



Cannabis and the Workplace

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Conflict of Interest Disclosures for Speakers



1. I do not have any relationships with any entities **producing, marketing, re-selling, or distributing** health care goods or services consumed by, or used on, patients, **OR**



2. I have the following relationships with entities **producing, marketing, re-selling, or distributing** health care goods or services consumed by, or used on, patients.

Type of Potential Conflict	Details of Potential Conflict
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Consultant	None
Speakers' Bureaus	None
Financial support	None
Other	Cannabis Policy Oversight Taskforce



3. The material presented in this lecture has no relationship with any of these potential conflicts, **OR**



4. This talk presents material that is related to one or more of these potential conflicts, and the following objective references are provided as support for this lecture:

- 1.
- 2.
- 3.



Overview

- History of cannabis prohibition in the United States + Cannabinoid biology 101
- Cannabis use and employment
- Lessons from Canada



Overview

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History of cannabis use



Image source: thcmuseum.org

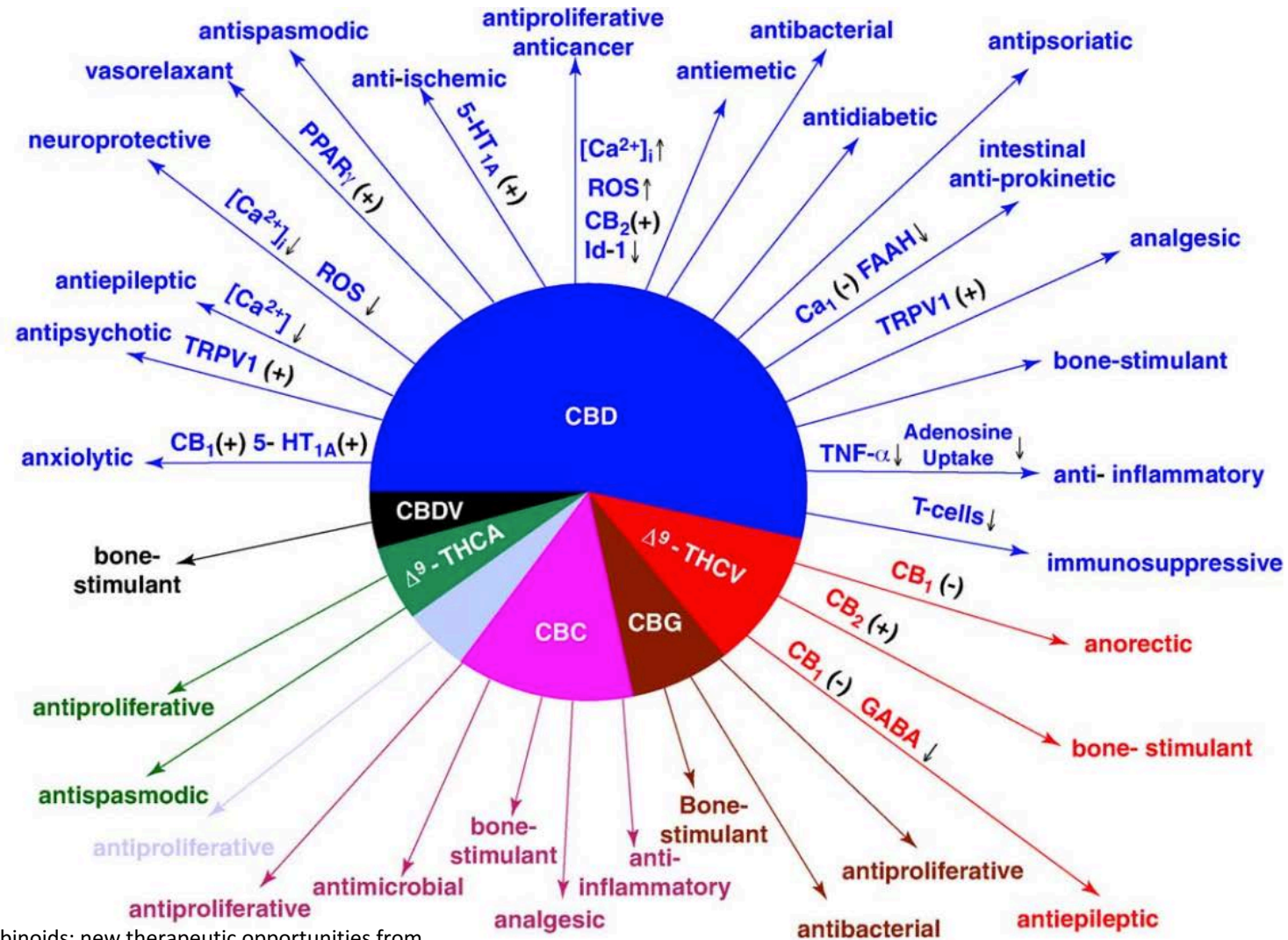
- 2700 BC Chinese emperor Shen Nong discover the healing properties of cannabis
- 1600-1890s domestic production of hemp is encourage
- 1900s-1920 Mexican immigrants introduce recreational cannabis “marijuana” to the US
- 1937 Marijuana Tax Act
- 1944 “LaGuardia Report”
- 1960s CBD and THC isolated and identified



