



Measuring Trends in Health Inequalities in Cities

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Public Health 2018 – CPHA
Montreal, May 30th, 2017



Overview

- Introduce Urban Public Health Network (UPHN) and Measuring Trends in Health Inequalities in Cities project
- Introduce some of the conceptual and methodological decisions MTHIC has made
- Share preliminary results and speculative findings at CMA and CSD levels in survey data



Urban Public Health Network

- Established in 2004, the UPHN is a network of Medical Officers of Health in charge of Canada's largest urban centres
- The network is responsible for the public health of more than 50% of the Canadian population
- The aim of the UPHN to address public health issues that are common to urban populations throughout the country

UPHN cities

- + Surrey
- + Mississauga
- + Laval
- + Longueuil
- + Sherbrooke
- + Fredericton

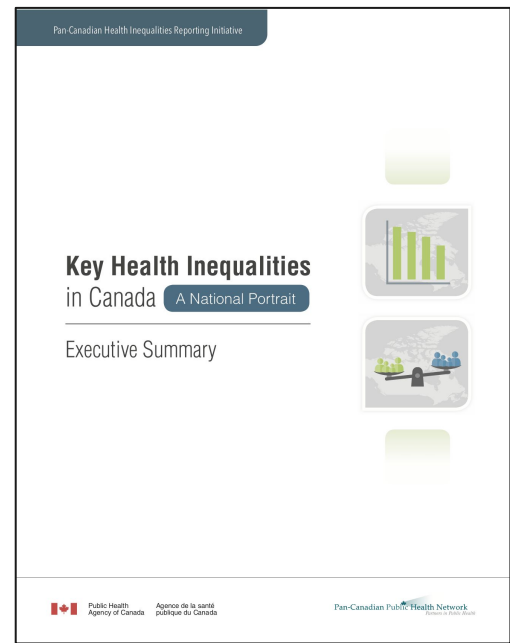
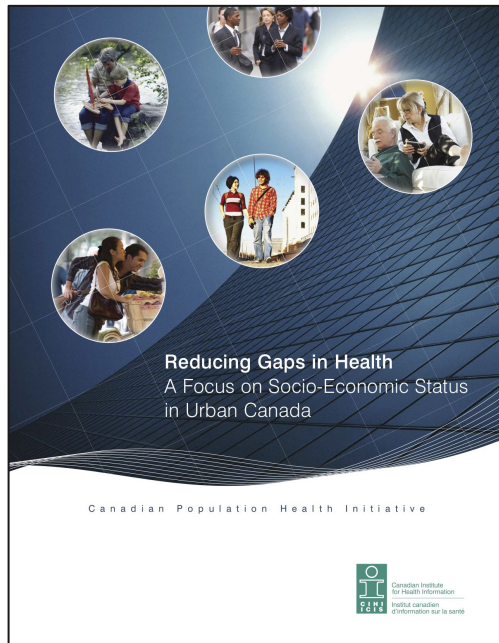




UPHN objectives

1. Share best practices in delivery and evaluation of public health
2. Raising awareness of urban public health issues
3. Fostering collaborative action on issues of mutual interest
4. Advancing policy change by developing a collective voice for urban public health
5. Facilitating research in public health.

MTHIC precedents





MTHIC

- MTHIC stands for “Measuring Trends in Health Inequalities in Cities”
- Project objectives:
 - a. To work with leading Canadian data sources on health to present a national-level portrait of urban health inequalities in the 23 UPHN member cities.
 - b. To help UPHN member cities use these resources and further monitor health inequalities using their own local data sources.
- Partners: Canadian Institute for Health Information (CIHI), Statistics Canada, Public Health Agency of Canada (PHAC), and others.



Health information data sources

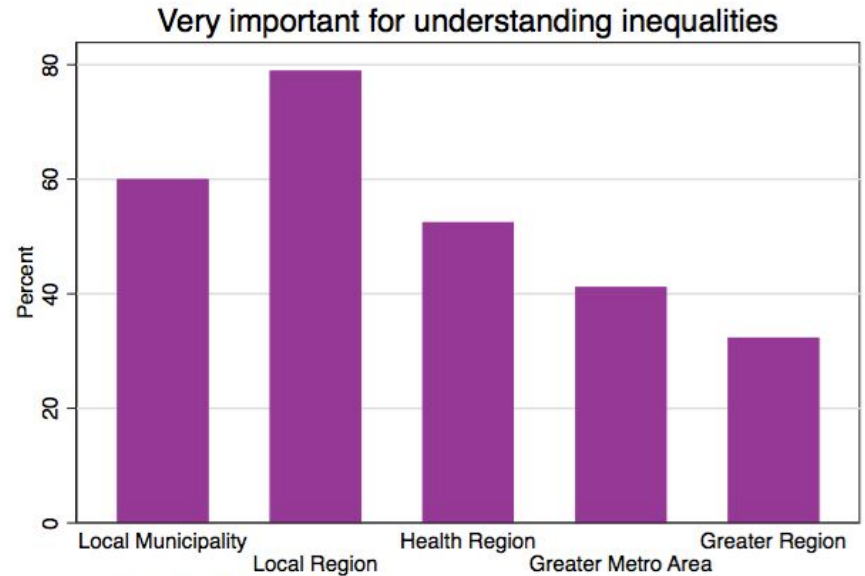
- Hospital administrative data (CIHI)
- Survey data* (Statcan)
- Vital statistics* (Statcan)
- Surveillance data (PHAC and health authorities)

*Available in local University Research Data Centres (RDCs)



What is a city?

