



**Connecticut State Medical Society
Testimony in Opposition to Senate Bill 888
An Act Responsibly and Equitably Regulating Adult Use Cannabis
Presented to the Judiciary Committee
February 26, 2021**

Senator Winfield, Representative Stafstrom, and distinguished members of the Judiciary Committee, on behalf of the physicians and physicians in training of the Connecticut State Medical Society (CSMS), thank you for the opportunity to provide this testimony in strong opposition to **Senate Bill 888, An Act Responsibly and Equitably Regulating Adult Use Cannabis**.

CSMS is fiercely opposed to the legalization of recreational marijuana. We have significant concerns about the lack of scientific evidence that supports recreational marijuana use by adults and young adults. We must look at the potential effect legalization will have on overall use and significant harms, including impaired driving and accidents, creation and worsening of severe mental health issues, and negative impacts on developing minds. The rush towards legalization of recreational marijuana ignores how profit-driven corporations hooked generations of Americans on cigarettes and opioids, killing millions and straining public resources. We need to learn the lessons from history to ensure that any legalized marijuana product does not become the Big Tobacco of the 21st Century.

Marijuana is an addictive drug that can have significant adverse public health impacts if it were to be legalized for non-medicinal purposes. We urge Governor Lamont and this Committee to approach this issue with serious prudence, and to heed the recommendations from leading medical organizations, and, with equal attention to scrutinize data from other states that have legalized recreational marijuana use.

At its 2017 national meeting, the American Medical Association (AMA) approved a policy position based upon recommendations from its Council on Science and Public Health that concluded that cannabis is a dangerous drug and a serious public health concern, and that the sale of cannabis for recreational use should not be legalized. Its position was based upon the analysis of multiple studies that found that, even as it had some therapeutic benefits, there was substantial evidence of a statistical linkage between cannabis smoking and health issues. The paper looked at data from jurisdictions that legalized cannabis that demonstrated adverse impacts such as unintentional pediatric exposures resulting in increased calls to poison control centers and emergency department visits, as well as increases in traffic deaths due to cannabis-related impaired driving.

Attitudes among parent users often depreciate the risks, encouraging and permitting teenagers to use a drug that has documented potential for harm. Products available for recreational use may not be standardized with regard to potency and the potential for intoxication that may prove dangerous when operating a motor vehicle. Police departments are hampered by the lack of established standards for blood levels indicative of intoxication and impaired driving. Even withstanding the controversial evidence concerning whether or not marijuana is a gateway product, risk taking among adolescents is a known behavior that may encourage the use of more dangerous illegal products such as heroin in the

event marijuana becomes commonplace and legal. A recent article in the New York Times underscores the increased use of marijuana in adolescents and teens as a coping mechanism to deal with the isolation brought on by the COVID-19 pandemic. As we see increased incidences of anxiety, depression, and suicide in our youth, injecting a mechanism that will only make access to marijuana easier for this age group is the wrong direction for our state to be heading.

While we are cognizant of the legal inequity that is all too often attached to marijuana use, we agree with the AMA that public health-based strategies are a better solution than either the old commitment to incarceration or this new attempt to dodge the problem through legalization. We must keep patients first and ahead of profits and taxable revenue. As physician in Connecticut, we stand strong that the legalization of recreational marijuana does not serve the best interests of our patients.

Youth Use/Brain Development

Data shows that despite best efforts of states to limit the purchase of legal marijuana to adults, it has also led to a downstream effect and a troubling increase in youth use. Overall use by youth aged 12-17 is up in “legal” states while declining in non-legal states, according to a uniform survey of marijuana use conducted by the federal government. The percentage of youth aged 12-17 using marijuana in states where marijuana is “legal” was 7.7%, versus 6.2% in non-legal states (National Survey on Drug Use and Health State Reports 2016-2017).

Research indicates that marijuana exposure during youth brain development can cause long-term, potentially permanent, adverse changes in the brain. Research on adolescent brain development has found that brain maturation, particularly that of the prefrontal cortex, proceeds into the mid-20s.¹ The earlier an adolescent experiments with marijuana, the more at risk they are for increased substance use later in life.² Scientific literature on the influence of marijuana use during adolescence on cognitive and psychological functioning has found evidence of short-term deficits in learning and memory, working memory, and attention.³ Adolescent marijuana use has been associated with impairment in a number of areas: impaired cognitive functioning, increased risk of developing marijuana dependence, elevated rates of school dropout, an elevated risk of developing psychotic illnesses, and an increased rate of engaging in risky behaviors, including future substance misuse.⁴

