Health Information and Communication of Data:

Data profiling and social marketing campaigns supporting health equity and poverty reduction strategies

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Outline

- Background, definitions
- Role of information in policy making, program planning and decision making
- Local, regional and national examples:
  - Internal (Public Health)
  - Intra-sectoral (Health System)
  - Inter-sectoral (Human Service sector)
  - All-of-Government / HiAP

Context: Public Health in Canada

URBAN PUBLIC HEALTH NETWORK
RÉSEAU CANADIEN POUR LA SANTÉ URBAINE

Public Health leaders from 19 of the largest health regions in Canada
www.uphn.ca

Saskatoon Health Region

>$1 billion budget, 15,000 employees, comprehensive health services for our population plus provincial referral centre for much tertiary care
www.saskatoonhealthregion.ca

Context: a Population Health Approach for health system planning and delivery

- Definitions
  - Population health approach
  - Health Inequality
  - Health inequity
  - All of Government approach / Health in All Policies

What is Health Equity?

"implies that all people can reach their full health potential and should not be disadvantaged from attaining it because of their race, ethnicity, religion, gender, age, social class, [where they live], socioeconomic status or other socially determined circumstance"

Modified from Whitehead M, Dahlgren G. 2006. Concepts and principles for tackling social inequities in health: Levelling up part 1. Geneva: World Health Organization. (p. 5). http://nccdh.ca/resources/entry/concepts-and-principles-for-tackling-social-inequities-in-health

Role of “Population Health”

- Population health – definition
- “focuses on improving the health status of a population, or sub-population rather than individuals. Focusing on the health of populations also necessitates the reduction of health inequalities in health status between population groups. An underlying assumption of a population health approach is that reduction in health inequalities require reductions in material and social inequities. The outcomes or benefits of a population health approach therefore extend beyond improved population health outcomes to include a sustainable and integrated health system, increased national growth and productivity, and strengthened social cohesion and citizen engagement.” *Public Health Agency of Canada*

Whole-of-Government Approach

- An approach that integrates the collaborative efforts of the departments and agencies of a government to achieve unity of effort toward a shared goal.
- When that shared goal is to maximize the health and well-being of the population, or to consider the health or determinants of health impact of the proposed policy before implementation, that is the start of a health in all policies approach…

Health in All Policies

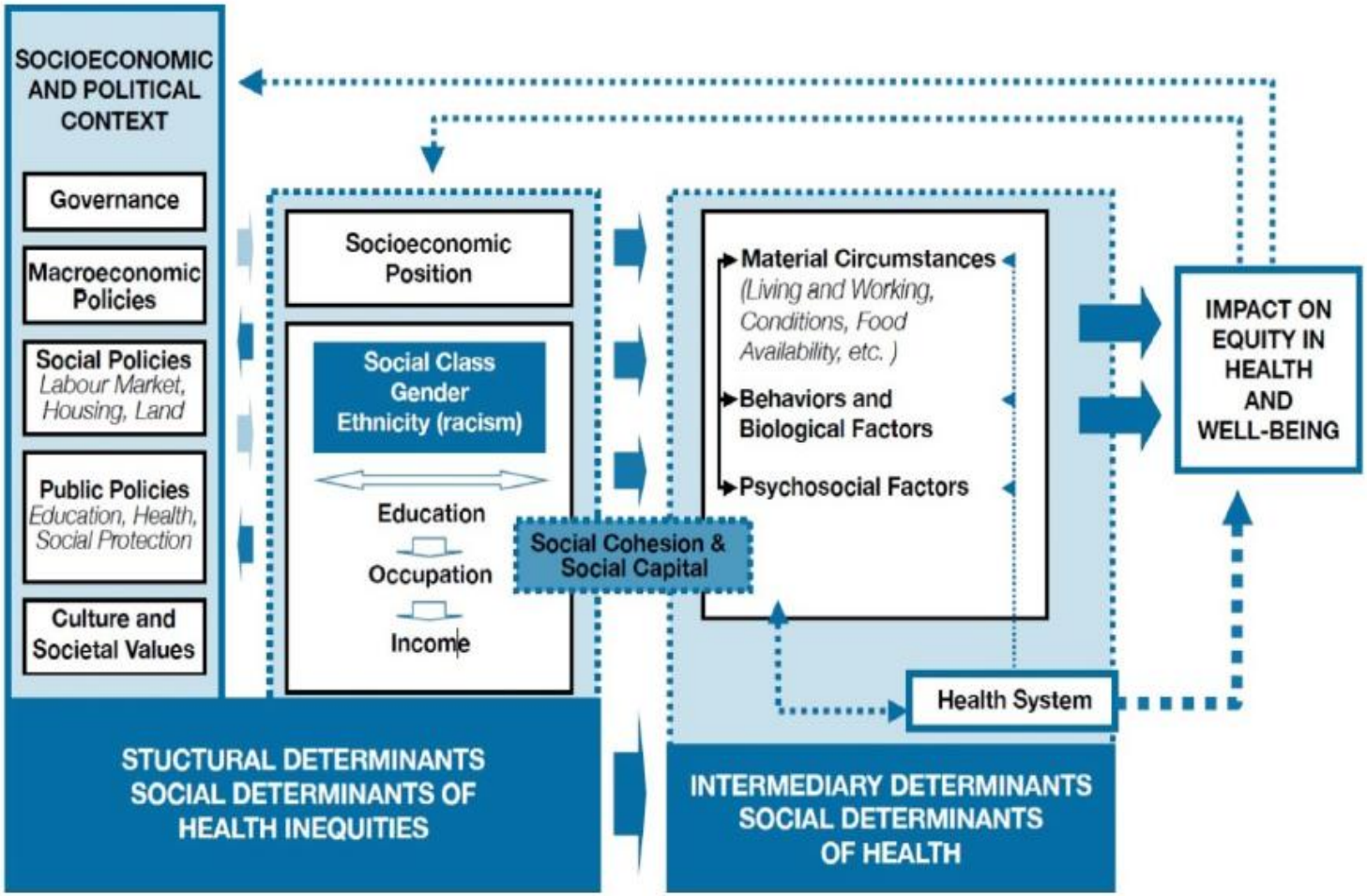
- Is an approach to public policies across sectors that systematically takes into account the health and health systems implications of decisions, seeks synergies and avoids harmful health impacts, in order to improve health and health equity.
  - Founded on health related rights & obligations
  - Emphasizes the consequences of public policies on health determinants
  - Aims to improve accountability of policy-makers for health impacts at all levels of policy-makin
    - Source: “Health in All Policies: Seizing opportunities, implementing policies. Leppo et al. 2013

Why Monitor Health Status and Health Inequities?

- To support intersectoral action on programs & policies
- To increase public awareness and support for policy change
- To support health system action on program & policy making

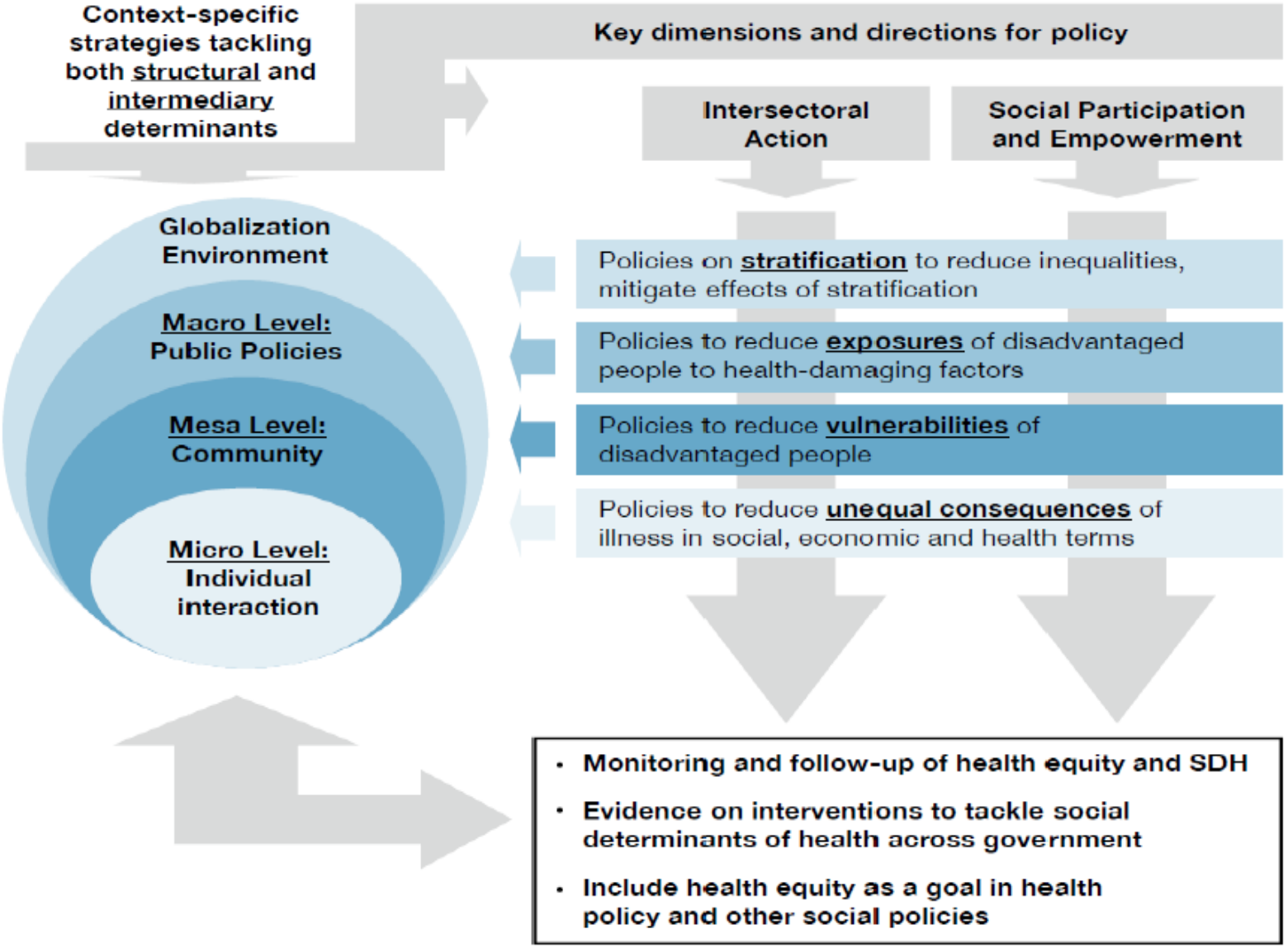
At local, regional and national levels….

Guiding Framework



World Health Organization. *A Conceptual Framework for Action on the Social Determinants of Health*. 2010.

Policy Entry Points



Health System Use of Health Equity Data

1. At the program/Department level:
   - For planning and monitoring quality of disease prevention and health promoting programs and services

2. At the system planning / quality improvement level:
   - For planning and monitoring quality of treatment and rehabilitative programs and services

3. At the Senior Leadership / Strategic level
   - For planning and prioritizing health system programs and services

Neudorf C. Integrating a population health approach into healthcare service delivery and decision-making. Healthcare Management Forum. 2012: 25(4) 155-159

Levels of Data for Health Status & Health Equity reporting

- Individual:
  - Linkage studies
  - Primary data collection
- Aggregate:
  - Neighborhood or small area aggregate analysis based on underlying population demographics

Health Status Reporting

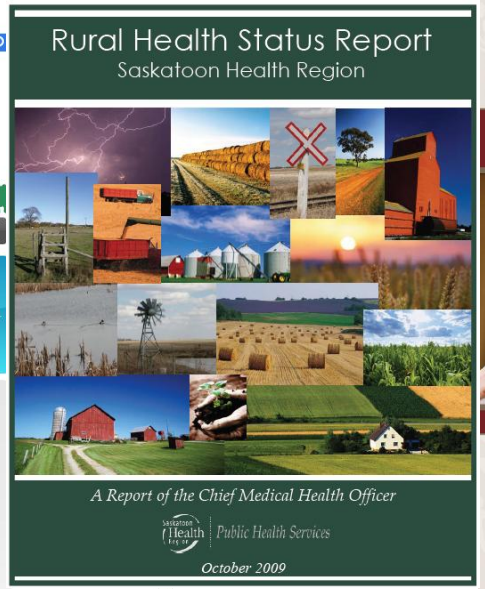
- Traditional uses (morbidity, mortality health behaviour reporting) and mandates in Public Health legislation for annual reports
- Evolution of health status reports in Saskatoon:
  - Expansion of indicators to include social determinants of health and many non-traditional indicators of health status
  - Inclusion of recommendations for Health system and other sector to improve population health
  - Trend toward shorter, more frequent topical reports
  - More consultation with target audiences to fine tune format and content
  - Consultations with stakeholders to assist in interpretation and analysis and dissemination and improve uptake/ownership
  - Move to web based interface with “drill down” for more detail as required (from infographics to one pagers with hypertext links to detailed tables and summary recommendations) see

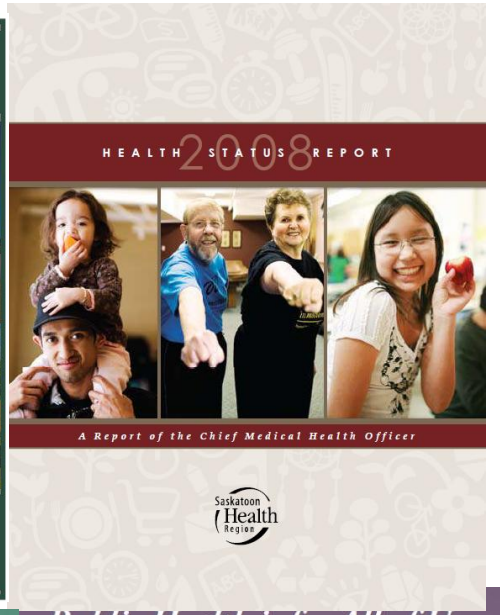
www.communityview.ca/communityviews

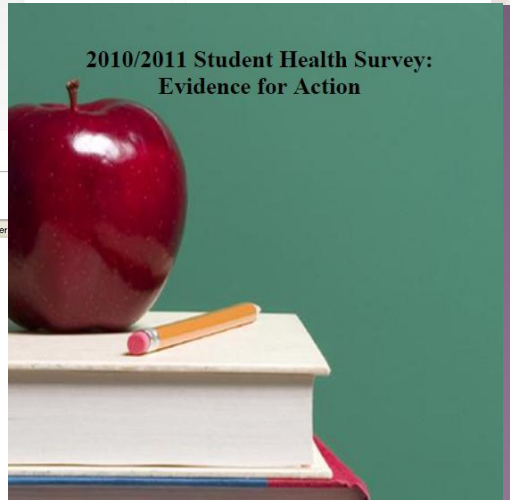
Resources required for analysis and reporting

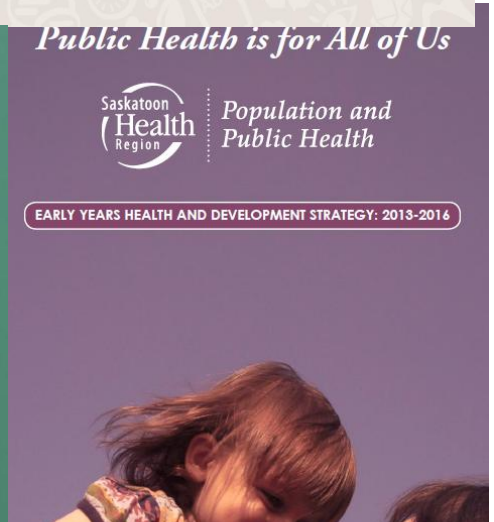
- Saskatoon Public Health Observatory – gradually built up over 15 years to current 12-14 staff including epidemiologists, GIS analyst, policy analyst, research assistants, knowledge transfer specialist, database analyst
- University partnerships and cross-appointments for population health intervention research

