

Cannabis Hyperemesis Syndrome Among Adolescents: Up to Date Epidemiologic Evidence on Prevalence

Michael S. Toce, MD MS FACMT

Assistant Professor of Pediatrics and Emergency Medicine

Boston Children's Hospital/Harvard Medical School



Disclosure

Dr. Toce reports receiving consultation fees from the Porto Law Firm for work related to **7-hydroxymitragynine**. Any real or apparent conflicts of interest related to the content of this presentation have been resolved.

All included photos were freely obtained from Google Images.





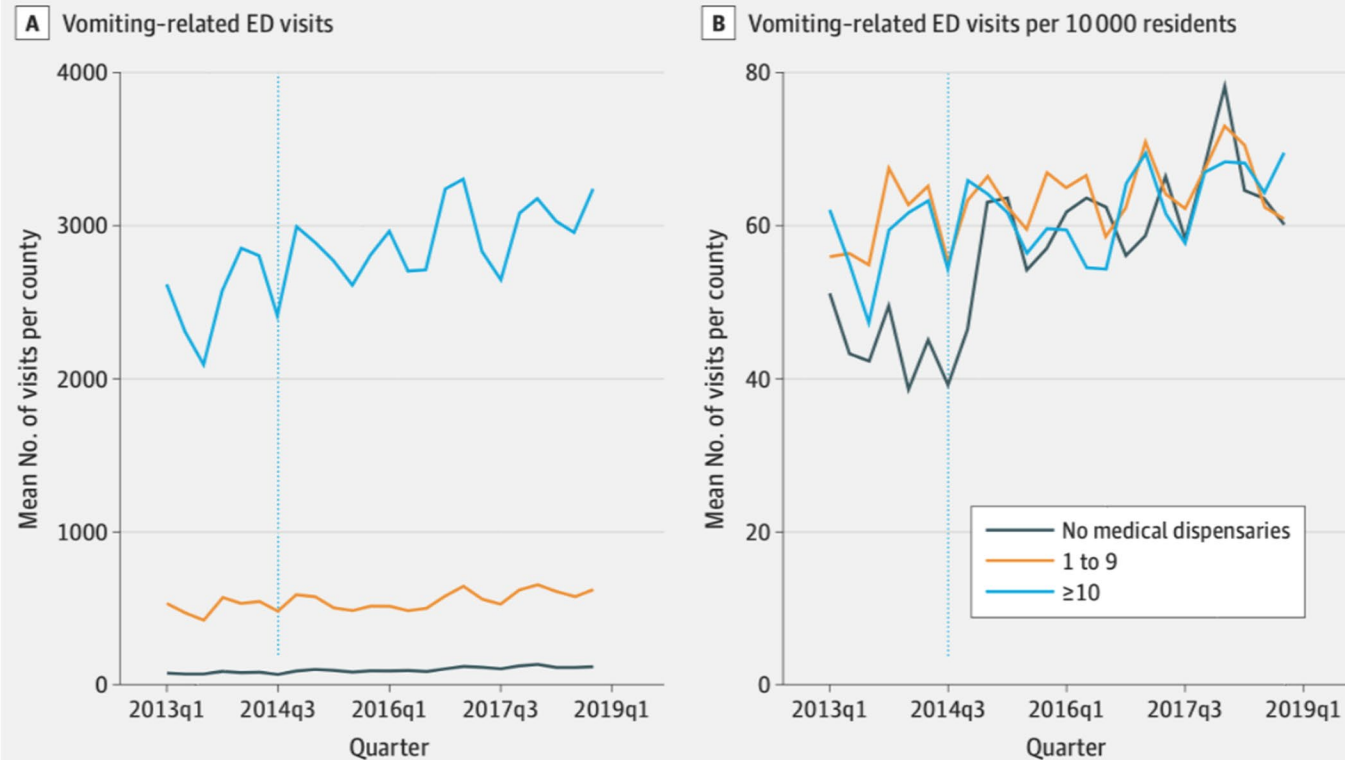
Roadmap

- Epidemiology of CHS among adolescents
 - Association of recreational cannabis legalization
- Research controversies