1. Inequalities refer to a distribution within a population
2. Which population should we use?
 - a. Census subdivision
 - b. Health Region
 - c. Census metropolitan area
 - d. Census division
 - e. Province



Source: MTHIC-UPHN Consultation Survey



The census metropolitan area (CMA)

- At the centre of controversies around measurement of health inequalities at the city-level is the census metropolitan area
- These are defined by the size and commuting patterns of adjacent municipalities (i.e. census subdivisions)
- For example:
 - “Given a minimum of 100 commuters, at least 50% of the employed labour force living in the CSD works in the delineation core” (92)
- Canada’s largest CMA span multiple health regions and UPHN members



City-level analysis

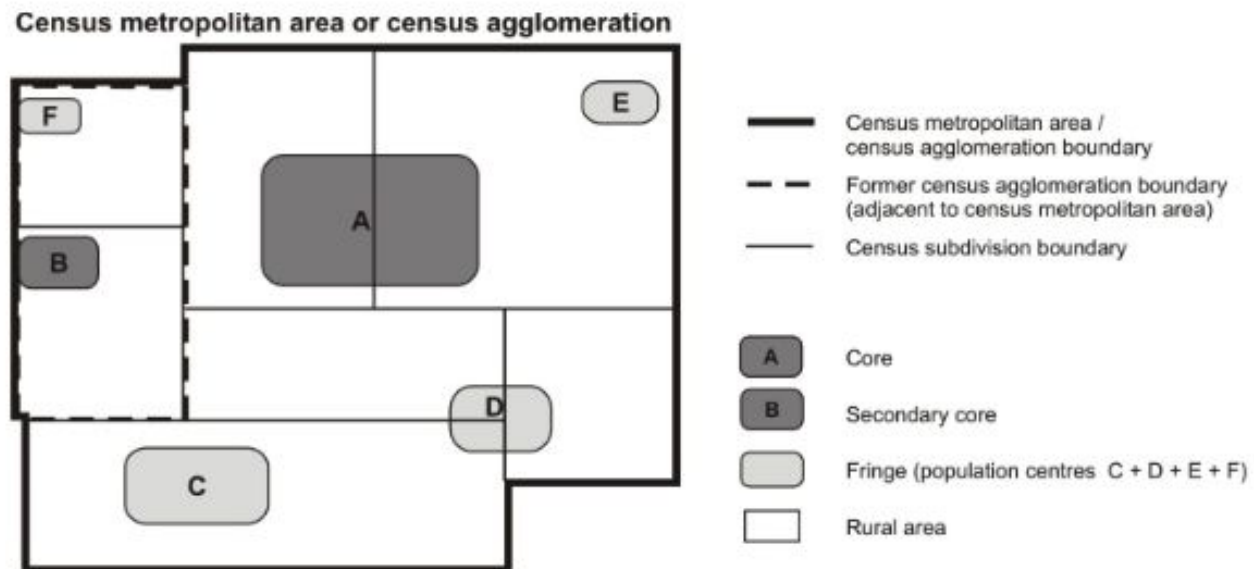
- MTHIC is working on estimating health inequalities for viable cities at CSD and CMA levels
- Three key innovations:
 - a. Taking as our unit of analysis 5-year between census intervals
 - b. Adopting an indicator-by-indicator approach to analysis
 - c. Developing new vetting practices to determine when data is sufficient



What is urban?

- Because of the way in which CMA are defined, they can include substantial rural areas
- We follow the lead of CIHI (2008) and only include neighbourhoods that are identified by Statistics Canada to be population centres:
 - “Area with a population of at least 1,000 and no fewer than 400 persons per square kilometre” (121)
- That is areas within CMA identified as being a core, secondary core, or fringe

Figure 12 Example of a census metropolitan area or census agglomeration, showing core, secondary core, fringe and rural area



Source: Statistics Canada, 2011 Census of Population.



