Pan-Canadian Dialogue to Advance the Measurement of Equity in Health Care

Proceedings Report

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Table of contents

Executive summary 4
Background 6
Identifying and agreeing on core stratifiers 8
Overview 8
Pre-dialogue survey 9
Criteria for CIHI pre-dialogue rating exercise 9
Dialogue proceedings 11
Survey results discussion 11
Iterative round robin 12
Plenary discussion 13
Working groups: Clustering and pick-6 exercise 13
Example of results for clustering exercise from 1 group 14
Gaining insight into accessing stratifiers 16
Overview 16
Availability of equity stratifiers for analysis at the pan-Canadian level 16
Accessing stratifiers: Challenges and opportunities 21
Ideas for moving forward 24
Knowledge translation and stakeholder engagement 24
Stratifier development and implementation 25
Appendix A: Dialogue agenda 26
Appendix B: Participant list 28
Appendix C: List of key terms 31
Appendix D: Equity stratifiers identified through literature review 33
Appendix E: Pre-dialogue survey results 38
Appendix F: Text alternatives for images 39
References 43

Executive summary

Equitable health care, including equitable access, quality and outcomes, is an important component of health system performance. Measuring inequalities in health and health care is a key step in identifying differences that may be considered unfair or unjust and that can be acted on to improve health equity in Canada. In 2015, the Canadian Institute for Health Information (CIHI) released a suite of products[1–3] that uncovered significant and persistent income-related inequalities in health and health care. The importance of equity in health care was reinforced during consultations throughout this project, as well as during CIHI's recent strategic planning[4] efforts. These consultations also identified that, while there is commitment across jurisdictions to improving health equity, approaches used to measure inequalities in health and health care vary and could be strengthened by the development and use of common standards.

Building on CIHI's role as a convenor and trusted source of data standards, CIHI held a pan-Canadian dialogue on March 22, 2016, to advance the measurement of equity in health care. A total of 37 participants attended from 12 provinces and territories, representing ministries of health, quality councils, health regions, academia, practitioners, national organizations and the federal government.

The objectives of this dialogue were to

- Identify and agree on core stratifiers for measuring equity in health care;
- Discuss how to access and/or collect these stratifiers, including challenges and opportunities; and
- Inform the development of an action plan for advancing equity measurement in health care in Canada.

Through a series of consensus-building exercises, participants identified the following core stratifiers as highest priority for measuring equity in health care:

- Age
- Sex
- Geographic location
- Income
- Education
- Aboriginal identity
- Ethnicity/racial groups

Additional stratifiers were highly rated but require further consideration: housing, disability, language, health insurance, immigrant status, sexual orientation and gender identity. The following stratifiers received low ratings from participants and were eliminated from consideration for the core set: household composition, marital status, country of birth, occupation, employment, wealth and religion.

After the consensus-building exercises, panel and plenary discussions were held to examine opportunities for and challenges in accessing equity stratifiers at the national, provincial/territorial and regional levels. Key takeaways include the following:

- Equity stratifiers can be accessed in 3 ways:
  - By being embedded in data sources
  - Through individual-level data linkage
  - Through area-level data linkage
- Data collection and linkage activities are under way at the national, provincial/territorial, regional and care provision levels. Initiatives at the Manitoba Centre for Health Policy and the Toronto Central Local Health Integration Network provide opportunities for sharing success stories and lessons learned.
- Statistics Canada is building on its program of record linkage and has great potential to link health and social data sources at the individual level. For example, Statistics Canada has linked CIHI's Discharge Abstract Database with the census, the Canadian Community Health Survey, the Immigrant Landing file and tax files. Efforts are under way to provide access to these data files through Research Data Centres where possible.
- Measurement needs will differ by reporting level, but where there is overlap, standards for measurement would enable roll-up and comparable reporting across multiple levels within and across jurisdictions.
- Ongoing stakeholder engagement is needed to ensure buy-in and to avoid barriers to data use.

Moving forward, participants generated ideas for both short and long-term next steps following the dialogue. These actions focused on knowledge translation and stakeholder engagement, as well as on stratifier development and implementation. Key activities for CIHI to consider in partnership with other organizations and jurisdictions include the following:

- Engage a broader group of stakeholders to agree on the proposed core stratifiers.
- Establish working groups to refine and review stratifier definitions, as well as to clarify the purpose of each stratifier within policy, practice or system management levels.
- Facilitate the exchange of success stories and lessons learned to advance the collection and use of comparable equity stratifier data.

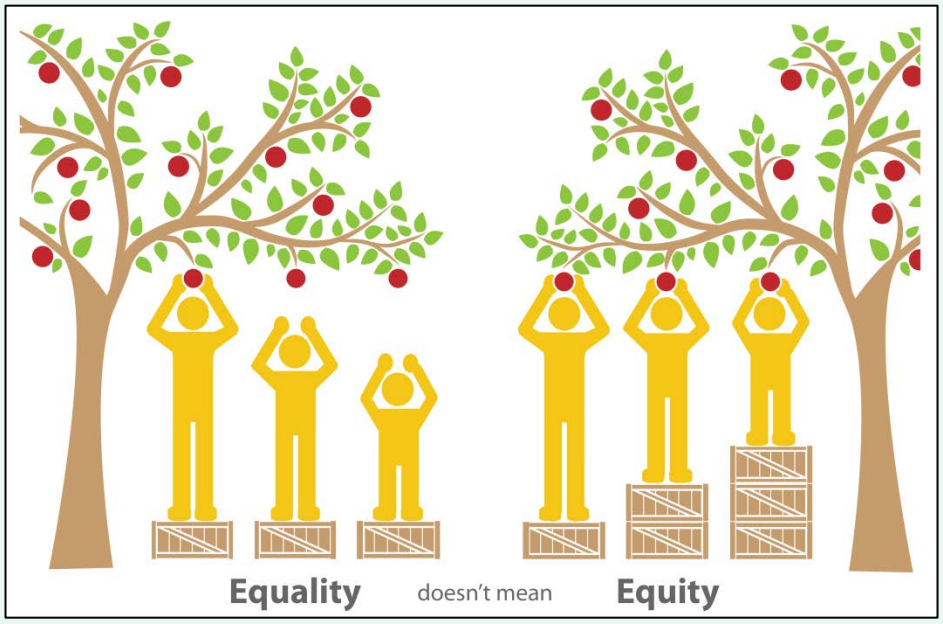
Background

Momentum is building across the country to address inequity in health and health care. In many ways, addressing inequity starts with the data. Inequalities, or differences, in health and health care across population groups can be measured as a starting point. Judgments can then be made as to whether these inequalities are unfair and can be reduced in order to achieve health equity (see Box 1). Throughout this report we use the term “equity” extensively, recognizing that measurement of inequality provides a foundation for understanding equity in Canada.

Over the past decade, there has been a focus on reporting health inequalities at the national, provincial/territorial and regional levels.[1, 5–8] In Canada and internationally, there have also been recent initiatives to collect socio-demographic data at the point of care to inform clinical care of vulnerable populations.[9–12] At a system level, health inequality measurement can draw attention to areas for action and can be used to evaluate interventions.

Definition of health equity

Health equity can be defined as the ideal state in which all people are able to reach their full health potential, regardless of where they live, who they are or what they have.[13]



CIHI has learned that, while there is commitment across jurisdictions to improve health equity, there is less consistency in the approaches used to measure inequalities in health and health care. Agreeing on and developing standards for core stratifiers to measure inequity, as well as improving access to data, will enable comparisons across health system levels and jurisdictions.

To this end, CIHI convened a pan-Canadian stakeholder dialogue on March 22, 2016, with the goal of advancing the measurement of equity in health care (see Appendix A for the agenda). The dialogue focused on equity in health care, including equity in access, quality and outcomes of care. Measuring equity in health care can be seen as one step toward achieving health equity in Canada.

