National Collaborating Centre
for Determinants of Health

Centre de collaboration nationale
des déterminants de la santé

LEARNING TOGETHER:
REPRESENTING THE DATA AND TELLING THE HEALTH EQUITY STORY IN POPULATION HEALTH STATUS REPORTING

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

BACKGROUND

The October 2012 Learning Circle discussion, focused on effective ways to represent population health data to tell the health equity story.

Telling the health equity story in a population health status report includes framing, reporting, and displaying data. This is critical to the audience's understanding of the message, influencing how policy makers and public health practitioners understand and react to the information.[1,2]

EVIDENCE

Two approaches were used to explore the evidence for best and better practices in communicating health equity data, as described below.

Search Protocol

The first approach was a search of academic and grey literature. 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 have qualitative data been integrated and presented in national (Canadian), and international, population health status reports?
- What are the comparative strengths and weaknesses of asset- and deficit-based approaches to selecting and representing health equity issues in population health status reporting?
- How have visual representations of quantitative data (e.g. maps, graphical charts, tables) been used and presented in national and international, population health status reports?
- What are the best practices of including visual data in population health status reports? What are the best resources available for guiding the visual presentation of data?

Gathering stories from the field

The second approach was to interview Learning Circle members about their experiences. This was done to explore the practice issues associated with communicating health equity in the population health status reporting process.

These interviews were guided by the following questions:

- What have you learned about incorporating both quantitative and qualitative data in telling the health equity story? What have you learned about what works and what does not work for data visualization?
- What is most important to remember when selecting and representing data to frame health equity in a population health status report? How do you know when the selection and representation of the data is successful?
- What advice do you have about incorporating asset-based approaches when working primarily with deficit indicators? How do you link the story of the report (the findings) to the recommendations (calls to action)?

Findings

There is little formal guidance on how to effectively display and report on health equity in population health status reports. The World Health Organization Commission on Social Determinants of Health provides several basic factors to consider:[1]

- Equity-related indicators should be reported with health data (moving beyond simply describing characteristics of the population)
- Time trends should be reported when possible, and they should be reported separately for men and women

The Commission also advocates the use of the following types of equity-related indicators for effective communication:[1]

- Social and regional stratifiers
- Absolute and relative measures
- Measures that summarize the magnitude of inequities
- Simple measures (e.g., rate differences) together with more complex measures (e.g., deprivation indices)

Current practices in communicating health equity data

Informal guidance on how to effectively display and report on health equity in population heath status reports can be found by examining existing reports. Overwhelmingly, reports rely on quantitative data to describe health inequity. Qualitative data is occasionally used to engage the audience and provide context using quotes, letters from leaders and stakeholders, and photographs.

Quantitative data is used to report on health equity in several ways: The population is often described in terms of the prevalence of selected equity-related determinants of health. For example, a report may describe the percentage of the working population that receives income assistance or employment insurance or identifies as Aboriginal. Most reports do not give the rationale for selecting particular determinants of health. In reports, bar and pie graphs are often used when describing characteristics in a single year, and bar and line graphs are used when showing trends over time.

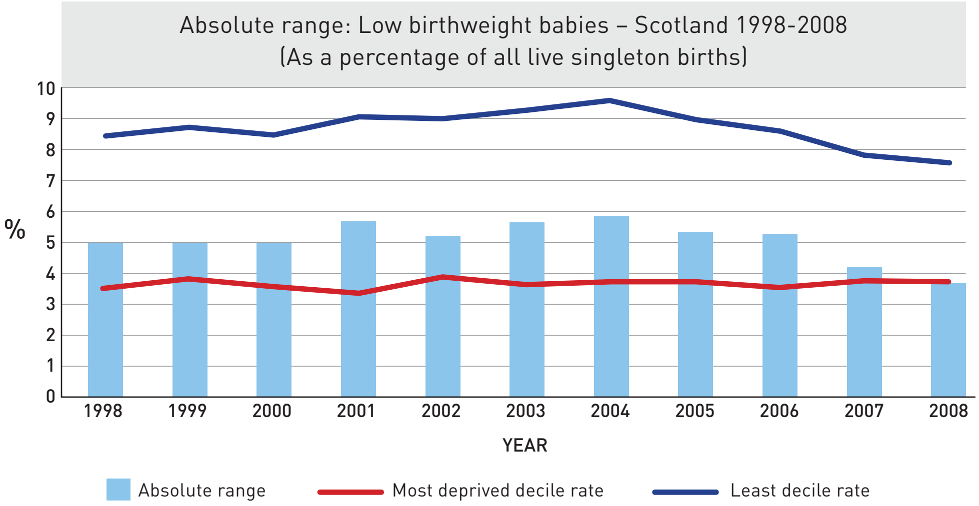
Figure 1: Using tables to make connections between equity measures and health status[3]

