

Prevalence of chronic back disorders among Canadian adults: trends in gender, age, and geography and distribution of physiotherapists

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Background

- Chronic back disorders (CBD) operational definition:
CBD encompass a variety of pathologies and symptoms localized in the back including the neck, thoracic, and lumbar spine, and pelvis with a duration of at least six months
- Lower back and neck pain were the leading causes of global years lived with a disability during 1990, 2005, and 2015
- Prevalence can vary by gender, age, and geographical location
- Evidence on changes in the prevalence of CBD is inconclusive

Gaps

- There are no known studies:
 - exploring trajectories of chronic back disorders in Canada
 - investigating interprovincial differences of CBD in relation to physiotherapist distribution in Canada

Objective

To examine CBD prevalence over time by gender/age analyze CBD geographic distribution in relation to physiotherapist (PT) distribution across Canada

Methodology

Data Source

- The Canadian Community Health Survey (CCHS) - cross-sectional survey (2007 to 2014 cycles)
- Canadian Institute for Health Information (2007-2014 PT workforce database)

Sample

- Canadian adults aged between 18 and 65 years.

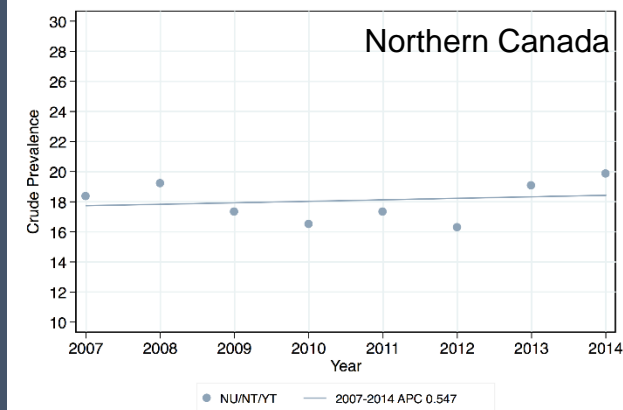
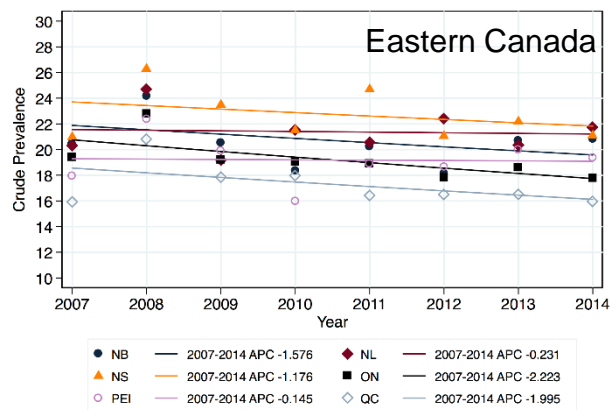
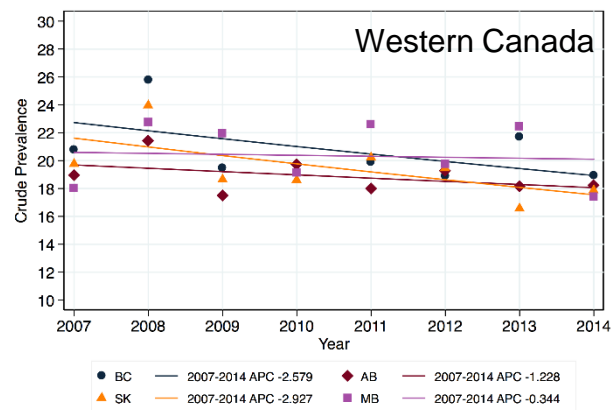
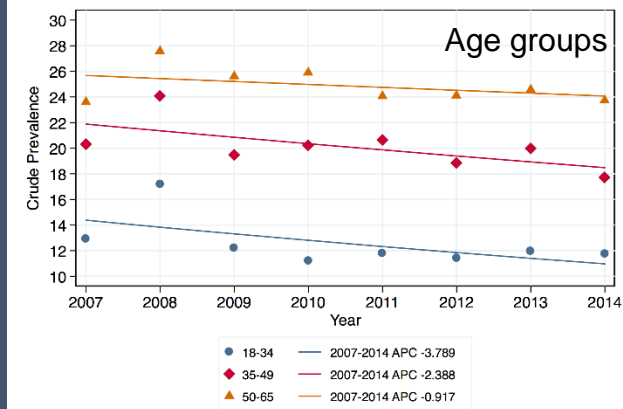
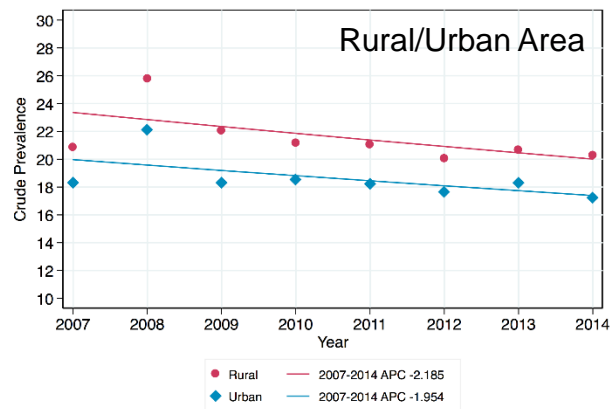
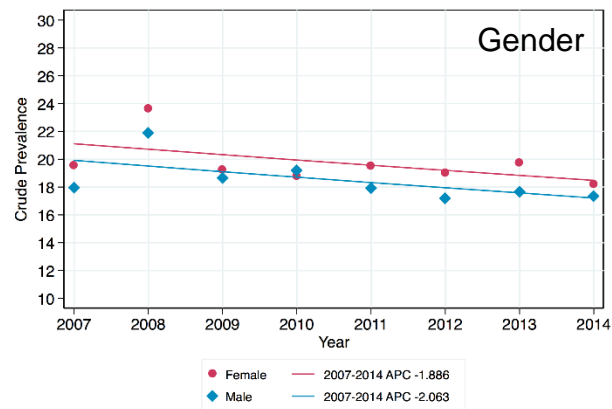
Variables

