



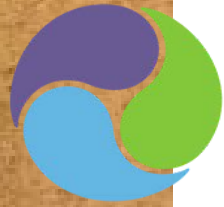
The Cannabis Landscape: Public Health and Policy Implications

Sharon Garrett, MPH, MA

Oct. 16th, 2024



Bia Carlini, PhD, MPH, Director



ADAI
ADDICTIONS, DRUG &
ALCOHOL INSTITUTE

CANNABIS EDUCATION & RESEARCH PROGRAM



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Who we are

Outline



Legal Cannabis Landscape

Health Effects

Reducing Risks: Policy

Reducing Risk: Pilot Project with Parents

Outline



Legal Cannabis Landscape

Health Effects

Reducing Risks: Policy

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Cannabis: What is it?

Comes in many forms	Used in many ways
Flower	Smoked/Vaped
Concentrates	Smoked/Vaped/Dabbed
Edibles	Ingested/Eaten
Topicals/Lotions	Applied to skin
Hemp (<.03% THC)	textiles, paper, rope etc.

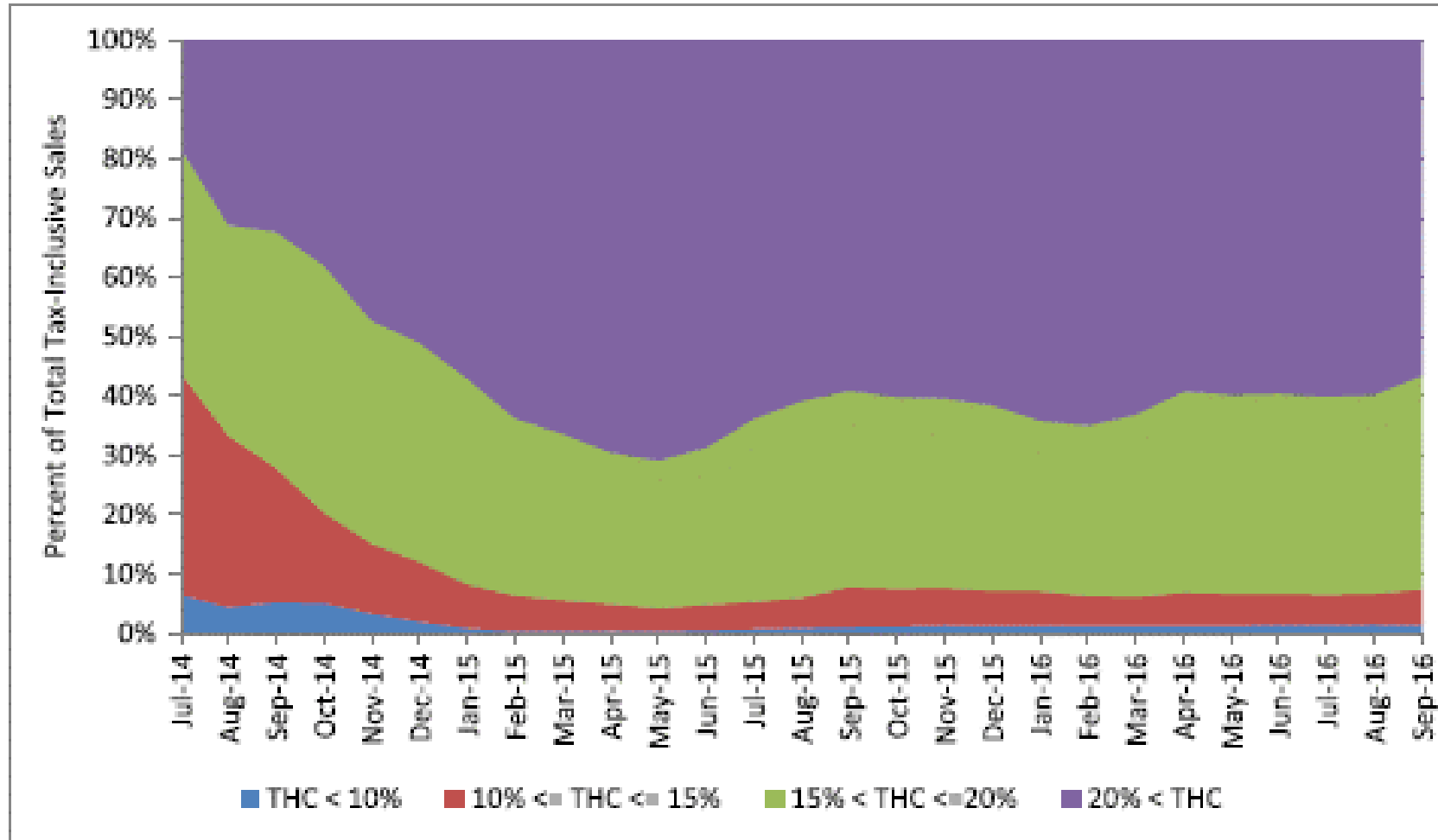


THC concentration and legalization

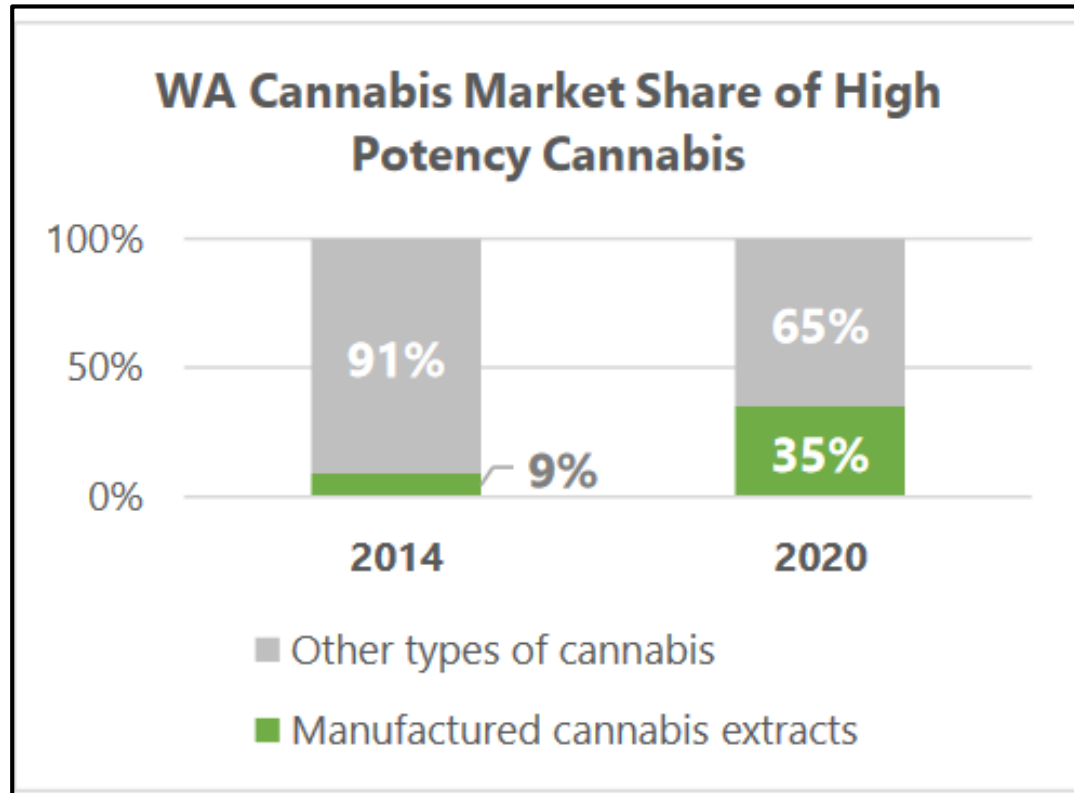
High potency = THC Concentration

THC concentration and legalization

Flower with less than 10% THC has vanished from the WA market



THC concentration and legalization



Manufactured products: 60-90% THC



Sources:

Kilmer, Beau, Steven Davenport, Rosanna Smart, Jonathan P. Caulkins, and Gregory Midgette, After the Grand Opening: Assessing Cannabis Supply and Demand in Washington State. Santa Monica, CA: RAND Corporation, 2019.

https://www.rand.org/pubs/research_reports/RR3138.html

WA State House Commerce and Gaming Commission work session. Sep 15, 2020. <https://www.twv.org/watch/?eventID=2020091004>



Cannabis Products - Flower



Cannabis Products: Edibles



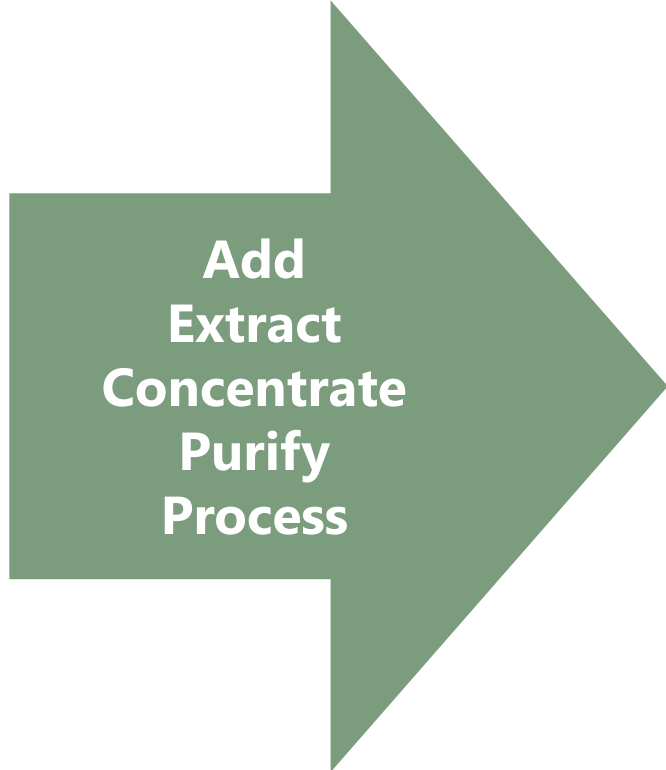
Cannabis Products – Vape Pens

Cannabis Products – Dabs





"fruit" by [sibhusky2](#) is licensed under [CC BY-NC 2.0](#)





Is high potency cannabis more detrimental to health than lower potency cannabis?

