TOBACCO AND CANNABIS USE: BEHAVIORAL HEALTH PERSPECTIVES ON POLICY, PRACTICE, AND EMERGING PRODUCTS IN KENTUCKY

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Describe

Current trends in tobacco and cannabis use among people living with mental and behavioral health concerns

Identify

Key policy and regulations impacting tobacco and cannabis availability

Discuss

Discuss implications for prevention, treatment, and policy

TOBACCO USE

TYPES OF TOBACCO PRODUCTS

Electronic Tobacco Products

E-Cigarettes, Vaping Devices

Combustable Tobacco Products

Cigarettes

Cigars

Hookah

Pipes

Non-Combustable Tobacco Products

Nicotine Pouch

Smokeless Tobacco

Snus

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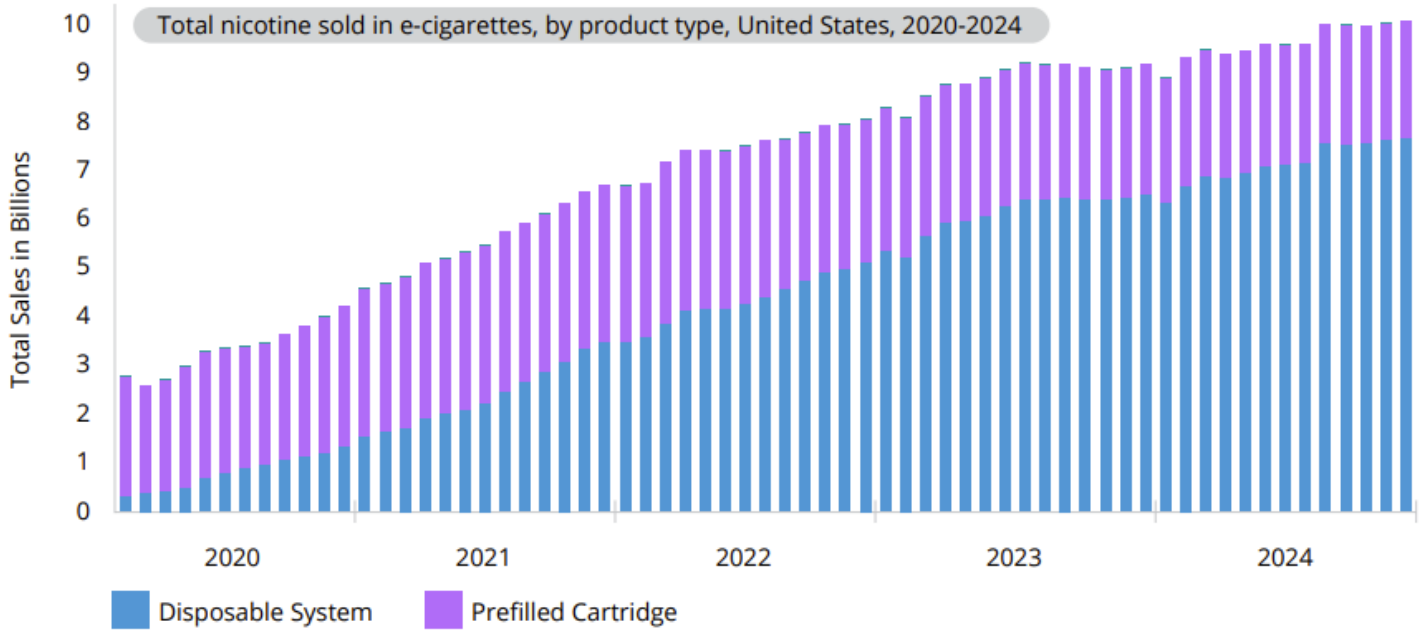
EMERGING TOBACCO PRODUCTS

- Flavored, disposable e-cigarettes continue to be most frequently purchased
- Nicotine pouches: most rapidly expanding nicotine product category
- Most products being sold do not have FDA authorization

CDC Foundation. Custom analysis of Circana sales data. See https://tobaccomonitoring.org/other-salesdata-briefs/nicotine-pouch-data-briefs/ for more information (accessed 28 October 2025). CDC Foundation. (2025, September). *Monitoring tobacco product use among youth and young adults in the U.S.: TEEN+ data brief, Issue 2* [Data brief]. Tobacco Epidemic Evaluation Network. https://tobaccomonitoring.org/wp-content/uploads/2025/09/Tobacco-Epidemic-Evaluation-Network-Data-Brief-Issue-2.pdf

TOTAL MILLIGRAMS OF NICOTINE SOLD AND STANDARDIZED UNIT SALES BY PRODUCT TYPE, 2020-2024



"..due to increases in product size and nicotine concentration, the total amount of nicotine sold in e-cigarettes surged by **249.2%** between February 2020 and June 2024."

Truth Initiative. (2026). Monitoring a changing tobacco product market in the United States: Trends Report 2025. Truth Initiative. Retrieved from https://truthinitiative.org/sites/default/files/media/files/2026/01/Trends%20Report%202025_final.pdf; Ali FRM, Diaz MC, Armour BS, et al. Trends in U.S. E-cigarette Sales Measured in Milligrams of Nicotine, 2019–2024. American Journal of Preventive Medicine. 2025;68:1173–8. doi: 10.1016/j.amepre.2025.02.007

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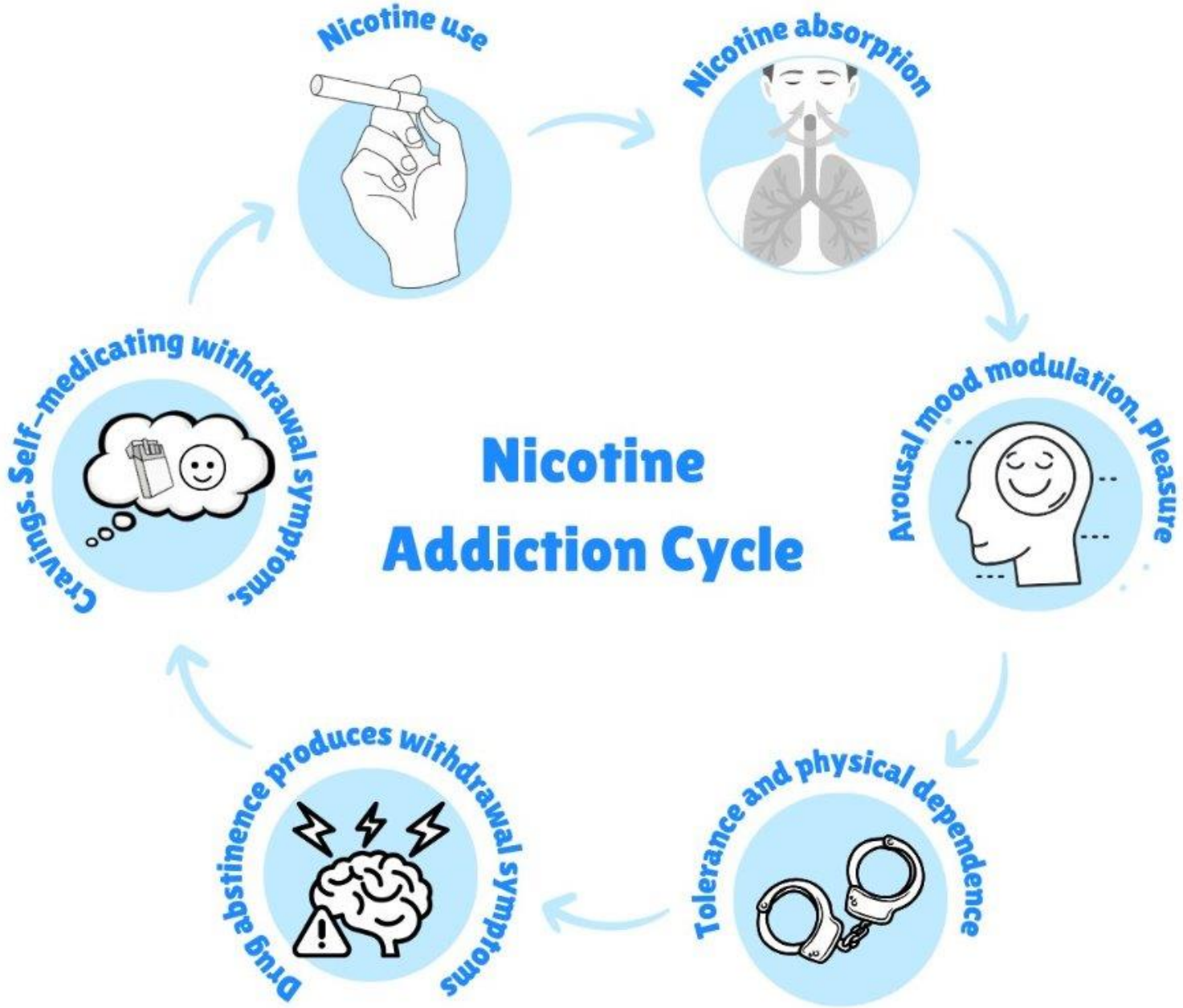

Benowitz, Neal L. "Nicotine addiction." *New England Journal of Medicine* 362.24 (2010): 2295-2303; Prochaska, J. J., & Benowitz, N. L. (2019). Current advances in research in treatment and recovery: Nicotine addiction. *Science advances*, *5*(10), eaay9763; U.S. Department of Health and Human Services. (1988). *The Health Consequences of Smoking: Nicotine Addiction. A report of the Surgeon General. (No. DHHS Publication No (CDC) 88-8406)*. Retrieved from Rockville, Maryland.

