


UCLA Center for Cannabis and Cannabinoids

Cannabis and Gambling What's Lying in the Weeds?

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21st Annual Midwest Conference on Problem Gambling and Substance Abuse
Kansas City, MO
June 20, 2024



1

Disclosures

- Research: Connections in Recovery

2

Goals

- Gain knowledge of the relationship between cannabis and gambling.
- Recognize how the legalization of cannabis is likely to impact gambling and gambling disorder.
- Use best treatment practices to address cannabis use disorders and gambling disorder.

3

Recent Case at UCLA

- 52 year old male presents for gambling disorder and depression treatment
- Classic presentation
 - Debt
 - Stress / emotional pain
 - Impaired work / home / social functioning
 - Poor Self-Care

4

Recent Case at UCLA

- Preferred form of gambling is poker, table games, online and live
- Tobacco, no other substances reported at intake
- Standard treatment doesn't appear to work
 - GA, Therapy, Medications

5

Recent Case at UCLA

- After 6 sessions, reveals that he uses cannabis "regularly" but doesn't see it as a problem because "it's just weed"
- Additional elements
 - Meets criteria for cannabis use disorder
 - Amotivated, emotionally absent
 - Thinks it helps calm him prior to gambling but no evidence that it is "performance enhancing"

6

Issues Raised

- How did gambling disorder impact cannabis use?
- How did cannabis use impact gambling disorder?
- How should cannabis be addressed in the office and how much time should be spent on this?
- How many others are out there?

7

A Few Thoughts on the Current Cannabis Landscape and How it Influences Mental Health 2024 Update

8

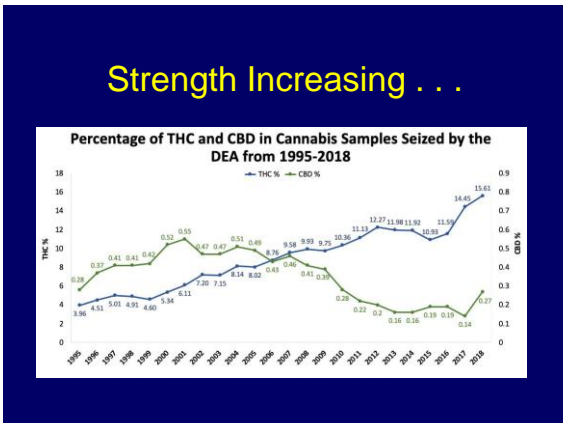
Terms

- Cannabis: The whole plant
 - Cannabinoids (hundreds!)
 - THC (Psychoactive)
 - CBD (Non-psychoactive)
 - CBG, CBL
 - Terpenes
- Marijuana: cannabis plant with THC
- Hemp: cannabis plant with <0.3%THC

9



10



11

One dose THC = 5mg

CONSIDER ROUTE of ADMINISTRATION

	Smoked	Oral	Sublingual/oromucosal
Time to peak effect	< 10 minutes	2-4 hours	1-2 hours
Duration of effect	45-180 minutes	3-8 hours	3-8 hours
Bioavailability	~ 30-35%	6-20%	Slightly higher than oral
	Smoked	Oral	Sublingual/oromucosal

12

November 2016- June 2024

- Cannabis as medicine ? or !
- Medical marijuana
 - 18-21 year old "market"
- What influences mental health?
 - Unregulated market thrives
 - Increasing strength of cannabis
 - So much "information" and "lived experience"
 - Embedded into daily culture

13

Cannabis and Psychiatric Effects

14

Cannabis and Psychiatric Effects

- Intoxication
- Withdrawal
- Create mental health disorders
 - Cannabis Use Disorder
 - Cannabis-Induced Disorders
- Exacerbate mental health disorders
 - Depression, anxiety, PTSD . . .
- Improve mental health disorders

15

Cannabis Intoxication

- A. Recent use of cannabis.
- B. Clinically significant problematic behavioral or psychological changes (e.g., impaired motor coordination, euphoria, anxiety, sensation of slowed time, impaired judgment, social withdrawal) that developed during, or shortly after, cannabis use.
- C. Two (or more) of the following signs or symptoms developing within 2 hours of cannabis use:
 - 1. Conjunctival injection.
 - 2. Increased appetite.
 - 3. Dry mouth.
 - 4. Tachycardia.
- D. The signs or symptoms are not attributable to another medical condition and are not better explained by another mental disorder, including intoxication with another substance.

