



PTTC HHS REGION 9
Pacific Southwest



Emerging Drug Trends in the Pacific Southwest

Part 1: The Substance Use Landscape and Why We Care About Emerging Trends

Josh Esrick, MPP

Chief of TTA, Carnevale Associates, LLC

Olivia Stuart, LMSW

Associate, Carnevale Associates, LLC



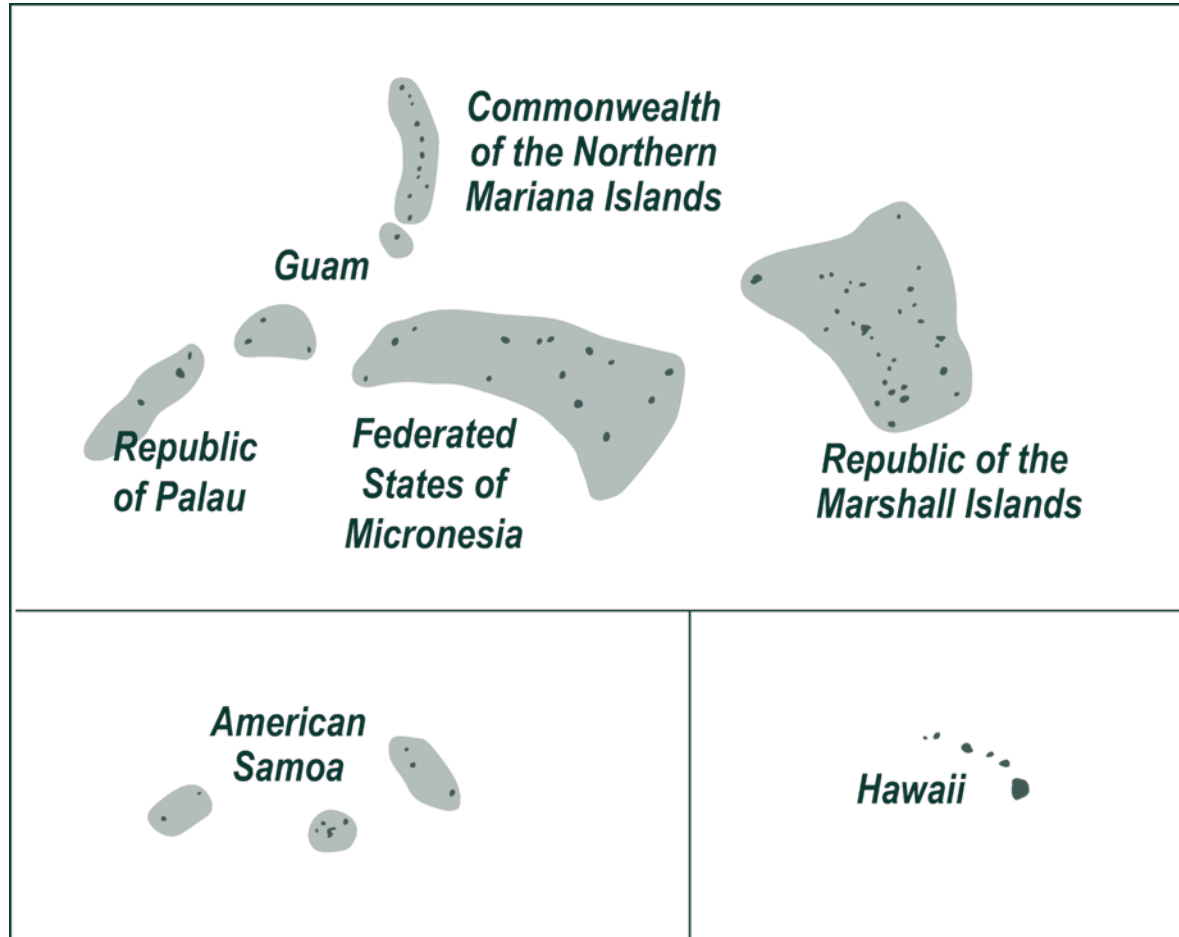
Disclaimer



This presentation is supported by SAMHSA of the U.S. Department of Health and Human Services (HHS) through SAMHSA Cooperative Agreement #5H79SP084319-02. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by SAMHSA/HHS, or the U.S. Government.

This webinar is being recorded and archived and will be available for viewing after the webinar. Please contact the webinar facilitator if you have any concerns or questions.

Pacific Southwest



Housekeeping

- Chat feature
- Q&A feature
- Webinar recording and materials
- Certificates of attendance



Learning Objectives

1. Explain the importance of understanding emerging trends
2. Identify opportunities to address emerging trends through strategic planning
3. Identify risk and protective factors that influence the emergence of new trends
4. Describe the current overview of substance use in the Pacific Southwest

The Importance of Understanding Emerging Trends



What are Emerging Trends?

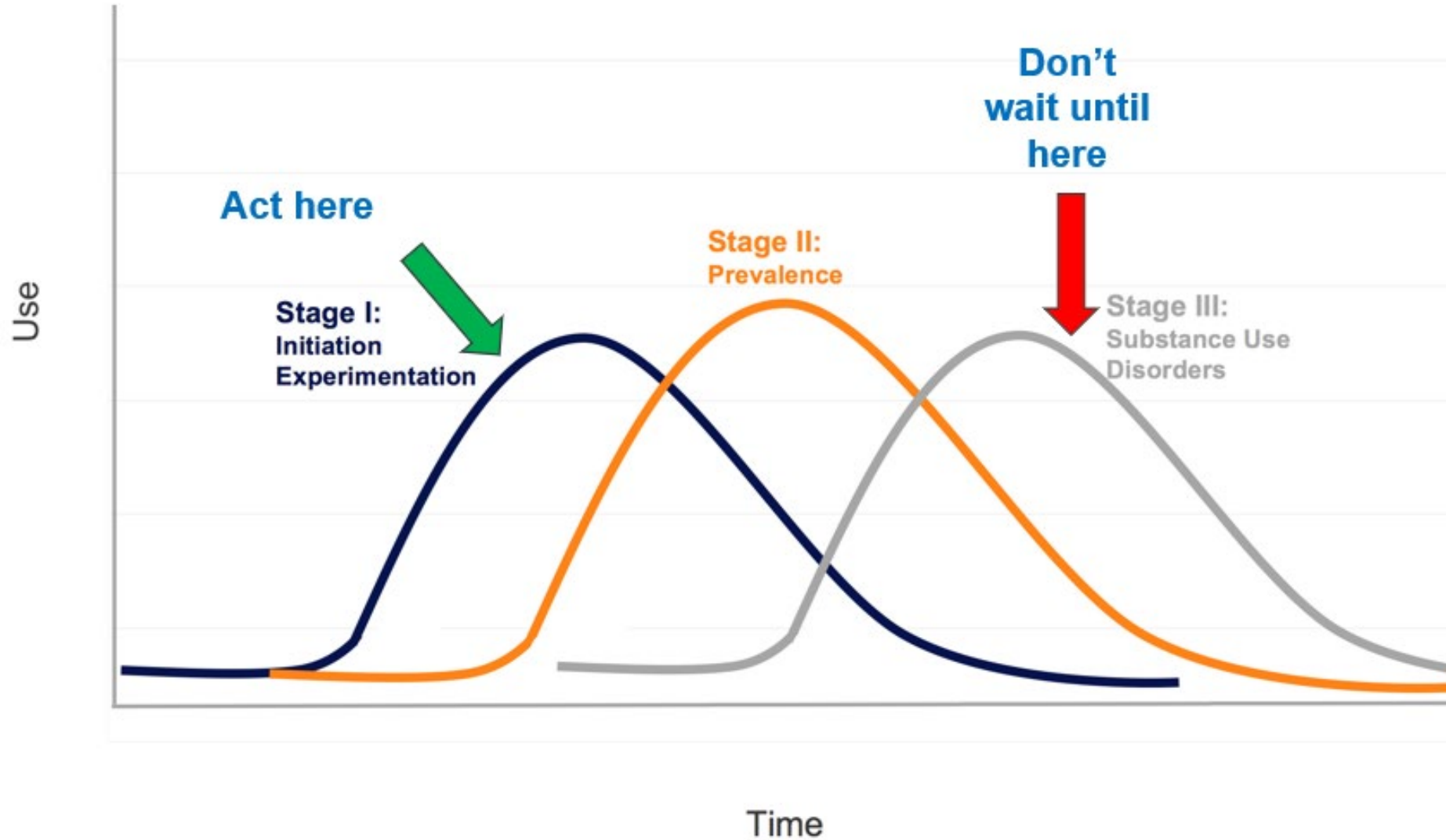
- New or changing patterns of substance use
- Can be the emergence of novel substances OR important changes in ongoing, “established” substances
- Vary significantly in scope and impact
 - E.g., fentanyl was once an emerging trend – but so was MT-45
- Often undetected initially in traditional quantitative sources due to data lag



