“My doctor recommended pot”: Mile High Mints, Mountain High Suckers, Honey Dabs, and how they alter the patient-physician relationship
Disclosures

• Royalty payments from American Psychiatric Publishing
• Honoraria for educational speaking engagements
• Salary from Denver Health
• Grant support from the University of Chicago for tangentially-related projects on professionalism
Learning objectives

Together we will explore...

• How Colorado became ‘Pot Capitol U.S.A.’
• Who is using medical marijuana
• Who is recommending medical marijuana
• The available evidence on the benefits and harms of MMJ
• How recommending the medical use of marijuana alters the patient-physician relationship
28 yo F w/o past psych hx

- Admitted w/ SI
- Panic attack
- In town for a library conference
- Consumes an edible from a local friend with a red card who told her “my doctor recommended pot”
- Brought to DH ED-> Freud squad
Propaganda, anyone?
Long roots!!!
Monday - Saturday / 9am - 8pm
Sunday / 9am - 4pm

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303-385-3912

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“While little research has been conducted on CBG, it has been found to have medical properties.”
Marijuana cures cancer
US government has known since 1974

In 1974 researchers at the Medical College of Virginia, who had been funded by the National Institute of Health to find evidence that marijuana damages the immune system, found instead that THC slowed the growth of three kinds of cancer in mice. The DEA quickly shut down the Virginia study and all further cannabis/tumor research. In 1976 President Gerald Ford put an end to all public cannabis research and granted exclusive research rights to major pharmaceutical companies who obviously squashed it. In 1983 the Reagan/Bush Administration told universities and researchers to destroy all 1966-76 cannabis research work.

Credit: tokesignals.com
Marijuana possession and use should be:

1. Illegal and criminalized, so that users could be incarcerated

2. Illegal and decriminalized, so that users could be fined or enter substance abuse treatment

3. Legal and recreationalized, so that users could possess and use like alcohol

4. Legal and medicalized, so that users could possess and use like medication
Definitions

**Decriminalization**
To eliminate criminal penalties for use and possession
Any penalties associated with use and possession would be non-criminal
Can be retroactive or proactive
Oregon (1973) was the first state to decriminalize
Example: minor traffic offenses

**Legalization**
To remove all penalties for the use and possession
Can still regulate who uses and possesses with regards to advertising, age, amount, content, public intoxication, taxation
Examples: alcohol, nicotine
States with ‘legal’ MMJ (2014)

- Alaska
- Arizona
- California
- Colorado
- Connecticut
- Delaware
- District of Columbia
- Hawaii
- Illinois
- Maine
- Massachusetts
- Michigan
- Montana
- Nevada
- New Hampshire
- New Jersey
- New Mexico
- Oregon
- Rhode Island
- Vermont
- Washington
States with pending bills

- Florida
- Georgia
- Kentucky
- Maryland
- Minnesota
- Missouri
- New York

- Ohio
- Pennsylvania
- Tennessee
- Utah
- West Virginia
- Wisconsin
Marijuana Regulation

1937
- Federal Prohibition
- Prohibited by federal law (Controlled Substances Act 1970)

1996
- Medical Marijuana (20 states and District of Columbia)
- Legal access under a physician’s supervision
- Marijuana may be possessed or grown for personal use

2012
- Legalization (CO and WA)
- Eliminates prohibition for possessing small amounts
- Requires legislatures to regulate recreational use

Credit: Laura Borgelt
Colorado legalized the possession and use of medical marijuana:
1. When the state was founded in 1876
2. When Red Rocks Amphitheatre opened in 1906
3. When Amendment 20 passed in 2000
4. When Amendment 64 passed in 2012
5. Full legalization has not yet occurred
Illicit Substance Use in CO

Illicit Drug Use in Past Month among Persons Aged 12 or Older by State: Percentages, Annual Averages Based on 2006 and 2007 NSDUHs

Ref: National Household Survey of Drug Abuse
Alcohol Use in CO

Binge Alcohol Use in Past Month among Persons Aged 12 or Older by State: Percentages, Annual Averages Based on 2006 and 2007 NSDUHs

Ref: National Household Survey of Drug Abuse
Amendment 20

- 54% of vote November 2000
- Provides affirmative defense not legalization
- Includes specific diseases (HIV/AIDS, cancer, epilepsy, glaucoma) + non-specific conditions (severe pain, severe nausea, cachexia, muscle spasms)
- Patient, caregiver, physician

