

## RESEARCH TEMPLATE

**Submissions must not exceed 300 words (excluding title)**

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**Word count (max 300):** 304 *(including headers such as Methods, Results etc)*

### **Title:**

How does proximity to alcohol retailers affect binge drinking in Vancouver, BC? – Results from My Health My Community

### **Background (Optional):**

Since 2015, changes in BC liquor policy have enabled municipalities to permit wine sales in grocery stores, even if they are less than 1km from another liquor-licensed premise. The City of Vancouver currently limits density of liquor stores and does not permit alcohol sales in grocery stores. Local data from the My Health My Community (MHMC) survey was used to inform discussion on this issue.

### **Objectives:**

To examine the association between binge drinking and physical proximity to liquor stores and establishments with liquor license (on-premise) in Vancouver, BC.

### **Methods:**

MHMC respondents aged 19+ years (legal drinking age in BC) with a valid Vancouver postal code were included. Binge drinking was defined as having 5+ drinks on one occasion for men and 4+ for women. Multivariate logistic regression was used to examine the relationship between binge drinking (1+ times per month) and distance to two types of retailers (liquor stores and on-premise, using ©ArcGIS). Models were weighted by age, gender, education and neighborhood, and were adjusted for socio demographic variables.

### **Results:**

Compared with those who lived within 250m of liquor stores, people who lived 1km+ away had 45% (95%CI: 29% - 57%) lower odds of binge drinking. For proximity to on-premise, people who lived 500m+ away had 39% (95%CI: 23% - 51%) lower odds of binge drinking, compared to those who lived within 150m.

### **Conclusions:**

Our local health data suggests that living in closer proximity to liquor-licensed premises may lead to increased binge drinking.

### **What are the implications of your research to inform future policy or practice initiatives?**

As the City of Vancouver's jurisdiction enables it to set parameters on the density of liquor-licensed premises, these findings can inform the City's alcohol policy development.



# How does proximity to alcohol retailers affect binge drinking in Vancouver, BC?

Canadian Public Health Association Conference 2017

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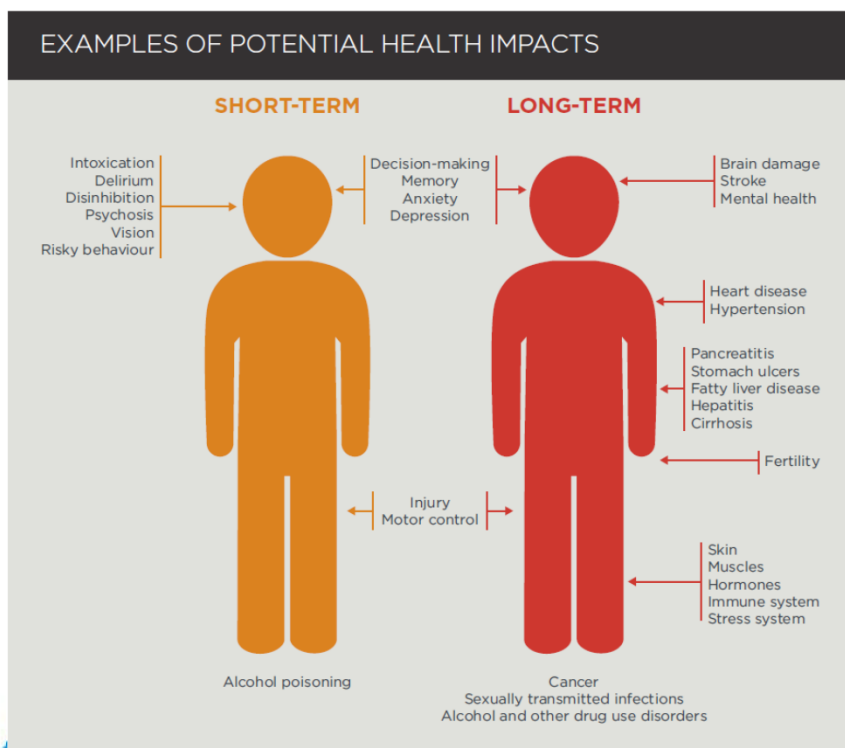
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# Disclosure Statement

Disclosure of Relationship	Company/Organization(s)	If you think this might be perceived as biasing your presentation or a conflict of interest, identify how you will address this in your presentation.
I have ownership interest or other financial interest in the company (i.e. stocks, stock options or other ownership interest, excluding diversified mutual funds)		
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No conflicts to disclose

# Alcohol consumption and health



- Alcohol is the third leading factor for premature death and disability worldwide
- Top risk factor for poor health in people aged 15-49 years
- Causal factor in more than 200 diseases/types of injury

Taylor G. The Chief Public Health Officer's Report on the State of Public Health in Canada 2015: Alcohol Consumption in Canada. Ottawa, ON: Public Health Agency of Canada, Government of Canada; 2016.



