The Pan-Canadian Health Inequalities Reporting Initiative:

Health Inequalities Data Tool
INITIATIVE BACKGROUND
Measuring, monitoring, and reporting on health inequalities: a global call-to-action
Measuring, monitoring, and reporting on health inequities: Canadian drivers

2015

Call to Action #19

2016

$6.2 Billion

Truth and Reconciliation Commission of Canada

The Direct Economic Burden of Socio-Economic Health Inequalities in Canada

Public Health Agency of Canada
Measuring, monitoring, and reporting on health inequities: Canadian drivers
For a given **health issue**, where are the greatest inequalities?

For which health issue(s) do **vulnerable populations** experience the greatest inequalities?

How can public health research, programs and services better address health inequalities?

Measure and monitor health *inequalities* → Inform efforts to reduce health *inequities* → Advance health *equity*
A Joint Federal/Provincial/Territorial response: The Pan-Canadian Health Inequalities Reporting Initiative

- Collaborative initiative between federal, provincial, and territorial governments
Pan-Canadian Health Inequalities Reporting Initiative: Data sources and custodians

- Canadian Community Health Survey
- Vital Statistics databases
- Canadian Cancer Registry
- Census data
- National Household Survey
- Canadian Health Measures Survey
- Canadian Survey on Disability
- Survey of Young Canadians
- Employment Insurance Coverage Survey
- First Nations Regional Health Survey
- Hospital Mental Health Database
- Canadian Tuberculosis Reporting System
- National HIV/AIDS Surveillance System
- Early Development Instrument
Our scope and approach

Data for **OVER 70 HEALTH INDICATORS** from 13 national data sources…

…disaggregated by each of **13 SOCIAL AND DEMOGRAPHIC STRATIFIERS** meaningful to health equity.*

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### HEALTH STATUS

Including indicators for:
- Mortality & life expectancy
- Morbidity & disability
- Mental illness & suicide
- Perceived physical & mental health
- Infectious & chronic diseases

### HEALTH DETERMINANTS

Including indicators for:
- Health behaviours
- Physical & social environments
- Working conditions
- Access to health care
- Social protection
- Social inequities
- Early childhood development

### SOCIO-ECONOMIC STATUS

1. Income
2. Education
3. Employment
4. Occupation
5. Material & social deprivation

### 6. INDIGENOUS PEOPLES

- First Nations
- Inuit
- Métis

### PLACE OF RESIDENCE

7. Rural/Urban

### POPULATION GROUP

8. Age
9. Immigrant status
10. Sexual orientation
11. Functional health
12. Cultural/racial background

### 13. SEX: Male or Female

### 14. JURISDICTION: National or Provincial/Territorial

* Where data allow
KEY HEALTH INEQUALITIES REPORT
Selecting key indicators for the Report on Key Health Inequalities in Canada

Health Inequalities Data Tool indicators
(n = 72)

- Infant mortality
- Infant mortality ≥500 grams
- Intentional self-harm/assault mortality
- Ischaemic heart disease mortality
- Life expectancy – at birth
- Life expectancy – at age 18
- Life expectancy – at age 65
- Low birth weight
- Lung cancer incidence
- Lung cancer mortality
- Mammography screening
- Hospitalization for selected mental illnesses
- Non-parental care
- Obesity (measured)
- Obesity (self-reported)
- Oral health – ability to chew
- Oral health – DecayRiskModel/Dent Tooth Index
- Oral health – missing teeth
- Oral health – pain/discomfort in teeth/gums in the past 12 months
- Oral health – presence of dental insurance
- Oral health – visit with dental professional in past 12 months (CDHR)
- Oral health – visit with dental professional in past 12 months (CHMS)
- Overweight (measured)
- Overweight (self-reported)
- Pap smear screening
- Perceived health
- Perceived mental health
- Physical activity (during leisure time)
- Physical activity (participation and activity limitations)
- Positive mental health
- Potential years of Life lost
- Prostate cancer incidence
- Regulated care
- Sense of community belonging
- Smoking
- Tinnitus
- Tuberculosis – active case reports
- Unintentional injury mortality
- Workplace stress

1. Do indicators reveal any substantial and statistically significant inequalities?
(based on minimum RR/AF thresholds)

2. Are the inequalities widespread across population groups?

3. Are the inequalities especially pronounced among multiple population groups?

4. Do indicators cover downstream health outcomes and upstream determinants of health?

5. Do indicators include stratifiers that cover key population groups?

6. Are the indicators actionable?

7. Are the indicators policy-relevant?

Key indicators of health inequalities
(n = 22)
HEALTH INEQUALITIES DATA TOOL (HIDT)
How to Access the Health Inequalities Data Tool?


