

Closing the Gap:

A Measurement Primer to Reduce Population Health Inequities in British Columbia



Ministry of
Health

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Inherent Rights of Indigenous Peoples

The Province of British Columbia's (B.C.'s) Ministry of Health headquarters building is located on the territories of the *lək'wəŋən* (Lekwungen) Peoples of the Songhees and Esquimalt Nations, and we acknowledge, with gratitude, that much of our work on this document has taken place there.

We acknowledge, with respect, the inherent rights and title of the First Nations whose ancestral territories cover every inch of the province now known as B.C., including their unextinguished rights to land, self-determination, health and wellness. Laws and governance systems rooted in the land have upheld the sovereignty of these diverse Nations for thousands of years. The rights and responsibilities of First Nations to their ancestral territories have, for the most part, never been ceded or surrendered, and are upheld in provincial, national and international law. These rights are reflected in historical and modern treaties, Section 35 of the Constitution of Canada¹, court rulings, the *United Nations Declaration on the Rights of Indigenous Peoples*² and the Truth and Reconciliation Commission of Canada's Calls to Action.³

We also honour and recognize all First Nations, Inuit and Métis Peoples (Indigenous Peoples) who call the lands and waters of this province home. Indigenous Peoples have inherent rights to self-determination, health and wellness that must be upheld.

We commit to continuing our collective journey towards Truth and Reconciliation, in pursuit of eliminating Indigenous-specific racism. We will uphold and honour Indigenous Peoples' inherent rights in all aspects of our population and public health policies and practices.

Introduction

The purpose of the *Closing the Gap: A Measurement Primer to Reduce Population Health Inequities in British Columbia* (the Primer) is to provide an overview of key measurement considerations and tools for identifying and reducing health inequities, as an essential component of strengthening public health. The Primer is intended for public health practitioners, epidemiologists and knowledge users in health authorities and community-based organizations involved with measurement of public health priorities in B.C. It also facilitates alignment with federal health inequality measurement and reporting.

Health inequalities refer to differences in health outcomes between groups.⁴ Health inequities are considered unfair or unjust differences in health outcomes between groups in society. These differences can be due to many factors or determinants of health. See Appendix A for more about health inequities and the *Determinants of Health Model*.

Why is Data Important to Advance Health Equity?

Figure 1 outlines how data for public health action works to reduce health inequities. This Primer aims to enable a common language when discussing an ‘equity lens’ approach in order to strengthen population health surveillance and reporting to improve population health. Development of this Primer was informed by the World Health Organization Commission on Social Determinants of Health and the measurement approach of the Pan-Canadian Health Inequalities Data Tool.⁵

Figure 1. Measuring Health Inequalities in British Columbia

Strengthening the collection, analysis and use of **disaggregated data*** can support people working across the population and public health system in several ways:

Monitoring health status



Helps health practitioners and decision-makers identify inequalities in health outcomes.

Informs population and public health intelligence and research in compliance with the *Anti-Racism Data Act*.

Identifying the causes of differences



Measures the impact of underlying forces, such as racism and settler colonialism, on publicly-funded health care and public health service delivery and programming by evaluating health inequalities according to the structural, social and ecological determinants of health.

Enables researchers and epidemiologists to employ the **grandmother perspective,**** conducting health equity analysis with subgroups of people in B.C. experiencing health inequities.

Reduces the risk of unintended system and infrastructure harms to subgroups of people in B.C. who experience health inequities.

Responding to health inequities



Informs program and healthy public policy decisions.

Supports the mandate of the Minister of Health to address systemic racism and promote equity in the health care system.

Helps population and public health policymakers and decision-makers create well-defined and articulated processes, systems and supports to achieve equitable outcomes in health.

Provides evidence to inform clear action towards improvement of health outcomes.

* **Disaggregated data** is data that provides sub-categories of information, for example, by ethnic group, gender, occupation or educational status. These are sometimes called demographic categories. Unlike aggregated data, which groups information together, disaggregated data can reveal inequalities and relationships between categories.

** The **grandmother perspective** is an approach grounded in the idea that, rather than collecting and using disaggregated data to monitor the lives of Indigenous Peoples, it is about caring for First Nations, Inuit and Métis.⁶

Population Groups and Stratifiers to Understand Health Equity

In B.C., where available, measures are stratified, or disaggregated, by the priority population groups and geographic regions identified in Table 1 as a first step to describing and understanding health inequalities. These factors for disaggregation do not include all determinants of health; instead, these factors identify population groups that may have systemic differences in opportunities for health or access to quality care. Importantly, this approach serves to better capture differences in health that could be inequities and priorities to address.

