Health Equity: Improving the Odds for Priority Populations

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Population Health Priority Populations

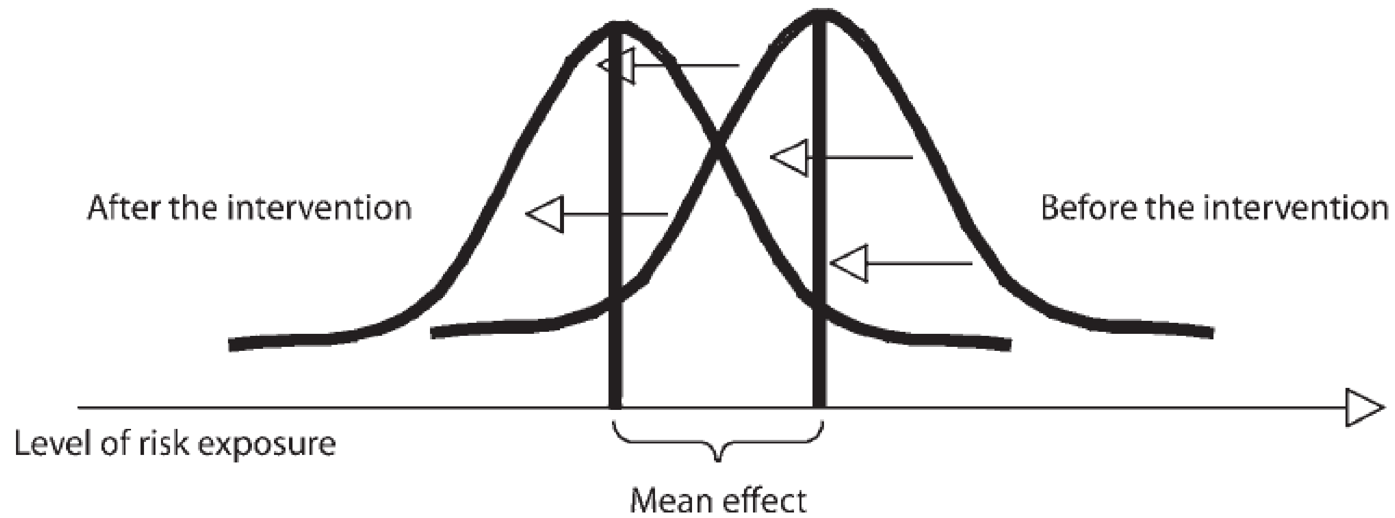
Age and Gender

- Healthy Children
- Healthy Adolescents
- Healthy Adults
- Healthy Seniors

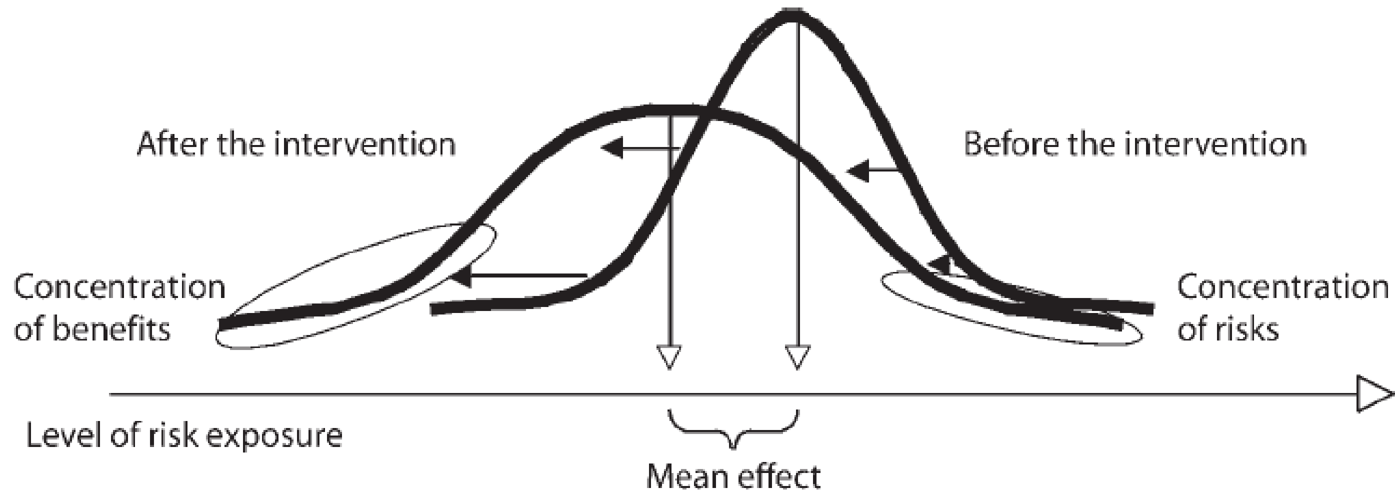
Risk Factors

- Chronic Disease
- Smoking
- Diet/Nutrition
- Exercise

Population Curves



Note. Arrows indicate where the lines of the distribution would be after a population-level approach.



Source. Adapted from Rose.[6(p74)]
Note. Arrows depict the shifting of the curve after a population-level approach. Circles indcate where the variation in risk is most flagrant.

Priority Populations
Vulnerable Individuals / Populations

INDIVIDUAL FACTORS

- personal health practices and coping skills
- healthy child development
- biology and genetic endowment
- gender
- culture
- health services