Health Status and health equity monitoring and reporting

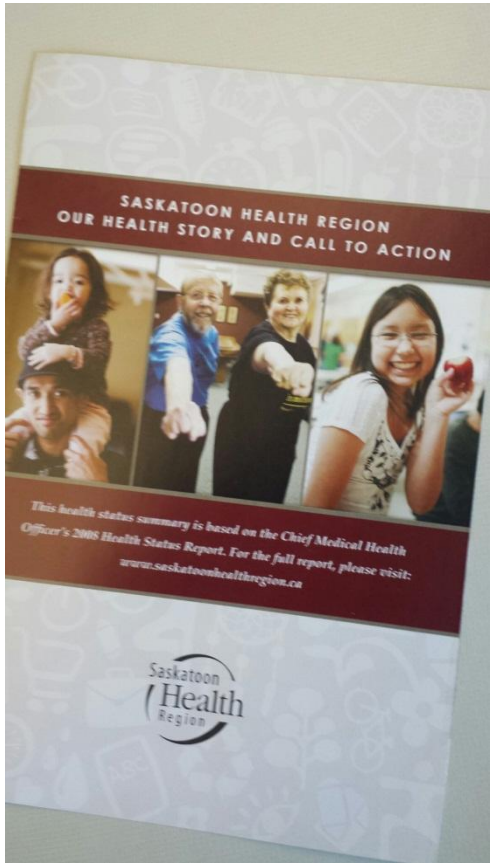


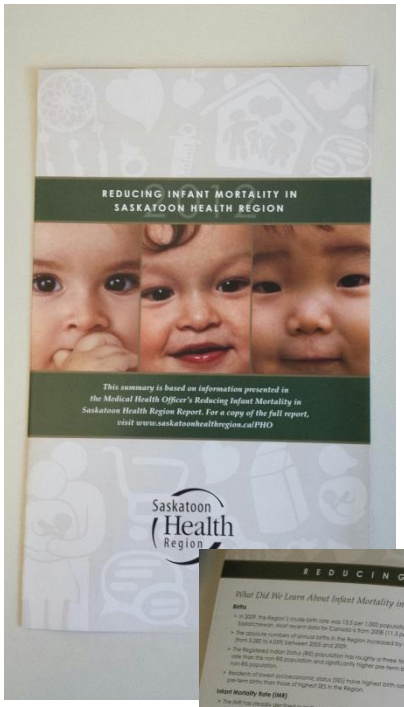


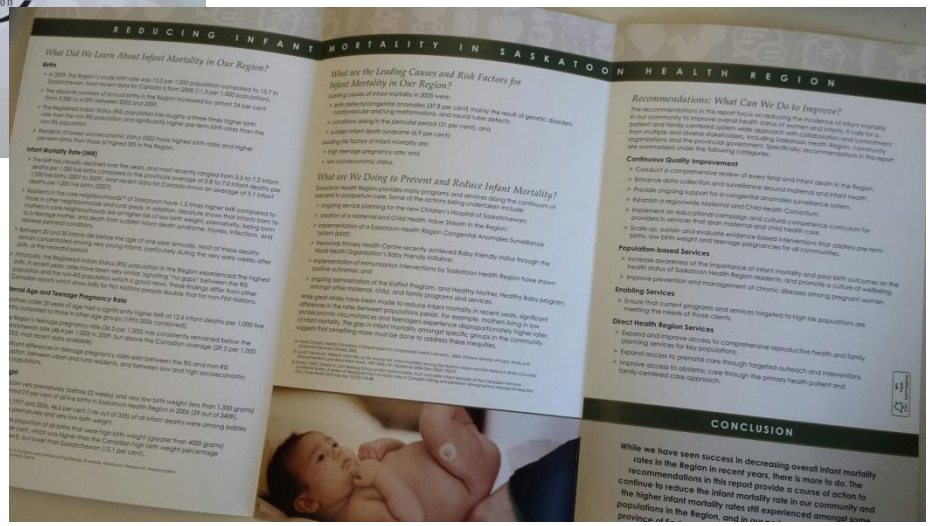




Health Status Reports: Consistent Calls to Action



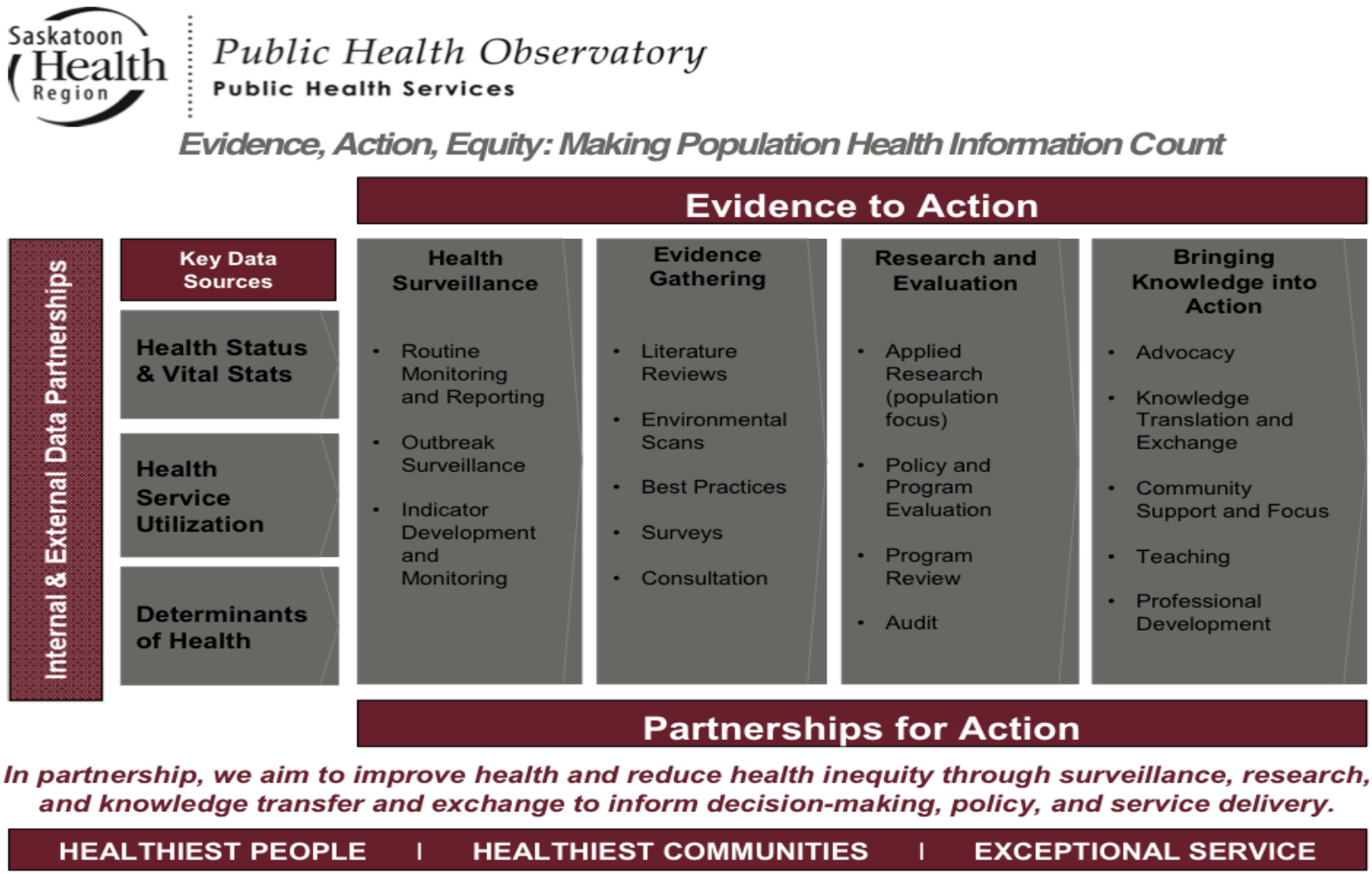




Sample consultation questions for health system leaders and managers

- Are there any barriers to access or uptake of services and facilities amongst any particular population group or area that you frequently encounter?
- Are there any already existing priorities for action that contribute to improve health equity?
- What programmes, services, approaches/practices already exist in your areas which might help in reducing gaps in equity?
- What further action is required from existing services or structures to address gaps in equity?
- How can health equity principles be embedded into existing work?
- Is more targeted action with specific groups and areas required?
- Are the supports and resources available in the system to adequately address health inequities in your area? What other resources would be helpful?

The PHO Model



The Catalyst to our Health Equity Work - 2006

Lemstra_HealthDisparity_2006.pdf - Adobe Reader

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Health Disparity by Neighbourhood Income

Mark Lemstra, MSc, DSc[1]
Cory Neudorf, MD, FRCPC, MHSc[2]
Johnmark Opondo, MD, MPH[3]

ABSTRACT

Background: Canadian cities are becoming more segregated by income. As such, investigation is required into the magnitude of health disparity between low-, average- and high-income neighbourhoods in order to quantify the level of health disparity at the scale of an urban city.

Methods: A cross-sectional ecological study design was used to review all hospital discharges, physician visits, medication utilization, public health information and vital statistics for an entire city by neighbourhood income status. Postal code information was used to identify six existing contiguous residential neighbourhoods in the city of Saskatoon that were defined as low-income cut-off neighbourhoods (N=18,228). There were two comparison groups: all other Saskatoon residents (N=184,284) and the five most affluent neighbourhoods in Saskatoon (N=16,683).

Many studies from different countries and diverse settings have found a strong correlation between life expectancy and socio-economic status (SES).[1-5] Historically, most of the studies reviewing SES and health status are at the individual rather than the neighbourhood level.[3,6-13] Recent studies suggest that neighbourhood SES can independently influence individual health above and beyond individual SES.[9-13] As such, research on the independent effect of individual and neighbourhood SES on health status is fairly well documented. Although the previous research is very important, there are several considerations: 1) most peer-reviewed research is American or British, 2) most papers use national-level census data with analysis at the national or provincial level, 3) when national-level census data is broken down into regional data, the census tract boundaries can create proxies for neighbourhoods that might not be meaningful, 4) analysis at the regional level normally results in very small sample size, and 5) health information is normally

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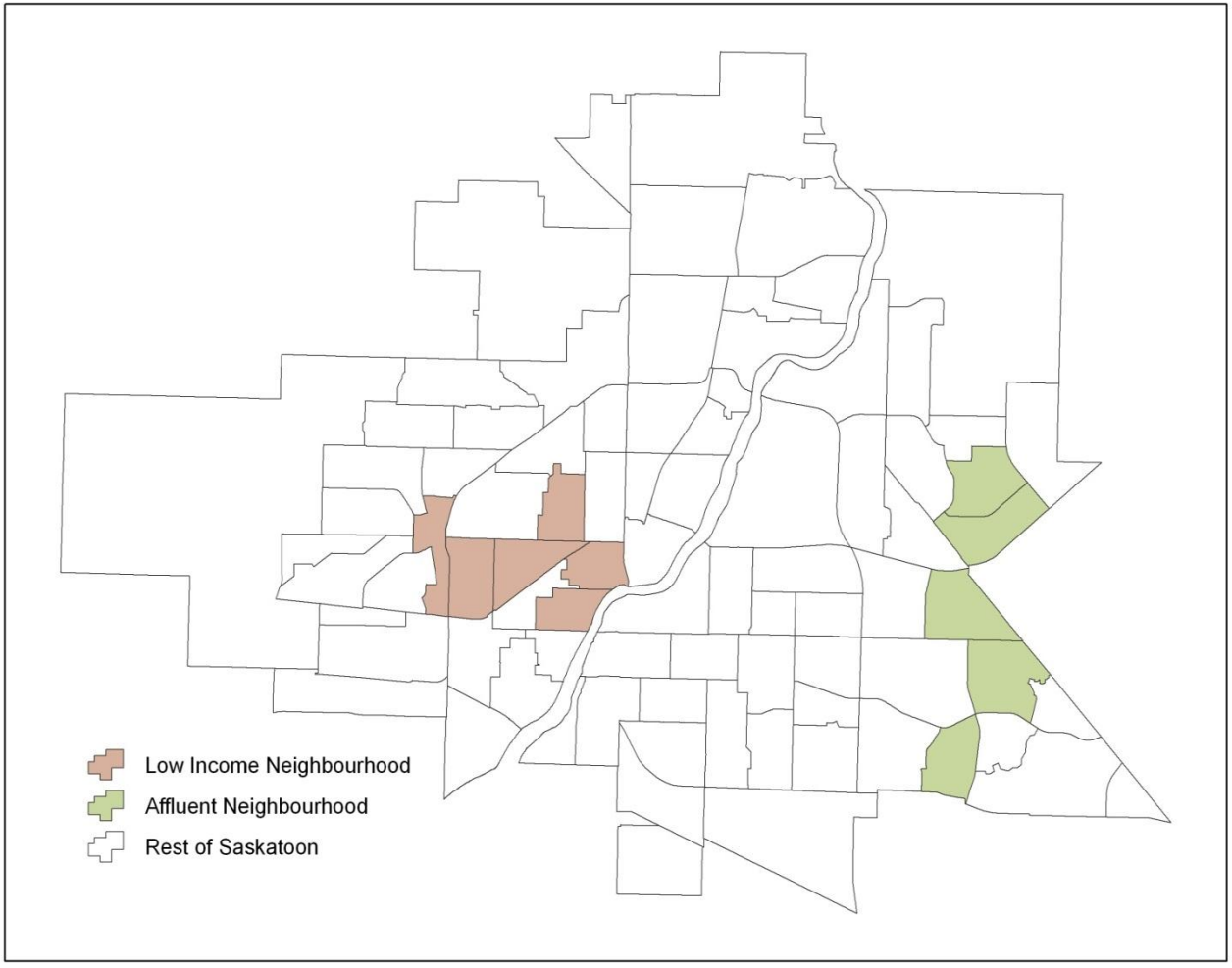
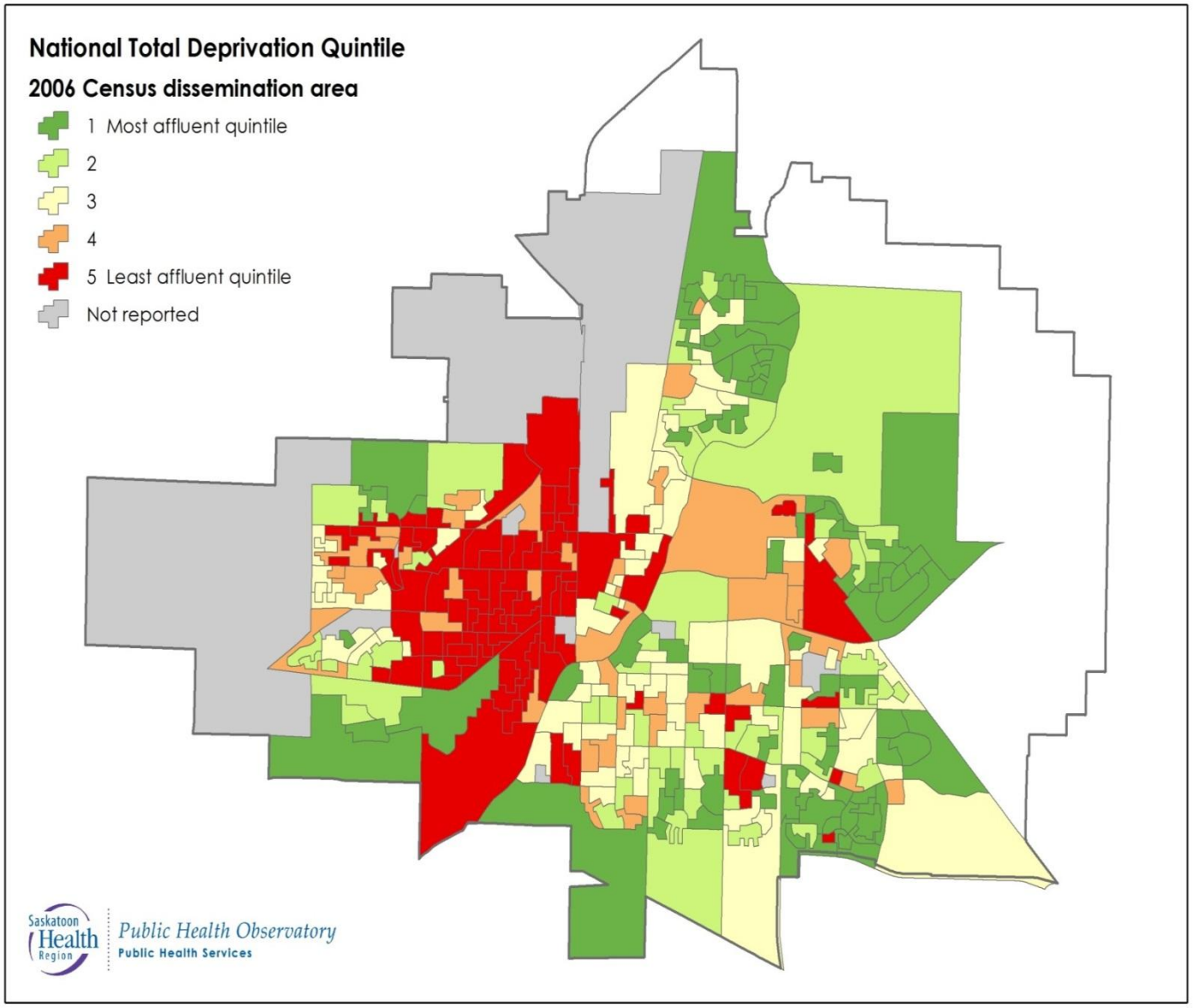

