Drawing a Portrait of Health Inequalities in Canada: The Pan-Canadian Health Inequalities Reporting Initiative

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A Joint Federal/Provincial/Territorial response: The Pan-Canadian Health Inequalities Reporting Initiative

- Objective: To strengthen knowledge and action on health inequalities in Canada through improved data infrastructure and reporting

- Collaborative initiative between federal, provincial, and territorial governments

- Measure and monitor health inequalities → Inform efforts to reduce health inequities → Advance health equity
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
- Canadian Tuberculosis Reporting System
- National HIV/AIDS Surveillance System
- Early Development Instrument
- Hospital Mental Health Database
- First Nations Regional Health Survey
Our scope and approach

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

…disaggregated by each of 14 SOCIAL AND DEMOGRAPHIC STRATIFIERS meaningful to health equity.*

<table>
<thead>
<tr>
<th>HEALTH STATUS</th>
<th>HEALTH DETERMINANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Including indicators for:</td>
<td>Including indicators for:</td>
</tr>
<tr>
<td>• Mortality &amp; life expectancy</td>
<td>• Health behaviours</td>
</tr>
<tr>
<td>• Morbidity &amp; disability</td>
<td>• Physical &amp; social environments</td>
</tr>
<tr>
<td>• Mental illness &amp; suicide</td>
<td>• Working conditions</td>
</tr>
<tr>
<td>• Perceived physical &amp; mental health</td>
<td>• Access to health care</td>
</tr>
<tr>
<td>• Infectious &amp; chronic diseases</td>
<td>• Social protection</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOCIO-ECONOMIC STATUS</th>
<th>6. INDIGENOUS PEOPLES</th>
<th>PLACE OF RESIDENCE</th>
<th>POPULATION GROUP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Income</td>
<td>• First Nations</td>
<td>7. Urban/rural</td>
<td>8. Age</td>
</tr>
<tr>
<td>2. Education</td>
<td>• Inuit</td>
<td></td>
<td>9. Immigrant status</td>
</tr>
<tr>
<td>3. Employment</td>
<td>• Métis</td>
<td></td>
<td>10. Sexual orientation</td>
</tr>
<tr>
<td>4. Occupation</td>
<td></td>
<td></td>
<td>11. Functional health</td>
</tr>
<tr>
<td>5. Material &amp; social deprivation</td>
<td></td>
<td></td>
<td>12. Cultural/racial background</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13. SEX: Male or Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. JURISDICTION: National or Provincial/Territorial</td>
</tr>
</tbody>
</table>

* Where data allow
The Health Inequalities Data Tool (Infobase.phac-aspc.gc.ca/HealthInequalities)

**PUBLIC ACCESS**
Hosted on PHAC’s online data platform, Public Health Infobase

**USER-FRIENDLY**
Retrieve, visualize, and explore the data by topic and population of interest using easy-to-navigate menus

**OPEN CONTENT**
Data and charts can be downloaded for further dissemination

**BETTER POLICY AND PROGRAM DECISIONS**
Disaggregated health data can help policymakers and program officials to:
- identify those most affected by a health issue, and
- direct resources at the health issues for which different groups experience the most disproportionate risk
Health Inequalities Data Tool Demo
How to Access the Health Inequalities Data Tool?

1. Direct link:
   https://infobase.phac-aspc.gc.ca/health-inequalities/

2. Public Health Infobase - PHAC:
   https://infobase.phac-aspc.gc.ca/

3. Through a web search engine
Thank you! Merci!

Contact information:

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Access the Health Inequalities Data Tool at:

http://infobase.phac-aspc.gc.ca/healthinequalities
Measuring, monitoring, and reporting on health inequities: a global call-to-action

2008

2011

2015

15.2 We pledge to:

(i) Establish, strengthen and maintain monitoring systems that provide disaggregated data to assess inequities in health outcomes as well as in allocations and use of resources;

(ii) Develop and implement robust, evidence-based, reliable measures of equity and inequity using existing indicators and tools.
Key contribution: enhanced analytical capacity to support policy and planning

- Access to data and related reporting products can strengthen action on health inequalities by FPT governments by addressing three types of questions:

1. **For a given health issue, where are the greatest inequalities?**
   - Indicators for **mental health and illness** can help to assess whether inequalities are most pronounced by income, cultural/racial background, Indigenous identity, sexual orientation, age, etc.

2. **For which health issue(s) do vulnerable populations experience the greatest inequalities?**
   - Examining inequalities data for **Indigenous peoples** or **children** (or visible minority groups, LGBT communities, etc.) can help to direct program and research resources to the health issues for which they experience the most disproportionate risk.