Or contact us at: HealthInequalities_InegalitesEnSante@phac-aspc.gc.ca
The Health Inequality Data Tool

Health Inequalities Data Tool

Health inequalities refer to differences in health status between groups in society. These differences can be due to biological factors, individual choices, or chance, but public health evidence suggests that many are attributable to the unequal distribution of the social and economic factors that influence health (e.g., income, education, employment, social supports) and exposure to societal conditions and environments largely beyond the control of the individuals concerned.

In 2012, Canada, along with other World Health Organization (WHO) Member States, endorsed the Rio Political Declaration on Social Determinants of Health, pledging to take action to promote health equity (defined by the WHO as “the absence of avoidable or remediable differences among groups of people”). Strengthening the capacity to monitor and report on health inequalities was recognized as a critical foundation for achieving meaningful progress towards this goal.

The Health Inequalities Data Tool supports Canada’s pledges under the Rio Declaration. This resource is a collaborative effort of the Public Health Agency of Canada, the Pan-Canadian Public Health Network (PCPHN), Statistics Canada, and the Canadian Institute for Health Information, and builds on a set of indicators of health inequalities proposed by the PCPHN in 2010.

The Health Inequalities Data Tool contains data on indicators of health status and health determinants, stratified by a range of social and economic characteristics (i.e., social stratifiers) meaningful to health equity. Indicators are grouped into twelve domains.

More Information

For more information about each indicator, click on the domains below.

Health Status

► Mortality and Life Expectancy
MAP OF AVAILABLE INDICATORS

Pan-Canadian Health Inequalities Data Tool
Map of Available Indicators

Health Inequalities

- Health Status
  - Mortality & Life Expectancy
  - Mortality & Disability
  - Mental Illness & Suicide
  - Self-assessed Physical & Mental Health
  - Disease / Health Condition
    - Perceived health, excellent or very good (aged 18+)
    - Isolated mortality
    - Mental illness hospitalization (aged 1+) 
  - Low birth weight
  - Preterm births
  - Small for gestational age
  - Overweight (self-reported, aged 16+)
  - Overweight (measured, aged 6-17)
  - Obesity (self-reported, aged 18+)
  - Obesity (measured, aged 6-17)
  - Obesity (measured, aged 16-17)
  - Functional health, severe or moderate functional impairment (aged 12-17)
  - Functional health, severe or moderate functional impairment (aged 1+)
  - Participation and activity limitation, some difficulty or often (aged 12-17)
  - Participation and activity limitation, some difficulty or often (aged 1+)
  - Disability (aged 15+)

- Health Behaviours
  - Cancer incidences - total for all cancers
  - Breast cancer incidence
  - Prostate cancer incidence
  - Colorectal cancer incidence
  - Lung cancer incidence
  - Unintentional injury mortality
  - Life expectancy - at birth (individual level)
  - Life expectancy - at age 65 (individual level)
  - Life expectancy - at age 65 (ecological level)
  - Health-adjusted life expectancy - at birth (individual level)
  - Health-adjusted life expectancy - at age 65 (individual level)

- Physical & Social Environment
  - Alcohol use
  - Heavy drinking (aged 12-17)
  - Alcohol use, heavy drinking (aged 18+)
  - Smoking, daily or occasionally (aged 12-17)
  - Smoking, daily or occasionally (aged 18+)
  - Breastfeeding, initiation (aged 8-15)
  - Breastfeeding, exclusive (aged 10-15)
  - Fruit/vegetable consumption, 5 or more servings per day (aged 12-17)
  - Fruit/vegetable consumption, 5 or more servings per day (aged 18+)
  - Physical activity, active or moderately active (aged 12-17)
  - Physical activity, active or moderately active (aged 18+)

- Working Conditions
  - Exposures to second-hand smoke at home (aged 12-17)
  - Exposures to second-hand smoke at home (aged 18+)
  - Workplace stress, quite a bit or extremely stressful, past month (aged 12-17)
  - Workplace stress, quite a bit or extremely stressful, past month (aged 18+)
  - Contact with medical doctor, past year (aged 12-17)
  - Contact with medical doctor, past year (aged 18+)

- Health Care
  - Contact with employment insurance (aged 15-60)
  - Dacrycentre enrolment (aged 1-6)
  - Non-parental child care (aged 1-6)
  - Subsidized care (aged 1+)

