Long-Term Care
Case Mix Index
Results for 2018-19

Frequently Asked Questions &
Glossary of CMI Terms

Health Sector Models Branch
Ministry of Health and Long-Term Care
January 2018
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FREQUENTLY ASKED QUESTIONS AND ANSWERS

What’s New for the 2018-19 Case Mix Index (CMI)

1. Are there any changes to the CMI methodology or calculation?
   
   For 2018-19 there are no changes to the CMI methodology; the -5% Funded CMI floor, the special rehabilitation limit (5%) and re-indexing continue to apply as in previous years. While providing funding stability, this approach enables homes to receive funding that reflects the level of care, based on their resident assessments.

2. How will the application of the -5% Funded CMI corridor affect funding for Long-Term Care (LTC) homes?
   
   Homes with more than 5% decrease in their funded CMI compared to last year will be limited to a 5% decrease in funded CMI.

   The need for future mitigation on significant year-over-year CMI changes will be reviewed and determined annually.

3. What is the process for communicating the 2018-19 CMI results to the individual LTC homes?
   
   Similar to last year, the 2018-19 CMI results will be provided to homes through the LHINs. This approach is consistent with how LHINs share funding related information with hospitals and CCACs, and recognizes the LHINs’ role under the Local Health System Integration Act (LHSIA). The ministry will provide the LHINs with home details and technical support.

   The Master Sheet showing 2018-19 CMI results for all homes will also be posted on the private ministry website (www.hsim.health.gov.on.ca/hdbportal/) and Ontario LTC Homes portal (www.ltchomes.net).

4. Who should the LTC homes contact for their enquiries?
   
   The first line of contact for the LTC homes on CMI questions is their respective LHIN.
CMI Methodology

5. Why was it necessary to limit the percentage of Special Rehabilitation assessments and how is the percentage determined?

As noted in several communications and education sessions to the sector over the past few years, the LTC home reporting of special rehabilitation (SR) in Ontario has been significantly higher than in any other jurisdiction. Although a marked decline in the number of assessed days classified as SR has occurred, it still exceeds the typical range reported in other jurisdictions (average of 2-5% for similar long-term care settings). The limit on SR was necessary to avoid inequitable allocation of funding across the sector.

The 5% SR limit for Ontario was based on recommendations from the Health System Funding Long Term Care Working Group and a review of the data from other jurisdictions. The 5% home level SR limit will be reviewed annually.

6. How is the Special Rehabilitation Limited Case Mix Index calculated?

For the purpose of CMI calculations, a maximum of 5% of a home’s assessed days will be assigned to the SR case mix category. Where the 5% limit is exceeded, the assessed days will be assigned to the next highest qualifying non-special rehabilitation case mix group (i.e., those that provide the largest CMI increase to the facility). No assessed days are lost. Note that the 5% limit affects only SR and have no effect on nursing rehabilitation also provided to residents.

The annual CMI notices for all homes will be accompanied by a spreadsheet including full technical details of the Special Rehabilitation Limited CMI calculation.

Example: SR Calculation
The home in this example reported a total of 400 assessed days. Therefore, a maximum of 20 days will be credited as SR (400 x 5% = 20 days). Three assessments with a total of 181 days were originally assigned to SR.

a) Identify the assessment/assessed days for the calculation: note that though Assessment 2 is assigned to RAD (the highest SR group), it is more beneficial to the home to use the assessed days from Assessment 3 first given the SR limit.