Emergency Department Visits for Vomiting

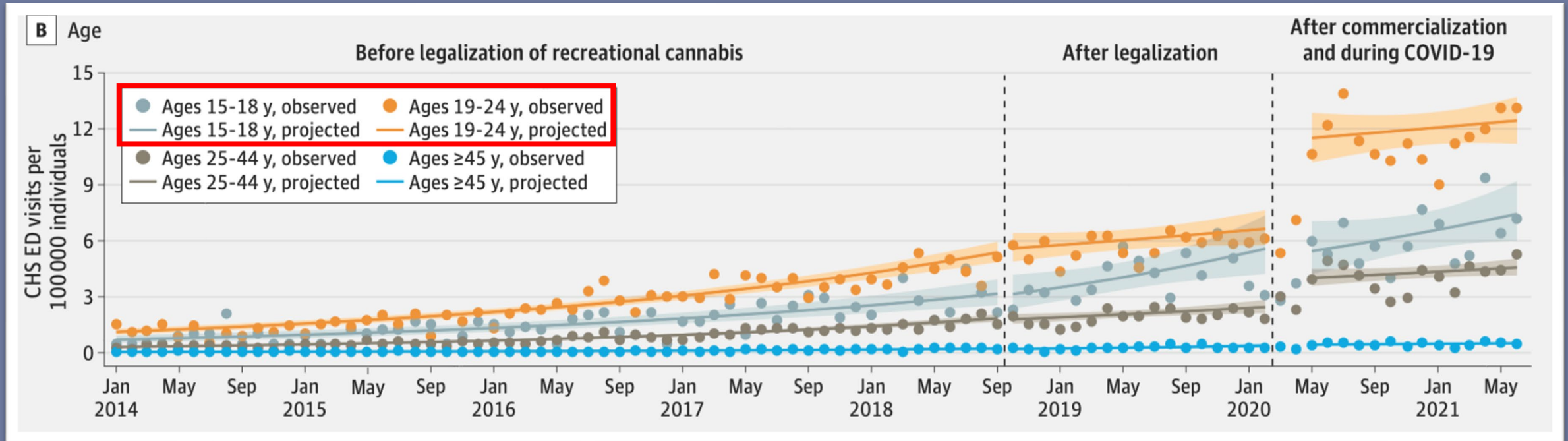
Figure 1. Changes in Vomiting-Related Emergency Department (ED) Visits Over Time, by Baseline Medical Dispensary Exposure



- 30% increase in annual cases overall
- 7-fold increase in use of cannabis diagnosis
- Higher increases post-legalization in counties no medicinal dispensaries

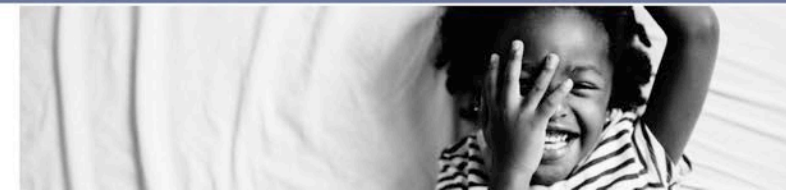


Association of legalization on CHS...

