



UBC CENTRE FOR  
HEALTH SERVICES AND  
POLICY RESEARCH

# Trends in work injuries in Canada

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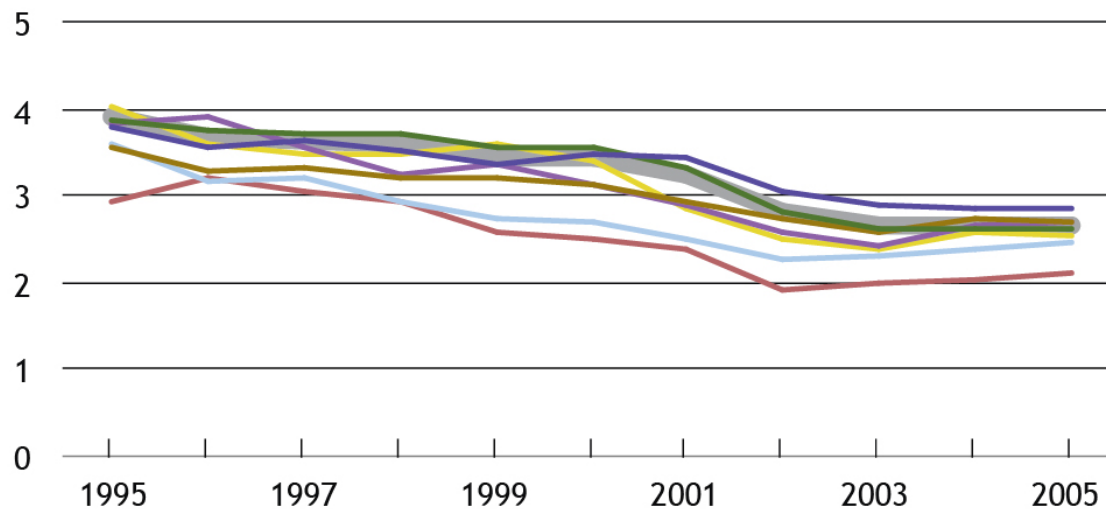
**WORK SAFE BC**

WORKING TO MAKE A DIFFERENCE

# Background

- Workers' compensation organizations report a general decline in work injuries

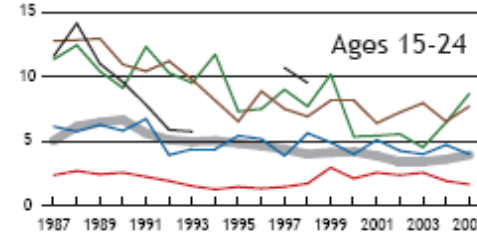
**Short-term disability claims per 100 workers,  
by economic region**



McLeod et al, 2007

# Background

- Little research has explored if this decline is consistent:
  - socio-demographic
  - regional
  - **work groups**
- Population-based, workforce data across Canada.



- Forestry

McLeod et al, 2007

# Purpose

- To investigate factors that are contributing to this variation.
- To describe the change in work injury rates over time in Canada by:
  - Age
  - Sex
  - Geography

# Methods

## Survey Source

- Canadian Community Health Surveys (CCHS) public use files, cycles:
  - 1.1 (2001-2002)
  - 2.1 (2003)
  - 3.1 (2006)

## Population

- All working-age respondents (age 15-64), worked part-time or full-time in the last 12 months (n= 76,458 in 2001; 78,371 in 2003; and 78,626 in 2006).

# Methods

## Measures

### Occupational Injury

- Injury in the past 12 months:
  - while working at a job or business
  - if the injury occurred at a commercial, industrial or construction area or a farm.

### Analysis

- Stratified logistic regression models
- Adjusted injury rate comparisons, stratified by gender
- Sampling weights applied to all analyses.

