WHITE PAPER ON CANNABIS POLICY

LESSONS FROM AROUND AMERICA

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In January 2019, TAADAS representatives attended the North American Cannabis Summit in Los Angeles, CA, to meet with international leaders in policy, public health, and research on cannabis. The conference included lessons learned from states that have legalized all forms of cannabis and marijuana for medicinal and personal use, research on public health issues, and important messages about prevention strategies, especially concerning youth cannabis consumption.

The following update summarizes information from the 2019 Summit and is intended to complement our previous paper and recommendations, “Lessons from Around America,” published in January 2018. This update is divided into four main topics related to cannabis policy:

1. Social Justice
2. Youth Prevention
3. Marketing
4. Driving Under the Influence of Cannabis and Enforcement

At the end of the full paper, there is an updated list of TAADAS’ recommendations which add to the policy and public health recommendations determined through the 2017 National Cannabis Summit.

Definitions:

Cannabis: a plant within the Cannabaceae family which contains more than eighty biologically active chemical compounds.

Marijuana: Parts of the cannabis plant that have been listed as a Schedule I drug under the Controlled Substances Act because they contain THC.

Cannabidiol (CBD): A non-psychoactive chemical compound found within the cannabis plant.

Tetrahydrocannabinol (THC): a psychoactive compound found within the cannabis plant.

Hemp: a type of cannabis containing small amounts of THC

“Not IF, but WHEN”

Cannabis policy experts overwhelmingly agree that cannabis will become legal in the future. Polls find that 61 percent of Americans are now in favor of legalizing cannabis.1 This number continues to grow as more voters from generations that grew up using cannabis weigh in. As of this publication date, 11 states and the District of Columbia have fully legalized cannabis for medicinal and personal use while 33 states have approved cannabis for medicinal purposes in some form.2

1. Social Justice Issues Related to Legalizing Cannabis

The 2019 North American Cannabis Summit shed light on the issue of “cannabis equity,” that is, the interrelated issues of social, health, and economic justice, related to the legalization of cannabis.3 Many communities of color and economically disadvantaged communities have been disproportionately affected by both drug and alcohol addiction and the adverse effects of the War on Drugs. As it relates to marijuana, it is well-documented that the War on Drugs has resulted in a “war on poor communities” and the unequal enforcement of marijuana laws. As a result, the War on Drugs has led to mass incarceration, loss of economic opportunities, and violent crime, in addition to further stigmatizing and marginalizing vulnerable communities.

In order to prevent cannabis policies from negatively affecting these communities further, special steps must be taken to ensure that policies are equitable and empower communities that have been negatively affected by previous drug policies. A public health, social, and economic equity approach to legalization must include the development of evidence-based practices with the goal of being neutral and objective.

The organization Getting it Right from the Start, a project of the Public Health Institute, “collaboratively develop[s] and test[s] models of optimal cannabis policy with the goal of reducing harms, problem use, and youth use.”4 Getting it Right from the Start recommends that states use lessons learned from experience with tobacco and alcohol regulation to promote health, social, and economic justice policies as they address the legalization of cannabis.

The following list incorporates ideas from Summit presenters on creating policies that encourage “cannabis equity:”

- Efficiently expunging past criminal records
- Prioritizing equity applicants for business
• Ensuring that enforcement of marijuana laws does not result in a new wave of incarcerations
• Discouraging big outside investors
• Collecting and investing tax revenue to reduce health disparities and mitigating the negative impact of the War on Drugs
• Protecting children and youth
• Reducing risk of addiction and negative health effects
• Taking measures not to worsen existing health disparities

**Current Tennessee Cannabis Law Perpetuates Inequity**

Tennessee’s current cannabis laws, HB 2144 and HB 1164, are examples of laws which inadvertently foster social inequity. HB 2144 permits people with epilepsy, and a few other severe conditions (or their family members), who have “a legal order or recommendation” from a Tennessee physician, to possess CBD oil with a THC content of 0.9 percent or less. Simultaneously, HB 1164 makes it illegal in Tennessee to produce CBD products from hemp with more than 0.3 percent THC. This effectively means that anyone who can legally use this concentration of THC must have the financial means to travel to another state to obtain the recommended product.

**Lessons from California’s Proposition 64**

California’s Proposition 64, passed as a ballot initiative in November of 2016, is an example of a marijuana policy aimed at cannabis equity given that it reduces criminalization. The proposition “authorizes the possession, transport, purchase, consumption and sharing of up to one ounce of marijuana and up to eight grams of marijuana concentrates for adults aged 21 and older. It also allows adults to grow up to six plants at their household, out of public view.” To emphasize equity, the proposition reduces criminal penalties for those under 21, and allows for individuals convicted of marijuana charges prior to the passage of legislation to retroactively reduce or clear their criminal record. Finally, any tax revenue garnered through marijuana sales is earmarked for social initiatives such as youth prevention, investment in communities harmed by previous marijuana laws, and research.

2. Preventing Youth Marijuana Use and Over-Use

The Summit focused a great deal on prevention efforts and engaging youth in meaningful and sustained prevention activities. The Summit highlighted several programs including the California Health Collaborative’s “I Perform Above the High” campaign in which youth engaged in every level of campaign planning including community assessment, implementation, and evaluation.

Youth advocates worked alongside local media partners to engage them in marijuana prevention efforts to stop the promotion of marijuana use for their peers.
and their communities. The presenters urged states to learn strategies for collaborating with youth partners in policy work and coalitions. They also urged policy makers to consider how the cannabis industry can inform schools about trends with cannabis, allowing educators and youth to have better informed prevention campaigns.6

Tennessee has many established prevention and anti-drug coalitions. These coalitions already have well-established mechanisms to begin providing the infrastructure for educational workshops in schools, community centers, and faith congregations all over Tennessee, before cannabis becomes legal.