Health inequalities

- Following Asada (2007) we define health inequalities as “differences in health by socio-economic status or social class” (11).
- We operationalize socio-economic status using the area-based measure of average dissemination area income after adjusting for household
- We sort this into five quintiles within CMA
- In PCCF+, this is the variable “QAIPPE”



Quantifying inequalities

There are different ways to summarize inequalities. Two leading measures are:

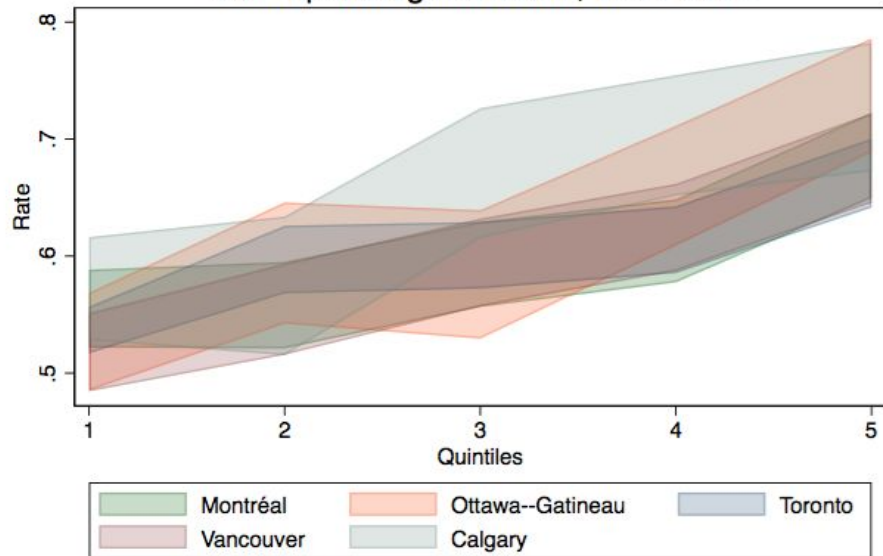
- Disparity rate ratio (DRR): The ratio between the health outcomes of the first and fifth income quintiles
- Disparity rate difference (DRD): The difference between the health outcomes of the first and fifth income quintiles



Preliminary results

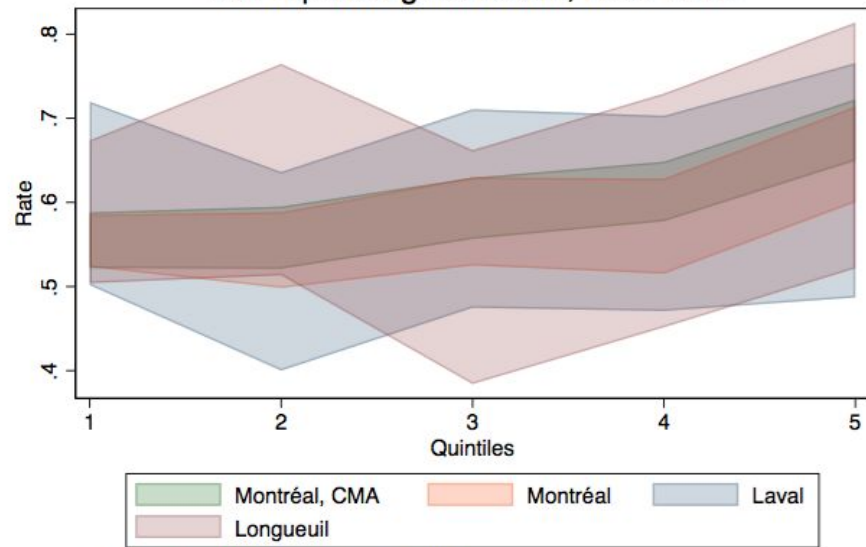
- Early results in the CCHS suggest that there is more variation in health inequalities between CMA than within them
- However, there is also as much variation among CMA within the largest provinces as there is between provinces
- These (early) results point to the CMA as an important and useful level of analysis for understanding health inequalities in Canada

Self-reported good health, 2006-2010



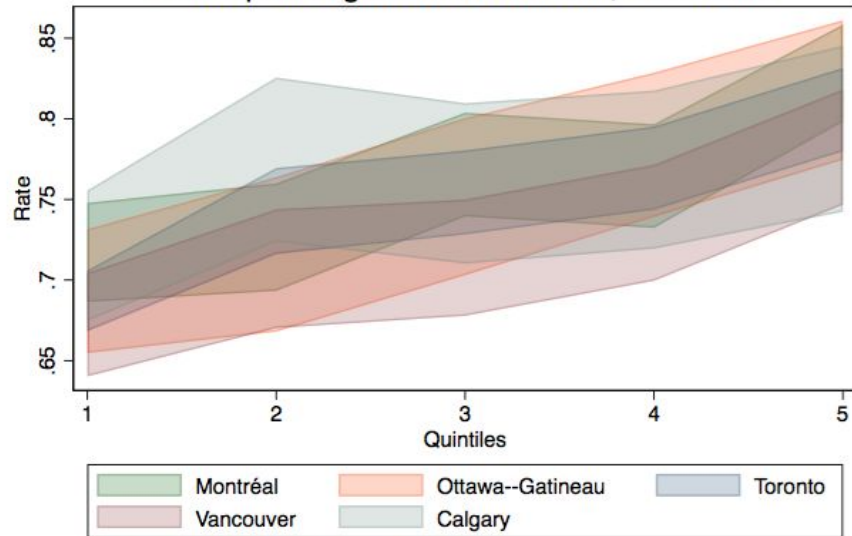
Source: pooled CCHS 2007, 2008, 2009 & 2010