YES, it is

Outline



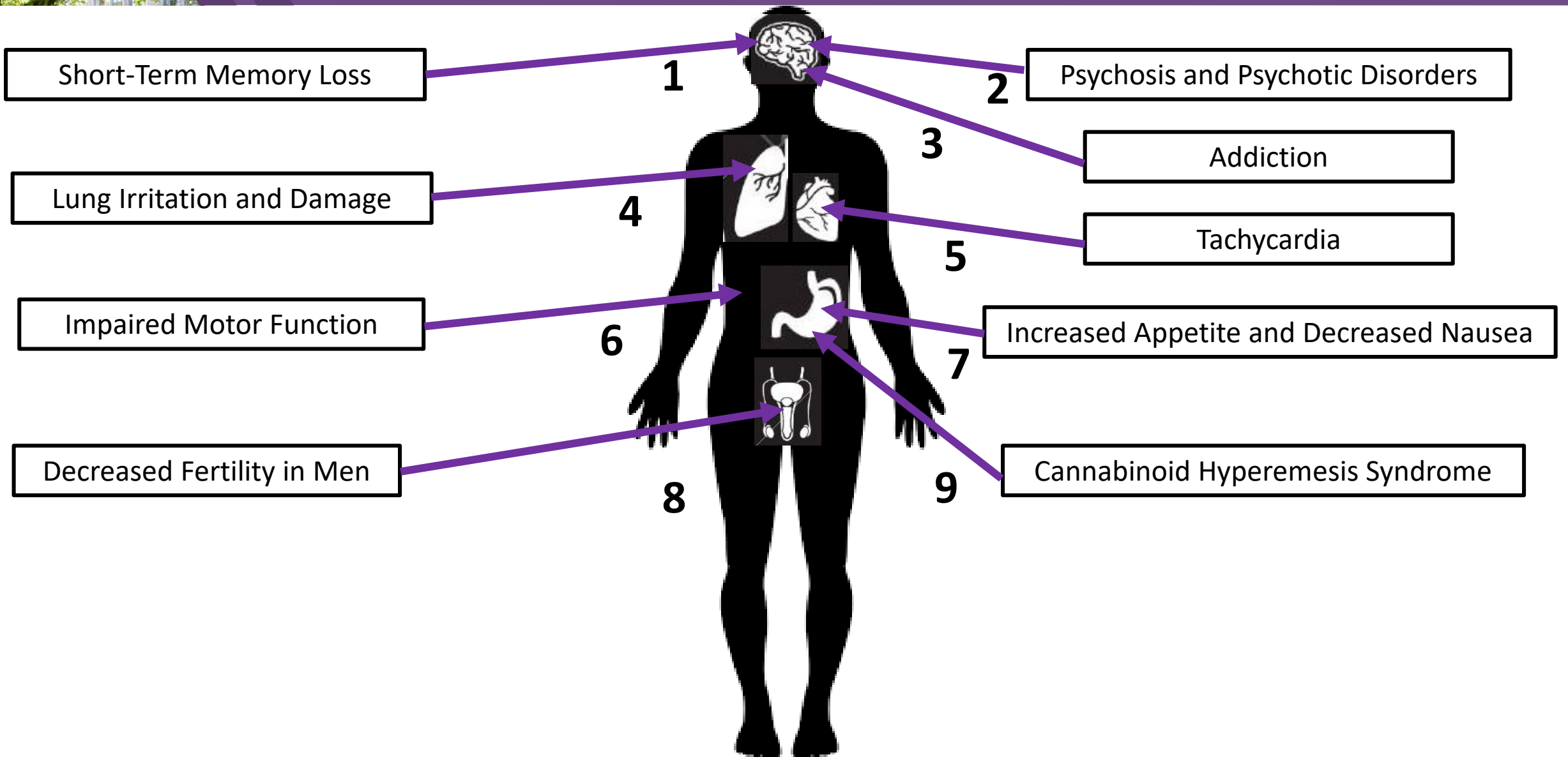
WA Cannabis Landscape

Health Effects

Reducing Risks: Policy

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Cannabis: What are the health effects?