Participants were invited to this dialogue based on their expertise in and/or responsibility for measuring equity in health care. A total of 37 participants attended, representing ministries of health, regional health authorities, health care providers, health quality councils, academic institutions from across the provinces/territories, national organizations and the federal government (see Appendix B for the participant list).

This report summarizes the approach of this stakeholder dialogue and its results, organized according to the following 3 objectives:

1. Identify and agree on core stratifiers for measuring equity in health care
2. Gain insight into how to access and/or collect these stratifiers, including challenges and opportunities
3. Inform the development of an action plan for advancing equity measurement in health care in Canada

A list of key terms that was used to provide a common frame of reference for dialogue participants can be found in Appendix C.

Identifying and agreeing on core stratifiers

Overview

Consensus-building exercises were used to derive the following core stratifiers for measuring equity in health care:

- Age
- Sex
- Geographic location
- Income
- Education
- Aboriginal identity
- Ethnicity/racial groups

Additional stratifiers were identified as requiring further consideration: housing, disability, language, health insurance, immigrant status, sexual orientation and gender identity. The following stratifiers were eliminated from consideration for inclusion in the core set: household composition, marital status, country of birth, occupation, employment, wealth and religion. This section of the proceedings report describes the approach used to reach agreement on core stratifiers and summarizes key points raised during the discussion.

For this work, we defined an **equity stratifier**[14] as a variable that captures a demographic, social, economic, geographic or other characteristic and that identifies population sub-groups that can be used to measure inequalities in health care access, quality and outcomes. A literature review identified 22 stratifiers that were considered in the consensus-building exercises (please see Appendix D).

Pre-dialogue survey

As the first step toward agreeing on a core set of stratifiers for measuring equity in health care, dialogue invitees (excluding CIHI staff who participated in the dialogue) were asked to complete a pre-dialogue survey to rate each of the 22 stratifiers from the literature on the 5 criteria listed below. These 5 criteria are consistent with those used in other similar priority-setting exercises[15–20] conducted by organizations such as the Institute of Medicine.

Criteria for CIHI pre-dialogue rating exercise

Strength of evidence:	There is strong evidence (qualitative or quantitative) that this stratifier is associated with access, quality and/or outcomes of health care
Actionability:	Stratifier identifies an inequality that can be addressed through policy or program intervention at the clinical or health care system level
Availability and use:	A stratifier definition exists that is standard, valid and reliable and has been used to measure inequality in health care in your jurisdiction
Acceptability:	Stratifier information would be willingly provided by Canadians without concerns over privacy and/or data ownership
Relevance:	Stratifier reflects a priority population for improving access, quality and outcomes of health care within your jurisdiction

A total of 25 people completed the survey. 92% of respondents indicated that they (or their organization) were involved in equity measurement/reporting in health care.

The results of the survey rating exercise are summarized in Table 1. The highest-rated stratifiers were age and sex, and the lowest were wealth and religion. For several stratifiers, however, including wealth and religion, more than 20% of respondents answered “don’t know” rather than providing a rating. Gender identity and sexual orientation had the highest proportion of “don’t know” responses. Please refer to Appendix E for detailed results of the rating exercise for each stratifier.

Table 1 Equity stratifiers in descending order of median overall score

Stratifier	Median score	Percentage answered "don't know"
Age	4.7	9.6
Sex	4.7	9.6
Geographic location	4.7	8.0
Aboriginal identity	4.0	10.4
Education	4.0	8.8
Income	4.0	8.0
Health insurance	4.0	21.6
Housing	3.8	16.8
Immigration status	3.8	12.0
Language	3.6	17.6
Employment	3.6	18.4
Disability	3.6	15.2
Country of birth	3.5	22.4
Ethnic/cultural group	3.3	19.2
Sexual orientation	3.3	25.6
Gender identity	3.2	26.4
Population group	3.2	16.8
Household composition	3.2	16.8
Marital status	3.0	17.6
Occupation	3.0	21.6
Wealth	2.9	24.0
Religion	2.0	38.4

Source
Canadian Institute for Health Information. Pre-dialogue survey. 2016.

The ratings and level of uncertainty, as measured by the percentage of total responses that were marked as "don't know," were summarized to categorize the stratifiers into the following 3 groups:

Group A (high scores):	Sex, age, geographic location, Aboriginal identity, education, income
Group B (medium scores/high percentage of "don't know" [i]):	Gender identity,[i] sexual orientation,[i] country of birth,[i] immigration status, language, ethnic/cultural group, housing, employment, occupation,[i] wealth,[i] health insurance,[i] disability, religion[i]
Group C (low scores):	Population group, household composition, marital status

Dialogue proceedings

To agree on a core set of equity stratifiers for advancing the measurement of equity in health care, a series of in-person consensus-building exercises took place during a 1-day facilitated event in Toronto, Ontario (see Appendix A for the agenda). This consensus-building process built on the survey results and is summarized in this section of the report.

Survey results discussion

As a first step, the results of the survey were presented to participants and the following decisions were agreed upon:

- Group A stratifiers (i.e., those with high scores and a low level of uncertainty) were automatically considered for the core set of stratifiers and were given top consideration moving forward. These were sex, age, geographic location, Aboriginal identity, education and income.
- Group B stratifiers (i.e., those with medium scores or a high level of uncertainty) required further discussion before considering them for the core set of stratifiers and were moved forward to the next exercise, which consisted of an iterative round robin.

i. A stratifier with greater than 20% **"don't know" responses**. The calculation was done per the following example scenario: For a total of 20 survey respondents, the maximum number of ratings for 1 stratifier would be 100 (1 rating for each of the 5 criteria). If 5 people marked "don't know" for 2 criteria each, the percentage who answered "don't know" for this stratifier would be 10%.

- Group C stratifiers (i.e., those with low scores and a low level of uncertainty) were considered as follows:
  - Population group generated significant discussion; it was agreed that this stratifier required further consideration and should be moved from Group C to Group B. Key discussion points included the challenges and importance of discussing racial discrimination in Canada. Also, there was some confusion about the distinction between population group (also referred to as racial/visible minority groups) and ethnic/cultural group.
  - Marital status and household composition were not discussed further for potential inclusion in the core set of stratifiers.

Iterative round robin

As a next step, participants were asked to consider the merits of each of the 14 Group B stratifiers through an iterative round robin exercise, with the goal of identifying stratifiers to include in the core set. In this exercise, groups of 2 to 3 people commented on the suitability of each stratifier from a pan-Canadian perspective, specifically considering the following:

Actionability: To what extent can Canadian jurisdictions act on inequality associated with this stratifier?

Availability and use: To what extent is this stratifier already being used across Canadian jurisdictions to measure inequality in health care access, quality and outcomes?

Acceptability: To what extent would Canadians across all jurisdictions willingly provide the stratifier information without concerns over privacy and/or data ownership?

Participants were asked to document their considerations for each stratifier on posters that were hung on the meeting room walls. As they moved through the room, participants were also asked to consider all existing comments and to vote on whether the stratifier should move into the Group A category (core set of stratifiers).

Prior to starting the exercise, participants noted that considerations and voting might vary significantly depending on whether one was considering a clinical care or a health system performance perspective. The facilitator suggested noting when comments were specific to a clinical or health system performance perspective throughout the exercise.

