Legalize it ??? - A Clinician's Guide to Medical Marijuana
Faculty

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Disclosures

- **Charles Vega, MD, FAAF** serves as a speaker for Shire Pharmaceuticals. Dr. Vega is also a consultant for McNeil Healthcare.
Learning Objectives

1. Assess trends in the use of marijuana, medical and recreational
2. Analyze the potential benefits of medical marijuana
3. Evaluate the potential negative consequences of medical marijuana
4. Review research of physician attitudes towards medical marijuana
Pre-test Question 1

Since 2001, how have the prevalence of marijuana use and marijuana use disorders among US adults changed?

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2. Marijuana use has doubled, but prevalence of use disorders has not changed
3. Both marijuana use and use disorders have increased by about two times
4. Only marijuana use disorders have increased in prevalence
Pre-test Question 2

Evidence best supports benefits of marijuana for which of the following indications?

1. Mood
2. Asthma
3. Appetite
4. Neuropathic pain
Pre-test Question 3

According to current evidence, the risks for negative outcomes of marijuana use are greatest for which patient population?

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2. Adults age 20-30 years
3. Adolescents age 15-18 years
4. Adolescents age 15 or younger
Patient Case: Melinda

History

- 34 year-old woman
- 8-year history of HIV
- 6-year history of PTSD related to a previous abusive relationship
- Recently restarted medical care after several years without

Workup

- Current symptoms:
  - Fatigue, intermittent fever, weight loss (15 lbs)
- Labs:
  - CD4 count 60 cells/mm$^3$
  - HIV viral load 280,000 copies/mL
  - Moderate anemia
  - Other tests negative for acute infection
- Denies alcohol or tobacco use
- Smokes marijuana several times weekly “to calm my nerves”
The Creep, or Wave, of Legalization
Prevalence of Marijuana Use or Disorder Among U.S. adults

Marijuana Use in HS Students, 2015

Epidemiology among teens:

- Use increased 1991 - 1997
- Use decreased 1998 - 2013
- Stable between 2013 - 2015

Do Dispensaries Promote MJ Use Among Teens?

- Evaluated nearly 15,000 8th, 10th, and 12th grade students at 141 schools in 18 states
- Dispensary located within 5 miles or 25 miles
  - Availability of medical marijuana NOT associated with recent or current use among adolescents
  - 5-mile and 5 to 25-mile buffers associated with increased use among 8th and 10th graders, respectively

Marijuana Use Among Colorado Adolescents

![Bar chart showing marijuana use percentages for 2011, 2015, and National '15.]

- 2011: 22%
- 2015: 21.2%
- National '15: 21.7%

2012: Rec use legal
2014: First stores open

Discussion Point
Patient Case: Melinda

- Referred for counseling and infectious disease consult
- Antiretroviral therapy initiated
- Within months, symptoms resolve and CD4 counts normalize
- Still using marijuana regularly
- Says that she is using it for medicinal purposes more than anything else
Medical Marijuana: Common Indications

- **1746 patients in California**: most common indications were pain, insomnia, and anxiety

- **Colorado data:**
  - 94% of MM patients with pain
  - 17% with muscle spasm


Marijuana Benefits: Pain

- Systematic review of RCTs for non-cancer pain
- 18 trials with 766 participants in total. 9 with neuropathic pain
- Mostly modest but significant relief in 15 of 18 trials. Best evidence for neuropathic pain, but fibromyalgia and RA also responded
- Improvement in sleep in multiple studies
- No serious AE
- Little discontinuation due to AEs

Marijuana Benefits: Appetite

- 243 patients with advanced cancer
- Randomized to cannabis extract, THC, or placebo

Marijuana in Crohn’s Disease

- 21 patients refractory to standard therapy
- Cannabis (115 mg THC) BID or placebo
- Only response was significant (P=0.028)
- MJ is steroid-sparing

Marijuana Benefits: HIV/AIDS

- 7 randomized controlled studies reviewed by Cochrane
- Small, short-term studies
- Mean weight gain of 0.1 kg with dronabinol vs. 0.4 kg loss with placebo
- **No improvement:**
  - Nausea/vomiting
  - Appetite
  - Mood
  - Performance

