



STATEMENT OF CONCERN

Marijuana Policy in Massachusetts

From: Pediatricians, Mental Health and Addiction Clinicians
& Scientists of Massachusetts

May 2019

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WHO ARE WE?

We represent major medical centers, medical schools, and health-related organizations in Massachusetts. We are clinicians, researchers, scientists, and other public health professionals.

STATEMENT OF CONCERN

We disagree with how marijuana policy is being shaped in the Commonwealth. Marijuana* is being governed and regulated as if it were an “ordinary commodity”, rather than following a Public Health Framework (See Table 1).¹

- The science is clear; marijuana, specifically the psychoactive chemical THC (delta-9-tetrahydrocannabinol), has the potential to do significant harm to public health.
- There is a lack of public awareness about these potential dangers.
- Given that the tobacco industry has spent \$billions to partner with JUUL and a marijuana company, we expect a significant increase in the use of high THC vapes.
- Diversion of high THC products ($\geq 10\%$), vapes and edibles, to MA youth is a growing concern.
- Regulatory failure in the case of the marijuana industry, like tobacco, opioids and vape devices, is likely unless there is a prioritized focus on public health.
- When public health is not prioritized in the regulation of addictive substances, the public and our young people are put at risk.

We provide fully cited supplementary material with this statement.

SUMMARY OF KEY NEGATIVE EFFECTS OF THC

- Risk of addiction;
- Impairment of cognitive (intellectual) function; and
- Increased risk of serious mental health problems including acute psychosis (e.g., hallucinations, delusions), paranoia, schizophrenia, depression, anxiety, and suicide, with growing scientific evidence that daily use of high THC products bring greater risk.
- We are seeing these negative health effects in our patient populations.²
- Just as not all tobacco use causes cancer, not all marijuana/THC use causes the negative effects listed above; however, the risk is substantial enough to require policies which discourage use.

* NOTE: We use the term “marijuana” rather than “cannabis” throughout, because “marijuana” is used in MGL 94G.

COLLECTIVELY, RECENT SCIENTIFIC FINDINGS INDICATE



A growing number of people are using marijuana/THC daily or near daily, with higher levels of use among those in low income groups.^{3,4,5}

50%

50% of first-episode psychosis cases in Amsterdam may be attributable to the use of high THC ($\geq 10\%$) marijuana, meaning that they are preventable.⁶

41%

41% of those who experience cannabis-induced psychosis later convert to schizophrenia.⁷

REQUEST FOR ACTION

Regulate and govern the commercial marijuana market, in Massachusetts, using a **Public Health Framework** (See Table 1 on page 3).¹

This regulatory framework prioritizes population-level health over commercial market interests and supports the maximum benefit for the largest number of people, including those most vulnerable.

TABLE 1: A PUBLIC HEALTH FRAMEWORK

for Legalized Retail Marijuana Based on the US Experience: Avoiding a New Tobacco Industry¹ (Adapted from Barry & Glantz, 2016).

	Public Health Standard
Lead Agency	
Department of Health	✓
Advisory Committees	
Membership solely of public health experts	✓
No decision-making authority of marijuana industry or vested interests	✓
Regulatory Complexity	
Creates a single system of retail marijuana	✓
Tax Revenue	
Tax covers full costs	✓
Dedicated revenue to marijuana prevention, control, and research	✓
Prevention and Control Programs	
Media Campaign aimed at general population (not just youth)	✓
Media Campaign modeled on social norm change	✓
Smokefree Laws	
Prohibit any public use of marijuana	✓
Prohibit marijuana use wherever tobacco smoking is prohibited	✓
Protect local control	✓
Prohibit indoor use in marijuana retail stores or marijuana clubs	✓
Marketing and Advertising	
Prohibit free or discounted samples	✓
Prohibit cartoon characters	✓
Prohibit sport and cultural event sponsorship	✓
Prohibit product placement in popular media and cobranding merchandise	✓
Prohibit therapeutic claims	✓
Prohibit outdoor advertising on billboards	✓
Prohibit advertising on television and radio	✓
Restrict advertising in print and digital communications with 15% threshold	✓
Licensing Rules	
Impose serious penalties on retailers' underage sales	✓
Prohibit sale of tobacco or alcohol in marijuana retail stores	✓
Prohibit tobacco and alcohol retailers from holding marijuana license	✓
Retail Sales	
Require retailer use age verification system (ID scanners) at point of sale	✓
Prohibit retailers within 1,000 feet of underage-sensitive areas	✓
Prohibit electronic commerce (internet, mail order, texts, social media)	✓
Product Standards	
Require strong potency limits and product quality testing	✓
Prohibit products containing additives (nicotine, alcohol, caffeine, or toxic chemicals)	✓
Prohibits flavored products appealing to underage persons	✓
Warning Labels	
Require warning labels modeled on state-of-the-art tobacco labels	✓