Psychotic Disorders

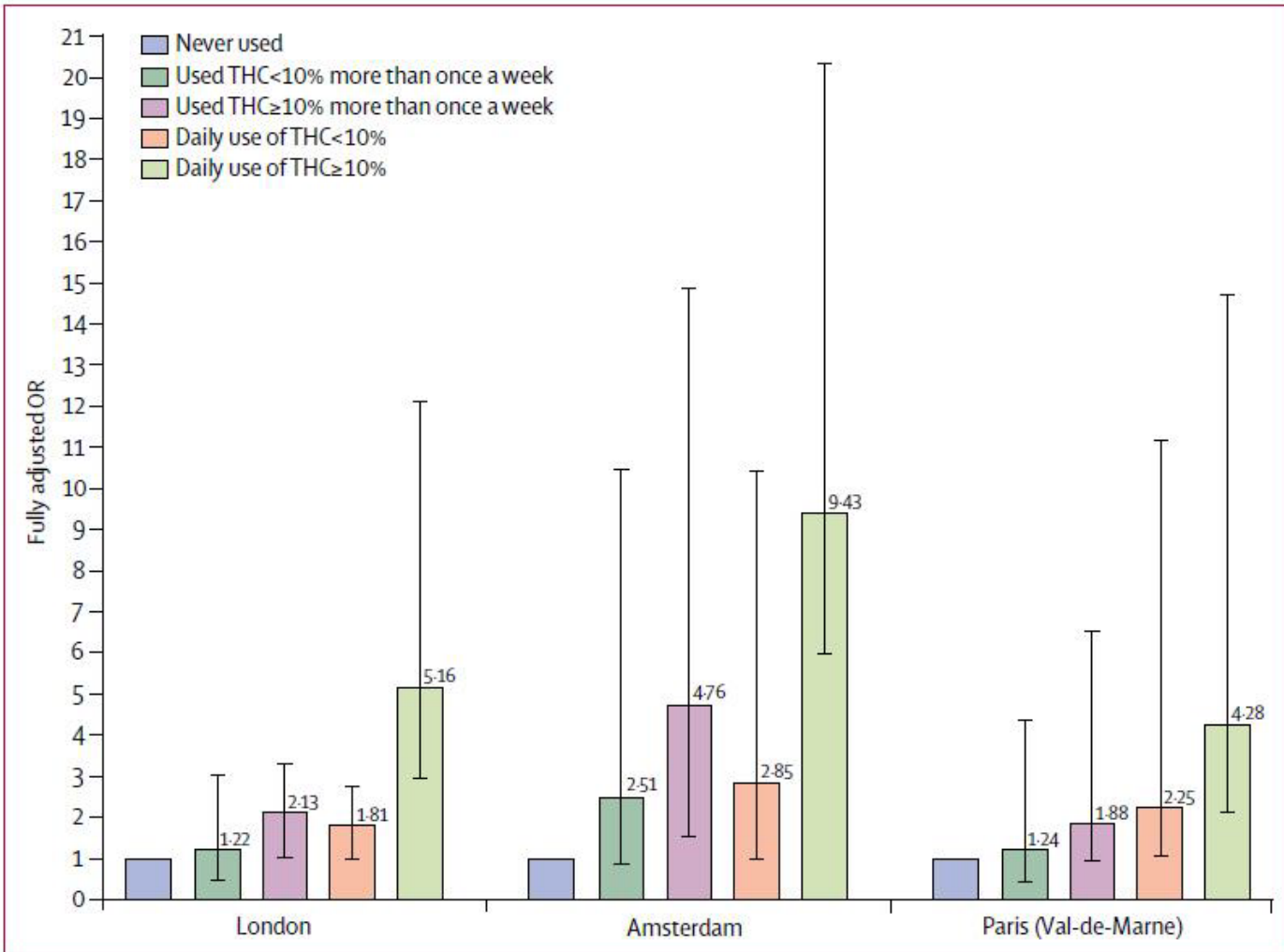


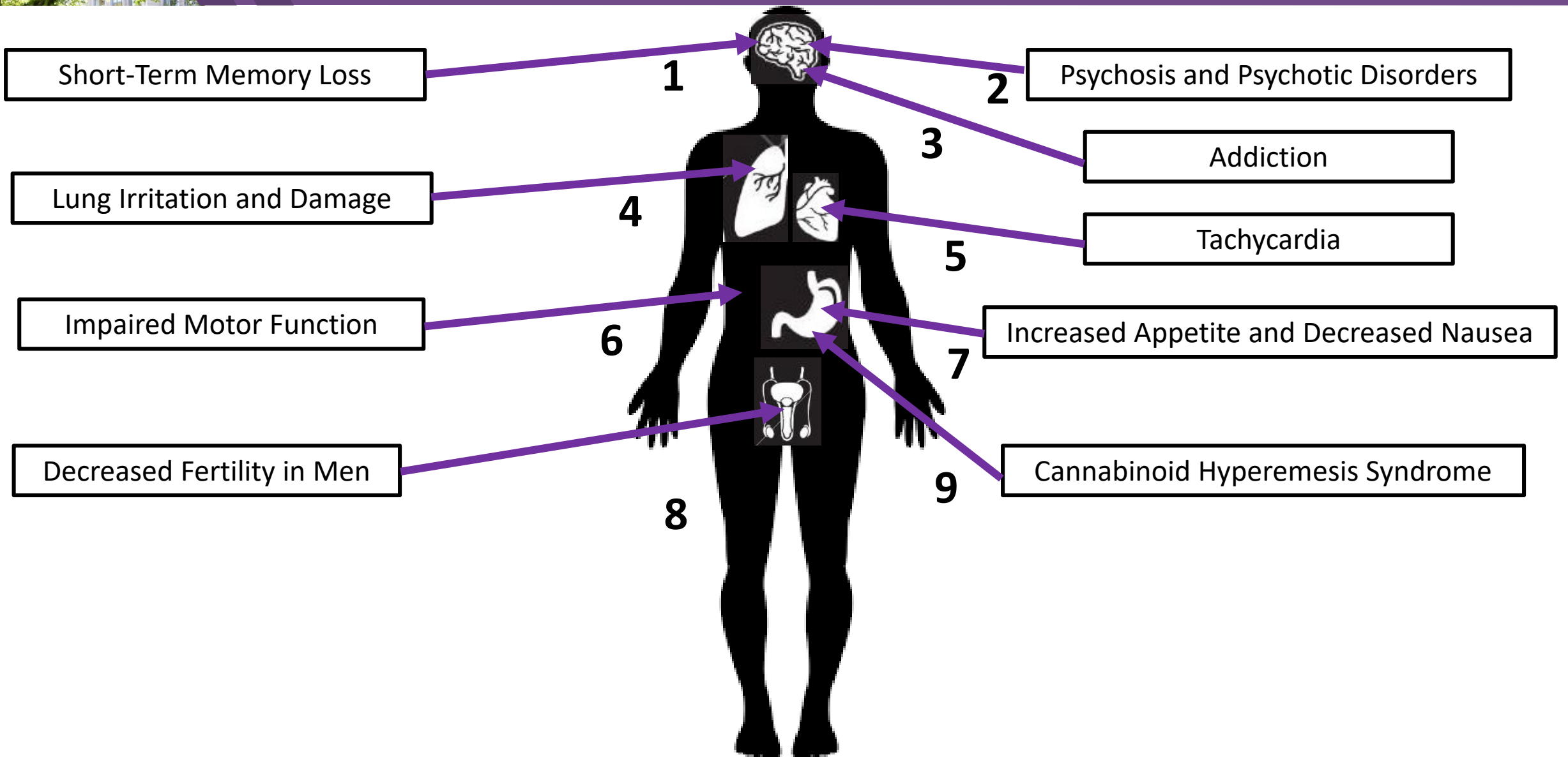
Figure 1: Fully adjusted ORs of psychotic disorders for the combined measure of frequency plus type of cannabis use in three sites. Data are shown for the three sites with the greatest consumption of cannabis: London (201 cases, 230 controls), Amsterdam (96 cases, 101 controls), and Paris (52 cases, 100 controls). Error bars represent 95% CIs. OR=odds ratio.

Daily use = 3x risk increase

Daily, High-THC = 5x risk increase

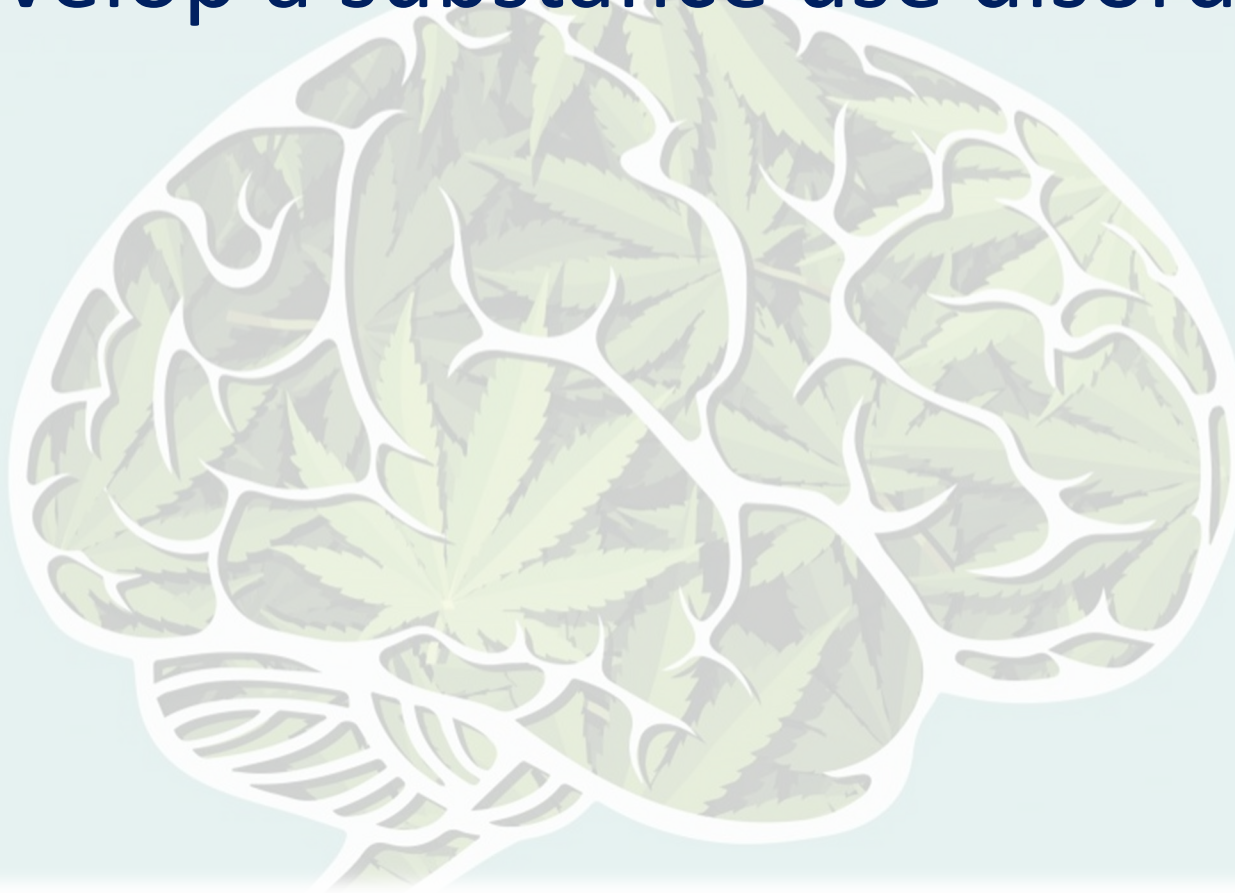
Di Forti M, *et al.* The contribution of cannabis use to variation in the incidence of psychotic disorder across Europe (EU-GEI): a multicentre case-control study. *The Lancet Psychiatry.* 2019;6:427–436.

Cannabis: What are the health effects?



Cannabis: Can people become addicted?

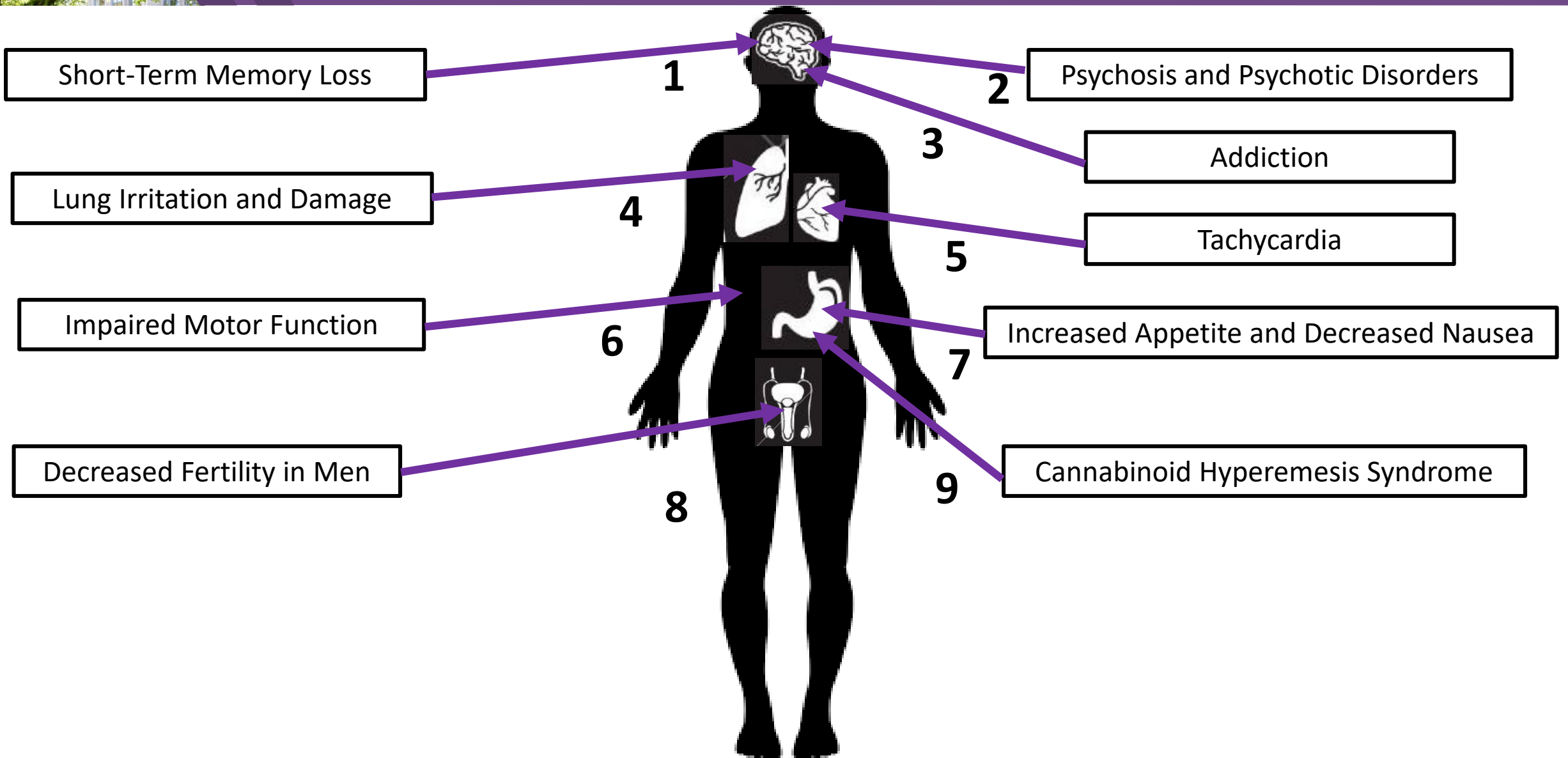
Of all who've ever used cannabis, about **9%** develop a substance use disorder.



