



**EVOLVING TRENDS
AND THREATS IN
THE ILLICIT DRUG
MARKET:**

**Fentanyl, Veterinary Sedatives,
and Other Emerging Synthetic
Substances**

December 2025



State of New Jersey

COMMISSION OF INVESTIGATION

50 WEST STATE STREET

PO Box - 045

TRENTON, NEW JERSEY 08625-0045

Telephone (609) 292-6767

Fax (609) 633-7366

John P. Lacey
Chair

Kevin R. Reina
A. Todd Mayo
Commissioners

Bruce P. Keller
Executive Director

December 2025

Governor Phil Murphy
The President and Members of the Senate
The Speaker and Members of the General Assembly

The State Commission of Investigation, pursuant to N.J.S.A. 52:9M-1 to -20, submits its final report of findings and recommendations in connection with an investigation into evolving trends and threats in the illicit drug market in New Jersey.

Respectfully,

A handwritten signature in cursive script, reading "John P. Lacey".

John P. Lacey
Chair

A handwritten signature in cursive script, reading "Kevin R. Reina".

Kevin R. Reina
Commissioner

A handwritten signature in cursive script, reading "A. Todd Mayo".

A. Todd Mayo
Commissioner

Table of Contents

I. Executive Summary	1
A. The Fentanyl Problem	2
B. The Veterinary Sedatives Problem.....	4
C. The Problem of Other Emerging Synthetic Substances	4
 II. Recommendations to Address These Threats	 5
A. Strengthen the State’s Criminal Penalties for Fentanyl-Related Offenses	5
i. Fentanyl’s Pervasiveness and Evolution	7
ii. The Trend Towards Polydrug Combination	9
1. Industrial Compounds in the Illicit Fentanyl Supply	10
2. Tusi	11
B. Classify Xylazine and Medetomidine as Controlled Dangerous Substances Under New Jersey Law	11
i. Xylazine and Medetomidine: The Problem of Veterinary Tranquilizers.....	11
C. Regulate Access to “Over-the-Counter” Synthetic Opioids and Other Emerging Substances in New Jersey.....	19
i. Bromazolam	19
ii. Nitazenes.....	20
iii. Tianeptine Sodium Salt.....	22
iv. 7-OH	23
 III. Conclusion: A Call to Action	 26

I. Executive Summary

The New Jersey State Commission of Investigation (“the SCI”) has the authority and responsibility to investigate matters involving “public safety” and “effective enforcement” of the laws of the State.¹ The way it discharges that authority can take several forms. For example, the SCI issued an in-depth report in July 2013 on prescription pill and heroin abuse.² That report revealed, among other things, that otherwise licensed doctors and individuals, some with links to organized crime, were operating seemingly legitimate medical clinics, but writing unnecessary prescriptions for painkillers.³

Last year, based on concerns expressed by various law enforcement partners, the SCI began to review current evolving trends and threats created by the illicit drug market. There are several.

Chief among them is fentanyl abuse, but other dangerous new substances also are being sold, often in combination with fentanyl, and are reshaping the illegal drug landscape. To better understand how this affects New Jersey, the SCI interviewed personnel from various law enforcement organizations throughout the state – including the New Jersey Division of the United States Drug Enforcement Administration (DEA), the New Jersey State Police, county prosecutor’s offices, and

¹ N.J.S.A. 52:9M-2.

² New Jersey State Commission of Investigation, [*Scenes from an Epidemic: A Report on the SCI’s Investigation of Prescription Pill and Heroin Abuse*](#) (2013).

³ *Id.*

municipal police departments – along with medical professionals on the frontlines of the public health response.

To the extent there possibly can be any good news regarding fentanyl, it is that there has been a slight decline in the number of people it has killed per year.⁴ This is attributable, in part, to the wider availability of overdose medications and targeted public health initiatives.⁵ Nonetheless, fentanyl abuse remains a major drug problem in New Jersey, a problem exacerbated by the trend of mixing it with a variety of other substances and additives, some not even intended for human consumption, others against which overdose medications are ineffective.

This report highlights the problems law enforcement and medical professionals are seeing. It is urgently needed to help focus the public on the scope of the problems and risks that are jeopardizing lives.

A. The Fentanyl Problem

More than 90% of drugs seized by law enforcement in New Jersey over the last two years tested positive for illicit fentanyl. A May 2025 National Drug Threat Assessment (NDTA) issued by the DEA confirms this: Fentanyl was the most common substance found in seized drugs tested in New Jersey, as reported to the National Forensic Laboratory Information System (NFLIS).⁶

⁴ United States Centers for Disease Control and Prevention, [*CDC Reports Nearly 24% Decline in U.S. Drug Overdose Deaths*](#) (Feb. 25, 2025).

⁵ *Id.*

⁶ United States Drug Enforcement Administration, [*2025 National Drug Threat Assessment*](#) (May 2025).

Illicit fentanyl is a serious drug problem for at least three principal reasons. First, it often is deadly, even in small quantities. Just two milligrams of fentanyl – an amount smaller than the tip of a pencil – can result in a fatal overdose and that has had a staggering effect.⁷ Data from the Centers for Disease Control and Prevention (CDC) indicate that in a span of only eight years, fentanyl-related deaths nationwide increased from 264 to 4,144 for adults over the age of 65 from 2015 to 2023.⁸ That is a 1,470% increase.⁹ For younger adults, aged 25 to 64, fentanyl-related deaths increased by 660% in the same eight-year period.¹⁰

Second, it is pervasive. In 2024, the DEA recovered nearly 8,000 pounds of fentanyl powder and more than 60 million fentanyl-laced fake pills nationwide – equal to more than 380 million deadly doses – enough to kill the entire population of the United States.¹¹

Third, the illicit fentanyl trade is economically significant. Federal authorities have linked at least \$1.4 billion in suspicious financial transactions to various aspects of the illicit fentanyl supply chain.¹²

⁷ United States Drug Enforcement Administration, [Facts About Fentanyl](#).

