

Beyond the Bench

**Parental Marijuana Use and Judicial Decisions—
A Medical Perspective**

Public Policy **Public Health**
Law **Medicine**

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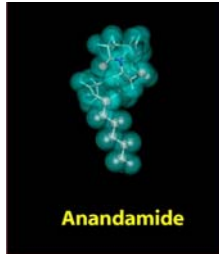
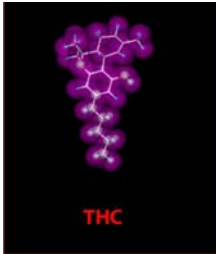
Marijuana myths

- Marijuana is 'just' an herb
- Marijuana use is harmless
- Marijuana use has no 'legitimate' medical benefits
- Marijuana is not 'really' addictive
- Marijuana risks are evenly distributed

Myth 1: Marijuana is 'just' an herb

- Cannabis sativa
- Forms
 - Marijuana (0.5-5%)
 - Sinsemilla (7.5-20%)
 - Hashish (2-8%)
 - Hash oil/wax (30-90%)

30-80 cannabinoids



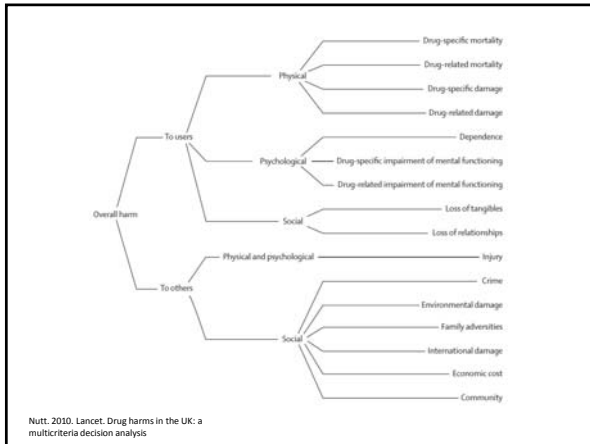
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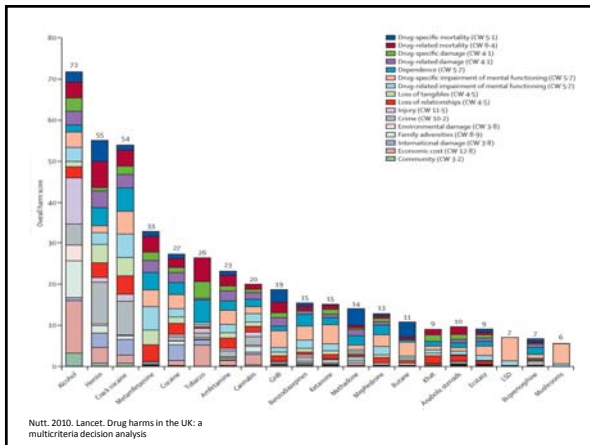
Myth 2: Marijuana use is harmless

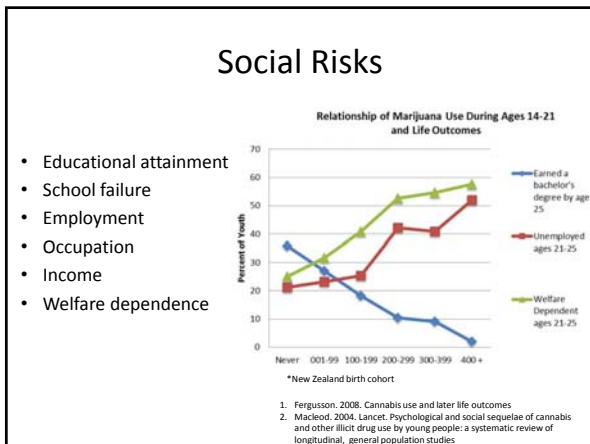
- Proposition 19: Section 2— Findings, intent and purposes
 - A.5. "Cannabis is not physically addictive, does not have long term toxic effects on the body..."











Myth 3: Marijuana use has no 'legitimate' medical benefits

- FDA/DEA: Schedule I
 - A. The drug or other substance has a **high potential for abuse**.
 - B. The drug or other substance has **no currently accepted medical use** in treatment in the United States.
 - C. There is a **lack of accepted safety for use** of the drug or other substance under medical supervision.

Safety and efficacy demonstrated in some conditions

- Nausea
- Emesis
- Appetite
- Cachexia
- Pain
- Spasticity
- Seizures
- Intraocular pressure
- Inflammation
- *HIV Associated Neuropathic Pain
- *Chemotherapy associated toxicity
- *Multiple Sclerosis Spasticity
- *Chronic Neuropathic Pain

| Peer-Reviewed Studies on Marijuana or Marijuana Extracts (1990-2012) | | | | | | | | |
|--|--------------|---------------|--------------|---------------|--------------|---------------|--------------|-------------|
| Type of Study | Positive | | Neutral | | Negative | | Totals | |
| | # of studies | % of total | # of studies | % of total | # of studies | % of total | # of studies | % of total |
| DB RCT | 12 | 54.54% | 7 | 31.82% | 3 | 13.64% | 22 | 100% |
| Open Label | 24 | 30.38% | 25 | 31.65% | 30 | 37.97% | 79 | 100% |
| TOTALS | 36 | 35.84% | 32 | 31.68% | 33 | 32.67% | 101 | 100% |