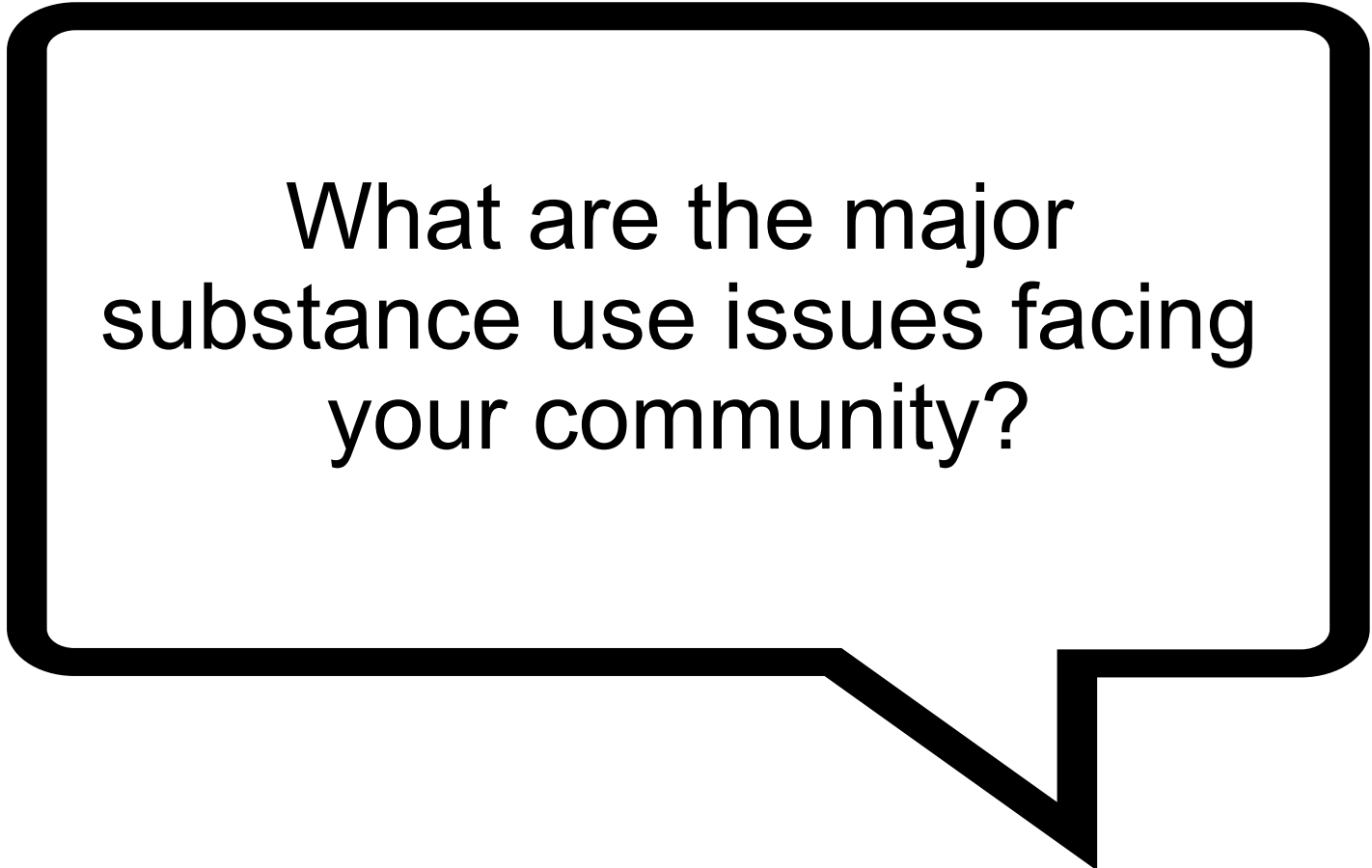
What Can Emerging Trends Tell Us?

- Informs us if specific substance prevalences are changing
- Informs us if substance use is increasing differently across populations
- Enables us to adjust our planning and implement new/different interventions
- Early awareness of trends allows us to respond proactively rather than retroactively
- By responding more rapidly to emerging trends, we can alter the scope, severity, and duration of potential epidemics

The Three Stages of an Epidemic



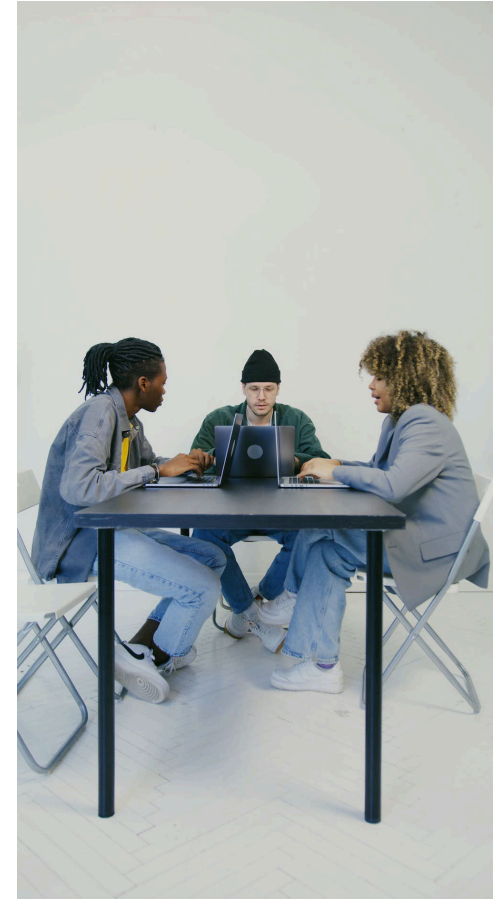
Discussion Question 1



What are the major substance use issues facing your community?

Emerging Trend Impacts On Our Work

1. Shift or confirm our priorities
2. Change the partners needed
3. Review or revise our strategic planning



Shift or Confirm Priorities

- Prevention resources are limited, so we likely cannot address every emerging trend
 - And we need to be careful that we are not accidentally promoting consumer awareness and encouraging use of new substances
- Need to balance efforts between...
 - Emerging trends
 - Ongoing issues
 - Underlying needs
- Consider formalized prioritization techniques
 - Strategies grids, multi-voting techniques, prioritization matrices, etc.