Credit: The Simpsons (doh!)
Amendment 20

• “...a patient or primary care-giver charged with a violation of the state's criminal laws related to the patient's medical use of marijuana will be deemed to have established an **affirmative defense** to such allegation where:

  • i. The patient was previously diagnosed by a physician as having a **debilitating medical condition**;

  • ii. The patient was advised by his or her physician, in the context of a **bona fide physician-patient relationship**, that the patient might benefit from the medical use of marijuana in connection with a debilitating medical condition; and

  • iii. The patient and his or her primary care-giver were collectively in possession of amounts of marijuana only as permitted under this section. This affirmative defense shall not exclude the assertion of any other defense where a patient or primary care-giver is charged with a violation of state law related to the patient's medical use of marijuana.
Complications of Amndmnt 20

- No exclusion criteria
- No exam
- No ongoing pt-doc relationship
- No training for docs
- No requirement for DEA license
- No coordination of care
- No definition of caregiver
Application for MMJ

Colorado Department of Public Health and Environment
Medical Marijuana Registry

APPLICATION FOR IDENTIFICATION CARD
[ ] New Application  [ ] Renewal Application

Instructions: Please complete all required information and return this application along with the Physician’s Certification form, a copy of a photo identification that establishes Colorado residency (such as a driver’s license), and the non-refundable $90.00 application fee to: Colorado Department of Public Health and Environment, Medical Marijuana Registry, HSLVD-MMP-A1, 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530. Incomplete applications will be returned to the applicant. You may contact the Registry at (303) 692-2184. Please make check or money order payable to CDPEHE.

APPLICANT INFORMATION

NAME (LAST, FIRST, M): ___________________________
MAILING ADDRESS: ________________________________
DATE OF BIRTH: _________________________________
TELEPHONE NUMBER: _____________________________
ALTERNATE: _____________________________
CITY AND ZIP CODE: ____________________________
COUNTY: __________________________
SOCIAL SECURITY NUMBER: ______________________
CAREGIVER INFORMATION*

NAME (LAST, FIRST, M): ___________________________
MAILING ADDRESS: ________________________________
DATE OF BIRTH: _________________________________
TELEPHONE NUMBER: _____________________________
ALTERNATE: _____________________________
CITY AND ZIP CODE: ____________________________

PHYSICIAN INFORMATION

NAME (LAST, FIRST, M): ___________________________
MAILING ADDRESS: ________________________________
TELEPHONE NUMBER: _____________________________
CITY, STATE, AND ZIP CODE: ______________________

PHYSICIAN’S STATEMENT

The above-named patient has been diagnosed with and is currently undergoing treatment for the following debilitating medical condition: (Check appropriate boxes.)

1. [ ] Cancer
2. [ ] Glaucoma
3. [ ] HIV or AIDS positive
   OR A medical condition or treatment that produces, for this patient, one or more of the following and which, in the physician’s professional opinion, may be alleviated by the medical use of marijuana.
4. [ ] Cachexia
5. [ ] Severe pain
6. [ ] Severe nausea
7. [ ] Seizures (including those characteristic of epilepsy)
8. [ ] Persistent muscle spasms (including those characteristic of multiple sclerosis)

Comments:

I hereby certify that I, a physician duly licensed to practice medicine in Colorado, am the physician for the above-named patient. It is my conclusion that the applicant might benefit from the medical use of marijuana. This is not a prescription for the use of medical marijuana.

SIGNATURE: ___________________________
DATE: ___________________________

* A caregiver is defined by law as a person, other than the patient and the patient’s physician, who is eighteen years of age or older and has significant responsibility for managing the well-being of a patient who has a debilitating medical condition.

In order to be eligible to receive protections under Colorado State law as a medical marijuana patient or caregiver you must be registered with the Colorado Medical Marijuana Registry that is operated and maintained by the Colorado Department of Public Health and Environment. The registry is not affiliated with any private operated club, organization or dispensary.

