Cannabis and Cannabis Use Disorder: What Providers Need to Know

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Disclosures

The presenters do not have any disclosures to declare for this presentation

Objectives

- Be able to talk with your patients about potency levels of THC in marijuana products
- Be prepared to speak with patients about the risks and benefits of marijuana for physical and emotional health
- Have the ability to identify problematic cannabis use and Cannabis Use Disorder (CUD)

Please see slide at Presentation

SAMHSA.gov, National Survey on Drug Use and Health 2015 and 2016

Colorado Cannabis: THC Content

- 40 yo professional female, recently moved to CO from Iowa
- Occasional cannabis user, “I smoke a joint with friends about 1-2 times a month.”
- Reports feeling tightness in chest, increased anxiety and nausea after smoking a joint with friends at a party in Colorado.

Does the potency of cannabis products (% of THC) vary among states?

- ❑ YES
- ❑ NO

National Potency Changes

Figure 4. Δ9-Tetrahydrocannabinol (THC) potency distribution of cannabis samples from Drug Enforcement Administration specimens and average THC by year, 1995–2014.

Mahmoud A. ElSohly, Zlatko Mehmedic, Susan Foster, Chandrani Gon, Suman Chandra, James C. Church

Changes in Cannabis Potency Over the Last 2 Decades (1995–2014): Analysis of Current Data in the United States

Biological Psychiatry, Volume 79, Issue 7, 2016, 613–619

http://dx.doi.org/10.1016/j.biopsych.2016.01.004

Average THC and CBD Levels in the U.S. 1960-2011

Average THC Levels in CO 2010-2016

RMHIDTA, 2016

Commercialization of Cannabis Increases THC Content

Hasin, 2018; Sevigny et al 2014; Compton et al 2004

Cannabis and Pain Management

- 47 year old male with chronic back pain presents with worsening pain in the context of opioid taper prescribed by previous PCP
- “I’m wondering if marijuana will help my pain better than opiates?”

Cannabis is more effective than opiates for the management of chronic pain

- ❑ TRUE
- ❑ FALSE

Effect of Cannabis Use in People with Non-cancer Pain Prescribed Opioids: Findings From a 4-year Prospective Cohort Study

Campbell et al , Lancet July 2018, Vol 3 p. e341-350

Association of Cannabanoid Administration with Experimental Pain in Health Adults: Systematic Review and Meta-Analysis

DeVita et al JAMA Psychiatry September 2018 e1-e10

Therapeutic Effects of Cannabis

Whiting, Wolff , Deshpande, et al, 2015 (JAMA)

"Trial of Cannabidiol for Drug-Resistant Seizures in the Dravet Syndrome"

Devinsky O et al. N Engl J Med 2017;376:2011-2020.

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Pharmacological Interactions

- 57 y/o male with CAD with recent stent replacement, recurrent thromboembolic disease and seizure D/O presents with persistent nose bleeds that started two weeks prior to appointment
- Stable on warfarin therapy for 10 years, suddenly has INR of 10
- Bloodwork WNL with exception of positive for THC
- On interview patient reports increase of .5 to 2.5 grams per week of smoked cannabis

Possible Medication Interactions

Increased risk of bleeding

Affects blood sugar

Increases drowsiness

Affects the liver's cytochrome P450 enzyme system

SAMHSA, 2017

Cannabis Delivery Methods

- 24 y/o male presents for annual PE
- No acute medical problems, no personal or family history of substance use disorder
- Enjoys the effects of cannabis and wants advice regarding safest delivery method

What is the safest delivery method for cannabis?

A. Smoking plant-based cannabis

B. Vaping

C. Edibles

D. There is no “safest” delivery method for cannabis

High Level of Cannabis Use within Colorado Cannabis Industry

Walters et al American Journal of Industrial Medicine feb 2018 61:451-461

Budtenders are not health care providers, despite their willingness to offer recommendations

Dickson et al Obstetrics and Gynecology June 2018 131 (6) 1031-1038

Medical Marijuana

- 67 y/o female presents with Stage 4 ovarian cancer
- Endorses significant acute pain, up to five times a day with intensity up to 9/10
- Requests prescription for Medical Marijuana, stating it helps with pain and will save her money

Cannabis and Sleep

- 56 y/o female presents with hypertension (well controlled with medication), post-menopausal, c/o insomnia x one year
- Wants to try marijuana to help her sleep and asks which type of marijuana will work best

Please see slide at Presentation

Sleep and Cannabis

Pearce et al The Journal of Alternative and Complementary Medicine 2014 20 (10):787-91
Vigil et al Medicines 2018 5(75) 1-10

Cannabis and Screening

- 28 yo male with prior diagnosis of attention deficit hyperactivity disorder presents for monthly appointment
- Urine dip is positive for THC
- Patient states he uses marijuana daily and doesn't think it is a problem
- Patient appears to be disorganized and easily distracted in interview

Why is it important to screen for cannabis use?

