

A first look at the 2014-2015 Quebec Population Health Survey data from the perspective of linguistic communities

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Context

Since 2010, in partnership:

- Institut national de santé publique du Québec (INSPQ)
- Community Health and Social Services Network (CHSSN)
- Ministère de la santé et des services sociaux du Québec (MSSS)

Main goal: To improve knowledge on the health of linguistic communities in Quebec.

Publications and other work are available online and upon request

Unique expertise, unique access to data



Team with a broad range of expertises:

- Demography, Statistics, Medicine, Public Health, Epidemiology, Geography

As part of our mandates:

- Special access to health data, for instance:
 - Administrative data (e.g. births, deaths, hospitalisations)
 - Census
 - Health surveys (including determinants): e.g. CCHS, EQSP, EQDEM, EQSJS...
- Linguistic community health is a dimension of social inequalities in health that our team studies.

Today's presentation:



- **Goals:**
 - To describe summarily the 2014-2015 Quebec Population Health Survey (Enquête québécoise sur la santé de la population, EQSP)
 - To present a few findings using data currently available, from the perspective of linguistic communities.
 - To explore other avenues for future research and public health surveillance that can be done using data from health surveys.

Quebec Population Health Survey



Cross-sectional survey conducted by the Institut de la statistique du Québec

- 1st edition: 2008 (38,154 participants); 2nd edition: 2014-2015 (45,760 participants)
- Aims at providing data at the regional and local levels.
- Population aged 15 years and older, living in the province of Québec.

Collects information about:

- Health-related lifestyles and behaviors
- Physical and mental health status
- Other health determinants (e.g. age, sex, socioeconomic characteristics, immigrant status)

Current literature on this survey...



A report on the main health indicators for the whole Québec population, prepared by the Institut de la statistique du Québec:

Camirand H., Traoré I. et Baulne J. (2016) L'Enquête québécoise sur la santé de la population, 2014-2015 : pour en savoir plus sur la santé des Québécois. Résultats de la deuxième édition, Québec, Institut de la statistique du Québec.

- Cross-tabs with age, sex, income and level of education
- Differences among linguistic communities have not been studied.
= our objective

A look at a few findings...



Partial list of health indicators and determinants available in the Quebec Population Health Survey 2014-2015 and language spoken at home

HEALTH INDICATORS	% (95% CI)			Health in workplace	% (95% CI)		
	Francophones	Anglophones	Allophones		Francophones	Anglophones	Allophones
Global and oral health							
Perceived global health				Psychological harassment			
Perceived oral health				Difficulty in work-life balance			
Teeth brushing				Low level of recognition			
Psychosocial				No respect or self-esteem			
Psychological distress				Insufficient wage			
Drug use (cannabis)				Low job security			
Dissatisfaction of social life				Musculo-skeletal disorders			
Perceived poverty				Handling of heavy loads			
Prevention							
Pap Test							
Blood pressure measurement by physician							

Preliminary findings. (Do not cite).

Source: Quebec Population Health Survey 2014-2015

Language: language spoken at home

HEALTH INDICATORS	% (95% CI)		
	Francophones	Anglophones	Allophones
Global and oral health			
Perceived global health	10.1 (9.7-10.5)	11.4 (9.8-13.2)	10.9 (8.9-13.4)
Perceived oral health	12.5 (12.1-12.9)	13.8 (12.1-15.6)	24.5 (21.5-27.8)
Teeth brushing	74.5 (73.9-75.0)	75.2 (73.0-77.3)	76.3 (73.1-79.3)
Psychosocial			
Psychological distress	28.3 (27.7-28.9)	25.3 (23.1-27.7)	35.9 (32.4-39.6)
Drug use (cannabis)	15.4 (14.9-15.8)	17.0 (15.1-19.0)	6.3 (4.8-8.4)
Dissatisfaction of social life	5.7 (5.4-6.0)	6.3 (5.2-7.6)	6.2 (4.7-8.1)
Perceived poverty	14.7 (14.2-15.1)	14.3 (12.6-16.2)	21.5 (18.7-24.6)
Prevention			
Pap Test	67.7 (66.8-68.5)	70.0 (66.5-73.5)	52.7 (46.9-58.4)
Blood pressure measurement by physician	85.5 (85.0-85.9)	85.3 (83.2-87.2)	77.6 (74.1-80.7)