3. **How can public health research, programs and services better address health inequalities?**
   - Access to data can facilitate health equity integration by:
     - Improving **policy, program, and planning** decisions
     - Prioritizing **science, intervention research, and surveillance** investments
     - Supporting **program evaluation**, including relevance and effectiveness for vulnerable populations
     - Enabling **monitoring of progress** in reducing health inequalities
Health Inequalities Data Tool - Components

HOMEPAGE

DATA
Report on Key Health Inequalities in Canada

• Narrative report on especially pronounced and widespread health inequalities in Canada

• 22 indicators drawn from the Data Tool
  – Cover downstream health outcomes and upstream determinants of health
  – Approved at federal/provincial/territorial levels for monitoring over time

• Identifies priority areas for federal and provincial/territorial action

• Currently under development
Knowledge Mobilization Products & Activities

- Conferences & targeted webinars/trainings across Canada
- Static and interactive infographics on key indicators
- YouTube Videos: for promotion, demonstration & interpretation
- Web and social media notifications
- HTV Slides
- Slide decks for instructional purposes
- Journal articles

Diverse activities for a wide reach

Targeted to specific audience needs

KM Working Group provides guidance and helps co-create some products

Ongoing evaluation
### Annex B: List of key indicators for the Report on Key Health Inequalities in Canada

| HEALTH OUTCOMES | | |
|-----------------|-------------------------|
| **Life expectancy and mortality** | • Life expectancy at birth (*report chapter will also include data on Health-adjusted life expectancy*) |
| | • Infant mortality – weight ≥ 500g |
| | • Unintentional injury mortality |
| **Early childhood development** | • Early Development Instrument (EDI) |
| **Mental illness** | • Intentional self-harm/suicide deaths (*report chapter will also include data on Mental illness hospitalization rate*) |
| **Self-assessed health** | • Perceived mental health – fair or poor |
| **Cause-specific outcomes** | • Arthritis |
| | • Asthma |
| | • Diabetes – excluding gestational |
| | • Disability indicator (Functional health) |
| | • Lung cancer incidence |
| | • Obesity (*recommended by HPC-SC for FPT policy relevance*) |
| | • Oral health – no ability to chew |
| | • Tuberculosis |

| HEALTH DETERMINANTS | | |
|---------------------|-------------------------|
| **A: DAILY LIVING CONDITIONS** | | |
| **Health behaviours** | • Alcohol use – heavy drinking (*recommended by HPC-SC for FPT policy relevance*) |
| | • Smoking |
| **Physical and social environment** | • Core housing need |
| | • Exposure to second-hand smoke – home |
| **B: STRUCTURAL DRIVERS** | | |
| **Social inequities** | • Food insecurity – household |
| | • Working poor |
Annex C: Selecting key indicators for the Report on Key Health Inequalities in Canada

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?

Health Inequalities Data Tool indicators  
(n = 72)

- Infant mortality
- Infant mortality ≥ 500 grams
- Intentional self-harm
- Preterm infant mortality
- Infant health care mortality
- Infant health care mortality
- Life expectancy (at birth)
- Life expectancy (at age 65)
- Low birth weight
- Lung cancer incidence
- Lung cancer mortality
- Lung cancer mortality
- Mammography screening
- Hypertension for selected mental illnesses
- Non-parental care
- Obesity (measured)
- Obesity (self-reported)
- Oral health (ability to chew)
- Oral health (Decayed/missing/Filled Teeth index)
- Oral health (missing teeth)
- Oral health (pain/discomfort in teeth/teeth in the past 12 months)
- Oral health (prescription dental care)
- Oral health (visits to dental professionals in past 12 months)
- Oral health (visits to dental professionals in past 12 months)
- Overweight (measured)
- Overweight (self-reported)
- Pneumonia screening
- Prevalence of mental illness
- Physical activity (during leisure time)
- Physical activity (participation and activity limitations)
- Pulmonary health
- Potential years of life lost
- Preterm birth
- Preterm birth
- Regulation of community belongingness
- Smoking
- Tuberculosis (active case reports)
- Unintentional injury mortality
- Workplace
- Working poor
- Workplace stress

Indicators assessed for representation of key population groups based on WHO recommendations

Indicators assessed for coverage of the WHO health equity surveillance framework

Indicators assessed for coverage of the WHO health equity surveillance framework

Indicators ranked by # of stratifiers over minimum RR/AF threshold

Indicators ranked by # of stratifiers based on increasing RR/AF thresholds

Key indicators of health inequalities  
(n = 20)
Appendix D: Health Inequalities Data Tool (HIDT) – Live Demo

Using Screenshots
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 (PHN), Statistics Canada, and the Canadian Institute for Health Information, and builds on a set of indicators of health inequalities proposed by the PHN 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 framework components.

More Information

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

Health Status

- Mortality and Life Expectancy
- Morbidity and Disability
This map is downloadable PDF that is located in the upper right corner of your screen.
In this section you will find important technical information on each indicator and its stratifiers.
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**).

**Effect Measures**

Magnitude of the inequality between two population groups

- **Rate Ratio (RR)**
  - Relative inequality
- **Rate Difference (RD)**
  - Absolute inequality
- **Attributable Fraction (AF)**
  - Percent (%) rate reduction in a sub-population

**Population Impact Measures**

Impact of the magnitude of the inequality between two population groups within the total 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

**Interpreting the measures of inequality**

All of the summary measures of health inequality used in this project reflect the potential change in rate in the hypothetical situation whereby the health status of the most advantaged group is achievable by other population groups\(^2\).

