



Institute of Neurosciences,
Mental Health and Addiction
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Catalyst Grant: Alcohol research to inform health policies and interventions End-of-Grant Workshop

SUMMARY REPORT

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Introduction

OVERVIEW

Alcohol consumption is a matter of increasing concern in our nation, posing multifaceted challenges that affect the physical and mental health of individuals and the broader social fabric. While consumption is widely tolerated and promoted, it has led to significant health and safety risks.

To address these harms and in recognition of a need for independent research, the Canadian Institutes of Health Research (CIHR) created the *Catalyst Grant: Alcohol research to inform health policies and interventions* funding opportunity, with funding provided through the *Canadian Drugs and Substances Strategy* and the *Canadian Cancer Society*.

The *20 projects* supported through this funding opportunity have collectively strengthened research capacity and the evidence base around alcohol consumption. These projects have focused on the effects of policy, interventions aimed at mitigating harm, and key populations and determinants of health. They explored a wide range of topics including polysubstance use, use among youth and gender diverse people, labelling and sales models, policies as cancer prevention interventions, and more.

In November 2023, CIHR's Institute of Neurosciences, Mental Health and Addiction (CIHR-INMHA) hosted an end-of-grant workshop bringing together researchers, policy makers, health care providers, people with lived and living experience, and other knowledge users to engage in discussion, foster cross-disciplinary collaborations, and mobilize new knowledge to inform policies and practices to reduce alcohol-related harms in Canada.

This report comprises a synthesis of the evidence presented by the research teams at the end-of-grant workshop and the diverse knowledge user perspectives shared during a panel reflections and discussion session.

DISCLAIMER

The following information intends to summarize what we heard at the workshop. Any errors or omissions are unintentional. This report should not be taken as a definitive account of research results. Readers are advised to follow up directly with *grant recipients* for the most current information on their projects.

Selected Project Findings

Below is a thematic synthesis of selected findings by the research teams.

IMPLICATIONS OF ALCOHOL USE IN YOUTH

Cognitive performance

- Two-thirds of Canadian youth (aged 15-25 years) actively consume alcohol. Frequent youth drinking is associated with poorer brain functioning, which has been linked to worse outcomes (e.g., poorer academic performance and work capacity). Preliminary data suggests that in adolescents 13 to 17 years of age, more frequent alcohol consumption is associated with lower verbal IQ and higher sensitivity to reward (a measure that is considered an important determinant of behaviour) at 18 years.
- Despite associations between youth drinking and poorer cognitive performance, more research is needed to determine what factors are associated with increased risk of drinking or whether youth drinking leads to poorer brain function.

Sexually and gender diverse young people

- Sexually diverse young people report increased drinking at important moments in their life trajectory (e.g., meeting peers, romantic/sexual encounters). Most of these youths consider alcohol very present in their socializing spaces and report that alcohol use is often trivialized among their peer group.
- Evidence suggests alcohol consumption among sexually and gender-diverse young people is higher and merits targeted action in terms of harm prevention (primary and secondary) and treatment. Prevention or treatment actions must consider the pleasure associated with consumption and the cultural aspects specific to this population.
- There is growing evidence to suggest that transgender youth experience disproportionate rates of drinking, drinking-related harms (e.g., binge drinking), increased rates of substance use harms and negative mental health symptoms.
- Preliminary results found that transgender youth consumed more alcohol when they experienced more minority stress (e.g., gender non-affirmation, rejection, discrimination, identity concealment).

First-year university students

- Preliminary findings show there is a prevalent alcohol culture among first-year students in university residences. Campus drinking culture and social factors (e.g. social challenges and norms) shape collective behaviours and thinking around alcohol use.
- Interventions targeting alcohol use on campus need to be multifaceted, addressing the physical and socio-cultural environment as well as providing robust support mechanisms such as wellness resources to effectively foster healthier student communities.

Emergency department visits

- Youth who visit the emergency department (ED) for the first time due to alcohol consumption have a three times greater risk of death compared to youth with a non-alcohol related ED visit within one year. Youth with lower risk first-time alcohol emergency department visits are still at an elevated risk for death.

