## Avoidable Deaths

<table>
<thead>
<tr>
<th>Name</th>
<th>Avoidable Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short/Other Names</td>
<td>Potentially Avoidable Mortality</td>
</tr>
</tbody>
</table>

### Description

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.

Potentially avoidable mortality includes premature deaths that could potentially have been avoided through all levels of prevention (primary, secondary, tertiary).

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

Not applicable

### 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: Avoidable Deaths

### Indicator Description and Calculation

**Description**

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.

Potentially avoidable mortality includes premature deaths that could potentially have been avoided through all levels of prevention (primary, secondary, tertiary).

For further details, please see the General Methodology Notes.

**Mortality rate:**

\[
\frac{\text{Number of deaths at age younger than 75 from avoidable causes}}{\text{Total mid-year population younger than age 75}} \times 100,000 \quad \text{(age-adjusted)}
\]

**Potential years of life lost (PYLL):**

\[
\frac{\text{The sum of differences between 75 and age of death from avoidable causes}}{\text{Total mid-year population younger than age 75}} \times 100,000 \quad \text{(age-adjusted)}
\]

### 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

Direct Standardization

**Standard Population:**

Canada 2011

### Denominator

**Description:**

Total mid-year population younger than age 75

**Description:**

Mortality rate:

Number of deaths at age younger than 75 from avoidable causes (treatable or preventable)

### Numerator

**Potential years of life lost (PYLL):**

The sum of differences between age 75 and age of death from avoidable causes (treatable or preventable)

**Inclusions:**

For the list of avoidable causes, refer to the List of conditions for Potentially Avoidable Mortality and Mortality From Preventable and Treatable Causes Indicators document.

### Background, Interpretation and Benchmarks

For further details, please see the General Methodology Notes.
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 avoided 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.

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.*

**Health System Outcomes:** Improve health status of Canadians

**Areas of Need:** Not applicable

**Targets:** Not applicable

**References**


**Availability of Data Sources and Results**

<table>
<thead>
<tr>
<th>Data Sources</th>
<th>Demography division, Statistics Canada, Vital Statistics - Death Database, Statistics Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Year:</strong></td>
<td>Calendar</td>
</tr>
<tr>
<td><strong>Available Data Years:</strong></td>
<td>First Available Year: 2007</td>
</tr>
<tr>
<td></td>
<td>Last Available Year: 2016</td>
</tr>
<tr>
<td><strong>Geographic Coverage:</strong></td>
<td>All provinces/territories</td>
</tr>
<tr>
<td><strong>Result Updates:</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Web Tool:</strong></td>
<td>Your Health System: In Depth</td>
</tr>
<tr>
<td><strong>URL:</strong></td>
<td>Accessing Indicator Results on Your Health System: In Depth</td>
</tr>
<tr>
<td><strong>Updates:</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Quality Statement</strong></td>
<td>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. 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. 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.</td>
</tr>
</tbody>
</table>
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.

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).