Management of Chronic Pain with Medical Marijuana: Clinical Correlates and an Update on the Evidence

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Conflict of Interest

- Received funding from the National Institute on Drug Abuse.
- Systematic review was funded by a grant from the VA Quality Enhancement Research Initiative to the VA Evidence Synthesis Program at the VA Portland Health Care System.
- No other conflicts of interest to report.
Objectives for Presentation

• Identify the changing culture related to the use of cannabis for chronic pain.
• Describe demographic and clinical characteristics of patients who use medical cannabis and have concurrent prescription for long-term opioid therapy.
• Summarize results from a systematic review examining the benefits and harms of medical cannabis for chronic pain.
• Provide clinical practice recommendations related to cannabis use among patients with chronic pain.
Not Part of our Presentation

The Molecular Structure of THC
(delta-9-tetrahydrocannabinol)
What we will be Talking About
Background on Chronic Pain

- Chronic pain is common, impacting up to one-third of US adults. Prevalence may be increasing (with an aging population). Annual economic costs associated with chronic pain are $560-635 billion (Institute of Medicine, 2011).
- Prescription opioid use markedly increased from the 1980’s (Boudreau et al., 2009; Caudill-Slosberg et al., 2004); however, there are not good data available to support the long-term use of opioids for chronic pain (Chou et al., 2015).
Increases in Opioid Prescribing Correlate with Increases in Prescription Opioid Deaths

National Center for Injury Prevention and Control, Centers for Disease Control & Prevention
But, Deaths are just the Tip of the Iceberg

For every 1 opioid overdose death in 2010 there were...

- 15 abuse treatment admissions
- 26 emergency room visits
- 115 who abuse/are dependent
- 733 nonmedical users

$4,350,000 in healthcare-related costs

National Center for Injury Prevention and Control, Centers for Disease Control & Prevention
Background on Prescription Opioids

• In recent years, numerous studies have highlighted potential adverse effects associated with prescription opioids, including abuse, diversion, accidents, falls and fractures, cardiovascular events, new onset SUD and depression, overdose, and death (Chou et al., 2015).

• Clinicians are increasingly concerned about providing appropriate pain management, particularly among patients prescribed opioids (Dobscha et al., 2008).

• CDC published new opioid treatment guidelines (Dowell et al., 2016), and many clinicians are increasingly concerned about opioid-related adverse effects and have motivation to consider alternatives to opioid therapy.
Cannabis Use in the United States

• The U.S. is in the midst of a rapid growth of legalized cannabis:
  • May be used recreationally in 8 states and District of Columbia
  • Legalized for medical use in 28 states and District of Columbia
• Of patients seeking state-sanctioned medical marijuana, the most common reason is for the treatment of chronic pain (~80%) (Ilgen et al., 2013).
• Approximately 20-40% of patients prescribed opioids report concurrent use of cannabis (Degenhardt et al., 2015; Reisfeld et al., 2009).
States That Have Legalized Marijuana
After Nov. 8, these states now allow some form of legalized marijuana.

Legalized for Adult Recreational & Medical Use
Legalized for Medical Use Only
Expected to Legalize in 2017
Illegal

Sources: Money Morning Staff Research
Background on Cannabis

• Delta-9-tetrahydrocannabinol (THC) is the most studied, and is considered the major active molecule of cannabis. The concentration of THC may determine its effects.

• Cannabidiol (CBD) is believed to have some medical benefits, but without the euphoria produced by THC.

• Cannabis “use” has changed:
  • There has been a marked increase in the potency of cannabis (3% THC in the 1980’s, up to about 15% currently)
  • ~40% of medical cannabis users use vaping as a route of administration (but this is seldom the sole route of administration) (Cranford et al., 2016)
  • Other routes of administration include smoking, edibles, tinctures, transdermal patch, suppository, topical cream, eat the raw plant, beverage, dabbing, etc.
Background on Cannabis

• Cannabis has 3 major species:
  • Sativa – most common, from which other derivatives (e.g., hash) are typically obtained
  • Indica
  • Ruderalis
• Some research suggests that different species are associated with different rates of addiction (Cohen et al., 2016).
• Those who use cannabis for pain do not differ on demographic characteristics from those who use for recreational purposes (Lin et al., 2016).
Background about Cannabis

- Survey data suggest greater proportions of the U.S. population view cannabis as acceptable (Pew Research Center, 2015).

