Alcohol Use

- Most commonly used substance in Canada
  - 75% reported alcohol use in the past year[1]

- College students (ages 18-25) are particularly at risk for Heavy Episodic Drinking [2]

[1]Canadian Centre on Substance Use and Addiction, 2017;
[2]Butt, Beirness, Gliksman, Paradis, & Stockwell, 2011

Public Health Concern

- HED associated with a host of short and long-term consequences[1-6]
- ~77,000 hospitalizations caused by alcohol in 2015[7]
- Alcohol poisoning causes 232 deaths annually[8]
- 72,000 impaired driving incidents in 2015[9]
- Alcohol related harms cost Canadian tax payers approximately $14.6 billion/year[10]
- Impacts the safety and economic welfare of Canada as a whole

[1]Butt, Beirness, Gliksman, Paradis, & Stockwell, 2011; [2]Caudwell, Mullan, & Hagger, 2016; [3]Park & Grant, 2005; [4]White & Hingson, 2014; [5]Rehm et al., 2010; [6]Stavro, Pelletier, & Potvin, 2013; [7]Canadian Centre on Substance Use and Addiction, 2017; [8]Statistics Canada, 2014; [9]Kathryn 2017; [10]Rehm et al., 2002
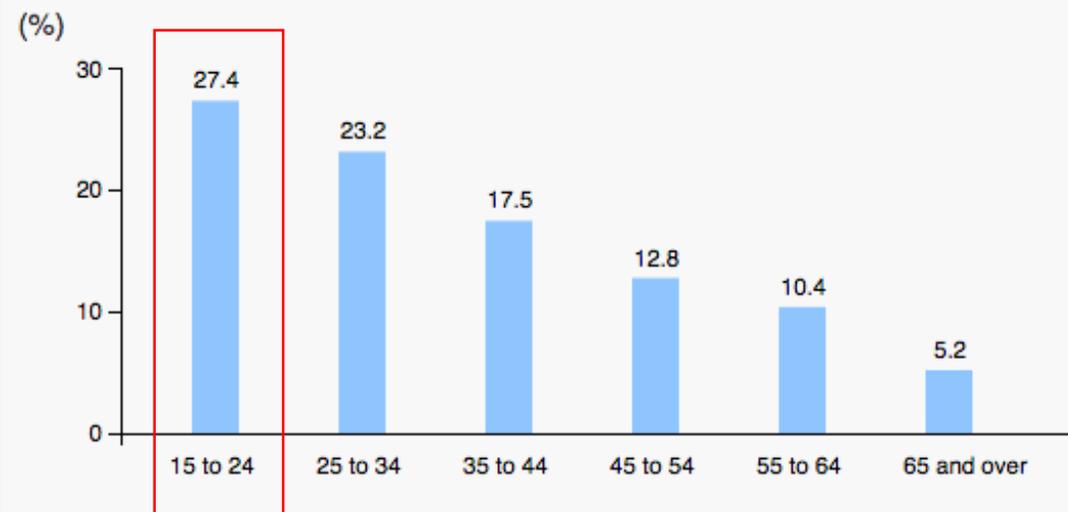
Cannabis Use in 18-25

- College-aged students engage in cannabis use more than any other age group[1]

- Report cannabis use in 9% of drinking occasions[2]

- Compliment or substitute?

Cannabis use in the past three months by age, Canada
Fourth quarter 2018
(%)

Age group	%
15 to 24	27.4
25 to 34	23.2
35 to 44	17.5
45 to 54	12.8
55 to 64	10.4
65 and over	5.2

[1]Statistics Canada, 2019;
[2]Centre for Addiction and Mental Health, 2005

Cannabis Substitution

- Behavioral Economic Theory: availability of one good can either increase, decrease or have no effect on the use of another good

- One substance may exert a substitute effect (decrease other substance use), compliment effect (increase other substance use), or have no effect on the use of other substances[1]

- Increasing public interest on the effect that increased access to and availability of cannabis presents, particularly on the use of alcohol

[1]Hursh et al., 2005

CIHR Catalyst Grant in Population Health Intervention Research on Legalization of Cannabis

- Multi-Method Evaluation of the Transition into Cannabis Legalization (METRIC-L)

1. **How will legalization impact level and modes of cannabis use and access?**

2. How will legalization impact cognitions related to CU?

3. **How does CU relate to the use of other psychoactive substances?**

4. How will legalization impact the psychosocial health consequences of CU?

5. Assessing heterogeneity among cannabis users

PI: Zach Walsh, PhD

Design and Purpose

- Online survey accessed by university students

- The present study sought to examine substance use patterns prior to and directly following cannabis legalization to evaluate the impact of the policy change

- Hypothesized that cannabis substitution would increase following legalization

Methods

- *N = 1575*
  - *n* = 972 undergraduate students (aged 18-25) positive for lifetime cannabis and alcohol use (66.9% female; *M*age = 20, *SD* = 1.7)
  - Cohorts: Pre-Legalization February 2018 to Mid-October 2018; Post-Legalization Mid-October 18 to April 2019

Pre-Legalization

N = 537
*M*age = 20, *SD* = 1.8,
62.4% female

Post-Legalization

N = 435
*M*age = 20, *SD* = 1.7,
72.4% female

Substitution

24%

Use cannabis instead of alcohol

56%

Drink less alcohol when using cannabis

1 in 10

Use cannabis to purposely reduce the amount of alcohol drank

I use cannabis instead of alcohol…

4 in 10

To avoid a hangover

27% vs. 17%

Because it's safer

17% vs. 11%

If I have to drive

[1] $\chi^2 = 16.03$, p > .01
[2] $\chi^2 = 7.78$, p > .01

I use alcohol instead of cannabis...

40%*
Because it's more
socially acceptable

47%*
Because I can use
it in more places

*Remained stable following legalization

Conclusions and Policy implications

- Data suggests that students substitute cannabis for alcohol and reduce alcohol consumption when cannabis is available.

- Notably, nearly a quarter of respondents indicated that they liked the effects of the two together, suggesting that this may represent a potential risk for harm.

- Given the major shift in cannabis policy in Canada and heightened public interest, examining the substitution effect and co-use of alcohol and cannabis is warranted.

UBC

Conclusions and Policy implications

- Things haven't changed – legalization didn't cause a huge change in cannabis substitution

- Students report drinking less when they use cannabis and this remained stable after legalization

- Things that did change:
  - Student's attitudes regarding the safety of cannabis more conservative
  - Student's attitudes regarding the safety of driving following cannabis use more conservative

- Fears about normalization not supported by this data

Other Considerations

- Storefront access to cannabis decreased following legalization

- Widespread educational campaigns and some negative PR around cannabis may subside

Acknowledgements

Research Assistants

Jill Robinson Joseph Rootman
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