

# What the U.S. can learn from the changes in cannabis use across Canada?

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# Disclosures

 **NO INDUSTRY FUNDING OR INTERESTS TO DECLARE.**

## **CONSULTANT / PAID SPEAKER / ADVISORY COMMITTEES**

- Regulatory agencies e.g., Canada, Australia, UK, EC
- Non-governmental associations e.g., CCS, Heart & Stroke Foundation
- International public health authorities e.g., WHO

## **PAID EXPERT TESTIMONY – PUBLIC HEALTH LITIGATION**

### **Tobacco**

- Canada, Norway, Australia, UK, Ireland, Uruguay, Uganda, NB, AB, Class actions

### **Vaping**

- Canada, NB

### **Cannabis**

- Canada, Quebec

### **Food & beverage**

- San Francisco



## **DISCLOSURE**

**There are diverse perspectives on the impact and 'effectiveness' of cannabis legalization.**

# Industry

 CBCNEWS

**With pot rules under the microscope, some entrepreneurs say Ottawa is stunting the industry's growth**



SOURCE: [HTTPS://WWW.CBC.CA/NEWS/POLITICS/CANNABIS-RULES-INDUSTRY-CONCERN-1.6810922](https://www.cbc.ca/news/politics/cannabis-rules-industry-concern-1.6810922)



# Indigenous peoples

 CBCNEWS

## Senate committee urges Cannabis Act overhaul to address exclusion of First Nations

Committee chair says situation 'yet another example of how Indigenous Peoples are being let down by Canada'



SOURCE: [HTTPS://WWW.CBC.CA/NEWS/INDIGENOUS/SENATE-INDIGENOUS-COMMITTEE-CANNABIS-2550841](https://www.cbc.ca/news/indigenous/senate-indigenous-committee-cannabis-2550841)

# Harm reduction & substance use crisis





**DISCLOSURE**

**Population-level impact from  
a public health perspective.**





# International context



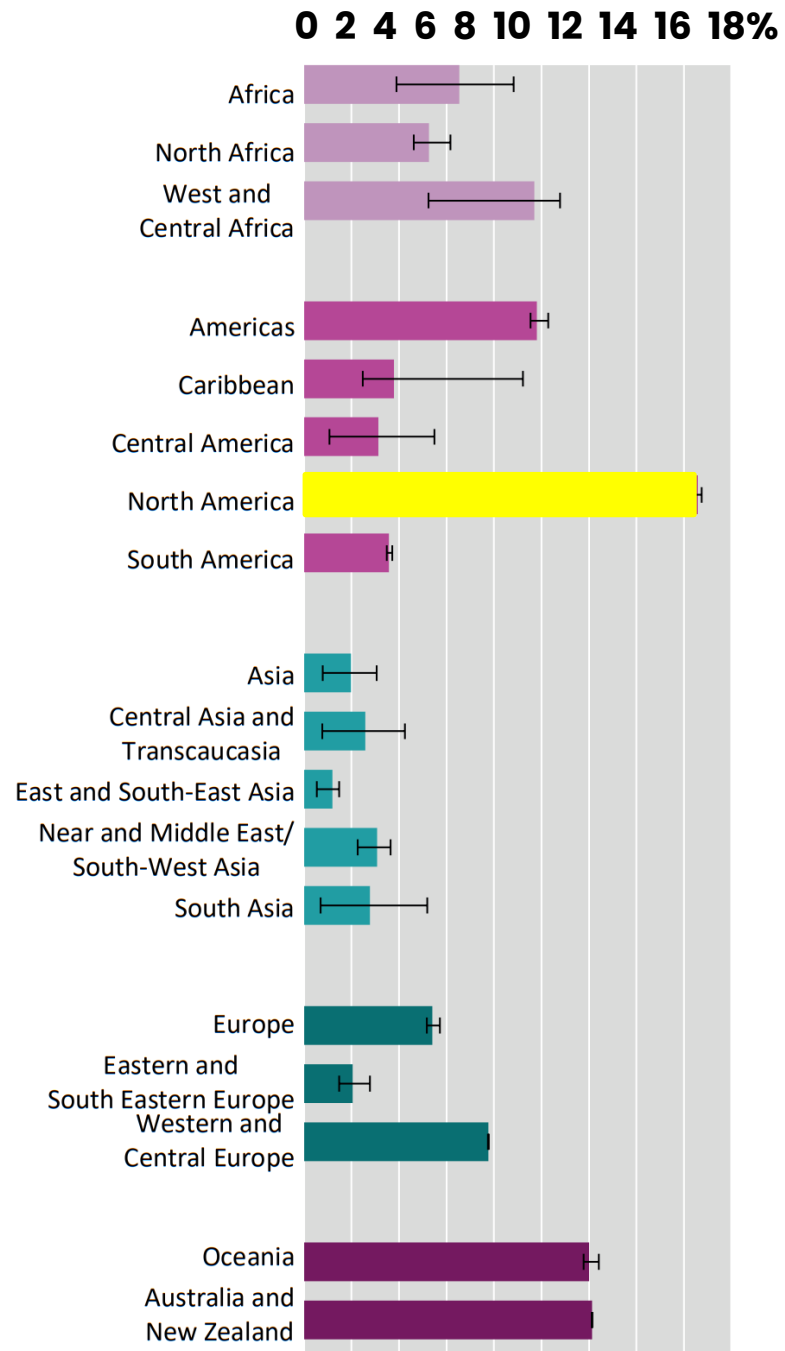


## GLOBAL TRENDS

# Cannabis use

USE IN PAST YEAR, 2020

SOURCES: UNODC, WORLD DRUG REPORT 2022 ,



# US & Canada have highest cannabis prevalence among legal markets.

## CANNABIS USE IN PAST 12-MONTHS



20%



15%



24%



9%\*

- **Highly diverse product market**
- **Early adoption of medical cannabis**

**LESSON**

**Not all 'legal' cannabis  
markets are the same...**







## **CANADA** 2018

**Private/public hybrid with high level of commercialization in production and sale of cannabis.**

# Alternative legal markets

Forbes

Uruguay Marks 6 Years Of Marijuana Sales, With 10.7 Million Grams Sold



# Alternative legal markets

**B B C**

## Cannabis clubs plan dilutes German drugs reforms



SOURCE: [HTTPS://WWW.BBC.COM/NEWS/WORLD-EUROPE-65254141](https://www.bbc.com/news/world-europe-65254141)





## Born gentle

**P**ROUD mothers, please forgive us if we too feel something of the pride of a new parent. For new Philip Morris, today's Philip Morris, is delighting smokers everywhere. Enjoy the gentle pleasure, the *fresh unfiltered flavor*, of this new cigarette, born gentle, then refined to special gentleness in the making. Ask for new Philip Morris in the smart new package.

***New Philip Morris...gentle for modern taste***

## CANNABIS LEGALIZATION

Public health impact depends on how cannabis is regulated in legal markets.



CANADA

CONSOLIDATION

CODIFICATION

Cannabis Act

Loi sur le cannabis

S.C. 2018, c. 16

L.C. 2018, ch. 16

Current to October 31, 2023

À jour au 31 octobre 2023

Last amended on April 27, 2023

Dernière modification le 27 avril 2023

Published by the Minister of Justice at the following address:  
<http://laws-lois.justice.gc.ca>

Publié par le ministre de la Justice à l'adresse suivante :  
<http://lois-laws.justice.gc.ca>

## CANNABIS ACT

**Canada's cannabis  
legislation is based on a  
public health and public  
safety approach**

## CANADA VS. US STATE MODEL

**Regulatory framework in Canada is less variable and more 'comprehensive' in most, but not all areas.**



Jurisdictional scope

- Federal & Provincial/Territorial

- State-level

Price/taxation

- Excise flat rate & ad valorem (incl. THC based)

- Variable

Product standards

- THC 10mg limit

- Minimal / Variable

Labelling & warnings

- More comprehensive warnings, standardized packaging

- Smaller text

Marketing

- More comprehensive

- Variable

Retail

- Online sales
- Fewer 'opt out'

- Variable

Minimum legal age

- 18, 19, 21 years of age

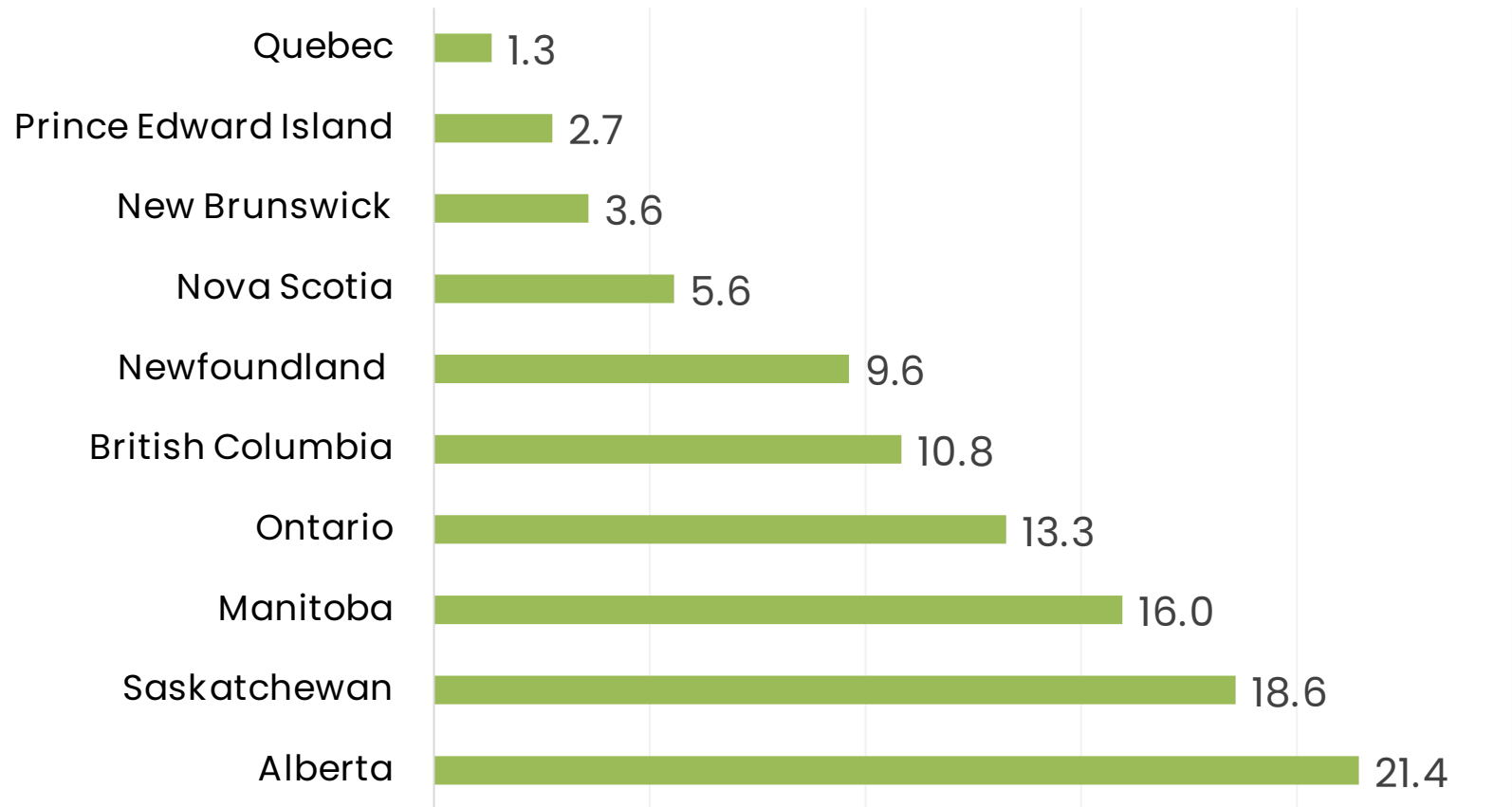
- 21 years of age



# Federal legalization with provincial & territorial differences in cannabis regulations.

## Retail stores number

LICENSED STORES PER 100,000 POP. – SEPT 2023



## **LESSON**

**Cannabis legalization has had several positive impacts in Canada.**



# **'Positive' impacts of legalization**

- **Marked declines in criminal charges**
- **Reductions in stigma**
- **Diversion of revenue to legal market**
  - ~3,800 licensed stores
  - ~\$5 billion direct annual revenues
- **Opportunity to shape product market**

## **LESSON**

**The overall effect of cannabis legalization is similar in Canada vs. US states in several key respects:**

- Patterns of use**
- Products & modes of use**
- Price**

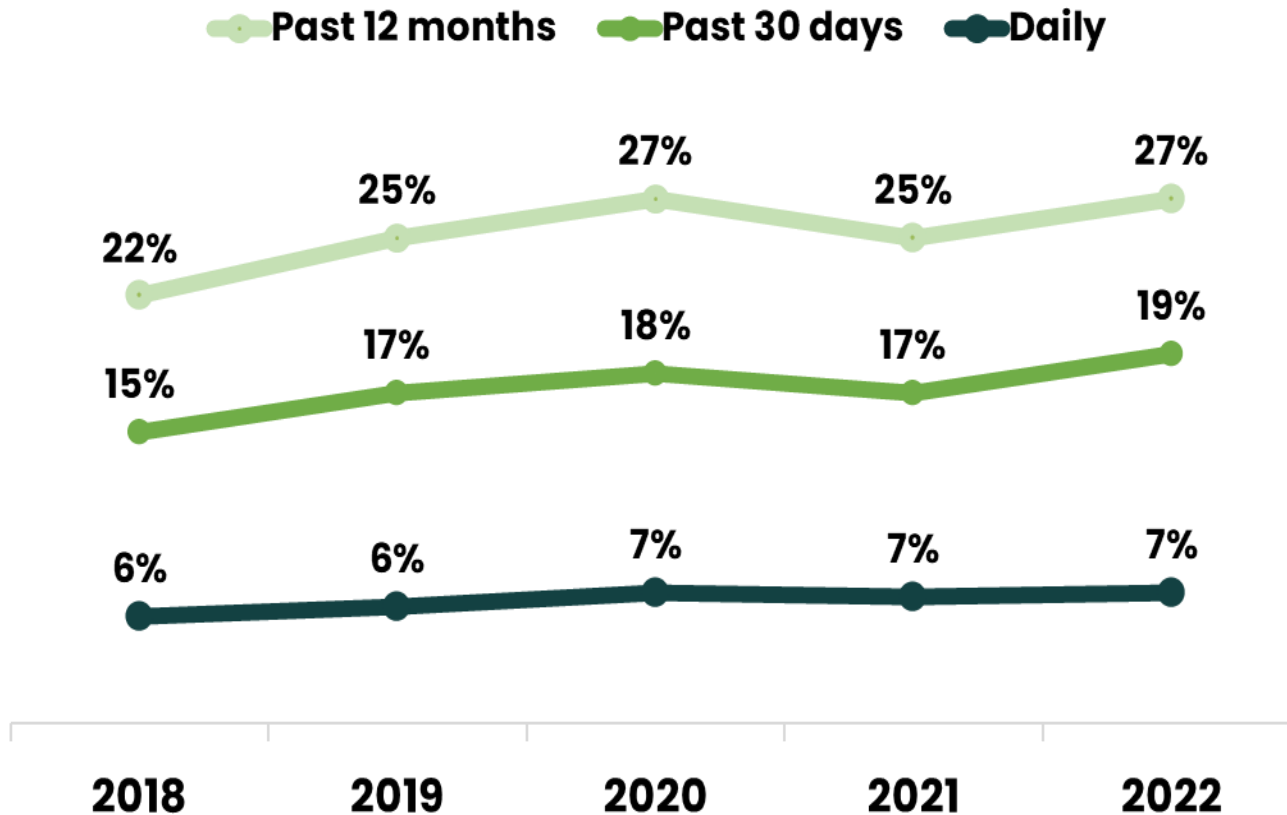




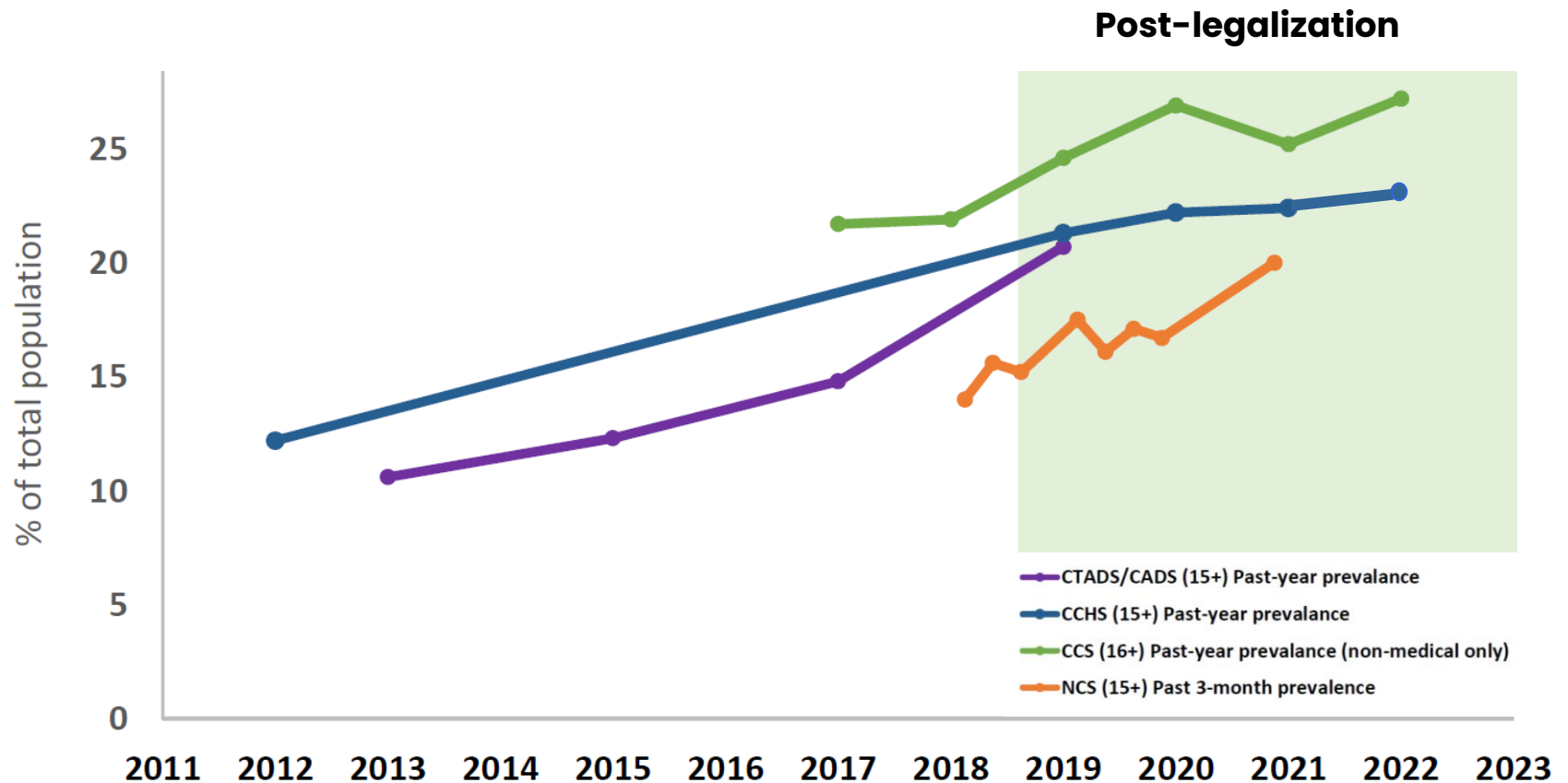
# Increased prevalence since legalization.

