Pan-Canadian Age-Standardized (or Crude) Mental Illness Separations per 100,000 Population, by Province and/or Region

Name	Pan-Canadian Age-Standardized (or Crude) Mental Illness Separations per 100,000 Population, by Province and/or Region
Short/Other Names	Not applicable
Description	Mental health and addiction separations (discharges or deaths) per 100,000 population (crude rate) by –Province/territory –Health region Mental health and addiction separations (discharges or deaths) per 100,000 population (age-standardized rate) by –Province/territory –Health region
Interpretation	This indicator provides a measure of hospital utilization and may reflect differences in the health of the population and men of specialized, residential and/or ambulatory and community-based health services.
HSP Framework Dimension	Health System Inputs and Characteristics: Health system resources
Areas of Need	Not applicable
Geographic Coverage	All provinces/territories
Reporting Level/Disaggregation	Province/Territory, Region
Indicator Results	https://apps.cihi.ca/mstrapp/asp/Main.aspx?Server=apmstrextprd_i&project=Quick%20Stats&uid=pce_pub_en&pwd=&ev

Identifying Information

Name	Pan-Canadian Age-Standardized (or Crude) Mental Illness Separations per 100,000 Population, by Province and/or Region
Short/Other Names	Not applicable

Indicator Description and Calculation

Description	Mental health and addiction separations (discharges or deaths) per 100,000 population (crude rate) by –Province/territory –Health region Mental health and addiction separations (discharges or deaths) per 100,000 population (age-standardized rate) by –Province/territory –Health region Crude rate = (Number of separations for mental health or addictions ÷ Population estimate) × 100,000
Calculation: Description	Age-standardized rate is based on the crude rates for each age group and the application of population weights for each age group
Calculation: Geographic Assignment	Unit of analysis: Mental health and addiction separations Place of residence
Calculation: Type of Measurement	Rate - Per 100,000
Calculation: Adjustment Applied	Age-adjusted
Calculation: Method of Adjustment	Direct Standardization **Standard Population:** Canada 2011
Denominator	**Description:** Total mid-year population **Inclusions:** Total mid-year population **Description:** Inpatient separations from general hospitals involving mental illness/addiction as the primary diagnosis and/or diagnosis

category (for data extracted from the Ontario Mental Health Reporting System [OMHRS]).
Inclusions:
1. Mental illness/addiction as the primary diagnosis and/or diagnosis category (for data extracted from OMHRS)

2. Admission to a general hospital in Canada

The following codes were used for inpatient separations involving mental illness/addiction:

For 2011–2012 through 2013–2014

–DSM-IV-TR: 290–319, 607.84, 608.89, 625.0, 625.8 and 780.09
–ICD-9-CM: 290–319 and 648.40–648.44
–ICD-10-CA: F00–F99, G30, R41.0, R41.3 and O99.30

For 2014–2015 through 2015–2016

–DSM-IV-TR: 290–319, 607.84, 608.89, 625.0, 625.8 and 780.09
–ICD-9-CM: 290–319 and 648.40–648.44
–ICD-10-CA: F00–F99, G30 and O99.30

As of 2016–2017

–ICD-10-CA codes: F00–F99, G30 and O99.30
–DSM-IV-TR codes: 290–319, 607.84, 608.89, 625.0, 625.8 and 780.09

DSM-IV diagnostic category

a = Disorders of childhood/adolescence
b = Delirium, dementia and amnesic and other cognitive disorders
c = Mental disorders due to general medical condition
d = Substance-related disorders
e = Schizophrenia and other psychotic disorders
f = Mood disorders
g = Anxiety disorders
h = Somatoform disorders
i = Factitious disorders
j = Dissociative disorders
k = Sexual and gender identity disorders
l = Eating disorders
m = Sleep disorders
n = Impulse-control disorders not classified elsewhere
o = Adjustment disorders
p = Personality disorders

DSM-5 diagnostic category

a = Neurodevelopmental disorders
b = Schizophrenia spectrum and other psychotic disorders
c = Bipolar and related disorders
d = Depressive disorders
e = Anxiety disorders
f = Obsessive–compulsive and related disorders
g = Trauma- and stressor-related disorders
h = Dissociative disorders
i = Somatic symptoms 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
p = Substance-related and addictive disorders
q = Neurocognitive disorders
r = Personality disorders
s = Paraphilic disorders
t = Other mental disorders

For information on prior years, please contact the Mental Health and Addictions team at mentalhealth@cihi.ca.
Exclusions:
1. Newborns

2. Psychiatric hospital separations

Background, Interpretation and Benchmarks

Rationale

Having a solid picture of the proportions of separations and the trends over time provides health system planners and other decision-makers with information to plan care and evaluate the performance of their health care system.

