



**HOUSE HEALTH COMMITTEE AND LIQUOR CONTROL COMMITTEE
INFORMATIONAL MEETING ON ADULT-USE CANNABIS**

Thursday, April 25th, 2024

9:30 am

G-50, Irvis Office Building
Harrisburg, PA

1. Call to Order
2. Attendance

Panel 1

David Hammond, Ph.D., University Research Chair, School of Public Health Sciences, University of Waterloo

François Gagnon, Senior researcher and special policy advisor, Canadian Center on Substance Use and Addiction

Panel 2

Rodrigo Diaz, Executive Director, Pennsylvania Liquor Control Board

Douglas Hitz, Deputy Executive Director, Pennsylvania Liquor Control Board

Andrew Collins, Chief Operating Officer, Pennsylvania Liquor Control Board

Panel 3

Ryan Vandrey, Ph.D., Behavioral Pharmacology Research Unit, Johns Hopkins University School of Medicine

Panel 4

Lynn Silver, MD, MPH, FAAP, Senior Advisor, Public Health Institute

Ken Finn, MD, VP, Pain Medicine and Drug Policy, International Academy on the Science and Impact of Cannabis

Jennifer B. Unger, Ph.D., Professor of Population and Public Health Sciences, Vice Chair for Faculty Development, University of Southern California

3. Adjournment

Evidence on 'state store models' in legal cannabis markets

TESTIMONY TO THE PENNSYLVANIA HOUSE HEALTH COMMITTEE

David Hammond PhD



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

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

- Industry**
- Harm reduction**
- Consumers**
- Public health**





Born gentle

PROUD 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.



King Size
or
Regular
Snap-open
Pack

New Philip Morris...gentle for modern taste

CANNABIS LEGALIZATION

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

INTERNATIONAL PERSPECTIVES

Different models for legal cannabis markets.



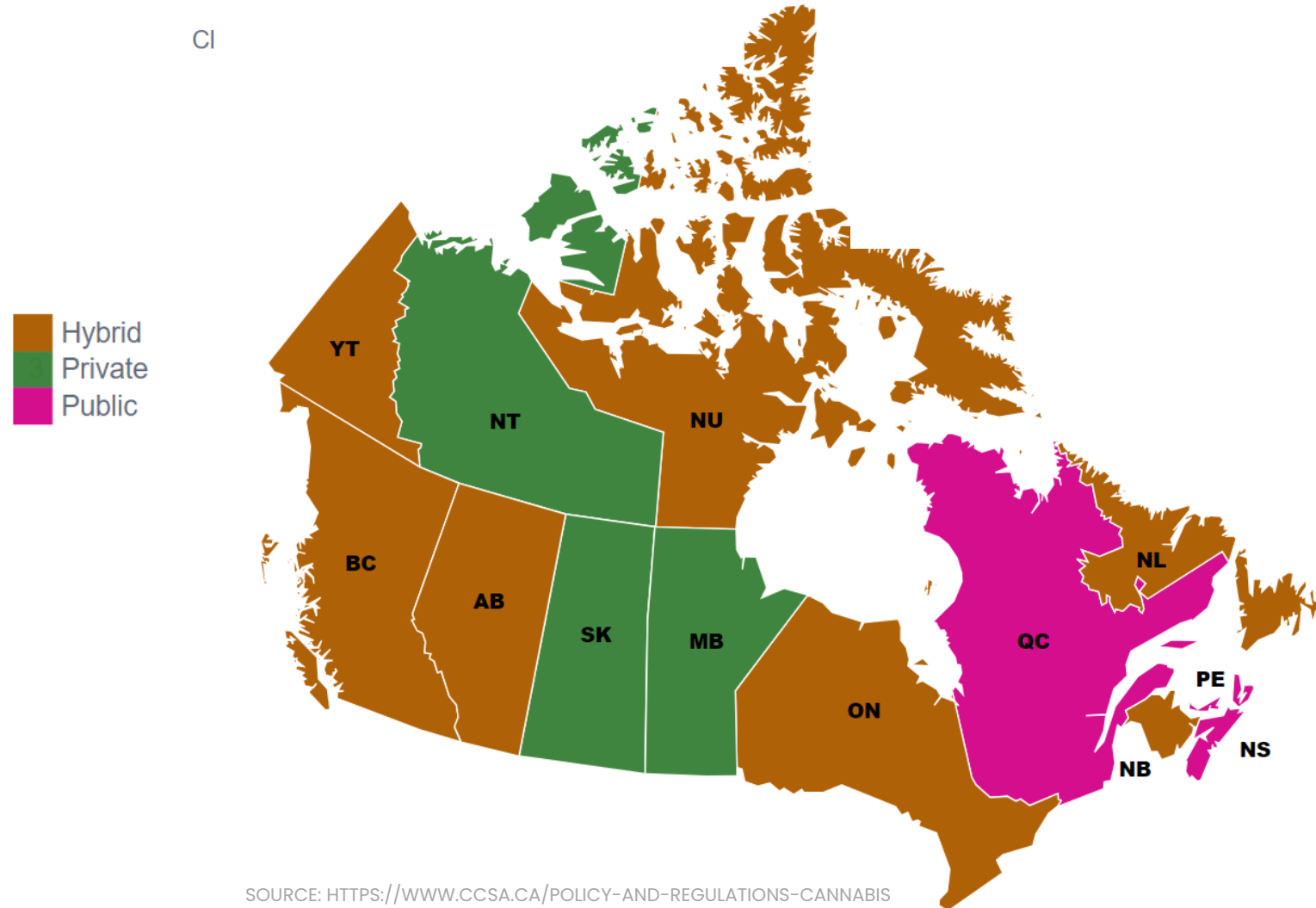
Legal market in Canada involves greater 'state' roles and more restrictive regulations in several areas.



Jurisdictional scope	<ul style="list-style-type: none">• Federal & Provincial/Territorial	<ul style="list-style-type: none">• State-level
Price/taxation	<ul style="list-style-type: none">• Excise flat rate & ad valorem (incl. THC based)	<ul style="list-style-type: none">• Variable
Product standards	<ul style="list-style-type: none">• THC 10mg limit	<ul style="list-style-type: none">• Minimal / Variable
Labelling & warnings	<ul style="list-style-type: none">• More comprehensive warnings, standardized packaging	<ul style="list-style-type: none">• Smaller text
Marketing	<ul style="list-style-type: none">• More comprehensive	<ul style="list-style-type: none">• Variable
Retail	<ul style="list-style-type: none">• Online sales• Fewer 'opt out'	<ul style="list-style-type: none">• Variable
Minimum legal age	<ul style="list-style-type: none">• 18, 19, 21 years of age	<ul style="list-style-type: none">• 21 years of age

CANADA

**States serves as distributors in all jurisdictions.
Mix of private and 'state' sales models.**



SOURCE: [HTTPS://WWW.CCSA.CA/POLICY-AND-REGULATIONS-CANNABIS](https://www.ccsa.ca/policy-and-regulations-cannabis)

ONTARIO

State-run cannabis stores

Spotlight: Crazy Cream Soda Soft Chews 4 pack

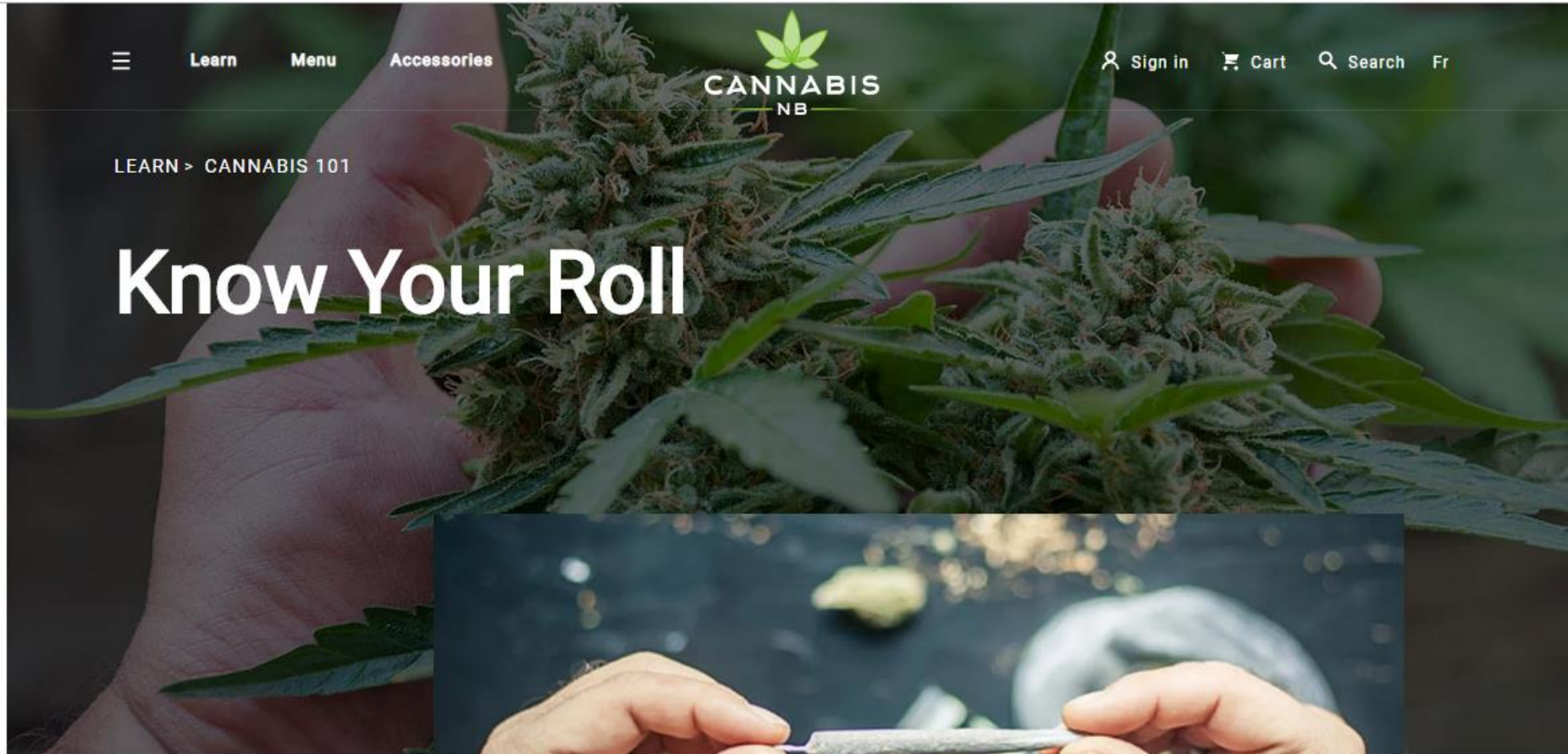
Each sugar-dusted 2.5 mg THC bite is bubbling with classic pop flavour, plus notes of cotton candy, vanilla and coconut

[BUY NOW](#)



NEW BRUNSWICK

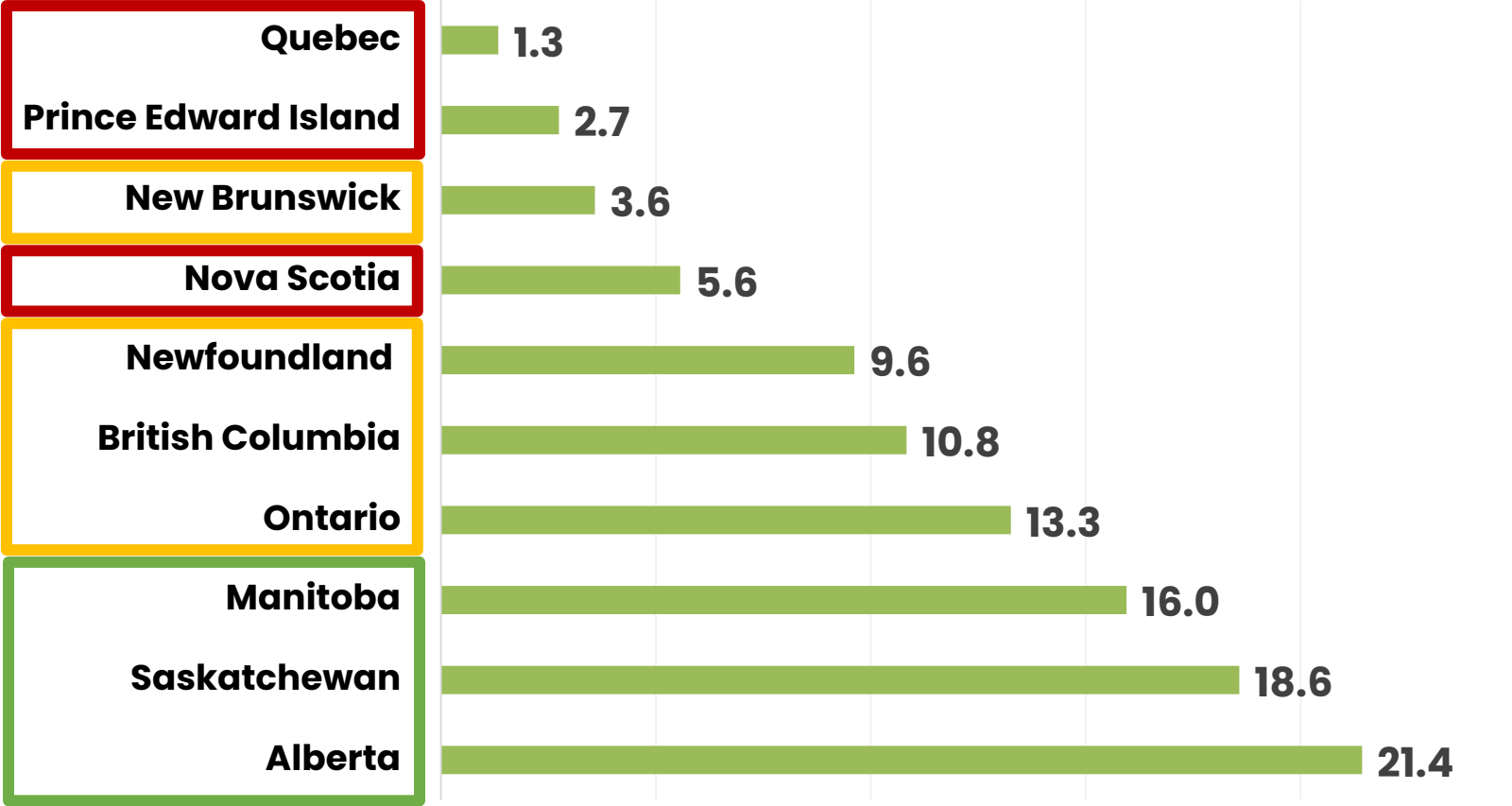
State-run cannabis stores.



[HTTPS://WWW.CANNABIS-NB.COM/LEARN/CANNABIS-101/KNOW-YOUR-ROLL/](https://www.cannabis-nb.com/learn/cannabis-101/know-your-roll/)

Jurisdictions with greater state control tend to have fewer stores and greater regulatory restrictions.