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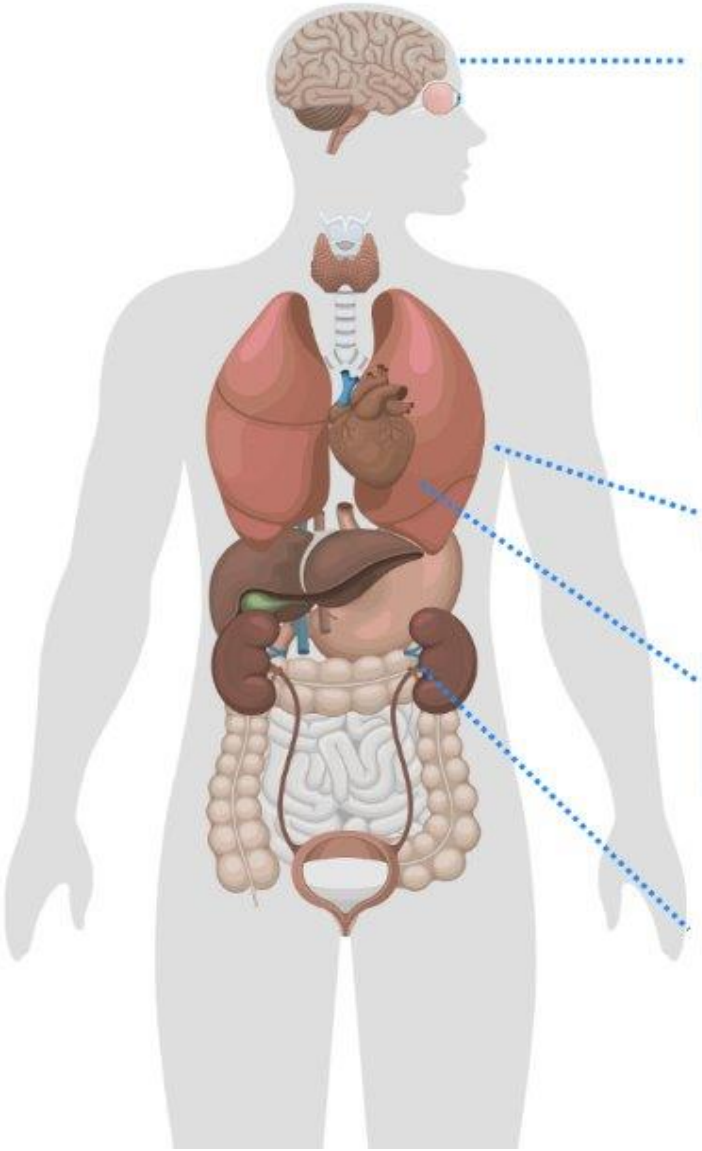
SIDE EFFECTS OF NIOCTINE



- Dizziness
- Headache
- Insomnia
- Reduced Appetite
- Depression
- Difficulty Concentrating

- Lung cancer

- Increased Heart Rate
- High Blood Pressure
- Heart Disease

- Nausea
- Vomiting

Mishra A, Chaturvedi P, Datta S, Sinukumar S, Joshi P, Garg A. Harmful effects of nicotine. Indian J Med Paediatr Oncol. 2015 Jan-Mar;36(1):24-31. doi: 10.4103/0971-5851.151771. PMID: 25810571; PMCID: PMC4363846.

CANNABIS USE

TYPES OF CANNABIS SATIVA PRODUCTS

Alzaher, W. (2020, February 13). What's the difference between hemp and marijuana? Cannabis Clinic. Retrieved December 18, 2025, from https://cannabisclinic.co.nz/hemp-marijuana-difference/

TYPES OF CANNABIS PRODUCTS

Electronic Cannabis Products

E-Cigarettes, Vaping Devices

Combustable Cannabis Products

Pre-rolls

Non-Combustable Cannabis Products

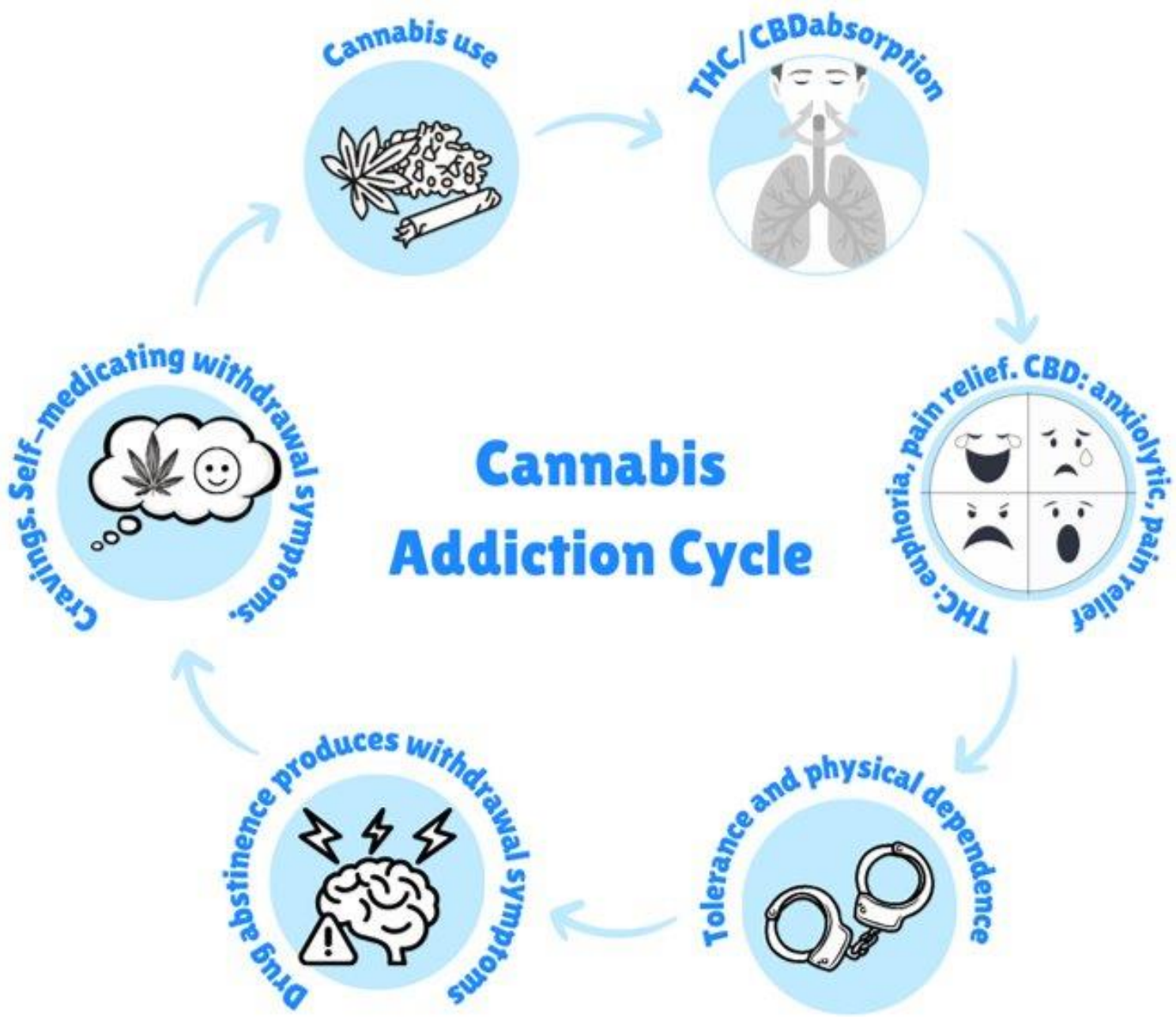
Edibles
Gummies, Candy, Foods,Beverages

Concentrates
tinctures, topicals, softgels, patches, sprays, dissolvables, intranasal, suppositories, inhalers, isolates, injections

EMERGING CANNABIS PRODUCTS

- PRODUCTS SOLD BY ROUTES OF ADMINISTRATION
  - Multisystem (41%)
  - Respiratory (37%)
  - Digestive (20%)
- PRODUCTS SOLD BY CANNABINOID CLASSIFICATION
  - Δ9-THC (63.3%)
  - Cannabidiols (25.62%)
- PRODUCTS SOLD BY PRODUCT CATEGORIES
  - Flower buds (20%)
  - Cartridges (12%)
  - Joints (8%)

Nali MC, Yang JS, Li Z, Larsen MZ, Mackey TK. Cannabis-Derived Product Types, Flavors, and Compound Types From an E-Commerce Website. JAMA Netw Open. 2024 Oct 1;7(10):e2440376. doi: 10.1001/jamanetworkopen.2024.40376. PMID: 39432307; PMCID: PMC11581530.



Connor, J.P., Stjepanović, D., Le Foll, B. et al. Cannabis use and cannabis use disorder. Nat Rev Dis Primers 7, 16 (2021). https://doi.org/10.1038/s41572-021-00247-4

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CANNABIS USE-ATTRIBUTABLE ILLNESSES

Cancers

- Lung
- Testicular

Cardiovascular disease

- Tachycardia
- Hypertension
- Atrial Fibrillation
- Arrhythmias

Neuropsychiatric

- Sedation
- Psychosis
- Mood disorders
- Cannabinoid hyperemesis syndrome

Reproductive Problems

- Infertility
- Problems with conception
- Low birthweight babies
- Abnormal neurodevelopment in babies

Chandy, M., Nishiga, M., Wei, T. T., Hamburg, N. M., Nadeau, K., & Wu, J. C. (2024). Adverse impact of cannabis on human health. Annual review of medicine, 75(1), 353-367.