Plenary discussion

Following the round robin exercise, participants discussed the voting results[ii] and agreed that stratifiers that had received fewer than 3 votes would not be considered for the core set of stratifiers moving forward. As a result, the following stratifiers were removed from further discussion:

- Wealth
- Occupation
- Religion
- Country of birth

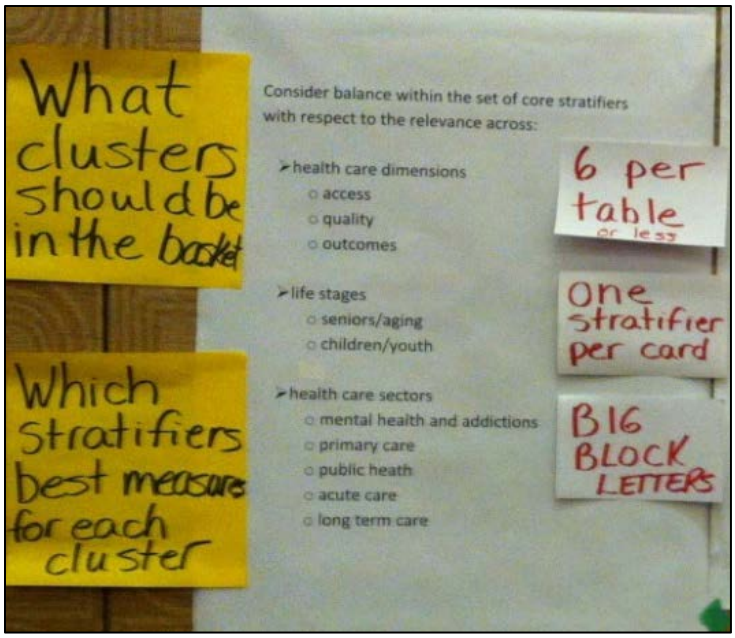
Working groups: Clustering and pick-6 exercise

Participants then worked in groups of 5 to 6 to further discuss and prioritize the remaining stratifiers by completing a clustering and pick 6-exercise. Before starting these exercises, however, it was agreed by all that age and sex were basic demographic data that could be considered as givens and therefore did not need to be considered further. Instead, the discussions would focus on the original Group A stratifiers and the remaining Group B stratifiers following the round robin exercise. These were

- Income
- Education
- Aboriginal identity
- Geographic location
- Housing
- Health insurance
- Gender identity
- Language
- Disability
- Sexual orientation
- Immigration status
- Employment
- Population group
- Ethnic/cultural group

ii. Voting results and a synthesis of round robin comments are available upon request to cphi@cihi.ca.

Figure 1 Instructions for the pick-6 exercise



Source
Bain K. Facilitator's report: pan-Canadian dialogue to advance the measurement of equity in health care, March 22, 2016. 2016.

Groups were asked to cluster stratifiers into themes, as shown in the example below. Then, keeping these clusters in mind, groups chose the 6 stratifiers that they felt should be given top consideration moving forward. When choosing these 6 stratifiers, groups were asked to also consider balance across the following: health care dimensions (access, quality, outcomes); life stages (seniors/aging, children/youth); and health care sectors (mental health and addictions, primary care, public health, acute care, long-term care) (see Figure 1).

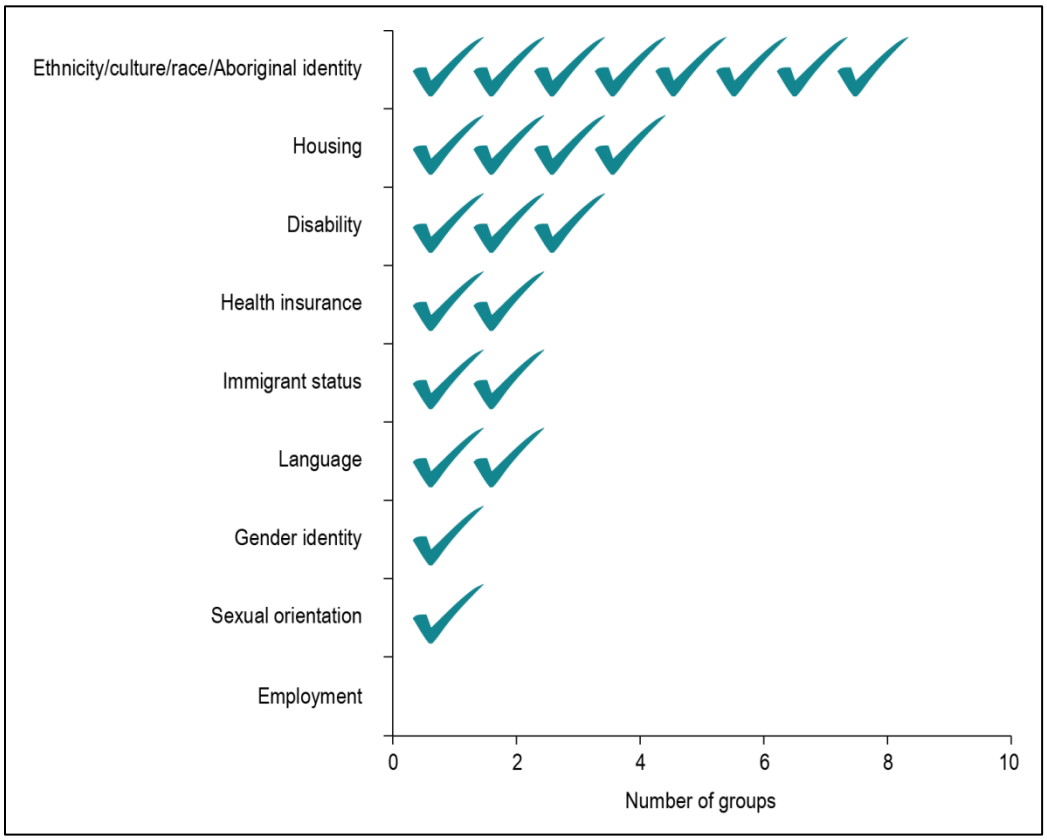
Example of results for clustering exercise from 1 group

Demographic cluster:	Age, sex
Social access cluster:	Gender identity, sexual orientation, immigration status, language, ethnic/cultural group, population group, Aboriginal identity, disability
Material access cluster:	Income, education, housing, health insurance, employment
Geographic location cluster:	Geographic location

As shown in Figure 2, the results of the pick-6 exercise provided additional support for including an ethnic/racial group stratifier in the core set, with many participants suggesting that the collection of Aboriginal identity be included within this stratifier. Employment was not selected by

any group, resulting in its elimination from further consideration or inclusion in the core set. These exercises, however, generated a lot of discussion among dialogue participants, with many expressing difficulty selecting only 6 stratifiers. The plenary discussion suggested that there is strong interest in continuing to discuss other highly rated stratifiers such as housing, disability, language, health insurance, immigrant status, sexual orientation and gender identity. A participant suggested that while a core set of stratifiers could be prioritized to expand on and improve the reporting of equity in health care at a pan-Canadian level, additional work may be needed to explore stratifiers that may be more relevant for reporting within a local context.

Figure 2 Results of pick-6 exercise



Source
Bain K. Facilitator's report: pan-Canadian dialogue to advance the measurement of equity in health care, March 22, 2016. 2016.

Gaining insight into accessing stratifiers

Overview

This section provides an overview of approaches to accessing stratifier data for pan-Canadian reporting of equity in health care, as well as a discussion of opportunities for and challenges in improving the availability of comparable stratifier data across health data holdings.

Availability of equity stratifiers for analysis at the pan-Canadian level

Approaches to accessing stratifiers to measure equity in health care include the following:

Embed stratifiers in data sources: Collecting equity stratifier data as part of administrative or survey data collection. For example, in Australia, hospitals are required to collect information on age, sex, area of usual residence and indigenous status directly from patients.[21]

Conduct individual-level data linkage: Linking person-level health care data with equity stratifier data describing the same person. This can be done by using unique personal identifiers, such as provincial health card numbers, or by using several non-unique personal identifiers through probabilistic linkage methodology. For example, in Sweden, 5 health data registries and more than 100 national quality registries can be linked to data such as income, country of birth, occupation and geographic location using a 10-digit unique identifier assigned to each Swedish resident.[22–25]

Conduct area-level data linkage: Using an individual's postal code to link person-level health care data with aggregate equity stratifier data (e.g., income, education, immigrant status, Aboriginal identity) by geographic areas (e.g., Statistics Canada dissemination areas).