- Social Protection
  - Food insecurity, moderate or severe (individual, aged 12-17)
  - Food insecurity, moderate or severe (individual, aged 18+)
  - Food insecurity, moderate or severe (individual, aged 1+)
  - Food insecurity, moderate or severe (individual, aged 1+)
  - Food insecurity, moderate or severe (individual, aged 1+)
  - Food insecurity, moderate or severe (individual, aged 1+)
  - Food insecurity, moderate or severe (individual, aged 1+)
  - Food insecurity, moderate or severe (individual, aged 1+)
  - Food insecurity, moderate or severe (individual, aged 1+)

- Social Inequalities
  - Children vulnerable in at least one domain of early development
  - Children vulnerable in domain of physical health and well-being
  - Children vulnerable in domain of social competence
  - Children vulnerable in domain of emotional maturity
  - Children vulnerable in domain of language and cognitive development
  - Children vulnerable in domain of communication skills and general knowledge

Suggested Citation: Pan-Canadian Health Inequalities Data Tool, 2017 Edition. A joint initiative of the Public Health Agency of Canada, the Pan-Canadian Public Health Network, Statistics Canada, and the Canadian Institute of Health Information.
HIDT- Homepage: Unfolding the list of indicators

Health Status
- Mortality and Life Expectancy
- Morbidity and Disability
- Mental Illness and Suicide
- Self-Assessed Physical and Mental Health
- Disease/Health Condition

Health Determinants
- Health Behaviours
- Physical and Social Environment
- Working Conditions
- Health Care
- Social Protection
- Social Inequities
- Early Childhood Development

More information is available about the measures of inequality used in this Data Tool.
### Health Status

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Details</th>
<th>Source (Year)</th>
<th>Method of Calculation</th>
<th>Available Stratifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suicide mortality (mortality rate per 100,000)</td>
<td>Suicide deaths (ICD-10: X60 to X84), total population</td>
<td>VS-DD (2009-2011)</td>
<td>Numerator: Number of deaths caused by suicide; Denominator: Total Canadian population (2011 Census counts), multiplied by 3</td>
<td>Details</td>
</tr>
<tr>
<td>Mental illness hospitalization (aged 15+) (discharge rate per 100,000)</td>
<td>Discharges following hospitalizations for five selected mental illness conditions (combined): substance-related disorders; schizophrenia, delusional and non-organic psychotic disorders; mood/affective disorders; anxiety disorders; and selected disorders of adult personality and behaviour, population aged 15+</td>
<td>HMHDB-CIHI (2009-2012)</td>
<td>Numerator: Discharges following mental illness hospitalizations for the five selected mental illness conditions (combined); Denominator: Total within population of interest (2011 Census counts), multiplied by 4</td>
<td>Details</td>
</tr>
</tbody>
</table>
**Suicide mortality (mortality rate per 100,000)**

<table>
<thead>
<tr>
<th>Stratifiers</th>
<th>Categories and Description</th>
<th>Source (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age group</td>
<td>0 to 11 years; 12 to 17 years; 18 to 34 years; 35 to 49 years; 50 to 64 years; 65 to 79 years; 80 years and over; Total</td>
<td>VS-DD (2009-2011)</td>
</tr>
<tr>
<td>Deprivation index quintiles - material &amp; social (regional versions) (overall and by rural/urban geography) (area-based measure)</td>
<td>At the DA level: Q1Q1 (least deprived – material &amp; social) [reference]; Q5Q5 (most deprived – material &amp; social)</td>
<td>2006 Census, PCCF+</td>
</tr>
<tr>
<td>Deprivation index quintiles - material (regional version) (area-based measure)</td>
<td>At the DA level: Q1 (least deprived) [reference]; Q2; Q3; Q4; Q5 (most deprived)</td>
<td>2006 Census, PCCF+</td>
</tr>
</tbody>
</table>
More information is available about the measures of inequality used in this Data Tool.

### Pan-Canadian Health Inequalities Reporting Initiative Summary Measures

Several summary measures have been used in the public health field to assess health inequalities. In this project, three effect measures and three impact measures\(^1\) were calculated to assess the distribution of inequality between population groups (Table 1).

