

Cannabis-related healthcare encounters among commercially insured adults aged 18-64 years contributing data to the US Food and Drug Administration’s Sentinel, 2017-2022



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Disclosures

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Background

The increasing number of U.S. state, local, tribal, and territorial bodies enacting laws allowing medical or both medical and nonmedical adult use of cannabis and the passage of the 2018 Farm Bill have paved the way for a booming cannabis market. Expanded access to cannabis among U.S. adults may potentially increase the public health burden from cannabis-related disorders and poisonings.

Objective

To assess temporal trends in cannabis-related healthcare encounters among commercially insured adults.

Methods

Study Design: Descriptive study

Data Source: Administrative claims from 4 national health insurers contributing to the FDA's Sentinel Distributed Database

Study Population and Period: Commercially insured individuals aged 18–64 years, with known sex, and continuous medical coverage (gaps ≤45 days permitted) in the 183 days before the qualifying cannabis-related encounter occurring between January 1, 2017, through December 31, 2022.

Outcome: Healthcare encounters for cannabis-related disorders or poisonings using International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnosis codes F12x or T40.7x

Statistical Analysis: Annual rates of cannabis-related encounters per 10,000 eligible person-years with 95% confidence intervals (CI), overall and stratified by care setting, age group, and cannabis use legal status (adult & medical, illegal, and medical), as determined by the latest cannabis laws implemented in the person’s most recent state/territory of residence at the start of the calendar year. For analyses by setting and legality status, estimated the mean annual change in rates. Mann-Kendall tests to statistically assess (T; p<0.05) trends in cannabis-related disorder encounters over the study period.

Results

- Among 115,187,493 commercially insured eligible persons, 963,345 (0.8%) persons contributed 5,601,233 cannabis-related encounters.
- Annual rates of cannabis-related encounters increased from 44.0 per 10,000 eligible person-years (95% CI: 43.8, 44.2) in 2017 to 75.1 per 10,000 eligible person-years (95% CI: 74.8, 75.4) in 2022 (T=1.0; p=0.01). Outpatient and emergency department encounters largely accounted for the upward trend, while inpatient encounters appeared to reach a plateau starting in 2020 (T=0.87; p=0.02) **[Figure 1]**.
- Increasing trends were observed across all age groups **[Figure 2]**.
- No differences by cannabis use legal status at the state/territory of residence (latest cannabis laws implemented) **[Figure 3]**.

Figure 1. Annual Rates of Cannabis-Related Health Care Encounters per 10,000 Eligible Person-Years, by Encounter Setting – United States, January 1, 2017–December 31, 2022