Given that marijuana can cause health issues including low birth weight babies, diabetes, stroke, high blood pressure, heart attack, and mental illness, the goal for marijuana users should be the least use possible.7 States should also develop campaigns for long-time users, new users, and non-users.8

Existing coalition best practices that should guide these efforts include:
- Providing age-appropriate information for multiple age groups (e.g. not providing pamphlets to children)
- Recognizing that fear-based messaging does not work
- Emphasizing engagement to inform (e.g. consider using cartoons, athletes, or gamer and social media platforms)
- Increasing campaign exposure, recognizing that it takes five interactions to have memory and recall about a campaign
- Creating prevention messages that move people to behavior change over time
- Developing surveys for the target populations and using this as a basis for the campaign

**State Campaign Models for Prevention**

The Summit reviewed several successful state campaigns that can be used to establish best practices for future Tennessee campaigns:

- **Colorado** - “It’s Good to Know”
  [https://www.colorado.gov/good-know](https://www.colorado.gov/good-know)
- **Colorado** - “Meg the Budtender”
  [https://responsibilitygrowshere.com/responsible-marijuana-use](https://responsibilitygrowshere.com/responsible-marijuana-use)
  [https://www.youtube.com/watch?v=zGaeFpv-VT4](https://www.youtube.com/watch?v=zGaeFpv-VT4)
- **Washington** – “You Can”
  [https://gmmnb.com/work/youth-marijuana-prevention](https://gmmnb.com/work/youth-marijuana-prevention)
• **Alaska** – “These Aren’t Your Grandma’s Brownies” (Figure 1) and “Start Slow Go Low”
  
  [http://dhss.alaska.gov/dph/Director/Pages/marijuana/default.aspx](http://dhss.alaska.gov/dph/Director/Pages/marijuana/default.aspx)  

![Figure 1 “These Aren’t Your Grandma’s Brownies” from The Alaska Department of Health and Social Services Division of Public Health’s Marijuana Awareness Campaign Initiative](image)

### 3. Marketing

**Tailoring Marketing to Different Communities**

There have been many marketing mishaps as various states have implemented cannabis access. For example, states learned that marketing issues for medical marijuana are very different from those for personal use. In states that marketed to both user populations simultaneously, the messaging sometimes got confused and was seemingly contradictory.

Prevention messaging always needs to be targeted toward the specific user group in order to be engaging. Many states had to grapple with the fact that they were the primary “marketer” for cannabis products to keep consumerism from interfering with public policy and public health messaging. Most states defined “selling practices” in some fashion and defined who could make any marketing or educational materials.

**Determining the Best Purveyor of Critical Information**

Additionally, states found that marketing or messaging about prevention needed to acknowledge that cannabis users tend to be “countercultural,” that is, generally this group does not trust government resources. In several states, messages from government programs, state-sponsored research, and other traditional sources, did not effectively capture the public’s interest.

In order to convey important public health information, states had to consider other ways to disseminate this information more effectively. Colorado, for example, has an
incredibly successful public health campaign called “Meg the Budtender” that is part of their “Responsibility Grows Here” campaign. After several attempts to use more traditional information sources failed, the state began enlisting the help of “budtenders,” cannabis retailer staff, to be the purveyors of critical health and safety information to cannabis users. Because the budtenders are required to be educated on legal and medical issues in order to dispense cannabis products, their credibility and knowledge was, in fact, often superior to other entities’.10

Public Messaging Before Legalization
States that have legalized cannabis, or were on the path to legalization, strongly emphasized that prevention and educational marketing needs to occur long before any product becomes available, especially concerning medical cannabis. Authorization to use medical cannabis can appear to the public as an indication that it is safe to use. Importantly, children and adolescents are seeing these messages indicating that cannabis sales are legal and accepted by the medical community, potentially encouraging use.11

Best Practices for Youth Messaging
According to Pamela Trangenstein, a Postdoctoral Associate at Boston University’s School of Public Health, “nine out of ten adolescents in states with legal non-medical [retail] cannabis are exposed to cannabis advertising and promotions.”12 Most of these ads are reportedly on Instagram, Facebook, and other online platforms. This is critical to note given that most underage users purchase cannabis online (Figure 2).

To combat these online marketing campaigns and discourage youth use, states have found that peer-to-peer focused campaigns are the most successful. For example, Washington distributes a “Green Guide” in regional local newspapers and a similar one for kids called DOPE Magazine.

The University of Washington Alcohol and Drug Abuse Institute provides the messaging and then these local guides “rebrand” the information to more effectively address their target demographic. States have also used animations to engage viewers in a less threatening and authoritarian manner.


Avoid the Emergence of “Big Marijuana”

With the commercialization of marijuana, marketers attempt to create “heavy users” by manipulating potency, packaging products in a manner to attract young users, and developing misleading advertising to stress the benefits of using. There are already powerful and lucrative marijuana growing and distributing businesses, and state policy makers must make efforts to ensure an equal playing field for the market in order to prevent “Big Marijuana” from emerging and dominating.

Tennessee benefitted from a large settlement against “Big Tobacco” because marketing and labeling practices were found to be deceptive. Many presenters warned that states should expect cannabis companies to conduct business the same way. Tennessee should look to North Carolina’s state-run liquor stores and Montreal, Canada’s oversight of the growing and sale of cannabis in their jurisdiction as exemplars. In Montreal, state-run sales have kept “Big Marijuana” out and allowed the government to supervise and control public messaging.

4. Driving Under the Influence of Cannabis (DUIC) and Enforcement

Perceptions Surrounding Driving Under the Influence of Cannabis

Research on the issue of DUIC is relatively new, however, research conducted by RTI International and presented at the Summit surrounding the self-reporting of individuals driving while under the influence of cannabis, indicates several important trends: 14

- States with legal adult recreational use had the lowest reported rates of DUIC
- People residing in states without legalized cannabis usage reported the strongest perceptions that driving while high is safe
- Home cultivation made people more likely to report driving high

These trends suggest that states with legalized usage, in which public education of the health issues surrounding cannabis is often emphasized, have been most successful in informing people about the dangers of driving while using cannabis.

