

# Commentary on Hall *et al.*: Evaluating impact of cannabis legalization in Canada—initial outcomes and current trends

*Legalization of recreational cannabis in Canada has had mixed effects. The benefits include reductions in illicit activity and billions of dollars in revenue for governments and industry; the challenges include increases in cannabis prevalence, a market-wide shift to higher tetrahydrocannabinol products and increased health-care usage. The coming years will be critical to identify best practices in regulating legal cannabis markets.*

Federal legalization of ‘recreational’ cannabis in 2018 is one of several notable developments in substance use policy in Canada, which also include provincial-level decriminalization of various substances and ‘safe supply’ of opioids [1]. The Hall *et al.* paper provides a timely summary of several indicators following cannabis legalization [2]. As the paper notes, adult prevalence of cannabis use increased in 2019 following legalization, with the most recent data indicating stable trends since 2020 [3]. The increases since legalization reinforce Canada’s position near the top of global cannabis prevalence: in 2022, cannabis prevalence was 27% in the past 12 months, 19% in the past 30 days and 10% daily use [3]. In contrast to the increases observed among adults, cannabis use among youth has been stable, albeit at high levels [4].

As noted by Hall *et al.*, several indicators of problematic use have also increased since legalization, including hospitalization rates. These increases are probably due to a combination of increased use, greater comfort in seeking health-care services for adverse outcomes from cannabis and the COVID-19 pandemic, during which hospitalizations increased for most substances in Canada [5, 6].

## LEGALIZATION VERSUS PRE-EXISTING TRENDS

Many of the changes observed since 2018 reflect trends that began prior to legalization [5, 7]. Legal access to medical cannabis in Canada began in 1999 and, by 2018, Canadians had widespread access to a diversity of products, both on-line and from unauthorized storefronts [8–10]. Nevertheless, legalization appears to have accelerated

pre-existing trends, particularly with regard to the use of higher tetrahydrocannabinol (THC) extracts such as edibles, vaping products and pre-rolled joints [10, 11]. The legal market has also led to major price decreases: during the first 4 years, the average price of dried flower from legal stores almost halved to approximately \$CAD 6/g, with prices as low as \$CAD 3/g in many legal stores [12, 13].

## STAKEHOLDER PERSPECTIVES

Stakeholders have differing perspectives on the ‘effectiveness’ of legal market. Among the general public, support for cannabis legalization has increased and most consumers report positive perceptions of the legal market in terms of convenience, safety and product availability [12, 14]. Most importantly, consumers continue to transition to the legal market: legal sales accounted for between 50 and 75% of the overall market in 2022 and continue to grow [3, 15, 16]. Other stakeholders are less positive, including some Indigenous stakeholders who feel excluded from the legal market [17]. The first 4 years of legalization has also been a volatile period for the cannabis industry due to a combination of overspeculation, oversupply and a saturated retail market that has led to vigorous competition.

## LEGALIZATION 2.0—WHAT’S NEXT FOR CANADA?

Legalization is entering a second phase in Canada, in which the focus is shifting from creating a legal retail market to determining best practices for regulating cannabis markets. A mandatory legislative review of the federal Cannabis Act is under way, providing an opportunity to consider regulatory changes [18]. Not surprisingly, the industry is advocating for less regulation, including fewer restrictions on advertising, removing THC limits on edibles and lower excise taxes. The legislative review will need to address the inherent conflict between these commercial interests and the primary objectives of the Cannabis Act with regard to preventing cannabis initiation and protecting public health [19].

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Independent evidence will be critical to testing the veracity of industry claims and informing regulatory decisions. Research priorities include more robust estimates of the illicit market and research on the potential consequences of the market-wide shift towards higher THC extracts. Research should also examine provincial differences in cannabis regulations, including in Quebec, which has implemented the most restrictive model in terms of minimum legal age, retail density and prohibition of most edibles and all products above 30% THC. Finally, research should consider potential benefits of legalization, including reductions in arrests—particularly among racialized Canadians—reductions in stigma, and the potential to reduce excess risks through enhanced product standards.

## EARLY DAYS...

Cannabis legalization in Canada is in its infancy, and it will take several decades to fully assess its impact. Comparative research between countries will be imperative to this learning process. Indeed, a wide range of legal markets already exist: the Canadian framework is more restrictive than US states that have legalized ‘recreational’ cannabis, but less restrictive than commercial markets in Uruguay and those being developed in several European countries. Each of these frameworks provides an opportunity to evaluate ‘natural experiments’ in cannabis policy, particularly with regard to the effectiveness of specific regulations that are likely to determine the public health impact of legalization.

## KEYWORDS

Cannabis, health policy, marijuana, risk behaviour, substance use

## ACKNOWLEDGEMENTS

This article was not funded.

## DECLARATION OF INTERESTS

D.H. has provided paid expert testimony on behalf of public health authorities in response to legal claims from the cannabis, tobacco and vaping industries. There are no financial or other relevant links to companies with an interest in the topic of this article.

