Testimony of Professor Keith Humphreys to the Joint Committee on Mental Health, Substance Use and Recovery, Massachusetts State Legislature

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Chair Velis, Chair Madaro, Vice Chair SEER, Vice Chair DOO-BWAA thank you for giving me a chance to talk to you and your distinguished colleagues today. My name is Keith Humphreys and I am the Esther Ting Memorial Professor at Stanford University, where I have studied addiction and drug policy for 30 years. I have also served as a drug policy advisor in multiple Presidential Administrations.

The key message I wish to convey is that while xylazine is in some ways a new challenge in drug policy, it is other ways a familiar one, namely that most addictive drug use is polydrug use and most overdoses involve more than one drug. We tend to talk and think about "the opioid crisis" just as in prior eras we did about the "methamphetamine crisis" and the "crack cocaine crisis", but effective public health policy has to recognize that that very few people who are addicted use only a single drug.

Xylazine is obviously a serious problem. It was initially intended as a treatment for hypertension but proved too dangerous for use in humans. About 20 years ago it began appearing sporadically in the U.S.'s illicit drug supply and became a consistent presence in parts of New England about 5 years ago and has now spread to most of the nation.[1] Like fentanyl, xylazine suppresses respiration, and the combined effect of the two drugs is probably multiplicative, raising the risk of overdose significantly. And because xylazine is not an opioid, naloxone doesn't reverse its effects, meaning there have to be changes to overdose response protocols, for example providing people supplemental oxygen and/or rescue breathing as appropriate.[1]

The federal government is currently considering putting xylazine on to the schedule of the Controlled Substances Act, which would probably create a significant disruption in the illicit supply. But

whether than happens or not, or whether xylazine disappears from the streets for some other reason or not, polydrug overdose is still likely to stay the norm as it has been for decades. For example, studies done before anyone had heard of xylazine, when most overdoses involved prescribed opioid pills, found consistently that about a third of "opioid" overdoses were in fact overdoses involving opioids combined with another tranquilizing drug, namely benzodiazepines.[2] Further, although many people don't think of alcohol as a drug, pharmacologically it is one, and we know that many "opioid" overdoses occur when the individual has also been drinking heavily.

There are multiple reasons why polydrug use is prevalent. Sometimes it's because dealers are combining drugs in the supply chain to accentuate the effect of drugs and thereby win more customers. But even when the supply chain is pure, users often combine drugs themselves to extend the effect of a drug, to recover from the effect of a drug, or both. And such polydrug use greatly amplifies the risk of overdose.

What this means is that while we should learn all we can about xylazine and improve our health care protocols in light of it, most of what we need to do is precisely the same things we would do if xylazine didn't exist. That means making sure our public insurance programs adequately support the provision of evidence-based addiction treatment, and that private insurers comply with state and federal regulations mandating adequate coverage of services for substance use disorder care, including care for polydrug use. It also means making the overdose rescue drug naloxone widely-available, including having insurers defray the cost of the new over the counter formulations. Last and definitely not least, it means making a long-term investment in the well-being of children through evidence-based prevention programs like Communities that Care. We can't predict what polydrug combinations will be the biggest threat to the health of people who are addicted ten years from now, but we can certainly be sure that preventing young people from heading down that track in the first place is the only long-term solution for significantly reducing the damage of polydrug addiction and overdose.

Thank you for your attention. I look forward to the discussion.

Dr. Humphreys' testimony expresses his own views which may or may not reflect the official views of his employers.

References

1. Gupta, R., Holtgrave, D.R., & Ashburn, M.A., (2023). Xylazine -- Medical and public health imperatives. New England Journal of Medicine, DOI: 10.1056/NEJMp2303120.

2.Sun, E.C., Dixit, A., Humphreys, K., Darnell, B., Baker, L. C., & Mackey, S. (2017). Association between concurrent use of prescription opioids and benzodiazepine with overdose: a retrospective analysis. BMJ, 356, j760.