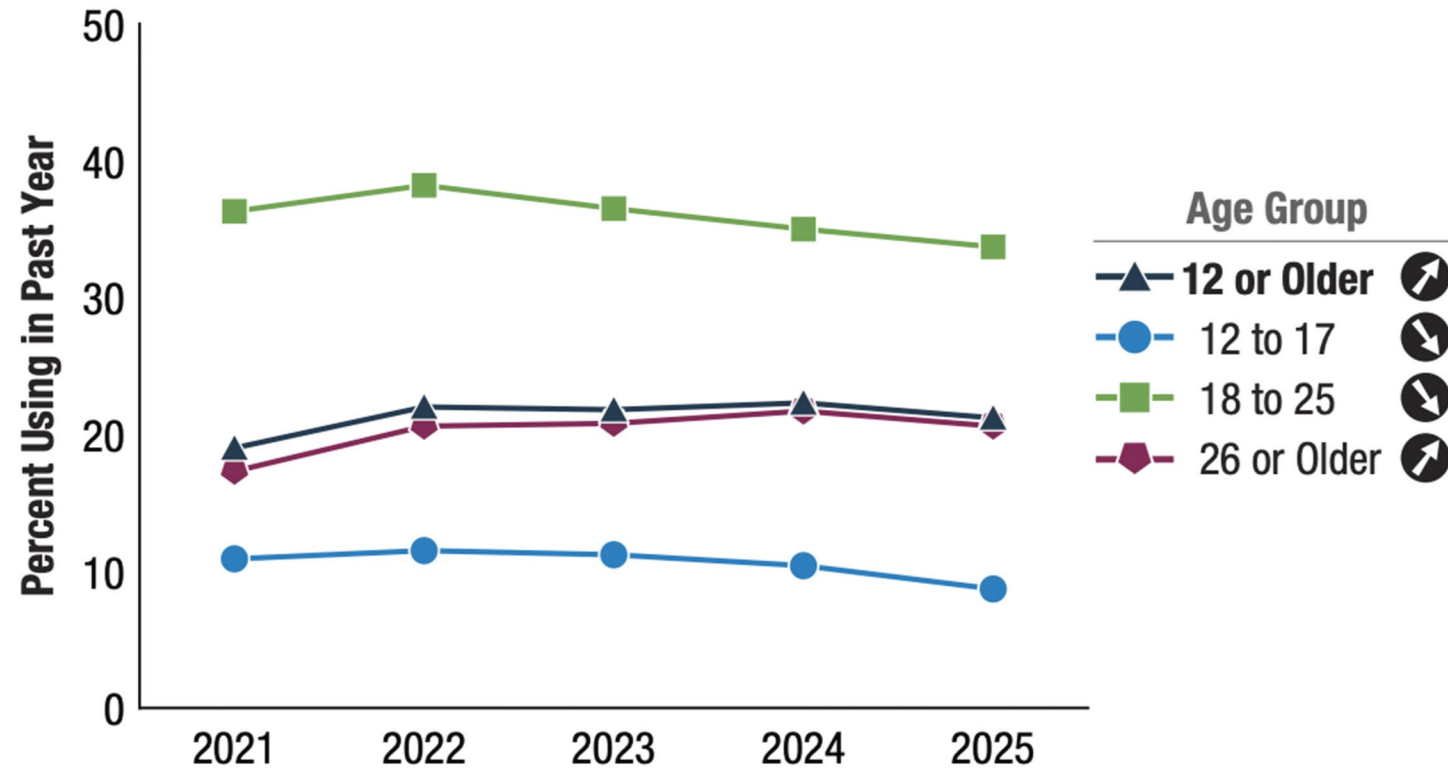


Myran DT, Roberts R, Pugliese M, Taljaard M, Tanuseputro P, Pacula RL. Changes in Emergency Department Visits for Cannabis Hyperemesis Syndrome Following Recreational Cannabis Legalization and Subsequent Commercialization in Ontario, Canada. *JAMA Netw Open*. 2022;5(9):e2231937.