Self-reported good health, 2006-2010



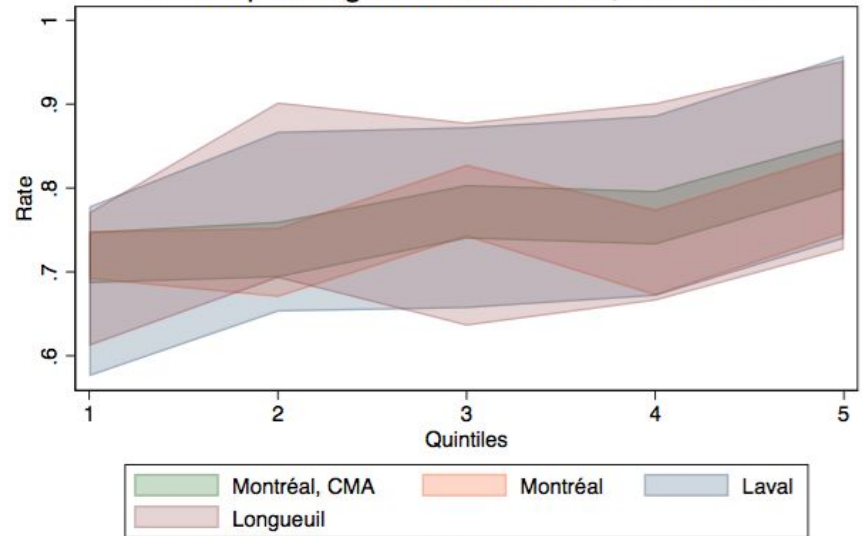
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Self-reported good mental health, 2006-2010



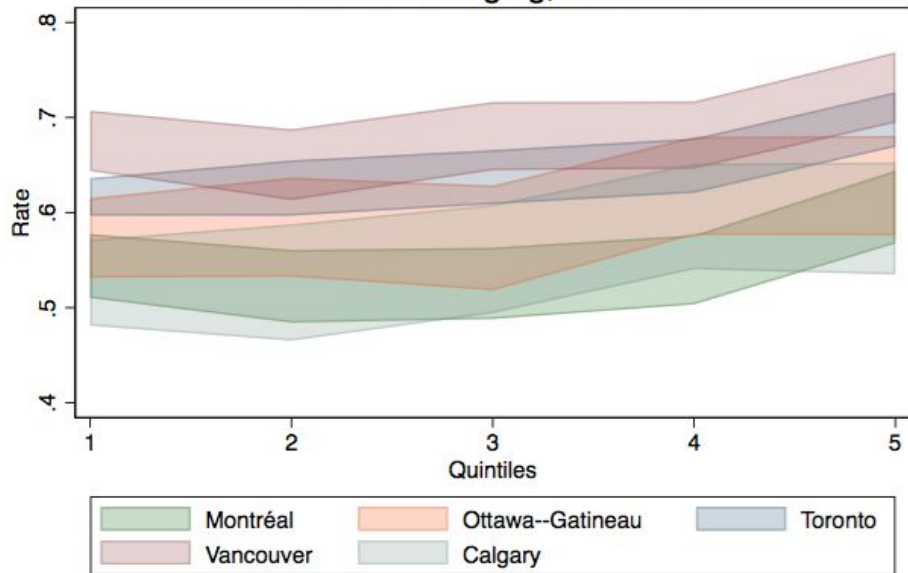
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Self-reported good mental health, 2006-2010



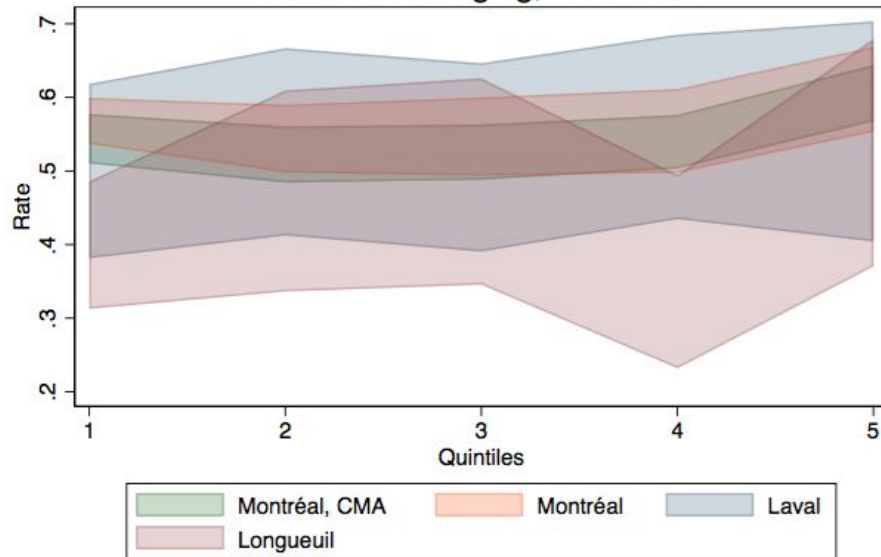
Source: pooled CCHS 2007, 2008, 2009 & 2010