WARNING! THE USE, POSSESSION, DISTRIBUTION AND MANUFACTURE OF MARIJUANA REMAINS A FEDERAL CRIME IN COLORADO, AND POSSESSION OF A REGISTRATION CARD PROVIDES NO PROTECTION WHATSOEVER AGAINST FEDERAL CRIMINAL PROSECUTION.
• Repeated attempts by CDPHE to define ‘caregiver’ as something like a home health aide
• Threat of federal action
• Fewer than 9,000 total patients by the end of 2008

Ref: CDPHE
- 251,376 applicants
- 113,441 registrants
- >2% of population
- Highest per-capita in the country, twice as high as CA
- Average age = 41
- 67% male
- 94% severe pain

Colorado MMJ registrants, by qualifying conditions
So, what changed?

March 2009: US Attorney General Eric Holder announces the Feds will not pursue MMJ users and dispensaries who follow state laws
Dispensaries = caregivers

- July 2009: CO Board of Health votes 4-3 against limits on caregivers
- Above-ground dispensaries appear
- Sept 2010: 1/3 of nation’s dispensaries

Credit: Denver Post
ARS #3

For which conditions is there high-level evidence for using medical marijuana?

1. Severe pain
2. Nausea
3. Glaucoma
4. Cancer
5. HIV/AIDS
6. None of the above
Different strains = Different drugs

Credit: leafly.com
Botanical Drug Development

Botanical Raw Material → Botanical Drug Substance → Botanical Drug Product

FDA, Guidance for Industry, Botanical Drug Products, 2004
Clinical correlation

• Most of the published studies are conducted with markedly lower THC agents than what is available at your local dispensary

• Clinical pearl:
  – Don’t ask: *Do you smoke pot?*
  – Ask: *Do you use marijuana, pot, hash, or other products containing marijuana?*
  – Seek information about initiation of use, strain, mechanism of use, frequency, duration, dose, dispensary, signs of substance use, etc.
How ‘medical’ is medical MJ?

<table>
<thead>
<tr>
<th>First Author/PMID</th>
<th>Condition studied</th>
<th>Subjects</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ware MA 2010 /20805210</td>
<td>Neuropathic pain</td>
<td>N=23</td>
<td>High dose marijuana cigarette &gt; Moderate- and low-dose marijuana cigarette &gt; placebo</td>
</tr>
<tr>
<td>Ellis RJ 2009 / 18688212</td>
<td>Neuropathic pain in HIV</td>
<td>N=28</td>
<td>Marijuana cigarette &gt; placebo</td>
</tr>
<tr>
<td>Kraft B 2008 / 18580179</td>
<td>Acute pain (sunburn, electrical, capsaicin)</td>
<td>N=18</td>
<td>Oral marijuana extract = placebo</td>
</tr>
<tr>
<td>Wilsey B 2008 / 18403272</td>
<td>Neuropathic pain</td>
<td>N=38</td>
<td>Low dose marijuana cigarette = high dose &gt; placebo</td>
</tr>
<tr>
<td>Abrams DI 2007 / 17296917</td>
<td>Neuropathic pain in HIV</td>
<td>N=50</td>
<td>Marijuana cigarette &gt; placebo</td>
</tr>
<tr>
<td>Haney M 2007 / 17589370</td>
<td>Caloric intake in HIV</td>
<td>N=10</td>
<td>Dronabinol = marijuana cigarette &gt; placebo</td>
</tr>
<tr>
<td>Wallace M 2007 / 18073554</td>
<td>Acute pain (capsaicin injection)</td>
<td>N=15</td>
<td>Low dose marijuana cigarette &gt; placebo &gt; high dose marijuana cigarette</td>
</tr>
<tr>
<td>Tomida I 2006 / 16988594</td>
<td>Intraocular pressure in glaucoma</td>
<td>N=6</td>
<td>Low dose oral marijuana extract &gt; placebo &gt; high dose oral marijuana extract</td>
</tr>
<tr>
<td>Zuardi AW 2006 / 16401651</td>
<td>Treatment-resistant schizophrenia</td>
<td>N=3</td>
<td>Oral cannabidiol extract = placebo</td>
</tr>
<tr>
<td>Haney M 2005 / 15778874</td>
<td>Caloric intake in HIV</td>
<td>N=30</td>
<td>Dronabinol = marijuana cigarette &gt; placebo</td>
</tr>
<tr>
<td>Fox P 2004 / 15079008</td>
<td>Tremor in multiple sclerosis</td>
<td>N=14</td>
<td>Oral marijuana extract = placebo</td>
</tr>
<tr>
<td>Abrams DI 2003 / 12965981</td>
<td>Immune function in HIV</td>
<td>N=67</td>
<td>Dronabinol = marijuana cigarette = placebo</td>
</tr>
<tr>
<td>Zajicek J 2003 / 14615106</td>
<td>Muscle spasticity in multiple sclerosis</td>
<td>N=630</td>
<td>Oral marijuana extract = dronabinol = placebo</td>
</tr>
<tr>
<td>Bredt BM 2002 12412840</td>
<td>Immune function in HIV</td>
<td>N=62</td>
<td>Dronabinol = marijuana cigarette = placebo</td>
</tr>
<tr>
<td>Killestein J 2002 / 12011290</td>
<td>Muscle spasticity in multiple sclerosis</td>
<td>N=16</td>
<td>Oral marijuana extract = dronabinol = placebo</td>
</tr>
<tr>
<td>Söderpalm AH 2001 / 11509190</td>
<td>Nausea (induced by ipecac)</td>
<td>N=13</td>
<td>Odansetron &gt; marijuana cigarette &gt; placebo</td>
</tr>
<tr>
<td>Greenwald MK 2000 / 10812286</td>
<td>Acute pain (heat stimulation)</td>
<td>N=5</td>
<td>Marijuana cigarette &gt; placebo</td>
</tr>
<tr>
<td>Merritt JC 1980 / 7053160</td>
<td>Intraocular pressure in glaucoma</td>
<td>N=18</td>
<td>Marijuana cigarette &gt; placebo</td>
</tr>
</tbody>
</table>
No accepted medical use