Low Income Neighbourhood
Affluent Neighbourhood
Rest of Saskatoon

Health Issue	Rate Ratio Core : Rest of Saskatoon	Rate Ratio Core : Affluent
Hospitalizations		
Suicide Attempts	3.75	15.58
Mental Disorders	1.85	4.27
Injuries and Poisonings	1.54	2.46
Diabetes	3.98	12.86
COPD	1.38	1.53
Coronary Heart Disease	1.34	1.70
Stroke	1.33	1.82
Cancer	0.89	1.02

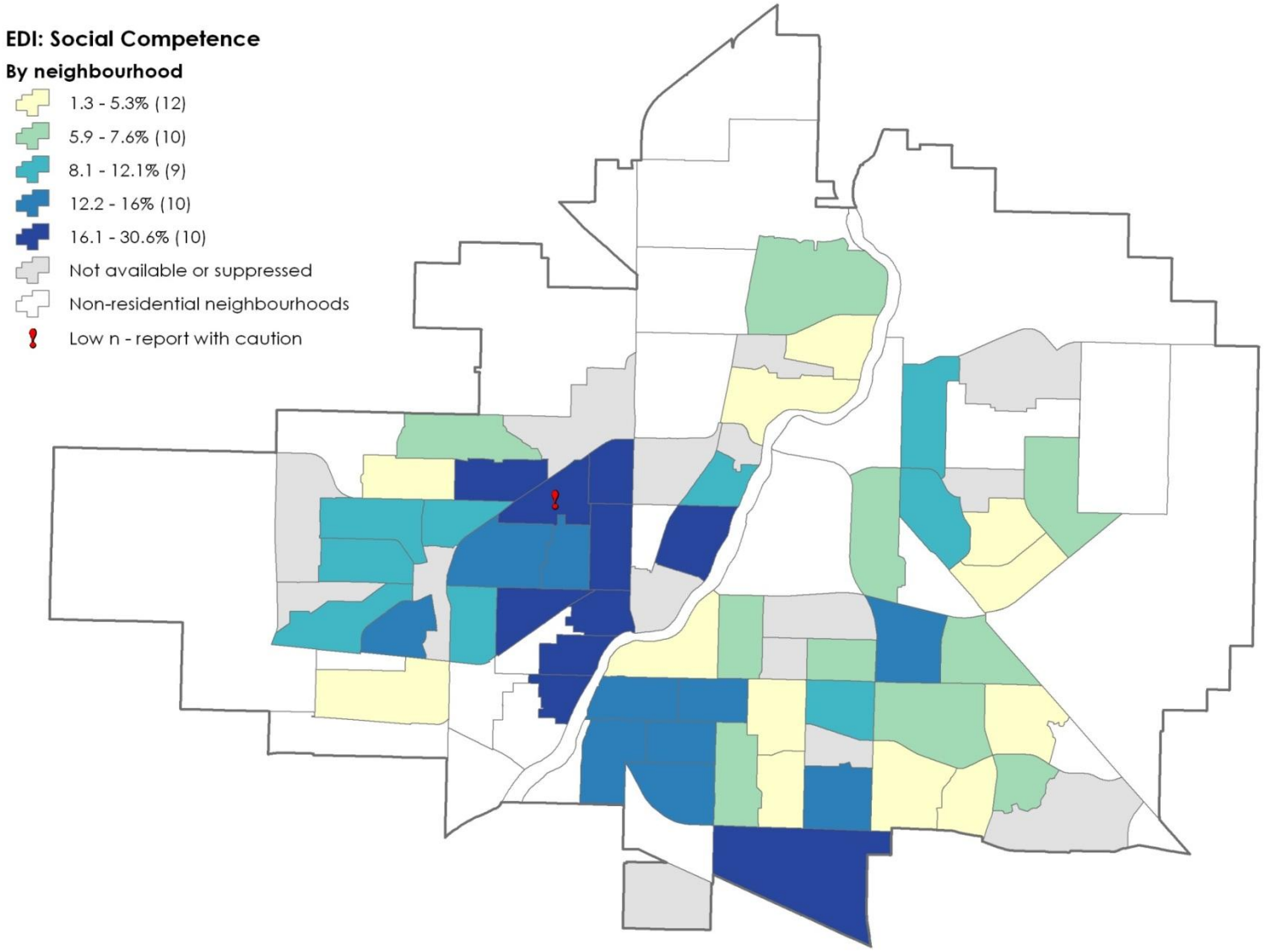
Health Issue	Rate Ratio Core : Rest of Saskatoon	Rate Ratio Core : Affluent
Physician Visits		
Mental Disorders	1.52	2.28
Injuries and Poisonings	1.35	1.91
Diabetes	1.71	2.11
COPD	1.43	2.42
Coronary Heart Disease	1.12	1.44
Stroke	0.88	1.58
Cancer	0.77	1.00
Prescription Drug Use		
Mental Disorders	1.21	1.62
Diabetes	1.80	2.60

Health Issue	Rate Ratio Core: Rest of Saskatoon	Rate Ratio Core : Affluent
Public Health / Reportable Diseases		
Chlamydia	4.32	14.89
Gonorrhea	7.76	n/a
Hepatitis C Notifications	8.04	34.60
Complete MMR coverage by age 2 yrs	1.47	2.05
Health Status Indicators		
Teen Births	4.21	16.49
Infant Mortality Rates	5.48	3.23
Low Birth Weight	1.46	1.10
All Cause Mortality	1.04	2.49

2008 – Use of common Deprivation Index and maps for data communication

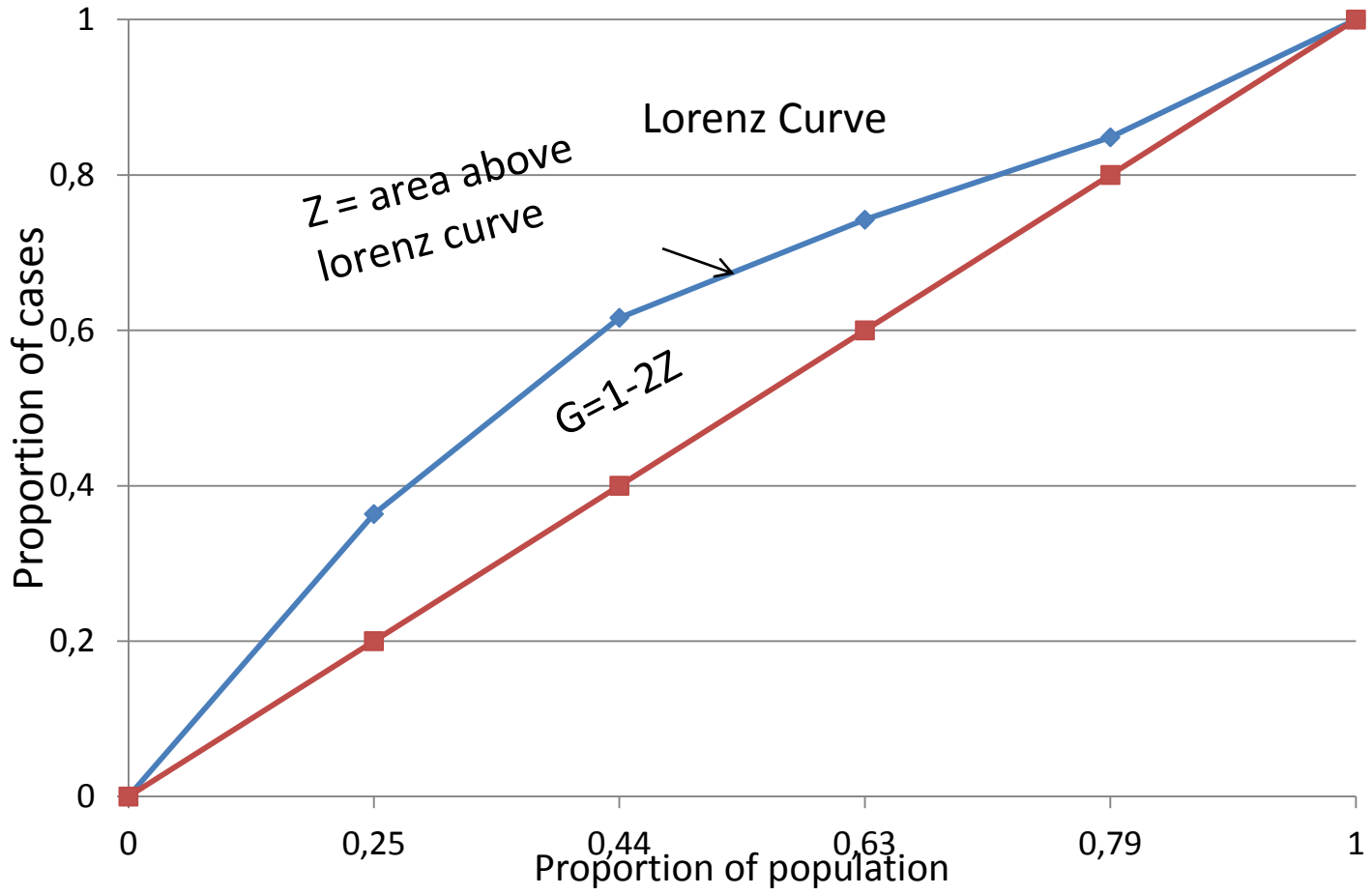


2012- Thematic report on Early childhood development and SDOH



HEALTH EQUITY "OVER TIME": FURTHERING OUR RESEARCH EVIDENCE- 2014

- Change to web based health status reporting format using our intersectoral "CommunityView" website
- Infographics, one pagers, drill down for more detail, summary recommendations and links to further work.


Lorenz Curve
Z = area above lorenz curve
G=1-2Z
Proportion of cases
Proportion of population
1
0,8
0,6
0,4
0,2
0
0
0,25
0,44
0,63
0,79
1

OVERVIEW: EQUITY TRENDS OVER TIME

HOSPITALIZATION DATA											
Indicator	Rate per 1000	% Change in Rate	Disparity Rate Ratio	Disparity Rate Ratio	DRR % change	Disparity rate difference	Disparity rate difference	DRD % change	Gini Coefficient	Gini Coefficient	% Change in Gini
	2011	1995 to 2011	1995	2011	1995 to 2011	1995	2011	1995 to 2011	1995	2011	1995 to 2011
Cancer	4.66	↓ 58%	1.13	1.18	↓ 4%	0.92	0.84	↓ 9%	0.13	0.04	↓ 69%
Intentional Self-Harm	0.39	↓ 53%	5.58	3.58	↓ 36%	1.28	0.48	↓ 63%	0.28	0.29	↑ 4%
COPD	1.71	↓ 62%	2.59	3.42	↑ 32%	2.61	2.19	↓ 16%	0.33	0.28	↓15%
Mental Disorders	3.48	↓ 44%	2.90	2.44	↓ 16%	6.35	3.28	↓ 48%	0.20	0.18	↓ 10%
Heart Disease	2.37	↓ 43%	1.41	1.75	↑ 24%	1.64	1.43	↓ 13%	0.15	0.16	↑7%
Diabetes	1.16	↑ 3%	1.74	2.75	↑ 58%	0.60	1.31	↑ 118%	0.18	0.19	↑6%
Stroke	1.19	↓ 50%	1.67	2.03	↑ 22%	1.24	0.76	↓ 39%	0.23	0.23	→ 0%

OVERVIEW: EQUITY TRENDS OVER TIME

PHYSICIAN BILLINGS DATA											
Indicator	Rate per 1000	% Change in Rate	Disparity Rate Ratio	Disparity Rate Ratio	DRR % change	Disparity rate difference	Disparity rate difference	DRD % change	Gini Coefficient	Gini Coefficient	% Change in Gini
	2009	1996 to 2009	1996	2009	1996 to 2009	1996	2009	1996 to 2009	1996	2009	1996 to 2009
Stroke	1.19	↓ 34%	4.85	6.16	↑ 27%	2.60	2.26	↓ 13%	0.42	0.38	↓10%
Diabetes	11.20	↑ 115%	8.28	9.91	↑ 20%	8.38	22.73	↑ 165%	N/A	0.39	↑ 3%
Heart Disease	5.96	↑ 12%	5.02	7.29	↑ 45%	6.93	11.20	↑ 62%	0.36	0.37	↑3%
Mental Disorders	41.95	↑ 32%	6.81	9.05	↑ 33%	51.86	81.44	↑ 57%	0.35	0.38	↑ 9%
Cancer	7.54	↑ 33%	3.91	5.56	↑ 42%	6.13	11.09	↑ 81%	0.25	0.28	↑12%
COPD	20.91	↓ 22%	6.23	9.26	↑ 49%	40.38	38.05	↑ 6%	0.32	0.37	↑ 16%

OVERVIEW:
EQUITY TRENDS OVER TIME

Indicator	Rate per 1000	% Change in Rate	Disparity Rate Ratio	Disparity Rate Ratio	DRR % change	Disparity rate difference	Disparity rate difference	DRD % change	Gini Coefficient	Gini Coefficient	% Change in Gini
STI INFECTIONS DATA											
	2010	2004 to 2010	2004	2010	2004 to 2010	2004	2010	2004 to 2010	2004	2010	2004 to 2010
Chlamydia	4.85	↑ 36%	4.22	2.96	↓ 30%	4.94	5.24	↑ 6%	0.29	0.25	↓14%
Tuberculosis	0.06	↑ 492%	N/A	N/A	N/A	0	0.21	↑ 763%	0.58	0.56	↓ 3%
Gonococal	0.40	↓ 13%	8.40	4.79	↓ 43%	0.93	0.73	↓ 21%	0.40	0.47	↑ 0%
HEP C	0.37	↓ 30%	7.84	11.14	↑ 42%	1.94	1.54	↓ 21%	0.43	0.51	↑ 19%
VITAL STATISTICS DATA											
	2009	1995 to 2009	1995	2009	1995 to 2009	1995	2009	1995 to 2009	1995	2009	1995 to 2009
High Birth Weight	134.82	↑ 27%	0.73	0.95	↑ 30%	-33.71	-6.54	↓ 81%	0.15	0.08	↓ 47%
Teen Abortion	195.61	↓ 20%	0.63	0.93	↑ 48%	-119.36	-13.19	↓ 89%	0.31	0.21	↓32%
All Cause Mortality	5.88	↑ 3%	2.28	2.34	↑ 3%	4.61	4.61	→ 0%	0.28	0.23	↓ 18%
Infant Mortality	8.36	↓ 22%	2.87	1.61	↓ 44%	10.71	3.39	↓ 69%	0.18	0.17	↓ 6%
Low Birth Weight	61.49	↓ 7%	2.27	1.53	↓ 33%	54.5	27.79	↓ 49%	0.06	0.06	→ 0%
Teen Pregnancy	56.64	↓ 35%	4.19	8.63	↑ 106%	113.31	114.25	↑ 1%	0.17	0.25	↑ 47%

