

**Alberta Health**

# **RAI-MDS 2.0 Quality Indicator Interpretation Guide**

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## Introduction

The Ministry of Health developed and maintains the Alberta Continuing Care Information System (ACCIS) which captures the International Resident Assessment Instrument Minimum Data Set 2.0 (RAI-MDS 2.0) assessments for Alberta's long-term care (LTC) population. ACCIS also submits this RAI-MDS 2.0 assessment data to the Canadian Institute for Health Information's (CIHI) Continuing Care Reporting System (CCRS). Through complex algorithms, data from the RAI-MDS 2.0 assessments are used to develop RAI-MDS 2.0 quality indicators and outcome measures. RAI-MDS 2.0 quality indicators are measures of health processes and outcomes in LTC that identify potential areas for quality improvement.

In June 2015, CIHI launched public reporting for an expanded set of RAI-MDS 2.0 quality indicators which report results at the national, provincial, health zone and facility levels. These results are accessible at [www.yourhealthsystem.cihi.ca](http://www.yourhealthsystem.cihi.ca) using the search function within the "In Depth" section.

To facilitate the understanding and interpretation of the nine publicly reported quality indicators for LTC, this Interpretation Guide was developed to provide information on each quality indicator including:

- The indicator name and code;
- The calculation of the indicator with inclusion and exclusion criteria;
- A graph showing Alberta's performance from fiscal years 2010/11 to 2013/14;
- An representation of Alberta's performance compared to the national average in 2014/15;
- Context for the indicator, including definitions where applicable; and,
- Interpretation notes, including initiatives and considerations.

Alberta's performance compared to the national average in 2014/15 is identified through graphics beside the graph of Alberta's performance for each quality indicator. The graphics display the national average in a coloured box. Green represents that Alberta's performance is more desirable than the national average. Grey represents that Alberta's average is statistically similar to the national average. Red represents that Alberta's performance is less desirable than the national average.



This Guide can be used by anyone seeking a general understanding of quality indicators, from members of the public to individuals working in LTC facilities, members of Alberta Health Services and the Ministry of Health.

### For More Information

This Guide is available through the Ministry of Health's website at [www.health.alberta.ca/services/continuing-care.html](http://www.health.alberta.ca/services/continuing-care.html).

For more details on Alberta Health Services zone-level performance and initiatives related to the QIs, please visit Alberta Health Services' website

at <http://www.albertahealthservices.ca/about/Page11908.aspx> and click on the “Continuing Care Quality Indicators” link under the Performance section.

For more information on quality indicators, contact the Continuing Care Branch at Alberta Health at 780-644-5499 (dial 310-0000 for toll-free access within Alberta).

## About RAI-MDS 2.0 Quality Indicators

Quality indicators (QI) are measures which flag *potential* quality issues that may need further review and investigation. They are used for a variety of purposes, including by care providers to monitor trends and improve care, by governments to monitor care, and for public reporting.

There are two types of RAI QIs: prevalence indicators and incidence indicators.

- **Prevalence indicators** represent the proportion of residents who are assessed as presenting with a condition/event of interest at a single point in time. Prevalence indicators do not include admissions assessments in the calculation of the QI.
- **Incidence indicators** represent the proportion of residents with a new presentation of the condition/event of interest which compares two points in time. Incidence indicators do include admission assessments in the calculation of the QI.

QIs may be reported as unadjusted or risk adjusted.

- **Unadjusted QIs** reflect the percentage of a discrete resident population within a LTC facility that have triggered the QI (see [calculation](#)), enabling facilities to trend quality measures to compare performance changes **within their facility** over time.<sup>1</sup>
- As not all facilities care for the same cohorts of residents, **risk adjusted QIs** take into account the differences in resident characteristics that are outside of the control of a facility and are known to affect indicator results. Defensible risk adjustment methodologies, developed through interRAI, are applied to raw indicator scores to permit appropriate and fair facility-to-facility comparisons. The risk adjustment process allows for comparability **between different facilities**.

A detailed description of the risk adjustment process can be found on the CIHI website: [www.cihi.ca/CIHI-ext-portal/pdf/internet/CCRS\\_QI\\_RISK\\_ADJ\\_METH\\_2013\\_EN](http://www.cihi.ca/CIHI-ext-portal/pdf/internet/CCRS_QI_RISK_ADJ_METH_2013_EN).

QIs are presented as a percentage for a fiscal year or a fiscal quarter. They are derived based on the coding of the RAI-MDS 2.0 assessment which is a point in time assessment. To calculate a fiscal-year average, four RAI-MDS 2.0 assessments per client, per fiscal-year (the most recent assessment for each of the four adjacent fiscal-quarters) are used if those assessments meet the inclusion criteria for the given QI (also known as “rolling quarters”). A detailed description of the “rolling quarters” calculation can be accessed at [www.cihi.ca/CIHI-ext-portal/pdf/internet/CCRS\\_QI\\_RISK\\_ADJ\\_METH\\_2013\\_EN](http://www.cihi.ca/CIHI-ext-portal/pdf/internet/CCRS_QI_RISK_ADJ_METH_2013_EN).

### Accessing Indicator Results

Reports for adjusted and unadjusted QIs can be accessed through ACCIS (Ministry of Health), and through the CCRS eReports (CIHI). A designate from each LTC facility in Alberta has access to the reports available through ACCIS and CCRS eReports. Slight differences in QI values may be noted between CCRS and ACCIS data reports. This is a result of slight variations between the two systems in the calculation of QIs, record inclusion/exclusion criteria, time of report runs, and more.

Please note that when using the CCRS eReports to compare Alberta’s QIs to other provinces, ensure that “Residential” is selected and not “Hospital-based” for the Quality Indicator Trend criteria.

Source software systems (e.g. MediTech) at LTC facilities only provide unadjusted QI information. Unadjusted rates are best used to compare performance changes *within* a facility over time but should not be used to compare between facilities. The risk adjustment process allows for comparability *between* different facilities.

