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Centre for Addiction and Mental Health  
Centre de toxicomanie et de santé mentale

# Alcohol Use and Suicide *Webinar*

November 12,  
11:00AM -12:30PM ET

# Presenters



**Moderator:**  
Karla Thorpe

**Director**  
Prevention and Promotion  
Initiatives  
*Mental Health Commission of  
Canada*



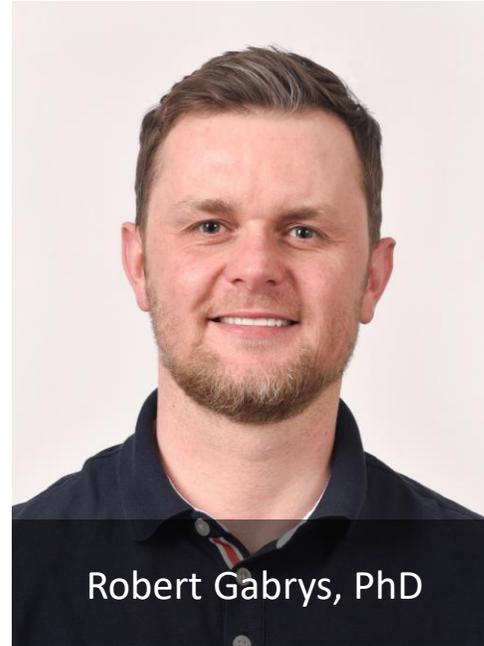
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# Alcohol use and suicide in Canada

Heather Orpana, PhD

Substance Related Harms Division

Centre for Surveillance and Applied Research

Public Health Agency of Canada



# Acknowledgements

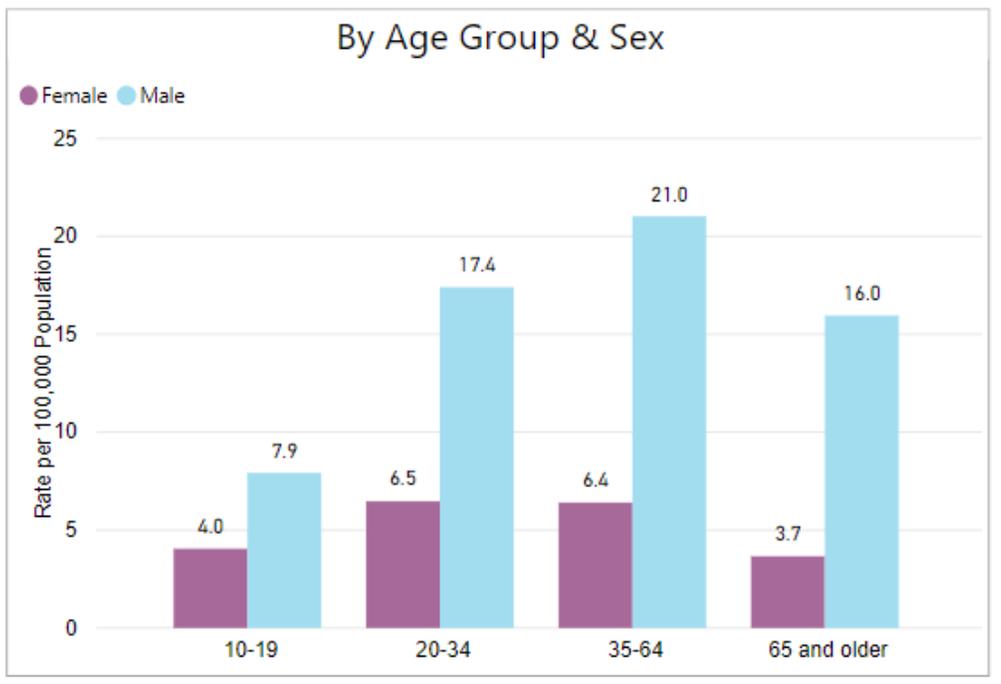
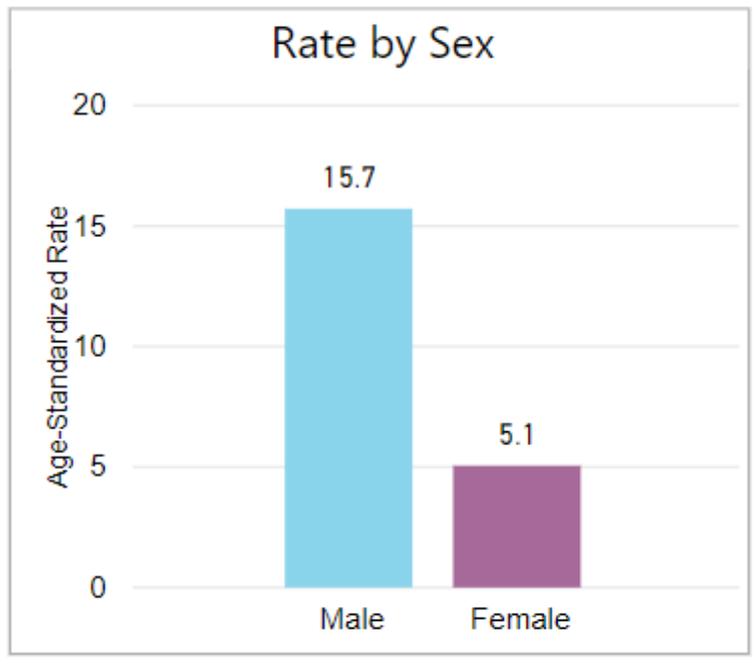
- Fatima Asad
- Dr. Norman Giesbrecht, Dr. Mark Kaplan, Aliya Hajee
- Cannabis, Alcohol, Vaping and E-cigarette Surveillance team
- Positive Mental Health and Suicide Surveillance team



# Suicide Mortality in Canada in 2018

Total Number of Deaths  
**3811**

Overall Rate  
**10.3**  
per 100,000 population



Source: CVSD, 2018

## Alcohol use in Canada

- In 2019, 77.6% of Canadians (aged 15+) reported consuming alcohol in the past year (CCHS, 2019)
- In 2017, 16.1% of Canadians (aged 15+) reported drinking that exceeded the Low Risk Drinking Guidelines (LRDG) for *chronic* health effects
  - More men (17.6%) than women (14.6%) (CTADS, 2017)
- In 2017, 11.5% of Canadians (aged 15+) reported drinking that exceeded the LRDG for *acute* health effects (binge drinking)
  - More men (13.1%) than women (9.9%) (CTADS, 2017)
- 44% of students in grades 7 to 12 reported drinking alcohol in the past year
  - 23% reported binge drinking in the past year (defined as 5+ drinks on one occasion)(CSTADS, 2018-2019)

## Alcohol use change during the COVID 19 pandemic

- Statistics Canada's **Canadian Perspectives Survey Series (CPSS)** provides data on COVID-related topics in representative Canadian samples (Statistics Canada, 2020)

### March 22-26

13.6% of Canadians reported an increase in alcohol consumption

9.5% reported a decrease in alcohol consumption

### April 24-May 2

18.8% of Canadians reported an increase

7.4% reported a decrease

## Alcohol use and suicide in Canada

### The relationship between alcohol use and suicide is multifaceted and complex

- Alcohol use can contribute to suicide death, as well as be a means of suicide (alcohol poisoning)
- Bio-psycho-social pathways between alcohol and suicide
- Depends on the pattern and timing of consumption
- Frequency and intensity of regular use
  - Increases instances of acute alcohol use, risk for alcohol use disorder
- Alcohol use disorder
  - May result from or lead to psychosocial stressors
  - Comorbid with other mental disorders
- Acute alcohol use
  - Impulsivity, poor problem solving, aggression, sadness, despair

# Alcohol use and suicide in Canada

Evidence collected on the relationship between alcohol use and suicide deaths in Canada include:



1. Ecological studies
2. Alcohol-attributable fractions and deaths
3. Toxicology studies

Source: Orpana H, Giesbrecht N, Hajee A, Kaplan MS. Alcohol and other drugs in suicide in Canada: opportunities to support prevention through enhanced monitoring. Injury prevention. 2020 Mar 27.

## Ecological studies

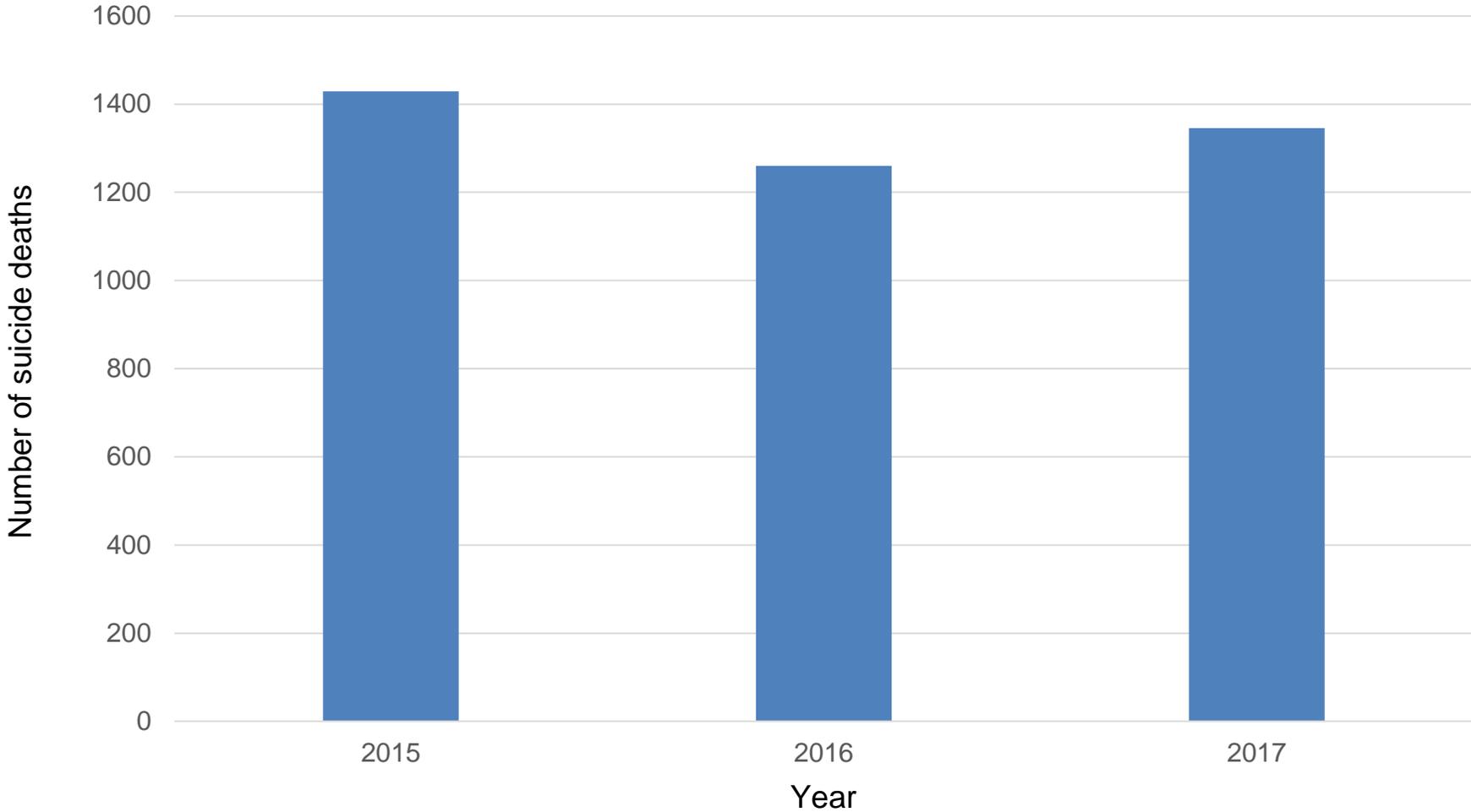
- Relationships at the population level
  - e.g. per capita alcohol consumption and overall suicide mortality
- Suicide mortality increased 4% for every litre per capita increase in alcohol consumption (Ramstedt et al, 2005)
- Privatization of alcohol retail sales in Alberta are associated with an increase in suicide mortality rates (Zalcman & Mann, 2007)
- Alcohol-related deaths increased by 3.25% for each 20% increase in private liquor store density (Stockwell et al, 2011)
  - Approx. 612 suicide deaths were attributable to alcohol use in BC between 2003 and 2008

