



# Evaluating the impact of mandatory awareness training in Ontario

Peter Smith

IWH Plenary Series

April 11<sup>th</sup>, 2017



## Research Team

Ron Saunders, Curtis Breslin, Emile Tompa, Morgan Lay, Tony LaMontagne (Deakin)

## Acknowledgements

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The views expressed in this document are those of the authors and do not necessarily reflect the funders.

# 4 die in Toronto scaffolding collapse

CBC News

Posted: Dec 24, 2009 5:46 PM ET

Last Updated: Dec 24, 2009 8:31 PM ET

Tragic scaffold accident  
2-14

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A highrise scaffolding collapse claimed four men's lives on Christmas Eve, leaving their split staging equipment dangling more than 10 storeys above a west-end Toronto street. Workers were on the scaffolding at an apartment building near Kipling Avenue and Steeles Avenue West on Thursday afternoon when the staging gave way.

Four of the men died when they fell to the ground just after 4:30 p.m. A fifth man is in hospital in critical condition with extensive head injuries. They fell from the 13th floor of the 18-storey building. People who live in the building phoned 911 to report the accident, police said.

Raymond Allard, who witnessed the accident, told CBC News he heard a bang, then looked out to see the scaffolding, snapped in two, hanging off the side of the building at 2757 Kipling Ave. One worker was still attached to scaffold by his safety harness, but they could not say if it is unclear if that man managed to scramble to safety. Police say all of the men had safety harnesses, but they were doing repairs to balconies at the side of the building at 2757 Kipling Ave. One worker was still attached to scaffold by his safety harness, but they could not say if the harnesses were attached.

"The information we have at this time is that the five men were employed by a contracting company and they were doing repairs to balconies at

Four people were killed, and one critically injured, when a scaffold broke

...ve the ground at a Kipling Ave. apartment building on Dec. 24,

2009. (CARLOS OSORIO / TORONTO STAR FILE PHOTO)



## Newsroom

## Archived Backgrounder

# Occupational Health and Safety Panel Recommendations

December 16, 2010 2:00 P.M. | Ministry of Labour

In January of this year, the Minister of Labour appointed Tony Dean as Chair of the Expert Advisory Panel to lead a review of Ontario's Occupational Health and Safety (OHS) Prevention and Enforcement system. The appointed panel included three members each from labour, employers and academia with workplace health and safety expertise.

Workplace fatalities have raised serious concerns among stakeholders and the public about compliance with legislative and regulatory requirements, enforcement, and the prevention of workplace injuries and fatalities, particularly as they relate to vulnerable workers. Stakeholders are also concerned that:

- prevention resources are not sufficiently integrated/coordinated
- prevention activities and expenditures are duplicated unnecessarily
- prevention and compliance efforts of small business are inadequately supported, and that
- workplace parties are unaware of their basic rights and responsibilities.

This document was published on December 16, 2010 and is provided for archival and research purposes.

## Related News

[New Chief Prevention Officer To Oversee Workplace Safety](#)



## Newsroom

## News Release

## Keeping Ontario's Workers Healthy and Safe Province Introducing New On-the-Job Training

November 15, 2013 3:10 P.M. | Ministry of Labour

Ontario is introducing new training to help protect workers and keep them safe on the job.

One way to complete the new health and safety awareness training will be for workers and supervisors to take part in a one-hour tutorial either individually or in groups using free, online e-learning tools or hard copy workbooks. The training is designed to help prevent workplace incidents and injuries by making workers and supervisors aware of their roles, rights and responsibilities in the workplace.

Developed in partnership with labour groups, businesses and municipalities, the training will be mandatory for all workers and supervisors in the province who are covered by the Occupational Health and Safety Act.

Mandatory basic health and safety awareness training was a key recommendation of the Expert Advisory Panel on Occupational Health and Safety, led by Tony Dean in 2010. The Ontario government committed to implement all of the **recommendations** of the Expert Advisory Panel.

Providing training to keep workers safe and healthy is part of the government's economic plan to invest in people, build modern infrastructure and support a dynamic and innovative business climate.

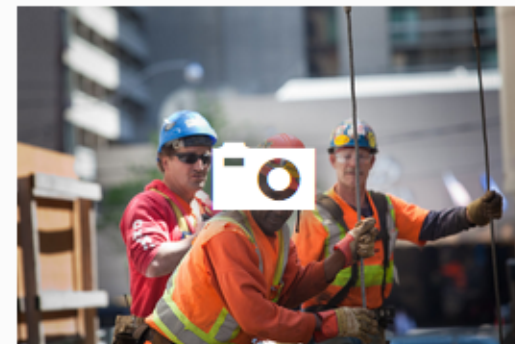
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## Health and Safety Awareness Training for Workers and Supervisors

Content last reviewed: June 2014

The Occupational health and safety awareness training provides a basic understanding of the Occupational Health and Safety Act (OHSA), and does not replace any sector specific, hazard specific, or competency specific training.

The Occupational Health and Safety Awareness and Training regulation requires health and safety awareness training for every worker and supervisor under the [Occupational Health and Safety Act \(OHSA\)](#).

Learn more about the regulation, requirements, and our free suite of optional training resources designed to help workers and employers meet the requirements.