Alcohol-associated hepatitis

- There has been a significant increase in the number of adolescents and young adults requiring acute hospitalization for organ damage related to alcohol in Ontario from 2002-2021. The most rapid rise was seen for hospital admissions related to acute alcoholic hepatitis (AH), which increased by more than 500%. Within five years after admission for AH, 25% of these young adults were dead, and females were at an approximately 50% higher risk of developing cirrhosis after an episode of AH than males.
- Liver transplants among adolescents and young adults are rising faster than any other age group.
- In Ontario, provincial changes to alcohol policy (e.g., expanded sales, grocery store sales), along with COVID-19, were associated with increased AH among 13-39-year-olds.
- AH was disproportionately observed among adolescents and young adults living in low-income neighborhoods and those experiencing housing instability.
- Early intervention after AH is critical to prevent premature death in adolescents and young adults.

PHYSICAL INJURIES AND HOSPITALIZATIONS

Emergency department visits

- Males who have had an alcohol-related emergency department visit have a higher risk of death than females, and people aged 25-29 are at higher risk of death compared to people aged 12-18. The most common cause of death for these young people includes alcohol poisoning, opioid poisoning, poisoning by other drugs, trauma and intentional self-harm.
- Alcohol emergency department visits are often the first point of contact with the health care system and presents a crucial opportunity for intervention.

Physical traumatic injury

- Alcohol-related physical traumatic injury predominantly affects young, urban, lower-income males. These injuries most commonly result from interpersonal violence and assault, followed by motor vehicle collisions.
- Individuals with a substance use disorder prior to an alcohol-related injury are likely to continue to have a substance use disorder after their injury. Understanding life trajectories is critical, as studies have shown that brief interventions at the time of injury in the hospital can reduce the likelihood of future harms.

Social determinants of health

- Preliminary data has found there are several social determinants of health that are associated with the increased risk of alcohol-related trauma. Some of these factors include receiving family income assistance, teen motherhood, and poor maternal health.
- Preliminary data shows individuals with a parent that have been involved in the criminal justice system were more likely to suffer an alcohol-related injury.
- Males are more likely to have an alcohol-related injury than females.

Risk of suicide

- About 4,500 Canadians die by suicide every year, and it is estimated that one in four of those suicides involve alcohol.

- Studies show that both males and females with alcohol use disorder are more likely to die by suicide than their counterparts without alcohol use disorder.
- As the average amount of alcohol a person consumes increases, their risk of suicide also increases. This risk appears to be higher for females than males, although this finding is based on a small sample size and further research is needed to better understand this relationship.

INTERVENTIONS AND TREATMENTS

Rapid Access Addiction Medicine (RAAM) model

- The Rapid Access Addiction Medicine (RAAM) model provides low-barrier, walk-in clinics that offer rapid access to evidence-based care for people with substance use concerns. Individuals presenting to RAAM clinics have high levels of alcohol-related harms and severity of use, as well as high levels of other substance use and mental health comorbidities.
- Preliminary evidence suggests that integrated services through RAAM clinics may be effective at reducing follow-up emergency department visits for problematic alcohol use or alcohol use disorder (AUD), reducing substance use in individuals with problematic alcohol use and AUD, improving mental health symptoms, and retaining individuals in care.

Personalized treatment models

- Some people benefit immensely from treatments for alcohol use disorder and others do not. Individual factors including executive functioning (e.g. working memory, inhibition, attention), negative emotionality (e.g. mood, anxiety, stress) and incentive salience (e.g. craving, attention-grabbing, motivation) may influence the effectiveness of AUD treatments.
- Preliminary research shows improved trajectories for people with AUD following 12 weeks of Cognitive Behavioural Therapy (e.g., decreases in total drinks per week, binge drinking days per week and drinking per week). Individual outcomes vary however, and ongoing research is investigating how individual factors influence these outcomes to inform more customized therapies.

Cognitive Enhancement Therapy in individuals experiencing early phase psychosis and problematic alcohol use

- Cognitive Enhancement Therapy (CET) is a comprehensive program that combines cognitive training and social skills training to improve cognitive functioning and social interactions in individuals experiencing psychosis. Substance use interferes with psychosis recovery.
- Preliminary findings suggest CET reduces alcohol consumption and improves hard-to-treat psychosis symptoms in youth and emerging adults with early phase psychosis and problematic alcohol use.
- Participants found CET modules including stress management, motivation and initiation, emotional regulation, getting the gist, self-defeating thinking, handling criticism, and adjusting to mental illness to be helpful. This suggests that psychotic symptoms are improved by addressing underlying challenges with social anxiety, motivation and abstract thinking, and substance use management is improved by learning new tools for stress management, criticism management and social comfortability.

