

# Repeat Hospital Stays for Mental Illness

Name	Repeat Hospital Stays for Mental Illness
Short/Other Names	Patients With Repeat Hospitalizations for Mental Illness
Description	Risk-adjusted percentage of individuals who had 3 or more episodes of care for a mental illness among all those who had at least one episode of care for a mental illness in general or psychiatric hospitals within a given year. <b>Note</b> For further details, please see the <a href="#">General Methodology Notes</a> .
Interpretation	Lower rates are desirable.
HSP Framework Dimension	Health System Outputs: Person-centred
Areas of Need	Living With Illness, Disability or Reduced Function
Geographic Coverage	All provinces/territories
Reporting Level /Disaggregation	National, Province/Territory, Region, Neighbourhood Income Quintile
Indicator Results	<a href="#">Accessing Indicator Results on Your Health System: In Depth</a>

## Identifying Information

Name	Repeat Hospital Stays for Mental Illness
Short/Other Names	Patients With Repeat Hospitalizations for Mental Illness
Indicator Description and Calculation	

Risk-adjusted percentage of individuals who had 3 or more episodes of care for a mental illness among all those who had at least one episode of care for a mental illness in general or psychiatric hospitals within a given year.

## Description

**Note**  
For further details, please see the [General Methodology Notes](#).

$$\left( \frac{\text{Total number of individuals who had at least 3 episodes of care for a mental illness [repeat hospitalizations] in a 1-year period}}{\text{Total number of individuals who had at least one episode of care for a mental illness in a 1-year period}} \right) \times 100$$

The risk-adjusted percentage for each region was calculated by dividing the observed number of individuals with repeat hospitalizations in each region by the expected number of individuals with repeat hospitalizations in the region and multiplying by the Canadian average percentage of individuals with repeat hospitalizations.

## Calculation:

Description Unit of Analysis : Patients

An episode of care refers to all contiguous inpatient hospitalizations in general and psychiatric hospitals and all day surgery visits regardless of diagnoses. To construct an episode of care, a transfer is assumed to have occurred if the following condition is met:

- Admission to a general/psychiatric hospital or day surgery facility occurs on the same day as discharge from another general/psychiatric hospital or day surgery facility

## Calculation:

Geographic Assignment Place of residence

## Calculation:

Type of Measurement Percentage or proportion

## Calculation:

Adjustment Applied The following covariates are used in risk adjustment:  
For a detailed list of covariates used in the model, please refer to the [Model Specification](#) document.

## Calculation:

Method of Adjustment Logistic regression

### Description:

Total number of individuals who had at least one episode of care for a mental illness in a 1-year period. The most recent episode of care in a fiscal year is the index episode of care.

### Inclusions:

1. A mental illness is identified by DSM-IV/DSM-5 diagnostic category in Ontario Mental Health Reporting System (OMHRS) data or by the most responsible diagnosis (MRDx) ICD-10-CA codes in Discharge Abstract Database (DAD)/Hospital Morbidity Database (HMDB) data

2. Diagnosis codes for mental illness:

i. Substance-related and addictive disorders: ICD-10-CA: F10–F19, F55, F63.0; DSM-IV diagnostic category: (d) substance-related disorders; DSM-5 diagnostic category: (p) substance-related and addictive disorders

ii. Schizophrenia and other psychotic disorders: ICD-10-CA: F20, F21, F22, F23, F24, F25, F28, F29; DSM-IV diagnostic category: (e) schizophrenia and other psychotic disorders; DSM-5 diagnostic category: (b) schizophrenia spectrum and other psychotic disorders

iii. Mood disorders: ICD-10-CA: F30, F31, F32, F33, F34, F38, F39, F53.0, F53.1; DSM-IV diagnostic category: (f) mood disorders; DSM-5 diagnostic category: (c) bipolar and related disorders or (d) depressive disorders

iv. Anxiety disorders: ICD-10-CA: F40, F41, F93.0, F93.1, F93.2, F94.0; DSM-IV diagnostic category: (g) anxiety disorders; DSM-5 diagnostic category: (e) anxiety disorders

v. Selected disorders of personality and behaviour: ICD-10-CA: F60, F61, F62, F68 (excluding F68.1), F69; DSM-IV diagnostic category: (p) personality disorders; DSM-5 diagnostic category: (r) personality disorders

vi. Other disorders:

#### ICD-10-CA

F42, F43, F44, F45, F48.0, F48.1, F48.8, F48.9, F50, F51, F52, F53.8, F53.9, F54, F59, F63 (excluding F63.0), F64, F65, F66, F68.1, F70–F73, F78, F79, F80–F84, F88, F89, F90, F91, F92, F93.3, F93.8, F93.9, F94.1, F94.2, F94.8, F94.9, F95, F98.0, F98.1, F98.2, F98.3, F98.4, F98.5, F98.8, F98.9, F99, O99.3