Health in workplace	% (95% CI)		
	Francophones	Anglophones	Allophones
Psychological harassment	20.4 (19.7-21.1)	22.3 (19.7-25.2)	23.5 (19.7-27.9)
Difficulty in work-life balance	9.3 (8.7-9.8)	12.7 (10.6-15.1)	15.4 (12.1-19.4)
Low level of recognition	20.8 (20.1-21.6)	19.8 (17.2-22.6)	19.3 (15.4-23.8)
No respect or self-esteem	16.0 (15.4-16.6)	14.6 (12.4-17.0)	13.9 (10.8-17.8)
Insufficient wage	31.8 (31.0-32.6)	34.4 (31.3-37.6)	37.1 (32.5-41.9)
Low job security	30.1 (29.3-30.9)	37.5 (24.6-30.5)	33.4 (38.9-38.2)
Musculo-skeletal disorders	28.4 (27.7-29.2)	20.7 (18.2-23.5)	25.8 (21.8-30.3)
Handling of heavy loads	15.0 (14.4-15.6)	9.8 (8.0-12.0)	10.7 (7.7-14.7)

Preliminary findings. (Do not cite).

Source: Quebec Population Health Survey 2014-2015

Language: language spoken at home

HEALTH INDICATORS	% (95% CI)		
	Francophones	Anglophones	Allophones
Global and oral health			
Perceived global health	10.1 (9.7-10.5)	11.4 (9.8-13.2)	10.9 (8.9-13.4)
Poor perceived oral health	12.5 (12.1-12.9)	13.8 (12.1-15.6)	24.5 (21.5-27.8)
Teeth brushing	74.5 (73.9-75.0)	75.2 (73.0-77.3)	76.3 (73.1-79.3)
Psychosocial			
Psychological distress	28.3 (27.7-28.9)	25.3 (23.1-27.7)	35.9 (32.4-39.6)
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Handling of heavy loads	15.0 (14.4-15.6)	9.8 (8.0-12.0)	10.7 (7.7-14.7)

Green: better outcome compared to Francophones

Red: poorer outcome compared to Francophones

Example 1: Psychological distress x language

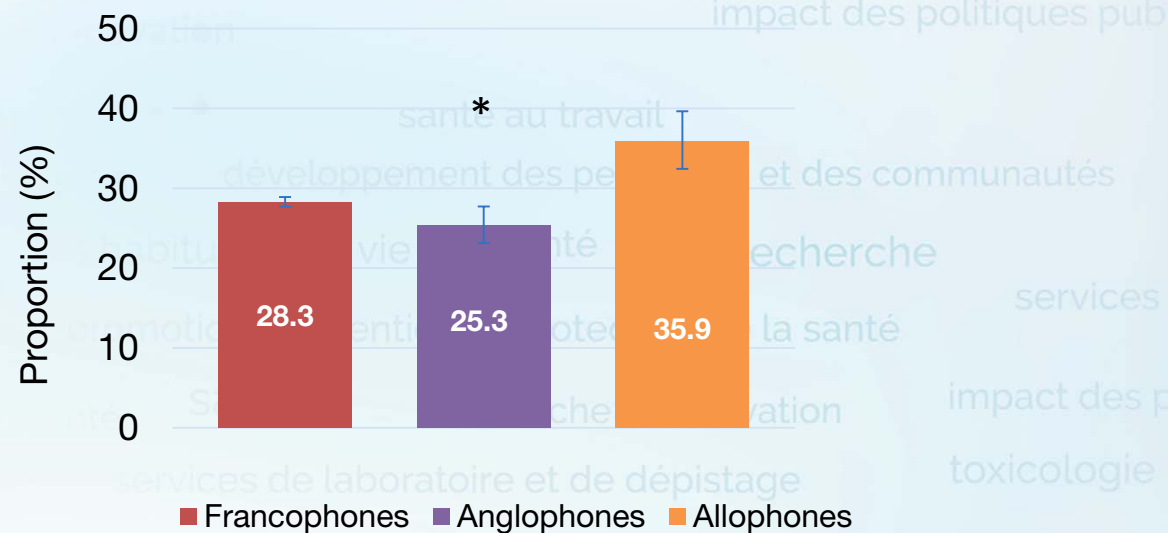
OUTCOME
High score on the psychological distress scale (K6, Kessler et al., 2002)

