Youth drinking and policy: evaluating the impact of Ontario alcohol policy change on youth alcohol use behaviours

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Compass

UNIVERSITY OF WATERLOO

Alcohol use is prevalent among Canadian youth

60% of Canadians youth report alcohol use, 46% of whom undertake binge drinking

- The latest change in the *Liquor Control Board of Ontario* (LCBO) policy increased the availability of alcohol to the province's population

- Authorized up to 450 grocery stores to sell alcoholic beverages

Background

The new grocery stores serve alcohol in addition to existing 1652 off-premise stores

https://www.ontario.ca/page/beer-wine-cider-sales-grocery-stores

Research Gaps

1. No evidence-based evaluation of the policy change

2. Little evidence on the impact of a policy change on underage drinking behaviour

3. Few studies on how drinking patterns may be influenced by a policy change

Objectives

1. To examine the impact of the new alcohol policy in developmental trajectories of alcohol use among youth population in the exposed jurisdiction within a context of natural experiment

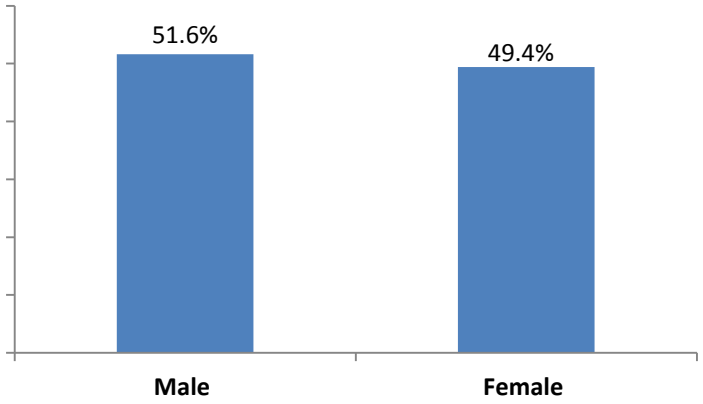
2. To compare the probability of transitioning between different drinking patterns of alcohol use among the exposed and unexposed youth in Ontario and Alberta

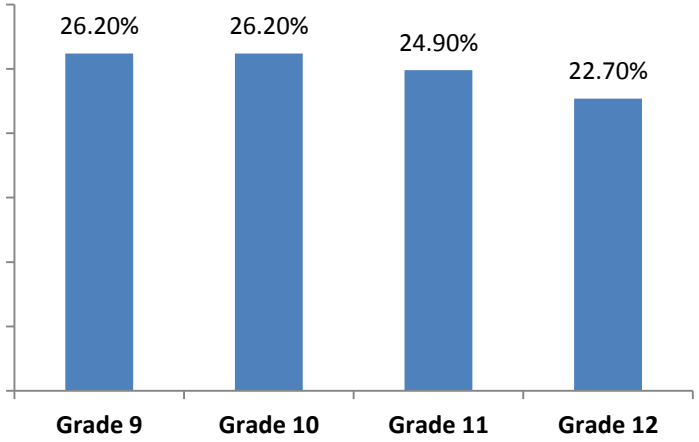
Data source

This analysis used data from four-year linked longitudinal data (2013-14 to 2016-17) in the COMPASS study

Participants

- Sample size= 2,267 Grade 9 students at Wave 1
- 60 Schools across Ontario (n=56) and Alberta (n=4)
- The sample was evenly split in terms of gender and grade





Student level data (COMPASS Questionnaire)

Alcohol and Marijuana Use

*Please remember that we will keep your answers **completely confidential**.*

A **DRINK** means: 1 regular sized bottle, can, or draft of beer; 1 glass of wine; 1 bottle of cooler; 1 shot of liquor (rum, whiskey, etc); or 1 mixed drink (1 shot of liquor with pop, juice, energy drink).