Sense of belonging, 2006-2010



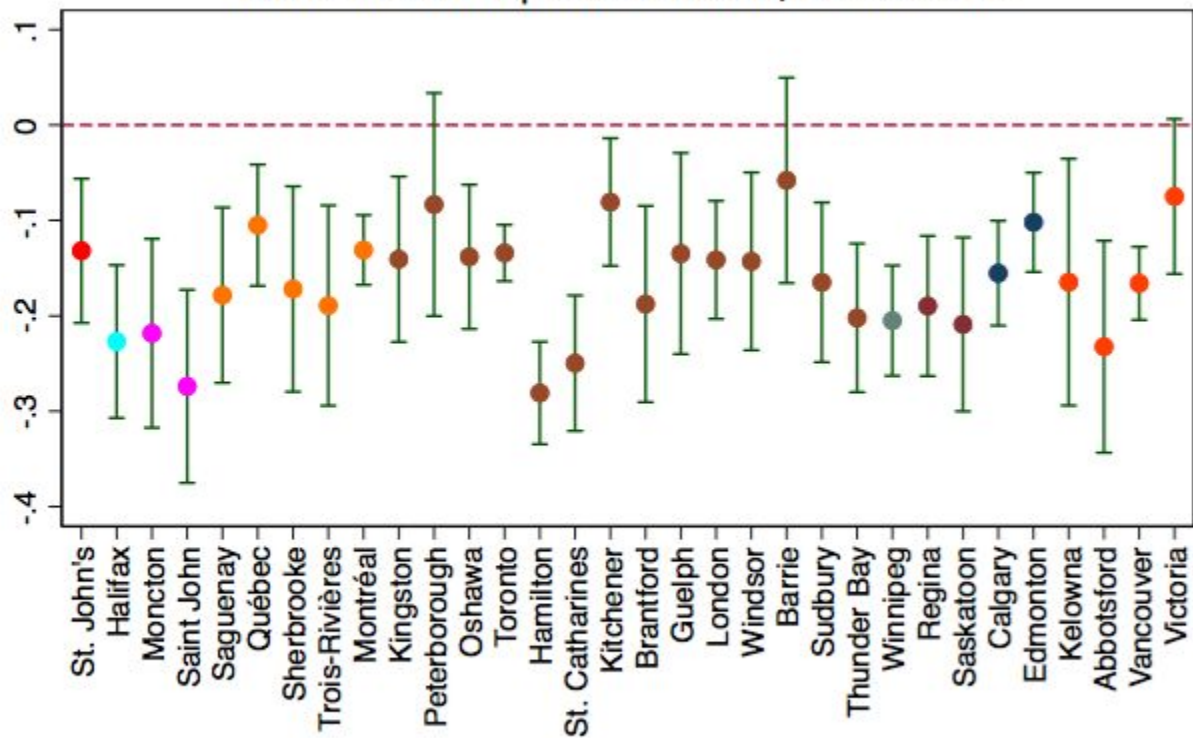
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Sense of belonging, 2006-2010



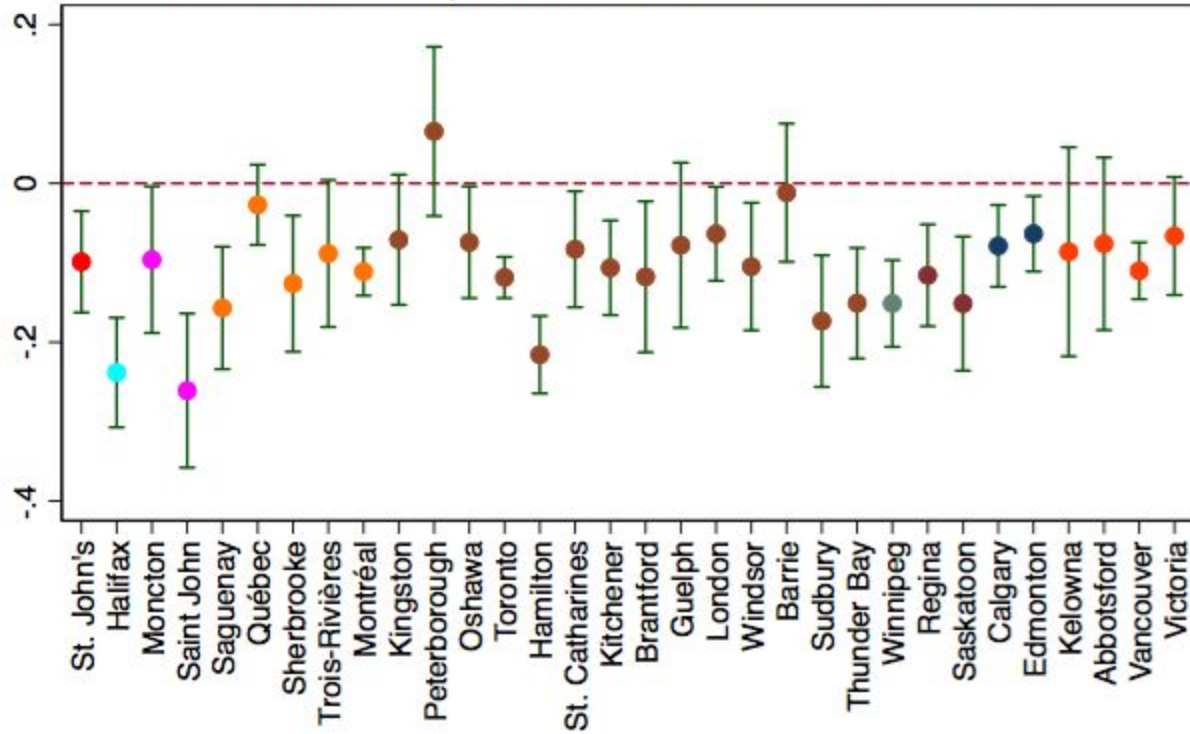
Source: pooled CCHS 2007, 2008, 2009 & 2010