Retail stores number
LICENSED STORES PER 100,000 POP. - SEPT 2023





STATE-MODEL

Québec

- All stores government run
- Minimum legal age of 21
- Fewer stores per capita
- Enhanced marketing restrictions
- Comprehensive product standards
 - No vaping product
 - 30% THC limit on all products
 - Highly restricted edibles



PRODUCT STRENGTH
THC levels of
vapes ~75%

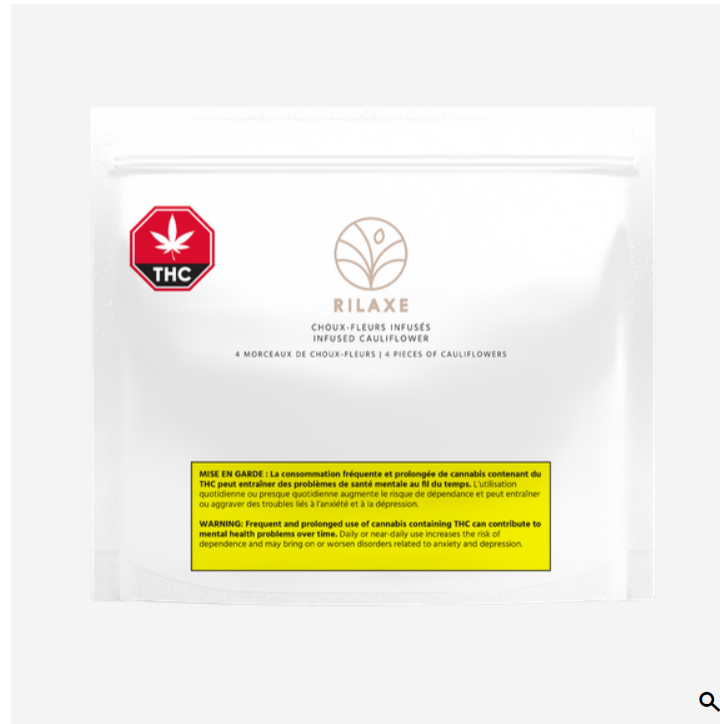


SOURCE: HAMMOND ET AL., 2023. CANNABIS RETAIL SCAN.

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](#)



\$5.80

LESSON

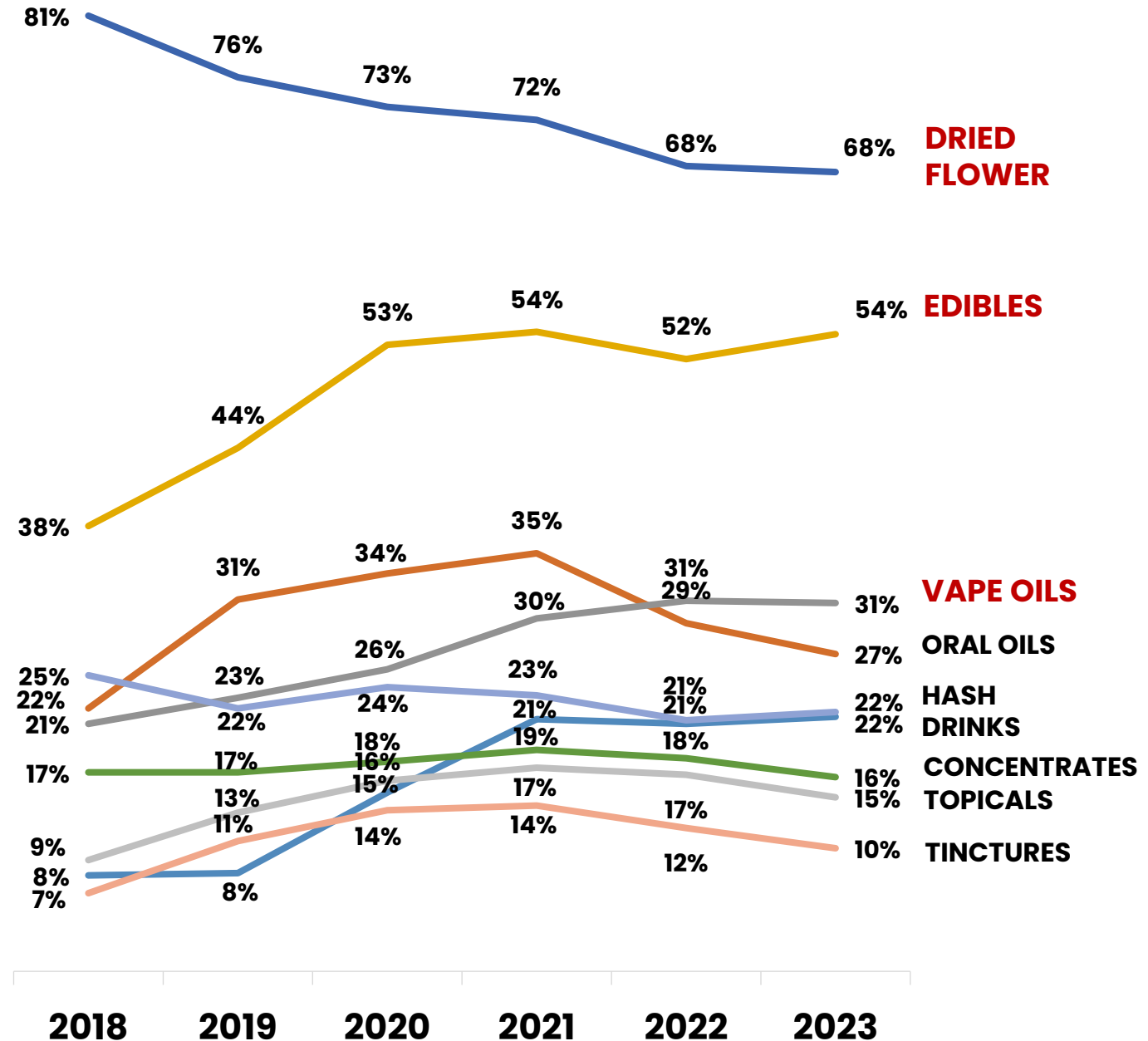
Cannabis legalization has increased the use of high THC products, but to a lesser extent in 'state-only' models.



Cannabis products

Use in the past 12-months

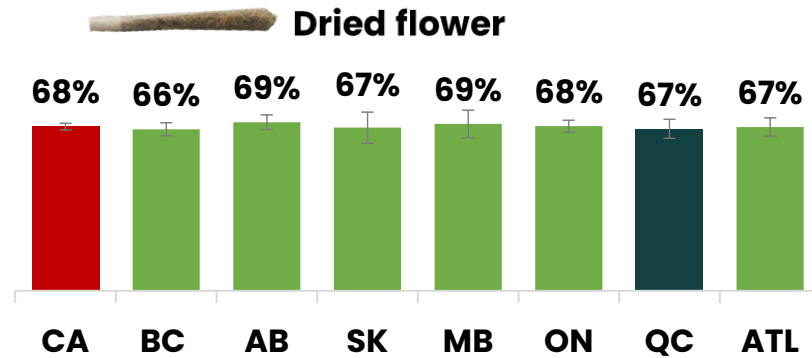
CANADA, AMONG PAST 12-MONTH CONSUMERS



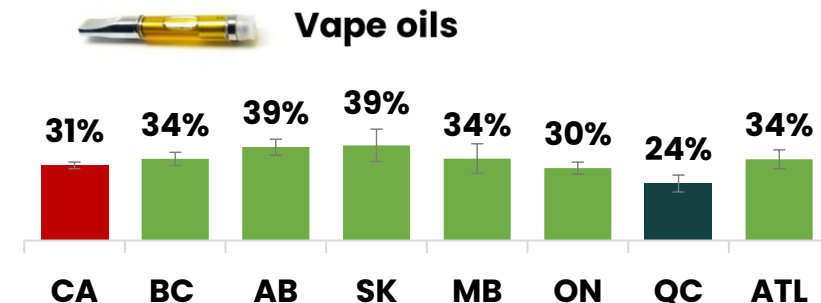
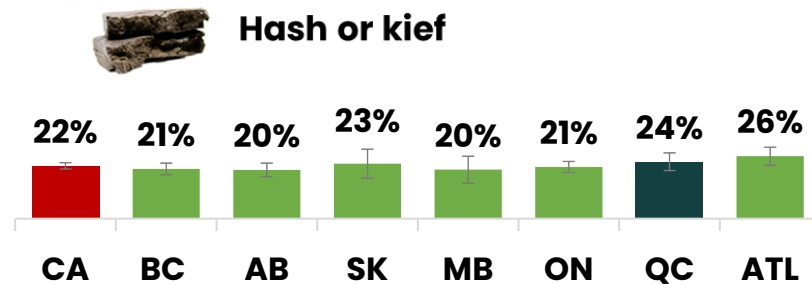
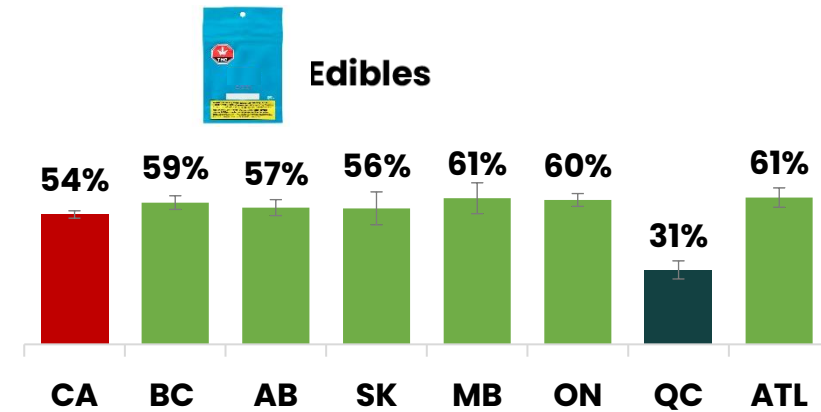
Product regulations

PRODUCT USE AMONG PAST 12-MONTH CONSUMERS 2023

QUEBEC 'LEGAL' SALES



QUEBEC 'RESTRICTED' SALES



Do product standards sustain illicit trade?

THC caps in Vermont could keep black market alive

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

Don't miss the big stories. Like us on Facebook.

 Like 19K



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-ABA1-33DC534196.HTML](https://www.reformer.com/local-news/thc-caps-in-vermont-could-keep-black-market-alive/article_90e37fe6-edb7-11ec-ab1-33dc534196.html)

LESSON

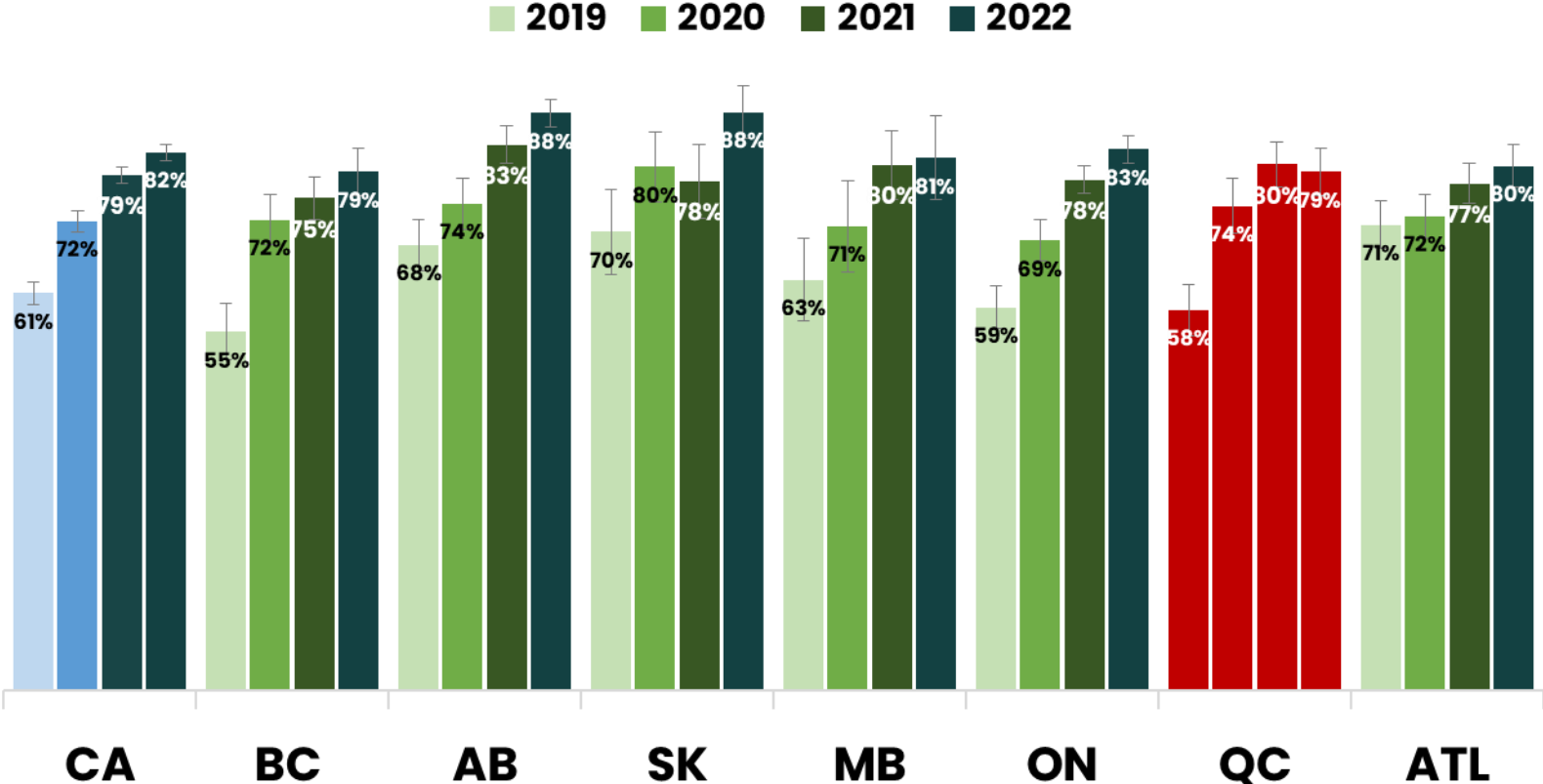
Transition from illegal to legal stores has been similar in private vs. state models.



Similar transition to legal market in Quebec to date.