COMMUNITY FACTORS

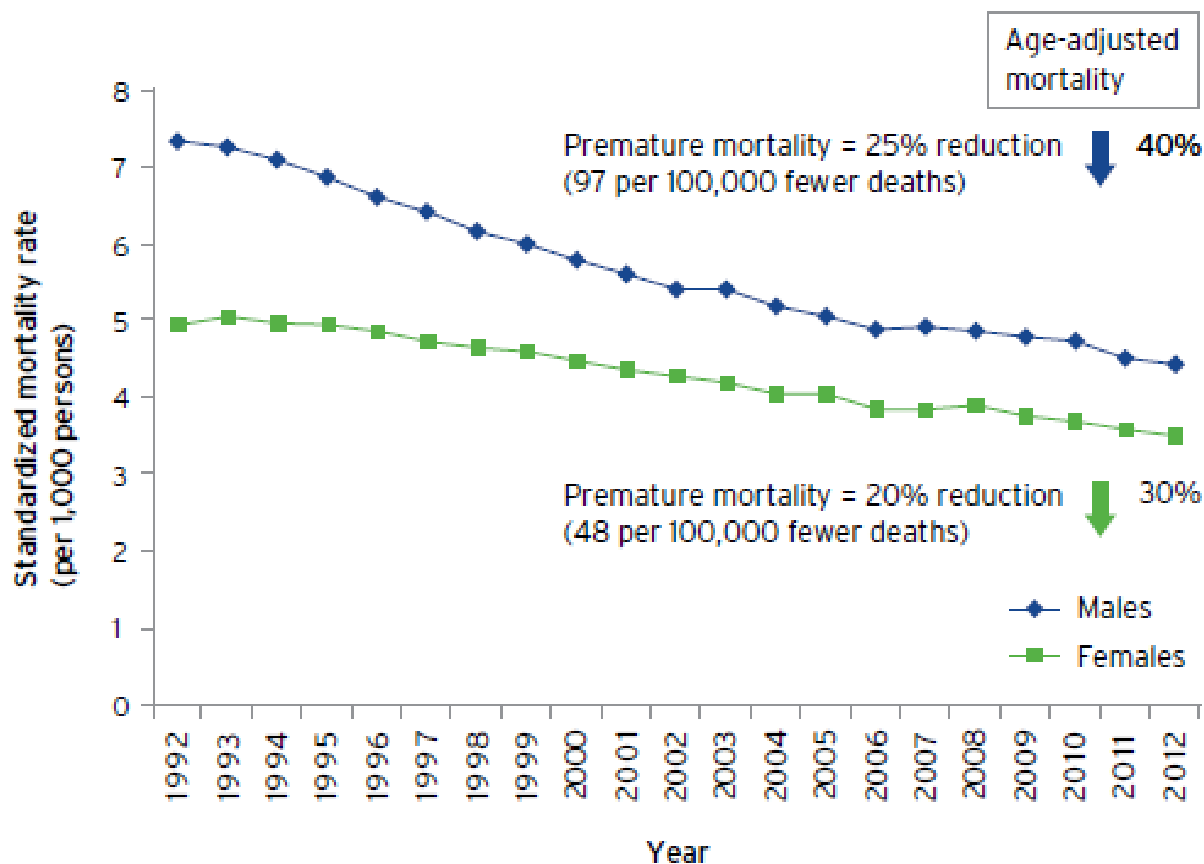
- income and social status
- social support networks
- education
- employment
- social environments
- physical environments

Health Equity: Who is being left behind?

In general, Ontarians are living longer and healthier lives. Our universal health programs and services have benefitted many Ontarians and the data reflects this.

Over the past two decades, mortality rates have steadily declined for both women and men and the gap in life expectancy between men and women has narrowed.

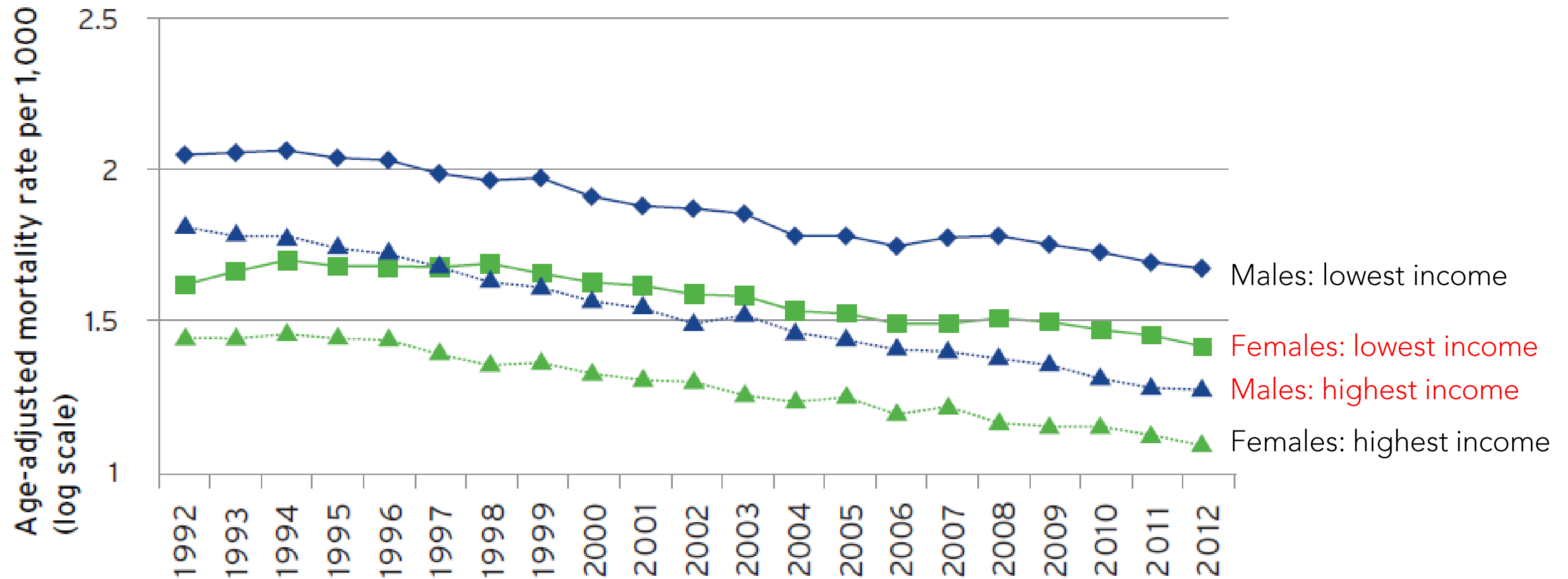
However, populations trends can hide the fact that not everyone is benefitting equally.



*Standardized to the 1991 Canadian population *Rosella LC, Calzavara A, Frank JW, Fitzpatrick T, Donnelly PD, Henry D. (2016). Narrowing mortality gap between men and women over two decades: a registry-based study in Ontario, Canada. BMJ Open, 6(11): e012564

Gaps in health disparity are in fact widening and we are seeing subsets of the population that are being left behind.

DIFFERENTIAL SOCIOECONOMIC STATUS-SEX TRENDS OVER TIME



Rosella LC, Calzavara A, Frank JW, Fitzpatrick T, Donnelly PD, Henry D. (2016). Narrowing mortality gap between men and women over two decades: a registry-based study in Ontario, Canada. BMJ Open, 6(11): e0125641

In the previous two decades, women, regardless of income, lived longer than men.

Today, the gap between poorer and wealthier women and men has grown and for the first time, **low-income women have a higher mortality rate than high-income men**

All Ontarians should have the opportunity to be as healthy as possible

Health: Health is the physical, spiritual, mental, emotional, environmental, social, cultural and economic wellness of the individual, family and community

Health equity means all people can reach their full health potential and are not disadvantaged from attaining it because of their race, ethnicity, religion, gender, age, social class, socioeconomic status or other socially determined circumstance.