Marijuana in Psychiatric Illness

- Little effect on depression / anxiety
- Does not worsen cognitive performance in bipolar disorder + some improvement in mood

Discussion Point
Patient Case: Melinda

- Doing better, but worried
- Expresses concern that she will not be able to stop smoking marijuana
- Has been using regularly for 5+ years
- Also worried about possible long-term side effects of chronic use
Marijuana Benefits / Risks: Lung Disease

- Marijuana is a decent bronchodilator – similar to isoproterenol
- COPD: 4-5 joints/day for 30 years
- 430 lung cancer cases & 778 controls:

Marijuana Risk: CVD

- Known to promote worse outcomes in short-term after MI
- 3886 MI survivors followed for up to 18 years
- Higher rate of mortality among marijuana users
- Multivariate analysis:
  - OR 1.29 for all-cause mortality with marijuana use
  - But NOT statistically significant

Marijuana Risks: Altered Consciousness

Systematic review of cannabis for pain

Marijuana Risks: Education

- Comparing cannabis use prior to age 15 with no use at age 18 in 3 cohort studies

Marijuana Risk: Cognition

- 181 adolescents
- Cannabis vs. alcohol vs. abstainers
- Rey Auditory Verbal Learning Test
- Cannabis group worst for:
  - Word recall
  - Learning
  - Retention & retrieval
- Effects cumulative & dose-dependent

Marijuana Risk: Adult Cognition

- Meta-analysis of 33 studies
- Small negative effect on most cognitive domains
- When strict exclusion criteria to account for withdrawal was applied, 13 studies remained
- Negative effects on cognition not evident
- Conclusion: Are negative cognitive effects due to intoxication/withdrawal alone?

Marijuana Risk: Psychosis

Marijuana Risks: Gateway Drug?

- Does the gateway phenomenon exist?
- 9282 young people
- Only 5.2% of those using illicit drugs deviated from the pattern
- More deviation associated with mental illness

Marijuana Risks: Gateway Drug?

Discussion Point
In all fairness…

- 3% to 4% of U.S. population receiving chronic opioid therapy
- 165,000 deaths due to prescription opioids 1999 – 2014
- 1.9 million dependent or with abuse of prescription opioids in 2013
- Rate of opioid misuse 4.8%

Prescription Drug Overdose

Total number of ED visits in U.S. - 2009

Prescription Drug Overdose

Overdose deaths in U.S. - 2009

- All Rx's: 20,444
- Opioids: 14,800

What Do Other Physicians Think?

Should physicians recommend marijuana?

- Yes: 19
- No: 46

What Do Other Physicians Think?

Does marijuana produce physical benefits or harms?

- Benefits: 27
- Harms: 61
Limitations of Using Marijuana Clinically

- Laws vary by state

- Prescribers generally protected if state law in place
  - Will new U.S. Attorney General Sessions continue this practice?

- Major limitations of medical marijuana:
  - Pharmacokinetics highly variable
  - Risk of abuse / dependence
  - Lack of quality research
  - Communication gaps between HCPs / dispensaries

However, millions of patients have already made the choice and are using marijuana medically.
Patient Case: Melinda

- Says that she is using marijuana for chronic neck and back pain
- Pain started after violent clashes with her ex-boyfriend
- Tried NSAIDs and tramadol without much improvement
- Pain management specialist recommended against injection therapy or surgery
- Also uses marijuana to relax when she feels anxiety related to PTSD
- Asks for a prescription for medical marijuana
Best Practices for Medical Marijuana

- Think of it like acupuncture, massage therapy, or other integrative medicine.
- Fully assess the patient and practice informed decision-making.
- Evaluate potential mental health issues that the patient may be trying to self-medicate.
- Realize that medical marijuana is probably not a first-line agent for ANY condition.
- Follow patients for efficacy, safety, tolerability as with any other drug.
- Communicate with the dispensary as you would any other health provider. If communication is lacking, stop the prescription.
Discussion Point
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