Mental Health-Related Emergency Department Visits

Description

- This indicator measures health service utilization - specifically emergency department visits - related to mental health conditions and is not a measure of the prevalence of mental health conditions in the population, as individuals may experience mental health conditions who do not seek care or who seek care in other medical establishments, such as family physician, community-based services and/or private clinics.
- This could suggest that people had mental health conditions that were inadequately managed in the community or that they were unaware of services in their communities, had difficulty accessing them or had negative experiences or outcomes with community care.
- A high rate of emergency department visits may strain already busy emergency departments.
- A high rate of visits to the emergency department may indicate challenges with access to community-based care or unmet needs.
- A lower rate is desired, although some emergency department care for mental health is required to treat high acuity patients or those in crisis.

Method of Calculation

Crude emergency department (ED) visits rate:

$$\frac{\text{Total number of ED visits (not scheduled) for selected mental health conditions}}{\text{Total population}} \times 100{,}000$$

- *Selected Mental Health Conditions defined based on ICD codes in the ICD Codes section below*

Age-specific ED visits rate:

$$\frac{\text{Total number of ED visits (not scheduled) for selected mental health conditions in an age group}}{\text{Total population in that age group}} \times 100{,}000$$

- *Selected Mental Health Conditions defined based on ICD codes in the ICD Codes section below*
- *Suggested age groups outlined in Recommended Subset Analysis Categories section below*

Age-standardized ED visits rates:

$$\frac{\text{Sum of (age-specific ED visit rate x standard population in that age group), for all age groups}}{\text{Total standard population}} \times 100{,}000$$

- *See Standardization of Rates Resource for more information on direct standardization*

Recommended Subset Analysis Categories

Suggested Age Groups

- **IntelliHEALTH Age Group**
  - **0-14**
  - **15-24**
  - **25-44**
  - **45-64**
  - **65+**

- **Statistics Canada Modified Age Group**
  - **0-11**
  - **12-17**
  - **18-34**
  - **35-49**
  - **50-64**
  - **65+**

Potential Age Groups for Specific Analysis Questions:

- Working population focus: 18-64
- Women of reproductive age: 15-49
- Seniors/older adults: 65-74, 75+

Sex

- Male
- Female

Geography

- Ontario
- Public Health Unit
- Census Division
- Municipality/Census Subdivision
- Smaller areas of geography, based on aggregated postal code (such as census dissemination area)

Data Sources

Numerator: Emergency Visits
Original source: National Ambulatory Care Reporting System (NACRS), Canadian Institute for Health Information (CIHI)
Distributed by: Ontario Ministry of Health and Long-Term Care (MOHLTC): IntelliHEALTH ONTARIO (IntelliHEALTH)
Suggested citation (see Data Citation Notes): Ambulatory Emergency External Cause [years], Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO, Date Extracted: [date].

Denominator: Population Estimates
Original source: Statistics Canada

Distributed by: Ontario Ministry of Health and Long-Term Care (MOHLTC): IntelliHEALTH ONTARIO (IntelliHEALTH)
Suggested citation (see Data Citation Notes): Population Estimates [years], Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO, Date Extracted: [date]

ICD Codes

Classification	Sub-category	ICD-10-CA
Any mental health and substance-related disorder	Any mental health and substance-related disorder	All categories EXCEPT Neurocognitive Disorders
Substance use and related disorders	Alcohol	F10.0–F10.9
	Opioid	F11.0–F11.9
	Cannabis	F12.0–F12.9
	Sedative	F13.0–F13.9
	Cocaine	F14.0–F14.9
	Stimulant	F15.0–F15.9
	Hallucinogen	F16.0–F16.9
	Phencyclidine (or phencyclidine-like) related	F19.0–F19.9
	Tobacco	F17.0–F17.9
	Inhalant	F18.0–F18.9
	Other, unknown and multiple substances	F19–F19.9, F55
	Gambling	F63.0
Schizophrenia spectrum and other psychotic disorders	Schizophrenia spectrum and other psychotic disorders	F06.0, F06.1, F06.2, F20.x, F22.x–F25.x, F28.x– 29.x, F53.1
Mood disorders	Mood (bipolar) disorders	F06.3, F30.x, F31.x, F34.0
	Mood (depressive) disorders	F32.x–F33.x, F34.1, F53.0
	Mood (other) disorders	F34.8, F34.9, F38.x, F39
Anxiety disorders	Anxiety disorders	F06.4, F40.x–F41.x, F93.0–F93.2, F94.0
Personality disorders	Personality disorders	F07.0, F21, F60.x–F62.x, F68.0, F68.8, F69
Other mental health disorders	Trauma- and stressor-related disorders	F43.x, F94.1, F94.2
	Obsessive–compulsive and related disorders	F06.8, F42.x, F45.2, F63.3
	Somatic symptoms and related disorders	F44.4, F44.5, F44.6, F44.7; F45.0, F45.1, F45.3, F45.4, F45.8, F45.9, F54, F68.1
	Dissociative disorders	F44.0, F44.1, F44.2, F44.3, F44.8, F44.9, F48.1
	Sexual dysfunction	F52.x
	Gender dysphoria	F64.x, F66.x
	Paraphilic disorders	F65.x
	Feeding and eating disorders	F50.x, F98.2, F98.3