SUMMARY OF CONCERNS BASED ON CURRENT SCIENCE

Marijuana Policy Impacts the Health and Safety
of Our Communities and Our Children

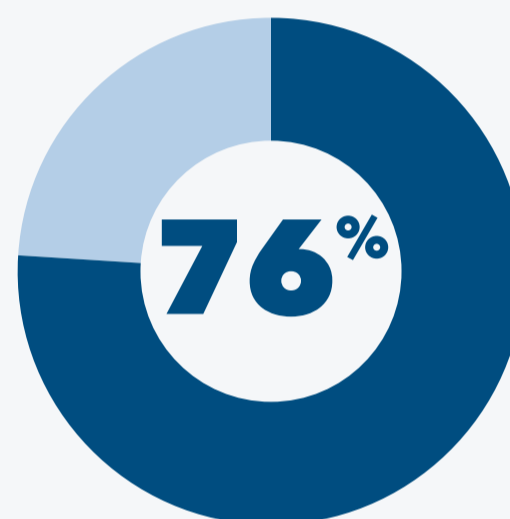
- **Marijuana can be addictive.** The earlier someone begins using marijuana, the higher their risk of addiction – older studies with low THC marijuana, showed that one in six users (17%) who start under age 18 become dependent; 25-50% of teen heavy users become addicted. Newer studies indicate nearly 3 of 10 users manifested a use disorder in 2012–2013. Among youth receiving substance use disorder treatment in publicly funded programs, marijuana accounts for the largest percentage of admissions--about 76% among those 12 to 17 years old.^{3,8-14}

THC (the psychoactive component of marijuana) activates the reward system in a similar way to other addictive drugs such as alcohol, opiates and cocaine, resulting in the release of the chemical dopamine and risk of addiction. The endocannabinoid system is important in many physiological processes, including proper connections between brain regions. Use of marijuana/THC during adolescence and young adulthood may disrupt brain development.

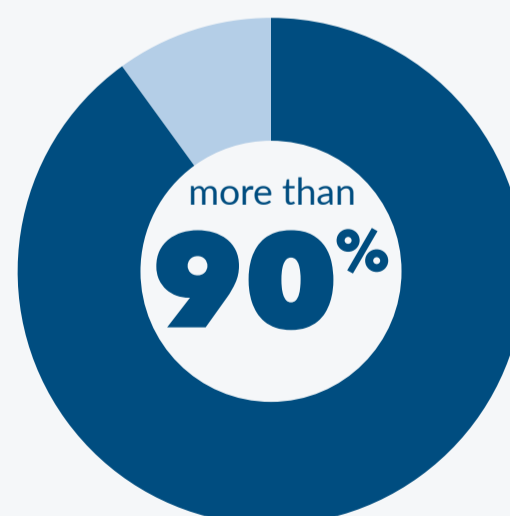
- **Marijuana today contains more THC, making it more harmful.** Highly concentrated marijuana/THC products available today can be more than 90% THC. High potency marijuana with dramatic increases in THC:CBD ratios, often in the form of candies, cookies, sodas, and hashish concentrates (e.g., budder, wax, honey oil, shatter), that can be “vaped”, suggest that commercial marijuana is becoming an increasingly harmful product that is more likely to cause addiction and negative health consequences in adolescents and young adults.¹⁵⁻¹⁹

