

Comment to the United States Sentencing Commission

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I have been working with, providing services to, and studying people who use drugs and their health concerns for more than 20 years. I started my career in 1999 working in HIV prevention organizations for people who use drugs, and since 2009 I have been conducting public health research on the drivers and solutions to drug overdose and other health consequences of drug use.

I have been invited to comment on the issues under consideration in the August 5, 2025 United States Sentencing Commission public hearing on methamphetamine. The starting point for this inquiry is the shared understanding that the illicit methamphetamine available to people in the US right now is highly pure (>90%; (Tennyson et al., 2024). Differential sentencing guidelines based on whether cases involve methamphetamine (actual)/ice or methamphetamine (mixture) are based on purity but given the high levels of purity across the board, purity is no longer a good indicator of someone's role in manufacturing or trafficking. The goal of this hearing, as I understand it, is to consider two questions: (1) are disparities in existing federal sentencing guidelines for methamphetamine trafficking warranted?, and (2) what is the state of the science on methamphetamine-related health harms? In addition, I have specifically been asked to provide an academic research perspective on the issues of methamphetamine purity and its impact on how and why people use methamphetamine, and the public health impacts of methamphetamine.

In what follows I will present data describing what we know about why and how people use methamphetamine, the health consequences of methamphetamine in the current era, and what the data say about the most viable response strategies. Throughout, I will share information that I have learned from my research subjects who have previously or continue to use methamphetamine, and who share their experiences with me and my research team in an effort to develop and improve public health interventions.

Methamphetamine *can* have serious health consequences for some people who use it, particularly when those people are also poor, do not have access to high quality health care and effective substance use disorder treatment, and are bouncing in and out of incarceration and other touchpoints with the criminal justice system. However, most people who use methamphetamine don't resemble the stereotypical image that comes up for many Americans when we think about a "methamphetamine user". That image, with pockmarked face, decaying teeth, and a wild look in the eyes, is certainly one image of a person who uses methamphetamine and who has suffered from its highly toxic effects. But it does not resemble most of the people that I, my staff, and my students interact with on a daily basis through our research.

According to the 2023 annual data from National Survey on Drug Use and Health (NSDUH), over 16 million (1,613,000) Americans have used methamphetamine at least once in their lives, 2.6 million (0.9% of the population) report using it in the past year, and 1.6 million report using it in the past month. 1.8 million Americans met criteria for a methamphetamine use disorder in 2023 (Substance Abuse and Mental Health Services Administration, 2024). For reference, this is 1% of the number of people who report using alcohol in the past month (134.7 million; 47.5% of the population) and 2.5% of the number of people who report using tobacco or nicotine products in the past month (64.4 million; 22.7% of the population). These prevalence data tell us that, while the raw numbers are large, relative to other drugs methamphetamine use is still rare in the US, and many people are using it judiciously and don't meet diagnostic criteria for addiction.

Q: Are sentencing disparities based on purity warranted?

In short, no. It is my professional opinion that the current sentencing disparities are not warranted. Based on the Sentencing Commission's report, the purity of drugs seized by law enforcement across the US is very high (>90% overall, with a median of 98%; (Tennyson et al., 2024). This estimate is consistent with my own data derived from street drug surveillance programs, in which people who use drugs provide residue samples from their own drug paraphernalia for laboratory testing. The methamphetamine we test has few contaminants, typically only contains methamphetamine, and is rarely adulterated (Wagner et al., 2023). This suggests that both the methamphetamine seized by law enforcement and the drugs used by people are highly pure.

Having established the near-universal purity of methamphetamine in the current US market, I now turn my attention to the quantity of "pure" methamphetamine that triggers the minimum sentence, as compared to the consumption patterns of my research participants in New Mexico and Nevada. The current guidelines recommend a mandatory minimum sentence for trafficking starting at 5 grams of methamphetamine (actual; i.e., "pure") or "ice" (i.e., methamphetamine dissolved in ethanol and then crystalized). What does that mean for an actual person who is using methamphetamine?