	Sleep–wake disorders	F51.x, G47.x, G47.xx, G25.8
	Disruptive, impulse-control and conduct disorders	F63.1, F63.2, F63.8, F63.9, F91.x, F92.x
	Other mental disorders	F06.9, F09, F48.0, F48.8, F48.9, F53.8, F53.9, F59, F99, O99.3xx
	Elimination disorders	F98.0, F98.1
	Neurodevelopmental disorders	F70.x–F73.x, F78.x–F79.x, F80.x, F81.x, F82, F83, F84.x, F88, F89, F90.x, F93.3, F93.8, F93.9, F94.8, F94.9, F95.x, F98.4, F98.5, F98.6, F98.8, F98.9
Neurocognitive disorders	Neurocognitive disorders	F00.x, F01.x, F02.x, F03.x, F04.x, F05.x, F06.5, F06.6, F06.7, F07.1–F07.9, G20.x, G30.x, G30.8x, G31.0x, G31.x, G35
Intentional self-injury	Intentional self-injury	Secondary diagnosis fields = X60–X84, Y10–Y19, Y28 when primary diagnosis is not F06–F99

Note: these codes can only be used for NACRS data from April 1, 2002 onward.

Analysis Checklist

General Checklist

- ❏ Refer to the National Ambulatory Care Reporting System (NACRS) Data Source for information on extracting unscheduled emergency department visits.
    - ❏ In particular, the NACRS package in Intellihealth includes Static Filters for Ontario Patients and Unscheduled ED Visits that should be applied to the report.
- ❏ Refer to the Population Estimates Data Source or Population Projections Data Source for information on extracting a population for your denominator.
- ❏ To best understand disease trends in a population, it is important to determine crude rates, age-specific rates and age-standardized rates (SRATES) and/or ratios (SMRs, SIRs).
    - ❏ Although the crude rate depicts the "true" picture of disease in a community, it is greatly influenced by the age structure of the population.
    - ❏ Age-specific rates can best describe the "true" disease pattern within particular age groups of a community, and allow for comparison of age groups across populations that have different age structures.
    - ❏ Since many age-specific rates are cumbersome to present, age standardized rates have the advantage of providing a single summary number that allows different populations to be compared; however, they present an "artificial" picture of the disease pattern in a community.
    - ❏ Refer to the Standardization of Rates methodology resource page for analytic recommendations and sample calculations.

Classifying Mental Health Conditions

- ❏ Refer to the table for a list of ICD-10-CA codes to apply to the Intellihealth report.
- ❏ Use the ‘Main Problem’ diagnosis codes (MPDx Code) for F codes AND ‘All Diagnosis’ code (All Dx Code) for the identified external cause codes (X and Y codes).

- ❏ For the count measure, use the unique number of visits (# of AM Visits (D)).