Health inequity: refers to differences in health associated with social disadvantages that are modifiable and considered unfair.

Special Populations

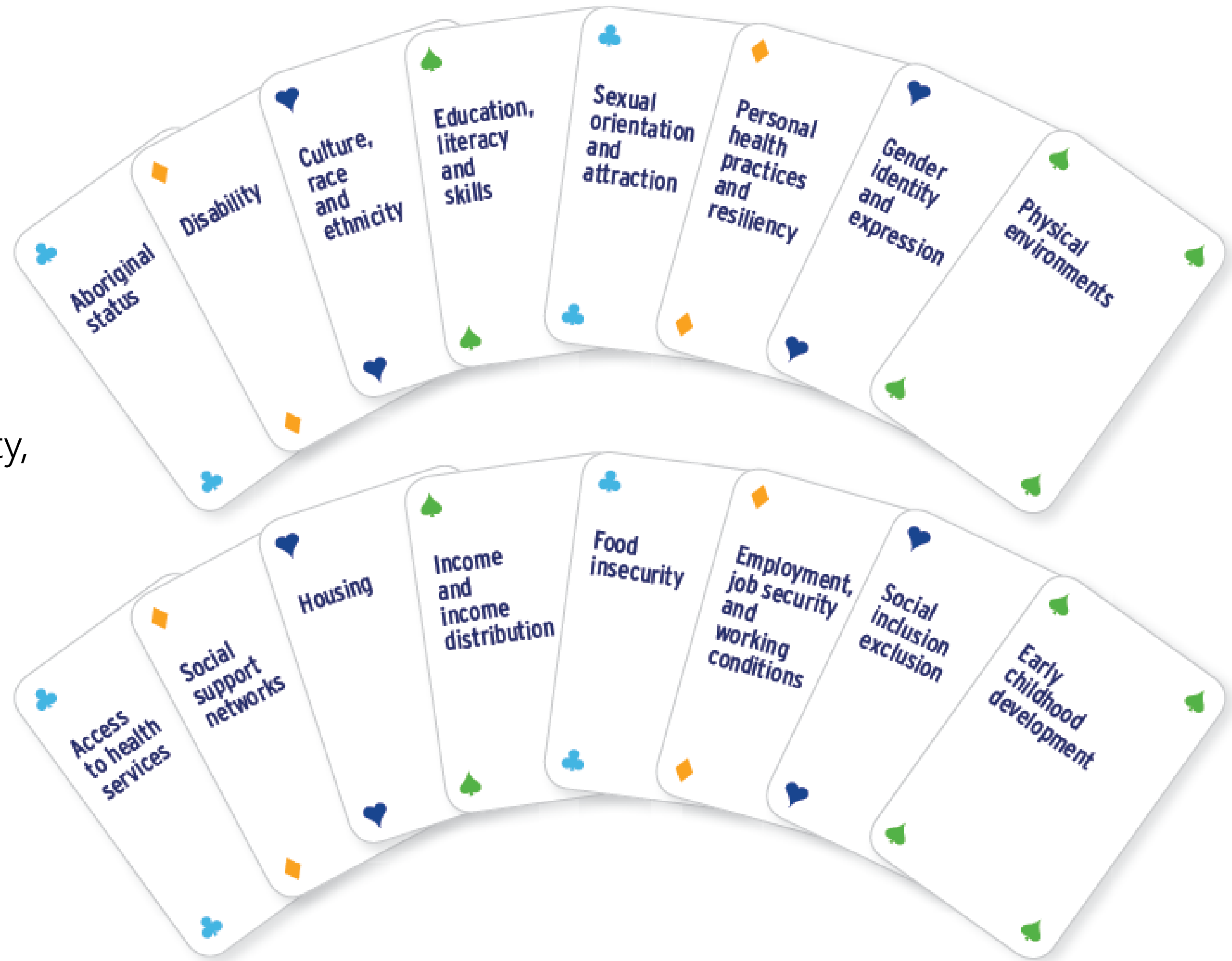
Priority populations are individuals or groups of people who are experiencing and/or at higher risk of poor health outcomes due to the burden of disease and/or factors for disease; the determinants of health, including the social determinants of health and/or the intersection between them. Priority populations are those who are more likely to benefit from public health interventions.

Vulnerable populations are groups and communities at a higher risk for poor health as a result of the barriers they experience to social, economic, political and environmental resources, as well as limitations due to illness or disability.

Marginalized populations are groups and communities that experience discrimination and exclusion (social, political and economic) because of unequal power relationships across economic, political, social and cultural dimensions.

Health Equity: Improving the Odds of Good Health

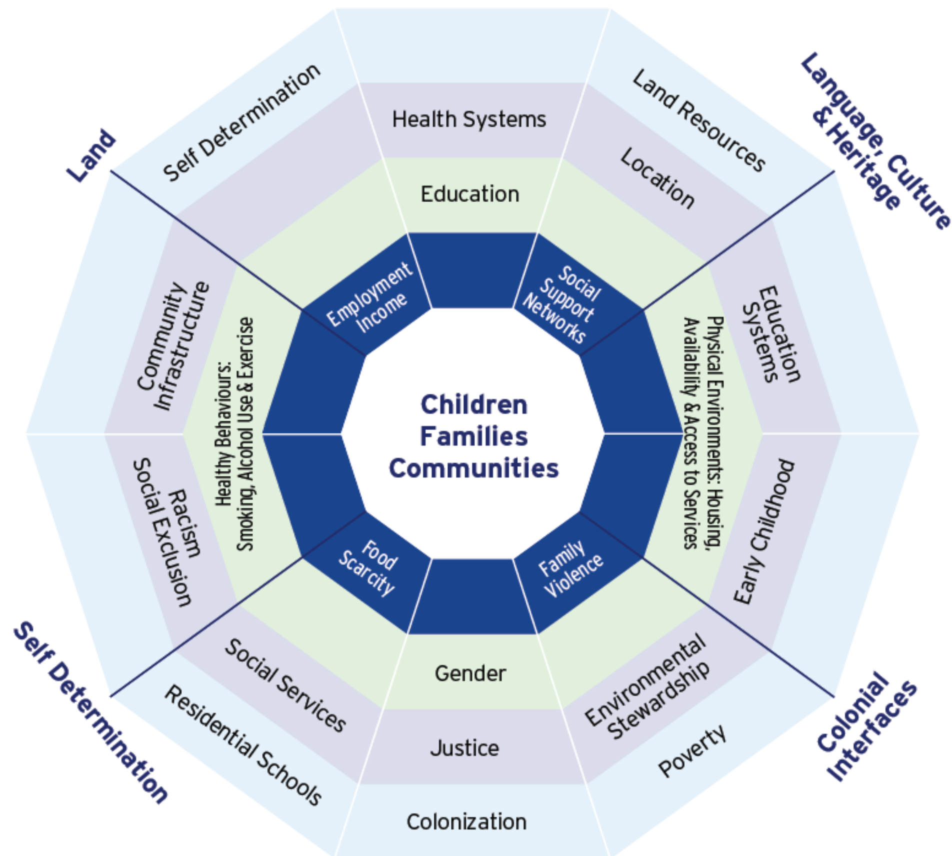
For many, the chances of living a long and healthy life can seem like a rigged lottery or a stacked deck