- **RR** and **RD** express the difference between the rates of two population groups in terms of relative and absolute inequality, respectively, whereas **AF**
HIDT- Homepage: General notes

Notes

- **Data Sources (Abbreviations):** Canadian Cancer Registry (CCR); Canadian Community Health Survey - Annual Component (CCHS); Canadian Demographic Estimates; Canadian Health Measures Survey (CHMS); Canadian Survey on Disability (CSD); Canadian Tuberculosis Reporting System (CTBR); Census Population Counts; Early Development Instrument; Offord Centre for Child Studies (EDI); Employment Insurance Coverage Survey (EICS); Hospital Mental Health Database; Canadian Institute for Health Information (CIHI-DB); National HIV/AIDS Surveillance System; National Household Survey (NHS); Survey of Young Canadians (SYC); Vital Statistics - Birth Database (VS-BD); Vital Statistics - Death Database (VS-DD).

- **Rates:** Age-standardized to the 2011 Canadian population unless otherwise stated. Rates encompass incidence and prevalence. Consult the documentation for more details on a specific indicator.

- **Stratification:** Where possible/applicable, indicators are stratified at the individual level by the following characteristics: individual respondent/household income (income quintile – provincial/national, overall and by rural/urban geography); education level/quantile (individual respondent/household, overall and by rural/urban geography); immigration status; First Nations/Inuit/Métis identity; deprivation index (social/material); employment status; occupation; rural/urban geography; cultural/ethnic background; sexual orientation; functional health; participation and activity limitation; and impact of health problems. In certain cases, categories within a stratifier are collapsed or replaced by a proxy measure in cases of small sample sizes or unavailable information. Consult the documentation for more details on the available stratifiers for a specific indicator.

Ecological stratifiers are used in cases of missing or unavailable individual level characteristics. These measures are based on the use of area level measures of socio-economic status, sub-group (e.g., First Nations/Inuit/Métis identity, foreign-born) concentration and rural/urban geography derived from the 2006 Census (long-form) at the Census Dissemination Area (DA) level and linked to the vital and cancer administrative data available at Statistics Canada using the Postal Code (PC) Conversion File Plus (PCCF+).

- **Data availability, validity and limitations:** When an indicator and a stratifier are crossed, the age interval is limited to that available in both the indicator and the stratifier. The values calculated for the summary measures of inequalities do not take into account the complex interactions between different social identities or different social determinants of health that may vary between the groups. Consult the documentation on the summary measures of inequalities used in this project for more details. Data from national surveys were weighted to permit representative estimates of the target population. The 95% confidence interval illustrates the degree of variability associated with a number or a rate. Wide confidence intervals indicate high variability and should therefore be interpreted and compared with caution. For indicators using data linkage to the 2006 census data via the PCGF+, records that could not be assigned a DA were excluded from the analysis.

**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.

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**References:**


**Acknowledgements:** The development of this Data Tool was made possible through collaboration of the Public Health Agency of Canada (PHAC), the Pan-
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
Use the “National, Provincial and Territorial Data” tab to study inequalities between sub-populations.
HIDT – Data: Changing your sex selection

To change your sex selection (e.g. totals versus females, or females only, etc.) click or unclick the sex legend items located besides “For sex selection, toggle legend items”
HIDT – Data: Data table, measures of inequalities and reference groups

Summary measures of inequalities

<table>
<thead>
<tr>
<th>Sexual orientation (aged 18-59)</th>
<th>Rate ratio (RR)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both sexes: Lesbian/Gay</td>
<td>1.08</td>
<td>0.80-1.36</td>
</tr>
<tr>
<td>Both sexes: Bisexual</td>
<td>2.90</td>
<td>2.44-3.37</td>
</tr>
<tr>
<td>Both sexes: Heterosexual [reference]</td>
<td>1.00</td>
<td>-</td>
</tr>
<tr>
<td>Both sexes: Missing</td>
<td>1.48</td>
<td>1.18-1.77</td>
</tr>
</tbody>
</table>

*Cells highlighted in yellow should be interpreted with caution, as the measure itself or at least one of the components used to calculate the value has a coefficient of variation between 16.6% to 33.3%.
*Cells highlighted in red indicate that values have been suppressed because the measure itself or at least one of the components used to calculate the value has a coefficient of variation greater than 33.3%, a small numerator (<10), small denominator (<20), or empty age-standardization groups.
*Cells highlighted in blue indicate that values have been suppressed because their interpretation is complex or not possible.
*Cells highlighted in green indicate that the denominators for the crude and age-standardized values do not match due to empty age-standardization group(s).
*Where applicable, data are age-standardized to the 2011 Canadian population, using five-year age groups. Canadian Community Health Survey and Canadian Survey of Disability data are age-standardized to the 2011 Canadian population using ten-year age groups.
HIDT – Data: Downloading graphs, tables, and data

Click to download detailed table (includes numerators and denominators)

Copy summary table

Download or copy graph

⚠️ For more information on the interpretation of the data please see the notes below.
Need aid to interpret summary measures results (e.g. RR)? Click on the link “measures of inequality”.

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