Defining the cannabinoid system

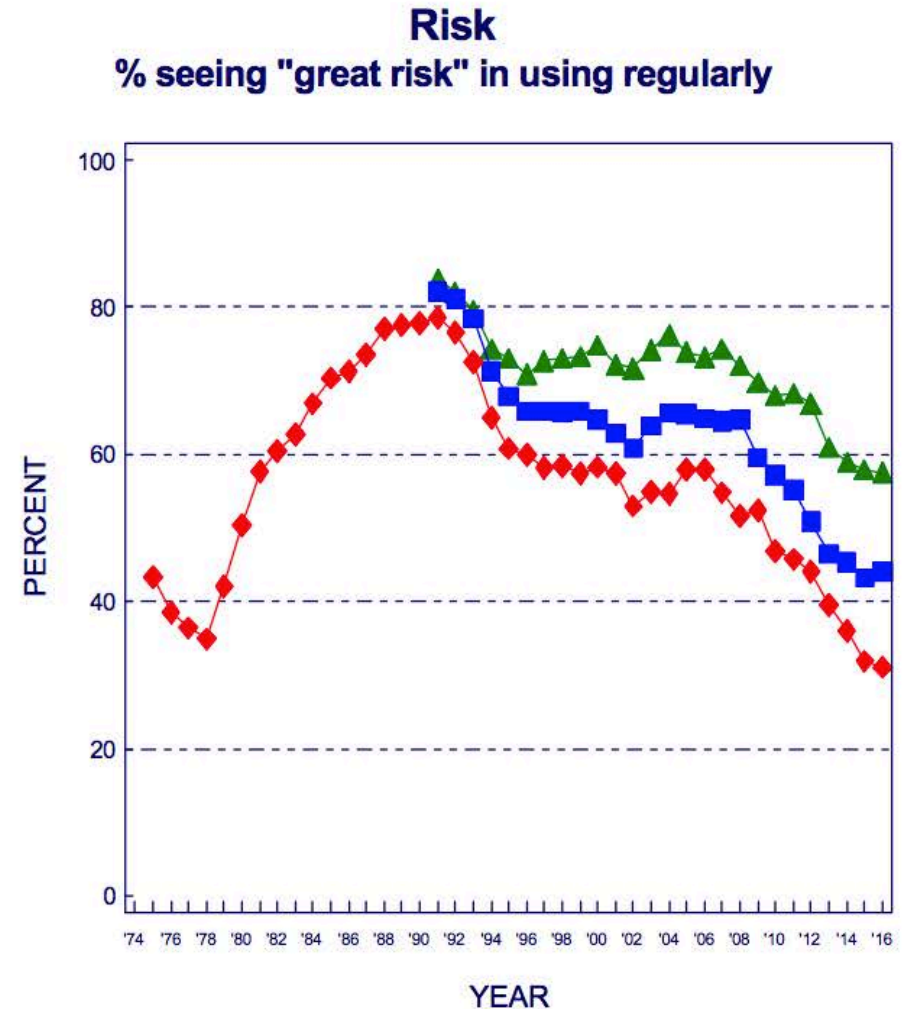
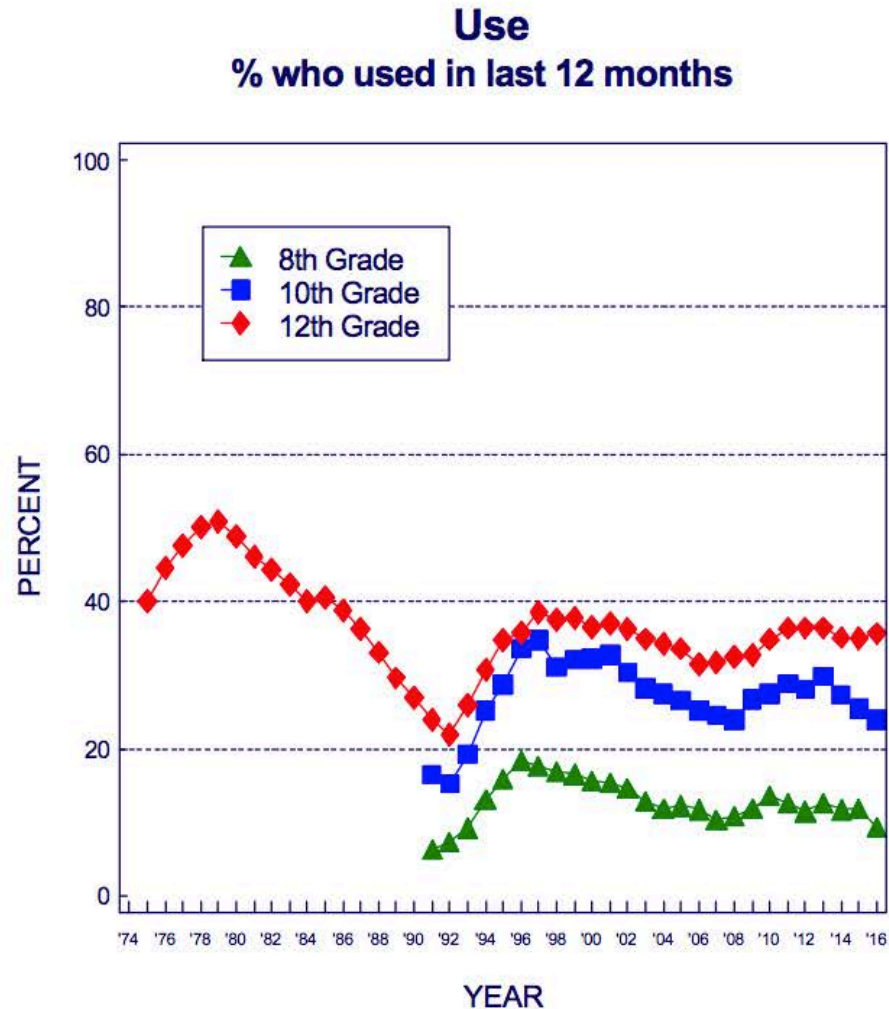
- Receptor targets
 - CB1, CB2
 - GPR55, 5-HT_{1A}, TRP channels
- Endogenous cannabinoids
 - Anandamide: 1992, sanskrit for “bliss”
 - 2-arachidonyl glycerol: 1995, high levels in the CNS than anandamide
- Synthesizing and degrading enzymes
- Exogenous compounds
 - Phytocannabinoids
 - >100 (e.g., THC, CBD, CBG, CBN)
 - Possible interactions with terpenes (entourage effect)
 - Synthetic cannabinoids: Nabilone and dronabinol, K2 and “spice”