To achieve health equity, we must tackle inequities that are **systematic, unfair and avoidable**: the ones caused by **social, economic or environmental conditions**

Web of Being: Indigenous Health & Well-Being

The Web of Being illustrates the determinants of health for First Nations, Inuit and Métis and shows how these factors form an interconnected web that affects the health and well-being of Indigenous children, families and communities.



Given the wide range of unique cultural, historical, geographical and socioeconomic challenges facing Indigenous communities, it is important to consider that each community is unique and may require different approaches.

A bottom-up, community-centred approach to public health that reflects the Web of Being is most likely to provide meaningful, positive change.

Collecting Population Health Data

Collecting population health data at the community level is crucial to:

- Target programs and services to neighbourhoods and populations with the greatest needs
- Allocate health resources to the most prevalent and urgent health problems in communities

A community's overall wellness is affected by the health of each neighbourhood

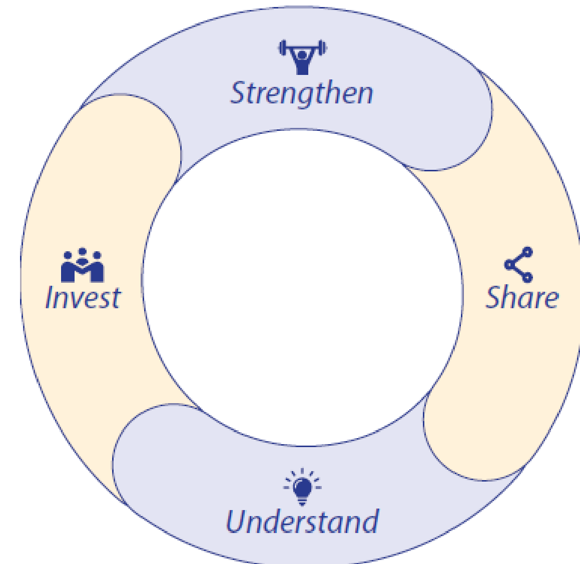
Data allows us to:

Understand our communities

Share with our communities

Invest in our communities

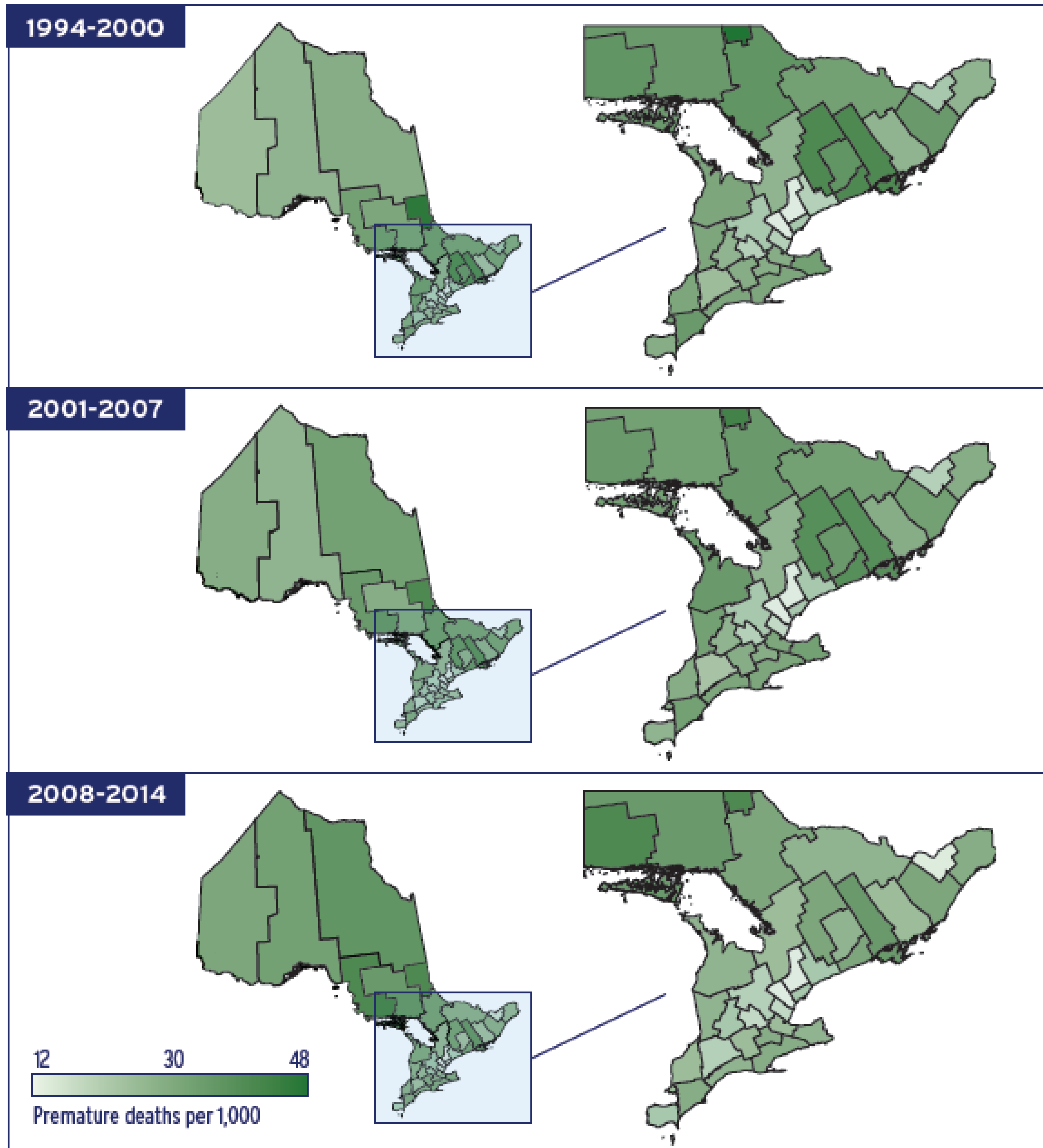
Strengthen our communities



Ontario's Changes

- Variations throughout the Province
- Variations between urban/rural/remote
- Variations over time
- Variations in System and Policy Framework over time

