THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER

Senate Bill 326
Interested Party Testimony
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Good morning, Chairman Wilkin, Vice Chair Reineke, Ranking Member DeMora and members of the Senate General Government Committee. I am an Assistant Professor of Psychiatry and Behavioral Health at The Ohio State University, psychiatrist at The Ohio State University Early Psychosis Intervention Center (EPICENTER), and practice at the Ohio State Wexner Medical Center.

One of the nation's leading academic health centers, The Ohio State University Wexner Medical Center offers health care services in virtually every specialty and subspecialty in medicine. Thousands of patients come to us each month for treatments and services they can't find anywhere else. Providing access to health care information is central to our research, education and patient care mission. At the Ohio State Wexner Medical Center, we're dedicated to improving health in Ohio and across the world through innovations and transformation in research, education, and patient care and community engagement.

We appreciate the legislature's attention to this important topic and the opportunity to provide feedback related to Senate Bill 326, which would prohibit the sale of intoxicating hemp product in Ohio. The bill defines "intoxicating hemp product" and establishes penalties for knowingly violating the prohibition.

My interested party testimony focuses on relevant research related to intoxicating hemp products.

- Delta-9 THC, the main psychoactive component of cannabis, has produced transient psychotic symptoms in even healthy individuals during periods of intoxication (D'Souza et al., 2004).
- In addition, literature confirms a dose-response relationship associating higher levels of cannabis use with an increased risk of psychotic outcomes, including schizophrenia (Marconi et al., 2016).
- A multi-site study, demonstrated a higher incidence of psychotic disorders in individuals that were daily users, especially of high-potency products (Di Forti et al., 2019). Individuals with a history of cannabis use present with psychosis at a younger age than non-users by an average of 3 years (Di Forti et al., 2014), which is relevant in terms of premorbid level of functioning achieved prior to diagnosis and prognosis.
- Individuals who continue to use cannabis after a diagnosis of first-episode psychosis have worse outcomes compared to non-users and discontinued users, including: higher relapse rates, poorer cognition, prolonged hospital admissions, medication non-adherence, and more severe psychotic symptoms (Schoeler et al., 2016; Solmi et al., 2023).
- Lastly, a recent umbrella review recommended avoiding cannabis during adolescence and early adulthood for those prone to have or have a mental health disorder. It also found an association

between cannabis use and general psychiatric symptoms, including depression, mania, and suicidality (Solmi et al., 2023).

This data clearly highlights the continued need to limit and closely monitor the percentage of delta-9 THC going into hemp products; however, as hemp cultivation advances, there is a need to regulate the addition of non-delta-9 THC compounds as well since literature is scarce related to their potential adverse effects.

- Delta-8 THC is an isomer of delta-9 THC and acts on the same endocannabinoid receptors (CB1 and CB2). The FDA has received 104 adverse event reports involving delta-8 THC-containing products between 2020-2022. Adverse events have included: hallucinations, vomiting, tremor, anxiety, dizziness, confusion, and loss of consciousness. (https://www.fda.gov/consumers/consumer-updates/5-things-know-about-delta-8-tetrahydrocannabinol-delta-8-thc)
- The FDA has also reported that delta-8 THC has psychoactive and intoxicating effects, that can be similar to delta-9 THC. Furthermore, extraction techniques may unintentionally expose the consumer to harmful chemicals – there are no regulations on its synthesis resulting in products being contaminated and/or yielding inconsistent effects.
- One study summarizes: "Most research on delta-8 THC is largely anecdotal, not peer-reviewed and does not involve human subjects. Future research should examine delta-8 THC use using nationally representative samples to more clearly understand the prevalence and consequences of use. Laws are needed to mitigate the risks of using delta-8 THC, particularly quality control of synthesis and minimum purchase age." (LoParco et al., 2023).
- A case report describes 3 individual cases of patients who required inpatient psychiatric admission for psychosis after regular use solely of delta-8 THC (Miller et al., 2023).
- THCa (tetrahydrocannabinolic acid) is a naturally occurring cannabinoid compound that is not known to produce psychoactive effects in its unprocessed form. However, THCa is converted into psychoactive delta-9 THC when heated, smoked, or vaped placing an individual at risk for items described above.

We hope this information is helpful as you consider Senate Bill 326 and the regulation of intoxicating hemp products.

Please contact Stephanie.Gilligan@osumc.edu if you have additional questions or would like to discuss further.

References

1. D'Souza DC, Perry E, MacDougall L, et al. The Psychotomimetic Effects of Intravenous Delta-9-Tetrahydrocannabinol in Health Individuals: Implications for Psychosis. Neuropsychopharmacology. 2004:29:1558-1572.
2. Marconi A, Di Forti M, Lewis CM, et al. Meta-analysis of the Association Between the Level of Cannabis Use and Risk of Psychosis. Schizophrenia Bulletin. 2016;42(5):1262-1269.
3. Di Forti 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; 6:427–436.
4. Di Forti M, Sallis H, Allegri F, et al. Daily Use, Especially of High-Potency Cannabis, Drives the Earlier Onset of Psychosis in Cannabis Users. Schizophrenia Bulletin. 2014;40(6):1509-1517.
5. Schoeler T, Monk A, Sami M, et al. Continued versus discontinued cannabis use in patients with psychosis: a systematic review and meta-analysis. Lancet Psychiatry. 2016;3:215-25.
6. Solmi M, De Toffol M, Kim JY, et al. Balancing risks and benefits of cannabis use: umbrella review of meta-analyses of randomized controlled trials and observational studies. BMJ. 2023;382:e072348.
7. LoParco CR, Rossheim ME, Walters ST, et al. Delta-8 tetrahydrocannabinol: a scoping review and commentary. Addiction. 2023;118:1011-1028.
8. Miller CR, Burk BG, Fargason RE, et al. Delta-8-THC association with psychosis: A case report with literature review. Frontiers in Psychiatry. 2023;14:1103123.