### Training for workers



[Worker Health and Safety Awareness in 4 Steps](#)

### Training for supervisors



[Supervisor Health and Safety Awareness in 5 Steps](#)

# Worker Health and Safety Awareness in 4 Steps

## Introduction



## Health & Safety at Work



Prevention Starts  
Here



Worker Health and  
Safety Awareness  
in 4 Steps

v1.6



Health & Safety at Work: 1/6



You will receive a "Proof of Completion" certificate once you complete the training. You must save and/or print the certificate before exiting the module. The Ministry of Labour will not store your certificate, or keep a record of training. Please keep a copy for your records.

## Step 1: Get On Board



At the conclusion of this section you will be able to:

- **Describe** why you are important to health and safety
- **Describe** the duties of the employer
- **Describe** the duties of the supervisor
- **Describe** the duties and rights of workers



# Step 1: Get On Board



The whole point of the OHS Act and Regulations is to keep workers from getting hurt or sick on the job. There are inspectors from the Ministry of Labour who make sure the laws are followed and may issue orders or lay charges if they aren't. If a person is convicted of breaking the law, there are penalties such as fines or time in prison.

The OHS Act gives everyone in the workplace duties. These duties are connected to the level of authority each person has in the workplace. To sort out all the duties in a workplace, the OHS Act breaks them down to three main levels of authority:

1. the employer (who is in charge of everyone)
2. the supervisor
3. the worker (you)

To which of these three people do you think the OHS Act gives the most duties? Choose one of the images to the right to make your selection.



# Step 1: Get On Board



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1. the employer (who is in charge of everyone)
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To which of these three people do you think the OHS gives the most duties? Choose one of the images to the right to make your selection.



Submit Response

# Step 1: Get On Board



The right answer is the employer. The more authority a person has in the workplace, the more health and safety duties they have.

**It's important for your safety that you understand everyone's health and safety duties.**



The right answer is #1. **Studies show that new and young workers in Ontario are four times more likely to get hurt during their first month on the job than at any other time.** That's because they often aren't told about or don't understand the hazards of the job. They don't know what to expect from their employer, their supervisor and of themselves. Sometimes they aren't sure what questions to ask. Sometimes they don't even know who to ask.

**That's where the law comes in.**

## How the Occupational Health and Safety Act works

**The OHSA is a set of laws that spells out the duties of employers, supervisors and the rights and duties of workers.** There are also different Regulations that are attached to the OHSA. They contain more detailed laws about how to make the workplace safe in specific situations. For example, several Regulations explain what is needed to work safely with chemicals and other hazardous materials. This includes training, warning labels on products and information sheets. There are also Regulations for different types of workplaces, such as construction projects, health care facilities, industrial establishments and mines.

**The whole point of the OHSA and Regulations is to keep workers from getting hurt or sick on the job.** There are inspectors from the Ministry of Labour who make sure the laws are followed and may issue orders or lay charges if they aren't. If a person is convicted of breaking the law, there are penalties such as fines or time in prison.

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To sort out all the duties in a workplace, the OHSA breaks them down to three main levels of authority:

1. the employer (who is in charge of everyone)
2. the supervisor
3. the worker (you).

To which of these three people do you think the OHSA gives the most duties? Check one of the boxes on pages 5 or 6 and explain why.

1. The employer

Why? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# Proof of Completion

This is to confirm that

**Peter Smith**

has successfully completed

**Worker Health and Safety Awareness in 4 Steps**

Issued: August 19, 2014





## Our research questions

Did the introduction of mandatory awareness training:

- Result in greater awareness about the mandatory awareness training program and participation in awareness training among workers in Ontario (implementation)?
- Result in higher levels of awareness and empowerment among workers in Ontario (impact)?