DRD in self-reported health, 2006-2010



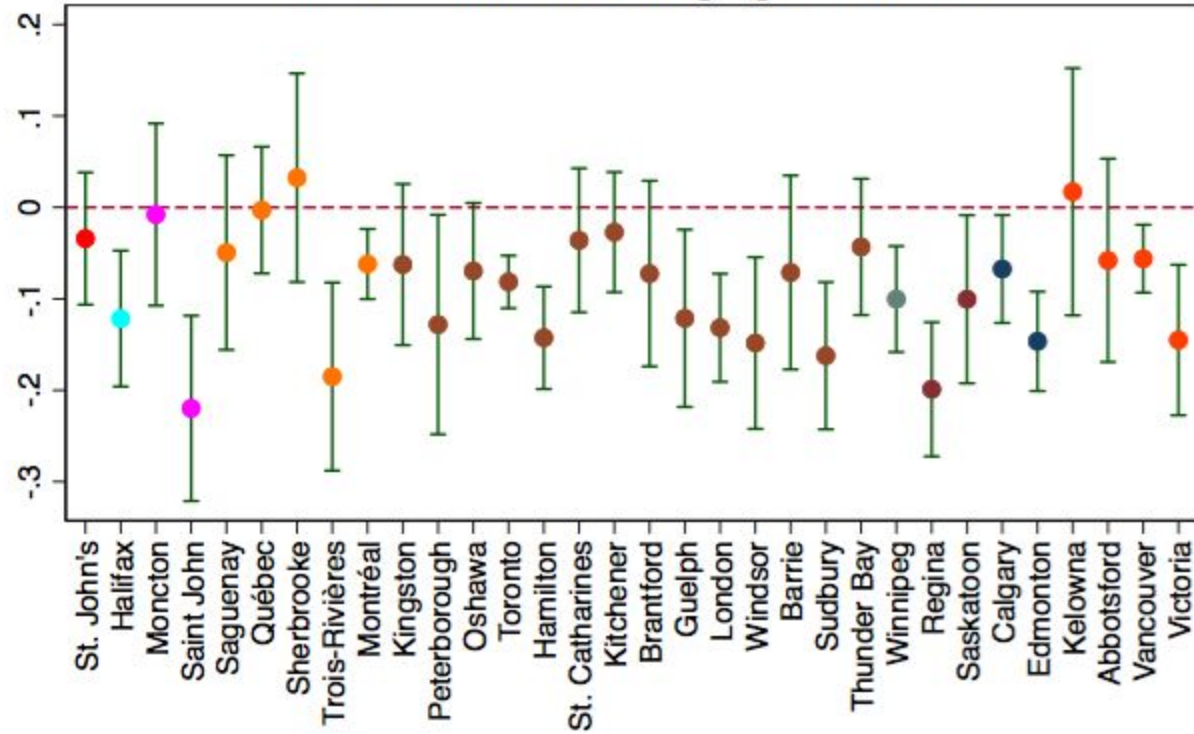
Source: pooled CCHS 2007, 2008, 2009 & 2010

DRD in self-reported mental health, 2006-2010



Source: pooled CCHS 2007, 2008, 2009 & 2010

DRD in sense of belonging, 2006-2010



Source: pooled CCHS 2007, 2008, 2009 & 2010



This design controls for composition

- Note that these results do not mean that there are not large inequalities in health between CSD within CMA
- Just that the health levels of similar neighbourhoods within CMA are comparable regardless of CSD
- Types of neighbourhoods are unlikely to be distributed evenly within a CMA
 - For example, a far greater share of Westmount or Hampstead neighbourhoods will be high-SES than Longueuil



Thank you.