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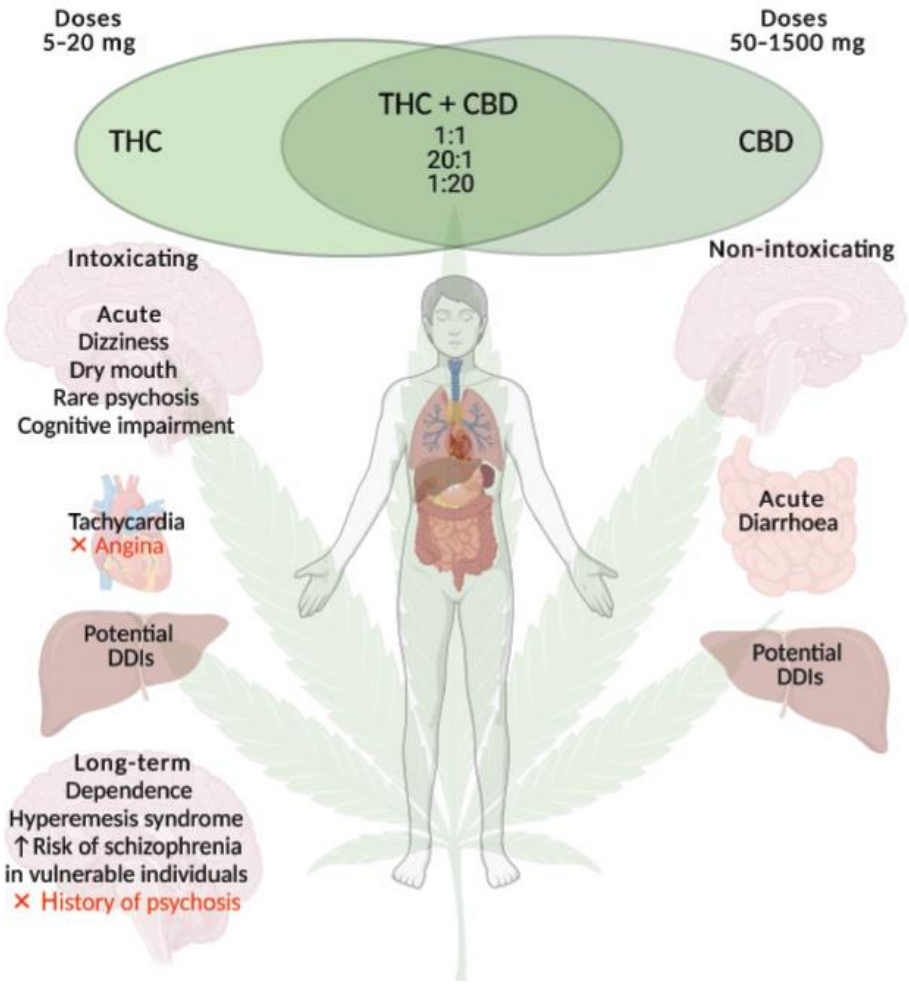
ADVERSE EFFECTS OF CANNABIS DEPENDS ON THC:CBD RATIOS



Arnold, J. C. (2021). A primer on medicinal cannabis safety and potential adverse effects. *Australian journal of general practice*, *50*(6), 345-350.

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EFFECT OF CANNABIS USE ON MENTAL DISORDERS

Mental Disorder	Effect of Cannabis
Schizophrenia	Early onset and increased risk for psychosis, cognitive impairments
Major Depressive Disorder	Risk for and early onset of depression, higher rates of depression
Bipolar Disorder	Earlier onset, may trigger manic episodes, increased frequency and severity of episodes
Anxiety Disorders	Increased anxiety symptoms, panic, paranoia
Post-traumatic Stress Disorder	Increased symptoms of anxiety and panic

Lowe, D. J., Sasiadek, J. D., Coles, A. S., & George, T. P. (2019). Cannabis and mental illness: a review. European archives of psychiatry and clinical neuroscience, 269(1), 107-120.
Onaemo, V. N., Fawehinmi, T. O., & D'Arcy, C. (2021). Comorbid cannabis use disorder with major depression and generalized anxiety disorder: a systematic review with meta-analysis of nationally representative epidemiological surveys. Journal of affective disorders, 281, 467-475.

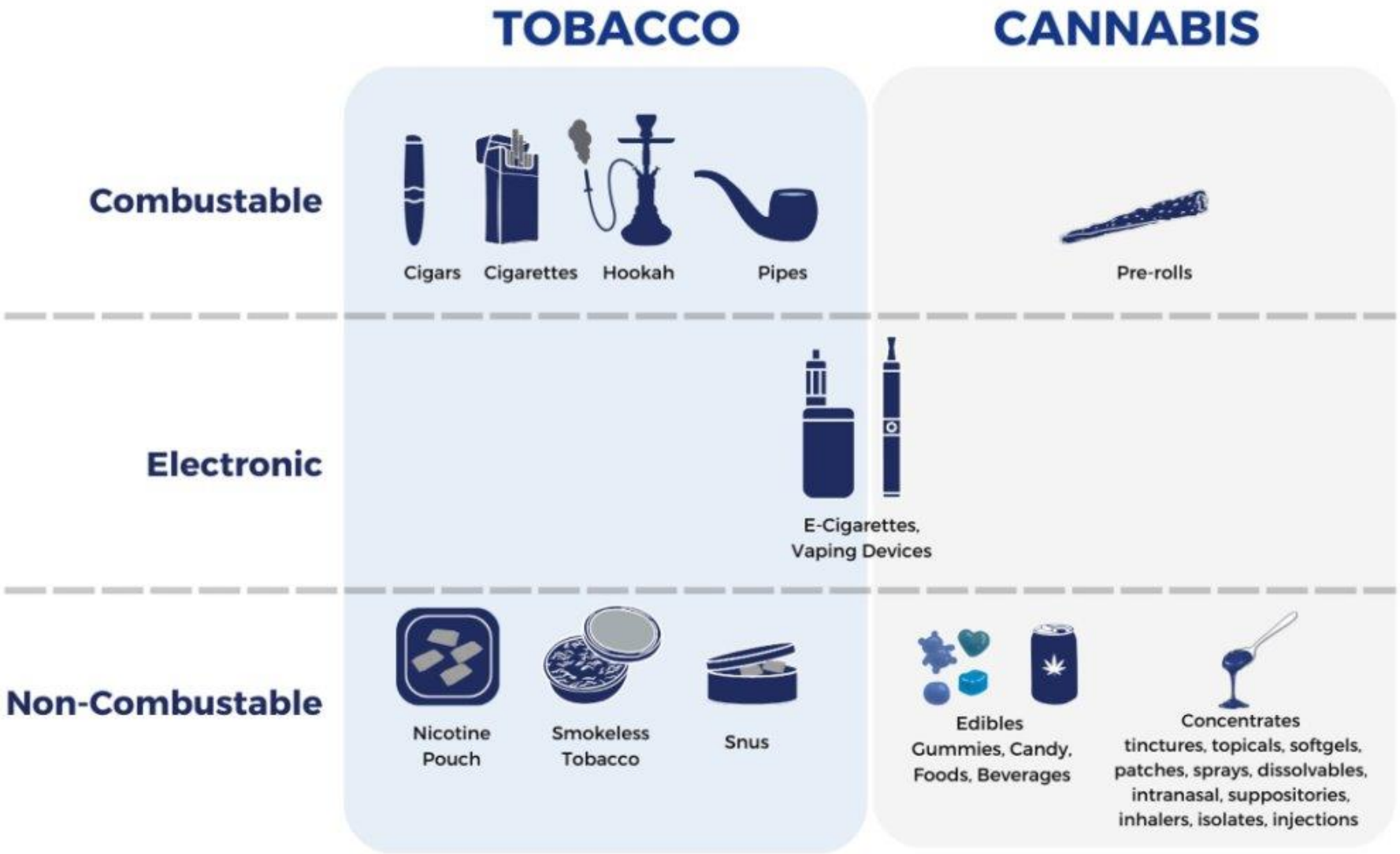
TOBACCO AND CANNABIS CO-USE

SUBSTANCE USE DISORDER (DSM-V)

Problematic pattern of use of substance leading to clinically significant impairment or distress, as manifested by **at least two** of the following, occurring within a 12-month period:

- Substance is often taken in **larger amounts or over a longer period** than was intended.
- There is a persistent **desire or unsuccessful effort** to cut down or control use of substance.
- A **great deal of time is spent in activities** necessary to obtain substance, use substance, or recover from its effects.
- **Craving**, or a strong **desire or urge** to use substance.
- Recurrent use of substance resulting in a **failure to fulfill major role obligations** at work, school, or home.
- Continued use of substance despite **having persistent or recurrent social or interpersonal problems** caused or exacerbated by the effects of its use.
- Important social, occupational, or recreational activities are **given up** or reduced because of use of substance.
- Recurrent use of substance in situations in which it is **physically hazardous**.
- Use of substance is continued despite knowledge of having a **persistent or recurrent physical or psychological problem** that is likely to have been caused or exacerbated by substance.
- **Tolerance**, as defined by either of the following:
  - A need for markedly increased amounts of cannabis to achieve intoxication or desired effect.
  - A markedly diminished effect with continued use of the same amount of cannabis.
- **Withdrawal**, as manifested by either of the following:
  - The characteristic withdrawal syndrome for substance (as specified in the DSM- 5 for each substance).
  - Substance is taken to relieve or avoid withdrawal symptoms.

ROUTES OF ADMINISTRATION AND CO-USE



Gibson, L. P., Parks, M. J., Kimmel, H. L., Blanco, C., Ciccolo, J., Creamer, M. R., ... & Kaufman, A. (2026). Tobacco and cannabis co-use by route of administration in the United States, 2022/2023. *Addictive Behaviors*, 108595.

