

# Avoidable Deaths

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|---|---|
| Name                                      | Avoidable Deaths  |
| Short/Other Names                         | Potentially Avoidable Mortality   |
| Description                               | <p>Avoidable mortality refers to untimely deaths that should not occur in the presence of timely and effective health care, including prevention. It serves to focus attention on the portion of population health attainment that can potentially be influenced by the health system.</p> <p>Potentially avoidable mortality includes premature deaths that could potentially have been avoided through all levels of prevention (primary, secondary, tertiary).</p> <p>For further details, please see the <a href="#">General Methodology Notes</a>.</p> |
| Interpretation                            | Lower rates are desirable.  |
| HSP Framework Dimension                   | Health System Outcomes: Improve health status of Canadians  |
| Areas of Need                             | Not applicable  |
| Geographic Coverage                       | All provinces/territories   |
| Reporting Level /Disaggregation           | National, Province/Territory, Region  |
| Indicator Results                         | <a href="#">Accessing Indicator Results on Your Health System: In Depth</a>   |
| Identifying Information                   |   |
| Name                                      | Avoidable Deaths  |
| Short/Other Names                         | Potentially Avoidable Mortality   |
| Indicator Description and Calculation     | <p>Avoidable mortality refers to untimely deaths that should not occur in the presence of timely and effective health care, including prevention. It serves to focus attention on the portion of population health attainment that can potentially be influenced by the health system.</p>  |
| Description                               | <p>Potentially avoidable mortality includes premature deaths that could potentially have been avoided through all levels of prevention (primary, secondary, tertiary).</p> <p>For further details, please see the <a href="#">General Methodology Notes</a>.</p> <p>Mortality rate:</p> $\frac{\text{(Number of deaths at age younger than 75 from avoidable causes)} \div \text{Total mid-year population younger than age 75}}{\text{age-adjusted}} \times 100,000$   |
| Calculation: Description                  | <p>Potential years of life lost (PYLL):</p> $\frac{\text{(The sum of differences between 75 and age of death from avoidable causes)} \div \text{Total mid-year population younger than age 75}}{100,000} \times 100,000$  |
| Calculation: Geographic Assignment        | Place of residence  |
| Calculation: Type of Measurement          | Rate - Rate per 100,000; also expressed as PYLL per 100,000 population  |
| Calculation: Adjustment Applied           | Age-adjusted  |
| Calculation: Method of Adjustment         | <p>Direct Standardization</p> <p><b>Standard Population:</b><br/>Canada 2011</p>  |
| Denominator                               | <p><b>Description:</b><br/>Total mid-year population younger than age 75</p> <p><b>Description:</b><br/>Mortality rate:</p> <p>Number of deaths at age younger than 75 from avoidable causes (treatable or preventable)</p>   |
| Numerator                                 | <p>Potential years of life lost (PYLL):</p> <p>The sum of differences between age 75 and age of death from avoidable causes (treatable or preventable)</p> <p><b>Inclusions:</b><br/>For the list of avoidable causes, refer to the <a href="#">List of conditions for Potentially Avoidable Mortality and Mortality From Preventable and Treatable Causes Indicators</a> document.</p>   |
| Background, Interpretation and Benchmarks |   |

Avoidable mortality indicators provide additional insight into the Canadian health system. These measures can be used to assess the impact of prevention strategies and the outcomes of health policy decisions and health care provision.

The potentially avoidable mortality indicator includes premature deaths that could be avoidable through all levels of prevention.

Mortality from preventable causes focuses on premature deaths from conditions that could potentially be avoided through primary prevention efforts, such as lifestyle modifications or population-level interventions (for example, vaccinations and injury prevention). The indicator informs efforts aimed at reducing the number of initial cases, or incidence reduction, as deaths are prevented by avoiding new cases altogether.

Rationale Mortality from treatable causes focuses on premature deaths that could potentially be avoided through secondary and tertiary prevention efforts, such as screening for and effective treatment of an existing disease. The indicator informs efforts aimed at reducing the number of people who die once they have the condition, or case-fatality reduction.