Tables 1 and 2 provide examples of population groups and statistical measures that are commonly used to disaggregate and further analyze inequalities in health. It is important to note that people have multiple characteristics that intersect with each other to determine health outcomes. Applying an intersectional lens, such as Gender-based Analysis Plus (GBA+), can bring important insights that can be hindered just looking at population groups separately. For more information about intersectionality and GBA+, refer to Appendix A.

Data sources and ability to disaggregate by equity stratifiers for each priority population may differ depending on the related health indicator. For example, indicators of self-rated health from the Canadian Community Health Survey can be disaggregated or stratified by several socio-demographic questions. For indicators based on administrative health data, like injury-related hospitalizations, disaggregation by area-based measures from the Census of Population determined by place of residence are more commonly used. Examples of these types of measures include average household income, Material and Social Deprivation Index, and the Canadian Index of Multiple Deprivation.

Table 1. Equity Stratifier Variables for Disaggregating Health-related Measures

Indigenous Peoples	Demographic, Socio-cultural & Economic Characteristics		Place of Residence
First Nations	Age	Income	Rurality
Métis	Sex	Education	Health Geography
Inuit	Gender Identity	Material Deprivation Index	• Community Health Service Area
	Sexual Orientation	Social Deprivation Index	• Consolidated Local Health Area
	Racial Identity	Living Arrangement	
	Language	Housing Status and Stability	
	Immigrant Status		
	Mental Illness		
	Disability		

Table 2 provides statistical measures that help to summarize the ‘size’ of inequalities in measures, broken down by the populations or regional characteristics in Table 1. What measure to use to summarize differences depends on the indicator and the approach can include sensitivity analysis to ensure that conclusions do not depend on the summary measure chosen. Summarizing the extent of the differences is a start toward setting goals about what inequalities most immediately need to be addressed. Further assessment, evidence and discussion are needed to prioritize areas of attention and create goals and actions the population and public health system can work on to address the inequalities.

Table 2. Statistical Measures Summarizing the Magnitude of Health Inequalities Between Population Groups

Effect Measures and Summary Measures	Aspirational Example of More Advanced Summary Measures
<p>Rate Ratio (Relative Inequality) E.g., Smoking rates are two times as high in low-income areas vs. high income areas.</p>	<p>Slope Index of Inequality Summarizes the absolute difference between several ordered groups (e.g., income quintiles) unlike rate ratio and rate difference that focus on differences between two groups or one group and the population average.</p>
<p>Rate Difference (Absolute Inequality) E.g., Life expectancy is over 16 years higher in Richmond vs. Vancouver West.</p>	

Though it is not possible to directly measure health equity (as it requires identifying whether the differences in health outcomes are considered unfair), evolving methodology will help identify important and statistically significant differences (i.e., inequalities). Methodology will be developed to identify statistically significant differences, robust to small numbers, and methods for combining information so differences in small populations or regions can be better represented. Statistical differences may not always be clinically or meaningfully different. Population and public health practitioners have a key role to play in the interpretation of results in their area of expertise. See Appendix B for brief examples applying a health equity analytical lens.

Importance of Qualitative Measures

Qualitative methodologies—including thematic analyses of survey responses or open text comments, focus groups or other methods—are also important to contextualize the lived and living experiences of inequities and to identify what matters most to population groups. Some population groups, such as those that are precariously housed, living in remote areas or lower income, are known to not be well represented in some quantitative and colonial analysis methods. Moreover, qualitative methodologies, including oral histories, are important in upholding mixed methods approaches and ultimately for telling a holistic, systematic and comprehensive story of evidence.

Key Considerations for Applying a Health Equity Analytical Lens

Honouring Indigenous Priorities, Knowledge and Stewardship

Currently, First Nations and Métis partners in B.C. actively work with provincial health partners to enable First Nations- and Métis-specific approaches to assessing population health and wellness. The *First Nations Population Health and Wellness Agenda*⁷ and *Taanishi Kiiya? Miiyayow Métis Saantii Pi Miyooayaan Didaan BC: Métis Public Health Surveillance Program— Baseline Report, 2021*⁸ represent examples of distinctions-based health reporting that identify opportunities for enhanced equity.