Drugged Driving

Whether marijuana is vaped, swallowed as edibles, or smoked, getting behind the wheel when under the influence of THC and CBD cannabinoid drugs quickly disrupts key parts of the brain that influence the perception of time, concentration, movement, memory and coordination to are critical skills in safe driving.⁵ Peak effects of ingesting marijuana take 10-30 minutes⁶ with driving acutely impaired for 2-5 hours⁷ and THC being detectable for over 2 weeks⁸ after last use. Drivers who have ingested marijuana are slower to accurately perceive, make decisions and react to the traffic environment with studies showing that the crash risk doubles.⁹ Research shows that drivers involved in car crashes who tested positive for THC were 3 to 7 times more likely to be responsible for having *caused* the collision.¹⁰ After the State of Washington passed legalizing marijuana for recreational use in 2012, research concluded that fatal crashes involving drivers under the influence of marijuana doubled in both number and proportion from 49 deaths in 2013 to 106 deaths in 2014.¹¹

Employment Risk

Chronic use of cannabis can be associated with a variety of harms, including increasing opioid use disorders and impairment in social, work, and intellectual performance.^{12 13} Marijuana legalization is expected to lead to increased positive urine drug tests (UDT) in the workplace and, because a UDT positive for cannabinoids does not distinguish between recent use with impairment and residual urine cannabinoids post-impairment, this will create challenges in assuring workplace safety and adherence to workplace conduct rules.¹⁴

Pregnancy

Scientific literature reports potential adverse effects of marijuana use in pregnant women, including fetal growth restriction, low birth weight, preterm birth, small-for-gestational age, neonatal intensive care unit (NICU) admission, and stillbirth.^{15 16 17} Based on published animal research, there are also concerns that use of marijuana during pregnancy may negatively impact fetal brain development.^{18 19 20}

Cannabis Potency

In the 1960s, 70s and 80s, marijuana typically contained 3 to 5 percent tetrahydrocannabinol (THC or delta-9-THC, the major psychoactive or mind-altering component of cannabis). Today, the percent of THC is up 500% in potency with current mean concentrations of 18-23% in flowers, and up an average of 1800% in potency to 68-75% through extracted products in Washington State where cannabis is legal. Studies show the risk of addiction to marijuana increases as the potency of THC increases. These trends put us on a dangerous course when it comes to addiction with potentially disastrous results, particularly in adolescents and youth as the brain is still developing.

Lessons from Colorado

The Rocky Mountain High Intensity Drug Trafficking Area (RMHIDTA) program has published annual reports²¹ every year since 2013 tracking the impact of legalizing recreational marijuana in Colorado. The purpose is to provide data and information so that policy makers and citizens can make informed decisions on the issue of marijuana legalization. We hope that Connecticut looks carefully at these statistics before jumping to legalize a drug that has not been properly studied.

➤ Traffic Fatalities & Impaired Driving in Colorado

- Since recreational marijuana was legalized, traffic deaths in which drivers tested positive for marijuana **increased 135 percent** while all Colorado traffic deaths **increased 24 percent**.
- Since recreational marijuana was legalized, traffic deaths involving drivers who tested positive for marijuana **more than doubled** from 55 in 2013 to 129 people killed in 2019. This equates to one person killed every 3.5 days in 2019 compared to one person killed every 6 ½ days in 2013.
- Since recreational marijuana was legalized, the percentage of all Colorado traffic deaths that were marijuana related **increased from 15 percent** in 2013 **to 25 percent** in 2019.

- Marijuana Use - Since recreational marijuana was legalized in Colorado:
 - Past month marijuana use for ages 12 and older **increased 30 percent** and is **76 percent higher** than the national average, currently ranked **3rd** in the nation.
 - Past month marijuana use for adults (ages 18 and over) **increased 19 percent** and is **73 percent higher** than the national average, currently ranked **3rd** in the nation.
 - Past month marijuana use for college students (ages 18-25) **increased 6 percent** and is **50 percent higher** than the national average, currently ranked **3rd** in the nation.
 - Past month youth marijuana use (ages 12-17) **decreased 25 percent** and is **43 percent higher** than the national average, currently ranked **7th** in the nation.

- Public Health impact of Marijuana in Colorado
 - The yearly number of emergency department visits related to marijuana **increased 54 percent** after the legalization of recreational marijuana (2013 compared to 2017).
 - The yearly number of marijuana-related hospitalizations **increased 101 percent** after the legalization of recreational marijuana (2013 compared to 2017).
 - Marijuana *only* exposures more than **quadrupled** in the six-year average (2013-2019) since recreational marijuana was legalized compared to the six-year average (2007-2012) prior to legalization.
 - The percent of suicide incidents in which toxicology results were positive for marijuana has **increased from 14 percent** in 2013 to **23 percent** in 2018.