45. In the last 12 months, how often did you have a drink of alcohol that was more than just a sip?

- ○ I have never drunk alcohol
- ○ I did not drink alcohol in the last 12 months
- ○ I have only had a sip of alcohol
- ○ Less than once a month
- ○ Once a month
- ○ 2 or 3 times a month
- ○ Once a week
- ○ 2 or 3 times a week
- ○ 4 to 6 times a week
- ○ Every day

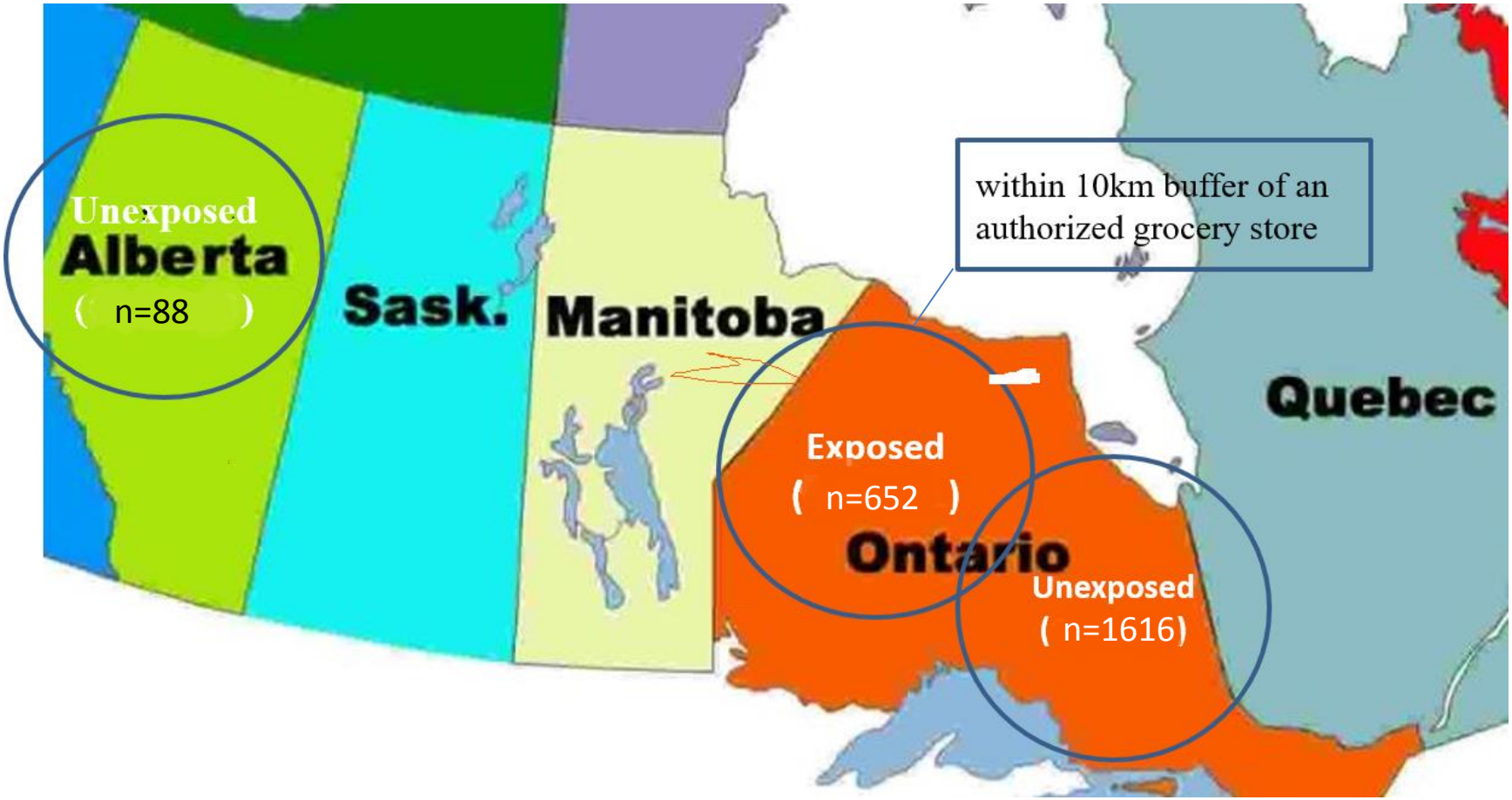
46. How old were you when you first had a drink of alcohol that was more than just a sip?