The Province of B.C. continues to collaborate with Indigenous partners to enable Indigenous data governance under foundational commitments such as the *Declaration on the Rights of Indigenous Peoples Act*.⁹ For example, this could include implementing the First Nations Principles of Ownership, Control, Access and Possession (OCAP)[®].¹⁰

Recognizing the importance of cultural relevance and self-determination in health ensures that policies and programs honour First Nations, Inuit and Métis Peoples' traditions, knowledge, values and wisdom.

Anti-Racism Research Priorities

In June 2022, the *Anti-Racism Data Act (ARDA)*¹¹ came into law to enable the gathering of demographic information to identify and address systemic racism in government programs and services in B.C. These data can be used to identify opportunities for action on addressing health inequities and support culturally-safe services. Under this legislation, the Anti-Racism Data Committee collaborates within the Province on data initiatives including providing guidance on data directivesⁱ and data standardsⁱⁱ, and setting research priorities.ⁱⁱⁱ Provincial legislation and policies, combined with provincial, regional and local knowledge and expertise, support the development of novel and consistent approaches to analyzing and presenting data on the health of all people in B.C. using an equity lens.

Under ARDA, research priorities are identified by the Anti-Racism Data Committee and Indigenous Peoples every two years. Research priorities help focus the Province's work to identify and address systemic racism in areas that matter most to First Nations, Inuit and Métis Peoples, and racialized communities. In 2023, 'Health Outcomes' were identified as a research priority for the Province.

ⁱ Data directives guide how government collects, uses and shares information.

ⁱⁱ Data standards determine what type of personal information is collected, used and shared.

ⁱⁱⁱ Research priorities show where B.C. should focus its efforts first to identify and address systemic racism.

Improving Disaggregated Data

Currently, most provincial health administrative data can be disaggregated—or broken down—by sex, age, rurality, area-based socio-economic status and geographic region. Work is underway to build capacity and data linkage options to produce disaggregated health measures for more population groups in line with the B.C. Office of the Human Rights Commissioner report titled *Disaggregated Demographic Data Collection in British Columbia: The Grandmother Perspective*.⁶ Population survey data can be more routinely disaggregated by priority population characteristics such as income, immigration status, ethnocultural background, education and gender.ⁱⁱⁱ In the process of delivering health care services, partners such as regional health authorities directly collect and hold some other types of data that can be used for disaggregated analysis. Use of Indigenous data for linkage must follow Indigenous data governance protocols with First Nations and Métis partners' endorsement, leadership direction and collaboration. Inuit partnerships are still in development.

It is crucial to note race-based identity and Indigeneity should not be used in ways that reinforce stereotypes and harm individuals. Harm can occur even if unintentional. Therefore, community engagement is important for ensuring this data is used safely and appropriately when considering measurement of health outcomes among racialized groups.¹² This principle to do no harm applies when examining data about other individual characteristics and historically, persistently or systemically marginalized groups including women, people with disabilities and members of the 2SLGBTQIA+^{iv} communities.

^{iv} 2SLGBTQIA+: Stands for 2-Spirit, Lesbian, Gay, Bisexual, Transgender, Queer and/or Questioning, Intersex and Asexual peoples; the “plus” sign (+) includes people with other identities and orientations, such as non-binary or pansexual. Everyone has both a gender identity and a sexual orientation. B.C. is committed to continue to advance the rights and freedoms for people of all sexual orientations and gender identities.¹³

Appendix A. About Health Inequities and the Determinants of Health Model

Life Course Approach

Health indicators should also be considered across a life course, ensuring selection of important measures that impact people throughout life stages (e.g., infancy, childhood, adolescence and adulthood). Prioritizing and examining indicators that span the life course allows us to understand how inequalities in health can be accumulated, mitigated or alleviated across generations.¹⁴

Similarly, the collection and analysis of disaggregated data is critical to Gender-based Analysis Plus (GBA+) and other forms of intersectional analysis. The “plus” indicates that GBA+ goes beyond sex and gender differences to consider a range of different intersecting identities such as race, class and age, and how they can work together to shape experiences and outcomes (intersectionality).¹⁵

