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# Partnerships for Cannabis Policy Evaluation End-of-Grant Workshop

## WHAT WE HEARD REPORT

**Date:** June 13, 2023

**Time:** 11 a.m. to 2 p.m. ET

Funding for the Partnerships for Cannabis Policy Evaluation funding opportunity was provided by:



Canadian Centre  
on Substance Use  
and Addiction

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# Introduction

## OVERVIEW

On June 13, 2023, the *Canadian Institutes of Health Research Institute of Neurosciences, Mental Health and Addiction* (CIHR-INMHA) and the *Canadian Centre on Substance Use and Addiction* (CCSA) hosted a virtual end-of-grant workshop to facilitate knowledge exchange for the five projects funded through the *Partnerships for Cannabis Policy Evaluation (PCPE)* program. This three-year program was funded by CCSA and developed under CIHR's *Integrated Cannabis Research Strategy*.

The *Cannabis Act* came into force in October 2018 and the PCPE program was an important step toward understanding how cannabis-related policies are impacting the health of Canadians.

The robust, coordinated evaluation provided by these projects is vital to monitor the public health and safety impacts of these policies — both positive and negative — so that future policy and regulatory models for non-medical cannabis use can be informed by evidence and adapted in near real-time.

This report comprises a synthesis of the evidence presented by the five research teams at the end-of-grant workshop and a summary of 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. CIHR has made every effort to share this text with project participants for their review. 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.

# Project Findings

This session included findings from the five PCPE projects as shared by the research teams. Rebecca Jesseman, Senior Research Associate, CCSA, moderated the session. The presentations are summarized below for each project.

## THE IMPACT OF PROVINCIAL CANNABIS POLICY ON IMPAIRED DRIVING

*Presenters: Jeffrey Brubacher, University of British Columbia (Nominated Principal Investigator) and Bianca Boicu, University of British Columbia*

### Overview

This study evaluated the impact of cannabis policies in B.C. and Ontario on the rates of driving after using cannabis and other substances. This was done by testing blood samples from injured drivers and passengers obtained from participating hospital emergency departments in both provinces.

Since January 2018, the team has collected almost 6,000 blood samples from injured drivers in Ontario and B.C. and more than 750 from injured passengers.

### Selected Findings

Cannabis was the most commonly detected substance in the blood of injured drivers in B.C. and Ontario. Most drivers had low THC levels, below two nanograms per millilitre (ng/mL), suggesting current cannabis-related policies may be somewhat effective in deterring driving under the influence of cannabis (DUIC).

Data showed driving after cannabis use is more common in males and drivers between the ages of 19 and 34, which could be attributed to variations in risk-taking behaviours associated with gender and age.

In B.C., the prevalence of DUIC *approximately doubled following legalization*<sup>1</sup>. However, the prevalence of drivers using cannabis did not translate into an increase in the number of collisions.

Researchers noted driving under the influence of alcohol remains a bigger concern for road safety than DUIC. Findings showed there are three to four times as many drivers with blood alcohol concentration (BAC) levels over 0.08% as there are with high levels of THC (above 5 ng/mL). Drivers with BAC over 0.08% have a more than six-fold increased risk of collisions; the risk of collision in drivers with high THC levels is poorly defined but far less than for alcohol.

In B.C. and Ontario, approximately one in five drivers tested positive for at least one impairing substance (e.g., cocaine, fentanyl, depressants, prescription sleeping pills, opiates).

Additionally, studies indicate concurrent use of multiple substances is widespread, underscoring the necessity for additional policies and marketing campaigns targeting polysubstance use.

Preliminary results of a media analysis conducted as part of this project show most news reports view cannabis-impaired driving as dangerous. Many news reports discuss efforts to mitigate cannabis-impaired driving (e.g., police training, roadside testing) positively. However, there are mixed messages regarding police preparedness (e.g., time to train officers, number of drug recognition experts) and negative attitudes toward the validity of roadside drug screening devices (e.g., reliability, accuracy, role in court of oral fluid testing).