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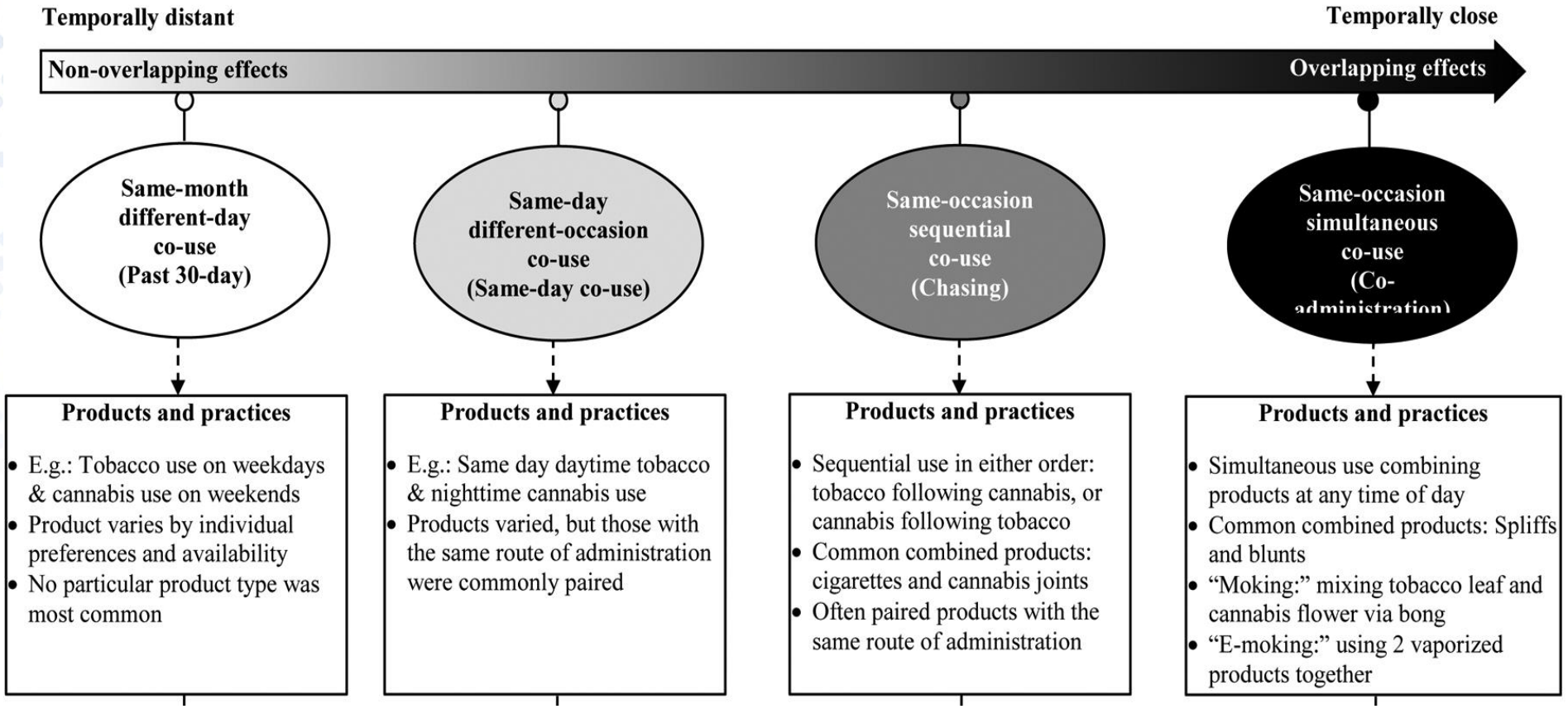
PATTERNS OF TOBACCO AND CANNABIS CO-USE



Nguyen, N., Islam, S., Llanes, K. D., Koester, K. A., & Ling, P. M. (2024). Classification of patterns of tobacco and cannabis co-use based on temporal proximity: a qualitative study among young adults. *Addictive behaviors*, *152*, 107971.

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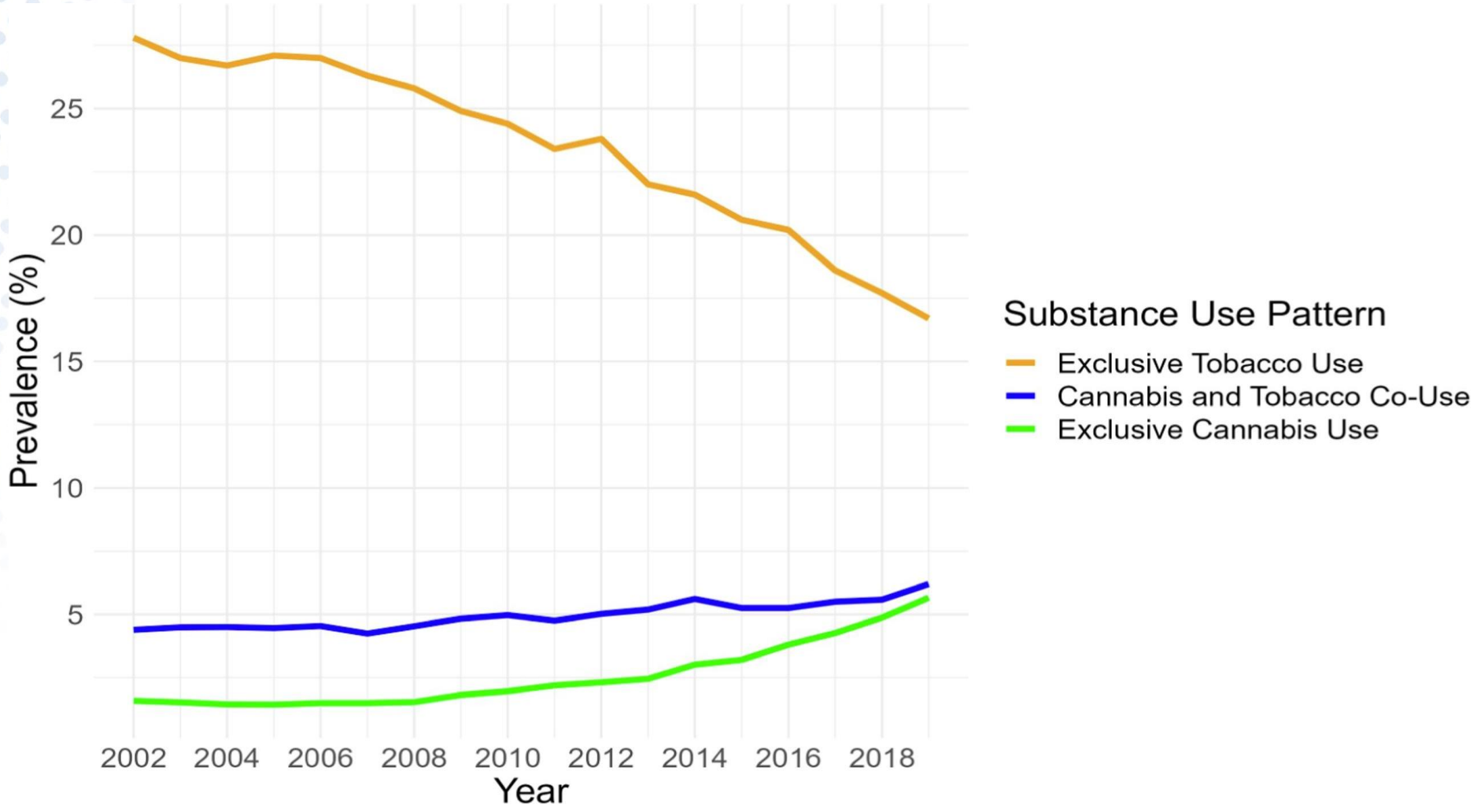

Rubenstein, D., McClernon, F. J., & Pacek, L. R. (2024). Trends in cannabis and tobacco co-use in the United States, 2002–2021. *Addictive Behaviors*, *158*, 108129.

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PREVALENCE OF CO-USE AMONG GENERAL POPULATION

Past 30-day cannabis use among tobacco users

- Young adults (18-24 years of age): **47.9%**
- Adults (25+ years of age): **27.7%**
- **2-10x** more common among cigarette smokers than non-smokers

Cohn AM, Chen S. Age groups differences in the prevalence and popularity of individual tobacco product use in young adult and adult marijuana and tobacco co-users and tobacco-only users: Findings from Wave 4 of the population assessment of tobacco and health study. Drug Alcohol Depend. 2022 Apr 1;233:109278. doi: 10.1016/j.drugalcdep.2022.109278. Epub 2022 Jan 10. PMID: 35151023; PMCID: PMC9028208.; Weinberger AH, Wyka K, Goodwin RD. Impact of cannabis legalization in the United States on trends in cannabis use and daily cannabis use among individuals who smoke cigarettes. Drug Alcohol Depend. 2022 Sep 1;238:109563. doi: 10.1016/j.drugalcdep.2022.109563. Epub 2022 Jul 8. PMID: 35870333.

CO-USE AND CONSEQUENCES

Co-use poses greater risks than individual use

- Increased toxin exposure
- Psychiatric effects
- Exacerbation of substance-specific consequences
- Cessation outcomes

WHY FOCUS ON PEOPLE WITH MENTAL HEALTH CHALLENGES?