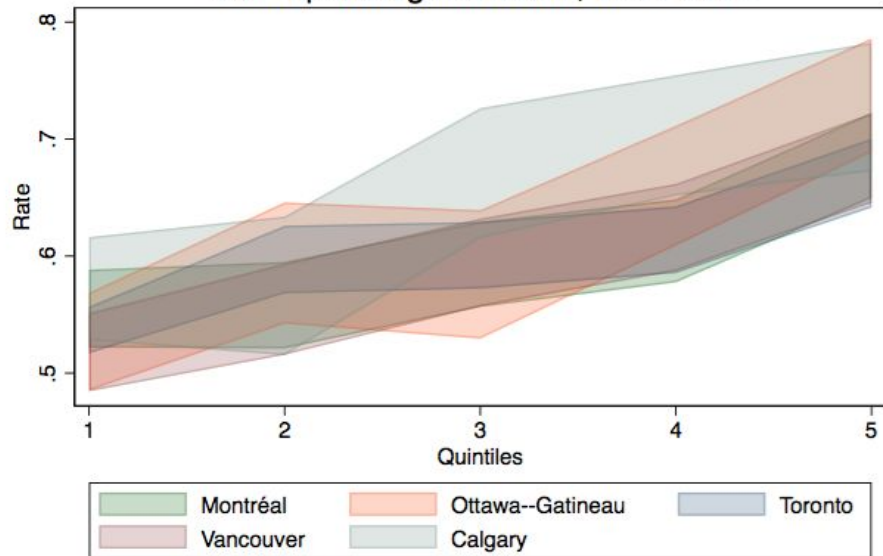
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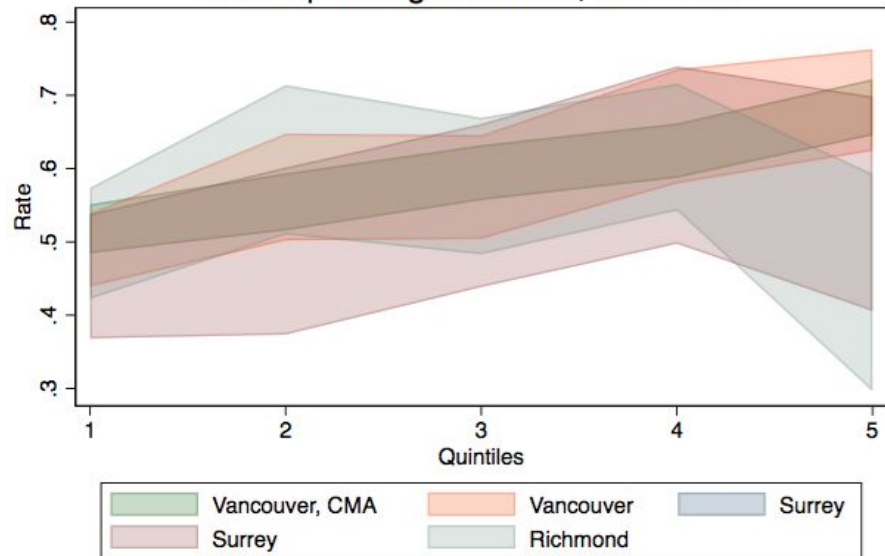
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Self-reported good health, 2006-2010



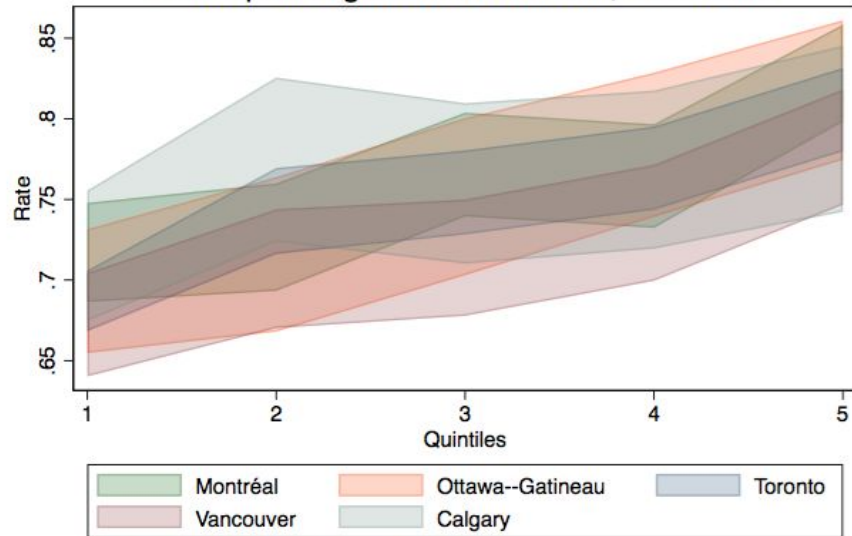
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Self-reported good health, 2006-2010



