

Written Testimony
Public Hearing – Tuesday, April 12, 2022
Senate Aging and Youth Committee
How Legalization of Adult Use Marijuana will Impact Children and Youth

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To: Pennsylvania Senate Aging and Youth Committee

Thank you, Senator Ward and the members of the Senate Aging and Youth Committee, for this opportunity to testify in opposition to the legalization of adult use recreational marijuana. It's time for an honest conversation around marijuana legalization and how it can adversely impact youth and our communities.

For over 45 years, the Commonwealth Prevention Alliance (CPA) has focused on advocating for essential substance use/misuse prevention priorities while supporting the professionals who do this important work across the state of Pennsylvania. For the past three years, I have served as the Executive Director of CPA. However, I'm certainly not new to the world of prevention as I spent 14 years at the Mercer County (PA) Single County Authority as a prevention specialist and supervisor. I also worked as the Special Projects Administrator of Opioid Programs, at the Jefferson County Public Health Department, Golden, Colorado.

CPA opposes the legalization of recreational marijuana for the following reasons:

1. **Increase access to and use of marijuana among adolescents**, specifically to vulnerable populations like those with predisposed addictive disorder, youth, pregnant women, and marginalized communities.
2. Marijuana is **addictive** and can interfere with brain development and worsen mental health conditions.¹
3. Recent studies add significantly to the evidence that marijuana use in adolescents has **adverse effects on mental health** with risk for depression, psychosis, and cognitive impairment, especially inhibitory control (*also known as response inhibition, permitting an individual to inhibit their impulses in order to select more appropriate behaviors consistent with one's goals*).²
4. **Increased potency of THC products**. A new analysis suggests that among adolescent marijuana users, smoking marijuana has become less prevalent, eclipsed by vaping and edibles. In addition, those who vaped THC (tetrahydrocannabinol, the main psychoactive compound in marijuana) or consumed edibles were more likely to use marijuana daily.³

¹ <https://nida.nih.gov/publications/research-reports/marijuana/marijuana-addictive>

² Morin JG, Afzali MH, Bourque J, et al. A population-based analysis of the relationship between substance use and adolescent cognitive development. *Am J Psychiatry*. 2019;176:98-

³ <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2763823>

Pennsylvania must thoroughly review the credible and available research regarding the impacts and consequences of youth and adult marijuana use/misuse on mental health, community safety, and substance use disorder.

We are still in the midst of the overdose epidemic. Vaping use is increasing substantially and alcohol is still the #1 substance of choice of PA youth. Adolescents today have grown up thinking marijuana is medicinal, “only” a plant, and not addictive. Mental health issues continue to increase at an alarming rate, impacting the overall behavioral health of youth and young adults.⁴ Prevention organizations, coalitions, and professionals are attempting to effectively prevent and address these issues with youth, young adults, and adults in their community. Legalizing and introducing recreational marijuana are counterintuitive to the health and safety of PA communities.

Youth Products and Use

How exactly are the majority of youth using marijuana? As mentioned, a new analysis suggests that among adolescent marijuana users, smoking marijuana has become less prevalent, eclipsed by vaping and edibles. In addition, those who vaped THC or consumed edibles were more likely to use marijuana daily.⁵ Additionally, THC products such as oil, dabs, and edibles have been able to get the **THC concentration upwards of 95%.**⁶

Edibles are food products infused with marijuana like gummi’s, chocolate bars, beverages, etc. The effects from smoking marijuana only takes minutes, however, edibles take much longer because food is absorbed into the bloodstream through the liver. Because it takes longer, the user may end up consuming larger amounts of the edible while thinking it isn't working.

- In Colorado, emergency room visits tied to marijuana have risen dramatically since legalization. People using edibles suffered toxic reactions, including cardiac and psychiatric problems, at much higher rates than those smoking marijuana.⁷
- There were more than 11,100 calls to US poison control centers related to marijuana use in 2019, up from about 8,200 in 2017.⁸
- More and more of those calls are related to manufactured products (edibles) that contain distilled amounts of THC.⁹

⁴ [https://www.pccd.pa.gov/Juvenile-Justice/Pages/Pennsylvania-Youth-Survey-\(PAYS\)-2019.aspx](https://www.pccd.pa.gov/Juvenile-Justice/Pages/Pennsylvania-Youth-Survey-(PAYS)-2019.aspx)

⁵ <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2763823>

⁶ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6312155/>

⁷ <https://www.acpjournals.org/doi/10.7326/M18-2809>

^{8,9} Julia Dilley, PhD, epidemiologist, Oregon Public Health Division, Portland; Linda Richter, PhD, vice president, prevention research and analysis, Partnership to End Addiction; Paul Armentano, deputy director, NORML; JAMA Network Open, May 24, 2021

Vaping and Dabbing are methods of ingesting cannabis oil extracts and popular with youth.

- The use of high-potency concentrates, like those found in vape pens also correlates with a higher incidence of mental and physical health problems and may lead to a higher risk of developing acute adverse effects, such as paranoia, psychosis, and cannabis hyperemesis syndrome.¹⁰
- According to the Pennsylvania Youth Survey, vaping marijuana has increased in 6th, 8th, 10th, and 12th graders since 2015.¹¹
 - In 2015, 8.6% of students reported vaping marijuana
 - In 2017, 12.6% of students reported vaping marijuana
 - In 2019, 26.6% of students reported vaping marijuana

Legalization advocates continue to tell us it's "just" a plant. Edibles are manufactured and are NOT a plant. So, it's important to know that youth favor the high potency products and continue to vape, dab, and consume edibles.