Targets of Phytocannabinoids



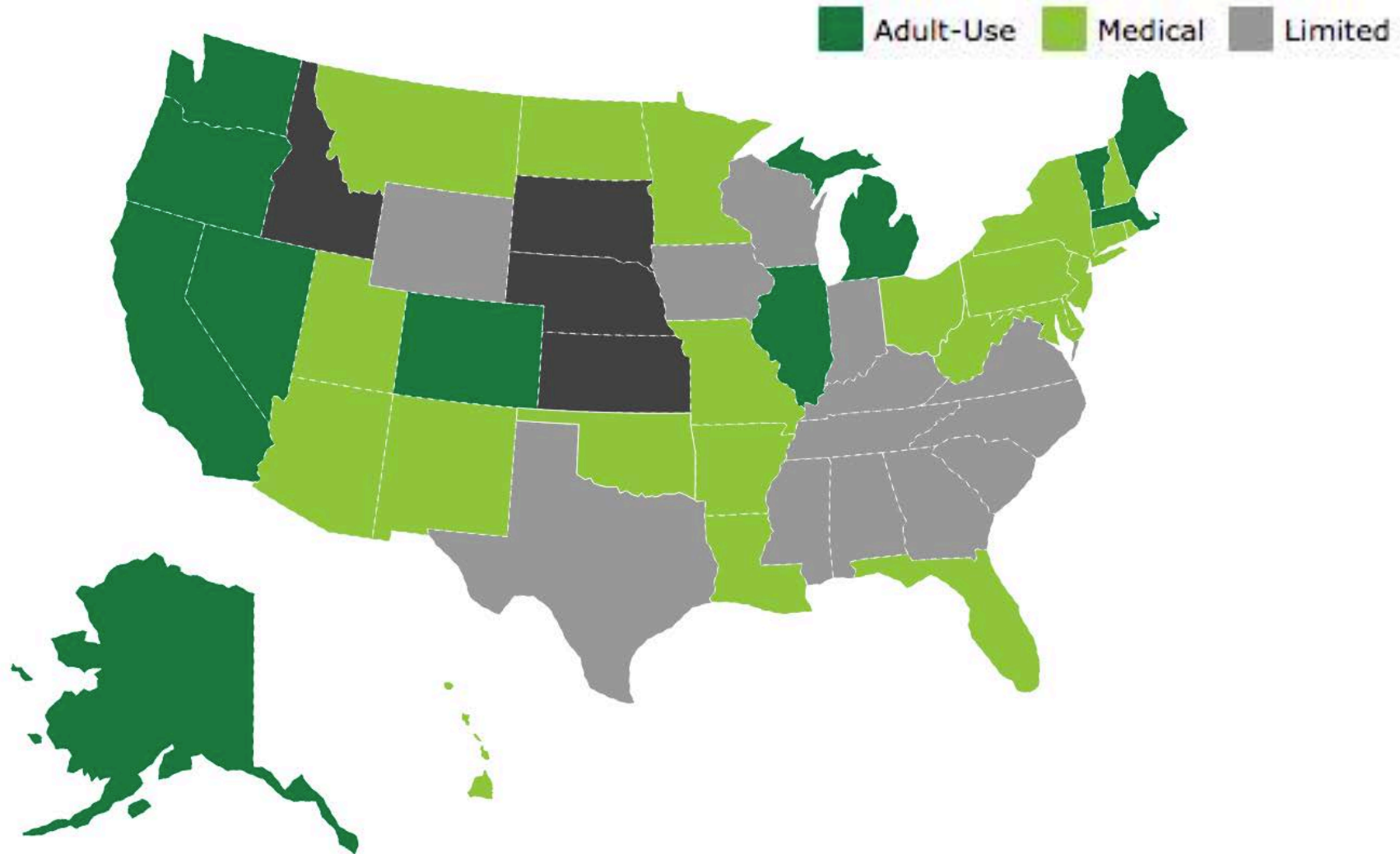


Cannabis use increased across the 60s and 70s, use is inversely associated to perceived risk





Rapid legalization in the last decade





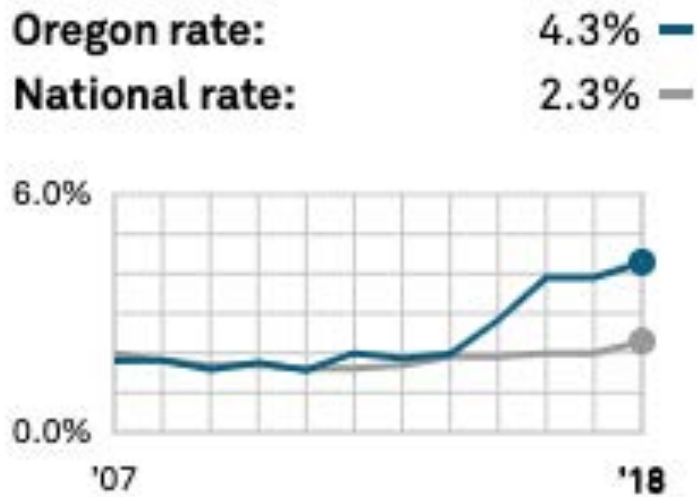
2018 Farm Bill: What does this mean for CBD?