# Multivariate results for risk of work injury associated with demographics

	Males	Females		Males	Females
	OR	OR		OR	OR
<b>Age</b>			<b>Education</b>		
15-19	1.38	1.09	< than secondary	1.04	1.10
20-29	<i>1.62</i>	1.61	Secondary grad	1.08	<i>1.37</i>
30-39	1.39	1.45	Other post secondary	0.95	1.16
40-49	1.06	1.42	College/university degree (ref)	1.00	
50-59	0.84	1.31	<b>Province</b>		
60-64 (ref)	1.00		Ontario (ref)	1.00	
<b>Marital status</b>			Newfoundland and Labrador	1.31	0.89
Married (ref)	1.00		PEI	0.73	1.32
Common law	<i>1.25</i>	<i>1.45</i>	Nova Scotia	1.00	1.23
Widowed/separated/divorced	1.22	<i>1.45</i>	New Brunswick	0.96	0.82
Single/never married	1.17	<i>1.70</i>	Quebec	0.91	0.86
<b>Race</b>			Manitoba	1.03	<i>1.46</i>
White (ref)	1.00		Saskatchewan	1.26	<i>1.63</i>
Visible minority	<i>0.69</i>	0.68	Alberta	<i>1.41</i>	<i>1.49</i>
<b>Immigrant</b>			BC	<i>1.38</i>	1.24
No (ref)	1.00		Yukon/NWT/Nunavut	1.15	0.76
Yes	0.89	0.79			

# Multivariate results for risk of work injury associated with worker characteristics

	Males	Females
	OR	OR
<b>Self perceived work stress</b>		
Not at all (ref)	1.00	
Not very	1.18	1.32
A bit	<i>1.27</i>	<i>1.46</i>
Quite a bit	<i>1.44</i>	<i>1.82</i>
Extremely	<i>1.80</i>	<i>2.75</i>
<b>Chronic condition</b>		
Yes	<i>1.47</i>	<i>2.07</i>
No (ref)		
<b>Physical activity</b>		
Regular (ref)	1.00	
Occasional	0.98	0.94
Infrequent	<i>1.29</i>	1.04



