



High Users of Acute Care Services



High Users of Acute Care Services– Who Are They? Assessing Variability across Canada

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Background

A small proportion of users of health services (5%) consume more than half of the total health system spending





Gaps in Canadian Information

- There is no pan-Canadian indicator of high users of inpatient acute care services.
- A comparable measure is needed to monitor provincial/territorial/regional variations in high users of inpatient acute care services
- A performance measure can help policy-makers and health-care planners to identify populations at risk and design strategies or community programs to potentially reduce high intensity use of acute care services



How to measure high users of acute care?

- By resource/cost (high-cost users)
- By number of hospitalizations (frequent users)
- By length of stay (high-use patients)



By resource/cost (high-cost users)

- Often used for research purposes rather than for measuring performance
- Using cost to define high users for a Pan-Canadian indicator:
 - Accounts for unique hospitalizations with high cost (elective procedures)
 - Does not account for repeat hospitalizations with low cost

By number of hospitalizations or length of stay (LOS)



- Patient with **repeat hospitalizations** are among high users of health care services and resources (frequent users).
- Patient with **long length of stay** not necessarily are the most frequently admitted— but those with the most days used (heavy users)



Methodological Development

Data sources:

- Discharge Abstract Database (DAD)
- Hospital Morbidity Database (HMDB)
- Maintenance et exploitation des données pour l'étude de la clientèle hospitalière (MED-ECHO)
- National Ambulatory Care Reporting System (NACRS)
- Ontario Mental Health Reporting System (OMHRS)

Methodological development: Repeat Hospitalizations



Repeat Hospitalizations	% of acute patients
1-2 Hospitalizations	89.5
3 + Hospitalizations	10.5
5 + Hospitalizations	2.0

Sources:

Discharge Abstract Database; Hospital Morbidity Database; Ontario Mental Health Reporting System; National Ambulatory Care Reporting System, CIHI, 2011-2012 to 2013-2014



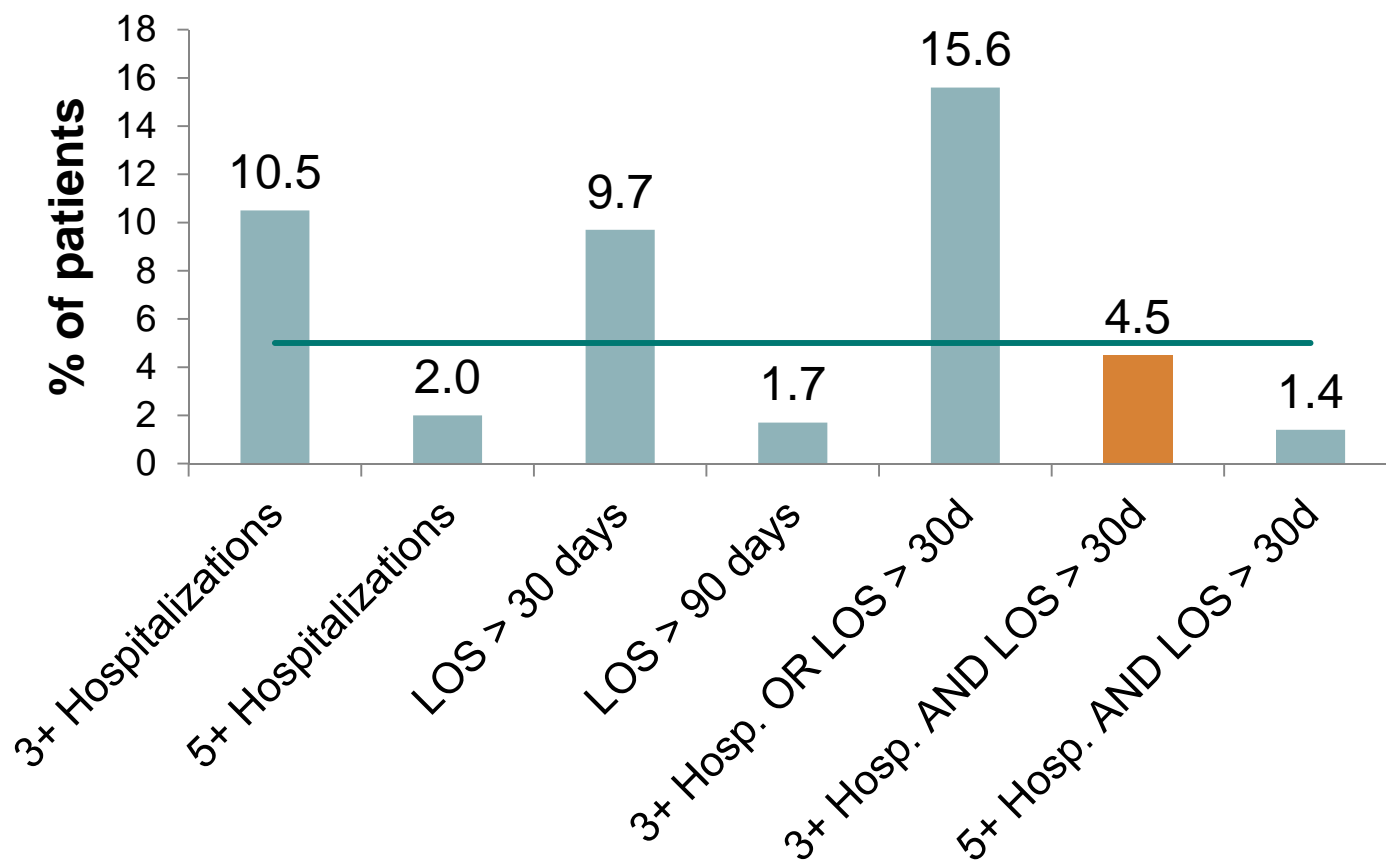
Cumulative LOS distribution among repeat hospitalizations