Changes in Partners

- Addressing emerging trends may require working with new or unfamiliar partners
 - E.g., xylazine is a veterinary medicine — you may want to work with veterinarians or animal medical supply companies
- Familiarity with new substances and the context surrounding them will help identify potential partners and their goals
- Need to balance developing any new partnerships with maintaining and growing successful, existing partnerships

Review or Revise Strategic Plans

- Goals or objectives may need updating
- Updates would require new:
 - Performance measures
 - Targets
 - Interventions
- Ask yourself: *do resources exist to support the revisions?*



Addressing Emerging Trends Through Strategic Planning



Discussion Question 2

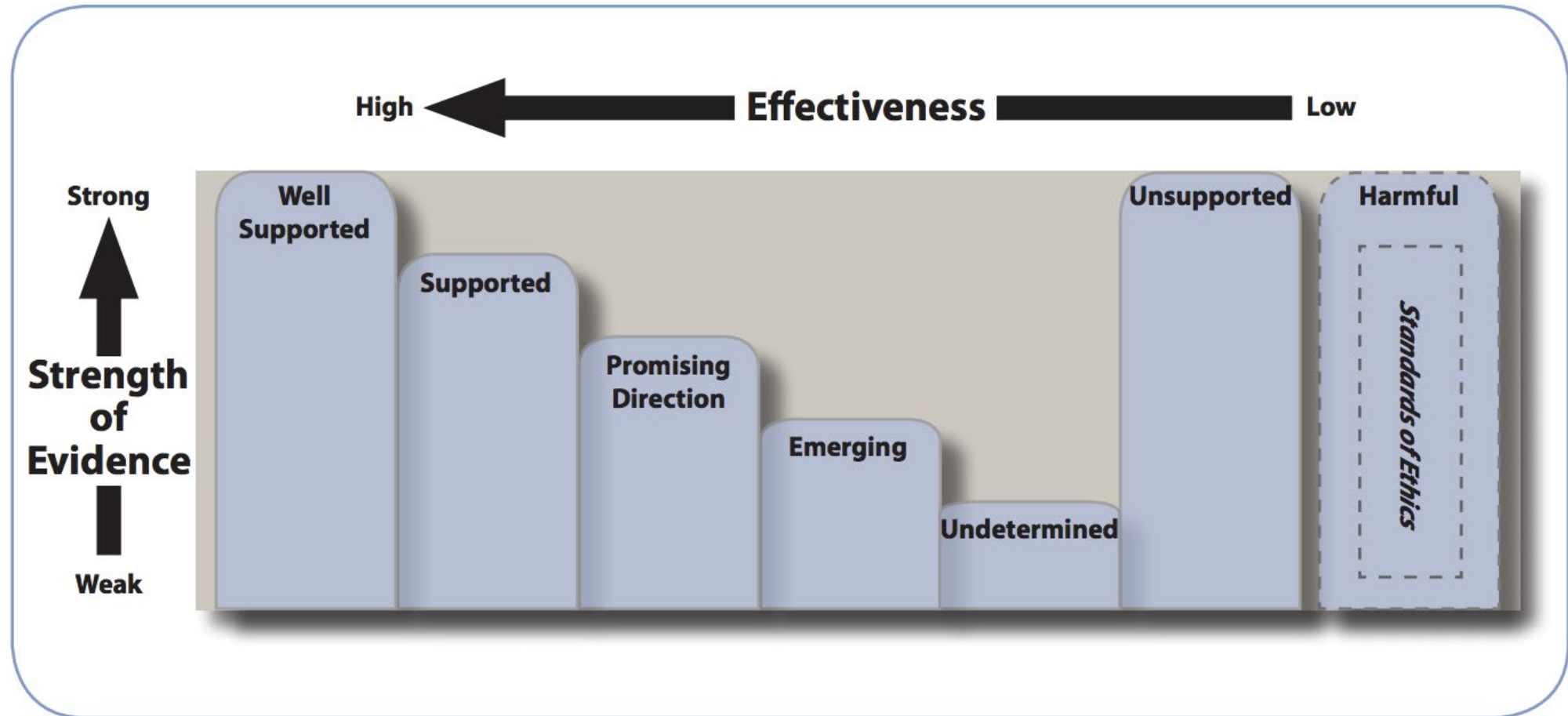
How familiar are you with strategic planning?

Have you found it helpful in developing your prevention efforts?

Strategic Planning

- Processes for identifying and implementing evidence-based prevention
 - Using data to establish goals
 - Using existing evidence to implement processes for achieving goals
 - Using new evidence to make adjustments
- Having evidence-based programs gives the greatest chance of success
- We can use strategic planning to figure out how to address emerging trends

Strategic Planning Lets Us Better Follow the Continuum of Evidence!



SAMHSA's Strategic Prevention Framework (SPF)



Step 1: Incorporating Emerging Trends into Assessment

- Identifying emerging trends early through epidemiological surveillance
 - Can provide info on where, when, how often, and to whom problems are happening
- Assessing risk and protective factors
- Determining community capacity
 - Resources
 - Readiness
- Sharing findings with stakeholders and the community



Step 2: Incorporating Emerging Trends into Capacity

- Forging new partnerships to address emerging trends, such as with:
 - Local government officials,
 - Faith communities,
 - Law enforcement,
 - Health care providers,
 - Community coalitions, etc.
- Raising community awareness about emerging trends
- Mobilizing community resources to respond to the issue



Step 3: Incorporating Emerging Trends into Planning

- Using assessment data to prioritize risk and protective factors associated with emerging trends
 - How much does this factor contribute to the problem?
 - Do we have the capacity to influence this factor?
- Identifying interventions that address (or can be adapted to address) emerging trends
 - Evidence-based
 - Conceptual fit
 - Practical fit



Step 4: Incorporating Emerging Trends into Implementation

- Deliver programs and practices that are responsive to emerging trends or their risk factors
- Ensure that strategies are meeting the needs of the community
- Continuously review and improve implementation to ensure programs and practices are:
 - Effectively addressing the issue
 - Not causing harm or creating new trends



Step 5: Incorporating Emerging Trends into Evaluation

- Identify which elements are working well (and not working well) to address emerging trends
- Track progression of the trends
- Obtain comparison data to determine impact of EBPs
- Advance public health and prevention science by sharing outcome data



Risk and Protective Factors that Influence Emerging Trends



Risk and Protective Factors

- Can be fixed or variable
- Are often correlated
- Can be cumulative
- May affect different populations in distinct ways
- Can change across the life course

Prevention's goal is to reduce risk factors and strengthen protective factors.

The Social-Ecological Model (CDC)



Poll Question 1

Which of the following is NOT an example of a protective factor against substance use?

1. Viewing substance use as dangerous to your health
2. Having healthy stress coping skills
3. Having a strong tolerance for addictive substances
4. Engaging in positive social activities
5. All of these are protective factors

Examples of Common Risk and Protective Factors

Risk Factors

- Mental health disorder
- Peer pressure
- Early use
- Poverty/economic status
- Childhood sexual abuse
- Family conflict or lack of family involvement

Protective Factors

- Resiliency
- Community connectedness
- Parental involvement
- Adequate housing
- Access to health care and social services
- Having peers who do not use substances

Non-Medical Drivers of Health (NMDOH)



All are relevant to substance use risk overall, but it's **social and community context** that are key to emerging trends.

Overview of Risk Factors for Emerging Trends

Legal status
of substances

Availability of
substances

Cost of
substance
manufacturing

Advances in
technology
and science

Maturity of the
drug epidemic

Proliferation of
social media

Changes in
societal
attitudes

Risk Factors for Emerging Trends, I

- Legal status of substances
 - Legal substances present a lower risk profile for use
 - Legal = easier access
- Increased availability of substances
 - Novel psychoactive substances are increasingly making up larger portions of the illicit drug market, making them easier to obtain