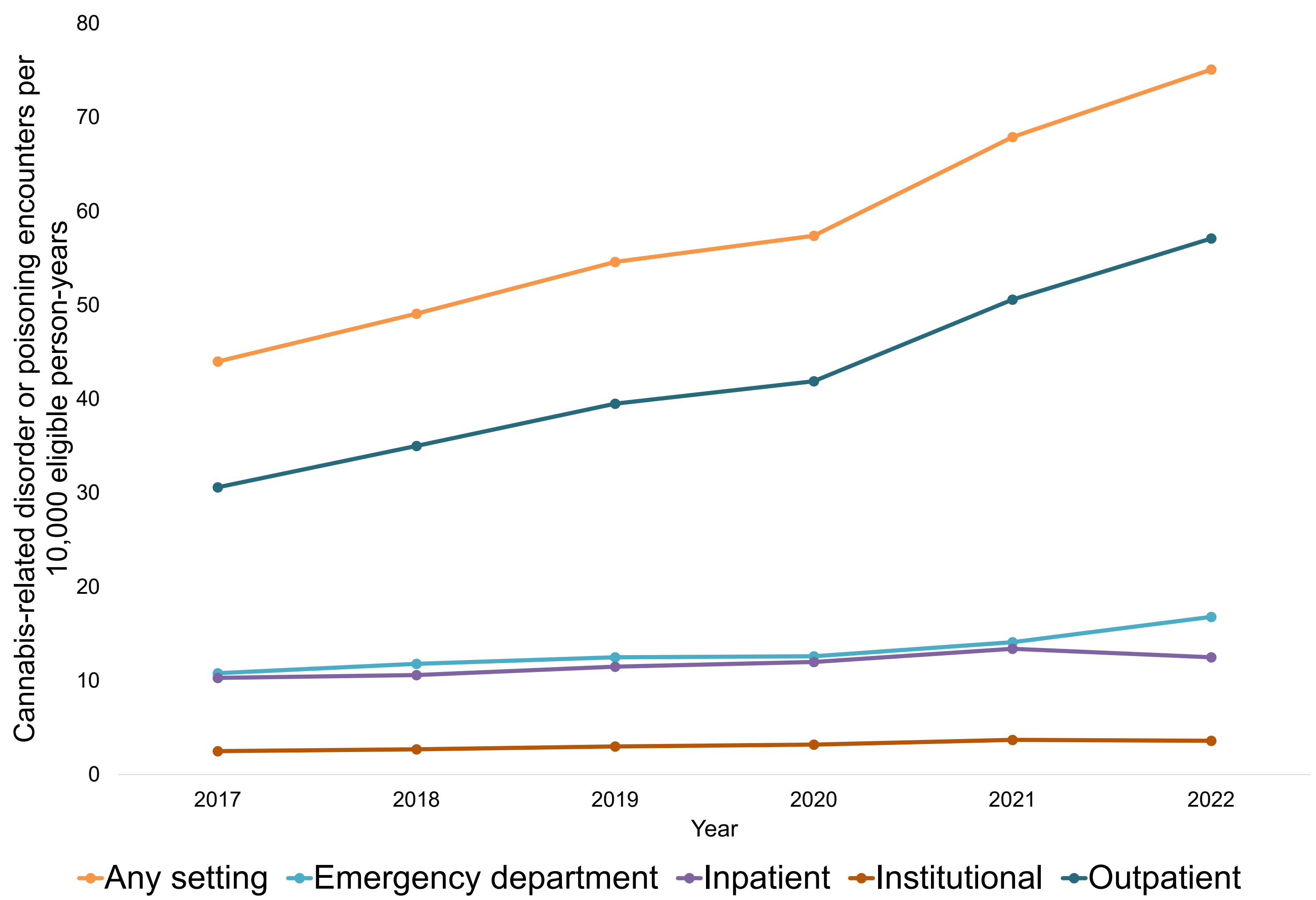


Figure 2. Annual Rates of Cannabis-Related Health Care Encounters per 10,000 Eligible Person-Years, by Age Group – United States, January 1, 2017–December 31, 2022