- ○ I have never drunk alcohol
- ○ I have only had a sip of alcohol
- ○ I do not know
- ○ 8 years or younger
- ○ 9 years
- ○ 10 years
- ○ 11 years
- ○ 12 years
- ○ 13 years
- ○ 14 years
- ○ 15 years
- ○ 16 years
- ○ 17 years
- ○ 18 years or older

47. In the last 12 months, how often did you have 5 drinks of alcohol or more on one occasion?

- ○ I have never done this
- ○ I did not have 5 or more drinks on one occasion in the last 12 months
- ○ Less than once a month
- ○ Once a month
- ○ 2 to 3 times a month
- ○ Once a week
- ○ 2 to 5 times a week
- ○ Daily or almost daily

Exposure to the policy change

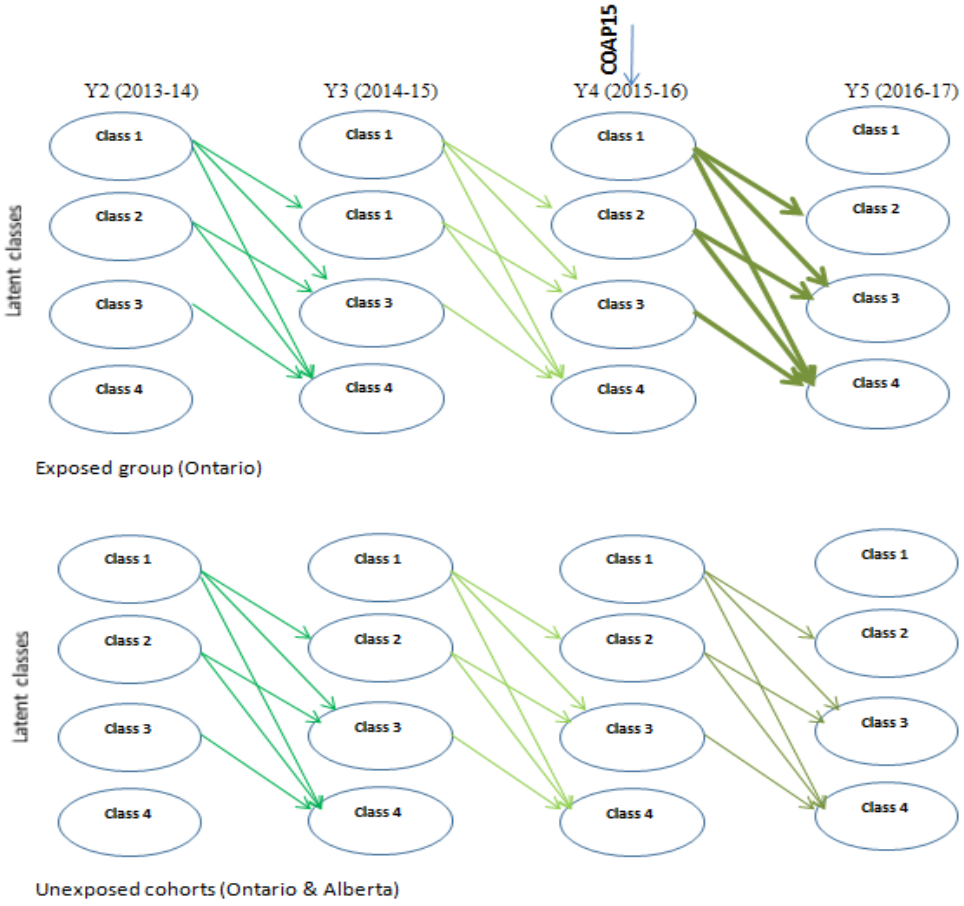


Analysis

Latent transitional analysis (LTA)

