



National Collaborating Centre
for Determinants of Health

Centre de collaboration nationale
des déterminants de la santé

LEARNING TOGETHER:

SELECTING POPULATION HEALTH STATUS INDICATORS TO ADVANCE HEALTH EQUITY



This document summarizes the Learning Circle of the National Collaborating Centre for Determinants of Health (NCCDH) Population Health Status Reporting Initiative held in May 2012.

POPULATION HEALTH STATUS REPORTING INITIATIVE

In order to better understand population health status reporting, the National Collaborating Centre for Determinants of Health (NCCDH) has implemented a Population Health Status Reporting Initiative. The NCCDH engaged research support from Public Health Ontario to search, review and synthesize evidence from the scholarly and grey literature and incorporate experiential evidence from key informants. The materials are presented to a "Learning Circle" of managers,

directors, researchers, epidemiologists, and medical officers of health who, through a series of discussions and presentations, reflect on how to improve population health status reporting to illuminate health inequities and support the development of effective health-equity policies. Capital Health (Halifax, Nova Scotia) functions as a practice site in relation to the learning circle, applying suggestions and bringing forward questions, needs and reflection on their experience. Each learning circle meeting addresses a new topic.

Population health status reports are important public health tools that can highlight differences in health outcomes that are due to inequity. When used, population health status reports can inform decisions to improve health of the whole population and reduce disparities between sub-groups.

BACKGROUND

The focus of this learning circle discussion in May 2012 was about how indicators are chosen for public health status reporting, with emphasis on indicators aimed at measuring health inequities.

In this case, an indicator is a population health assessment tool that provides a concise definition of a key dimension of health using data from censuses, vital statistics, surveys, administrative databases and maps.¹⁻⁴ Indicators are used to convert health data, primarily of interest to epidemiologists and researchers, into information that is valuable to policy makers, program planners and decision makers.⁵

EVIDENCE

Search Protocol

In order to explore how indicators aimed at measuring health inequities are chosen for public health status reporting, a search of academic and grey literature was implemented. Information was retrieved through a literature search, as well as through the examination of existing population health status reports that are being collected through an ongoing search for examples of reports in Canada (English and French) and internationally (English only). (A copy of the complete protocol is available upon request).

The literature search was based on the following questions:

- How are public health indicators chosen? (scholarly literature and grey literature)
- Which indicators should be used to measure inequalities in health? (scholarly literature only)

Findings

How are indicators chosen?

Ideally, indicators are chosen using rigorous scientific processes. However, practical constraints including resource and data availability, and ideological and political factors may also play a role in indicator selection.⁴ While there is no single agreed upon method for choosing indicators, consensus-building processes (often described broadly as modified Delphi methods) are common. Large scale projects such as the European Community Health Indicators Monitoring Project,¹ the United States Community Health Status Indicators Project⁶ and the Canadian Institute for Health Information (CIHI) Health Indicators Project³

have employed some form of consensus-building method to select indicators. These methods have also been adapted by smaller organizations. For example, Capital Health used a four-step process based on the methods described by CIHI to select community health indicators which involved:⁷

1. Gathering an initial set of indicators
2. Consulting with stakeholders to identify priority indicators
3. Validating priority indicators
4. Using the selected indicators

A pre-determined set of evaluation criteria are used throughout the process based on organization or project objectives. Common criteria for assessing quality include determining whether indicators are:²

- Built on consensus
- Based on a conceptual framework
- Valid
- Sensitive
- Feasible
- Reliable and sustainable
- Understandable
- Timely
- Comparable

Additional criteria that encourage alignment with established priorities, strategies and interventions are often added.⁸ For example, the Association of Public Health Epidemiologists in Ontario assesses whether indicators are applicable to requirements from the Ontario Public Health Standards and whether they are relevant to most or all local public health units.⁹

How are indicators aimed at measuring health inequities chosen?

