Health Indicators at the Local Level in Canada

IOM Committee on Public Health Strategies to Improve Health
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Disclosures

• Primary funder: Saskatoon Health Region

• Other major funders and partners:
  – Canadian Institute for Health Information / CPHI
  – Statistics Canada
  – Canadian Institutes for Health Research
  – Institut national de santé publique du Québec
  – Urban Public Health Network

• Most of this work has been presented as expert witness material to several Canadian Senate subcommittee deliberations
Public Health Indicator development in Canada

• National
  – Surveillance and Information Expert Group, Public Health Network, Indicators Task Group
    • Current Focus on Performance Indicators in Public Health
    • Health Inequalities Indicators
  – Population Health Indicators – CIHI/Statistics Canada

• Provincial
  – Performance Indicators and Accountability Agreements with Regional Health Authorities

• Local (in RHAs and via the Urban Public Health Network)
  – Health Status Reports
  – Performance Indicators
  – Capacity Indicators
  – Tools for Indicator access, analysis, display
The SHR Public Health Observatory: infrastructure at the local level

- Local level staff support for surveillance, analysis, monitoring, knowledge translation, and research
- Linked together with similar units in other cities for joint projects and reports
Urban Public Health Network

- A network of the 18 largest city-based Public Health Units across Canada
- For information sharing, collaboration, innovation, joint program development, advocacy and research
- Develop shared priorities for action in these areas of mutual interest, and share best practise models
- Indicator development is one of the network priorities, in the areas of: performance and management; capacity; health status; health inequality; tools for analysis and display
Local Public Health Performance indicators

- “Report cards/dashboards”: Nested sets of indicators from the individual program level to the department, and unit levels within Public Health which feed into dashboards for the Health Region senior executive and Board.

- Accountability agreements: individual managers at all levels set targets for the year which roll up to the senior executive level. Also, the Provincial government sets high level targets for the local level to meet.

- Local level indicators for QA:
  - Routine process improvement - 80% of programs/year
  - Evidence-based practise review – 20% of programs/yr
  - External program evaluation – 1 program/year
SHR Public Health Performance Indicator areas

Framework (Draft)

• Clients, Community and populations
  – Effectiveness
  – Acceptability
  – Equity
  – Wellness
  – Quality of Life
  – Access

• Service Delivery and Coordination
  – Effectiveness
  – Acceptability
  – Efficiency
  – Appropriateness
  – Access

• Staff
  – Safety
  – Quality of Work Life
  – Efficiency
SHR Public Health Performance Indicators and Targets

Example

- Clients, Community and populations
  - Effectiveness – e.g. Reduce the incidence of Chlamydia in SHR by 10% in 3 years
  - Acceptability – e.g. percent satisfied clients in selected program areas (client survey)
  - Equity – e.g. improve immunization coverage rates in hard to reach populations (at least 85% coverage for <2 yrs old in all neighbourhoods)
  - Etc.
Public Health Capacity Report Card

- Draft indicators developed by small working group of MOH’s and refined by epidemiologists based on CDC 'Data Set Directory of SDOH at the local level' where they list a Public Health domain with 3 components:
  - Programs, Regulations/Enforcement and Funding.

  - **Programs** e.g.
    - Immunization coverage rate in 2 year olds (up to date)
    - Speech language pathology waitlist
    - Emergency preparedness progress
    - Etc.

  - **Regulations/Enforcement** e.g.
    - Number of restaurant inspections per year per risk category
    - Number of food safety/event inspections per population
    - % of population with adequate drinking water

  - **Funding** e.g.
    - total SHR budget to prevention activities
    - Prevention FTE's per 10,000 population
Public Health Capacity Report Card

- Subproject on Core Public Health Services and funding
  - Developing a list of core public health programs and services along with staff mix and FTEs, and funding for each
  - Plan to use in the report card as a way to express relative investment in public health in various jurisdictions
  - Awaiting translation of document from Montreal with similar content for adaptation in UPHN
Core Health Status Indicators

• Calgary and Saskatoon have been surveying other UPHN members re: health status reports and indicators in use currently across the country

• Plan to agree on a core set of indicators available nationally or to be considered provincially/locally where not available nationally

• Plan to ask national stakeholders to make this core set of data available at standard stratifications (age groups, sex, geographies, etc) to local RHA’s for local planning, and to allow comparisons between jurisdictions as part of a data liberation request.