1. Ben Amar. 2006. Cannabinoids In Medicine- A Review Of Their Therapeutic Potential- 76 Studies
 2. Grant. 2010. CMCR Report to the Legislature
 3. http://medicalmarijuana.proton.org/sites/default/files/2014-07/0088466public_7-23-14

Consensus Statements

- ✓ Purified THC does not replicate whole marijuana
- ✓ Safety and efficacy in some conditions
- ✓ Physician & patient protections
- ✓ Call for well-controlled research
- ✓ Call for re-scheduling
- ❖ Smoking is not a safe delivery system
- ❖ Medications should be subject to approval process of FDA
- ❖ If prescribed, physicians must adhere to:
 - Good faith history & physical, treatment planning, informed consent, monitoring, and documentation
 - Adequate training, and consultation as necessary

1. NIH. 1997. Workshop on the Medical Utility of Marijuana
 2. IOM. 1999. Marijuana and Medicine: Assessing the Science Base
 3. ACP. 2008. Supporting Research into The Therapeutic Role Of Marijuana
 1. AMA. 2009. House of Delegates Report
 2. APA. 2013. Position statement on Marijuana as Medicine
 3. ASAM. 2010. Public policy statement on Medical Marijuana
 4. CSAM. 2010. Position statement on Medical Marijuana
 5. AAAP. 2002. Medical Use of Marijuana

Myth 4: Marijuana is not 'really' addictive

"Cannabis is not physically addictive..."

*Proposition 19: Section 2—Findings, intent and purposes



Evidence for Cannabis Use Disorder

1. Neurobiology
2. Pre-Clinical
3. Clinical
4. Epidemiology

Physical Dependence

- (1) Tolerance
- (2) Withdrawal

Control

- (3) Taken in larger amounts or over greater time than expected
- (4) Unsuccessful efforts to cut down
- (5) Use despite recognition of harm

Compulsion

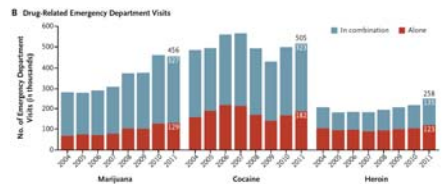
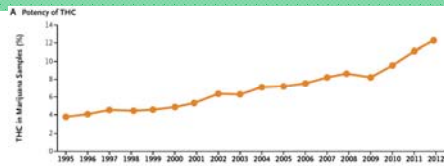
- (6) Excess time spent obtaining, using, or recovering
- (7) Use in situational contexts of physical hazard
- (8) Craving

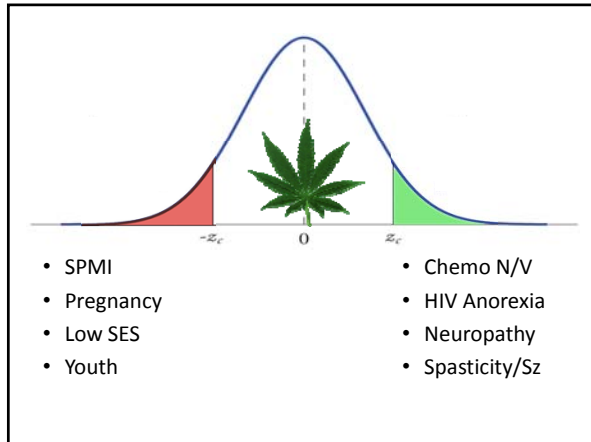
Consequence

- (9) Recurrent social or interpersonal problems
- (10) Social, occupational, recreational roles given up
- (11) Use in spite of physical or psychological problems

2008 NSDUH Survey
2008 NIDA Monitoring The Future

Myth 5: Marijuana risks are evenly distributed





Cannabis and the developing brain

| | |
|--|---|
| <p>Functional</p> <ul style="list-style-type: none"> • Problem solving • Cognitive efficiency • Loss aversion • Executive function • Attention • Processing speed • Reaction time • Verbal & Nonverbal Memory | <p>Physiological</p> <ul style="list-style-type: none"> • Gray matter volume and density • White matter volume and density • Fronto-parietal white matter volumes • Hippocampal volumes • Amygdala reactivity |
|--|---|

Jacobus, Tapert, 2000. Functional Consequences of Marijuana Use in Adolescents

Summary

- ✓ **Distinct categories of MJ use**
 - Recreational & Self-Medication vs:
 - Use under therapeutic oversight of licensed physician
- ✓ **Certain populations are at elevated risk for MJ related harms**
 - Youth; SPMI; Low SES; SUD
- ✓ **Cannabis use disorder is defined by the presence of functional or behavioral problems**
 - It is possible to have some negative effects without having disorder
- ✓ **Treatment works**
 - Monitoring
 - Evidence Based

Thank You

Supplemental References

- Bostwick JM. Blurred boundaries: the therapeutics and politics of medical marijuana. *Mayo Clin Proc.* 2012.
- Danovitch I, Gorelick D. State of the Art Treatments for Cannabis Dependence. *Psychiatr Clin North Am.* 2012
- Mechoulam R, et al. Early phytocannabinoid chemistry to endocannabinoids and beyond. *Nature Reviews.* 2014
- Roger Roffman (Editor). *Cannabis Dependence: Its Nature, Consequences and Treatment (International Research Monographs in the Addictions).* 2010
- Volkow ND, Baler RD, et al. *N Engl J Med.* Adverse health effects of marijuana use. 2014
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- <http://www.drugabuse.gov/publications/drugfacts/marijuana>