A. Cannabis is the third most commonly used substance, after nicotine and alcohol

B. It is unhelpful to screen for cannabis use because so many people use it

C. Cannabis use is associated with significant medical problems

D. A & C

Screening and Brief Intervention

SAMHSA, 2017

CUDIT-R

Adamson, Kay-Lambkin, Baker, Lewin, Thornton, Kelly and Sellman (2010)

Side Effects of Cannabis Use

- 35 y/o male presents with complaint of frequent nausea and vomiting
- Patient has no active medical problems and doesn’t take any prescription medications
- On interview patient endorses daily use of cannabis with dabs and vaping

Acute Adverse Effects of Cannabis Use

Whiting, Wolff , Deshpande, et al, 2015 (JAMA)

Other Adverse Effects

Temporarily increases HR and BP

Chronic bronchitis

Depression

Anxiety/panic attacks

Suicidal ideation and suicide attempts

Psychosis

Infertility

Cannabinoid Hyperemesis Syndrome

SAMHSA, 2017

Other Effects of Cannabis

Reviewed in Hall, 2014; Reviewed in Volkow et al 2014; Hodcroft et al 2014; Asbridge et al 2014; Monte et al 2014

I did stop using. That test came back positive because my friends are still using marijuana.

Yes, “Hotboxing,” Is Real

Stanciu et al Journal of Alcoholism and Drug Dependence 2017 5(5): 1-4

Cannabis and Psychosis

- 35 year old male, successful real estate developer in Northern Colorado.
- Does not drink alcohol, began smoking marijuana in HS and continued through college and after
- Being seen after 72-hour hold at the ED
- Using marijuana daily x three years with worsening symptoms of paranoia, disorganized and threatening bx and auditory and visual hallucinations

Does psychosis remit after cannabis use is stopped?

A. YES

B. NO

C. UNCLEAR

Cannabis and Psychosis

Spencer, 1970; Degenhardt & Hall, 2002

Cannabis Use and Psychosis

Hall, 2014; Di Forti et al 2014, Giordano et al 2014

Cannabis Use Disorder

- 45 y/o male construction worker with chronic back pain has been working with PCP x two years
- Currently uses Butane Hash Oil (BHO) per vape up to 10x daily
- Unable to decrease and has actually increased use in past month
- Recently fired for poor attendance and his girlfriend broke up with him

National Cannabis Use Levels

Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health, 2016

Development of a Cannabis Use Disorder in Adults who use Cannabis: 1 in 11

Development of a Cannabis Use Disorder in Adults who use Cannabis daily: 1 in 2

(Keeping in mind that this is based on THC content <12%)

Wagner, F.A. & Anthony, J.C. , 2002; Giedd. J. N., 2004; Mokrysz et al 2016

Diagnosing Cannabis Use Disorder via DSM-5
2-3 = mild, 4-5 = moderate, 6+ = severe

Impaired control

1. Using for longer periods of time than intended/using larger amounts than intended
2. Wanting to reduce use, yet being unsuccessful
3. Spending excessive time getting/using/recovering
4. Cravings that are so intense it is difficult to think about anything else

Social impairment

5. Continued use despite work, family/social obligations
6. Continued use despite interpersonal problems
7. Important/meaningful social/recreational activities reduced or given up

Risky use

8. Repeatedly uses in physically dangerous situations
9. Continued use even though there is awareness of physical and psychological problems

Physiological indicators

10. Tolerance
11. Withdrawal

Cannabis Withdrawal Syndrome

Withdrawal symptoms are a negative reinforcement for continued use and are associated with less treatment adherence

Bonnet and Pruess, 2017

The Natural Course of Cannabis Use Disorders

Farmer et al 2015

Treatment

Only 7% with a cannabis use disorder in the past year report having received some sort of treatment or involvement in mutual support groups

Hasin et al 2016

Treatment of Cannabis Use Disorder

- Outpatient vs residential treatment
- Psychosocial Interventions
- Pharmacotherapy

Gorelick, Saxon and Hermann, 2017

Psychosocial Interventions and Outcomes

Interventions

- CBT
- MET
- Contingency Management
- Self Help Support Groups-12 Step Groups, SMART Recovery

Outcomes

- Enhance motivation to reduce or end use
- Improve social skills
- Improve social support and interpersonal functioning
- Manage painful feelings
- Education about consequences of use

Gorelick, Saxon and Hermann, 2017

Pharmacotherapy

- NO MEDICATION has been approved for the treatment of Cannabis Use Disorder by the FDA or any other national regulatory agency

Gorelick, Saxon and Hermann, 2017

Treatment- Pharmacotherapy

Gorelick, Saxon and Hermann, 2017, Reviewed in Kelly and Levin “Treatment of Cannabis Use Disorder,” in 2015 Textbook of Substance Abuse Treatment; Allsop et al 2014

Summary

- Commercialized cannabis THC potency (the substance that makes you high) is often higher than cannabidiol potency (the substance that is most protective)
- Cannabis may be most helpful for the emotional components of pain; prospective controlled studies show no benefit for chronic pain
- Many positive studies in the literature are industry associated studies
- Any use of cannabis can cause physical and emotional side effects; chronic use can lead to addiction