Indicator Comments

General Comments

1. ED visits for mental health do not portray the full burden of mental health care utilization or the burden of mental health illness on the population.
2. Not all individuals with mental health needs access services.
3. Emergency department visit data does not capture those who did not seek treatment in hospital, those treated in doctors' offices or clinics and therefore will underestimate the burden of mental health issues.
4. Visits to the ED are influenced by the availability of ED resources in the area as well as that of other health care services, including primary care physician availability or the availability of urgent care services.
5. Destigmatization of mental health conditions may have led to increases in health care seeking behaviours for mental health.
6. After the COVID-19 emergency order was issued in March 2020, there was a significant decrease in service utilization across all acute mental health services (emergency department and hospital admissions) use. Service utilization patterns returned to pre-pandemic levels for most age groups (with exceptions) by mid-2022. Interpret service utilization patterns from 2020 to 2022 with caution. [1]
7. Due to the nature of an ED visit (people spend less time being assessed or leave without proper assessment), there is often less clinical detail in the ED patient record as compared to a hospitalization record. In addition, ICD-10-CA diagnostic codes assigned for an ED visit may differ from diagnostic codes assigned if the person is hospitalized.
8. This indicator utilizes a similar approach to how ICES define their Mental Health and addictions-related emergency department indicator, by including both primary diagnosis Mental health and behavioural disorder F codes as well as secondary external cause codes related to self-harm. ICES also includes some undetermined intent external cause codes related to poisonings (Y10-19). A 2009 study in Ontario found that a substantial number of injury and poisonings of undetermined intent are more common in emergency department data than in hospitalization data. [2] The inclusion of the ‘Y’ ICD-10-CA codes (undetermined intent) may result in an over-counting.
9. The Canadian Triage & Acuity Scale (CTAS) is a tool that enables EDs to triage adult and pediatric patients according to their acuity, risk and care needs, on a scale of 1 (Resuscitation) to 5 (Non-Urgent) [3]. CTAS data are available in Intellihealth and can be used to look at mental health ED visits by their acuity.
10. Sociodemographic data beyond age and sex are not routinely captured in all hospital records.
11. Sometimes a patient seen in one ED can be transferred to another acute care facility. Ideally, a person that is transferred to another acute care facility will enter through the ED and receive a NACRS record with the new facility, however, this does not always occur. Thus, we recommend the inclusion of disposition status code '8', even though this may result in some over-counting of visits.

Ontario Public Health Standards (OPHS): Requirements for programs, services and accountability

The Ontario Public Health Standards (OPHS) establish requirements for the fundamental public health programs and services carried out by boards of health, which include assessment and surveillance, health promotion and policy development, disease and injury prevention, and health protection. The OPHS consist of one Foundational Standard and 13 Program Standards that articulate broad societal goals that result from the activities undertaken by boards of health and many others, including community partners, non-governmental organizations, and governmental bodies. These results have been expressed in terms of two levels of outcomes: societal outcomes and board of health outcomes. Societal outcomes entail changes in health status, organizations, systems, norms, policies, environments, and practices and result from the work of many sectors of society, including boards of health, for the improvement of the overall health of the population. Board of health outcomes are the results of endeavours by boards of health and often focus on changes in awareness, knowledge, attitudes, skills, practices, environments, and policies. Boards of health are accountable for these outcomes. The standards also outline the requirements that boards of health must implement to achieve the stated results.

Related OPHS Topics

Mental Health Promotion

http://www.ontario.ca/publichealthstandards

Corresponding Health Indicator(s) from Statistics Canada and CIHI

- None

Definitions

- **Emergency department visit -** An ED visit occurs when a person presents the emergency department, or a hospital-based urgent care centre, either by their own means or by ambulance, and without a prior scheduled appointment. Urgent care centres provide diagnosis and treatment for most injuries and illnesses through emergency trained doctors and other health care professionals and are a health care option for urgent, but non life-threatening illness or injury like sprains or strains. Urgent care centre visits are captured in NACRS.

Cited References

Cited references are numbered and cited in the indicator text, using square brackets [#].
In a numbered list, provide references following the Vancouver Citation Method, as used by the Canadian Public Health Association.

1. ICES Mental Health and Addictions Dashboard January 2023 Highlights. Accessed March 1, 2023. Available at: https://www.ices.on.ca/Research/Research-programs/Mental-Health-and-Addictions/MHA-Dashboard)

2. Statistics Canada. Identifying deliberate self-harm in emergency department data [Internet]. Ottawa: Statistics Canada; 2009. Available from: https://www150.statcan.gc.ca/n1/en/pub/82-003-x/2009002/article/10836-eng.pdf?st=DY-Je4fW
3. CTAS National Working Group. CTAS Guidelines [Internet]. CTAS; 2016. Available from: https://ctas-phctas.ca/?page_id=294

Acknowledgements

Lead Authors	Reviewers
Nicole Bradley, Simcoe Muskoka District Health Unit **Kayley Henning**, Region of Peel - Public Health **Payal Jain**, Region of Peel - Public Health **Anjali Pandya**, Durham Public Health **Katherine Russell**, Ottawa Public Health **Sarah Wallingford**, Ottawa Public Health	**Lindsay Favotto**, Niagara Region Public Health **Michael Campitelli**, ICES
Contributing Authors **Harshani Dabere**, CIHI **Po-Po Lam**, Region of Peel - Public Health **Jasmine Song**, York Region Public Health	

Revision History

This Core Indicator Product is maintained by the Mental Health Subgroup.

Date	Review Type	Author	Changes	PDF
July 2024	New Indicator	Kayley Henning, on behalf of the Mental Health Core Indicator subgroup	N/A	[Insert PDF Symbol]