MENTAL ILLNESS

A syndrome of clinically relevant disturbance in **cognition**, **emotional** regulation, or **behavior,** caused by dysfunction in the psychological, biological, or developmental processes underlying mental functioning

Approximately 23.4% of U.S. adults experience mental illness annually

American Psychiatric Association. (2013). *DSM 5*. American Psychiatric Association.**2014 National Survey on Drug Use and Health: http://www.samhsa.gov/data/sites/default/files/NSDUH-FRR1-2014/NSDUH-FRR1-2014.htm**

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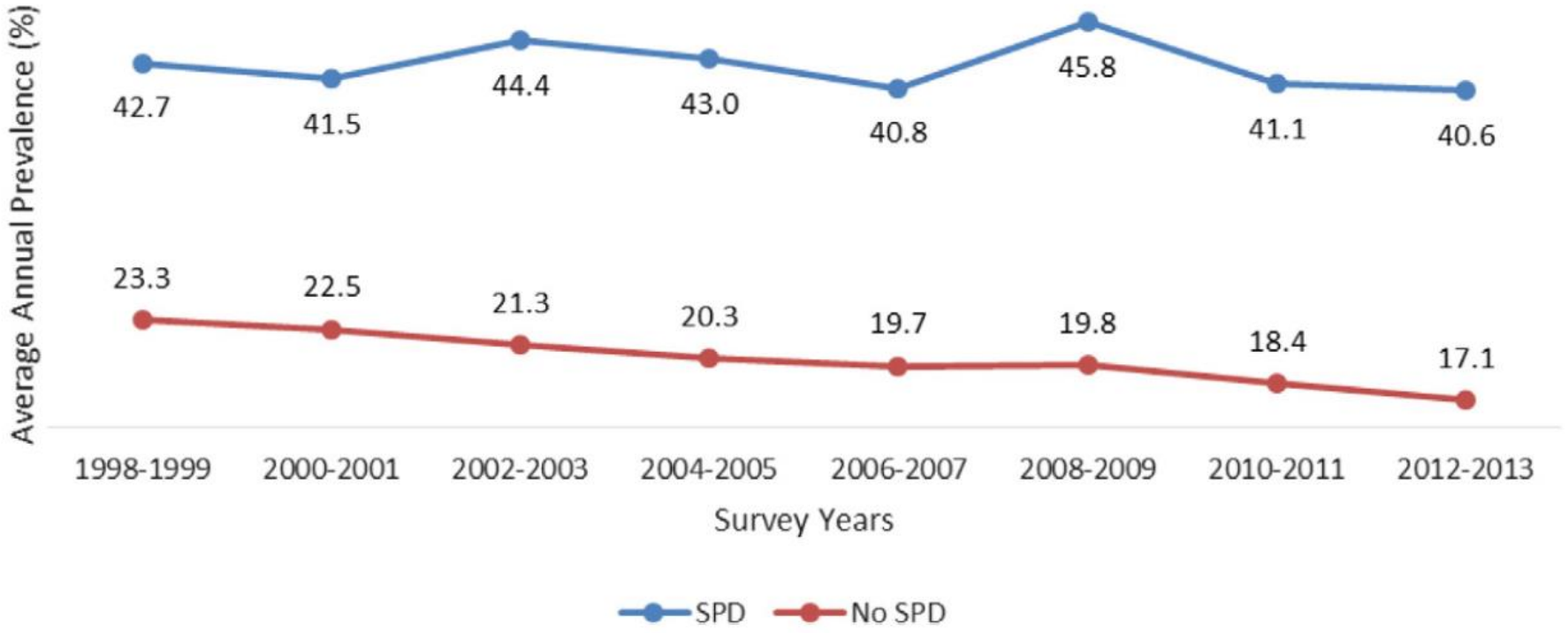
CURRENT SMOKING, BY SERIOUS PSYCHOLOGICAL DISTRESS STATUS (1993-2013)



Forman-Hoffman, V. L., Hedden, S. L., Miller, G. K., Brown, K., Teich, J., & Gfroerer, J. (2017). Trends in cigarette use, by serious psychological distress status in the United States, 1998–2013. *Addictive Behaviors*, *64*, 223-228; Ziedonis D, Hitsman B, Beckham JC, et al. Tobacco use and cessation in psychiatric disorders: National Institute of Mental Health report. *Nicotine Tob Res Off J Soc Res Nicotine Tob*. 2008;10(12):1691-1715. doi:10.1080/14622200802443569.

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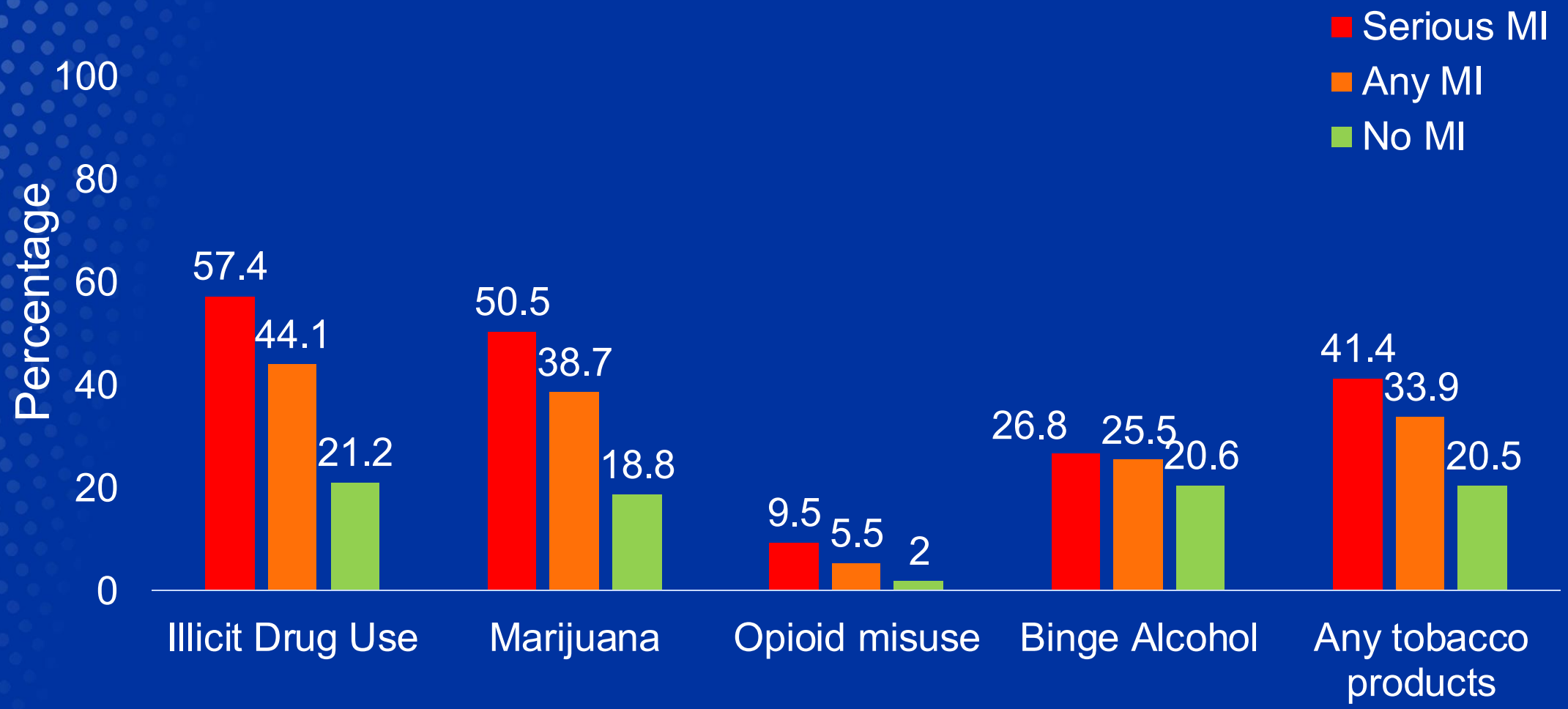
PERCENT OF PAST YEAR SUBSTANCE USE BY MENTAL ILLNESS STATUS AMONG ADULTS IN THE U.S. (2024)



2024 National Survey on Drug Use and Health: https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health/national-releases/2024#detailed-tables

