

# Patterns of problematic cannabis use among Canadian and US respondents; 2018-2020

CESAR LEOS-TORO PhD SAMANTHA GOODMAN PhD FATHIMA FATAAR PhD DAVID HAMMOND PhD









# Patterns of problematic cannabis use among Canadian and US respondents; 2018-2020

CESAR LEOS-TORO PhD SAMANTHA GOODMAN PhD FATHIMA FATAAR PhD DAVID HAMMOND PhD







### **Disclosures**

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

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

- Regulatory agencies e.g., Canada, Australia, UK, EC, US CDC, etc.
- 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

### **Cannabis**

Canada, Quebec

### Food & beverage

San Francisco

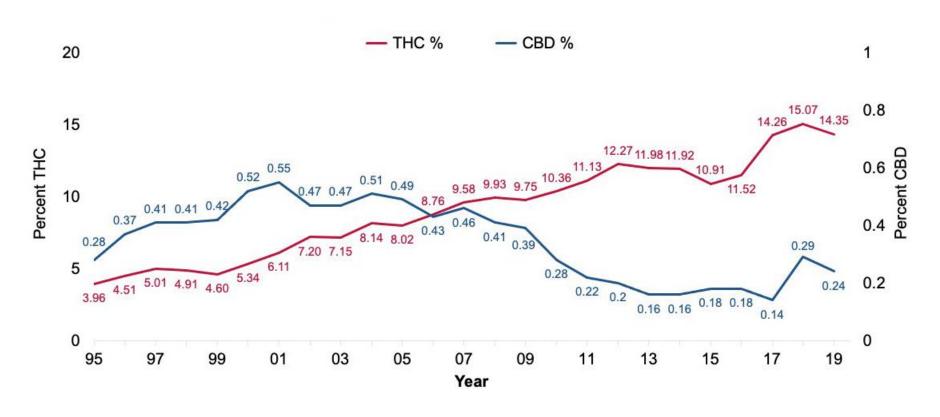
## **Cannabis**

- Increasingly permissive policies in Canada and USA
- Trends may reflect recreational, not necessarily chronic or medical use 1,2,3,4
- Mixed evidence regarding policy shifts and problems with cannabis use – no causal mechanism described<sup>5,6,7,8</sup>

### **CANNABIS POTENCY**

# Percent of THC and CBD in cannabis samples seized by the DEA from 1995-2019

Source: Potency Monitoring Program, Quarterly Report #146



## **CANNABIS POTENCY**

Form	Description	THC potency up to 30%		
Fresh or dried herbal material	Flowers and leaves from the cannabis plant			
Cannabis oil	Cannabis extract dissolved in oil. Can be used to make other forms (for example, edibles).	up to 3%		
Chemically concentrated extracts (for example, hash oil/shatter/budder/wax)	Highly concentrated cannabis extract dissolved in petroleum-based solvent (for example, butane). Shatter, budder and wax most highly concentrated.	up to 90%		
Physically concentrated extracts (for example, hash/kief)	Loose trichomes or pressed resin from the cannabis plant.	up to 60%		
Edibles	Foods and drinks containing extracts of cannabis	Depends on the amount of extract added		
Tinctures/sprays	Cannabis extract dissolved in a solvent, often alcohol. Can be used to make other products (for example, edibles).	varies		
Creams/salves/liniments	Cannabis extract preparation prepared with alcohol, oil or wax and applied to the skin.	varies		

## International evidence

- Uruguay prevalence and risk perceptions unchanged,
   stable crime statistics
- Emphasis on public security conditions<sup>11,12</sup>