Avoidable mortality indicators can serve to inform where Canada's health system has made gains and to point to where more work is needed. They can also help to quantify potential gains. For example, in an ideal world where all avoidable mortality in Canada has been eliminated, life expectancy at birth for the years 2006 to 2008 would have been 85.8 years—4.9 years longer than the actual life expectancy of 80.9 years. Three of the 4.9 years would be attributed to eliminating preventable mortality; the other 1.9 years would come from eliminating mortality from treatable causes.

Analysis of avoidable mortality highlights the need for prevention.

Interpretation Lower rates are desirable.

HSP

Framework

Health System Outcomes: Improve health status of Canadians

Dimensions

Areas of

Need

Not applicable

Targets

Benchmarks

Not applicable

References

Australian Government. National Healthcare Agreement: PI 20-Potentially Avoidable Deaths, 2010. <http://meteor.aihw.gov.au/content/index.phtml/itemId/394495>. Published June 8, 2011. Accessed on October 19, 2011.

Ministry of Health. Saving Lives: Amenable Mortality in New Zealand, 1996-2006. Wellington, New Zealand: Ministry of Health; 2010.

Nolte E, McKee CM. Does Health Care Save Lives? Avoidable Mortality Revisited. London, UK: The Nuffield Trust; 2004.

References

Office for National Statistics (United Kingdom). Definitions of Avoidable Mortality. [http://www.ons.gov.uk/ons/dcp171778\\_264958.pdf](http://www.ons.gov.uk/ons/dcp171778_264958.pdf). Published May 15, 2012. Accessed on October 19, 2012.

Page A, Tobias M, Wright C, et al. Australian and New Zealand Atlas of Avoidable Mortality. Adelaide, Australia: PHIDU, University of Adelaide; 2006.

Rutstein DD, Berenberg W, Chalmers TC, et al. Measuring the Quality of Medical Care: A Clinical Method. *N Engl J Med* 1976( 294): 582-588

Availability of Data Sources and Results

Data Sources

Demography division, Statistics Canada, Vital Statistics - Death Database, Statistics Canada

**Type of Year:**

Calendar

Available Data Years

**First Available Year:**

2007

**Last Available Year:**

2016

Geographic Coverage

All provinces/territories

Reporting Level/Disaggregation National, Province/Territory, Region

Result Updates

Update Frequency Every year

**Web Tool:**

Your Health System: In Depth

Indicator Results

**URL:**

[Accessing Indicator Results on Your Health System: In Depth](#)

Updates

Not applicable

Quality Statement

It is generally acknowledged that not all deaths from potentially avoidable causes can actually be avoided. For example, some deaths from treatable causes may be unavoidable due to late diagnosis or concurrent health problems, while some deaths from preventable causes could be due to unpredictable events against which no protective measures could have been taken.

Limitations

An upper age limit of 75 should not imply that some deaths in the population older than 75 could not be avoided. However, multiple comorbidities are common among older adults, making the assignment of a single cause of death challenging.

Future Directions

The indicators will be reviewed periodically to assess the upper age limit and potential new avoidable conditions due to better understanding of disease etiology or advances in treatment.

Trending Issues Not applicable

The indicator is calculated based on three years of pooled data. The reference year reflects the mid-point of a three-year period.

Avoidable mortality indicators were developed based on the Australian Potentially Avoidable Deaths indicator and the U.K. Office for National Statistics' list of causes of avoidable mortality, followed by expert review of the diagnosis codes and rationales for including each condition.

Causes of death were assigned to preventable and treatable subcategories based on two main mechanisms of mortality reduction: incidence and case-fatality reduction. These subcategories are mutually exclusive. In cases where a prevention/treatment overlap exists, the case was assigned to the preventable category; the exceptions were ischemic heart disease and stroke, where a random half of cases were assigned as preventable and the other half assigned as treatable. However, the mutually exclusive nature of the subcategories does not imply that all cases assigned to the preventable group do not have a treatable component, and vice versa.

Comments

More information about the indicator can be found in the In Focus section of *Health Indicators 2012*, available on CIHI's website (<https://secure.cihi.ca/estore/productFamily.htm?locale=en&pf=PFC1791>).

Indicator results are also available on

- Your Health System: In Brief (<http://yourhealthsystem.cihi.ca/inbrief/?lang=en#!/indicators/012/avoidable-deaths>)
- Statistics Canada website (<http://www.statcan.gc.ca/pub/82-221-x/2013001/pyll-eng.htm>).