

Letter to the Editor

Hexahydrocannabinol (HHC): a potentially potent challenge for Ireland's early intervention in psychosis network

Sean Naughton^{1,2}  and Mary Clarke^{1,2} 

¹DETECT, Early Intervention in Psychosis Service, Blackrock, Dublin, Ireland and ²University College Dublin School of Medicine, Dublin, Ireland

To the Editor

We read with interest the case series published by O'Mahony et al. (2024) concerning two cases of hexahydrocannabinol (HHC) induced psychotic illnesses.

We contend that a combination of three factors, the illegality of tetrahydrocannabinol (THC) in Ireland, the decline in the perceived harmfulness of cannabis in the general population (Chiu et al., 2022) and the increasing prevalence of vaping amongst young people (Pinho-Gomes et al., 2023), may conspire to generate a potent public health issue, particularly regarding incident cases of psychotic disorders. HHC became widely available in the United States in mid-2021 and was first recorded in Europe in May 2022 (European Monitoring Centre for Drugs and Drug Addiction 2023). Due to concerns about both its known and potential risks, many European countries have prohibited or restricted its use (Holt 2024), but not Ireland, where it is not a Schedule-controlled drug. Apart from the risk to individuals who consume inhaled cannabinoids, the sale of edible cannabis preparations, such as gummies and sweets, has been linked with acute THC toxicity in young children (Mattimoe et al., 2021). The extension of HHC into this market extends the potential population at risk.

There may be a particular risk to individuals who already habitually consume THC. It is not possible to say whether HHC is more potent or tends to be consumed in larger quantities than THC. Due to the nature of illicit substance use, it can be difficult to be precise about the relative quantities of each when individuals switch from one to another. While a greater quantity of HHC relative to THC may need to be ingested to consume an equivalent level of the 9β epimer, the isomer responsible for the cannabimimetic effect (Ujváry, 2024), it is possible that the ease of obtaining HHC, its relatively affordability, odourless character and the convenience of vaping it may facilitate increased consumption and counteract any decreased potency. The lack of knowledge and public discourse about its effects may also contribute to a perception that it is a safer alternative to THC.

Public health monitoring infrastructure in Ireland should continue to be vigilant in the coming months. There is often a lag between initial availability, widespread adoption, and the cumulative exposure required before cases of substance induced psychotic disorders will begin to appear at scale. Ireland has a network of Early Intervention in Psychosis services covering a

portion of the population, who carry out comprehensive clinical assessments, and may be well placed to identify any emerging trend.

Clearly more research is required in this area, however we echo the authors' recollection of the days of headshops and 'legal highs', which occurred in a space where legislation lagged accumulating clinical observation. Psychotic illnesses occur at a crucial developmental junction for young people, have lifelong implications, and cannabis use has a clear impact on onset, severity and relapse (Hasan et al., 2020). We join the call for increased research, education, and legislative scrutiny in this area.

Financial support. This article received no financial support.

Competing interests. None.

Ethical standards. Institutional ethical approval was not required for this work.

References

- Chiu V, Hall W, Chan G, Hides L, Leung J (2022). A systematic review of trends in US attitudes toward cannabis legalization. *Substance Use & Misuse* 57, 1052–1061.
- European Monitoring Centre for Drugs and Drug Addiction (2023). *Hexahydrocannabinol (HHC) and Related Substances*. Lisbon: European Union Drugs Agency.
- Hasan A, von Keller R, Friemel CM, Hall W, Schneider M, Koethe D, et al. (2020). Cannabis use and psychosis: a review of reviews. *European Archives of Psychiatry and Clinical Neuroscience* 270, 403–412.
- Holt E (2024). Czech Republic latest country to ban hexahydrocannabinol. *The Lancet* 403, 10427.
- Mattimoe C, Conlon E, Ni Siochain D, Quinn N, Okafor I (2021). Edible cannabis toxicity in young children; an emergent series public health threat. *Irish Medical Journal* 114, 446.
- O'Mahony B, O'Malley A, Kerrigan O, McDonald C (2024). HHC-induced psychosis: a case series of psychotic illness triggered by a widely available semisynthetic cannabinoid. *Irish Journal of Psychological Medicine*, 1–4. doi:10.1017/ipm.2024.3.
- Pinho-Gomes AC, Santos JA, Jones A, Thout SR, Pettigrew S (2023). E-cigarette attitudes and behaviours amongst 15–30-year-olds in the UK. *Journal of Public Health* 45, e763–e775.
- Ujváry I (2024). Hexahydrocannabinol and closely related semi-synthetic cannabinoids: a comprehensive review. *Drug Testing and Analysis* 16, 127–161.

Corresponding author: Sean Naughton; Email: sean.naughton@ucdconnect.ie

Cite this article: Naughton S and Clarke M. (2024) Hexahydrocannabinol (HHC): a potentially potent challenge for Ireland's early intervention in psychosis network. *Irish Journal of Psychological Medicine* 41: 505, <https://doi.org/10.1017/ipm.2024.33>

© The Author(s), 2024. Published by Cambridge University Press on behalf of College of Psychiatrists of Ireland.