- Limitations:
  - Small sample sizes
  - Short duration
  - Subjective outcomes
  - Few active comparators
  - Heterogeneous populations
  - Difficulty maintaining the blind
  - Strict exclusion criteria
  - Not studying the doses in CO dispensaries

- Equivalent to Phase II studies
- Risks are better documented

- 109 controlled trials of cannabinoids
- 13 controlled trials of smoked cannabis
  - 5 on HIV/AIDS
  - 3 on pain
  - 3 on chemo-induced nausea/vomiting
  - 1 each on MS, glaucoma, Hepatitis C
Is this patent medicine?
Glaucoma

- 3 controlled trials of cannabinoids
- 1 study with 2% THC MJ cigarettes (18 patients)
- 1 with eye drops with different concentrations of THC (8 patients)
- 1 with cannabis extracts (6 patients)
- MJ lowered IOP in all studies

Credit: www.herbalmision.org
“Although marijuana can lower the IOP, its side effects and short duration of action, coupled with a lack of evidence that it shortens the course of glaucoma, preclude recommending this drug in any form for the treatment of glaucoma at the present time.”

--American Glaucoma Society Position Statement, 2010
Appetite Stimulation

- 8 controlled studies, mostly in patients with cachexia related to AIDS or cancer
- 3 of these are with smoked marijuana (largest with 67 patients)
- Generally seems to promote weight gain/retard weight loss, although this was not statistically significant in all studies
Nausea/vomiting

• Studied primarily in chemo-induced nausea and vomiting
• 32 randomized trials, 3 of these included smoked MJ
• Dronabinol and nabilone seem equivalent to or better than earlier generation antiemetics, but have worse side-effect profile
• Now that newer medications like ondansetron are available, used less
Seizure disorders

• Seems promising in animal studies
• Only one controlled study done on 15 patients with epilepsy refractory to standard meds
• 8 patients randomized to oral cannabidiol and half of these remained seizure-free for the study period (8-18 weeks)

Credit: www.recapo.com
“No reliable conclusions can be drawn at present regarding the efficacy of cannabinoids as a treatment for epilepsy. The dose of 200 to 300 mg daily of cannabidiol was safely administered to small numbers of patients generally for short periods of time, and so the safety of long term cannabidiol treatment cannot be reliably assessed.”