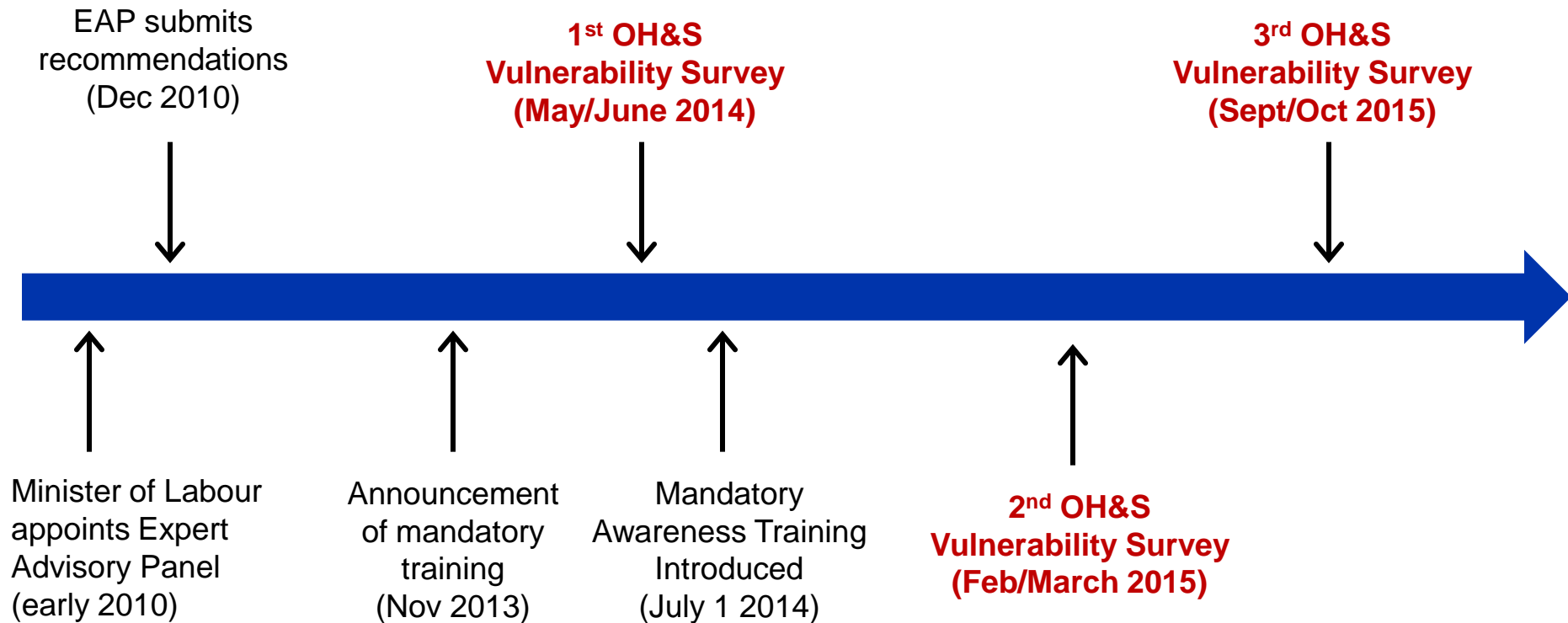


## Study Design

Three cross-sectional surveys in Ontario and British Columbia

- Survey One: May-June 2014
- Survey Two: Feb-March 2015
- Survey Three: Sept-Oct 2015

# Overview of the timeline of mandatory awareness training announcement and the OHS vulnerability surveys





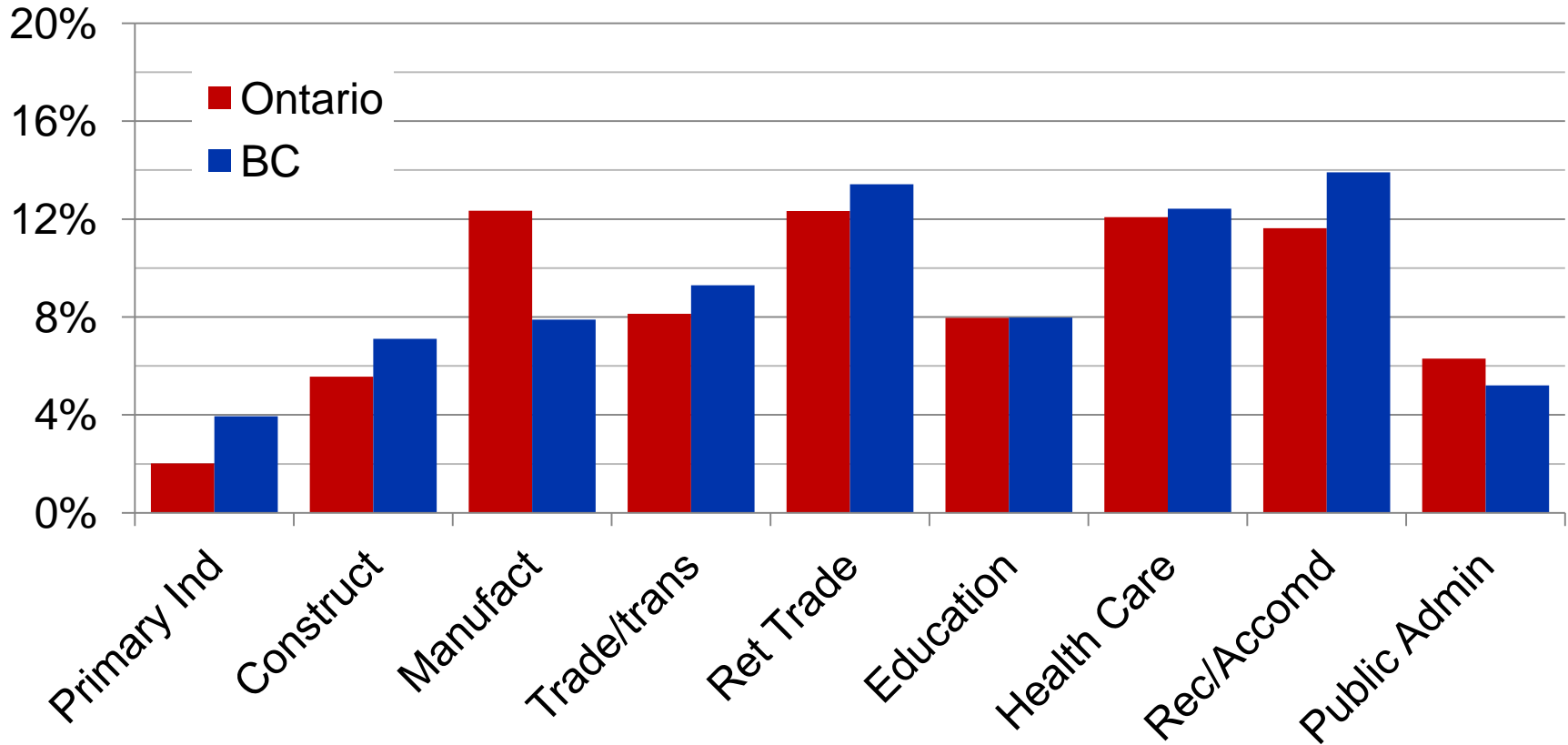


## Comparing Ontario and British Columbia in 2014

	Ontario	British Columbia
Size of labour market	6.9 million	2.3 million
Percent of Self-employed	15%	17%
Percent male	50%	50%
Percent less than 25 yrs	16%	16%
Percent over 50 years	29%	29%
Percent permanent employment	87%	87%
Percent employed in small workplaces (less than 20)	31%	38%
Percent in medium workplace size (20 to 99 employees)	33%	36%