6



Past Year Cannabis Use, 2021-2025 (NSDUH)

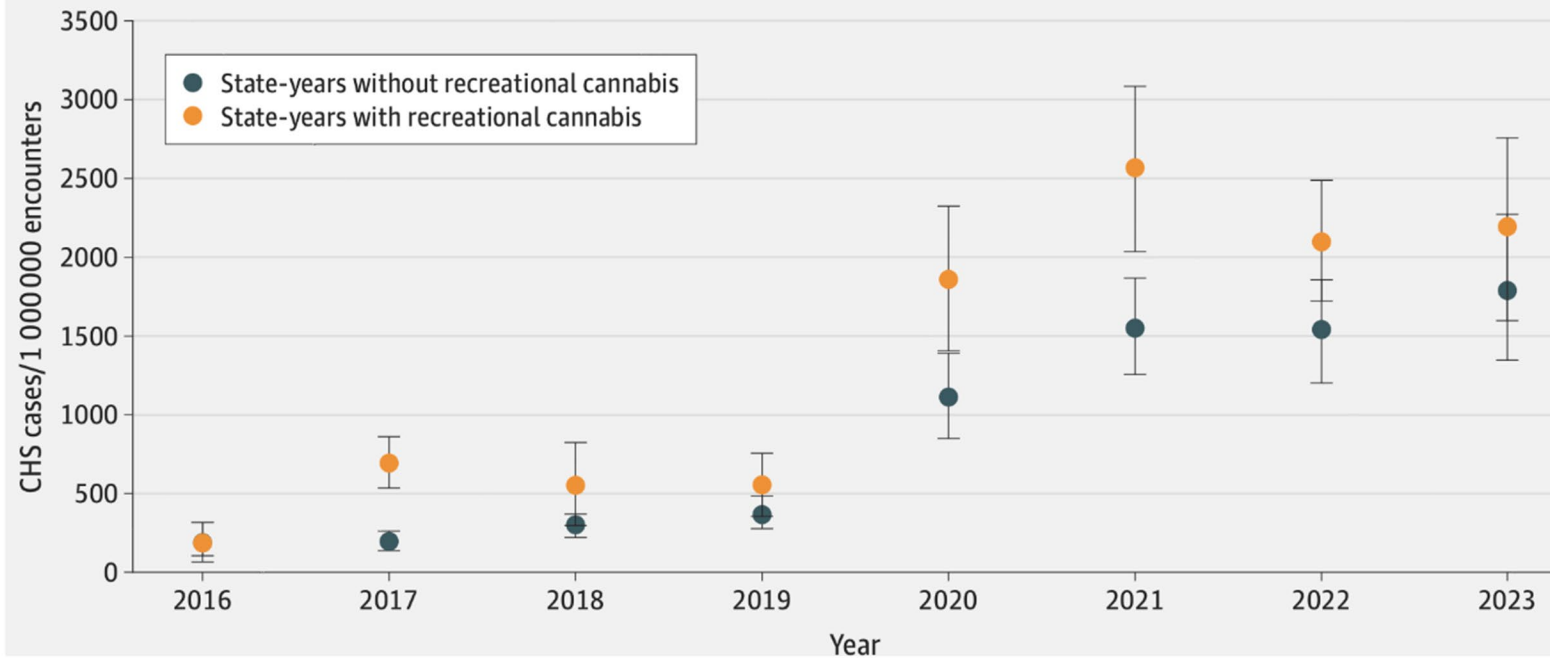


Note: Estimates for 2021 may differ from previously published estimates because the 2021 analysis weights were updated to facilitate between-year comparisons.



CHS increasing regardless of legalization status

Figure. Estimated Annual Rates of ED Encounters for Cannabis Hyperemesis Syndrome (CHS) in State-Years With and Without Recreational Cannabis, January 2016 to December 2023