- Some may perceive that cannabis is a safer alternative to prescription opioids.

- Whether or not clinicians support the clinical use of cannabis, all clinicians will encounter patients who elect to use it.
Medical Cannabis Laws and Opioid Analgesic Overdose Mortality in the United States, 1999-2010

Marcus A. Bachhuber, MD; Brendan Saloner, PhD; Chinazo O. Cunningham, MD, MS; Colleen L. Barry, PhD, MPP


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Point estimate of the mean difference in the opioid analgesic overdose mortality rate in states with medical cannabis laws compared with states without such laws; whiskers indicate 95% CIs.
Correlates of Medical Cannabis Use Among Patients Prescribed LTOT

Study Methods:

• Two-site (VA and Kaiser Permanente) prospective cohort study of patients with musculoskeletal pain who have been prescribed a stable dose of opioids for 90+ days.
• Purpose of the overall study is to examine predictors and outcomes of opioid dose escalation.
• Currently reporting baseline data.
• Comparing participants who endorsed past-month use of cannabis for pain versus participants who denied any cannabis or illicit substance use.
# Medical Cannabis Use

<table>
<thead>
<tr>
<th>Frequency of use</th>
<th>% (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once per month</td>
<td>16% (11)</td>
</tr>
<tr>
<td>2-4 times per month</td>
<td>24% (16)</td>
</tr>
<tr>
<td>2-3 times per week</td>
<td>15% (10)</td>
</tr>
<tr>
<td>4 or more times per week</td>
<td>45% (30)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pain reduction utility</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = Not Helpful</td>
<td>8% (5)</td>
</tr>
<tr>
<td>2</td>
<td>5% (3)</td>
</tr>
<tr>
<td>3</td>
<td>21% (14)</td>
</tr>
<tr>
<td>4</td>
<td>24% (16)</td>
</tr>
<tr>
<td>5 = Very Helpful</td>
<td>42% (28)</td>
</tr>
</tbody>
</table>

| Possession of a state issued medical cannabis card | 31% (21) |
## Demographic Characteristics

<table>
<thead>
<tr>
<th>Age</th>
<th>Past-Month Cannabis Use (n=67)</th>
<th>No Cannabis Use (n=304)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>57.7 (10)</td>
<td>60.5 (11)</td>
<td>0.062</td>
</tr>
<tr>
<td>Male gender</td>
<td>81%</td>
<td>48%</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Caucasian</td>
<td>70%</td>
<td>86%</td>
<td>0.003</td>
</tr>
<tr>
<td>Married</td>
<td>52%</td>
<td>59%</td>
<td>0.654</td>
</tr>
<tr>
<td>Income &lt; $30,000</td>
<td>46%</td>
<td>25%</td>
<td>0.002</td>
</tr>
<tr>
<td>Currently working</td>
<td>30%</td>
<td>34%</td>
<td>0.074</td>
</tr>
</tbody>
</table>
# Clinical Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Past-Month Cannabis Use (n=67)</th>
<th>No Cannabis Use (n=304)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average daily opioid dose</td>
<td>35.1 (25)</td>
<td>33.5 (27)</td>
<td>0.45</td>
</tr>
<tr>
<td>Arthritis</td>
<td>55%</td>
<td>65%</td>
<td>0.13</td>
</tr>
<tr>
<td>Neck/Joint Pain</td>
<td>52%</td>
<td>55%</td>
<td>0.68</td>
</tr>
<tr>
<td>Back Pain</td>
<td>64%</td>
<td>58%</td>
<td>0.32</td>
</tr>
<tr>
<td>Pain Intensity</td>
<td>64.0 (12)</td>
<td>62.4 (15)</td>
<td>0.46</td>
</tr>
<tr>
<td>Pain Interference</td>
<td>51.6 (24)</td>
<td>49.7 (26)</td>
<td>0.58</td>
</tr>
<tr>
<td>Depression Severity</td>
<td>10.0 (6)</td>
<td>9.0 (6)</td>
<td>0.28</td>
</tr>
<tr>
<td>Current Nicotine Use</td>
<td>42%</td>
<td>26%</td>
<td>0.012</td>
</tr>
<tr>
<td>Hazardous Alcohol Use</td>
<td>34%</td>
<td>15%</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Risk for Prescription Opioid Misuse</td>
<td>16.8 (8)</td>
<td>12.5 (7)</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>
## Correlates of Hazardous Alcohol Use among Patients Prescribed LTOT