## Comparing Ontario and British Columbia in 2014



# Support for employers

## Training and orientation for young and new workers

An employer's guide to Part 3 of the Occupational Health and Safety Regulation

### Why specific requirements for young and new workers?

Young and new workers need special attention because they are at more risk of injury than their older or more experienced counterparts. The injury rate for young male workers, is much higher than that of the overall population.



### Where do I find the Young and New Worker regulation?

Look in sections 3.22 to 3.25 (“Young or New Workers”) of the Regulation, which is reprinted on the back page of this document.

### Orientation and training are essential

More than half of workplace accidents involving young and new workers occur during their first six months on the job. Providing effective orientation and training is the best way to prevent accidents. As an employer, you are responsible for ensuring that your workers are prepared for the job before they start working.

### Who are young workers and new workers?

## Sample worker orientation checklist

Employee name: \_\_\_\_\_

Position (tasks): \_\_\_\_\_

Date hired: \_\_\_\_\_ Date of orientation: \_\_\_\_\_

Person providing orientation (name and position): \_\_\_\_\_

Company name: \_\_\_\_\_

Topic	Initials (trainer)	Initials (worker)	Comments
1. Supervisor name: _____ Telephone #: _____			
2. Rights and responsibilities (a) General duties of employers, workers, and supervisors			
(b) Worker right to refuse unsafe work and procedure for doing so			
(c) Worker responsibility to report hazards and procedure for doing so			
3. Workplace health and safety rules (a) _____ (b) _____ (c) _____			



## Data sources

Samples of employed labour force participants in BC and Ontario were recruited through EKOS Research Associate's Probit survey panel (90%) and through RDD (10%)

- Panel of approximately 90,000 households who agree to participate in surveys from “time-to-time”.
- Covers both landline and cellular telephones
- Substantially cheaper than an RDD approach.
- Substantially easier than recruiting through workplaces



## How representative is the EKOS panel?

Compared to Labour Force Survey, the Probit/RDD sample was

- Older;
- More likely to work in health, education, social or community services occupations;
- Less likely to be in sales and services occupations; and
- Less likely to be employed by a small business

Compared to the RDD sample, the Probit-based sample was

- Older;
- Less likely to have English as first language



## Information on samples

Survey	Size	% Ontario	Questions
May/June 2014	1,694	63%	OH&S vulnerability Scale
Feb/March 2015	1,647	64%	OH&S vulnerability scale Awareness of mandatory training Participation in mandatory training Type of training
Sep/Oct 2015	1,690	63%	OH&S vulnerability scale Awareness of mandatory training Participation in mandatory training Type of training

All samples approx. 90% EKOS Probit Panel, 10% Random Digit Dial



## Implementation outcomes (available in 2<sup>nd</sup> and 3<sup>rd</sup> surveys only)

- *Have you heard of a provincial occupational health and safety awareness and training regulation that requires health and safety training for every worker and supervisor?*
- *In the previous 12 months have you participated in occupational health and safety awareness training as part of your job?*





## Implementation outcomes (available in 2<sup>nd</sup> and 3<sup>rd</sup> surveys only)

*What type of health and safety awareness training did you complete?  
(tick all that apply)*

- *A series of meetings or a workshop offered by my employer*
- *Online training module(s) available on a government website (e.g. the Ministry of Labour website)*
- *Workbooks or written resources designed by my employer*
- *Workbooks or written resources designed by a government agency (e.g. the Ministry of Labour)*
- *External training provided by hired consultants*



## Impact Outcomes (available in all surveys)

- Six statements measuring respondent's OHS awareness
- Five statements measuring respondent's empowerment to participate in injury prevention in their workplace

Smith et al 2015; Lay et al 2016



## Awareness Questions: At my workplace....

1. I am clear about my rights and responsibilities in relation to workplace health and safety
2. I am clear about my employers' rights and responsibilities in relation to workplace health and safety
3. I know how to perform my job in a safe manner
4. If I became aware of a health or safety hazard at my workplace, I know who (at my workplace) I would report it to
5. I have the knowledge to assist in responding to any health and safety concerns
6. I know what the necessary precautions are that I should take while doing my job

strongly agree; agree; disagree; strongly disagree



## Empowerment Questions: At my workplace....

1. I feel free to voice concerns or make suggestions about workplace health and safety at my job

2. If I notice a workplace hazard, I would point it out to management

3. I know that I can stop work if I think something is unsafe and management will not give me a hard time

4. If my work environment was unsafe I would not say anything, and hope that the situation eventually improves (reverse scored)