- Signed into law December 2018
- Removed hemp (<0.3 % THC) and derivatives from the Controlled Substances Act
- Preserves FDA's authorities over hemp products
 - No health claims of a dietary supplement
 - June 2018 FDA approved Epidiolex for treatment of severe pediatric seizures
 - Based on approval of this drug/substantial clinical investigations of CBD, CBD cannot be marketed as a dietary supplement
 - Foods with CBD cannot be introduced into interstate commerce
 - **Exception** can be made following public comments: FDA has formed CBD Policy Working Group (public hearing May 31, 2019)
- **Despite these regulations the FDA notes a flood of products in the market with illegal and unsubstantiated health claims**

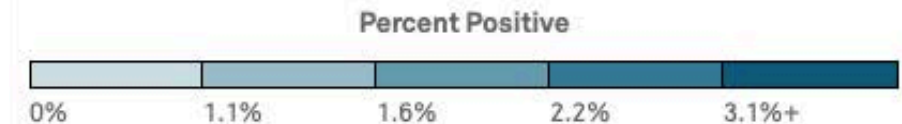


Overview

- History of cannabis prohibition in the United States + Cannabinoid biology 101
- **Cannabis use and employment**
- Lessons from Canada



Oregon leading state for percentage of positive workplace testing for cannabis use





“We have all these Americans that are looking to work...Are we aligning our... drug testing policies with what’s right for the workforce?”

-Labor Secretary Alexander Acosta

**Table 3. Positivity Rates by Testing Reason – Urine Drug Tests
(For Federally Mandated, Safety-Sensitive Workforce)**

(More than 2.4 million tests from January to December 2018)

Testing Reason	2014	2015	2016	2017	2018
Follow-Up	3.2%	3.1%	3.4%	3.9%	5.3%
For Cause	9.3%	11.0%	11.7%	13.1%	13.1%
Periodic	0.9%	1.8%	1.2%	1.1%	2.0%
Post-Accident	2.6%	2.8%	3.0%	3.1%	4.7%
Pre-Employment	1.0%	1.0%	2.0%	2.1%	2.0%
Random	1.5%	1.5%	1.7%	1.8%	2.4%
Return to Duty	2.9%	3.4%	3.2%	3.4%	5.5%

**Table 4. Positivity Rates by Testing Reason – Urine Drug Tests
(For General U.S. Workforce)**

(More than 6.5 million tests from January to December 2018)

Post-Accident	6.5%	6.9%	7.4%	7.7%	8.4%
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“Increases in post-accident positivity among safety-sensitive workers should serve as a warning to employers that employee drug use may increase the risk of workforce accidents or injuries...

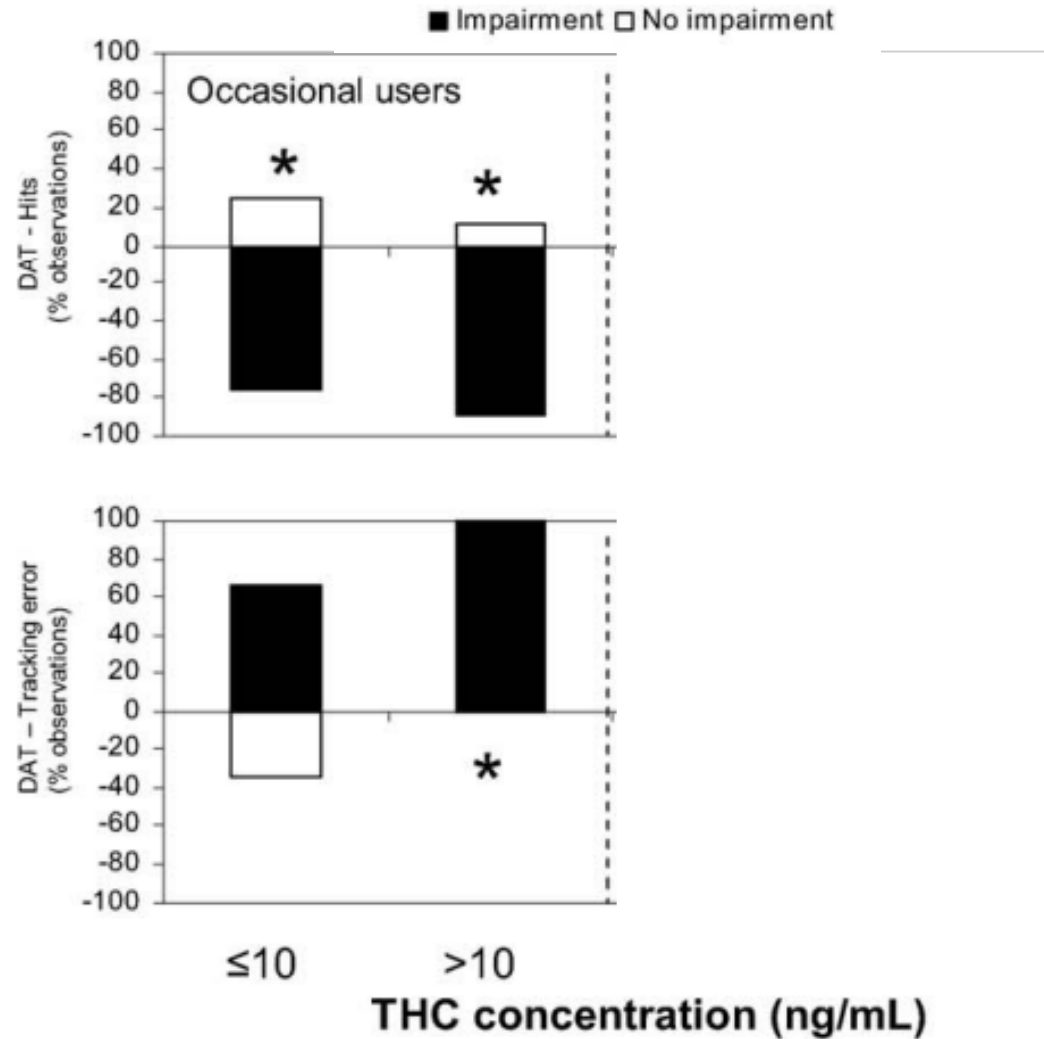
-Kimberly Samano, PhD, scientific director, Quest Diagnostics