--Cochrane Review on Cannabinoids for epilepsy
Multiple sclerosis

• 22 controlled trials of cannabinoids
• No trials of smoked MJ
• Initial studies with mixed results
• CAMS Study enrolled 630 patients—subjective improvement
• 26 controlled trials of various cannabinoids
• 3 controlled trials looking at smoked MJ, largest with 38 patients
• Mixed results; pain relief *may* be equivalent to that of codeine.
Adverse effects

• Adverse effects found frequently in above studies = sedation, euphoria, dizziness, dysphoria, hallucinations, dry mouth, postural hypotension, concentration problems

• No reported deaths directly attributed to cannabis overdose

• LD 50 in humans estimated to be 15-70g, much higher than even heavy users are getting, but we might (?) reach this with edibles or dabs
“Despite ... some jurisdictions making allowances for the ‘medical’ use of marijuana by patients with HIV/AIDS, evidence for the efficacy and safety of cannabis and cannabinoids in this setting is lacking. Such studies as have been performed have been of short duration, in small numbers of patients, and have focused on short-term measures of efficacy. Long-term data, showing a sustained effect on AIDS-related morbidity and mortality and safety in patients on effective antiretroviral therapy, has yet to be presented. Whether the available evidence is sufficient to justify a wide-ranging revisiting of medicines regulatory practice remains unclear.”

--Cochrane Review on cannabinoids for HIV/AIDS
“The accumulated data indicate a potential therapeutic value for cannabinoid drugs, particularly for symptoms such as pain relief, control of nausea and vomiting, and appetite stimulation. ... The effects of cannabinoids on the symptoms studied are generally modest, and in most cases there are more effective medications. ... The goal of clinical trials of smoked cannabis would not be to develop cannabis as a licensed drug but rather to serve as a first step toward the possible development of nonsmoked rapid-onset cannabinoid delivery systems.”
The frequent use of marijuana is associated with?

1. Cognitive decline
2. Depression
3. Psychosis
4. Substance abuse
5. Suicide
6. All of the above
High risk of abuse

• 6,500 Americans begin using daily
• 10-20% develop dependence
• Primary substance in 17.1% of SA admissions in USA
• Most common illicit substance used

Credit: michigan.backpage.com
Most common illicit substance

Illicit Drug Dependence or Abuse in the Past Year among Persons Aged 12 or Older: 2002-2012


Credit: Laura Borgelt
MJ is a psychoactive compound

- Native CB1 endocannabinoid receptors regulate appetitive, mood, motivation
- Most dense in basal ganglia, olfactory bulb, cerebellum, hippocampus

Credit: Scientific American
Pharmacokinetics

- 50% of the THC in a joint is inhaled by smoking
- Nearly all absorbed by lungs → into bloodstream → to brain within minutes
- Bioavailability of oral ingestion much less, slower onset, but longer duration of action
- Highly lipid soluble, so accumulates in fatty tissues and crosses BBB
- Metabolized in liver, excreted through GI tract
“Stoned”

• Mild euphoria, sedation, relaxation, hunger, enhanced sensory input
• Impaired attention, balance, cognition, judgment, memory
• Anxiety, psychosis, and mania

Credit: living.oneindia.in
So what does marijuana do?

- Initiating regular smoking marijuana as an adolescent is associated with:
  - early use predicts substance abuse and dependence
  - earlier onset and worse course of psychosis
  - increased risk of suicide and impulsivity
  - decreased motivation
  - school drop-out

Credit: Young Frankenstein
Heavy use → psychosis

- Adolescent brain altered through synaptic pruning, which is regulated by endocannabinoids
- Heavy use associated with double the rate of neuronal loss → reduced hippocampus & cerebellum volumes
- Early use associated with two-fold risk of developing schizophrenia + earlier onset
- First ten years: more severe psychosis + impaired attention

Credit: societypages.org
Impairs memory & cognition

• Deficits in encoding, storage, and retrieval of memory
• Bilateral volume reduction of amygdala and hippocampus
• Impaired executive function, information processing, and visuospatial perception

Credit: sodahead
IQ declines over time

- New Zealand study of 1.037 people from birth to age 38
- Found that persistent cannabis use was associated with neuropsychological decline broadly across domains of functioning, even after controlling for years of education

Reference: Meier MH, et al., 2012
Depression & suicide

- Heavy use associated with depression
  - Prospective cohort study of 7,735 adults with no history of anxiety or mood disorders found that adults who used marijuana at the beginning of the three-year study were at an increased risk of first depressive episode (OR = 1.62, CI 1.06 to 2.48) in comparison to non-users; association was stronger with more frequent use
  - 1-10 uses by age 21 associated with increased suicidal thoughts (OR=2.4) by age 27
  - >11 uses by age 21 associated with increased suicidal thoughts (OR=2.7) and attempts (OR=2.9) by age 27

References: van Laar 2007; Pedersen, 2008
We are allowing MJ use while...