5. I have enough time to complete my work tasks safely

strongly agree; agree; disagree; strongly disagree



## Analyses

### **Descriptive analyses:**

- Prevalence of each outcome by province and survey phase

### **Multivariable regression analyses:**

- Logistic regression models with province and phase as predictors
  - *hypoth = second and third phases should have higher odds of positive outcomes compared to the earliest phase.*
- Interaction term included to examine if the relationship between phase and each outcome differed by province
  - *hypoth = relationship between survey phase and positive outcomes should be stronger in Ontario (where intervention took place) compared to BC*

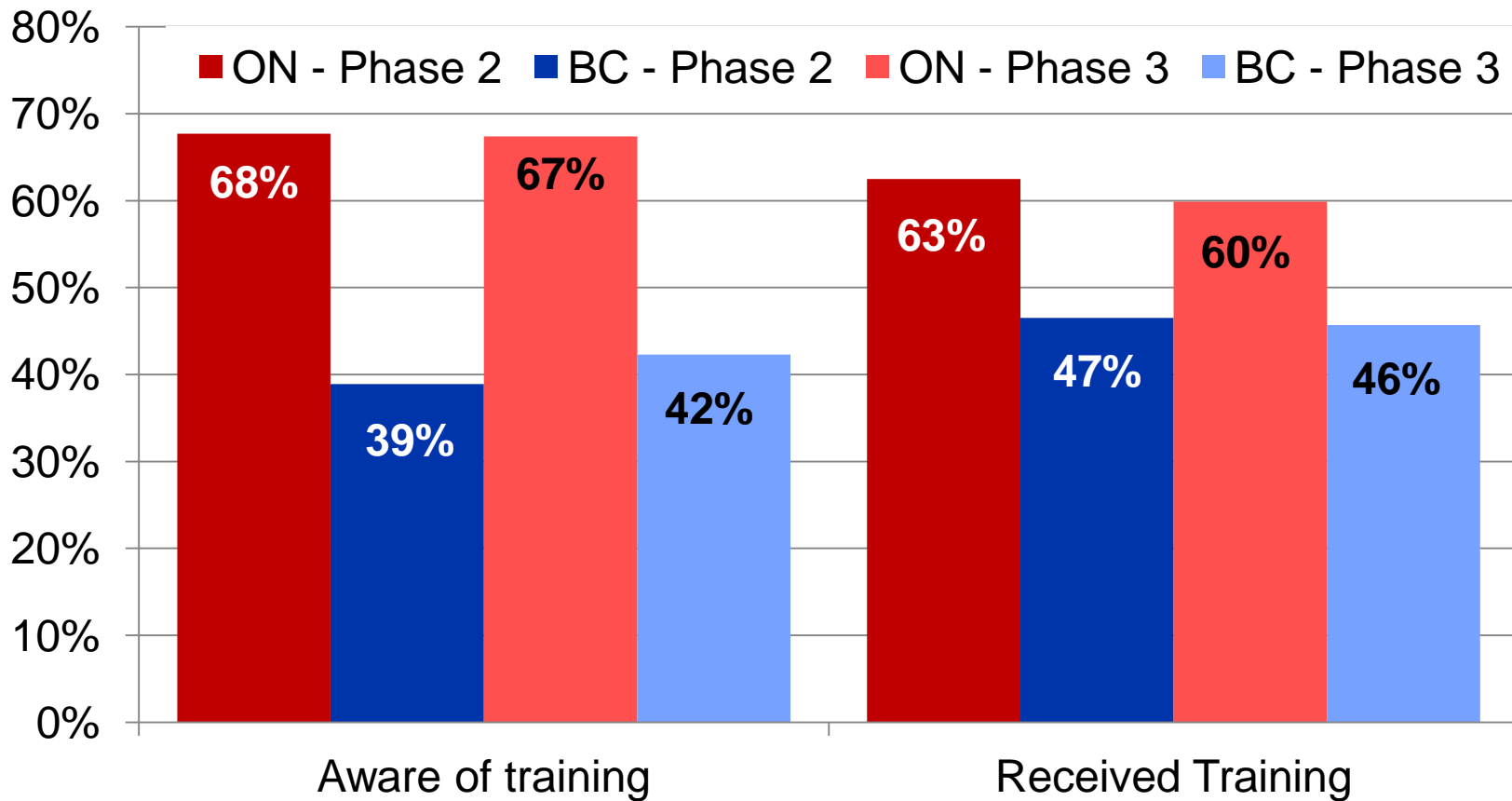


## Analyses (cont)

- In addition to province and phase, adjusted models also included sex, age, education, employer size, place of birth and employment arrangement
- Survey weights used to account for selection into the sample in relation to the age, gender and province, using the LFS