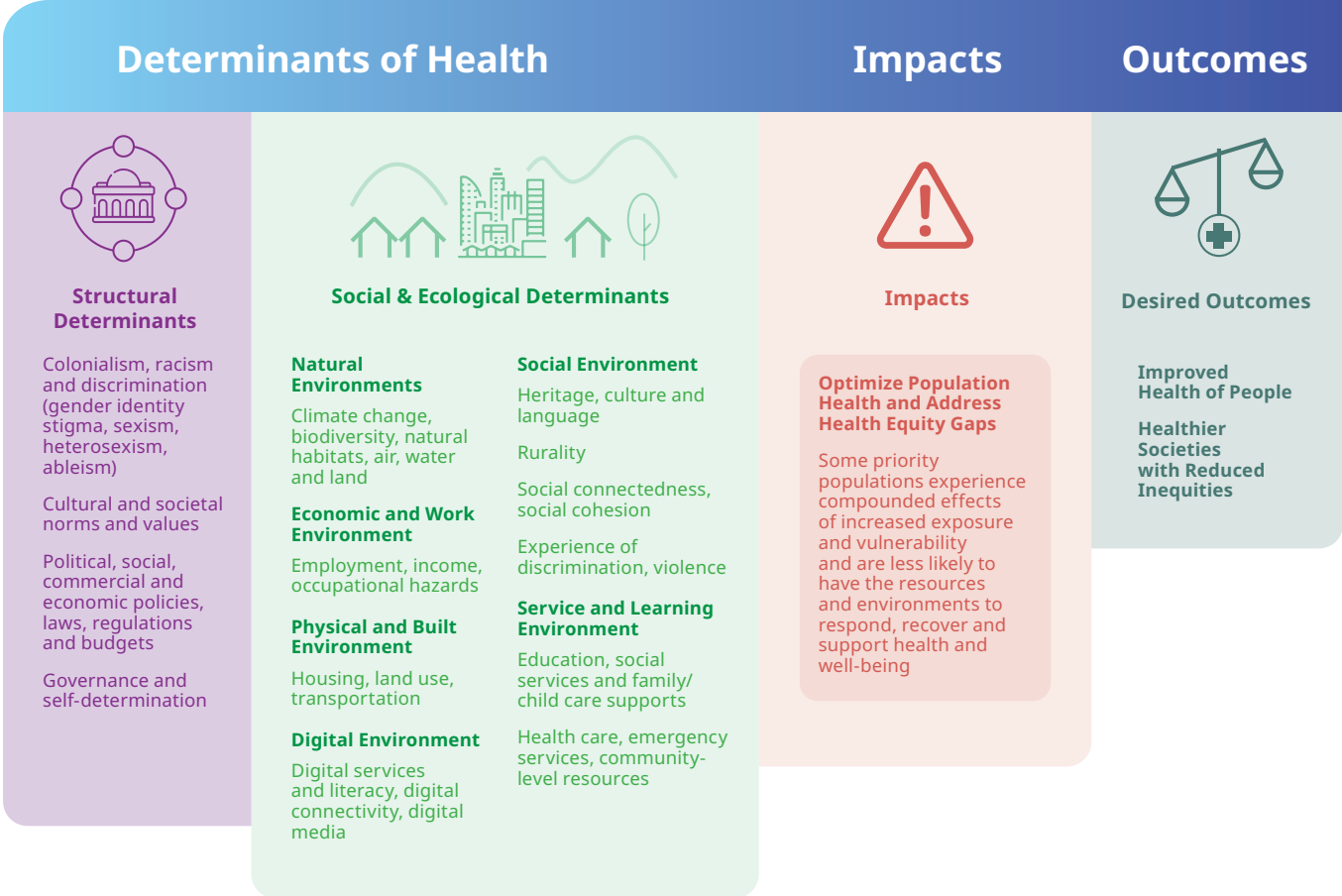
Determinants of Health Model

Determinants of health refer to the broad range of structural, social and ecological factors that combine with individual characteristics to influence individual and population health.¹⁶ Indigenous determinants of health may more broadly encompass First Nations-, Inuit- and Métis-specific cultural practices, language and connection to land. Structural determinants are the upstream social, economic, cultural and political systems that lead to inequities in power, wealth and resources within society. They may include social and economic policies, cultural norms and values, settler colonialism, racism and commercial determinants.