25%
to
50%

of teen heavy marijuana
users become addicted



of teen substance abuse
treatment admissions are for
marijuana



THC potency in some
marijuana products

Impaired Cognitive DEVELOPMENT



especially for adolescents
and young adults

↑ **2-5X**

risk of first-episode
psychosis

increased risk of

SCHIZOPHRENIA
ANXIETY & DEPRESSION
BIPOLAR DISORDER
SUICIDAL THOUGHTS

- Use of marijuana/THC is associated with long-term negative consequences, particularly for adolescents and young adults <25 years old.
 - ▶ **Impaired cognitive and intellectual development:** Marijuana use by adolescents can impair brain development (with negative effects on focus and motivation, etc.), reduce academic success, impact long-term career growth, and even lower IQ.²⁰⁻²⁵
 - ▶ **Increased risk of serious mental illness:**
 - ➔ It is well documented that THC use can induce **psychosis-like symptoms** (e.g., cannabis-induced psychosis). More recent research shows that frequent use and/or high doses of THC are more likely to bring on first-episode psychosis (thinking that is detached from reality, sometimes including hallucinations), with increased risk of 2-5x (200-500%).^{2,6,7,26-30}
 - ➔ Marijuana use increases the risk of developing **serious psychotic disorders** including schizophrenia and bipolar disorder; this conversion occurs for nearly 50% of those diagnosed with cannabis-induced psychosis. This is especially true for those who start using during adolescence, are heavy users of high THC products, and those at higher genetic risk for these disorders, but also possibly among those with no family history.^{7,27,31-36}
 - ➔ Regular marijuana use has been linked to **increased risk for several other mental health problems**, including depression, anxiety, suicidal thoughts, and personality disturbances. Additionally, studies show that high THC products may worsen PTSD and increase the risk of violence in the long-term.^{21,37-40}
- Marijuana use during pregnancy may result in **altered brain development in childhood**. Research suggests that marijuana use during pregnancy may be linked to subtle neurological changes and, later in childhood, to reduced problem-solving skills, memory, and attention.⁴¹

CURRENT MARIJUANA REGULATION IS COUNTERPRODUCTIVE TO HEALTH EQUITY GOALS

Public health and addiction prevention professionals have been closely watching the development and roll-out of regulations for a recreational marijuana industry in Massachusetts. Serious concerns continue to heighten about the increased availability of highly potent THC products whose marketing has broad appeal to youth and young adults. The health concerns of marijuana use are particularly acute for vulnerable and marginalized populations, including adolescents and young adults <25, LGBTQ persons, those with mental health problems and those of low socioeconomic position. Of particular concern is the “Social Equity Program”⁴² included in the Cannabis Control Commission’s regulations.

The Social Equity Program written into the regulations increases availability and access to marijuana among the populations already disproportionately affected by cannabis use disorder and youth marijuana use, including people of color.^{3,5} The “Social Equity Program” is well intentioned: It aims to distribute the “economic success” of a regulated marijuana market among communities that have traditionally been excluded from economic opportunity. However, marijuana is not an ordinary commodity; low income and minority communities have a perilous history of being targeted by predatory industries that profit from those who become addicted.⁴³⁻⁵⁰ For example, tobacco manufacturers have exploited low income communities with deep price discounting, targeted advertising and high density of retail outlets, often near schools. These targeted efforts not only increase access and opportunity for young people to use, but also shape social norms and increase the social acceptability of use.

The multi-billion dollar investment made by Altria, the parent company of the tobacco giant Philip Morris, in JUUL and the marijuana company Cronos heightens significant concerns.⁵¹⁻⁵³ Further, PAX Labs, the parent company from which JUUL spun out of, announced in April 2019 that they had successfully raised \$420M; PAX makes JUUL-like vaporizers specifically for marijuana dry leaf, high THC oils and concentrates.⁵⁴

*“By targeting low income communities for marijuana retail outlets, **the Social Equity Program is likely to increase health inequities and disparities among marginalized populations.**”*

By targeting low income communities for marijuana retail outlets, the Social Equity Program is likely to increase health inequities and disparities among marginalized populations. The Cannabis Control Commission's regulatory language prioritizes market growth, targets communities with high unemployment rates (low income) and is directly counter-productive to the state's health equity, behavioral health and addiction prevention goals. Some recognize this; for example:

- In 2018, the Los Angeles Times wrote “After decades of black Americans being cast as the face of the underground pot market, Compton and other Southern California cities with large African American populations have opted against legalizing the pot trade, worried about the effects on the community and the message it sends.” ⁵⁵
- In 2019, a NYT article on cannabis legislation stated “...Among the most vocal opponents were a handful of African-American Democratic lawmakers who split with their party over legalization, arguing that it would be a public health menace to their communities.” ⁵⁶
- In 2019, a Boston Globe article wrote “...there are many in minority neighborhoods who don’t care which racial groups prevail in the marketplace of marijuana ...Among them are local pastors [including Rev. Zenetta Armstrong of Mattapan], medical clinicians, and parents who insist their struggling neighborhoods, of all places, shouldn’t have to deal with marijuana’s potentially damaging effects.” ⁵⁷
- Others to voice serious concerns regarding marijuana commercialization include the Illinois NAACP and Will Jones III of the organization Two is Enough (TIE DC). ⁵⁸⁻⁶⁰

To support substance use prevention and social, emotional, and mental health promotion, state and local leaders must support strategies that minimize the reach of the marijuana industry and promote healthy, drug-free norms for families and communities.

