**Worsened Pressure Ulcer in Long-Term Care**

**Name**
Worsened Pressure Ulcer in Long-Term Care

**Short/Other Names**
Percentage of Residents Whose Stage 2 to 4 Pressure Ulcer Worsened

**Description**
This indicator looks at the number of long-term care residents whose stage 2 to 4 pressure ulcer had worsened since the previous assessment. Pressure ulcers can happen when a resident sits or lies in the same position for a long period of time. Immobility may be due to many physical and psychological factors, neurological diseases like Alzheimer's and improper nutrition or hydration. Careful monitoring is required to ensure good quality of care.

**Interpretation**
Lower is better. It means that a lower percentage of residents had a stage 2 to 4 pressure ulcer that worsened.

**HSP Framework Dimension**
Health System Outputs: Safe

**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)

**Accessing Indicator Results on Your Health System: In Depth**

**Identifying Information**

**Name**
Worsened Pressure Ulcer in Long-Term Care

**Short/Other Names**
Percentage of Residents Whose Stage 2 to 4 Pressure Ulcer Worsened

**Indicator Description and Calculation**

**Description**
This indicator examines the percentage of residents whose stage 2 to 4 pressure ulcer had worsened since the previous assessment. It is calculated by dividing the number of residents whose stage 2 to 4 pressure ulcer worsened by the number of all residents with valid assessments (excluding those who had a stage 4 ulcer on their prior assessment) within the applicable time period.

**Calculation**
Unit of Analysis: Resident

**Calculation**: Percentage or proportion

**Calculation**: Place of service

**Calculation**: Type of Measure

**Calculation**: Adjustment Applied
Facility-level stratification: Case Mix Index (CMI)

**Calculation**: Method of Adjustment
Stratification, direct standardization, indirect standardization

**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**
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

As this is an incidence indicator, the resident must also have had an assessment in the previous quarter, with 45 to 165 days between the target and prior assessments. If multiple assessments in the previous quarter meet the time period criteria, the latest assessment is selected as the prior assessment.

**Exclusions**
1. Residents who had a stage 4 ulcer (M2a = 4) on their prior assessment (cannot get worse)
Description:
Residents who have a pressure ulcer at stage 2 to 4 on their target assessment and for whom the stage of pressure ulcer is greater on their target assessment than on their prior assessment

Inclusions:
1. Residents with a stage 2 to 4 pressure ulcer (M2a = 2, 3 or 4)
2. 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

As this is an incidence indicator, the resident must also have had an assessment in the previous quarter, with 45 to 165 days between the target and prior assessments. If multiple assessments in the previous quarter meet the time period criteria, the latest assessment is selected as the prior assessment.

Exclusions:
1. Residents who had a stage 4 ulcer (M2a = 4) on their prior assessment (cannot get worse)

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 residents had a stage 2 to 4 pressure ulcer that worsened.

Health System Outputs: Safe
Living With Illness, Disability or Reduced Function

Target Benchmarks
CIHI: None
Health Quality Ontario (external): 1% for long-term care

References
Canadian Institute for Health Information. When a Nursing Home Is Home: How Do Canadian Nursing Homes Measure Up on Quality? 2013.
Health Quality Ontario. Results From Health Quality Ontario's Benchmark Setting for Long-Term Care Indicators. 2017.
Users should be cautious when interpreting results from the Continuing Care Reporting System (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.

Caveats and Limitations

Coverage is incomplete in the following jurisdictions:
- Manitoba (includes all facilities in Winnipeg Regional Health Authority only)
- New Brunswick
- 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).

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.

Comments

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.