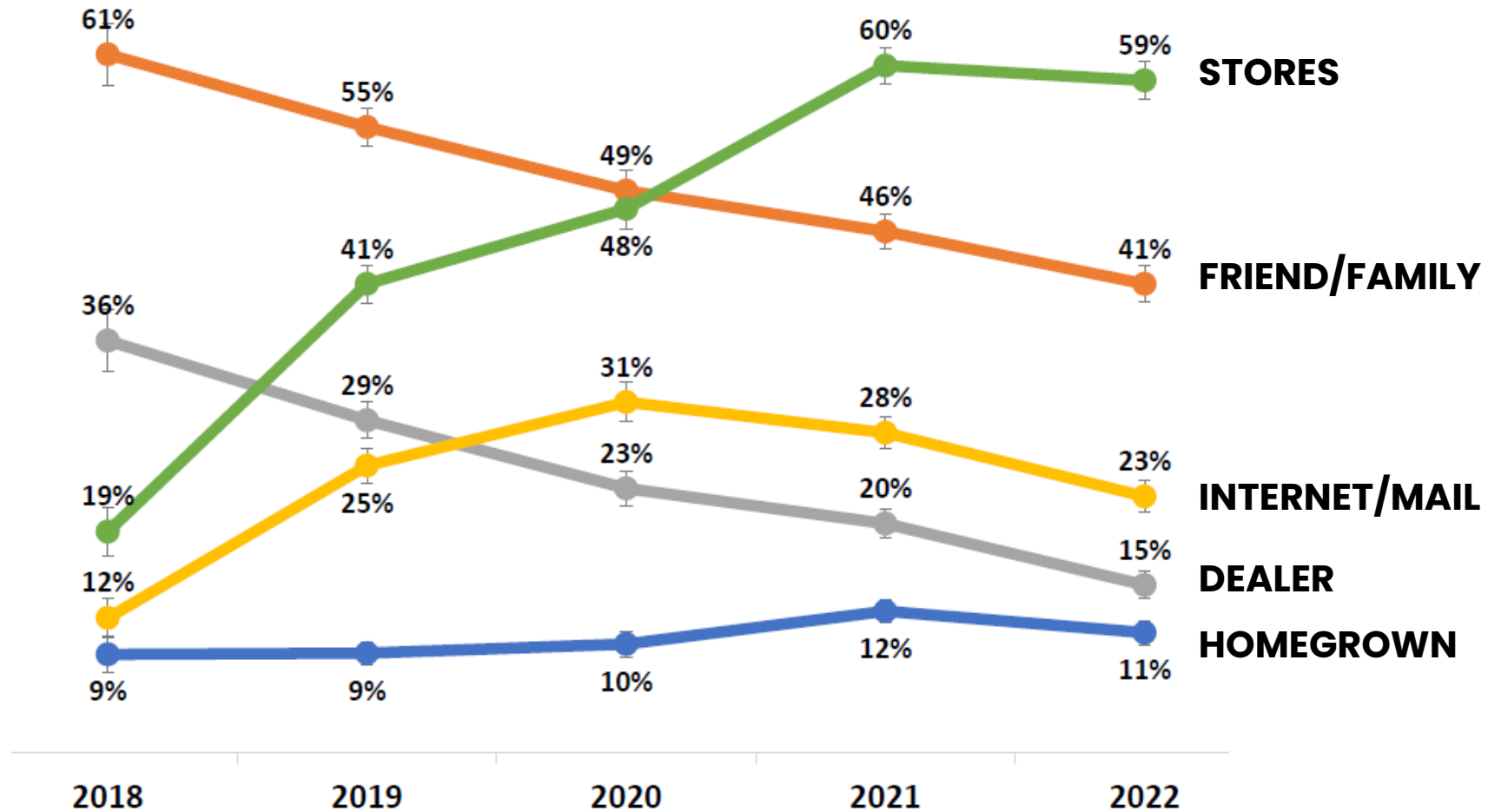
Mean percentage of all cannabis products purchased in last 12-months from a legal retail source

AMONG PAST 12-MONTHS CONSUMERS



Cannabis sources in the past 12-months

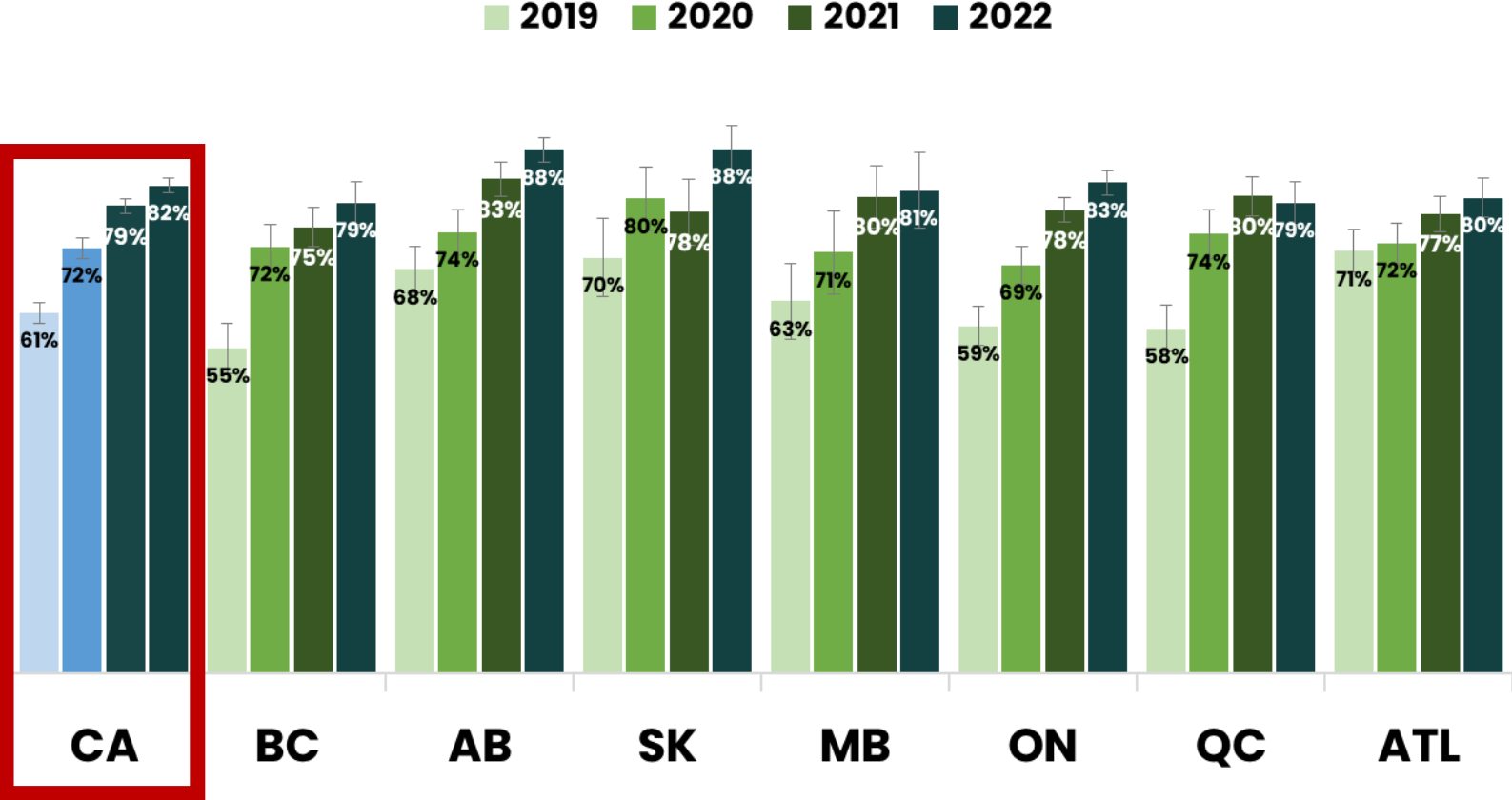
AMONG PAST 12-MONTHS CONSUMERS



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



LESSON

Consumers support comprehensive regulations in both private and state-models.

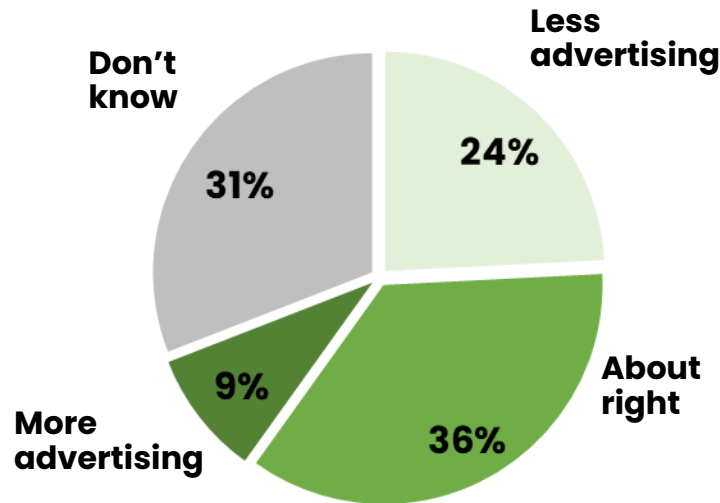


Please think about the amount of marijuana advertising in the province where you live.

How much advertising do you think should be allowed?

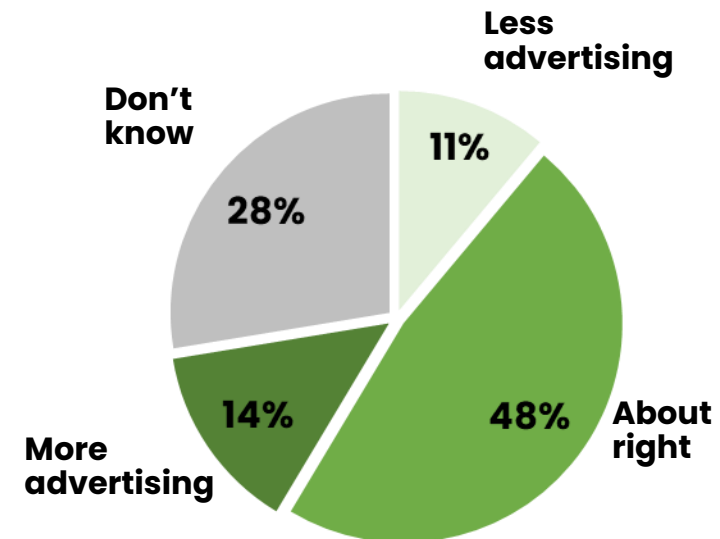
All respondents

N=15,831



Cannabis consumers

N=5,434



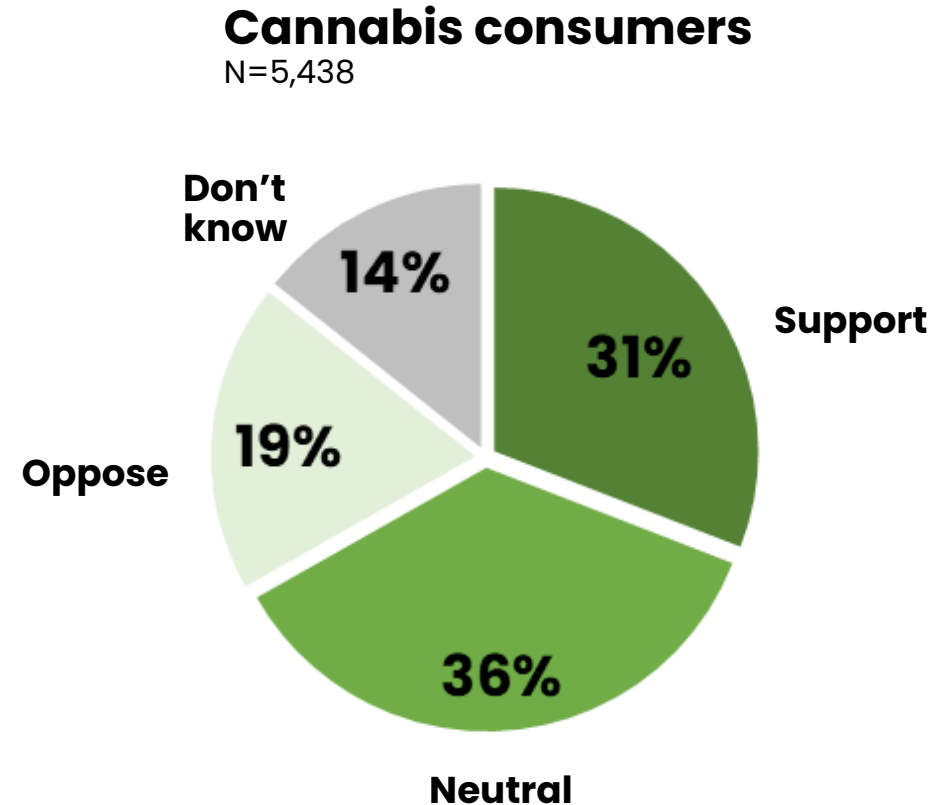


FEDERAL PRODUCT STANDARDS

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?



LESSON

State models (more comprehensive regulations) associated with fewer increases in cannabis use.



Québec vs. other provinces

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

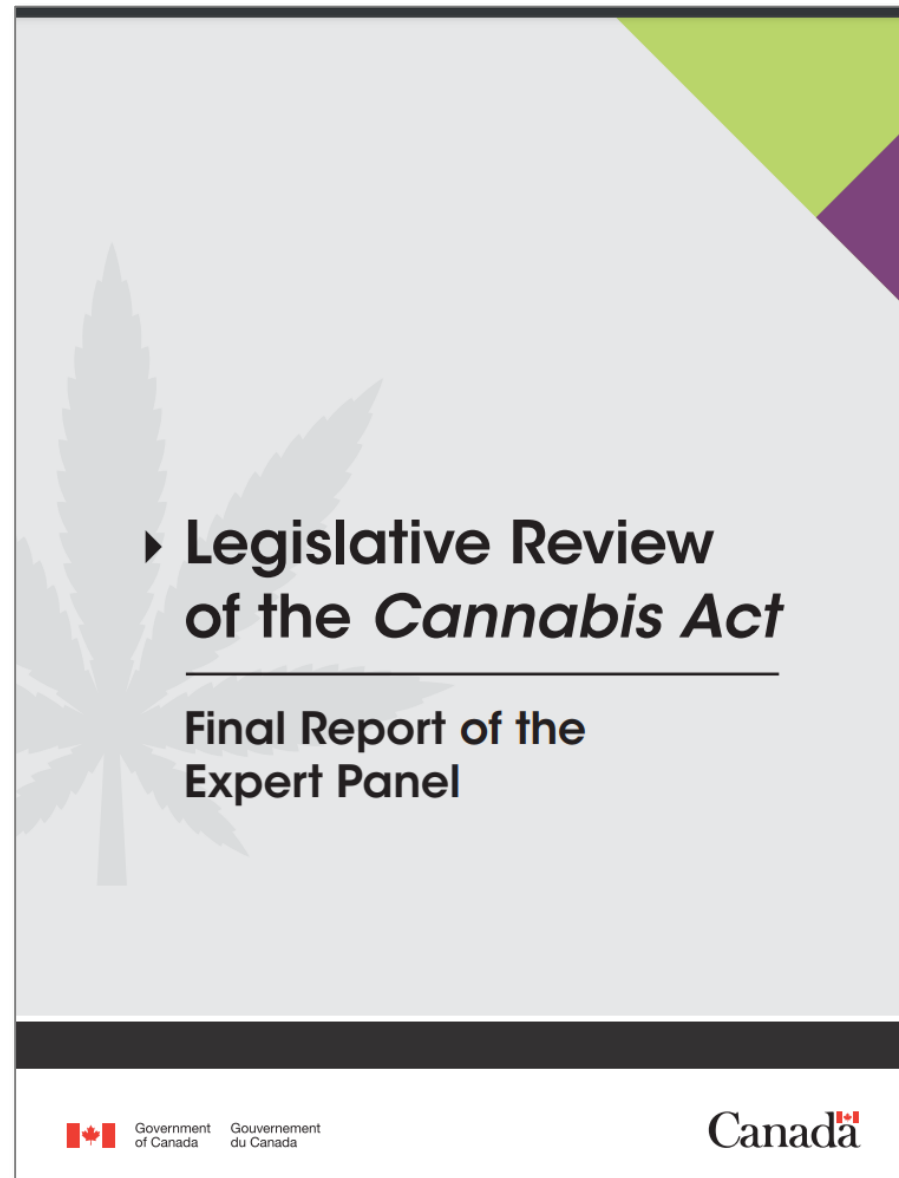
	QUÉBEC	CANADA
Past 12-months	15.9%	22.4%
Daily/near daily	3.7%	6.1%*

SOURCES

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



CANADA
**Legislative
review**



Summary

- **State-models provide state regulators with greater means of shaping market.**
- **State-models may be more effective in achieving public health objectives.**
- **Very positive consumer perceptions of legal market for both private and state models.**
- **Little evidence that regulations are associated with legal market capture.**



Thank you.

David Hammond PhD

SCHOOL OF PUBLIC SCIENCES
UNIVERSITY OF WATERLOO

WEB DHAMMOND@UWATERLOO.CA

EMAIL WWW.DAVIDHAMMOND.CA



UNIVERSITY OF
WATERLOO

School of Public
Health Sciences



Canadian Centre
on Substance Use
and Addiction

Evidence. Engagement. Impact.

Centre canadien sur
les dépendances et
l'usage de substances

Données. Engagement. Résultats.



The distribution of cannabis in Québec: providing legal access without promoting

François Gagnon, Ph.D.