Practical problems: When was cannabis ingested?

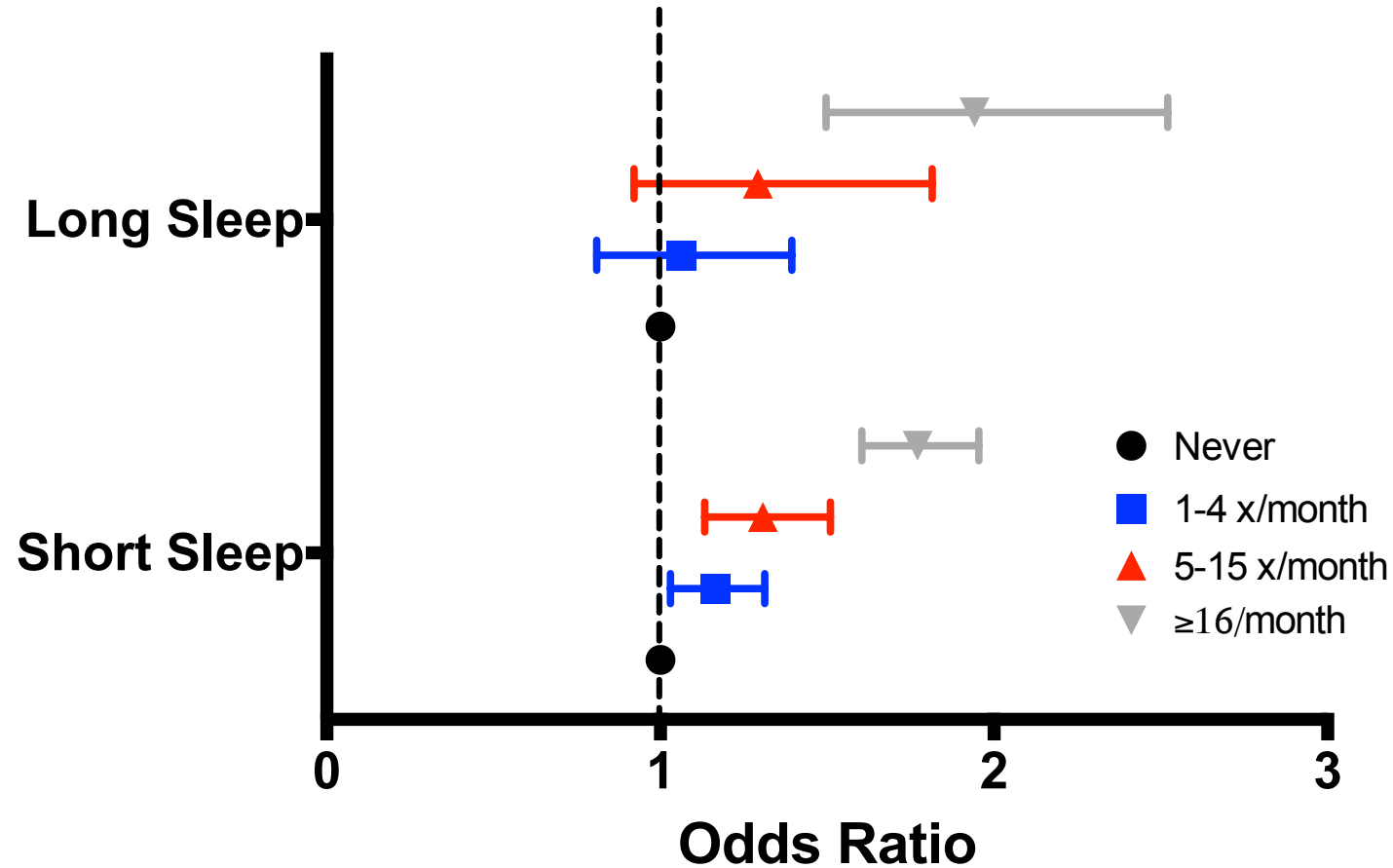


Practical problems: How to assess impairment?





Practical problems: Indirect consequences of cannabis use



Legal cannabis and cannabinoids:
What rights do employees and
employers have for medical or
recreational use in the United States?