Health inequities are often attributable to the unequal distribution of the social and economic factors that influence health (e.g., income, education, employment, social supports) and unequal exposures to societal conditions and living environments (e.g., racism, settler colonialism, housing) largely beyond the control of an individual.⁴ Differences in health status that arise from systematic marginalization of certain groups and structural, social and ecological conditions are considered health inequities because they are unfair or unjust.

Figure 2 shows the ways that structural determinants influence health behaviours and the distribution of health outcomes by shaping the social and ecological determinants, like education, income, age, gender and living conditions, including geographic isolation. To improve population health and health equity, policies and programs must move beyond biomedical and behavioural models of disease and focus upstream to address the structural determinants that perpetuate inequities in health including racism and settler colonialism.

Figure 2. Key Determinants of Health and Impact on Health Outcomes in British Columbia



Source: Adapted from Solar & Irwin (2010)¹⁷, First Nations Health Authority (2012)¹⁸, Loppie & Wien (2009)¹⁹, Reading et al. (2007)²⁰ and Phillips (2024)²¹.

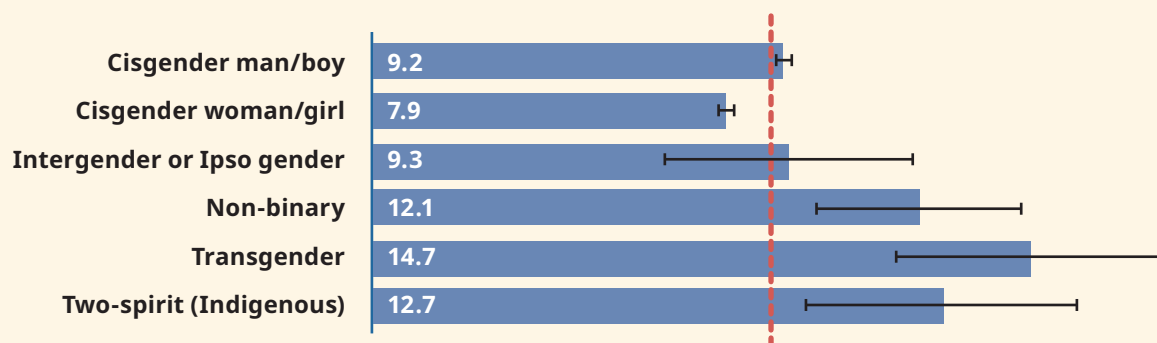
Appendix B. Examples of Applying a Health Equity Analytical Lens

The following are brief examples applying a health equity analytical lens that serves to illustrate how statistical measures help to summarize the ‘size’ of inequalities when disaggregated by populations or regional characteristics.

Example 1 – Diabetes Prevalence

The following is an example of how non-cisgender identifying groups, such as non-binary, transgender and Two-spirit people, experience higher rates of diabetes compared to cisgender people. The findings were reported by the B.C. Government as part of work under the Anti-Racism Data Committee. For detailed information on gender identity definitions used in this example, see Appendix 3 of the original report.²²

Figure 3. Age-sex Standardized Active Health Care Contact Prevalence (and 95% Confidence Interval) for Diabetes in 2021/22, by Gender Identity



The dashed vertical line **represents the provincial age-standardized rate** based on the Chronic Disease Registry official population estimate (8.9%).

Note: Reproduced with permission as cited in *Population Differences in Three Common Chronic Conditions in BC: Technical Report*.²²

Example 2 – Early Childhood Development

The following example for early childhood development utilizes the measurement of rate ratio to highlight relative health inequalities between children in different income groups.

As reported from the Pan-Canadian Health Inequalities Reporting Initiative by the Public Health Agency of Canada²³:

One in four children living in Canada are vulnerable in at least one of five developmental areas, including physical health and well-being, social competence, and language and thinking skills. Indigenous children and those living in lower income communities experience the greatest inequalities. The percentage of children vulnerable in at least one developmental area is 1.8 times higher in the lowest-income communities compared to highest income communities, and 2.0 times higher among Indigenous children compared to non-Indigenous children.

Appendix C. Additional Resources

- Institute National de Santé Publique du Québec., Material and social deprivation index [Internet]. Québec, QC: Institute National de Santé Publique du Québec; [updated 2023 Nov 22; cited 2024 Mar 25]. Available from: <https://www.inspq.qc.ca/en/deprivation/material-and-social-deprivation-index>.
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