<table>
<thead>
<tr>
<th>Effect Measures</th>
<th>Population Impact Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnitude of the inequality between two population groups</td>
<td>Impact of the magnitude of the inequality between two population groups within the total population</td>
</tr>
</tbody>
</table>

- **Rate Ratio (RR)**: Relative inequality
- **Rate Difference (RD)**: Absolute inequality
- **Attributable Fraction (AF)**: Percent (%) rate reduction in a sub-population
- **Population Attributable Rate (PAR)**: Absolute rate reduction in the total population
- **Population Attributable Fraction (PAF)**: Percent (%) rate reduction in the total population
- **Population Impact Number (PIN)**: Absolute number of cases reduced in the total population
Summary Measures: Reference document
HIDT - DATA
HIDT: Going from homepage to the data

Health Inequalities Data Tool

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More Information

For more information about each indicator, click on the framework components below:

Health Status
Health Inequalities Data Tool

Select item(s) from each list below:
- Geography: Newfoundland and Labrador
- Framework Components: Disease / Health Condition
- Indicator: Inability to chew (aged 18+)
- Stratifier: Overall
- Measure: Age-standardized rate

Inability to chew (aged 18+), age-standardized rate, prevalence (%), Newfoundland and Labrador

- Total: Age-standardized rate 12.2 (95% CI 10.1-14.4)
- Total [Males, reference]: Age-standardized rate 13.1 (95% CI 10.0-16.1)
- Total [Females]: Age-standardized rate 11.6 (95% CI 9.5-13.6)

More information is available about the indicators and their stratifiers. More information is also available about the measures of inequality.

For more information on the interpretation of the data please see the notes below.

Summary Table: Inability to chew (aged 18+), age-standardized rate, prevalence (%), Newfoundland and Labrador

<table>
<thead>
<tr>
<th>Sex</th>
<th>Overall</th>
<th>Age-standardized rate</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both sexes</td>
<td>Total</td>
<td>12.2</td>
<td>10.1-14.4</td>
</tr>
<tr>
<td>Males</td>
<td>Total [Males, reference]</td>
<td>13.1</td>
<td>10.0-16.1</td>
</tr>
<tr>
<td>Females</td>
<td>Total [Females]</td>
<td>11.6</td>
<td>9.5-13.6</td>
</tr>
</tbody>
</table>

Download Detailed Table
Health Inequalities Data Tool

Select item(s) from each list below:

Framework Components
Disease / Health Condition

Indicator
Inability to chew (aged 18+)

Measure
Age-standardized rate

More information is available about the indicators and their stratifiers. More information is also available about the measures of inequality.
Inability to chew (aged 18+), age-standardized rate, prevalence (%), Newfoundland and Labrador

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More information is available about the indicators and their stratifiers. More information is also available about the measures of inequality.

For more information on the interpretation of the data please see the notes below.

Download Detailed Table
Includes both relative measures of inequality (e.g. rate ratio)...

Core housing need was 1.62 times higher among visible minorities than among the people of NL who did not identify as visible minorities.

CORE HOUSING NEED BY VISIBLE MINORITY
Rate ratio, Newfoundland and Labrador, 2011

…And absolute measures of inequality (e.g. rate difference)

DENTAL PAIN OR DISCOMFORT, PAST MONTH
Rate difference, aged 18+, Newfoundland and Labrador, 2007-2008

There were 4.3 more cases of dental pain per 100 women compared to men

Source: Pan-Canadian Health Inequalities Data Tool, 2017 Edition. A joint initiative of the Public Health Agency of Canada, the Pan-Canadian Public Health Network, Statistics Canada and the Canadian Institute of Health Information.
Data from the Canadian Community Health Survey - Annual Component (2007-2008).
Measures that capture the impact of inequality in population terms (e.g. population impact number)

MENTAL ILLNESS HOSPITALIZATION (AGED 15+) by rural/urban
Population impact number, Newfoundland and Labrador, 2009-2012

255 cases of hospitalization due to mental illness could have been avoided if the most rural population of NL had the same rate of hospitalization as those in the cities.

Source: Pan-Canadian Health Inequalities Data Tool, 2017 Edition. A joint initiative of the Public Health Agency of Canada, the Pan-Canadian Public Health Network, Statistics Canada and the Canadian Institute of Health Information. Data from the Hospital Mental Health Database-Canadian Institute for Health Information (2009-2012)
Who is accessing the Data Tool?

**Top three:** Ontario, Quebec, Alberta

63% of users are from outside the Health Portfolio.