-To identify the subgroups of the youth population

-To estimate probabilities of transitions between alcohol use patterns



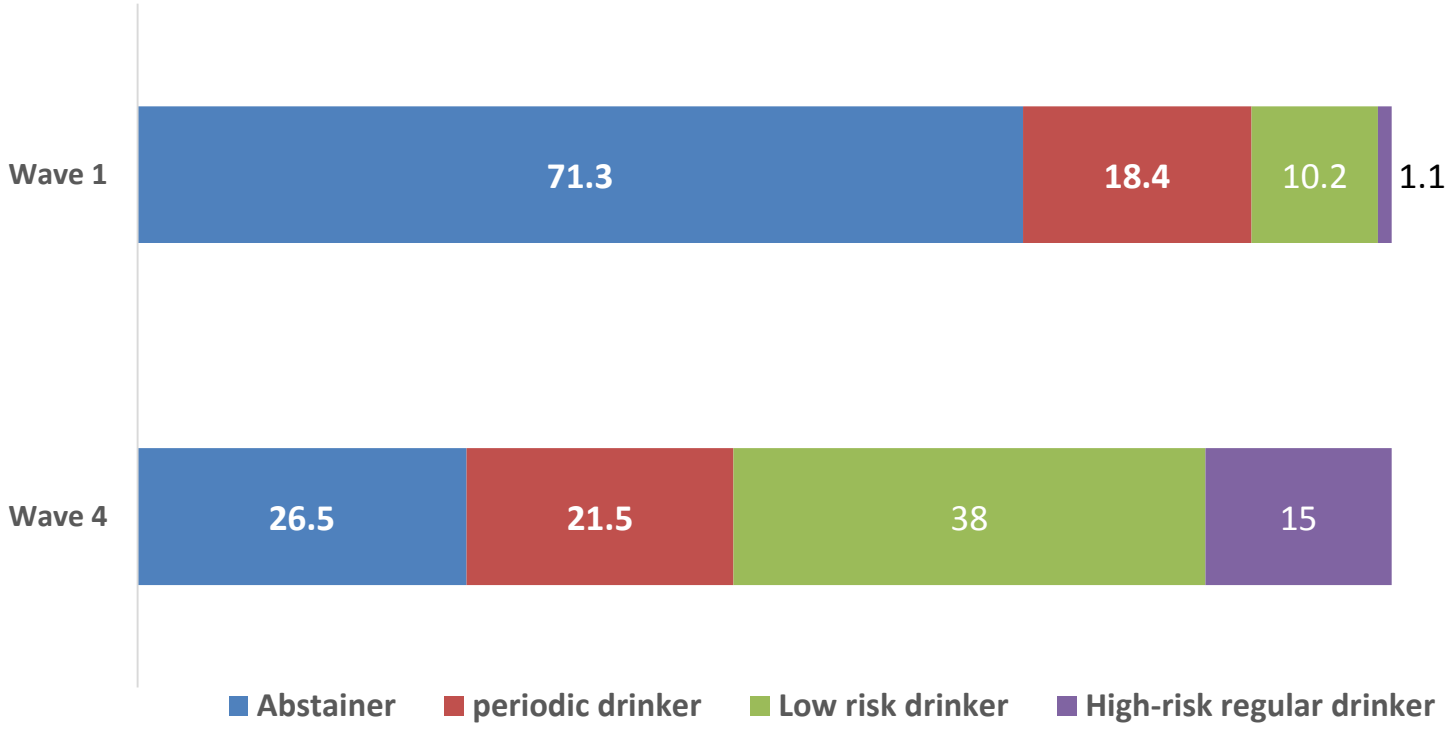
Results (LTA)

LTA identified 4 subpopulations:

1. *Abstainers*: never or no use in the past year (size 71.3%)
2. *Periodic drinkers*: reported monthly drinking and no binge drinking (17%)
3. *Low risk drinkers:* reported some steady monthly drinking but limited number of binge drinking (10%)
4. *High-risk regular drinkers:* reported binge drinking 2-4 times weekly (1%)