16

Cannabis Withdrawal

- 1. Cessation of cannabis use that has been heavy and prolonged (i.e., usually daily or almost daily use over a period of at least a few months).
- 2. Three (or more) of the following signs and symptoms develop within approximately 1 week after Criterion A:
 - 1. Irritability, anger, or aggression.
 - 2. Nervousness or anxiety.
 - 3. Sleep difficulty (e.g., insomnia, disturbing dreams).
 - 4. Decreased appetite or weight loss.
 - 5. Restlessness.
 - 6. Depressed mood.
 - 7. At least one of the following physical symptoms causing significant discomfort: abdominal pain, shakiness/tremors, sweating, fever, chills, or headache.
- 3. The signs or symptoms in Criterion B cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- 4. The signs or symptoms are not attributable to another medical condition and are not better explained by another mental disorder, including intoxication or withdrawal from another substance.

17

Cannabis Induced Disorders

- Cannabis intoxication is distinguished from cannabis-induced mental disorders (e.g., cannabis-induced anxiety disorder, with onset during intoxication) because the symptoms are in excess of those usually associated with cannabis intoxication, predominate in the clinical presentation, and are severe enough to warrant independent clinical attention.

18

Cannabis-Induced Disorders

- Cannabis-induced delirium
- Cannabis-induced persisting dementia
- Cannabis-induced persisting amnesic disorder
- Cannabis-induced psychotic disorder
- Cannabis-induced mood disorder
- Cannabis-induced anxiety disorder
- Cannabis-induced sexual dysfunction
- Cannabis-induced sleep disorder

19

Cannabis Use Disorder

20

Cannabis Use Disorder

1. _____ is often taken in larger amounts or over a longer period than was intended.
2. There is a persistent desire or unsuccessful efforts to cut down or control _____ use.
3. A great deal of time is spent in activities necessary to obtain _____, or recover from its effects.
4. Craving, or a strong desire or urge to use _____.
5. Recurrent _____ use resulting in a failure to fulfill major role obligations at work, school, or home.
6. Continued _____ use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol.
7. Important social, occupational, or recreational activities are given up or reduced because of _____ use.
8. Recurrent _____ use in situations in which it is physically hazardous.
9. _____ use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol.
10. Tolerance, as defined by either of the following:
 1. A need for markedly increased amounts of alcohol to achieve intoxication or desired effect.
 2. A markedly diminished effect with continued use of the same amount of _____.
11. Withdrawal, as manifested by either of the following:
 1. The characteristic withdrawal syndrome for alcohol (refer to Criteria A and B of the criteria set for alcohol withdrawal).
 2. _____ is taken to relieve or avoid withdrawal symptoms.

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21

Cannabis Use Disorder (CUD)

DRUG	LIFETIME RISK OF DEPENDENCE
Nicotine	32%
Heroin	23%
Cocaine	17%
Alcohol	15%
Cannabis	9%

SOURCE: Bostwick, 2012 (reference list).

22

22

Cannabis as Medicine

23

Accepted Therapeutic Use: Cannabinoids

- Dronabinol (Marinol) (synthetic THC)
- Nabilone (Cesamet) (synthetic THC)
 - Chemotherapy-induced nausea and vomiting
 - Stimulate appetite with wasting syndrome due to AIDS
- Cannabidiol (Epidiolex) (CBD)
 - Intractable pediatric seizures (Dravet and Lennox-Gastaut)
 - Plant Derived
 - Oral liquid
 - Not controlled substance

Nabiximols (Sativex) (THC and CBD)

- Spray
- Muscle Spasticity and neuropathic pain (MS);
- non-USA (UK, Canada)

24

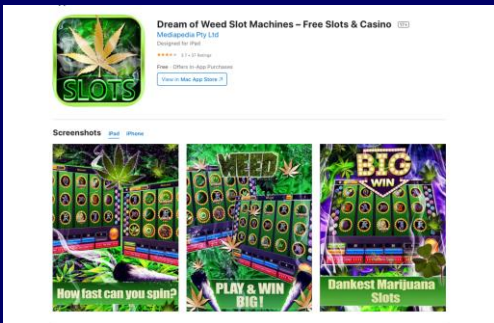
Cannabis and Mental Health: Treatment

There is **scarce** evidence to suggest that cannabinoids **improve** depressive disorders and symptoms, anxiety disorders, attention-deficit hyperactivity disorder, Tourette syndrome, post-traumatic stress disorder, or psychosis.

25

How do cannabis and gambling relate to one another?