April 25th, 2024

Adult Use Cannabis Hearing

Pennsylvania, USA

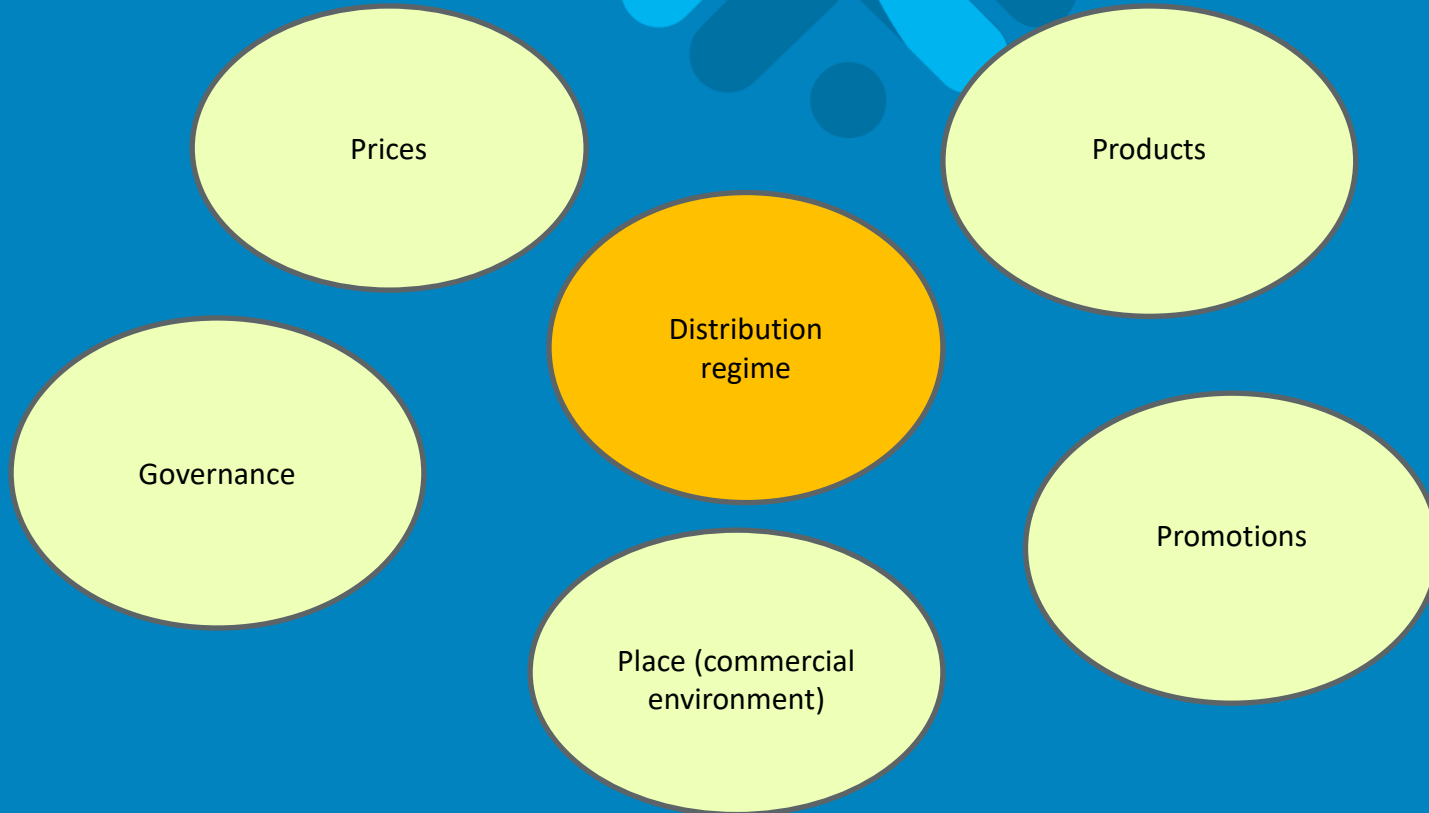


Presentation plan

1. The distribution regime

2. Public health outcomes

1. The distribution regime



1. The distribution regime

Governance: not-for-profit approach

Monopoly =
Société
québécoise du
cannabis (SQDC)

Mandate =
Integrate users
without
incentivizing use

Profits =100% to
prevention,
treatment,
and harm
minimization of
cannabis and
other drugs

Board of directors:
no link to private
industry

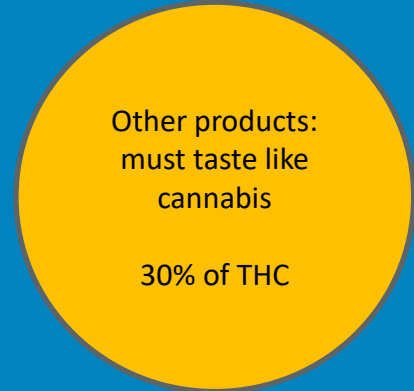
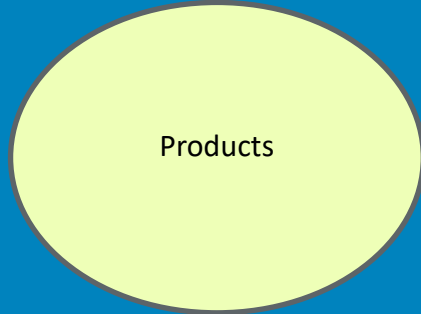
Enforcement of
the Cannabis Act :
Department of
Health and Social
Services

1. The distribution regime

Price

No temporary
rebates allowed

1. The distribution regime



1. The distribution regime

Other provinces

Promotions

Québec

UNBEATABLE PRICES

Product	Member Price	Market Price
Back Forty Kush Mint Cartridge (1g) Cartridges	\$28.05	\$40.99
Cherry Blossom OG Cartridges	\$30.35	\$41.99
Strawberry Diesel 99 Ken'nilonhontésa Kalenkwará Water Hash Infused PR 1 x 1 g Infused	\$13.45	\$20.99

Cabana Club
Sign up & get instant access to our UNBEATABLE member prices, at the Lowest Price Guaranteed.

Your Email [JOIN](#)

Unbeatable Prices
Save on your favourite cannabis and accessories, every day.

[LEARN MORE](#)

quality cannabis accessories of any retailer. With huge savings on bongs, vaporizers, vape pens, pipes, grinders, and more. Canna Cabana has the best prices in town -- not only on quality cannabis, but also on all the gear you need to Get a Little Island Time.

capsules.

Follow us @canna.cabana

Every time my friends think they're coming by for a session...

POV: when you don't use rige often

first of the day?

When you've had enough

CANNA Cabana

UNBEATABLE PRICES

QUICK LINKS

- Product Categories
- Shop All
- Price Match Policy
- Unbeatable Membership Prices
- Sentido Dispensaries
- Cabana Dispensaries
- Educational Dispensaries

CONTACT US

info@cannacabana.com

COMPANY

- About Us
- Locations
- Cabana Club
- Contact
- Engage Meed
- Careers
- Invest

JOIN CABANA CLUB

Get exclusive discounts & updates as a Cabana Club Member.

Signing up is **FREE**

[SIGN UP FOR CABANA CLUB](#)

Bakerstreet 10mg

13 unités

28,00 \$

en ligne

en succursale

1. The distribution regime

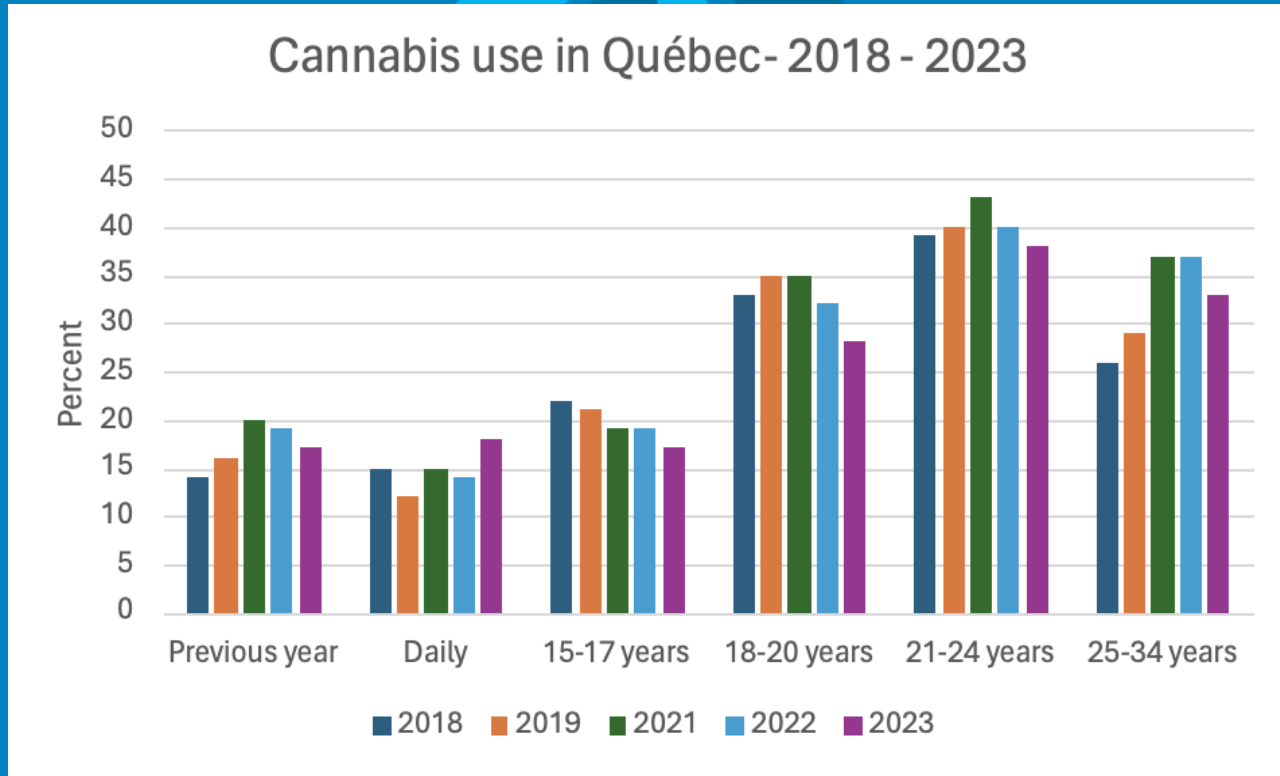


Place
(commercial
environment)

Density akin to
"Destination stores"
(only +- 98 for now)

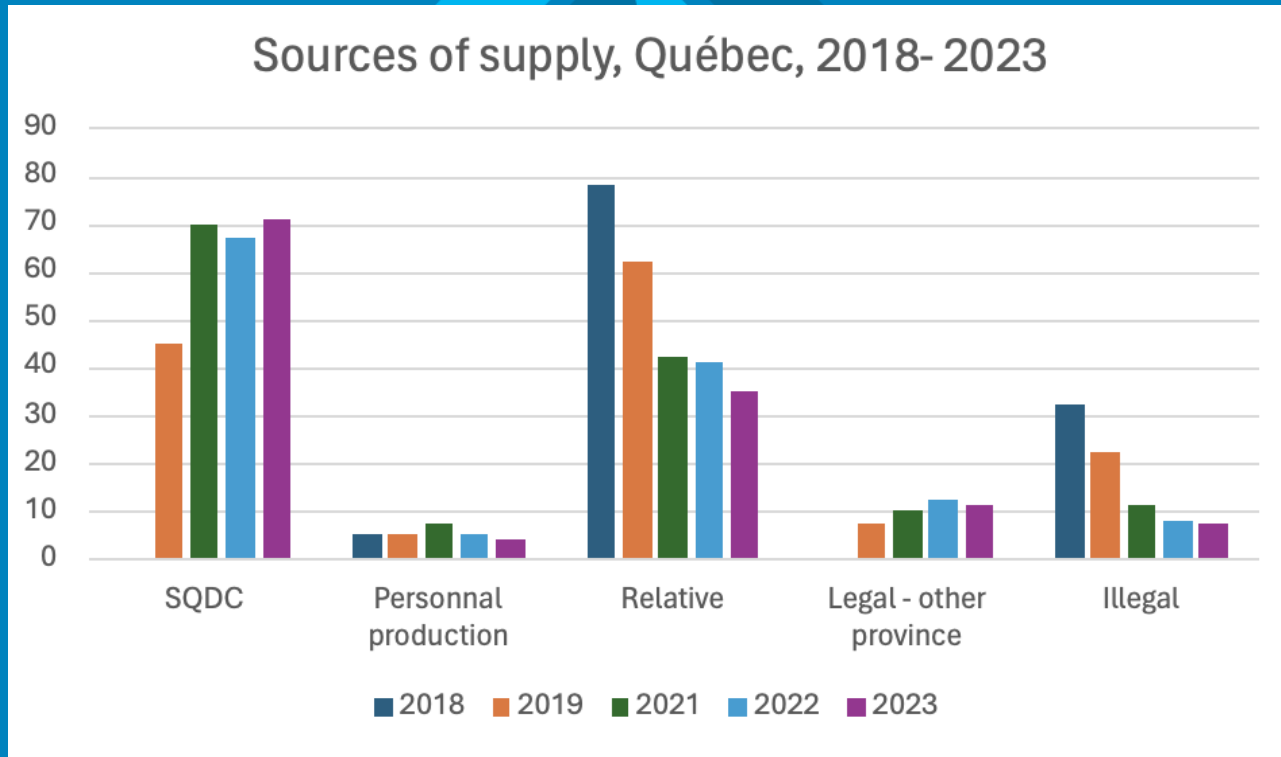
21 years for legal
supply

2. Public health outcomes



Source: Enquête québécoise sur le cannabis (2023 et 2024).

2. Public health outcomes



Source: Enquête québécoise sur le cannabis (2023 et 2024).



Conclusions

A public monopoly is easier to control than an ecosystem of large private, for-profit actors

Loosening is easier than tightening



Testimony Lynn Silver, MD, MPH, FAAP
April 25, 2024
Pennsylvania House of Representatives
Health Committee

Key recommendation:

Our most important recommendation, if you decide to legalize sale, is to pursue a middle road neither prohibitionist nor profiteering. To reap the criminal justice equity benefits without driving up the harms. The best evidence supports something that resembles your existing Fine Wine & Good Spirits system which has long served your residents. This can be accomplished through a public store system, or if you are concerned about public employees selling a federally illegal product, through an exclusive contracted nonprofit arrangement, or other type of quasi-public entity. Its central goal should be to make cannabis legally available without driving up consumption or maximizing sales.

- Thank you, Chairman Frankel and members, it's an honor to be here with you this morning.
- My name is Dr. Lynn Silver. I'm a pediatrician, senior advisor at the Public Health Institute and full clinical professor at the University of California San Francisco, with 4 decades of experience in public health policy and administration.
- In 2017 with passage of legalization in California I founded the Getting it Right from the Start initiative. Our focus has been to work where cannabis has been or is being legalized to identify and test potential best practices to protect kids, public health, and social equity. We carry out extensive research

supported by NIH and other funders to assess policy impact on health and equity. We develop tools and model laws and provide technical assistance to government and community partners.