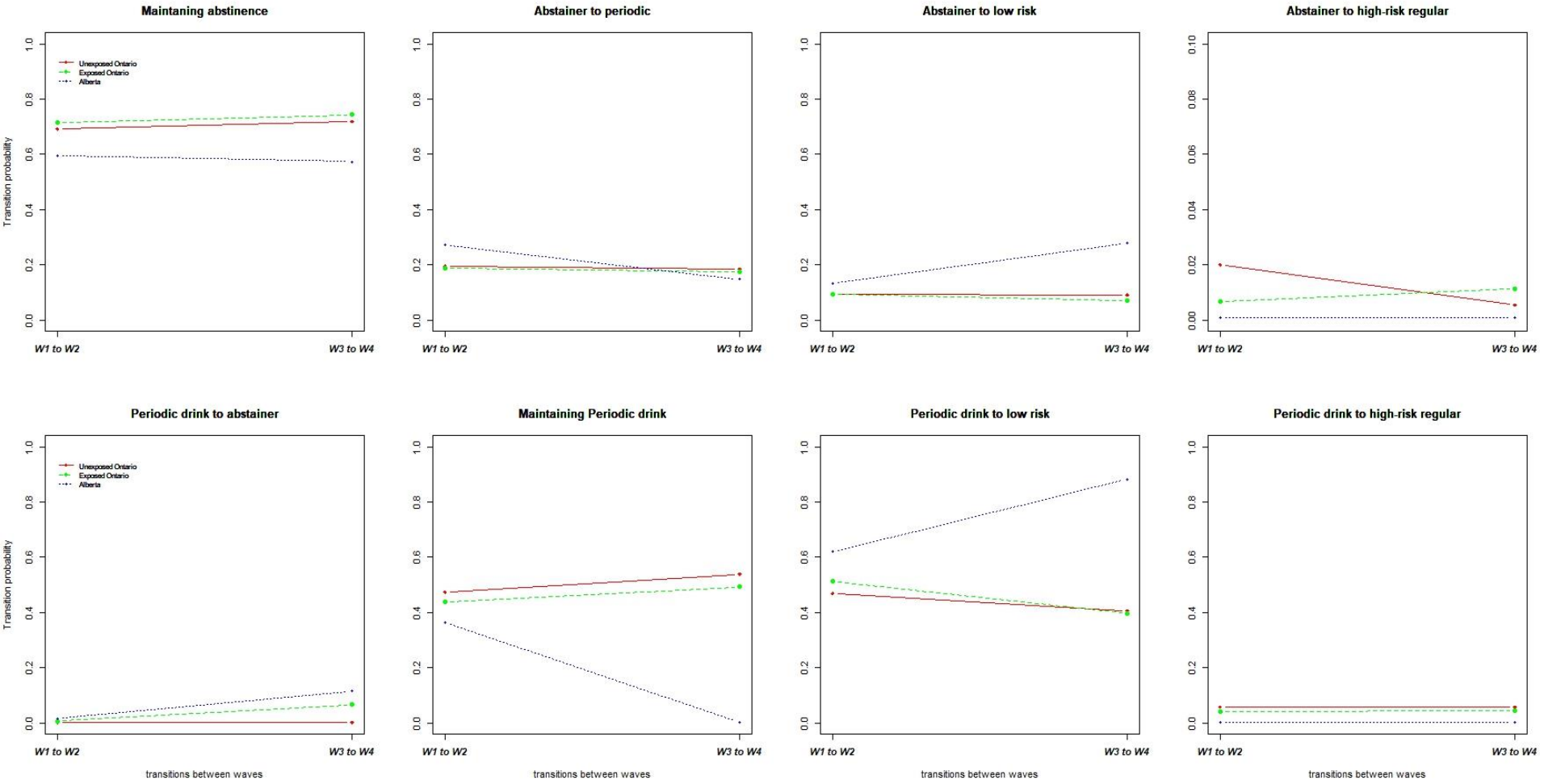
Results (LTA)