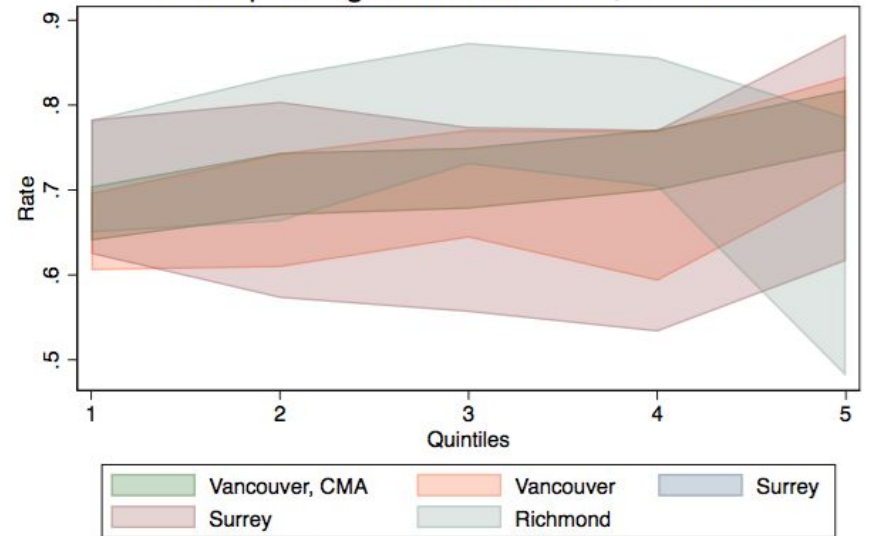
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Self-reported good mental health, 2006-2010



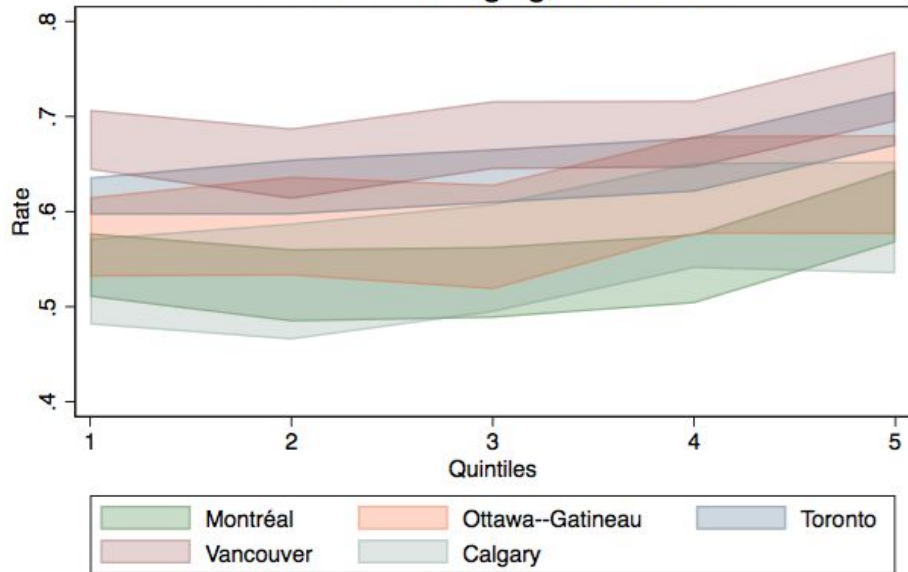
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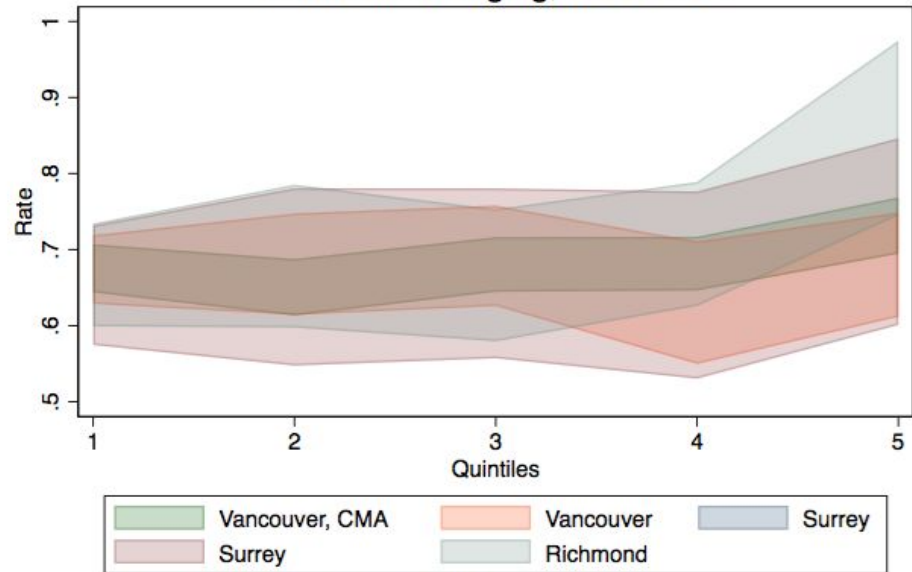
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Sense of belonging, 2006-2010



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Sense of belonging, 2006-2010



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