- I come at this problem as a pediatrician, a public health professional who has spent her life finding ways to prevent illness before it happens. But also as a mother and stepmom of 5, soon to be grandmother, and lastly as someone who loved someone who developed psychosis and schizophrenia and is no longer alive today. Preventing every case of serious mental illness that is preventable is personal to me.
- **A critical window:** For the 26 states that have not yet legalized, we believe there is a critical window to learn from our errors and do better.
- **The “how” of legalization matters as much as the “whether:”** I am not here to tell you whether to legalize or not. There are very good arguments to be made for and against. I’m here to share with you ways, that if you decide to move forward, you can greatly reduce harms from legalization, improve impact on health and social equity, and better protect kids. The “how” of legalization has received far too little attention. Yet it is as or more important than the “whether.”
- **The middle road:** You can do this by following a **more prudent middle road, neither prohibitionist nor profiteering**, as other countries legalizing cannabis have done.
- **Decriminalize and expunge no matter what:** You can and should start by further reducing the unjust burden of criminalization and by automatically expunging nonviolent past criminal records. You don’t even need to legalize sale to do that. You certainly don’t need to create a new for-profit industry of addiction to do that.
- **Why should you not follow the path taken by my state, California?**

- The product Pennsylvania is deciding how to treat is not the botanical plant from my college days. That joint your mother may have rolled had about 3-5% THC. It got you high. But only rarely did it make people seriously ill. Over the last 20 years the US cannabis market has become something completely different. **Changes in agricultural practices have led flower to be roughly 8 times stronger, clocking in at 20-30% THC. A vast array of manufactured, aggressively marketed, and flashily packaged inhalable concentrates and edible cannabis products, as well as intoxicating so-called hemp products has emerged. Many are 80, 90 or almost 100% THC.** Some imitate McDonald's, baby foods, Cocoa Pebbles, Nachos or Skittles. **Many bear as much relationship to the cannabis plant as fentanyl does to poppies, or a strawberry PopTart to a strawberry.**
- In the just desire to right the wrongs of the War on Drugs, acquire new tax revenue and create legal jobs, much of America has, essentially, been snookered. Notwithstanding requiring testing for contaminants, many states, have allowed the cannabis industry to define its scope as almost any product the industry can invent, no matter how potent, harmful or attractive to youth. Even where rules exist, they often go unenforced. In contrast, **other countries like Germany, Uruguay, or Canada, have been far more prudent.**
- We are paying the price of imprudence.** The result is not good. One in ten young American adults now walks around high nearly every day, tripling past rates. Use during pregnancy, which has significant negative impacts for the baby, has almost doubled in my state. Cannabis-induced psychosis and schizophrenia, generally in teens and youth, have grown markedly, and are now responsible for a significant - and preventable - subset of new psychosis. Daily use of cannabis above 10% THC – now almost everything now being sold, has been associated in studies with a five-fold increases in risk of psychosis– a problem we all know we are failing as a society to manage, and one that is helping to fill our streets with people with poorly controlled serious mental illness.

- Frequent use by high school students is up and is likely contributing to the increases in absenteeism and other poor educational outcomes. Youth who engage in daily use are far less likely to graduate high school or college. They are more likely to be suicidal.
- ER visits related to cannabis have risen dramatically, especially in seniors.
- Quite simply we already have a national crisis in youth mental health. An unfettered for-profit cannabis industry throws flame on that fire. Cannabis is no ordinary commodity and cannot be treated as such without generational harms.
- **When you think about legalization, it is important to recognize that the greatest future danger to the health of Pennsylvania residents comes not from home grows or even pesticide residues. It comes from what is intentionally put in the box. It comes from what happens if you build a powerhouse of agricultural, industrial, and retail interests that profit from a harmful and addictive drug and develop increasing political influence. In short, from building a new tobacco industry.**
- **A middle road: Our most important recommendation, if you decide to legalize sale, is to pursue a middle road. To reap the criminal justice equity benefits without driving up the harms. The best evidence supports something that resembles your existing Fine Wine & Good Spirits system which has long served your residents. This can be accomplished through a public store system, or if you are concerned about public employees selling a federally illegal product, through an exclusive contracted nonprofit arrangement, or other type of quasi-public entity. Its central goal should be to make cannabis legally available without driving up consumption or maximizing sales.**

- **By using strong exclusive contractual and permitting relations you can:**
 - **Limit advertising** and marketing in a way that you could not otherwise do under current commercial speech jurisprudence.
 - **Right size production** rather than encourage the vast overproduction that feeds the illicit market in California or Oklahoma today.
 - Better **shape a safer cannabis supply** of less potent products, not designed to attract children and youth.
 - **Assure accurate information** for consumers.

- Like other alcohol state store states, **you currently have about one state store per 22,000 residents. You don't need more cannabis stores than that and should only go there gradually. Or you could pursue a delivery dominant model without stores or with far fewer stores.**

- **Location and moderation in numbers are key.** Our California research shows that negative outcomes like use during pregnancy, use by teens, and psychosis in teens are directly associated with the density of cannabis retailers near the home.

- **Tax revenues must be balanced against the cost of harms:** Tax revenue projections from consultants and cannabis lobbyists should be consumed with a grain of salt. If you do this wrong and create an industry that drives up consumption, and the more serious adverse effects, it will be robbing Peter to pay Paul. For every dollar in taxes gained Pennsylvania will spend one or two on psychiatric beds or in rehab units. Taxes should be sufficient (in the 20-40% range), proportional to milligrams of THC, and dedicated to prevention and health equity or community reinvestment. Alternatively in a public option revenue can be directly captured in a fund and redistributed.

- **The data from Quebec you heard earlier suggests that their model is less harmful, does not drive-up consumption as rapidly as the for-profit model, and still promotes the transition to the legal market as rapidly as for-profit stores.** Prices remain amongst the most affordable in Canada and consumers are satisfied.

- In the distributed material see a **one-page summary of Principles** we recommend where cannabis is being legalized. These include specific policy steps to protect children and youth, promote equity and mitigate harms from the War on Drugs, avert the emergence of a new tobacco-like industry, protect public health, and limit dangerous product diversification and marketing.
- I'm happy to answer questions and share additional materials and scientific evaluations and models.
- What you decide here will affect the health and well-being of Pennsylvania youth – and adults- for generations to come. Do it wrong and it can take as long to untangle as the harms of the tobacco industry. Do it right and you can help assure a healthier and more just future for your children and youth.
- Pennsylvania emerged from Prohibition's excesses cautiously. Similar prudence is required when emerging from the War on Drugs.
- Thank you.

PRINCIPLES FOR PROTECTING YOUTH, PUBLIC HEALTH & EQUITY IN CANNABIS REGULATION

The war on drugs has resulted in large scale unjust incarceration and other harmful social impacts. At the same time, legalizing cannabis without robust regulation and promoting the growth of an unfettered for-profit industry threatens our developing youth and public health, and risks further exacerbating social, economic, and health disparities. As a society, we have a collective responsibility to prevent or mitigate such harms. Where legalization is occurring, we can better accomplish this by putting in place strong guardrails and policies that protect youth, promote public health, and advance social equity. These should include:

PROTECT CHILDREN & YOUTH



- Eliminate the Cannabis Kids Menu. Prohibit any products, packaging or marketing that is attractive to children or youth, such as cannabis-infused beverages, flavored products intended for inhalation, flavored wrappers, and products that resemble candy.
- Limit the number of retail outlets to fewer than 1 per 15,000 people.
- Require buffer zones between retail outlets and schools (including colleges), public libraries, other youth serving facilities and residential areas.

PROMOTE EQUITY & MITIGATE HARMS FROM THE WAR ON DRUGS



- Decriminalize cannabis possession, reduce cannabis-related incarceration and automatically expunge past criminal convictions for non-violent cannabis-related crimes (e.g. CA, IL).
- Capture most or all tax revenue for substance abuse prevention and treatment, mitigating negative social impacts of the war on drugs, and public education campaigns.
- Prioritize equity in licensing applicants and hiring requirements (e.g. residents of communities impacted by high drug incarceration rates, people with past cannabis convictions).

AVERT THE EMERGENCE OF A NEW TOBACCO-LIKE INDUSTRY



- Favor public or nonprofit monopoly models to allow legal access without creating a profit-driven market (Quebec cannabis model or state alcohol monopoly models).
- Preserve local control so communities can innovate and learn.
- Prohibit conflicts of interest in regulatory bodies, advisory commissions, and for regulators and prescribers.

PROTECT PUBLIC HEALTH



- Assure that not driving increased consumption is a system goal.
- Place public health authorities in leadership roles.
- Require prominent health warnings in stores and provide safer use information to consumers.
- Inform vulnerable groups of the risks of use, such as low birth weight when used during pregnancy, psychosis and schizophrenia and other mental health effects, traffic incidents and immigration risks.
- Extend smoke-free air restrictions to consistently prohibit smoking and vaping cannabis indoors in workplaces, multi-unit housing and in public outdoors spaces.

LIMIT DANGEROUS PRODUCT DIVERSIFICATION & MARKETING



- Limit THC content, require stocking of lower THC products, and standardized 5 mg THC doses of concentrates.
- Prohibit the use of flavor additives and limit marketing of flavor names known to attract kids.
- Limit aggressive cannabis marketing, especially when visible to youth and children.
- Require warning labels on any advertising, prominent pictorial warnings on packages, and use of plain packaging of products.
- Prohibit therapeutic or health claims for cannabis products.
- Use a specialized business model for retailers (no food or other product sales).
- Prohibit sale of intoxicating hemp products.

Download complete model ordinances for retailing, marketing and taxation at www.gettingitrightfromthestart.org.

For more information, email gettingitright@phi.org.



Getting it Right from the Start
Advancing Public Health & Equity in Cannabis Policy

The Middle Road for Cannabis

Pennsylvania House of Representatives
April 25, 2024

Lynn Silver MD, MPH
Senior Advisor
The Public Health Institute

1

A key goal of decriminalization and then legalization was to reduce the unjust and excessive burden of arrests

How are we doing?

2

CA - Major Progress!

A 20% Decline in Marijuana Possession Arrests California 2009-2020

- 93% of over 200,000 eligible criminal records for minor marijuana offenses expunged by 2023
- But this can be achieved without creating a for-profit sales system

Source: PHI from FBI Crime Data Explorer

3

Emerging juggernaut

- Still Schedule 1 federally
- Still a policy of federal "forbearance"
- Cannabis industry is a growing juggernaut with increasing political power
- Companies like Altria and Constellation now leading coalitions to legalize, Altria and BAT bought in via Canada
- Strong pressure for state and Federal legalization of for-profit industry
- Growing global footprint

4

Where marijuana is - and isn't - legal in 2023

Legend: CBD/Low THC, Medical, No public program, Recreational & Medical

Map: Andy Bink & Aja Markelchuk, NAWP. Source: National Conference of State Legislatures. Get the data! Created with Datawrapper

5

Bad News: California Examples

- Tripling of daily or near daily use in adults 26+ 2008-9 to 2018-2019
- Major increases in use during pregnancy, vary with retailer density
- 75% increase in cannabis related ER visits in CA 2016-2020, including increasing psychosis
- 1800% increase in cannabis ER visits for seniors

Sources: UCLA, 2022; Young-Wolff 2021; PHI 2022

6

Cannabis Industry 2023 -Ramping up the lobbying game

Disseminating misinformation	Demanding tax cuts	Demanding Legalization & Deregulation
Demanding end to local control	Compromising smoke free air in parks, "cannabis" restaurants and bars	Expanding intoxicating "hemp"

7

Still large illicit markets driven largely by overproduction

8

Three Dangerous Areas Where the Cannabis Industry is Borrowing from Big Tobacco's Playbook

- ⚠️ Manipulating Potency thereby Increasing the Risk of Addiction and Psychosis
- 🎨 Creating flavored and other diverse products aimed at attracting youth
- 📣 Misleading marketing & Marketing appealing to youth

9

Cannabis v. Tobacco Industries Similarities and Differences

Cannabis	Tobacco
<ul style="list-style-type: none"> Federally & historically illegal Growing and transitioning markets to legal Rapidly changing product Elevated health harms Some medical uses Declining perception of harm Major criminal justice changes Addictive and harmful for many Source of pleasure to users Early & growing corporatization 	<ul style="list-style-type: none"> Historically legal Stable but declining legal market Well known product with some novelty (e-cigs) Elevated health harms No medical use High perception of harm Limited criminal justice issues Addictive and harmful to many Source of pleasure to users Longstanding corporatization

10

Rising Potency -Does this sound familiar? Judge Kessler in *US v Philip Morris*

"Defendants have long known that nicotine creates and sustains an addiction to smoking and that cigarette sales, and ultimately tobacco company profits, depend on creating and sustaining that addiction.....Defendants have designed their cigarettes to precisely control nicotine delivery levels and provide doses of nicotine sufficient to create and sustain addiction."

Source: Kessler, G. |in US. V Philip Morris USA Inc. (D.D.C. 2006)

11

To what extent are our cannabis policies addressing these challenges?

12

Many States: State Regulatory Frameworks – A Recipe for Addiction

- Allow extensive marketing
- Few restrictions on potency or flavors
- Health and therapeutic claims allowed and marketing inadequately monitored
- No or insufficient limits on number of licenses unless banned or restricted by local government
- Invisible and weak health warnings
- Weak state equity provisions in licensing

Positives include local control, taxation, expungement of records, specialized business in many states, emerging potency limits and plain packaging

13

And the result is.....

14

THE TOBACCO INDUSTRY HAS A KIDS MENU

80% OF KIDS WHO EVER USED TOBACCO STARTED WITH A FLAVORED PRODUCT

The cannabis industry has a kids' menu too – because we have let them

15

30% THC Flower Imitating Kids Cereal

16

Grape Flavored "Blunts" with added concentrates

17

Plus Pride Rainbow Sherbet 100mg

Pickup at ECO Cannabis

\$21.73 each

View retailer

Exclusively for in-store customers.

Favorite Share

Pride Rainbow Sherbet

18



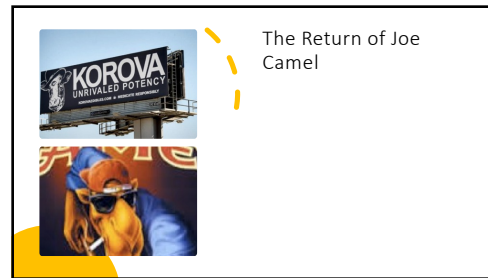
19



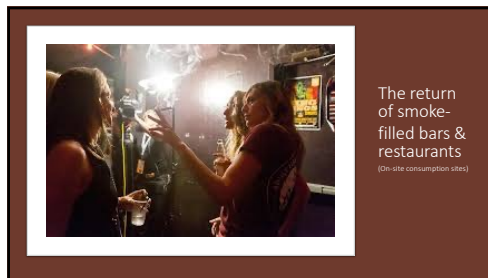
20



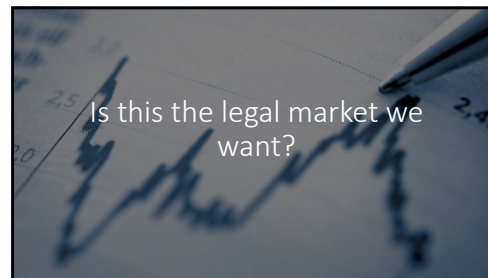
21



22



23



24

Formula for Trouble

Formula for Significant Population Health Harm

High and Growing Levels of Exposure +


Mass Commercialization of More and Riskier Products +

Significant Associated Harms =



25

What should we be doing?



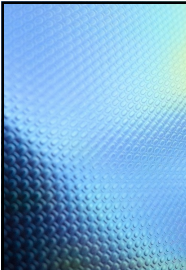
26

Uncertainty

Evidence base for cannabis policy practices is still nascent

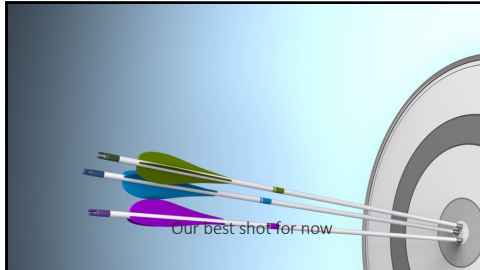
Lessons from tobacco control and other fields, especially for policy, system and environmental change provides strong guidance

But the real world won't wait – we are forced to regulate and legislate amongst uncertainty, to the best of our ability



27

Our best shot for now



28

Goals and Strategies


- Not Drive Up Consumption
- Protect Youth and Public Health
- Build Social Equity
- Public Health Primacy
- Strong Product Regulations
- Rightsize Commerce Infrastructure and Limit Profit Driven Commerce
- Taxes and Pricing
- Protect Smoke-Free Air
- Preserve Local Control
- Disallow Conflicts of Interest



29

Key Principles for Regulation IF legalizing commerce

- End unjust incarceration and automatically expunge criminal records
- Allow legal access but minimize or eliminate profit drive
- Consider public or not-for-profit state run system
- Structure to not drive-up consumption



30

Public Utility or Monopoly or Non-profit Model options

- Quebec (public monopoly stores & online)
- State alcohol monopolies (e.g., VA, UT)
- State operated system or via contracted nonprofit

31

Learning from Quebec, & Alcohol Monopolies

Allowing legal sales of a harmful product without promoting consumption

32

Quebec



- Created Soci t  Quebecois du Cannabis in 2018
- Retail sector is all state controlled public stores
- Express purpose is to allow legal access **without** increasing consumption
- 30% THC Limit on concentrates
- 5mg edible serving
- No sweets, confectionaries, desserts, chocolates or other products attractive to under 21
- No substance destined to modify odour, flavor or color

33

Quebec Exclusive State Controlled System Outcomes

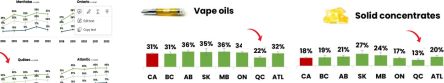


- Transition from illicit to legal market 75% by 2023 and similar to other provinces, higher than in many US legal states.
- Overall satisfaction 80% and with service is 88-90%
- The most profitable cannabis businesses in Canada are owned by government (MiBizDaily 9/20/22)
- Less growth in population consumption patterns

34

Quebec model had less consumption, did not shift people to getting high potency products from illegal market

0 Trends in cannabis prevalence



Vape oils (2018-2022): CA 31%, BC 31%, AB 36%, SK 35%, MB 36%, ON 34%, QC 22%, ATL 22%

Solid concentrates (2018-2022): CA 18%, BC 19%, AB 21%, SK 27%, MB 24%, ON 17%, QC 13%, ATL 20%

35




Can we do this in US?