The availability of embedded equity stratifier data in CIHI data holdings varies, but is generally limited to age and sex (see Table 2). Moreover, where additional stratifiers are available,

- They are not always captured consistently across data holdings.
  - For example, the number of response categories for the education stratifier varies from 7 to 9.
- Data quality or coverage is inconsistent.
  - For example, Aboriginal identity is included in the Continuing Care Reporting System, but the percentage missing varies — it is less than 2% in Manitoba and Saskatchewan but greater than 10% in all other provinces (ranging from 14% in Nova Scotia to 100% in Alberta).

Table 2 Equity stratifiers embedded at the individual level in CIHI data holdings

Category	CIHI data source	Age	Sex	Geographic location	Education	Aboriginal identity	Ethnicity/ race	Homeless	Disability	Language	Uninsured population (no health card)	Sexual orientation	Marital status	Employment status	Social (informal) support
Hospital and acute care	Discharge Abstract Database (DAD)	A	A	A	N/A	S/A	N/A	S/A	N/A	N/A	S/A	N/A	N/A	N/A	N/A
	Hospital Morbidity Database (Quebec only) (HMDB)	A	A	A	N/A	S/A	N/A	S/A	N/A	N/A	S/A	N/A	N/A	N/A	N/A
	National Ambulatory Care Reporting System (NACRS)	A	A	A	S/A	S/A	N/A	S/A	N/A	N/A	S/A	N/A	N/A	N/A	N/A
	Canadian Patient Experiences Reporting System (CPERS)	A	A	N/A	A	A	A	N/A	N/A	A	N/A	S/A	N/A	N/A	N/A
Primary and physician care	Patient-Level Physician Billing Repository (PLPB)	A	A	A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Primary Health Care EMR Content Standards	A	A	A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Category	CIHI data source	Age	Sex	Geographic location	Education	Aboriginal identity	Ethnicity/ race	Homeless	Disability	Language	Uninsured population (no health card)	Sexual orientation	Marital status	Employment status	Social (informal) support
Drugs	National Prescription Drug Utilization Information System (NPDUIS) Database	A	A	S/A	N/A	S/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Disease and surgical registries	Canadian Organ Replacement Register (CORR)	A	A	A	N/A	A	A	N/A	N/A	N/A	S/A	N/A	N/A	N/A	N/A
	Ontario Trauma Registry — Comprehensive Data Set (OTR-CDS)	A	A	A	N/A	N/A	N/A	A	N/A	N/A	S/A	N/A	N/A	N/A	N/A
	Canadian Joint Replacement Registry (CJRR)	A	A	A	N/A	N/A	N/A	N/A	N/A	N/A	S/A	N/A	N/A	N/A	N/A
Home and continuing care	Continuing Care Reporting System (CCRS)	A	A	A	A	S/A	N/A	N/A	A	A	S/A	N/A	A	N/A	N/A
	Home Care Reporting System (HCRS)	A	A	A	A	A	N/A	N/A	A	A	S/A	N/A	A	N/A	N/A

Category	CIHI data source	Age	Sex	Geographic location	Education	Aboriginal identity	Ethnicity/ race	Homeless	Disability	Language	Uninsured population (no health card)	Sexual orientation	Marital status	Employment status	Social (informal) support
Mental health and rehab	National Rehabilitation Reporting System (NRS)	A	A	A	N/A	A	N/A	A	A	A	S/A	N/A	N/A	A	A
	Ontario Mental Health Reporting System (OMHRS)	A	A	A	A	A	N/A	A	A	A	S/A	N/A	A	A	A

Notes

EMR: Electronic medical record.

Geographic location refers to residential postal code.

Stratifiers, such as income, that are not captured as embedded individual-level data elements in any CIHI data holding are not included in this summary table.

For the Primary Health Care EMR Content Standard (Version 3.0, released April 2014), "A" denotes the availability of a reference set for the stratifier data element.

Legend

A: Available.

N/A: Not available.

S/A: Somewhat available (i.e., data is incomplete, has high non-response or requires additional validation).

Source

Canadian Institute for Health Information. Data holdings. 2016.

To date, pan-Canadian reporting of equity in health care has been primarily carried out using area-level data linkage (e.g., hospitalization rates reported by neighbourhood-level income in CIHI's Health Inequalities Interactive Tool and Health Indicators e-Publication). Statistics Canada's Postal Code Conversion File (PCCF) is an important source of area-based measures in Canada. The PCCF provides a link between an individual's residential 6-digit postal code and socio-demographic information collected through the Canadian census, aggregated at standard census geographic areas, such as dissemination areas and census tracts.[26] Through this linkage, individual-level health data can be analyzed by area-based stratifiers such as income, material deprivation, immigrant status, Aboriginal identifier and type of settlement where the individual resides (urban or rural). Area-based measures are also used as the basis for deprivation indices in Canada (see Box 2).

Deprivation indices as potential equity stratifiers

The **INSPQ Index of Material and Social Deprivation** from the Institut national de santé publique du Québec consists of 3 material and 3 social indicators derived from Canadian censuses**.** The 3 material indicators are the proportion of people age 15 and older with no high school diploma, the population-to-employment ratio of people age 15 and older and the average income of people age 15 and older. The 3 social indicators are the proportion of individuals age 15 and older living alone, the proportion of individuals age 15 and older whose marital status is separated, divorced or widowed, and the proportion of single-parent families.[27]

The **Canadian Marginalization Index** contains 4 dimensions of marginalization: material deprivation, residential instability, dependency and ethnic concentration.[28]

The **Vancouver Area Neighbourhood Deprivation Index** includes 7 variables: the proportion of residents age 20 and older without high school completion, the proportion of residents age 20 and older with a university degree, the unemployment rate, the proportion of lone-parent families, average income, the proportion of persons owning their home and the workforce participation rate.[29]

Accessing stratifiers: Challenges and opportunities

At the dialogue, panel and plenary discussions expanded on current opportunities and challenges at the national, provincial/territorial and regional levels for accessing equity stratifiers through data collection and/or data linkage.

At the national level, a panellist from Statistics Canada shared that, by building on their program of record linkage, they are making great progress on linking health and social data sources at the individual level to meet future information needs. The recently developed Social Domain Linkage Environment allows for record linkage at Statistics Canada across a range of social and economic data, including survey-based and administrative data. Statistics Canada has also linked the Discharge Abstract Database (DAD) with the census,[iii] the Canadian Community Health Survey (CCHS),[iv] the Immigrant Landing file and tax files. Examples of stratifiers that can be accessed through the CCHS and census are shown in Table 3. Efforts are under way to provide access to these data files through Statistics Canada Research Data Centres where possible. To improve data collection and reporting consistency across Canadian jurisdictions, there is also an opportunity to build on currently available standards and definitions used by Statistics Canada.

iii. DAD–census linkage variables: date of birth, sex, residential postal code.
iv. DAD–CCHS linkage variables: date of birth, sex, residential postal code, health card number, health card issuing province.

Table 3 Equity stratifiers embedded in the 2006 long-form census and CCHS

Stratifier	2006 census (long form)	CCHS
Age	A	A
Sex	A	A
Geographic location	A	A
Income	A	A
Education	A	A
Aboriginal identity	A	A
Ethnic/cultural group	A	A
Population group (visible minorities)	A	A
Homeless	A	N/A
Disability	A	A
Language	A	A
Uninsured population (no health card)	N/A	N/A
Sexual orientation	N/A	A
Marital status	A	A
Employment status	A	A
Gender identity	N/A	N/A
Country of birth	A	A
Immigrant status	A	A
Household composition	A	A
Occupation	A	A
Wealth	A	N/A
Religion	N/A	N/A

Note
CCHS: Canadian Community Health Survey.
Legend
A: Available.
N/A: Not available.
Sources
Statistics Canada. Canadian Community Health Survey (CCHS) — 2016. 2016.
Statistics Canada. Census 2006 — 2B (Long Form). 2010.