## Prevalence of cannabis use in Canada

CANADIAN CANNABIS SURVEY AGE ≥15; 2018-2022



# Acceleration of pre-existing trend towards greater use following legalization?



SOURCE: HEALTH CANADA, JUNE 2023.

## **LESSON**

**Distinction between 'use' and 'problematic use' more important in legal market.**

**Mixed findings on indicators of problematic cannabis use following legalization in Canada.**





PROBLEMATIC USE - INDICATORS

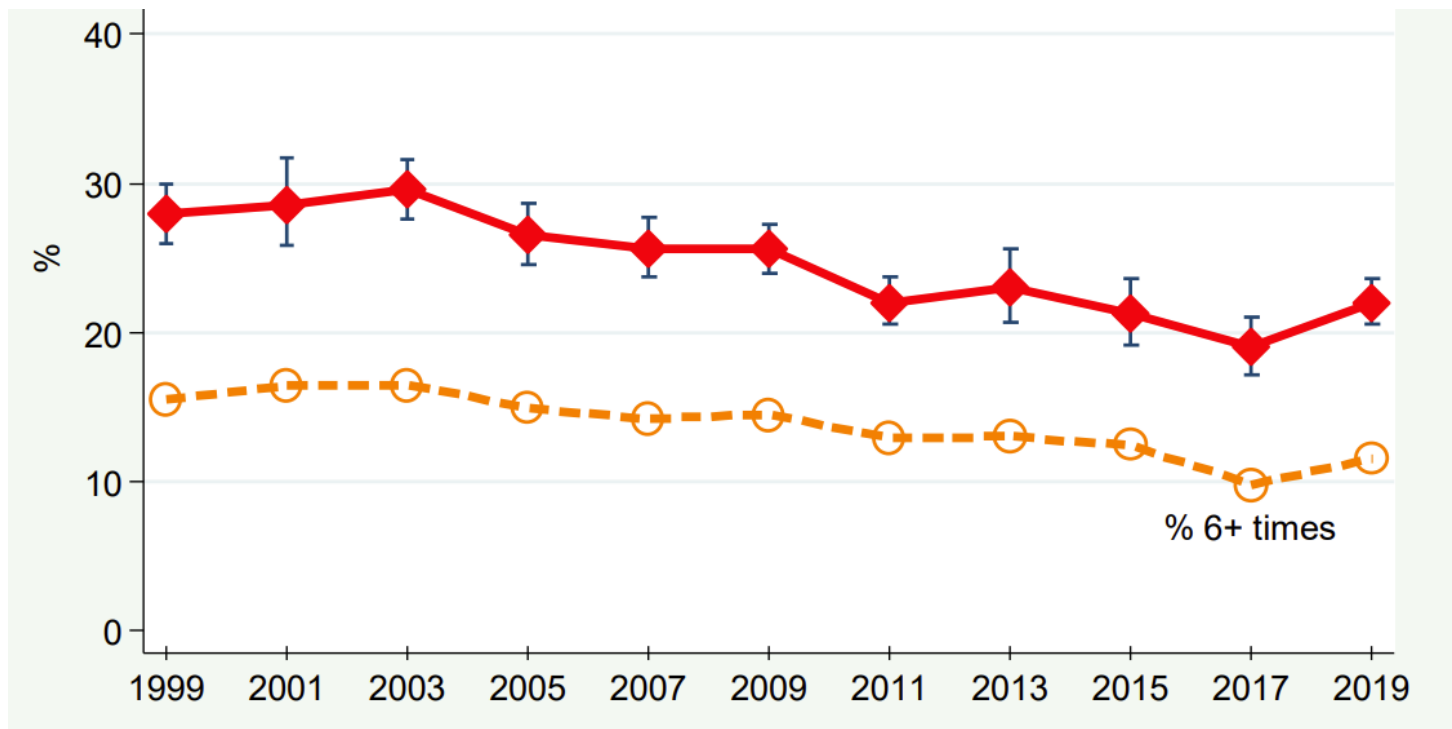
**Cannabis use  
among youth.**



# Little change in cannabis prevalence among youth.

## Past 12-month cannabis prevalence

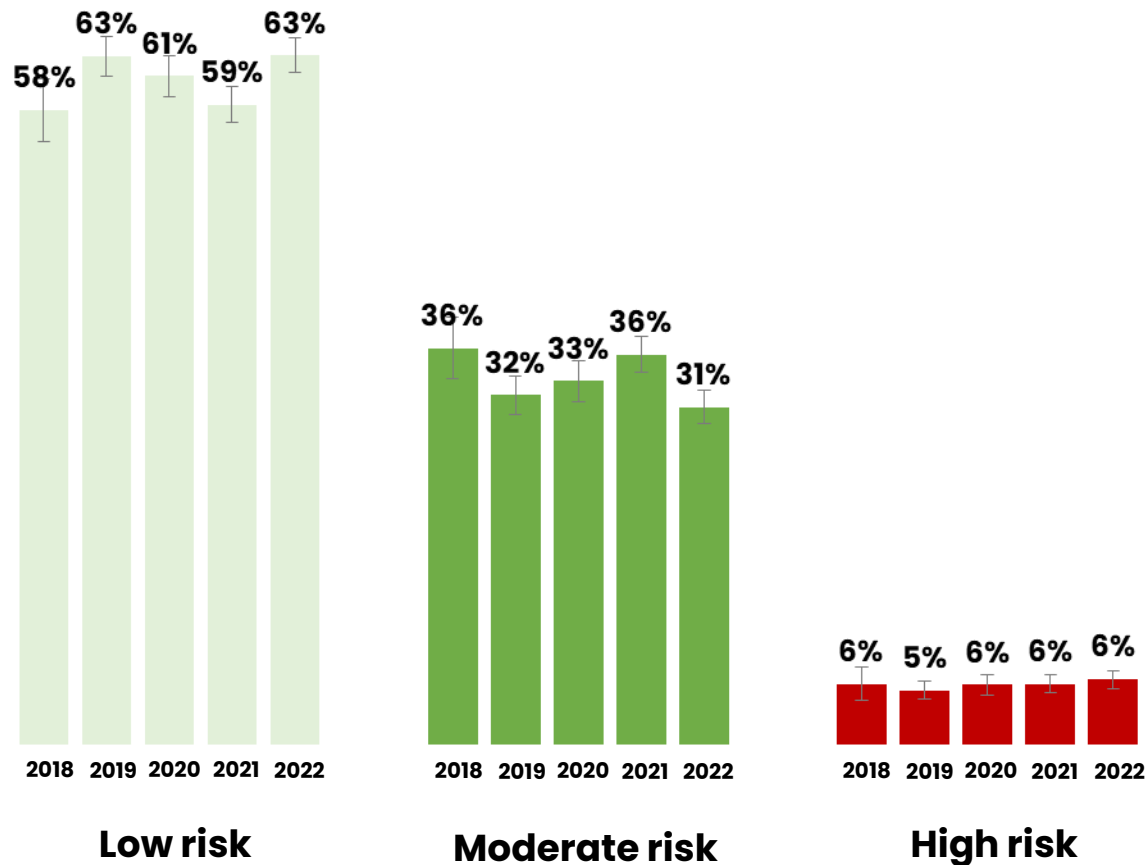
GRADES 7-12, ONTARIO



# No changes in overall indicators of risk.

## Risk of problematic cannabis use

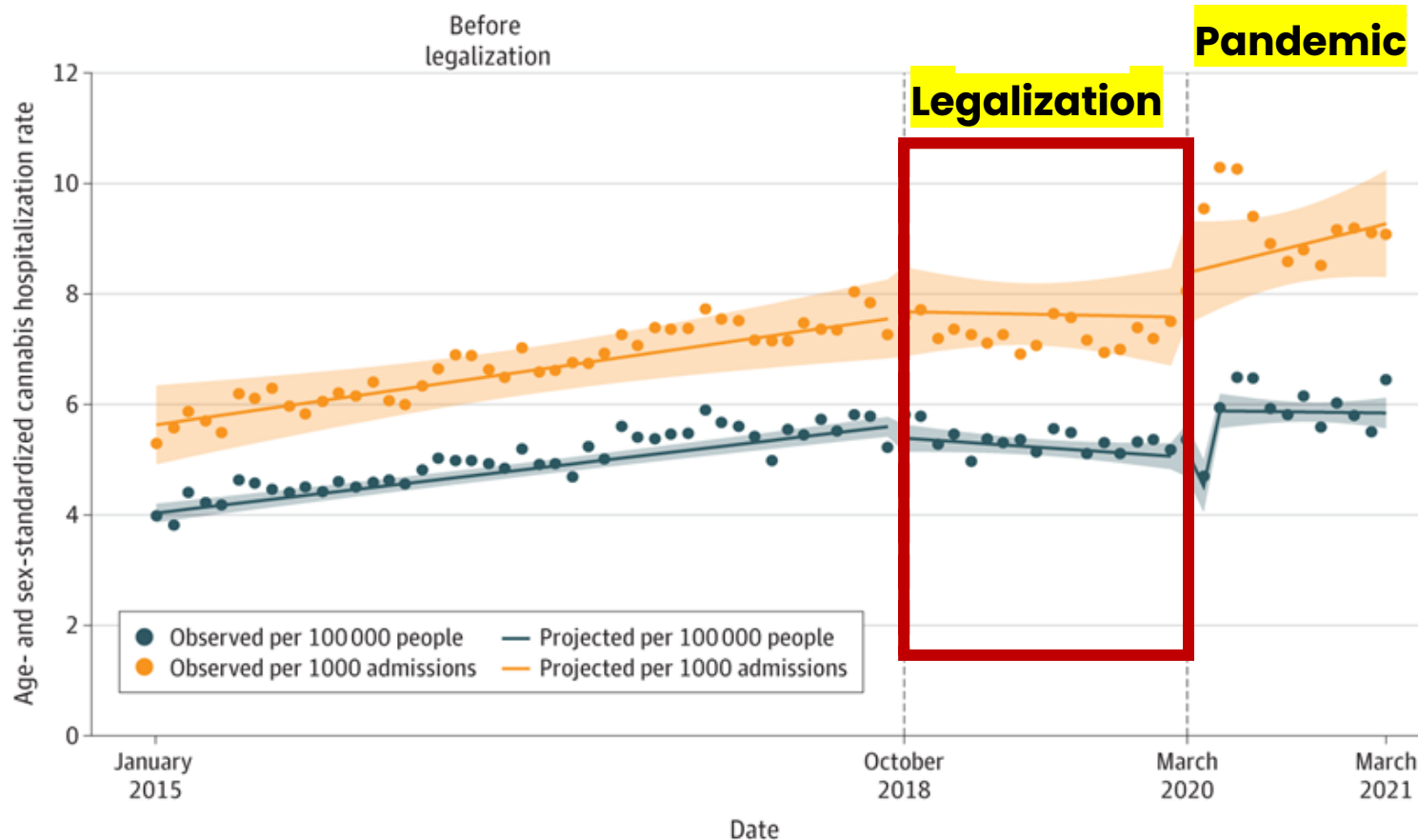
WHO ASSIST SCORES, AMONG PAST 12-MONTH CONSUMERS N=22,406



## HOSPITALIZATION - ED VISITS

# Continuation of longer-term trends.

### Age and Sex Standardized Rates of Hospitalizations Due to Cannabis for All of Canada





## Unintended Consequences of COVID-19

Impact on Harms Caused  
by Substance Use



### CONTEXT

# Pandemic effects

**Increase in ED visits for cannabis.  
...and for alcohol, opioids,  
stimulants, and substance use  
overall.**

CIHI. Unintended consequences of COVID-19: Impact on harms caused by substance use, self-harm and accidental falls.

<https://www.cihi.ca/en/covid-19-resources/impact-of-covid-19-on-canadas-health-care-systems/unintended-consequences>





## TRENDS IN PROBLEMATIC USE

**More people who use  
cannabis or different  
patterns of use?**







## **LESSON**

**Cannabis legalization has increased the diversity of products, including high THC products.**

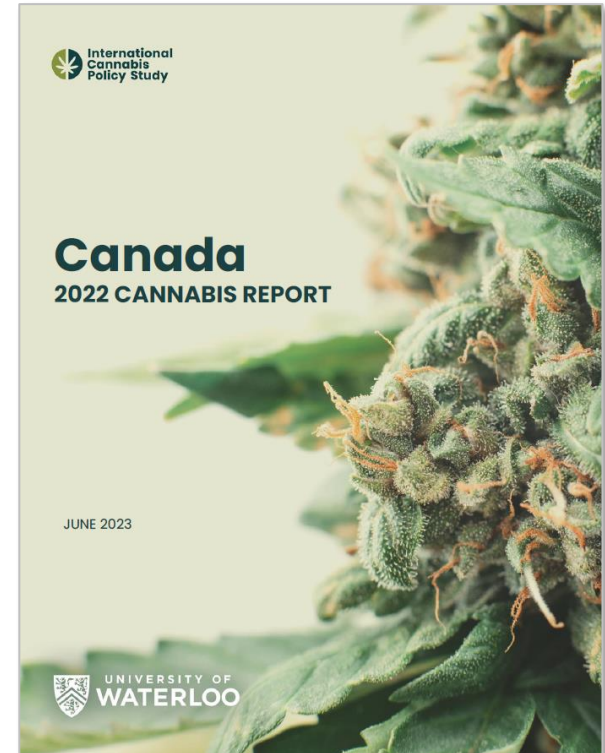


# ICPS Study

- National surveys
- Repeat cross-sectional design
- Annual data collection SINCE 2018
- Ages 16–65

<b>2018–</b>		<b>2021–</b>		<b>2023–</b>	
					
<b>USA</b> 'Illegal' 'Medical' 'Recreational'	<b>CANADA</b> 'Recreational'	<b>AUSTRALIA</b> Medical	<b>NEW ZEALAND</b> Medical	<b>GERMANY</b> 'Recreational'*	<b>UK</b> Medical

**~300,000 respondents**  
**~66,000 cannabis consumers**

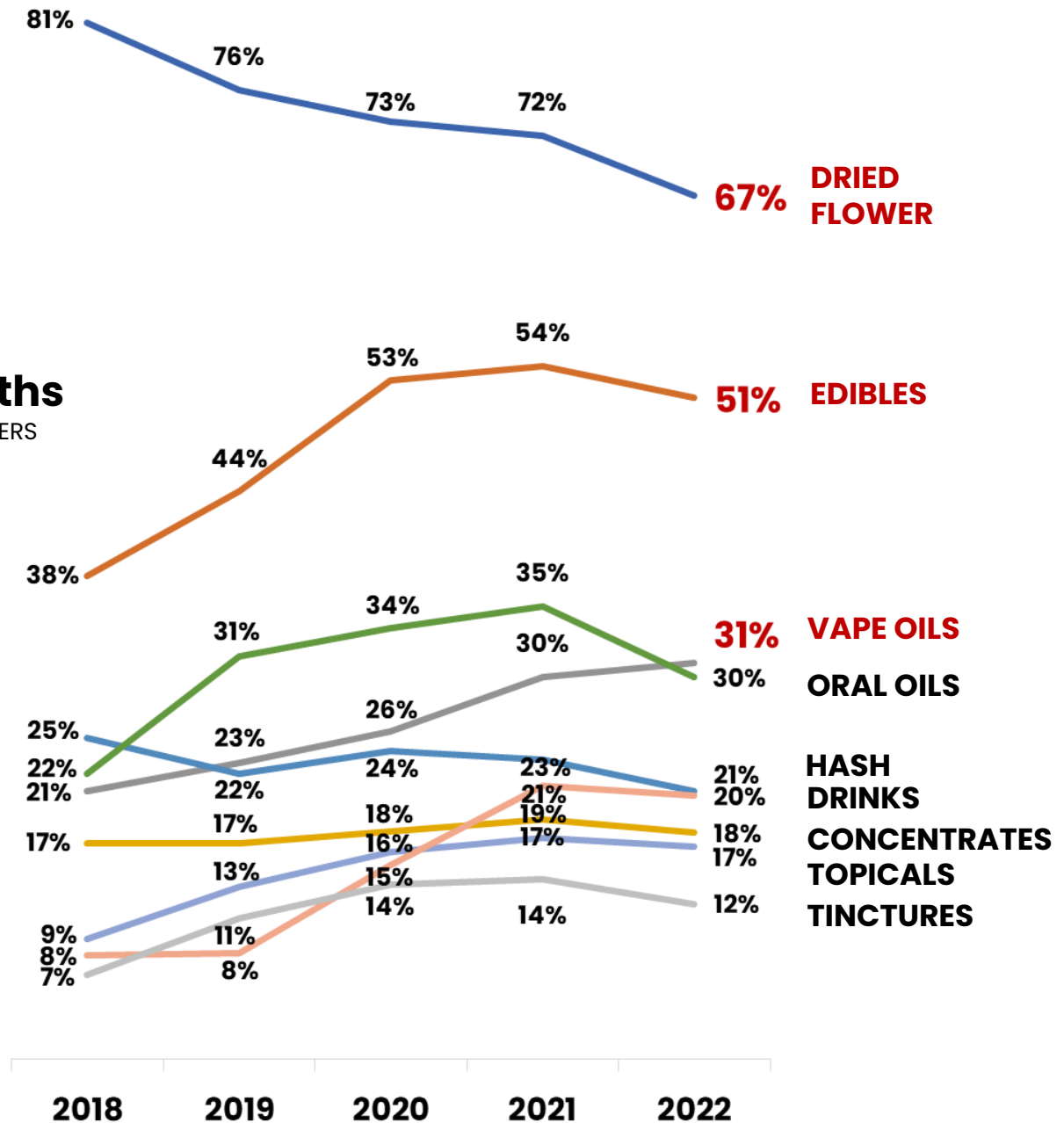


[www.cannabisproject.ca](http://www.cannabisproject.ca)

# Cannabis products

## Use in the past 12-months

CANADA, AMONG PAST 12-MONTH CONSUMERS





# Increased use of highly 'processed' cannabis products.



**Dried flower shifting to processed forms.**

**52%** bought a 'pre-rolled' joints in past 12-months'



Have you bought any 'pre-rolled' joints in the past 12-months?  
2022, CONSUMERS THAT USED FLOWER IN PAST 12-MONTHS



## Forms of dried flower

**42%** bought a 'pre-rolled' joints in past 12-months'



**'Illegal' states: 31%**

**'Medical' states: 34%**

**'Legal' states: 53%**

Have you bought any 'pre-rolled' joints in the past 12-months?  
2022, CONSUMERS THAT USED FLOWER IN PAST 12-MONTHS, N=10,243

**Higher THC infused flower is increasing.**

**15%** bought an 'infused' pre-rolled joint in past 12-months'



Have you purchased any pre-rolled joints mixed with high potency oils or concentrates in the past 12-months?