- CBD, gender, age, rural/urban area, province, PT ratio per 10,000 population

Statistical analysis

- Percentage, prevalence and 95% CI using bootstrap and weights → Stata 14.0
- Maps → ArcGIS 10.5.1
- Joinpoint Regression Analysis → Joinpoint Regression Program 4.6.0.0
- Correlations and Logistic Regressions → Stata 14.0

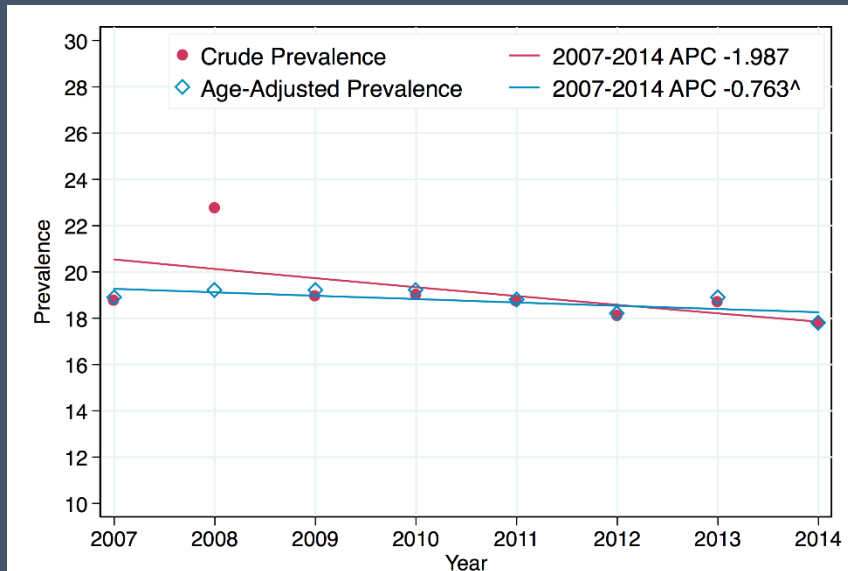
RESULTS: CBD time trends by gender, age group, area, and province. Canada, 2007-2018



APC: annual percent change

Crude CBD prevalence was stable from 2007 to 2014 by gender, age group, rural/urban area and province

