In All Things, I Am My Patients’ Advocate

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Conflict of Interest

Board Member – American Cannabis Nurses Association

I declare that I have a vested interest/arrangement or affiliation with an organization that could be perceived as a real or apparent conflict of interest.

Learning Objectives

By the end of this presentation, the learner will:

- Recognize current legislation in states related to medical cannabis and its use and access.
- Identify indications for medical cannabis use related to pain.
- Examine evidence-based outcomes related to medical cannabis’s effects on mind, body, and spirit.
- Describe concerns and social distress experienced by patients who acquire medical cannabis.
Current Legislation – August 2018

Who, What, Where, When, & Why: A Brief Overview of Medical Marijuana Procurement

Who is involved in the process?

- State authorities
- Physicians
- Advanced practice nurses
- Ancillary members
  - Medical marijuana grower
  - Medical marijuana laboratory
  - Medical marijuana facility
- May or may not be health care practitioners
- No current certification or regulation process
What is the process?

- Physician referral/recommendation*
- Advanced practice nurse referral/recommendation
- Patient registration through state regulation
- Medical marijuana identification card
- Initial application
- Medical records
- Renewal fee
- Reciprocity of states

Where can MM be obtained?

- State-licensed facility
- Retail facility
- Physicians' office
- Pharmacy
- University research centers
- Home grown
- CBD online

When (at what age) is MM allowed?

<table>
<thead>
<tr>
<th>AS</th>
<th>AZ</th>
<th>CO</th>
<th>MT</th>
<th>NV</th>
<th>OR</th>
<th>RI</th>
<th>VT</th>
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</thead>
<tbody>
<tr>
<td>&lt; 18 years</td>
<td>&lt;1.0%</td>
<td>&lt;1.0%</td>
<td>&lt;1.0%</td>
<td>&lt;1.0%</td>
<td>&lt;1.0%</td>
<td>&lt;2.2%*</td>
<td>&lt;1.0%</td>
</tr>
<tr>
<td>Largest age group/</td>
<td>50-58</td>
<td>51-60</td>
<td>51-60</td>
<td>51-60</td>
<td>51-60</td>
<td>55-64</td>
<td>50-59</td>
</tr>
<tr>
<td>Next largest age group/</td>
<td>25.5%</td>
<td>23.9%</td>
<td>23.1%</td>
<td>23.1%</td>
<td>23.1%</td>
<td>23.1%</td>
<td>23.1%</td>
</tr>
<tr>
<td>&gt;70 years</td>
<td>3.0%</td>
<td>4.1%</td>
<td>2.4%</td>
<td>2.9%</td>
<td>5.1%</td>
<td>3.6%</td>
<td>16.5%**</td>
</tr>
</tbody>
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*Note: Age tracked at 21 & under. **Age tracked at 65 & over. Adapted from: "Trends in Registered Medical Marijuana Participants Across 13 US States and District of Columbia," by Brian J. Fairman, 2016, Drug and Alcohol Dependence, 159, p. 76.
Why is MM used?

- Any diagnosed condition (VA)
- Any debilitating condition (AL, CA, CT, DC, )
- Any medical condition approved by the Department of Health (AR)
- Any condition for which MM has been useful for providing relief & provider believes will be of benefit (GU, ME, MA, OK, WI)
- Epilepsy, Lennox-Gastaut syndrome, Dravet syndrome (IN, SC)
- Intractable epilepsy & terminally ill patients (UT)
- Intractable epilepsy (KY, MS, MO, NC*, TN, TX*, WY)

*NC: Pilot program that allows medical use of CBD-rich oil only for registered patients diagnosed by a neurologist at one of four universities as having intractable epilepsy that has not been responsive to at least three other treatment options

*TX: Law calls for MD prescription rather than a recommendation which conflicts with federal law regarding prescription of Schedule I substances

By the Numbers – Legal

# with MM Laws...34
# with CBD-Specific Laws...16
# not yet operational...5
# where MM/CBD is legal but no place to purchase as of yet...18
# where patients can grow...16
# with mandatory registration...37
# with no mandatory registration...13
# where legalized...10
# still prohibited...4*
# where purchase can only be made at physician's office or pharmacy...2

By the Numbers – Clinical

# where APRN can recommend...4
# with limited qualifying conditions...10
# with broad qualifying conditions...11
# specifically for pain...33
# specifically for cancer...32
# with hospice & terminal illness as qualifying condition...12
# using for opioid addiction...3
# with legislation to protect nurses who administer MM/CBD in the hospital...2
Indications for Medical Marijuana Use: Pain

Pain-free vs. Pain-reduction?
- Numerous conditions for MM use
- Harm-reduction approach
- Stand-alone or adjuvant therapy
- Considerations:
  - Acute/traumatic/post-operative pain
  - Chronic pain
  - Neuropathic pain & Diabetic neuropathic pain
  - Cancer-related pain

Evidence-based Outcomes – Acute Pain

<table>
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<tbody>
<tr>
<td>1 hospital setting in Germany</td>
<td>1 hospital setting in Canada</td>
</tr>
<tr>
<td>Post-operative pain relieving qualities of Cannador® after PCA in lieu of analgesia</td>
<td>Compared effects of nabilone, ketoprofen, or placebo</td>
</tr>
<tr>
<td>Results:</td>
<td>Outcomes measured: Morphine use, Pain Scores, Emesis</td>
</tr>
<tr>
<td>- Reduced analgesia demands, extended time lag</td>
<td>Results:</td>
</tr>
<tr>
<td>- Dose-dependent pain reduction overall</td>
<td>- No difference in morphine use</td>
</tr>
<tr>
<td>- 26 adverse effects among 19 patients</td>
<td>- Pain scores higher in nabilone group</td>
</tr>
<tr>
<td>- CNS</td>
<td>- No adverse events</td>
</tr>
<tr>
<td>- CV</td>
<td>- High dose nabilone in presence of morphine PCA associated with increased pain scores</td>
</tr>
<tr>
<td>- GI</td>
<td>- Whole body</td>
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Evidence-based Outcomes – Acute Pain