# Multivariate results for risk of work injury associated with work characteristics

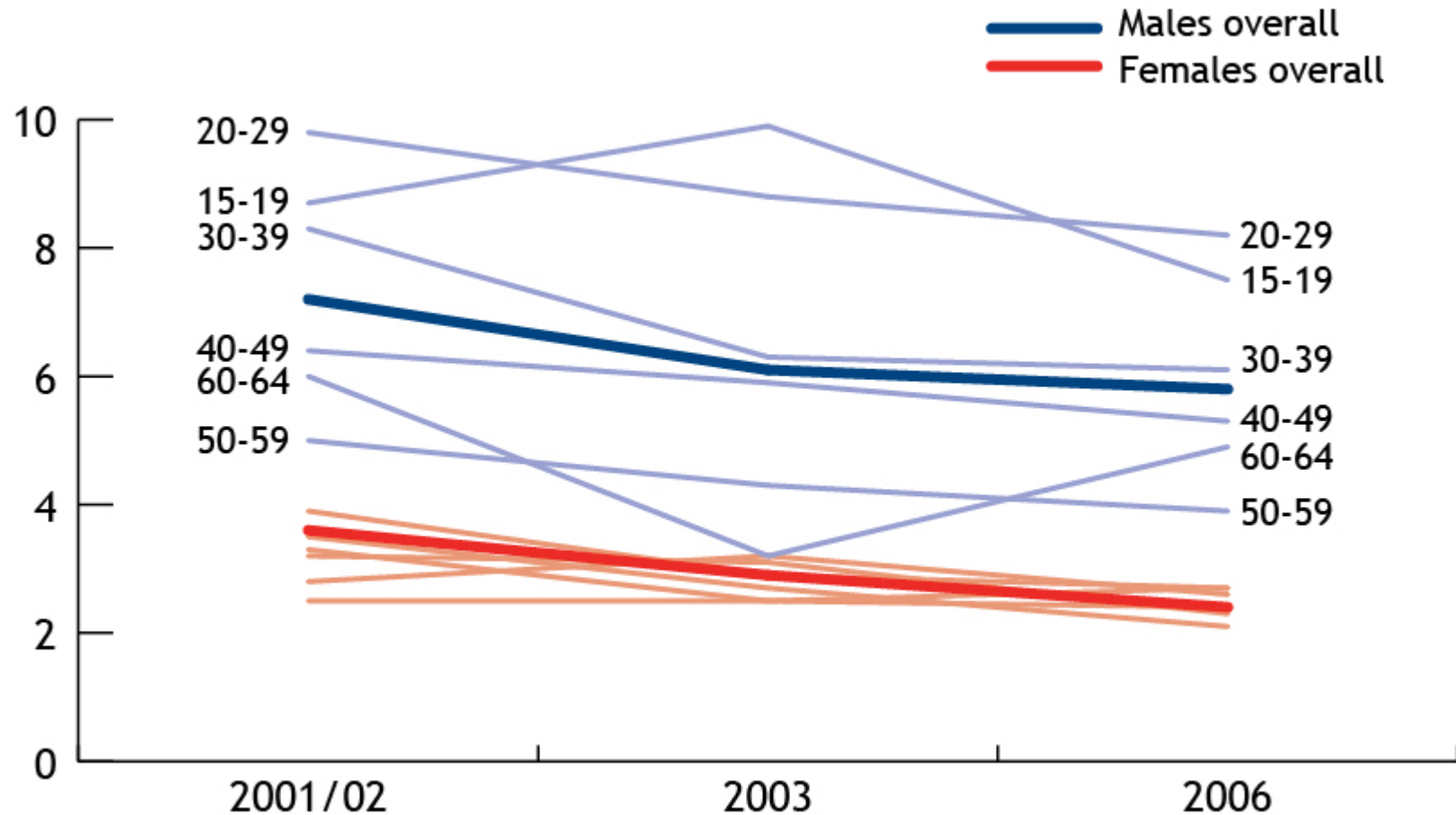
	Males	Females
	OR	OR
<b>Occupational group</b>		
Management (ref)	1.00	
Professional	1.05	1.01
Technologist	<i>1.47</i>	1.53
Admin/finance/clerk	0.95	0.52
Sales/service	<i>2.11</i>	1.24
Trades/transport	<i>3.40</i>	<i>2.06</i>
Farm/forestry/fishing	<i>3.06</i>	<i>1.82</i>
Processing/manufacturing	<i>3.94</i>	<i>1.80</i>
Other	<i>2.55</i>	1.50
<b>Hours worked</b>		
<34 (ref)	1.00	
35-39	0.98	<i>1.27</i>
40-46	<i>1.48</i>	1.12
>47	<i>1.45</i>	1.27