Average users who inject methamphetamine might consume 1 gram over the course of 1 to 3 days. Average users who smoke methamphetamine might consume as much as 3.5 grams (1/16th of an ounce) per day. And so, based on this information, five grams is not a lot. Five grams could easily represent one or two days of personal use for someone who smokes, and maybe a week or two for someone who injects. Reports from my research participants suggest that methamphetamine has changed. They say it "doesn't seem to last as long now as it used to," so they have started using larger amounts more frequently to achieve the same effects.

There are also economic and social reasons why people would have larger quantities in their possession. Multiple people sometimes combine their funds to purchase higher quantities and then split that amount among them. Larger purchases might also be made by people who live in rural areas and/or who have unreliable transportation, both of which make it harder to make daily purchases.

In July 2024 prices for crystal methamphetamine in the areas where I conduct research ranged from \$10/gram to \$20/gram, with prices varying based on location and quantity. I've learned that buying in bulk is cost-effective. For instance, one participant in my study said they can buy 7 grams for \$50, about half of what they would pay if they bought those individually. If someone has less money, they may be able to purchase a "bowl" with a smaller quantity of smokable methamphetamine for just a few dollars.

So, what conclusions can we draw from this information? In short, methamphetamine is cheap and pure. Five grams is clearly too low of a threshold for trafficking. It is easy to see how someone with even as little as \$50 could have more than this amount in their possession.

Q: What is the state of the science on methamphetamine use and health consequences?

People use methamphetamine for a variety of reasons. In my study of 420 people who use methamphetamine, 61% said they use methamphetamine to help them stop worrying, and 69% said they use it to feel better when depressed. Seventy-nine percent of people said they use methamphetamine to stay awake; 58% said they use it to help concentrate, study or work; and 44% said they use it to relieve physical pain. In our earlier qualitative study, participants also reported using methamphetamine to alleviate over-sedation from fentanyl and other opioids (including methadone prescribed for treatment of opioid use disorder;(Rhed et al., 2022).

What is methamphetamine "overdose"?

US surveillance data indicate increases in drug overdose deaths involving methamphetamine (Jones et al., 2023). However, we should be careful not to equate methamphetamine involvement with it necessarily being the primary cause of death. This is because many of those deaths are more appropriately characterized as polysubstance use deaths, usually involving both stimulants and opioids. Typically, the respiratory depression resulting from opioid use is the fatal mechanism in these deaths. The methamphetamine positive toxicology results identified in death surveillance reports could be from use that occurred days prior to death, meaning that the decedent may not have used methamphetamine in the hours or days before they died (Black et al., 2025).

The importance of considering polydrug use in these trends is reflected both in the death surveillance data and in my own research with people who use methamphetamine. In my study of 420 people who use methamphetamine in Nevada and New Mexico, 93.2% used multiple illicit drugs in the past 3 months. Half of the sample reported having a non-fatal medical emergency from opioids or methamphetamine. Methamphetamine-involved events were described very differently from opioid-involved events. The symptoms reported during methamphetamine-involved events fell into two categories, based on 1) cardiovascular symptoms (e.g., rapid heart rate, difficulty breathing, hyperventilation, etc.) or 2) psychiatric symptoms (e.g., anxiety, paranoia, hallucinations, etc.). In contrast, opioid-involved medical emergencies were characterized by depressed respiration and loss of consciousness.

When asked directly if they have ever experienced a "methamphetamine overdose," our participants often definitively state that it is "not possible" and that "nobody's dying from meth (overdose)"(Harding et al., 2022). A recent analysis of methamphetamine-involved toxicity deaths in San Francisco found

that stimulant-only toxicity deaths were less likely to have any evidence of recent drug use by the decedent (65%) compared to stimulant-fentanyl involved deaths (89%). The researchers concluded, “many of these may not be driven by acute toxicity, but instead be the result of chronic disease contributed to by substance use”(Black et al., 2025). These data have led me to stop using the term “overdose” to describe the results of taking too much methamphetamine, in favor of the term “acute methamphetamine toxicity.” People who use drugs also refer to it as “overamping,” which they do not equate with the concept of “overdose” (Harding et al., 2022; Mansoor et al., 2022)

What are the health consequences of methamphetamine use?