**Top Three:** Canada (94%), USA, UK

+ 44 other countries
Suicide - Numerator

<table>
<thead>
<tr>
<th>Sex</th>
<th>Numerator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both sexes</td>
<td>340</td>
</tr>
<tr>
<td>Males</td>
<td>270</td>
</tr>
<tr>
<td>Females</td>
<td>70</td>
</tr>
</tbody>
</table>

Suicide – Numerator (stratified)

Select item(s) from each list below:

Geography
Nova Scotia

Framework Components
Mental Illness and suicide

Indicator
Suicide mortality

Stratifier
Education quintiles (area-based)

Measure
Numerator

Suicide mortality, numerator, persons, Nova Scotia

Stratifier: Q1 (lowest education)
Numerator: 110

Stratifier: Q5 (highest education) [reference]
Numerator: 45

Education quintiles (area-based measure)

For sex selection, toggle legend items:
- Both sexes
- Males
- Females
Suicide – Rate

Select item(s) from each list below:

Geography
Nova Scotia

Framework Components
Mental Illness and suicide

Indicator
Suicide mortality

Stratifier
Education quintiles (area-based)

Measure
Age-standardized rate
## Suicide – Prevalence Summary Table

<table>
<thead>
<tr>
<th>Sex</th>
<th>Education quintiles (area-based measure)</th>
<th>Age-standardized rate</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both sexes</td>
<td>Q1 (lowest education)</td>
<td>15.7</td>
<td>13.0-19.0</td>
</tr>
<tr>
<td>Both sexes</td>
<td>Q2</td>
<td>10.5</td>
<td>8.2-13.4</td>
</tr>
<tr>
<td>Both sexes</td>
<td>Q3</td>
<td>9.8</td>
<td>7.5-13.0</td>
</tr>
<tr>
<td>Both sexes</td>
<td>Q4</td>
<td>14.1</td>
<td>11.0-18.0</td>
</tr>
<tr>
<td>Both sexes</td>
<td>Q5 (highest education) [reference]</td>
<td>10.5</td>
<td>7.9-13.9</td>
</tr>
<tr>
<td>Males</td>
<td>Q1 (lowest education)</td>
<td>25.4</td>
<td>20.6-31.5</td>
</tr>
<tr>
<td>Males</td>
<td>Q2</td>
<td>17.2</td>
<td>13.1-22.7</td>
</tr>
<tr>
<td>Males</td>
<td>Q3</td>
<td>16.7</td>
<td>12.3-22.7</td>
</tr>
<tr>
<td>Males</td>
<td>Q4</td>
<td>22.9</td>
<td>17.3-30.3</td>
</tr>
<tr>
<td>Males</td>
<td>Q5 (highest education) [reference]</td>
<td>18.3</td>
<td>13.4-24.9</td>
</tr>
<tr>
<td>Females</td>
<td>Q1 (lowest education)</td>
<td>6.8</td>
<td>4.5-10.1</td>
</tr>
<tr>
<td>Females</td>
<td>Q2</td>
<td>4.4</td>
<td>2.6-7.5</td>
</tr>
<tr>
<td>Females</td>
<td>Q3</td>
<td>3.7</td>
<td>2.0-6.9</td>
</tr>
<tr>
<td>Females</td>
<td>Q4</td>
<td>6.2</td>
<td>3.8-10.4</td>
</tr>
<tr>
<td>Females</td>
<td>Q5 (highest education) [reference]</td>
<td>3.4</td>
<td>1.7-6.9</td>
</tr>
</tbody>
</table>
Suicide - Numerator

Suicide mortality, numerator, persons, Nova Scotia

Stratifier: Total [Males]
Numerator: 270

Stratifier: Total [Females, reference]
Numerator: 70

Population impact number

Suicide mortality, population impact number (PIN), average annual number of excess cases, Nova Scotia

Stratifier: Total [Males]
Population impact number (PIN): 68

Overall

For sex selection, toggle legend items: Males Females
National data – Unintentional injury, crude rates

Unintentional injury mortality, crude rate, mortality rate per 100,000, Canada

**Stratifier:** High concentration of First Nations/Inuit/Métis identity
Crude rate: 78.1

**Stratifier:** Low concentration of First Nations/Inuit/Métis identity [reference]
Crude rate: 30.5

First Nations/Inuit/Métis identity (area-based measure)

For sex selection, toggle legend items: Both sexes Males Females
National data – Unintentional injury, age-standardized rates

Unintentional injury mortality, age-standardized rate, mortality rate per 100,000, Canada

- **Stratifier:** High concentration of First Nations/Inuit/Métis identity
  - **Age-standardized rate:** 97.7

- **Stratifier:** Low concentration of First Nations/Inuit/Métis identity [reference]
  - **Age-standardized rate:** 30

First Nations/Inuit/Métis identity (area-based measure)

For sex selection, toggle legend items:
- **Blue** Both sexes
- **Green** Males
- **Yellow** Females
Workplace conditions – stress by income

Workplace stress, quite a bit or extremely stressful, past year (aged 18-75), age-standardized rate, prevalence (%), Canada
Workplace conditions – stress by occupation

Workplace stress, quite a bit or extremely stressful, past year (aged 18-75), age-standardized rate, prevalence (%), Canada