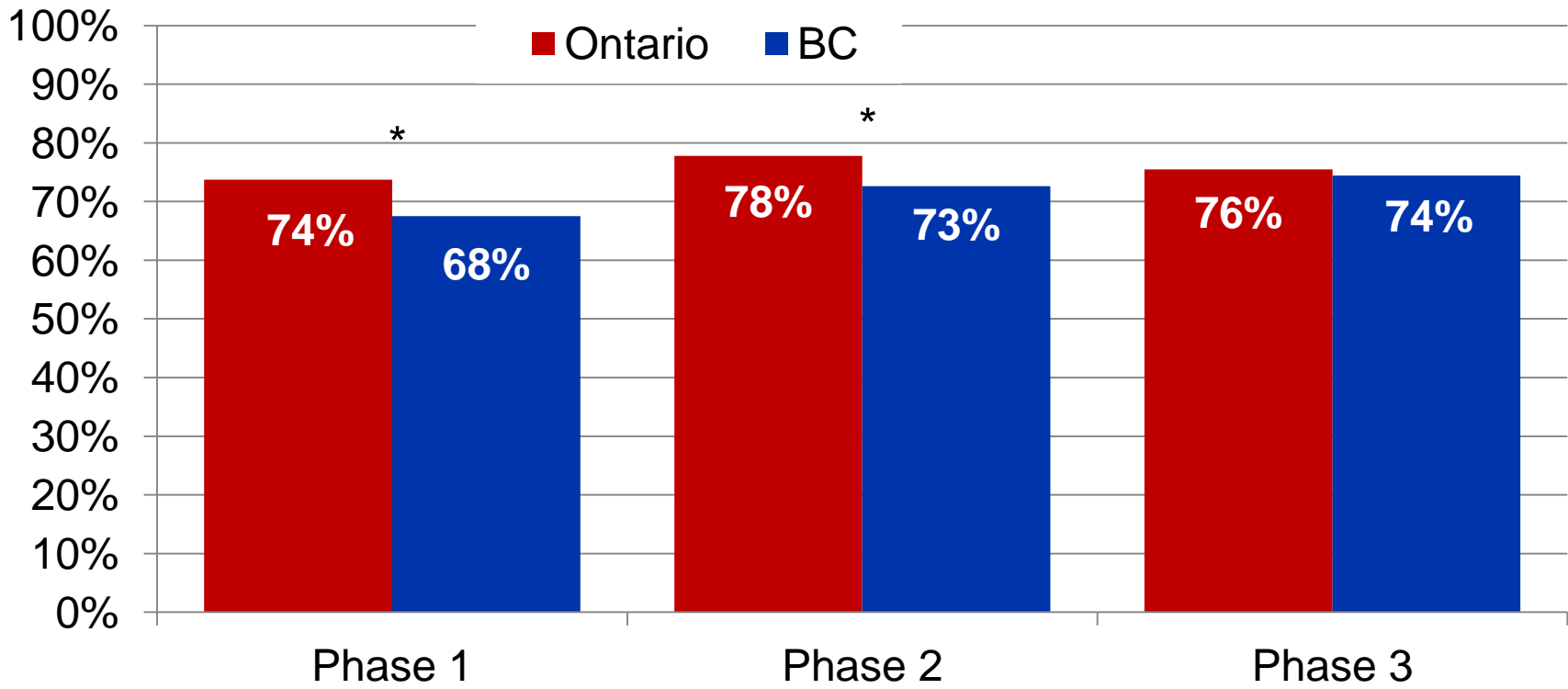


## Percent of respondents who knew about and who had participated in mandatory awareness training by province.





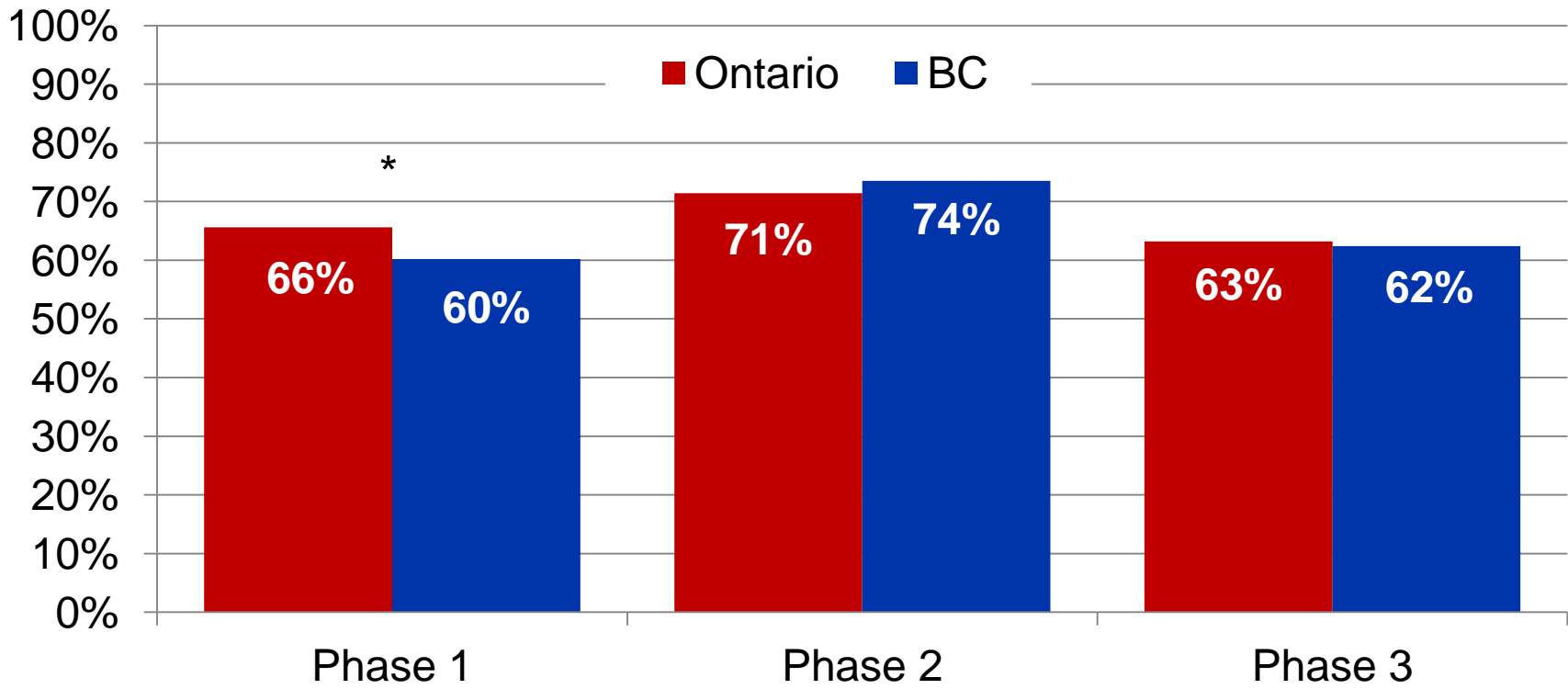
## Prevalence of adequate awareness by province and survey