## FAL02: Falls in the Last 30 Days in LTC

**Indicator Name:** Percentage of LTC residents who fell in the last 30 days.  
**Indicator Code:** FAL02

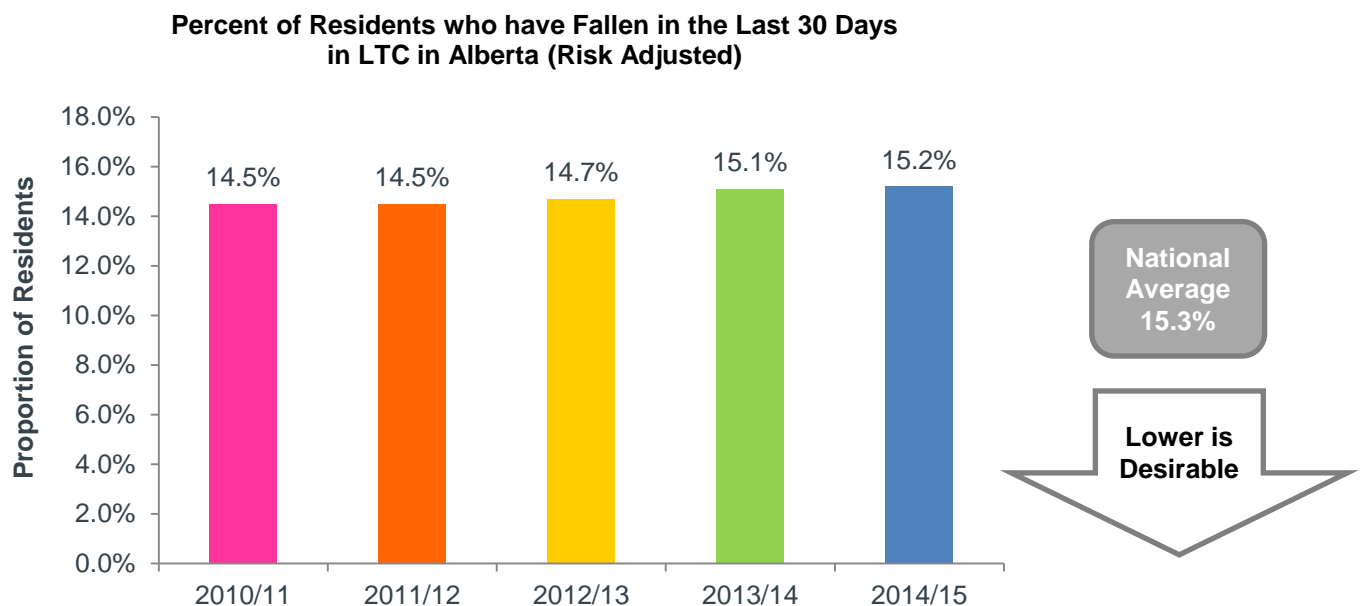
### Calculation

The unadjusted QI for a given LTC facility is calculated as follows:

$$\% \text{ of residents who have had a fall in the last 30 days} = \frac{\text{Number of residents who had a fall in the last 30 days}}{\text{All assessed residents}}$$

Unadjusted rates are best used to compare performance changes *within* a facility over time.

The risk adjusted QI is calculated using a predetermined statistical process that adjusts for differences in the populations served and the associated differences in risk that come with various conditions. The risk adjustment process allows for comparability *between* different facilities.



**Source:** CCRS eReports, September 08, 2015.

### Context

- A fall is defined as any unintentional change in position where the resident ends up on the floor, ground or other lower level.<sup>8</sup>
- Falls may be an indicator of functional decline and the presence of other conditions, such as delirium, adverse drug reactions, medication effects, dehydration or infections. The risk of falling increases among individuals with incontinence and cognitive and/or physical impairments.
- Falls are a leading cause of morbidity and mortality as people age. They can also impact quality of life due to psychological and functional effects. Falls can result in minor

injuries to sentinel events and are associated with prolonged hospitalizations and medical complications.

- Most falls are preventable in residents with lower levels of cognitive impairment. Residents with higher levels of cognitive impairment who are mobile may lack the judgement necessary to prevent falls.
- Falls management programs attempt to reduce significant injuries due to falls.

## Interpretation

- A lower percentage is desirable as it indicates a lower proportion of LTC residents who have fallen.
- A higher percentage indicates a higher proportion of LTC residents who have fallen in the past 30 days.
- Only falls experienced and reported within the past 30 days of the assessment reference date are captured in this indicator.
- The frequency of falls encountered by residents is not reflected in this QI.
- This QI captures falls with or without injury.

## Initiatives and Considerations

- The management of risk related to falls requires a coordinated effort by the entire clinical care team (e.g. nurses, health care aides, therapists, pharmacists, etc.). Residents at risk for falls require ongoing reassessment, and the interventions that are implemented should be reflected in the plan of care.
- A resident that is engaged in the life of the facility will remain more active and have a reduced risk of falling; inactivity and social isolation can increase the risk for falls.
- AHS' Falls Risk Management (FRM) Level 1 Policy was implemented in March, 2015.
- A *Falls Risk Management Strategy Development Resource Guide* has been developed by AHS. It describes the elements that are required for a comprehensive FRM strategy to support resident safety and quality improvement. It includes links to a range of evidence-based information and practical tools that are available to support operational units (organization/site/program/facility/unit) in their strategy development. All falls risk management tools and resources are available to all continuing care operators on AHS' Insite and the Continuing Care Desktop.
- As part of the accreditation process, accreditation bodies require: an assessment of falls risk; implementation of actions to prevent falls and injuries related to falls; and, the use of indicators to guide local quality improvement initiatives.



## PRU06: Worsened Pressure Ulcer in LTC

**Indicator Name:** Percentage of LTC residents whose stage 2 to 4 pressure ulcer worsened.

**Indicator Code:** PRU06

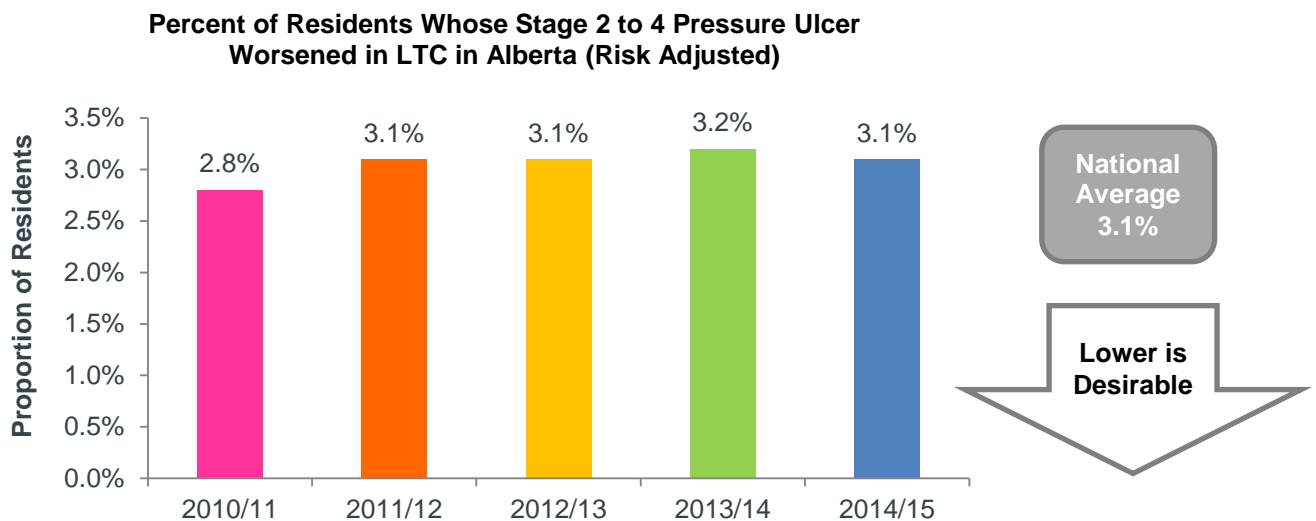
### Calculation

The unadjusted QI for a given LTC facility is calculated as follows:

$$\begin{array}{l} \text{\% of residents} \\ \text{whose stage 2 to 4} \\ \text{pressure ulcer} \\ \text{worsened} \end{array} = \frac{\begin{array}{l} \text{Number of residents who had a pressure ulcer at stage 2 to} \\ \text{4 on their target assessment and the stage of pressure ulcer} \\ \text{is greater on their target assessment than on their prior} \\ \text{assessment} \end{array}}{\begin{array}{l} \text{All assessed residents, excluding those who had a stage 4} \\ \text{ulcer on their prior assessment} \end{array}}$$

Unadjusted rates are best used to compare performance changes **within** a facility over time.

The risk adjusted QI is calculated using a predetermined statistical process that adjusts for differences in the populations served and the associated differences in risk that come with various conditions. The risk adjustment process allows for comparability **between** different facilities.



