High Users of Hospital Beds

Name	High Users of Hospital Beds
Short/Other Names	High Users of Inpatient Acute Care Services or Rate of High Users
Description	The risk-adjusted rate of patients who had 3 or more inpatient acute care hospitalizations (episodes of care) with a cumulative length of stay (LOS) longer than 30 days (high users). For further details, please see the General Methodology Notes (PDF).
Interpretation	A lower rate is more desirable.
HSP Framework Dimension	Health System Outputs: Appropriate and effective
Areas of Need	Not applicable
Geographic Coverage	All provinces/territories
Reporting Level /Disaggregation	National, Province/Territory, Region
Indicator Results	Accessing Indicator Results on Your Health System: In Depth

Identifying Information

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Short/Other Names High Users of Inpatient Acute Care Services or Rate of High Users

Indicator Description and Calculation

Description	The risk-adjusted rate of patients who had 3 or more inpatient acute care hospitalizations (episodes of care) with a cumulative length of stay (LOS) longer than 30 days (high users). For further details, please see the General Methodology Notes (PDF).
Calculation: Description	The risk-adjusted rate of high users of inpatient acute care services is calculated by dividing the number of high users (patients with multiple episodes of care in a 1-year period and a cumulative length of stay greater than 30 days) in each region by the expected number of high users in the region and multiplying by the Canadian average high users rate. Unit of analysis: Patients
Calculation: Geographic Assignment	Place of residence
Calculation: Type of Measurement	Rate - Rate per 100
Calculation: Adjustment Applied	The following covariates are used in risk adjustment: Age, sex, admission category (elective versus urgent) and patient clinical groups — palliative care, mental illness, obstetric, surgical and medical conditions (for a detailed description, please refer to the High Users of Hospital Beds — Appendix (PDF) and the Model Specification (PDF) document.
Calculation: Method of Adjustment	Logistic regression
Denominator	**Description:** Patients age 18 and older discharged from an acute care facility within the fiscal year of reporting. The most recent episode of care (hospitalization) within the fiscal year of reporting is the index episode of care. **Inclusions:** 1. Patients 18 years and older (at time of index episode of care) 2. Sex recorded as male or female 3. Admission to an acute care institution (Facility Type Code = 1) 4. The LOS of the index episode of care was shorter than 365 days **Exclusions:** 1. Abstracts with an invalid/missing health card number or invalid/missing province issuing health card number 2. Records with admission category of cadaveric donor or stillbirth (Admission Category Code = R or S) 3. Abstracts with a missing age 4. Abstracts with an invalid/missing admission date 5. Abstracts with an invalid/missing discharge date 6. Records with a discharge status of dead on arrival (Discharge Disposition = 11, 71* for NACRS) 7. 2018–2019 data onward: Medical assistance in dying (MAID) (Discharge Disposition Code = 73) Note *2018–2019 data onward.

Numerator	**Description:** Patients within the denominator with 3 or more previous acute care episodes of care in a 1-year period and a cumulative LOS longer than 30 days. **Inclusions:** 1. Patients with 3 or more previous acute care episodes of care in a 1-year period (365 days) from the admission date of the index episode of care AND 2. A cumulative LOS greater than 30 days: cumulative LOS is calculated by summing the total episode LOS across the multiple episodes of care in a 1-year (365-day) period. It captures the length of time patients occupied acute care beds and may include alternate level of care (ALC) days, day surgery days and acute rehabilitation days. **Exclusions:** Same as in the denominator For further details, please see the High Users of Hospital Beds — Appendix (PDF).

Background, Interpretation and Benchmarks

Rationale	Individuals with multiple admissions to acute care facilities are among high users of health care system services and resources. It is important to identify and monitor these high users. An Ontario study has shown that the top 5% of frequent users consumed about two-thirds of total health system spending and were mainly users of acute care and home care services. This indicator can be used to monitor the rate of high users of inpatient acute care services across jurisdictions over time. Variations in this indicator across jurisdictions may reflect differences in service delivery. Indicator results can help policy-makers and health care planners identify high-risk groups and design specific preventive strategies/programs that may prevent the need for frequent hospital admissions.
Interpretation	A lower rate is more desirable.
HSP Framework Dimension	Health System Outputs: Appropriate and effective
Areas of Need	Not applicable
Targets /Benchmarks	Not applicable
References	Doupe MB, Palatnick W, Day S, et al. Frequent users of emergency departments: developing standard definitions and defining prominent risk factors. Ann Emerg Med. July, 2012;60(1):24-32. PM:22305330. Kirby SE, Dennis SM, Jayasinghe UW, Harris MF. Patient related factors in frequent readmissions: the influence of condition, access to services and patient choice. BMC Health Serv Res. 2010;10:216. PM:20663141. Lain SJ, Nassar N, Bowen JR, Roberts CL. Risk Factors and Costs of Hospital Admissions in First Year of Life: A Population-Based Study. J Pediatr. June 12, 2013; PM:23769505. Longman JM, Rolfe I, Passey MD, et al. Frequent hospital admission of older people with chronic disease: a cross-sectional survey with telephone follow-up and data linkage. BMC Health Serv Res. 2012;12:373. PM:23110342. Rais S, Nazerian A, Ardal S, et al. High-cost users of Ontario's healthcare services. Healthc Policy. August, 2013;9(1):44-51. PM:23968673.

Availability of Data Sources and Results

Data Sources	DAD, HMDB, NACRS, OMHRS
Available Data Years	**Type of Year:** Fiscal **First Available Year:** 2014 **Last Available Year:** 2019
Geographic Coverage	All provinces/territories
Reporting Level/Disaggregation	National, Province/Territory, Region

Result Updates

Update Frequency	Every year
Indicator Results	**Web Tool:** Your Health System: In Depth **URL:** Accessing Indicator Results on Your Health System: In Depth
Updates	Not applicable

Quality Statement

Caveats and Limitations	Not applicable
Trending Issues	Not applicable
Comments	Not applicable