Compared to:
Alcohol – 15%
Cocaine – 17%
Heroin – 23%
Tobacco – 33%

~30% of heavy users are likely to have some degree of cannabis use disorder

Cannabis: What are the health effects?



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RESEARCH REPORT

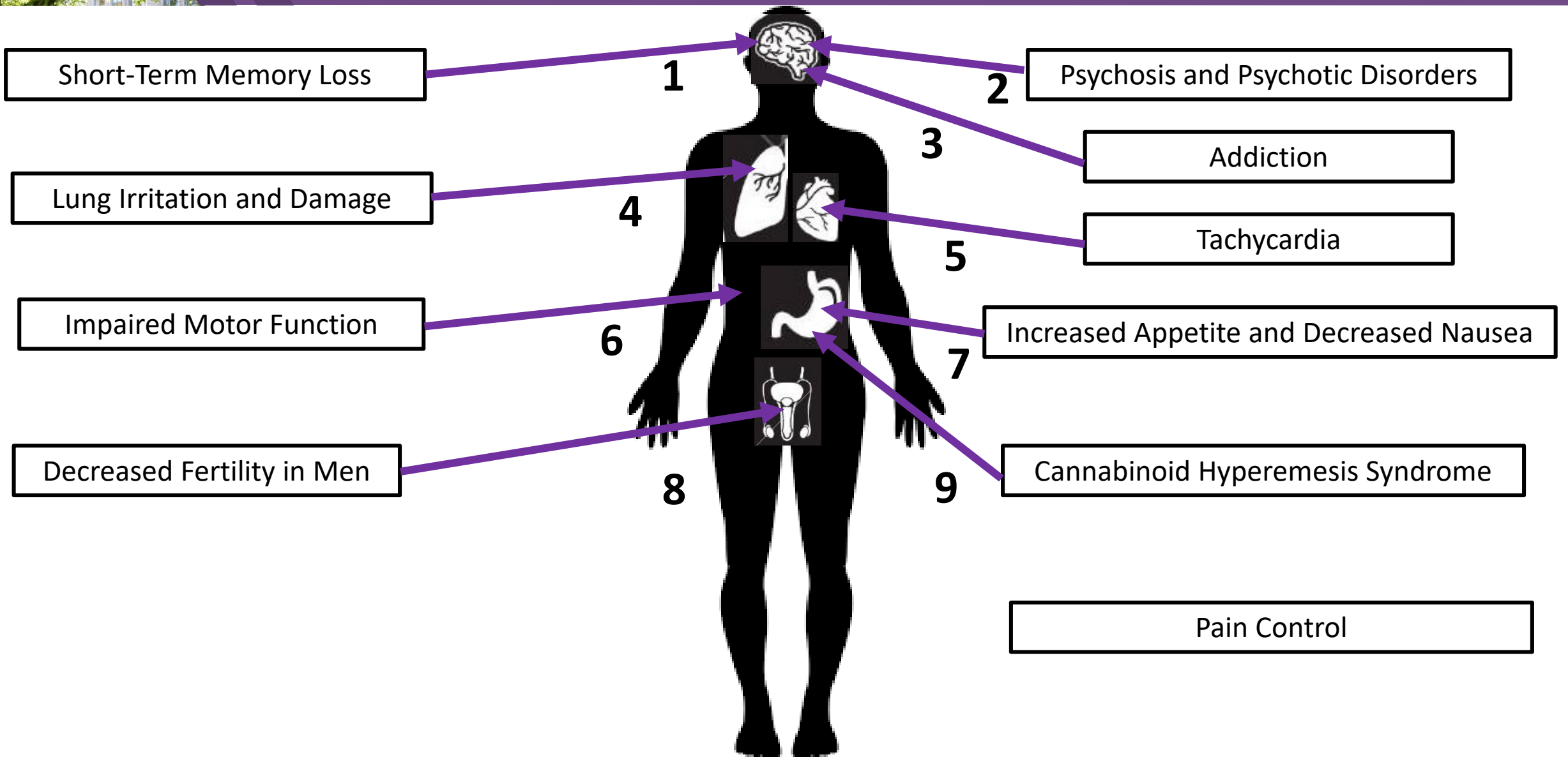
ADDICTION

SSA

Cannabis use disorder and adverse cardiovascular outcomes: A population-based retrospective cohort analysis of adults from Alberta, Canada

Anees Bahji^{1,2,3,4}  | Josh Hathaway⁵ | Denise Adams^{5,6} | David Crockford^{1,3} |
E. Jennifer Edelman^{7,8}  | Michael D. Stein^{9,10} | Scott B. Patten^{1,2}

Cannabis: What are the health effects?



Cannabis Overdose



Are Teens and Adults Affected Differently?



Memory, Attention,
Concentration



Emotional Development



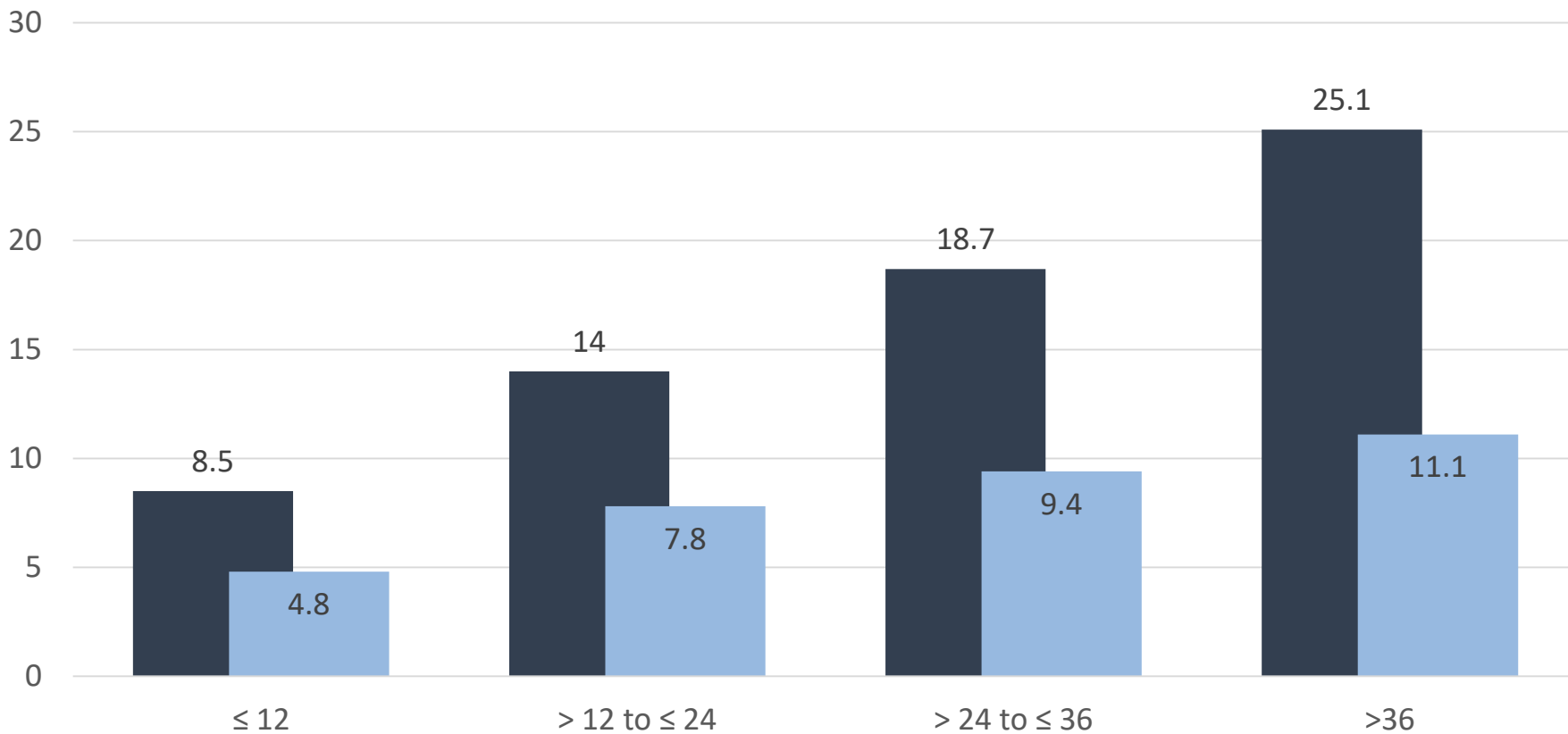
Psychosis



Cannabis Use Disorder

Adolescents are highly vulnerable to addiction

% cannabis use disorder by months since first use and age



■ 12-17
■ 18-25

Volkow, Han, Einstein, & Compton. (2021) Prevalence of substance use disorders by time since first substance use among young people in the US. *JAMA Peds*; 175(6).

Cannabis: What makes cannabis riskier?