I want to reiterate that people can experience medically significant health consequences from methamphetamine use. Methamphetamine use causes increased levels of dopamine in the brain, which is responsible for the euphoric effect, or “high.” Over time, prolonged exposure to excessive dopamine can cause inflammation in the brain and other neurological changes (Coffin & Suen, 2023). About one-quarter of heavy methamphetamine users have experienced at least one psychotic episode, which can transition to schizophrenia (Lappin & Sara, 2019). Methamphetamine use is also associated with an increased risk for Parkinson’s disease (Coffin & Suen, 2023). Other cognitive effects are possible including reduced executive functioning, concentration, and memory.

Additionally, long-term and heavy use of methamphetamine can damage the cardiovascular and cerebrovascular systems (i.e., the veins and arteries in the heart and brain). Cardiovascular symptoms include chest pain, hypertension, and other heart-damaging complications, which can ultimately lead to heart failure. Heart failure and cardiac disease are commonly identified as the cause of death among people who use methamphetamine (Coffin & Suen, 2023).

My team analyzed data from 168 deaths with a positive toxicology report for drugs and found that people whose death was attributable to psychostimulants alone (28% of drug-related deaths) were significantly older and sicker than those whose death was attributable to opioids with or without stimulants. On average, stimulant-only decedents were more than 10 years older than opioid decedents. Cardiovascular disease and diabetes were significantly more common among the stimulant-only group. These data point to an accumulation of chronic disease over years of methamphetamine use.

How do people who use methamphetamine try to reduce health consequences?

People use a variety of strategies to minimize the health consequences of their use. Our study showed that buying what appears to be more pure crystalline methamphetamine from a trusted source is one of the primary ways that people attempt to reduce their risk of exposure to contaminants, including fentanyl (Erinoso et al., 2024). This strategy for avoiding health consequences is easily disrupted by enforcement efforts that target low level dealers. Arrest and incarceration of low-level dealers typically does not eliminate those points of sale, as dealers are quickly replaced by others. However, it does disrupt trusted relationships, increase volatility, and expose end users to new and potentially harmful products.

We have also observed a national trend of people moving away from injecting illicit drugs, in favor of smoking them (Tanz et al., 2024). In general, smoking methamphetamine is considered less risky than injecting because frequent reusing or sharing of needles can increase the risk for HIV, hepatitis C virus,

and skin and soft tissue infections. On the other hand, people who smoke methamphetamine can experience injury to their lungs and burns on their mouth and hands, especially if not using the proper equipment. These health consequences can be prevented through public health interventions, though access is limited in many places due to lack of funding and state and federal laws.

What treatments are available?

Currently, FDA-approved treatments for methamphetamine use disorder are limited. Approaches that have shown positive effects are transcranial magnetic stimulation, contingency management, and cognitive behavioral therapy (AshaRani et al., 2020; Minozzi et al., 2024; Roll, 2007). However, there are currently state-level barriers to using Medicaid to pay for contingency management, and it is still not widely used.

Efforts to develop medications are also underway. Research has shown that medicines such as XR-Naltrexone, bupropion, modafinil, mirtazapine, and central nervous system stimulants can be helpful. Studies suggest they can reduce drug cravings, withdrawal symptoms, and frequency of use (Yates, 2024). Ongoing investment in existing treatment options and research to develop novel medications is critical, because reducing the frequency and/or intensity of methamphetamine use can have important clinical benefits, including reduction in cardiovascular toxicities (Coffin & Suen, 2023).

Can increased enforcement and higher penalties help reduce methamphetamine use and health consequences?

In short, no. National surveillance data demonstrate growing numbers of people using methamphetamine in recent years, despite strict penalties already in place. People's motivations for use and the benefits/functions they seek often outweigh the risk of arrest. Incarceration does not solve the underlying problems that people are trying to address when they use methamphetamine.

