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3563374/>]
Lawson, S.N. et al (2013). Validation of the Saskatoon Falls Prevention Consortium's Falls Screening and Referral Algorithm Physiother Can. 2013. 65(1): 31-39.
- [Berg Balance Test](http://www.veterans.gc.ca/eng/forms/document/437) [<http://www.veterans.gc.ca/eng/forms/document/437>]
Veteran Affairs Canada
- [Falls Screening and Referral Algorithm and Fall-Risk Screening: Multi-factor Falls Questionnaire](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3563374/) [<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3563374/>]
Lawson, S.N. et al (2013). Validation of the Saskatoon Falls Prevention Consortium's Falls Screening and Referral Algorithm Physiother Can. 2013. 65(1): 31-39.
- [Six Minute Walk Test](http://strokeengine.ca/assess/module_6mwt_intro-en.html) [http://strokeengine.ca/assess/module_6mwt_intro-en.html]
Canadian Stroke Network. Stroke Engine Assess.
- [Five-Step Test](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2686332/) [<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2686332/>]
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Prevention of Falls Network Europe.
- [Floor Transfer](http://www.kennisnetwerkvalpreventie.nl/csi/catalogus.nsf/0/5759d4e57c8578bcc1256d5e002dfed2/$FILE/Murphy_Screening.pdf) [[http://www.kennisnetwerkvalpreventie.nl/csi/catalogus.nsf/0/5759d4e57c8578bcc1256d5e002dfed2/\\$FILE/Murphy_Screening.pdf](http://www.kennisnetwerkvalpreventie.nl/csi/catalogus.nsf/0/5759d4e57c8578bcc1256d5e002dfed2/$FILE/Murphy_Screening.pdf)]
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The Ottawa Hospital and the Regional Geriatric Program of Eastern Ontario.
- [Timed-Up-and-Go-Test \(TUG\)](http://www.saskatoonhealthregion.ca/locations_services/Services/Falls-Prevention/providers/Documents/Community%20Tools%20Timed%20Up%20and%20Go%20procedure.pdf#search=timed%20up%20and%20go) [http://www.saskatoonhealthregion.ca/locations_services/Services/Falls-Prevention/providers/Documents/Community%20Tools%20Timed%20Up%20and%20Go%20procedure.pdf#search=timed%20up%20and%20go]
Saskatoon Health Region
- [STRATIFY Risk Assessment](http://www.bmj.com/content/315/7115/1049) [<http://www.bmj.com/content/315/7115/1049>]
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- [Integrated Provincial Falls Prevention Toolkit](http://www.southeasthln.on.ca/page.aspx?id=6246) [<http://www.southeasthln.on.ca/page.aspx?id=6246>]
LHIN Collaborative
- [Morse Fall Scale](http://rgp.toronto.on.ca/torontobestpractice/Morsefallscale.pdf) [<http://rgp.toronto.on.ca/torontobestpractice/Morsefallscale.pdf>]
Regional Geriatric Program of Toronto.
- [Reducing Falls and Injuries from Falls: Getting Started Kit](http://www.patientsafetyinstitute.ca/en/toolsresources/pages/falls-resources-getting-started-kit.aspx) [<http://www.patientsafetyinstitute.ca/en/toolsresources/pages/falls-resources-getting-started-kit.aspx>]
Safer Healthcare Now!
- [Fall Risk Assessment Tool](http://www.homecaremissouri.org/projects/falls/index.php) [<http://www.homecaremissouri.org/projects/falls/index.php>]
Missouri Alliance for Home Care.