2022, CONSUMERS THAT USED FLOWER IN PAST 12-MONTHS, N=10,241

# This is not your father's Oldsmobile.



You won't find this Oldsmobile tooling through anybody's family album.

For the past five years, this all new Cutlass Supreme has existed only in the minds of an elite cadre of automotive engineers. And on a million miles of test track.

It resists the wind with an affinity that would do a needle proud. And sticks to the road like gum.

At 0.297, its drag coefficient hovers somewhere between

exceptional and whoopee.

But beneath its sleek, double-sided, galvanized exterior, the Cutlass Supreme is pure muscle. Its body strength and rigidity are the basis of one of the world's most totally developed suspension systems.

As you'd expect on such a world-class automobile, technological achievements such as four-wheel independent suspension, front-wheel drive, four-wheel disc brakes, and a 2.8-liter multiport fuel-

injected V6 are, of course, standard.

For more information on this remarkable vehicle, send for a free catalog. Write: Oldsmobile Cutlass Supreme Catalog, P.O. Box 14238, Lansing, Michigan 48901.



**OLDSMOBILE QUALITY  
CUTLASS SUPREME**

**GM 660** Let's get it  
together.  
Buckle up.  
QUALITY COMMITMENT PLAN  
See your Oldsmobile dealer for the terms and  
conditions of this limited warranty.

**The strength of  
cannabis products  
has increased.**





**PRODUCT STRENGTH**  
**THC levels of**  
**vapes ~75%**

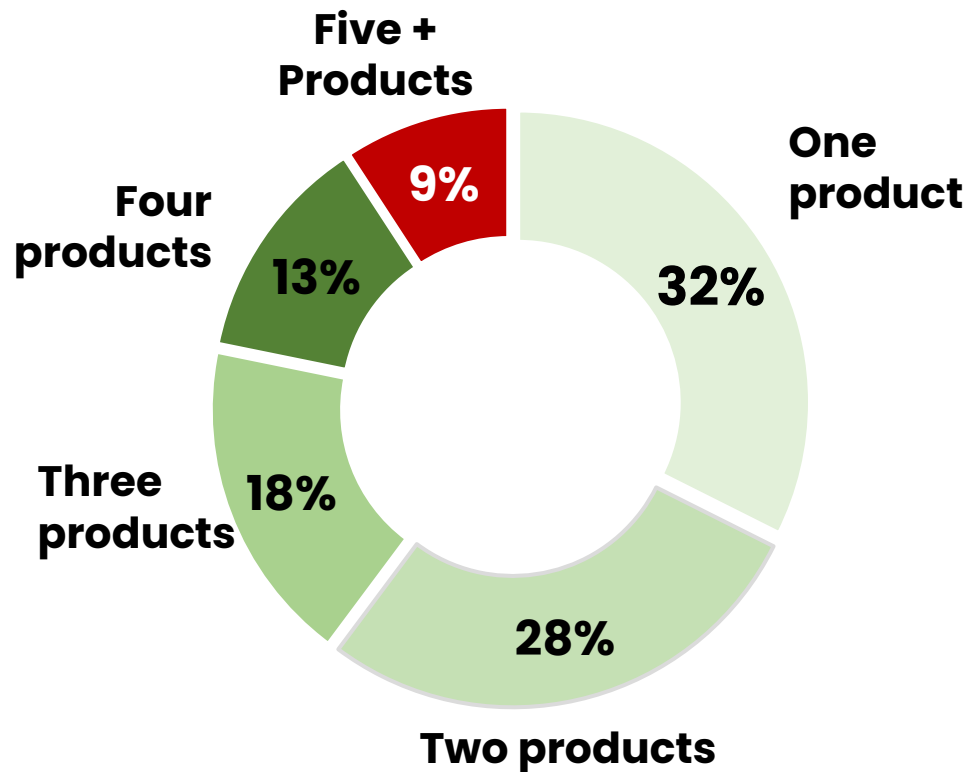


SOURCE: HAMMOND ET AL, 2023. CANNABIS RETAIL SCAN.

# Most consumers use multiple product types.

## Number of products used

CANADA, AMONG PAST 12-MONTH CONSUMERS, 2021



## **LESSON**

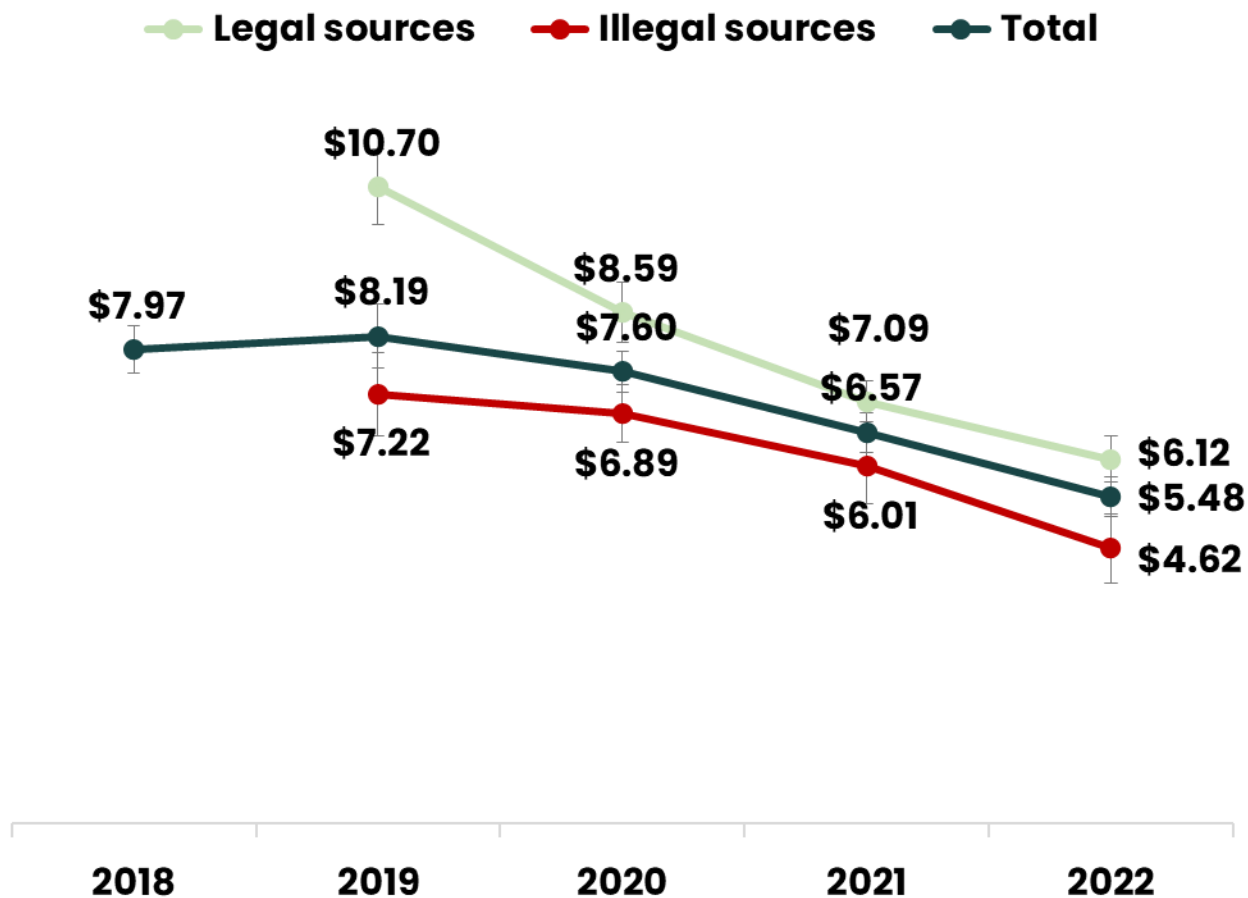
**Substantial decreases in cannabis prices since legalization in Canada.**



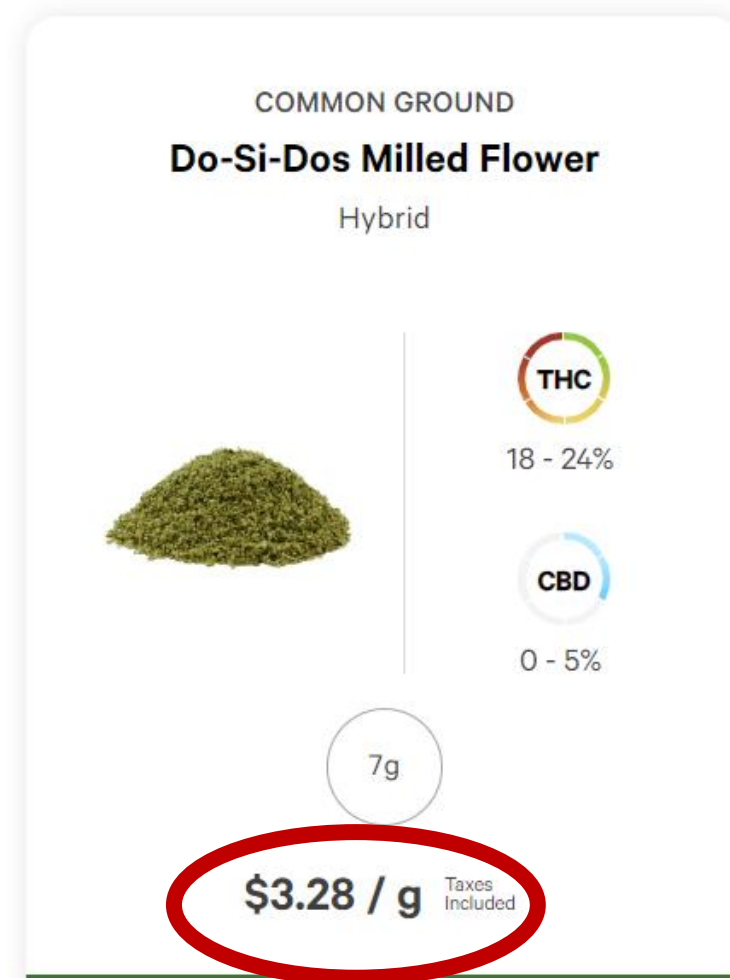
# Differential between legal and illegal price has narrowed.