As shown earlier, 2.6 million Americans report using methamphetamine in the past year, the vast majority of whom were not arrested for possession or trafficking. In any given year, far more people use methamphetamine than are arrested for that offense. For those with methamphetamine use disorder, or addiction, it is important to remember that a key diagnostic criterion of a substance use disorder is "continued use despite recurring negative consequences." This ongoing, compulsive use in the face of potential negative consequences (such as arrest, toxicity, and health problems) is what distinguishes someone with addiction vs. the casual user. Although fear of policing or arrest may prevent some people from using, the heaviest and most frequent users are not deterred by these factors. Nothing we know about methamphetamine use disorder suggests that increasing sentences is the solution to our current problem.

We also know that policies that criminalize drugs and drug users incentivize manufacturers and suppliers to make drugs that are cheaper to produce, easier to smuggle, and strong enough to be appealing to users. In light of heavy criminalization of methamphetamine for the past several decades, drug manufacturers and suppliers have already figured out how to make their products cheaper and of consistently high quality. More criminalization has not made the product weaker. And, in fact, following escalating penalties and enforcement related to fentanyl trafficking, we have observed rapid innovation

in the opioid market that has resulted in newer, more potent, and more dangerous forms of that opioid. The unpredictability is what causes the most harm. And an enforcement-based strategy will continue to increase that unpredictability.

As described earlier, one of the most important ways that people who use methamphetamine try to reduce the health consequences of methamphetamine use, especially in the highly volatile market of today, is to purchase their drugs from a trusted source. Buying larger quantities at a time might also help people maintain a consistent supply. Enforcement activities targeted at dealers interrupt this strategy and drive people towards unknown and untrusted sources.

In sum, it is my opinion that neither the sentencing disparities based on methamphetamine purity nor the 5mg threshold for trafficking of methamphetamine (actual) are warranted, given the evidence we have about today's methamphetamine market. And, based on my understanding of methamphetamine use patterns, using weights and thresholds is not an effective way to determine culpability for trafficking or to reduce public health harms.

It can be tempting to try to assess drug-related health consequences according to a hierarchy, based on the severity of psychiatric and/or physical harms, and to assign penalties based on some quantification of those harms. But based on my experience, this is not a productive exercise. I cannot quantify how harmful the current methamphetamine supply is, relative to what people used in the past. Nor can I quantify how harmful methamphetamine is relative to other drugs. The health consequences associated with methamphetamine use vary, as do the other conditions in the illicit drug market and the social context that contribute to health problems. But we also know the very real and harmful health and social consequences of incarceration, including increased opioid overdose risk, disrupted social support networks, disenfranchisement, and restricted access to employment, housing, and other basic needs. Any consideration of increased sentencing penalties must also consider the very real individual and societal harms that will result from increased incarceration and longer prison sentences. These resources could be better spent investing in public health and substance use treatment infrastructure, and research to identify innovative solutions to the current problem.

References

- AshaRani, P. V., Hombali, A., Seow, E., Ong, W. J., Tan, J. H., & Subramaniam, M. (2020). Non-pharmacological interventions for methamphetamine use disorder: a systematic review. *Drug Alcohol Depend*, 212, 108060. <https://doi.org/10.1016/j.drugalcdep.2020.108060>
- Black, F., McMahan, V. M., Chang, Y.-S. G., Rodda, L. N., & Coffin, P. O. (2025). Thematic analysis of medical examiner narratives to understand the socio-spatial context, recency of drug use, and likely mechanism of stimulant toxicity deaths. *Drug and Alcohol Dependence*, 272, 112700. <https://doi.org/https://doi.org/10.1016/j.drugalcdep.2025.112700>
- Coffin, P. O., & Suen, L. W. (2023). Methamphetamine Toxicities and Clinical Management. *NEJM Evid*, 2(12), EVIDra2300160. <https://doi.org/10.1056/EVIDra2300160>
- Erinoso, O., Daugherty, R., Kirk, M. R., Harding, R. W., Etchart, H., Reyes, A.,... Wagner, K. D. (2024). Safety strategies and harm reduction for methamphetamine users in the era of fentanyl