# Descriptives: Unadjusted and adjusted work injury rates

	2001-2002	2003	2006
Unadjusted	5.62%	4.83%	4.63%
Adjusted*	5.10%	4.20%	3.70%

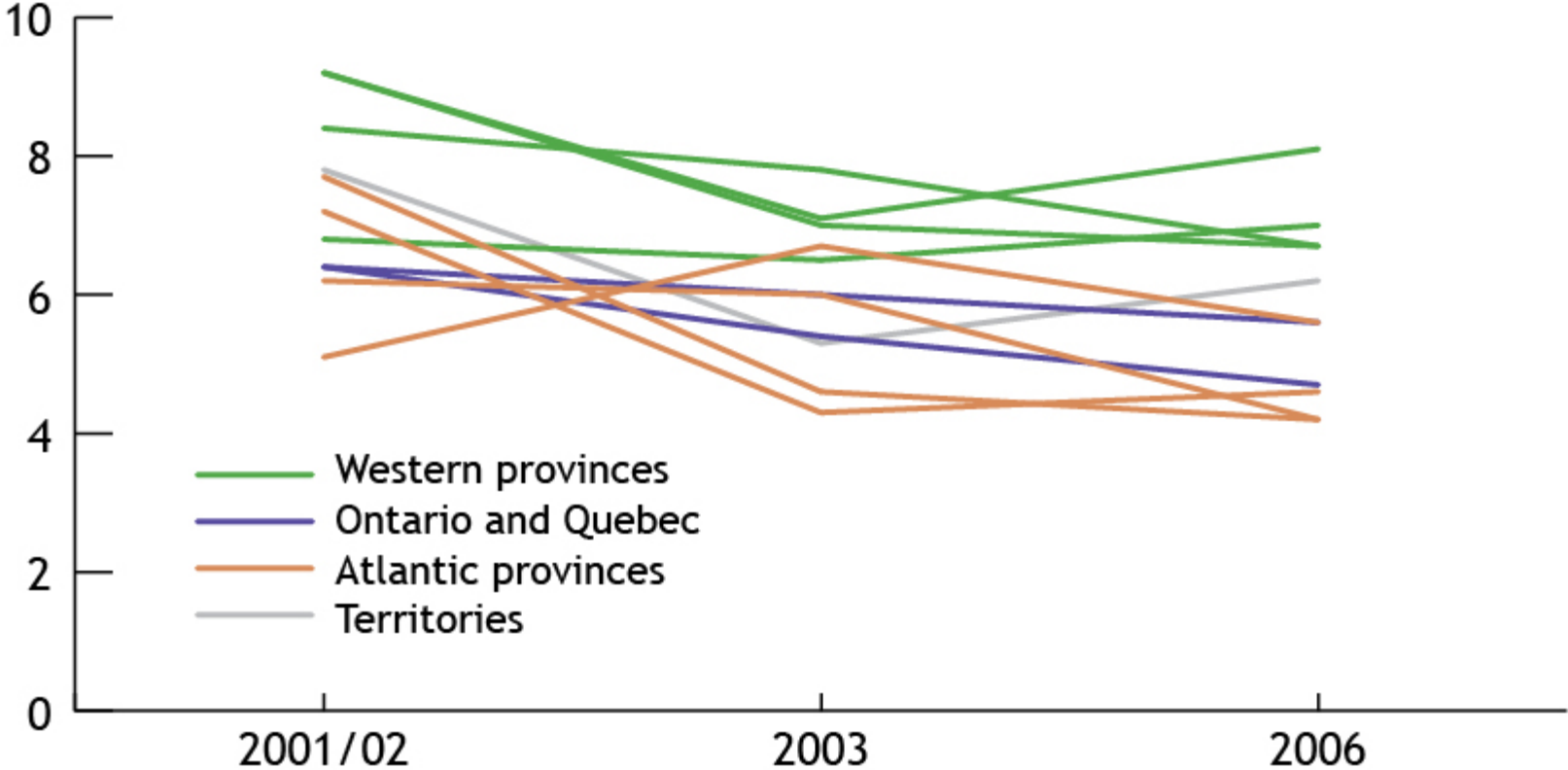
\*Adjusted for age, sex, marital status, race, immigrant status, education, province, self perceived work stress, presence of a chronic condition, physical activity level, job class, usual hours worked

