Hospitalizations Entirely Caused by Alcohol

Name	Hospitalizations Entirely Caused by Alcohol
Short/Other Names	100% Alcohol-Attributable Hospitalizations (AAHs)
Description	Age-standardized rate of hospitalizations with conditions that are wholly (100%) attributable to alcohol per 100,000 population age 10 and older. For further details, please see the General Methodology Notes.
Interpretation	Lower rates are desirable.
HSP Framework Dimension	Health System Outcomes: Improve health status of Canadians
Areas of Need	Staying Healthy
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

Name	Hospitalizations Entirely Caused by Alcohol
Short/Other Names	100% Alcohol-Attributable Hospitalizations (AAHs)

Indicator Description and Calculation

Description	Age-standardized rate of hospitalizations with conditions that are wholly (100%) attributable to alcohol per 100,000 population age 10 and older. For further details, please see the General Methodology Notes.
Calculation: Description	(Total number of hospitalizations with wholly alcohol-attributable conditions among patients age 10 and older ÷ Total mid-year population age 10 and older) × 100,000 (age-adjusted) Unit of analysis: Single discharge
Calculation: Geographic Assignment	Place of residence
Calculation: Type of Measurement	Rate - 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 age 10 and older
	Description: Total number of hospitalizations with wholly alcohol-attributable conditions among patients age 10 and older **Inclusions:**

- Sex recorded as male or female
- Discharge from a general or psychiatric hospital, or a day surgery clinic.

The following codes were used to identify conditions wholly attributable to alcohol:

— Outside Quebec

a) **Inpatient and day surgery records:**

- ICD-10-CA codes for conditions 100% attributable to alcohol (or 100% alcohol-attributable fraction [AAF] codes) (see Appendix 1, ICD-10-CA codes) coded as diagnosis type (M), (1), (2), (W), (X), (Y) or (9) in the Discharge Abstract Database (DAD), or as Main Problem (MP) or Other Problem (OP) in the National Ambulatory Care Reporting System (NACRS); or

b) **Records from the Ontario Mental Health Reporting System (OMHRS):**

Numerator

- DSM-IV-TR and DSM-5 (ICD-9-CM version) 100% AAF codes (see Appendix 1, DSM-IV and DSM-5 codes) coded as a principal diagnosis or secondary diagnosis for inpatient records; or
- A category diagnosis of substance-related and addictive disorder coded as a principal diagnosis or secondary diagnosis and emergency department visit with 100% AAF codes in NACRS within 7 days prior to admission to an OMHRS bed (for patients without a DSM-IV-TR or DSM-5 (ICD-9-CM version) 100% AAF code and without another substance coded on the abstract)

— In Quebec

a) **Inpatient and day surgery records:**

- 100% AAF codes coded as type (M), (1), (2), (W), (X), (Y) or (9) in the Hospital Morbidity Database (HMDB); or
- 100% AAF codes (see Appendix 1, ICD-10-CA codes) coded as type (C) **and** ICD-10-CA codes for conditions partially attributable to alcohol (partial AAF codes) (Appendix 2) coded as diagnosis type (M) or (9)

For detailed descriptions of the 100% AAF and partial AAF codes, as well as the OHMRS DSM-IV and DSM-5 codes, see the Hospitalizations Entirely Caused by Alcohol: Appendices to Indicator Library.

Exclusions:

- Records with admission category of cadaveric donor or stillbirth (Admission Category Code = R or S).

Background, Interpretation and Benchmarks

Harmful use of alcohol has serious effects not only on selected individuals, but also on a community as a whole. It also puts unnecessary strain on limited health care resources. Harmful use of alcohol is associated with a wide range of health conditions and is one of the leading factors in death, disease and disability. Harmful alcohol consumption can cause harm to other individuals in a manner that is intentional (assault) or unintentional (traffic accidents and fatalities).

Comparable prevalence data on harmful alcohol use is not available; however, hospital discharges can be used as a proxy for alcohol harm in the community and of the burden it imposes on health systems. An indicator that measures alcohol-attributable hospitalizations (AAHs) can help

Rationale

- Bring awareness to the seriousness of harm associated with alcohol use
- Estimate the magnitude of hospital use due to alcohol harm to inform service needs for access to appropriate primary health care services, community addictions or rehab services, community mental health or social services, education and prevention
- Identify local areas of concern and flag potential issues with access to appropriate services (such as primary care and/or community and social services)
- Signal future health service needs and proper resource allocation for both management and prevention of harmful alcohol use
- Drive action to reduce and prevent the burden of alcohol harm by informing alcohol policy and priority areas of need
- Monitor the effectiveness of alcohol policies in place.

Interpretation: Lower rates are desirable.

HSP Framework Dimension: Health System Outcomes: Improve health status of Canadians

Areas of Need: Staying Healthy

Targets/Benchmarks: Not applicable

References

1. World Health Organization. *Global Status Report on Alcohol and Health 2014*. 2014.

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Availability of Data Sources and Results

Data Sources	DAD, HMDB, NACRS, OMHRS
Available Data Years	**Type of Year:** Fiscal **First Available Year:** 2015 **Last Available Year:** 2017
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	As of 2016, OMHRS data uses DSM-5 codes (ICD-9-CM version) codes. Starting in 2017, alcohol-related diagnosis codes captured as diagnosis type (2) are included in the indicator. Results for previous fiscal years were also recalculated using the same methodology.

Quality Statement

Caveats and Limitations

- The indicator measures hospitalizations due to conditions wholly attributable to alcohol. Conditions partially attributable to alcohol (e.g., cancers, strokes, respiratory diseases) are not directly captured. This should be taken into consideration while interpreting the indicator results. It is estimated that out of all hospitalizations attributable to alcohol, 30% are due to wholly attributable conditions and 70% are due to partially attributable conditions.
- This indicator depends on the documentation of alcohol as the cause of a disease condition (100% attributable) for which care is delivered. Therefore, conditions potentially related to alcohol but not diagnosed and documented as such (e.g., liver disease not linked to alcohol) might not be captured.
- The stigma associated with alcohol influences the documentation of conditions associated with alcohol use. The increasing caution of clinical staff and the sensitivity of patients around documentation of alcohol use may affect the proportion of certain conditions with a documented link to alcohol.
- Accidents and injuries to self or others are major consequences of harmful use of alcohol; however, this indicator's focus is on mental and medical conditions attributable to alcohol. Injuries to others are not captured, but patients admitted because of the conditions attributable to alcohol may have physical injuries as well.
- Since treatment for alcohol-attributable conditions may happen at different levels of the health care system, including clinics, emergency departments, and general and psychiatric hospitals, variations in indicator results are influenced by service delivery and capacity, access to care, and type of delivery and provider.

Trending Issues

The *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5, ICD-9-CM version) 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. Because 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 be affected.

Comments

Indicator results are also available in

- Your Health System: In Brief
- Health Indicators e-Publication.

Both the indicator Hospitalizations Entirely Caused by Alcohol and the indicator Hospital Stays for Harm Caused by Substance Use have a common approach to case identification. For additional information, please see the other Indicator Library entry.