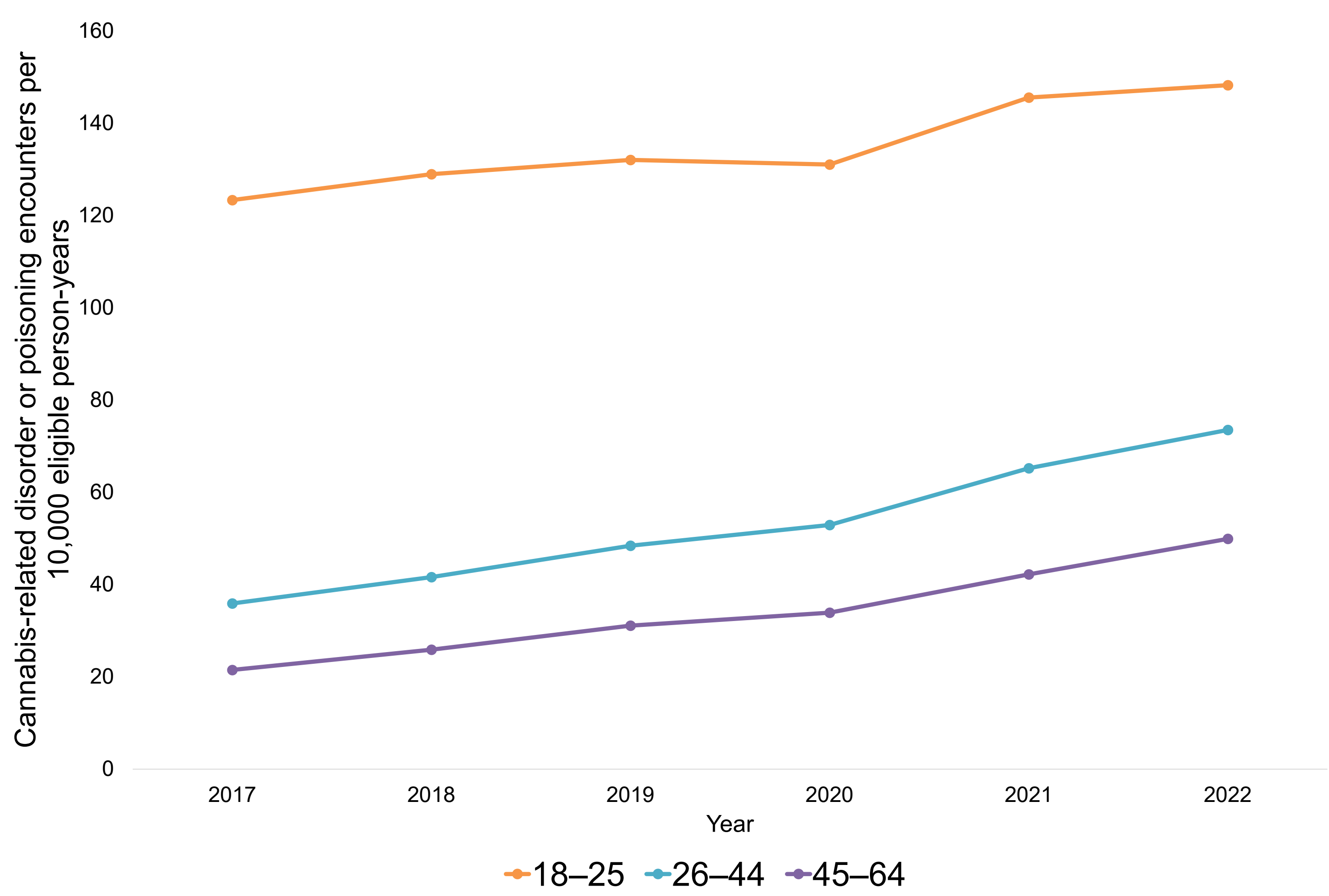
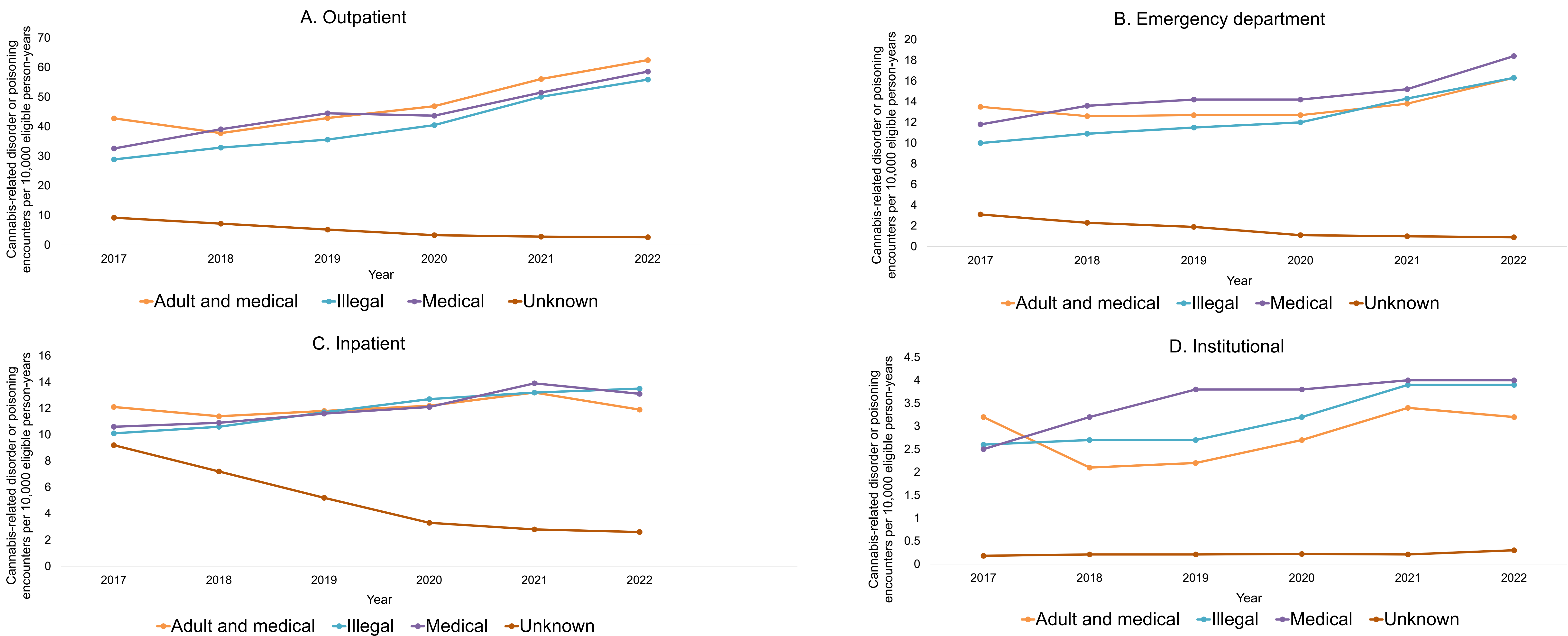


Figure 3. Annual Rates of Cannabis-Related Health Care Encounters per 10,000 Eligible Person-Years, by Claims Setting (A, B, C, D) and State or Territory Cannabis Legal Status – United States, January 1, 2017–December 31, 2022



Discussion

Our findings are consistent with an evolving landscape where cannabis use, legalization, and products’ potency are increasing, and the public perception of risk is decreasing. However, the observed increase appears to be lower than what would be expected based on results from U.S. surveys and suggests the need for providers to engage patients in conversation, continue to screen for cannabis use and, if appropriate, refer or provide services for diagnosis and treatment of cannabis use disorder. Although results were stratified by age and cannabis legal status, determinants such as race, socioeconomic status, and clinical characteristics might have an impact on our estimates.

Related Publications

Cannabis-related healthcare encounters among U.S. commercially insured adults. Perez-Vilar S, Adimadhyam S, Burk J, Radin R, Fung EN, Spahiu V, Brisbane G, Shebl FM, Greene C, Epperson M, Hernández-Muñoz JJ, Shinde M, Graham DJ. Am J Prev Med. 2025 Jun 12:107936. doi: 10.1016/j.amepre.2025.107936. Online ahead of print. PMID: 40516767