26



27



28

Cannabis and Casinos (Considerations)

29

- ## Cannabis and Gambling Venues
- From the operator perspective
 - Managing gambling intoxication
 - Policies, procedures, training required
 - Navigating local, state and federal laws
 - Promote or prohibit cannabis usage?
 - Managing employees (urine testing)
 - Cannabis lounge?
 - Customer demand or forced demand?

30

Cannabis Money is a No-No

- As state laws and federal laws don't match up on marijuana, gambling industry are unable to accept money from anyone involved in the medical or recreational marijuana industry, whether it's legal in the state or not.
- Schedule I by-product

31

Does Cannabis Increase or Decrease Gambling Behavior?

32

Addictive Behaviors
 Volume 137, February 2023, 107520

Problem gambling severity, gambling behavior, substance use, and mental health in gamblers who do and do not use cannabis: Evidence from a Canadian national sample

Daniel S. McGrath^a, Robert J. Williams^b, Brett Rothery^c, Yale D. Belanger^d, Darren R. Christensen^e, Nady el-Guebaly^g, David C. Hodgins^h, Fiona Nicoll^f, Carrie A. Shaw^g, Garry J. Smith^h, Rhys M.G. Stevensⁱ

Show more

33

Results

- Large, national population survey, Canadians
- Individuals with greater problem gambling severity scores, more hours gambling, and a larger range of gambling activities were more likely to endorse using cannabis.

34

Cannabis Impact on Gambling Behavior

- Cannabis consistently should:
 - Increase impulsivity
 - Increase risk-taking
 - Increase ingestion of other available substances
 - Change perception of time
 - Alter moods
 - Impair decision-making

35

How does cannabis use impact gambling behavior?

- Attention / Concentration
 - Make more errors?
- Risk-taking behaviors
 - Take more or less?
- Diminish emotional responses?
 - Loss Aversion
- Urges and cravings for gambling

36

Does gambling increase or decrease cannabis use?

37

Does gambling lead to cannabis use?

- Most certainly if they are sold together or available together
- Most certainly if they are marketed together to enhance each other's experience (e.g. named products)
- Impact of professional gamblers, gambling role models, online influencers / Twitch Streams

38

Other questions to consider

- Impact of cannabis on gambling disorder?
 - Essentially unknown
- Could cannabis treat gambling disorder?
 - What is the basis of this?
 - Target urges / cravings / reward circuitry?

39



problemgambling.ca.gov

40

CalGETS Fast Facts

Cannabis Use Is Increasing Among Problem Gamblers Entering Treatment

CalGETS Problem Gamblers Entering Treatment between 2015 and 2018 Report Increasing Cannabis Use

Fiscal Year	Cannabis Use (%)
FY 2015-16	20%
FY 2016-17	21%
FY 2017-18	26%

Sources – Outpatient Gamblers: CalGETS Fiscal Years 2015-18 dataset, prepared for the California Department of Public Health, Office of Problem Gambling by the University of California Los Angeles Gambling Studies Program. CalGETS treatment participants were asked at intake: “In the past 12 months, have you used any of the following substances? Marijuana?” Dataset includes data from July 2015 through June 2018. USA Marijuana Use: Gallup, “What percentage of Americans smoke marijuana? (updated), 2018” (accessed August 5, 2020). URL: <https://news.gallup.com/poll/216135/percentage-americans-smoke-marijuana.aspx>

In California, problem gamblers can receive no-cost treatment through CalGETS. © If you or someone you know has a gambling problem, call 1-800-GAMBLER.

July 2020

Between July 1, 2015 and June 30, 2018, 2,596 problem gamblers entered CalGETS outpatient treatment. They were asked if they had used cannabis in the past year.

In Fiscal Year 2015-16, 20% of problem gamblers reported that they used cannabis in the past year. Cannabis use increased to 21% in FY 2016-17, and 26% in FY 2017-18. These percentages are higher than the 12% of U.S. and 16% of Western-state adults who report using cannabis.

Medicinal use of cannabis was legal throughout the study timeline. Recreational use of cannabis was legalized in California starting January 1, 2018.