Cannabis and Employment: State Laws

State	Medical Cannabis Anti-Discrimination Employee Protection	Medical Cannabis Required Accommodation	Recreational Cannabis Anti-Discrimination Employee Protection
Alaska			
California			
Colorado			
District of Columbia	✓		
Illinois	✓		
Maine	✓		
Massachusetts			
Michigan			
Nevada	✓	✓	✓
Oregon			
Vermont			
Washington			

*Medical states with medical cannabis anti-discrimination employee protection: Arizona, Arkansas, Connecticut, Delaware, Illinois, Maine, Minnesota, New York, Oklahoma, Pennsylvania, Rhode Island



Case Report

- Rhode Island: Callaghan v. Darlington Fabrics Corp., 2017
- During job interview plaintiff was told she would be required to take a drug test
- Plaintiff shared that she had a medical marijuana card, currently uses cannabis due to allergy to pain medications, and would not use or bring cannabis to the workplace
- Plaintiff was not hired since she would not comply with corporation's drug-free workplace policy
- Plaintiff sued and won



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“Increases in post-accident positivity among safety-sensitive workers should serve as a warning to employers that employee drug use may increase the risk of workforce accidents or injuries ...employers committed to creating a safe, drug-free work environment should incorporate strategies that monitor drug use above and beyond pre-employment drug screening.”

-Kimberly Samano, PhD, scientific director, Quest Diagnostics



Lessons from Canada

- Ontario's *Human Rights Code*-Employers must accommodate the use of medical cannabis, and addiction to recreational cannabis to the point of undue hardship to the employer.
- Canadian Human Rights Commission (CHRC), 2017- defines safety-sensitive position: "if not performed in a safe manner, can cause direct and significant damage to property and/or injury to the employee, others around them, the public and/or the immediate environment."
- ***IBEW, Local 1620 v Lower Churchill, 2019 NLSC 49***. Here, the Supreme Court of Newfoundland: upheld denial of employment to an employee at a safety-sensitive construction site due to his medically prescribed cannabis



Moving forward what should employers do?

- Terminology matters: Performance deficit vs. impairment
- Define behavior that warrants a drug test
- Note that testing following an accident report are a reasonable part of an investigation
- State action to be taken if impaired at work
- Are drug test necessary before employment even in safety sensitive jobs?
- Clearly state instances when use of cannabis in the workplace will be accommodated (i.e., breaks, work social events)



Moving forward what should Oregon do?

- Modify Oregon disability law so that use of marijuana doesn't defer to federal law
 - Employees access to more resources for addiction
 - Ex. An employer does not have to accommodate someone's alcoholism in the workplace, **but** must accommodate need for treatment.

1. How often do you use cannabis?

Never	Monthly or less	2-4 times a month	2-3 times a week	4+ times a week
0	1	2	3	4

2. How many hours were you "stoned" on a typical day when you had been using cannabis?

Less than 1	1 or 2	3 or 4	5 or 6	7 or more
0	1	2	3	4

3. How often during the past 6 months did you find that you were not able to stop using cannabis once you had started?

Never	Less than monthly	Monthly	Weekly	Daily/almost daily
0	1	2	3	4

4. How often during the past 6 months did you fail to do what was normally expected from you because of using cannabis?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily
0	1	2	3	4

5. How often in the past 6 months have you devoted a great deal of your time to getting, using, or recovering from cannabis?

Never	Less than monthly	Monthly	Weekly	Daily/almost daily
0	1	2	3	4

6. How often in the past 6 months have you had a problem with your memory or concentration after using cannabis?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily
0	1	2	3	4

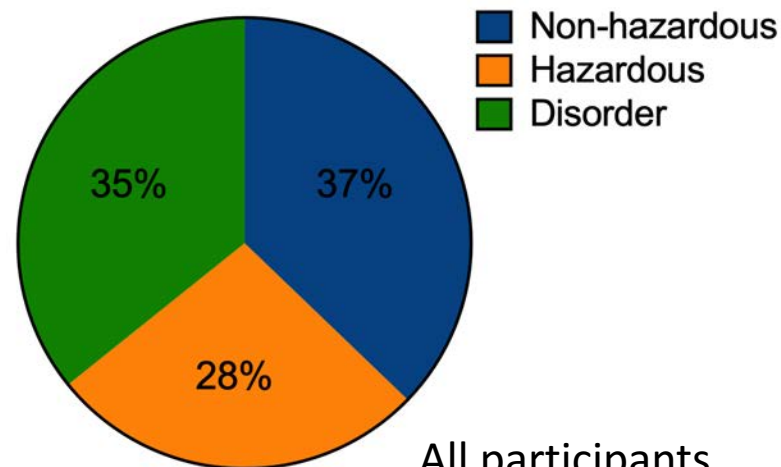
7. How often do you use cannabis in situations that could be physically hazardous, such as driving, operating machinery, or caring for children?