# Alcohol consumption and health



Taylor G. The Chief Public Health Officer's Report on the State of Public Health in Canada 2015: Alcohol Consumption in Canada. Ottawa, ON: Public Health Agency of Canada, Government of Canada; 2016.



# Background - local context

- Updates to British Columbia Liquor Control and Licensing Act and regulations have brought about changes including:
  - Allowing BC VQA wine to be sold in grocery stores, even if less than 1km from another retail location
- Current City of Vancouver (CoV) policy limits density and does not permit alcohol sales in grocery store
- CoV expressed desire to use **local data** to inform discussions
  - Potential impact of increased availability, in particular the impact of physical proximity to alcohol retail locations on binge drinking



# Analysis objective

To examine the association between **binge drinking** and **physical proximity to liquor stores and establishments with liquor licenses (on-premise)** in Vancouver, BC.





my Health  
my Community

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the big picture.**

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Faculty of Medicine  
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# Data collection



- 2013/14, online & paper
- Lower Mainland, Sea to Sky & Coastal, 18+ years
- Media and social media promotions
- Community partnerships, outreach & incentives
- 33,000 respondents
  - 9,995 Vancouver



# Ensuring a representative sample

- 2% population target overall
- Purposeful sampling
- Monitoring of progress
- Outreach
- Post-collection weighting
  - Age, gender, education and geography (municipality or neighbourhood)



1. Socio-demographics

2. Health status

3. Health care access

4. Lifestyle

5. Built environment

6. Community resiliency



# SURVEY Topics



129 EDMONDS STN

my Health my Community

**Do you have enough transportation options in your community?**

Tell us at [www.myhealthmycommunity.org](http://www.myhealthmycommunity.org).  
Your voice for a healthier community.

Where you live, work and play affects your health.



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**Can you get fresh fruits and vegetables in your neighbourhood?**

Tell us at [www.myhealthmycommunity.org](http://www.myhealthmycommunity.org).  
Your voice for a healthier community.

Where you live, work and play affects your health.



my Health my Community

**Do you know your neighbours?**

Tell us at [www.myhealthmycommunity.org](http://www.myhealthmycommunity.org).  
Your voice for a healthier community.

Where you live, work and play affects your health.

## Sample for analysis (n=8650)

- My Health My Community survey respondents, who:
  - Were 19+ years (legal drinking age in BC)
  - Had a valid **Vancouver** postal code
  - Responded to alcohol-related questions *“During the past 12 months, how often did you drink alcoholic beverages?”*



# Alcohol-related questions



- During the past 12 months, how often did you drink alcoholic beverages?
- How often in the past 12 months have you had 5 or more (men), 4 or more (women) drinks in one occasion?

*[one drink includes one glass of beer, one small glass of wine or one shot of hard alcohol]*