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OUR SCIENCE-INFORMED RECOMMENDATIONS

Current Commercial Marijuana Regulations Do Not Prioritize Public Health and Prevention of Youth and Young Adult Access and Exposure



1. Protect Vulnerable Populations

- Temporarily suspend licensing and conduct a Public Health Impact Assessment, by public health professionals, of the Social Equity Program with all the associated components to avoid worsening health inequities and disparities among vulnerable populations and communities.



2. Implement Product Standards and Safety

- Establish strict potency limits and regulation of THC:CBD ratio (e.g., Switzerland, Netherlands, and Uruguay).
- No sale of products that are especially appealing to children and adolescents.
- Model warning labels after best practices in “tobacco” warning labels (e.g., cover 70% of packaging, rotate warnings so all are exposed to consumers, etc.)
- Label information should include that “It is illegal to give marijuana/THC products to anyone under 21” and should be on all packaging.
- Warnings need to include “increased risk of serious mental illness including psychosis, paranoia, suicidal thoughts, and depression”. Those who use need to be warned that “if they have hallucinations, delusions, or other psychotic-like experiences while intoxicated, it is an indicator that they may develop a serious psychotic illness with continued use.”
- Warnings issued, and required, by Canada are a model: <https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/laws-regulations/regulations-support-cannabis-act/health-warning-messages.html>



3. Educate the Public to Discourage Use

- Develop an education campaign that warns of the real risks of marijuana use, including mental illness.
- Provide funding for public messaging to prevent underage use and OUI Marijuana.



4. Evaluate and Track Negative Impacts

- To avoid the harms of “a medical system only in name,” the medical marijuana program should either be regulated like medicine or combined with the recreational market.
- Ensure a comprehensive data monitoring plan. The baseline study was sorely inadequate, and the data tracking plan is not comprehensive or transparent. For example: the Cannabis Control Commission is not adequately monitoring underage use.
- Peer review is needed for the Cannabis Control Commission’s research program.



5. Avoid Regulatory Capture and Failure

- Massachusetts is failing to meet many of the public health standards for regulation of marijuana using a Public Health Framework (Table 1), making regulatory failure likely.
- Stronger and clearer conflict of interest standards for the Cannabis Control Commission. The goal of this Commission should be to regulate the marijuana industry in a way that discourages use, minimizes harm, and prioritizes public health and safety.
- Strict limits on industry reach and lobbying based on lessons-learned from the Tobacco Industry Master Settlement Agreement ⁶¹ (Section III):
 - ▶ No participating manufacturer may oppose, or cause to be opposed, legislative proposals or administrative rules intended by their terms to reduce Youth access to, and the incidence of Youth consumption of, marijuana products.
 - ▶ Prohibit practices that seek to hide negative information about marijuana/THC, such as: Lobbying against measures aimed to prevent underage use; lobbying against labeling that lists health harms; lobbying against measures that seek to reduce heavy consumption of marijuana that may lead to psychosis or other mental health disorders; agreements to suppress health-related research; material misrepresentations about health consequences of using marijuana-related products.
- No Advisory Committee, including the Impaired Driving Committee, should include industry representation.



6. Reduce Underage Use Through Best Practices

- Indefinitely delay the licensing of social consumption establishments (primary and mixed use) and licensing of home delivery of marijuana products.
- No advertising by ancillary marijuana businesses (e.g., Weedmaps) and no advertisement/marketing by marijuana businesses in any public media outlet.
- Marketing and advertising should be limited to an over-21 only audience where 100% of the audience is over 21, based on ID verification.
- Increase age of entry for local marijuana-related events to 21, consistent with the Marijuana laws for sales and use.
- Include clear regulatory language that expands the buffer zones and that the distance be measured from the property line not the physical building structure, between places where children congregate and marijuana businesses. The clear language should include “public and private schools, daycare center, any facility or location in which children commonly congregate (e.g., public library, playground or park)”. Municipalities should not be allowed to reduce the buffer zone below 500 ft.
- Prohibit internet sales of marijuana/THC products.
- Transaction limits and tracking: Limits on the mg of THC and the frequency of consumer purchases are necessary. The regulations limit each package to 20 x 5mg servings but do not indicate how many sales are permissible per day, week, month. This increases the risk of diversion to those under age. For concentrate, 5g of 90% THC may be equivalent to 4,500mg THC. This lack of oversight increases the opportunity for diversion to those under 21.

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Production of this document was supported by the Massachusetts Prevention Alliance, a private, non-partisan, 501c3 organization. Signatories were not compensated for their endorsement of this statement. For comments or inquiries, please email info@mapreventionalliance.org.