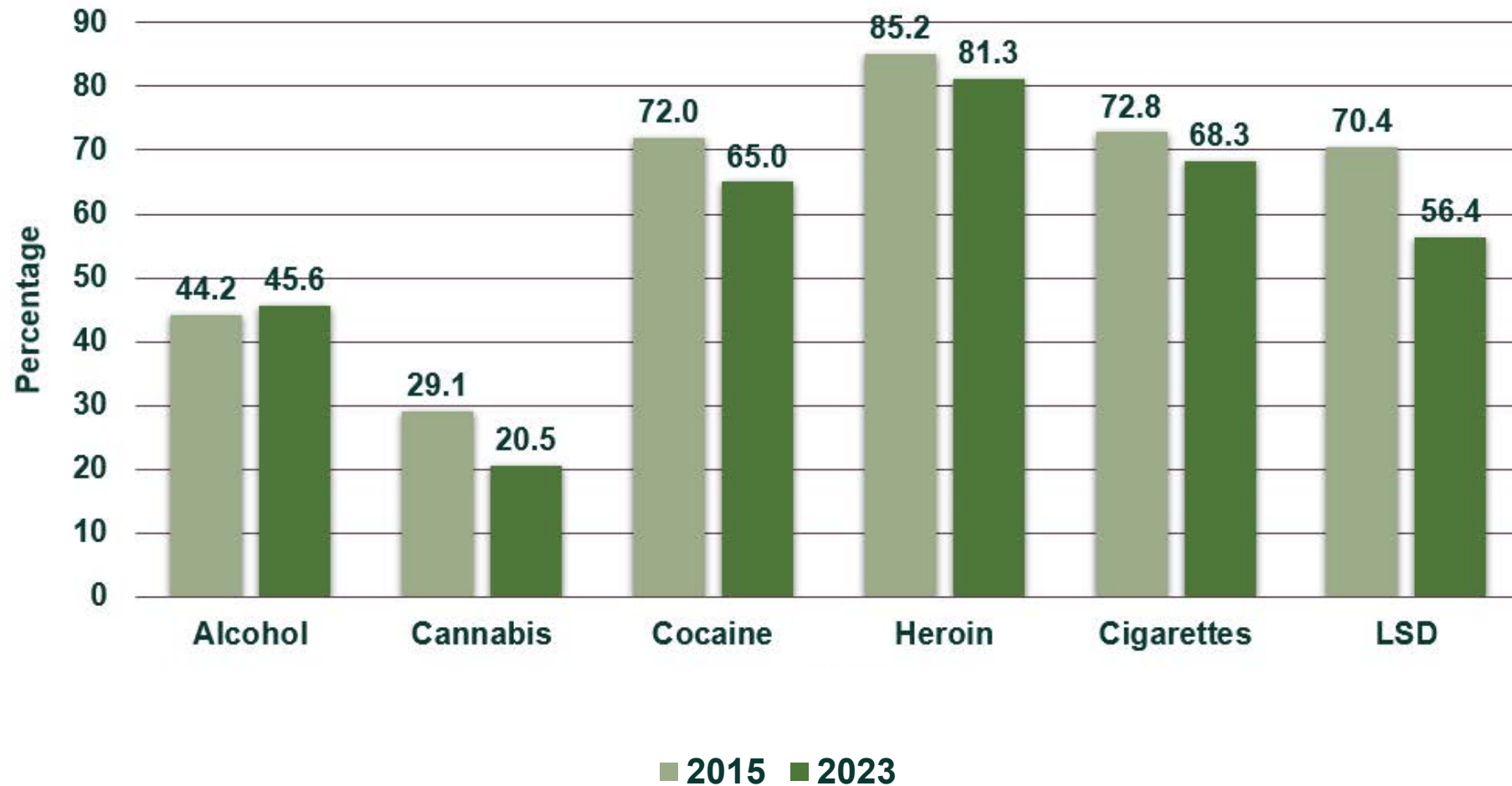
Risk Factors for Emerging Trends, II

- Cost of substance manufacturing
 - Illicit drug manufacturers are businesses, and like all businesses, they seek to increase their profit margins
 - That can mean raising prices or decreasing costs
 - E.g., xylazine is cheap, so adding xylazine = fewer expensive opioids needed
 - People can also be price conscious and seek out less expensive substances cut with cheaper ingredients
- Technological and scientific advancements
 - Improvements in chemistry and AI technology have made it easier to synthesize new substances quickly and more efficiently

Risk Factors for Emerging Trends, III

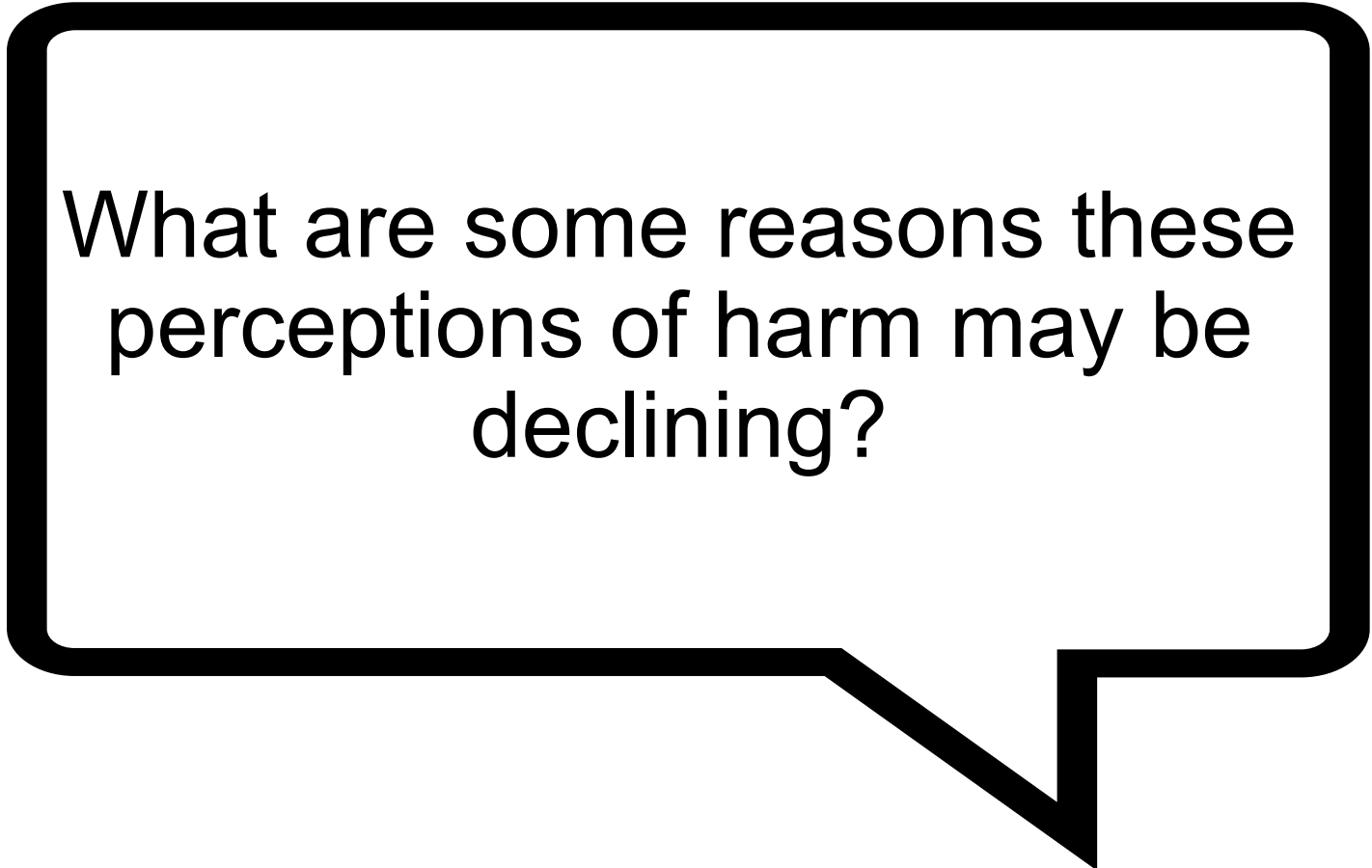
- Maturity of the drug epidemic
 - The longer people continue their substance use, the greater likelihood they will deliberately seek out more potent substances
- Proliferation of social media
 - Substance use-related social media content is widely available and frequently depicts use in a positive light
 - Social media allows for semi-anonymous, open discussion about where to obtain novel substances and how to use them
- Changes in societal attitudes
 - E.g., Gen Z has much less positive attitudes towards drinking than Millennials and has led to lower rates of problem alcohol use (*protective!*)
 - However, overall perceptions of harm from substance use are declining

Declines in Perceptions of Great Harm From Substance Use



Source: NSDUH

Discussion Question 3



What are some reasons these perceptions of harm may be declining?