Table 4.4
Age-Standardized Hospitalization Rate for All Causes, Peel, 2006

Dimension: Residential Instability	**Hospitalization Rate Per (100,000)**	**Comparison to Peel Hospitalization Rate* Estimate**
1 (least unstable)	6,689	No Difference
2	6,612	Lower than Peel
3	6,901	No Difference
4	6,903	No Difference
5 (most unstable)	6,938	No Difference
Dimension: Material Deprivation	**Hospitalization Rate Per (100,000)**	**Comparison to Peel Hospitalization Rate* Estimate**
1 (least unstable)	6,414	Lower than Peel
2	6,594	Lower than Peel
3	6,725	No Difference
4	7,104	Higher than Peel
5 (most unstable)	7,701	Higher than Peel
Dimension: Dependencey	**Hospitalization Rate Per (100,000)**	**Comparison to Peel Hospitalization Rate* Estimate**
1 (least unstable)	6,808	No Difference
2	6,652	No Difference
3	6,697	No Difference
4	6,778	No Difference
5 (most unstable)	6,476	Lower than Peel

Quantitative data is used to describe the relationship between equity-related indicators and health status. For example, Figure 1 displays the age-standardized hospitalization rate for all-causes by several indicators, including residential instability and material deprivation.

Figure 2: Using a graph to make connections between equity measures and health status[4]



Relationships between equity-related indicators and health status are displayed in many ways, including tables (Figure 1), bar graphs, line graphs, and a combination of bar and line graphs (Figure 2), using a variety of stratifiers.

A STORY FROM THE FIELD...

INTERPRETATION/MISINTERPRETATION

The computer-age has made data increasingly accessible, improving public awareness and the understanding of many health issues. Once data are made freely available there is no controlling its use, even when best efforts are made for proper representation and interpretation.

In this example, indicators associated with emergency department consultations for influenza across several US cities and states were collected. After careful negotiation and the establishment of formal agreements, the data were compiled, reported separately for each jurisdiction, and made accessible on the Internet. It was not possible to compare absolute values between cities, as there were often slight differences in the way indicators were defined in each jurisdiction (e.g. the definition of an "influenza-like-illness visit"). Therefore, the data were plotted separately for each city and only trends over time could be used for comparison.

The New York Times[5] accessed the data and started asking questions such as "which city is healthier?" and "which city has a flu problem?" To answer these questions, they compared current to historical data, and reported that "City X" had a much bigger problem with influenza. Using the data in this manner illustrated a lack of understanding of the differences in meaning and quality between data sets.

Within the jurisdictions that had agreed to provide the data and make it accessible, some were upset by the misinterpretation and the bad publicity. Apologies were made, letters of correction were sent to the New York Times, and the website that housed the data was restricted, so that only one year of data would be returned on request.

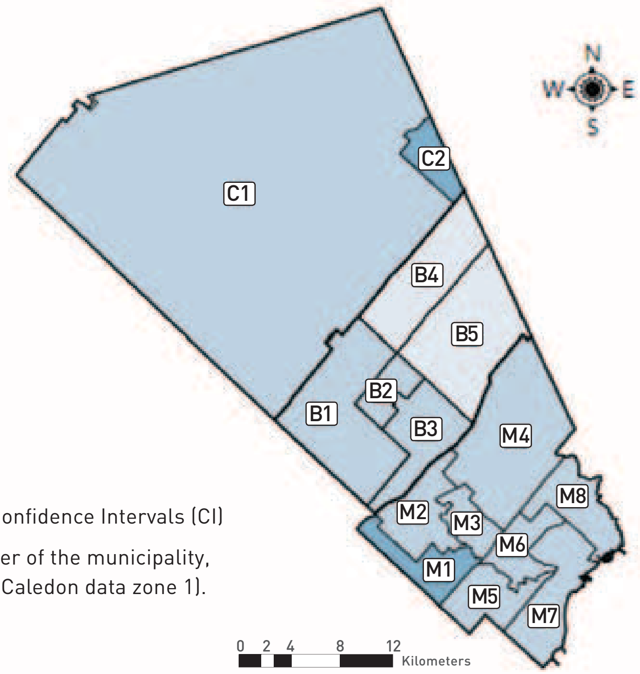
This story shows that good and/or accessible data does not always lead to good story telling.

Figure 3: Using maps to make connections between equity-related indicators and health status[3]

Map 2.8
Per cent of senior kindergarten children very ready on one or more domains of the early development instrument by data zone, Peel, 2010

Overall Peel Rate:
58.8% (95% CI: 58.0%-59.7%)

- ░ Significantly below Peel Rate
- ▒ Same as Peel Rate
- ▓ Significantly above Peel Rate
- □ Municipal Boundaries



Statistical significance based on 95% Confidence Intervals (CI)

Data zones are denoted by the first letter of the municipality, followed by a number (e.g., CI denotes Caledon data zone 1).

Another technique used to display these relationships is mapping. For example, a recent report mapped Early Development Instrument (EDI) scores by data zone (Figure 3).