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## REFERENCES

- Province of British Columbia. Decriminalizing people who use drugs in B.C. Available at: [https://www2.gov.bc.ca/gov/content/overdose/decriminalization#:~:text=under%20this%20exemption%2C%20adults%20\(18,heroin%2C%20morphine%2C%20and%20fentanyl\)](https://www2.gov.bc.ca/gov/content/overdose/decriminalization#:~:text=under%20this%20exemption%2C%20adults%20(18,heroin%2C%20morphine%2C%20and%20fentanyl).). Accessed 21 July 2023.
- Hall W, Stjepanović D, Dawson D, Leung J. The implementation and public health impacts of cannabis legalization in Canada: a systematic review. *Addiction*. 2023;118:2062–72.
- Health Canada. Canadian cannabis survey 2018–2022 Ottawa, ON: Health Canada; 2022 Available at: <https://health-infobase.canada.ca/cannabis/>. Accessed 21 July 2023.
- Health Canada. Summary of results for the Canadian student tobacco, alcohol and drugs survey 2021–22 Ottawa, ON: Health Canada; 2023 Available at: <https://www.canada.ca/en/health-canada/services/canadian-student-tobacco-alcohol-drugs-survey/2021-2022-summary.html>. Accessed 21 July 2023.
- Canadian Institute of Health Information (CIHI). Unintended consequences of Covid-19 impact on harms caused by substance use Ottawa, ON: CIHI; 2021 Available at: <https://www.cihi.ca/sites/default/files/document/unintended-consequences-covid-19-substance-use-report-en.pdf>. Accessed 21 July 2023.
- Wadsworth E, Goodman S, Hammond D. Self-reported impact of the COVID-19 pandemic on cannabis use in Canada and the United States. *J Psychoact Drugs*. 2022;1–10. <https://doi.org/10.1080/02791072.2022.2110023> PMID: Epub ahead of print.
- Mammen G. How has cannabis legalization impacted public health in Canada? Controlled substances and cannabis branch. Canadian Consortium for the investigation of cannabinoids annual meeting, 23 June 2023. Toronto, ON: Health Canada; 2023.
- Mahamad S, Hammond D. Retail price and availability of illicit cannabis in Canada. *Addict Behav*. 2019;90:402–8.
- Health Canada. A Framework for the Legalization and Regulation of Cannabis in Canada: The Final Report of the Task Force on Cannabis Legalization and Regulation Ottawa, ON: Health Canada; 2016. Available at: <https://www.canada.ca/content/dam/hc-sc/healthy-canadians/migration/task-force-marijuana-groupe-etude/framework-cadre/alt/framework-cadre-eng.pdf>. Accessed 21 July 2023.
- Health Canada. Canadian Cannabis Survey 2022: Summary Health Canada: Ottawa, ON; 2022 Available at: <https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/research-data/canadian-cannabis-survey-2022-summary.html>. Accessed 21 July 2023.
- Hammond D, Goodman S, Wadsworth E, Freeman TP, Kilmer B, Schauer G, et al. Trends in the use of cannabis products in Canada and the USA, 2018–2020: findings from the International Cannabis Policy study. *Int J Drug Policy*. 2022;105:103716.
- Hammond D, Corsetti D, Fataar F, Iraniparast M, Danh Hong D, Burkhalter R. International Cannabis Policy Study—Canada 2022 Summary. June 2023. Waterloo, ON: University of Waterloo; 2023. Available at: <https://cannabisproject.ca/wp-content/uploads/2023/06/2022-Canada-Report-June-26.pdf>. Accessed 21 July 2023.
- Wadsworth E, Driezen P, Dilley JA, Gabrys R, Jesseman R, Hammond D. Proximity to legal cannabis stores in Canada and use of cannabis sources in the first three years of legalization, 2019–2021. *J Stud Alcohol Drugs*. 2023. <https://doi.org/10.15288/jsad.22-00427> PMID: Epub ahead of print.
- Wadsworth E, Fataar F, Goodman S, Smith D, Renard J, Gabrys R, et al. Consumer perceptions of legal cannabis products in Canada, 2019–2021: a repeat cross-sectional study. *BMC Public Health*. 2022;22:2048.
- Wadsworth E, Rynard V, Driezen P, Freeman TP, Rychert M, Wilkins C, et al. Legal sourcing of ten cannabis products in the Canadian cannabis market, 2019–2021: a repeat cross-sectional study. *Harm Reduct J*. 2023;20:19.

16. Statistics Canada. Cannabis data overview: inventory, sales and licensed area. Statistics Canada; May 2023. Available at: <https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/research-data/market.html>
17. Senate of Canada. On the Outside Looking In: The Implementation of the Cannabis Act and its effects on Indigenous Peoples. June 2023. Available at: <https://sencanada.ca/en/info-page/parl-44-1/appa-cannabis-act-implementation/>. Accessed 21 July 2023.
18. Government of Canada. Cannabis act legislative review. Government of Canada; January 2023. Available at: <https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/laws-regulations/cannabis-act-legislative-review.html>. Accessed 21 July 2023.
19. Government of Canada. Cannabis Act. SC 2018, c. 16. Available at: <https://laws-lois.justice.gc.ca/eng/acts/C-24.5/page-2.html#h-76969>. Accessed 21 July 2023.