Overall, ecological studies appear to support a relationship between alcohol sales (or other measures of alcohol availability) and suicide rates

## Attributable fractions (AF) studies

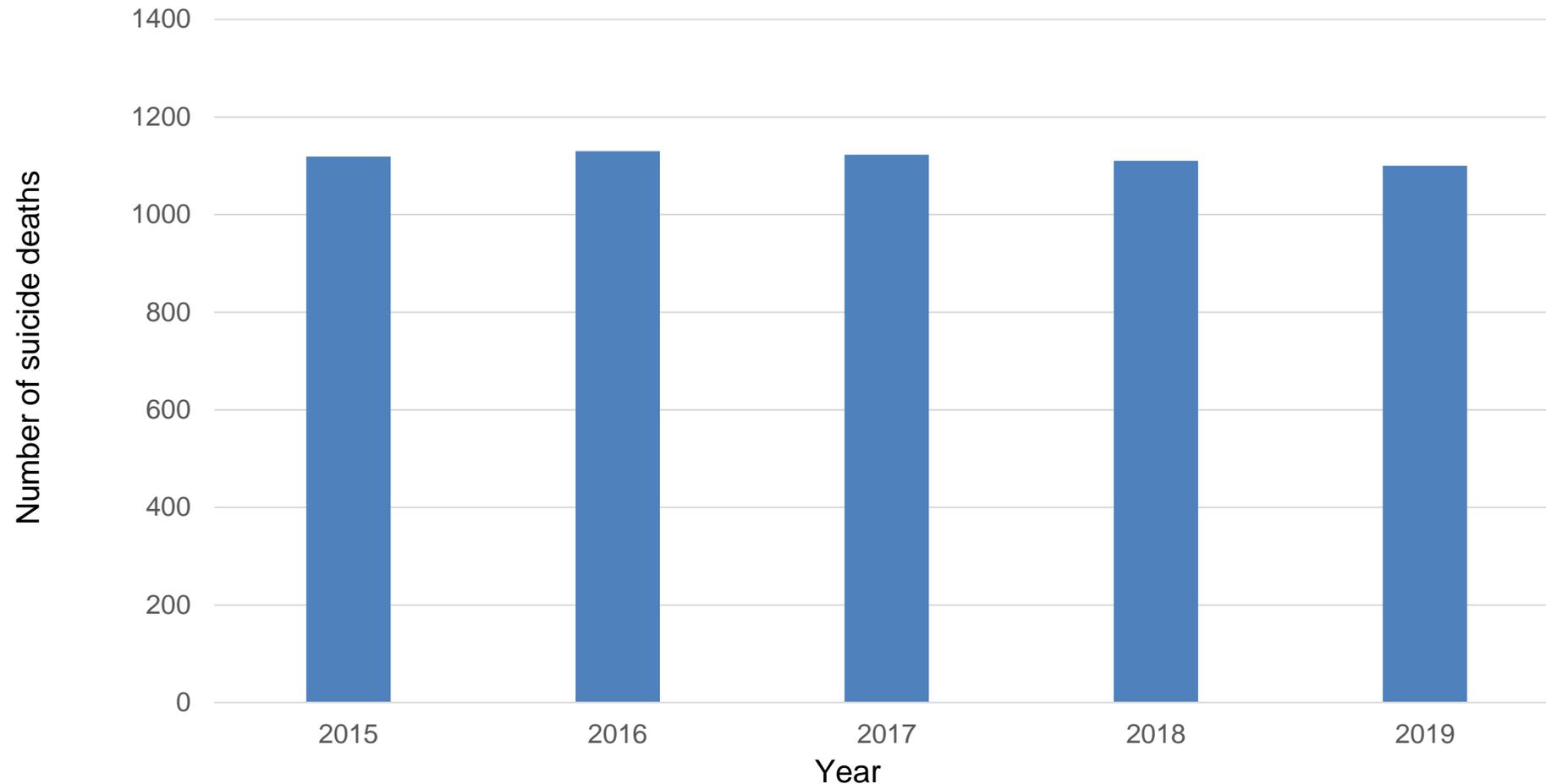
- An AF is the percentage of an outcome in the population that would be prevented if the exposure was removed (or was at an ideal level)
- The AF depends on
  - The level of the risk factor (alcohol consumption) in the population
  - The relationship between the risk factor and the outcome (suicide)
  - The level of the outcome in the population
- 8 publications from 1992 to 2005; approximately  $\frac{1}{4}$  of suicide deaths were alcohol attributable

# Alcohol-attributable suicide deaths in Canada, 2015 – 2017, CSUCH Estimates



Source: Canadian Substance Use Costs and Harms Scientific Working Group. (2020). Canadian substance use costs and harms visualization tool, version 2.0.0 [Online tool]. Retrieved from <https://csuch.ca/explore-the-data/>

# Alcohol-attributable suicide deaths in Canada, 2015 – 2019, Global Burden of Disease Study Estimates



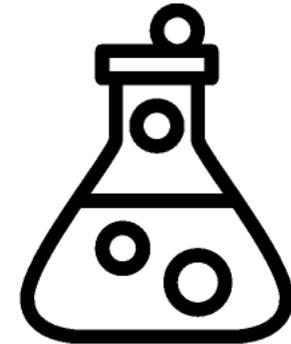
Source: Institute for Health Metrics and Evaluation. Global Burden of Disease Study Results Tool [Online tool].

Retrieved from <http://ghdx.healthdata.org/gbd-results-tool>

Permalink: <http://ghdx.healthdata.org/gbd-results-tool?params=gbd-api-2019-permalink/451dcf47fec9c63f9d15d5d1ac3c1228>

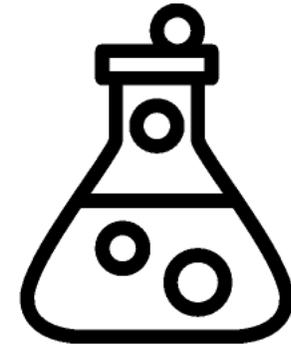
## Studies with toxicology findings (1)

- Toxicology may be conducted as part of coroner or medical examiner investigations
- Due to intentional self poisoning as a means of suicide, many research studies on suicide mention drugs and alcohol in the context of cause of death
- Poisoning can be the direct cause of death and/or a contributing cause to other causes of suicide death



## Studies with toxicology findings (2)

- 18 published studies between 1998 and 2018
- Diversity of studies across geography, age groups, method of suicide
- Alcohol was detected in a substantial proportion of suicide decedents in a number of studies, many at an impaired level
- Limitations
  - Not all decedents had toxicology results
  - Studies were small & toxicology not conducted consistently, any levels are a minimum
    - Among those with toxicology results available, the proportion with positive blood alcohol varied widely
  - Some studies grouped alcohol and other drugs



## Implications

- All three types of studies reviewed indicate that alcohol use contributes to suicide death in Canada
- Systematic documentation of suicide deaths, including toxicology protocols with blood alcohol levels would contribute to better understanding the role of acute alcohol use in suicide in Canada
- Those working in suicide prevention should be aware of the relationship between alcohol use and suicide
- Chronic use of alcohol and alcohol use disorder are well recognized as risk factors for suicide: the acute use of alcohol as a risk factor for suicide needs further recognition
- Preventing and reducing the harmful use of alcohol should be part of a comprehensive approach to suicide prevention
  - May include measures to reduce availability to and accessibility of alcohol



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# Alcohol and Suicide

**MHCC webinar**

**Sarah Konefal, Robert Gabrys**

November 12, 2020



# Stigma & Language

# Stigma – Why Words Matter

**STIGMA** IS ONE OF THE BIGGEST BARRIERS TO TREATMENT AND RECOVERY FOR SUBSTANCE USE DISORDERS TODAY. OFTEN THE LANGUAGE WE USE CONTRIBUTES TO STIGMA. THERE ARE A LOT OF STIGMATIZING WORDS THAT ARE COMMON IN OUR DAY-TO-DAY LANGUAGE.

## WHAT YOU SAY

ABUSER  
DRUG HABIT  
ADDICT  
DRUG USER

VS

## WHAT PEOPLE HEAR

IT'S MY FAULT  
IT'S MY CHOICE  
THERE'S NO HOPE  
I'M A CRIMINAL

# Choosing Person-First Language

**BY CHOOSING ALTERNATE LANGUAGE, YOU CAN HELP BREAK DOWN THE NEGATIVE STEREOTYPE ASSOCIATED WITH SUBSTANCE USE DISORDER.**

## **INSTEAD OF**

**ABUSER, ADDICT**

**DRUG HABIT**

**FORMER/REFORMED ADDICT**

## **TRY**

**PERSON WITH A SUBSTANCE USE DISORDER**

**REGULAR SUBSTANCE USE, SUBSTANCE USE DISORDER**

**PERSON IN RECOVERY/LONG-TERM RECOVERY**

# Say this, not that!

## INSTEAD OF THIS...

“You’ve been drinking a lot lately. Why can’t you just stop? You know I’m concerned.”

“I have been clean for six months.”

“Substance abuse affects Canadians from all walks of life.”

“Relapse means you need to restart the recovery process.”

“They lied. They said they were sober but they’re using again.”

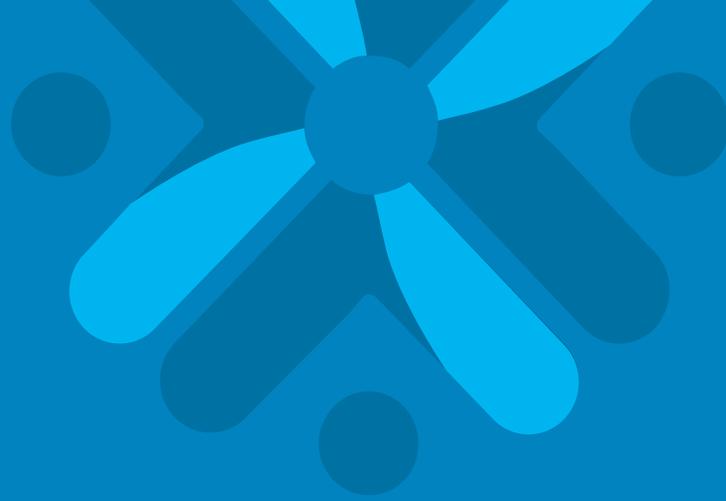
## SAY THIS...

“I notice you’re drinking more than usual. Have you noticed the change or do you have any concerns? If so, is there anything I can do to help?”

“I haven’t taken any substances in six months.”

“Canadians from all walks of life are impacted by the use of substances.”