Salottolo et al. (2018)
- 4 trauma centers (3-Level 1, 1-Level 2; 3 in Denver, CO; 1 in Plano, TX)
- Compared non-drug users to drug users during recovery from trauma
- Measures: Pain scale, Daily opioid intake count
- Found:
  - Increased consumption of opioid analgesics
  - Greater self-reported pain
  - Marijuana's effect on pain was modified by concomitant drug use
- First study to examine effects of marijuana use and abuse on acute pain management following traumatic injury (Salottolo et al., 2018)

Evidence-based Outcomes – Acute Pain

Heng et al. (2018)
- 2-Level 1 trauma centers in Massachusetts
- Measures: Pain Catastrophizing Scale, PROMIS Anxiety Scale, Post-Traumatic Stress Disorder test
-Asked three questions:
  - Do patients believe that marijuana can be used as medicine?
  - Do patients believe that marijuana can help treat post-injury pain?
  - Are patients comfortable speaking with their healthcare providers about medical marijuana?
- Results:
  - Majority (78%) felt that MM could be used to treat pain
  - Ninety percent of those that used MM during recovery believed that it helped reduce symptoms of pain
  - Eighty-one percent believed MM reduced amount of pain medication they used
  - Majority (84%) indicated very comfortable or comfortable discussing MM with healthcare provider

What are Medical Marijuana products?
**Evidence-based Outcomes – Chronic Pain**

**Conclusions**
- Low-dose MM in various forms (SL, oral, vaporized, smoked) effectively decreased chronic pain
- Minimal adverse effects: dizziness, dry mouth, nausea, drowsiness, confusion
- Additional positive effects: improved appetite, improved sleep quality

**Evidence-based Outcomes – Neuropathic Pain**

**Conclusions**
- Sublingual, smoked, or vaporized low-dose MM decreased neuropathic pain from a variety of etiologies
- Inconclusive efficacy in oral MM on neuropathic pain
- Minimal adverse effects: cough, dizziness, dry mouth, nausea, drowsiness, headache, confusion, poor concentration
- Additional positive effects: improved appetite, improved sleep quality, decreased anxiety

**Evidence-based Outcomes – Diabetic Neuropathy**

**Conclusions**
- Sublingual MM did not appear to have a benefit over placebo for diabetic neuropathy
- Oral and vaporized MM had a positive effect in decreasing diabetic neuropathic pain
- Minimal adverse effects: cough, dizziness, dry mouth, nausea, drowsiness, confusion
- Additional positive effects: improved appetite, improved mood, improved sleep quality, decreased anxiety
Evidence-based Outcomes – Cancer

Conclusions
- Sublingual and smoked MM as adjuvant therapy had a positive effect in decreasing intractable or refractory cancer pain
- Minimal adverse effects: cough, dizziness, dry mouth, nausea, vomiting, hypotension, drowsiness, confusion
- Additional positive effects: decreases in opioid doses, improvements in sleep disturbances, reduced nausea & vomiting, reduced anxiety

Conclusions
- Sublingual and smoked MM as adjuvant therapy had a positive effect in decreasing intractable or refractory cancer pain
- Minimal adverse effects: cough, dizziness, dry mouth, nausea, vomiting, hypotension, drowsiness, confusion
- Additional positive effects: decreases in opioid doses, improvements in sleep disturbances, reduced nausea & vomiting, reduced anxiety

A few thoughts about opioids...

Data are suggesting:
- Reductions in daily doses of medications for pain (Bradford & Bradford, 2016)
- Patients seek out MM to reduce opioid use (Ilgen et al., 2013)
- MM use may “lessen the drive to use opiates at lethal levels in individuals with nonpain, psychiatric conditions” (Hayes & Brown, 2014, p. 1674)

Medical Marijuana: Mind, Body, & Spirit
**Experiences of Medical Marijuana Patients**

**Stigma**
- Drug addict/abusers
- Deviant
- Criminals
- “Pot head,” “Stoners”
- Legality/criminality
- Risk-taking
- Guilt & shame

**Family & Friends**
- Hidden identity
- Deny status
- Social disapproval
- Misinformation
- Fear of offending non-users
- Avoidance behaviors
- Role expectations
**Employment**
- Discrimination
- Concealment
- Drug screening
- Professional identity

**Financial**
- Housing
- Education
- Judicial concerns
- Costs to purchase MM
- Costs to obtain recommendation
  - Practitioner visit
  - Application & renewal fees
- Costs to use MM

**Age-Related Concerns**

*Smoked/vaporized marijuana (Δ-9 tetrahydracannabinol)*

**Pediatric/Adolescents**
- Accidental ingestion
- Tolerance
- Withdrawal
- Decreased attention
- Decreased memory
- Reduced IQ

**Elderly**
- Dizziness
- Fatigue
- Muscle weakness
- Confusion
- Palpitations/tachycardia

**References**
Available on request

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Will you join us in our mission?

To advance excellence in cannabis nursing practice through advocacy, collaboration, education, research and policy development.

www.cannabisnurses.org