DUIC Detection and Enforcement

There are also some logistical concerns with how to legislate, measure, and enforce DUICs. THC, the main psychoactive chemical in cannabis, is fat-soluble as opposed to alcohol, which is water-soluble. This makes cannabis intoxication difficult to detect with blood or urine tests. As a result, field sobriety tests may need to be altered to detect cannabis intoxication, as the effects are different from that of alcohol, opioids, and other classes of psychoactive substances. Possible technology for cannabis breathalyzers and oral swabs are in development, but currently there is no scientific consensus on the best way to measure and enforce DUICs.
Driving under the influence may be the most complicated issue related to legal or illegal cannabis use. Impairment with alcohol and other drugs—even cannabis—is usually easily tested and will result in a DUI. While alcohol and other drugs will show up in a urine or blood test for up to 48 hours, cannabis will continue to show up in testing for weeks or months depending on the individual's age, weight, metabolism, the amount consumed, frequency of use, and potency of the cannabis used. This may, inadvertently, cause individuals who are not actually impaired at the time of a citation to be arrested for DUIC. Tennessee should continuously research how other states are dealing with this issue as well as emphasize this information in prevention messaging.
POLICY ISSUES

2018 Farm Bill’s Impact on National Policy
With the passage of the 2018 Farm Bill, CBD products suddenly became mainstream. The bill allows for hemp cultivation and explicitly allows the transfer of hemp-derived products across state lines for commercial or other purposes. It also puts no restrictions on the sale, transport, or possession of hemp-derived products, so long as those items are produced in a manner consistent with the law. The bill outlined actions that would be considered violations of the law such as producing a plant with higher than 0.3 percent THC content or cultivating hemp without a license. It also lists potential punishments and consequences for repeat offenders. Additionally, the bill set up a shared state and federal regulatory authority, outlining the steps a state must take to develop a plan to regulate hemp and submit it to the Secretary of Agriculture for approval. Hemp or CBD products are still subject to health claim review.

Revenue from Cannabis/CBD Sales
States that have attached a tax to the sale of cannabis and CBD products are seeing strong revenues. Forbes Magazine reported that Nevada poured $42.5 million raised by hemp taxes (far exceeding original predictions), from the latest fiscal year into its “rainy day” fund, which had been close to running dry. Colorado and Washington, which were the first two U.S. states to legalize recreational use, collected nearly $250 million and $320 million, respectively, in cannabis-related taxes and fees in 2017. States have used this revenue to fund diverse programs such as education initiatives, prevention campaigns, and addiction treatment. Underground, illicit markets still affect sales in states where cannabis is legal and affect black market issues in states where it is not. To address this issue, the California legislature introduced a bill that would give legal cannabis businesses a tax break to help them thrive and better compete with the underground market while hoping to curtail some illicit sales.

Policy Inconsistencies
There is still tension and contradiction between policies created by the Drug Enforcement Administration (DEA) and the Food and Drug Administration (FDA). While the DEA regulates cannabis (THC) as an illegal, Schedule I drug, the FDA approved THC in medications like Epidiolex, to treat seizures associated with two rare and severe forms of epilepsy. The DEA has also published information surrounding its use in pain management. The FDA has also approved three cannabinoid-based medicines derived from isolated synthetics. These medications are primarily used for the treatment of anorexia, weight loss in patients with AIDS, and nausea and vomiting associated with cancer chemotherapy in patients who have failed to respond adequately to conventional treatments. In response, several months after the FDA approved Epidiolex, the DEA responded by rescheduling FDA-
approved drugs containing cannabis-derived CBD with no more than 0.1 percent THC (Epidiolex) under Schedule V of the Controlled Substances Act. This eliminates some contradictions between the two agencies, but others will inevitably arise as medications are reviewed. Notably, people with a legal THC prescription from another state have been subject to dismissal or outright legislative exceptions in states where these prescriptions are not authorized.

**Public and Private Cannabis Use**

There are several cannabis policy issues that have been uniformly applied in states. Smoke-free workplace laws and laws affecting public space apply to cannabis use. While it may be legal for adults to consume cannabis inside private residences, in some states property owners or homeowners associations may have policies that disallow this. Nationwide, it is illegal to consume cannabis in public places as well as on federal land.

Drug-free workplaces are defined under federal law and these laws are unchanged by state legalization of cannabis in any form. Workplaces can regulate the use of any intoxicating substance—whether prescribed or not—when it is a workplace safety issue or otherwise illegal. Drug-free workplaces issues have been litigated for many substances and generally each workplace sets its policy about the safety issues that are prevalent in their locations.

**Tennessee Cannabis Legislation**

Tennessee laws around cannabis use are evolving but at a slower pace than many other states. Below is the most recent cannabis-related legislation:

- **2015:** Governor Bill Haslam signed SB 280 into law which allowed for the medical use of marijuana for several serious conditions. Through the legislation, Tennesseans are still not able to sell or buy the product within the state. Without proof of purchase of CBD oil outside of the state, individuals may still be charged with a misdemeanor.

- **2016:** Through HB 2144, Tennessee modified SB 280 adding that patients may possess CBD oils with no more than 0.9 percent THC if they have “a legal order or recommendation” for the oil and if they, or an immediate family member, have an epilepsy diagnosis made by a Tennessee doctor.

- **2017:** The legislature passed HB 1164 which altered Tennessee’s industrial hemp law to allow for the production of hemp with 0.3 percent THC or less. Hemp growers must fit into particular criteria outlined by the law such as being licensed by the Department of Agriculture. HB 1164 also provides that hemp is not marijuana under the state’s controlled substances law under particular stipulations.
Tennessee legislation to further regulate or allow medical cannabis has been introduced several times over the last few years. In 2019, lawmakers introduced several bills including one to create a legal infrastructure to issue medical cannabis cards and license cannabis farms, processors, and dispensaries. However, these bills were not voted on this session, but will likely be heard in the 2020 session.
March 2017 Introduction

Few legislative and regulatory issues in the United States are as polarizing as cannabis legalization. No matter your perspective, many states and countries around the world are legalizing cannabis for both medical and adult recreational use. In 1972, the Shafer Commission, appointed by President Nixon, called for the decriminalization of cannabis. In 2016, nine states had medical and recreational cannabis-related questions on their ballots. Currently, 29 states and the District of Columbia have legalized the medical use of cannabis. In addition, eight states and the District of Columbia have legalized cannabis for recreational use. The debate over legalization of any kind has engaged state and local governments, advocacy groups, the agriculture industry, marketers, researchers, and consumers alike. The 2017 National Cannabis Summit held August 28-30 in Denver, CO, provided a structure for an objective national discussion of policies and regulatory approaches to enhance public health and safety, improve prevention and treatment, and respond to changing cannabis policies.