<table>
<thead>
<tr>
<th>Covariate</th>
<th>Odds Ratio</th>
<th>95% Confidence Interval</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.99</td>
<td>0.96 – 1.01</td>
<td>0.298</td>
</tr>
<tr>
<td>Female gender</td>
<td>0.18</td>
<td>0.09 – 0.37</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Prescription opioid dose</td>
<td>0.97</td>
<td>0.96 – 0.99</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Pain intensity</td>
<td>0.98</td>
<td>0.96 – 1.00</td>
<td>0.098</td>
</tr>
<tr>
<td>Depression severity</td>
<td>0.98</td>
<td>0.92 – 1.03</td>
<td>0.324</td>
</tr>
<tr>
<td>Cannabis use</td>
<td>2.21</td>
<td>1.13 – 4.30</td>
<td>0.020</td>
</tr>
</tbody>
</table>
Summary

• In this study, among patients who are prescribed opioids long-term, 17% endorsed past-month cannabis use for pain.

• Of these patients:
  • 31% had a current medical marijuana card
  • 66% reported that marijuana was helpful for reducing pain

• Compared to individuals who denied any cannabis or illicit substance use, those who used cannabis for pain:
  • Had higher rates of nicotine use, risk for prescription opioid misuse, and hazardous alcohol use
  • No differences between groups in opioid dose, pain intensity, pain interference, or depression severity

• In regression analysis, current cannabis use was significantly associated with increased likelihood of hazardous alcohol use.
VA Portland Evidence Synthesis Project

- **Background:** Cannabis is increasingly available for the treatment of chronic pain, yet its efficacy remains uncertain.

- **Purpose:** To systematically review the benefits and harms of cannabis to treat chronic pain in adults.


Kansagara et al., 2016
ESP Methods

Topic Development
- Key Questions.

Data Sources and Search
- Clinical trial registries; technical advisors; reference lists.

Study Selection
- English-language intervention trials.
- Rigorously designed observational studies with control group.
- Plant-based cannabis preparations.
Literature Flow Diagram

10,831 Citations identified from electronic database searches

44 Citations identified from other sources

10,875 Citations compiled for review of titles and abstracts

9,801 Non-relevant titles and abstracts excluded

1,074 Potentially relevant articles retrieved for further review

1,016 Excluded publications

58 Included publications

Chronic Pain:
- 2 Systematic reviews
- 5 RCTs
- 3 Observational studies

Harms:
- 10 Systematic reviews
- 38 Observational studies
## ESP Methods

### Data Abstraction
- Study design, setting, patient population, intervention, follow-up, important co-interventions, health outcomes, healthcare utilization, and harms.
- Dual investigator abstraction process.

### Quality Assessment
- Risk of Bias (ROB) assessed utilized published assessment tools:
  - Trials (Cochrane), Observational (Newcastle-Ottawa).
  - ROB rated as High, Low, or Unclear.

### Data Synthesis
- Could not combine findings in meta-analysis.
- Strength of Evidence (SOE) for each outcome classified as high, moderate, low, or insufficient.
- Consistency, coherence, and applicability of the body of evidence; internal validity of individual studies.
Results: Chronic Pain

• Summarized two prior, recent systematic reviews:
  • Non-significant trend towards benefit of pain reduction (low to moderate SOE) (Whiting et al., 2015)
  • Insufficient to low SOE for benefit (Butler et al., 2015)

• Additionally, we found:
  • 4 trials (multiple sclerosis)
  • 1 trial (mixed pain conditions)
  • 3 observational studies (mixed pain conditions)
## Results: Chronic Pain, Multiple Sclerosis

<table>
<thead>
<tr>
<th>Study, Setting, Design, Risk of bias (ROB)</th>
<th>Sample Size</th>
<th>Intervention (T) and comparator (C)</th>
<th>Primary findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple sclerosis (MS)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Novotna et al., 2011</td>
<td>N=241</td>
<td>T = Nabiximols</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C = Placebo oromucosal spray.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maximum permitted dose was 12 sprays in any 24 hour period.</td>
<td>Pain: NR</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Spasticity: Change in mean NRS score at 12 weeks: -0.84 (95% CI, -1.29 to -0.40), P=.0002</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12-week intervention (2 week follow-up period)</td>
<td>Other: Nabiximols superior for sleep disruption, ADLs, and function.</td>
</tr>
</tbody>
</table>
## Results: Chronic Pain, Mixed Pain Conditions