<sup>1</sup> Brubacher, J. R., Chan, H., Erdelyi, S., Staples, J. A., Asbridge, M., & Mann, R. E. (2022). *Cannabis Legalization and Detection of Tetrahydrocannabinol in Injured Drivers*. *New England Journal of Medicine*. <https://doi.org/10.1056/NEJMSa2109371>

## Next Steps

The next steps for the team include continuing knowledge mobilization efforts (e.g., *national and provincial annual reports, publications, infographics*) and examining regional variations in drug-impaired driving. The team will also publish an interactive data dashboard allowing users to generate customized reports based on drug type, sex, age range and province.

Funding from Transport Canada will enable the team to continue to build its toxicology lab to complete the analysis of blood samples and potentially expand the study.

For more information about this study: <https://rsph.med.ubc.ca/current-projects/national-drug-driving-study>

## AN INTEGRATED PROCESS AND OUTCOMES EVALUATION OF CANNABIS LEGALIZATION POLICIES IN NEWFOUNDLAND AND LABRADOR TO EXAMINE PUBLIC HEALTH AND SAFETY IMPACTS OF SALES, CONSUMPTION AND ENFORCEMENT REGULATIONS

*Presenters: Jennifer Donnan, Memorial University of Newfoundland (Nominated Principal Investigator) and Lisa Bishop, Memorial University of Newfoundland*

### Overview

The study employed a citizen and stakeholder-engaged process to explore the impact of cannabis legalization on public health and safety in Newfoundland and Labrador. This included: 1) an exploration of the retail market from both the consumer and retailer perspectives; 2) the impact on youth and their risk perception; 3) cannabis related stigma; and 4) the impact on medical cannabis use behaviours.

### Selected Findings

Despite access to regulated products, some consumers still access the unregulated market for products with higher THC potency (especially concentrates and edibles), perceived superior quality, simpler packaging, and access to bulk sales and discounts. While newer and less frequent consumers tended to be more satisfied with regulated cannabis products, more frequent consumers were willing to trade off the security that comes with purchasing regulated products for bulk discounts, higher potencies, and access to additional product and effect information. From the retailer perspective, complex licensing processes, challenges with start-up capital and small profit margins were the biggest challenges to establishing a cannabis store.

Qualitative research found many people in the unregulated market are consuming cannabis for medical reasons. These consumers struggled to find health care support and guidance. Some experienced stigma and many had difficulty finding medical practitioners for authorization. Prescribers reported not being comfortable/willing to provide authorization or guidance and shared concerns about lack of training, complexities of dosing, and lack of strong evidence.

The majority of cannabis consumers indicate that they consume at least in part for a medical purpose, however the proportion who purchase from an authorized medical producer is decreasing. Those who consume for medical purposes indicated using predominantly dried flower and high THC, low CBD products, which is counter to *Health Canada recommendations* for product selection and dosing of cannabis for medical use. This highlights a critical gap in access to information and support for patients who seek cannabis for medical purposes.

While legalization is thought to have reduced stigma associated with cannabis use, many still feel the effects of stigma in the community. Survey research, exploring factors that may contribute to stigma, found that: younger consumers experienced more stigma compared to those 19 years and older; stigma increases with frequency of use; and recreational use is more stigmatized than medical use (either advised by a health care provider or self-medication). However, gender does not seem to play a role. This is a notable concern, as stigmatization may lead to riskier behaviours and a reluctance to seek help and support.

Qualitative research revealed the use of cannabis and driving is more normalized among youth, who felt more peer pressure to drive after consuming cannabis. Youth also reported certain misconceptions (e.g., cannabis can make you a better driver; it is not a risk to drive off-road vehicles).

Through qualitative research and a scoping review and environment scan, it is apparent that there is a lack of cannabis education and minimal education on substances within the school system. This gap in education is concerning, as youth are not able to make safe and informed choices about cannabis.