Interpretation	This indicator provides a measure of hospital utilization and may reflect differences in the health of the population and mental health service delivery models as well as variations in the availability and accessibility of specialized, residential and/or ambulatory and community-based health services.
HSP Framework Dimension	Health System Inputs and Characteristics: Health system resources
Areas of Need	Not applicable
Targets/Benchmarks	Not applicable
References	Not applicable

Availability of Data Sources and Results

Data Sources	Demography division, Statistics Canada, HMHDB
Available Data Years	**Type of Year:** Fiscal **First Available Year:** 2003 **Last Available Year:** 2017
Geographic Coverage	All provinces/territories
Reporting Level/Disaggregation	Province/Territory, Region

Result Updates

Update Frequency	Every year
Indicator Results	**Web Tool:** Quick Stats **URL:** https://apps.cihi.ca/mstrapp/asp/Main.aspx?Server=apmstrextprd_i&project=Quick%20Stats&uid=pce_pub_en&pwd=&evt=20480 21C75F
Updates	2016–2017: For records from the Ontario Mental Health Reporting System (OMHRS) — one of the data sources that populates the Hos the HMHDB was assigned based on the DSM-5 diagnosis category instead of the specific diagnosis code. The assignment of diagnosis codes to diagnosis categories was modified. Several ICD-10-CA and DSM-IV-TR diagnosis codes were re decreased the volume of separations in the Anxiety Disorders broad mental health category and increased the volume of separations in

Quality Statement

Quality Statement	As this indicator excludes psychiatric hospitals, it should not be construed to represent all mental health and addiction hospital separations in Canada. Certain cells were suppressed for confidentiality reasons in accordance with CIHI's privacy policy. Totals exclude suppressed values. Many factors contribute to the observed variations in the analysis of indicators at the provincial/territorial and regional levels. These include, but are not limited to, geography, population health, provincial and regional health service resources, and health services administration. It is important to consider these factors and the effect they may have on indicator results when conducting comparative analyses. The variation in results between provinces/territories or between health regions suggests systematic differences in
Caveats and Limitations	–Provincial/territorial or regional health policies, practices and resources –Geography and urban/rural population distribution –Environmental and socio-economic characteristics –Types of patients served and acuity of illness –The range of health services available beyond general and specialty psychiatric hospitals (such as community mental health services) –Accessibility and awareness of alternative points of entry to the health system The above list suggests a few of the factors that should be considered when making provincial/territorial and/or regional comparisons. 2011–2012: Additional ICD-10-CA diagnosis codes were added to the extraction criteria for the Discharge Abstract Database–Hospital Morbidity Database (DAD-HMDB), one of the data sources that populates the Hospital Mental Health Database (HMHDB). This increased the volume of separations. 2011–2012: Additional ICD-10-CA diagnosis codes were added to the extraction criteria for the DAD-HMDB, one of the data sources that populates the HMHDB. This increased the volume of separations. 2014–2015: Two ICD-10-CA diagnosis codes were removed from the extraction criteria for the DAD-HMDB, one of the data sources that populates the HMHDB. This decreased the volume of separations.
Trending Issues	2016–2017: For records from the Ontario Mental Health Reporting System (OMHRS) — one of the data sources that populates the Hospital Mental Health Database (HMHDB) — broad mental health category in the HMHDB was assigned based on the DSM-5 diagnosis category instead of the specific diagnosis code. The assignment of diagnosis codes to diagnosis categories was modified. Several ICD-10-CA and DSM-IV-TR diagnosis codes were regrouped into HMHDB broad mental health categories. These changes decreased the volume of separations in the Anxiety Disorders broad mental health category and increased the volume of separations in the Other Disorders category. Separations by year are based on the date of discharge, not the date of admission. As such, records with invalid discharge dates are not included. The HMHDB is an event-based rather than a person-based database; individuals may be represented multiple times in the data.

Comments

For 2006–2007, 2007–2008, 2008–2009, 2009–2010, 2011–2012, 2012–2013, 2013–2014, 2014–2015 and 2015–2016, crude rate calculations at the provincial/territorial level are based on population estimates from Statistics Canada as of July 1, 2006, 2007, 2008, 2009, 2011, 2012, 2013, 2014, 2015, 2016 and 2017, respectively.

For 2010–2011, crude rate calculations at the provincial/territorial level are based on population estimates from Statistics Canada as of October 1, 2010.

For 2006–2007, 2007–2008, 2008–2009, 2009–2010, 2011–2012, 2012–2013, 2013–2014, 2014–2015 and 2015–2016, crude rate calculations at the regional level are based on population estimates from Statistics Canada as of July 1, 2006, 2007, 2008, 2009, 2011, 2012, 2013, 2014, 2015, 2016 and 2017, respectively.

For 2010–2011, crude rate calculations at the regional level are based on population estimates from Statistics Canada as of October 1, 2010.

Standardized rates are age-adjusted using a direct method of standardization based on the July 1, 2011, Canadian population. For data years prior to 2014–2015, rates were age-adjusted using a direct method of standardization based on the July 1, 1991, Canadian population.