We develop a growing body of evidence on marijuana’s deleterious effects, especially among adolescents.
Medical Marijuana Use and Suicide Attempt in a Patient With Major Depressive Disorder

Abraham Nussbaum, M.D.
Christian Thurstone, M.D.
Ingrid Binswanger, M.D., M.P.H.

Ms. H acknowledged the temporal association between her suicide attempts and episodes of increased marijuana use, but she was precontemplative about abstinence. She was referred to an outpatient substance abuse program, but declined to attend, saying, “Marijuana is prescribed by a doctor, so I don’t think it’s a problem.” She was discharged to her father’s home with a prescription for 20 mg/day of citalopram and an appointment with a primary care provider.
Does the legalization of medical marijuana increase completed suicide?

Melanie Rylander, MD1,2, A, Carolyn Valdez, MS3, and Abraham M. Nussbaum, MD1,4

1Departments of Behavioral Health, 2Departments of Internal Medicine, 3Departments of Patient Safety and Quality, Denver Health, Denver, Colorado, and 4Department of Psychiatry, University of Colorado School of Medicine, Colorado, USA

Abstract

Introduction: Suicide is among the 10 most common causes of death in the United States. Researchers have identified a number of factors associated with completed suicide, including marijuana use, and increased land elevation. Colorado is an ideal state to test the strength of these associations. The state has a completed suicide rate well above the national average and over the past 15 years has permitted first the medical and, as 2014, the recreational use of marijuana. Objectives: To determine if there is a correlation between medical marijuana use, as assessed by the number of medical marijuana registrants and completed suicides per county in Colorado. Methods: The number of medical marijuana registrants was used as a proxy for marijuana use. Analysis variables included total medical marijuana registrants, medical marijuana dispensaries per county, total suicide deaths, mechanism of suicide death, gender, total suicide hospitalizations, total unemployment, and county-level information such as mean elevation and whether the county was urban or rural. Analysis was performed with mixed model Poisson regression using generalized linear modeling techniques. Results: We found no

Keywords

Altitude, cannabis, legalization of marijuana, medical marijuana, suicide, unemployment

History

Received 18 November 2013
Revised 19 March 2014
Accepted 23 March 2014
Published online 20 June 2014
Figure 1. Medical Marijuana Registrants in Colorado from 2004–2010 (primary axis) and Completed Suicides in Colorado from 2004–2010 (secondary axis). Source: CDPHE.
Survey of adult inpatients

- N= 623 participants (54.6% male)
- 282 (47.6%) reported using marijuana in the last 12 mos
- 60 (15.1%) reported having a marijuana card.
- 133 (24.1%) reported that someone with a medical marijuana card had shared or sold medical marijuana to them
- 24 (41.4%) of respondents with a medical marijuana card reported ever having shared or sold their medical marijuana.
Table 3: Medical Marijuana Registrants (N=60)