Cumulative LOS (days)	3 + hospitalizations	5 + hospitalizations
100% Max	620	620
99%	195	223
95%	113	144
90%	83	113
75% Q3	48	73
50% Median	26	45
25% Q1	14	27
10%	8	17
5%	6	13
1%	3	8
0% Min	3	5

Sources:

Discharge Abstract Database; Hospital Morbidity Database; Ontario Mental Health Reporting System; National Ambulatory Care Reporting System, CIHI, 2011-2012 to 2013-2014

What is the most appropriate “cut-off”?



Sources:

Discharge Abstract Database; Hospital Morbidity Database; Ontario Mental Health Reporting System; National Ambulatory Care Reporting System, CIHI, 2011-2012 to 2013-2014



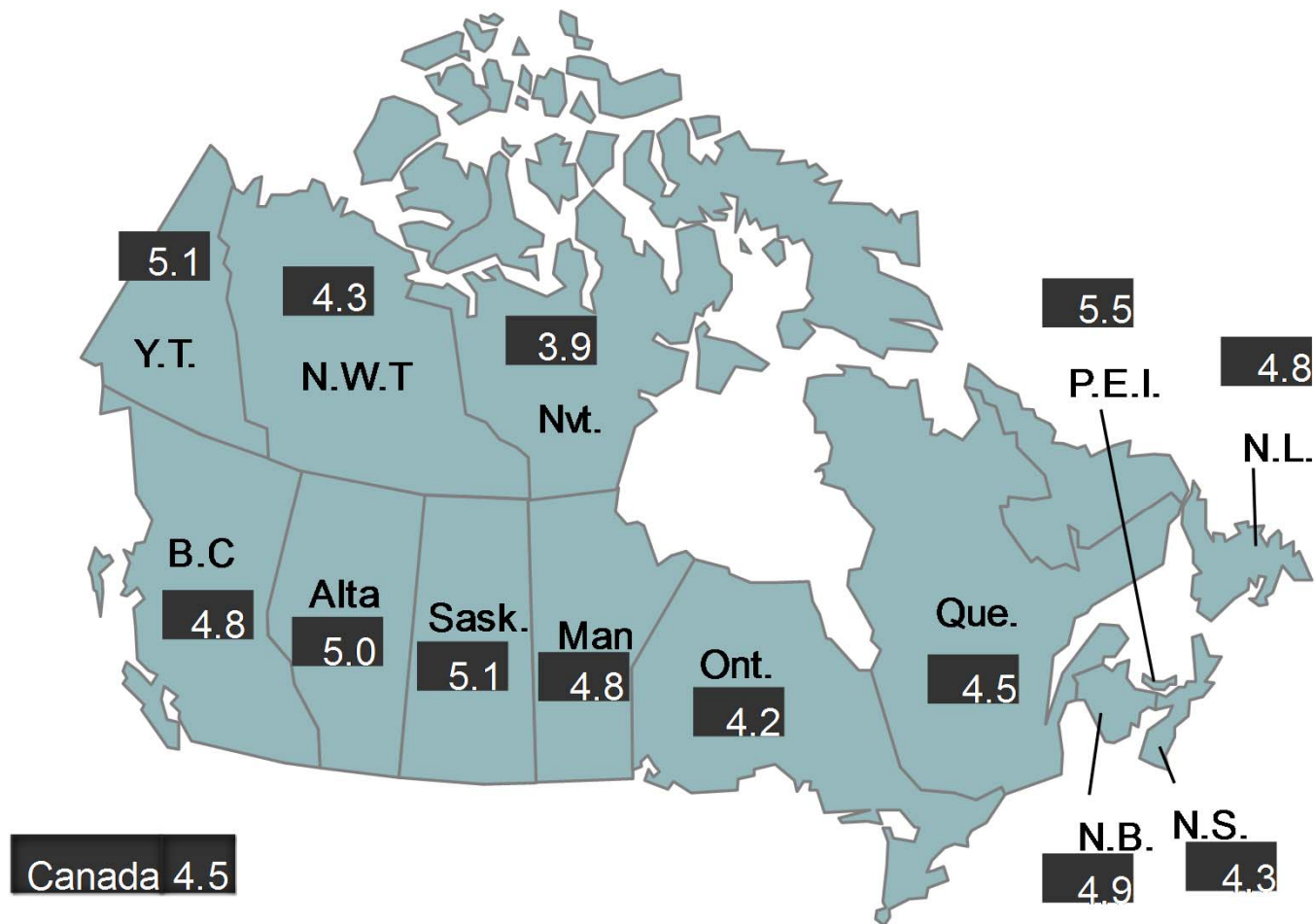
Comparable Pan-Canadian performance measure

- The risk-adjusted rate of patients who had three or more acute care hospitalizations (episodes of care) with a cumulative length of stay (LOS) longer than 30 days
- This indicator provides a performance measure from both an **effectiveness** (repeat hospitalizations) and **efficiency** (cumulative LOS) lens.
- Risk adjusted by age, sex, admission category (elective versus urgent), and patient clinical groups—palliative care, mental illness, medical, surgical, and obstetric conditions.



Results:

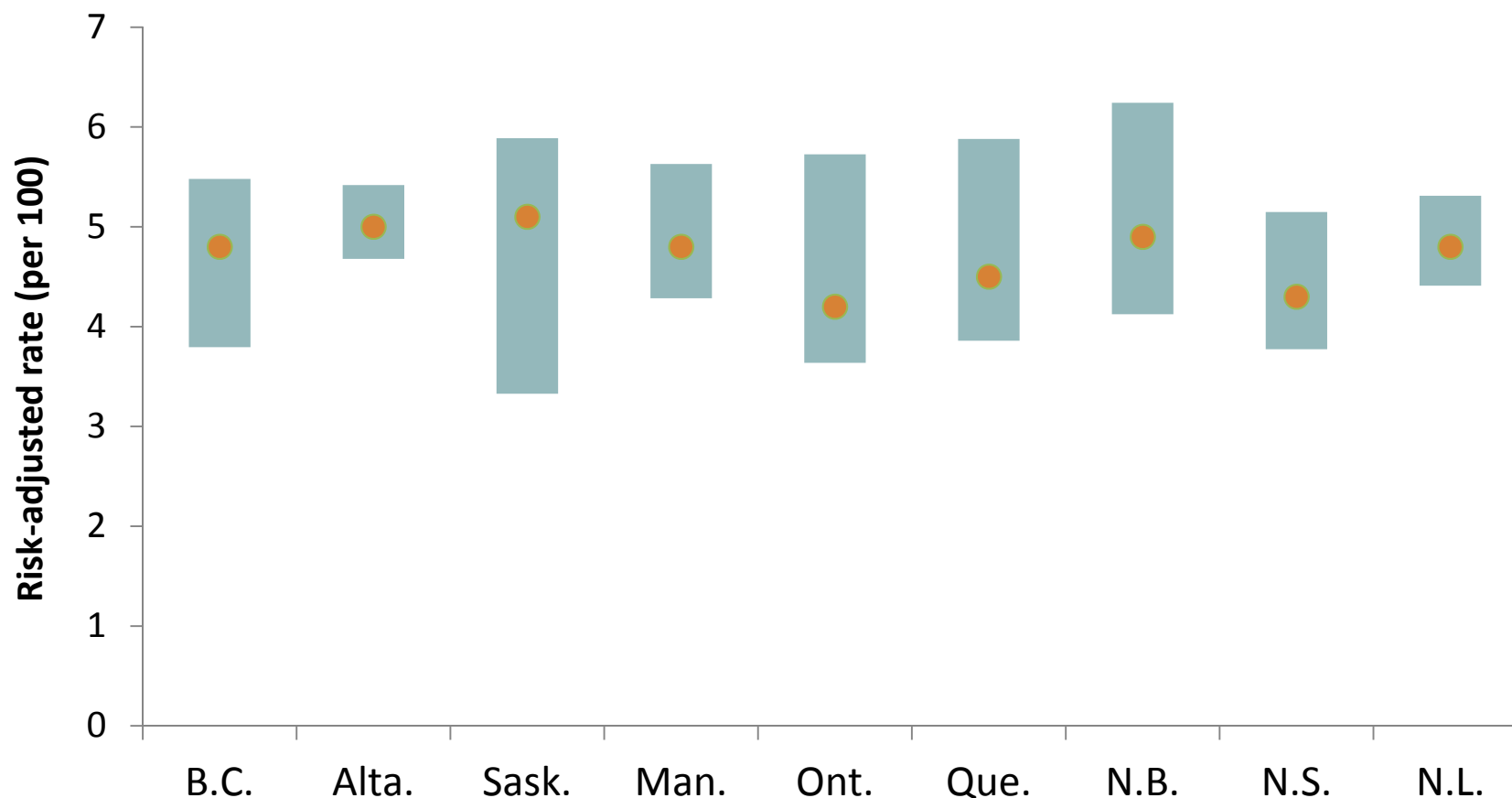
High User of Acute Services Risk Adjusted Rates, 2013-14



Sources:

Discharge Abstract Database; Hospital Morbidity Database; Ontario Mental Health Reporting System; National Ambulatory Care Reporting System, CIHI, 2011-2012 to 2013-2014