Prevalence of drinking patterns



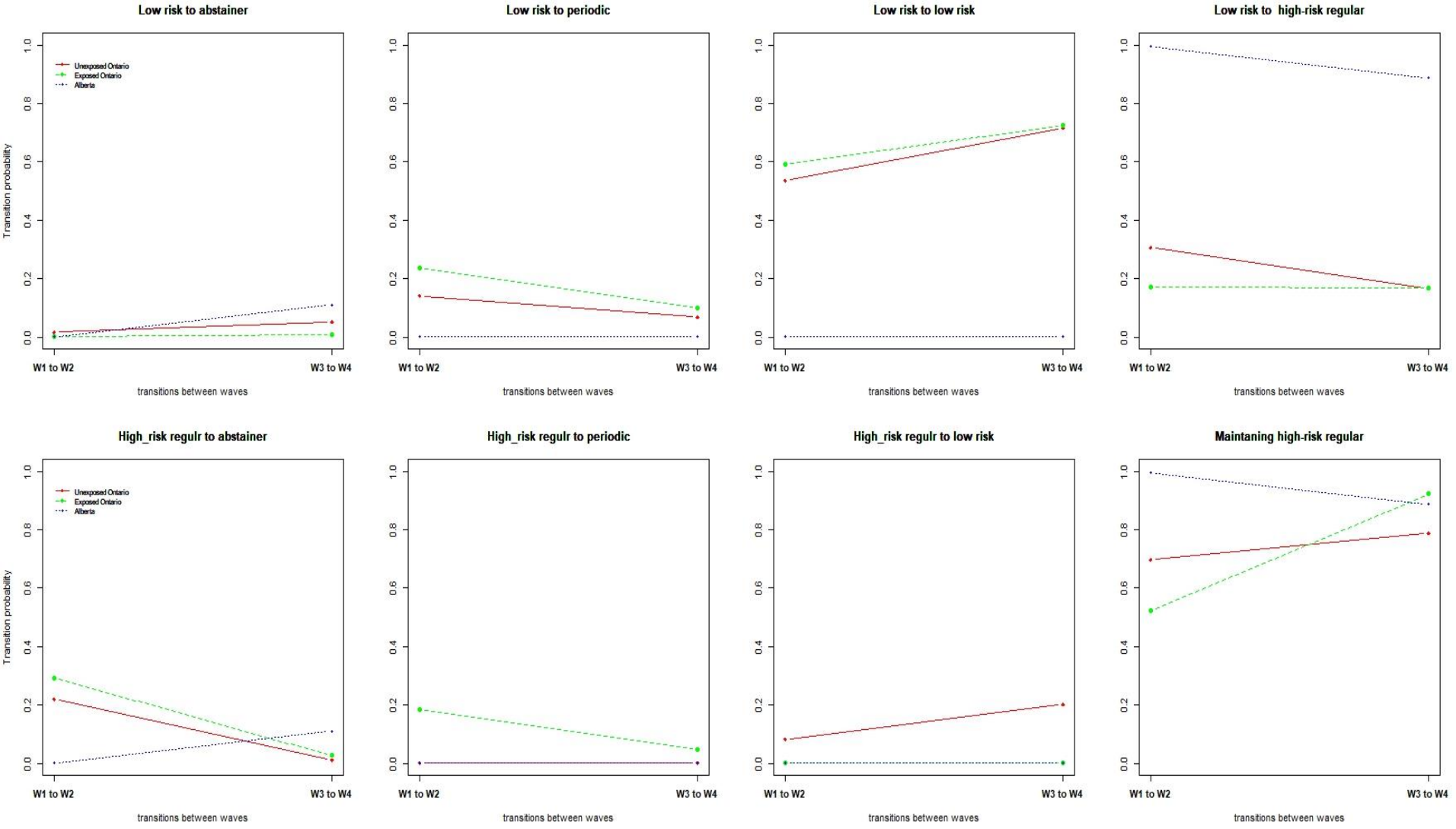
Results (Transition probabilities between latent classes)

Before the policy change: Wave 1 to Wave 2 (i.e., grade 9 to 10)
After the policy change: Wave 3 to Wave 4 (i.e., grade 11 to 12)