TAADAS elected to send members and staff to the Summit to engage in the discussion firsthand. Over 450 people attended the Summit, many of whom were from states that had already legalized cannabis and were now seeking ideas to improve existing policies. Our key findings from the Summit and recommendations for any future legalization in Tennessee—should it be considered—are outlined in this publication. Although presenters shared various kinds of medical indication information at the Summit, TAADAS will not endorse or take a position on the types of medical conditions that could be addressed with medical cannabis as those decisions are best regulated by the medical profession.

Upon return, the Summit attendees outlined three main areas of focus which serve as the focus of this white paper:

- Prevention
- Treatment
- Regulatory policy
Throughout the Cannabis Summit, states where medical marijuana is legal shared their general findings and statistics. Around 9 percent of Americans who use marijuana become addicted to it, according to the National Institute on Drug Abuse; for alcohol, it’s 15 percent, and for heroin, it’s 23 percent.\(^{18}\)

**Figure 3 Addictiveness of Marijuana from "Marijuana Legalization and the "Answer" to our Drug Problem, John F. Kelly, National Cannabis Summit, (2017)\(^{19}\)**

**Cannabis Use in Colorado**

Colorado, which has one of the longest histories of legalization, shared most of the available longitudinal data. In Colorado, marijuana was decriminalized in 1975, medical marijuana use was approved in 2000, and adult use was approved in 2012. Over the years since legalization, Colorado hasn’t had a much higher rate of marijuana use than the rest of the country. According to a report by the Colorado Department of Public Safety, past-month use of marijuana by adults was 12 percent nationwide in 2014, compared to 14 percent in Colorado.\(^{20}\) 2015 Colorado Department of Public Health & Environment data showed similar findings with 13.6 percent of adults in the state identifying themselves as cannabis users.
In general:

- For legal marijuana, 80 percent of the volume of use is by 20 percent of users.\textsuperscript{21}
- The proportion or percentage of use in the adult population has increased, while youth use has remained relatively stable.
- Legal use changes the nature of the drug problem, it does not eliminate it.\textsuperscript{22}

**Cannabis for Medicinal Use**

Components of cannabis can be extracted (CBD) and used for medical treatment in such a way that the intoxicating property of the cannabis (THC) is not present. To date, THC has not been found to have medical properties, though its use is being studied.

Most conditions approved for medical marijuana treatment in the United States, whether CBD or cannabis-based, are pain-related. But medical marijuana can also be used to treat seizures, nausea from cancer treatment, muscle spasticity in multiple sclerosis, Parkinson’s disease, and dementia, among other conditions. There is increasing research that indicates that cannabis is particularly useful for certain types of pain such as fibromyalgia. In fact, over 90 percent of medical marijuana card holders in Colorado have a chronic pain diagnosis.\textsuperscript{23}

Summit presenters shared many strong opinions regarding the use of medical cannabis for pain management, rather than using opiates. Several studies presented found that pain relief from CBD was more consistent, in general and over time, than pain management with opioids. A recent study found that patients using CBD to control chronic pain reported a 64 percent reduction in their use of opioids. Tolerance to CBD (requiring more medication to get the same effect), was also less of a problem than with opioids.\textsuperscript{24,25}

**Assessing the Safety of Cannabis Use**

While opioid overdose can be lethal, cannabis overdose is rare, but can lead to illness. It would be extremely hard to ingest a lethal amount of cannabis given that someone would have to take 40,000 times the normal amount of cannabis to die.\textsuperscript{26} In fact, there have been no recorded deaths due to cannabis overdose.

High potency cannabis can have adverse effects, however. In 2017 the National Academies of Science Engineering and Medicine presented a consensus study that showed that smoking cannabis leads to bronchitis, smoking during pregnancy leads
to lower birth rates, and initiating cannabis use at an early age is a risk factor for problematic use. In addition, the National Institute of Health’s (NIH) ABCD study found that smoking one cannabis cigarette causes as many pulmonary problems as 4-10 cigarettes. The study also found there to be an increased risk of heart attack for smokers.27

Research has also shown an association between cannabis use and the onset of manic symptoms in individuals without preexisting Bipolar Disorder. It may also worsen the course of Bipolar Disorder by increasing the likelihood, severity, or duration of manic phases. In addition, there is evidence of an association between cannabis use and the development of any type of anxiety disorder, with the exception of social anxiety disorder.
With the number of states that have legalized cannabis ever-increasing, whether it be for medicinal purposes or recreational use, health care professionals and policy makers must begin to look at how these changes in the law could affect adolescents and young adults from a public health perspective. Although states have passed laws and tightened restrictions on underage use and packaging, unintended use is one concern policy makers face.

**Effects of Cannabis on Adolescents/Young Adults**

Research from the state of Colorado, as well as findings from other short-term research, has informed recommendations regarding prevention programs. A group of researchers in Colorado completed the following summary, examining the potential cognitive and emotional effects of marijuana use on adolescents and young adults.

Research has shown that parts of the adolescent brain are still developing well into the mid-twenties. The neural connections, or “grey” matter, is still pruning, wiring of the brain is still in progress, and the fatty tissues surrounding neurons, or “white” matter, continue to increase and assist with the speeding up of electrical impulses and stabilization of connections. The prefrontal cortex is the last to mature and it involves the control of impulses and decision-making. As the prefrontal cortex is developing, adolescents often rely on the amygdala, a more reactionary, survival-oriented part of the brain, to help them solve problems and make decisions. It is also during adolescent years (ages 9-17), that peak social and emotional development occurs. Adolescents are more at risk to develop mental health disorders such as anxiety and depression during this time of brain development.