Youth Mental Health

We are all aware of the mental health crisis impacting our youth. "Adolescence is a critical period, with increased risk for cannabis use, and; in particular, high THC potency cannabis use. This may represent a public health crisis", Dr. Christopher Hammond, MD, PhD.¹²

Early onset of cannabis use, according to Hammond, could lead to a number of health issues, including major depressive disorder, alcohol use disorders, substance use disorders, suicidality, anxiety disorders, bipolar disorders, psychosis, and delinquent behaviors.¹³

"There appears to be a relatively consistent pattern of findings showing that adolescent cannabis use is associated in a dose dependent manner with poor outcomes in academic and occupational functioning, cognition, and psychiatric and substance use outcomes, and that these may be worse for young people with mental health problems," said Hammond.¹³

Adolescent cannabis use could also lead to potential long-term brain effects, like dysfunction in white matter tracts, altered brain waves, and decreased brain blood flow. These effects are larger and more consistent with earlier age of onset and heavy use.¹³

¹⁰ Prince MA, Conner BT. Examining links between cannabis potency and mental and physical health outcomes. *Behav Res Ther* 2019;115:111–20

¹¹ <https://www.pccd.pa.gov/JuvenileJustice/Documents/2019%20PAYS/State%20of%20Pennsylvania%20Profile%20Report.Final.pdf>

¹² Christopher J. Hammond, MD, PhD, 2021 Annual Psychiatric Times™ World CME Conference

¹³ Morgan CJ, Gardener C, Schafer G, et al. Sub-chronic impact of cannabinoids in street cannabis on cognition, psychotic-like symptoms and psychological well-being. *Psychol Med.* 2012;42(2):391-400.

¹³ Arterberry BJ, Padovano HT, Foster KT, et al. Higher average potency across the United States is associated with progression to first cannabis use disorder symptom. *Drug Alcohol Depend.* 2019;195:186-192.

¹³ DiForti M, Quattrone D, Freeman TP, et al. The contribution of cannabis use to variation in the incidence of psychotic disorder across Europe (EU-GEI): a multicentre case-control study. *Lancet Psychiatry.* 2019;6(5):427-436.

¹³ Hines LA, Freeman TP, Gage SH, et al. Association of high-potency cannabis use with mental health and substance use in adolescence. *JAMA Psychiatry.* 2020;77(10):1044-1051.

Further, the percentage of reports of cannabis usage and incidents of cannabis use disorder (CUD) is much higher among adolescents.

- A long, school-based study found that cannabis use was associated with poorer functioning in high school students across more domains – academic performance, unpreparedness, delinquency, and mental health – compared to alcohol use.¹⁴

Mental Health Issues with PA Youth

Good mental health enables children to grow emotionally, mentally, socially, and physically. Depression, anxiety, and stress are known as negative emotions and are associated with quality of life. And, negative emotions are risk factors for adolescents.¹⁵

A number of scientific studies have identified a link between mental health problems, such as depression, and the use of alcohol, tobacco, & other drugs during adolescence. According to the 2019 PA youth survey, these four depressive symptoms were indicated by students in grades 6, 8, 10, & 12.¹⁶

- 38.0% of students reported, “sad or depressed most days in the past year”
- 25.0% of students reported, “sometimes life is just not worth it”
- 36.3% of students reported, “at times, I feel I am no good at all”
- 23.4% of students reported, “I am inclined to think I’m a failure”

There is a relationship between marijuana use and these students reporting depressive symptoms:¹⁶
Of the students reporting NO depressive symptoms:

- 4.7% report past 30-day marijuana use, and;
- 9.1% report lifetime marijuana use

Of the students reporting MODERATE depressive symptoms:

- 10.8% report past 30-day marijuana use, and;
- 19.5% report lifetime marijuana use

Of the students reporting HIGH depressive symptoms:

- 22.4% report past 30-day marijuana use, and;
- 36.0% report lifetime marijuana use

¹⁴ D’Amico et al, NIH, 2016 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5016216/>

¹⁵ <https://www.sciencedirect.com/science/article/pii/S1697260020300119>

¹⁶ <https://www.pccd.pa.gov/JuvenileJustice/Documents/2019%20PAYS/State%20of%20Pennsylvania%20Profile%20Report.Final.pdf>

Following legalization, marijuana would inevitably become more readily available, accessible to the entire population and specifically to vulnerable populations like those with predisposed addictive disorders, youth, pregnant women, and low-socio economic communities.

It's important that we acknowledge Black people and Communities of Color who were and continue to be adversely affected by marijuana policies. States that have legalized have not been able to address this social justice issue which may indicate that it's systemic and not one that legalization can prevent. Per the American Civil Liberties Union, Black people are still more likely to be arrested for marijuana possession than White people in every state, including those that have legalized marijuana.¹⁷

Before considering legalization, it's our hope that an honest conversation around this issue will occur and that the voices of prevention, medical, and treatment communities would be represented and invited to the table.

Once again, thank you to Senator Ward and the Senate Aging and Youth Committee for the invitation to present.

Sincerely,

A handwritten signature in blue ink that reads "Jeffrey Hanley". The signature is written in a cursive style with a long horizontal stroke at the end.

Jeff Hanley
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¹⁷ <https://www.aclu.org/report/tale-two-countries-racially-targeted-arrests-era-marijuana-reform>