**Source:** CCRS eReports, September 08, 2015.

### Context

- A pressure ulcer is a localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear and/or friction. Stage 2 to 4 wounds range in severity from partial loss of skin layers (e.g. abrasions or blisters) to full thickness of skin and subcutaneous tissue loss with exposure of muscle or bone.<sup>6</sup>

- Some of the negative outcomes of pressure ulcers are pain and suffering, increased risk for infections or infecting others and mortality. A person with a pressure ulcer has three times the mortality risk of a person without an ulcer.<sup>6</sup>
- Some pressure ulcers may worsen or be non-healable regardless of treatment. This means they are “incapable of healing due to inability to treat the underlying cause or related conditions” or may not have adequate blood circulation.
- Some pressure ulcers may be classified as maintenance, meaning that they could be healable, but if the resident does not comply with the plan of care (e.g. turning and repositioning) then the ulcer will not heal. This is outside of the control of the facility.

## Interpretation

- A lower percentage is desirable as it indicates that resident’s stage 2 to 4 pressure ulcers are improving or being maintained at the current stage.
- A higher percentage indicates a higher proportion of LTC residents with stage 2 to 4 pressure ulcers that worsened.
- This QI only references pressure ulcers. Other types of ulcers (e.g. ischemic, stasis and diabetic foot ulcers) are not included.
- The QI does not reflect the prevalence of wounds within the facility.
- Stage 4 pressure ulcers cannot worsen, therefore they are excluded from the calculation.
- For the purposes of RAI-MDS 2.0 Assessment, wound staging is done at the time of the assessment and reflects the current state of the wound.
- The QI does not distinguish between pressure ulcers that have developed within the LTC facility or those which originated in another setting (e.g. if a resident develops an ulcer in acute care during an admission for a crisis).

## Initiatives and Considerations

- This QI should be reviewed in conjunction with indicator PRU09 – the percentage of residents with newly occurring pressure ulcers and PRU05 – the percentage of residents who had a pressure ulcer.
- AHS has consultative wound teams that are available to assist LTC providers with difficult ostomies and wounds. They will also assess residents for supportive therapy surfaces to assist with wound healing, pain control and comfort measures. The teams provide one to one education, in-services and full day educational opportunities to LTC staff.
- The practice for staging wounds for RAI Assessments differs from what are considered clinical best practice guidelines within the wound care community. RAI permits the backstaging of wounds.
- The RAI-MDS 2.0 assessment produces a Pressure Ulcer Risk Scale score with each assessment that can be used to monitor and evaluate the effectiveness of clinical interventions.
- As part of the accreditation process, accreditation bodies require that clinical teams assess each resident’s risk for developing a pressure ulcer and implement interventions to prevent pressure ulcer development.

# DRG01: Potentially Inappropriate Use of Antipsychotics in LTC

**Indicator Name:** Percentage of LTC residents on antipsychotics without a diagnosis of psychosis.

**Indicator Code:** DRG01

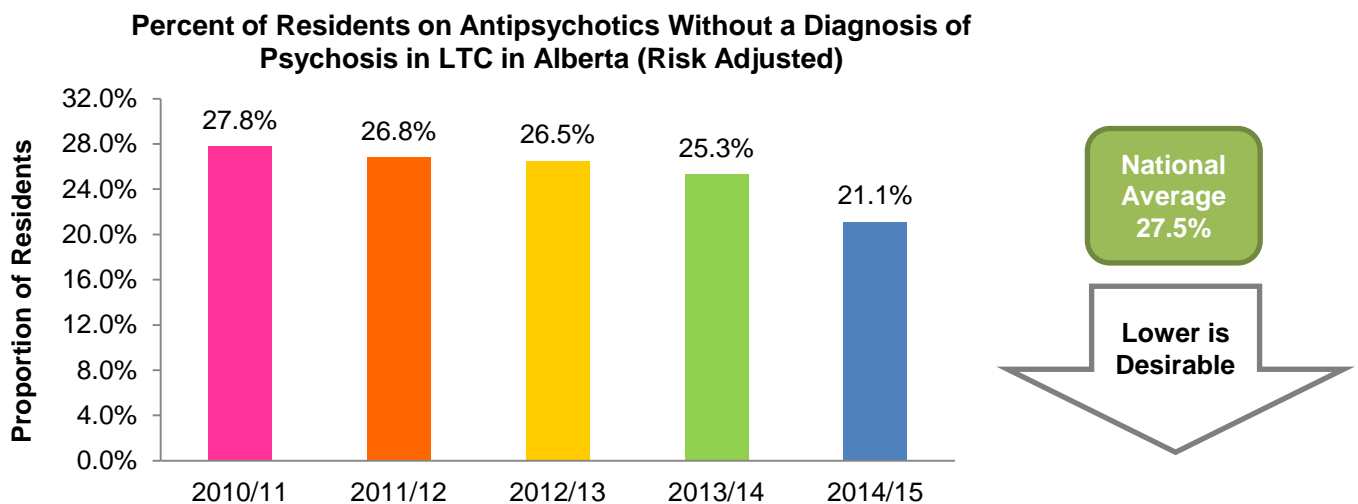
## Calculation

The unadjusted QI for a given LTC facility is calculated as follows:

$$\begin{aligned} \text{\% of residents on antipsychotics} &= \frac{\text{Number of residents who received an antipsychotic medication}}{\text{All assessed residents, excluding those with schizophrenia, Huntington's chorea and hallucinations, delusions and end-of-life residents}} \\ \text{without a diagnosis of psychosis} & \end{aligned}$$

Unadjusted rates are best used to compare performance changes **within** a facility over time.

The risk adjusted QI is calculated using a predetermined statistical process that adjusts for differences in the populations served and the associated differences in risk that come with various conditions. The risk adjustment process allows for comparability **between** different facilities.



**Source:** CCRS eReports, September 08, 2015.

## Context

- Antipsychotics are a class of medications used for the treatment of acute and chronic psychosis.<sup>2</sup>
- Antipsychotic drugs have been associated with numerous adverse effects (e.g. increased risk of strokes, confusion, etc.) and as such, should be used with caution, especially among the elderly.<sup>3</sup>

- Antipsychotic drugs are appropriate when used in the treatment of chronic mental health conditions such as schizophrenia and to manage psychosis (hallucinations or delusions that are troublesome to the person).
- Experts now agree that in many cases non-pharmaceutical approaches are as effective, or better at managing many of the behaviours seen in people with dementia.<sup>4</sup>
  - Individuals with dementia may also develop psychosis which is distressful, in which case it may be appropriate to treat the psychosis with antipsychotic medications.

## Interpretation

- A lower percentage is desirable as it indicates a lower proportion of LTC residents who received a potentially inappropriate antipsychotic medication.
- A higher percentage indicates a higher proportion of LTC residents who have received an antipsychotic medication without a diagnosis of psychosis on their most recent assessment in a given quarter.
- The frequency of administration or dosage is not factored into the inclusion criteria. If a resident has received an antipsychotic medication once within the seven day look-back period of the RAI-MDS 2.0 assessment, they are included in the QI (providing they do not have a diagnosis of schizophrenia, hallucinations, Huntington's disease or are end-of-life).