At the provincial level, the Manitoba Centre for Health Policy (MCHP) is using data to inform equity in health care through its Pathways to Health Equity for Children program of research[30] and the Population Health Research Data Repository.[31] A panellist from the MCHP noted that the MCHP data repository allows researchers to link individual-level data for Manitoba residents across several domains, including health, social services, education, justice and survey data from Statistics Canada. For income analysis, however, the MCHP continues to rely on area-based data, which has limitations, particularly when analyzing rural populations. Going forward, it was noted that record linkage holds considerable promise for health equity work at the provincial/territorial level, but that there is a need for buy-in from ministries to expand health data linkage to social databases.

At the regional level, a panellist from the Toronto Central Local Health Integration Network (LHIN) spoke about their health equity data collection efforts,[12] as well as the LHIN's data needs for population health planning. The data includes 8 socio-demographic questions and has been mandated for collection at the point of care within all Toronto hospitals since 2013, as well as more recently at community health centres and family health centres. The data is intended to be kept on patient records to inform care delivery. Although there are anecdotal stories of success, there is a need to further evaluate the survey and to share examples that demonstrate the power of this data to convince hospital and health sector planners of its value. During the implementation phase of the survey, support from hospital leadership proved critical for resolving technical challenges to storing the data in electronic medical records (EMRs). As another challenge, the panellist noted the need to engage early with indigenous populations, to avoid delays in and barriers to using the data. From a population health planning perspective, there is potential to use the data if it can be linked with other health databases, such as through the Institute for Clinical Evaluative Sciences (ICES).

Plenary discussions also highlighted the following key takeaways:

- Measurement needs will differ at the national/provincial/territorial/regional reporting levels, as well as at the care provision level, but where there is overlap, there is a need to agree on standards for measurement to enable roll-up and comparison across levels and jurisdictions.
- Statistics Canada linkages can enable improved measurement of equity in health care; however, there is a need to make these linkages available to jurisdictions at levels that are relevant to decision-makers and system planners.
- Ongoing stakeholder engagement is needed to ensure buy-in and to avoid barriers to data use. CIHI and Statistics Canada should work in collaboration to engage with stakeholders to inform priorities and to develop definitions and establish standards.
- Improving access to primary care data, including equity data, would fill a notable gap in Canada, especially given that most health system encounters occur in primary care.

Ideas for moving forward

In the last session of the dialogue, participants spent time in small groups discussing possible next steps for both the short and long terms. These ideas were further discussed in plenary by all participants as potential components of an action plan for CIHI to consider, in partnership with other organizations and jurisdictions.

The ideas generated by the small group sessions are summarized below in 2 categories:

1. Knowledge translation and stakeholder engagement
2. Stratifier development and implementation

Knowledge translation and stakeholder engagement

Ideas for the short term:

- Release a dialogue proceedings report after sharing it with participants for review and validation.
- Continue stakeholder engagement and expand to Aboriginal communities, patient groups, other pan-Canadian organizations (e.g., Canadian Medical Association, Canadian Nurses Association, College of Family Physicians of Canada, Canadian Institutes of Health Research, Canada Health Infoway), the research community, senior leaders (e.g., deputy ministers, assistant deputy ministers) and health regions.
- Communicate a rationale for measuring health equity that takes into account different needs for equity information at national, provincial/territorial, regional and care provision levels.
- Work with Statistics Canada and other partners to develop or adapt a conceptual framework of health equity that can be applied to CIHI's Health System Performance Measurement Framework, considering how equity can be understood and measured across the different domains of performance.
- Solidify the governance for this project; as one participant said, "At the moment, everyone owns equity and no one owns equity." Determine who will take the lead and who will collaborate.

Ideas for the long term:

- Work with Statistics Canada, the provinces and territories, and other custodians to develop data sharing agreements to enable equity measurement, while considering privacy concerns and legislation.

- Undertake knowledge translation activities to provide guidance on how to use equity data at various levels (e.g., how equity data can inform clinical interventions and system-level improvements in regions and provinces/territories). These activities could include sharing information on case studies from early adopters, developing a community of practice that leverages existing networks of professionals and researchers, designing user guides for training purposes and maintaining a web presence.
- Align a communication strategy with the current political priorities and interests of senior decision-makers (e.g., by drawing connections to health system spending).

Stratifier development and implementation

Ideas for the short term:

- Review existing standard definitions of the stratifiers used by CIHI, Statistics Canada and other organizations.
- Identify existing data sources and gaps in data to measure stratifiers, as well as barriers to and challenges in collecting or linking to this data.
- Form working groups, as needed, to further define stratifiers based on stakeholder needs and research findings.
- Clarify the purpose of each stratifier at the policy, practice and system management levels.

Ideas for the long term:

- Develop national standards for equity stratifiers, including how to define/operationalize and access them, in collaboration with Statistics Canada and with input from stakeholders (providers, policy-makers, researchers, patients, vulnerable groups, community groups).
- Identify and implement approaches for accessing stratifiers, such as by updating surveys, by making use of data linkages across social, justice, housing and tax databases, and by incorporating poverty tools and stratifier information into EMRs in partnership with Canada Health Infoway. For any new data collection, engage with people who are responsible for collecting data.
- Pick 1 or 2 stratifiers that are not currently used routinely but that are potentially available to demonstrate what actionable insights could be gained by using them to measure inequity in health care.

Appendix A: Dialogue agenda

CIHI Pan-Canadian Dialogue to Advance the Measurement of Equity in Health Care in Canada

Meeting objectives:

- Identify and agree on core stratifiers for measuring equity in health care
- Discuss how to access these stratifiers, including challenges and opportunities
- Inform the development of an action plan for advancing equity measurement in health care in Canada

8:30 a.m.	*Continental breakfast (Alpine II Room)*

9:00 a.m.

Welcome and Introductory Remarks

- *Jean Harvey, Canadian Institute for Health Information*
- *Dr. Jeffrey Turnbull, Health Quality Ontario and The Ottawa Hospital*

9:15 a.m.

Roundtable and Review of Agenda

Facilitator: Kimberly Bain

9:30 a.m.

Prioritizing Stratifiers for Measuring Equity in Health Care Access, Quality and Outcomes: A Focus on Pan-Canadian Relevance

Format: Working group exercise facilitated by Kimberly Bain

10:30 a.m.	*Break*

10:45 a.m.

Consensus Building: The Core Stratifiers

Consider balance within the set of core stratifiers with respect to

- *Relevance across health care dimensions (access, quality and outcomes); and*
- *Relevance across life stages (seniors/aging and children/youth) and health care sectors (mental health and addictions, primary care, public heath, acute care and long-term care).*

Format: Working group exercise facilitated by Kimberly Bain

12:00 noon	*Lunch (Alpine II Room)*

12:45 p.m.

Discuss Approaches to Accessing Equity Stratifiers

Panellists with regional, provincial and national perspectives will reflect on new developments, innovations and challenges in accessing stratifiers to measure equity in health care.

Panellists

- *Sophia Ikura, Toronto Central Local Health Integration Network*
- *Nathan Nickel, Manitoba Centre for Health Policy*
- *Claudia Sanmartin, Statistics Canada*
- *Sara Allin, Canadian Institute for Health Information*

Format: Panellist perspectives followed by group discussion

Moderator: Kimberly Bain

1:45 p.m.