Never	Less than monthly	Monthly	Weekly	Daily/almost daily
0	1	2	3	4

8. Have you ever thought about cutting down, or stopping, your use of cannabis?

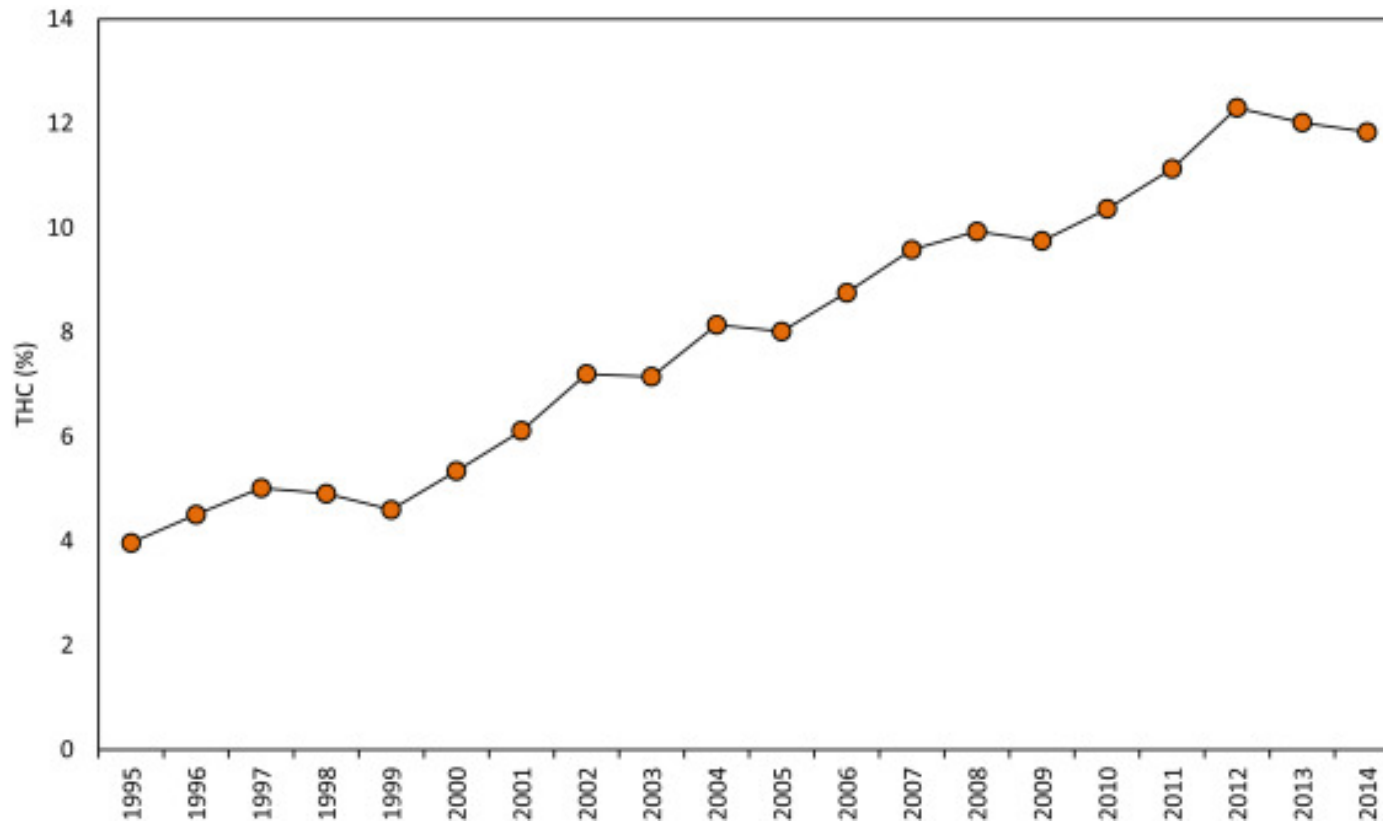
Never	Yes, but not in the past 6 months	Yes, during the past 6 months
0	2	4

Scores of 8 or more: Hazardous cannabis use
Scores of 12 or more: Possible use disorder

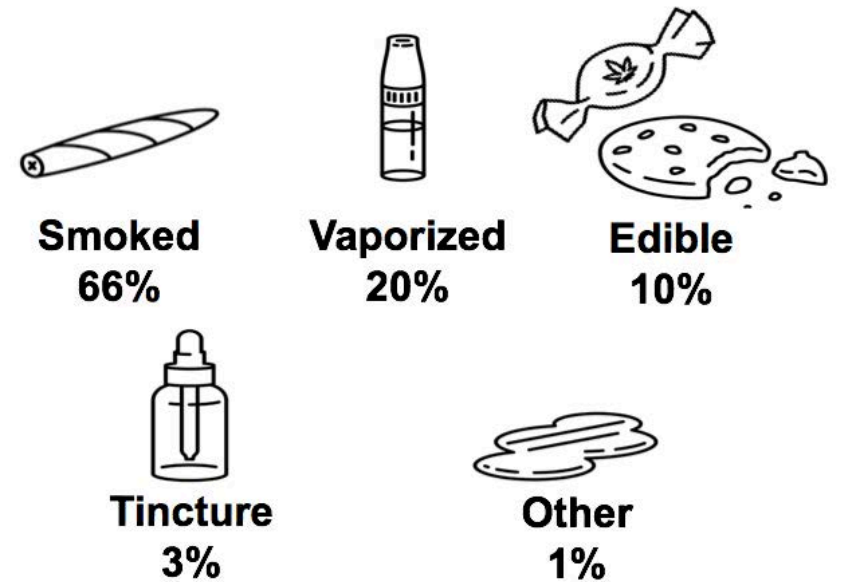


All participants
N=561

Increased THC potency in grown cannabis



Average Δ^9 -tetrahydrocannabinol (THC) concentration of Drug Enforcement Administration specimens by year, 1995–2014.



Bowles et al. Unpublished



Table 1
Major product types observed in June 2016.

Product Type	Use Method(s)	Average Price	1st Quartile	3rd Quartile	Average THC Potency	1st Quartile	3rd Quartile	Market Share
Extract for Inhalation	Smoked, vaporized, “dabbed”, or added to other products	\$34.24	\$23.51	\$38.1	69.66	65.1	78.6	22%
Solid Infused Edible	Eaten	\$21.1	\$7.58	\$30.73	–	–	–	7%
Liquid Infused Edible	Drunk	\$20.1	\$17.54	\$24.61	–	–	–	2%
Usable Marijuana	Smoked, vaporized	\$22.05	\$9.36	\$28.06	20.47	18.2	22.99	66%
Marijuana Mix	Smoked, vaporized	\$16.84	\$11.22	\$18.85	–	–	–	1%
Infused								
Infused Topicals	Applied to skin	\$31.33	\$17	\$39.58	–	–	–	1%
Marijuana Mix Package	Smoked, vaporized	\$13.61	\$6.59	\$14.14	19.31	16.1	21.3	1%



The Conference Board
of Canada

Le Conference Board
du Canada



IMPACTS ON THE WORKPLACE

Employers may have to address some of these issues related to cannabis legalization.