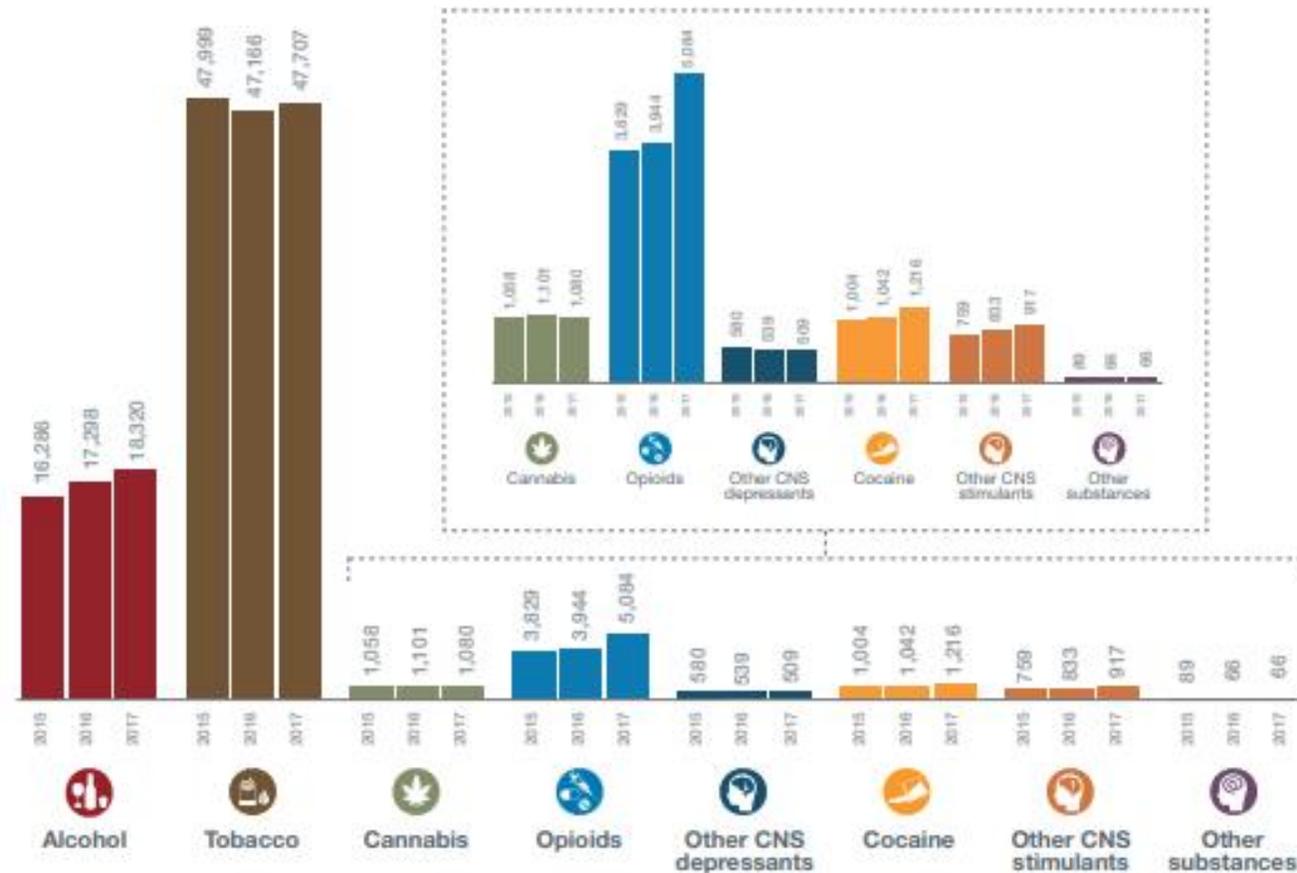
“Life can be difficult. Emotional pain, trauma and changing life patterns can be challenging for a person navigating their recovery. I understand a person’s pathway to well-being is often not linear and recurrences can and do occur with some people as they work on change.”



# Alcohol-related intentional poisoning deaths in Canada, 2014 – 2017

# Study Objectives

Figure 11. Number of deaths attributable to substance use by substance, 2015–2017



# Methods 1



- Canadian Vital Statistics Death database
  - Collects demographic and medical information (cause of death) from all provincial and territorial statistics registries on all deaths in Canada
  - Includes Canadian residents and non-residents
  - Registration of death completed by medical examiner or coroner
- Data from 2014-2017 was stratified by sex (male and female), intent (intentional and unintentional) and combinations of substance classes
  - Alcohol, Depressants, Cocaine, Opioids, Other Stimulants
  - All unique combinations are counted separately
  - Only looking at poisoning deaths – no other underlying causes

# Methods 2

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- International Classification of Disease (ICD-10) codes
  - Multiple causes of death can be identified, with both “underlying” and “contributing” causes of death
- ICD-10 codes for intentional poisoning death:
  - Considered to be “self-harm/suicide”
  - Alcohol can be coded as either the underlying cause of death or contributing cause of death if multiple substances are involved

# Methods 3

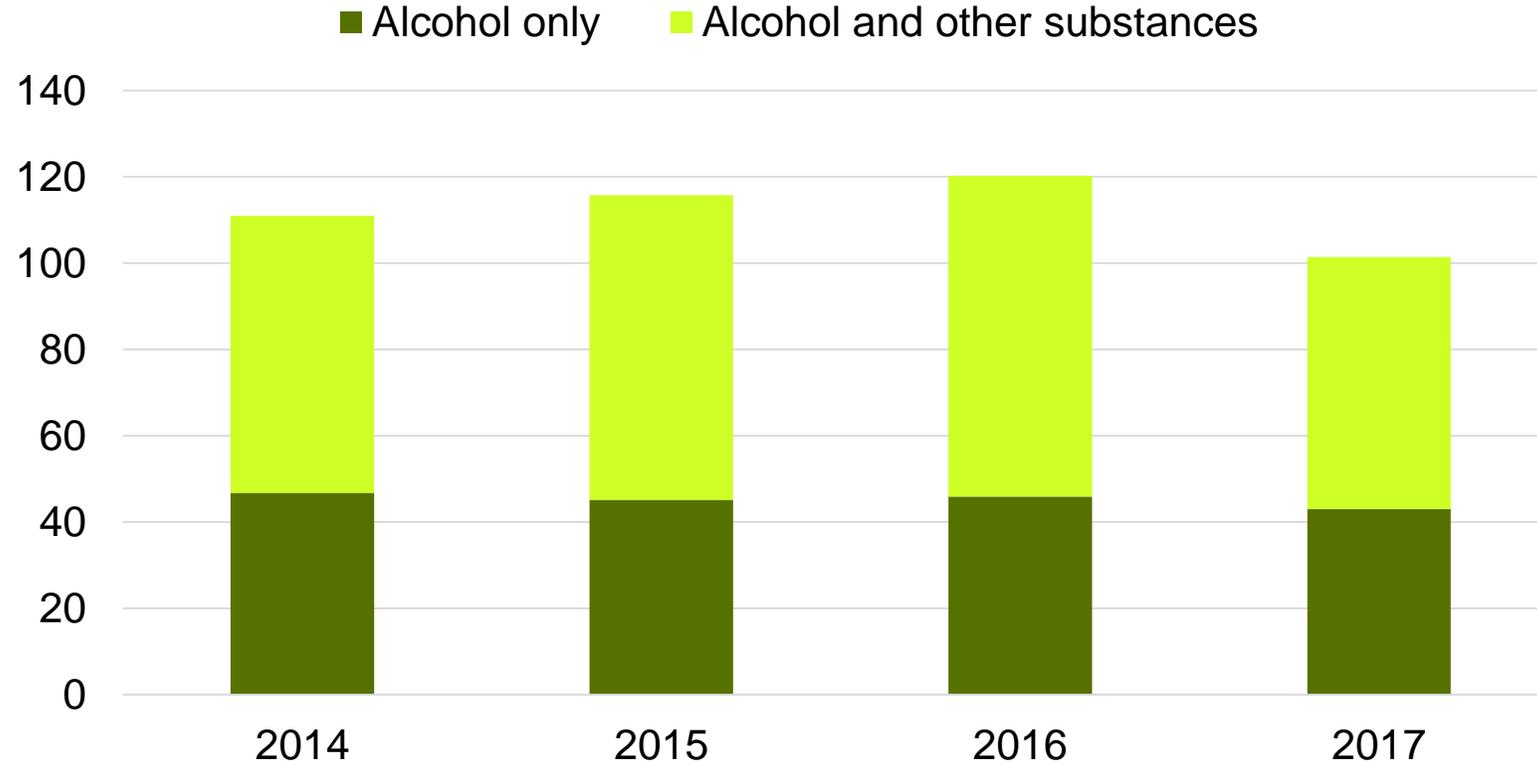


- Intentional poisoning deaths
  - Excludes poisoning deaths classified as unintentional (“accidental”)
  - Excludes poisoning by and exposure to alcohol with undetermined intent
- Identification of alcohol as a contributing cause of death depends on toxicology screening which can be imperfect
- Some fraction of fatal poisonings coded as unintentional or undetermined are actually suicides
  - Suicide rates underreported by ~10% (Skinner et al., 2016)

Skinner, R., McFaull, S., Draca, J., Frechette, M., Kaur, J., Pearson, C., & Thompson, W. (2016). Suicide and self-inflicted injury hospitalizations in Canada (1979 to 2014/15). *Health promotion and chronic disease prevention in Canada: research, policy and practice*, 36(11), 243.

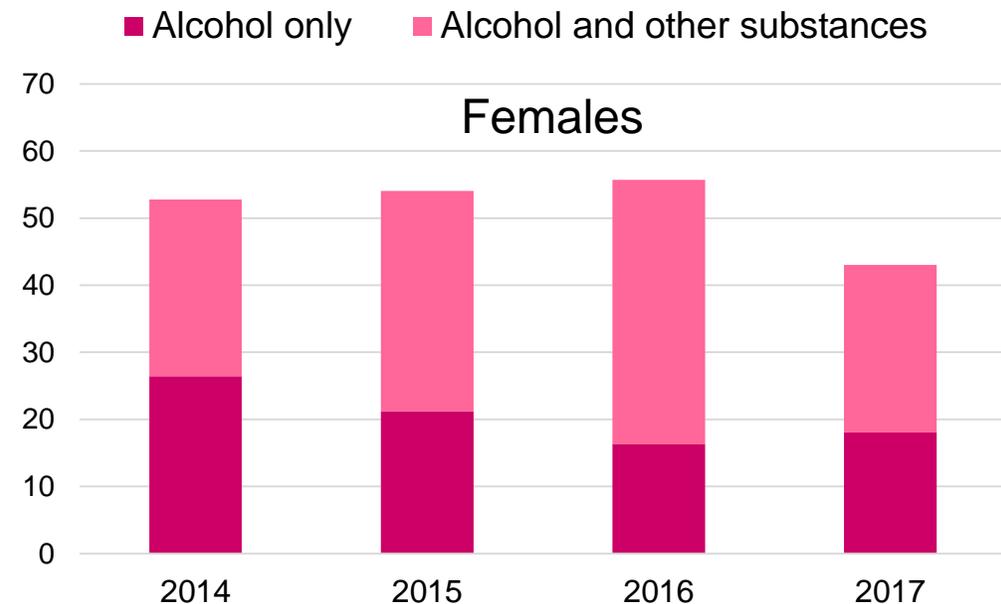
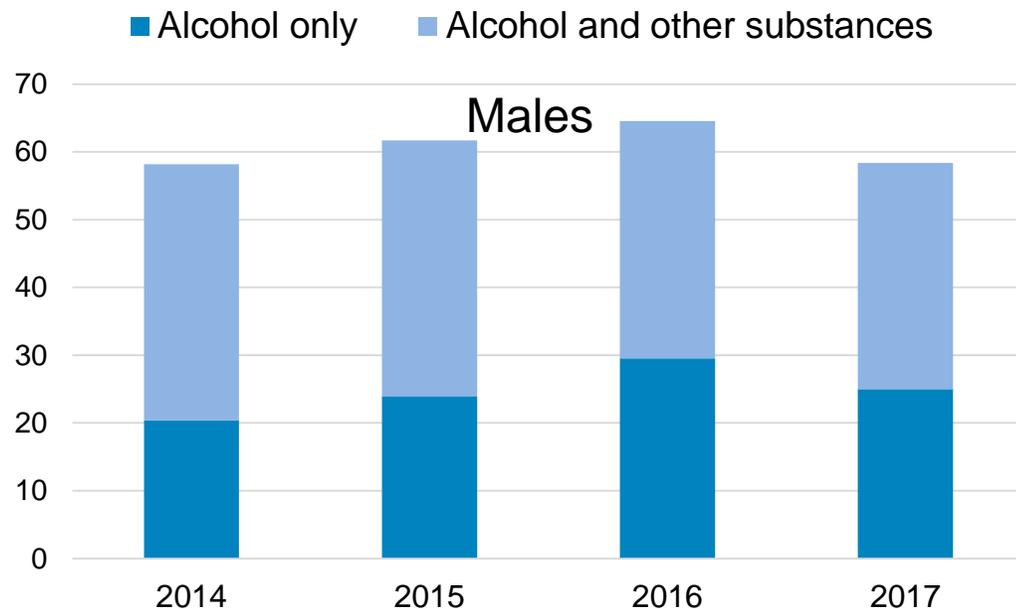
# Intentional poisoning deaths involving alcohol