Protective Factors that Help Curb Emerging Trends, I

- Epidemiological surveillance and early warning systems
 - Continuous monitoring of overdoses, toxicology results, wastewater data, emergency department visits, law enforcement seizures, etc.
 - Enables rapid detection of emerging trends before they become more widespread
- Disseminating health alerts via public bulletins
 - Translates epidemiological surveillance findings into actionable and timely information
 - Increases awareness of emerging substances, contamination of illicit drug supplies, and increased overdose risks



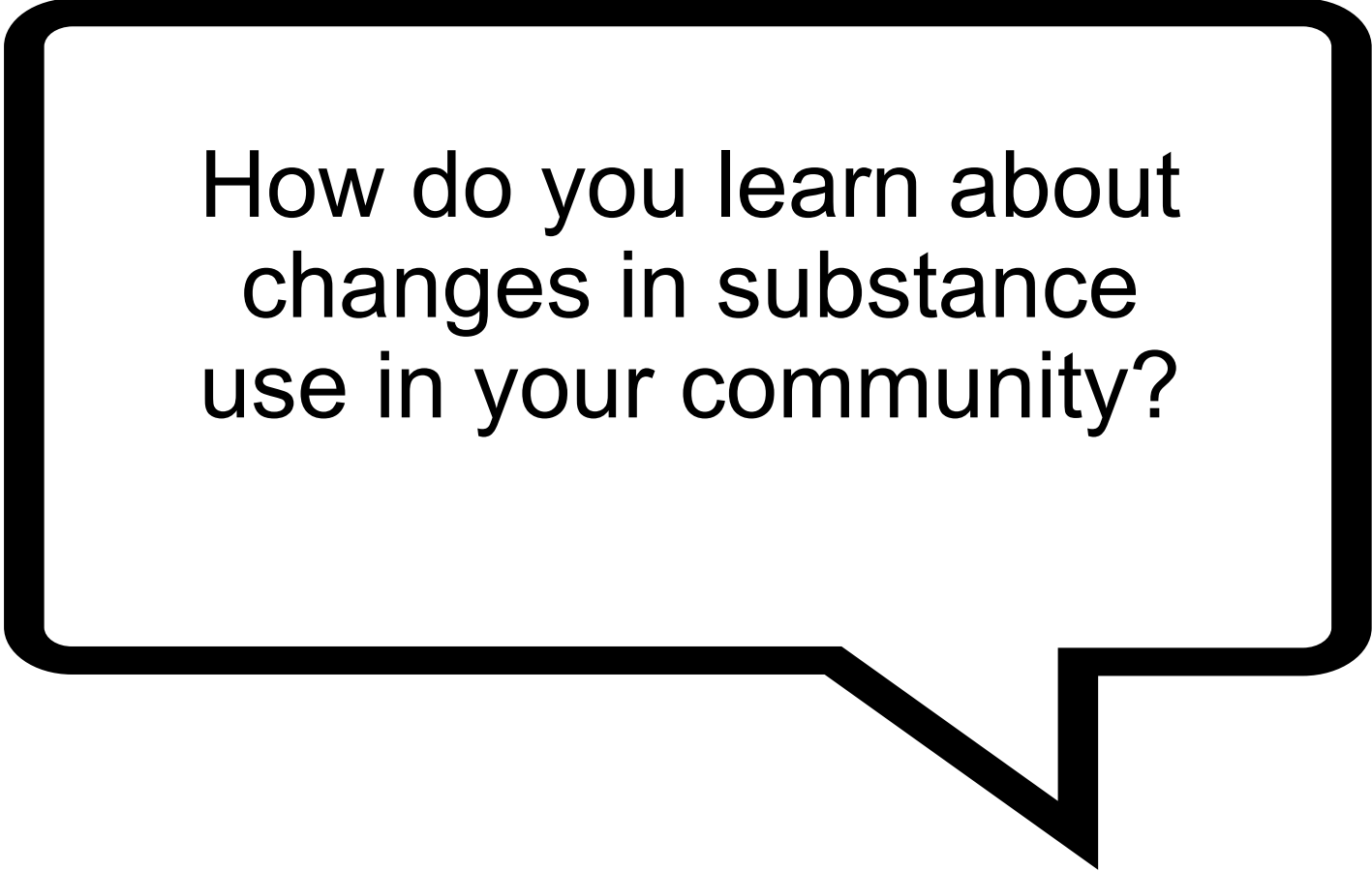
Protective Factors that Help Curb Emerging Trends, II

- Increased forensic laboratory testing
 - Many people are unaware of what is in their substances and are unintentionally exposed to more serious substances
 - AI-driven analysis in forensic lab analysis can enhance the identification of unknown substances
- Improving data sharing systems
 - Coordinating data collection and sharing across the behavioral health continuum, forensic labs, law enforcement, and community-based organizations
 - Can help break down data silos and enable coordinated prevention messaging and policy responses

Data are Necessary for Identifying Relevant Risk and Protective Factors

- Many potential risk and protective factors exist, but not all will be important to your community
 - And even if they are important, they might not be changeable
- Need to collect and analyze data to learn about the causes of substance use in your community that you can address
- This can occur alongside other data collection efforts (e.g., prevalence, community capacity), or separately
- We will discuss data collection in greater depth in a future two-part webinar series.

Discussion Question 4

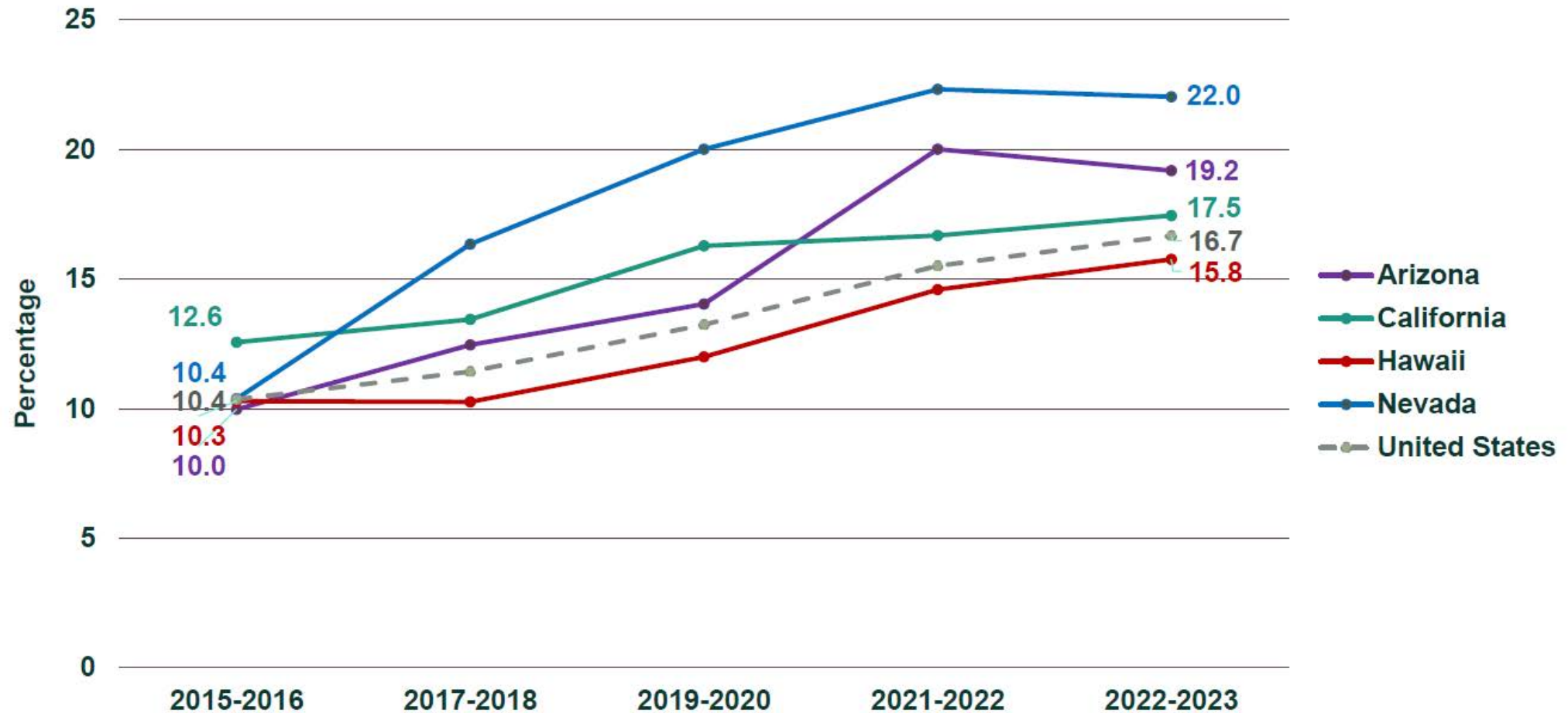


How do you learn about changes in substance use in your community?