## Price of dried flower

SALES WEIGHTED PRICE-PER-GRAM  
OF DRIED FLOWER AT LAST PURCHASE



# Major price reductions in legal market.





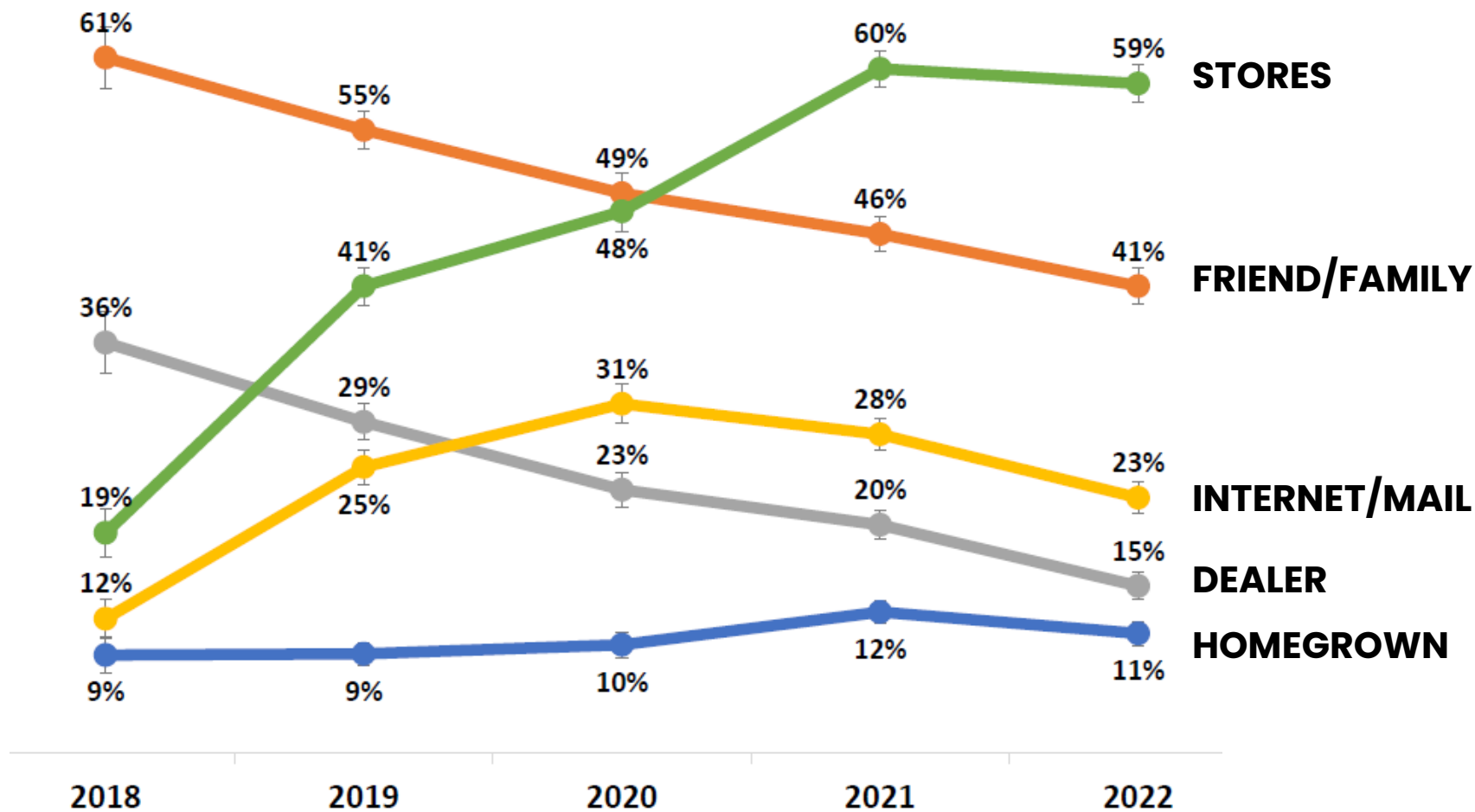
## **LESSON**

**Most consumers have transitioned to the legal market and report positive experiences.**



# Cannabis sources in the past 12-months

AMONG PAST 12-MONTHS CONSUMERS

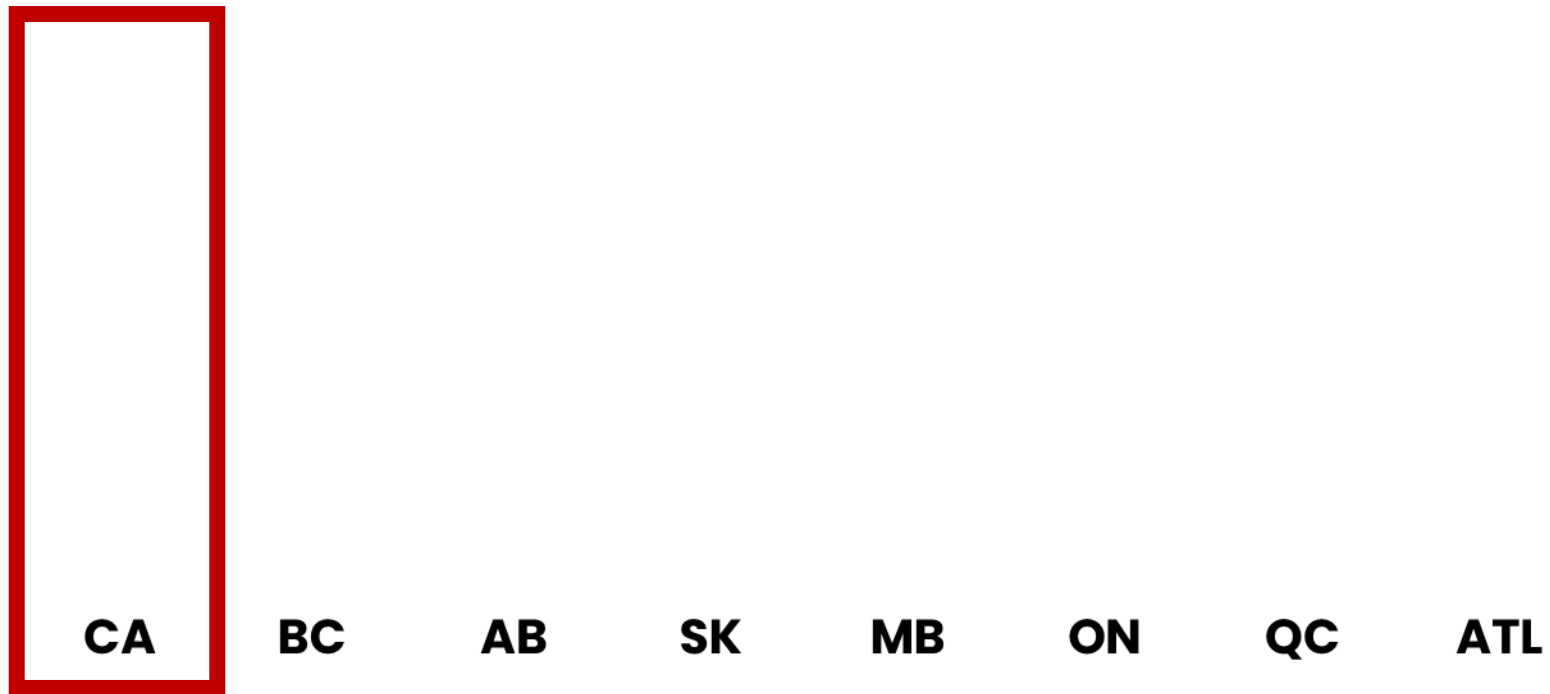


# Most consumers report switching to legal market.

**Mean percentage of all cannabis products purchased  
in last 12-months from a legal retail source**

SELF-REPORTED AMONG PAST 12-MONTHS CONSUMERS

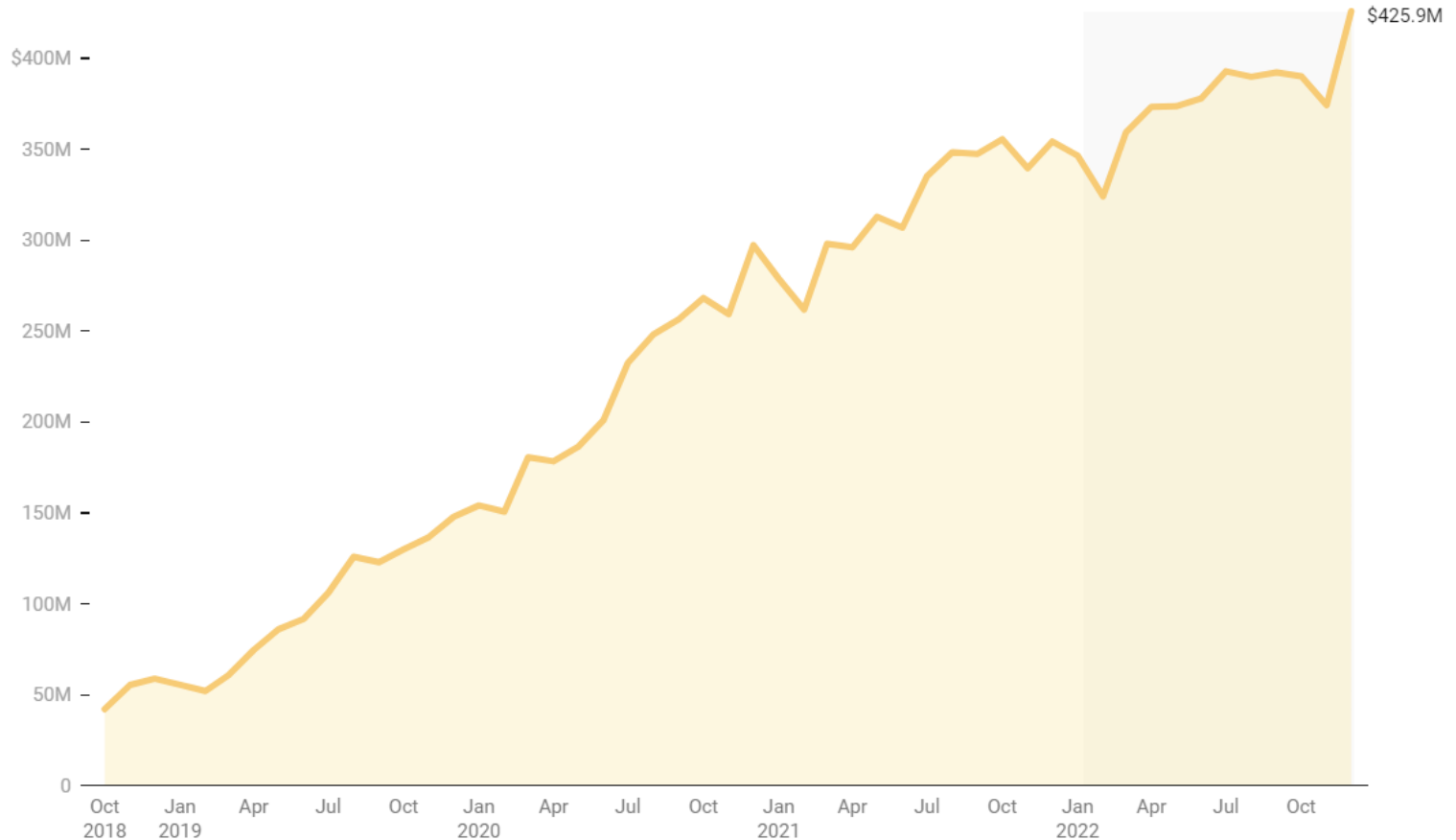
■ 2019 ■ 2020 ■ 2021 ■ 2022



# Self-report data consistent with sales data.

## Cannabis sales from licensed retail stores

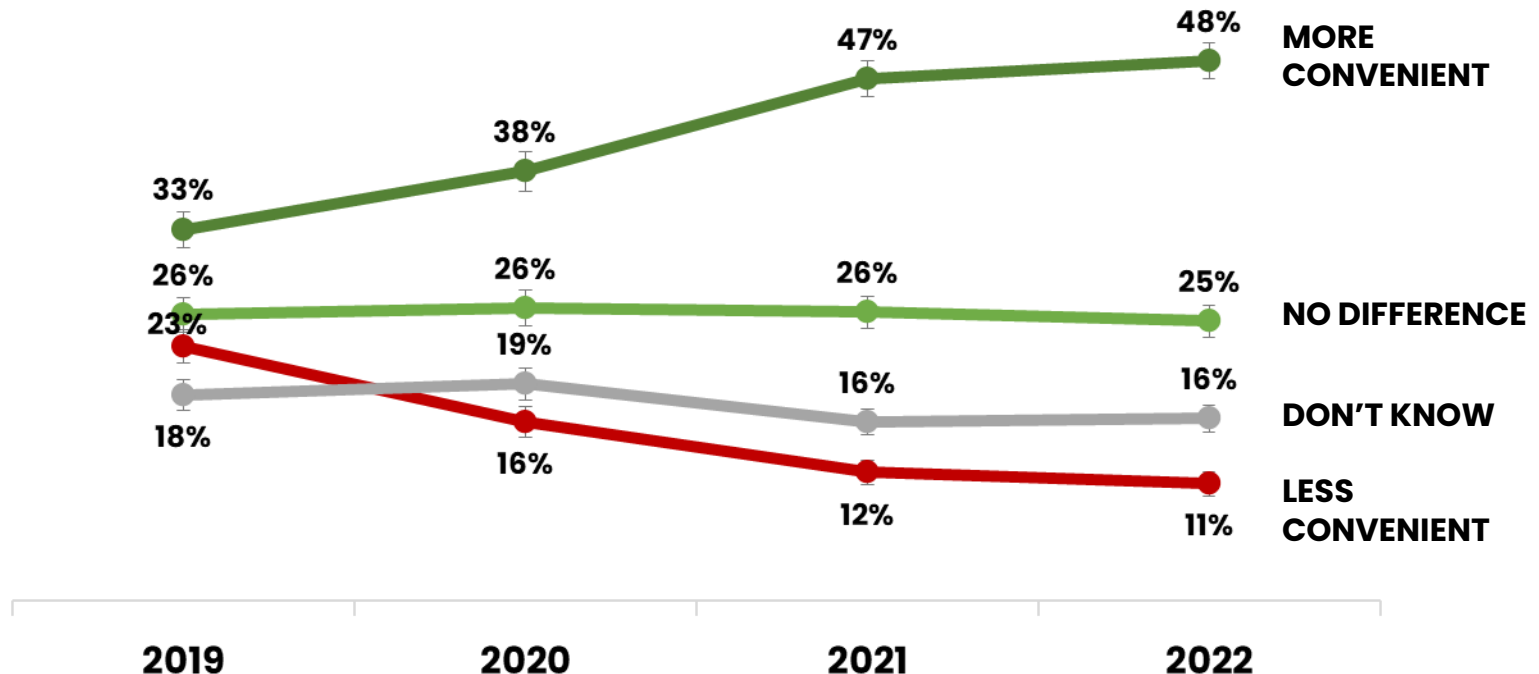
CANADA, NON-MEDICAL CANNABIS MONTHLY SALES



# Most consumers report that legal cannabis as more convenient to buy.

## Convenience of buying legal marijuana...

AMONG PAST 12-MONTH CONSUMERS

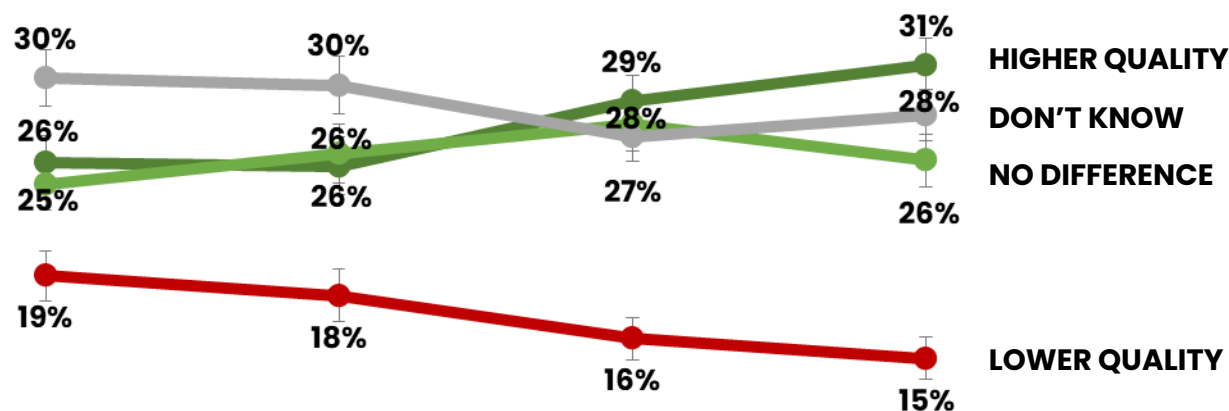




# Most consumers report that legal cannabis is the same or higher quality.

## Quality of legal cannabis

AMONG PAST 12-MONTH CONSUMERS



## **LESSON**

**Greater product diversity, lower price and accessibility are factors that promote use.**





## Born gentle

**P**ROUD mothers, please forgive us if we too feel something of the pride of a new parent. For new Philip Morris, today's Philip Morris, is delighting smokers everywhere. Enjoy the gentle pleasure, the *fresh unfiltered flavor*, of this new cigarette, born gentle, then refined to special gentleness in the making. Ask for new Philip Morris in the smart new package.



***New Philip Morris...gentle for modern taste***

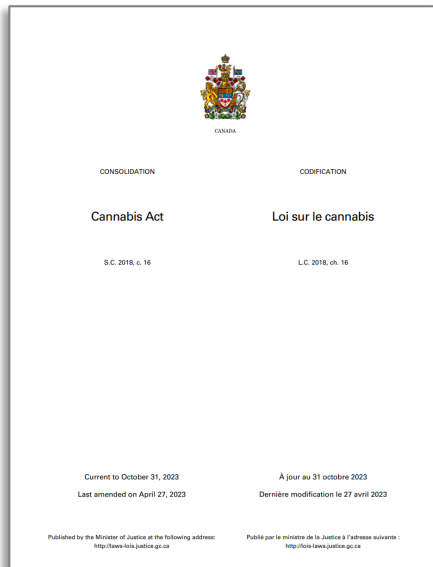
## CANNABIS POLICY

Public health impact depends on how cannabis is regulated in legal markets.

## LESSON

**More comprehensive cannabis regulations are more effective in meeting public health objectives of cannabis legalization.**





## OBJECTIVES

“Protect young persons and others from inducements to use cannabis.”

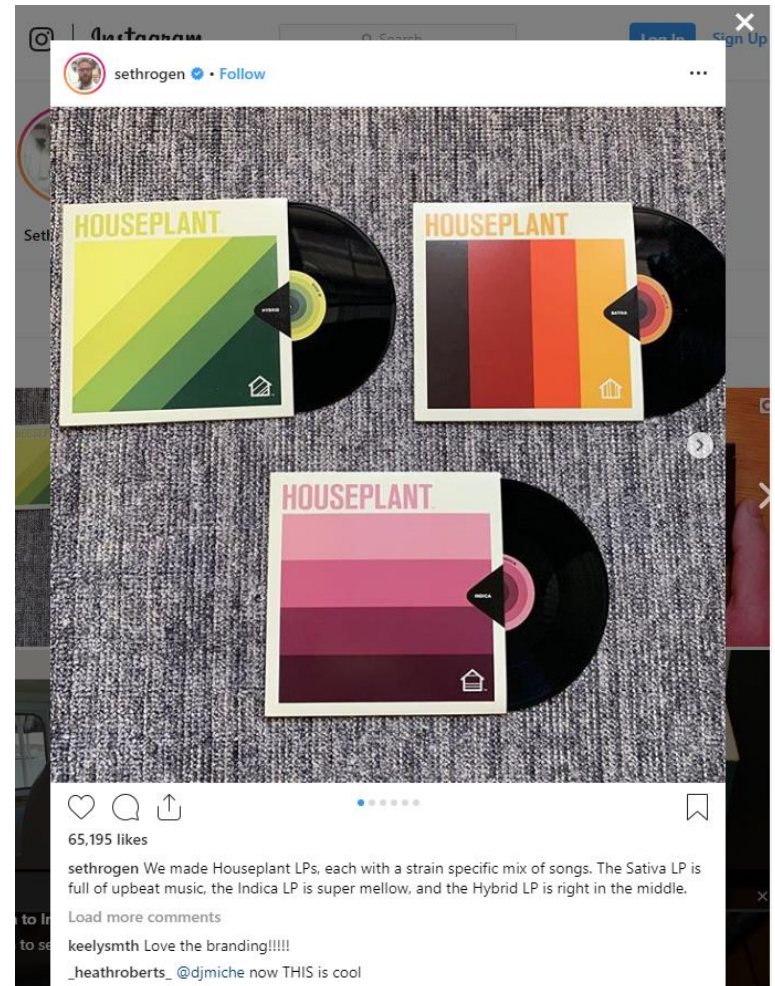
CANNABIS ACT  
SECTION 7b

SOURCE: [HTTPS://LAWS-LOIS.JUSTICE.GC.CA/ENG/ACTS/C-24.5/PAGE-1.HTML?TXTHL=PROTECT#S-7](https://laws-lois.justice.gc.ca/eng/acts/C-24.5/PAGE-1.HTML?TXTHL=PROTECT#S-7)