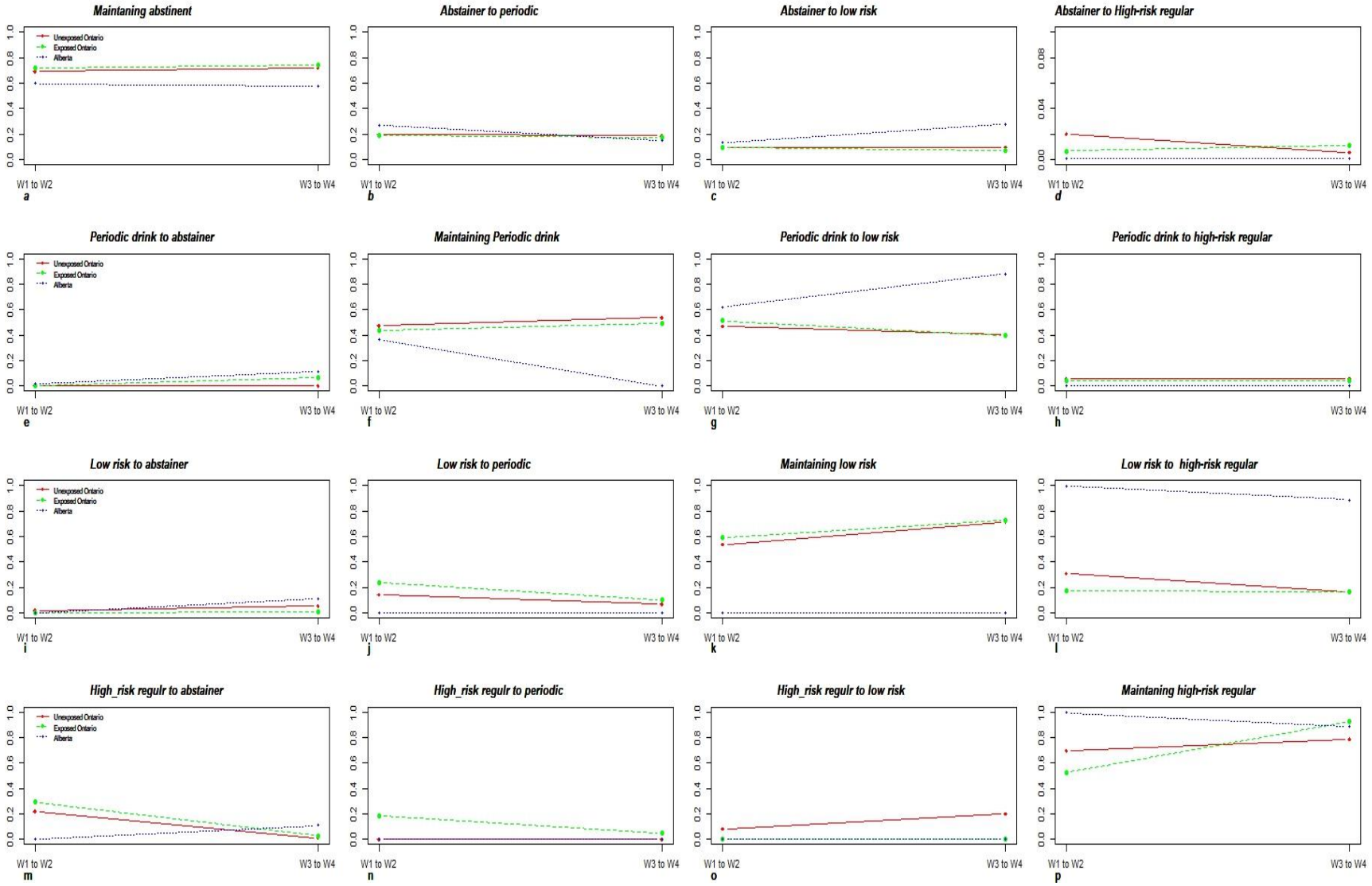
Unexposed_Ontario cohort Exposed cohort Alberta cohort

Results (Transition probabilities between latent classes)