## Prevalence of adequate empowerment by province and survey



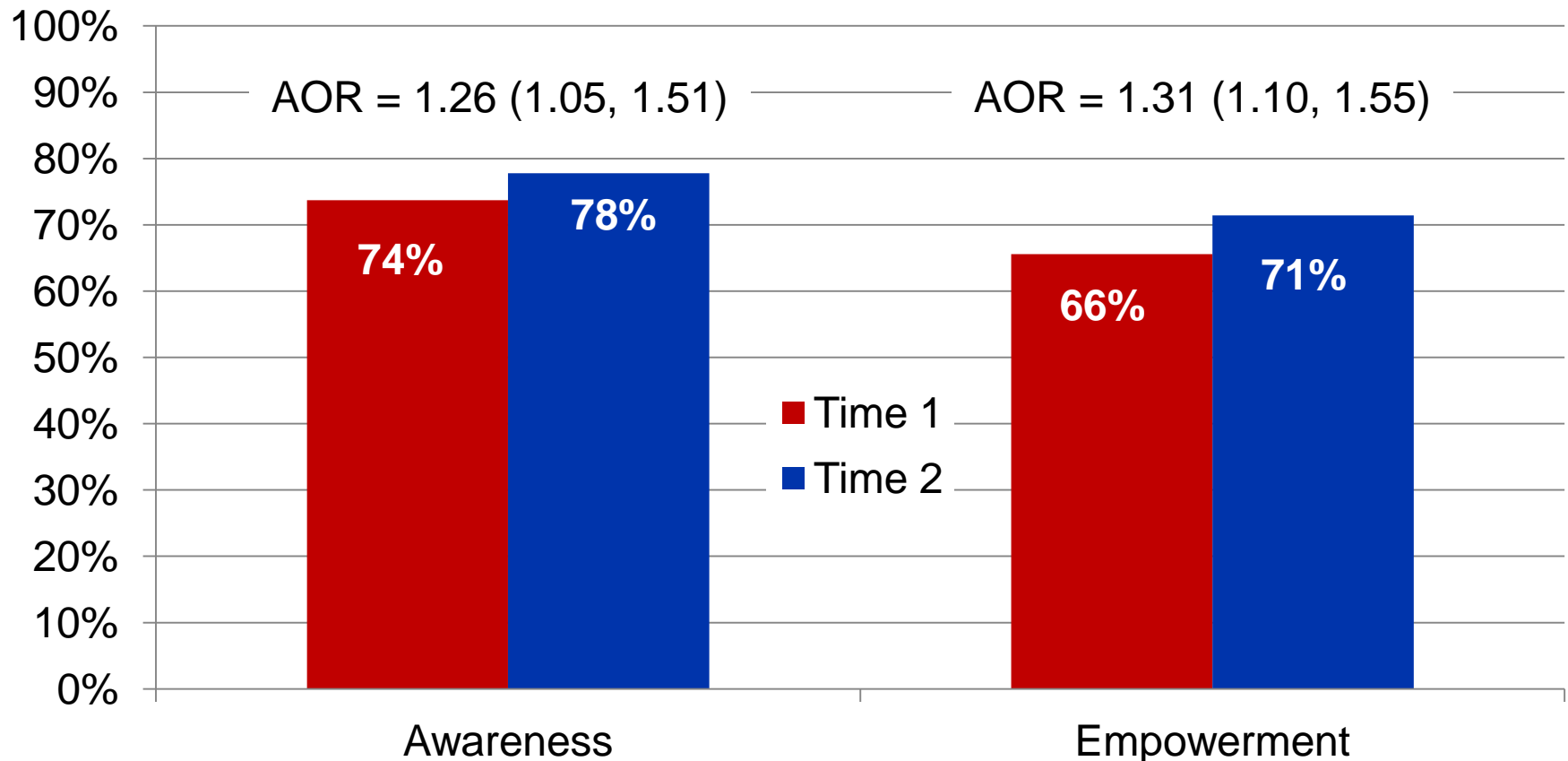


## Key messages

- After the introduction of mandatory awareness training in Ontario, respondents in Ontario were more likely than respondents in BC
  - to be aware of a program of mandatory training
  - to have participated in training in the previous 12 months
- No differences were observed between Ontario and BC in the trend of adequate awareness and empowerment across surveys pre- and post-introduction of mandatory training.
- Respondents in Ontario had higher levels of awareness in first two survey cycles than respondents in BC.
- Respondents in Ontario had higher levels of empowerment in the first survey cycle than respondents in BC.