Resources

- [Falls: assessment and prevention of falls in older people](http://beta.scie-socialcareonline.org.uk/falls-assessment-and-prevention-of-falls-in-older-people/r/a11G000002VtAAIA0/) [<http://beta.scie-socialcareonline.org.uk/falls-assessment-and-prevention-of-falls-in-older-people/r/a11G000002VtAAIA0/>]
National Institute for Health and Care Excellence (NICE).
- [Canadian Fall Prevention Curriculum](http://www.canadianfallprevention.ca/) [<http://www.canadianfallprevention.ca/>]
Canadian Fall Prevention Education Collaborative
- [Falls Prevention Resources](http://www.ihl.org/explore/Falls/Pages/default.aspx) [<http://www.ihl.org/explore/Falls/Pages/default.aspx>]
Institute for Healthcare Improvement
- [Preventing Falls Change Package](http://www.hqontario.ca/portals/0/Documents/qi/rr-change-package-falls-en.pdf) [<http://www.hqontario.ca/portals/0/Documents/qi/rr-change-package-falls-en.pdf>], [Poster](http://www.hqontario.ca/portals/0/Documents/qi/rr-poster-falls-en.pdf) [<http://www.hqontario.ca/portals/0/Documents/qi/rr-poster-falls-en.pdf>], and [Change Table](#)

[\[http://www.hqontario.ca/portals/0/Documents/qi/rf-change-table-falls-en.pdf\]](http://www.hqontario.ca/portals/0/Documents/qi/rf-change-table-falls-en.pdf)

Residents First, Health Quality Ontario

- **Prevention of Falls and Fall Injuries in the Older Adult** [\[http://www.mao.org/Page.asp?PageID=924&ContentID=810\]](http://www.mao.org/Page.asp?PageID=924&ContentID=810)
Registered Nurses' Association of Ontario (RNAO)
- **Seniors Fall Prevention** [\[http://www.injuryresearch.bc.ca/quick-facts/fall-prevention/\]](http://www.injuryresearch.bc.ca/quick-facts/fall-prevention/)
BC Injury Research and Prevention Unit
- **Physical Activity and Arthritis Overview** [\[http://www.cdc.gov/arthritis/pa_overview.htm\]](http://www.cdc.gov/arthritis/pa_overview.htm)
Centers for Disease Control and Prevention
- **Management of falls in older persons: A prescription for prevention** [\[http://www.aafp.org/afp/2011/1201/p1267.html\]](http://www.aafp.org/afp/2011/1201/p1267.html)
Van Voast Moncada, L. American Family Physician, 11, 1267-1276.
- **Falls Prevention: Health Care Providers. Community: Screening Tools**
[\[https://www.saskatoonhealthregion.ca/locations_services/Services/Falls-Prevention/providers/Pages/Assessment-Tools.aspx\]](https://www.saskatoonhealthregion.ca/locations_services/Services/Falls-Prevention/providers/Pages/Assessment-Tools.aspx)
Saskatoon Health Region
- **The Safe Living Guide** [\[http://www.phac-aspc.gc.ca/seniors-aines/publications/public/injury-blessure/safelive-securite/index-eng.php\]](http://www.phac-aspc.gc.ca/seniors-aines/publications/public/injury-blessure/safelive-securite/index-eng.php)
Public Health Agency of Canada
- **Preventing Falls: From Evidence to Improvement in Canadian Health Care** [\[https://secure.cihi.ca/estore/productFamily.htm?locale=en&pf=PFC2707&lang=en&media=0\]](https://secure.cihi.ca/estore/productFamily.htm?locale=en&pf=PFC2707&lang=en&media=0)
Canadian Institutes for Health Information
- **Resource guide on falls prevention – For clients and family caregivers**
[\[http://www.patientsafetyinstitute.ca/en/toolsresources/homecaresafety/documents/resources/20for%20family%20caregivers%20and%20clients%20-%20resource%20guide%20on%20falls%20prevention.pdf\]](http://www.patientsafetyinstitute.ca/en/toolsresources/homecaresafety/documents/resources/20for%20family%20caregivers%20and%20clients%20-%20resource%20guide%20on%20falls%20prevention.pdf)
CPSI