- contamination: A qualitative analysis. *Int J Drug Policy*, 128, 104456. <https://doi.org/10.1016/j.drugpo.2024.104456>
- Harding, R. W., Wagner, K. T., Fiuty, P., Smith, K. P., Page, K., & Wagner, K. D. (2022). "It's called overamping": experiences of overdose among people who use methamphetamine. *Harm reduction journal*, 19(1), 1-11.
- Jones, A. A., Shearer, R. D., Segel, J. E., Santos-Lozada, A., Strong-Jones, S., Vest, N.,...Winkelman, T. N. A. (2023). Opioid and stimulant attributed treatment admissions and fatal overdoses: Using national surveillance data to examine the intersection of race, sex, and polysubstance use, 1992-2020. *Drug Alcohol Depend*, 249, 109946. <https://doi.org/10.1016/j.drugalcdep.2023.109946>
- Lappin, J. M., & Sara, G. E. (2019). Psychostimulant use and the brain. *Addiction*, 114(11), 2065-2077. <https://doi.org/10.1111/add.14708>
- Mansoor, M., McNeil, R., Fleming, T., Barker, A., Vakharia, S., Sue, K., & Ivsins, A. (2022). Characterizing stimulant overdose: A qualitative study on perceptions and experiences of "overamping". *Int J Drug Policy*, 102, 103592. <https://doi.org/10.1016/j.drugpo.2022.103592>
- Minozzi, S., Saulle, R., Amato, L., Traccis, F., & Agabio, R. (2024). Psychosocial interventions for stimulant use disorder. *Cochrane Database Syst Rev*, 2(2), CD011866. <https://doi.org/10.1002/14651858.CD011866.pub3>
- Rhed, B. D., Harding, R. W., Marks, C., Wagner, K. T., Fiuty, P., Page, K., & Wagner, K. D. (2022). Patterns of and Rationale for the Co-use of Methamphetamine and Opioids: Findings From Qualitative Interviews in New Mexico and Nevada. *Frontiers in Psychiatry*, 13.
- Roll, J. M. (2007). Contingency management: an evidence-based component of methamphetamine use disorder treatments. *Addiction*, 102 Suppl 1, 114-120. <https://doi.org/10.1111/j.1360-0443.2006.01774.x>
- Substance Abuse and Mental Health Services Administration. (2024). *Key substance use and mental health indicators in the United States: Results from the 2023 National Survey on Drug Use and Health*. <https://www.samhsa.gov/data/report/2023-nsduh-annual-national-report>
- Tanz, L. J., Gladden, R. M., Dinwiddie, A. T., Miller, K. D., Broz, D., Spector, E., & O'Donnell, J. (2024). Routes of Drug Use Among Drug Overdose Deaths - United States, 2020-2022. *MMWR Morb Mortal Wkly Rep*, 73(6), 124-130. <https://doi.org/10.15585/mmwr.mm7306a2>
- Tennyson, K. M., Reimer, M. K., Guiton, T., & Ray, C. S. (2024). *Methamphetamine Trafficking Offenses in the Federal Criminal Justice System*.
- Wagner, K. D., Fiuty, P., Page, K., Tracy, E. C., Nocera, M., Miller, C. W.,...Dasgupta, N. (2023). Prevalence of fentanyl in methamphetamine and cocaine samples collected by community-based drug checking services. *Drug Alcohol Depend*, 252, 110985. <https://doi.org/10.1016/j.drugalcdep.2023.110985>
- Yates, J. R. (2024). Pharmacological Treatments for Methamphetamine Use Disorder: Current Status and Future Targets. *Subst Abuse Rehabil*, 15, 125-161. <https://doi.org/10.2147/SAR.S431273>