<table>
<thead>
<tr>
<th>Question</th>
<th>Frequency</th>
<th>(Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason for medical marijuana *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severe Pain</td>
<td>44</td>
<td>(78.6)</td>
</tr>
<tr>
<td>Muscle Spasms</td>
<td>18</td>
<td>(32.1)</td>
</tr>
<tr>
<td>Nausea</td>
<td>13</td>
<td>(23.2)</td>
</tr>
<tr>
<td>HIV, Cancer, or Glaucoma</td>
<td>3</td>
<td>(5.4)</td>
</tr>
<tr>
<td>Seizures</td>
<td>3</td>
<td>(5.4)</td>
</tr>
<tr>
<td>Unsure</td>
<td>1</td>
<td>(1.8)</td>
</tr>
<tr>
<td>Helpfulness of medical marijuana b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very helpful</td>
<td>34</td>
<td>(58.6)</td>
</tr>
<tr>
<td>Helpful</td>
<td>18</td>
<td>(31.0)</td>
</tr>
<tr>
<td>Neither helpful nor unhelpful</td>
<td>2</td>
<td>(3.5)</td>
</tr>
<tr>
<td>Unhelpful</td>
<td>0</td>
<td>(0.0)</td>
</tr>
<tr>
<td>Very unhelpful</td>
<td>4</td>
<td>(6.9)</td>
</tr>
<tr>
<td>Time spent with doctor during visit when marijuana was related b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 – 4 minutes</td>
<td>4</td>
<td>(6.9)</td>
</tr>
<tr>
<td>5 – 9 minutes</td>
<td>1</td>
<td>(1.7)</td>
</tr>
<tr>
<td>10 – 14 minutes</td>
<td>10</td>
<td>(17.2)</td>
</tr>
<tr>
<td>15 – 19 minutes</td>
<td>2</td>
<td>(3.5)</td>
</tr>
<tr>
<td>20 – 24 minutes</td>
<td>14</td>
<td>(24.1)</td>
</tr>
<tr>
<td>&gt;= 25 minutes</td>
<td>27</td>
<td>(46.6)</td>
</tr>
<tr>
<td>Visits to doctor whom recommended marijuana c</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>24</td>
<td>(42.1)</td>
</tr>
<tr>
<td>2</td>
<td>14</td>
<td>(24.6)</td>
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<td>3</td>
<td>6</td>
<td>(10.5)</td>
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<td>4</td>
<td>6</td>
<td>(10.5)</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>(1.8)</td>
</tr>
<tr>
<td>&gt;= 6</td>
<td>6</td>
<td>(10.5)</td>
</tr>
<tr>
<td>Side effects of marijuana d</td>
<td>16</td>
<td>(27.1)</td>
</tr>
<tr>
<td>Ever shared or sold your marijuana b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marijuana usage before getting medical marijuana card</td>
<td>55</td>
<td>(91.7)</td>
</tr>
</tbody>
</table>

* 56 participants answered this item and they can indicate multiple reasons for medical marijuana.

b 2 participants did not answer this item.

c 3 participants did not answer this item.

d 1 participant did not answer this item.
Does the legalization of medical marijuana alter the patient-physician relationship?

1. Not at all
2. It expands the relationship by allowing patients to be more honest about their habits
3. It narrows the relationship to the use of a substance
4. Not sure
PERSPECTIVES

“But my Doctor Recommended Pot”: Medical Marijuana and the Patient–Physician Relationship

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As the use of medical marijuana expands, it is important to consider its implications for the patient–physician relationship. In Colorado, a small cohort of physicians is recommending marijuana, with 15 physicians registering 49\% of all medical marijuana patients and a single physician registering 10\% of all patients. Together, they have registered more than 2\% of the state to use medical marijuana in the last three years. We are concerned that this dramatic expansion is occurring in a setting rife with conflicts of interest despite

These responsibilities are consistent with those listed in the recent “Medical Professionalism in the New Millennium: A Physician Charter,” which was endorsed by specialty boards, organizations, and medical societies around the world\textsuperscript{1}. These ethical responsibilities exist in addition to the legal requirements to practice medicine in a particular community.

Neither the ethical responsibilities nor the legal requirements of medical practice were altered when Amendment 20, a citizen-initiated change to Colorado’s constitution, received
Who is recommending MMJ?

MMJ recommendations by top 50 recommenders
Source: CDPHE, April 2011
They are not your family doc...

- Survey of 1727 Colorado FP’s
- 19% think docs should recommend MMJ
- Most believe it poses it mental (64%) and physical (61%) risks
- 76% supported recording MMJ in the PDMP
- Recommending MMJ for different reasons

Ref: Kondrad EC, Reid A 2013
So: who are these docs?

- Pathologists treating pediatric seizures
- Mammography radiologists with suspended licenses*
- Multiple investigations and sanctions by the Colorado medical board
- Not affiliated with state’s teaching hospitals
- One license revoked
  - Listed his specialty as “medical marijuana”
  - Listed his employer as a local dispensary
<table>
<thead>
<tr>
<th>Fundamental principles</th>
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<td>Principle of primacy of patient welfare</td>
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<td>Principle of patient autonomy</td>
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<td>Principle of social justice</td>
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<th>Professional responsibilities</th>
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<tr>
<td>Commitment to professional competence</td>
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<td>Commitment to honesty with patients</td>
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<td>Commitment to patient confidentiality</td>
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<td>Commitment to maintaining appropriate relations with patients</td>
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<td>Commitment to improving quality of care</td>
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<td>Commitment to improving access to care</td>
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<td>Commitment to a just distribution of finite resources</td>
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<td>Commitment to scientific knowledge</td>
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<td>Commitment to maintaining trust by managing conflicts of interest</td>
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<td>Commitment to professional responsibilities</td>
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</table>
Ethical questions