- Yes, but concerns over federal illegality for public employees
- Alternative is to use incubate/create a nonprofit to manage the system or to contract a nonprofit
- Like contracting an electric company to provide power
- Use contract in addition to law to create guardrails, including advertising restrictions that may be limited by law under first amendment
- Supernat captured for state and/ local government goals
- Less pressure on legislature?

Create the Pennsylvania Cannabis Society?

36


Key Principles: Products

-  Create authority to regulate products not just issue licenses
-  Limit product diversification and increasing potency
-  Prohibit designs and flavors attractive to youth

37

Product Regulations


- Manufacturing**
 - Don't allow "kid's menu" products (e.g., copycat candies, snacks & pop)
 - Clearly define attractiveness to youth
 - Products should **NOT** resemble "cartoons, fictional characters, non-cannabis kids foods, people, animals, toys, or existing food brands"
 - Ban artificially derived cannabinoids (e.g., delta-8)
 - Standardized dosing for products (e.g., 5mg for edibles in easily defined, geometric shapes)
 - Limits on THC content



38

Product Regulations

- Manufacturing**
 - Regulating product design and content is as or more important than testing
 - Regulating hemp products and prohibiting intoxicating hemp is essential or it undermines legal cannabis system
 - Pre-marketing product approval is valuable



39

Key Principles: Price

Tax	Tax, tax based on THC content
Capture	Capture revenue for prevention, youth, community reinvestment
Prohibit	Prohibit discounting

40

Key Principles: Retailers

- Limit the number and footprint of retailers
- Approx 1:20,000 people
- Keep Retailers specialized business (no food, clothes, etc)
- Keep them away from schools & homes (Buffers)

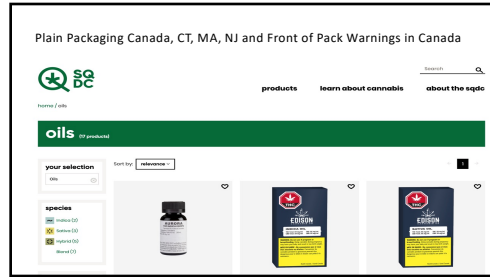
41

Key Principles: Information and Marketing

- Limit marketing & health claims to the maximum extent allowable
- Warn and inform consumers



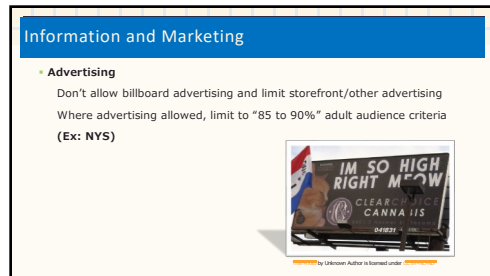
42



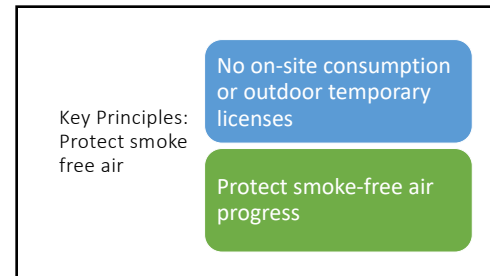
43



44



45



46



47

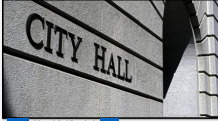


48

Local Control

Preserve local jurisdictions' ability to...

- Opt out
- Tax locally
- License
- Control number and types of outlets
- Regulate sale and marketing beyond state law
- It's ok if a little slower



49

In Summary, regulation should:

- MINIMIZE** health harms of legalization
 - Fetal & child health
 - Mental health
 - Youth initiation and addiction
 - Driving fatalities
- BALANCE** criminal justice advances with public health objectives...
 - NOT** driving up consumption
 - PREVENT** excessive growth of a for-profit industry
 - BUILD** greater health and social equity
 - PREVENT** substance abuse



50

Summary of these ideas




51

Thank You!

Lynn Silver, MD, MPH, FAAP
lsilver@phi.org
 917-974-7065

www.gettingitrightfromthestart.org
 Join Our Listserv
 Contact Us



52

Thank you for the opportunity to present to you today regarding my concerns and thoughts on marijuana commercialization and legalization in Pennsylvania from a public health and safety perspective.

Using Colorado as an example, we have seen what would be categorized as unintended consequences related to cannabis expansion and commercialization. I am thankful that the state of Pennsylvania is taking a positive step to protect its citizens from a public health and safety angle. I will summarize a few of the, what I feel, are important issues to take into consideration.

OPIOID CRISIS

One of the platforms to legalize cannabis for medical, and perhaps, recreational purposes in Colorado in many states is that it will help with our drug crisis. Provisional 2023 data, as of April 19, 2024, shows that Colorado shattered another record in drug overdoses under the banner of legalization. Overall in the United States our drug crisis worsens in the era of legalization for both medical and recreational purposes.

PEDIATRIC POISONINGS

Pediatric poisonings related to marijuana are on the rise not only in Colorado but in other states, including Pennsylvania.

In Colorado, the largest percent increase in reported marijuana exposures occurred when adult use cannabis retail and medical markets open to the public in 2014 and 2010 respectively. Since 2013, 2/3 of marijuana exposures have been marijuana only. Nearly 50% of marijuana exposures were in children five years old and younger and more than 50% we're related to edibles.

A publication March 2024 from the Journal of Adolescent Health clearly demonstrates that marijuana poisonings are steadily on the rise particularly compared to other substances.

Pediatric marijuana poisonings are also on the rise in Canada. Note that the province of Quebec does not allow edibles and have a significantly less pediatric poisonings related to marijuana compared to some of the other provinces.

SUICIDE DATA

In the state of Colorado, marijuana is currently the most prevalent substance found in completed teen suicide, as well as in completed suicides for those 25 years of age and younger. This trend began in 2012, interestingly, when Colorado voted to legalize for recreational purposes, and has steadily worsened over time, now with nearly 43% of teens who complete suicide positive for marijuana, with alcohol at 27%. Many states do not test for toxicology in suicide.

GERIATRIC DATA

Although many states are not tracking this type of data, in the state of California, for example, there has been a 1,800% increase of people over the age of 65 ending up in the emergency department related to marijuana poisoning. This could be related to the duration of California's

medical marijuana program and promotion of cannabis through a variety of advertising, including social media.

IN UTERO EXPOSURE DATA

In the state of Colorado, a recent survey of dispensaries showed that more than 70% of them recommended women use during first trimester pregnancy, a critical time of brain development in the fetus. The ABCD study has been following outcomes related to in utero exposure to cannabis and are finding significant problems in those offspring, particularly behavior related problems, which include psychotic like experiences which are not found in other substance exposures. Those problems persist into early adolescence which has been published at the National Institute of Health. There is also more recent data showing higher incidences of autism spectrum disorder and attention deficit hyperactivity disorder in cannabis exposures in utero.

CHILD FATALITY DATA

Most states do not track data like the state of Texas, which shows that in a case of child abuse or neglect fatality, the most common substance found by the perpetrator, active or past use, is clearly marijuana followed by nothing, more than all of the other substances combined. This would be important data for the state of Pennsylvania to monitor.

PRODUCT INTEGRITY

The state of Oregon in 2019 audit it's they are on a program and was only able to inspect 3% of stores and 1/3 of growers for compliance. The state of Oregon concluded that they could not guarantee the results of testing and could not guarantee that products were safe for human consumption. Most states do not look internally to make things better. More recent data out of Colorado shows the dispensaries were inflating THC potency in order to make more money. Lab directors in states like California and Nevada were found purposely faking testing results putting consumers at safety risks. Colorado has not introspectively looked at its entire program for more many years. Also in Colorado recalls are made long after products are likely consumed. There is no requirement to sign up for these types of recalls in Colorado.

SUMMARY

Generally speaking our country has not done a good job with the current legal drugs that are available such as tobacco, alcohol, and opioids. Now there is another addiction for profit industry creating already established societal harms and it is critical that the appropriate safety measures are in place in Pennsylvania before access is available to your citizens.

I have been asked many times, if Colorado could do it over again what should have been done differently. One of the mistakes Colorado made is not having a state run program initially where there can be tighter control on access and products, with adequate tracking and monitoring of data.

The Colorado Department of Public Health and Environment has done a very good job in monitoring and publishing data and would encourage the state of Pennsylvania to do the same. Other things to consider:

Severely restrict access to youth, with strong penalties for those providing to youth

Mandatory drug testing on violent crimes and associated data tracked overtime, since we know there is a strong link between cannabis use and violence.

Recommend consumers register on site at the dispensary (med and rec) for potential recalls of contaminated products and it should be imperative that products do not end up on the shelf for purchase is potentially contaminated.

Eliminate home grows which are breeding grounds for illegal activity and taxing law enforcement

Discourage use during pregnancy due to known negative impacts on the unborn

Screen both mother and father for their cannabis use in children with ADHD/ASD.

Canada does not recommend men use cannabis if wanting to start a family

Support a potency cap, starting at 10% THC, due to risk of psychosis

Discourage smoking and vaping

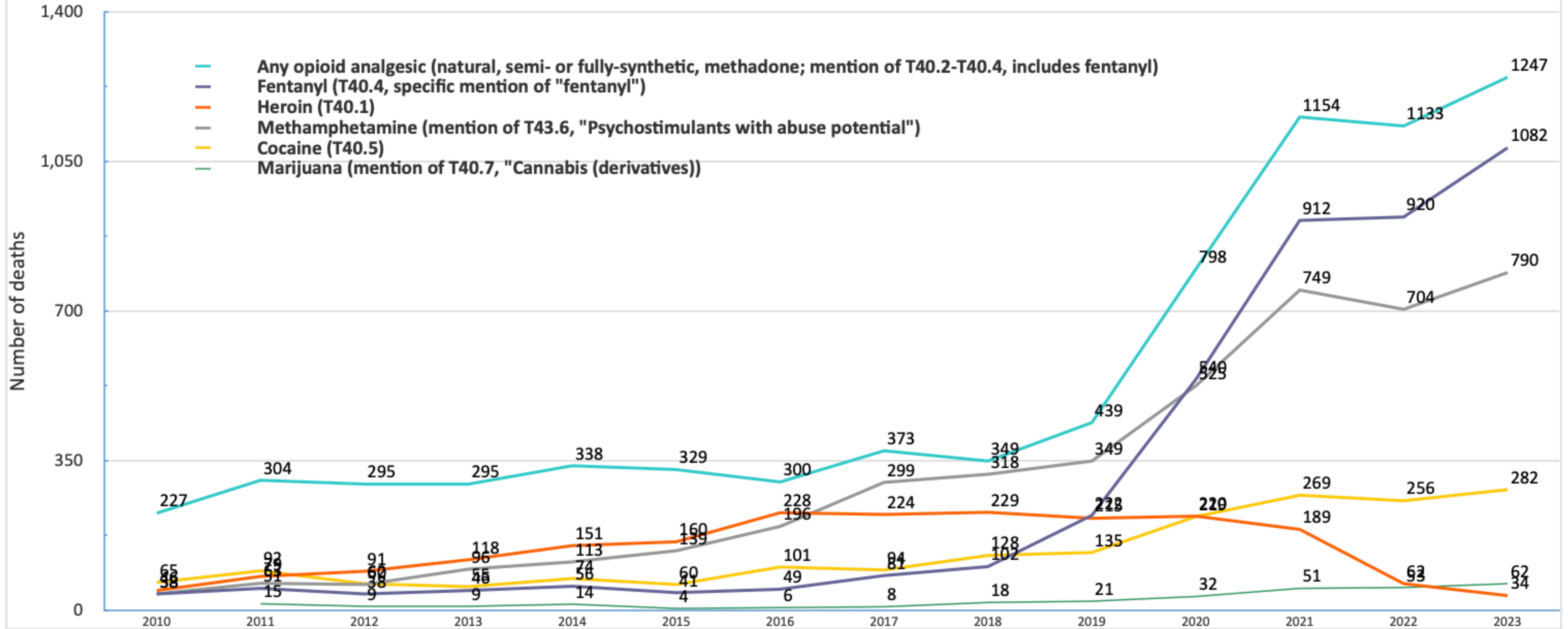
Monitor marijuana-related driving impacts, including fatalities

Have strong independent lab testing requirements and hold producers accountable for contamination with heavy fines

Thank you for your time and thank you for your work for the state of Pennsylvania.

Drug overdose deaths by category of specific drug involvement: 2010-2022

Colorado residents,



Deaths involving more than one substance will be counted in each respective category..
Source: Vital Statistics Program, Colorado Department of Public Health and Environment.