Interpreting Multiple Equity Measures

- To interpret multiple equity measures, a 7 step process was developed
- Gini coefficients were the primary focus and thus all indicators were first ranked according to that measure
- Disparity Rate Ratios, Rate Differences, and Rates per 1000 were also considered and ranked accordingly
- A composite score was created in consideration of the above measures
- Indicators were ranked in priority sequence according to composite scores and overall gini coefficient categories (high, medium, low inequality)
- Those with a high score and high gini coefficient have been given priority for stakeholder consultations

MATRIX SCORE

Disparity Matrix

DISPARITY INDEX *	DRD ↓ 0	DRD = 1	DRD ↑ 2
DRR ↓ 0	DRD ↓/ DRR ↓ 0	DRD =/ DRR ↓ 1	DRD ↑/ DRR ↓ 2
DRR = 1	DRD ↓/ DRR = 1	DRD =/ DRR = 2	DRD ↑/ DRR = 3
DRR ↑ 2	DRD ↓/ DRR ↑ 2	DRD =/DRR ↑ 3	DRD ↑/ DRR ↑ 4

* Scores based on direction of absolute change from T1 (1995) to T5 (2011)

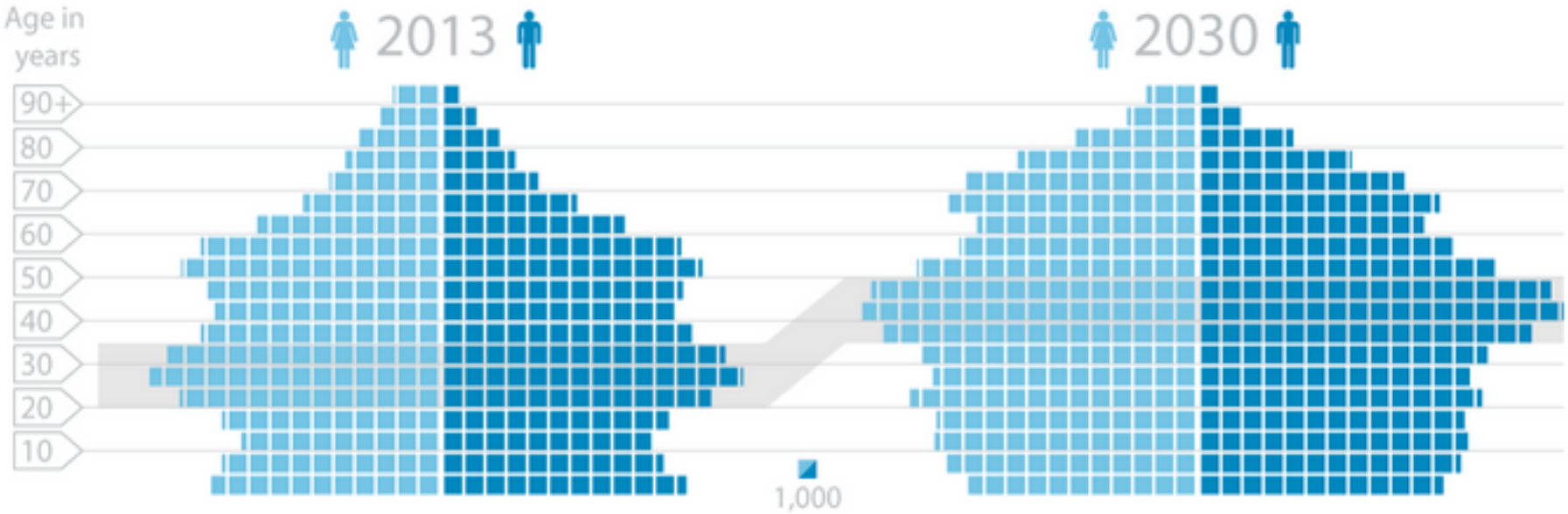
Indicator	Year	Type of Data	Gini	Gini Score	DRR Score	DRD Score	Matrix Score	Rate per 1000 Score	*FINAL SCORE*	PRIORITY RANK
Mental Disorders	2009	Physician Billing	0.38	5	4	2	4	7	***22***	**1**
Teen Pregnancy	2009	Vital Statistics	0.25	10	5	1	3	5	***24***	**2**
Injury	2009	Physician Billing	0.33	7	6	3	2	6	***24***	**2**
Diabetes	2009	Physician Billing	0.39	4	2	6	4	9	***25***	**3**
COPD	2009	Physician Billing	0.37	6	3	4	4	8	***25***	**3**
Heart Disease	2009	Physician Billing	0.37	6	7	7	4	12	***36***	**4**
Cancer	2009	Physician Billing	0.28	9	9	8	0	11	***37***	**5**
HEP C	2009	STI Infections	0.51	2	1	16	2	24	***45***	**6**
Stroke	2009	Physician Billing	0.38	5	8	14	2	20	***49***	**7**
Chlamydia	2009	STI Infections	0.25	10	13	9	2	15	***49***	**7**
All Cause Mortality	2009	Vital Statistics	0.23	11	17	11	2	13	***54***	**8**
Gonococal	2009	STI Infections	0.47	3	10	21	0	22	***56***	**9**
COPD	2011	Hospitalizations	0.28	9	12	15	2	19	***57***	**10**
Intentional Self-Harm	2011	Hospitalizations	0.29	8	11	22	0	23	***64***	**11**
Teen Abortion	2009	Vital Statistics	0.21	12	24	25	2	2	***65***	**12**
Stroke	2011	Hospitalizations	0.23	11	18	20	2	20	***71***	**13**
Injury	2011	Hospitalizations	0.2	13	16	10	2	14	***55***	**14**
Infant Mortality	2009	Vital Statistics	0.17	16	20	12	0	10	***58***	**15**
Mental Disorders	2011	Hospitalizations	0.18	15	15	13	0	17	***60***	**16**
High Birth Weight	2009	Vital Statistics	0.08	18	23	24	2	3	***70***	**17**
Diabetes	2011	Hospitalizations	0.19	14	14	18	4	21	***71***	**18**
Heart Disease	2011	Hospitalizations	0.16	17	19	17	2	18	***73***	**19**
Child Immunization	2011	Immunization	0.07	19	25	26	2	1	***73***	**19**
Low Birth Weight	2009	Vital Statistics	0.06	20	21	5	0	4	***50***	**20**
Cancer	2011	Hospitalizations	0.04	21	22	19	0	16	***78***	**21**
Tuberculosis*	2009	STI Infections	0.56	1 missing		23 missing		25	***N/A***	**N/A**

STEP 1: Sort by Gini coefficient at T5^
STEP 2: Rank by Gini score
STEP 3: Rank by absolute DRR for T5^
STEP 4: Rank by absolute DRD for T5^
STEP 5: Apply matrix (see attached)
STEP 6: Rank by absolute rate per 1000 at T5^

KEY	
	High Inequality (Gini score: > 0.20)
	Moderate Inequality (Gini score: > 0.06 - <=0.20)
	Low Inequality (Gini score: <= 0.06)
*	Data incomplete

Population Projections

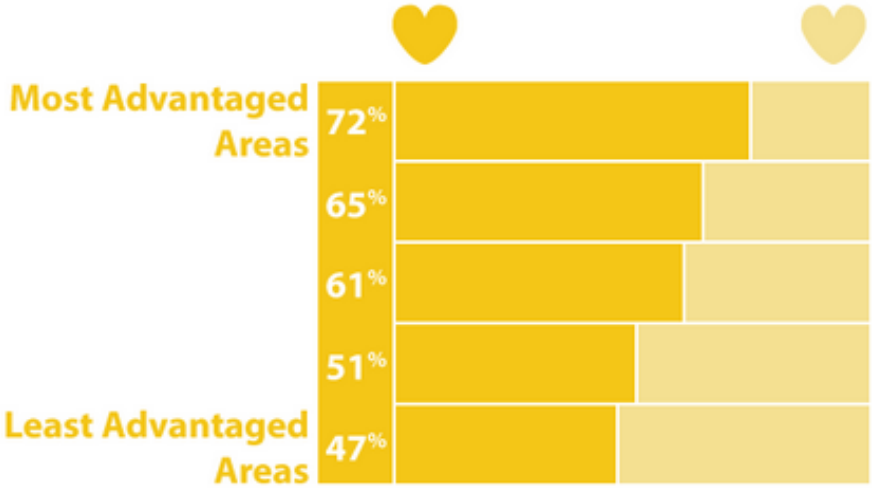
About the Data | One Page Summary



Our Region is expected to grow from 336,403 to 418,578 in 2030.

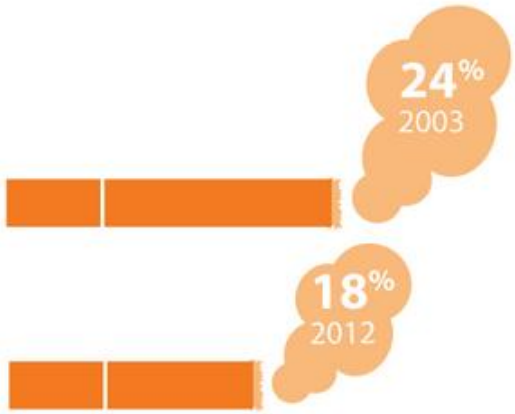
Self-Rated Health

6 in 10 individuals in the Region rated their health as "very good" or "excellent" in 2012.

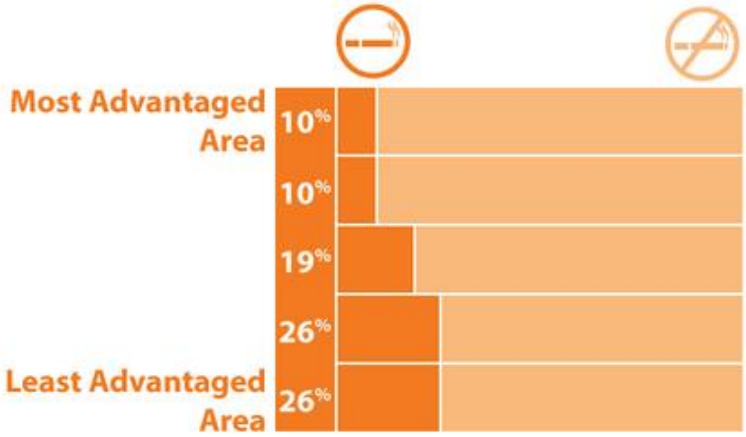


People living in the most advantaged areas of Saskatoon had the highest self-rated health.

Smoking



Smoking rates in the Region decreased over time to 18% in 2012.



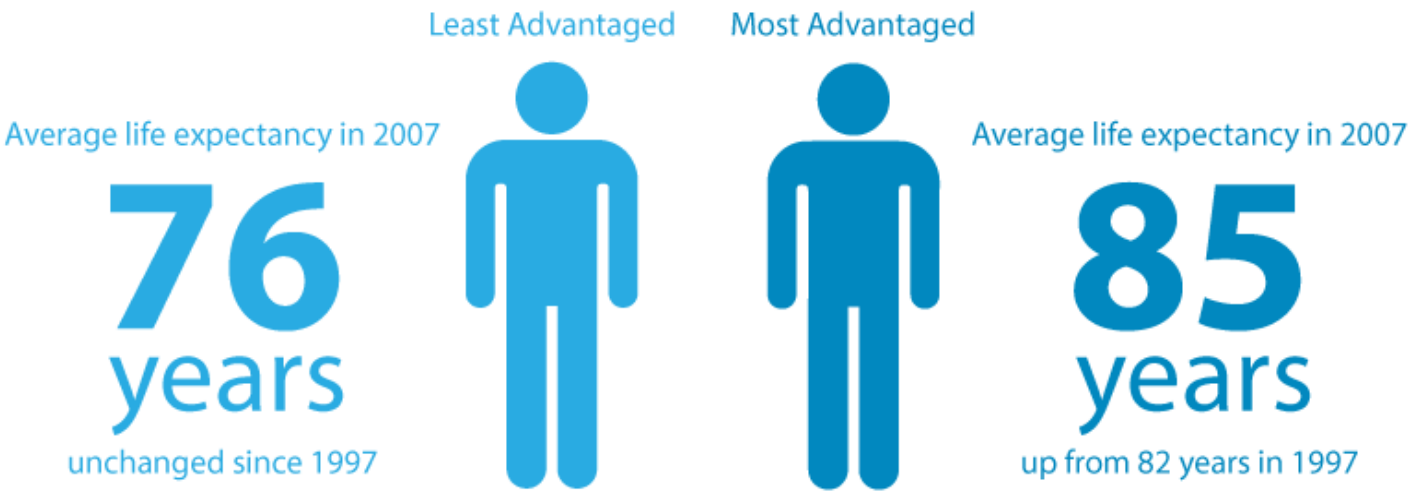
People living in the most advantaged areas of Saskatoon had the lowest smoking rates.

Gaps in Health Equity

Over the last 15 years in our Region, gaps in health equity have remained wide and persistent.

Life Expectancy at Birth

What would you do with 9 extra years?



The gap in life expectancy between those living in the most and least advantaged areas has increased over time in our Region.

Example from SHR Health Status report 2014 Call to Action

- Recommendation #2)

Holistic approach for Improving Health and wellbeing of First Nations and Metis peoples: (Introduction contains)

  - Awareness and acknowledgement of traditional lands and treaties in reports and meetings
  - Asset-based approach in balance with discussing the current challenges in order to find the way forward

Saskatoon Health Region

Better Health for All
Health Status Reporting Series One

A Message from Dr. Cory Neudorf
Chief Medical Health Officer
Saskatoon Health Region

Our Vision of Better Health for All

The conditions in which we live, work, learn and play have a huge impact on our health. The stark reality is that many people who live in Saskatoon Health Region do not have the same opportunities to be as healthy as others and as a result, live shorter lives. This is not fair and does not need to be this way.

We can live in a community in which everyone has a chance to live a healthy life. Our community can be one in which everyone has the same opportunities to reach their full health potential and not be disadvantaged by their race, ethnicity, religion, gender, age, disability, sexual orientation, where they live, socioeconomic status or other socially determined circumstance.[1] Our community can be a place in which all families can afford the basics in life: where no child lives in poverty; where those who work receive a wage that allows them to purchase healthy foods and pay the rent; where First Nations and Métis people have greater self-determination[2] and no longer face institutionalized racism; and where people living with mental health conditions are supported and not stigmatized.

While I am encouraged by what we have achieved towards making this vision a reality, we must continue with our commitment to create greater positive change. There is already much support from the community.[3] Let us use this momentum by continuing to work together as a community and build upon our collective strengths.

Saskatoon Health Region's commitment to Better Health

Improve population health through health promotion, protection and disease prevention, and collaborating with communities and different government organizations to close the health disparity gap.

Health Equity-Integrated Health Status Reporting

How will we know when positive changes have occurred? Saskatoon Health Region's Public Health Observatory has significantly contributed to measuring the vision for health for over a decade through health equity integrated health status reporting and health disparity research. Gathering and analyzing data and consulting with key stakeholders about the health of our population provide the Region and its partners with important information that should in the short-term, create a burning desire for change and in the long-term, contribute to creating *equal opportunities* for all to make choices that lead to good health.