#### DSM-IV diagnostic category

- (a) Disorders of childhood/adolescence
- (c) Mental disorder due to medical conditions
- (h) Somatoform disorders
- (i) Factitious disorders
- (j) Dissociative disorders
- (k) Sexual and gender identity disorders
- (l) Eating disorder
- (m) Sleep disorder
- (n) Impulse-control disorders
- (o) Adjustment disorders

Denominator

#### DSM-5 diagnostic category

- (a) Neurodevelopmental disorders
- (f) Obsessive-compulsive and related disorders
- (g) Trauma- and stressor-related disorders
- (h) Dissociative disorders
- (i) Somatic symptom and related disorders
- (j) Feeding and eating disorders
- (k) Elimination disorders
- (l) Sleep-wake disorders
- (m) Sexual dysfunctions
- (n) Gender dysphoria
- (o) Disruptive, impulse-control and conduct disorders
- (s) Paraphilic disorders
- (t) Other mental disorders

3. Sex recorded as male or female

4. Admission to a general or psychiatric hospital (Facility Type Code = 1, 5)

#### Exclusions:

1. Records with an invalid health card number
2. Records with an invalid code for province issuing health card number
3. Records with an invalid admission date
4. Records with an invalid discharge date
5. Cadaveric donor or stillbirth records (Admission Category Code = R or S)
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.

#### Description:

Total number of individuals in the denominator who had at least 3 episodes of care for a mental illness in a 1-year period. Each individual has a 12-month look-back period prior to his or her most recent episode of care in a given year. Therefore, data for 2 fiscal years is necessary to obtain the data for the numerator.

Numerator

An episode of care for a mental illness is identified using the same inclusion and exclusion criteria as for the denominator.

Background, Interpretation and Benchmarks

This indicator is considered an indirect measure of appropriateness of care, since the need for repeat admissions to hospital depends on the person and the type of illness.

Rationale	Challenges in getting appropriate care/support in the community and/or the appropriate medication often lead to repeat hospitalizations. Variations in this indicator across jurisdictions may reflect differences in the services that help individuals with mental illness remain in the community for a longer period of time without the need for hospitalization.
Interpretation	Understanding this population can aid in developing/enhancing programs that may prevent the need for repeat hospitalizations. Lower rates are desirable.
HSP Framework Dimension	Health System Outputs: Person-centred
Areas of Need	Living With Illness, Disability or Reduced Function
Targets /Benchmarks	Not applicable
References	Lin E, Durbin J, Zaslavska N, et al. <i>Hospital Report 2007: Mental Health</i> . 2008.
Availability of Data Sources and Results	
Data Sources	DAD, HMDB, NACRS, OMHRS <b>Type of Year:</b> Fiscal <b>First Available Year:</b> 2014 <b>Last Available Year:</b> 2018
Available Data Years	
Geographic Coverage	All provinces/territories
Reporting Level/Disaggregation	National, Province/Territory, Region, Neighbourhood Income Quintile
Result Updates	
Update Frequency	Every year <b>Web Tool:</b> Your Health System: In Depth
Indicator Results	<b>URL:</b> <a href="#">Accessing Indicator Results on Your Health System: In Depth</a>
Updates	Not applicable
Quality Statement Caveats and Limitations	Not applicable
Trending Issues	The <i>Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition</i> (DSM-5) was implemented in the Ontario Mental Health Reporting System as of 2016-2017. Prior to 2016-2017, the fourth edition (DSM-IV-TR) was used. Due to the fact that the DSM-IV-TR and DSM-5 diagnostic categories are not fully comparable, there may be some shift in the distribution of cases across categories. Therefore, trending of 2015-2016 and 2016-2017 rates for Ontario may potentially be affected. Indicator results are also available in
Comments	<ul style="list-style-type: none"><li>The Health Indicators e-Publication (<a href="http://yourhealthsystem.cihi.ca/epub/?language=en">http://yourhealthsystem.cihi.ca/epub/?language=en</a>); updated annually starting from 2008–2009</li><li>Your Health System: In Brief (<a href="http://yourhealthsystem.cihi.ca/inbrief/?lang=en#!/indicators/007/repeat-hospital-stays-for-mental-illness">http://yourhealthsystem.cihi.ca/inbrief/?lang=en#!/indicators/007/repeat-hospital-stays-for-mental-illness</a>)</li></ul>