Indicators aimed at measuring health inequities are often chosen in the same way as broader indicators, although additional criteria may be added. For example, a Scottish framework suggests assessing potential indicators for monitoring health inequities by considering:¹⁰

- Reasonable completeness and accuracy of reporting
- Clear relevance to known social determinants of health
- Reversibility and sensitivity to intervention
- Avoidance of reverse causation
- Statistically appropriate methods of data analysis and depiction
- Clarity of meaning for nonscientists

In addition, the World Health Organization suggests ensuring that the following types of indicators are included in order to establish a minimum health equity surveillance system:¹¹

- Health outcomes: mortality, morbidity, self-rated mental and physical health
- Measures of inequity: gender, social markers, regional/geographic markers
- Summary measures of health inequities: absolute and relative measures
- Data on the health of Indigenous/Aboriginal Peoples, where applicable

Which indicators should be used to measure health equity?

There is no single way to measure health inequities that is appropriate in all situations.¹² In a 2009 report, the

Pan-Canadian Public Health Network identified more than 40 potential indicators for measuring health inequities in Canada.¹³ Previous forums and conferences held in Canada (2004 and 2005) have identified priority areas:

- Gender, geography, Aboriginal Peoples, and socioeconomic status were identified as priorities by Health Disparities Task Group of the Advisory Committee on Population Health and Health Security^{14,15}
- Income, age, gender, education, ethnicity, and rural/urban were identified as priorities at the CIHI and Statistics Canada conference on Population Health Indicators¹⁶

For more detailed information and examples on the definitions of indicators and sources of data, please consult the selected report provided in Table 1.

Table 1: Selected reports and resources on indicators for measuring health inequities

PLACE	REFERENCE	URL	USEFUL INFORMATION
CANADIAN REPORTS			
Canada (National)	Pan-Canadian Public Health Network. Indicators of health inequalities: A report from the Population Health Promotion Expert Group from the Pan-Canadian Public Health Network. 2009.	http://www.phn-rsp.ca/pubs/ihidps/index.html	Table of proposed indicators of inequalities in health status and determinants of health (Table 1, P. 6)
Canada (National)	Federal, provincial and territorial advisory committee on population health. Toward a healthy future: Second report on the Health of Canadians. 1999.	http://publications.gc.ca/site/eng/82290/publication.html	Appendix of ~100 most commonly used indicators to measure health, and health determinants (Appendix B, P. 201)
Region of Peel Public Health (Local)	Region of Peel Public Health. Health in Peel, 2011: Determinants and Disparities. 2011.	http://www.peelregion.ca/health/health-status-report/determinants/pdf/MOH-0036_Determinants_final.pdf	<ul style="list-style-type: none"> • Measures of health inequities used throughout • Discussion of marginalization indexes (Chapter 4, P. 82)
Saskatoon Health Region (Local)	Saskatoon Health Region. Health disparity in Saskatoon: analysis to intervention. 2008.	http://www.saskatoonhealthregion.ca/your_health/documents/PHO/HealthDisparityRept-complete.pdf	Measures of health inequities used throughout
INTERNATIONAL REPORTS			
International (World Health Organization)	World Health Organization Commission on Social Determinants of Health. Closing the gap in a generation: Health equity through action on the social determinants of health. 2008.	http://www.who.int/social_determinants/thecommission/finalreport/en/index.html	Recommendations on monitoring social determinants of health (Chapter 16, P. 178)
Scotland	The Scottish Government. Long-term monitoring of health inequalities: Headline indicators – October 2010.	http://www.scotland.gov.uk/Resource/Doc/328340/0106137.pdf	Indicators and technical notes for measuring inequities (Annex 3, P. 32)
United States	US Department of Health and Human Services: Centers for Disease Control and Prevention. Methodological issues in measuring health disparities. 2005.	http://www.cdc.gov/nchs/data/series/sr_02/sr02_141.pdf	Guidance throughout



LEARNING CIRCLE DISCUSSION

Members of the learning circle generally agreed that good resources are available for identifying and evaluating indicators that report on health inequality. It was recognized that every indicator has advantages and disadvantages and needs to be considered in context. There is no such thing as a “perfect” health inequality indicator.