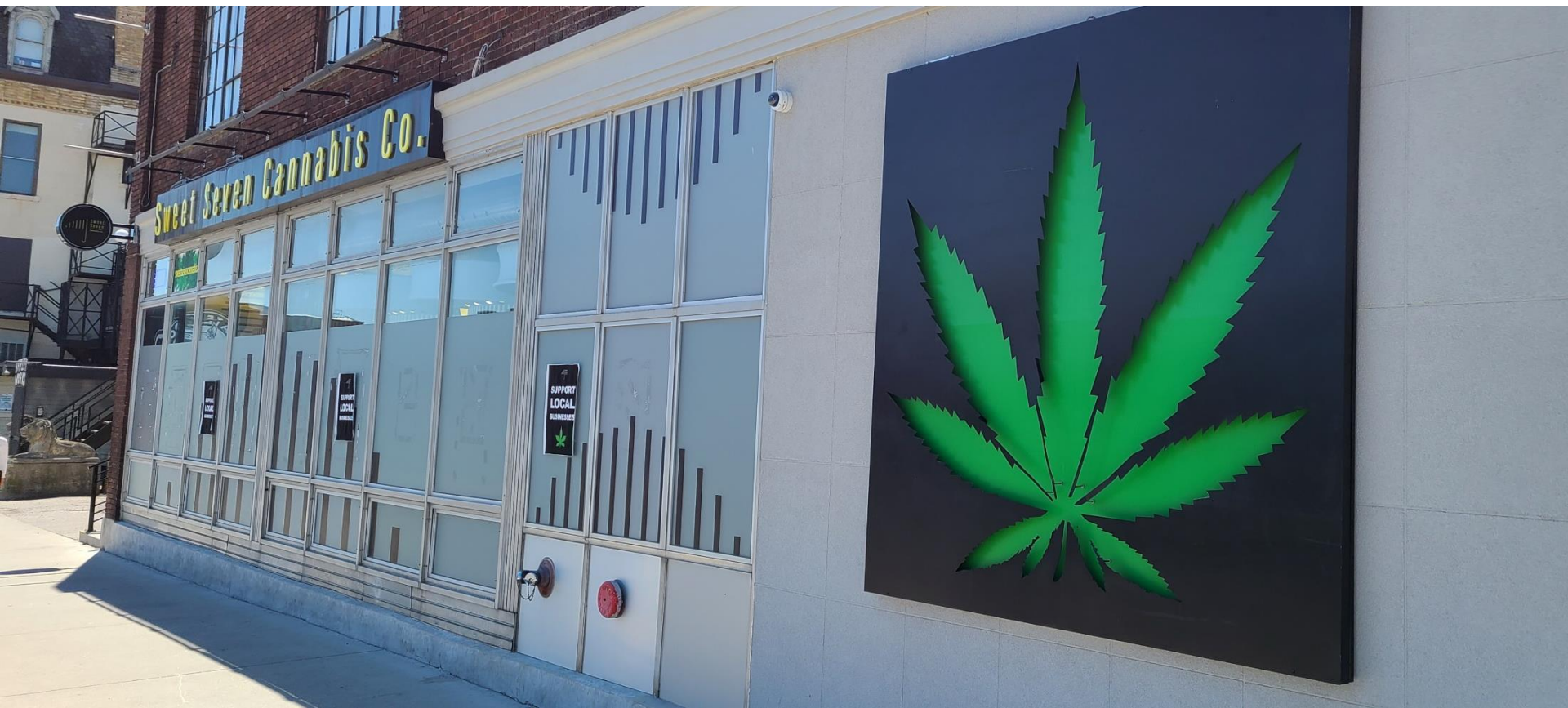
## CANNABIS ACT

# Comprehensive restrictions on cannabis advertising & promotion



## ADVERTISING EXPOSURE

**How does Canada compare to US jurisdictions?**



# Legalization associated with greater exposure to cannabis marketing in US states.

## Self-reported exposure to 'any' cannabis promotions in the past 12-months – by jurisdiction

% NOTICED ANY CANNABIS PROMOTIONS – ALL RESPONDENTS

— Illegal states      — Medical states      — Legal states

2018

2019

2020

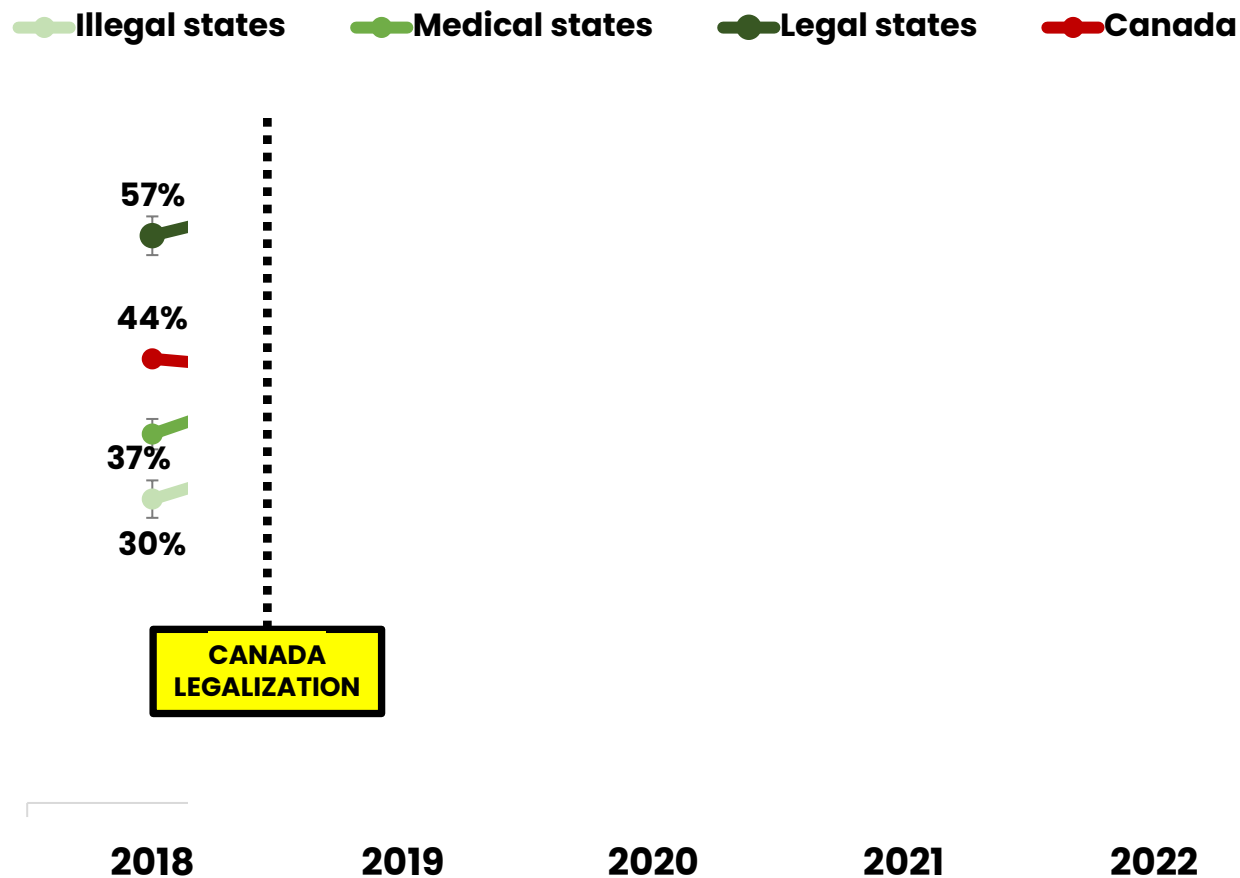
2021

2022

# Legalization not associated with greater exposure to cannabis marketing in Canada.

## Self-reported exposure to 'any' cannabis promotions in the past 12-months – by jurisdiction

% NOTICED ANY CANNABIS PROMOTIONS – ALL RESPONDENTS



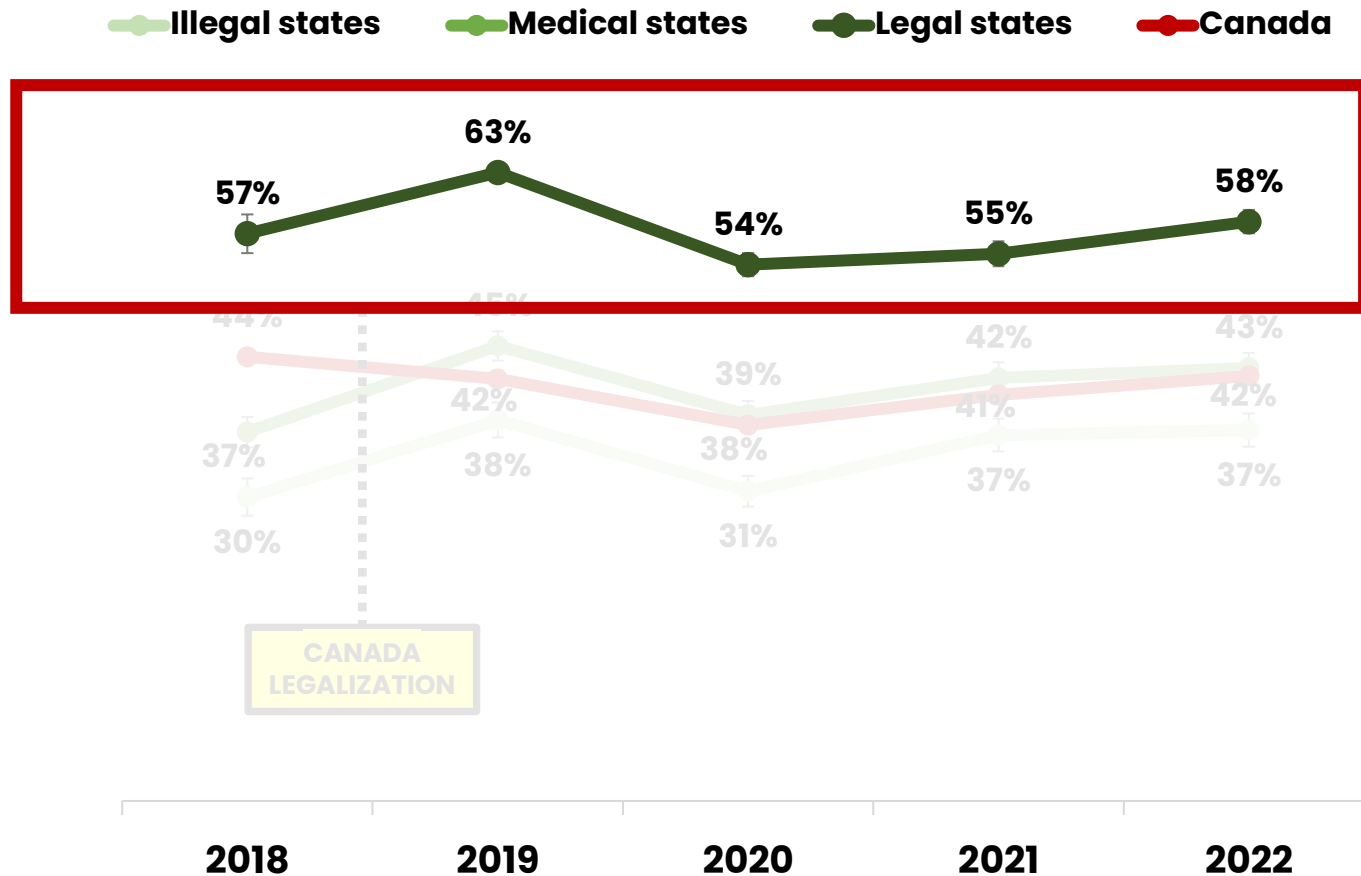
# Exposure to advertising is associated with the strength of restrictions in US 'legal' states.

## Advertising and promotional promo restrictions in jurisdictions that legalized recreational cannabis, as of 2018

PROMOTIONAL CHANNEL	CAN	AK	NV	WA	OR	CA	CO	ME	MA
Regular postal mail	3	1	1	1	1	3	3	1	1
Websites	3	3	2	1	3	2	2	3	3
Email or text messages	2	1	1	3	3	2	1	1	1
Bars, pubs, nightclubs	2	1	1	2	1	1	1	2	3
Inside stores	3	1	1	1	1	1	1	1	3
Outside stores	3	2	1	2	1	1	3	1	2
Events & sponsorships	3	2	3	1	1	1	2	2	2
TV or radio	3	1	2	1	2	2	2	2	2
Billboards or posters	3	1	2	1	2	2	3	2	2
Print	3	1	1	1	2	2	2	3	2
Social media	3	2	2	3	2	2	1	3	2
Total score	31	16	17	17	19	19	21	21	23

# Self-reported exposure to 'any' cannabis promotions in the past 12-months – **By jurisdiction**

% NOTICED ANY CANNABIS PROMOTIONS – ALL RESPONDENTS

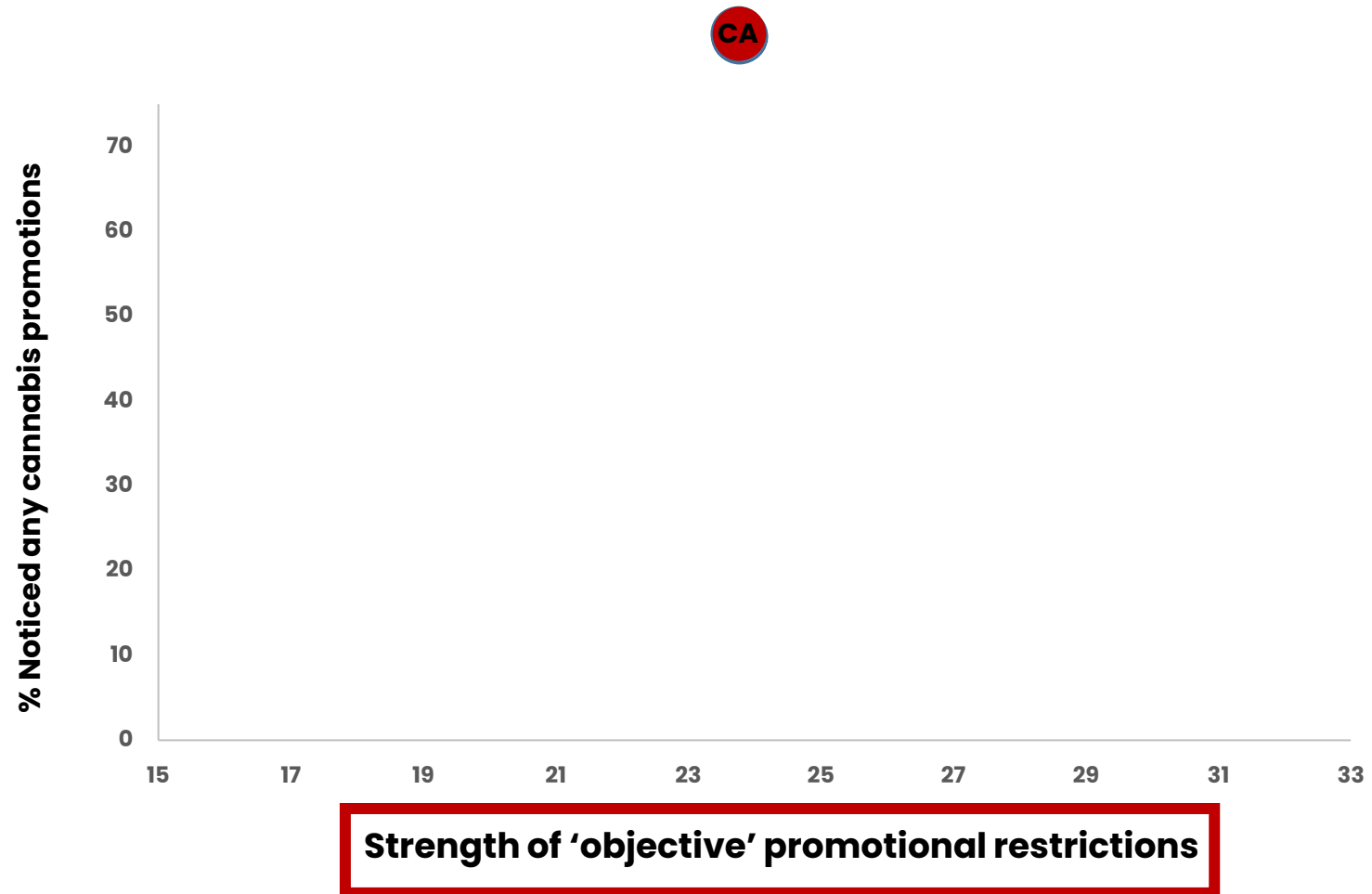




# Self-reported exposure to promotions

By strength of promotional restrictions in 'legal' jurisdictions

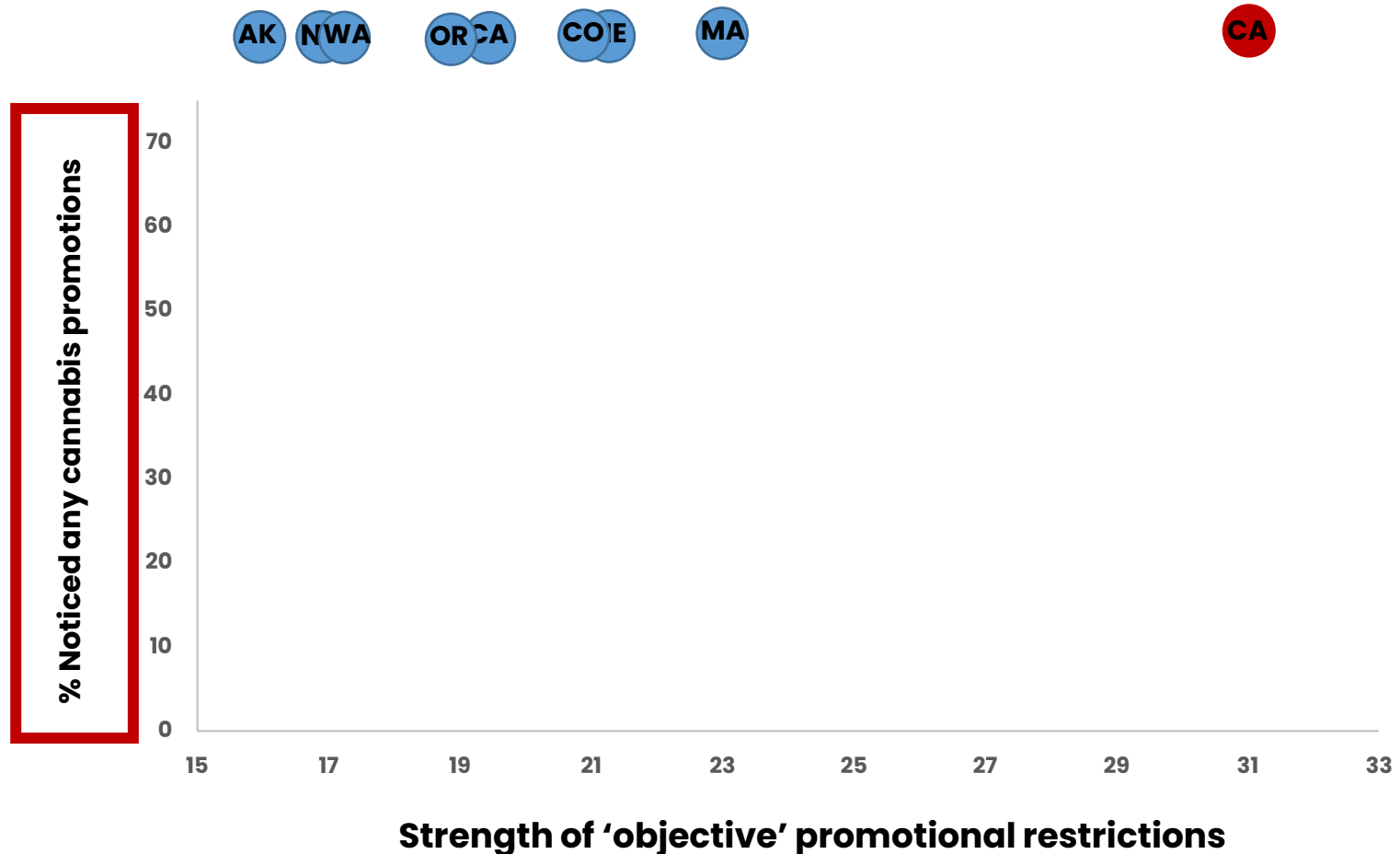
2019 / 2020 N=59,985



# Self-reported exposure to promotions

By strength of promotional restrictions in 'legal' jurisdictions

2019 / 2020 N=59,985

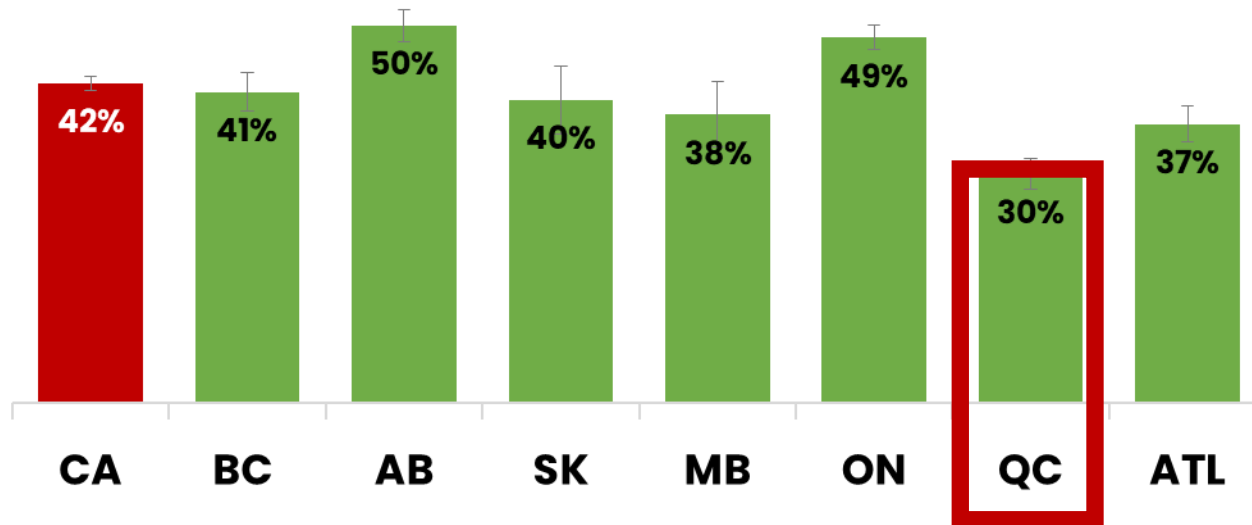


# Exposure to advertising is associated with the strength of restrictions in Canadian provinces.

## Self-reported exposure to cannabis promotions in the past 12-months

### By province

% NOTICED CANNABIS PROMOTION FROM EACH SOURCE 2022



## **LESSON**

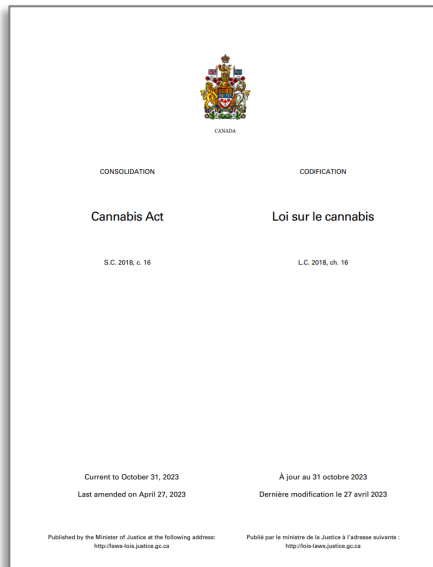
**More comprehensive marketing restrictions are more effective in reducing inducements to use cannabis.**



## WARNINGS & LABELLING

**Communicating the health risks of cannabis & informing consumers.**





## OBJECTIVES

“Enhance public awareness of the health risks associated with cannabis use.”