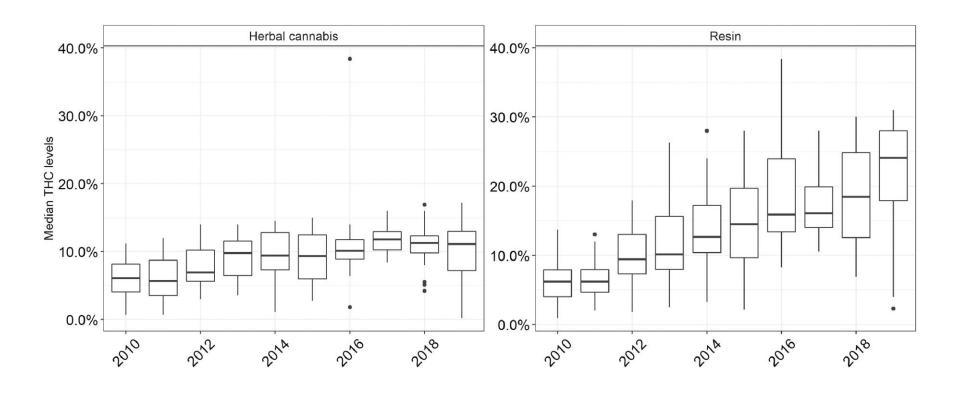
## International evidence

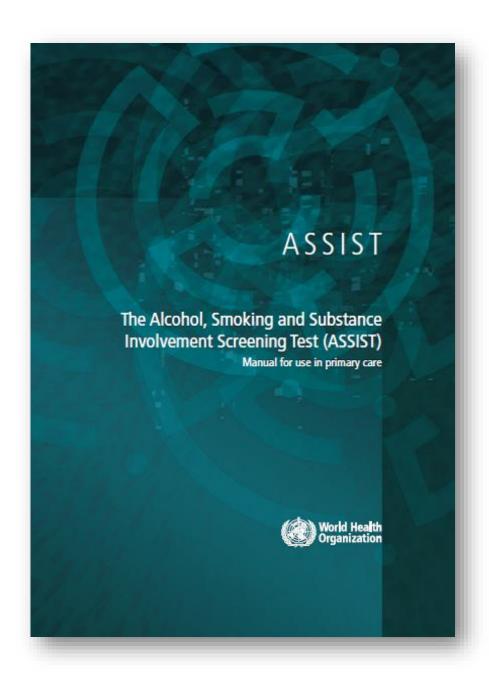
Europe – emphasis on classic cannabis use metrics



## International evidence

Europe – emphasis on classic cannabis use metrics<sup>13</sup>





Identify hazardous, harmful or dependent substance use.

# How have patterns of problematic cannabis use changed in Canada and USA between 2018 and 2020?



# **Methods**

- ·Repeat cross-sectional surveys
- Annual data collection 2018...
- Online data collection
- •Ages 16-65

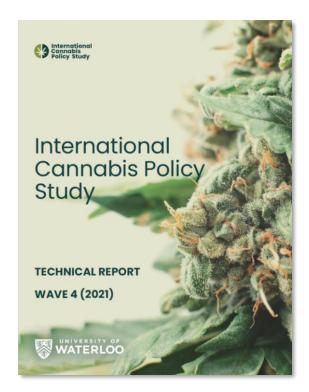
**2018 2019 2020 27,169 48,111 45,681** 





**USA** 

**CANADA** 



www.cannabisproject.ca

### **MEASURES**

### **WHO ASSIST**

Item 1	In your life, which of the following substances have you ever used? "Cannabis (marijuana, pot, grass,					
	hash, etc.)"					
	No=0; Yes=3					
Item 2	In the past three months, <b>how often have you used</b> the substances you mentioned? "Cannabis (marijuana, pot, grass, hash, etc.)"					
	Never=0; Once or twice=2; Monthly=3; Weekly=4; Daily or almost daily=6					
Item 3	During the past three months, how often have you had a strong desire or urge to use "Cannabis (marijuana, pot, grass, hash, etc.)"?					
	Never=0; Once or twice=3; Monthly=4; Weekly=5; Daily or almost daily=6					
Item 4	During the past three months, how often has your use of "Cannabis (marijuana, pot, grass, hash, etc.)" led to health, social, legal or financial problems?					
	Never=0; Once or twice=4; Monthly=5; Weekly=6; Daily or almost daily=7					
Item 5	During the past three months, how often have you failed to do what was normally expected of					
	<b>you</b> because of your use of "Cannabis (marijuana, pot, grass, hash, etc.)"?					
	Never=0; Once or twice=5; Monthly=6; Weekly=7; Daily or almost daily=8					
Item 6	Has a friend or relative or anyone else <b>ever expressed concern about your use</b> of "Cannabis					
	(marijuana, pot, grass, hash, etc.)"?					
	No, never=0; Yes, in the past 12 months=6; Yes, but not in the past 12 months=3					
Item 7	Have you <b>ever tried and failed to control, cut down or stop using</b> "Cannabis (marijuana, pot, grass hash, etc.)"?					
	No, never=0; Yes, in the past 12 months=6; Yes, but not in the past 12 months=3					

SCORING: Add up Items 2 to 7.

Low risk: 0-3 No intervention; Moderate risk:4-26 Receive brief intervention; High risk: 27+ More intensive treatment