• Hope to develop a portal to allow for access to this data in a standardized format for all RHAs to use, including metadata and standard text that could be adapted for local use in making health status reports across the country
SHR Health Status Report indicators

• 120 indicators analyzed by age, sex, geography, ethnicity, SES, etc as appropriate

• Table of Contents
  – Chapter 1: Population of SHR
  – Chapter 2: Reproductive and Infant Health
  – Chapter 3: Major Causes of Morbidity & Mortality
  – Chapter 4: Communicable Disease
  – Chapter 5: Social Environment
  – Chapter 6: Physical Environment
  – Chapter 7: Health – Related Behaviours
  – Chapter 8: Recommendations
UPHN/CPHI work

- Health Inequalities report
- Small area geography research
- Measures of poverty: Deprivation Index
- Standardized indicators
SHR Health Disparities research

• Initial research published in 2006 based on comparison of health indicators of poorest decile to wealthiest decile and average

• Indicators spanned: cause specific rates of hospitalization, major reasons for visits to primary care, prescription drug use, reportable disease incidence, health status and behaviours, access to selected preventive programming

• Results: disparities larger and more pervasive than anyone thought, ranging from 30% to 3000%

• Begged the questions: how do we compare to other regions? What can be done about it? Shouldn’t we account for more than just poverty?

• Model involved much public and media consultation prior to and after release of data. Resulting in development of a community action plan involving dozens of program and policy changes at local, provincial and federal levels.
Reducing Gaps in Health: A Focus on Socio-Economic Status in Urban Canada

Released:
November 24, 2008
Project Background

- *Reducing Gaps in Health: A Focus on Socio-Economic Status in Urban Canada* was born out of a partnership between CPHI and the Urban Public Health Network (UPHN).

- The nature of the partnership is to further explore the links between socio-economic status (SES) and health in Canada’s urban areas.
Objective of CPHI’s “Reducing Gaps in Health” Report

To provide a broad overview of the links between SES and health in 15 Canadian census metropolitan areas (CMAs) by examining how health, as measured by a variety of indicators, varies in small geographical areas in those CMAs with different socio-economic characteristics.
CMAs Chosen for Analyses

15 CMAs that provide a broad geographic representation of Canada’s urban areas were chosen:

- Victoria
- Vancouver
- Calgary
- Edmonton
- Saskatoon
- Regina
- Winnipeg
- London
- Hamilton
- Toronto
- Ottawa–Gatineau
- Montréal
- Québec
- Halifax
- St. John’s
Geographical Location of the 15 CMAs
What Is the Deprivation Index?

• A tool for measuring (quantifying) two forms of deprivation:
  1. Material deprivation—such as income, education and employment ratios
  2. Social deprivation—such as family structure, marital status and incidence of persons living alone.

• Allows for comparisons of small, homogeneous groups of individuals.

• Allows a variety of socio-economic indicators to be analyzed based on their known relationship with health (for example, income, education and marital status).
Moving From Social and Material Quintiles to Low, Average or High SES

- Quintile 1 = the 20% least deprived
- Quintile 5 = the 20% most deprived
- DAs with material and social combinations found in the top-left (shaded) portion of the matrix below were categorized by CPHI as “high SES.” DAs found with material and social combinations found in the bottom-right (shaded) portion of the matrix were categorized by CPHI as “low SES.” All other DAs were categorized as “average SES.”
Data Analysis Plan

- 21 indicators are presented for each CMA by SES group
- Analysis based on Statistics Canada DAs allowed the following comparisons:
  - between SES groups within each CMA for each indicator
  - between CMAs and the overall pan-Canadian rate for each indicator within each SES group

Québec CMA, Quebec
Deprivation Index Applied to Saskatoon CMA
CIHI Indicators

Age-standardized hospitalization rates (2003–2004 to 2005–2006) for longer-term chronic health problems and acute conditions were analyzed:

- Ambulatory care sensitive conditions (ACSC)
- Diabetes
- Chronic obstructive pulmonary disease (COPD)
- Asthma in children
- Injuries
- Land transport accidents
- Unintentional falls
- Injuries in children
- Mental health
- Anxiety disorders
- Affective disorders
- Substance-related disorders
- Low birth weight*

* Rate per 100 live births and not age standardized.
Statistics Canada Indicators

A subset of the Canadian Community Health Survey (CCHS) data from cycles 2.1 (2003) and 3.1 (2005) were combined to tabulate the percentage of people reporting excellent or very good health, as well as reporting certain health-related behaviours:

- “Excellent” or “very good” self-rated health (ages 12 and over; age standardized)
- Physically inactive (ages 12 and over; age standardized)
- Smoking (ages 12 and over; age standardized)
- Alcohol binging (ages 12 and over; age standardized)
- Overweight or obese (ages 18 and over; age standardized)
- Risk factor index, that is, 3 or 4 of the following (physically inactive, smoking, alcohol binging, overweight or obese) (ages 18 and over; age standardized)
- Influenza immunization (ages 65 and over)
- Activity limitation (ages 65 and over)
Hospitalization Rates

Pan-Canadian Age-Standardized Hospitalization Rates by SES Group*

* For each indicator, all rates are significantly different between low-, average- and high-SES groups at the 95% confidence level.

Source
CPhI analysis of 2003–2004 to 2005–2006 Discharge Abstract Database and National Trauma Registry data, Canadian Institute for Health Information.
Self-Reported Health

Pan-Canadian Age-Standardized Self-Reported Health Percentages by SES Group*

Note
* For each indicator, all rates are significantly different between low-, average- and high-SES groups at the 95% confidence level except for overweight/obese, where there is no significant difference between average- and high-SES groups.

Source
CPhI analysis of Canadian Community Health Survey, cycles 2.1 (2003) and 3.1 (2005), Statistics Canada.
Ratio of Age Standardized Hospitalization Rates Between Low and High SES Groups, Pan-Canadian, Regina, Saskatoon and Winnipeg

Source: RQHR presentation on CPHI study
Ratio of Age Standardized Self-Reported Health Percentages Between Low and High SES Groups, Pan-Canadian, Regina, Saskatoon and Winnipeg

Source: RQHR presentation on CPHI study
Conclusion

• New CPHI analyses of 15 Canadian CMAs emphasize the complex relationship between SES and health in urban Canada.

• The report demonstrates that significant differences exist between each SES group in 20 of the 21 health indicators examined.

• The report provides evidence to support the value of examining gaps in health across an SES gradient rather than focusing on the two dichotomous extremes (that is, high versus low SES).
Display and Analysis Tools
e.g. Community View website
The Data Access Paradox!

Research relevance to local / Individual Health Issues

Ease and Timeliness of Data Access

Easy/ Responsive

Difficult/ Not Timely

Ease and Timeliness of Data Access
Viewing Data Access Policies through the Intended Use Lens

Policy’s Impact on Use of Data and Population

Policy Adjustment Feedback Loop
Display and Analysis Tools: e.g. SHR’s “Community View” website

- Intersectoral website hosted by SHR in collaboration with City of Saskatoon to give more locally relevant small area aggregate data
- Hosts data from many partners including health, education, social services, city departments, census, etc
- Allows data manipulation and layering into charts, tables, maps, with flexible groupings and boundaries
- Data, indicators, reports, research findings, etc
- Various levels of access for public, decision makers, analysts, researchers
2 results found for "heart disease"

1. Hospitalization Rates - Heart Disease - 5 year age standardized average ending in
   - Indicator
   - Search Rank: 380.00
   - Geographies: CSD, NBHD
   - Source: Public Health Observatory, SHR
   - Year Published: 2009

2. Health Status Report 2008
   - Document
   - Search Rank: 200.02
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Summary

• A lot of indicator work going on at the at all levels across the country

• UPHN supports more collaborative work between local jurisdictions in order to promote collective and comparative research, planning and policy making

• Medical Officer of Health independence necessary to critically analyse the indicators and make recommendations for system or policy change at all levels
Our Partners

Institut national de santé publique du Québec

Statistics Canada

Urban Public Health Network