CANNABIS ACT  
SECTION 7E

SOURCE: [HTTPS://LAWS-LOIS.JUSTICE.GC.CA/ENG/ACTS/C-24.5/PAGE-1.HTML?TXTHL=PROTECT#S-7](https://laws-lois.justice.gc.ca/eng/acts/C-24.5/PAGE-1.HTML?TXTHL=PROTECT#S-7)



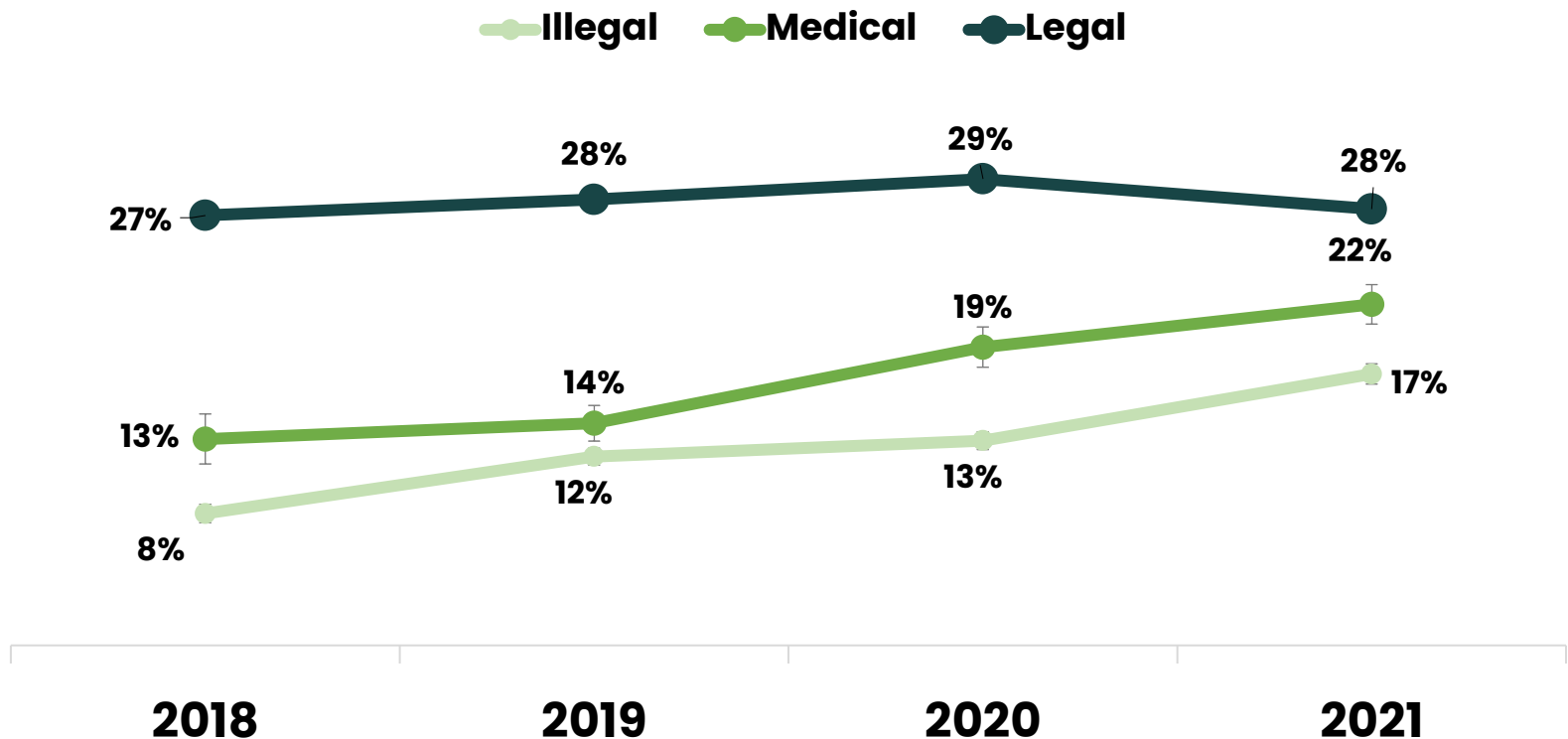


## PACKAGING POLICIES

**Canada has more stronger health warnings and labelling regulations than any US state.**

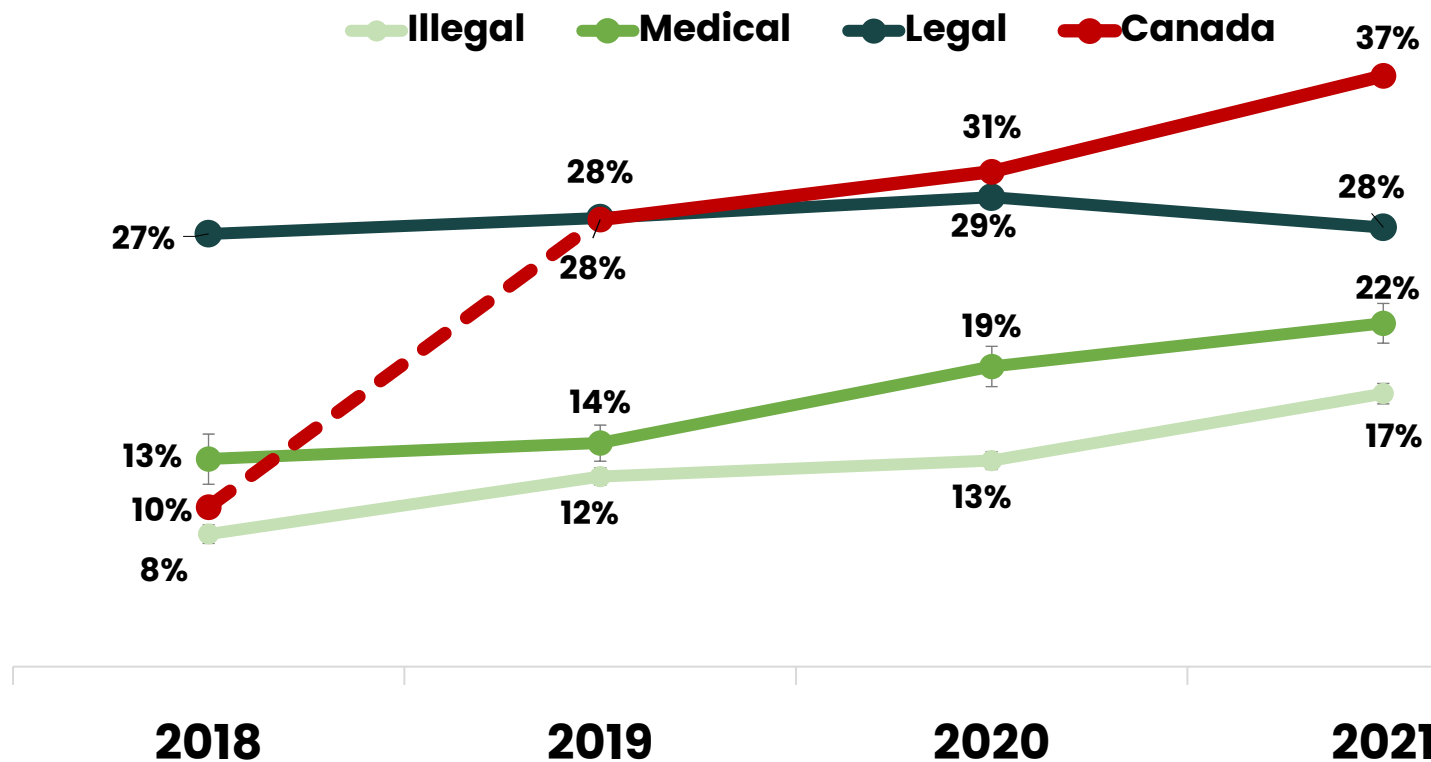
# Consumers more likely to receive health information on products in 'legal' US states.

**In the past 12 months, have you seen health warnings on marijuana products or packages?**  
AMONG PAST 12-MONTH CONSUMERS



# Consumers more likely to receive health information on products in Canada after legalization.

**In the past 12 months, have you seen health warnings on marijuana products or packages?**  
AMONG PAST 12-MONTH CONSUMERS



# Labelling regulations are associated with greater message recall.

## Recall is highest among consumers who purchase from legal sources.

GOODMAN S, LEOS-TORO C, HAMMOND D. DO MANDATORY HEALTH WARNING LABELS ON CONSUMER PRODUCTS INCREASE RECALL OF THE HEALTH RISKS OF CANNABIS? SUBSTANCE USE & MISUSE 2022; 57(4): 569-580.



**US states**



**Canada**

## LESSON

**More comprehensive health warnings & labelling regulations are more effective in** communicating the health risks associated with cannabis use.



# Product standards

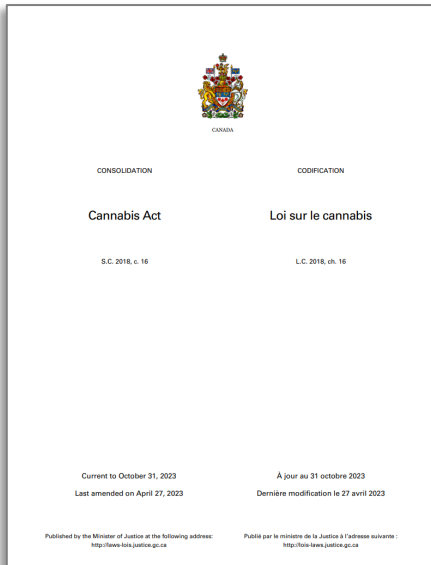
Leafly.

**World's largest THC-infused brownie weighs in at 850 pounds**



**20,000 mg of THC!**





## OBJECTIVES

“provide access to a quality-controlled supply of cannabis.

provide for the licit production of cannabis to reduce illicit activities in relation to cannabis.”

CANNABIS ACT  
SECTION 7C & F

SOURCE: [HTTPS://LAWS-LOIS.JUSTICE.GC.CA/ENG/ACTS/C-24.5/PAGE-1.HTML?TXTHL=PROTECT#S-7](https://laws-lois.justice.gc.ca/eng/acts/C-24.5/PAGE-1.HTML?TXTHL=PROTECT#S-7)



## FEDERAL PRODUCT STANDARDS

**THC**  
**10mg / package**



PROVINCIAL REGULATIONS

**Québec**

- **All stores government run**
- **Minimum legal age of 21**
- **Fewer stores per capita**
- **Enhanced marketing restrictions**
- **Comprehensive product standards**

# Product regulations

	QC	AB	BC	SK	MB	ON	ATL
<b>THC limits</b> 30% All products	X	O	O	O	O	O	O
<b>Vape sales</b>	X	O	O	O	O	O	O
<b>Edible sales</b>	X*	O	O	O	O	O	O



## **FEDERAL REGULATIONS**

# **Appeal to young persons**

Unless authorized under this Act, it is prohibited to sell cannabis or a cannabis accessory that has an appearance, shape or other sensory attribute or a function that there are reasonable grounds to believe could be appealing to young persons.

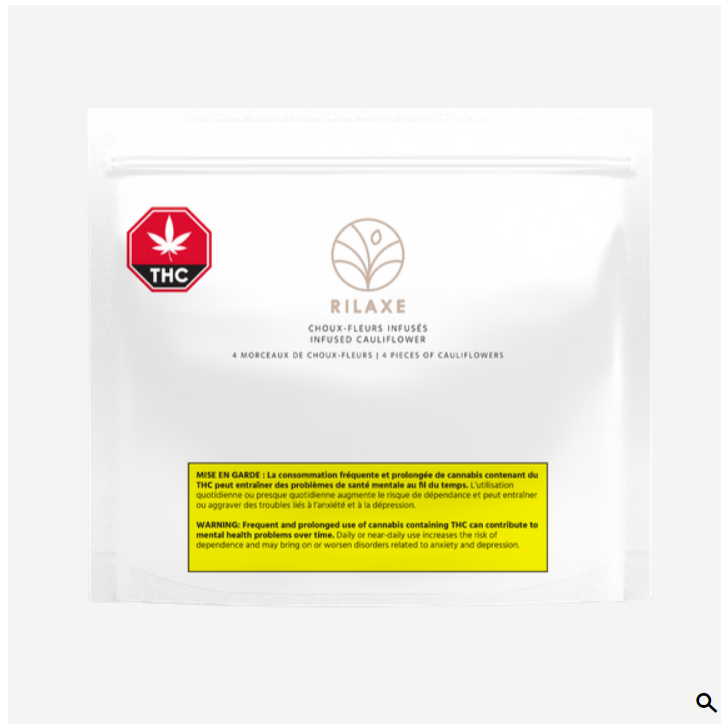
SOURCE: CANNABIS ACT. [HTTPS://LAWS-LOIS.JUSTICE.GC.CA/PDF/C-24.5.PDF](https://laws-lois.justice.gc.ca/pdf/C-24.5.pdf)



# Quebec – Edibles



home / edibles / ready-to-eat / choux-fleurs infusés



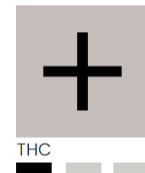
## Choux-Fleurs Infusés

Rilaxe  
Ready-to-eat

Cannabinoids  
**THC 2.5 mg/unit**  
**CBD 5 mg/unit**

Category  
**derived**

Dominance



size

4 units

availability

✓ online

[see availabilities in store](#)



1



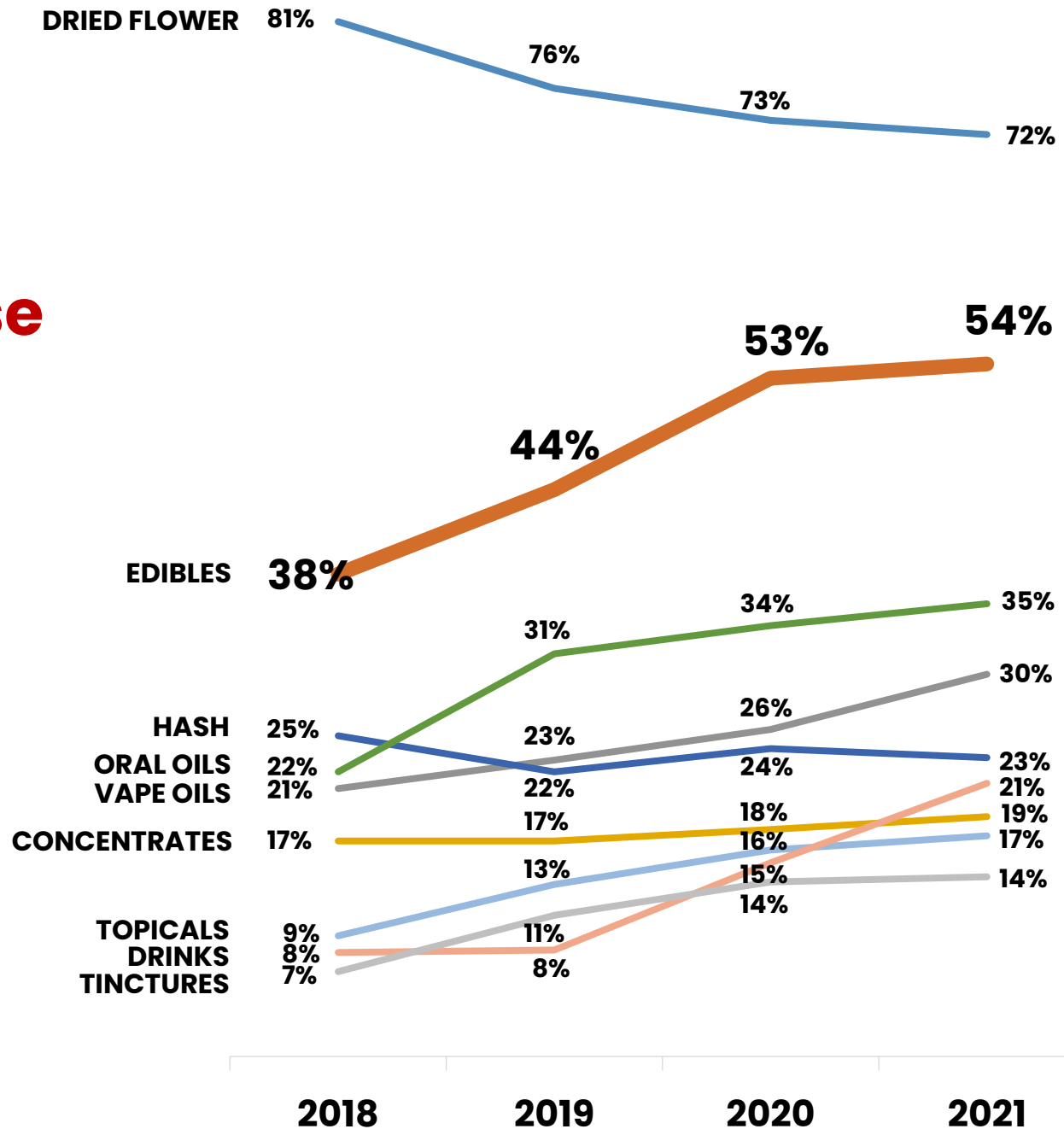
**\$5.80**





# Product use CANADA

PAST 12-MONTH CONSUMERS



# Product regulations

PRODUCT USE AMONG PAST 12-MONTH CONSUMERS 2022

## QUEBEC 'LEGAL' SALES



**Dried flower**



**Hash or kief**

## QUEBEC 'RESTRICTED' SALES



**Edibles**



**Vape oils**

Québec vs. other provinces

**Markedly lower prevalence in  
Québec and little/no increase since  
legalization vs. rest of Canada.**

	QUÉBEC	CANADA
<b>Past 12-months</b>	<b>15.9%</b>	<b>22.4%</b>
<b>Daily/near daily</b>	<b>3.7%</b>	<b>6.1%*</b>

SOURCES

CANADIAN COMMUNITY HEALTH SURVEY\*, CANADIAN CANNABIS SURVEY,  
QUÉBEC CANNABIS SURVEY, INTERNATIONAL CANNABIS POLICY SURVEY



# Do product standards sustain illicit trade?

## THC caps in Vermont could keep black market alive

By Lex Merrell, Vermont News & Media Jun 19, 2022

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MONTPELIER — The amount of THC — the cannabinoid that produces the high sensation after consumption of cannabis, commonly referred to as marijuana — in concentrates has been capped in Vermont, but some worry that cap could cause the illegal cannabis market to thrive.

[Act 158](#), signed by Gov. Phil Scott at the end of May, states that cannabis concentrates cannot surpass 60 percent THC, a cap backed by science due to concern over the negative effects of highly concentrated cannabis.

Dr. Catherine Antley, a pathologist at Copley Hospital in South Burlington, said, “These are not products used by the ‘casual’ cannabis consumer.” In the 1990s, the average THC content of cannabis in flower form was less than 4 percent. Today, she said, it’s about 15 percent.

