

Restraint Use in Long-Term Care

Name	Restraint Use in Long-Term Care
Short /Other Names	Percentage of Residents in Daily Physical Restraints
Description	This indicator looks at how many long-term care residents are in daily physical restraints. Restraints are sometimes used to manage behaviours or to prevent falls. There are many potential physical and psychological risks associated with applying physical restraints to older adults, and such use raises concerns about safety and quality of care.
Interpretation	Lower is better. It means that a lower percentage of long-term care residents were in daily physical restraints.
HSP Framework Dimension	Health System Outputs: Appropriate and effective
Areas of Need	Living With Illness, Disability or Reduced Function
Geographic Coverage	Newfoundland and Labrador, New Brunswick, Nova Scotia, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon
Reporting Level /Disaggregation	Province/Territory, Region, Facility, Corporation, Sector (residential and hospital-based continuing care)
Indicator Results	Accessing Indicator Results on Your Health System: In Depth (PDF)

Identifying Information

Name	Restraint Use in Long-Term Care
Short/Other Names	Percentage of Residents in Daily Physical Restraints
Indicator Description and Calculation	

Description	This indicator looks at how many long-term care residents are in daily physical restraints. Restraints are sometimes used to manage behaviours or to prevent falls. There are many potential physical and psychological risks associated with applying physical restraints to older adults, and such use raises concerns about safety and quality of care.
Calculation: Description	This indicator examines the percentage of residents in daily physical restraints. It is calculated by dividing the number of residents who were in daily physical restraints by the number of all residents (excluding comatose residents and those who are quadriplegic) with valid assessments within the applicable time period.
Calculation: Geographic Assignment	Unit of Analysis: Resident Place of service
Calculation: Type of Measurement	Percentage or proportion
Calculation: Adjustment Applied	The following covariates are used in risk adjustment: Individual Covariates: None Facility-Level Stratification: Activities of Daily Living (ADLs) Long Form Scale Stratification, Direct Standardization, Indirect Standardization ;
Calculation: Method of Adjustment	Standard Population: 3,000 facilities in 6 U.S. states and 92 residential care facilities and continuing care hospitals in Ontario and Nova Scotia Description: Residents with valid assessments

Inclusions:

Denominator	<ol style="list-style-type: none"> 1. Residents with valid assessments. To be considered valid, the target assessment must <ol style="list-style-type: none"> a. Be the latest assessment in the quarter b. Be carried out more than 92 days after the Admission Date c. Not be an Admission Full Assessment
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Exclusions:

1. Residents who are comatose (B1 = 1) or quadriplegic (I1bb = 1)

Description:

Residents who were physically restrained daily on their target assessment. For this indicator, restraints included

- Trunk Restraint (P4c = 2)
- Limb Restraint (P4d = 2)
- Chair Prevents Rising (P4e = 2)

Inclusions:

Numerator

1. Residents with valid assessments. To be considered valid, the target assessment must
 - a. Be the latest assessment in the quarter
 - b. Be carried out more than 92 days after the Admission Date
 - c. Not be an Admission Full Assessment

Exclusions:

1. Residents who are comatose (B1 = 1) or quadriplegic (I1bb = 1)

Background, Interpretation and Benchmarks

CCRS quality indicators were developed by interRAI (www.interrai.org), an international research network, to provide organizations with measures of quality across key domains, including physical and cognitive function, safety and quality of life. Each indicator is adjusted for resident characteristics that are related to the outcome and independent of quality of care. The indicators can be used by quality leaders to drive continuous improvement efforts. They are also used to communicate with key stakeholders through report cards and accountability agreements.

Interpretation Lower is better. It means that a lower percentage of long-term care residents were in daily physical restraints.

HSP
Frame Health System Outputs: Appropriate and effective

Dimension
Areas of Need Living With Illness, Disability or Reduced Function

Targets CIHI: None

Benchmarks Health Quality Ontario (external): 3% for long-term care

Canadian Institute for Health Information. [CCRS Quality Indicators Risk Adjustment Methodology \(PDF\)](#). 2013.