<table>
<thead>
<tr>
<th>Study, Setting, Design, Risk of bias (ROB)</th>
<th>Sample Size</th>
<th>Intervention (T) and comparator (C)</th>
<th>Primary findings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mixed Pain Conditions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ware et al., 2015; Canada, 7 sites; Prospective cohort Low ROB</strong></td>
<td><strong>N = 431</strong></td>
<td><strong>T: 12.5 ± 1.5% THC; max of 5 g/day; med. daily dosing was 2.5 g/day</strong>&lt;br&gt;27% smoked, 61% combined smoking, oral, and vaporization, 8% consumed orally</td>
<td><strong>Pain:</strong> Greater reduction in pain intensity among cannabis users over last 24 hours. Difference = 1.10 (95% CI, 0.72-1.56)&lt;br&gt;Reduction in average pain intensity over 1 year with T (change=0.92; 95% CI, 0.62-1.23)&lt;br&gt;&lt;br&gt;<strong>Other:</strong> Non-cannabis users had higher mood disturbance ($p = 0.006$) and lower physical QOL (NS) at one year.</td>
</tr>
</tbody>
</table>
## Strength of Evidence for Chronic Pain

<table>
<thead>
<tr>
<th>Pain Condition</th>
<th>Number of studies/ROB</th>
<th>SOE</th>
<th>Primary Intervention of Low ROB studies</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Sclerosis</td>
<td>- 4 Low ROB (N=1017)</td>
<td>Low - Pain</td>
<td>- Nabiximols (2.7 mg THC/2.5 mg CBD)</td>
<td>Inconsistent results; restrictive entry criteria</td>
</tr>
<tr>
<td></td>
<td>- 3 Unclear ROB</td>
<td>and sleep</td>
<td>- THC (2.5mg) capsules</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- 7 High ROB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neuropathy</td>
<td>- 2 Low ROB (N=62)</td>
<td>Insufficient</td>
<td>- Smoked: % THC = 0, 2.5, 6, 9</td>
<td>Small N; inconsistent results below clinical</td>
</tr>
<tr>
<td></td>
<td>- 4 Unclear ROB</td>
<td></td>
<td>- Vaporized: % THC = 1.29, 3.55</td>
<td>threshold</td>
</tr>
<tr>
<td></td>
<td>- 12 High ROB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other/mixed</td>
<td>- 2 Low ROB (N=465)</td>
<td>Insufficient</td>
<td>- 12.5% ± 1.5% THC</td>
<td>One small (n=34) trial; observational study, high</td>
</tr>
<tr>
<td></td>
<td>- 3 Unclear ROB</td>
<td></td>
<td>- 1:1 THC/CBD, CBD only, THC only</td>
<td>attrition</td>
</tr>
<tr>
<td></td>
<td>- 3 High ROB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cancer</td>
<td>- 2 Unclear ROB</td>
<td>Insufficient</td>
<td>N/A</td>
<td>Use of non-validated measures, high attrition</td>
</tr>
</tbody>
</table>
Harms Associated with Cannabis Use

• Cannabis use is associated with a higher likelihood of adverse events, but not serious adverse events (Ware et al., 2015).

• General Adverse Events among patients with chronic pain
  • AEs: dizziness, lightheadedness, fatigue, muscle spasms, dry-mouth, short-term memory impairment
  • SAEs: suicide attempts, paranoia, and agitation
# Medical Harms Associated with Cannabis Use

<table>
<thead>
<tr>
<th>Medical Harm</th>
<th>Findings/ Strength of Evidence</th>
<th>N studies</th>
<th>Limitations</th>
</tr>
</thead>
</table>
| Pulmonary Function | Moderate strength of evidence that there are no adverse effect for low levels of smoking among young adults. | - 2 Low ROB prospective, cohort (N = 6053)  
- 1 systematic review (N = 851) | No data on heavy use or on older, chronically ill patients.                               |
| Cardiovascular     | Insufficient evidence of cardiovascular harms in short or long term light cannabis use.        | - 2 High ROB observational                                                               | Recall bias, no data about longitudinal exposure.                             |
Medical Harms Associated with Cannabis Use