The team has participated in various knowledge mobilization activities, including on social media (X, formerly Twitter and Facebook) and an end-of-grant Evidence to Knowledge Symposium with policy makers, cannabis regulators, stakeholders and members of the public in attendance.

### Next Steps

The team will continue working with the provincial Department of Education to create a substance use education strategy with a harm reduction focus called *Drug Education Centred on Youth Decision Empowerment (DECYDE)*. The project's next steps also include validating its cannabis health literacy tool and a new study with Humber College exploring cannabis education needs among pharmacists.

For more information about this study: <https://www.mun.ca/pharmacy/research/cherp>

## TRIANGULATING EVIDENCE TO EVALUATE THE IMPACT OF CANNABIS POLICY IN ONTARIO

*Presenters: Tara Elton-Marshall, University of Ottawa (Nominated Principal Investigator) and Sameer Imtiaz, Centre for Addiction and Mental Health*

### Overview

This study evaluated the intended and unintended impacts of cannabis policies in Ontario by analyzing and triangulating findings from multiple sources, including health care utilization data from the Drug and Alcohol Treatment Information System, National Ambulatory Care Reporting System and Discharge Abstract Database, collision data from the Ministry of Transportation, and population survey data from the Centre for Addiction and Mental Health (CAMH) Monitor Survey and the Ontario Student Drug Use and Health Survey.

### Selected Findings

Cannabis legalization was associated with a 62% increased likelihood of cannabis use, 59% increased likelihood of daily cannabis use, and 53% increased likelihood of cannabis-related problems among adults over 18 in Ontario. A biennial survey of youth in grades 7–12 found that legalization was not associated with initiation of cannabis but was associated with an increased likelihood of use, daily use, and cannabis dependence.

More than half of young people reported using cannabis for medical purposes (e.g., anxiety, sleep, depression), with most reporting use without medical documentation. Findings demonstrate a need for accessible mental health services for young people, given they are using cannabis to address mental health concerns. There is also a need to improve cannabis-related public health promotion messages, as one-third of youth who use cannabis did not notice any cannabis health promotion and only 17% of those surveyed reported seeing lower-risk guidelines.

The impacts of cannabis legalization on cannabis-related problems among adults varied by age. Adults aged 55 years and older experienced increases in cannabis-related problems following legalization. Cannabis legalization was not associated with DUIC or motor vehicle collisions for adults or adolescents. However, there was an increase in the likelihood of DUIC among adults over 55.

Between 2008 and 2020, there were no significant changes in the number of individuals seeking treatment for cannabis through the Drug and Alcohol Treatment Information System. People who use cannabis reported a desire for information on how their cannabis consumption could interact with other substances and how cannabis impacts mental health. Youth and young adults said they are not seeing information on the health impacts of cannabis use, and expressed a strong interest in obtaining this knowledge.

## Next Steps

The team will look at its long-term cohort study to examine if increases in cannabis use among cannabis consumers are sustained over time post-pandemic. Researchers will continue working with the provincial and federal governments to disseminate findings to impact future policies and programming.

## CANNABIS POLICY EVALUATION IN ONTARIO

*Presenter: David Hammond, University of Waterloo (Nominated Principal Investigator)*

### Overview

The study is a collaboration between the *International Cannabis Policy Study (ICPS)* and the Ontario Legalization of Cannabis Secretariat in the Ministry of the Attorney General. The study aims to monitor the impact of cannabis policies in Ontario.

### Selected Findings

There was a notable increase in cannabis use in Canada in the first 12 months following legalization. Since then, consumption has levelled off but is still slightly higher than pre-legalization.