Targeted interventions for alcohol-impaired drivers

- Most jurisdictions use a one-size-fits-all approach toward impaired driving offenses. In Quebec, impaired drivers must participate in a severity-based intervention assignment program. Drivers are classified to higher-risk or lower-risk groups based on arrest characteristics and other criteria (e.g. previous impaired driving) and are then assigned to either brief or intensive intervention programs.
- Research shows an intensive intervention approach is more effective than a brief intervention at reducing future impaired driving in both high-risk and low-risk drivers after three and six years.

Older people

- Older people with a history of residential instability and substance use need access to flexible and comprehensive support that is tailored to their needs while promoting their well-being, self-determination and dignity. Services should be designed with consideration of people's age, to account for mobility and other accessibility challenges that are more common among older adults.
- It is essential to provide more training to caregivers of older populations and increase and strengthen overall collaboration between services, including transitional supports for people after discharge from hospital.

POLICY EVALUATIONS

Sales and health outcomes associated with COVID-19

- More restrictive bar and restaurant policies during COVID-19 (e.g., restricted hours, closings) resulted in a decrease in alcohol sales and intoxication hospitalizations. However, reduced access to alcohol retail stores was associated with higher mental health hospitalizations, suggesting that some individuals may use alcohol as a coping mechanism.
- While strict bar and restaurant policies could help reduce alcohol consumption and alcohol intoxication during public health emergencies, it may be necessary to monitor the possible unintended impacts these restrictions have on mental health.

Availability

- Findings showed a consistent association between raising the minimum legal drinking age and the reduction of alcohol consumption among youth.
- Policies that restrict the availability of alcohol have been linked to lower alcohol consumption, but further research is needed to assess the cost effectiveness of these interventions.
- Data suggests greater access to alcohol stores is associated with an increase in emergency department and outpatient visits caused by alcohol. This association is strongest for individuals without prior treatment for AUD.

Advertising and labelling

- Canada is a world leader in mandating strong health warning labels on tobacco and most recently cannabis packaging, yet alcohol containers are exempt. Health warning labels can be effective for increasing awareness of alcohol-related health risks, and reducing drinking intentions and per capita alcohol sales, particularly among women.
- While alcohol warning labels may increase awareness of alcohol-related harms, there is little evidence to suggest that they are associated with a reduction in alcohol use.
- Government mass media campaigns and counter-advertising (messages or campaigns to challenge the messages of traditional advertising) were not as effective as commercial advertising at changing alcohol consumption behaviours.
- Advertising bans may be associated with decreases in alcohol consumption, but research findings are inconsistent. Complete advertising bans may be more effective than partial bans and have potential cost savings.

Conclusion

A high-level summary of overarching themes from the research presentations and knowledge user discussions from the workshop follows below:

- The adverse effects of alcohol consumption are a major public health issue. Alcohol harms represent the greatest health care, cost to Canadian society when compared to other substances. Alcohol consumption is a known risk factor for conditions such as cancer, liver disease, and premature death. Alcohol contributes to a significant number of emergency department visits and hospitalizations.
- It is essential to meaningfully involve people with lived and living experience of alcohol consumption in research, the development and implementation of services and interventions, and knowledge mobilization products and activities.
- COVID-19 pandemic has created conditions that might have long-term negative effects on the alcohol consumption patterns of Canadians.
- Many people, including youth, consume alcohol to address mental health concerns. There is a critical need for more mental health resources, programs and services.
- Queer and trans youth are impacted in unique ways that may require specific interventions. The need for social connectedness and acceptability, as well as discrimination and trauma disproportionately affect 2SLGBTQIA+ youth.
- For many youth, consuming alcohol is perceived as normative behaviour.
- Alcohol consumption patterns change across the lifespan. Many individuals report alcohol consumption increases at certain moments in life (e.g., peaking through transition to adulthood). These moments represent critical opportunities for intervention. Early intervention and more prevention work are also key.
- Sex and gender differences influence alcohol consumption and harms.
- There is a need to provide information to people, including youth, about the risks associated with substance use so they can make their own decisions about whether to consume alcohol. Educational materials for youth, parents and teachers must include information on the potential harms of alcohol use in youth.
- To fully understand the impacts of alcohol consumption on the health and safety of Canadians, sustained funding for research and knowledge mobilization is required.

Thank you to all who participated in this end-of-grant knowledge exchange event.

FOR MORE INFORMATION

The meeting book for this workshop is available to the public upon request. Requests can be directed to the CIHR Contact Centre: support-soutien@cihr-irsc.gc.ca.

More information about the Alcohol research to inform health policies and interventions funding opportunity can be found [here](#).

Information about research funded by CIHR's Research in Substance Use initiative can be found [here](#).