Public Health Mitigation Measures

In the event this legislation moves forward, we would recommend some additional mitigation measures to lessen the impact on public health, particularly the health of Connecticut’s adolescents and youth. Our recommendations include:

- Raising the legal age of marijuana use and purchase to 25
- Ensuring dispensaries are not within close proximity to college campuses
- Restrict marketing efforts overall and in particular to individuals under the age of 25
- Restriction purchase amounts of consumers between the ages of 21 and 25
- Address the increased workload and financial stress on the medical community

There are many indications that the public health impacts of legal, recreational marijuana may far offset any immediate or long-term fiscal benefits to Connecticut. Connecticut has an obligation to protect the health and welfare of its citizens and rushing to legalize a potentially unsafe drug abdicates this responsibility. For all the reasons above, CSMS is strongly opposed to SB 888 and we urge your rejection of this dangerous legislation.

¹ “What are marijuana’s long-term effects on the brain?” National Institute on Drug Abuse, 2012.

<https://www.drugabuse.gov/publications/research-reports/marijuana/what-are-marijuanas-long-term-effects-brain>

² National Institute on Drug Abuse.

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- ³ Diana Dow-Edwards and Lindsay Silva, "Endocannabinoids in Brain Plasticity: Cortical Maturation, Hpa Axis Function and Behavior.," *Brain Research* 1654, no. Part B (2017): 157–64, doi:10.1016/j.brainres.2016.08.037. <https://www.ncbi.nlm.nih.gov/pubmed/27569586>)
 - ⁴ Hopfer, Christian. "Implications of marijuana legalization for adolescent substance use" *Substance abuse vol.* 35,4 (2014): 331-5. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4308295/>
 - ⁵ Brady, 2014. Trends in alcohol and other drugs detected in fatally injured drivers. *American Journal Epidemiology*. 2014 Mar 15;179(6):692-9. doi: 10.1093/aje/kwt327. Epub 2014 Jan 29.
 - ⁶ "Driving while high." *Time*, October 2014. <http://time.com/3455621/driving-while-high/>
 - ⁷ Grotenhermen et al, 2007. Developing limits for driving under influence of cannabis.
 - ⁸ NHTSA Traffic Safety Facts 2015. Research Note DOT HS 812118.
 - ⁹ Asbridge, Hayden & Cartwright, 2013. Acute cannabis consumption and motor vehicle collision risk.
 - ¹⁰ Hartman & Heustis, 2013. Cannabis effect on driving skills. *Clin Chem*. 2013 Mar; 59(3): 10.1373/clinchem.2012.194381. Published online 2012 Dec 7. doi: 10.1373/clinchem.2012.194381
 - ¹¹ Tefft, Arnold & Grabowski, (2016). Prevalence of Marijuana Use Among Drivers in Fatal Crashes: Washington, 2010-2014. *AAA Foundation for Traffic Safety*.
 - ¹² Karila L, et al. Long-Term Effects of Cannabis Use : A Review. *Curr Pharm Des*. 2013
 - ¹³ National Academies of Science, Engineering & Medicine, 2017 Cannabis Report
 - ¹⁴ Workplace Issue Related to the Decriminalization/Legalization of Marijuana. Substance Abuse and Mental Health Services Administration. 2014. <https://www.samhsa.gov/sites/default/files/galvin-marijuana-update-dtab-sept-2014.pdf>
 - ¹⁵ Gray, et al. Identifying Prenatal Cannabis Exposure and Effects of Concurrent Tobacco Exposure on Neonatal Growth. *Clinical Chemistry*. 2010; 56(9): 1442-1450.
 - ¹⁶ Gunn, et al. Prenatal Exposure to cannabis and maternal and child health outcomes: a systematic review and meta-analysis. *BMJ Open*. 2016; 6:e009986.
 - ¹⁷ Hayatbakhsh, et al. Birth Outcomes associated with cannabis use before and during pregnancy. *Pediatric Research*. 2012; 71 (2): 215-219.
 - ¹⁸ Silva, et al. Prenatal tetrahydrocannabinol (THC) alters cognitive function and amphetamine response from weaning to adulthood in the rat. *Neurotoxicol and Teratol* 2012; 34(1): 63-71.
 - ¹⁹ Trezza, et al. Effects of perinatal exposure to delta-9-tetrahydrocannabinol on the emotional reactivity of the offspring: a longitudinal behavioral study in Wistar rats. *Psychopharmacology (Berl)* 2008; 198(4): 529-537.
 - ²⁰ Campolongo, et al. Perinatal exposure to delta-9-tetrahydrocannabinol causes enduring cognitive deficits associated with alteration of cortical gene expression and neurotransmission in rats. *Addict Biol* 2007; 12(3-4): 485–495.
 - ²¹ <https://rmhidta.org/default.aspx?act=documents2.aspx&DocumentCategoryID=27>