As researchers were reviewing the data for their study, they noted a couple of key findings. The strongest findings were related to reduced cognitive abilities and academic achievement, problem use or addiction to cannabis or other substances after adolescence, and psychotic symptoms or diagnoses. Those that used cannabis weekly, exhibited impaired learning, memory, math, and reading abilities, even 28 days after their last use. The researchers’ findings also noted that adolescents and young adults who used cannabis were more likely to experience psychotic symptoms as adults, such as hallucinations, paranoia,
delusional beliefs, and feeling emotionally unresponsive. Weekly use was associated with failure to graduate high school and failure to obtain a college degree.

An important note for all of these findings is that the available research evaluated the association between cannabis use and potential adverse health outcomes. This association does not prove, however, that cannabis use alone caused these effects. One of the recommendations that researchers stated is that in future studies of the effects of cannabis and adolescent behavior, it will be important to improve data quality by systematically collecting information on the frequency, amount, potency, and method of cannabis use in both public health surveillance and in clinical settings.

Nonetheless, it is important to consider how the deleterious effects of adolescent and young adult marijuana use may compound issues already affecting this population. For example, in the state of Colorado, close to 23 percent of students who started high school in 2011 did not graduate by 2015. Six percent of Colorado high school students attempted suicide in 2015 and 30 percent felt sad or hopeless almost every day for two weeks or more, one indicator of depression. Given that the 2015 Healthy Kids Colorado Survey data estimates that 21 percent of Colorado high school students used marijuana within the last month, it is necessary to question how marijuana use may be causing some of these statistics and how increasing marijuana usage may increase these numbers in the future.  

**Considerations for Prevention Initiatives**

During the summit, TAADAS found that one of the most important recommendations for states to consider is how to educate the public on the potential effects of cannabis use and abuse. While the introduction of medical cannabis can be limited to CBD-only products, THC-infused products are available in many states. Introducing medical cannabis, in any form, leads the public—particularly adolescents—to believe that cannabis use is relatively safe.

States recommended that educational materials be

- Designed for not only adolescents and young adults, but for parents and caregivers as well.
- Accurate and combinable with other behavioral education that includes information on what addiction looks like.
- Widely available and clear about access to treatment options.
Many states that have legalized cannabis have spent large amounts of funding on public awareness campaigns and introduced evidenced-based health education curriculum into schools as a preventative measure.

**Considerations for Cannabis Edibles Awareness Initiatives**

At the Summit, two presenters spoke to the importance of policies pertaining to edible cannabis products, which have become widely popular in states that have passed both medicinal cannabis and cannabis for adult use. Their presentation spoke to why edibles require specific policies to ensure safety and to help prohibit unintended use. Some of the unintended issues discussed included: delayed intoxication, THC concentrating in a portion of the edible, youth usage, unsuspecting adults and animals becoming sick from accidental ingestion, ingestion of molds, pesticides or contaminants, and ingestion of spoiled or impure products.

Some of the key takeaways from this presentation were:

- All edibles should be in child-resistant packaging and must contain warning labels to prevent children or unsuspecting adults from accidentally consuming products.
- All packages should contain ingredients, serving size, and THC amounts to prevent overconsumption.
- Most, if not all, states should have a ban on edibles that are made to resemble certain shapes that would be enticing to children—gummy bears/animals, edibles shaped like people, or edibles infused into food items like cotton candy, lollipops, etc.
TREATMENT

The Prevalence of Cannabis Use Disorder (CUD)

Cannabis is the most commonly used illicit substance in the United States. Between 2001-2002 and 2012-2013, the percentage of Americans who reported using cannabis in the past year more than doubled. The increase in cannabis use disorder (meeting DSM-V criteria for problematic use) during that time was nearly as large. Past-year cannabis use rose from 4.1 percent to 9.5 percent of the U.S. adult population, while the prevalence of cannabis use disorder rose from 1.5 percent to 2.9 percent, according to national surveys conducted by the National Institute on Alcohol Abuse and Alcoholism (NIAAA). Young adults (ages 18 – 29) were found to be at the highest risk for cannabis use and cannabis use disorder, with use increasing from 10.5 percent to 21.2 percent and cannabis use disorder increasing from 4.4 percent to 7.5 percent over the past decade.

Continuing decreases in the perceived harmfulness and personal disapproval of regular cannabis use have continued to derail efforts to minimize use. According to the University of Michigan Monitoring the Future study reflecting the views of 8th, 10th, and 12th graders, there has been a steady decline in both measures between 1992 and 2016. This reduction in perceived harmfulness has led to a higher likelihood of cannabis usage by this age group.30

Treatment Options31

Treatment for cannabis dependence can occur in residential programs, but typically treatment takes place in out-patient facilities in intensive programs that meet multiple times per week. Treatment goals should be client-driven. While abstinence is preferable, particularly in states where cannabis use is illegal, some clients may only wish to decrease their use to a more manageable level in states where it is legal. Facilities with an abstinence-only treatment program as well as ones for clients wishing to minimize use should be available. While there is no single approach to treatment for cannabis use disorder, there are several evidence-based therapies that have been found to be effective such as Motivational Enhancement Therapy and Cognitive-Behavioral Therapy. The addition of Contingency Management improves the effectiveness of both of these treatments. This approach may require the necessity of substance-specific groups for those in treatment for cannabis use disorder. In general, states where cannabis has been legalized, have cited this need.