The cannabis product market in Canada is changing rapidly, with legalization accelerating pre-existing trends. While smoking dried flower remains the dominant product for people who consume cannabis, its use has declined since 2018 and continues to do so as of the end of 2022. There has been a rise in the consumption of edibles and vape oils, indicating an increased use of higher THC products. Consumption of cannabis beverages has also increased, while the use of oral oils and hash has declined. Understanding the types of products that are being consumed is important to comprehend the impacts of cannabis legalization and regulation.

A provincial scan of product standards highlighted that regulations play an important role in shaping the types of products people obtain through both regulated and unregulated markets. For example, when Quebec (which has stricter cannabis policies than other provinces) allows the sale of products, consumption patterns align with other provinces. When the province imposes restrictions on certain products, usage is lower.

Data also demonstrates that consumers across Canada are shifting to the regulated retail market – a trend that continues to increase.

Surveys showed people did not notice an increase in cannabis advertising and promotions from 2018 to post-legalization, reflecting Canada's comprehensive advertising and marketing regulations. Provincially, people in Alberta and Ontario were most likely to be exposed to cannabis ads due to the higher number of retail stores in those provinces. Canadians were most likely to notice cannabis advertising outside of stores selling cannabis, followed by digital sources, including social media and websites.

Cannabis retail scans revealed a large diversity of products (almost 30,000 regulated products and 86,000 unregulated products), similarities in THC concentrations in specific product categories in the regulated and the unregulated markets (e.g., dried flower), higher THC levels in the unregulated market, and major price reductions in cannabis products after legalization due to competition in the retail markets.

The team has published several manuscripts and presented data to policy and decision makers, including Health Canada, Public Safety Canada and CAMH. Evidence from the study has also been cited in regulatory decision making by the Government of Canada (e.g., flavoured and inhaled tobacco).

### Next Steps

Next steps for the team include making the data from its cannabis retail scans available online for public access. The research team has leveraged this project and now has a large study in the Canadian Territories, funded by Health Canada's Substance Use and Addictions Program (SUAP), and has added Germany to its survey list of international countries.

For more information about this study: <https://cannabisproject.ca>

## EVALUATING THE IMPACT OF LOCAL, PROVINCIAL, AND NATIONAL CANNABIS POLICIES AMONG YOUTH IN THE COMPASS SYSTEM

*Presenter: Katie Burns, University of Waterloo*

*Nominated Principal Investigator: Scott Leatherdale, University of Waterloo*

### Overview

This project used data from *COMPASS*, a long-term study that collects student-level and school-level data from over 200 secondary schools and more than 70,000 students in grades seven to 12 in Ontario, Quebec, Alberta, B.C., and Prince Edward Island (P.E.I.). Its objectives are to understand how cannabis-related interventions are associated with changes in cannabis use and the co-occurrence of other major modifiable risk factors for chronic disease and mental health among youth.

### Selected Findings

Current and occasional cannabis use in youth has declined over time and the prevalence of youth who report cannabis as easy to access has declined since legalization and early into the pandemic. As students age, their perceptions of cannabis being easy to access increases, especially among cannabis consumers.

School programs, policies and climate appear to have limited impact on student cannabis use. However, students who perceived their school as supportive of substance use prevention or cessation were less likely to report current cannabis use than their peers who perceived their school to be unsupportive. Among schools with high cannabis consumption, collaboration between local public health agencies and schools was associated with lower cannabis use. This suggests the rate of substance use within the school is important and may impact the effectiveness of public health engagement on substance use. Additionally, greater density of sports and recreation facilities in a school neighbourhood was associated with a lower probability of binge drinking and e-cigarette use, but not cannabis consumption.

Studies demonstrated several co-occurrences of cannabis and modifiable risk factors. There is a bidirectional relationship between cannabis, e-cigarette and cigarette use among students (i.e., students who reported using e-cigarettes and cigarettes were more likely to report using cannabis the next year, and similarly, students who consumed cannabis were more likely to report using e-cigarettes and cigarettes the following year). Non-competitive sports participation appears to be protective against cannabis use (i.e., youth who did not participate in intramural sports were more likely to consume cannabis compared to youth who consistently participated in intramural sports). Studies showed a multidirectional relationship between cannabis use, mental health and screen time among youth.