- Most deaths involving alcohol (~60%), also involve at least one additional substance



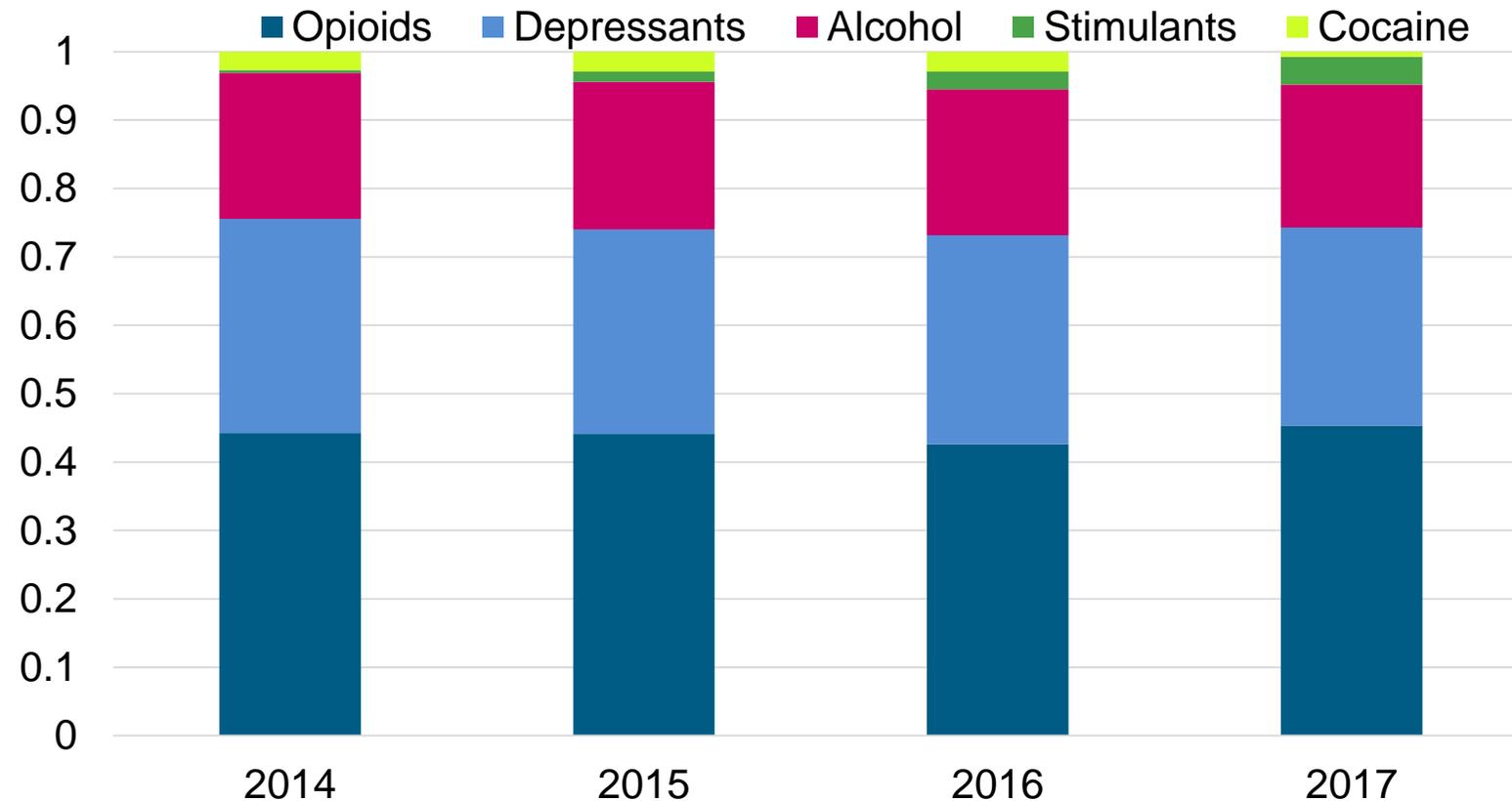
# Intentional poisoning deaths involving alcohol

- In 2017, the total number of alcohol related death among males (n=58) was 36% higher than the total for females (n=43)
- The number of deaths involving only alcohol increased 23% among males and decreased 32% among females



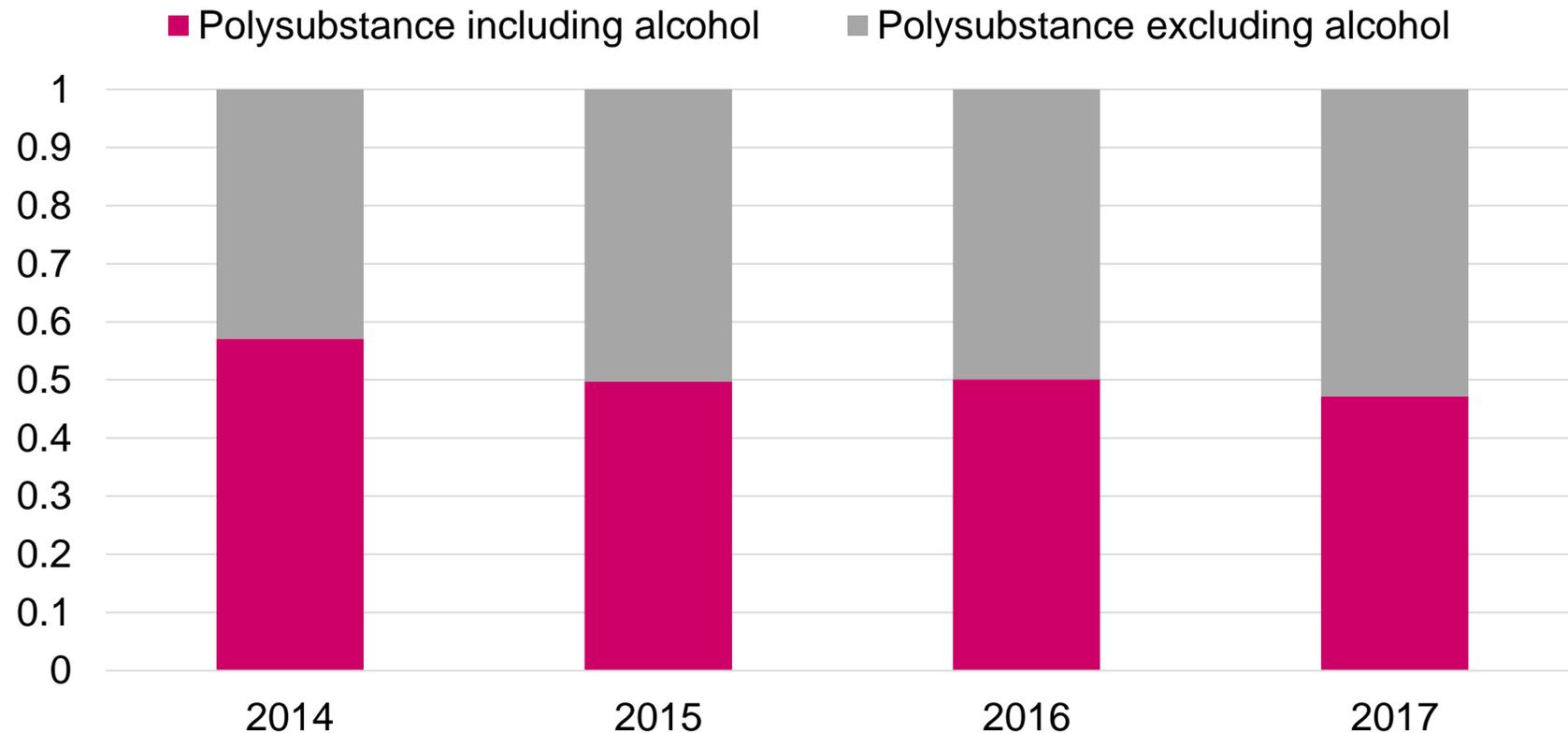
# How does alcohol compare to other substances?