Overview of the Substance Use Landscape in the Pacific Southwest Region

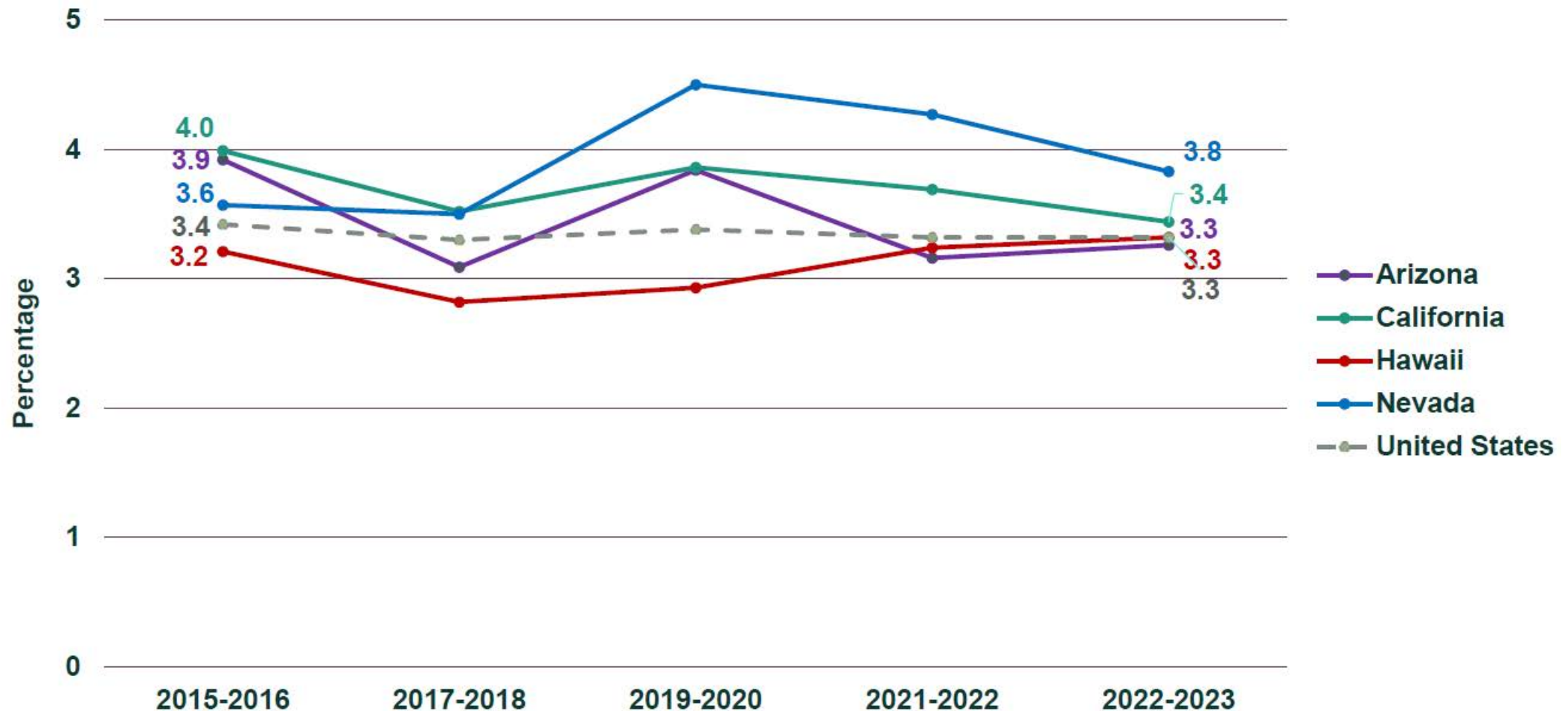


Past-Month Illicit Drug Use in the Region, 2015-2023



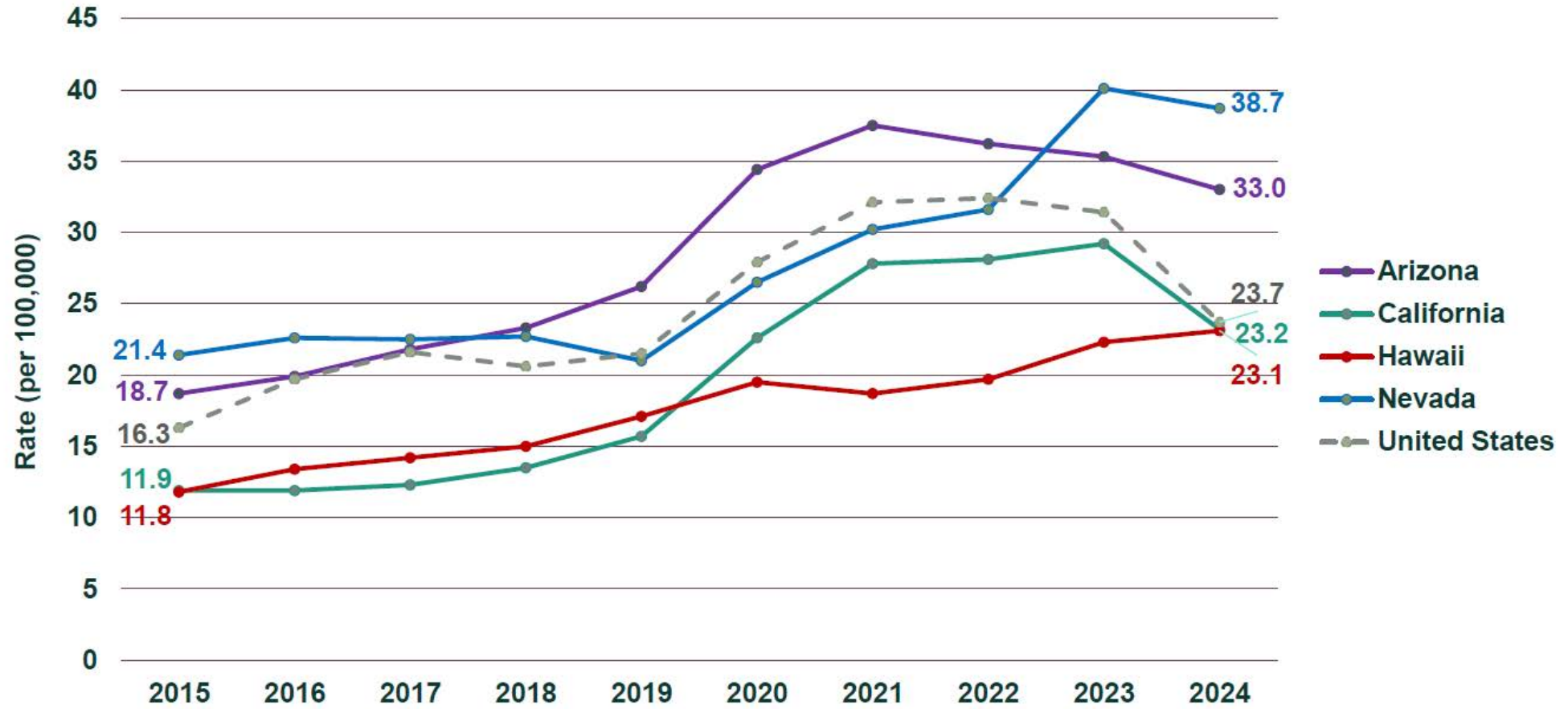
Source: NSDUH

Past-Month Illicit Drug Use in the Region *Excluding Cannabis*, 2015-2023



Source: NSDUH

Rate of Fatal Drug-Involved Overdoses in the Region, 2015-2024



Source: CDC WONDER

Recent Shifts in Substance Use and Overdose Trends

- For many years, substance use rates (excluding cannabis) were *declining* as overdose rates were *increasing*
 - This was the case both regionally and nationally
- This divergence indicates a shrinking scope of substance use, but an increased severity
 - Often driven by increased substance potency
- However, recent data shows overdose rates declining the past two years (perhaps dramatically in 2025, but data are partial)
 - Many theories for why this decline is occurring — more data are needed to assess whether this is a long-term change and why