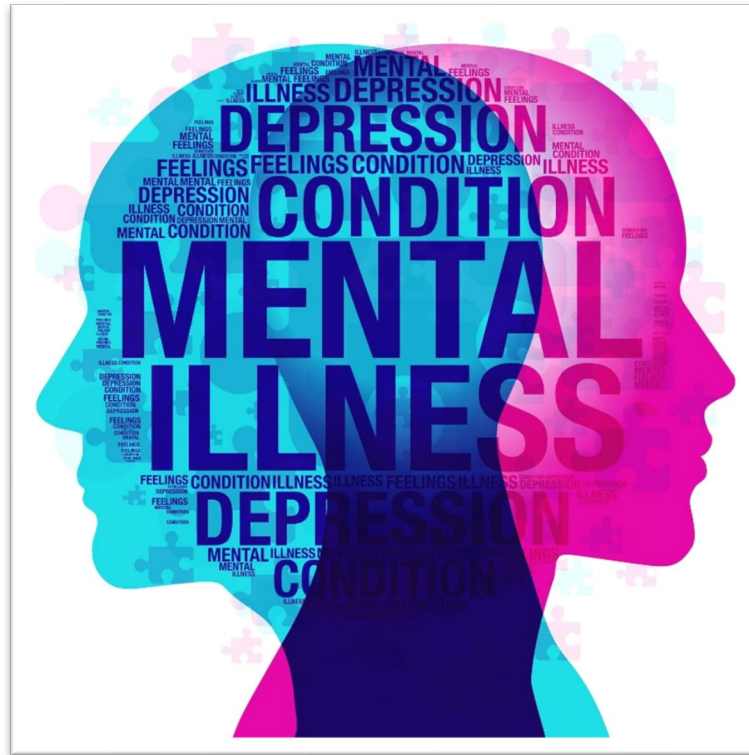
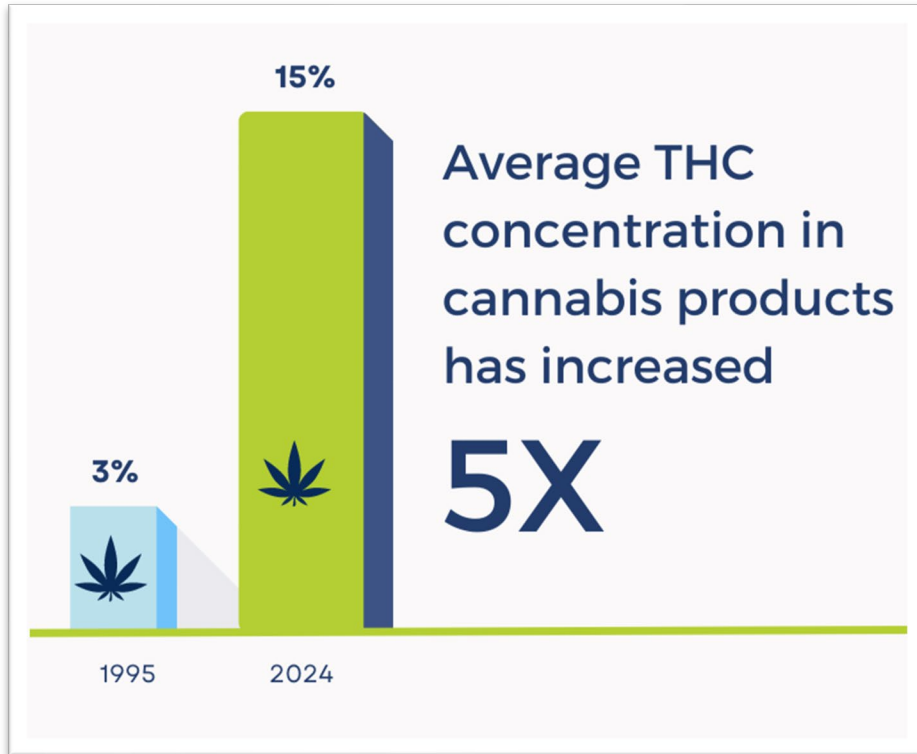
- Adolescents 13-21yr
- Visits increased 50% per year

Toce MS, Monuteaux MC, Fishman MD, Hudgins JD. Emergency Department Visits for Cannabis Hyperemesis Syndrome Among Adolescents. *JAMA Netw Open*. 2025;8(7):e2520492.