<table>
<thead>
<tr>
<th>Assessment ID</th>
<th>Assessed Days</th>
<th>Unadjusted RUG</th>
<th>Unadjusted Weight</th>
<th>&quot;Rehab Off&quot; RUG</th>
<th>&quot;Rehab Off&quot; Weight</th>
<th>Weight Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>75</td>
<td>RAD</td>
<td>1.6125</td>
<td>SSC</td>
<td>1.4020</td>
<td>0.2105</td>
</tr>
<tr>
<td>3</td>
<td>15</td>
<td>RAC</td>
<td>1.3492</td>
<td>PD1</td>
<td>0.9718</td>
<td>0.3774</td>
</tr>
<tr>
<td>4</td>
<td>91</td>
<td>RAA</td>
<td>1.0167</td>
<td>CA1</td>
<td>0.9413</td>
<td>0.0754</td>
</tr>
<tr>
<td>TOTAL</td>
<td>181</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
b) Calculate the SR days with the 5% limit: multiply the weight for each assessed day by the number of assessed days in each group and summed to the home level

<table>
<thead>
<tr>
<th>Assessment ID</th>
<th>Assessed Days</th>
<th>Unadjusted Weight</th>
<th>&quot;Rehab Off&quot; Weight</th>
<th>Weight Difference</th>
<th>Rehab Days</th>
<th>Non-Rehab Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>15</td>
<td>1.3492</td>
<td>0.9718</td>
<td>0.3774</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>75</td>
<td>1.6125</td>
<td>1.4020</td>
<td>0.2105</td>
<td>5</td>
<td>70</td>
</tr>
<tr>
<td>4</td>
<td>91</td>
<td>1.0167</td>
<td>0.9413</td>
<td>0.0754</td>
<td>0</td>
<td>91</td>
</tr>
<tr>
<td>TOTAL</td>
<td>181</td>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td>161</td>
</tr>
</tbody>
</table>

c) Calculate the Home SR Limited CMI: divide total weighted days by total assessed days, the ratio equals SR Limited CMI for the home

<table>
<thead>
<tr>
<th>Assessment ID</th>
<th>Assessed Days</th>
<th>RUG</th>
<th>RUG Weight</th>
<th>Weighted Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>91</td>
<td>SE2</td>
<td>1.5910</td>
<td>144.7810</td>
</tr>
<tr>
<td>2a</td>
<td>5</td>
<td>RAD</td>
<td>1.6125</td>
<td>8.0625</td>
</tr>
<tr>
<td>2b</td>
<td>70</td>
<td>SSC</td>
<td>1.4020</td>
<td>98.1400</td>
</tr>
<tr>
<td>3</td>
<td>15</td>
<td>RAC</td>
<td>1.3492</td>
<td>20.2380</td>
</tr>
<tr>
<td>4</td>
<td>91</td>
<td>CA1</td>
<td>0.9413</td>
<td>85.6583</td>
</tr>
<tr>
<td>5</td>
<td>35</td>
<td>CC2</td>
<td>1.3794</td>
<td>48.2790</td>
</tr>
<tr>
<td>6</td>
<td>46</td>
<td>PA2</td>
<td>0.6452</td>
<td>29.6792</td>
</tr>
<tr>
<td>7</td>
<td>47</td>
<td>BB1</td>
<td>0.8917</td>
<td>41.9099</td>
</tr>
<tr>
<td>TOTAL</td>
<td>400</td>
<td></td>
<td></td>
<td>476.7479</td>
</tr>
</tbody>
</table>

SR Limited CMI = 1.1919

7. What is the re-indexing factor and how does it affect an LTC homes’ funding?

LTC funding will continue to be re-indexed in order to maintain fiscal neutrality. The re-indexing factor ensures the aggregate funding to all homes is not changed by the case mix funding calculations. The case mix system allocates each home a share of the existing funding pot. The re-indexing factor does not change each home’s share of the pot based on its RUG Weighted Patient Day (RWPD).