LANGUAGE: Language spoken at home

REFERENCE = Francophones
Anglophones: lower proportion

* Statistically significant difference compared to Francophones ($p < 0.05$)

Population with a high score on the psychological distress scale, Québec, 2014-2015



Example 1: Psychological distress x language x immigrant status

OUTCOME

High score on the psychological distress scale (K6, Kessler et al., 2002)

REFERENCE = Francophones

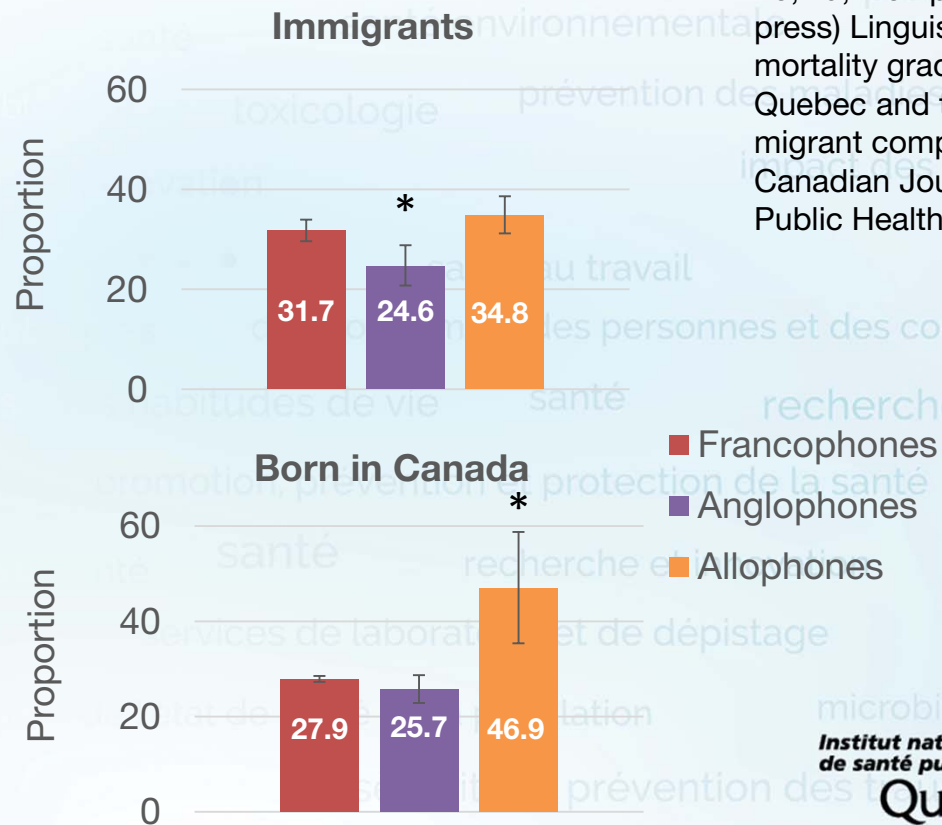
Immigrants

Proportion is lowest in Anglophones.

Born in Canada

Anglophones: comparable
Allophones: higher proportion

* Statistically significant difference compared to Francophones ($p < 0.05$)



Lo, Tu, Trempe, Auger (in press) Linguistic mortality gradients in Quebec and the role of migrant composition. Canadian Journal of Public Health.