Binge drinking = 1+ times per month

**n=2223 (25.8%)**

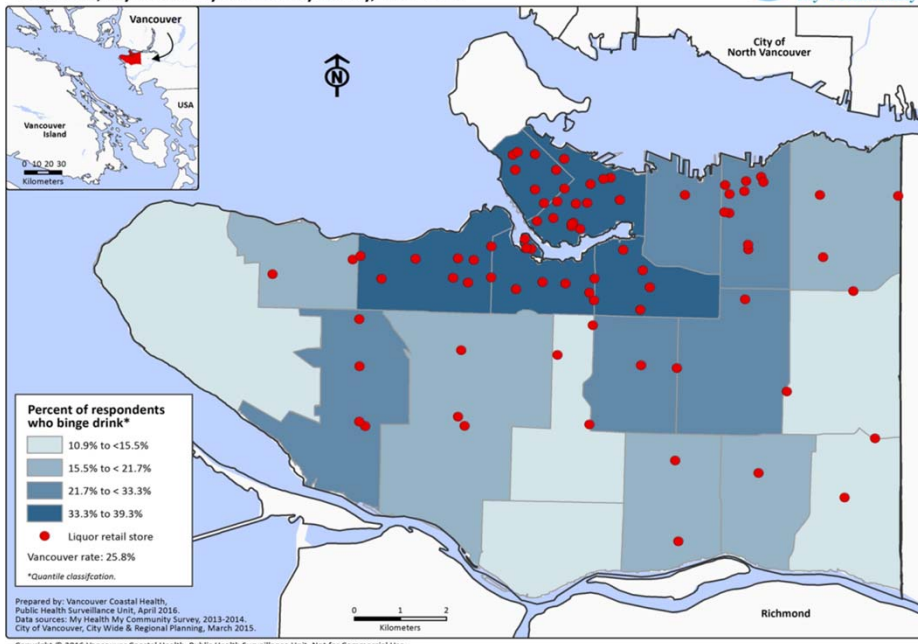


# Network analysis

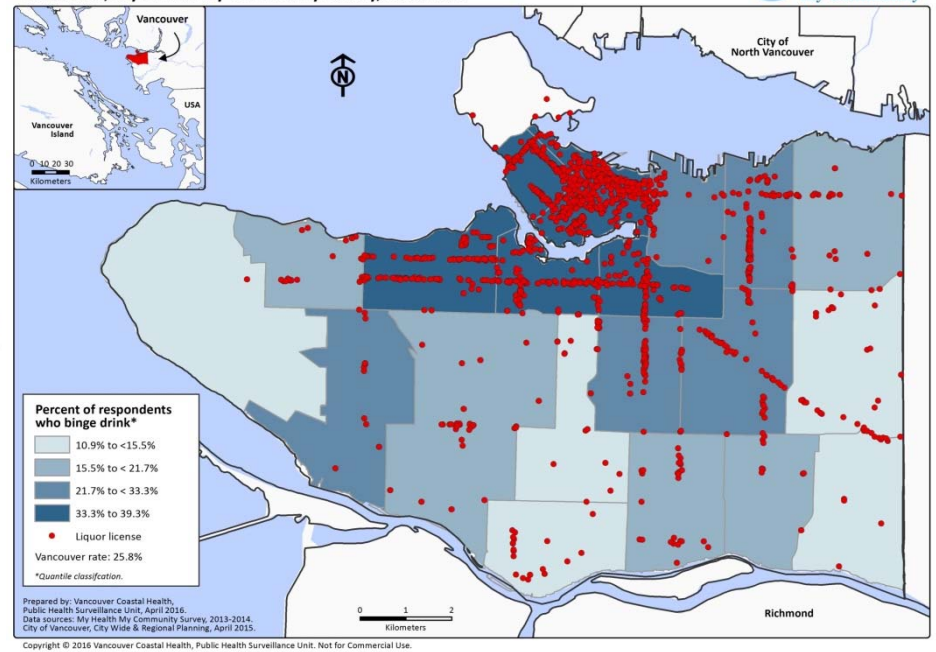
- Locations (postal code) for liquor stores and establishments with liquor license (on-premise) provided by City of Vancouver
- Calculated distance between MHMC respondent postal code to establishment postal code along a road network
  - ©ArcGIS Network Analyst



Survey respondents (19+ years) who binge drink by neighbourhood.  
Vancouver, My Health My Community Survey, 2013-2014



Survey respondents (19+ years) who binge drink by neighbourhood.  
Vancouver, My Health My Community Survey, 2013-2014



# Analytical methods

- Multivariate model to examine the relationship between (self-reported) binge drinking and:
  - 1) Proximity to Liquor Store
  - 2) Proximity to establishment with Liquor License (on-premise)
- Controlled for socio-demographic factors
  - Age, gender, education, ethnicity, income, employment and time in Canada
- Excluded UBC area





# Results



Proximity to liquor stores/licensed premises = increased odds of (self-reported) binge drinking



## Proximity to Liquor Stores

Compared with those who live within 250m of liquor stores, people who live over 1km have 45% (95%CI: 29% - 57%) lower odds of binge drinking



## Proximity to on-premise liquor license

Compared to those who live within 150m of an on-premise liquor license, people who live over 500 m away have 39% (95%CI: 23% - 51%) lower odds of binge drinking



# Conclusions and implications

- Binge drinking and associated harms are driven by multiple factors
  - Proximity to retail locations is under municipal control
- Local health data suggests that decreased distance, may lead to increased binge drinking and associated harms
- These findings can inform the City of Vancouver's alcohol policy development



# Project Team (since 2013)

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# Additional acknowledgements



my Health  
my Community

- VCH and FH Medical Health Officers and other staff involved in the project
- Municipal partners
- Community organizations
- All of our survey respondents!



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