

Acute LOS to Expected LOS Ratio

Name and Definition

Full Name	Acute Length of Stay (LOS) Relative to Expected Length of Stay (LOS)	
Short Name	Acute LOS to Expected LOS Ratio	
Definition	<p>The average number of acute days in acute care hospitals compared to expected length of stay (Statistics Canada, 2000).</p> <p>Length of stay is defined as the number of days indicated in a hospital record; specifically, the number of days from the date of admission to the date of discharge (Statistics Canada, 2012). The total hospital LOS includes acute days and alternate level of care (ALC) days. Only the acute portion (i.e., acute LOS) of the total LOS is relevant to this measure, which is to be consistent with the denominator calculation (i.e., Expected LOS).</p> <p>Expected length of stay (LOS) is calculated on typical patients taking into account the reason for hospitalization, age, comorbidity, and complications. Typical cases exclude deaths, transfers, voluntary sign-outs, and cases where the acute length of stay is greater than the “trim point” established by the Canadian Institute for Health Information (CIHI). The calculation uses the Case Mix Group Plus (CMG+) methodology of the most recent fiscal year. For instance, during the 2012/13 fiscal year the most recent grouper is CMG+ 2012. This grouper is applied to current as well as historical data (all historical data is re-grouped) so that expected LOS computations across all years are consistent.</p> <p>Expected LOS values predict acute days stay (i.e., excluding alternate level of care [ALC] days), as ALC days are not relevant to the acute care delivery. A ratio greater than 1 indicates actual acute days of stay was longer than expected while a value below 1 indicates the acute stay was shorter than expected.</p>	
Domain	Health Services Delivery	
Dimension		
Acceptability	Efficiency	Appropriateness
No	Yes	Yes
Effectiveness	Accessibility	Safety
No	No	No
Category of Measure	Strategic	
Type of Measure	Outcome Measure	
Other Comments / Notes		

Context

Business Context	AHS internal reporting needs Alberta Health Services Health Plan and Business Plan 2014-2017
Rationale	<p>To improve system-wide health services delivery, there is a need to manage acute LOS and improve discharge/transition from acute hospital to community health care.</p> <p>This measure compares the acute LOS to the CIHI expected/anticipated LOS for acute care patients with similar disease complexity. Monitoring the ratio can help health care teams to ensure care appropriateness and efficiency. Retrospective review of the measure helps to identify opportunities for improvement in both areas.</p>
Notes for Interpretation	<p>Limited to Acute Care Hospitals.</p> <p>A ratio of 1 or less shows an overall length of stay efficiency. A ratio greater than 1 indicates less efficiency. For values exceeding 1 there may be opportunities to safely reduce the acute care stay of patients. For example, if the expected length of stay is 7 days but the acute stay was in fact 8 days, the ratio of Acute LOS to Expected LOS will be 1.14 or greater than one representing possible</p>

Performance Measure Definition

opportunities to provide care in a shorter time.

The CMG+ assignment is a grouping of patient stays with similar clinical and resource utilization for comparison of hospital resource use. The CMG+ assignment is based on the patient's Most Responsible Diagnosis (MRDx), the diagnosis that, at discharge, is determined to have been responsible for the greatest portion of the patient's length of stay (LOS) in hospital or resource use.

In case mix classification systems, patients are categorized as typical or atypical based on several criteria. A typical patient is one that has a normal length of stay, whose treatment is completed in a single facility, and whose resource use is relatively homogeneous within their case mix classification. Typical patients can be assigned a relative resource weight according to their case mix classification. An atypical patient is one where the hospitalization involves a transfer, sign-out against medical advice, ends in death, includes non-acute days, or has a length of stay beyond the trim point (outlier). An atypical patient has a different resource use within the hospital relative to a typical patient. Both the DRG™ and CMG™ patient case mix classification systems distinguish between typical and atypical patients.

Trim Point is defined as the point after which a length of stay (LOS) is determined to be abnormally long, and any additional days are classified as outlier days.