Dose



Frequency



How its Used



Who the Person Is



When It's Use It

Outline



Legal Cannabis Landscape

Health Effects

Reducing Risks: Policy

Reducing Risk: Pilot Project with Parents

Topics

Why policies?

Which promising policies?

Suggested policies

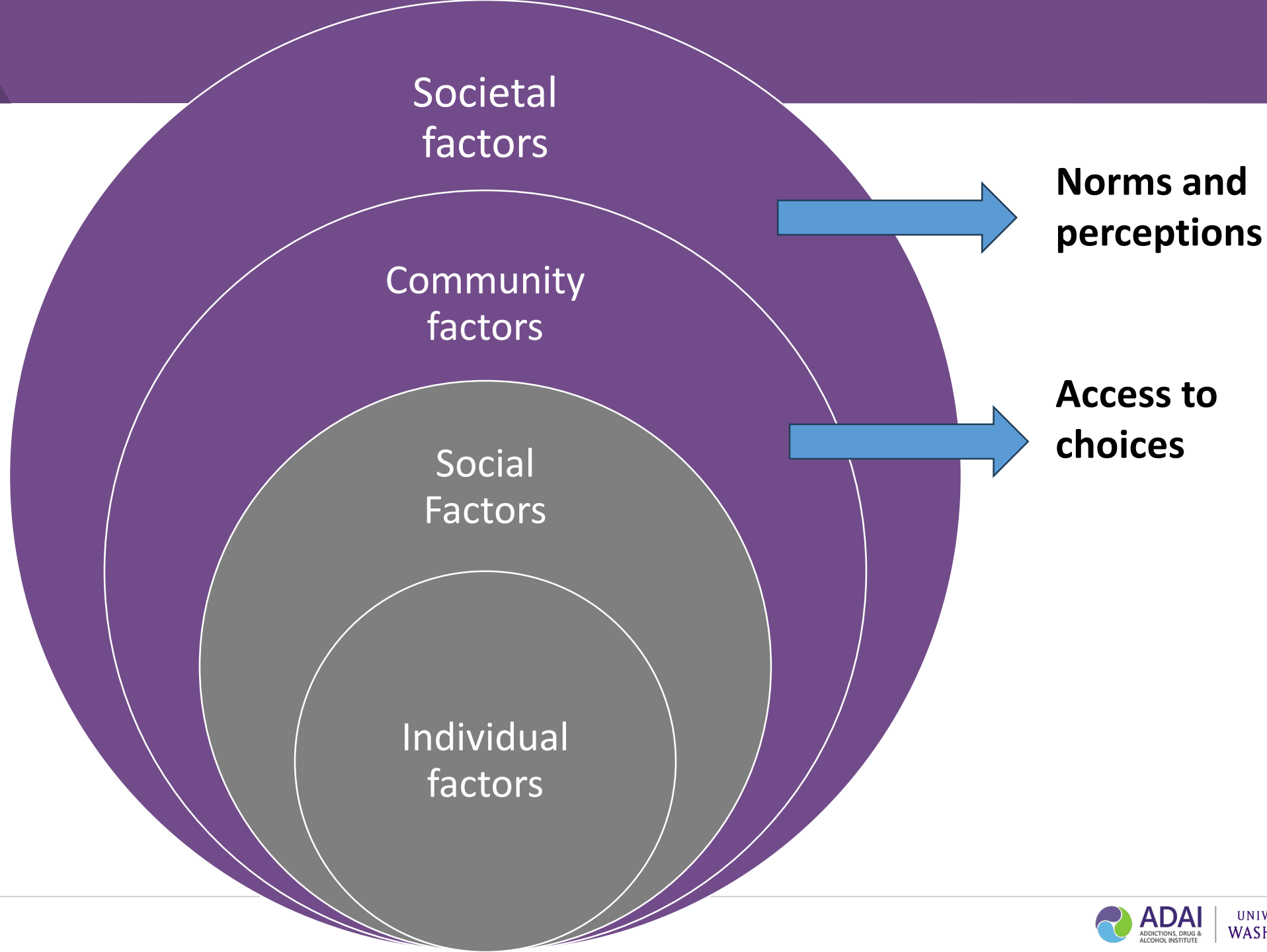
Cannabis use is a **modifiable risk factor**

Action Points

Delay cannabis use initiation

Discourage use of High THC Products

Discourage frequent use



Societal factors

Norms and perceptions

Community factors

Access to choices

Social Factors

Individual factors

Healthy choices are made by individuals,
but they can be either facilitated or
hindered by social, physical, and
economic factors.

And policies can change these factors.

In WA: Cannabis regulations/policies

Age of purchase: 21 years old

Edibles: 10 mg of THC per wrapping

Retail distance from schools and parks

Billboard content

“Not for kids” symbol

Topics

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Suggested policies

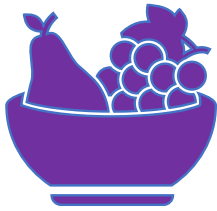
Promising policies: behavioral economics

Default exerts a powerful influence on choice

Make the healthy choice the easy choice

Individuals must actively work to engage in less desirable behaviors

Make the healthy choice the easy choice



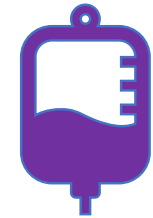
Nutrition



Immunization

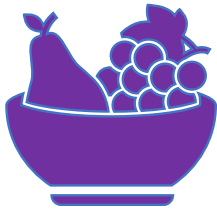


Retirement savings



Organ Donation

Make the healthy choice the easy choice



Nutrition



Immunization

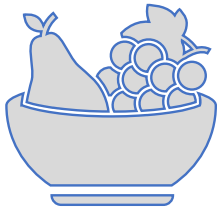


Retirement savings



Organ Donation

Make the healthy choice the easy choice



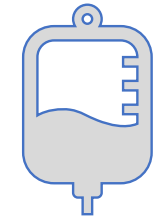
Nutrition



Immunization

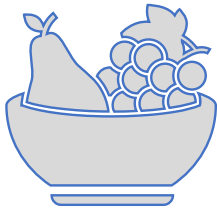


Retirement savings



Organ Donation

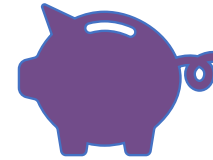
Make the healthy choice the easy choice



Nutrition



Immunization

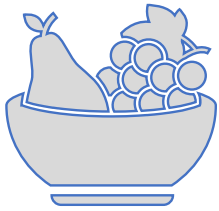


Retirement savings



Organ Donation

Make the healthy choice the easy choice



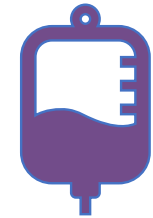
Nutrition



Immunization



Retirement savings



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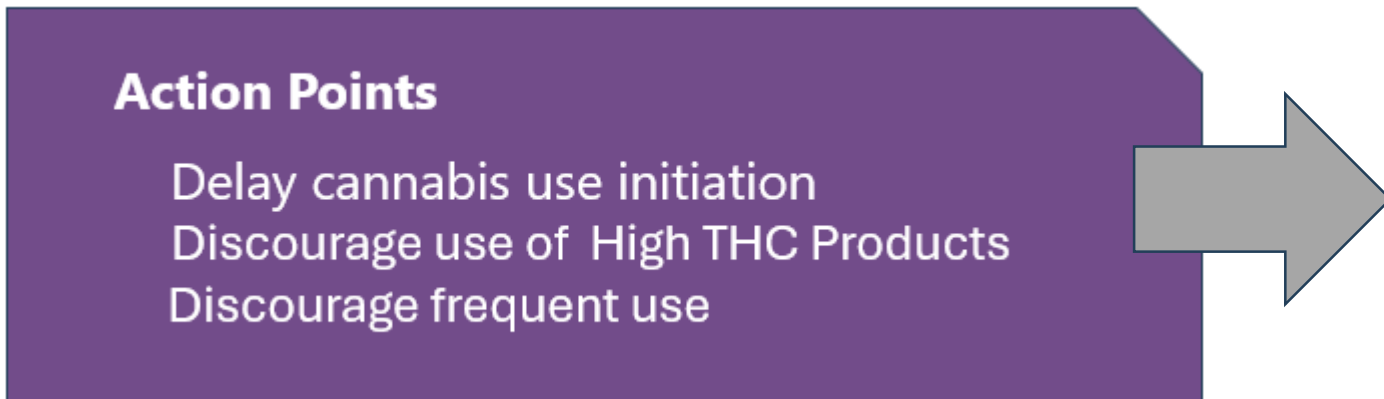
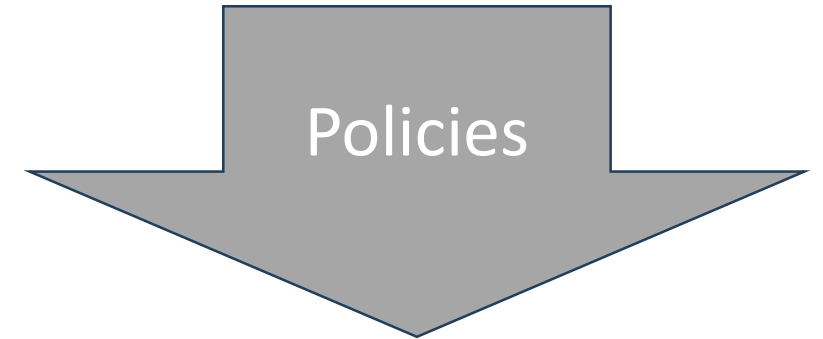
Topics

Why policies?

Which promising policies?