## An important methods message: Always have a control group, and three time points are better than two



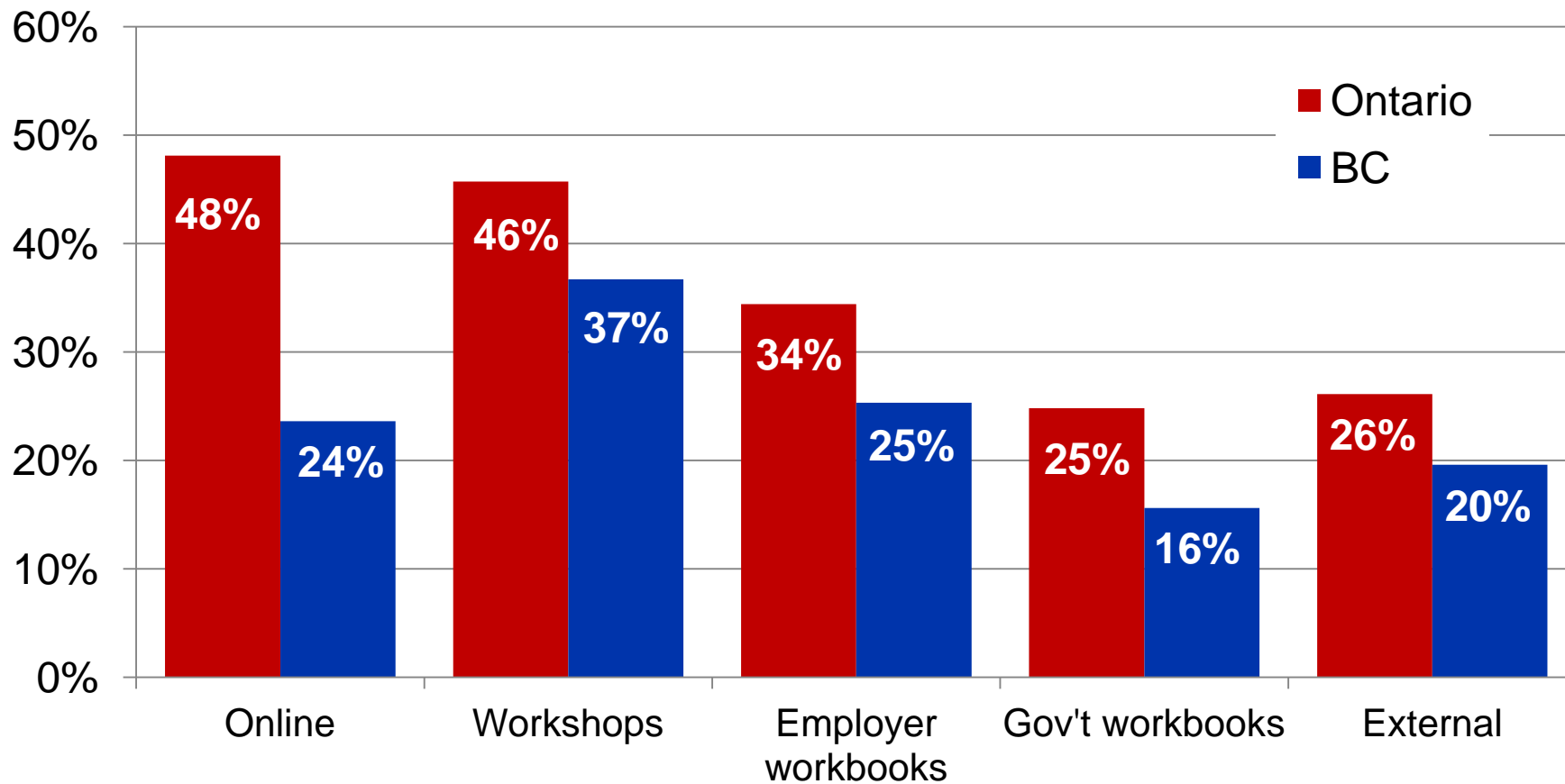


## Why was there no impact of awareness training on self-reported awareness or empowerment?

- The impacts of mandatory awareness training may have occurred prior to our first survey (i.e. the announcement was the intervention).
  - Could be examined if we had information on the uptake of online and workbook training prior to July 2014
  
- The types of training that increased as a result of mandatory awareness training were not effective in increasing awareness or empowerment (theory failure)



## Prevalence of training types by province. 2<sup>nd</sup> and 3<sup>rd</sup> OHS vulnerability surveys





## Adjusted relative risk ratios for different modes of training on adequate awareness (N = 2,704)

Results removed from online presentation as work is in progress



## Adjusted relative risk ratios for different modes of training on adequate empowerment (N = 2,704)

Results removed from online presentation as work is in progress



## Additional key messages

- Mode of training matters: Passive training (completing OHS awareness training on-line or through a workbook) is less effective than active (instructor led) training on both awareness and empowerment.
- Future programs utilising on-line training need to examine ways to make this type of training more effective (e.g. interactive training modules)





## For more information

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Slides and a recording of this plenary will be made available through the IWH website and youtube channel

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