Example 2: Use of cannabis x language

OUTCOME

Use of cannabis in the past 12 months

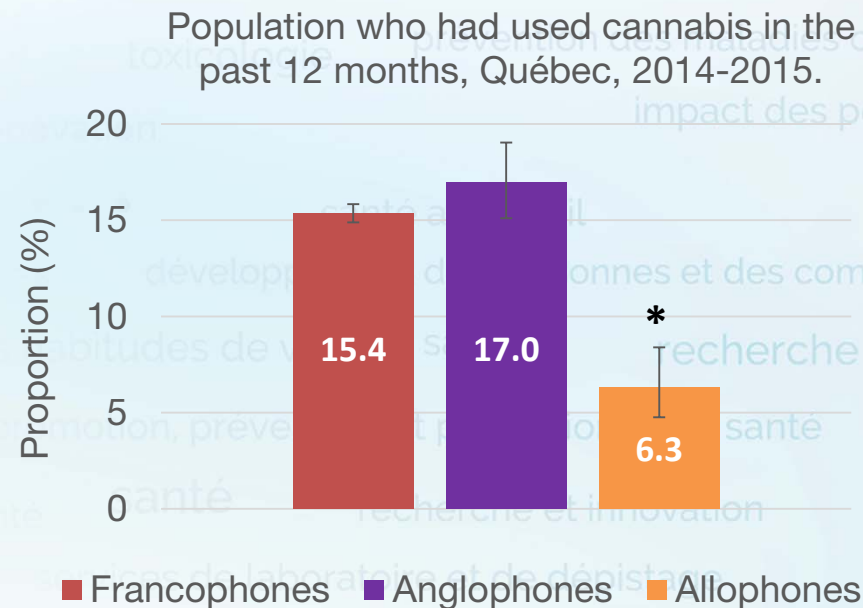
LANGUAGE: Language spoken at home

REFERENCE = Francophones

Anglophones: comparable

Allophones: lower proportion

* Statistically significant difference compared to Francophones ($p < 0.05$)



Example 2: Use of cannabis x language x immigrant

OUTCOME

Use of cannabis in the past 12 months

LANGUAGE: Language spoken at home

REFERENCE = Francophones

Immigrants

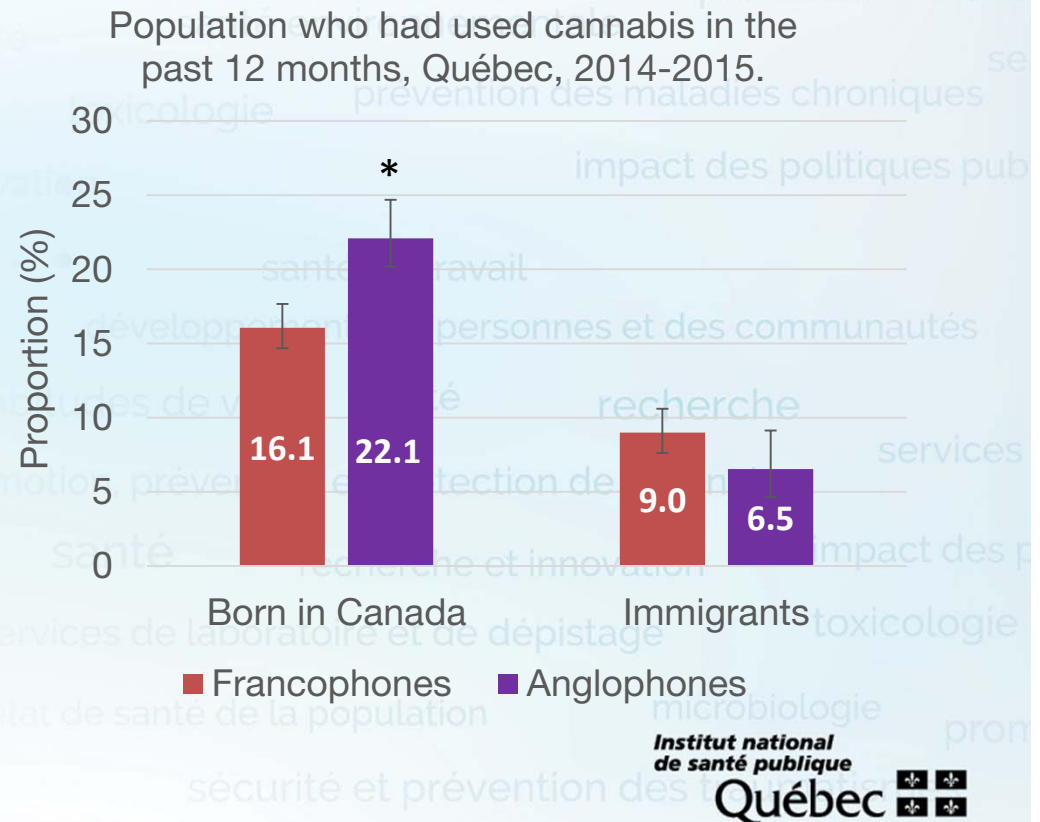
Anglophones: proportion comparable

Born in Canada

Anglophones: higher proportion

Allophones, not shown due to insufficient sample size.