Suggested policies

Cannabis use is a **modifiable risk factor** in the onset and progression of psychotic disorders



Make the healthy choice the easy choice

Individuals must actively work to engage in less desirable behaviors

Three areas:

01

Make high THC products harder to get

02

Make cannabis retail a low-risk decision environment

03

Balance the narrative



Make
higher THC
products
harder to
get

Set price of cannabis
products proportional to
their THC content

Increase age of purchase
for products over a
certain level of THC



Make
cannabis
retail stores
a low-risk
decision
environme
nt

Placement of products

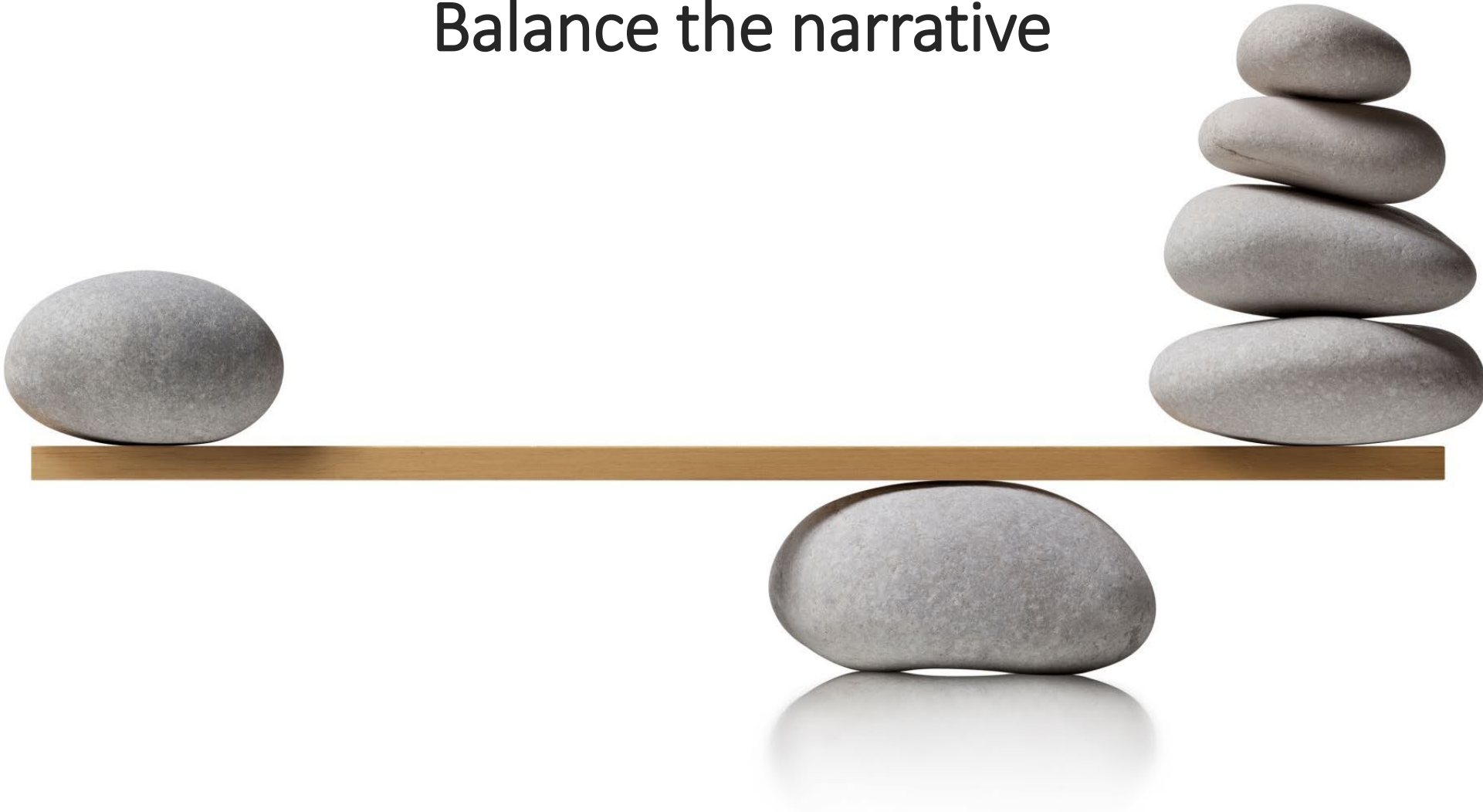
Budtender training

Educational materials

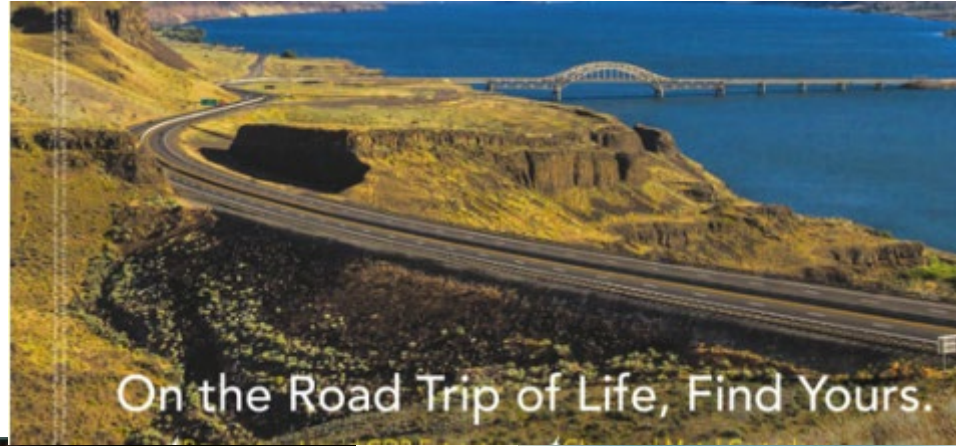
Continue with compliance

Reduce hours

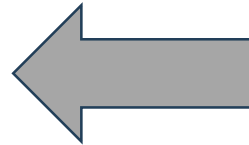
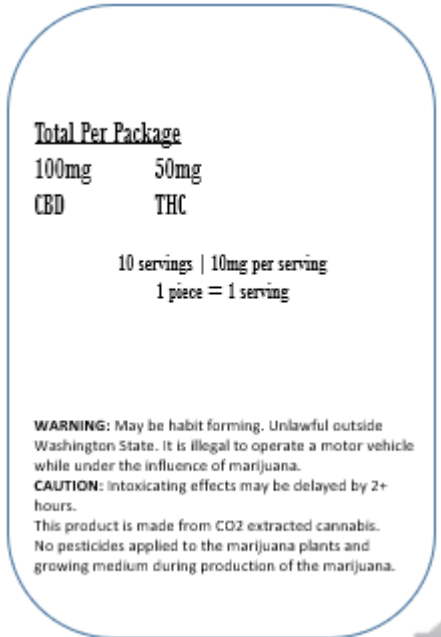
Balance the narrative



Balance the narrative: marketing



Balance the narrative: clear warning messages

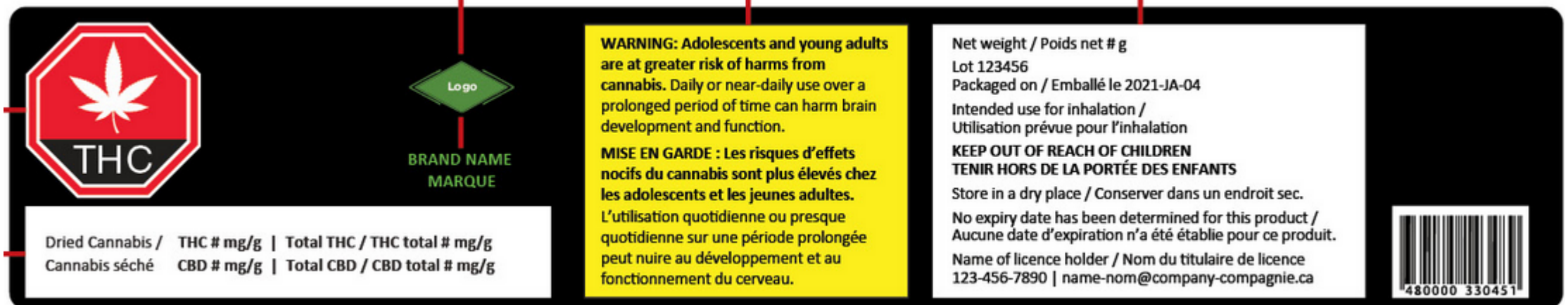
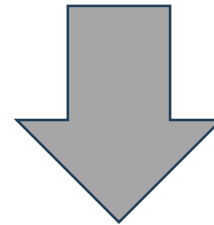


Washington

Font size typically 4-6. No contrast colors, no rotating message

Canada

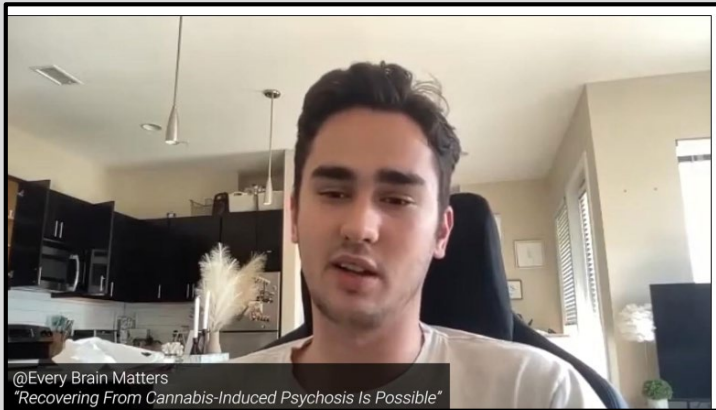
mandatory colors, size, rotating messages



Balance the narrative: plain packaging



Balance the narrative: lived experiences



And let's keep in mind
Regulation is not prohibition

Outline



Legal Cannabis Landscape

Health Effects

Reducing Risks: Policy

Reducing Risk: Pilot Project with Parents



Consumer Assessment of Receptivity to Point-of-Sale Education and Safe Storage Intervention

Sharon Garrett, M.A., M.P.H.