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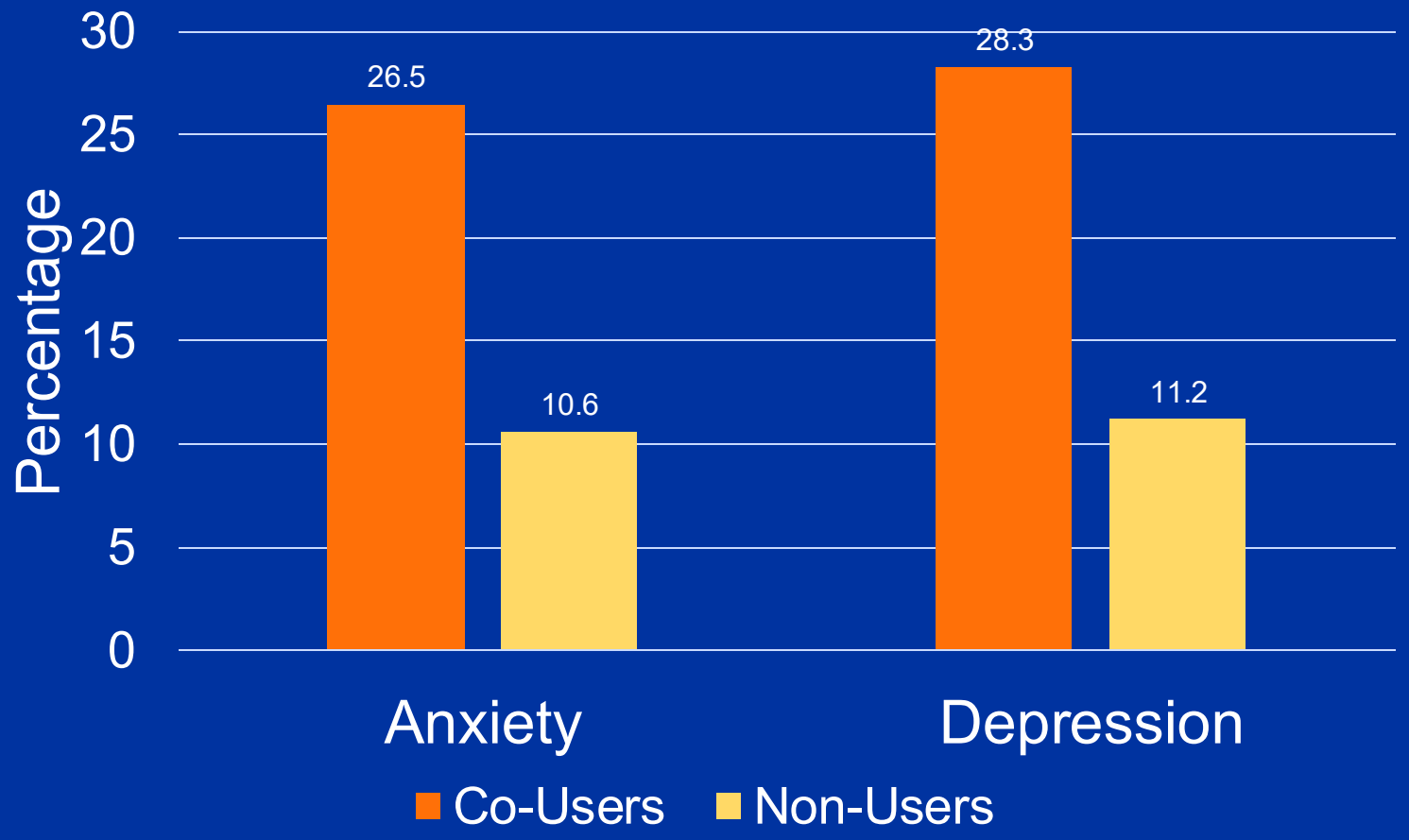
PREVALENCE OF CO-USE AMONG ADULTS WITH A MENTAL ILLNESS



Nguyen N, Peyser ND, Olgin JE, Pletcher MJ, Beatty AL, Modrow MF, Carton TW, Khatib R, Djibo DA, Ling PM, Marcus GM. Associations between tobacco and cannabis use and anxiety and depression among adults in the United States: Findings from the COVID-19 citizen science study. PLoS One. 2023 Sep 13;18(9):e0289058. doi: 10.1371/journal.pone.0289058. PMID: 37703257; PMCID: PMC10499225.

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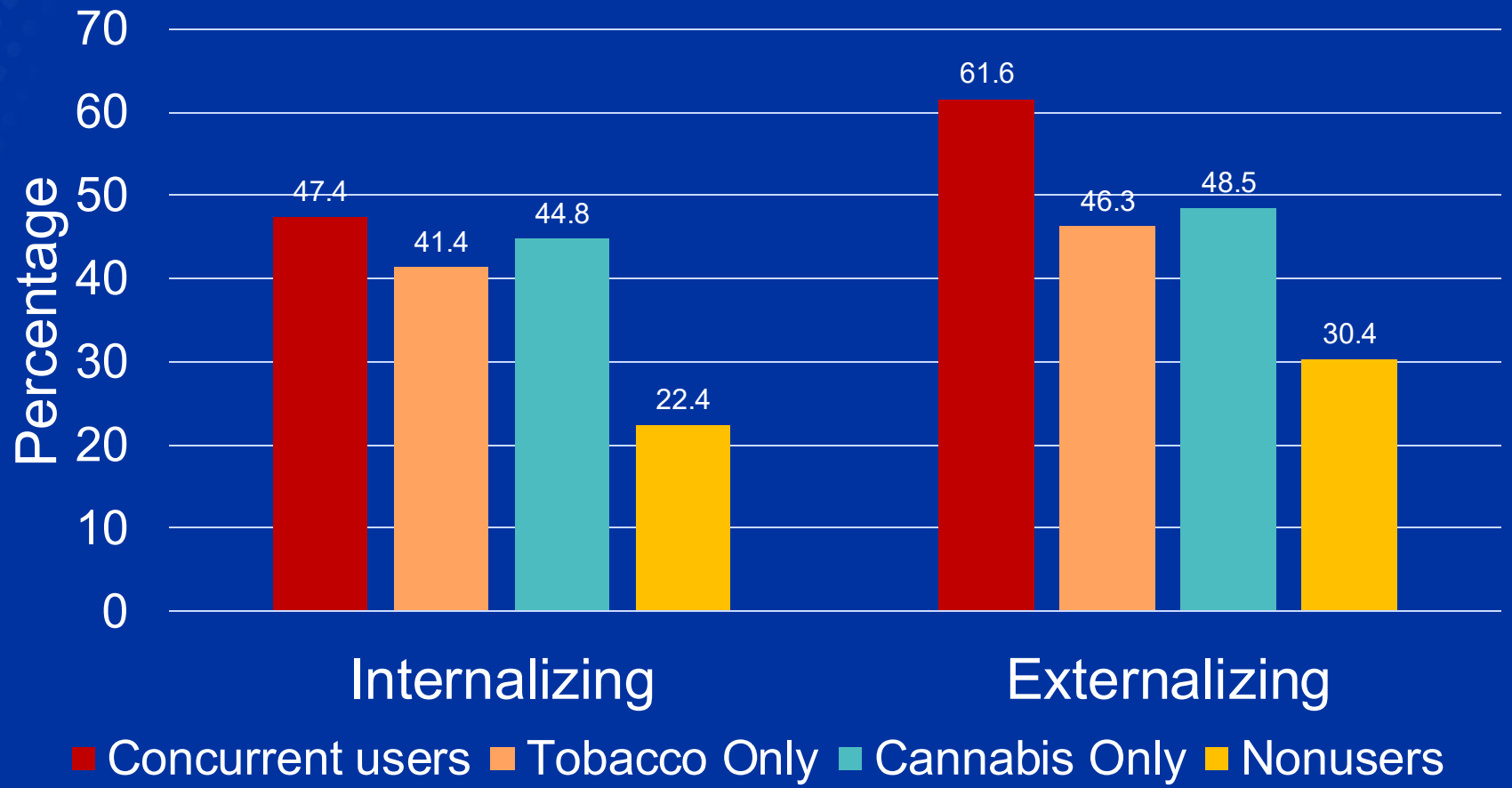
PREVALENCE OF CO-USE AMONG YOUTHS WITH AN INTERNALIZING OR EXTERNALIZING DISORDER



Do, V. V., Ling, P. M., Chaffee, B. W., & Nguyen, N. (2024). Concurrent use of tobacco and cannabis and internalizing and externalizing problems in US youths. *JAMA network open*, 7(7), e2419976-e2419976.

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TOBACCO AND CANNABIS USE IN KENTUCKY: POLICY, PRODUCTS, AND BEHAVIORAL HEALTH IMPACT

TOBACCO AND CANNABIS USE IN KENTUCKY

Adult Tobacco Use

- 17.4% of adults smoke cigarettes daily
  - 34.2% of adults with any MI
- 10.7% of adults use e-cigarettes
- 7.4% use smokeless tobacco

Youth Tobacco Use

- 26.1% use e-cigarettes, 8.9% smoke cigarettes, 6.4% use smokeless tobacco
- 66.8% of behavior events in public schools
- 3 times more likely to use cigarettes and 2.5 times more likely to e-cigarettes with serious psychological distress

Adult Cannabis Use

- 9.8% use of adults use cannabis (49.2% heavy users (≥20/past 30 days)
- 77.5% smoke as mode primary of use

Youth Cannabis Use

- 4.5% used cannabis (smoked and/or vaped)
- 22.2% of behavior events in public schools
- 2.5 times more likely to use cannabis with serious psychological distress
- Cannabis-related poisonings rose 43% between 2023 and 2024

Kentucky Department of Education. (2024). 2023–2024 Safe Schools Annual Statistical Report. Office of Continuous Improvement and Support, Division of Student Success. https://www.education.ky.gov/school/sdfs/Documents/2023-2024%20School%20Safety%20Annual%20Statistical%20Report.pdf; Kentucky Incentives for Prevention. (2023, March 6). The state of youth mental health in Kentucky: KIP infographic. https://static1.squarespace.com/static/5a30a0572aeba58c0fb5e2eb/t/6414aaeb91f00c6a328e50b4/1679076077759/KIP+Infographic-Youth+Mental+Health-6Mar2023.pdf; Substance Abuse and Mental Health Services Administration. (2022). Kentucky 2022 NSDUH state-specific tables of substance use and mental health estimates. Center for Behavioral Health Statistics and Quality, U.S. Department of Health and Human Services. https://www.samhsa.gov/data/sites/default/files/reports/rpt44486/2022-nsduh-sae-state-tables/NSDUHsaeKentucky2022.pdf

TOBACCO AND CANNABIS USE IN KENTUCKY

Tobacco product use

Greatest prevalence among:

- No significant gender differences
- Aged 45 to 54 (25%)
- Highschool education or less (37.2%)
- No significant race differences
- Appalachia region (25.2%)
- Household income of <$25,000 (28.2%)

Cannabis use

Greatest prevalence among:

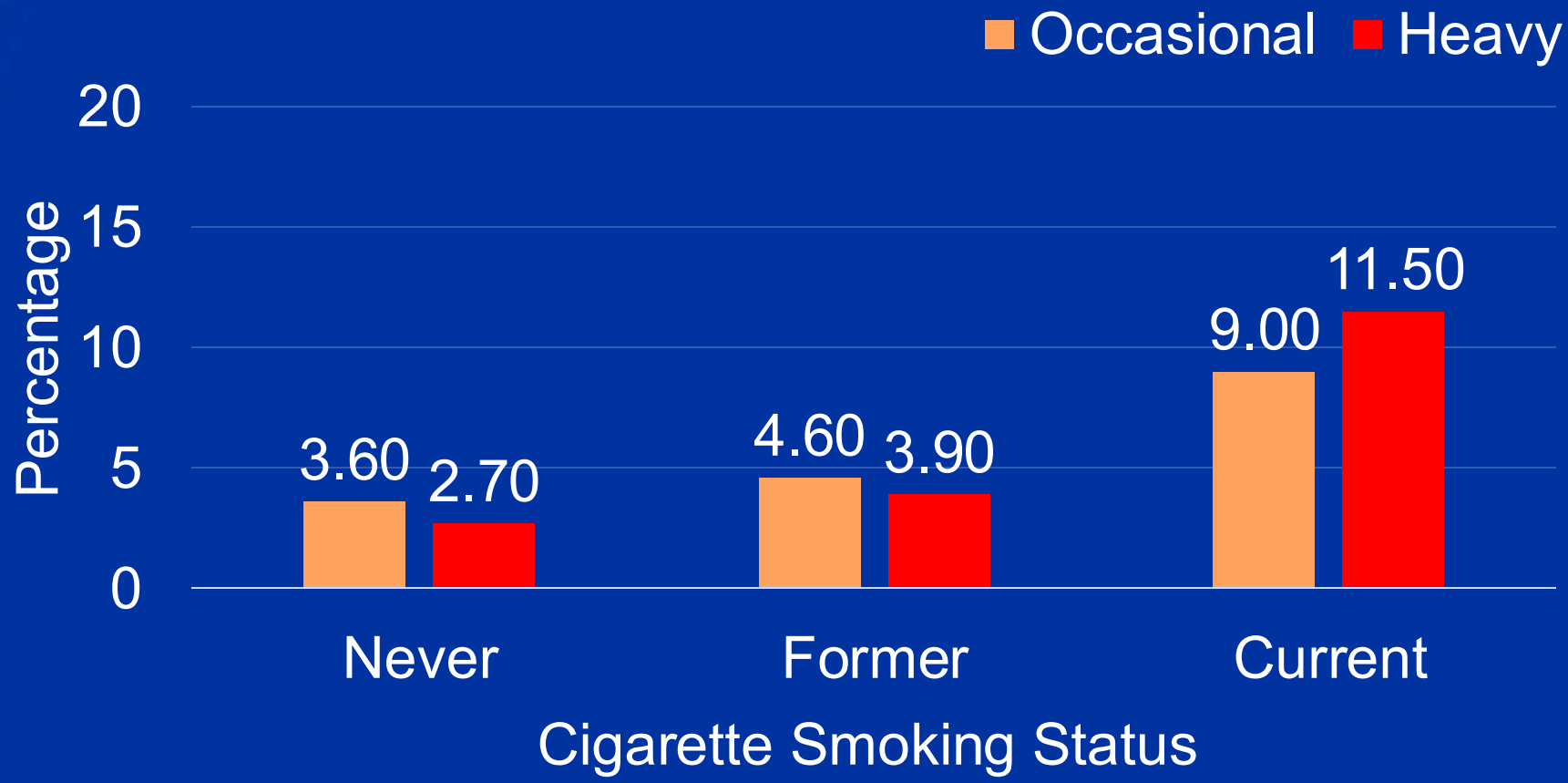
- Males (12.3%) vs females (7.5%)
- Aged 18 to 34 (16.1%)
- Highschool education or less (10.9%)
- Black adults (18.3%) vs White adults (9.0%)
- Central KY region (11.7%)
- Household income of <$25,000 (5.9-7.1%)

Reason for use:

- 42.8% use for both medical and recreational
- 24.4% medical-only
- 32.8% recreational-only

Truth Initiative. (2024, April 9). Tobacco use in Kentucky 2023. https://truthinitiative.org/research-resources/smoking-region/tobacco-use-kentucky-2023; Shafer S, Kennedy G, Christian WJ. Population-based cross-sectional analysis of cannabis use among Kentucky adults, 2020-21. J Cannabis Res. 2024 Dec 20;6(1):44. doi: 10.1186/s42238-024-00251-x. PMID: 39707551; PMCID: PMC11662459.

PERCENTAGE OF CURRENT SMOKERS WHO USE CANNABIS IN KENTUCKY (2021-2022)



Shafer S, Kennedy G, Christian WJ. Population-based cross-sectional analysis of cannabis use among Kentucky adults, 2020-21. J Cannabis Res. 2024 Dec 20;6(1):44. doi: 10.1186/s42238-024-00251-x. PMID: 39707551; PMCID: PMC11662459.

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TOBACCO POLICIES IN KY

KRS 438.3061 and KRS 438.3063 took effect January 2026

- Establishes regulations for tobacco, nicotine, and vapor product licensing in KY
  - Requires retailers to obtain license to sell products
  - Compliance inspections without search warrant
  - Age restrictions: 21 years or older to purchase any products
  - May only sell authorized products

TOBACCO POLICIES IN KY

The “Kentucky Vape Ban” (HB11) took effect on Jan. 1, 2025

- Only allows sales of authorized products with safe harbor certification with the US Food and Drug Administration

The Synar Program

Federal-State partnership aimed at reducing youth access to tobacco products

States, territories, and tribal entitles required to:

- Enforce laws prohibiting tobacco and nicotine sales to individuals under age 21
- Conduct annual, unannounced inspections of sales compliance among sales outlets accessible to minors
- Report results to annual Synar survey
- Achieve noncompliance rate <20%
- The Tobacco Retail Underage Sales Training (TRUST)

Kentucky Synar Retail Violation Rates 1997-2023

https://dbhdid.ky.gov/sud/synar

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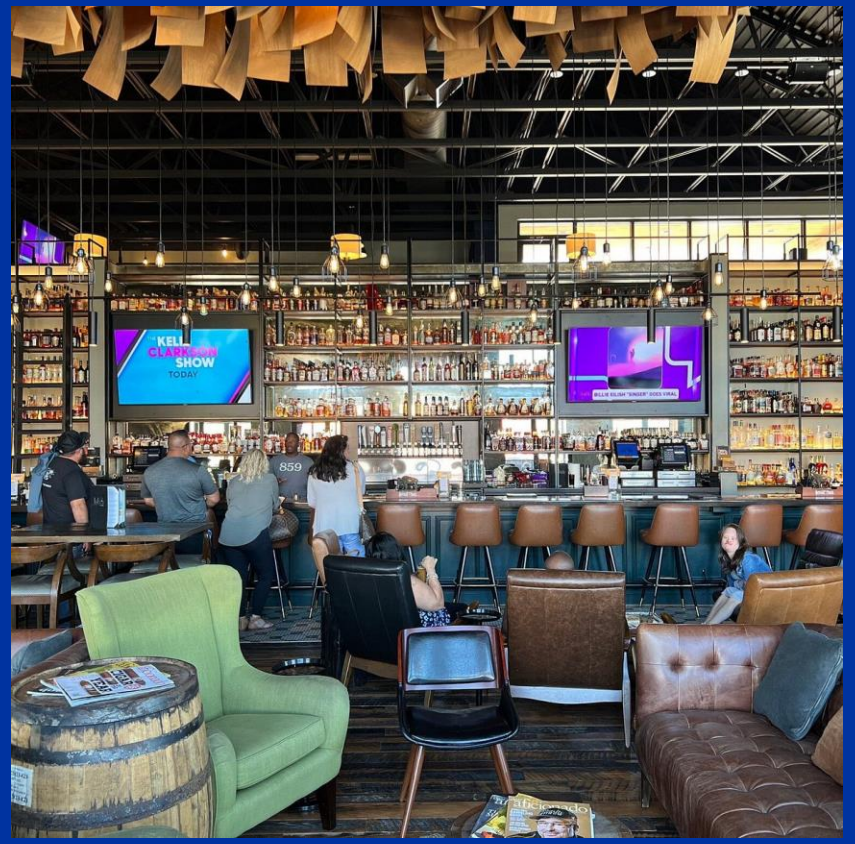
CONSTANTLY EVOLVING POLICIES

An ACT relating to cigar bars (HB194) filed January 14th, 2026

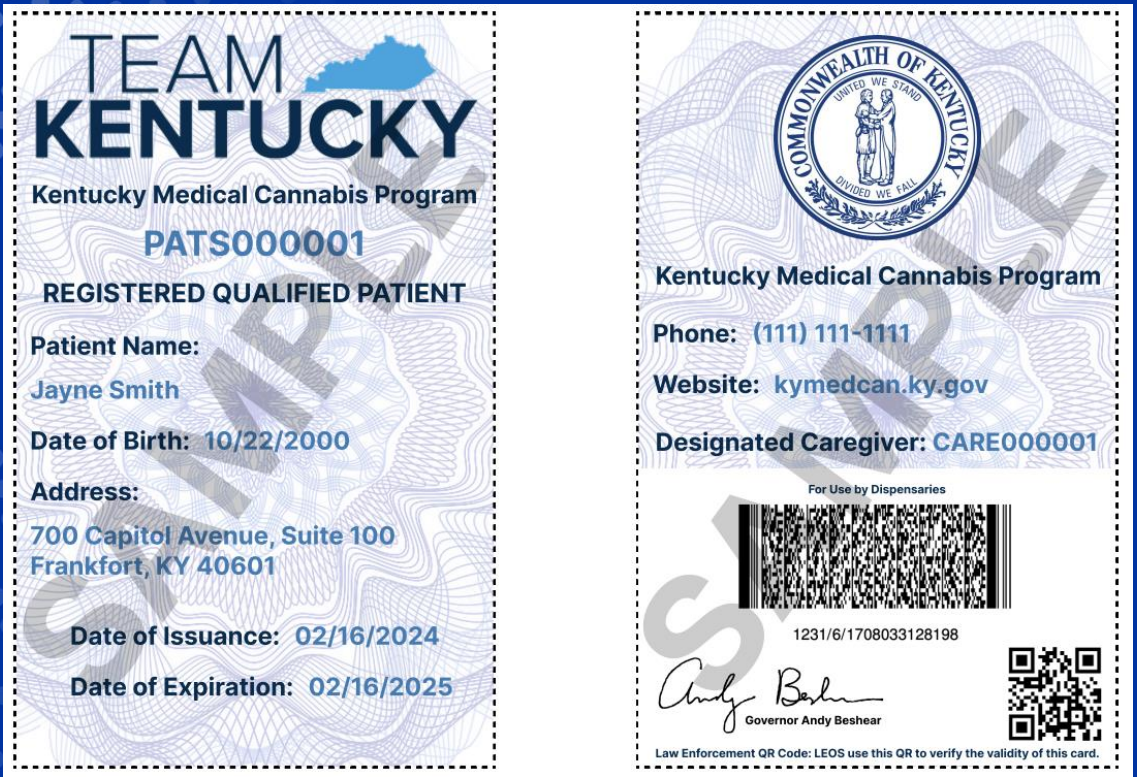
- Exempts cigar bars from smoke-free laws