- Proportion of intentional poisoning deaths involving only one substance



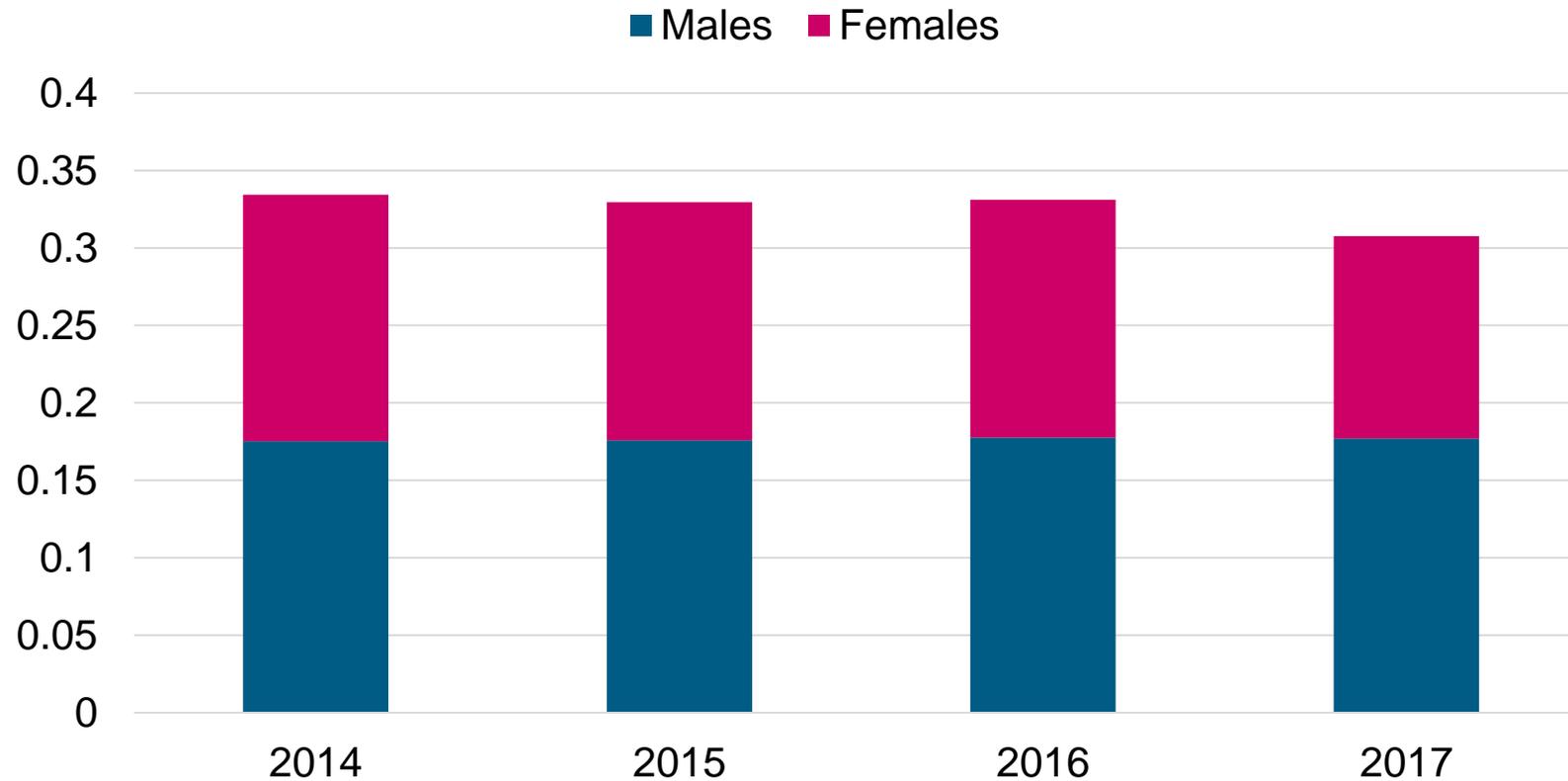
# How does alcohol compare to other substances?

- Proportion of intentional poisoning deaths involving more than one substance



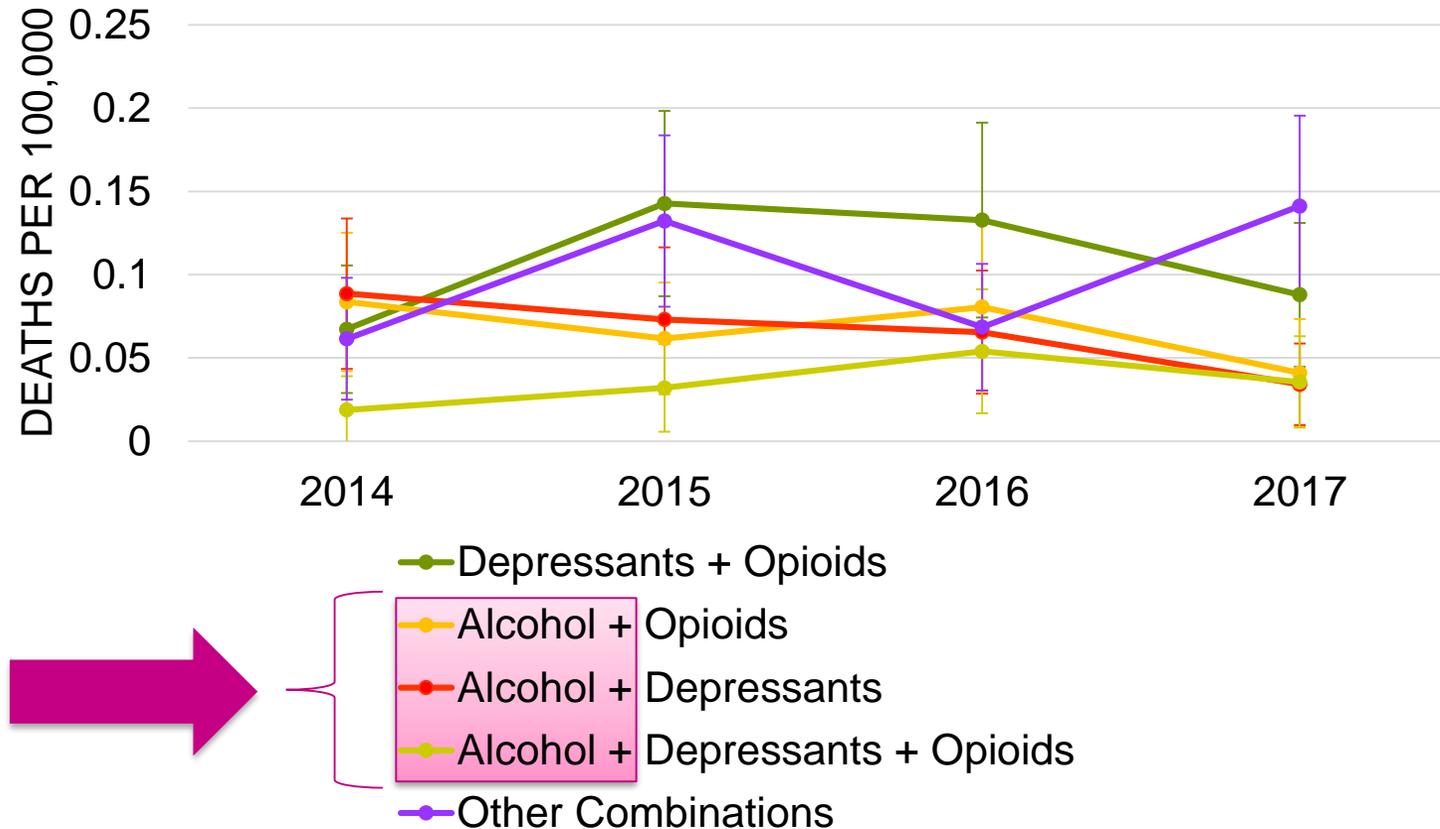
# Intentional poisoning deaths involving alcohol

- One third of all intentional poisoning deaths involve alcohol



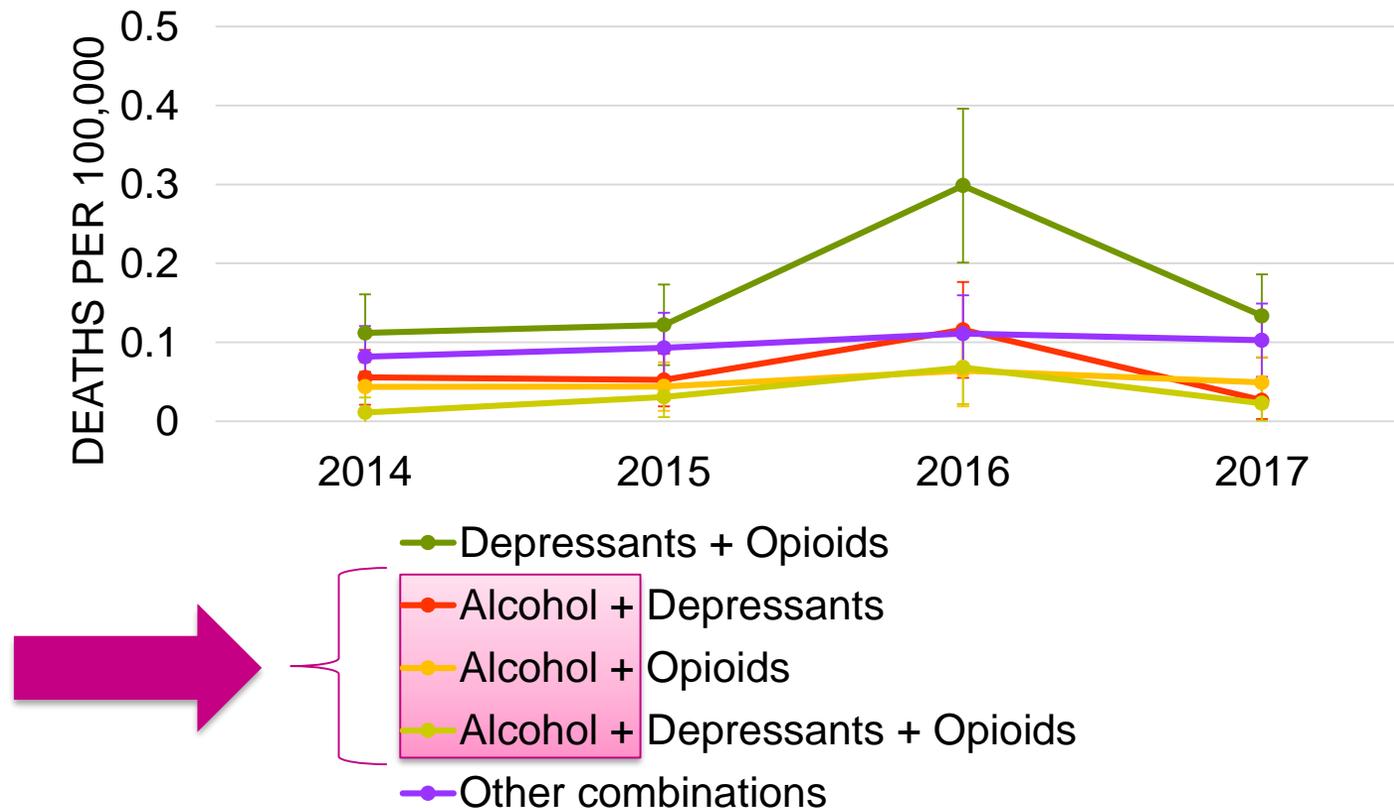
# Rates of polysubstance poisoning deaths

- Most common substance class combinations for male intentional poisoning deaths



# Rates of polysubstance poisoning deaths

- Most common substance class combinations for female intentional poisoning deaths



# Summary of results

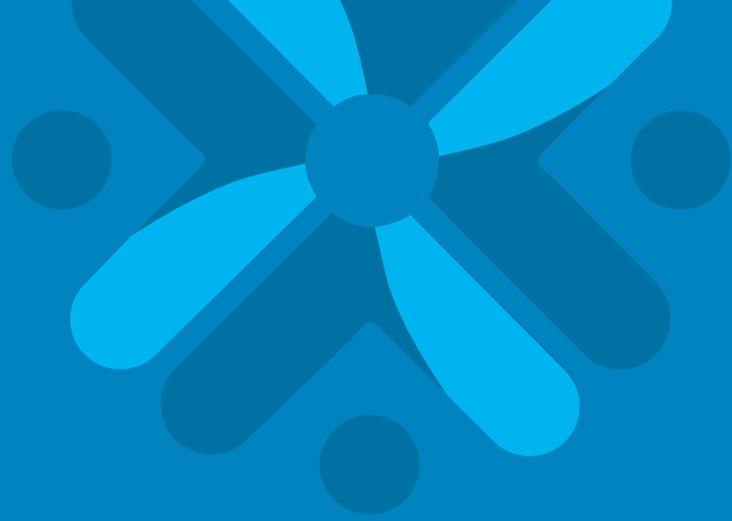
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- The contribution of acute use of alcohol to suicide is significant compared to other substances known to underlie intentional poisonings
  - One third of all intentional deaths involve alcohol
  - And ~60% of these involve other substances; usually opioids and depressants
  - 50% of all “polysubstance” poisoning deaths involve alcohol

# Implications

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- Data on alcohol and other substances contributing to death by suicide provides valuable information for prevention activities
  - Limitations include variability in practices and procedures in determining cause of death
- Polysubstance use is an important factor to consider for suicide prevention and intervention