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Lexi Nims, B.A.

Liz Wilhelm, M.S., C.P.P.



**CANNABIS RESEARCH
& EDUCATION**



Topics

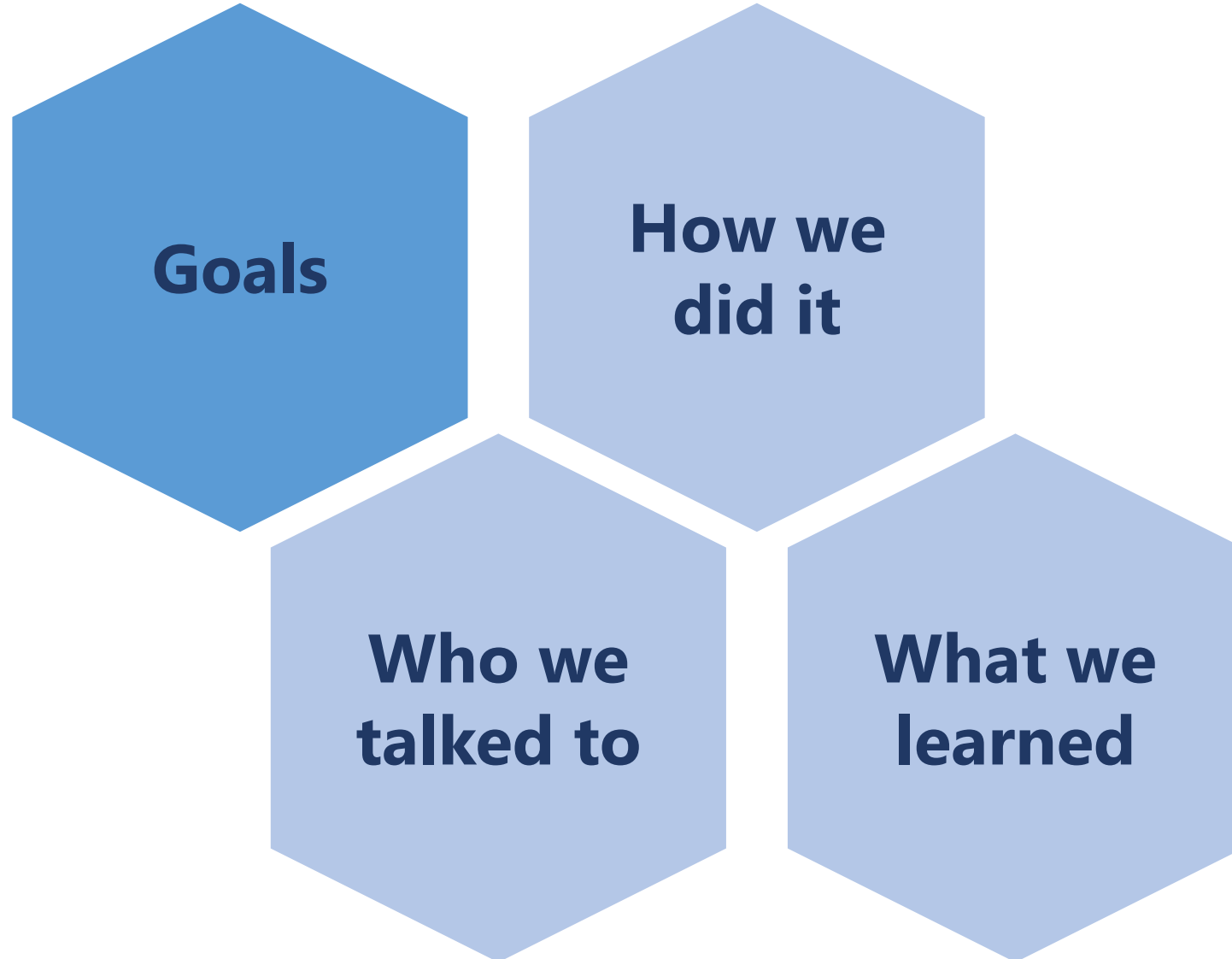
Goals

**How we
did it**

**Who we
talked to**

**What we
learned**

Topics





Safe Storage

- Current storage practices and associated beliefs
- Interest in storage devices

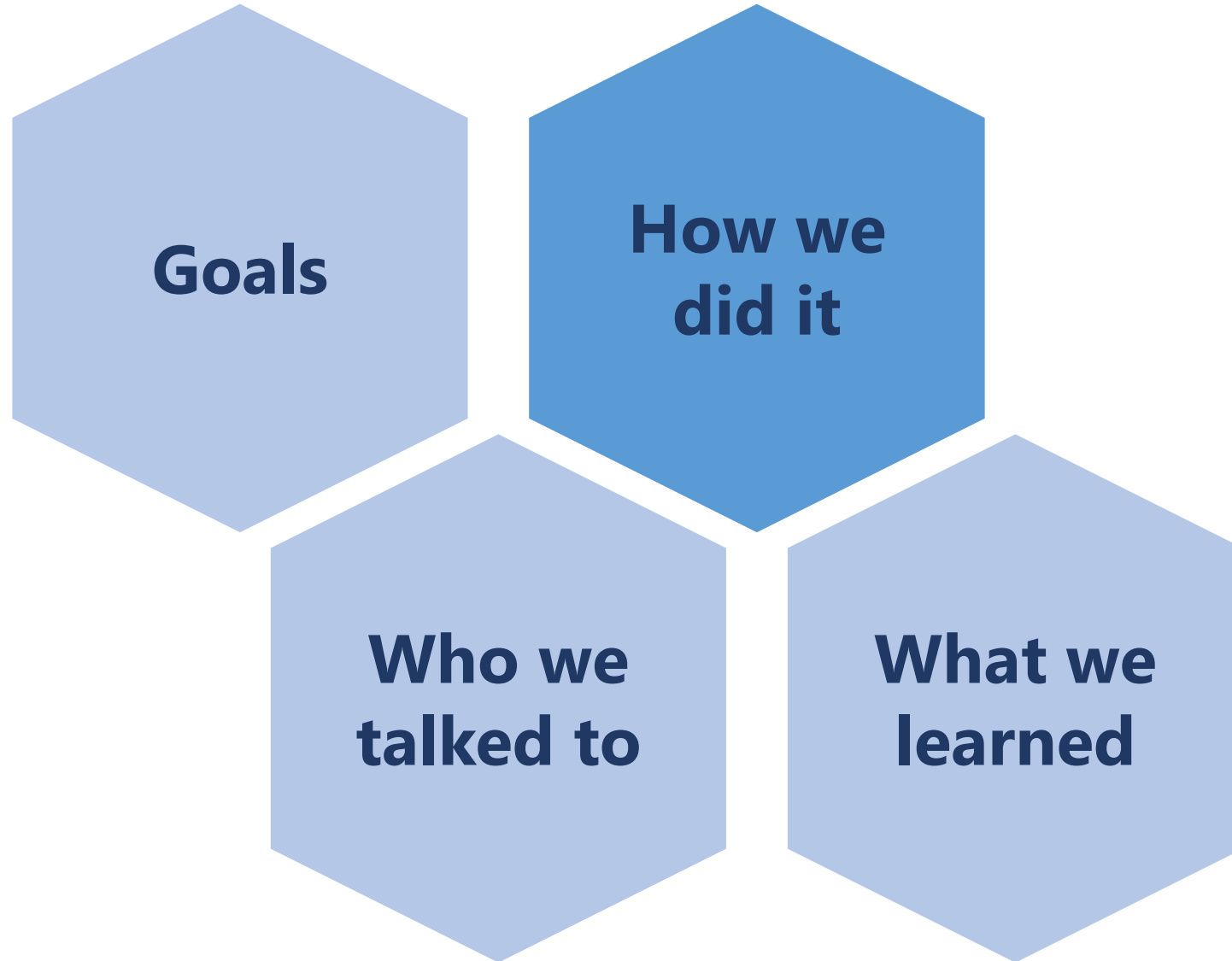


Goals

Receptivity of point-of-sale education

- How current messages resonate with them?
- What could be done differently?

Topics



Participants recruited via social media

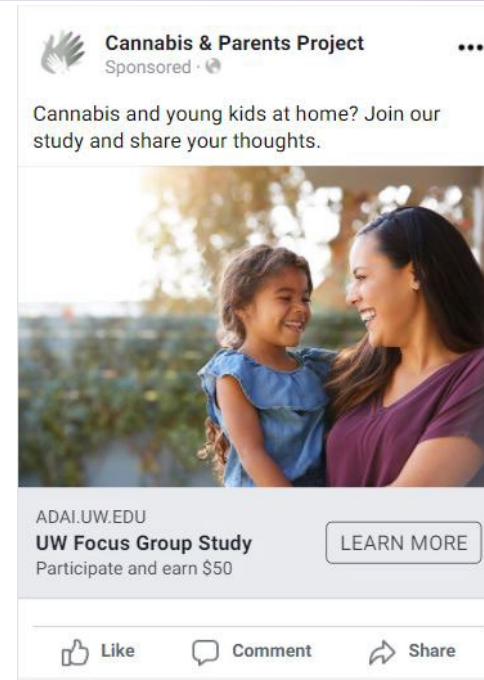
Targeted:

- Adults 21+
- With children aged 3-17 in the home
- Residing in King, Spokane, Adams, Ferry, Stevens, Pen Oreille counties
- Interest in “cannabis/marijuana stores, products, or legalization”