Over the coming months, in our ***Better Health for All*** series, we will

[1] National Collaborating Centre for Determinants of Health. (2013). Let's talk: Health equity. Antigonish, NS: National Collaborating Centre for Determinants of Health, St. Francis Xavier University.
[2] The 2008 United Nations Declaration on the Rights of Indigenous Peoples states that "Indigenous peoples have the right to self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development. Indigenous peoples, in exercising their right to self-determination, have the right to autonomy or self-government in matters relating to their internal and local affairs, as well as ways and means for financing their autonomous functions *(Articles 3 and 4)*.
[3] See Public Opinion Survey

1

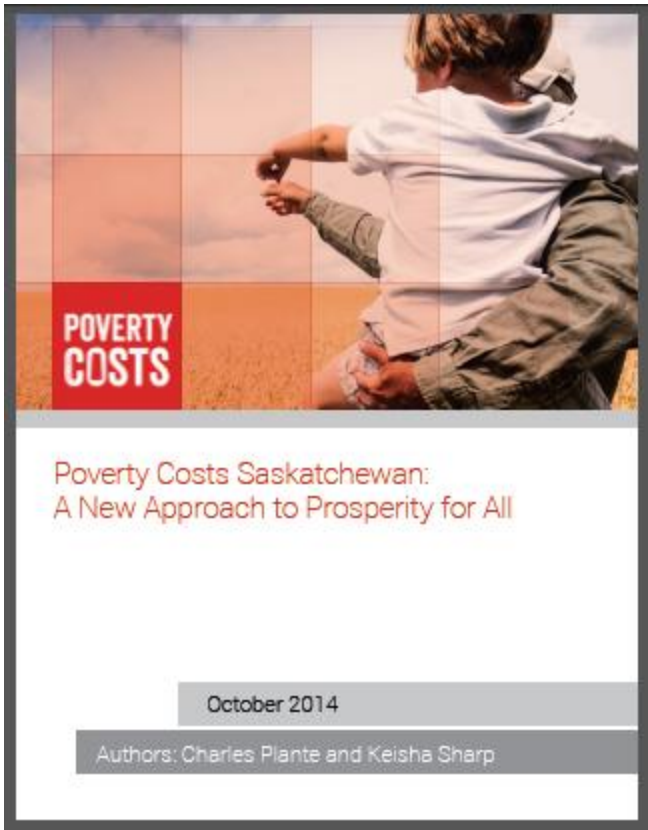
http://www.communityview.ca/pdfs/2014_SHR_HSRMessage_phase1.pdf

Campaigns

- Move from full reports every 4 years with topical reports in between to regularly updated data, regular mini reports with periodic overview recommendations
- Presentations to Board, Intersectoral committee, government, media (public)
- Better uptake by media, board, decision makers, and media

Social marketing

- Social media (twitter, blogs, youtube videos, websites), advocacy, and letter writing to politicians, presentations to policy committee of government
- http://www.povertycosts.ca/
- http://www.saskatoonpoverty2possibility.ca/
- Target groups and content changed over time



Results (in Health sector)

Health Care Equity Audits: E.g. Immunization

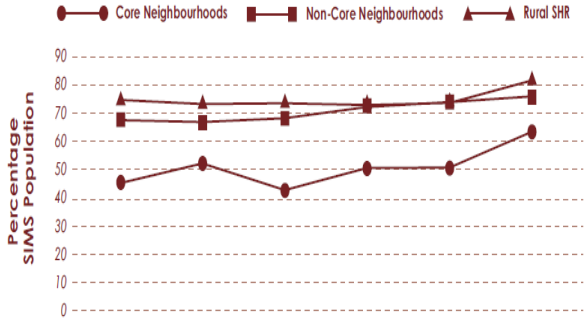
Problem
Low Immunisation rates
Core Neighbourhood

Lit Review
Of evidence and best practice
+Parent survey

Implement Phone based reminder system for parents

Measure Impact and Amend intervention

Figure 4.3: Two Year Old Coverage Rate for Rubella and Measles (Two Doses), Saskatoon Health Region, 2003-2008



	2003	2004	2005	2006	2007	2008
Core Neighbourhoods	45.4	52.3	42.9	50.7	50.9	63.5
Non-Core Neighbourhoods	67.6	66.9	68.3	72.2	74.0	76.0
Rural SHR	74.7	73.3	73.5	72.9	73.7	81.6

Source: Saskatchewan Immunization Management System

Performance metrics with equity focus

Saskatoon Health Region

DASHBOARD - FACT SHEET

IMMUNIZATION DISPARITY RATIO
MUMPS MEASLES RUBELLA (MMR)

What is being measured?

Equity is defined as providing care on basis of need not influenced by personal characteristics and circumstance. Immunization disparity can be expressed as a ratio comparing the top socio-economic quintile to the bottom quintile. In other words, this compares the wealthiest fifth of our population to the poorest fifth.

The ratio is calculated by dividing the two year-old MMR coverage rate in the top socio-economic quintile by the coverage rate in the bottom quintile. **A ratio equal to one indicates equity while measures greater than one indicate inequity.**

Socio-economic quintiles are based on the Total Deprivation Index. This includes income, employment, education and social support indicators. It is calculated at the Dissemination Area level geography for Saskatoon city only, and cannot be utilized at present for rural SHR.

Immunization rates are calculated for populations in the top and bottom quintiles - 20% of the population.

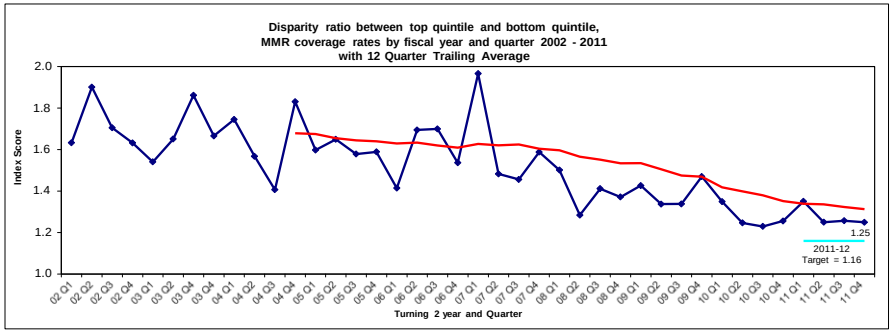
Why is it important?

SHR has a mandate to reduce disparities based on the Federal Healthy Living Strategy. Health disparities make it difficult for individuals and groups to participate fully in society. Health disparities are also huge cost drivers which are estimated to account for 20% of all healthcare expenditures.

How are we doing?

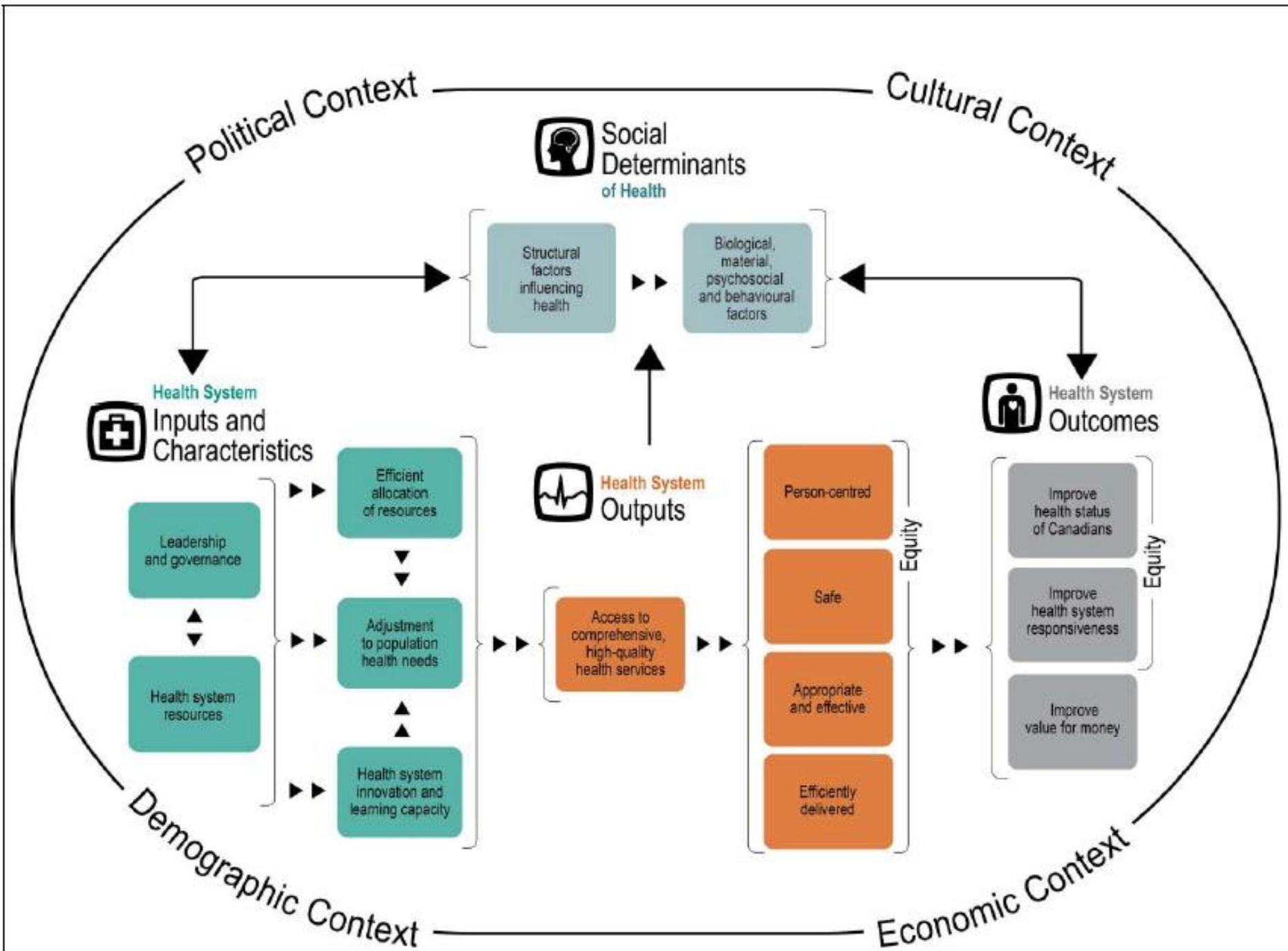
The ideal disparity ratio is equal to 1.0, which indicates equality between the upper and lower quintiles or socio-economic groups of population (i.e. no gap). In SHR the disparity ratio has been decreasing most rapidly since 2007. This signals greater equity in immunization rates.

Our 2011-12 target was 1.16, and our Q4 ratio was 1.25. In January 2012, we initiated a targeted pilot campaign to address immunization rates in the lowest socioeconomic neighbourhoods and it has been successful in immunizing some of the hardest to reach families in Saskatoon. In 2012 -13, our Community Program Builders will continue to make personal connections and reminders via home visits and phone calls with the hardest to reach families and neighbourhoods.

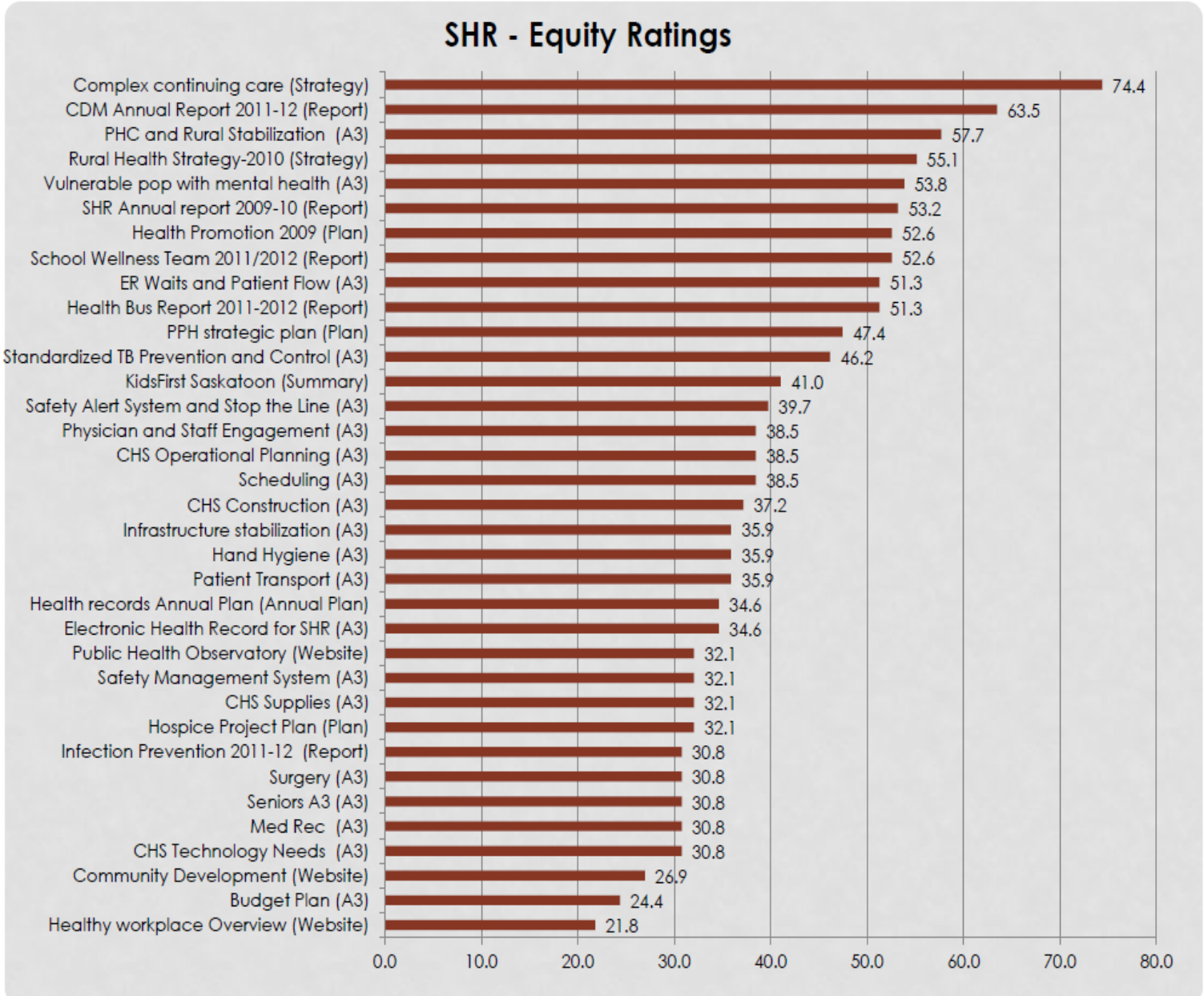


Healthiest people, healthiest communities, exceptional service.