“Treatment goals should be client-driven.”
Equally important is the use of psychoeducation to provide clients substantive information concerning both the negative and positive effects of cannabis use. Thus, medical professionals, therapists, and counselors should be educated on and maintain awareness of the most recent research regarding cannabis use. While additional research is indicated, several medications including Gabapentin, buspirone, and N-Acetylcisteine have shown promise as treatment adjuncts.
Marijuana and Pregnancy
The American College of Obstetricians and Gynecologists (ACOG) and the Substance Abuse and Mental Health Services Administration (SAMSHA) have published recommendations for substance abuse treatment during pregnancy. Because cannabis is often cited as an effective treatment for nausea, many women believe that they can take it for morning sickness. A Yahoo News/Marist Poll study from April of 2017 showed that 20 percent of Americans think using marijuana for nausea during pregnancy is appropriate. This public health issue must be addressed with educational materials showing that use of marijuana is associated with increased risk of dysfunctional labor and increased pre-term labor given that THC crosses the placenta and affects a growing fetus. Smoking cannabis during pregnancy is also highly correlated with low birthweight babies; there is also evidence that THC inhibits fetal development of the brain. In addition, one of the biggest risk factors for women using marijuana during pregnancy involves smoking the plant, given that smoking has deleterious effects on a person’s lungs, making it hard to breathe during pregnancy.

At birth, babies affected by cannabis use often exhibit poor feeding skills. Intoxication by the mother and/or the child interferes with the eye contact needed for bonding and attending to the needs of the child. Notably, breastfeeding is not recommended for mothers who have used cannabis during pregnancy or who may return to use postpartum because the potential risk is not fully understood yet.

For women whose children are at risk due to their substance use, children’s services that included collaborative care approaches alongside treatment providers, have been the most effective way to provide effective care. In states where marijuana is legal, data indicated that 80 percent of women who had babies that tested positive for marijuana at birth, resumed use after delivery. Child-serving agencies and the TN Department of Children’s Services would need to develop new policies for intervening in situations where mothers are using marijuana during pregnancy.
Several presenters at the Summit stated that, in one way or another, “the train has left the station,” meaning that America has decided to legalize cannabis. While this may be the case, policy makers taking an active role in where this train is headed, determine the outcome of legalization. It was clear from all of the discussions that science has not caught up with policy issues regarding cannabis. Whatever process is approved for legalization needs to include a continuous review of literature that informs ongoing evaluation of the ever-changing process. Several state policy makers criticized the lack of cannabis data and called for an increase in the amount of research that the federal government will approve.

**Legalizing Cannabis Changes the Nature of the Drug Problem**
One of the main regulatory issues often cited by policy makers in states that legalized cannabis was that legalization changes the nature of this drug problem; it does not eliminate it. Although legal cannabis has cut down the black market, confiscation of cannabis continues in states where it is legal and where it is not.

Cannabis legalization has also affected access to heroin. Drug cartels have used cash from cannabis sales to fund other smuggling. Heroin smuggling and purity have increased because heroin is now being used as a primary cash crop to finance other smuggling.

Because regulations differ so greatly from state to state and within a state (where local rules could ban sales, etc.), there have been increasing migration issues, “border shopping,” and confusion about the legality of using a legal product imported from another state or area. Local police have often been making policy on the fly as they choose whether to enforce cannabis laws and regulations. Many states have described a fragmented system and the resulting need for a patchwork of rules to try to address these unintended consequences. In response, many states have tried to regulate legal cannabis in the same manner as they had regulated legal alcohol and tobacco sales, distribution, and taxation. But many have found this to be a mistake. Legalization of medical marijuana is the regulation of a drug, not the voluntary, adult use of a product.

**The Regulatory Process**
Several states noted that they would have preferred legislation for legalization that defines what to allow rather than disallow. They believed the regulatory process is better defined when the goals of the program are defined first. States repeatedly
cited that the regulatory success of legalization depends on clearly stated goals for the program. Several states cited their goals which included:
- Suppress the black market; reduce access to unregulated product
- Suppress use; define the recipient population
- Control dosing
- Aim to reduce crime
- Reduce opioid use

Policy makers from Iowa cited that first defining medical card holders helped define the market. A defined market illustrated the required supply, distribution system, packaging, and other logistics to meet the needs of these users only.

Federal regulation of cannabis does exist. The initial, non-commercial, mostly medical use that was allowed based on local ballot initiatives, has given way to limited regulation by the federal government as well as the localities and states that have legalized. The Cole Memorandum, issued by the Department of Justice, gives states guidance on cannabis. For example, no interstate commerce is allowed in states that allow its use, and no organized capital is allowed or can be filtered through federal entities such as banks and the post office. The Cole Memorandum also directed states not to focus on marijuana enforcement except where it affects minors, but encouraged a “seed to sale” tracking systems for cannabis. In regard to taxes, the cannabis industry pays a different federal tax rate, but they do pay federal taxes on revenue.

**Defining Eligible Medical Diagnoses & Prescriber Education**
Summit participants also cited the need to define eligible medical diagnoses as another major policy concern. Many states found it hard to adapt to the rapidly changing medical cannabis field and cited that medical prescribers should certify a qualifying diagnosis based on fairly open criteria that is under the administrative authority of a designated board or agency driven by medical science. States also cautioned that allowing medical cannabis to be used for pain management, without appropriate pain management guidelines and oversight, can lead to a “cannabis epidemic” that is like the current opioid epidemic many states already face. While the risk of death by overdose is not relevant and cannabis is often cited as a better pain management tool, there are still risks with unrestricted cannabis prescription policies, especially if access to THC infused products is allowed.

It has been noted that one of the issues that fueled the opioid crisis was that prescribers were not educated in pain management and addiction. This will be an issue with cannabis prescription as well, and it should be addressed in policy so that medical schools and continuing education programs cover this topic. Medical education about the prescription of cannabis has been developing primarily in states where the product is legal. Prescribers need more data and protocols to
determine the strength or dose to use, the most effective route of administration, as well as what conditions are amenable to cannabis treatment. State policies that contribute to this kind of research and medical education are needed.

**Home Grown Cannabis Plants**
Initially, many states allowed “home grows” of plants to allow patients access to medical cannabis. This practice was largely sanctioned to allow patients needing these medications access where medical use products were not being manufactured, were not readily available, or were too expensive to be accessible. With a growing medical cannabis industry, this is much less of an issue. Access to CBD-only products are now available and are more accessible. Where home grows are allowed, states have lowered the number of permissible plants and implemented new tracking mechanisms for plants. Every state who would consider home grows, cited the need to regulate and inspect the plants, to ensure that pesticide use was regulated, and to regularly review the ongoing need for medical use, among other issues.