Annual Frequency of Reported Marijuana Exposures, Colorado 2000-2021

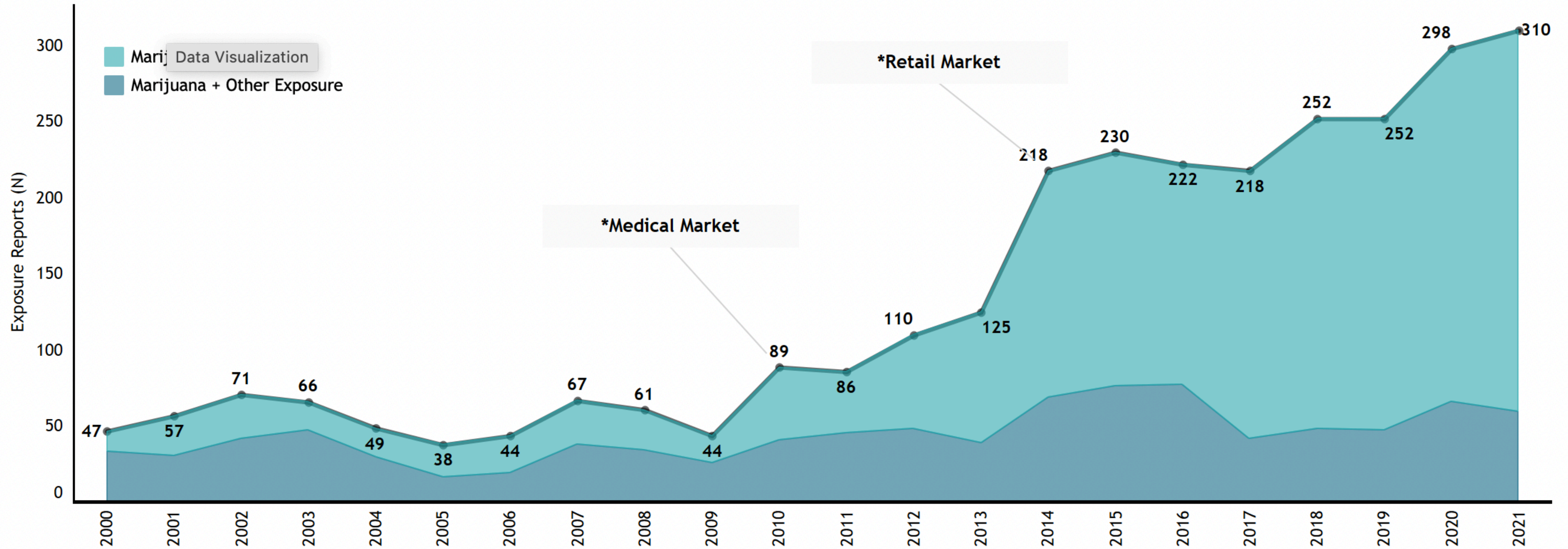


Figure includes:
Ages: All; Product Type: All; Exposure Intention: All; Exposures <=5 suppressed

<https://marijuanahealthreport.colorado.gov/health-data/poison-center-data>

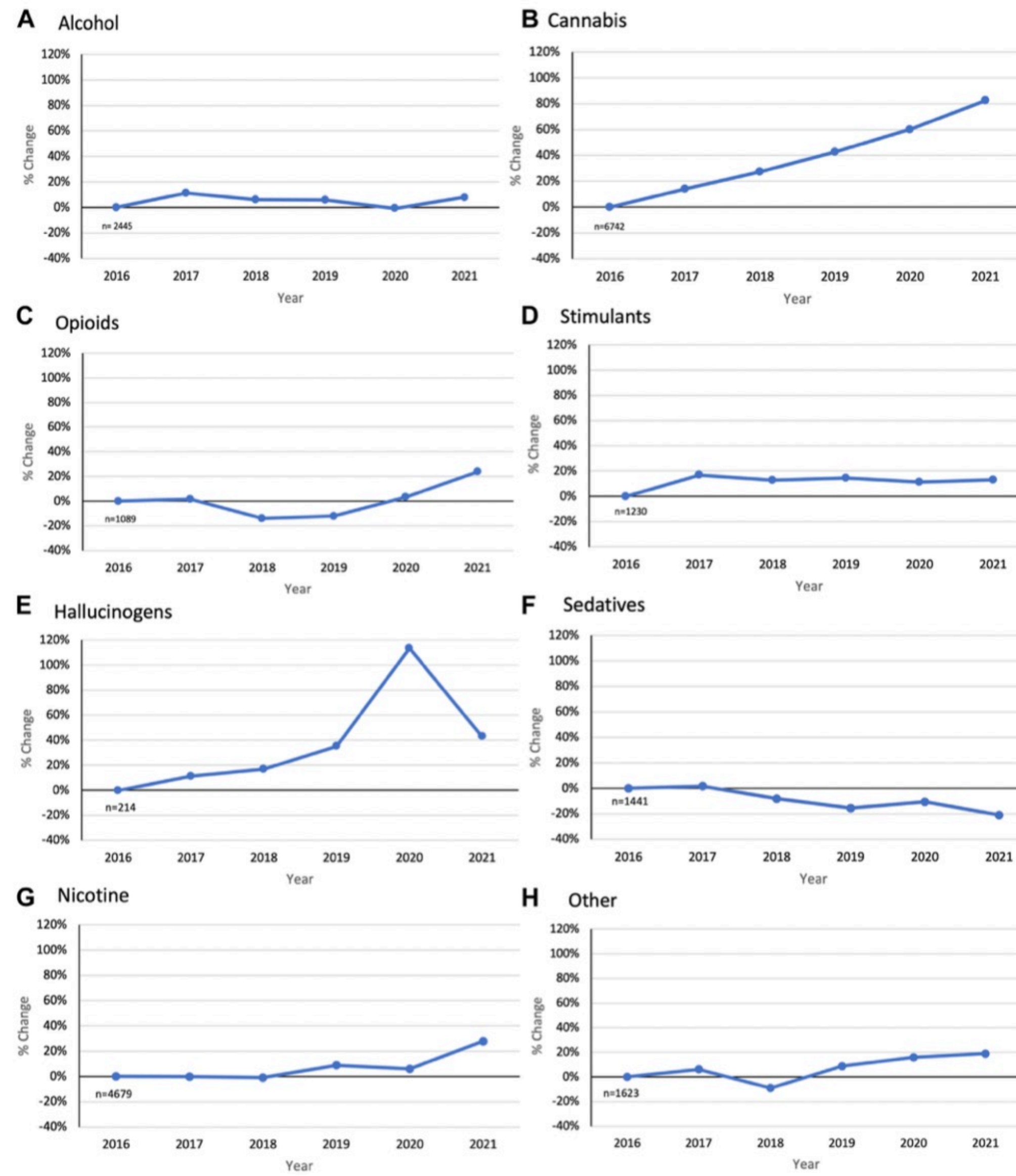
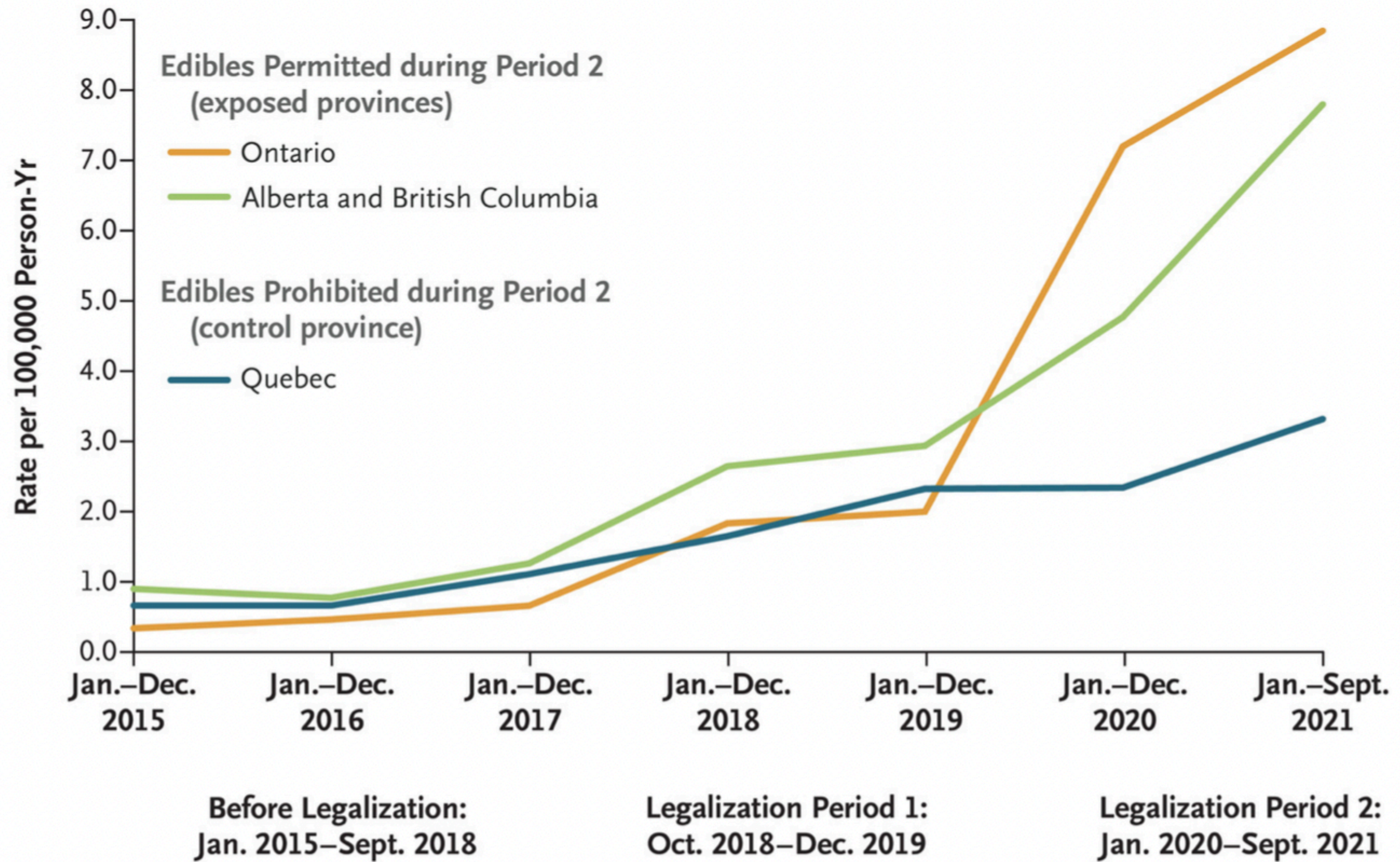


Figure 2. Percentage change of substance-related visits by substance from 2016 to 2021. Substance-related growth from 2016 by substance: Alcohol (A), Cannabis (B), Opioids (C), Stimulants (D), Hallucinogens (E), Sedatives (F), Nicotine (G), and Other Substances (H). Growth values were calculated by generalized estimating equations to develop percentage growth for each substance. Growth values calculated relative to number of visits, n, in 2016.



Suicide in Colorado: Circumstances, Toxicology, and Injury Location, 2020-2021, includes Race/Hispanic Origin

Colorado Violent Death Reporting System

Select Year: 2021

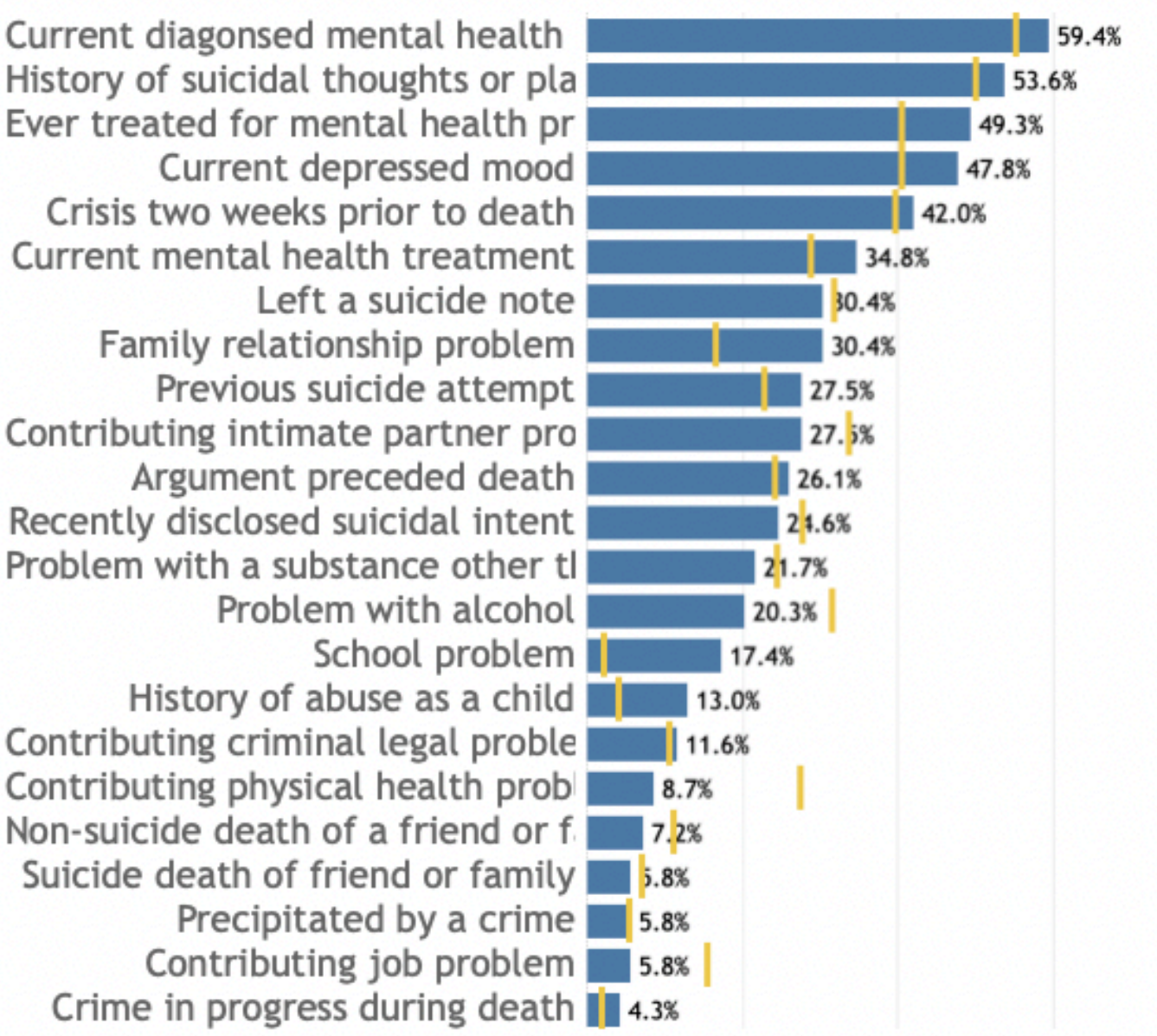
County of residence: (All) Sex: (All) Age: 15-19 years Race: (All) Hispanic Origin: (All)
 Education: (All) Marital status: (All) Veteran status (ever in U.S. Armed Forces): Not a veteran
 Method used to inflict the fatal injury: (All)

Total suicides entire state: 1,352 Total suicides selected population: 71

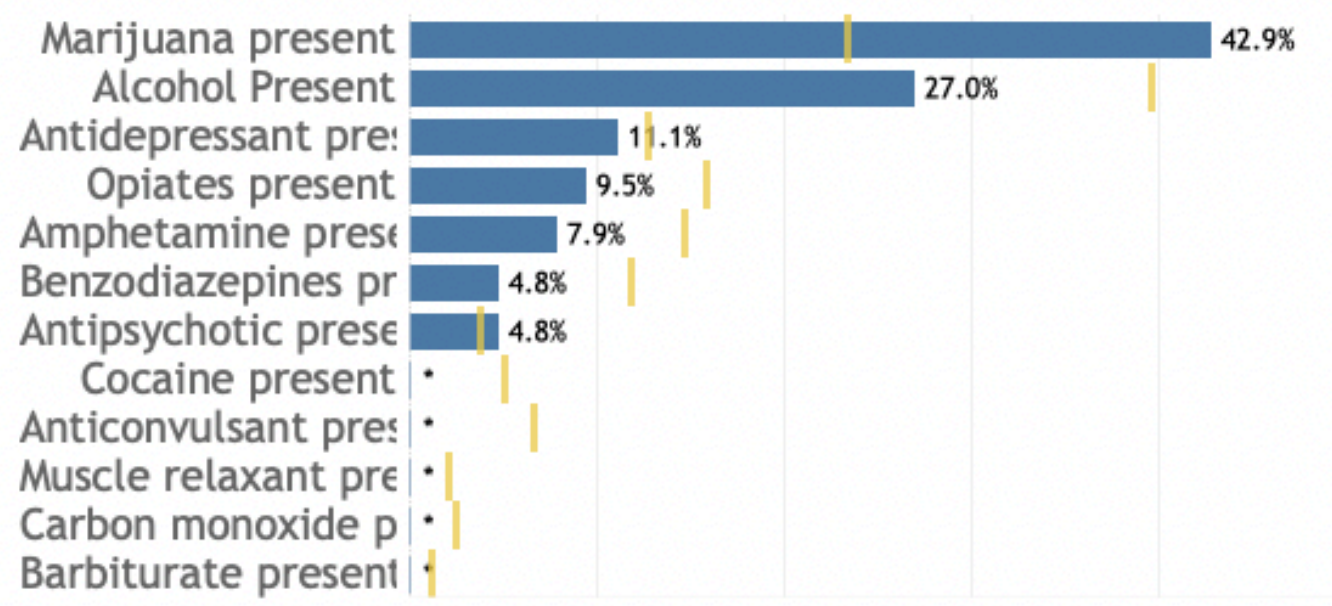
For all charts below: the bars represent the values for selected population, the yellow reference bands are the values for the entire