# Adjusted\* rate, per 100 workers, of work injury by age, 2001-2006



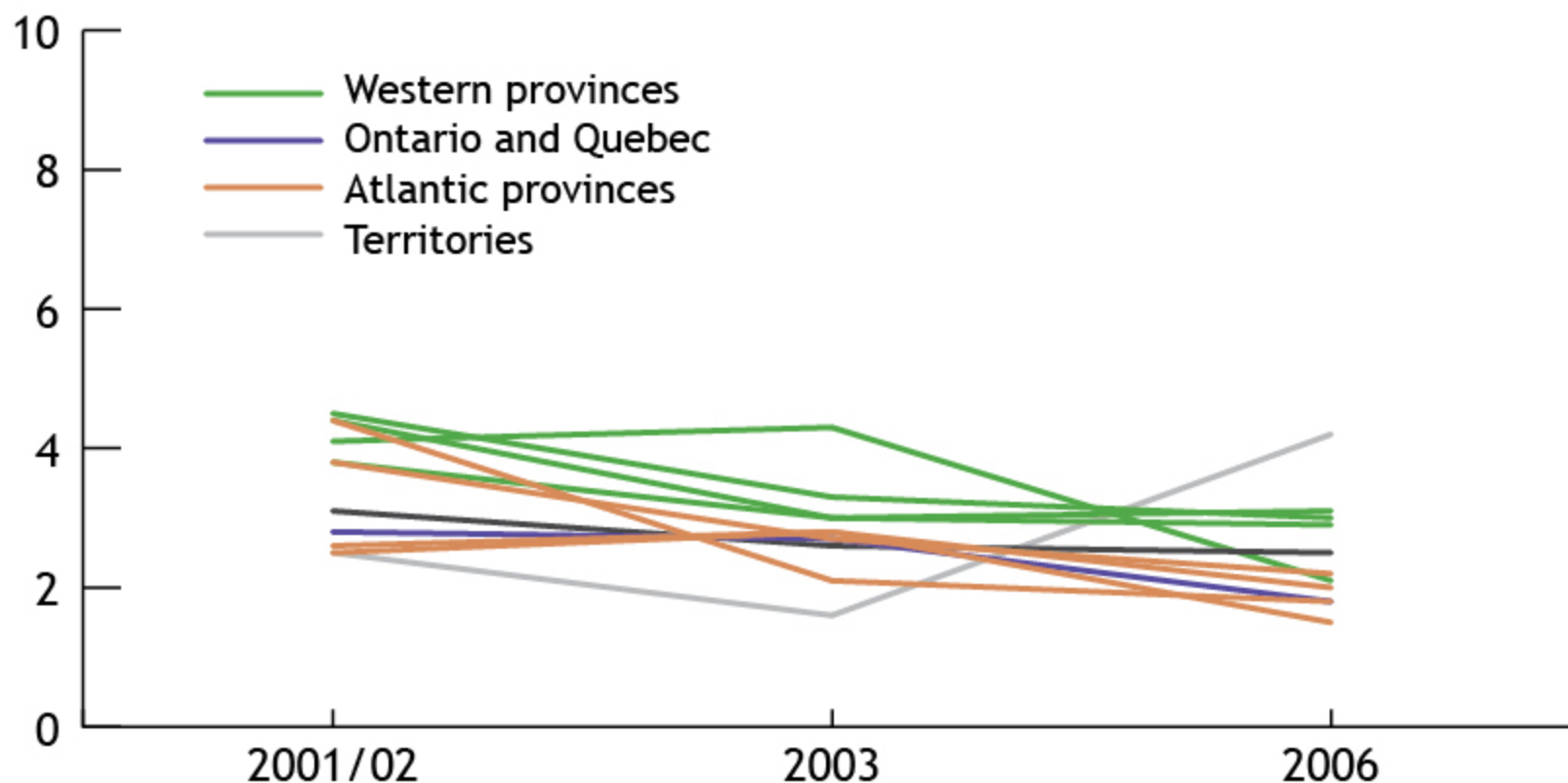
\* Adjusted for: marital status, race, education, province, Canadian immigrant, self perceived work stress, chronic condition, physical activity level, hours worked