Range in Regional High Users of Acute care Services by Province, 2013-14

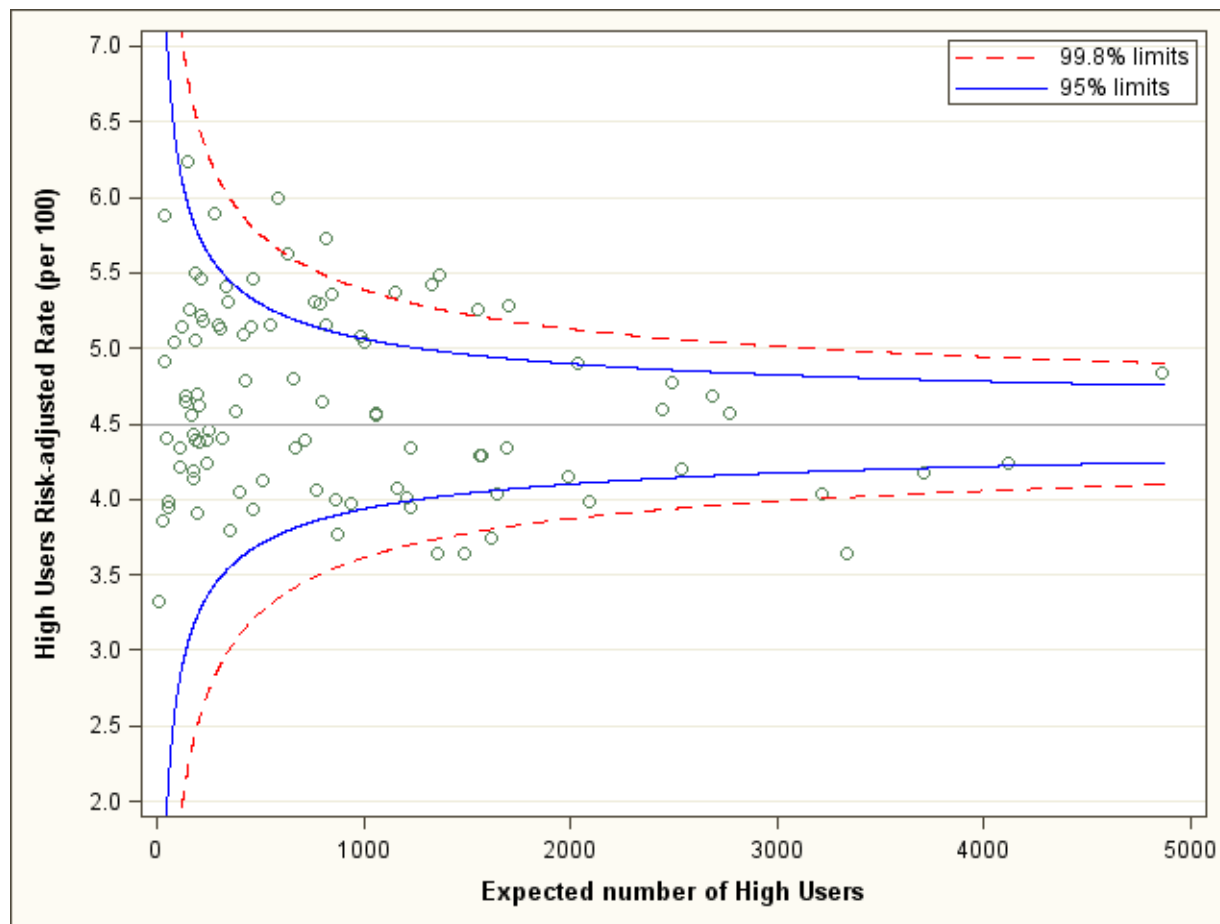


Sources:

Discharge Abstract Database; Hospital Morbidity Database; Ontario Mental Health Reporting System; National Ambulatory Care Reporting System, CIHI, 2011-2012 to 2013-2014

Notes: Results for P.E.I. and the territories are suppressed

Regional Variation: High Users of Acute Care, 2013-2014



Sources:

Discharge Abstract Database; Hospital Morbidity Database; Ontario Mental Health Reporting System; National Ambulatory Care Reporting System, CIHI, 2011-2012 to 2013-2014



Who high user patients are?