Equity versus equality

The learning circle conversation quickly moved from a discussion of indicator quality in the context of “inequality” (a measure of difference) to the usefulness of indicators in the context of “inequity” (the unfairness of that difference). An important consideration in the selection of indicators to advance health equity is how easily they can be used to stimulate and support action. Therefore, it is critical that indicators be meaningful to decision-makers and practitioners implementing policy, service and program interventions.

Data Resolution

Resolution (both spatial and temporal) as an indicator is most useful if it is relevant at both the local and regional levels.

Geographic data at a local level is critical for identifying differences that can be linked to issues of social justice, as well as for evaluating the impact of interventions targeted at improving health equity. The caution is that local indicators are often too specific to be comparable across regions or at the national and international levels. As well, some indicators (e.g. income) that are effective for describing differences between areas may not work equally well at the very local level.

Data Sources

Where should the data for health equity indicators come from? It was recognized that it is often more efficient and effective to use indicator data that is already being collected (e.g. Canadian Community Health Survey [CCHS]). While this is generally possible in major centres, in small and more rural areas sample sizes are often too small to generate statistical confidence. A common solution to this problem is for communities to collect their own data, but this can be costly and require a significant level of skill. An innovative approach to this problem is the development of protocols for generating local estimates from regional data, as is being explored by researchers in Alberta for CCHS data.¹⁷

Data Linkages

One area of great opportunity, but also great complexity, is linking various sources of data together using individual identifiers such as personal health numbers. This method requires a huge amount of collaboration across regions and trust and agreement between partners. At the national level, Statistics Canada is working with provincial and territorial ministries to explore the process of linking administrative and survey data through the Longitudinal Health and Administrative Data Initiative,¹⁸ and some provinces have created linked data repositories (e.g. Manitoba Centre for Health Policy).¹⁹

Also desirable would be sharing indicator data across local, provincial and national levels. At this time, unfortunately, there are limited structures or mechanisms in place in Canada to effectively facilitate data sharing or establish common health equity indicators.

Evaluation and action

For the public health sector it is important that, at whatever the scale, the choice of indicator be appropriate to measure the impacts or outcomes that may result from programs and services. Although social determinants of health can only be addressed through cross-sector collaboration, there is increasing pressure for the health sector to be able to evaluate its' contribution to actions aimed at improving health equity.

If the ultimate purpose of an indicator is to generate action, then it is critical that it be useful in the long term, but also that it shows change over the short term political cycle. An example of this is the Early Development Instrument (EDI) that has been used by the Human Early Learning Partnership at the University of British Columbia²⁰ and others. The EDI is a robust set of measures because changes in child development can be observed over a short period of time and also demonstrate long term impact. As well, child development is an indicator that cuts across sectors and is equally relevant in public health, social service, and education settings.

WHAT NEXT?

There will always be trade-offs in the selection of indicators to advance health equity, so it is important to look at opportunities and local priorities. Whichever indicators are selected initially, an iterative process to develop and improve indicators over time is essential.

It is most important to begin the journey and work collaboratively across regions and sectors. Learning circle members recommended that practitioners be supported by resources and tools ideally obtainable in a single location. Members suggested that real-life experiences from the field be shared in accessible formats such as short videos of interviews with practitioners. These suggestions will be explored further through the NCCDH online learning community, Health Equity Clicks: Community. For more information visit www.nccdh.ca.

THE LEARNING TOGETHER SERIES

Increasingly, population health status reports are key evidence in the creation and realignment of public and population health policies.

The resources in this Learning Together series summarize the NCCDH Population Health Status Reporting Initiative, which is working to strengthen the integration of social determinants and health equity in population health status reporting processes.

To download the Learning Together series, visit www.nccdh.ca



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