Overview of Cannabis Policies in U.S. States: Implications for Public Health

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The findings and conclusions in this presentation are my own and do not necessarily represent the official position of any of the agencies with whom I consult.
Presentation Overview

• Policy Landscape
• How has policy change impacted utilization?
• Diversifying product landscape
• What do we know about the health effects?
• What do these policies look like on the ground?
• Public health implications, challenges, and future directions
Marijuana policy, by state, 2015
* VT and DC have legal medical marketplaces, but no legal adult use marketplaces

^ The KS Governor passed a bill to exempt CBD oil from the definition of marijuana, effectively legalizing CBD, though no THC is allowed in the product.
Past 30 day marijuana use, by age, National Survey on Drug Use and Health, 2002-2017
Marijuana Products and Modes of Use in the U.S.

- **Combusted products**
  (e.g., joints, pipes, bongs, bowls, blunts, spliffs)

- **Vaporizers**
  (e.g., electronic vaping devices, or older models that are more like heat-not-burn)

- **Edibles**
  (e.g., brownies, cookies, candies)

- **Drinks**
  (e.g., elixirs, syrups, hot chocolates)

- **Dabbing**
  (e.g., using concentrates and waxes)

- **Other ways**
Be Careful When You Eat and Drink Marijuana.

These Aren't Your Grandma's Brownies.

Learn more about marijuana edibles.
Health risks of marijuana include:

- **Youth psychosocial outcomes** (short term impaired learning, memory, attention)
- **Pregnancy/Prenatal Outcomes** (low birthweight)
- **Increased risk of respiratory effects** (bronchitis)
- **Increased risk of abuse of/dependence on marijuana**
- **Increased risk of abuse of/dependence on other substances**
- **Increased risk of schizophrenia and other psychoses, some**
  **increased risk for other mental health diagnoses**
- **Increase risk of motor vehicle crash**

A number of areas of insufficient or conflicting evidence
**including for:** Lung cancer, other cancers, COPD, cardiovascular
disease, reproductive effects/fertility, breastfeeding
Therapeutic Effects

- **Schedule I substance**
  - No currently accepted medical use in treatment.

- **Anecdotal evidence**
  - Vocal advocacy community

- **Increasing scientific evidence** for medical use of cannabis or components of cannabis plant:
  - Most promising for pain relief, nausea relief, patient-reported symptoms from MS; some evidence for sleep.
  - States may authorize broader indications
  - 3 FDA approved synthetic THC drugs, 1 cannabis-derived CBD drug
Why don’t we know more?
CBD/Low-THC States

• Often focus on CBD/low-THC oils
• Allow clinicians to “recommend” CBD...
• Laws often do not address how CBD oil is made, purchased or shipped
• Typically no marketplace
• Typically no regulatory agency
• Typically no product testing or oversight
• Legalization often looks more like decriminalization of CBD/low-THC products

*Notable exception to all of this: Iowa*
Medical States

• Wide range of regulations in terms of:
  • Marketplaces/number of outlets
  • Types of available products
  • Registries and cards
  • Homegrows
  • Lab testing

• Public health is often the regulatory agency

• Wide range of indications (not all based on science)

• Often paves the way for non-medical framework
Adult Use Policy Tracking - Methods

• Data Collection:
  • Quarterly updates from State Public Health Agencies and Regulatory partners
  • Review of ballot measures, laws, rules & regulations

• Data Validity:
  • Snapshot in time – as of January, 2019
  • Cross checked by state agencies directly

• Analyses:
  • Overall, similarities and differences
## Non-Medical/Adult Use States

<table>
<thead>
<tr>
<th>State</th>
<th>Year Passed (% support)</th>
<th>Retail marketplace open?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>2012 (55%)</td>
<td>January, 2014</td>
</tr>
<tr>
<td>Washington</td>
<td>2012 (56%)</td>
<td>July, 2014</td>
</tr>
<tr>
<td>Oregon</td>
<td>2014 (56%)</td>
<td>October, 2015 (through medical dispensaries)</td>
</tr>
<tr>
<td>Alaska</td>
<td>2014 (53%)</td>
<td>October, 2016</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>2014 (65%)</td>
<td>No retail marketplace approved</td>
</tr>
<tr>
<td>Nevada</td>
<td>2016 (54%)</td>
<td>July, 2017 (through medical dispensaries)</td>
</tr>
<tr>
<td>California</td>
<td>2016 (56%)</td>
<td>January, 2018</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>2016 (54%)</td>
<td>November, 2018</td>
</tr>
<tr>
<td>Maine</td>
<td>2016 (50%)</td>
<td>Still unknown</td>
</tr>
<tr>
<td>Vermont</td>
<td>2018 (legislative)</td>
<td>No sales or regulatory provisions enacted</td>
</tr>
<tr>
<td>Michigan</td>
<td>2018 (56%)</td>
<td>Still unknown</td>
</tr>
</tbody>
</table>
Policy Basics