## Initiatives and Considerations

- The Seniors Health Strategic Clinical Network (SH SCN) in collaboration with the Addiction & Mental Health Strategic Clinical Network (AMH SCN) within AHS coordinated a project to reduce the overall utilization of antipsychotic medications without a diagnosis of psychosis in LTC facilities to a maximum of 20% of residents by 2018.
- The Appropriate Use of Antipsychotics approach was trialed in 11 Early Adopter sites in 2013-14. These teams were able to reduce by 50% the number of residents on antipsychotics without a diagnosis of psychosis. Once the pilot demonstrated promising results, this project was funded through a grant from Alberta Health. Based on the success of the Early Adopter sites, in 2014-15 the remaining LTC sites were invited to learn strategies to safely trial reductions in these medications.
- The SH SCN initiative has developed guidelines and a toolkit of resources to promote the appropriate use of antipsychotics in LTC facilities and to appropriately manage responsive behaviours associated with dementia. This toolkit is available at [www.albertahealthservices.ca/auatoolkit.asp](http://www.albertahealthservices.ca/auatoolkit.asp).
- The SH SCN is providing enhanced education in long-term care on additional strategies to ensure antipsychotics are used appropriately, such as helping residents sleep better without sleeping pills (a common use of antipsychotics). This education will also be trialed in supportive living sites.
- Alberta participated in the Reducing Antipsychotic Medication Use in LTC Collaborative sponsored by the Canadian Foundation for Healthcare Improvement. Fifteen healthcare organizations from seven provinces and one territory, including Alberta's Good Samaritan Society participated in the Collaborative. AHS staff members involved in the AUA project were part of the Collaborative Faculty.
- As part of the accreditation process, accreditation bodies require LTC facilities to assess the appropriateness of antipsychotic use and to use this information to make improvements.

## RES01: Restraint Use in LTC

**Indicator Name:** Percentage of LTC residents in daily physical restraints.  
**Indicator Code:** RES01

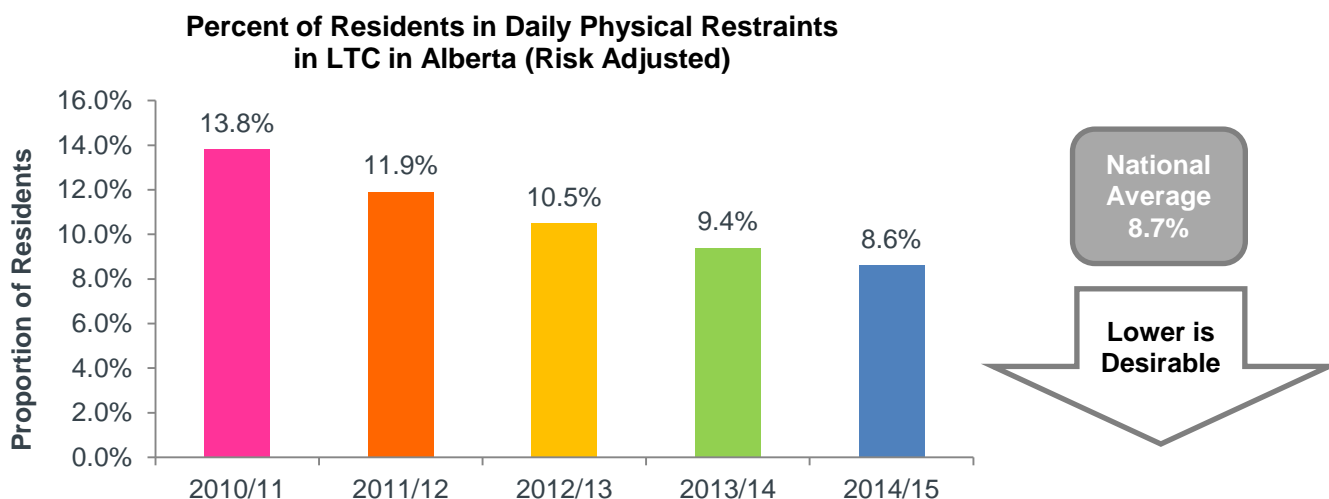
### Calculation

The unadjusted QI for a given LTC facility is calculated as follows:

$$\begin{aligned} \text{\% of residents in} \\ \text{daily physical} \\ \text{restraints} &= \frac{\text{Number of residents who were physical restrained daily on} \\ &\quad \text{their target assessment}}{\text{All assessed residents, excluding those who are comatose} \\ &\quad \text{and/or those who are quadriplegic}} \end{aligned}$$

Unadjusted rates are best used to compare performance changes **within** a facility over time.

The risk adjusted QI is calculated using a predetermined statistical process that adjusts for differences in the populations served and the associated differences in risk that come with various conditions. The risk adjustment process allows for comparability **between** different facilities.



**Source:** CCRS eReports, September 08, 2015.

### Context

- A physical restraint is defined as any manual method, or any physical or mechanical device, material or equipment that is attached or adjacent to the resident's body, that the resident cannot remove easily, and that restricts the resident's freedom of movement or normal access to his or her body. It is the effect the device has on the resident that classifies it into the category of restraint, not the name or label given to the device, nor the purpose or intent of the device.<sup>8</sup>

- Physical restraints are associated with negative physical and psychosocial outcomes. If used for any significant period of time, the physical consequences may include loss of muscle mass, contractures, lessened mobility and stamina, impaired balance, skin breakdown, constipation, social isolation, emotional distress and incontinence. Further, persons who try to free themselves from restraints may fall and be injured.<sup>6</sup>
- Physical restraints should be used as a last available option after all other supportive interventions have been trialed. Where physical restraint use is unavoidable, the outcomes of the restraint on resident status must be evaluated regularly.

## Interpretation

- A lower percentage is desirable as it indicates a lower proportion of LTC residents who require the use of physical restraints on a daily basis.
- A higher percentage indicates a higher proportion of LTC residents who are in daily physical restraints on their most recent RAI-MDS 2.0 assessment in a given quarter.
- This QI only references physical restraints (excluding side rails on beds). Other types of restraint such as environmental, pharmacological and mechanical restraints are not included in the calculation.
- Restraints captured in this QI include trunk restraint, limb restraints and chairs that prevent residents from getting up. If a resident does not have the physical ability or cognitive capacity to rise from any chair, they would not be considered restrained for the purposes of this QI.

## Initiatives and Considerations

- A system-wide provincial policy has been drafted by AHS to reduce the proportion of LTC residents in daily physical restraints and is currently under review for approval.
- The reduction of restraint use requires an interdisciplinary team approach to resident care and safety.
- Supportive interventions, which include positive, non-restrictive and non-pharmacological interventions, must be considered prior to utilization of restraints.<sup>5</sup>
- If supportive interventions are considered and deemed ineffective or inappropriate in the circumstance, the least restrictive restraint may be used.<sup>1</sup>
- As part of the accreditation process, accreditation bodies require restraint use be monitored and limited in use.

## ADL05: Improved Physical Functioning in LTC

**Indicator Name:** Percentage of LTC residents whose functional status improved on mid-loss activities of daily living (ADL) (transfer and locomotion) or who remained completely independent in mid-loss ADLs.