The re-indexing factor maintains a consistent total adjusted RWPD at the provincial level and preserves fiscal neutrality in the LTC Nursing and Personal Care (NPC) funding. This factor is the same for all homes and will normally be calculated annually. The NPC per diem, which is adjusted for acuity, impacts the home’s total NPC funding and is applied after the re-indexing factor.
**Example: Re-indexing factor calculation for a three home allocation pool**

The **re-indexing factor** = \( \frac{A}{B} \), where:

- **A** = sum of weighted resident days for the prior fiscal year
- **B** = current weighted residents days for all Ontario long-term care homes with classified beds

<table>
<thead>
<tr>
<th>Home</th>
<th>Funding CMI (D)</th>
<th>Beds</th>
<th>Assessed Days (E)</th>
<th>Weighted Days (D*E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>0.85</td>
<td>80</td>
<td>29,120</td>
<td>24,752</td>
</tr>
<tr>
<td>Y</td>
<td>1.04</td>
<td>128</td>
<td>46,592</td>
<td>46,592</td>
</tr>
<tr>
<td>Z</td>
<td>1.14</td>
<td>200</td>
<td>72,800</td>
<td>83,720</td>
</tr>
<tr>
<td></td>
<td><strong>Total (A)</strong></td>
<td></td>
<td><strong>155,064</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Home</th>
<th>Corridored CMI (D)</th>
<th>Beds</th>
<th>Assessed Days (E)</th>
<th>Weighted Days (D*E)</th>
<th>Share</th>
<th>Funding CMI (D*C)</th>
<th>Adjusted Weighted Days</th>
<th>Share with Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>0.89</td>
<td>80</td>
<td>29,120</td>
<td>25,917</td>
<td>16.5%</td>
<td>0.8770</td>
<td>25,538</td>
<td>16.5%</td>
</tr>
<tr>
<td>Y</td>
<td>1.04</td>
<td>128</td>
<td>46,592</td>
<td>48,456</td>
<td>30.8%</td>
<td>1.0248</td>
<td>47,747</td>
<td>30.8%</td>
</tr>
<tr>
<td>Z</td>
<td>1.14</td>
<td>200</td>
<td>72,800</td>
<td>82,992</td>
<td>52.7%</td>
<td>1.1233</td>
<td>81,779</td>
<td>52.7%</td>
</tr>
<tr>
<td></td>
<td><strong>Total (B)</strong></td>
<td></td>
<td><strong>157,364</strong></td>
<td></td>
<td></td>
<td><strong>Total 155,064</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(C) Re-indexing Factor For Year 2:  = \( \frac{A}{B} = 0.9854 \)

8. **What is the re-indexing factor for 2018-19 Funded CMI?**

The re-indexing factor for all homes is 0.9456 for 2018-19 Funded CMI.

9. **What is the definition of classified beds in the CMI calculation and payment notices?**

The definition for classified beds is the same for the CMI calculation, CMI notices and subsequent payment notices. Beds that have their funding “adjusted” for CMI are known as “classified beds.” Classified beds are beds in a LTC home where:

- data is submitted in all 4 quarters of the Assessment Period - from April to March of the previous year; e.g. for 2018-19 CMI, April 2016 to March 2017 as the Assessment Period, and;
- there is a high data submission rate (>90%) for three consecutive quarters of the Assessment Period.
A rigorous process is undertaken to validate the number of classified beds for each LTC home. For all LTC homes that submitted clinical (RAI-MDS 2.0) data in the Assessment Period, the bed data from the following sources is compared:

1) Results from the previous year CMI modeling
2) Ministry to Facility Payment Notice File
3) Facility Information from the Continuing Care Reporting System Files

10. Are “unclassified beds” included in the CMI calculation?

Currently, there are four different types of beds/scenarios that are excluded in the CMI calculation or not CMI adjusted.

1. **Convalescent Care Program (CCP) beds** are not CMI adjusted and funded at a CMI value of 1.00.

2. **Interim Bed Program (IBP) beds** are not CMI adjusted due to:
   - Data quality issues in the bed type field which is not consistently coded making it difficult to isolate these residents.
   - Fixed funding from LHINs based on a CMI of 1.0 (would need to be renegotiated).

Going forward, the ministry will be examining the feasibility to identify interim bed specific assessments in the dataset to validate the appropriateness of setting CMI at 1.0.

3. **Elder Care Capital Assistance Program (ELDCAP) beds** are not CMI adjusted as the beds are funded through a hospital’s global budget.