The Core Stratifiers: Taking a Closer Look

Participants will discuss approaches to accessing the core stratifiers and the challenges and opportunities around measurement and standardization.

Format: Working group exercise facilitated by Kimberly Bain

2:15 p.m.	*Break*

2:30 p.m.

Developing an Action Plan for Pan-Canadian Measurement of Equity in Health Care: Opportunities and Barriers

Format: Working groups and plenary discussion facilitated by Kimberly Bain

3:30 p.m.

Building on the Momentum and Next Steps

Jean Harvey, Canadian Institute for Health Information, and Kimberly Bain

Note: Please take a few minutes to complete your feedback form.

4:00 p.m.	*Adjournment*

Appendix B: Participant list

Attended dialogue

Sara Allin
Senior Researcher, Canadian Population Health Initiative
Canadian Institute for Health Information

Nam Bains
Manager, Health Analytics Branch
Ontario Ministry of Health and Long-Term Care

Dawn Bruyere
Nurse Consultant, Primary Health Care Policy and Practice
Health Canada

Lisa Cardinal
Director, Corporate Reporting, Planning and Evaluation
Department of Health and Social Services, Northwest Territories

Jill Casey
Acting Executive Director, Business Intelligence and Analytics
Health Information Office
Nova Scotia Department of Health and Wellness

Joyce Douglas
Strategic Advisor
Canadian Medical Association

Sarah Fleming
Senior Epidemiologist, Population Health Assessment and Surveillance
Nova Scotia Department of Health and Wellness

Leila Gillis
Director, Primary Health Care Systems Division
Health Canada

Rick Glazier
Scientist
Institute for Clinical Evaluative Sciences

Aisling Gogan
Director, Poverty Reduction Strategy
Newfoundland and Labrador Department of Seniors, Wellness and Social Development

Lawson Greenberg
Unit Head, Health Indicators
Statistics Canada

Yana Gurevich
Manager, Health Indicators and Client Support
Canadian Institute for Health Information

Jeannie Haggerty
Associate Professor
McGill University

Jean Harvey
Director, Canadian Population Health Initiative
Canadian Institute for Health Information

Michael Hunt
Director, Health Spending and Strategic Initiatives
Canadian Institute for Health Information

Geoffrey Hynes
Manager, Canadian Population Health Initiative
Canadian Institute for Health Information

Sophia Ikura
Senior Director, Strategy, Community Engagement and Corporate Affairs
Toronto Central Local Health Integration Network

Beth Jackson
Manager, Equity Analysis and Policy Research
Social Determinants and Science Integration Directorate
Public Health Agency of Canada

Gina Lockwood
Manager, Analytics and Surveillance, and Senior Biostatistician
Canadian Partnership Against Cancer

Michelina Mancuso
Executive Director, Performance Measurement
New Brunswick Health Council

Valerie Mann
Chief Population Health Epidemiologist
Saskatchewan Ministry of Health

Cory Neudorf
Chief Medical Health Officer
Saskatoon Health Region

Nathan Nickel
Research Scientist, Manitoba Centre for Health Policy, and Assistant Professor, Community Health Sciences, University of Manitoba

Anne Pastuszak
Director, Planning and Research
Canada Health Infoway

Mike Pennock
Population Health Epidemiologist
British Columbia Ministry of Health

Erin Pichora
Team Lead, Canadian Population Health Initiative
Canadian Institute for Health Information

Andrew Pinto
Scientist and Staff Physician
St. Michael's Hospital

Gerry Predy
Senior Medical Officer of Health
Alberta Health Services

Amélie Quesnel-Vallée
Chaire de recherche du Canada sur les politiques et les inégalités de santé
McGill University

Heather Richards
Director, Operational Services and Analytics
British Columbia Ministry of Health

Corinne Rowswell
Senior Public Health Planning and Policy Officer
Prince Edward Island Department of Health and Wellness

Claudia Sanmartin
Chief and Senior Researcher, Health Services Research
Statistics Canada

Larry Svenson
Director, Epidemiology and Surveillance
Alberta Health

Jeff Turnbull
Chief, Clinical Quality, Health Quality Ontario, and Chief of Staff, The Ottawa Hospital

Alain Vanasse
Full Professor, Department of Medicine
University of Sherbrooke

Elise Weiss
Deputy Chief Provincial Public Health Officer
Manitoba Health

Jessica Wu
Manager, Population Health Information
Nunavut Department of Health and Social Services

Did not attend, but completed pre-survey

Yukiko Asada
Associate Professor
Dalhousie University

Kim McGrail
Associate Professor
University of British Columbia

Trevor van Ingen
Epidemiologist
Public Health Ontario

Facilitator

Kimberly Bain
Bain Group Consulting

Appendix C: List of key terms

General terms	Working definition
Equity stratifier	A variable that captures a demographic, social, economic, geographic or other characteristic and identifies population sub-groups that can be used to measure inequalities in health care access, quality and outcomes
3 approaches to accessing equity stratifiers	
Embedded equity stratifier	A stratifier that is included as a data element in health care data sources, such as electronic health records, patient surveys or population surveys
Individual-level data linkage	A process that links patient health care data to data sources that contain individual equity stratifier data, using a unique patient identifier
Area-based data linkage	A process that assigns predominant stratifier characteristics within a geographical region to an individual based on where he or she lives
Health care performance domains	
Access	Getting needed care at the right time and without barriers (e.g., financial, cultural, geographical) *Example indicators:* Emergency Department Wait Time; Have a Regular Doctor
Quality	Health care that is safe, appropriate, effective, efficient and patient-centred *Example indicators:* Readmission Rate; In-Hospital Sepsis Rate
Outcomes	Changes in health that result from health care investments or interventions *Example indicator:* 30-Day Acute Myocardial Infarction In-Hospital Mortality Rate
Equity stratifier criteria	
Strength of evidence	There is strong evidence (qualitative or quantitative) that this stratifier is associated with access, quality and/or outcomes of health care
Actionability	Stratifier identifies an inequality that can be addressed through policy or program intervention at the clinical or health care system level
Availability and use	Stratifier definition exists that is standard, valid and reliable and has been used to measure inequality in health care in your jurisdiction
Acceptability	Stratifier information would be willingly provided by Canadians without concerns related to privacy and/or data ownership
Relevance	Stratifier reflects a priority population for improving access, quality and outcomes of health care within your jurisdiction
Feasibility*	Stratifier is or can be made readily available from pan-Canadian data sources of indicators of access, quality or outcomes of health care

General terms	Working definition
Pan-Canadian comparability*	Stratifier can be defined in a standard way that is applicable for all provinces/territories and does not require adaption within jurisdictions
Balance*	A core set of stratifiers are applicable across health care dimensions (access, quality, outcomes), life stages (seniors/aging, children/youth) and health care sectors (mental health and addictions, primary care, public heath, acute care, long-term care)
Equity stratifiers	
Age	—
Sex	An individual's biological sex: male, female or other
Gender identity	An individual's sense of self as, for example, male, female or transgender[32]
Sexual orientation	An individual's romantic or physical attraction to a specific sex or gender
Aboriginal identity	The self-identification of an individual as First Nations, Inuit or Métis[33]
Ethnic/cultural group	Ethnic/cultural groups based on an individual's ancestry, with categories such as Canadian, German, Ukrainian, South Asian and Portuguese[34]
Population group	Population groups (also referred to as racial/cultural groups[35]) are used to identify visible minorities as defined in the *Employment Equity Act*.[36] This stratifier commonly includes categories such as white, Chinese, Arab, Latin American and black.[37]
Immigration status	Length of time an individual has lived in Canada, including whether he or she is a refugee, immigrant or Canadian-born
Language	The language(s) that an individual feels most comfortable speaking or reading
Country of birth	—
Geographic location	An individual's home address, or a broader geographical region (e.g., neighbourhood, city, province, rural/urban)
Household composition	An individual's living arrangement, including categories such as living alone, couple or single parent
Marital status	Whether an individual reports being single, married, separated, divorced, widowed or living common-law[38]