Researchers also found that polysubstance use is associated with cannabis consumption and that youth cannabis use is associated with symptoms of anxiety and depression, including loneliness, irritability, low well-being, and restless sleep. Weekly cannabis use is associated with increased symptoms of depression and anxiety.

To date, the team has published 26 journal articles, with six manuscripts in progress and three in review.

### Next Steps

COMPASS is an ongoing study that is funded until 2027. The study will continue to provide participating schools with summary reports on youth health outcomes and the school environment to inform programs and practices. The study will also explore gender minority and cannabis consumption among youth and other priority topics identified by knowledge users.

For more information about this study: <https://uwaterloo.ca/compass-system>



# Panel Discussion and Reflections

In this session, panelists reflected on the research results presented by the five PCPE-funded teams. Panelists included policy makers, service providers and knowledge users. Audience members from various backgrounds, including researchers and people with lived and living experience (PWLLE), also shared comments.

Below is a summary of the facilitated discussion.

## *Moderator:*

Rebecca Jesseman, CCSA

## *Panelists:*

Mahalia Dixon, Centre for Addiction and Mental Health

Michael McGrath, Ministry of Transportation of Ontario

Emily Rowe, Memorial University of Newfoundland

Daniel Sansfaçon, Public Safety Canada

## SUMMARY OF DISCUSSION

**Meaningful engagement with PWLLE, youth, families, service providers, schools and communities is important for successful cannabis research and education.**

- This includes employing a patient-engagement approach in the design, development, implementation, and service delivery of public health messaging initiatives, particularly in schools and local communities.
- It is only with the support and participation of partners that research can be put into practice and influence government decisions.
- The aim is to establish a feedback loop, where insights gathered from the community are channelled back to researchers and clinicians, ultimately creating a comprehensive system where research directly addresses the needs of the community.

**Harm reduction approaches should be used to shape policies and influence cultural shifts like stigma reduction related to cannabis use.**

- There is a need for more education with a harm reduction focus, particularly for youth.

**There is a need to better understand the unregulated cannabis market.**

- This includes its extent, characteristics, and potential links to organized crime and other unregulated activities.
- There is limited reliable data to inform enforcement policies.
- The unregulated market is not solely Canada-based. There is also a large market for exportation.
- There is limited information on the online cannabis market, which appears to be growing post-pandemic.

**It is difficult to estimate the share of consumption originating from the regulated market as opposed to the unregulated market.**

- While there is no one objective measure, census data from regulated sales shows an increase in the regulated market that has yet to peak. Data on cannabis consumption is not increasing at the same level, suggesting that regulated sales continue to draw increasingly from the unregulated market.
- Estimates show three-quarters of the cannabis market is now regulated.

**Cannabis-impaired driving has increased since 2018. Gathering more data on the effectiveness of tools like standardized field sobriety testing and approved screening devices is important.**

- There is a shift toward using administrative penalties (e.g., fines, license suspension) over criminal penalties to address impaired driving due to the faster resolution and lower burden on police resources. However, the effectiveness of these approaches in deterring future offenses, especially among repeat offenders, remains unclear. Comparative studies are needed to understand which strategies, both in law enforcement and the justice system, are most effective and cost-efficient.
- Cannabis education, especially for young drivers, is critical. The early years of driving are crucial for forming good habits. There are zero-tolerance laws for young and novice drivers regarding cannabis. Success hinges on drivers being aware of these laws and understanding that THC can remain detectable in the body for an extended time.

**There is a need for sustained cannabis research.**

- Cannabis research is in its infancy. An extended period of study is required to better understand the impacts of cannabis legislation on public health and safety.
- A community of practice to inform the development of research and invest in training and trainees would be beneficial.