Figure 1: CIHI's New Health System Performance Measurement Framework



Equity Gauge tool



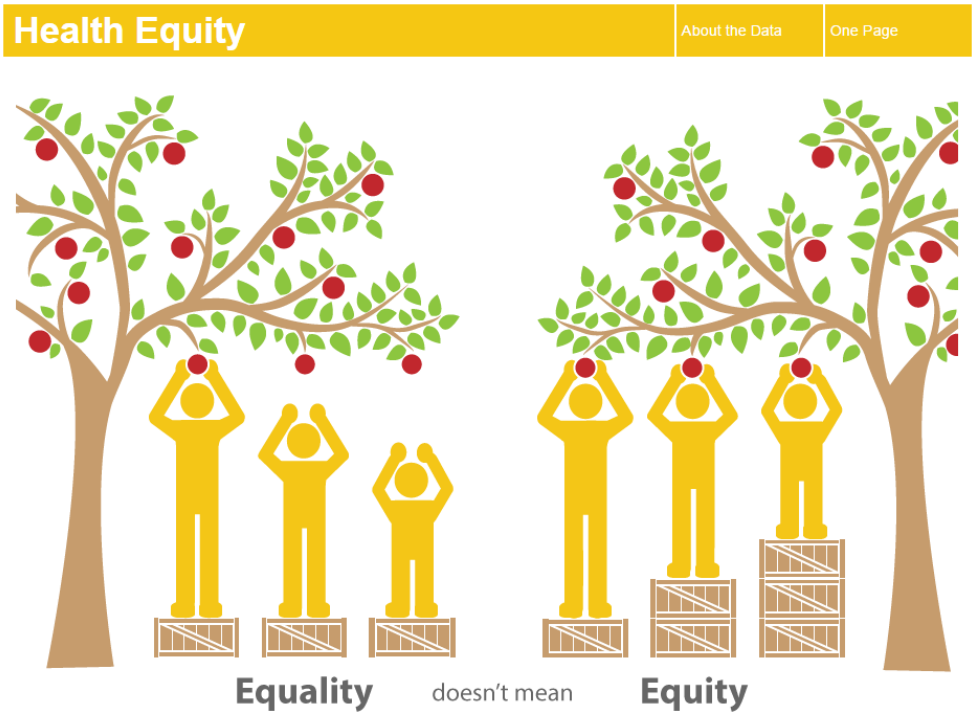
Integrating population health approaches and equity into the system

- Health Promoting Hospitals, investment in community services and prevention/promotion to improve flow

Applying a Health Equity Lens to Healthcare Planning & Leadership

5 Bold Steps for Saskatoon Health Region

- **Invest in partnerships**
- **Embed equity in Safety & Quality Improvement**
- **First Nations and Métis Health Strategy**
- **Socio-demographic data collection on SDOH**
- **Aboriginal Health Summit & Health Equity Forum**



FIVE BOLD STEPS

Recommendations for advancing health equity in Saskatoon Health Region (2015-16)

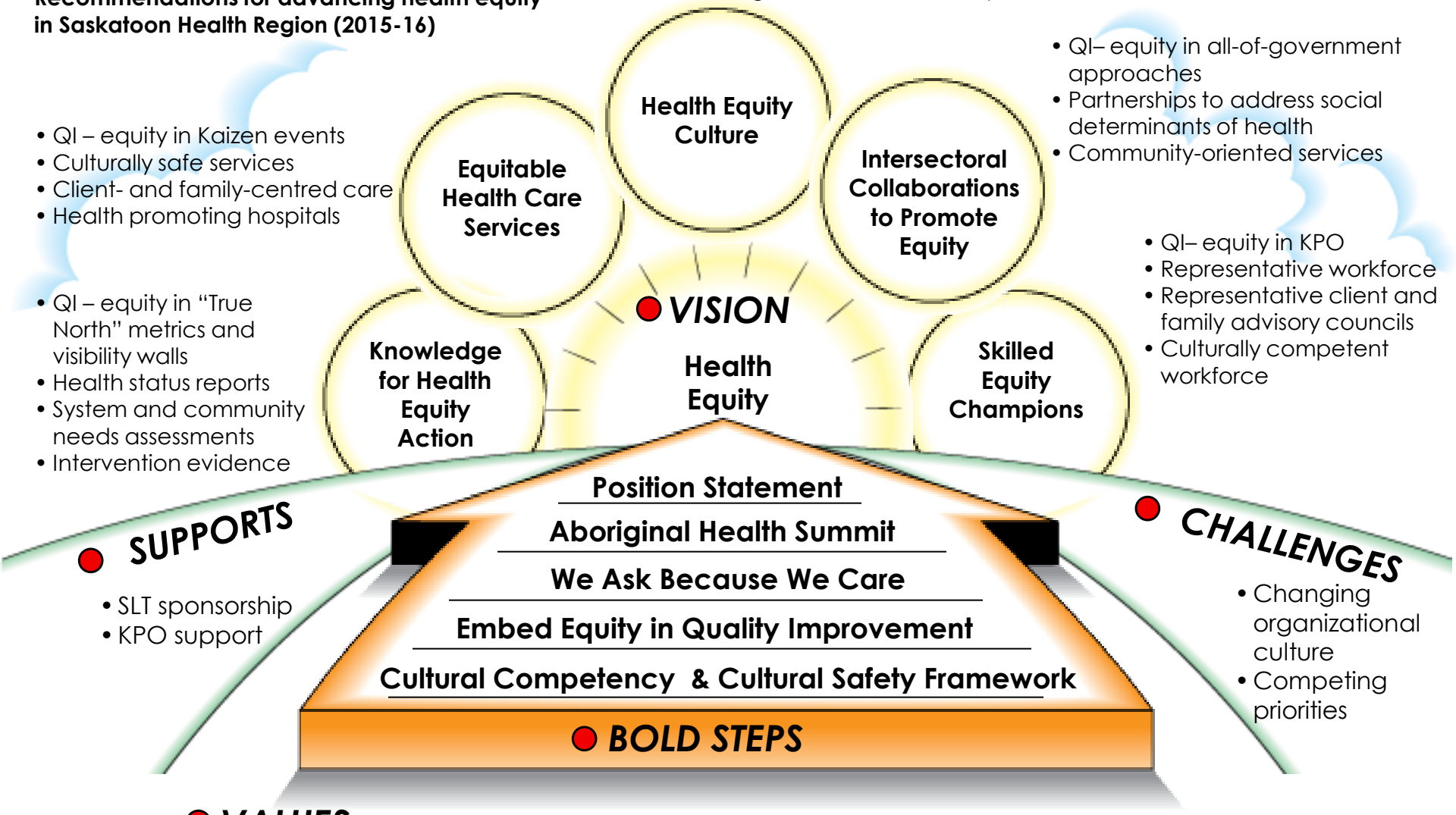
- QI– equity in Hoshin planning
- Organizational health equity strategy
- Health in all policies
- Organizational leadership

- QI– equity in all-of-government approaches
- Partnerships to address social determinants of health
- Community-oriented services

- QI – equity in Kaizen events
- Culturally safe services
- Client- and family-centred care
- Health promoting hospitals

- QI– equity in KPO
- Representative workforce
- Representative client and family advisory councils
- Culturally competent workforce

- QI – equity in "True North" metrics and visibility walls
- Health status reports
- System and community needs assessments
- Intervention evidence



SUPPORTS

- SLT sponsorship
- KPO support

CHALLENGES

- Changing organizational culture
- Competing priorities

VALUES

- Better Health
- Better Care
- Better Value
- Better Teams

WE ASK
BECAUSE WE CARE.

What are we asking?

We are asking all patients who register at this hospital whether they self-identify as First Nations or Métis.

You can choose not to answer this question.

Why are we asking?

Our goal is to make sure you have access to the highest quality of healthcare that we can provide. The information you provide will:

- Tell us more about you and help us connect you with services
- Help us plan for services
- Help us improve the quality of care for all.

Who will ask this question? When? Where?

This question will be asked when you register for your appointment or hospital stay at Registration Services. You will be asked this question when the Registration Clerk verifies and updates your personal information, such as your address, phone number, next of kin, and family physician.

What happens to the information we collect?

Your information may be seen by people in your 'circle of care' – your doctors, nurses, health navigator, and others involved in your care – and will be treated with the same respect and confidentiality as all the other information you share as part of your care and treatment. For research, program planning, and staff training purposes, the information will only be available in 'aggregate' form; this means that your answers will be grouped with other answers and there will be no way to identify you (no name, address, or other identifying information).

How does this impact your health?

The project seeks to improve your care - and your health - by asking questions that help us connect you to services, such as First Nations & Métis Health Navigators and Cultural Support Workers. We also know that sometimes people experience discrimination in healthcare, which can have a negative effect on your health. We want to make sure that is not happening here – and, if it is, we want to correct that.

Saskatoon Health Region

BETTER EVERY DAY
better health • better care • better value • better teams

St. Paul's Hospital

WHY ALL THE QUESTIONS?

By asking if you self-identify as First Nations or Métis, our goal is to make sure every person has access to the highest quality of health care that we can provide. The information you share with us will:

- **help us connect you with services, such as First Nations & Métis Health Navigators and Cultural Support Workers**
- **help us plan for services**
- **help us improve the quality of care for all**

You can choose not to answer this question. Please ask to speak with the Registration Manager or contact First Nations & Métis Health Services (306-655-0518) if you have any questions or concerns.

St. Paul's Hospital

BETTER EVERY DAY
better health • better care • better value • better teams

Saskatoon Health Region

WE ASK BECAUSE WE CARE.

Resources and tools

- From SHR Public Health Observatory:
  - Health Care Equity Audit tool
  - Health care equity audit guide
  - Tackling the Barriers to Better Health For All
  - Cultural Considerations
  - Other health equity considerations
    - http://www.communityview.ca/pdfs/2014_shr_phase3_whatyoucando.pdf

Results (Intersectoral)

-Intersectoral Committee priority setting: Plan to end homelessness, Poverty awareness campaigns by Poverty Reduction Partnership, Poverty Costs campaign, Aboriginal employment strategy, Early Childhood development strategy

-Increased public awareness of impact of poverty on health and increased support for poverty reduction policies

-Increased municipal and regional investments in areas highlighted in policy review (see report card of Saskatoon Poverty Reduction Partnership)

-Municipal poverty reduction strategy

-Provincial Poverty Reduction Strategy advisory group report and government response.

Policy Options and interventions

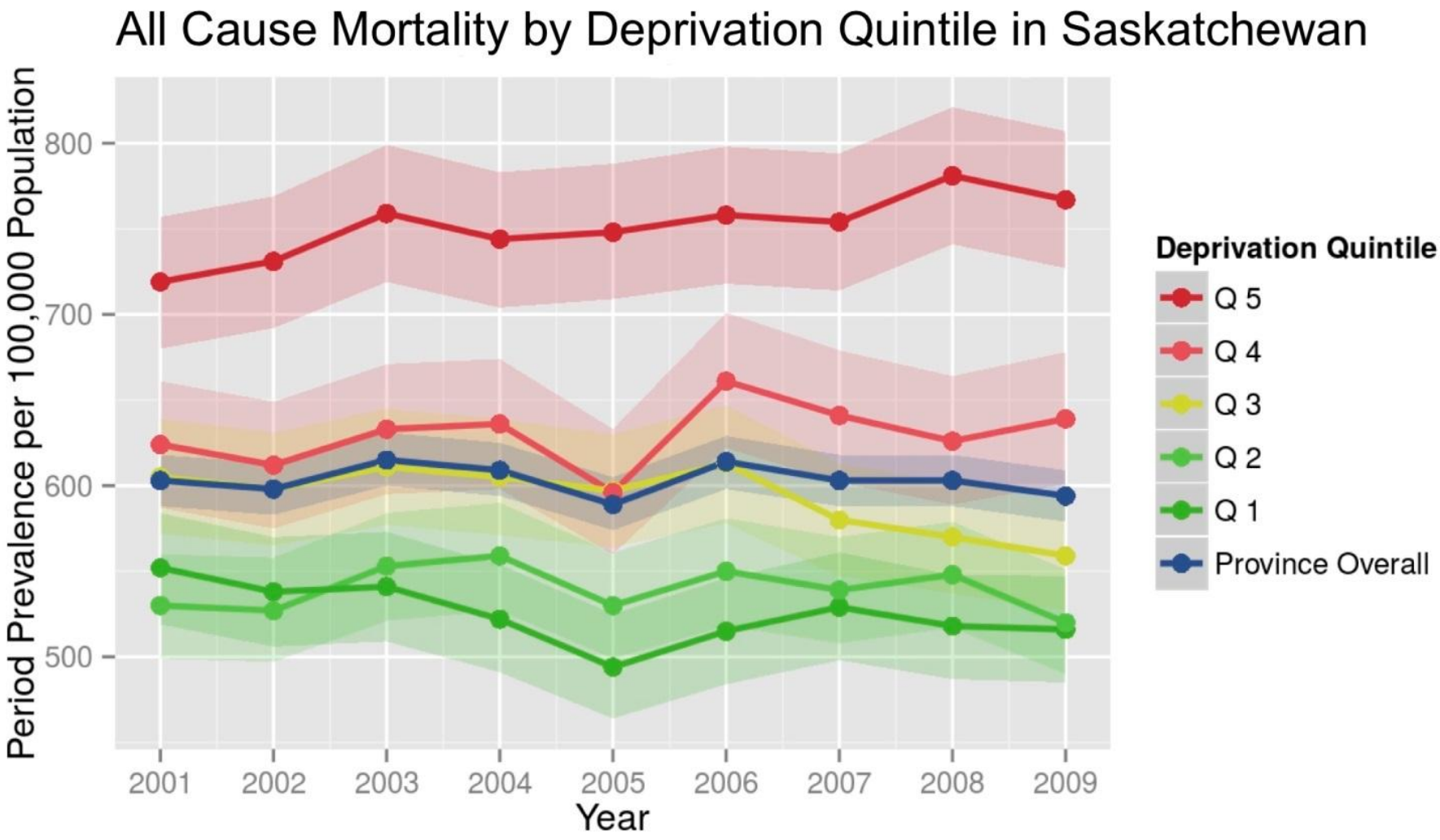
Advisory Group on Poverty Reduction

- Composition
  - 11 members: 5 from across government and six from the community
  - Recommended Vision: “We envision all of Saskatchewan committing to actions that will reduce, and ultimately eliminate, poverty in our communities”
  - Recommended Target: “Using the 2012 Market Basket Measure, the Province aims to reduce poverty in Saskatchewan by 50% by the end of 2020”

Changes in Social Inequalities in Health Over Time in Saskatchewan

Authors

Dr. Cordell Neudorf
Mr. Joshua Neudorf
Mr. Stuart Lockhart
Mr. Charles Plante
Dr. Daniel Fuller
Ms. Hazel Williams-Roberts
Mr. Thilina Bandara
Ms. Lisa Thurairasu


All Cause Mortality by Deprivation Quintile in Saskatchewan
Period Prevalence per 100,000 Population
800
700
600
500
2001
2002
2003
2004
2005
2006
2007
2008
2009
Year
Deprivation Quintile
Q 5
Q 4
Q 3
Q 2
Q 1
Province Overall

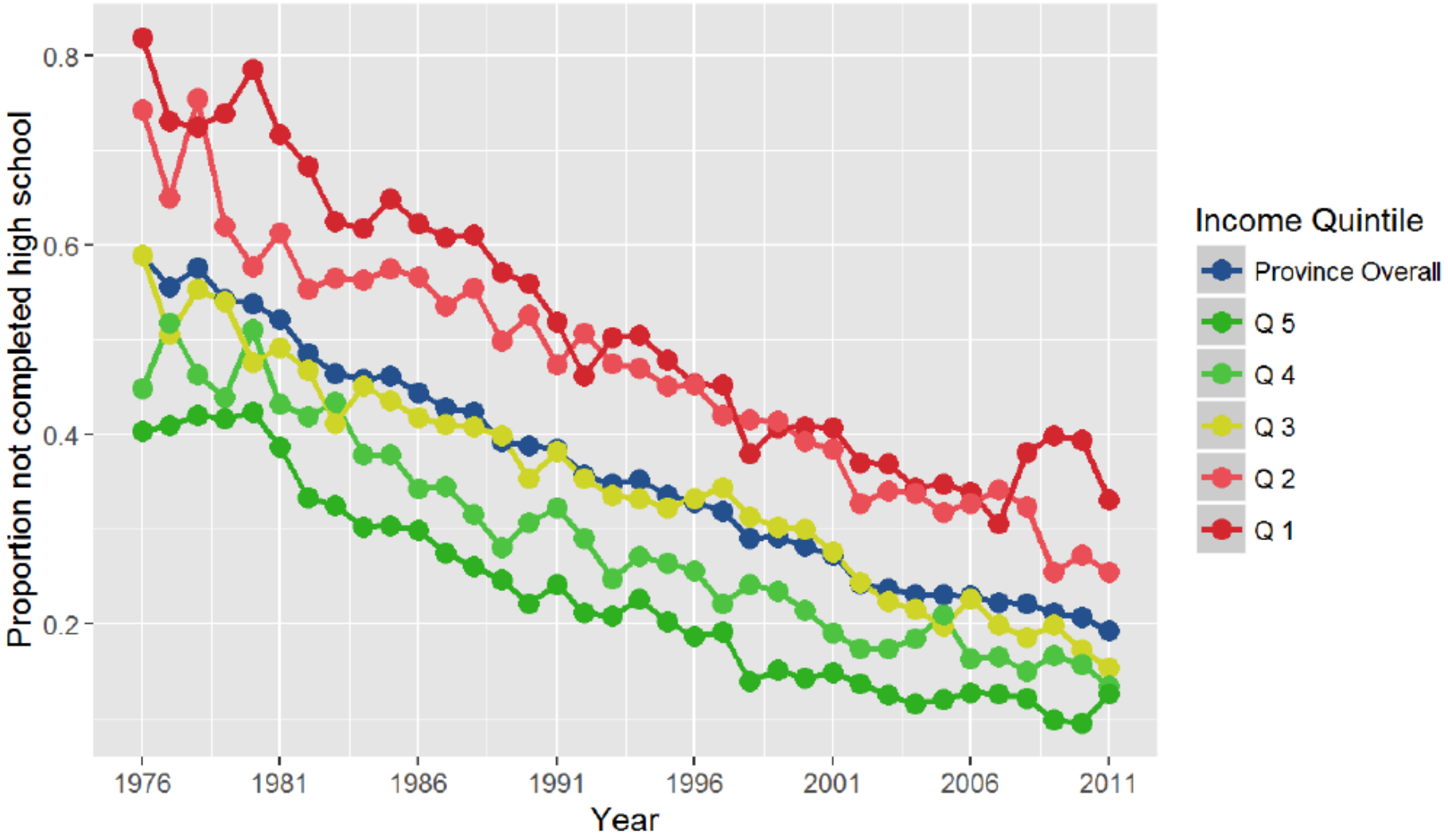


Figure 3. Percent of the population without a high school education by deprivation quintile in Saskatchewan between 1976 and 2011 estimated using data from the Survey of Labour and Income Dynamics.