Canadian Institute for Health Information. [When a Nursing Home Is Home: How Do Canadian Nursing Homes Measure Up on Quality? \(PDF\)](#) 2013.

Health Quality Ontario. [Long-Term Care Benchmarking Resource Guide \(PDF\)](#). 2013.

Health Quality Ontario. [Results From Health Quality Ontario's Benchmark Setting for Long-Term Care Indicators \(PDF\)](#). 2017.

References Health Quality Ontario. [Health Quality Ontario Indicator Library](#). Accessed October 4, 2017.

Hirdes JP, Mitchell L, Maxwell CJ, White N. [Beyond the "iron lungs of gerontology": Using evidence to shape the future of nursing homes in Canada](#). *Canadian Journal on Aging*. 2011.

Hirdes JP, Poss JW, Caldarelli H, et al. [An evaluation of data quality in Canada's Continuing Care Reporting System \(CCRS\): Secondary analyses of Ontario data submitted between 1996 and 2011](#). *BMC Medical Informatics and Decision Making*. 2013.

Jones RN, Hirdes JP, Poss JW, et al. [Adjustment of nursing home quality indicators](#). *BMC Health Services Research*. 2010.

Availability of Data Sources and Results

Data Sources CCRS

Type of Year:
Fiscal

Available Data Years **First Available Year:**
2010

Last Available Year:
2019

Geographic Coverage Newfoundland and Labrador, New Brunswick, Nova Scotia, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon

Reporting Level /Disaggregation Province/Territory, Region, Facility, Corporation, Sector (residential and hospital-based continuing care)

Result Updates
Update Frequency Every year

Web Tool:
Your Health System: In Depth

Indicator Results **URL:**
[Accessing Indicator Results on Your Health System: In Depth \(PDF\)](#)

Updates Not applicable
Quality Statement

This measure uses data collected by long-term care facilities using the Resident Assessment Instrument–Minimum Data Set 2.0 (RAI-MDS 2.0) and submitted to the Continuing Care Reporting System (CCRS). Users should be cautious when interpreting results from CCRS because the CCRS frame does not currently contain all facilities in all provinces and territories that make up the CCRS population of interest; thus the population covered by CCRS may not be representative of all continuing care facilities across Canada.

Some jurisdictions have implemented or are in the process of implementing the new interRAI Long-Term Care Facilities (LTCF), the next-generation clinical assessment instrument for long-term care. Data collected using this assessment instrument will be submitted to the Integrated interRAI Reporting System (IRRS). Results for these jurisdictions as of the fiscal year of interRAI LTCF implementation are not available at this time. Historical results based on the RAI-MDS 2.0 are available.

Caveats and Limitations Coverage is incomplete for some fiscal years in the following jurisdictions:

- Saskatchewan (implemented and started collecting data using the interRAI LTCF in 2019–2020)
- Manitoba (includes all facilities in Winnipeg Regional Health Authority only)
- New Brunswick (implemented and started collecting data using the interRAI LTCF in 2017–2018)
- Nova Scotia

Indicators are risk-adjusted to control for potential confounding factors.

Trending Issues Since 2003, the number of facilities and jurisdictions submitting to CCRS has been increasing. With the addition of new jurisdictions, it is possible that differences in care practices may impact indicator rates; however, changes to the underlying population would be controlled for using risk-adjustment. There is also evidence to suggest that trending and use of data from the entire time series is not an issue and that data quality is consistent over time (Hirdes et al., 2013).

Comments The CCRS quality indicators use 4 rolling quarters of data for calculations in order to have a sufficient number of assessments for risk adjustment. Since residents are assessed on a quarterly basis, each resident can contribute to the indicator up to 4 times.

Data for this indicator is also available in the Quick Stats tool, which includes results for both the residential and hospital-based continuing care sectors: <https://www.cihi.ca/en/quick-stats>.