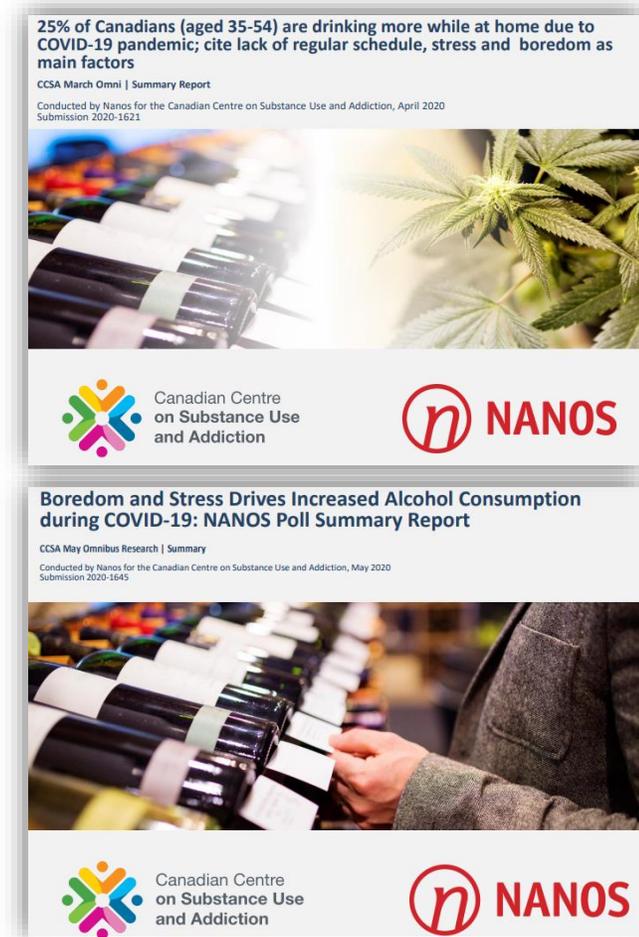
# Alcohol use during COVID-19

# Data sources: Nanos polls

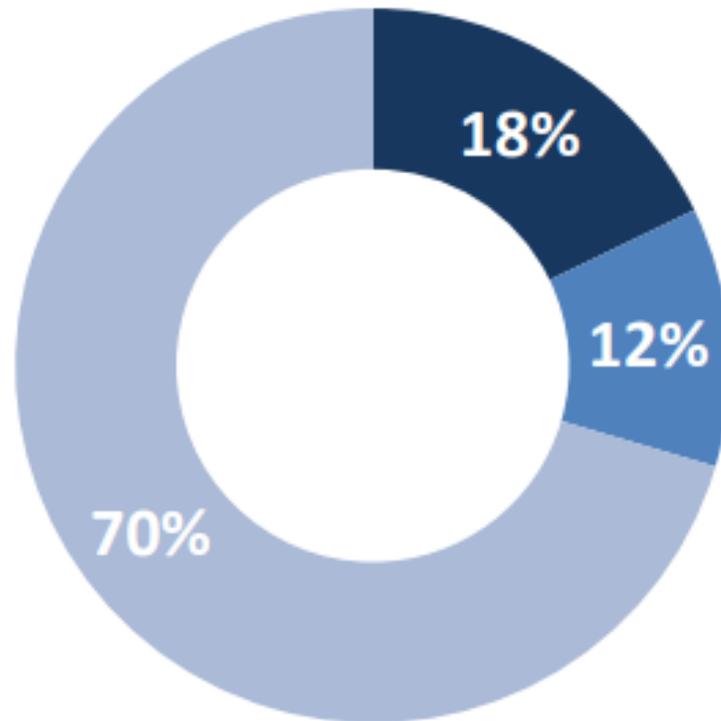
- Nanos Poll 1
  - 1,036 Canadians, 18 years of age or older
  - Data collection: **March 30 to April 2**
- Nanos Poll 2
  - 1,009 Canadians, 18 years of age or older
  - Data collection: **May 26 to May 28**

\*RDD dual frame (land- and cell-lines) hybrid telephone and online random survey

***Since staying at home more due to COVID-19***



# April 2020: Change in alcohol use



■ Increased    ■ Decreased    ■ Remained the same

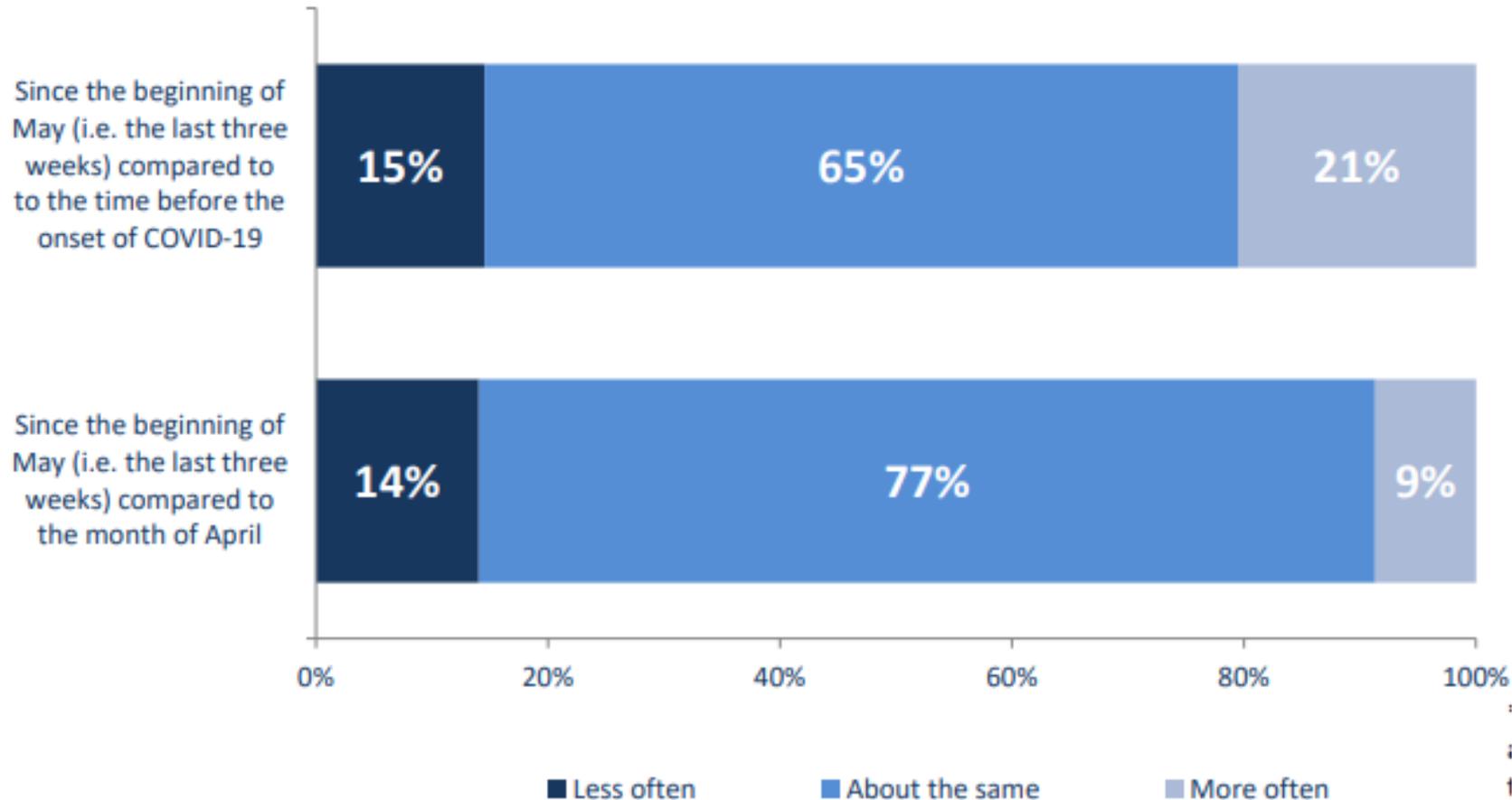
## *Top reasons for **increase***

1. Lack of regular schedule
2. Boredom
3. Stress

## *Top reasons for **decrease***

1. Lack of social gathering
2. Health
3. No reason

# May 2020: Change in frequency of alcohol use



### Top reasons for **increase**

1. Stress
2. Boredom
3. Lack of regular schedule

### Top reasons for **decrease**

1. Health
2. Lack of social gathering
3. No reason

# May 2020: Change in quantity of alcohol use

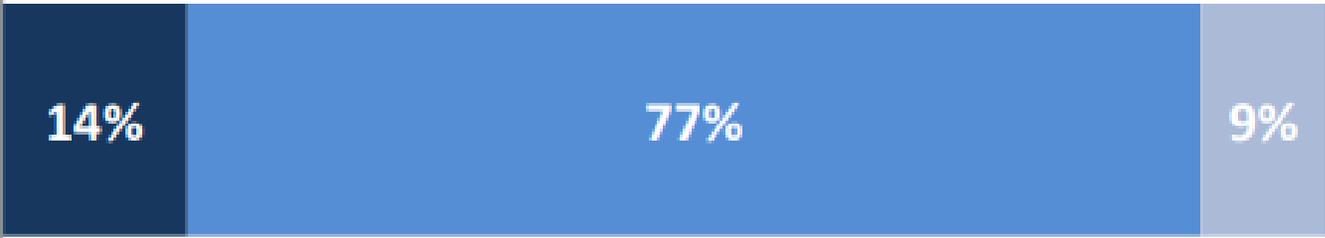
Since the beginning of May (i.e. the last three weeks) compared to the time before the onset of COVID-19



*Top reasons for **increase***

- 1. Stress
- 2. Boredom
- 3. Lack of regular schedule

Since the beginning of May (i.e. the last three weeks) compared to the month of April