PREMATURE (AGE <75) MORTALITY RATES BY PUBLIC HEALTH UNIT



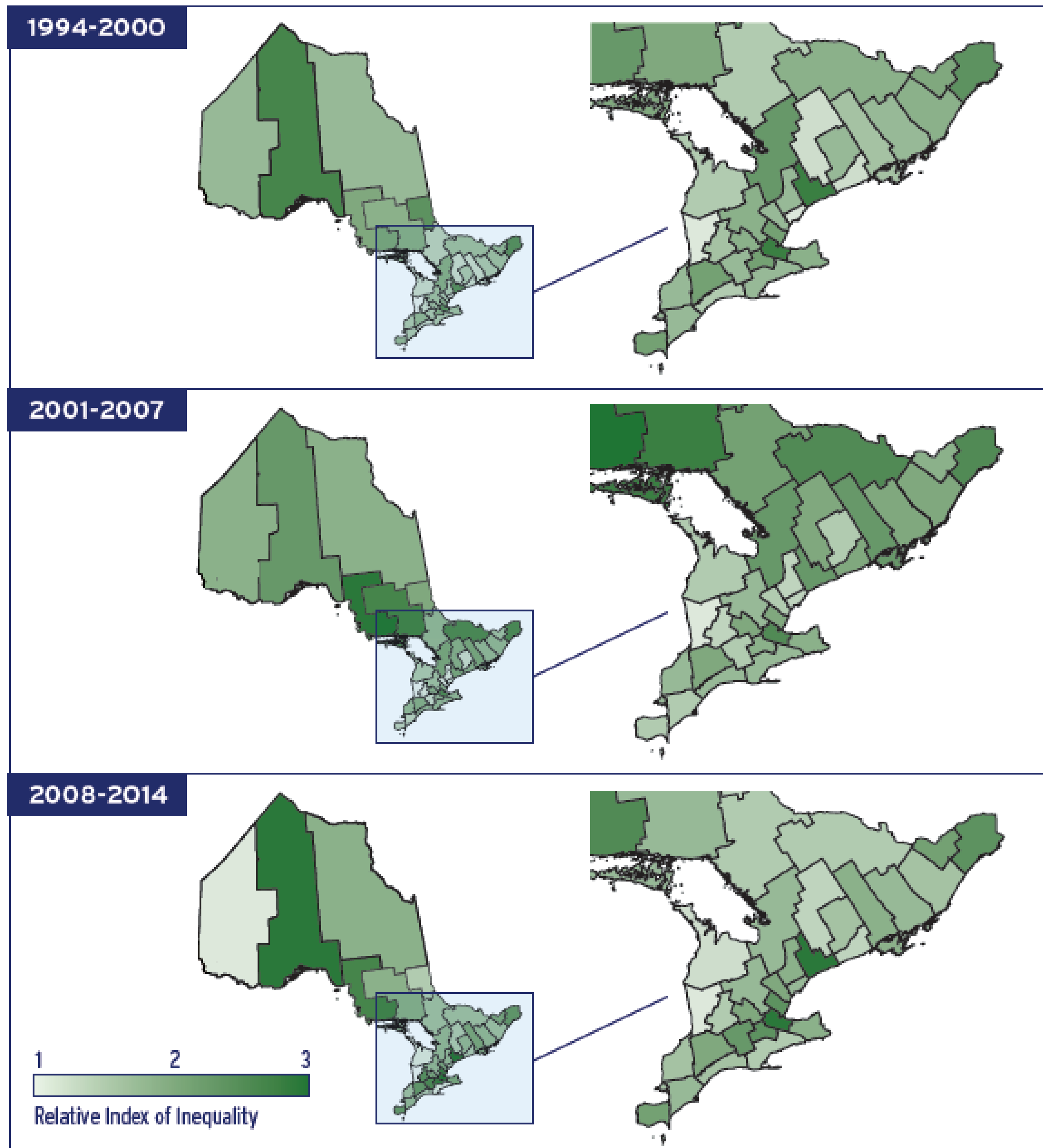
Dr. Laura Rosella provided the data in figure 3. Dr. Rosella is supported by a Canadian Institutes of Health Research Foundation Scheme Grant [FDN-148456] and by a Canada Research Chair in Population Health Analytics.

Premature mortality is an indicator of health inequity and is a measure of unfulfilled life expectancy.

Some parts of the province - particularly in the south - have seen marked improvements in premature mortality rates over time while many in the north have not.

There appear to be systematic unfair barriers to health in the northern parts of the province that must be overcome.