Unexposed_Ontario cohort Exposed cohort Alberta cohort

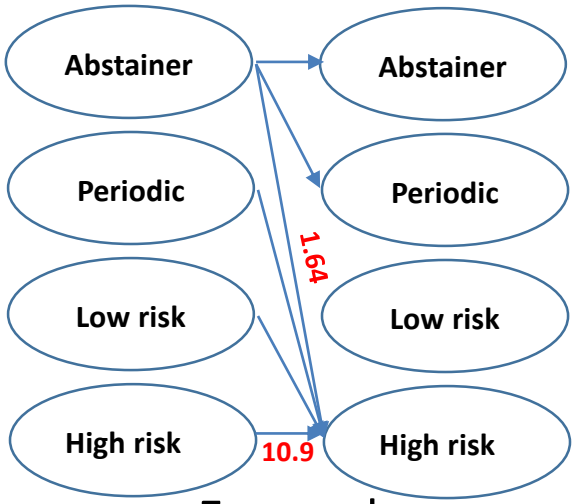
Results (Transition probabilities between latent classes)



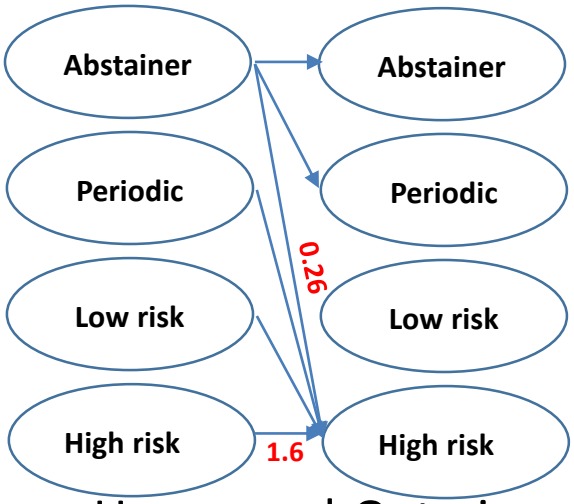
Exposed cohort Unexposed_Ontario cohort Alberta cohort

Results (cont'd)

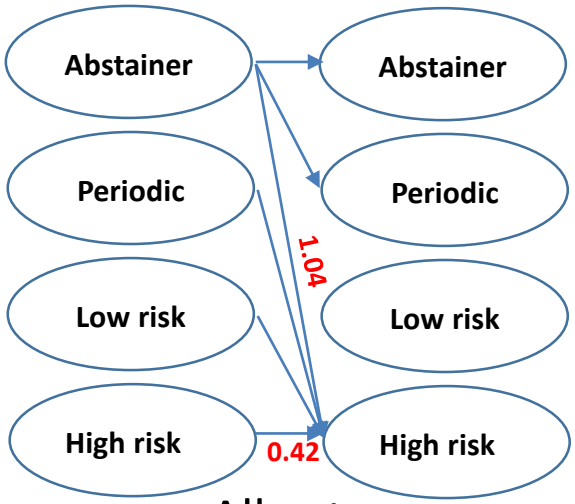
Odds ratio of transitioning to higher drinking latent classes after the policy change to before the change.



Exposed



Unexposed-Ontario



Alberta

Conclusion

- The youth population is heterogenous with respect to alcohol use behaviors
  - Warrant the need to consider different, but identifiable, response to public policies
  - Understanding different trajectories helps to implement tailored programs around prevention
- The new LCBO policy appears to have had no negative impact on the alcohol use behaviour of most youth
- This new policy did have a negative impact on alcohol use behaviour among the two small group of highest risk youth
  - Exposed heavy drinkers were more apt to maintain heavy drinking rather than reduce
  - Exposed abstainers were more apt to become high risk drinkers

Limitations

- Not provincially or nationally representative
- Study relies on self-reported alcohol consumption
- Linkage bias
- Short term impacts of the policy change
- Binary cut of for the distance of the new grocery stores to schools
- Small sample size of Alberta cohort

Research significance

- This evaluation protocol can be used for other substance policy evaluations
- First research about the impact of change to a governmental alcohol policy on Canadian youth alcohol trajectories
- The findings would provide a useful evidence to inform public health contributions and considerations for alcohol policy making

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Thank you!

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