8



Why the increase? Why me and not you?



Research Controversies

Dependence on the Rome IV Criteria

- Not validated in pediatric patients
- Cessation of cannabis use

ICD-10 coding

- Nausea and/or vomiting (R11)
- Cannabis-related (F12.1, F12.2, F12.3)

ROME IV CRITERIA FOR **CANNABIS HYPEREMESIS SYNDROME**

ESSENTIAL



Long-term cannabis use
Cyclic nausea and vomiting
Resolution of symptoms
with cessation of cannabis use

SUPPORTIVE

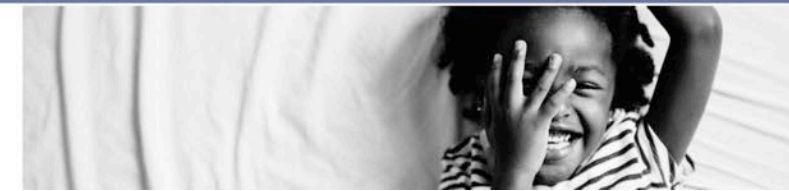


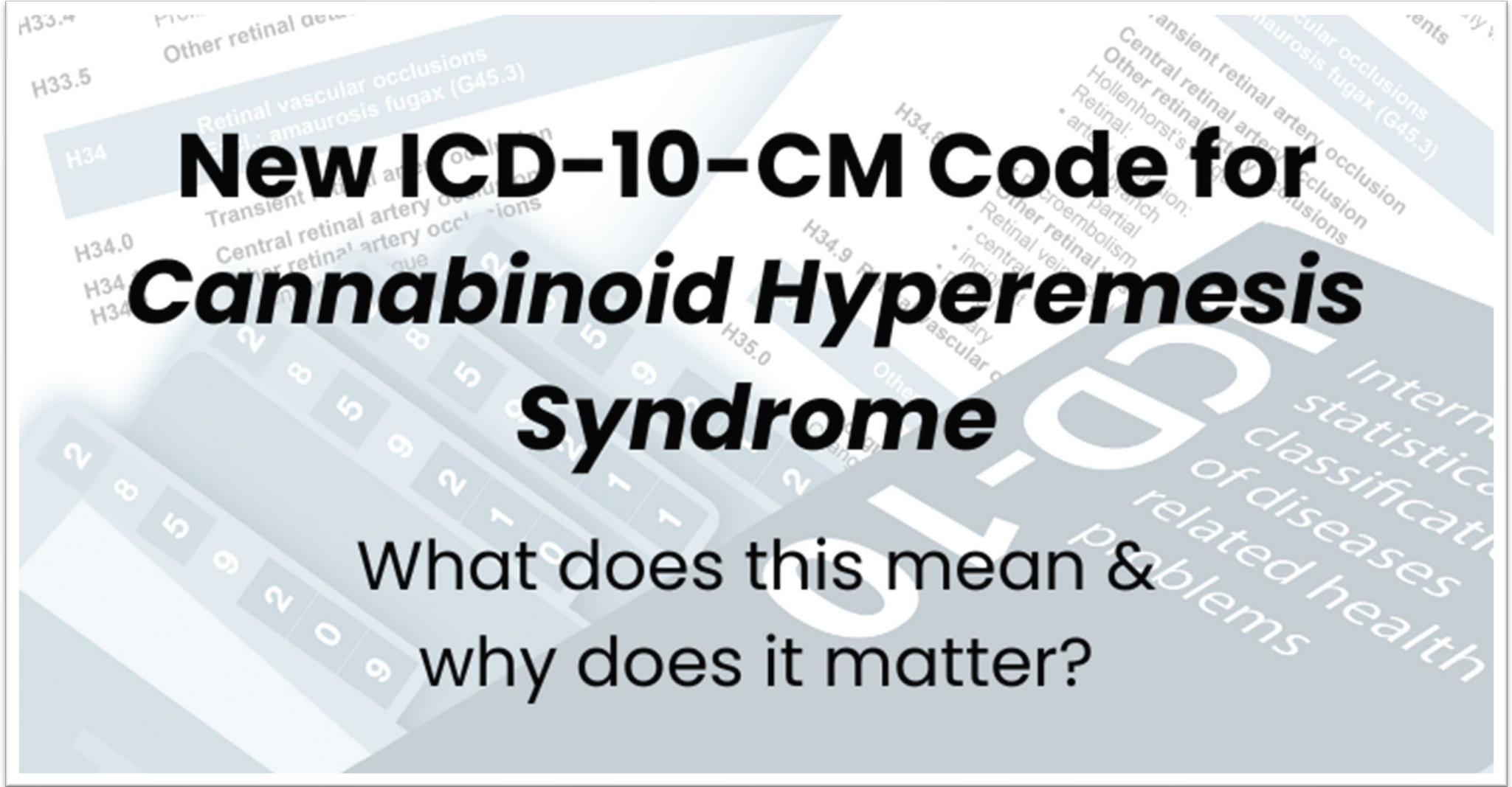
Compulsive hot showering
or bathing

EXCLUSION



Absence of other causes





New ICD-10-CM Code for Cannabinoid Hyperemesis Syndrome

What does this mean &
why does it matter?

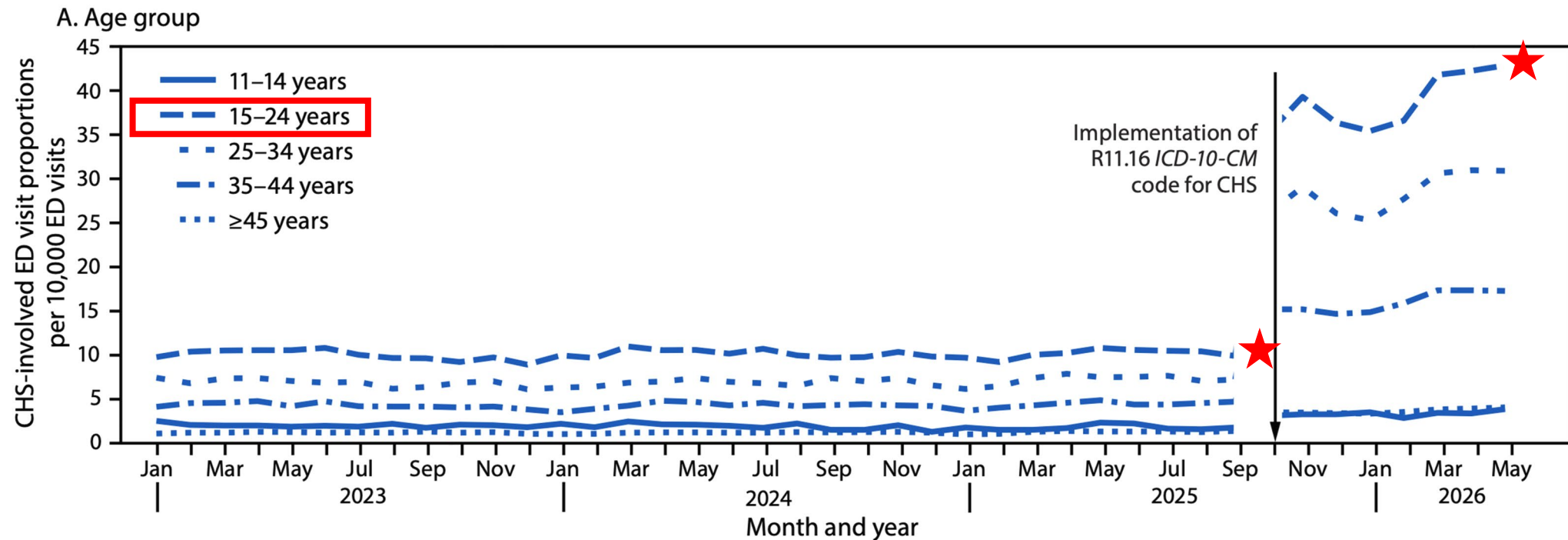
**New ICD-10-CM Code for
Cannabinoid Hyperemesis
Syndrome**

What does this mean &
why does it matter?