# Adjusted\* rate, per 100 workers, of work injury by province, males, 2001-2006



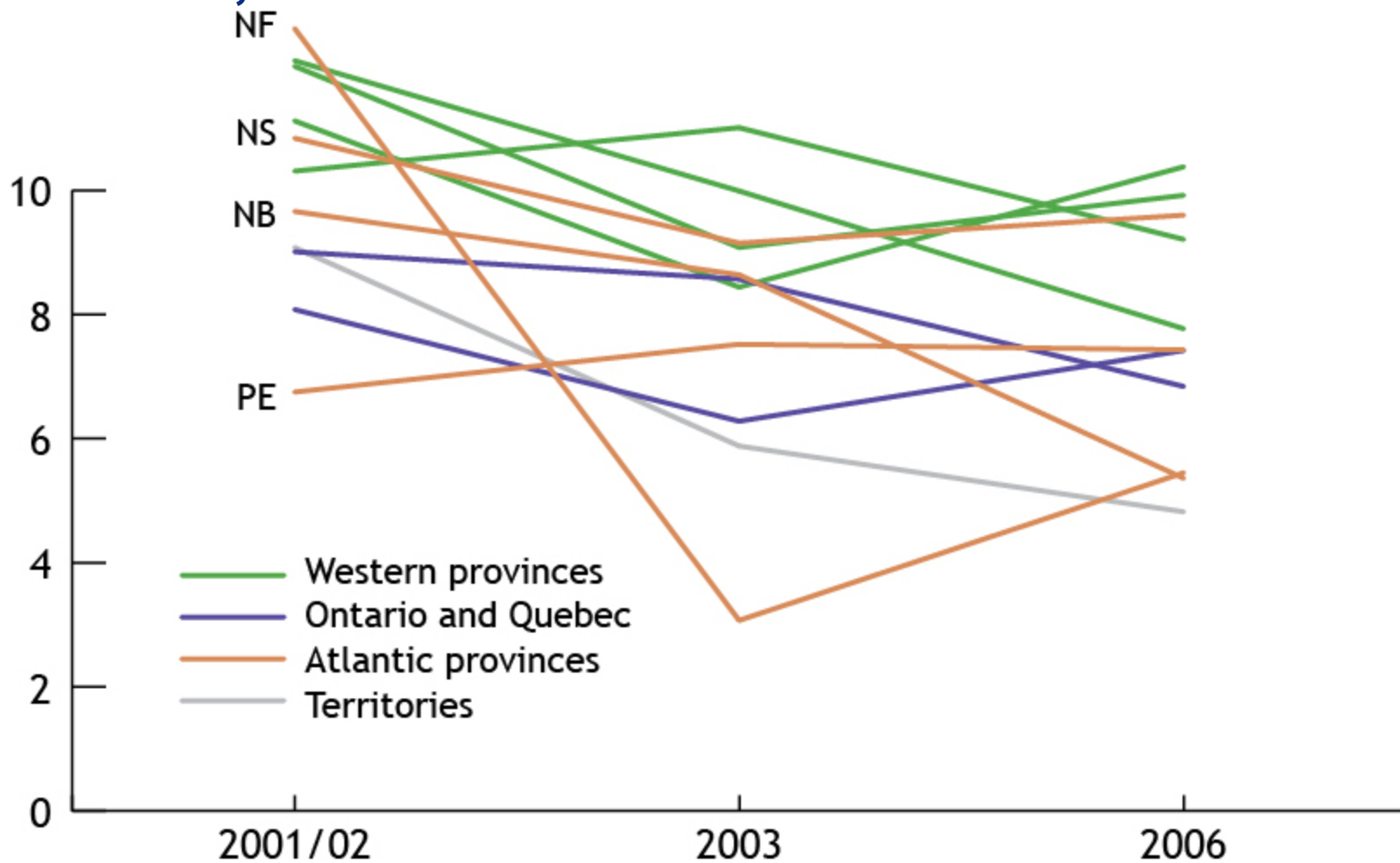
\* Adjusted for: age, marital status, race, education, Canadian immigrant, self perceived work stress, chronic condition, physical activity level, hours worked