CURRENT CANNABIS LAWS AND POLICIES IN KY

Policy Area	Key Provisions
Medical Cannabis	• Medical cannabis legalized (Jan 1, 2025) • Smoking prohibited, vaporization and other forms allowed • Licensed growers/processors/dispensaries only • Access allowed only for certified patients with qualifying conditions
Recreational Cannabis	• Recreational possession, sale, and use remain illegal statewide
Hemp & Hemp-Derived Cannabinoids (CBD, Delta-8, THCa)	• Legal if containing ≤0.3% Δ-9 THC • Subject to testing, labeling, and age-restriction requirements depending on product type

CANNABIS POLICIES IN KY



"Kentucky Medical Marijuana Act" (KRS 218B) – took effect January 1, 2025

- Established medical cannabis program for individuals with qualifying conditions
- Permits raw plant material, concentrates, THC-infused products, and topicals
- Regulated THC concentration
- Supply limits

CANNABIS POLICIES IN KY

Hemp-Derived Cannabinoids (KRS 260.850–260.869)

- Established regulation, licensing, and promotion guidelines for industrial hemp production
- Products must contain ≤0.3% Delta-9 THC

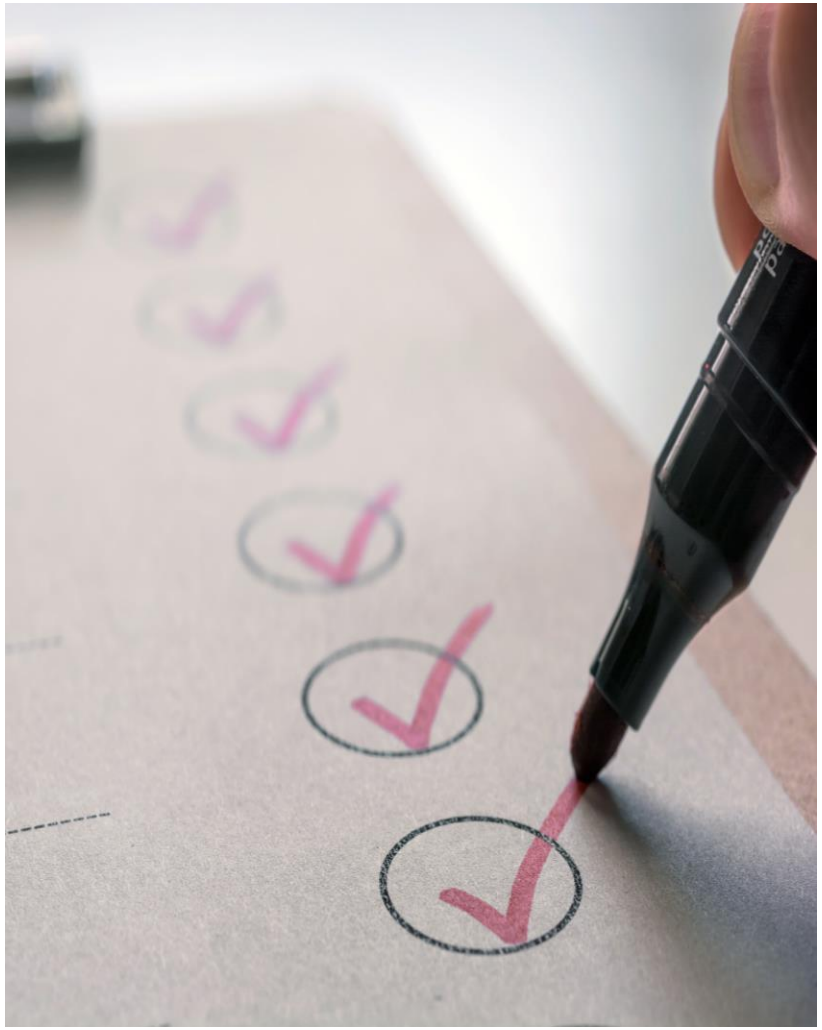
ONLINE SALES OF CANNABINOID PRODUCTS

- Medical cannabis may be delivered by licensed dispensaries to registered cardholders at their home address (HB 829)
- Shipping **recreational** cannabis across state lines is a **federal offense**, regardless of state laws
- Hemp-derived cannabinoid products may be shipped from online retailers in compliance with the federal farm bill
    - The 2025 Appropriations act, to take effect November 12, 2026
        - 0.3% limit will apply to total THC concentration
            - Strict cap of 0.4mg THC per container
        - Ban synthetic and converted cannabinoids

IMPLICATIONS

IMPLICATIONS FOR PREVENTION

- Youth prevention, focusing on access pathways
- Tailor prevention approaches for mental health populations
- Address co-use and product potency awareness



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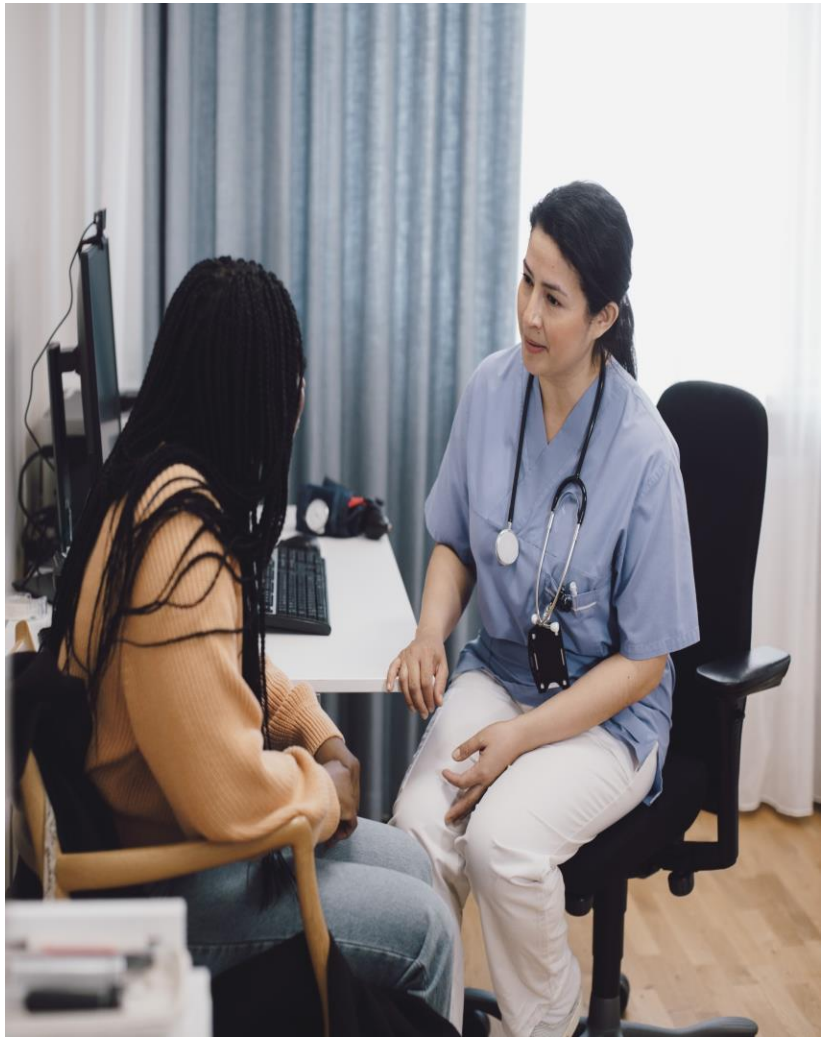
IMPLICATIONS FOR PRACTICE

- Routine, integrated screening for use at intake and follow up
- Integrate brief interventions as standard of care in mental health settings
  - 5 A's of Smoking Cessation
  - Motivational Interviewing
- Harm reduction



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Behavioral Health Wellness Environments for Living and Learning

IMPLICATIONS FOR POLICY

- Address changes in product consumption following policy shifts
- Improve treatment capacity in behavioral health systems
- Prioritize equity and access for vulnerable populations

SUMMARY

- Nicotine and cannabis co-use is common and clinically significant among individuals with behavioral health conditions
- Kentucky's evolving nicotine and cannabis policies are reshaping access, product availability, and risk exposure.
- Behavioral health systems must adapt by integrating prevention, screening, and treatment strategies to address this changing landscape

QUESTIONS?

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