RELATIVE INDEX OF INEQUALITY (RII) BY PUBLIC HEALTH UNIT



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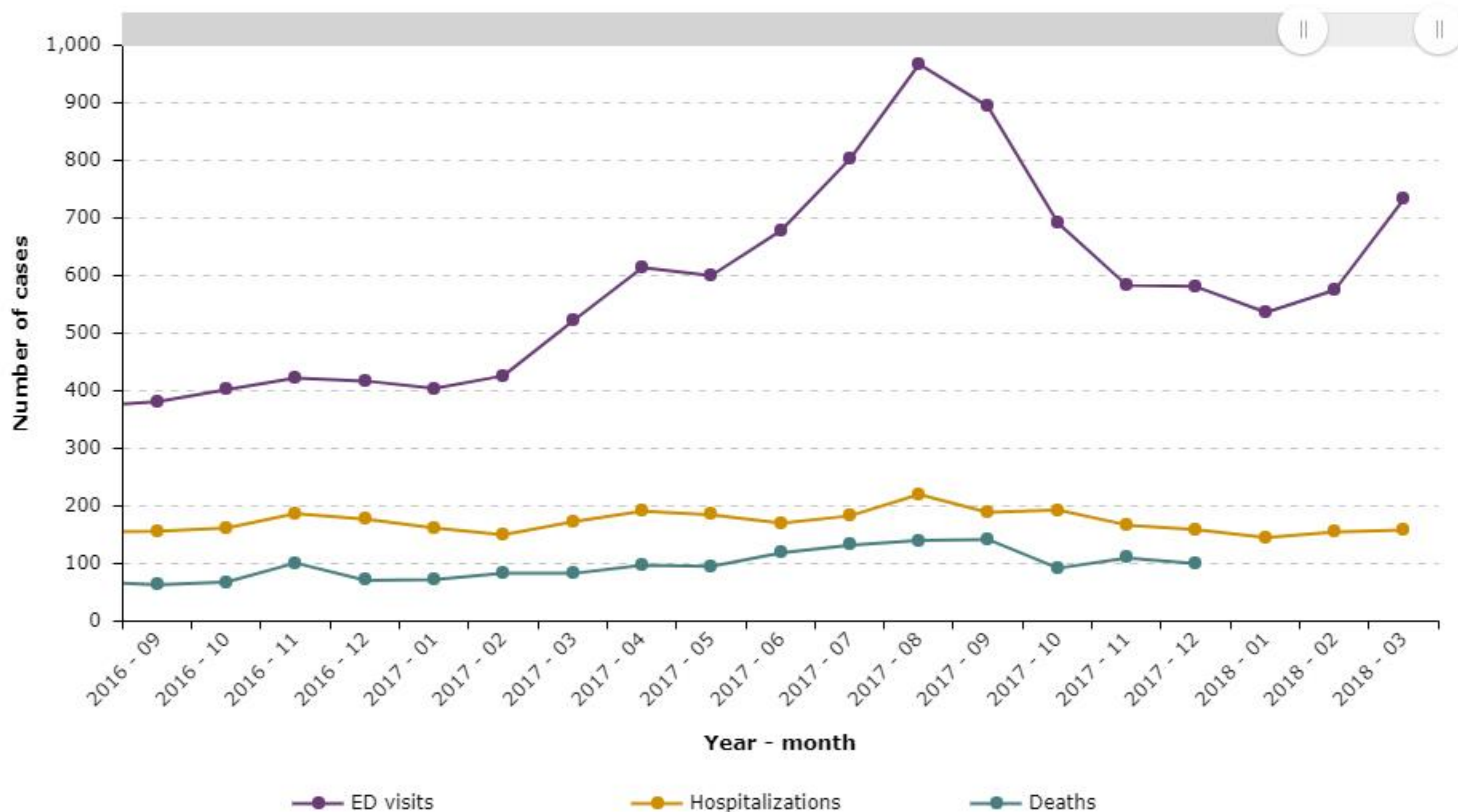
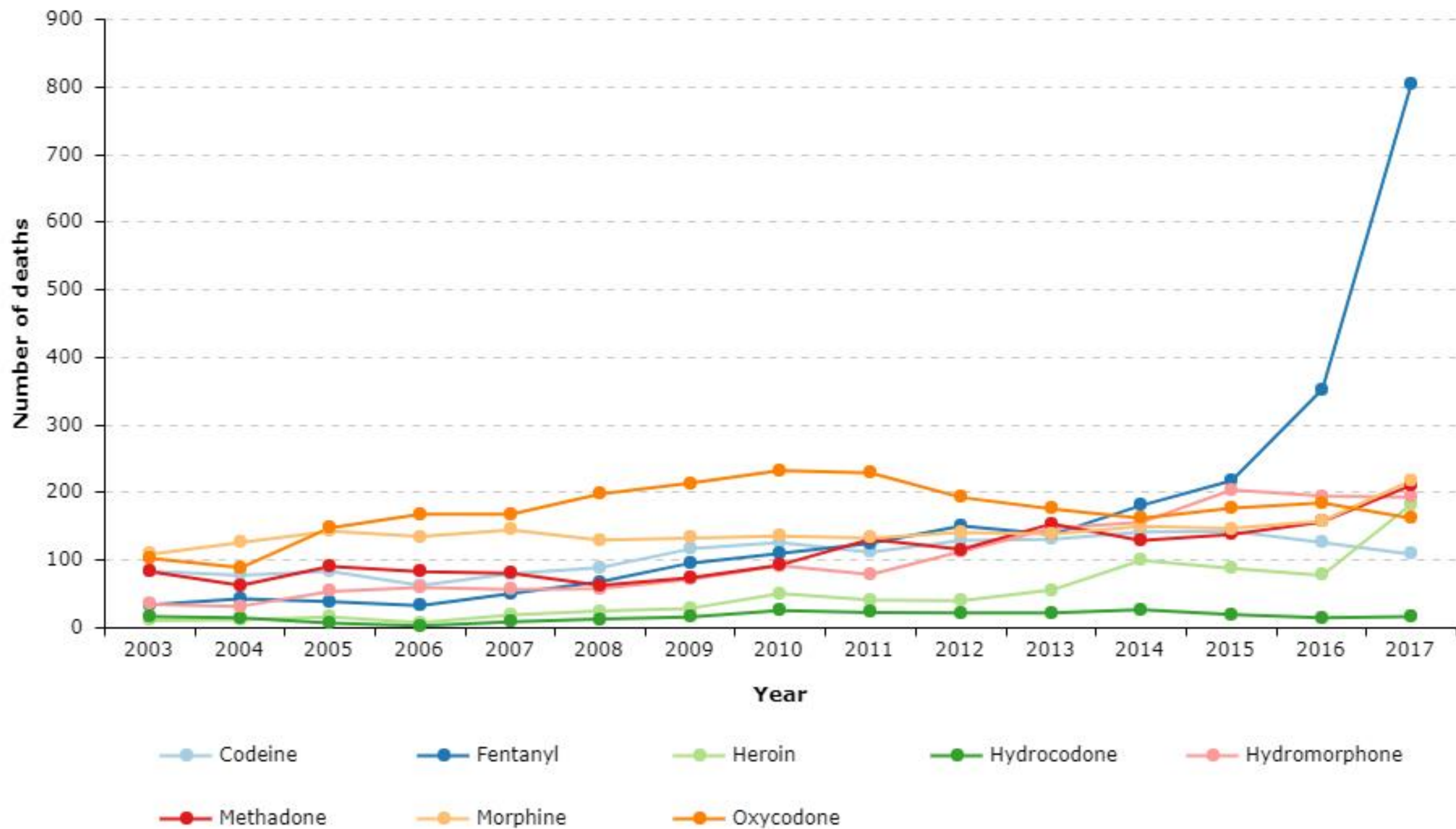
The Relative Index of Inequality (RII) can help identify, within a given population, the impact of social, economic and environmental health disparities, where these disparities are occurring and who is the most affected.

Compared to the premature mortality rates in the previous maps where the entire north faced larger disparities, the RII maps indicate that certain northern regions, such as Northwestern and Timiskaming have seen a decrease in their RII.

It appears that some measures of equity in those regions are improving.