* Statistically significant difference compared to Francophones ($p < 0.05$)



Example 3: Work-life balance x language

OUTCOME

Difficulty in having work-life balance

LANGUAGE: Language spoken at home

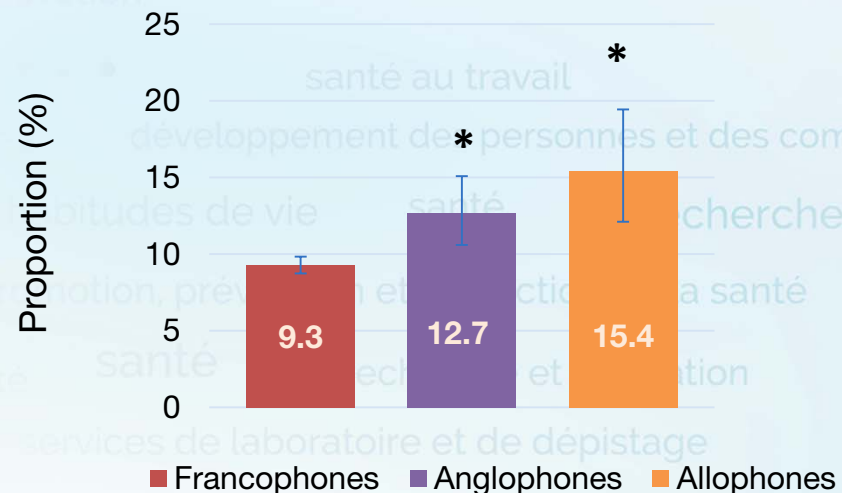
REFERENCE = Francophones

Anglophones: higher proportion

Allophones: higher proportion

* Statistically significant difference compared to Francophones ($p < 0.05$)

Population having difficulty with work-life balance, Québec 2014-2015



Example 3: Work-life balance x language x immigrant

OUTCOME

Difficulty in having work-life balance

LANGUAGE: Language spoken at home

REFERENCE = Francophones

Immigrants

Anglophones: comparable proportion

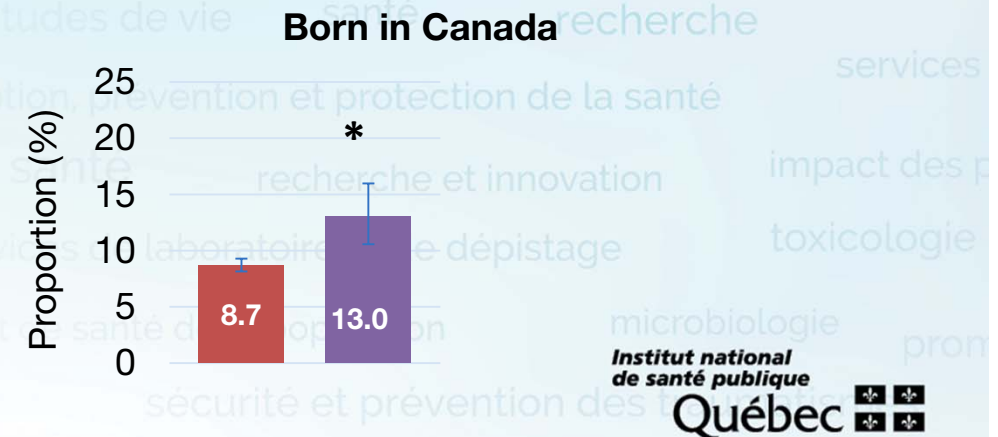
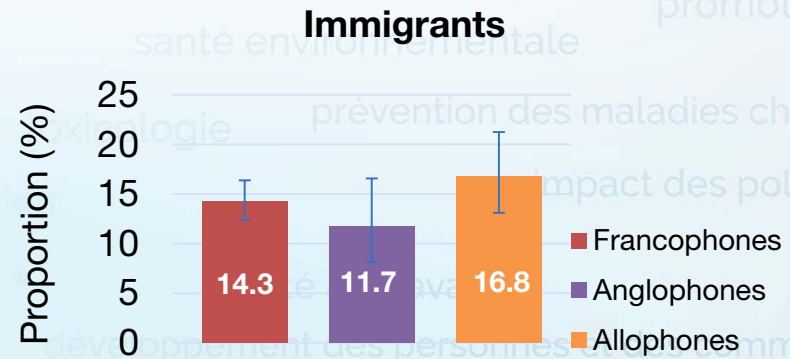
Allophones: comparable proportion

Born in Canada

Anglophones: higher proportion

Allophones, not shown due to insufficient sample size.