High Users Patient Characteristics

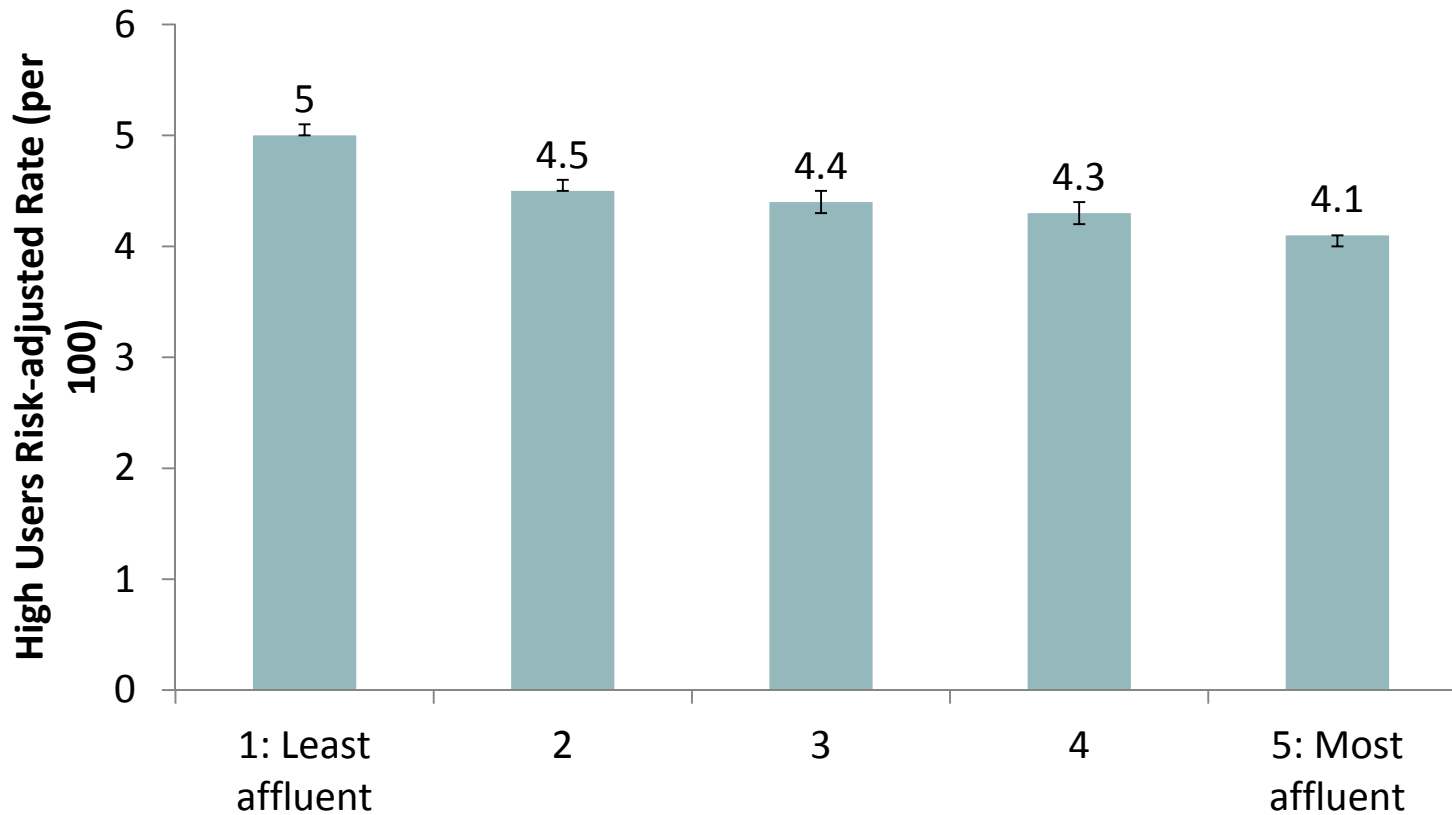


	Median Age (years)	Top 5 Case Mix Group (CMG) at index hospitalization (%)
High User Patients	72	<ul style="list-style-type: none"> • Palliative Care (5.9); • COPD (5.8); • Heart Failure (5.6); • Pneumonia (2.5); • General Symptoms (2.5)
Other Acute (non-high user) Patients	57	<ul style="list-style-type: none"> • Vaginal Birth with Anaesthetic (4.3); • Vaginal Birth w/out Anaesthetic (4.0); • Vaginal Birth with Anaesthetic and Non-Major OB/GYN Intervention (4.0); • Knee Replacement (2.6); • COPD (2.2)

Sources:

Discharge Abstract Database; Hospital Morbidity Database; Ontario Mental Health Reporting System; National Ambulatory Care Reporting System, CIHI, 2011-2012 to 2013-2014

Association Between Income and High Users, 2013-2014



Sources:

Discharge Abstract Database; Hospital Morbidity Database; Ontario Mental Health Reporting System; National Ambulatory Care Reporting System, CIHI, 2011-2012 to 2013-2014



Summary

- There is a need for a comparable performance measure that helps policy-makers and health-care planners to identify and monitor populations at risk
- CIHI's indicator provides a pan-Canadian perspective of high users of acute care services from both an effectiveness (repeat hospitalizations) and efficiency (cumulative LOS) lens
- Identifying who high user patients are may also help regional health authorities in designing strategies to reduce high intensity use of acute care services



Thank you