Background

Created on August 28, 2017

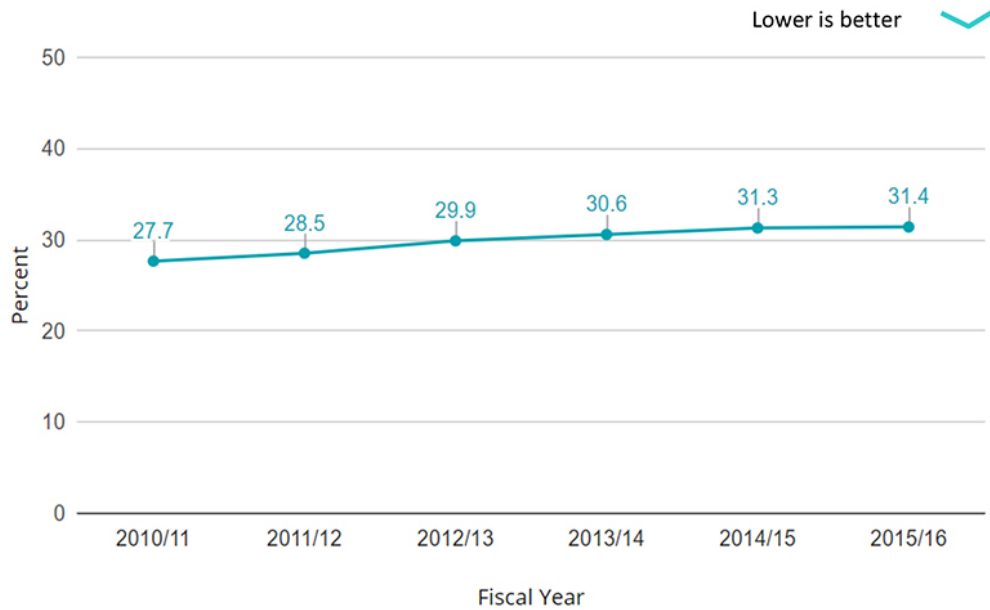
Issue

A fall is defined as an event or unintentional change in position that results in a person coming to rest inadvertently on the ground or floor, or other lower level (Morris et al., 2010; RNAO, 2011). The frequency of falls increases with age, and in Ontario the average age of the home care client is 78 years old (CIHI, 2016). Fall-related injuries are among the most serious and common occurrences experienced by older adults. Falls can lead to a loss of independence and deterioration in one's quality of life (RNAO, 2011).

Ontario home care (HC) nursing visits, personal support and homemaking is provided to approximately 650,000 people per year. Estimates indicate that approximately 30% of home care (HC) clients - close to 200,000 people per year will fall in the home (Bansal, et al., 2016). Having a recent fall - within six months to one year, has reliably been identified as a strong risk factor for subsequent falls among older adults (Bangbade & Deamon, 2016; Bansal, et al., 2016). For clients in the home who have some type of cognitive impairment and dementia the annual prevalence of falls is approximately 60% (Bansal et al., 2016).

In 2011-2012 28% of long-stay home care clients had a fall in the 90 days prior to their last assessment, this figure has changed very little, and has actually increased to 31.4% in 2015-2016. Figure 1 illustrates the slow steady increase in percent of Ontarians receiving publicly funded home care who fell one or more times in the past three months.

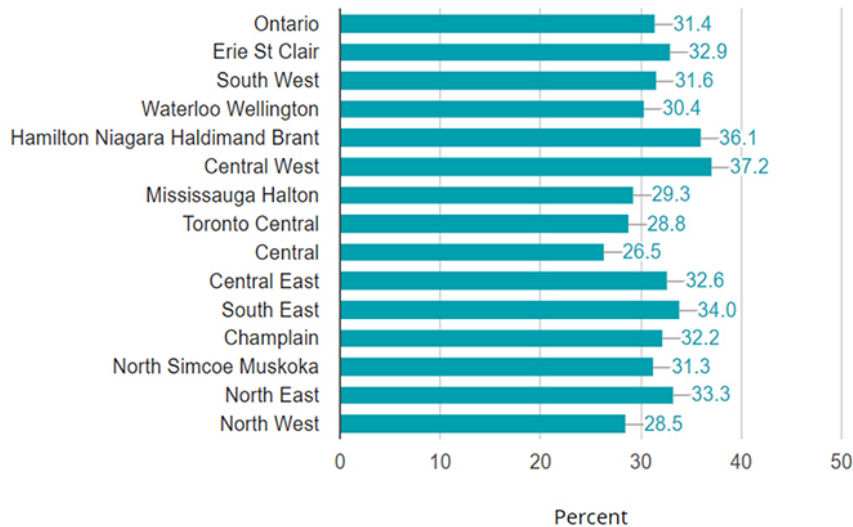
FIGURE: 1 The percentage of Ontario patients receiving publicly funded home care for at least 60 days (such as chronic/complex illnesses) who fell at least once during the three months since their last assessment.