* Statistically significant difference compared to Francophones ($p < 0.05$)



Example 4: Self-perceived health x language

OUTCOME

Proportion of the population who self-perceived health as poor

LANGUAGE: Language spoken at home

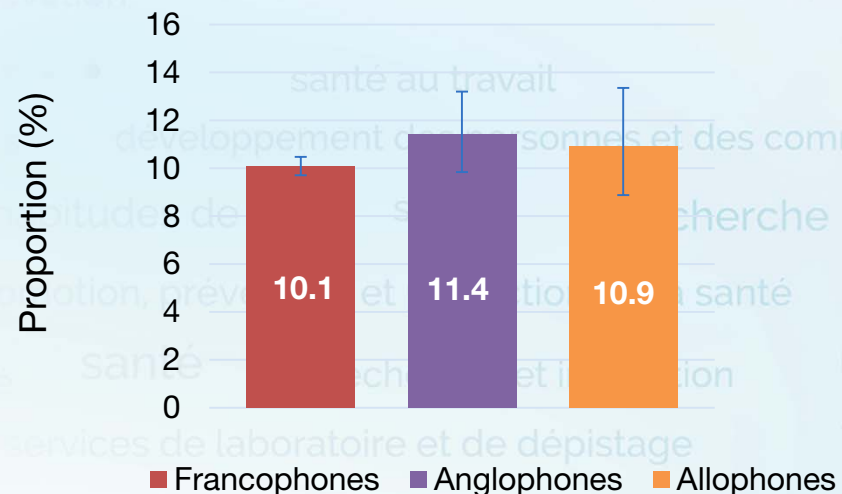
REFERENCE = Francophones

Anglophones: comparable

Allophones: comparable

* Statistically significant difference compared to Francophones ($p < 0.05$)

Population with poor self-perceived health, Québec 2014-2015



Example 4: Self-perceived health x language x immigrant

OUTCOME

Proportion of the population who self-perceived health as poor

LANGUAGE: Language spoken at home

REFERENCE = Francophones

Immigrants

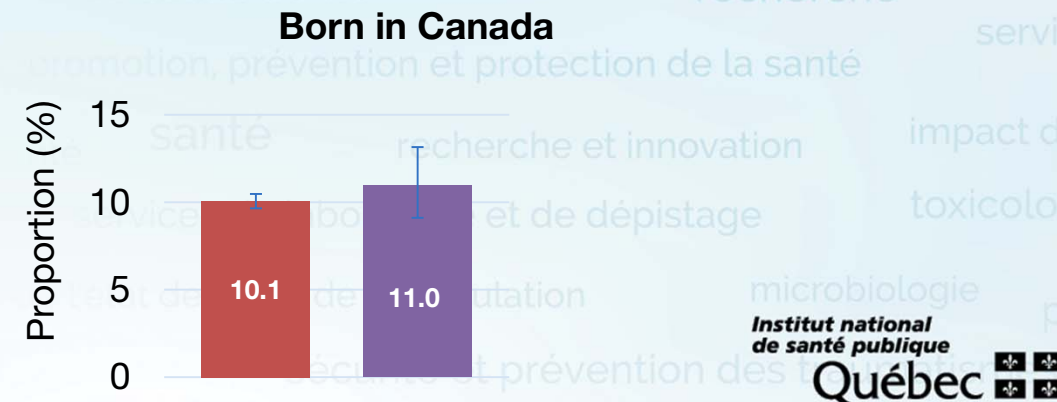
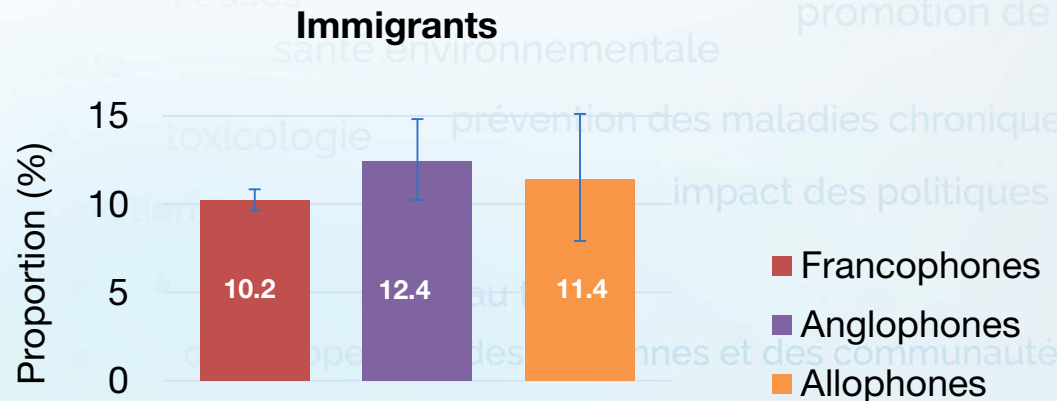
Anglophones: comparable