**Indicator Code:** ADL05

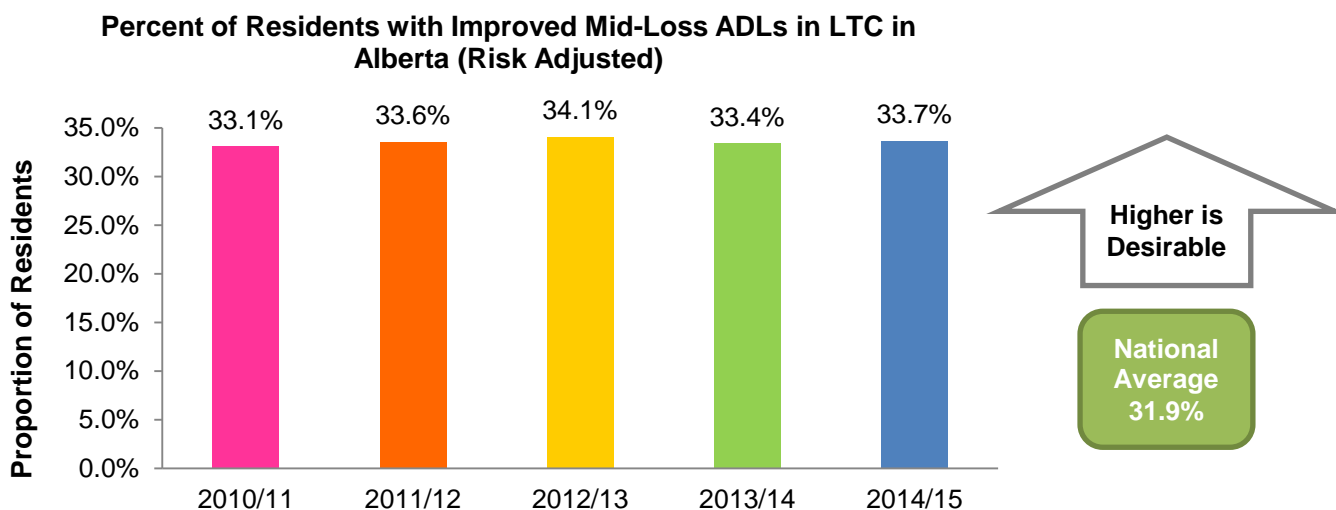
### Calculation

The unadjusted QI for a given LTC facility is calculated as follows:

$$\frac{\text{\% of residents with improved mid-loss ADLs or remained completely independent}}{\text{Number of residents with improved mid-loss ADL self-performance on their target assessment relative to their prior assessment or a score of 0 on both prior and target assessment}} = \frac{\text{All assessed residents, excluding comatose and end-of-life residents}}{\text{All assessed residents, excluding comatose and end-of-life residents}}$$

Unadjusted rates are best used to compare performance changes **within** a facility over time.

The risk adjusted QI is calculated using a predetermined statistical process that adjusts for differences in the populations served and the associated differences in risk that come with various conditions. The risk adjustment process allows for comparability **between** different facilities.



Source: CCRS eReports, September 08, 2015.

### Context

- Increasing dependence or loss of independence in ADLs among LTC residents follows a regular, hierarchical pattern. Typically, residents first need help with the “early-loss” ADLs (dressing and personal hygiene); followed by “mid-loss” ADLs (walking, transfer and locomotion); and finally “late-loss” ADLs (eating and bed mobility).<sup>6</sup>

- Residents with improved mid-loss ADLs get a lower ADL self-performance score on their most recent assessment compared to the previous assessment for one or more of three mid-loss ADLs: i) transfer, ii) walk in corridors, and/or iii) locomotion on unit.
- A lower ADL self-performance score is desirable as it indicates more independence in these ADLs.
- Improved mid-loss ADL score of a resident may indicate that the resident has the potential to improve performance or prevent avoidable functional decline in mid-loss ADLs.<sup>7</sup>
- Most LTC residents are at risk of physical decline and a resident's potential for improvement or optimal ADL functionality is often underestimated by family, staff, or the resident himself or herself.<sup>8</sup> The mid-loss ADLs such as ability to walk and self-transfer are very decisive factors in a resident's quality of life.

## Interpretation

- A higher percentage is desirable as it indicates a higher proportion of LTC residents whose mid-loss ADL functioning improved.
- A lower percentage indicates a lower proportion of LTC residents whose mid-loss ADL functioning improved.
- ADL self-performance measures what the resident actually did (not what he or she might be capable of doing) within each ADL category over a seven day period according to a performance-based scale.<sup>3</sup>
- The inclusion criteria for mid-loss ADLs in the calculation of this QI include:
  - i) Transfers refer to the movements of the resident between surfaces (e.g. to/from bed, chair and standing position) but exclude the movements to/from bath or toilet.
  - ii) Walk in corridor may also include locations other than resident's room or the corridor (e.g. walking in the dining room).
  - iii) Locomotion on unit includes resident's movement between locations in his or her room and adjacent corridor on the same floor and does not include locomotion off the unit. If the resident is in a wheelchair, locomotion is defined as self-sufficiency once in the chair.<sup>3</sup>
- This QI is triggered for residents whose cumulative mid-loss ADL score (for walking, transfer and locomotion) on their target assessment is lower than the cumulative score on their prior assessment. The cumulative score could represent an improvement in one of the mid-loss ADLs and worsening in the others; however, to be included in the numerator the degree of improvement must be greater than the worsening.

## Initiatives and Considerations

- Residents with no cognitive impairment or moderately impaired cognition (Cognitive Performance Scale scores of 0, 1 and 2) may have the best capacity to improve in early to mid-loss ADLs.
- When the RAI-MDS 2.0 ADL Clinical Assessment Protocol is triggered "for improvement," residents should be considered for some form of rehabilitation programming, depending on available resources.



## ADL5A: Worsened Physical Functioning in LTC

**Indicator Name:** Percentage of LTC residents whose functional status for mid-loss ADLs (transfer and locomotion) worsened or who remained completely dependent in mid-loss ADLs.

**Indicator Code:** ADL5A

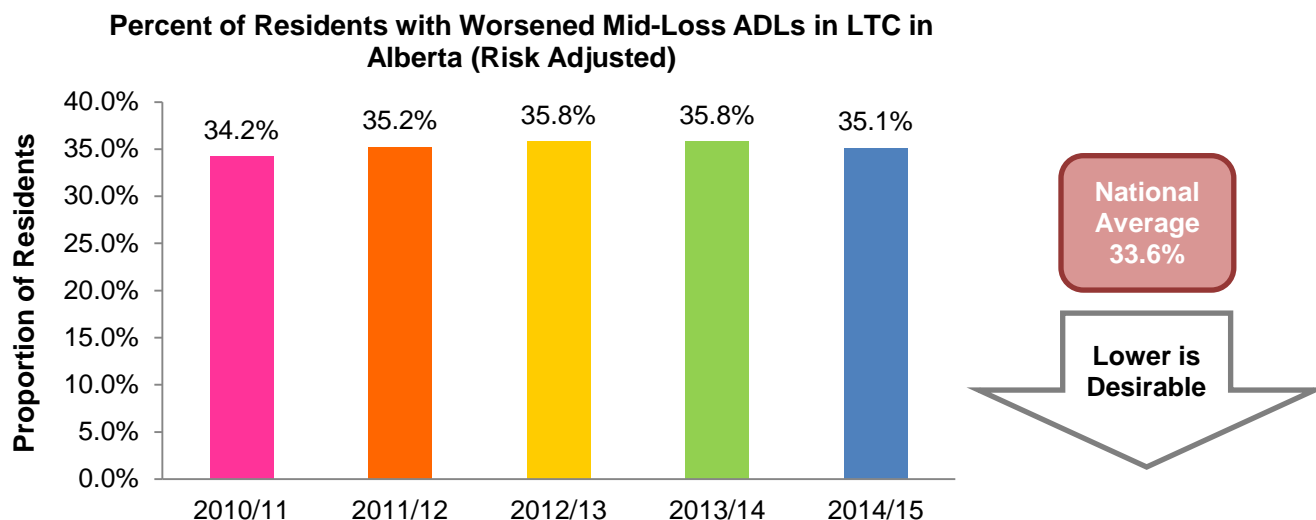
### Calculation

The unadjusted QI for a given LTC facility is calculated as follows:

$$\frac{\text{\% of residents with worsened mid-loss ADLs or remained completely dependent on mid-loss ADLs}}{\text{Number of residents with worse ADL self-performance on their target assessment relative to their prior assessment or with a maximum ADL score on both previous and most recent assessments}} = \frac{\text{All assessed residents, excluding comatose and end-of-life residents}}{\text{All assessed residents, excluding comatose and end-of-life residents}}$$

Unadjusted rates are best used to compare performance changes **within** a facility over time.