General terms	Working definition
Housing	The housing situation of an individual, which could include housing tenure (own home, rent from a private or social landlord, homeless) or inadequate housing (e.g., overcrowded, damp)
Education	The number of years of formal education (elementary, secondary, university, college or other post-secondary institution) completed or the highest level of education obtained by an individual[39, 40]
Employment status	Refers to whether a person was employed (full time or part time), unemployed or not in the labour force[41, 42]
Occupation	An individual's occupational category (e.g., transit vehicle drivers, retail sales persons, pharmacists)[43] or industrial category (e.g., construction, educational services, arts/entertainment)[44]
Income	An individual's personal or household income, which may be used to derive measures of poverty, neighbourhood-level income or financial strain
Wealth	An individual's household characteristics/amenities and possessions
Health insurance	The extent of an individual's insurance coverage for prescription drugs, dental care or other health services
Disability	Refers to whether an individual has a long-term or recurring physical, mental, sensory, psychiatric or learning impairment and is considered to be at a disadvantage.[36] Disability may be captured by functional status, activities of daily living score or specific disability category (e.g., physical disability, learning disability).

Note

* This criterion was not included in the pre-dialogue rating exercise, but it was considered and applied to a group of stratifiers at the dialogue.

Appendix D: Equity stratifiers identified through literature review

Organization/jurisdiction	Stratifiers
Canada	
Public Health Agency of Canada,[6] 2016	Age, sex, education, geography, income, employment status, occupation, rural/urban geography, immigration status, Aboriginal identity, cultural/racial background, sexual orientation, impact of health problems, participation and activity limitations, functional health, deprivation index
Canadian Partnership Against Cancer,[45] 2014	Household income, immigration status, rurality/remoteness
British Columbia Provincial Health Services Authority,[16] 2014	Age, sex, sexual orientation, ethnicity, Aboriginal status, immigrant status, education, employment, household income, homelessness, persons living with chronic illness, children from families with parents with co-occurring mental illness and substance abuse disorders, neighbourhood deprivation indices, persons below the low-income cut-off, rural/urban residence, refugees
Toronto Central Local Health Integration Network (Ontario),[12, 46] 2013	Family income, number of people supported by income, race/ethnicity, preferred language spoken, disability, immigration status (i.e., Canada born, length of time in Canada), gender, sexual orientation, religion,* type of housing,* preferred language for reading*
Project for an Ontario Women's Health Evidence-Based Report (St. Michael's Hospital and Institute for Clinical Evaluative Sciences, Toronto, Ontario),[47] 2012	Age, sex, household income, highest level of education, ethnicity, time since immigration, knowledge of official languages, LHIN, rural/urban residency
Institut national de santé publique du Québec,[27] 2009	Deprivation Index: Education (i.e., high school completion), employment (i.e., individuals employed), average personal income, marital status, household composition (i.e., individuals living alone, single-parent families)
Pan-Canadian Public Health Network,[48] 2010	Age, sex, income, employment, occupation, education, immigration status, Aboriginal status, ethnicity, geographic level, disability, sexual orientation
Centre for Research on Inner City Health (St. Michael's Hospital, Toronto, Ontario),[17] 2009	Age, gender, postal code, language, race/ethnicity, socio-economic status (e.g., household income, level of education, immigration status, number of dependents)

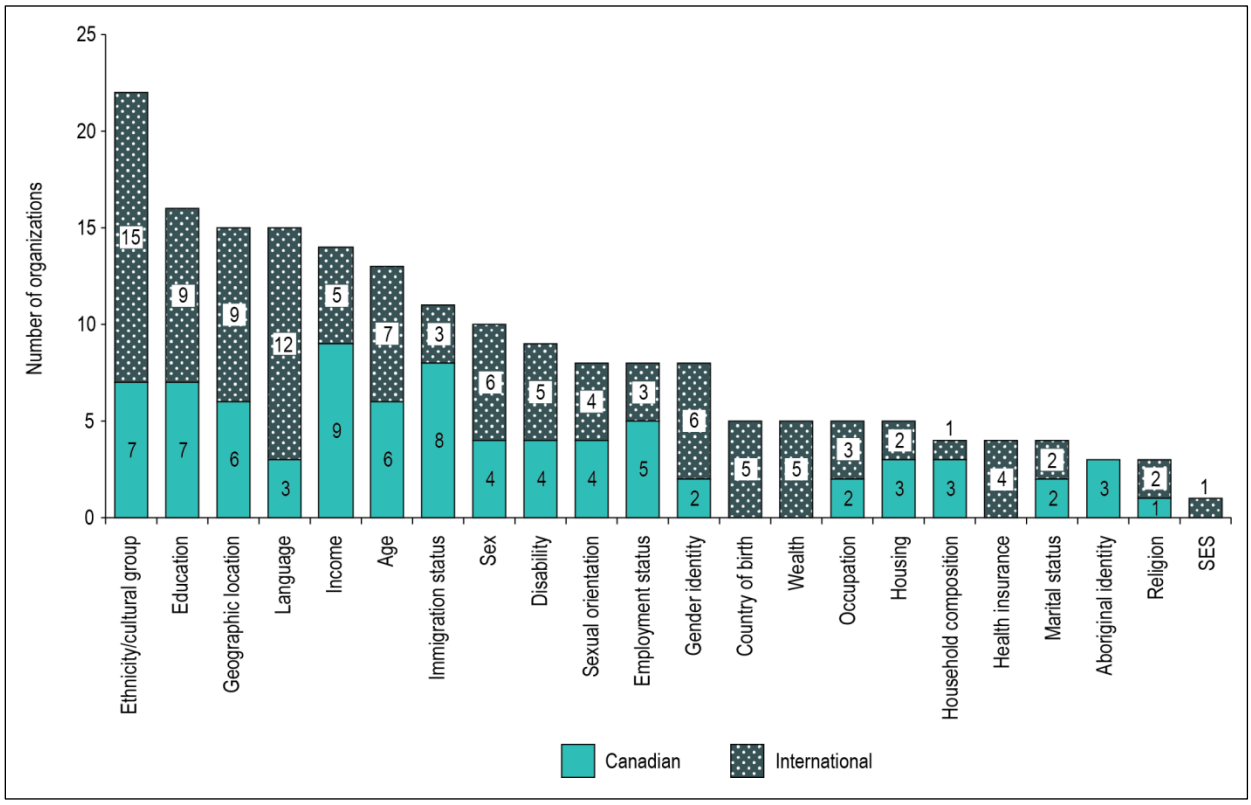
Organization/jurisdiction	Stratifiers
Centre for Research on Inner City Health (St. Michael's Hospital, Toronto, Ontario),[28] 2006	Canadian Marginalization Index: age (i.e., dependency ratio, proportion of youth and seniors), household composition (i.e., proportion living alone, lone-parent families), housing (i.e., proportion of dwellings owned, multi-unit housing, homes needing repair, residential mobility, crowding — persons per dwelling), marital status, education (i.e., proportion age 25+ without certificate, diploma or degree), income (i.e., proportion of government transfer payment, below low-income cut-off), employment (i.e., proportion unemployed, labour force participation), ethnicity/race (i.e., proportion of visible minorities), immigration status (i.e., proportion of recent [5 years] immigrants)
International organizations	
World Health Organization (WHO) affiliated research group,[49] 2014	Sex, economic status (wealth), urban/rural residence, education*
WHO,[14] 2013	Place of residence, race/ethnicity, occupation, gender, religion, education, socio-economic status, language, immigration status
WHO Commission on Information and Accountability for Women's and Children's Health,[50] 2011	Age, wealth, gender, urban/rural residence, geographic location, ethnicity, education, marital status, number of children, HIV status
WHO Commission for the Social Determinants of Health,[51] 2008	Sex, education, income/wealth, occupational class, rural/urban status or province, race/ethnicity/indigeneity*
The Global Equity Gauge Alliance,[52] 2003	Age, gender, socio-economic status (income, expenditures, accumulated economic assets, occupation, education level), race/ethnicity, religion, language, national origin, sexual orientation, disability, geography, any other characteristic that defines marginalized or disempowered populations
United States	
Department of Health and Human Services,[53] 2010	Race/ethnicity, sex, primary language, disability status
Minnesota legislature,[9, 54] 2015	Age, sex, zip code, county, primary payer, race/ethnicity, preferred language, country of origin, sexual orientation,* disability*
Agency for Healthcare Research and Quality,[55] 2014	Age, gender, race/ethnicity, family income, highest level of education, employment, health insurance, language spoken at home, activity limitation, perceived health status, number of chronic conditions, U.S. born, rural/ urban residence