Workplace safety concerns



Alcohol & drug policies and testing



Problematic drug use or dependence



Defining cannabis impairment



Potential costs to the organization



Implementing prevention strategies



Medicinal cannabis use



Consumption during work-related events

Download the complete report at: www.conferenceboard.ca/cannabis



Acknowledgements



Research Participants

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Practical problems: What is the level of impairment?

Executive Function Measured	Acute Effects	Residual Effects	Long-Term Effects
Attention/Concentration	Impaired (light users) Normal (heavy users)	Mixed findings	Largely normal
Decision Making & Risk Taking	Mixed findings	Impaired	Impaired
Inhibition/Impulsivity	Impaired	Mixed findings	Mixed findings
Working Memory	Impaired	Normal	Normal
Verbal Fluency	Normal	Mixed findings	Mixed findings

Note: Acute Effects denotes 0–6 hours after last cannabis use; Residual Effects denotes 7 hours to 20 days after last cannabis use; Long-Term Effects denotes 3 weeks or longer after last cannabis use.



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CONTENTS FOR JULY 1936

CLARA D. NOYES, R.N.	Frontispiece
THE AMERICAN NURSES' ASSOCIATION — 1934-1936	Susan C. Francis, R.N. 655
CELIAC DISEASE	Wilford W. Barber, M.D. 660
CELIAC DISEASE: STORY OF A PATIENT	Bertha E. Rich, R.N. 668
LOOKING TOWARD TOMORROW	Aurelia Henry Reinhardt, Ph.D. 673
MARIJUANA	Victor Lewitus 677
"I WOULD LIKE A CARDIAC CASE"	Louis Faugeres Bishop, Jr., M.D. 679
THE PUBLIC LIBRARY AND THE NURSING SCHOOL: I. In a Small City	Jean Martin White, R.N. 685

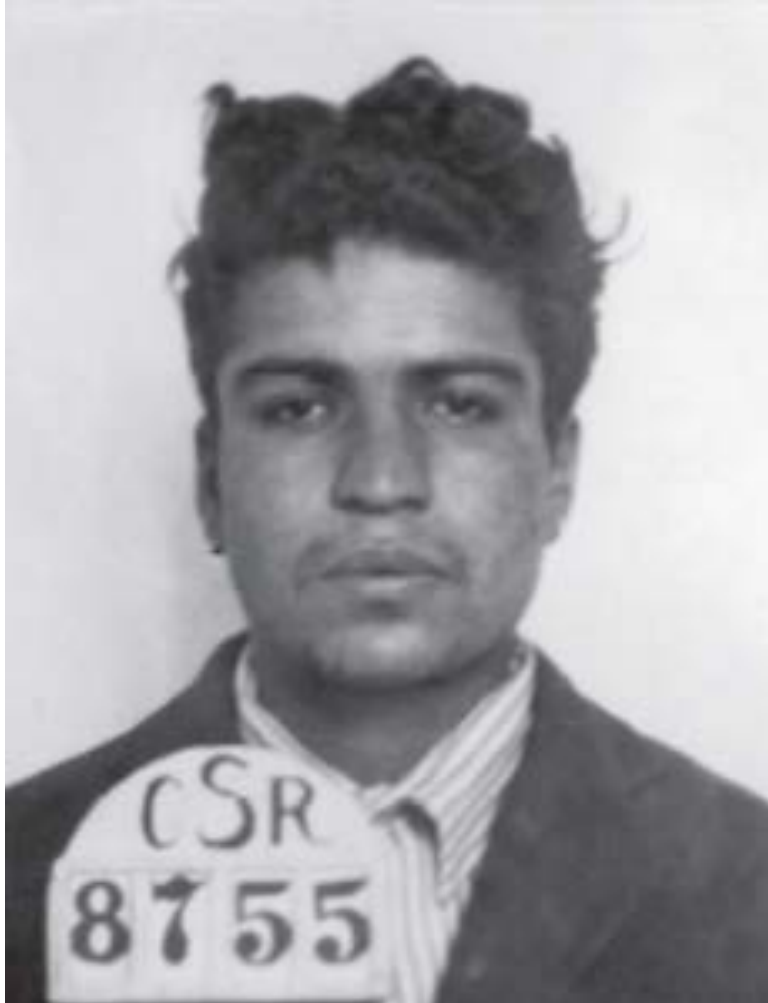
Fortunately, unlike most other narcotics, the drug is not known to cause a permanent addiction, for by abstinence the victim can be cured. Continual use, however, is known to produce a violent type of insanity which has brought to it the name "loco

weed." The subject will suddenly turn with murderous violence upon whomever is nearest to him. He will run amuck with knife, axe, gun, or anything else that is close at hand, and will kill or maim without any reason.

After the sudden outburst wears away, the memory is left blank and the victim of these narcotic effects returns to normal.



History of cannabis use



- 1937 Marijuana Tax Act
- Moses Baca
 - First arrest for $\frac{1}{4}$ of an ounce
 - Sentenced to 18 months
- 1950s stricter sentences for first offense, 2-10 years



Heavy cannabis use is associated with a greater risk of culpable driving