**Regulation of Edible Cannabis Products**
The types of cannabis products, many containing THC, that are manufactured has ballooned in states and countries that have allowed medical use. The use of any “edible” product (such as cookies and candies, which are often needed for elderly patients with dementia or cancer) needs to be balanced with policies that ensure that they are clearly labeled as medicine and not marketed or packaged in ways that are appealing to children. Child resistant packaging is a necessity. Most states are eliminating or heavily regulating cannabis products, such as gummy-type candies, as they are too enticing for children. Where products seem to be manufactured for use by children, policies to clearly label them as medicine were seen as critical. Several states talked about mandating advertising and messaging that stressed messages like, "These Aren't Your Grandma's Brownies." In addition, edibles often must be refrigerated and have a “sell by” date that results in the need for policies to destroy “unfit to sell” items.
Economic Impact of Cannabis Policy

Presenters discussed the economic impact of policies. Cannabis use affected social norms and how people chose to socialize, shop, and use transportation, among other things. The economic impact of the cannabis industry in states is magnified because the industry is so siloed and isolated from other areas of the economy and it is also completely contained in that state. Generally, private capital investments support the cannabis industry, but state and local banks, unregulated by federal agencies, have invested in the market as well. While state and local tax revenue from cannabis has remained high in many states, as the industry has expanded, manufacturing costs have been reduced and prices for cannabis products have gone down, along with the resulting tax revenue. This was particularly true in Colorado.

Engaging Stakeholders in Cannabis Policy

A key area of agreement between the states attending the Summit was the need for a diverse group to be engaged in policy development. The widely varying expertise required to work on implementation surprised many lawmakers and state officials. States required prescribers, medical educators, and specialists with experience in agriculture, marketing, prevention, dispensing, packaging, environmental protection, addiction, legal issues, and regulation. States also regularly cited the need to include public health agencies, such as poison control centers, in policy development and data review.

Medicaid and Medicare payment for medical cannabis is being debated at the federal level as its use is seen as a means to lower the costs of prescriptions. A report published in *Health Affairs* found that if all states had legalized medical marijuana in 2014, Medicaid could have saved $1 billion in spending on prescriptions.35

Cannabis Legalization and Homelessness

Many of the social costs of cannabis use have been widely debated, but the one social issue that has been the most widely discussed is legal cannabis’ effect on...
homelessness. Colorado has been singled out as a chief example of this issue as they have allowed adult recreational use an initially fairly unrestricted use for medical purposes. With a yearly growth rate of 1.85% in 2016, Colorado is second fastest-growing state in the USA. Colorado’s economic growth rate is 5th in the nation. With the population and the cannabis industry growing so quickly, the number of homeless grew as well. However, research shows that Colorado homelessness was primarily caused by the cost of rent doubling. Housing was in high demand and there was a higher cost of living because of the new cannabis industry. (11, 26)

Workplace Cannabis Policies

Presenters also discussed the impact of medically prescribed cannabis in work settings. Drug free workplace policies generally cover the use of a prescribed product that can be intoxicating or can affect someone’s ability to perform work tasks. Aside from federal workplaces, policy makers agreed that existing guidelines for drug free workplaces were adequate to address medical cannabis. Many employers forbid the use of any intoxicating substance during work hours in their employee manuals in order to address both medical and recreational use of cannabis. These policies don’t include CBD use, however, because CBD would not cause intoxication or create any type of a positive result on a drug screen.

Regulating Unsanctioned Cannabis Distribution

States where cannabis is legal needed to define penalties for unsanctioned cannabis distribution at any level of the process. Additionally, many surrounding states chose to enhance such penalties as well. Growers with a continuous pattern of diversion are typically subject to increased scrutiny before ultimately having their sales licenses revoked for continued infractions. Any individuals who home grow for medicinal use still had to register their plants and could have their medical card to allow home grows revoked if engaging in the practice of diversion. All of these licensure reviews were subject to due process provisions. Additionally, states strongly endorsed stronger penalties for illicit marijuana sales to minors.

Some of the other broad areas of regulation and policy that presenters discussed included:

- **Determining the chief regulator**
  - Evaluate the pros and cons of defining an existing agency or new one to be the chief regulator
  - Define clear regulations that are accessible (web based)
  - Mandate record keeping and retention
  - Implement compliance checks at every level
  - Require video and signage for dispensaries, farms, and distributors
Defining state and local licensing; letting localities ban sales
  o Include regulation of local zoning – number of shops, hours of operation
  o Determine state taxes and local taxes; fees

Defining eligibility to be a grower, distributor, or prescriber
  o Determine the minimum residency requirement
  o Implement background checks and processes for surprise inspections
  o Evaluate the pros and cons of limiting the number of producers
  o Evaluate how this creates an opportunity for monopoly; graft
  o Evaluate how this can be easier to inspect and regulate

Defining “dose”
  o Potency by type of cannabis product
  o Quality control with a clear “no sampling” policy
  o Labs for quality control should be separate from farmers, distributors, etc.

Regulating Pesticides
  o EPA rules are lacking for cannabis; states must issue regulations
  o Pesticides for plants becomes concentrated when making oils and extracts
  o Rules for workers who are exposed to pesticides

Advertising
  o Information campaigns that are evidence-based
  o Clear ‘not for kids’ labeling and messaging; no cartoon characters
  o First amendment complaints and lawsuits have been filed regarding limits on advertising

Other legal regulation issues such as:
  o Public housing regulations
  o Public intoxication issues
  o Operating under the influence regulations and determinations
  o Dispensing in schools
  o Use of law enforcement stings with prescribers, especially for underage patients

Most states mentioned that implementing medical cannabis took more time and infrastructure than originally anticipated. It was typical for dispensaries to take two years to begin operating and it also took time for farms, medical education, the regulatory framework, agencies, and many other areas of the process, to develop.
SUMMARY

TAADAS does not condone medical cannabis nor seek to limit its use. Legislative approval of access to medical cannabis can lead to many unintended consequences. It is critical to ensure that medical use by adolescents is limited, whenever possible, to non-intoxicating extracts, such as CBD, given that their brains are still developing.