Organizational Strategy	<ol style="list-style-type: none"> 1. Monitor sites and/or programs for identification of opportunity for improvement. 2. Implement standard process to discharge patients from acute patient beds and arrange for follow-up community supports, if needed.
Benchmark Comparisons	Not available
Cited References	<p>CIHI Discharge Abstract Database (DAD) Manual. Alternate Level of Care In Canada, Analysis in Brief, CIHI (https://secure.cihi.ca/free_products/ALC_AIB_FINAL.pdf).</p> <p>Statistics Canada: Health Indicators (December 2000). Available at: http://www.statcan.gc.ca/pub/82-221-x/4060874-eng.htm.</p> <p>Statistics Canada. (Johansen and Finès) Acute care hospital days and mental diagnoses, November 2012. Available at: http://www.statcan.gc.ca/pub/82-003-x/2012004/article/11761-eng.pdf.</p> <p>CMG+ Directory Available at: https://secure.cihi.ca/estore/productSeries.htm?locale=en&pc=PCC358</p> <p>CMG Client Tables Available at: https://secure.cihi.ca/estore/productSeries.htm?locale=en&pc=PCC566</p> <p>University of Manitoba: Concept Dictionary and Glossary Available at: http://mchp-appserv.cpe.umanitoba.ca/viewDefinition.php?definitionID=102284 http://mchp-appserv.cpe.umanitoba.ca/viewDefinition.php?definitionID=103699 http://mchp-appserv.cpe.umanitoba.ca/viewDefinition.php?definitionID=103686</p>

Technical Specifications

Metric	Ratio
Preferred Display Format	0.9999
Numerator	Sum of acute length of stay of acute care inpatients.
Inclusion Criteria for Numerator	All typical Inpatient Cases. Acute care hospitals only.
Exclusion Criteria for Numerator	Atypical cases. Acute care inpatient ALC days.
Data Source(s) for Numerator	AHS Provincial Discharge Abstract Database (DAD)
Refresh Rate for Numerator	Monthly

Performance Measure Definition

Data Steward for Numerator	Reporting Services, Data Integration, Measurement and Reporting (DIMR)							
Denominator	Sum of expected length of stay (LOS) as determined by Case Mix Group Plus (CMG+) groupers from CIHI for patients included in the Numerator							
Inclusion Criteria for Denominator	All typical Inpatient Cases. Acute care hospitals only.							
Exclusion Criteria for Denominator	Atypical cases. Acute care inpatient ALC days.							
Data Source(s) for Denominator	AHS Provincial Discharge Abstract Database (DAD)							
Refresh Rate for Denominator	Monthly							
Data Steward for Denominator	AHS Reporting Services, Data Integration, Measurement and Reporting (DIMR).							
Technical Notes	Not applicable.							
Calculation	Sum of Acute LOS/Sum of Expected LOS							
Relationship to Other Indicators	Percentage of Inpatient days – ALC Acute LOS to Expected LOS Ratio – Surgical Percentage Long Stay Cases							
Level of Reporting	National	No	Provincial	Yes	Zone	Yes	Site	Yes
Reporting Notes								
Frequency of Reporting	Annually	No	Quarterly	No	Monthly	Yes	Other	No
Other Reporting Frequency								
Limitations	<p>Acute LOS is calculated by subtracting ALC (Alternate Level of Care) Days from the total LOS Days. As such it will be affected by differences in capture of ALC days. Currently ALC days are not captured in the same fashion throughout AHS and so variation strictly due to definitional differences exist. Beginning in spring 2012 efforts began to align documentation and coding practices to a common definitional standard. Based on assessment prior to the start of this project taken at Foothills Medical Centre in Calgary, it was determined that ALC could be as much as 45% under-represented. This would result in a significant shift in the Acute LOS/Expected LOS ratio just as a result of the changes to data capture of ALC. As of early 2014 all sites in the province with the exception of Alberta Children’s Hospital have completed projects to align to a standard definition and data capture based on chart documentation. ACH has yet to establish a start date for this project. The implementation schedule followed the following timeline in AHS Zones:</p> <p>North Zone – December 2012 Edmonton Zone – June 2012 Central Zone – Proof of Concept Drumheller – September 2012 - Remainder – Dec 2012 to Feb 2013 Calgary Zone – Proof of Concept Foothills – December 2011 - Peter Lougheed – September 2012 - Rockyview – October 2012 - Rural All – October 2012 - South Health Campus – January 2013 - Alberta Children’s Hospital – Not started South Zone – December 2012.</p> <p>A validation through auditing and data quality review will be required at a later date to confirm alignment of the data capture. Caution should be exercised in any use of this measure until such time as it is reported that ALC data capture has achieved definitional consistency.</p> <p>Atypical cases are excluded and these will include long stay cases where the acute LOS greatly exceeds the expected LOS, i.e. the LOS exceeds the “trim point” determined for the specific CMG+ Group. This may result in the measure not being sensitive to frequent long stay cases and resource implications for this patient population.</p>							

Planning Documents

Reference Documents

Name	Business Planning Document URL
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