4. **Excluded facilities**, due to their uniqueness, will not be CMI adjusted. These include:
   - New LTC homes that do not meet the data threshold for classified beds will have all beds funded at a CMI of 1.0. This is subsequently adjusted in future years when a home has met the data threshold for CMI calculation.
   - Homes due to unique circumstances warrant exclusion from CMI adjustments. These homes will be dealt with on an individual basis and will be identified separately in further communications.

11. When will the RUG-III (34) weights for long-term care be updated?

The 2018-19 CMI calculation is applying the same weights as for previous years. The weighting methodology will be reviewed in the coming year including options for the update with more recent data and an exploration of additional data elements for weight calibration.

12. What data was used for the 2018-19 CMI?

The RAI-MDS 2.0 data submitted by LTC homes for the period April 1, 2016 to March 31, 2017 was used for modelling the 2018-19 CMI.
Resources for the Long-Term Care Sector

13. What are the next steps for data quality education and culture within the sector?

Data quality and education will continue to be an integral resource provided for the LTC sector. Homes first line of education for RAI-MDS is Canadian Institute for Health Information (CIHI). CIHI provides education available to all LTC homes in Ontario to assist with data quality improvements.

Mandatory assessment intelligence system (AIS) competency evaluations will continue to be required annually for all LTC home staff that contributes to the RAI-MDS assessments. Homes are encouraged to ensure their staff completes all mandatory AIS evaluations annually as well as confirm there is a process within the home to review the resident assessment data that supports high quality data submission.

14. What supports are available to the LTC sector to better understand the 2018-19 CMI methodology?

The following resources are available to enhance the understanding of the 2018-19 CMI methodology:

- FAQ document is also posted on the ministry website (www.hsim.health.gov.on.ca/hdbportal/) and Ontario LTC Homes portal (www.ltchomes.net).
- HSFR Helpline is available for the LHINs to submit their questions via email to HSF@ontario.ca.
# Glossary of CMI Terms

This glossary clarifies the definitions of various terminologies used in the LTC homes CMI.

<table>
<thead>
<tr>
<th>Definition/Description</th>
</tr>
</thead>
</table>
| **Funded CMI** | Funded CMI = SR limited CMI × Re-indexing Factor  
The Funded CMI is used to adjust the Nursing and Personal Care (NPC) funding.  
The ministry re-indexes all homes equally to ensure fiscal neutrality. The re-indexing factor is applied to ensure the aggregate funding to all LTC homes is not changed by the case mix funding calculations. The case mix system allocates the funding pot but does not change the size of the pot. |
| **Home-Level CMI** | A calculation by dividing the total RUG Weighted Patient Day (RWPD) at a home level by the total assessed resident days in the Continuing Care Reporting System (CCRS) at a home level over the specified measurement period. |
| **RUG (Resource Utilization Group) Weights** | A measure of the average resource use at a RUG level and are used for calculating RUG Weighted Patient Days (RWPD). The ministry produced these weights using data submitted by the LTC sector, as recommended by the Case Mix Transition Advisory Group. For example, the current weight or CMI attached to the RUG PE1 is 1.1063. |
| **RUG Weighted Patient Day (RWPD)** | The number of days that get assigned to each RUG group based on the RAI-MDS assessments. Each RUG group has a weight associated with it. By multiplying each assessed day by the weight associated with the RUG, the RUG Weighted Patient (resident) Days (RWPD) are calculated. |
| **Special Rehabilitation (SR) Limited CMI** | A 5% home level limit on special rehabilitation (SR) has been applied for the purpose of CMI results for the existing NPC funding. The resulting CMI is referred to as the SR Limited CMI.  
For the purpose of CMI calculations, a maximum of 5% of a home’s assessed days will be assigned to the SR case mix group. Assessed days (if any) above the 5% limit will be assigned to the next highest qualifying non-special rehabilitation case mix group. Where the 5% limit is exceeded, those SR days which continue to be recognized are the SR days most favourable to the home (i.e., those that provide the largest CMI increase to the home). |