High Inequality (measured using ALCC)

Prevalence	DRD & DRR Change: Decrease	No change	Increase
Increase		Diabetes Food Security	Self-rated Mental Health COPD
Decrease		Injury	

Moderate Inequality (measured using ALCC)

Prevalence	DRD & DRR Change: Decrease	No change	Increase
Increase		Chronic Stress	Self-rated Health
Decrease		CHF Fruit and Vegetable Consumption	

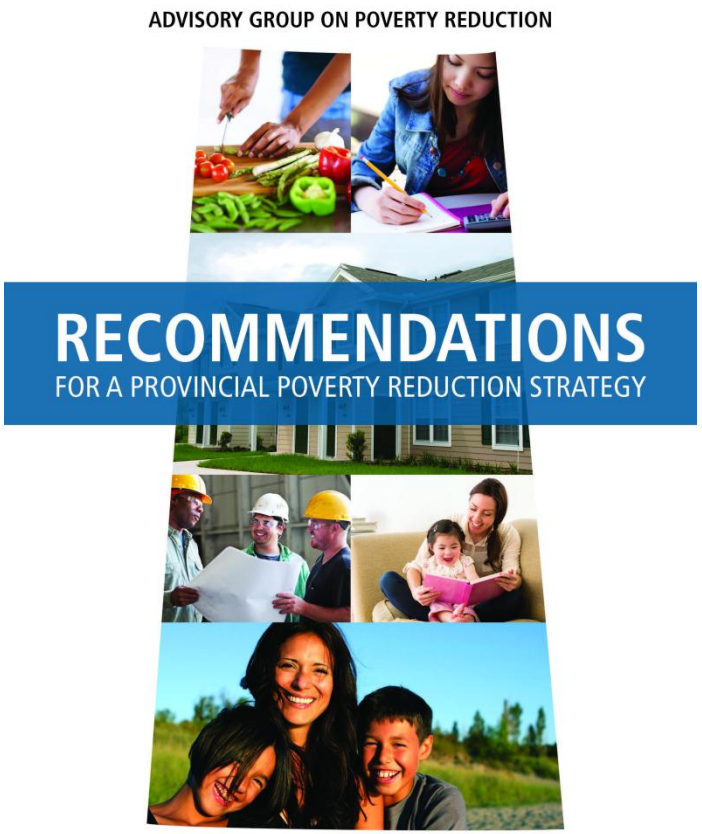
Low Inequality (measured using ALCC)

Prevalence	DRD & DRR Change: Decrease	No change	Increase
Increase	Mood Disorder Mental Disorder		Mortality
Decrease	Asthma CAD		Smoking

Table 2. High, moderate, and low inequality measured using the area level concentration coefficient by prevalence, by change in disparity rate ratio and disparity rate difference.

Recommendations

- 6 areas for initial focus:
  - Income Security
  - Housing and homelessness
  - Early Childhood Development
  - Education and Training
  - Employment
  - Health and Food Security



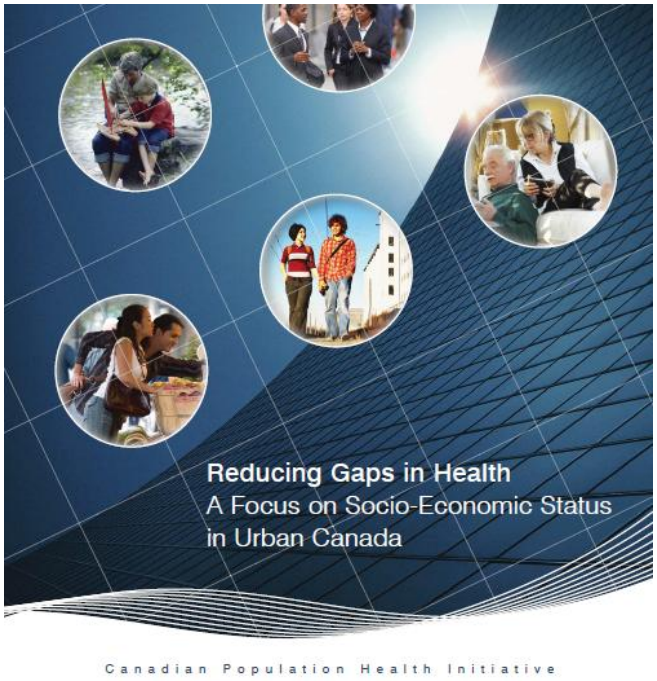
http://www.saskatchewan.ca/government/news-and-media/2015/august/24/poverty-reduction-strategy

Saskatchewan Poverty Reduction Strategy

- Government announced a poverty reduction strategy based on these recommendations in March 2016 during the provincial election.
- Results? Stay tuned! Continued monitoring of this data and the impacts of implemented policy decisions promised by the SPRP and researchers.

Canadian Population Health Initiative & Urban Public Health Network partnership

Reducing Gaps in Health - 2008



Data communication lessons

- Same methodology used for all member cities
- Central spokesperson for national media, but simultaneous local media interviews by all member MHOs across the country on same day
- Still one of the most accessed national reports from CPHI ever.
- Served as catalyst for many more cities' work on health equity

https://secure.cihi.ca/free_products/Reducing_Gaps_in_Health_Report_EN_081009.pdf

National health inequalities data communication examples from Canada

- Public Health Agency of Canada: 1st national report on health inequalities post Rio declaration (www.phac-aspc.gc.ca)
  - 60+ indicators, crossectional analysis by 20+ stratifiers. National level only, several measures of inequality: due fall 2016
- Canadian Institute for Health Information (www.cihi.ca)
  - 17 indicators by income quintile and gender, national and regional/provincial, trend over 5 to 10 years, several measures of inequality
- Researcher reports and interagency studies
  - More in depth analysis of specific topics for various levels of geography
  - E.g. Canadian Council on the SDOH (www.ccsdh.ca)
    - "Communicating the Social Determinants of Health"
    - "Maps to Inform Intersectoral Planning and Action", and others

Evidence of the problem: the Pan-Canadian Health Inequalities Reporting Initiative

Brings together data for **more than 70 health indicators…**

Health outcomes

Including:
- Life expectancy, health-adjusted life expectancy
- Mortality
- Perceived health – physical, mental
- Infectious and chronic diseases

Health determinants

Including:
- Health behaviours
- Access to health care services
- Working conditions
- Physical and social environments
- Structural determinants

…disaggregated by each of **13 social stratifiers meaningful to health equity**

Socioeconomic status
- Income
- Education
- Employment
- Occupation

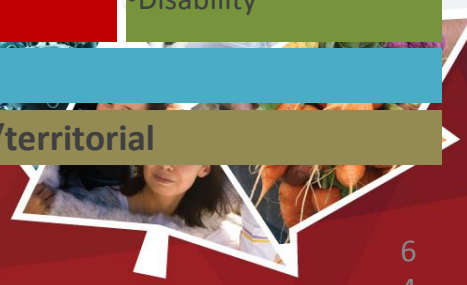
Ethnicity/ race/ indigeneity
- Ethnicity/racial background
- Indigenous identity

Place of residence
- Urban/rural

Other social stratifiers
- Age
- Immigrant status
- Sexual orientation
- Disability

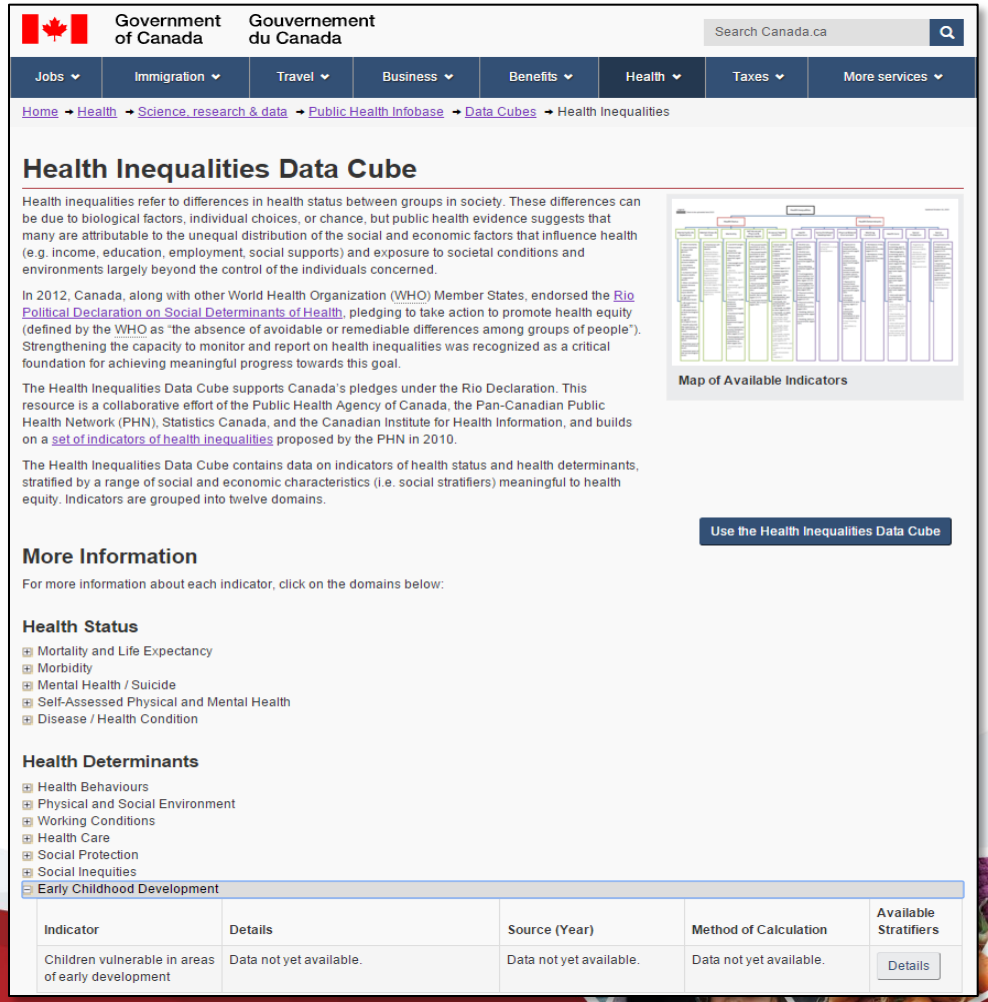
Sex

Jurisdiction: national and provincial/territorial



The Health Inequalities Data Cube

- Interactive data tables for all available indicators and stratifiers
  - Allows users to rapidly access health inequalities data by topic and population of interest
  - Most data available at both the national and sub-national levels

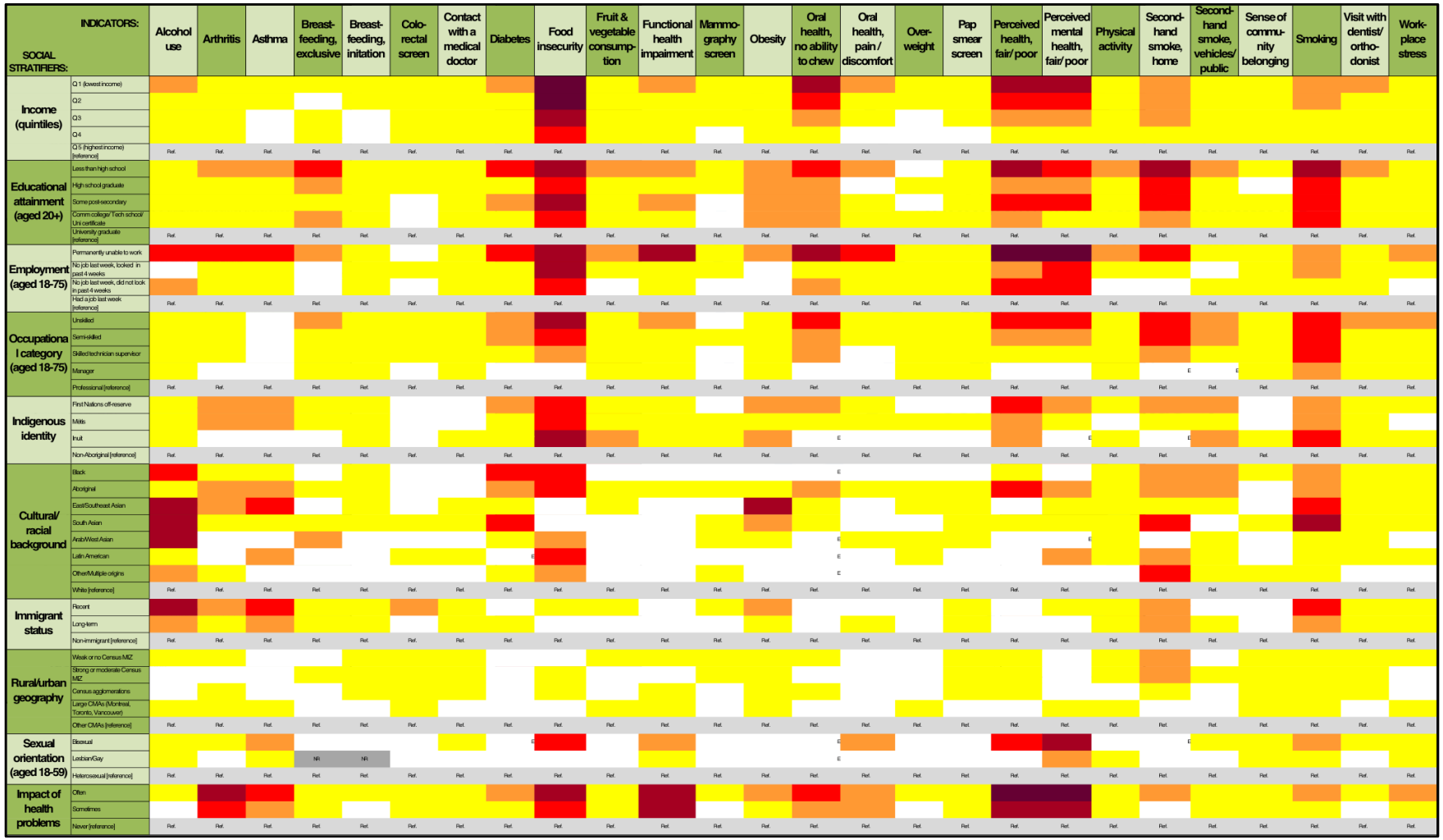


Health inequalities data to support policy and planning

- Access to data and related reporting products can strengthen action on health inequalities by addressing three questions:

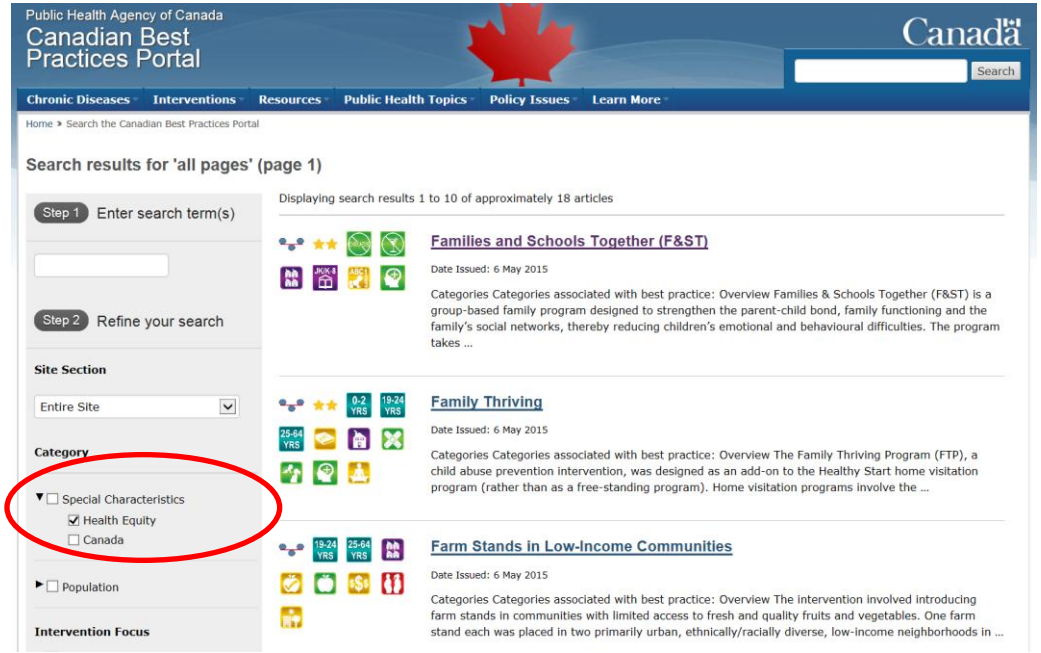
1	**For a given health issue, where are the greatest inequalities?**	*E.g.*	Indicators for **mental health and illness** can help to assess whether inequalities are most pronounced by income, ethnicity/racial background, Indigenous identity, sexual orientation, age, etc.
2	**For which health issue(s) do vulnerable populations experience the greatest inequalities?**	*E.g.*	Examining inequalities data for **Indigenous peoples** or **children** (or visible minority groups, LGBT communities, etc.) can help to direct program and research resources to the health issues for which they experience the most disproportionate risk
3	**How can public health research, programs and services better address health inequalities?**	*E.g.*	Access to data can facilitate health equity integration by: •Improving **policy, program, and planning** decisions •Prioritizing **science, intervention research**, **and surveillance** investments •Supporting **program evaluation**, including relevance and effectiveness for vulnerable populations •Enabling **monitoring of progress** in reducing health inequalities

How evidence can facilitate targeted decision-making on health issues



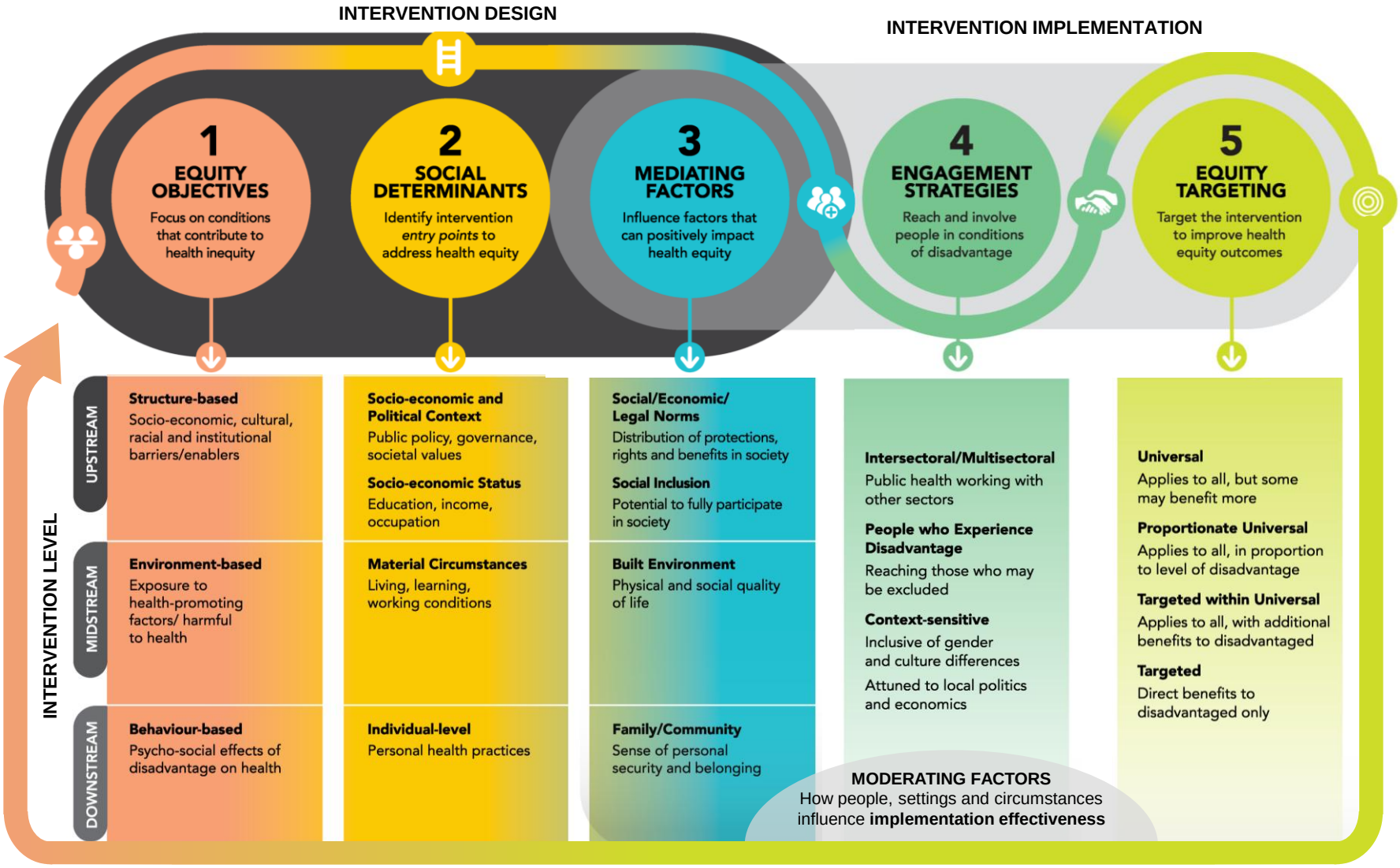
Evidence of what works: equity-sensitive interventions

- Consolidates multiple sources of information to offer a “one stop shop” for health professionals and decision-makers about how to promote health and prevent chronic disease

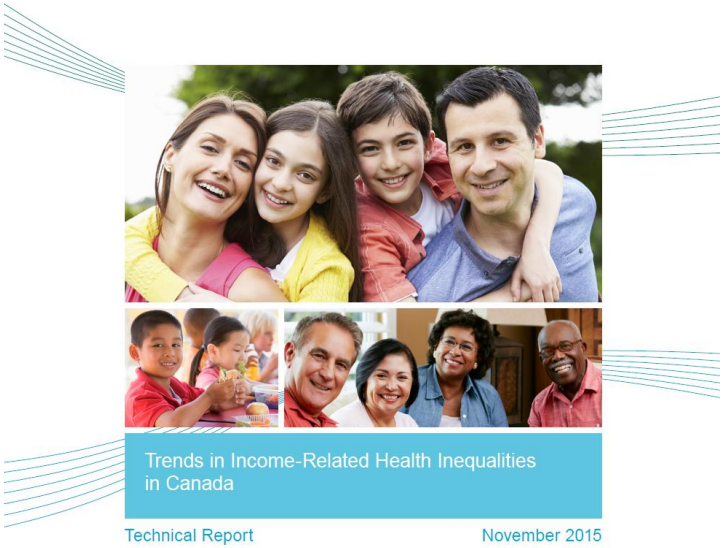


- A key feature is its searchable database of interventions that have been identified as:
  - Best or promising practices
  - Aboriginal Ways Tried and True
  - NEW! Equity-sensitive interventions

TOWARD HEALTH EQUITY: A Practice Tool (condensed)

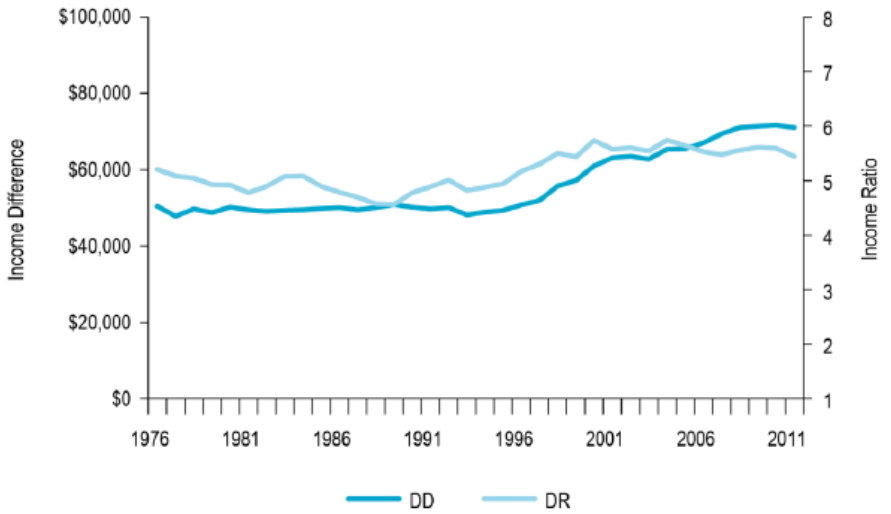


Trends in Health Inequality - 2015



CIHI report – Nov 2015

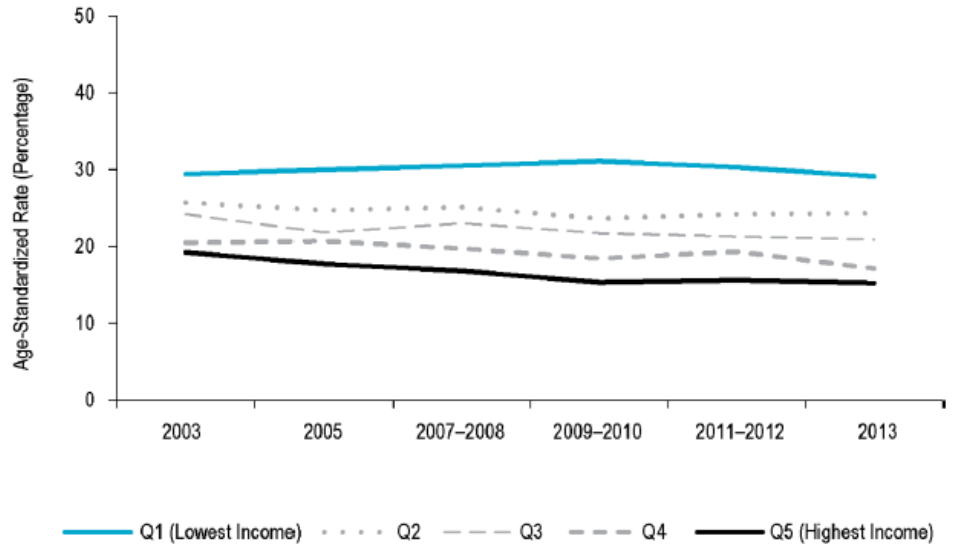
Figure 7: Individual After-Tax Income Inequality Measures (2011 Constant Canadian Dollars), Canada, 1976 to 2011



	1976	1993	2011	Change Over Time: Direction	Change Over Time: Percentage	Change Over Time: Difference
Income Ratio (Q5 ÷ Q1) (95% CI)	5.20	4.82* (4.73 to 4.91)	5.44* (5.31 to 5.58)	↑	13.0* (12.3 to 13.7)	0.63* (0.59 to 0.66)
Income Difference (Q5 − Q1) (95% CI)	50,400	48,100* (47,300 to 48,900)	71,100* (69,600 to 72,600)	↑	47.8* (44.0 to 51.6)	23,000* (21,400 to 24,600)

CIHI report 2015

Figure 35: Smoking Prevalence Rates, by Income Quintile, Canada, 2003 to 2013



	2003	2013	Change Over Time		
			Direction	Percentage	Difference
All Quintiles (95% CI)	23.6 (23.2 to 24.0)	20.6 (20.0 to 21.3)	↓	-12.6* (-15.8 to -9.4)	-3.0* (-3.8 to -2.2)
Q1 (95% CI)	29.4 (28.3 to 30.4)	29.1 (27.2 to 30.9)	—	—	—
Q5 (95% CI)	19.2 (18.3 to 20.1)	15.2 (14.1 to 16.3)	↓	-20.5* (-27.3 to -13.7)	-3.9* (-5.3 to -2.5)

Communicating on the SDOH
(CCSDH report)

- A report on general communications strategies to use for effective communications on the social determinants of health with the public and various audiences
- Similar work from the USA funded by Robert Wood Johnson Foundation
- Also discusses ways to talk about SDOH to various audiences across various spectrums (age, gender, political ideology, public vs private sector etc) by focusing on deep metaphors in your society.

Communication on the SDOH

WHAT TO DO	WHAT TO AVOID:
Use clear, plain language	Technical language or jargon
Make issues tangible with analogies and stories	Abstract concepts or terms
Break down and round numbers; place numbers in context	Complex numbers, or large numbers without any context
Challenge conventional wisdom with one unexpected fact	Exhaustive documentation
Use inclusive language (we, our, us)	Creating distance between groups (them, they)
Identify people by shared experiences	Labeling people by group membership
Prime your audience with a fact, image or story they are likely to believe, based on their values, interests and needs	Facts, images or stories that audiences may find too contentious or extreme to be believable (even if they are true)
Leave the audience with a memorable story or fact that can be easily repeated	Being forgettable
Use a conversational and familiar tone	A clinical or academic tone
Understand your audience—this includes customizing your message by selecting appropriate tools, approaches and information	Assuming the same message will work for all audiences
Prepare your content and presentation	Speaking off the cuff
Focus on communicating one thing at a time	Trying to do too many things at once

Examples

- Politicians:
  - “Elevator pitches”, public opinion polls, briefing notes, small area data and maps of their constituency
- Health System Decision-makers:
  - Drill-down health status reports, infographics; health equity audits, health equity gauge; integration into quality improvement & performance monitoring; position statement
- Public:
  - Media campaigns (build from education about effects of poverty/SDOH on health, policy changes that work, costs of status quo and calls for action

What will you do?

- Small group exercise

Collaborators