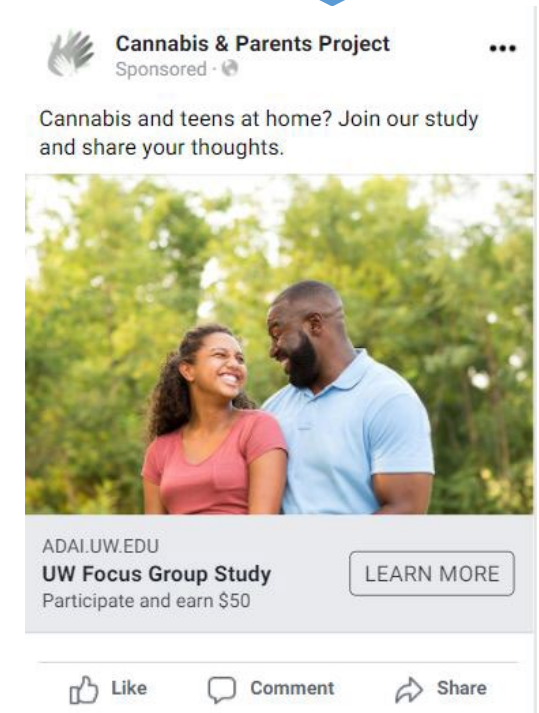
- Priority populations
 - Depiction in Ads
 - Zip code

Adaptive Recruitment: zip code, gender, & age of youth

May 19 through June 4, 2021



Note: Both UW IRB and WA State IRB issued a human subjects exempt determination for this research



Topics

Goals

**How we
did it**

**Who we
talked to**

**What we
learned**

Participants

Age	Spokane	North King	South King	Total
21-35	3	0	5	8
36-50	2	4	2	8
Gender				
Woman	4	3	7	14
Man	1	1	0	2
Race/Ethnicity (Multiple responses allowed)				
White/Caucasian	3	2	5	10
Black/African American	1	1	1	3
Native American/American Indian	0	0	1	1
Pacific Islander & White/Caucasian	1	0	0	1
Black/African American & White/Caucasian	0	1	0	1
Asian	0	0	0	0
Hispanic/Latinx	0	0	0	0
Age of Children				
<2	2	0	3	5
2-10	3	2	6	11
11-17	2	2	2	6
TOTAL	5	4	7	16

Who we talked to

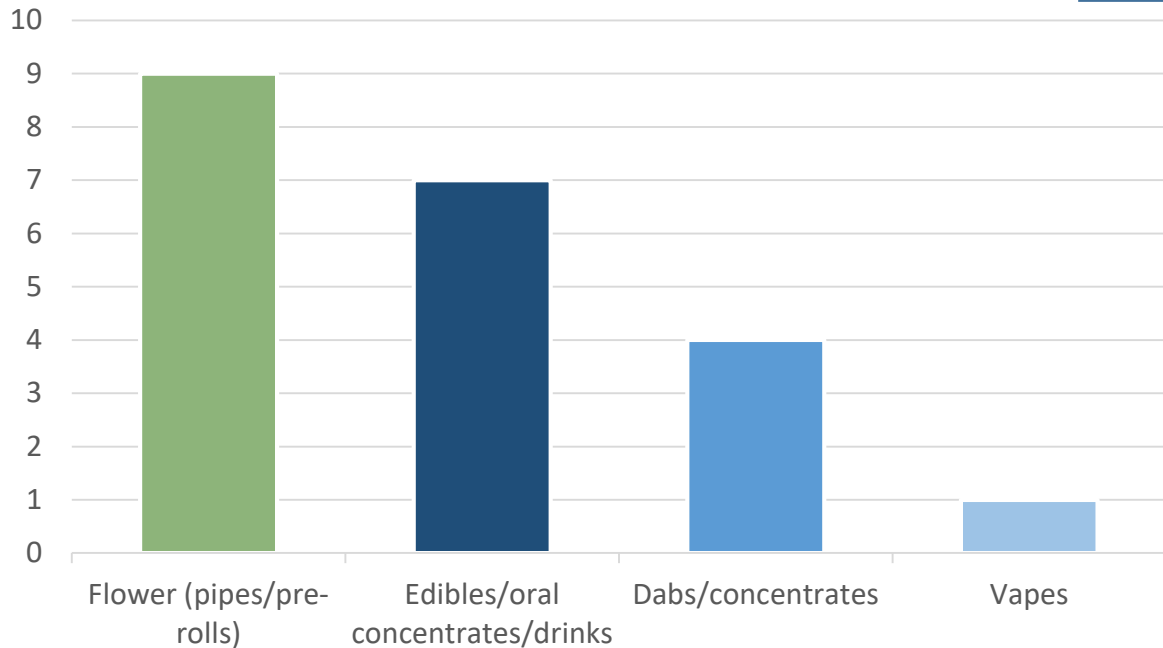
Note:

All but one was the biological parent (1 step-parent)

Cannabis Use

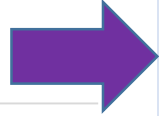
Products Used Most Frequently

(Note: multiple products could be mentioned)



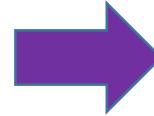
■ Flower (pipes/pre-rolls)

■ Edibles/oral concentrates/drinks



13 cannabis daily
1 weekly
2 few times/ month

Who we talked to



11 visited cannabis store > 7 times-past 6 months

5 went 1-6 times

Reasons for Use

Cannabis use defined as **therapeutic** in various instances.

Parents mentioned that they used cannabis . . .

- to treat debilitating anxiety
- to replace pain pills
- instead of ADHD meds
- to overcome addiction to other substances

“This is mom’s medicine.”

**Who we
talked to**




Topics

Goals

**How we
did it**

**Who we
talked to**

**What we
learned**



**What we
learned**

- **Current storage practices** and associated beliefs
- **Interest** in storage devices
- **Messages**



**What we
learned**

- **Current storage practices** and associated beliefs
- **Explore interest** in storage boxes
- **Messages**

Storage Behavior

Range of Practices

No one locked cannabis

Out of reach, out of sight



Child proof, not locked

Off limit areas

Labeled

No storage place

“And I keep it out of reach of my 7-year-old, and I keep it out of sight of the other (older) kids, but I suppose if they really wanted to find it, they could; I don't lock in a safe or anything like that.”



What we learned

- **Current storage practices** and associated beliefs
- **Explore interest** in storage boxes
- **Messages**

Interest in Safe Storage Devices

Most participants excited and willing to use:

"I would appreciate it, I love freebies!"

Might not lock it "I would probably store it in there. **I don't know that I would necessarily lock it.** I just feel like that's such an extra measure, when my family specifically is so open about it..."

Environmental concern: "Thinking of how much waste we already create with jars and baggies ...and so we're creating more of a waste."

Risk in context: "... I don't have a locked liquor cabinet... Let's just take my 16-year-old: if he was going to get into substance abuse, I would much rather him steal my stash and joints than steal my bottle of Jim Beam."

What We Learned

What we learned

- **Current storage practices** and associated beliefs
- **Explore interest** in storage boxes
- **Messages**

Messages

Be proactive. **Subtract & position** right this is in the department right, employees, parents, children, friends, family, that ready to be informed and give the right message. You can still save lives and avoid accidents by taking steps now.



SECURE YOUR CANNABIS

YOU'RE THEIR HEROES

You keep kids safe.

Kids can't tell when food or drinks include THC. You can protect them from accidental ingestion.

SECURE YOUR CANNABIS

Learn more at bit.ly/secureyourcannabis

Messages: Considerations

Budtender as messengers:

"It makes me feel less like an authority is telling you what to do. Because the budtenders are your peers, you know, they're your peers they're your friends."

Include pets:

"Jeez you know, and that brings up a good point, I'd be far more worried about my dog eating my stuff (than my kids)."



Messages: Consider Adding Context



"I think if you're going to have Meg say keep it safe in a safe, she ought to be pointing to a rifle or pistol..."

Consuming Out of Sight

It is best to consume cannabis out of sight of young people

Feels Taboo, Judgmental, Secretive, Stigmatizing

*"I don't like this, I think, is kind of passing **judgment** on people...it's like...that's none of your business."*

*"Yeah keep your cannabis away from your kids when you're not using it, but whether or not you use it in front of your kids **is not anybody's business**; that's parenting choice okay."*

Context: It is Like Alcohol, and We Don't Hide Drinking

*"...you know people **drink** in front of their kids. To me there's no difference, but anyway sorry that's my soapbox."*

YOU'RE THEIR #1

Kids say you're their greatest influence.

It's best to consume cannabis out of sight of young people. Kids learn by watching adults they admire.

SECURE YOUR CANNABIS

Learn more at bit.ly/secureyourcannabis



SECURE YOUR CANNABIS

Open Communication

Keep the weed conversation going



Communication over Hiding Use:

“Yeah, these are great. I like these ones. I like to keep the conversation going...”



Talk Early! Talk Often.
Tell them that marijuana can harm their developing brain.



Wrap up - What We Learned

What we learned

Recognition: Genuine love and concern for their kids; Respect for developing brain, child development.

Context: Cannabis vs. alcohol. Safe storage of cannabis vs. guns.

Respect for cannabis: Content can be easily rejected if perceived as judgmental, one-sided, stigmatizing, includes stereotypes or scare tactics. Not willing to hide use.

Trust in open dialogue – especially how use is different for kids than for adults.

This is mom's medicine: Cannabis use defined as therapeutic in various instances.

Acknowledgments

Much thanks to the parents who trusted ADAI team, sharing their thoughts, beliefs, and behaviors about cannabis use with children at home.

Youth Marijuana Prevention and Education Program Managers

- Sarah Ross-Viles, M.P.H.
- AJ Sanders, Youth Cannabis and Commercial Tobacco Program

Support: Brought to you by the Washington State Department of Health with Dedicated Marijuana Account funds

Public Health Seattle & King County- "Consumer Assessment of Receptivity to Point-of-Sale Education and Safe Storage Intervention" - 6607 CDIP

Spokane Health District - Agreement # 750-730-1712 ; Purchase Order Number:C7507301712-2

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