### **WEIGHTED SAMPLE**

			Canada			<b>US Illegal</b>			US Legal
	2018	2019	2020	2018	2019	2020	2018	2019	2020
	n=5,683	n=9,458	n=9,572	n=5,308	n=6,401	n=7,122	n=4,549	n=13,993	n=11,014
Age									
16-25 years 26-35 years 36-45 years 46-55 years 56-65 years	746 1359 1116 1224 1238	1359 2320 1953 1871 1955	1239 2284 2052 1886 2111	679 1123 1016 1240 1250	957 1521 1315 1303 1305	1001 1568 1492 1483 1578	605 1149 770 1015 1010	2333 3362 2824 2700 2774	1574 2643 2345 2106 2346
Sex at birth									
Female Male	2728 2954	4640 4817	4647 4925	2582 2727	3125 3277	3549 3575	2279 2271	6937 7056	5554 5460
Sexuality									
Heterosexual or straight	5091	8294	8336	4752	5701	6235	3936	11974	9483
Homosexual or gay or lesbian	591	1163	1235	556	701	888	613	2019	1531
Racial Group									
White Other/Mixed/Unstated	4694 988	7339 2119	7370 2202	4133 1175	4912 1490	5553 1570	3577 972	10957 3036	8755 2259
Highest Level of Education Attained									
Less than high school	731	1325	1187	502	568	525	346	670	500
High school diploma or equivalent	1567	2564	2674	1092	1516	1825	786	3000	2356
Further training*	2109	3355	3440	2403	2559	2850	2204	6281	4746
Bachelor's degree or higher	1243	2121	2187	1302	1748	1899	1204	4000	3348
Income Adequacy									
Very difficult	522	1049	830	527	722	795	445	1583	1015
Difficult Neither easy nor difficult	1237 2009	2282 3173	1975 3516	1240 1677	1511 2082	1457 2381	951 1517	3383 4533	2213 3803
Easy	1174	1791	2029	1149	1226	1381	966	2602	2278
Very easy	628	888	972	660	751	952	599	1529	1464
Cannabis Use Status									
>12 months ago	2914	4076	4194	3000	3262	3720	2017	6113	5005
Past 12-month user	863	1729	1610	676	837	833	693	2028	1405
Monthly user Weekly user	491 522	1064 863	1008 896	507 403	627 485	646 544	500 505	1279 1263	1160 1059

# Overall problematic cannabis use scores were stable across measurement waves

# Mean WHO ASSIST Scores in Canada and US jurisdictions; 2018-2020

n= 73,098



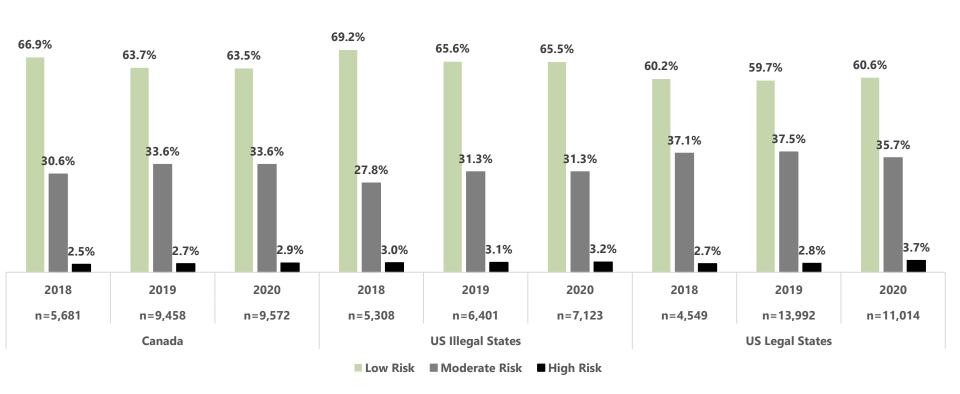
SCORING: Low risk: 0-3 No intervention; Moderate risk:4-26 Receive brief intervention; High risk: 27+ More intensive treatment



# Populations in the United States were more likely to be classified into higher risk strata; 'legal states'

# WHO ASSIST Risk Stratified Scores in Canadian and US jurisdictions; 2018-2020

N = 73,098





Age, sex, sexual orientation, race/ethnicity, education, are important considerations to inform public policy





### The New Hork Times

### Use of Marijuana and Psychedelics Is Soaring Among Young Adults, Study Finds

The annual U.S. survey of substance use captures the growing mainstream acceptance of cannabis and hallucinogenic compounds.









The annual survey of drug use indicated that daily consumption of marijuana among young adults nearly doubled over the previous decade. Peter Morgan/Associated Press

#### By Andrew Jacobs

Published Aug. 23, 2022 Updated Aug. 25, 2022

Marijuana and hallucinogen use among young adults reached an all-time record last year after having leveled off during the first year of the coronavirus pandemic, according to federal <u>survey</u>

# Improved surveillance of problematic cannabis use in US settings



# Prepare for unanticipated effects of a shifting regulatory landscape



# www.cannabisproject.ca



ABOUT METHODS FINDINGS TEAM MEMBERS CONTACT

# A new international study on cannabis legalization and public health.







## Research team

David Hammond Canada
Samantha Goodman Canada
Elle Wadsworth Canada
Christian Boudreau Canada
Pete Driezen Canada

Julia Dilley United States
Tom Freeman United Kingdom
Wayne Hall Australia
Beau Kilmer United States
Rosalie Pacula United States
Gillian Schauer United States
Chris Wilkins New Zealand

# Thank you.

## Cesar Leos-Toro PhD

Jacobs Center for Productive Youth Development UNIVERSITY OF ZURICH

WEB www.cesarleostoro.com

EMAIL cesar.leostoro@jacobscenter.uzh.ch

TWITTER @CesarLeosToro