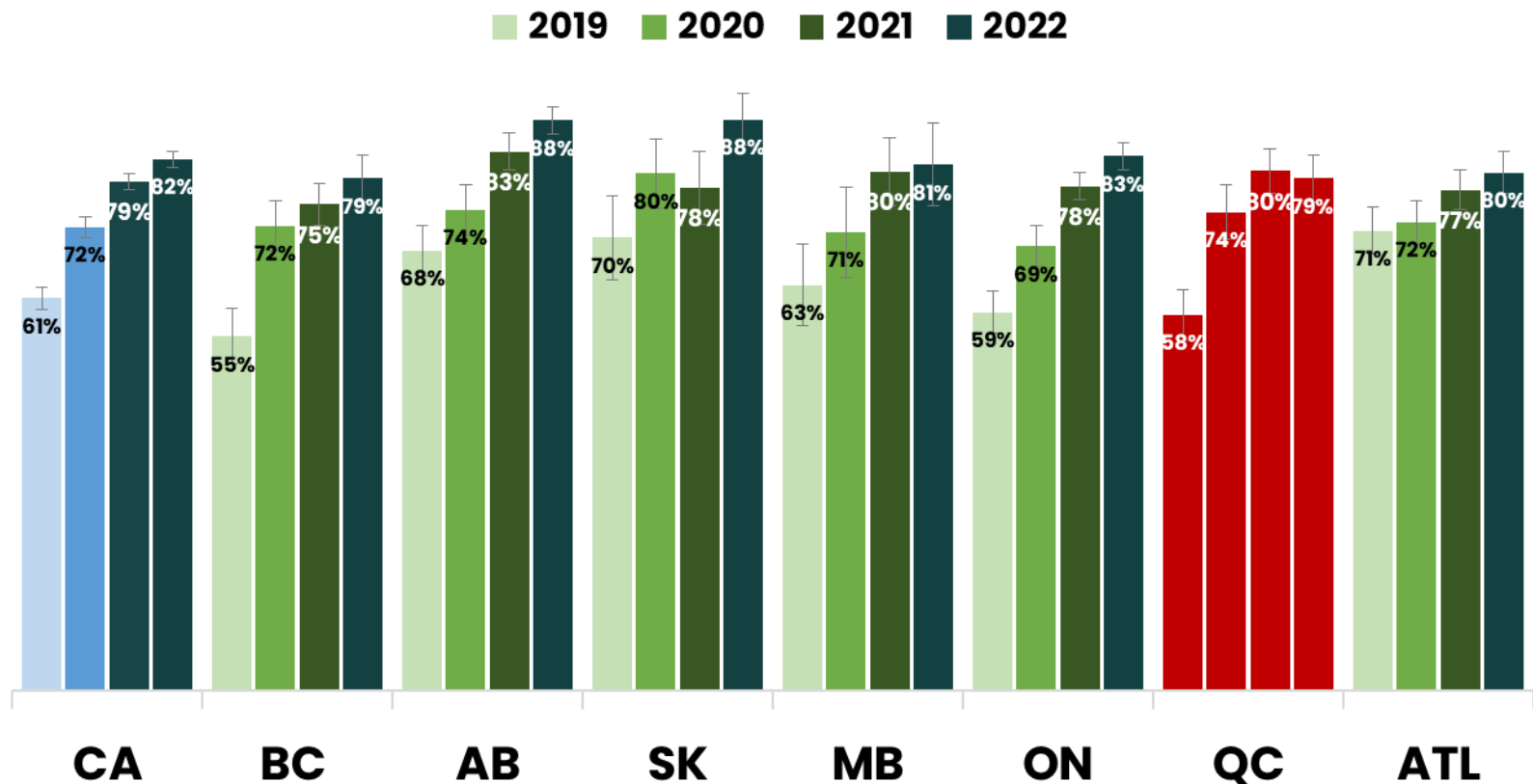
SOURCE: [HTTPS://WWW.REFORMER.COM/LOCAL-NEWS/THC-CAPS-IN-VERMONT-COULD-KEEP-BLACK-MARKET-ALIVE/ARTICLE\\_90E37FE6-EDB7-11EC-ABA1-33DCBC534196.HTML](https://www.reformer.com/local-news/thc-caps-in-vermont-could-keep-black-market-alive/article_90e37fe6-edb7-11ec-aba1-33dcbbc534196.html)



# Similar transition to legal market in Quebec to date.

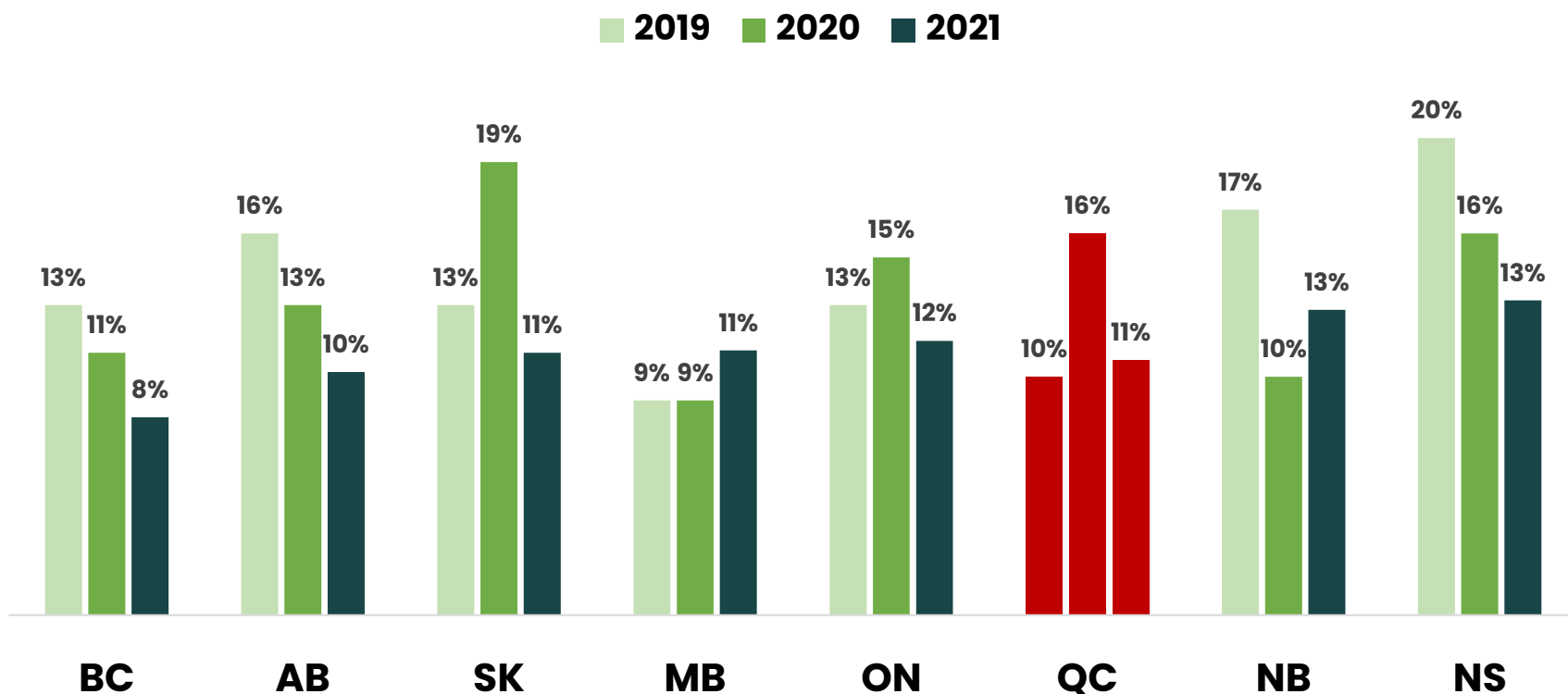
## Mean percentage of all cannabis products purchased in last 12-months from a legal retail source

AMONG PAST 12-MONTHS CONSUMERS



## Reasons for purchasing from 'illegal' sources

**“Legal sources don’t sell products I want”**



AMONG CONSUMERS WHO REPORT PURCHASING FROM ILLEGAL SOURCE IN PAST 12 MONTHS



**Among consumers who use edibles, the likelihood of 'illegal' edibles is higher in Quebec.**

**But....**

**Overall number who source illegal edibles is lower in Quebec.**

**(BECAUSE QUEBEC HAS ~HALF THE NUMBER OF EDIBLE CONSUMERS.)**



## **LESSON**

**Consumer patterns of use—and not just legal vs. illegal sources—can be influenced by product standards.**



# Illicit market vs. public health standards



## **Boost THC limit for cannabis edibles and loosen packaging rules, Competition Bureau recommends**

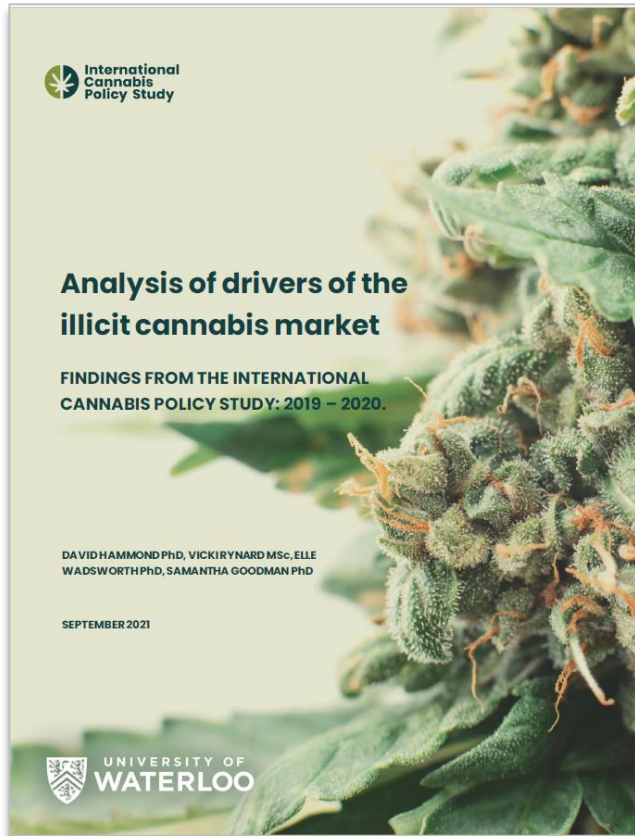
Competition watchdog outlines its suggestions to Health Canada, which is tasked with updating the rules



[Pete Evans](#) · CBC News · Posted: May 26, 2023 12:39 PM EDT | Last Updated: May 26



SOURCE: [HTTPS://WWW.CBC.CA/NEWS/BUSINESS/CANNABIS-RULES-COMPETITION-BUREAU-1.6855729](https://www.cbc.ca/news/business/cannabis-rules-competition-bureau-1.6855729)



## **LESSON**

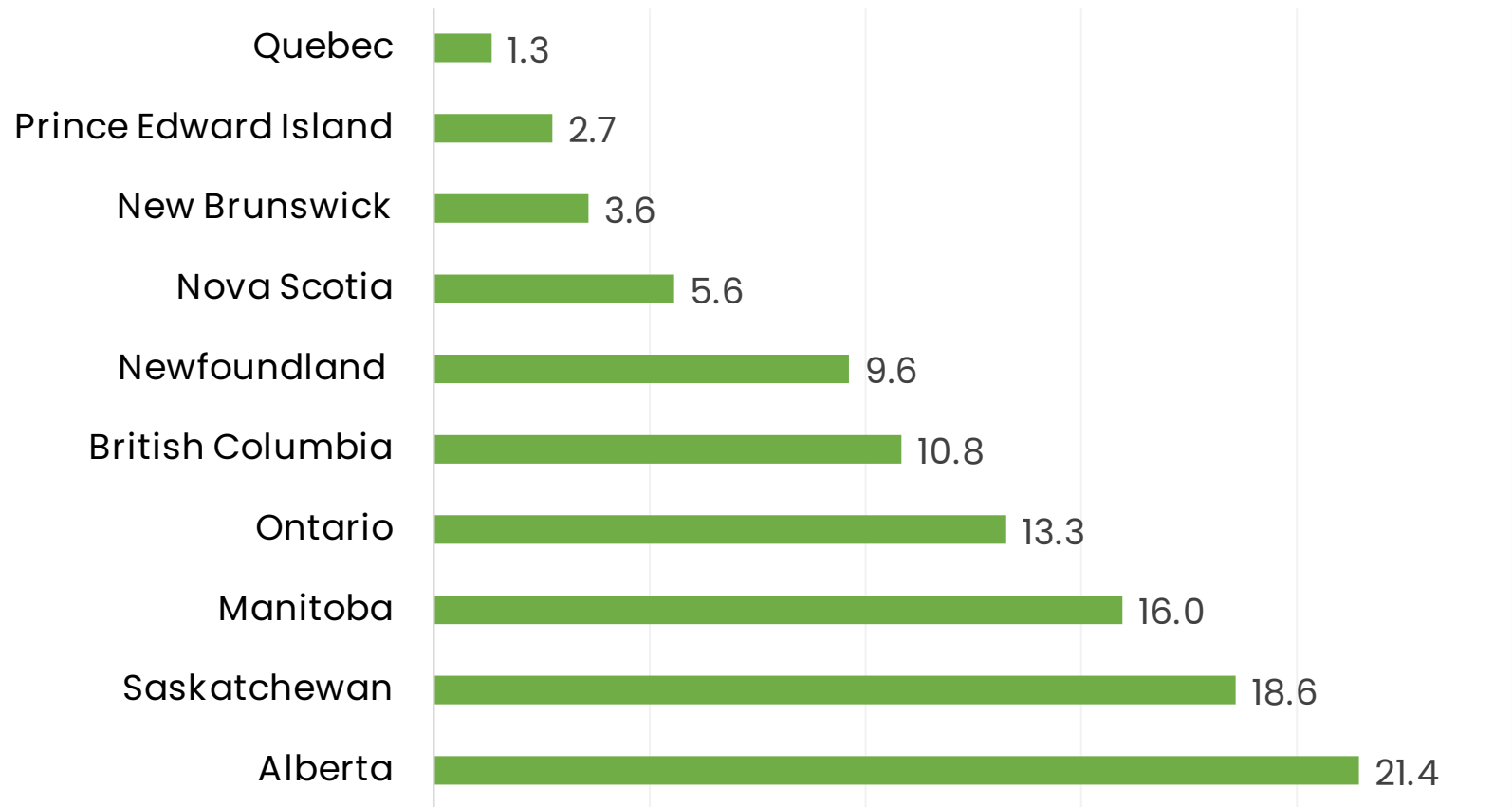
**Access and price most important in early stages of legal markets.**

**Factors that influence legal market capture over time require greater scrutiny.**

# Federal legalization with provincial & territorial differences in cannabis regulations.

## Cannabis stores per capita

LICENSED STORES PER 100,000 POP. – SEPT 2023





# Industry experience





## **LESSON**

**There is strong support among the public—and most consumers—for strong public health standards.**



**Please think about the amount of marijuana advertising in the province where you live.**

**How much advertising do you think should be allowed?**

--

## PRODUCT STANDARDS

In Canada, packages of marijuana edibles can include a maximum of 10mg of THC.

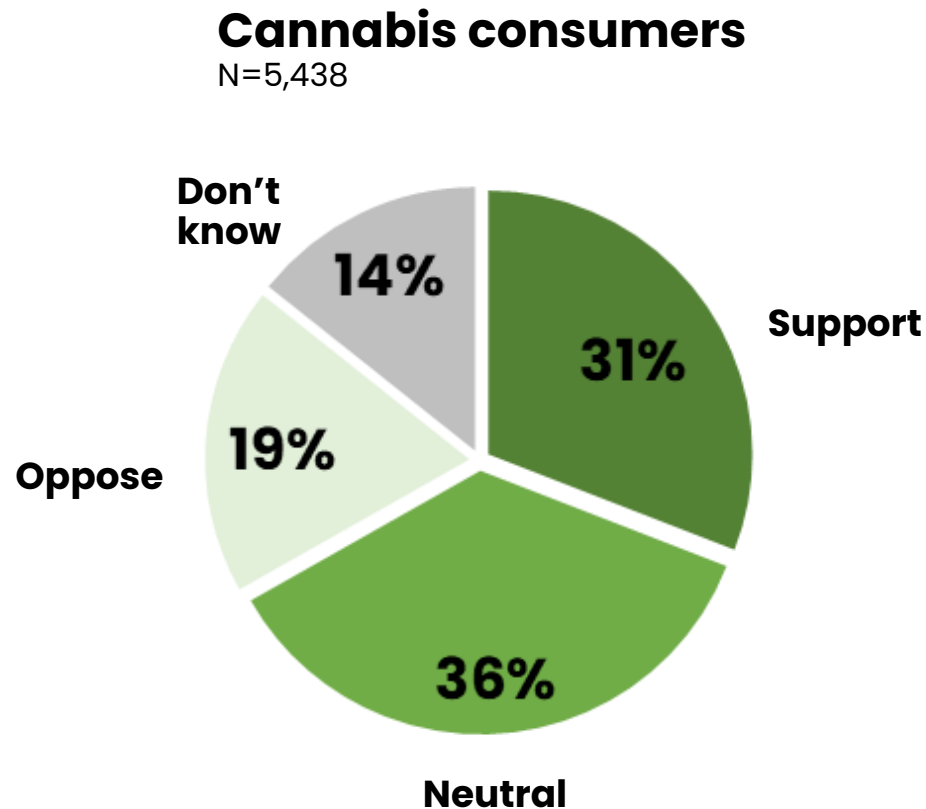
Do you support or oppose the THC limit on edibles?