The risk adjusted QI is calculated using a predetermined statistical process that adjusts for differences in the populations served and the associated differences in risk that come with various conditions. The risk adjustment process allows for comparability **between** different facilities.



**Source:** CCRS eReports, September 08, 2015.

### Context

- Loss of or increasing dependence on ADLs in LTC residents follows a regular, hierarchical pattern. Typically, residents first need help with the “early-loss” ADLs (dressing and personal hygiene); followed by “mid-loss” ADLs (walking, transfer and locomotion); and finally “late-loss” ADLs (eating and bed mobility).<sup>6</sup>

- Residents whose mid-loss ADLs worsened get a higher ADL self-performance score on their most recent assessment than the previous assessment (or a maximum score on both previous and most recent assessments) for one or more of three mid-loss ADLs: i) transfers, ii) walk in corridors, and/or iii) locomotion on unit.<sup>9</sup> A higher ADL self-performance score is not desirable as it indicates less independence in these ADLs.
- Residents who experience loss of or decreased independence on mid-loss ADLs could also experience social isolation and decline in other aspects of their health and quality of life (e.g. poor communication, incontinence, depression, cognitive loss, falls, pressure ulcers) which should be closely monitored.<sup>10</sup>
- Worsening ADL self-performance suggests that the resident's needs for formal nursing care, supervision and support services could be increasing.<sup>6</sup>
- Many factors can contribute to ADL dependence of a LTC resident. Among the more important factors are: decline in cognitive performance; the onset or flare-up of a recurrent chronic disease (e.g. depression); the emergence of an acute disease (e.g. stroke) or another health problem (e.g. hip fracture); and the inappropriate use of medications. Worsening of physical and neurological conditions can adversely affect physical factors important to resident's self-care such as stamina, muscle tone, balance, and bone strength.<sup>8</sup>

## Interpretation

- A lower percentage is desirable as it indicates that mid-loss ADL functioning is worsened in a lower proportion of LTC residents
- A higher percentage indicates a higher proportion of LTC residents whose mid-loss ADL functioning worsened.
- The ADL self-performance measures what the resident actually did (not what he or she might be capable of doing) within each ADL category over the last seven days according to a performance-based scale.<sup>8</sup> Their self-performance may vary from day to day, shift to shift, or within shifts due to many possible reasons including mood, medical condition and medications. The RAI-MDS 2.0 assessments capture the total picture of the resident's ADL self-performance over the seven day look-back period.<sup>8</sup>
- The inclusion criteria for mid-loss ADLs in the calculation of this QI include:
  - iv) Transfers refer to the movements of the resident between surfaces (e.g. to/from bed, chair and standing position) but exclude the movements to/from bath or toilet.
  - v) Walk in corridor may also include locations other than resident's room or the corridor (e.g. walking in the dining room).
  - vi) Locomotion on unit includes resident's movement between locations in his or her room and adjacent corridor on the same floor and does not include locomotion off the unit. If the resident is in a wheelchair, locomotion is defined as self-sufficiency once in the chair.<sup>10</sup>
- This QI is triggered for residents whose cumulative mid-loss ADL score (for walking, transfer and locomotion) on their target assessment is higher than the cumulative score on their prior assessment. The cumulative score could represent a worsening in one of the mid-loss ADLs and an improvement in the others; however, to be included in the numerator the degree of worsening must be greater than the improvement.

## Initiatives and Considerations

- Residents with worsened mid-loss ADLs may trigger the ADL Clinical Assessment Protocol in the category aimed to prevent further ADL decline.

- Residents who remained completely dependent for mid-loss ADLs may not be successful in care plans targeted to improve mid-loss ADL functioning, but may succeed with care plans that are targeted to improve late-loss ADL functioning.
- Select targeted ADLs for care interventions to prevent further decline and increase independence by comparing self-performance versus capacity. For those who are dependent in mid-loss ADLs (e.g. walking), focus the care plan on a late-loss ADL (e.g. eating).<sup>6</sup> Because of the increasing frailty and complexity of LTC residents, in many circumstances care planning should be focused on maintaining late-loss ADL functioning.

## MOD4A: Worsened Depressive Mood in LTC

**Indicator Name:** Percentage of LTC residents whose mood **symptoms** of depression worsened.

**Indicator Code:** MOD4A

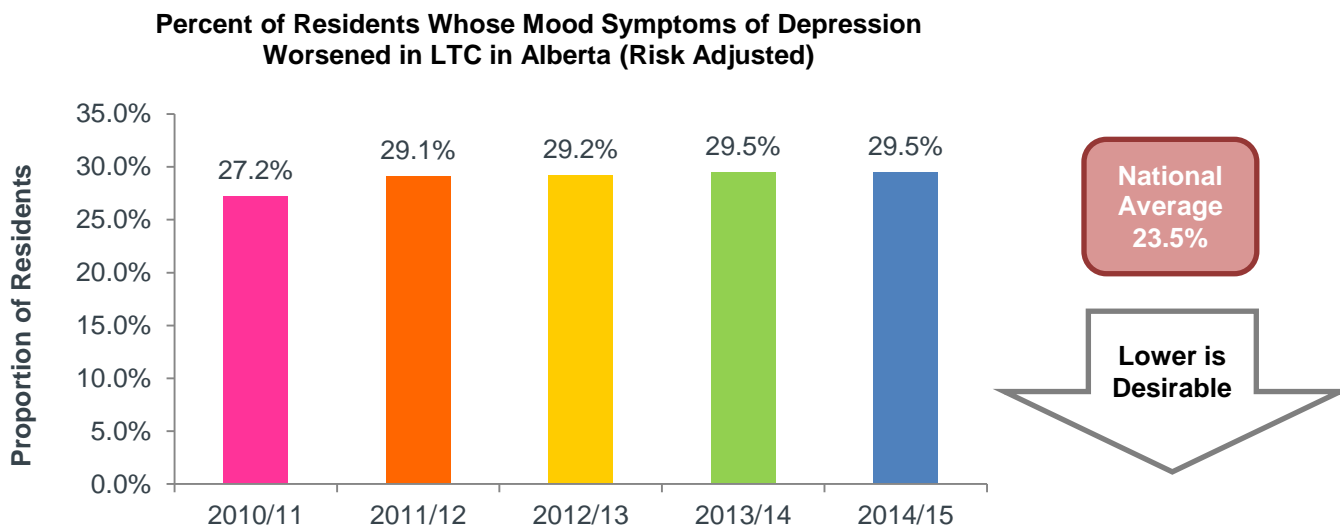
### Calculation

The unadjusted QI for a given LTC facility is calculated as follows:

$$\begin{array}{l} \text{\% of residents who} \\ \text{\textit{declined in mood}} \\ \text{\textit{from symptoms of}} \\ \text{\textit{depression}} \end{array} = \frac{\begin{array}{l} \text{\textit{Number of residents with a higher Depression Rating Scale}} \\ \text{\textit{score on their target assessment than on their prior}} \\ \text{\textit{assessment}} \end{array}}{\begin{array}{l} \text{\textit{All assessed residents whose depression symptoms could}} \\ \text{\textit{decline, excluding comatose residents}} \end{array}}$$

Unadjusted rates are best used to compare performance changes **within** a facility over time.