Every day, TAADAS member agencies and practitioners see the effects of overdose as well as the opioid crisis in communities. Reducing the use of opioids by implementing pain management strategies with cannabis will address overdose deaths. However, using appropriate extracts, such as CBD or medical cannabis, to control pain in lieu of the use of opioids, would need to be initiated only with strict guidelines for use in pain management, and would need to be developed well in advance of any legal use. Guidelines for any other medical use would need to be developed well in advance of any legalization as well.

Several states attending the National Cannabis Summit in 2017 recommended that along with setting goals for any legalization of cannabis, policy makers should establish clear goals for the use of any revenue generated through the regulation of cannabis. Legislating where any new revenue will be invested was key to ensuring a smooth, responsive, and responsible implementation process. States also encouraged earmarking some of the revenue for addiction treatment and prevention programs.

Any medical cannabis use will need to have a cohesive and evidence-based marketing strategy to ensure citizens are aware of appropriate medical use, its intent, and regulations. Such messaging must precede implementation by a significant period of time to address well established misconceptions. Significant lead time will also ensure that potential patients are prescreened and approved appropriately by physicians who have been well trained.

2017 National & 2019 North American Cannabis Summits Recommendations

While cannabis industry shops and related marketing is multiplying exponentially, cannabis policy experts are multiplying at a similar rate. The policy institute that is available through the Cannabis Summit has been instrumental in helping states decipher fact from fiction and analyze many of the first steps in legalizing cannabis—which have often been missteps. TAADAS’ recommendations are taken from the best practices gleaned from these policy recommendations. We urge policy makers to skip the “hype” and enthusiasm that accompanies many cannabis presentations and examine the lessons learned from state policy makers from around our country.
Below is an updated list of TAADAS’ recommendations surrounding cannabis policy and implementation. These recommendations combine policy and public health recommendations determined through both the 2017 National and 2019 North American Cannabis Summits:

1. **Define Goals for Medical Cannabis Programs**
   Although federal regulations as well as federal recommendations surrounding cannabis exist, Tennessee must determine the state-specific goals of implementing a medical cannabis program prior to implementation. Goals can be structured around issues such as pain management or reducing criminalization. Defining the purpose of legalization will structure the process for legalization. Given that many other states will have legalized cannabis before Tennessee, the state should use other states’ implementation procedures to inform the process.

2. **Create Standards for Medically Prescribing Cannabis Prior to Legalization**
   Given the potential health risks associated with cannabis, standards must be developed for cannabis prescriptions, particularly for pain management reasons. Additionally, medical use should be limited to CBD products whenever clinically appropriate.

3. **Establish Cannabis Prescriber and Clinician Education Programs**
   As researchers continue to release new reports about using cannabis for medical purposes, it is critical that the medical community remains informed on the topic and emerging research. Therefore, prior to the legalization of cannabis for medicinal purposes, the state should require that relevant medical staff participate in initial and ongoing education programs to ensure that patient care is attuned to the most recent research.

4. **Determine Regulations for Cannabis Legalization by Enlisting a Broad Range of Stakeholders**
   Any process for determining implementation and regulations must be multi-disciplinary, community-based, and engage a broad range of stakeholders. States that have undergone this process emphasize the need for specialists with experience in agriculture, marketing, prevention, dispensing, packaging, environmental protection, addiction, legal issues, regulation, medical education, public health agencies, and poison control centers.

5. **Review Criminal Penalties for Cannabis Sales to Minors**
   Criminal penalties for sales to minors should be reviewed and strengthened where appropriate to prevent the sale of cannabis products to minors.
6. Form a Study Committee on the Impact of Cannabis Legalization on Social Justice Issues
Taking a proactive stance on cannabis issues by forming a committee to evaluate the impact of cannabis in Tennessee will help Tennessee develop practical approaches that take into account social equity and criminal justice concerns. This committee can cover medical issues including pain management, oncology and neurology, distribution, prevention, advertising, and commerce. A broad-based coalition that includes advocates, law enforcement, addiction professionals as well as key state commissioners, should guide any process that considers legalization.

7. Start Prevention Messaging Immediately
There is no wrong time to implement prevention strategies. Implementing prevention programs before cannabis is more broadly legalized and to reinforce restrictions on sales to minors is optimal. The pressure to use cannabis is growing exponentially. The body of evidence shows that cannabis usage has disproportionate health consequences for children and youth, meanwhile advertising campaigns are directly targeting this demographic. Messaging to differentiate and clarify medical and personal use are urgently needed to help parents, schools, and communities give clear, consistent, and appropriate information. Additionally, given the health risks associated with cannabis consumption for pregnant women, it is critical to implement prevention messaging for this demographic as well.

8. Create Marketing Guidelines for Preventing Child and Youth Consumption
Standards for packaging and for any approved product items should be aimed at discouraging cannabis use among children and adolescents given the negative effects it can have on this population.

9. Create Guidelines for Driving Under the Influence of Cannabis
Technology for cannabis breathalyzers and oral swabs are in development and as cannabis science progresses, policy makers should focus on incorporating new technologies into DUIC guidelines as soon as they are available and prior to any legalization of THC in Tennessee.

10. Include Funding for Treatment and Prevention in Legislation
Legalizing cannabis use legitimizes its use in the minds of many consumers. Consumers assume cannabis is safe if the government approves it for medical use. The need for treatment and prevention programs will increase, and funding for these services should also increase to meet the need. States should tax cannabis products and use this revenue to fund these programs.
ABRIDGED REFERENCES


22 Ibid.


34 "When it Comes to Retail Marijuana it's Good to Know." Colorado.gov. Web <https://www.colorado.gov/good-know>.