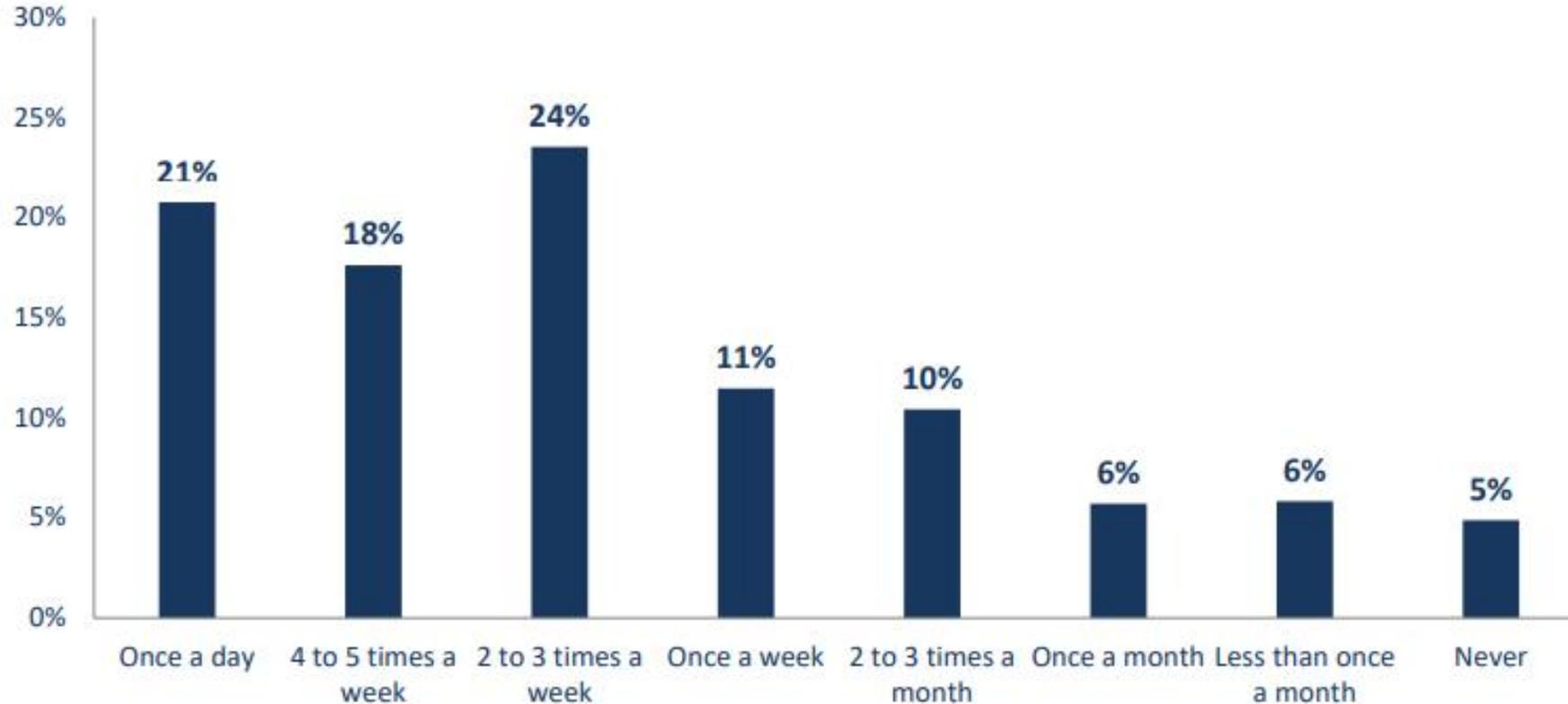


*Top reasons for **decrease***

- 1. Health
- 2. Lack of social gathering
- 3. No reason

■ Smaller quantity    ■ About the same quantity    ■ Larger quantity

# May 2020: Frequency of alcohol use



**QUESTION** – [IF STAYING HOME MORE DUE TO CORONAVIRUS/COVID-19 AND DRINKS ALCOHOL] Since the beginning of May (i.e. the last three weeks), how often have you consumed alcohol?

# May 2020: # of alcoholic drinks

Men	
Mean	Median
2.8 drinks	2.0 drinks

Women	
Mean	Median
2.4 drinks	2.0 drinks

Top Mentions	Men (n=349)	Women (n=332)
One drink	36.6%	48.8%
Two drinks	31.0%	31.8%
Three drinks	13.6%	7.3%
Four drinks	6.5%	4.5%
Six drinks	3.5%	1.7%
Five drinks	2.9%	0.8%
Twelve drinks	1.1%	1.3%

- **12% of men** exceed LRDGs for short-term harm (5+ drinks)
- **12% of women** exceed LRDGs for short-term harm (4+ drinks)
- **19% of women** exceed LRDGs for long-term harm (2+ drinks)

# Summary

- Most individuals (~80%) have either decreased or have not changed their alcohol use during the COVID-19 pandemic
- About 20% have increased their alcohol use
  - Who has increased their alcohol use?
  - Need to quantify what is meant by “increase”
- A notable proportion of individuals are exceeding the **Low-Risk Alcohol Drinking Guidelines**

**CANADA'S LOW-RISK ALCOHOL DRINKING GUIDELINES**

Drinking is a personal choice. If you choose to drink, these guidelines can help you decide when, where, why and how.

**For these guidelines, "a drink" means:**

- Beer** 355 mL (12 oz) 5% alcohol content
- Cider/Cooler** 355 mL (12 oz) 5% alcohol content
- Wine** 150 mL (5 oz) 12% alcohol content
- Distilled Alcohol** 45 mL (1.5 oz) 40% alcohol content

**▶ YOUR LIMITS**  
Reduce your long-term health risks by drinking no more than:

- 10 drinks a week for women, with no more than 2 drinks a day most days
- 15 drinks a week for men, with no more than 3 drinks a day most days

Plan non-drinking days every week to avoid developing a habit.

**▶ SPECIAL OCCASIONS**  
Reduce your risk of injury and harm by drinking no more than 3 drinks (for women) or 4 drinks (for men) on any single occasion. Plan to drink in a safe environment. Stay within the weekly limits outlined above in **Your Limits**.

**▶ SAFER DRINKING TIPS**

- Set limits for yourself and stick to them.
- Drink slowly. Have no more than 2 drinks in any 2 hours.
- For every drink of alcohol, have one non-alcoholic drink.
- Eat before and while you are drinking.
- Always consider your age, body weight and health problems that might suggest lower limits.
- While drinking may provide health benefits for certain groups of people, do not start to drink or increase your drinking for health benefits.

**▶ WHEN ZERO'S THE LIMIT**

- Do not drink when you are driving a vehicle or using machinery and tools
- Taking medicine or other drugs that interact with alcohol
- Doing any kind of dangerous physical activity
- Living with mental or physical health problems
- Living with alcohol dependence
- Pregnant or planning to be pregnant
- Responsible for the safety of others
- Making important decisions

**▶ PREGNANT? ZERO IS SAFEST**  
If you are pregnant or planning to become pregnant, or about to be pregnant, the safest choice is to drink no alcohol at all.

**▶ DELAY YOUR DRINKING**  
Alcohol can harm the way the body and brain develop. Teens should speak with their parents about drinking. If they choose to drink, they should do so under parental guidance; never more than 1-2 drinks at a time, and never more than 1-2 times per week. They should plan ahead, follow local alcohol laws and consider the **Safer drinking tips** listed in this brochure.

Youth in their late teens to age 24 years should never exceed the daily and weekly limits outlined in **Your Limits**.

**Low-risk drinking helps to promote a culture of moderation.**

**Low-risk drinking supports healthy lifestyles.**

CCSA wishes to thank the partners who supported development of Canada's Low-Risk Alcohol Drinking Guidelines. For a complete list of the organizations supporting the guidelines, please visit [www.ccsa.ca/Eng/Prevention/Alcohol/Canada-Low-Risk-Alcohol-Drinking-Guidelines/Pages/default.aspx](http://www.ccsa.ca/Eng/Prevention/Alcohol/Canada-Low-Risk-Alcohol-Drinking-Guidelines/Pages/default.aspx).

**References:**  
Ad. P., Bennett, G., Robinson, L., Parikh, C., & Reardon, T. (2017). *Drinking alcohol in Canada: A commentary*. 1987-1990 published by the Canadian Council on Substance Use and Addiction. Toronto, ON.

160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000.

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# Ongoing research

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- Public Health Agency of Canada (PHAC) and Statistics Canada
  - COVID-19 and Mental Health survey
- CCSA and Mental Health Commission of Canada (MHCC)
  - COVID-19, Mental Health and Substance Use bi-monthly survey

# Alcohol policies & prevention of alcohol-related suicides

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**Alcohol Use & Suicide Webinar, November 12, 2020**

**Mental Health Commission of Canada**

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# PATHWAYS TO PREVENTION

1. Addressing social determinants of health
2. Reducing access to means
3. Assessment, screening & treatment
4. Alcohol policies

# SOCIAL DETERMINANTS OF HEALTH

- Social isolation
  - Discrimination
  - Victimization
  - Poverty
  - Unemployment
  - Marginal opportunities
  - Inadequate housing
  - Low access to services
- 
- High risk alcohol and other drug use
  - Despair
  - Violent acts, including suicide

## Recession of 2007-08, alcohol use and suicide

- **Recession** → unemployment and job insecurity → mental health problems (depression, anxiety, binge drinking, **suicidal behavior**)
- During the economic **recession** in 2007-2008 county level **poverty rates** in the US was associated with risk of **suicide**.
- **Poverty rates** were also associated with increased **alcohol involvement in suicides** for men aged 45-65.

[Haw et al. 2014; Kaplan et al. 2015; Kerr et al. 2017;; Matin-Carraso et al., 2016; ]

# Recession & Deaths of Despair

- **Suicide deaths** and overdoses related to poverty, poor health care, etc. have been labelled '*deaths of despair.*'
  - Drug, alcohol and suicide mortality rates are higher in US counties with more economic distress and a larger working class. [Monnat 2016]
- **Recession** of 2007-08 associated with an increase in **suicides**.
  - However, the increase was **not as great** in countries with a stronger safety net, such as **unemployment protection or sustained welfare spending**.  
[ Chang et al. 2013; Haw et al. 2016; Norström & Gronqvist, 2015]
- *What impacts are there from COVID 19 on suicide in Canada?*

# REDUCING ACCESS TO & PROMOTION OF MEANS

- **Control of firearms & safer storage**
- **Reduced access to lethal prescription drugs**
- **Barriers on bridges & other jumping hotspots**
- **Bans on hazardous pesticides**
- **Changes in media reporting of suicides**

[Barnhorst, 2019, 2020; Branas et al.2011; Grossman 1992;Houtsma et al, 2018; Large 2018;  
Pirkis et al. 2015; Stuber, 2020; Swanson et al. 2015]

# ASSESSMENT, SCREENING & TREATMENT

- Training of health care & social support providers
- Screening for signs of suicide intention – e.g. at admission to ER, clinic or hospital
- Extensive follow-up after suicide ideation or attempt
- Therapy – e.g. cognitive-behavioral therapy; dialectical behavioural therapy, mentalization-based therapy
- Family and community support
- Medication – e.g. lithium, clozapine
- Follow up after discharge from hospital or psychiatric facility

[Barnhorst, 2019, 2020; Büscher et al, 2020; Cipriani et al. 2013; Connor et al. 2014; D’Anci et al, 2019; Large 2018; Meerwijk et al. 2016; Nock et al. 2018; Ougrin et al, 2015; Stuber, 2020; Zalsman et al. 2016]

# CHALLENGES [Caine 2013]

1. An inability to discriminate the relatively few true cases from the large numbers of false-positive cases.
2. The large number of false-negative cases that escape preventive detection.
3. The inability of clinical services to reach many individuals who have suicide intent.
4. A continuing paucity of knowledge about fundamental biological, psychological, social, and cultural factors that contribute to apparent risk among diverse populations and groups.
5. The lack of coordinated strategies for suicide prevention to deal effectively with myriad local, regional, state, and national agencies and organizations that could, in theory, play a role in preventing suicide.

## WHY ALCOHOL POLICIES ARE IMPORTANT

1. Universal in scope, potentially impacting all alcohol-related suicides.
2. Strong evidence of effectiveness in reducing alcohol-related suicide.
3. Also shown to be cost effective.
4. Reduce other causes of death, chronic illness and social problems.

***However these policies under-utilized and under-appreciated.***

# ALCOHOL POLICIES & SUICIDE

## Access to alcohol

- Low prices
- High outlet density
- Long hours of sale
- Extensive marketing
- Low minimal legal drinking age



## Alcohol consumption

- High volume & frequent drinking
- Solitary drinking
- Frequent binge drinking
- Alcohol as a “go to” problem solver



Chronic, acute medical and social problems  
- Including suicide deaths

# A LITERATURE REVIEW OF PREVENTION OF ALCOHOL-RELATED SUICIDE

Search terms: suicide AND (alcohol OR ethanol) AND (prevention OR policy OR policies OR intervention)

Search engines: PubMed plus others

Criteria for inclusion:

1. Published between 1990 and 2020
2. Published in English
3. Alcohol and suicide are substantial foci
  - a. For now those focusing on suicide attempts and/or suicide death are included.
4. Prevention is discussed in a substantial way, not just 'e.g. more attention to prevention is warranted.'
5. Is original research - either a qualitative or quantitative study, Commentaries, editorials, and letters are excluded.