• Regulatory Authority:
  • Typically Depts. of Revenue/Taxation/Consumer Affairs OR Liquor/Alcohol/Beverage Control Boards
  • Public health has had retail regulatory role in 2 states (CA, OR)
  • 6 states (AK, CA, ME, MA, OR, WA) have rule making/advisory boards; public health on all but 1 (WA); industry on all but 1 (WA); NV just announced cannabis commission

• What’s Legal?
  • Most states have ~1oz possession or 7-8g concentrate (ME and MI have 2.5 oz total)
  • MA and OR have higher home possession (10 oz and 8 oz)
  • Home grows in all states (~6 plants; MI has 12), with exception of WA.
Policy Basics

• Taxes:
  • Excise taxes vary widely: ~10% (ME, MA, MI, NV) to 37% (WA)
  • AK is only state with weight-based tax

• Vertical integration
  • Allowed in all states except for WA (limitations in CA)

• Funding for Public Health Agency:
  • 6 states have actual (AK, CO, OR, WA) or expected (MA, ME) funding for public health agency. Wide range in $$ ($1M to $18M annually).
  • Not protected. May supplant other funds.
  • Public health funding typically for surveillance, education
Policy Basics

• Medical Marijuana Marketplace
  • AK is only state without existing medical marketplace
  • WA is only state with fully merged Medical/Adult Use
  • All other states have or moving towards parallel regulation (e.g., single regulatory system, but separate licenses)

• Delivery
  • Allowed (with restrictions) in 3 states (CA, NV, OR)

• Local Control to Ban/Amend Policy
  • Allowed in all states (with some tax implications and restrictions on extent of local control)
Packaging and Labeling

• Universal Symbol
  • Required (or will be) in 6 states (CA, CO, MA, NV, OR, WA); poison control line sticker also required for infused products in WA, and similar adopted in MA

• Warning Labels
  • Required in all states, but vary widely
  • On packaging vs. at point of sale
  • Most commonly include warnings against: youth use, operating machinery/driving/impairment
  • Some include warnings about: dependence (AK, WA) delayed effects from edibles (CO, MA, NV, WA)
Packaging and Labeling

• **Childproof packaging?**
  - Required in all states; resealable requirements in most states, some also require opaque, childproof exist bag.

• **Edibles**
  - 10mg serving size in CA, CO, MA, NV, WA; 5 mg serving size in AK, OR, MA.
  - All states have provision that can’t appeal to kids (i.e., no cartoons, limitations on gummy shapes)
  - Most states prohibit products that look like commercial food items, including adulterated products.
  - Most states prohibit health and benefit claims on labels
  - Shelf-stable products only in WA
Lab Testing

• Third party testing:
  • Exists in all states that have testing systems set up or planned (ME/MI do not yet)

• Reference lab?
  • Exists in NV and WA, pending in MA, CO

• Sampling and testing procedures:
  • Vary widely by state (with most testing for microbial contamination, residual solvents, metals, and cannabinoid content).

• Cannabinoid/pesticide labeling
  • All states require THC amount on label; 3 (CO, MA, OR, WA) require CBD. No states require pesticide disclosure on label, differences in pesticide testing across states
Public Consumption, Zoning, Advertising

• **Public/On-Site Consumption**
  - Any public/on-site consumption prohibited (MA, NV, OR, WA)
  - Prohibited, unless municipality approves on-site consumption (CA, CO)
  - Rule-making passed to allow for on-site consumption in stand alone retail stores (AK)
  - Ballot measure language allows; legislative proposals to restrict (ME)

• **Zoning and Advertising/Marketing**
  - Zoning for retail locations ranges from 300 ft (NV) to 1000 ft (WA) from child/community-related locations (varies by locality, and some localities can reduce)
  - In AK, CA, NV, WA: no advertising 1000 ft. from child/community-related locations
  - In all states: cannot advertise health benefits, therapeutic effects, or make false statements
  - Warnings required on ads: MA, NV, OR; Billboard restrictions: CA, CO, WA
  - Some TV/radio/print/internet ads allowed in most states, with audience restrictions
Summary of state non-medical legalization policy

• Public health has a seat at the table, but so does industry
• Taxes vary widely, but are getting closer together...
• Consumption and possession limits similar – with some outliers
• Various medical/non-medical marketplace approaches
• Warning labels and universal symbols vary widely – potential implications?
• Onsite consumption/social clubs is an issue in every state
• Time/Place/Manner/Advertising – area of opportunity for public health
• Public health funding....making progress, but insufficient
Future areas to watch in the U.S.

- Farm bill and hemp-derived CBD
- Interstate commerce for hemp (and maybe cannabis)
- Ongoing intersection of opioids and cannabis
- FDA drug approvals (Epidiolex…what’s next?)
- Entry of other big industry into cannabis space (e.g., tobacco, alcohol, etc.)
Final word on U.S. State Cannabis Policy

Citation: Kilmer, B. Recreational Cannabis – Minimizing the Health Risks from Legalization (2017) New England Journal of Medicine; 376 (8): 705-707
Questions?

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