• Do doctors owe patients something more than what the law demands?
• Unmet responsibilities:
  – Insufficient scientific knowledge
  – Conflicts of interest
• Narrows patient-physician relationship to a recommendation

Credit: wikimedia
Mismanaging COI

- Recommend a single substance
- Often affiliated with dispensaries for referrals
- No exclusion criteria
- No exam
- No training for docs
- No requirement for DEA license
- No coordination of care

Credit: mdarx.org
Senate Bill 109

- June 2010
- “Bona fide” relationship
- Exam, history, f/u care
- Valid, unrestricted DEA #
  – 18 docs can no longer recommend
- No economic interest in MMJ business
- *Remains a practice of a small # of docs*

Credit: medicalmarijuanaeducation.com
Mismanaging COI... revisited

- Still recommending a single substance
- Still affiliated with dispensaries for referrals
- MMJ doc advocating for new conditions based on “anecdotal evidence”
- Still no training requirement
- Still no exclusion criteria
- Still no coordination of care
- *Still no ongoing pt-doc relationship*

Credit: mdarx.org
What kind of relationship?

• All effective forms of care have an alliance at their heart
• In this system, is there an alliance?
• The law is structured to provide a legal defense rather than a working relationship
• Patients or consumers?

Credit: Lars & the Real Girl
Physician-advocate #1

- Chris Thurstone, MD
- Addiction + child shrink
- Runs research + clinical trials
- Named “Advocate for Action” by the White House Office of National Drug Control Policy
Physician-advocate #2

- Sam Wang, MD
- Peds ED + toxicology
- Observed adverse effects for kids eating edibles
- Published research
- Led to change in packaging laws

Credit: Denver Post
What the future may hold...

- Altered federal enforcement
- Mechanisms to study within academic centers
- Bilateral advocacy
- Funding for substance use disorders
- Funding to study marijuana for use as medicine
- Mainstreamed practice
- Targeting endocannabinoids without cannabis
- Additional purified compounds
  - Savitex
  - Cannador
IMMACULATE HEART COLLEGE ART DEPARTMENT RULES

Rule 1. FIND A PLACE YOU TRUST AND THEN TRY TRUSTING IT FOR A WHILE.
Rule 2. GENERAL DUTIES OF A STUDENT: PULL EVERYTHING OUT OF YOUR TEACHER.
Rule 3. GENERAL DUTIES OF A TEACHER: PULL EVERYTHING OUT OF YOUR FELLOW STUDENTS.
Rule 4. CONSIDER EVERYTHING AN EXPERIMENT.
Rule 5. TO BE SELF DISCIPLINED IS TO FOLLOW IN A GOOD WAY; TO BE SELF DISCIPLINED IS TO FOLLOW IN A BETTER WAY.
Rule 6. NOTHING IS A MISTAKE. THERE'S NO WIN AND NO FAIL. THERE'S ONLY MAKE.
Rule 7. THE ONLY RULE IS WORK. IF YOU WORK IT WILL LEAD TO SOMETHING.
Rule 8. IT'S THE PEOPLE WHO DO ALL OF THE WORK ALL THE TIME WHO EVENTUALLY CATCH ON TO THINGS.
Rule 9. DON'T TRY TO CREATE AND ANALYSE AT THE SAME TIME. THEY'RE DIFFERENT PROCESSES.
Rule 10. BE HAPPY WHENEVER YOU CAN MANAGE IT. ENJOY YOURSELF. IT'S LIGHTER THAN YOU THINK.

"WE'RE BREAKING ALL OF THE RULES, EVEN OUR OWN RULES AND HOW DO WE DO THAT? BY LEAVING PLENTY OF ROOM FOR X QUANTITIES." JOHN CAGE

HELPFUL HINTS: ALWAYS BE AROUND. COME OR GO TO EVERYTHING. ALWAYS GO TO CLASSES. READ ANYTHING YOU CAN GET YOUR HANDS ON. LOOK AT MOVIES CAREFULLY OFTEN. SAVE EVERYTHING IT MIGHT COME IN HANDY LATER. THERE SHOULD BE NEW RULES NEXT WEEK.
• Chabrol H, Chauchard E, Girabet J: Cannabis use and suicidal behaviours in high-school students. *Addict Behav* 2008; 33:152-155
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