## Literature Review of Prevention of Alcohol-Related Suicide - 2

- 845 hits in the main search
- Team assessed abstracts and 147 were selected for further examination
- Further assessment reduced the number selected to 86:
  - Narrative, archival data, qualitative studies 49%
  - Ecological studies 22%
  - Randomized controlled trials 13%
  - Natural experiment & quasi-experimental 11%
  - Surveys 5%

# ALCOHOL CONSUMPTION & SUICIDE

- Positive correlation between per capita alcohol consumption, **percentage of daily drinkers and overall rates of suicide** [Mann et al 2001, 2008]
- Suicide mortality rates **increased 4% overall for every estimated liter increase** in alcohol consumption at the population level in **Canada** [[Ramstedt 2005](#)]

[[Orpana, 2019](#)]

# ALCOHOL PRICING & TAXATION

- An inverse relationship between **prices of alcohol and suicide rates in Russia**. Alcohol pricing policy is an effective population-level intervention in reducing suicide mortality [Razvodovsky 2019]
- Examined US suicides by state between 1976-1999. Results indicate that **increases in excise tax on beer** are associated with a reduction in the number of male suicides [Markowitz et al. 2003]

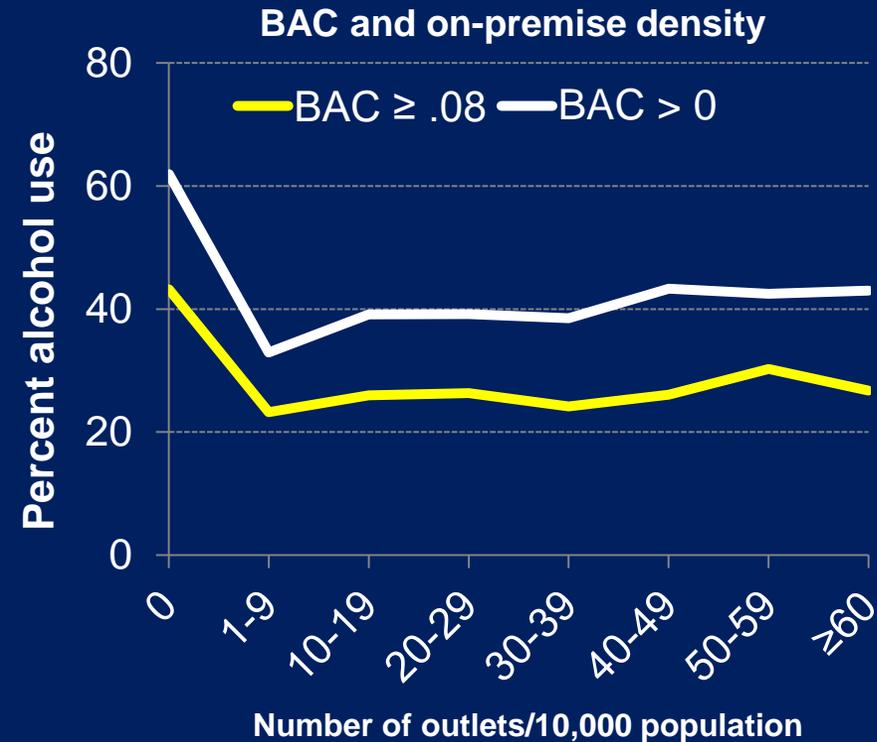
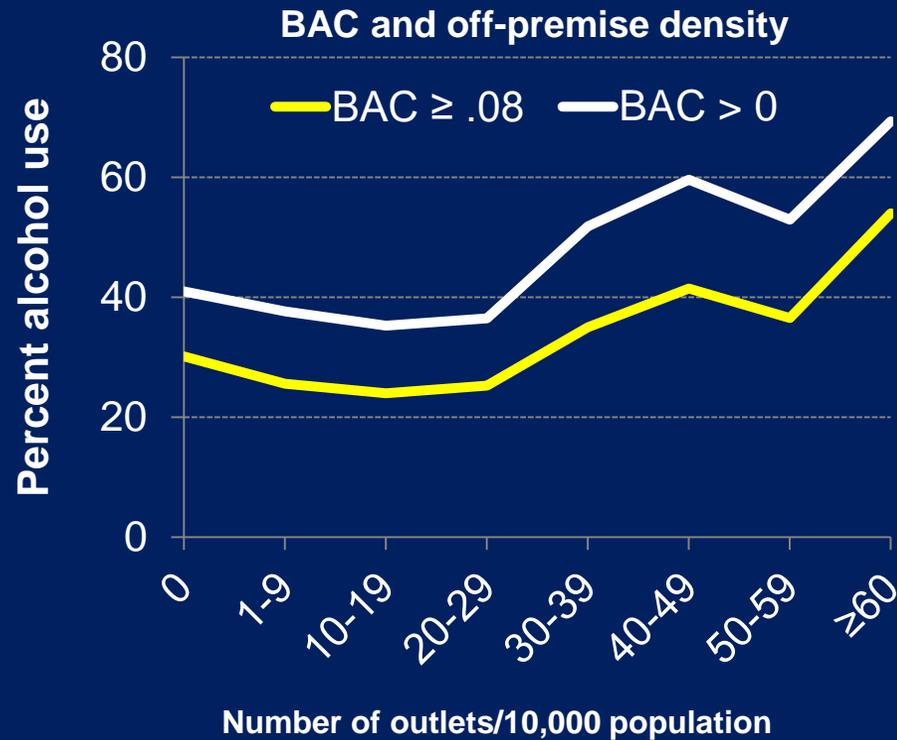
# PHYSICAL AVAILABILITY

- Reduction in **hours of alcohol sales** in one area of Lima City, linked to **35% reduction in suicide** [Malaga et al. 2012]
- When alcohol sales were **privatized** in Alberta in 1993, **suicide rates increased** [Flam-Zaltman & Mann 2007]
- Alcohol-related deaths increased by 3.25% for each 20% increase in private liquor store density. **Approximately 612 suicide deaths were attributable to alcohol use in BC between 2003 and 2008** [Stockwell et al, 2011]

# PHYSICAL AVAILABILITY

- A significant **reduction in male suicides** in Slovenia following a new national alcohol policy. [Pridemore & Snowden 2009]
- The 2006 Russian alcohol policy linked with an immediate and **permanent reduction of about 9% of male suicides** [Pridemore et al. 2013]
- Alcohol-related suicides were more affected by the restriction of alcohol availability in Belarus during the anti-alcohol campaign: between 1984 and 1986 the **number of BAC-positive suicide cases drop by 54.2%**, while number of BAC-negative suicides decreased by 7.1%. [Razvodovsky 2009]

# Off-Premise and on-premise alcohol outlet density was associated with acute alcohol use among 51,547 suicide decedents in 14 U.S. States



# Review of studies between 1999-2016

- 17 studies identified
  - 4 on alcohol price and taxation
  - 3 on minimum legal drinking age law
  - 4 on outlet density
  - 3 other policies: local option, zero tolerance laws
- Policy changes toward more restrictive alcohol control are associated with decrease in suicide mortality.
- Similarly, liberalization of alcohol policies (e.g., privatization of alcohol retail market) tends to increase alcohol mortality.

[Xuan et al. 2016]

# Impact of Alcohol Policies on Suicidal Behavior: A Systematic Literature Review

- Review assessed impact of alcohol policies on suicidal behaviors in 19 papers:
  - 9 papers examined the effects of **alcohol availability**
  - 7 changes to **alcohol pricing**,
  - 3 changes to **drink-driving countermeasures**.
  - 4 investigated the effects associated with change in alcohol policy including **multiple measures**
- Although methods and effect sizes varied substantially in the 19 papers, **reducing alcohol often led to reduction in suicide in Western and Eastern Europe as well as the U.S.**

[ Kölves et al. 2020]

# CHALLENGES & RECOMMENDATIONS

# Preventative Initiatives

Classification	Examples	Comment
<b>Universal</b> – targeting whole population	Raise alcohol taxes, control density of outlets	Effective, not expensive, but some may be unpopular among policy makers and users
	Barriers on bridges	
	Better controls on prescription drugs	
<b>Selective</b> - targeting higher-risk groups	Offering brief intervention for high risk drug or alcohol users	May be expensive and challenging to implement on a large scale
	Gun control legislation; safer storage of firearms	
<b>Indicated</b> – protecting individuals	Suicide risk assessment at admission at admission to ER, clinic or hospital	Not shown to be effective at predicting suicidal persons

## Alcohol Policies and Suicide Prevention

Type of policy	PROVINCES & TERRITORIES
Alcohol pricing	Indexed minimum price by alcohol content
Physical availability	Reduce hours & set upper limits on outlet density per capita
Alcohol marketing & advertising controls	Comprehensive restrictions on placement, quantity, and content of ads as well as sponsorship restrictions
Brief intervention & treatment	Fund online and in-person Screening and Brief Intervention programs with a suicide prevention component
Retail control system	Maintain a government-owned and run retail network for off-premise outlets
Alcohol control strategy	Create an alcohol-specific strategy incorporating a full range of evidence-based interventions and policies
Monitoring & reporting	Fund the tracking and public reporting of key alcohol-related harm indicators annually through a centralized system
Health & safety messaging	Require prominent placement of alcohol labels that include rotating health and safety messages, standard drink information & Low Risk Drinking Guidelines

[Stockwell et al. 2019]

## Alcohol Policies and Suicide Prevention

Type of policy	FEDERAL GOVERNMENT
Alcohol pricing	Increase federal alcohol taxes (excise & GST)
Physical availability	Restrictions on duty exemptions
Alcohol marketing & advertising controls	National codes applied to full range of media of both electronic and digital media
Brief intervention & treatment	Federal support and implementation of national SBIR initiatives for a range of populations
Retail control system	Protection of government control systems, federal regulation of duty-free outlets and trade law exemptions, specific to alcohol
Alcohol control strategy	Approve a national alcohol strategy based on evidence-based policies
Monitoring & reporting	Implement federally funded national monitoring program to track key indicators of consumption and harm
Health & safety messaging	Labels on alcohol products with health & safety messages

[Wettlaufer et al. 2019]

## Alcohol Policies and Suicide Prevention

Type of policy	COMMUNITIES & MUNICIPALITIES
Alcohol pricing	Encourage provincial/territorial governments to set precautionary pricing on alcoholic beverages
Physical availability	Have licensing policies that discourage high density of outlets or concentration of venues
Alcohol marketing & advertising controls	Prohibit alcohol marketing on city property and encourage stronger marketing controls from other governments
Brief intervention & treatment	Facilitate access to brief interventions [in person and on line] with a suicide prevention component
Retail control system	Encourage government-owned and run retail network for off-premise outlets
Alcohol control strategy	Implement a municipal alcohol control strategy with evidence-based components
Monitoring & reporting	Implement a regular municipal reporting of alcohol policies, harms from alcohol, and local suicide prevention initiatives
Health & safety messaging	Promote low risk drinking guidelines, crises contact numbers, and make health and safety messages mandatory in local liquor stores, bars and restaurants

## SUMMARY

- There is substantial evidence from a **number of countries** showing that alcohol policies are linked with suicide:
  - **Increasing access** to alcohol is associated with an **increase in suicide**
  - **Reducing access** is associated with a **decrease in suicide**
- Alcohol policies are an essential component of a multi-dimensional suicide prevention strategy

# Contact Information

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**Thank you!**  
*Questions?*

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**Merci!**  
*Questions?*