Poll Question 2

The reasons for the decline in fatal overdoses are not fully understood. Which of the following reasons seem relevant to you based on your understanding of your own community? (select all that apply)

1. Decreased potency/purity of fentanyl and other synthetic opioids
2. Decreased interest in/demand for high potency substances
3. Increased knowledge and supply of Narcan/naloxone
4. Increased reach of SUD prevention and treatment services
5. Increased public health epidemiological surveillance
6. Decreased pandemic-related pressures
7. Other (please share in chat)

Established Substance Trends in the Pacific Southwest States, I



- Prevalence of past-year substance use disorder has increased significantly among youth and adults
- Adult binge drinking and youth alcohol use are declining, but alcohol-induced deaths are rising
- Cocaine use is declining while methamphetamine use is increasing
 - Stimulant-involved fatal overdoses are higher in the region than they are nationally
- Hallucinogen use increased, driven primarily by increases in AZ & CA

Established Substance Trends in the Pacific Southwest States, II

- Tobacco product use (including cigarette use) is declining among adults and youth
 - Though novel products such as heated tobacco devices and nicotine pouches present new risks
- High school past-month and daily vaping prevalence has decreased from its peak in 2019
 - Adult vaping rates continue to climb
- Cannabis use has increased significantly among adults, but has either decreased or remained about the same among youth
 - Cannabis-related deaths remain very low

Novel Substances Emerging in the Pacific Southwest States, I

- **Xylazine** and **medetomidine** are increasingly being identified in the illicit fentanyl market in the region
- Surge in **bromazolam**-related fatalities in CA in 2024
- **BTMPS** detected in the regional drug supply
 - CA & NM among the top 5 states with highest number of BTMPS detections
- **Nitazenes** are beginning to emerge on the West Coast
- **Fluorofentanyl** has been detected in every state in the region
 - In 2022, nearly 7% of accidental overdose deaths in San Francisco contained fluorofentanyl
- CA had the third highest number of illicit **ketamine** law enforcement seizures in the U.S. between 2017-2023

Novel Substances Emerging in the Pacific Southwest States, II

- Products like **tianeptine** and **kratom** are widely available at gas stations and smoke shops
- 6 of the 10 counties with the highest number of non-fatal **tusi**-related overdose encounters from 2022-2025 were in CA
- Though use of **etomidate** is currently low in the U.S. (and primarily occurring on the East Coast), it is becoming increasingly popular in East and Southeast Asia and Oceania
- **Synthetic cannabis** use appears to have declined in the region and tends to be lower in states with legalized cannabis
 - Some reporting from the region suggests that use may be rising in incarcerated populations
- The use of synthetic **cathinones** (aka “**bath salts**”) has decreased significantly in the region



Trends in the Pacific Islands

- Publicly-available substance use prevalence data is limited and largely inconsistent across the Pacific Islands
- However, alcohol and tobacco remain the most commonly-used substances
 - Tobacco use and vaping tends to be higher in the Pacific Islands compared to mainland U.S., while alcohol use is generally lower
- Stimulant use (methamphetamine in particular) appears to be rising
- Cannabis use is rising in some Pacific Islands
- Chewing areca/betel nut is prevalent among some Pacific Islander communities

Discussion Question 5



Are there any other novel substances appearing in your community?

Conclusion

- The ongoing emergence of new trends is a regular feature of the substance use landscape
- Identifying and addressing emerging trends is a key element of effective prevention services
- Strategic planning helps us determine what trends are emerging, why, and whether they should be priorities
- The Pacific Southwest Region faces a wide range of emerging trends, which we'll discuss in greater depth throughout this series
- At the same time, remember to celebrate the successes you have accomplished!

Join us for Upcoming Webinars in the Pacific Southwest Emerging Trends Series!

- Part 2: Emerging Trends and Novel Substances Impacting the Opioid Epidemic
 - March 12th, 2026
- Part 3: Other Emerging Trends and Novel Substances
 - April 9th, 2026
- Part 4: The Latest Trends Among Established Substances
 - May 14th, 2026



Contact Information

Josh Esrick: josh@carnevaleassociates.com
Olivia Stuart: olivia@carnevaleassociates.com

International Certification & Reciprocity Consortium (IC&RC)

This webinar is under these domains:

- Planning & Evaluation

Learn more about IC&RC: <https://internationalcredentialing.org/>

Connect with us!

Join our mailing list:

- www.pspttc.org
- <http://eepurl.com/glssWD>

Email with general questions:

- pspttc-info@casat.org

Find us on LinkedIn:

- <https://linkedin.com/company/pacific-southwest-pttc>

Like us on Facebook:

- <https://tinyurl.com/PSPTTC-Facebook>

Post-Webinar Feedback

Please click on the link in the chat to complete a very brief online feedback form!

Thank you!



Thank You!



University of Nevada, Reno
CASAT
School of Public Health



PTTC_{HHS REGION 9}
Pacific Southwest



References, I

1. Akosile, W., McDonald, D., Aghanwa, H., & Ola, B. (2024). A systematic review of the prevalence of substance abuse in the South Pacific region. *Psychoactives*, 4(4), 42. <https://doi.org/10.3390/psychoactives4040042>
2. Bade, R., Nadarajan, D., Driver, E., Halden, R., Gerber, C., Krotulski, A., Hall, W., & Mueller, J. (2024). Wastewater-based monitoring of the nitazene analogues: First detection of protonitazene in wastewater. *Science of the Total Environment*, 920, Article 170781. <https://doi.org/10.1016/j.scitotenv.2024.170781>
3. Center for Substance Abuse Prevention. (2019). *A guide to SAMHSA's Strategic Prevention Framework* [Publication No. PEP19-01]. Substance Abuse and Mental Health Services Administration. <https://www.samhsa.gov/sites/default/files/samhsa-strategic-prevention-framework-guide-08292019.pdf>
4. Center for Substance Abuse Prevention. (2020). *Focus on prevention* [Publication No. (SMA) 10-4120]. Substance Abuse and Mental Health Services Administration. <https://library.samhsa.gov/sites/default/files/focus-on-prevention-sma10-4120.pdf>
5. Centers for Disease Control and Prevention. (2023). *1995-2021 high school Youth Risk Behavior survey data*. <https://youthonline.cdc.gov>
6. Centers for Disease Control and Prevention. (2025). *About violence prevention*. <https://www.cdc.gov/violence-prevention/about/index.html>
7. Centers for Disease Control and Prevention. (2025). *National Vital Statistics System, provisional mortality on CDC WONDER online database*. National Center for Health Statistics. <https://wonder.cdc.gov>
8. David, A., Reyes, K., Benavente, A., & Harrell, S. (2023). *Guam state epidemiological profile, 2021 update*. Prevention and Training Branch, Guam Behavioral Health and Wellness Center. https://gbhwc.guam.gov/sites/default/files/2021_Epi_Profile_full_20230918.pdf
9. Dayton, K. (2022). *Drugs in Hawaii prisons: "We are swimming in spice, and nobody cares."* Honolulu Civil Beat. <https://www.civilbeat.org/2022/03/drugs-in-hawaii-prisons-we-are-swimming-in-spice-and-nobody-cares/>