**Frequent, accessible knowledge mobilization is critical to better understand research outcomes, knowledge gaps and inform next steps.**

- Research summaries, infographics, and knowledge exchange events and targeted resources developed with communities and knowledge users are useful for policy makers, decision makers, partners and the public.

**It is not clear if taxation on cannabis products plays a role in consumption.**

- There are different taxes for cannabis products (e.g., 10% tax on flower, 1% per milligram tax for THC concentrates).
- Tax rates on cannabis products have not changed since October 2018, but prices have decreased dramatically due to saturation of the retail market and competition between brands.
- There should be a better understanding of the role taxation plays on consumption over the next five years as the market price settles. Currently, tax has been a marginal contributor to the overall retail price. Minimum pricing may be needed.

**Limited information is available regarding the allocation of resources to cannabis law enforcement.**

- Law enforcement agencies are prioritizing resources and efforts towards substances that pose a greater risk to public health and safety.
- Various provinces have adopted different approaches to cannabis law enforcement. Policy makers are interested in data comparing the effectiveness of these diverse approaches.

# Conclusion

The PCPE End-of-Grant Workshop featured presentations from five projects and a panel session with an open discussion among researchers, policy and decision makers, service providers, knowledge users and PWLLE of cannabis use.

A high-level summary of overarching themes from the workshop follows below:

- Evidence shows many people consume cannabis to address mental health concerns, therefore **access to mental health services and information and guidance from health care providers about the use of cannabis for medical purposes are needed for all populations**, including youth.
- **Polysubstance use is common with cannabis**, including among drivers.
- **Youth cannabis use is an important and complex public health issue**. Youth populations are diverse and more needs to be known about effective ways to provide harm reduction-focused education to youth in a way that meets their needs. Many youth report using cannabis for medical purposes (e.g., sleep, anxiety, depression) without medical documentation or oversight. Engaging youth in research design, knowledge mobilization and information sharing is key to increasing the impact and relevance of research findings for this population. **Youth cannabis use is associated with e-cigarette and cigarette use**.
- **The meaningful and sustained involvement of people with lived and living experience of cannabis use is essential** in research, and developing and implementing services and interventions for cannabis use-related harms.
- Various provinces have implemented different cannabis policies. **The coordination and sharing of cannabis data across provinces** may yield valuable insights into the effectiveness of different approaches.
- There is a need to better understand the **relationship between the regulated and unregulated cannabis markets**, including which products people are purchasing and why.
- There are **gaps in consumer understanding** of cannabis products and health effects, including cannabis use for medical reasons. There is a need to **improve cannabis-related public health promotion** and provide authoritative, credible and consistent messaging related to cannabis use, including educational material and information outlining access to and use of cannabis products and the potential benefits and risks of cannabis use.
- Policy makers, decision makers, knowledge users and partners require **timely and accessible knowledge mobilization products** to understand research outcomes, knowledge gaps and next steps to inform cannabis policy.
- Cannabis legalization is in its infancy. **Sustained funding for cannabis research and knowledge mobilization** is needed to fully understand the impacts of legalization on the health and safety of Canadians.

**Thank you to all who participated in this knowledge exchange event.**

# For More Information

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The meeting book for the PCPE End-of-Grant Workshop is available to the public upon request. Requests can be directed to the CIHR Contact Centre: [support-soutien@cihr-irsc.gc.ca](mailto:support-soutien@cihr-irsc.gc.ca).

Additional information about the PCPE funding opportunity, including progress reports, can be found [here](#).

Information about the CIHR's Integrated Cannabis Research Strategy can be found at: [cihr-irsc.gc.ca/e/50932.html](https://cihr-irsc.gc.ca/e/50932.html).

More information on CIHR's initiatives for Research in Substance Use can be found at: [cihr-irsc.gc.ca/e/50927.html](https://cihr-irsc.gc.ca/e/50927.html).

Also available on the Web in PDF and HTML formats

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