<table>
<thead>
<tr>
<th>Medical Harm</th>
<th>Findings/ Strength of Evidence (SOE)</th>
<th>N studies</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung Cancer</td>
<td>Low SOE that there is no association between light cannabis use and lung cancer.</td>
<td>- 1 patient-level meta-analysis of 6 case-control studies (2150 cases)</td>
<td>Recall bias, light users.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 1 High ROB cohort study (N = 49,231)</td>
<td></td>
</tr>
<tr>
<td>Head and Neck Cancer</td>
<td>Low SOE that there is no association between head and neck cancer and cannabis use.</td>
<td>- Meta-analysis of 9 case-control studies (5732 cases)</td>
<td>Imprecise exposure measurement, recall bias.</td>
</tr>
</tbody>
</table>
## Medical Harms Associated with Cannabis Use

<table>
<thead>
<tr>
<th>Medical Harm</th>
<th>Findings/ Strength of Evidence (SOE)</th>
<th>N studies</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Testicular Cancer</td>
<td>Insufficient evidence of association.</td>
<td>- Meta-analysis of 3 High ROB case-control studies</td>
<td>Recall bias and potentially confounded by tobacco use.</td>
</tr>
<tr>
<td>Transitional Cell Cancer</td>
<td>Insufficient evidence of an increased risk among those with &gt;40 joint years.</td>
<td>- 1 High ROB case-control study (52 cases)</td>
<td>Small and methodologically limited.</td>
</tr>
</tbody>
</table>
# Mental Health Harms

<table>
<thead>
<tr>
<th>Mental Health Harm</th>
<th>Findings/ Strength of Evidence</th>
<th>Data Source</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suicidal Behaviors</td>
<td>Suicide ideation (pooled OR 1.43; 95% CI, 1.13 to 1.83)</td>
<td>Meta analysis</td>
<td>No data on acute cannabis use.</td>
</tr>
<tr>
<td></td>
<td>Suicide attempt (pooled OR 2.23; 95% CI, 1.24 to 4.00)</td>
<td>(Borges et al., 2016)</td>
<td>Heterogeneity of exposure measurement.</td>
</tr>
<tr>
<td></td>
<td>Death by suicide (OR 2.56; 95% CI, 1.25 to 5.27)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mania</td>
<td>Increased incidence of new-onset mania symptoms among populations without a diagnosis of bipolar disorder, (OR 2.97; 95% CI, 1.80 to 4.90)</td>
<td>Meta-analysis/ Systematic Review (Gibbs et al., 2015)</td>
<td>Small # of studies.</td>
</tr>
<tr>
<td>Psychosis</td>
<td>Low strength evidence that a history of cannabis use was associated with an increase in risk of developing psychotic symptoms.</td>
<td>Systematic Review (Moore et al., 2007) - 7 additional studies</td>
<td>Magnitude of risk uncertain.</td>
</tr>
</tbody>
</table>
# Mental Health Harms Associated with Cannabis Use

<table>
<thead>
<tr>
<th>Mental Health Harm</th>
<th>Findings/ Strength of Evidence (SOE)</th>
<th>Data Source</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive effects</td>
<td>Moderate SOE that active, long-term cannabis use is associated with small negative effects on all domains of cognitive function; Insufficient evidence of long-term cognitive effects in past users.</td>
<td>Systematic Review (Schreiner et al., 2012)</td>
<td>Inconsistent data about past use.</td>
</tr>
<tr>
<td>Cannabis Use Disorder (Pain pts)</td>
<td>No evidence.</td>
<td>Observational (Fleming et al., 2007)</td>
<td>Data are cross-sectional.</td>
</tr>
</tbody>
</table>
Other Harms Associated with Cannabis Use

• Motor Vehicle Accidents (MVA)
  • Moderate strength evidence that acute cannabis intoxication is associated with increase in collision risk. (Rogeberg et al., 2016)
  • (OR 1.35; 95% CI = 1.15 - 1.61)

• Emerging Harms
  • Cannabis hyperemesis syndrome
  • Exposure to contaminants
  • Tuberculosis
Summary: Chronic Pain

- Cannabis (nabiximols) may improve pain, spasticity, and sleep in patients with multiple sclerosis.