Born in Canada

Anglophones: comparable

Allophones, not shown due to insufficient sample size.

* Statistically significant difference compared to Francophones ($p < 0.05$)



Example 4: Do we have reliable data about self-perceived health at the regional level?

Regions RSS	Francophones	Anglophones	Allophones
Estrie	yes	Use caution	no
Montréal	yes	yes	yes
Outaouais	yes	Use caution	no
Côte-Nord	yes	Use caution	no
Gaspésie-Îles-de-la-Madeleine	yes	Use caution	no
Laval	yes	Use caution	yes
Montérégie	yes	Use caution	no
Bas-Saint-Laurent, Saguenay – Lac-Saint-Jean Capitale-Nationale, Mauricie, Abitibi-Témiscamingue, Nord-du-Québec, Chaudières-Appalaches, Lanaudière, Laurentides	yes	no	no

Orange: use with caution, coefficient of variation (CV): $15\% < CV \leq 25\%$

Red: coefficient of variation $> 25\%$

Census divisions



- **East:** Gaspésie-Îles-de-la-Madeleine, Côte-Nord, Bas-Saint-Laurent
- **Québec and surroundings:** Capitale-Nationale, Chaudières-Appalaches, Saguenay-Lac-Saint-Jean
- **Estrie and South of Québec:** Estrie, South of Quebec (part of Montérégie)
- **Montréal:** census metropolitan area (CMA)
- **Outaouais:** Outaouais
- **Rest of Québec:** all other divisions.

Are data reliable at the regional level for anglophones?

Indicator: Self-perceived health as poor.

Source: Canadian Community Health Survey (CCHS)

Regions	Cycle 1 2007-2008	Cycle 2 2009-2010	Cycle 3 2011-2012	Cycle 4 2013-2014
East	no	Use caution	no	no
Québec and surroundings	no	no	no	no
Estrie and South of Québec	no	no	no	no
Montréal (CMA)	no	no	Use caution	yes
Outaouais	no	Use caution	no	no
Rest of Québec	no	Use caution	no	no

Orange: use with caution, coefficient of variation (CV): $15\% < CV \leq 25\%$

Red: coefficient of variation $> 25\%$

Are data reliable at the regional level after combining cycles?

Indicator: Self-perceived health as poor

Source: Canadian Community Health Survey

Regions	4 Cycles	Francophones	Anglophones	Allophones
East	2007-2014	yes	Use caution	Use caution
Québec and surroundings	2007-2014	yes	Use caution	Use caution
Estrie and South of Québec	2007-2014	yes	Use caution	Use caution
Montréal (CMA)	2007-2014	yes	yes	yes
Outaouais	2007-2014	yes	yes	Use caution
Rest of Québec	2007-2014	yes	Use caution	Use caution
Prov. Québec	2007-2014	yes	yes	yes

Possible avenues of research and surveillance



- To explore other health surveys, e.g. CCHS, EQSJS, EQDEM (youth and children)
- To meet the needs for data at the regional level and to support and guide local actions, for example by:
 - Suggesting a research project to have access to the dataset to produce a regional health portrait from the perspective of linguistic communities
 - Developing small area estimation strategies to permit regional-level estimates, given the challenges related to smaller population size.

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