Source: Home Care Reporting System (HCRS), provided by the Canadian Institute for Health Information (CIHI).

When considered by Local Health Integration Network there is a ten percent difference between the LHIN region with the highest fall rate and the one with the lowest falls rate.

FIGURE 2: By LHIN region, the percentage of Ontario patients receiving publicly funded home care for at least 60 days (such as chronic/complex illnesses) who fell at least once during the three months since their last assessment.

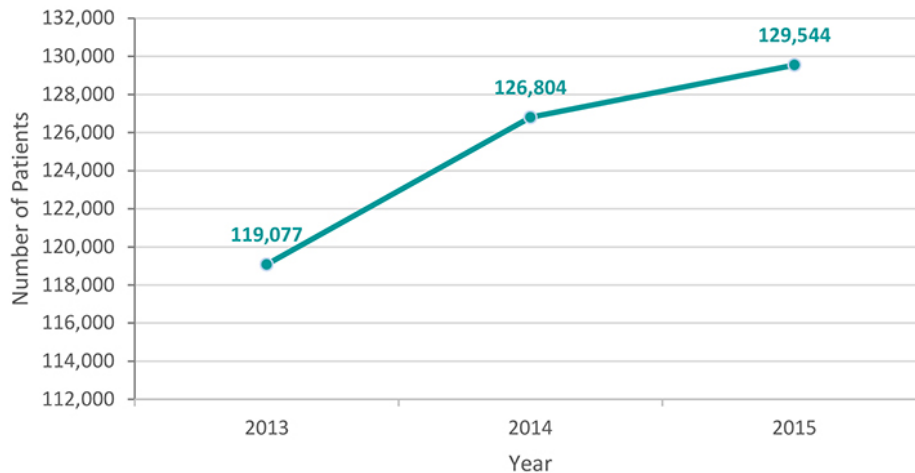


Source: Home Care Reporting System (HCRS), provided by the Canadian Institute for Health Information (CIHI).

Causes and Consequences of Falls

The occurrence of falls and the risk factors associated with falling vary based on a client's clinical profile, and the home setting. Persons over age 65 have the highest mortality rate from injuries, and injuries from falls cause about one-half of deaths due to injury - more than either pneumonia or diabetes (MOHLTC, 2016). In Ontario the number of patients admitted to the emergency department (ED) due to a fall related injury has been steadily increasing. Figure 3 illustrates that the number of fall related ED visits are increasing by approximately 10% every two years.

FIGURE 3: Number of Ontario patients admitted to the emergency department (ED) due to a fall related injury in 2013, 2014, 2015



Source: Ambulatory Emergency External Cause (2013-2015), Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO

Call to Action

In Ontario 84% of home care clients are over the age of 65, with an average age of 78 (CIHI, 2016). Various types of rehabilitation services and therapies are provided in the home, however 78% of the care being provided is personal support or home making. Furthermore, 97% of home care clients in Ontario have an informal family caregiver present (CIHI, 2016; Home Care Ontario, 2016). Preventing falls and injuries in frail seniors is imperative, as it will allow seniors to remain at home and maintain their quality of life, reduce hospital admissions and readmissions, and delay entrance into a long-term care home. Furthermore, injury prevention is a cost-effective strategy for reducing the indirect and direct health care costs associated with falls and can reduce injury-associated demand for extra care.

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