Circumstances Toxicology

Entire state:		Selected population:	
1+ circumstance:	1,312	1+ circumstance:	69
No circumstance:	40	No circumstance:	



Entire state:		Selected population:	
Toxicology info ava	1,081	Toxicology info ava	63
No toxicology info i	271	No toxicology info i	8



Location where fatal injury was inflicted

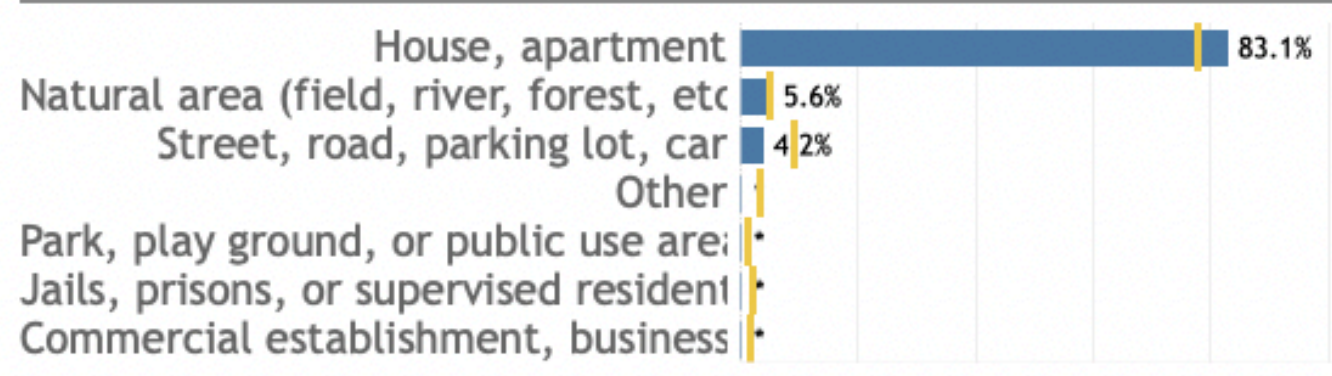


Table 3. Toxicology test results among non-natural, non-homicide deaths, Colorado residents younger than 25 years (population of interest), 2010-2022[‡]

Toxicology result	Frequency	Percent (%) (n=2,233)
Toxicology test results available	2,223	
No substance	713	31.9%
Marijuana present	651	29.2%
Alcohol present	560	25.1%
Opioid present	558	25.0%
Amphetamine present	255	11.4%
Cocaine present	254	11.4%
Benzodiazepines present	185	8.3%
Antidepressant present	180	8.1%
Anticonvulsants present	72	3.2%
Antipsychotic present	51	2.3%
Carbon monoxide present	38	1.7%
Muscle relaxant present	9	0.4%
Barbiturates present	6	0.3%

<https://drive.google.com/drive/u/0/folders/1K0jYw-3spzb6F3OTOW1JLupdMK4Z5mfH>

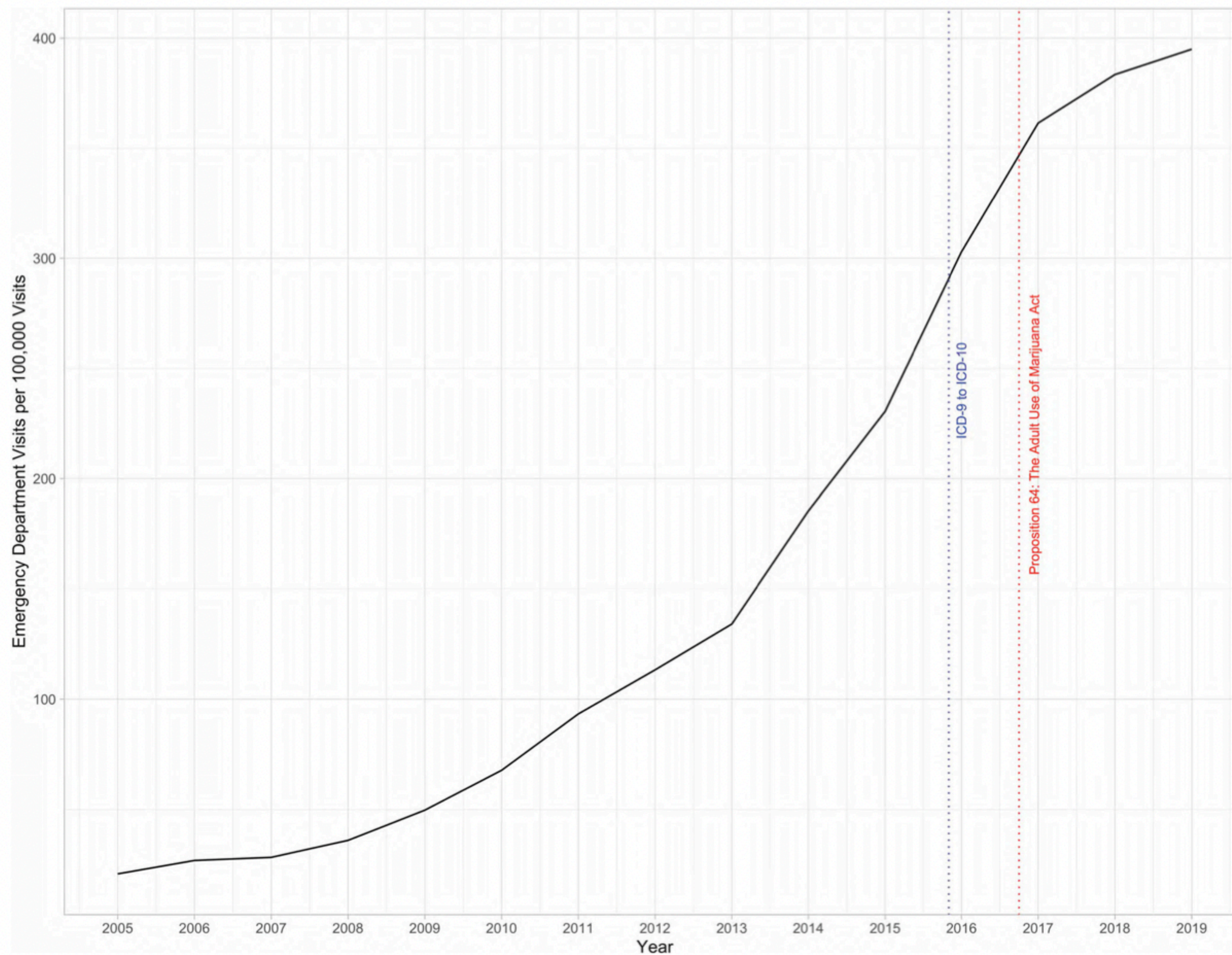
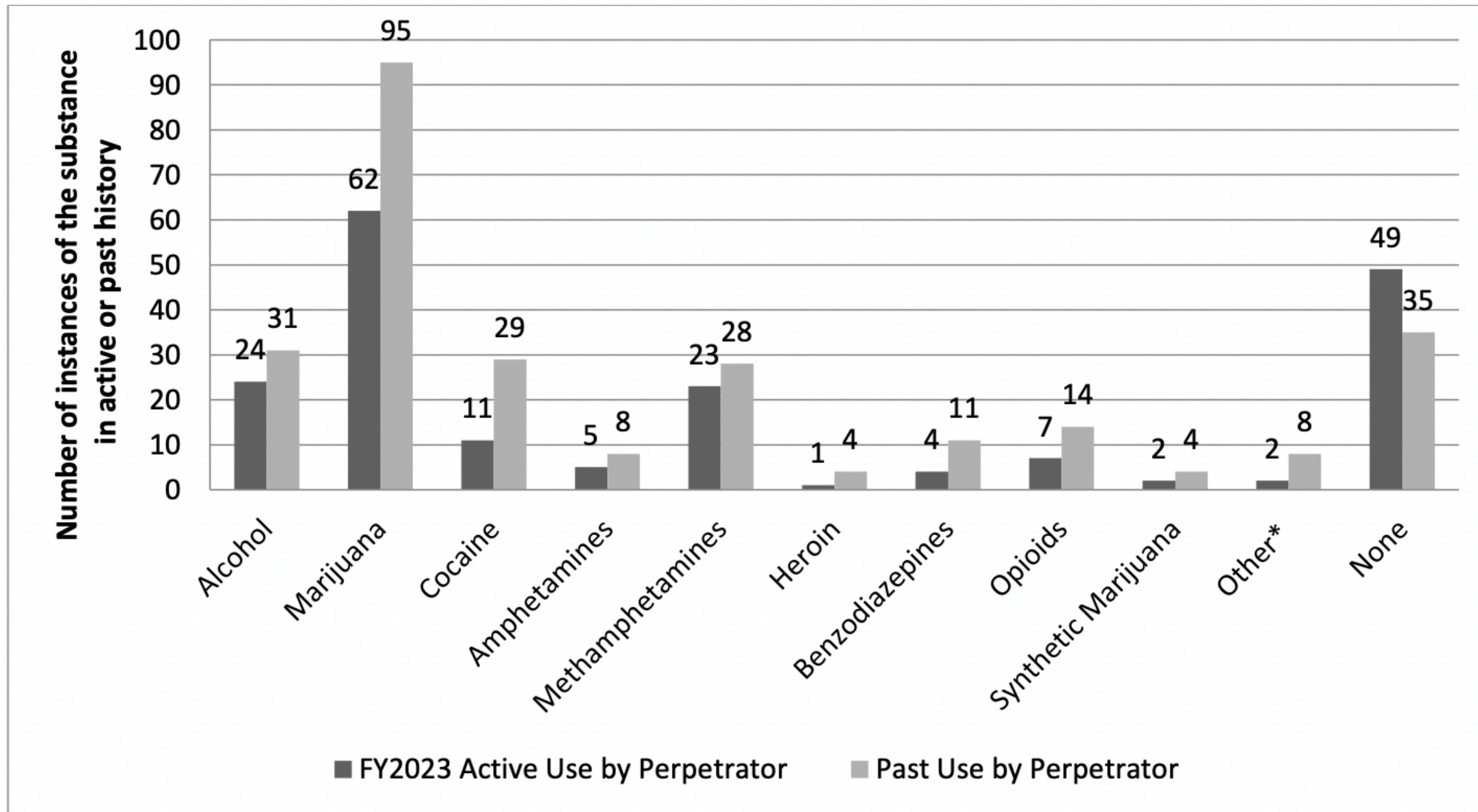


FIGURE 1 Trend in cannabis-related emergency department visit rate per 100,000 visits among adults aged 65 years and older in California, 2005–2019

Figure 11. FY 2023 Confirmed Child Abuse or Neglect Fatality by Substance Abuse by Perpetrator



[https://www.dfps.texas.gov/About DFPS/Reports and Presentations/PEI/documents/2024/2024-03-20 Child Maltreatment Fatalities and Near Fatalities Annual Report.pdf](https://www.dfps.texas.gov/About%20DFPS/Reports%20and%20Presentations/PEI/documents/2024/2024-03-20%20Child%20Maltreatment%20Fatalities%20and%20Near%20Fatalities%20Annual%20Report.pdf)

My name is Jennifer B. Unger, Ph.D. I am a Professor of Population and Public Health Sciences, Vice Chair for Faculty Development, and Director of the Ph.D. program in Health Behavior Research at the University of Southern California. I am qualified to testify on legalization of cannabis in Pennsylvania because I have worked in tobacco and cannabis control research in California since 1998. The California experience with cannabis legalization demonstrates some challenges that Pennsylvania might face.

California legalized cannabis for adult recreational use in 2016, and retail cannabis stores were allowed to open in 2018. Retail stores could operate legally if they obtained a state license and followed rules for age verification, THC content, and packaging. Unfortunately, numerous unlicensed retailers also appeared, and California did not have the enforcement resources to shut them down. Unlicensed retailers are more likely to sell to minors, sell high-THC products, and sell products without childproof packaging. The presence of these unlicensed retailers is dangerous to youth.

The state law legalized cannabis retailers statewide. However, individual jurisdictions such as counties and cities could pass ordinances banning cannabis retailers. We noticed that many high socioeconomic status jurisdictions banned cannabis retailers, whereas low socioeconomic status jurisdictions viewed cannabis as a revenue opportunity and did not ban it. As of 2024, 44% of California cities and counties allow at least one type of cannabis business, and 56% do not. This has created a patchwork of regulations, where residents of a non-cannabis jurisdiction can drive a short distance and purchase cannabis in a neighboring jurisdiction. This concentrates the revenue (but also the crime, litter, etc.) in low socioeconomic status locations.

I wish to highlight two of my published research studies that are relevant to Pennsylvania's decision about whether to legalize cannabis. In the first study (Unger et al., 2020), we used data from the California Board of Cannabis Control and Weedmaps to map the locations of all licensed and unlicensed cannabis retailers throughout California. We merged these data with racial/ethnic and socioeconomic data from the US Census. We identified 448 licensed retailers and 662 unlicensed retailers. Compared with neighborhoods with only licensed retailers, neighborhoods with only unlicensed retailers had higher proportions of Hispanics and African Americans and lower proportions of non-Hispanic whites. Neighborhoods with both licensed and unlicensed retailers had higher proportions of African Americans, Asian Americans, and people living in poverty, relative to neighborhoods with only licensed retailers. Unlicensed retailers were disproportionately located in unincorporated areas and jurisdictions that allow cannabis retailers. This indicates that minority and low-income populations in California are disproportionately exposed to unlicensed cannabis retailers, potentially exacerbating health disparities by selling unregulated products or selling to minors.

We then collected survey data from 1406 adolescents throughout California to ask about their cannabis use. We found that adolescents who lived near cannabis retailers were more likely to use cannabis than those who lived farther away, even after controlling for socioeconomic differences. For every additional 5 driving miles to the nearest cannabis retailer, the risk of past-month cannabis use was reduced by 3.6% (Albers et al., 2023). We also found that adolescents who lived in jurisdictions that allowed cannabis retailers were significantly more likely to report past-month cannabis use and easy access to cannabis (Rogers et. al, 2022).

Our findings indicate that proximity to cannabis retailers, especially unlicensed retailers but also licensed retailers, is a risk factor for cannabis use among adolescents. To prevent this, I recommend the following:

1. Pennsylvania should limit youth access to cannabis retailers by placing licensed retailers far from residential areas, schools, and parks and strongly enforcing age verification practices.

2. Pennsylvania should devote significant resources to enforcement so that unlicensed retailers can be detected and shut down promptly.
3. Pennsylvania should consider health equity in awarding licenses to make sure low-income and minority areas do not become saturated with cannabis retailers.

References

Albers L, Rogers CJ, Steinberg J, Vos RO, Soto D, Lee R, Wu JS, Unger JB. Proximity to Cannabis Retailers and Recent Cannabis Use among a Diverse Sample of California Adolescents. *Subst Use Misuse*. 2024;59(5):643-650. doi: 10.1080/10826084.2023.2294965. Epub 2023 Dec 19. PMID: 38115623.

Rogers CJ, Steinberg JK, Vos RO, Soto DW, Unger JB. Associations between Local Jurisdiction Ordinances and Current Use of Cannabis Products in California Adolescents. *Subst Use Misuse*. 2022;57(3):373-379. doi: 10.1080/10826084.2021.2012693. Epub 2021 Dec 14. PMID: 34903134.

Unger JB, Vos RO, Wu JS, Hardaway K, Sarain AYL, Soto DW, Rogers C, Steinberg J. Locations of licensed and unlicensed cannabis retailers in California: A threat to health equity? *Prev Med Rep*. 2020 Jul 13;19:101165. doi: 10.1016/j.pmedr.2020.101165. PMID: 32714779; PMCID: PMC7378688.