Interactive Opioid Tool





Type of opioid present at death,
Ontario, 2003 – 2017
Number of deaths
900
800
700
600
500
400
300
200
100
0
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Year
Codeine
Fentanyl
Heroin
Hydrocodone
Hydromorphone
Methadone
Morphine
Oxycodone

Public Health's Approach to Outbreak Management

When faced with outbreaks of infectious and communicable diseases, public health immediately uses a well-established outbreak approach and protocol.

What we can learn ....

There is evidence that non-communicable threats to health, such as homicides, suicides, drug and alcohol use, smoking, depression sleep disorders and even obesity can also be spread or shared between people in a community

What would happen if clusters of health inequalities were approached with the same sense of urgency as infectious diseases by applying the outbreak approach?

Using the Outbreak Approach for Health Equity

Are there certain neighborhoods or populations facing health challenges that are systematic, unfair and avoidable? Are there clusters of disparities?

Draw experts from the community to assemble a social determinants of health outbreak team.

Put a system in place to keep all partners informed.

Establish a case definition that includes criteria to determine who is a part of the outbreak.

Identify who is directly affected and who has had contact with those affected? Look to broader social networks

Identify a wide range of data sources using the social determinants of health to map the outbreak.

Use the data to target effective interventions for priority groups, neighborhoods or communities.

Determine what factors are driving the outbreak and test ways to reduce or eliminate the factors.

Strategies may include community engagement, development, education and new services.

10. Monitor the Response

Data should be continually collected to monitor the determinants of health and health outcomes.

Health Disparity in Saskatoon

- Comparison of six lowest income neighbourhoods to rest of the city

- Residents in six low income neighbourhoods
  - 1458% more likely to attempt suicide
  - 1389% more likely to have Chlamydia
  - 3360% more likely to have Hepatitis C

- Children aged 10-15
  - 190% more likely to have suicidal thoughts
  - 1140% more likely to be smoking already
  - 80% more likely to be physically inactive

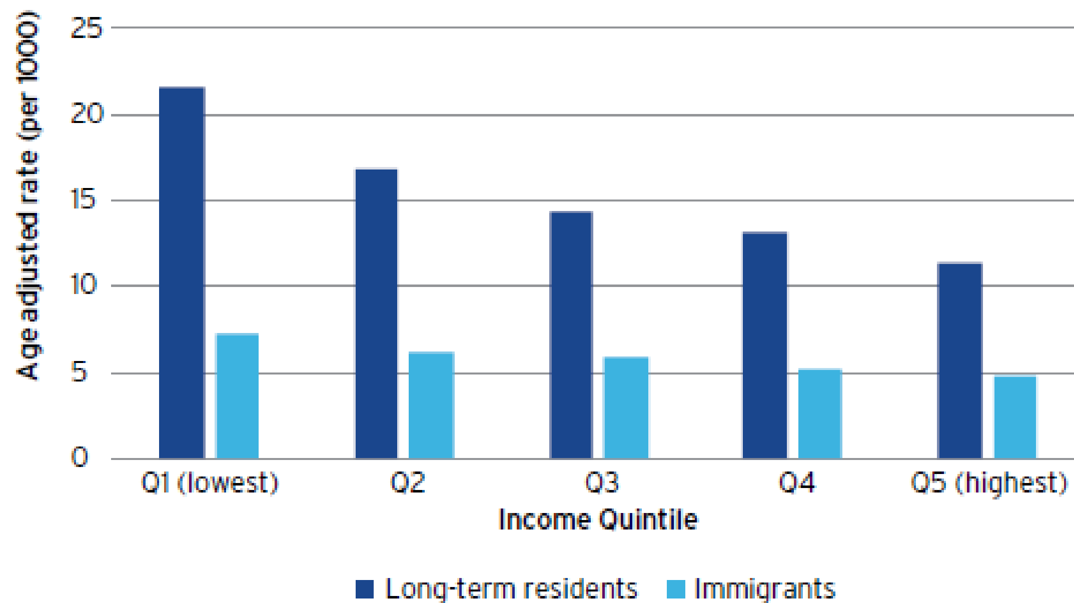
Lemstra M, Neudorf C. Health disparity in Saskatoon: analysis to intervention. Saskatoon: Saskatoon Health Region; 2008.

Using Community Development to Reduce Inequities

Interventions that improve social connection and reduce isolation are protective – even in the presence of other threats, such as low incomes

Well-designed community development initiatives that improve social cohesion may help reduce the impact of inequities

This is well-documented in new immigrants in Ontario, as newcomers are less likely than long-term residents to die prematurely, even though they are more likely to have lower incomes.



Khan AM, Urquia M, Kornas K, Henry D, Cheng SY, Bornbaum C, Rosella LC. (2017). Socioeconomic gradients in all-cause, premature and avoidable mortality among immigrants and long-term residents using linked death records in Ontario, Canada. J Epidemiol Community Health, 71(7):625-632

Looking Beyond the Impact of Income on Health Equity

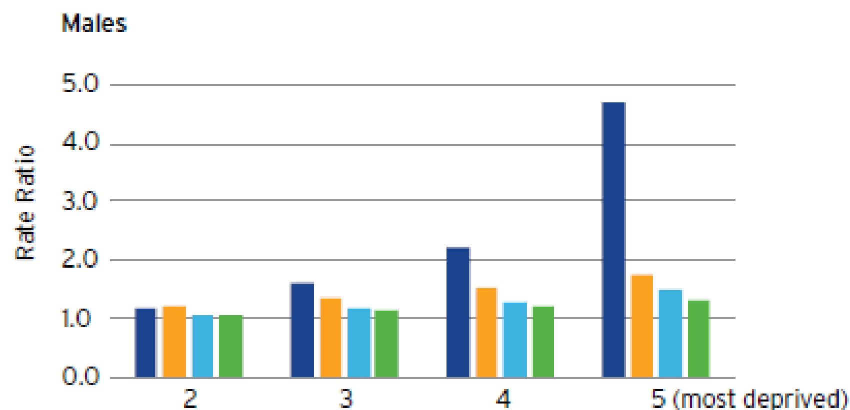
While income is a key driver of health inequity, some causes of premature death are not as income-sensitive as others. Many inequities that put people at risk are outside the health system.