- Insufficient data on other secondary outcomes.
- Insufficient data for other chronic pain patient populations.
- Insufficient data on non-nabiximols preparations or other routes of administration for pain.
Summary: Harms

- Cannabis use....
  - Associated with an increased risk of AEs but not SAEs in chronic pain populations.
  - Associated with an increased risk of mental health adverse effects.

- Strength of evidence on its long term and physical effects is low and inconsistent.
Limitations

• OF EVIDENCE BASE:
  • Few methodologically rigorous trials.
  • Limited or no trials available on musculoskeletal pain, cancer pain, and other pain conditions.
  • Cannabis formulations studied in trials may not reflect what is available in dispensaries.
  • Applicability to heavy users or older, chronically ill populations is limited.

• OF OUR SYSTEMATIC REVIEW:
  • Relied on existing high quality systematic reviews when available.
  • Excluded studies of synthetic, prescription cannabinoids.
Educational Needs of Providers

• Biggest Knowledge Gaps:
  • Dosing and creating effective treatment plan for patients using medical cannabis.
  • Similarities and differences between various cannabis preparations.

• Most Desired Knowledge:
  • Potential risks.
  • Safety, warning signs, and precautions.

  (Ziemanski et al., 2016)

• Medical training needed for scientific base of medical cannabis.

  (Carlini et al., 2015)
Clinical Practice Recommendations

Focus Article

Cannabis in Pain Treatment: Clinical and Research Considerations

Seddon R. Savage,* † Alfonso Romero-Sandoval,‡ Michael Schatman,§ Mark Wallace,¶ Gilbert Fanciullo,* Bill McCarberg,¶ and Mark Ware‖

*Geisel School of Medicine at Dartmouth, Hanover, New Hampshire.
†Silver Hill Hospital, New Canaan, Connecticut.
‡Presbyterian College School of Pharmacy, Clinton, North Carolina.
¶University of California San Diego School of Medicine, La Jolla, California.
‖McGill University Faculty of Medicine, Montreal, Quebec, Canada.
Clinical Practice Recommendations

• Awareness of federal, state, and institutional policies and laws.
• Establish goals of care for cannabis use.
• Screen for signs of misuse, abuse, and addiction.
• Counsel patients on harms and risks.
• Advise on routes of administration.
• Continually monitor cannabis use/utility, functional status, symptom severity, and use of other medications/substances.
  • Consider use of urine drug tests.
• Monitor for other harms (i.e. MVA, falls).
• Advise on discontinuation or referral to substance use treatment.

Savage et al., 2016
Clinical Practice Recommendations: Cannabis Use Disorder

- Cannabis Use Disorder (CUD)
  - Using a larger quantity or over a longer duration than intended
  - Unsuccessful attempts to limit/quit
  - Significant amount of time spent obtaining cannabis
  - Cravings
  - School/occupational impairment
  - Social/interpersonal impairment
  - Reduction of social/occupational/recreational activities
  - Recurrent use in physically harmful situations
  - Continued use despite recurrent physical or psychological harms
  - Tolerance
  - Withdrawal
Clinical Practice Recommendations: CUD Assessment and Treatment

• CUD screening tools
  • Single item screener: How often in the past year did you use marijuana?”
    • “never”, “less than monthly”, “monthly”, “weekly”, and “daily or almost daily”
  • Problematic Use: CUD Identification Test (CUDIT-R) (Adamson et al., 2010)
  • Problems related to use: Marijuana Problems Scale (Stephens et al., 1994)
  • Motives for use: Comprehensive Marijuana Motives Measure (Lee et al., 2009)

• CUD treatment
  • No FDA approved medications to treat CUD
  • Contingency Management (CM), Motivational Enhancement Therapy (MET), Cognitive Behavioral Therapy (CBT)
Substance Use Screening & Assessment Instruments Database

This resource is intended to help clinicians and researchers find instruments used for screening and assessment of substance use and substance use disorders. Some instruments are in the public domain and can be freely downloaded from the web; others can only be obtained from the copyright holder. We don't provide copies of instruments, but links to contact and availability information are included if known. We welcome submissions of instruments, as well as corrections for those already included.

★ Measures that are widely used and have proven reliability and validity are noted with a gold star. ★ Selected screening instruments | Selected assessment instruments

Search for an instrument (or use Advanced search)

- marijuana

Limit to
- □ Adolescents
- □ Adults
- □ All
- □ Screening
- □ Assessment
- □ All
- □ Selected ⭐

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