RESULTS: Overall CBD time trends. Canada, 2007-2014

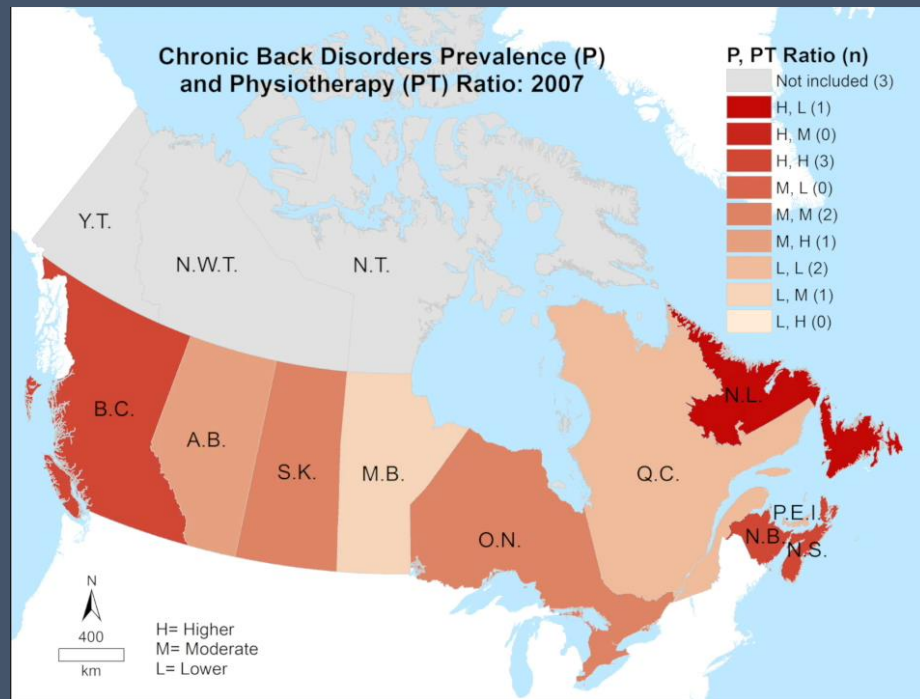


^Indicates that the Annual Percent Change (APC) is significantly different from zero at the alpha = 0.05 level

RESULTS: Logistic Regressions

In each survey cycle, CBD prevalence was significantly higher in population between 50 and 65 years compared to 18-34.

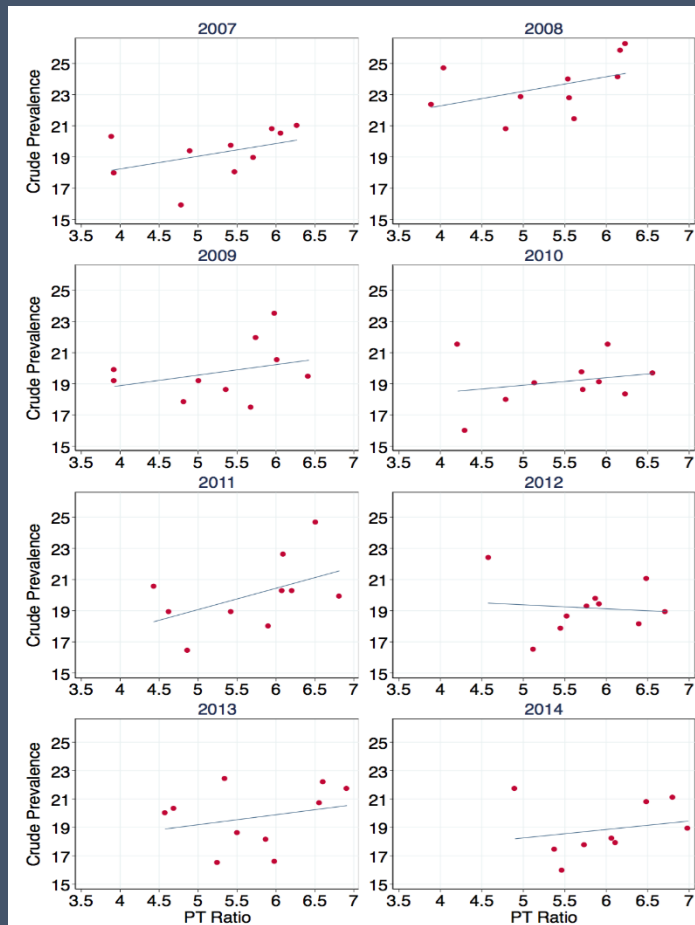
RESULTS: CBD Prevalence and Physiotherapy Ratio. Canada, 2007-2014



Higher CBD Prevalence and lower PT Ratio

- Newfoundland and Labrador in 5 out of 8 years

RESULTS: Correlation between CBD Prevalence and PT ratio in 10 Provinces of Canada, 2007-2014



$p > 0.05$

Conclusions

- Age-adjusted CBD prevalence has decreased over the study period by 0.76% per year.
- Tailored prevention and management of CBD should consider:
 - interprovincial and age differences in prevalence
 - access to physiotherapy services
 - For example: Newfoundland and Labrador showed higher CBD Prevalence and lower amount of PT per population
- This information is relevant:
 - monitoring the burden of CBD in Canada
 - may help to highlight where there is a greater need for prevention and rehabilitation services.

Acknowledgements



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