The risk adjusted QI is calculated using a predetermined statistical process that adjusts for differences in the populations served and the associated differences in risk that come with various conditions. The risk adjustment process allows for comparability **between** different facilities.



Source: CCRS eReports, September 08, 2015.

### Context

- The Depression Rating Scale (DRS) is a direct output of the RAI-MDS 2.0 that can be used as a clinical screen for the severity of and change in depressive symptoms. The DRS is not a diagnostic tool. If a resident has a score of 3 or more on the DRS, they should be further assessed for a clinical diagnosis of depression.
- DRS scores range from 0-14 with higher values indicating that the resident has more numerous and/or frequent depressive symptoms. Symptoms used to calculate the DRS include the resident making negative statements, persistent anger with self or others,

expressions of unrealistic fears, repetitive health complaints, repetitive anxious complaints/concerns, sad/pained/worried facial expressions, and crying/tearfulness.

- Depression is a serious condition and if left untreated is associated with significant morbidity, functional decline and unnecessary suffering by the person, family and caregivers. Residents in LTC are at high risk due to factors including relocation adjustment to the facility, functional impairment (including vision, hearing and speech and ability to participate in activities), social withdrawal, increased risk of medical illness, cognitive impairment and issues with pain. It is important to identify signs and symptoms of mood distress, as it is very treatable.<sup>6</sup>

## Interpretation

- A lower percentage is desirable as it indicates that a lower proportion of LTC residents' DRS scores increased.
- A higher percentage indicates a higher proportion of LTC residents who experienced more frequent or additional depressive symptoms on their most recent assessment as compared to their previous assessment.
- The RAI Clinical Assessment Protocol Manual states that 20% of persons in LTC facilities will have a DRS score of 3 or higher. Therefore, this QI should not reach 0%.
- Residents with a DRS of 14 (maximum score) are excluded from this indicator, as their score cannot increase.

## Initiatives and Considerations

- A review of Alberta's addiction and mental health system has just wrapped up. The scope of the review includes addiction and mental health services and supports for all ages, including seniors. Results and recommendations are being presented to the Minister before the beginning of 2016.
- As part of the accreditation process, accreditation bodies require that residents' mental health status is assess and monitored.

## PAI0X: Experiencing Pain in LTC

**Indicator Name:** Percentage of LTC residents with pain.

**Indicator Code:** PAI0X

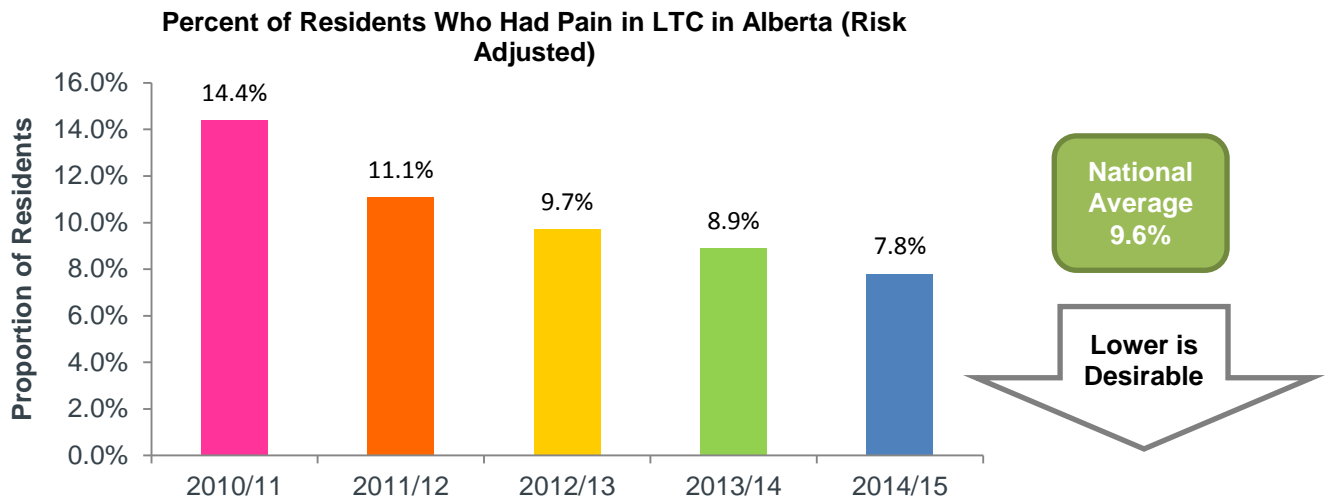
### Calculation

The unadjusted QI for a given LTC facility is calculated as follows:

$$\text{\% of residents with pain} = \frac{\text{Number of residents with moderate pain at least daily or horrible/excruciating pain at any frequency}}{\text{All assessed residents}}$$

Unadjusted rates are best used to compare performance changes **within** a facility over time.

The risk adjusted QI is calculated using a predetermined statistical process that adjusts for differences in the populations served and the associated differences in risk that come with various conditions. The risk adjustment process allows for comparability **between** different facilities.



**Source:** CCRS eReports, September 08, 2015.

### Context

- Pain refers to any type of physical pain or discomfort in any part of the body. It may be acute or chronic, continuous or intermittent, or occur at rest or with movement.<sup>8</sup>
- It is a subjective experience, and the inability to communicate verbally does not negate the possibility that an individual is experiencing pain and is in need of appropriate pain-relieving treatment.<sup>6</sup>
- Pain directly impacts the resident's quality of life and can impact social engagement, ability to perform activities of daily living, mood and behaviours, and nutrition status.

## Interpretation

- A lower percentage is desirable as it indicates fewer LTC residents who suffer from moderate daily or excruciating pain.
- A higher percentage indicates a higher proportion of LTC residents with pain.
- Clinical judgement is used when assessing pain. If difficulty is encountered in assessing intensity level (i.e. mild, moderate, severe), the clinician will code for the higher intensity level of pain.
- This QI is triggered for residents with moderate (a “medium” amount) pain at least daily or horrible/excruciating pain (worst possible pain which can interfere with daily routines, socialization and sleep) at any frequency during the seven day look-back period. Pain experienced outside of this reflective period is not included in the calculation.
- For residents with chronic pain, if pain management strategies (e.g. receipt of regularly scheduled analgesic or other therapeutic interventions) are effective to the extent that the resident does not report experiencing pain or does not demonstrate behaviours associated with pain, then the resident would be coded as having “no pain”. They would therefore not be included in the numerator of this calculation.

## Initiatives and Considerations

- This QI should be reviewed in conjunction with indicator PAN01 - the percentage of residents with worsened pain.
- When pain is not resolved through conventional therapy or is chronic, in-depth secondary assessments are required to determine the cause and the best interdisciplinary pain management strategies.
- Pain management strategies should be included in the care plan for any resident who experiences pain. Ongoing monitoring and evaluation of pain management strategies are standard expectations of care.
- As part of the accreditation process, accreditation bodies require that pain be monitored and managed appropriately.