References, II

10. Drug Enforcement Administration. (2022). *The growing threat of xylazine and its mixture with illicit drugs* [Publication No. DEA-DCI-DIR-001-23]. U.S. Department of Justice. <https://www.dea.gov/sites/default/files/2022-12/The%20Growing%20Threat%20of%20Xylazine%20and%20its%20Mixture%20with%20Illicit%20Drugs.pdf>
11. Drug Enforcement Administration. (2025). *2025 National drug threat assessment* [Publication No. DEA-DCT-DIR-007-25]. U.S. Department of Justice. <https://www.dea.gov/sites/default/files/2025-07/2025NationalDrugThreatAssessment.pdf>
12. Education Development Center. (n.d.). *Key features of risk and protective factors*. <https://solutions.edc.org/sites/default/files/FeaturesRiskProtectiveFactors.pdf>
13. Freestone, J., Siefried, K., Peacock, A., Fletcher, K., Barratt, M.J., Sutherland, R., Ezard, N., Doumany, J., MacDonald, H., Kypri, S., Acheson, L., & Clifford, B. (2025). From environmental disasters to emerging drugs: A framework to understand, map and assess drug-related early warning systems. *International Journal of Drug Policy*, 145, Article 104946. <https://doi.org/10.1016/j.drugpo.2025.104946>
14. Friedman, J., Molina, C., Konscol, A., Romero, R., Godvin, M., Jalayer, E., Davila, S., Arellano, O., Cowan, A., Hurley, B., & Shover, C. (2025). Xylazine prevalence and concentration in the Los Angeles fentanyl market, 2023-2025. *Drug and Alcohol Dependence Reports*, 16, Article 100364. <https://doi.org/10.1016/j.dadr.2025.100364>
15. Greco, E. (2025). AI methods for novel psychoactive substance (NPS) design and analysis. *Analytica*, 6(2), 17. <https://doi.org/10.3390/analytica6020017>
16. Grilz, G. (n.d.). *The spice epidemic inside Arizona prisons: A deadly and unstoppable crisis*. Prison Writers. <https://prisonwriters.com/spice-epidemic-inside-arizona-prisons/>
17. Kadakia, K., & Desalvo, K. (2023). Transforming public health data systems to advance the population's health. *The Milbank Quarterly*, 101(Suppl 1), 674-699. <https://doi.org/10.1111/1468-0009.12618>

References, III

18. Lata, H., Duque, N., Togami, E., Miglietta, A., Perkins, D., Corpuz, A., Kato, M., Babu, A., Dorji, T., Matsui, T., Almiron, M., Cheng, K., MacDonald, L., Pukkila, J., Williams, G., Andraghetti, R., Dolea, C., Mahamud, A., Morgan, O., ... & Hamblion, E. (2024). Disseminating information on acute public health events globally: Experiences from the WHO's Disease Outbreak News. *BMJ Global Health*, 26(9), e012876. <https://doi.org/10.1136/bmjgh-2023-012876>
19. Minnis, A. (2023). *Synthetic cannabis*. California Poison Control System. <https://calpoison.org/content/synthetic-cannabinoids>
20. National Drug Early Warning System. (2025). *NDEWS special report: EMS encounters in the US for nonfatal tucsi-related overdoses*. <https://ndews.org/wordpress/files/2025/03/NDEWS-2025-Nonfatal-tuci-related-overdoses.pdf>
21. National Drug Early Warning System. (2025). *Sentinel site report, August 2025: What trends are being observed concerning synthetic cathinones or "bath salts" in the local drug supply?* https://ndews.org/wordpress/files/2025/10/202508_NDEWS_SSD_Report_EP.pdf
22. Nippa, D., Boddy, A., Atz, K., Grether, U., Binch, H., & Martin, R. (2025). Accelerating compound synthesis in drug discovery: The role of digitalization and automation. *RSC Medicinal Chemistry*. Advance online publication. <https://doi.org/10.1039/d5md00672d>
23. Palamar, J., & Krotulski, A. (2024). Medetomidine infiltrates the US illicit opioid market. *JAMA*, 332(17), 1425-1426. <https://doi.org/10.1001/jama.2024.15992>
24. Palamar, J., Wilkinson, S., Carr, T., Rutherford, C., & Cottler, L. (2023). Trends in illicit ketamine seizures in the US from 2017 to 2022. *JAMA Psychiatry*, 80(7), 750-751. <https://doi.org/10.1001/jamapsychiatry.2023.1423>
25. Papsun, D., Mohr, A., Browne, T., & Logan, B. (2024). *Para-Fluorofentanyl adulterating the illicit drug supply*. The Center for Forensic Science Research & Education. https://www.cfsre.org/images/content/reports/public_alerts/pFF_Public_Health_Alert_Final.pdf

References, IV

26. Puddy, R., & Wilkins, N. (2011). *Understanding evidence part 1: Best available research evidence. A guide to the continuum of evidence of effectiveness*. National Center for Injury Prevention and Control, Division of Violence Prevention, Centers for Disease Control and Prevention. https://sites.pitt.edu/~jdnorton/teaching/2682_confirmation/2024/slides/evidence_in_science/understanding_evidence-a.pdf
27. Radio New Zealand. (2019). *Methamphetamine use at crisis levels in American Samoa*. <https://www.rnz.co.nz/international/pacific-news/397623/methamphetamine-use-at-crisis-levels-in-american-samoa>
28. Rodda, L., (2024). The surge of bromazolam-related fatalities replacing other novel designer benzodiazepines-related fatalities in San Francisco. *Addiction*, 119(8), 1487-1490. <https://doi.org/10.1111/add.16520>
29. Rutherford, B., Lim, C., Johnson, B., Cheng, B., Chung, J., Huang, S., Sun, T., Leung, J., Stjepanović, D., & Chan, G. (2022). #TurntTrending: A systematic review of substance use portrayals on social media platforms. *Addiction*, 118(2), 206-217. <https://doi.org/10.1111/add.16020>
30. Substance Abuse and Mental Health Services Administration. (2016-2024). *Results from the National Surveys on Drug Use and Health: Detailed tables*. Center for Behavioral Health Statistics and Quality.
31. Substance Abuse and Mental Health Services Administration. (2017-2024). *National Surveys on Drug Use and Health: Model-based prevalence estimates (50 states and the District of Columbia)*. Center for Behavioral Health Statistics and Quality.
32. United Nations Office on Drugs and Crime. (2024). *Increasing detections of etomidate and analogues on illicit drug markets is becoming a global concern*. <https://www.unodc.org/LSS/Announcement/Details/8774c132-4b30-477c-9ceb-46ce384223fd>
33. Winkler, D., Caulkins, J., Behrens, D., & Tragler, G. (2004). Estimating the relative efficiency of various forms of prevention at different stages of a drug epidemic. *Socio-Economic Planning Sciences*, 38(1), 43-56. [https://doi.org/10.1016/S0038-0121\(03\)00027-2](https://doi.org/10.1016/S0038-0121(03)00027-2)

References, V

34. World Health Organization Regional Office for the Western Pacific. (2024). *Health statistics in the Western Pacific region 2023: Monitoring health for the SDGs*. <https://iris.who.int/server/api/core/bitstreams/9d53f633-5476-450d-9933-de358e6cf813/content>
35. Yu, J., Diekhans, K., Tsang, A., & Rodda, L. (2024). Fluorofentanyl and novel synthetic opioids in accidental overdose deaths. *Journal of Analytical Toxicology*, 48(8), 573-581. <https://doi.org/10.1093/jat/bkae062>
36. Zhu, D., Krotulski, A., & Palamar, J. (2025). The rapid spread of a novel adulterant in the US illicit drug supply: BTMPS. *JAMA Internal Medicine*, 185(9), 1057-1058. <https://doi.org/10.1001/jamainternmed.2025.2307>