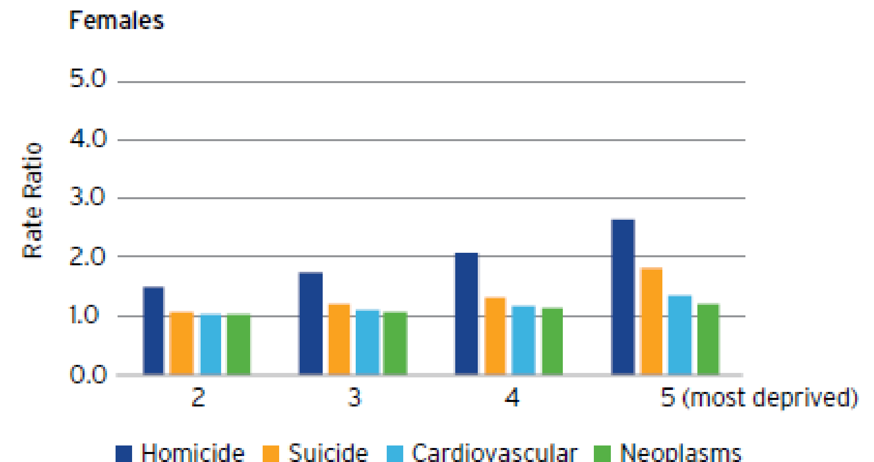
Mortality rates for people at five quartiles of material deprivation illustrates that deaths from cardiovascular disease and cancer appear to be less affected by income than rates of suicide and homicide.

CAUSE-SPECIFIC MORTALITY & SOCIOECONOMIC STATUS

Homicide, suicide, cardiovascular disease, and cancer mortality rate ratios in Ontario by ON-Marg material deprivation index, 1999-2012.

Material Deprivation



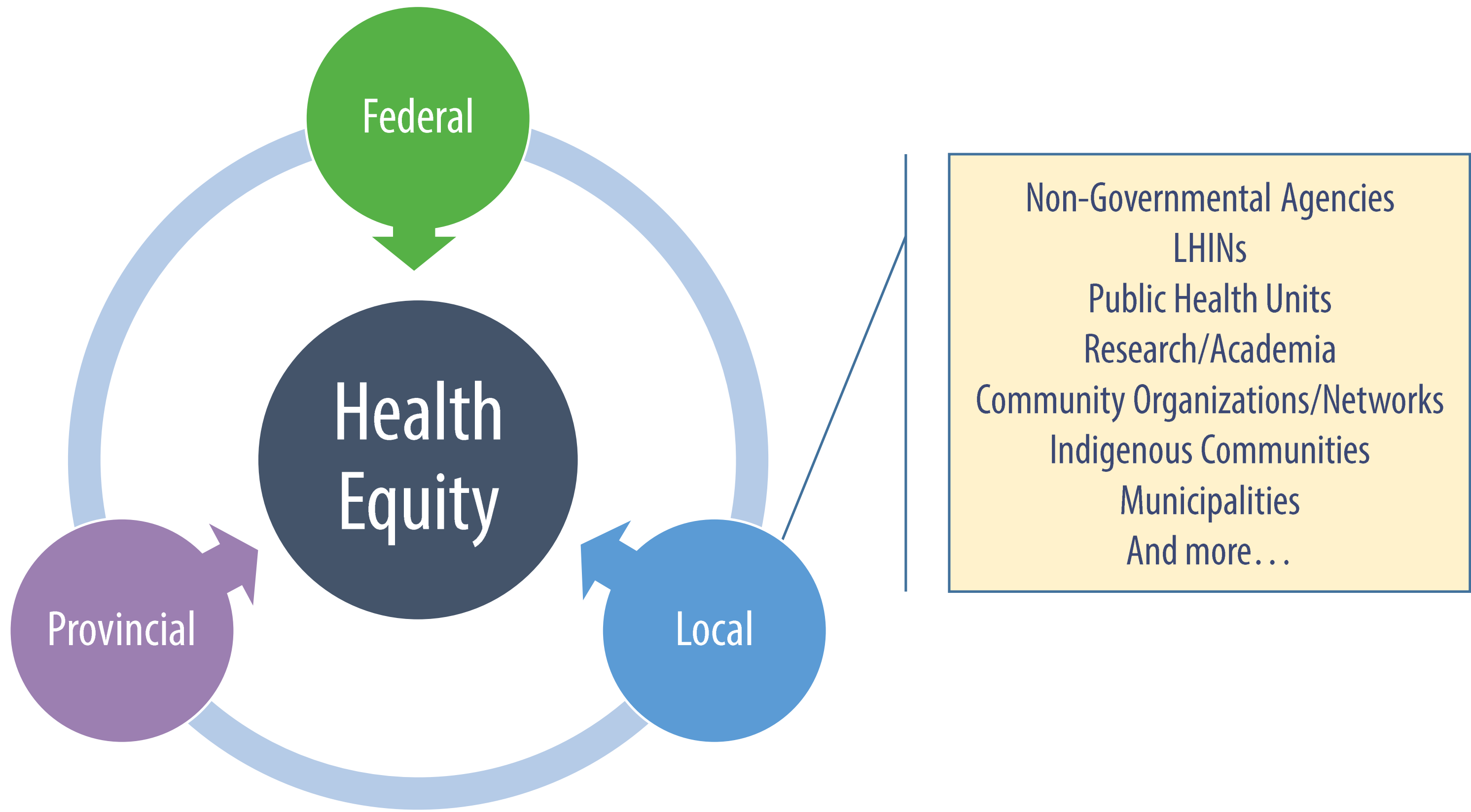


Lachaud J, Donnelly PD, Henry D, Komas K, Calzavara A, Bornbaum C, Rosella L. (2017). A population-based study of homicide deaths in Ontario, Canada using linked death records. Int J Equity Health, 16:133.18
Lachaud J, Donnelly PD, Henry D, Kornas K, Fitzpatrick T, Calzavara A, Bornbaum C, Rosella L. (2017). Characterising violent deaths of undetermined intent: a population-based study, 1999-2012. Inj Prev, pii: injuryprev-2017-042376 [epub ahead of print].

A System-Wide Effort to Improve the Odds of Good Health

Health equity is influenced by more than health – each level of government has different levers and opportunities to improve health equity.

We must work together, across all sectors to improve health equity.



Key Messages

Take Urgent Action :
We cannot afford to wait for and rely on action from others - we have the tools to make a difference for health equity.

Collect Local Data:
Community or neighbourhood level data is necessary to understand health inequities and inform community development efforts

Community Development:
We need to leverage the strengths within our communities to reduce health inequities

Pursue Partnerships:
Work system-wide and government-wide to improve health equity, reach out to sectors beyond health

We have the tools to make a difference.

We all have invaluable knowledge about our communities.

Every individual has a network that they can leverage to bring change.

How can we help ‘improve the odds’ of health equity?

Acknowledgements

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