R11.16

CHS diagnoses after ICD-10 code

FIGURE 2. Monthly proportions of emergency department visits involving cannabis hyperemesis syndrome,* by age (A), sex (B), and race and ethnicity (C)[†] — National Syndromic Surveillance Program, United States, January 2023–May 2026



Vivolo-Kantor AM, Liu S, Tanz LJ, Mattson CL, Schier J. Trends in Emergency Department Visits Involving Cannabis Hyperemesis Syndrome Identified Using a New Diagnosis Code — United States, January 2023–May 2026. *MMWR Morb Mortal Wkly Rep.* 2026;75(30):391-396.

13



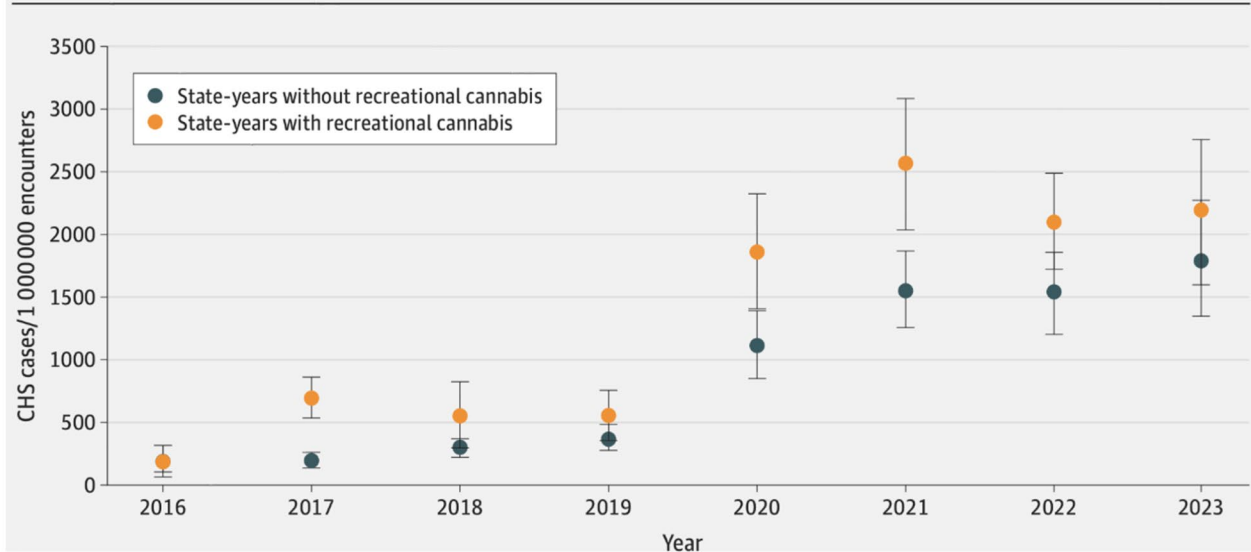
Summary

- Incidence of CHS in adolescents is increasing
- Unclear implication of cannabis legalization on CHS
- New ICD-10 code to add specificity to diagnosis



Thank you

Figure. Estimated Annual Rates of ED Encounters for Cannabis Hyperemesis Syndrome (CHS) in State-Years With and Without Recreational Cannabis, January 2016 to December 2023



Michael.Toce@childrens.harvard.edu
@therealMikeToce

Where the world comes for answers