**THC**  
**10mg / package**

**In Canada, packages of marijuana edibles can include a maximum of 10mg of THC?**

**Do you support or oppose the THC limit on edibles?**

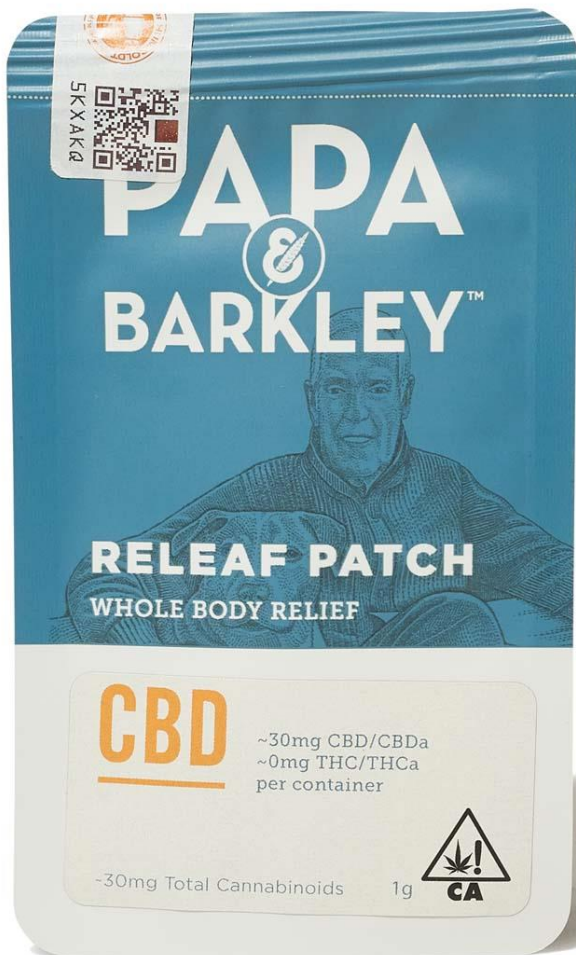


## CHALLENGES

**Product diversity and novel categories represent challenges for regulation.**



SOURCE: WWW.NEWYORKER.COM, JUNE 7 2023



**Use of 'CBD only'  
products is prevalent.**

**25%**

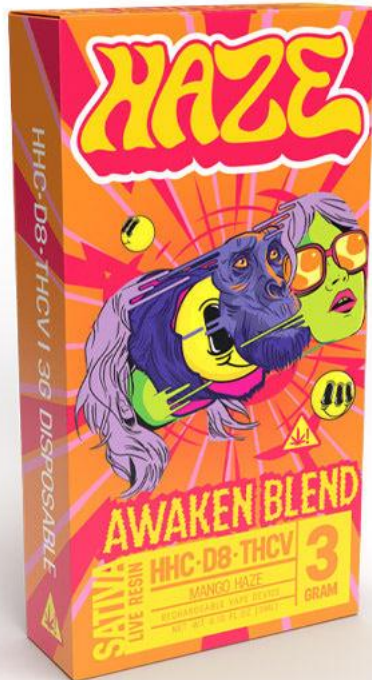
**USE IN PAST 12-MONTHS**

US 2022, N=40,027



## NOVEL PRODUCTS

**New product categories, many related to regulatory 'loopholes'.**



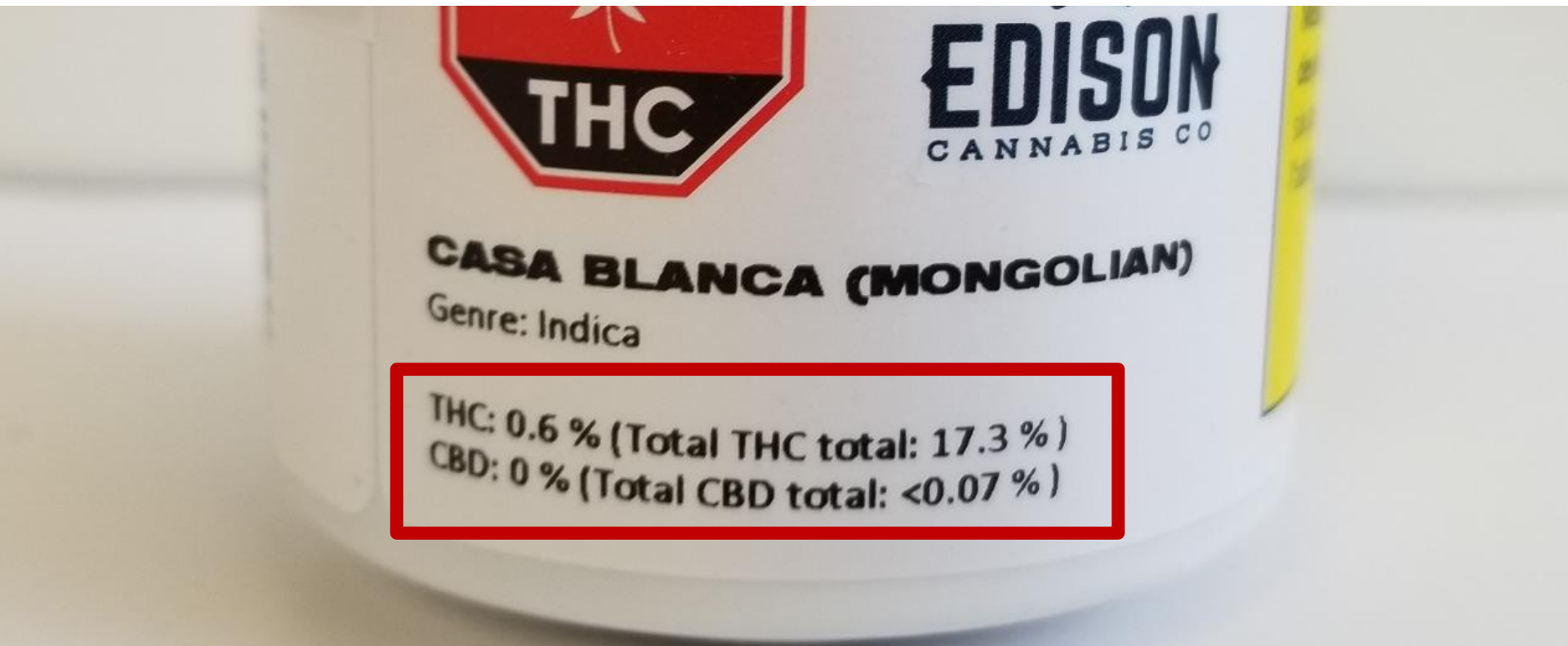
**Use of 'novel' products markedly lower in Canada vs. US.**

## **CHALLENGES**

**Consumers require better guidance on dosing and the strength of products.**



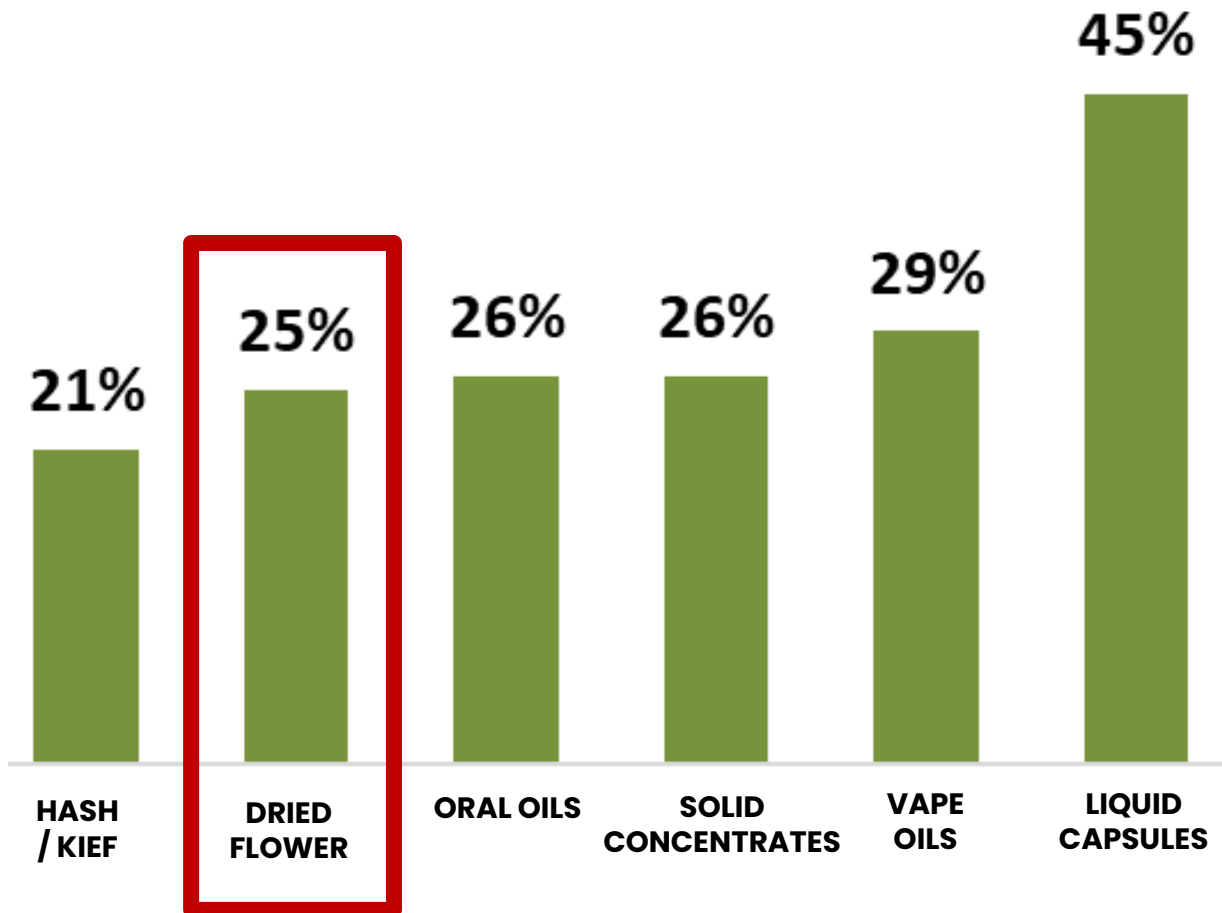
**Existing product labels are inadequate.**



# Most don't know the THC levels of their products.

**Do you know the amount/number of  
THC in the [product] you used last?**

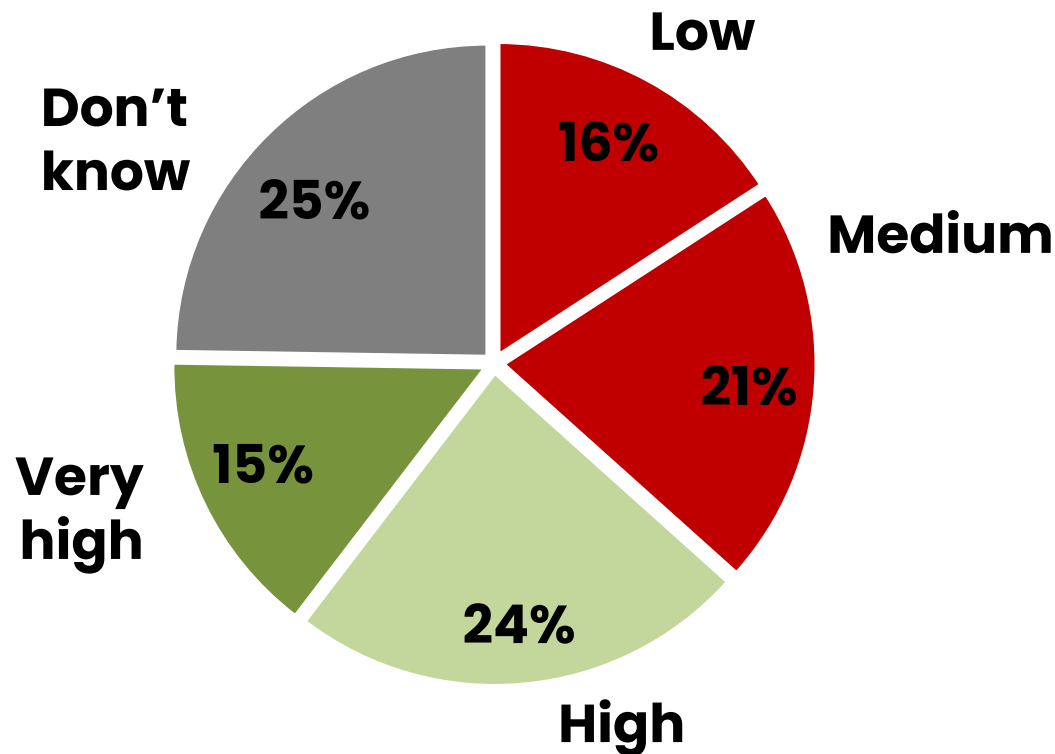
**% WHO REPORT KNOWING** PAST 12-MONTH CONSUMERS, 2020



# Consumers lack even a general understanding of THC levels.

Is **30% THC** a low, medium, high amount for dried herb?

UNIVERSE: PAST 12-MONTH CANNABIS CONSUMERS 2020



Can this product **get someone 'high'?**



**12%**

**42%**





# Adverse events are common.

**30%** **REPORTED EXPERIENCING AN  
ADVERSE HEALTH EFFECTS**

**5%** **SOUGHT MEDICAL HELP FOR  
ADVERSE HEALTH EFFECTS**

AMONG PAST 12-MONTH CONSUMERS 16-65 YEARS OLD

SOURCE: MARQUETTE, IRANIPARAST, & HAMMOND; UNDER REVIEW, 2023.

# Standard THC units

ADDICTION OPINION AND DEBATE

doi:10.1111/add.14842

## **‘Standard THC units’: a proposal to standardize dose across all cannabis products and methods of administration**

**Tom P. Freeman<sup>1,2,3</sup>  & Valentina Lorenzetti<sup>4</sup> **

Addiction and Mental Health Group (AIM), Department of Psychology, University of Bath, Bath, UK,<sup>1</sup> National Addiction Centre, King's College London, London, UK,<sup>2</sup> Clinical Psychopharmacology Unit, University College London, London, UK<sup>3</sup> and School of Behavioural and Health Sciences, Australian Catholic University, Fitzroy, VIC, Australia<sup>4</sup>

## **CHALLENGES**

**Determining the role and regulatory framework for medical cannabis in 'legal' markets.**



# Summary

- **Legalization of cannabis has had both 'positive' and 'negative' impacts in Canada.**
- **Greater access, product diversity, and lower prices general consequences of legal markets.**
- **Policy measures will be critically important in shaping patterns of use and public health outcomes.**
- **Greater public health standards in Quebec appear to be associated with lower prevalence of use.**



# Summary

- **Emergence of strong commercial interests.**
- **Tension between objectives of displacing illicit market and strong public health protections.**
- **Alternative, less commercial models for legalizing cannabis are being implemented.**
- **Longer-term impacts have yet to be assessed...**

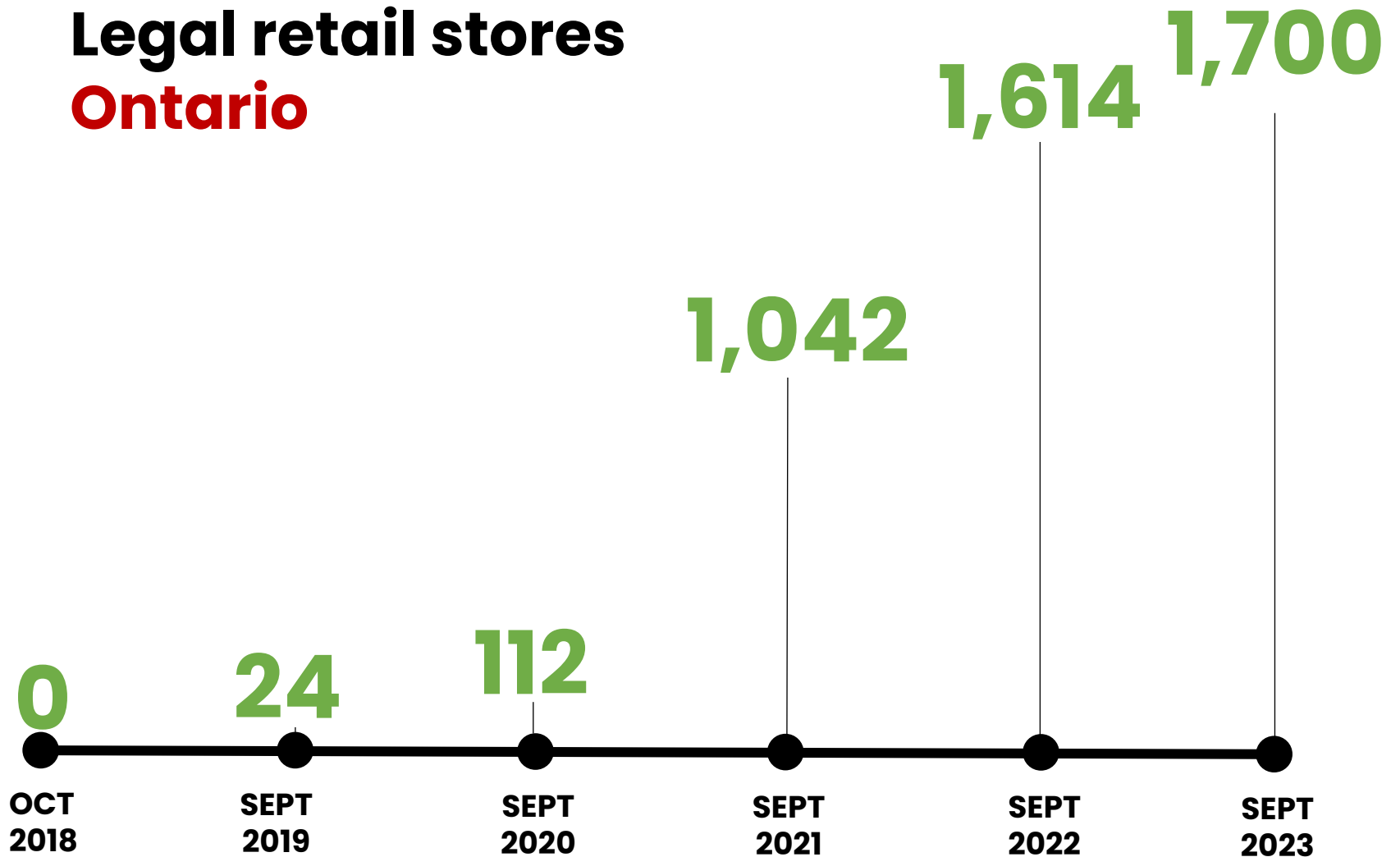


**CONTEXT**

**Cannabis legalization is in its infancy.**



# Legal retail stores Ontario





## CONTEXT

**Temporal effects vary by policy domain.**





# ► Legislative Review of the *Cannabis Act*

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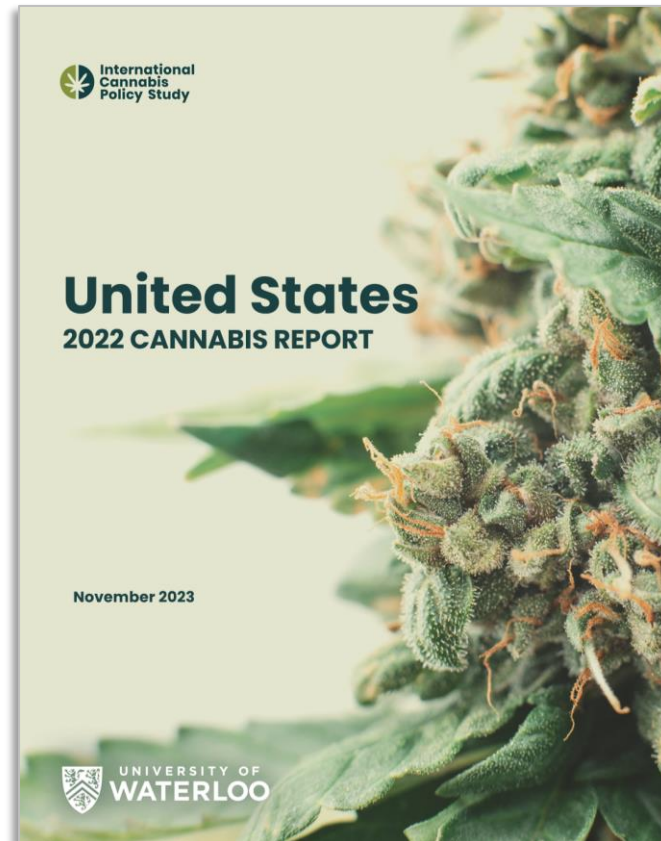
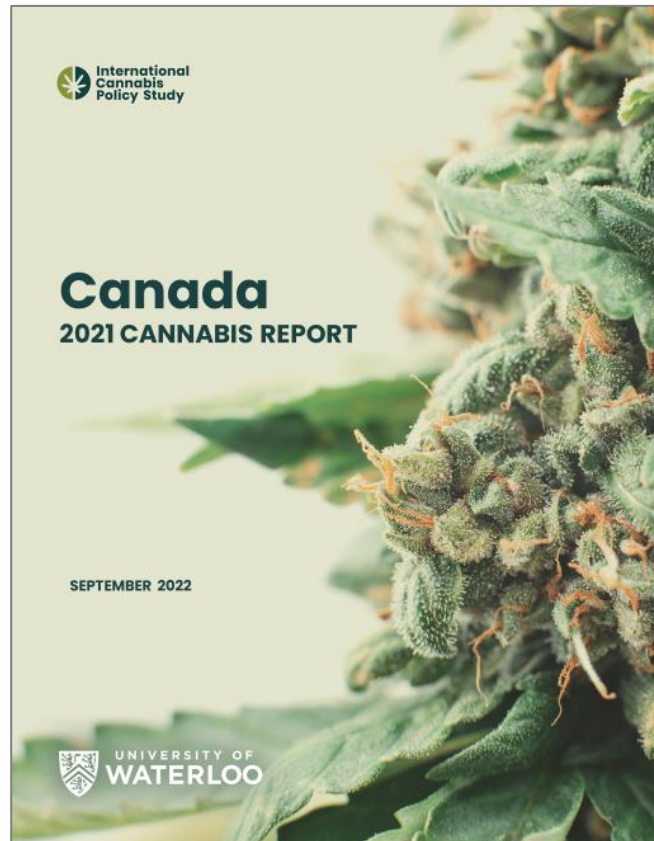
## What We Heard Report



Government  
of Canada

Gouvernement  
du Canada

Canada



[www.cannabisproject.ca](http://www.cannabisproject.ca)

# Thank you.

**David Hammond** PhD

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