A STORY FROM THE FIELD...

LEARNING TO TELL THE STORY TOGETHER

It can be difficult to know how to present the data in a way that tells the story, but your audience will let you know if you got it right. This was the experience of Capital Health, Nova Scotia.

When Capital Health presented preliminary data maps to a community health board, they were limited by the usual challenges of not being able to access high-quality local data and not having the local knowledge to be able to interpret the data that was available. The board members responded by requesting that more detailed data be represented at the street level including details such as bridges, businesses, and buildings. Additionally, the board members wanted to see recommendations based on the data about how to alleviate health inequities. Capital Health staff worked hard to answer the board's questions, and the board struggled to understand the limitations of the data.

However, the engagement process between staff and board members opened a dialogue and created the environment for learning together. The board was able to provide vital local context information, and Capital Health was able to layer the data to guide the interpretation of the information. Together they were able to identify opportunities for action to improve the health of community members. The presentation of the data was only the beginning of the conversation.

Framing health equity in population health status reports

Health equity is almost always reported in population health status reports using a deficit-based approach, which focuses on negative aspects or needs of a population.[2] Despite this, several authors in the academic literature advocate for a shift to an asset-based approach. Authors point out that asset-based approaches make an important contribution and that more work is needed to achieve the right mix of approaches.[6]

An asset-based approach can be defined as "any factor (or resource), which enhances the ability of individuals, groups, communities, populations, social systems, and institutions to maintain and sustain health and well-being and to help to reduce health inequities."[2, pg. 18]

Including asset-based measures in population health status reports has the potential to improve equity-related outcomes by:[2]

- Identifying sustainable protective and health promoting factors
- Framing the community as a co-producer of health and increasing their capacity

LEARNING CIRCLE DISCUSSION

Learning Circle members discussed how integrating health equity into population health status reports requires both the appropriate data and the consideration of values in the data analysis.

Health status data can describe differences or disparities between sub-populations, but it cannot inherently assess equity or considerations of fairness. Health equity considerations require a value-based assessment of what health differences are systematic, socially produced, and unfair.[7]

The group suggested that identifying disparities is the first step, as it can expose potential inequities and motivate public health and stakeholder organizations to question why differences may exist.

Even though "why?" sounds like a simple question, it often leads to additional questions:[8] How do we declare something to be unfair? At what threshold does something become unfair? What level of difference is acceptable?

Ultimately, decisions about what is fair and unfair must be made collectively. Learning circle members discussed the pros and cons of building these types of health equity considerations into health assessment and surveillance systems. There are tools to support dialogue and collective conversation, for example the *INSPQ Deprivation Index*[9] supports the comparison of estimated social and material inequalities. At the same time there is increasing recognition about the importance of a strength- or assets-based approach, for example the *Early Development Instrument*[10] *(EDI)* tool. But there is no definitive assessment or comparison of indices or indicators that are proven to be effective from either a strength perspective or a deficit perspective.

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**

Some health authorities have structures with a role in supporting analysis and decision making, such as the community health boards in Capital Health Halifax, Nova Scotia. Learning Circle members recognized that community engagement is an important approach. They also noted that this approach has not been evaluated across a continuum of strategies to support the integration of health equity into population health status reporting.

Telling the story of health equity in the context of population health status reporting could be a powerful way to help communities and political leaders to take action and celebrate community strengths. However, there is still a lot to learn about the best way to make this possible.

WHAT'S NEXT?

In the immediate term, the Learning Circle recognized the importance of sustaining a program for population health status reporting at the regional and local level across Canada. Adequate funding for this function is critical to advancing health equity and fairness, better understanding community assets and resilience, and developing the necessary tools to measure and learn from population health data.

Overall, Learning Circle members suggested there is a need to think about how to support national surveys, such as the *Canadian Community Health Survey*[11] (CCHS) that are key to population heath status reporting, and to deliver more of what we need "on the ground" regarding asset-based approaches to addressing health equity issues.

These suggestions will be explored further through the NCCDH online learning community: Health Equity Clicks: Community, for more information visit www.nccdh.ca.

A STORY FROM THE FIELD...

IT'S THE PEOPLE WHO GIVE THE NUMBERS MEANING ...

At first glance, a sexually transmitted disease outbreak seemed like a situation related to unprotected sex and a number of commonly related issues such as substance use, a lack of knowledge, and a risk taking culture. However, when the epidemiologist talked to the public health nurses who were working directly with the population to get a better understanding of the cases, they found out that the drivers for unprotected sex were associated more closely with issues of survival, including sex for food, clothing and shelter, and often involving Aboriginal women who were not able to return to their reserves.

As a result, the recommendation from the outbreak report focused on policy change and tri-partite collaboration between all government levels (including Aboriginal government). The recommendations would have looked quite different if the qualitative data had not been collected to give the numbers meaning.

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