Organization/jurisdiction	Stratifiers
Institute of Medicine,[18] 2014	Race/ethnicity, residential address, educational attainment, financial resource strain, neighbourhood median income, country of origin,* employment,* language,* occupation,* type of insurance,* marital status/family structure,* housing (i.e., stability, quality and safety),* sexual orientation,* gender identity*
Institute of Medicine,[56] 2003	Race/ethnicity, socio-economic status (education), primary language
National Standards for Culturally and Linguistically Appropriate Services in Health and Health Care,[57] 2010	Race/ethnicity, language
Essential Hospitals Institute,[58] 2008	Race/ethnicity, primary language
Massachusetts General Hospital,[59] 2008	Age, gender, race/ethnicity, language (i.e., ability to speak, read and understand English, need for interpreter, preferred language), highest level of education and where it was obtained, health insurance,* family/personal income,* and country of origin, length of time in U.S. and citizenship*
Massachusetts Division of Healthcare Finance and Policy,[60] 2007	Race/ethnicity
Boston Public Health Commission,[11] 2006	Age, sex, race/ethnicity, language spoken at home, highest level of education, gender identity, sexual orientation, address
Australia	
Australian Commonwealth, state and territorial governments,[21] 1993	Age, sex, address, country of birth, indigenous status
United Kingdom	
London Health Observatory,[61] 2003	Ethnicity, religion, languages spoken and read, need for a sign language interpreter or material in Braille, employment status, housing tenure, housing situation, country of birth*
U.K. government,[10, 62] 1995	Age, sex, ethnicity

Note

* Stratifier initially considered by organization/initiative but ultimately not included in their recommendations.

Figure D1 Frequency with which each equity stratifier appeared in any of the literature sources consulted



Notes

SES: Socio-economic status.

The above figure captures “ethnic/cultural group” and “population group” within the “race/ethnicity” category. These 2 specific stratifiers were used in the rating exercise to be consistent with the census and Canadian Community Health Survey.

Appendix E: Pre-dialogue survey results

Figure E1 Results of equity stratifier rating exercise

Source

Canadian Institute for Health Information. Pre-dialogue survey. 2016.

Appendix F: Text alternatives for images

Text alternative for image in Box 1

The image by the Saskatoon Health Region shows the difference between equality and equity using people of different heights stepping on wooden boxes to try to pick an apple from a tree.

Equality is represented as each person, whether tall or short, having only 1 box to step on; this results in only the tallest person being able to reach the apple. Equity is represented as providing each person with as many boxes as needed in order for everyone to reach the apple.

Therefore, equality is about providing the same support to everyone, regardless of how much support they truly need, while equity means providing a level of support appropriate to a person's needs.

Text alternative for Figure 2 Results of pick-6 exercise

8 groups selected the stratifier ethnicity/culture/race/Aboriginal identity. 5 groups selected income and geographic location. 4 groups selected housing. 3 groups selected disability and education. 2 groups selected health insurance, immigrant status and language. 1 group selected gender identity and sexual orientation. No groups selected employment.

Data table for Figure D1 Frequency with which each equity stratifier appeared in any of the literature sources consulted

Number of organizations	Ethnicity/cultural group	Education	Geographic location	Language	Income	Age	Immigration status	Sex	Disability	Sexual orientation	Employment status	Gender identity	Country of birth	Wealth	Occupation	Housing	Household composition	Health insurance	Marital status	Aboriginal identity	Religion	SES
Canadian	7	7	6	3	9	6	8	4	4	4	5	2	0	0	2	3	3	0	2	3	1	0
International	15	9	9	12	5	7	3	6	5	4	3	6	5	5	3	2	1	4	2	0	2	1

Notes

SES: Socio-economic status.

The above table captures “ethnic/cultural group” and “population group” within the “race/ethnicity” category. These 2 specific stratifiers were used in the rating exercise to be consistent with the census and Canadian Community Health Survey.

Data table for Figure E1 Results of equity stratifier rating exercise

Equity stratifier	Strength of evidence	Actionability	Availability and use	Acceptability	Relevance	Overall median	Percentage answered "don't know"
	Median (count answered "don't know")						
Age	5 (2)	4 (2)	5 (3)	5 (2)	5 (2)	4.7	9.6
Sex	5 (2)	4 (3)	5 (3)	5 (2)	5 (2)	4.7	9.6
Gender identity	4 (8)	3 (6)	2 (5)	3 (7)	4 (7)	3.2	26.4
Sexual orientation	4 (7)	4 (6)	2 (6)	3 (7)	4 (6)	3.3	25.6
Country of birth	3.5 (7)	3 (5)	2.5 (5)	4 (5)	4 (6)	3.5	22.4
Immigration status	4 (4)	4 (2)	3 (3)	4 (3)	4 (3)	3.8	12
Language	4 (6)	4 (3)	3 (5)	4 (4)	4 (4)	3.6	17.6
Aboriginal identity	5 (2)	4.5 (3)	2 (4)	3 (2)	5 (2)	4	10.4
Ethnic/ cultural group	4 (7)	3 (4)	2 (4)	4 (4)	4 (5)	3.3	19.2
Population group (visible minorities)	4 (4)	3 (3)	2 (4)	3 (5)	4 (5)	3.2	16.8
Housing	4 (4)	4 (4)	2 (5)	4 (4)	4 (4)	3.8	16.8
Household composition	4 (4)	3 (3)	3 (6)	3 (4)	3 (4)	3.2	16.8
Marital status	3 (4)	2 (3)	3 (6)	3 (4)	2.5 (5)	3	17.6
Education	5 (2)	4 (2)	3 (2)	4 (2)	4.5 (3)	4	8.8
Employment	4 (5)	3.5 (5)	3 (5)	4 (3)	4 (5)	3.6	18.4
Occupation	4 (5)	3 (6)	2 (4)	3 (5)	3 (7)	3	21.6
Income	5 (2)	4 (2)	3 (2)	3 (2)	5 (2)	4	8
Wealth	4 (6)	3 (6)	2 (6)	2 (5)	4 (7)	2.9	24

Equity stratifier	Strength of evidence	Actionability	Availability and use	Acceptability	Relevance	Overall median	Percentage answered "don't know"
	Median (count answered "don't know")						
Health insurance	4 (4)	4 (4)	3 (6)	4 (7)	4 (6)	4	21.6
Disability	4 (4)	4 (3)	2 (4)	3 (4)	4 (4)	3.6	15.2
Religion	3 (11)	2 (9)	2 (8)	2 (9)	2 (11)	2	38.4
Geographic location	4 (2)	4.5 (3)	5 (2)	4 (2)	5 (1)	4.7	8

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