41

CalGETS Fast Facts

Problem Gamblers' Cannabis Use Decreases after CalGETS Treatment

Category	Cannabis Use (%)
Intake	21%
End of Treatment	13%
USA Overall	13.3%

Source – Outpatient Gamblers: CalGETS Fiscal Year 2017-18 dataset, prepared for the California Department of Public Health, Office of Problem Gambling by the University of California Los Angeles Gambling Studies Program. CalGETS treatment participants were asked: “In the past 12 months, have you used any of the following substances? Marijuana.” At the end of treatment they were asked: “Since intake, have you used any of the following substances? Marijuana.” The decrease in cannabis use from intake to End of Treatment was significant ($p < .000$, McNemar test). USA Marijuana use: Compton, W. M., Han, B., Jones, C. M., Blanco, C., & Hughes, A. (2010). Marijuana use and use disorders in adults in the USA, 2002-16: analysis of annual cross-sectional surveys. *The Lancet Psychiatry*, 8(10), 954-964.

If you or someone you know has a gambling problem, call 1-800-GAMBLER. © For help with substance use problems, call SAMHSA's helpline 1-800-662-HELP (4357)

November/December 2019

In California, problem gamblers can receive no-cost treatment through CalGETS. Between July 1, 2017 and June 30, 2018, 876 problem gamblers entered outpatient treatment; 352 of whom also provided end-of-treatment data. We analyzed reports of cannabis use for those 352 clients.

Problem gamblers' use of cannabis decreased from 21% at CalGETS treatment entry to 13% at the end of treatment. This decrease in cannabis use is statistically significant.

Medicinal use of cannabis was legal during the study timeline, and recreational use of cannabis was legalized in California starting January 1, 2018.

42

Clinical Roadmap

- Raise knowledge about cannabis trends (how, where, what)
- Screen for cannabis use at intake, annually or when client reports increased emotional distress
 - Cannabis Use Disorder Identification Test
- Assess for cannabis use disorder
- Watch out for withdrawal

46

During the Course of Treatment

- Document cannabis use and impact on course of gambling behavior
 - Help or hurt or unknown?
 - Report these trends to MCPG, NCPG or peers / colleagues
- Monitor cannabis and gambling industry partnerships/ collaborations

47

Summary

- Cannabis products are dynamically evolving
- Cannabis and cannabinoids can impact mental health, short-term and long-term
- Earlier onset + frequent use = increased risk for addiction
- Therapeutic potential is behind currently recognized harms

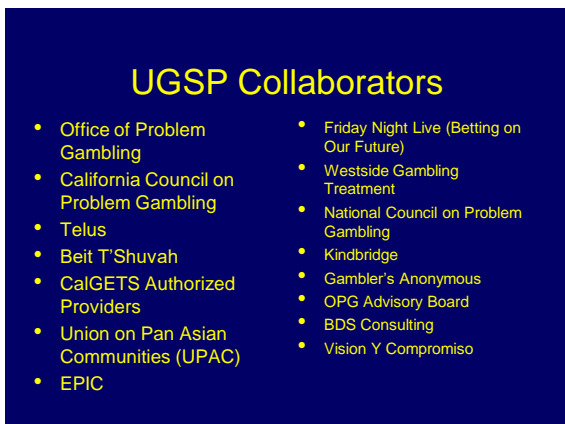
48



49



50



51

UCLA Center for Cannabis and Cannabinoids

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- Patric Carino
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52

cannabis.semel.ucla.edu

The screenshot shows the website header with navigation links: Home, About Us, UCLA Research, Media, Education, Events & Videos, and Giving. The main content area features a teal banner with the text: "Do you use cannabis? Healthy male and female cannabis smokers (age 18-30) invited to evaluate the effects of cannabis for a UCLA Research Study. Requires 1-3 screening visits (2 hours each) and 3 visits (30-60min) over 1-4 weeks at the UCLA Medical Center. Compensation for each: \$200-\$300." Below the text is a "Join Study" button and a small image of cannabis leaves. A "Join Study" button is also visible at the bottom left of the banner.

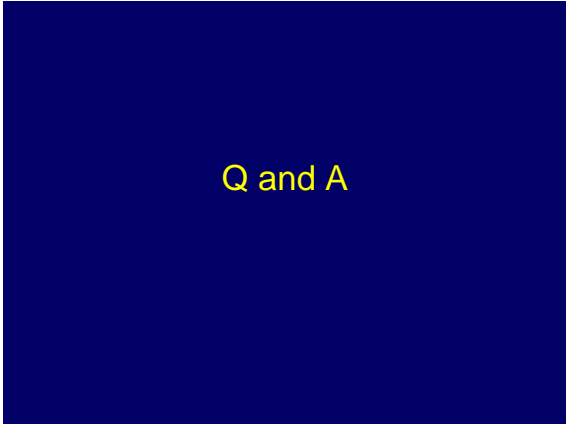
53

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54



Q and A

55