# Adjusted\* rate, per 100 workers, of work injury by province, females, 2001-2006

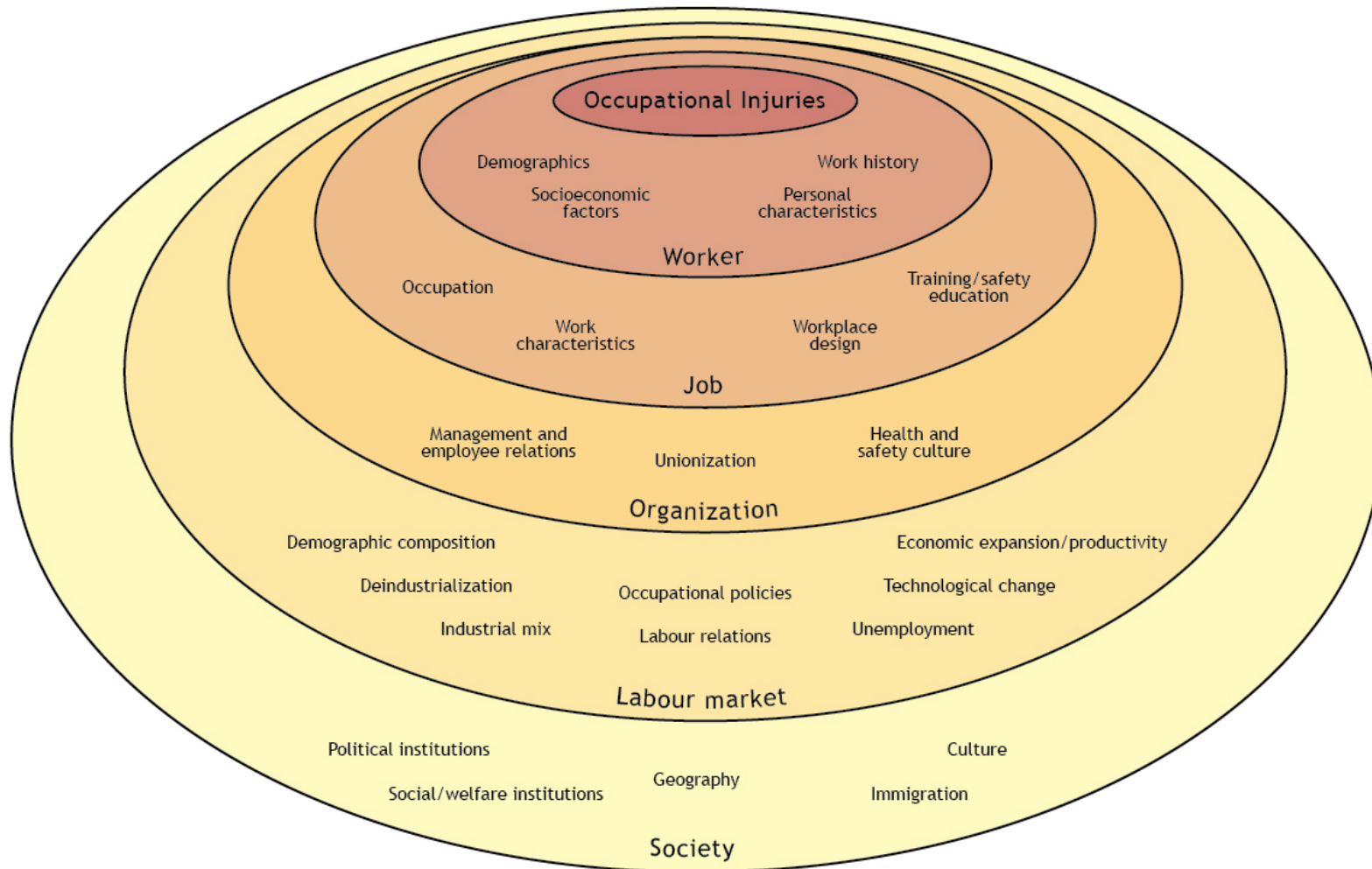


\* Adjusted for: age, marital status, race, education, Canadian immigrant, self perceived work stress, chronic condition, physical activity level, hours worked

# Geographic variation in the rate (per 100 workers) of work injuries in young workers (15-29) by province, 2001-2006



# Conceptual Model



# Conclusions

- Work injury rate is decreasing over time in Canada
  - Appears to have levelled off/increasing
- Prevention efforts target at young workers may be working in certain provinces
- Focus on understanding and ameliorating the reasons for these differences.



# Acknowledgements

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