## PAN01: Experiencing Worsened Pain in LTC

**Indicator Name:** Percentage of LTC residents whose pain worsened.

**Indicator Code:** PAN01

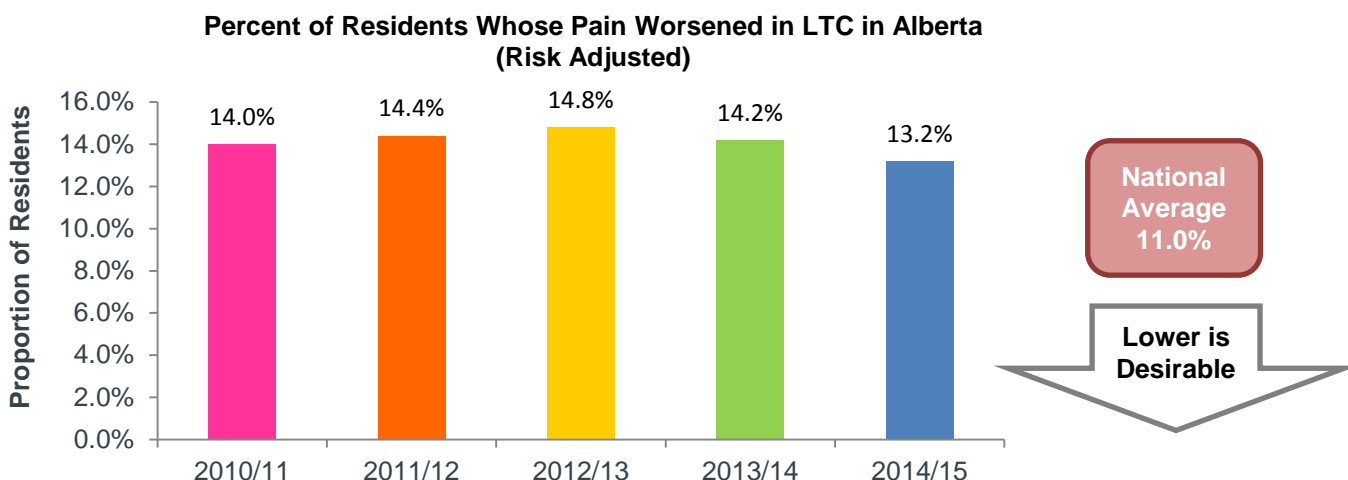
### Calculation

The QI for a given LTC facility is calculated as follows:

$$\begin{array}{l} \% \text{ of residents} \\ \text{whose pain} \\ \text{worsened} \end{array} = \frac{\begin{array}{l} \text{Residents with greater pain on their target assessment,} \\ \text{relative to their prior assessment} \end{array}}{\begin{array}{l} \text{All assessed residents whose pain symptoms could} \\ \text{increase} \end{array}}$$

Unadjusted rates are best used to compare performance changes **within** a facility over time.

The risk adjusted QI is calculated using a predetermined statistical process that adjusts for differences in the populations served and the associated differences in risk that come with various conditions. The risk adjustment process allows for comparability **between** different facilities.



Source: CCRS eReports, September 08, 2015.

### Context

- Pain refers to any type of physical pain or discomfort in any part of the body. It may be acute or chronic, continuous or intermittent, or occur at rest or with movement.<sup>8</sup>
- It is a subjective experience, and the inability to communicate verbally does not negate the possibility that an individual is experiencing pain and is in need of appropriate pain-relieving treatment.<sup>6</sup>
- Pain directly impacts the resident's quality of life and can impact social engagement, ability to perform activities of daily living, mood and behaviours, and nutrition status.



## Interpretation

- A lower percentage is desirable as it indicates fewer LTC residents whose pain has worsened.
- A higher percentage indicates a higher proportion of LTC residents with pain that has worsened since their prior assessment.
- Residents coded as having severe daily pain cannot worsen and are therefore excluded from the calculation.
- Coding of the RAI-MDS 2.0 assessment uses a seven day look-back period for this data element. Pain experienced outside of this reflective period is not included in the calculation.
- Clinical judgement is used when assessing pain. If difficulty is encountered in assessing intensity level (i.e. mild, moderate, severe), the clinician will code for the higher intensity level of pain.
- For residents with chronic pain, if pain management strategies (e.g. receipt of regularly scheduled analgesic or other therapeutic interventions) are effective to the extent that the resident does not report experiencing pain or does not demonstrate behaviours associated with pain, then the resident would be coded as having “no pain”.

## Initiatives and Considerations

- This QI should be reviewed in conjunction with indicator PAIOX - the percentage of residents with pain.
- Chronic pain and pain not resolved through conventional therapy requires in-depth secondary assessments to determine the cause and the best interdisciplinary pain management strategies.
- Pain management strategies should be included in the care plan for any resident who experiences pain. Ongoing monitoring and evaluation of pain management strategies are standard expectations of care.
- This indicator is not a definitive measure of quality of care. Higher results may be indicative of residents with worsening clinical conditions. It also provides clinicians with insight into those residents for whom current pain strategies are not effective and therefore warrant further assessment.
- As part of the accreditation process, accreditation bodies require that pain be monitored and managed appropriately.

- <sup>1</sup> Canadian Institute for Health Information: CCRS Quality Indicators Risk Adjustment Methodology 2013.  
[www.cihi.ca/CIHI-ext-portal/pdf/internet/CCRS\\_QI\\_RISK\\_ADJ\\_METH\\_2013\\_EN](http://www.cihi.ca/CIHI-ext-portal/pdf/internet/CCRS_QI_RISK_ADJ_METH_2013_EN).
- <sup>2</sup> Davis' Drug Guide for Nurses (Eleventh Edition)
- <sup>3</sup> Health Canada. Atypical Antipsychotic Drugs and Dementia – Advisories, Warnings and Recalls for Health Professionals. 2005.  
[www.healthycanadians.gc.ca/recall-alert-rappel-avis/hc-sc/2005/14307a-eng.php](http://www.healthycanadians.gc.ca/recall-alert-rappel-avis/hc-sc/2005/14307a-eng.php).
- <sup>4</sup> Alberta Health Services, Seniors Health Strategic Clinical Network Appropriate Use of Antipsychotics Toolkit for Care Teams.  
[www.albertahealthservices.ca/auatoolkit.asp](http://www.albertahealthservices.ca/auatoolkit.asp).
- <sup>5</sup> 2014 Continuing Care Health Service Standards. Section 16.0 Restraint Management
- <sup>6</sup> interRAI Clinical Assessment Protocols (CAPs)—For Use With interRAI's Community and Long-Term Care Assessment Instruments, March 2008 (Ottawa: CIHI, 2008).
- <sup>7</sup> [www.interrai.org/assets/files/par-i-chapter-3-old-age.pdf](http://www.interrai.org/assets/files/par-i-chapter-3-old-age.pdf)
- <sup>8</sup> Resident Assessment Instrument (RAI) RAI-MDS 2.0 User's Manual. February 2012. Canadian version.
- <sup>9</sup> <http://indicatorlibrary.cihi.ca/pages/viewpage.action?pageId=5112032>
- <sup>10</sup> [https://secure.cihi.ca/free\\_products/CCRS\\_QualtyinLongTermCare\\_EN.pdf](https://secure.cihi.ca/free_products/CCRS_QualtyinLongTermCare_EN.pdf)