⁸ Ahmad FB, Cisewski JA, Rossen LM, Sutton P. [Provisional drug overdose death counts](#), National Center for Health Statistics (2025).

⁹ *Id.*

¹⁰ *Id.*

¹¹ United States Drug Enforcement Administration, [State and Local Task Forces](#) (Sept. 22, 2025).

¹² United States Treasury Financial Crimes Enforcement Network, [Financial Trend Analysis Fentanyl-Related Illicit Finance: 2024 Threat Pattern and Trend Information](#) (April 2025).

As if that were not enough, just as this report was being issued, illicit fentanyl was designated as a weapon of mass destruction by Executive Order.¹³ The practical effect of that designation, although intended to increase penalties and enforcement options at the federal level, has no impact on the specific recommendations in this report, which urges New Jersey to take steps to address the illicit fentanyl crisis at the state level.

B. The Veterinary Sedatives Problem

The problem of illicit fentanyl is compounded by a second, related issue: To give users a prolonged high, illicit fentanyl is now frequently laced with veterinary tranquilizers – such as xylazine and medetomidine.¹⁴ This combination not only complicates the ability to remedy overdoses, but these additional drugs also cause skin lesions, sores and in severe cases, amputations. New Jersey ranks among the states where xylazine is most prevalent in seized drug samples.¹⁵

C. The Problem of Other Emerging Synthetic Substances

Lesser-known, but increasingly dangerous, substances also are infiltrating the state's illicit drug market. These include, but are not limited to, bromazolam,

¹³ The White House – Executive Order 14367, [*Designating Fentanyl as a Weapon of Mass Destruction*](#) (Dec. 15, 2025).

¹⁴ United States Drug Enforcement Administration, [*Public Safety Alert: DEA Reports Widespread Threat of Fentanyl Mixed with Xylazine*](#) (November 2022); United States Drug Enforcement Administration, [*State and Territory Report on Enduring and Emerging Threats: Medetomidine and Dexmedetomidine Submissions Increase Significantly*](#) (October 2024).

¹⁵ United States Drug Enforcement Administration, [*2025 National Drug Threat Assessment*](#) (May 2025).

nitazenes, tianeptine sodium salt, and 7-hydroxymitragynine (“7-OH”).¹⁶ Worse still, these synthetic compounds often are deceptively packaged and disguised as items like fruit-flavored gummies or ice cream cones. These substances are not proscribed by any law in New Jersey despite their danger and lack of legitimate medical use.

II. Recommendations to Address These Threats

A. Strengthen the State’s Criminal Penalties for Fentanyl-Related Offenses

The serious problem posed by fentanyl is not reflected in New Jersey’s current approach to criminalizing fentanyl-related offenses. Depending upon the amount of fentanyl involved, even illicit distribution offenses are currently only second- and third-degree crimes under New Jersey law.¹⁷ Second-degree offenses are punishable by a term of five to ten years in prison and a fine of up to \$150,000.¹⁸ Third-degree crimes are punishable by a term of three to five years in prison and a maximum fine of \$15,000.¹⁹

This should be contrasted with heroin: It is a first-degree crime to manufacture, distribute, or dispense, or possess with intent to manufacture, distribute, or dispense five or more ounces of heroin.²⁰ First-degree offenses are punishable by a term of ten to twenty years in prison and a maximum fine of \$200,000.²¹

¹⁶ See pages 19-25, *infra*.

¹⁷ N.J.S.A. 2C:35-5(b)(4)-(5).

¹⁸ N.J.S.A. 2C:43-6(a)(2); N.J.S.A. 2C:43-3(a)(2).

¹⁹ N.J.S.A. 2C:43-6(a)(3); N.J.S.A. 2C:43-3(b)(1).

²⁰ N.J.S.A. 2C:35-5(b)(1).

²¹ N.J.S.A. 2C:43-6(a)(1); N.J.S.A. 2C:43-3(a)(1).

Accordingly, even though fentanyl is far more deadly than heroin, fentanyl offenses are criminally considered less serious. There does not appear to be a reasonable justification for that disparity. The penalties available to be imposed for fentanyl offenses should be the same as those available to be imposed for heroin offenses.²² To the extent that longer prison terms – or even the threat of greater sentences – is an effective deterrent, law enforcement must have the option of recommending, and the judiciary the option of imposing, sentences commensurate with the seriousness of the offense. The SCI therefore recommends that the Legislature pass legislation to create new, first-degree crimes related to the manufacture, distribution, and possession of fentanyl, consistent with pending legislation introduced in January 2024 (S442/A806).²³ Other states, including Florida, Minnesota, and Ohio, all have first-degree crimes that are specific to the manufacture, distribution, and possession of fentanyl.²⁴ Additional background on

²² Notably, fentanyl is a Schedule II controlled substance whereas heroin is a Schedule I. In many cases, Schedule I drugs would be more severely punished than Schedule II drugs. However, fentanyl's scheduling is simply a by-product of the fact that it, unlike heroin, has a legitimate medical use. With respect to *unlawful* possession of fentanyl, this distinction is meaningless. As noted, fentanyl is far more deadly than heroin and, thus, in the context of punishing unlawful possession and distribution, there is no reasonable justification for treating it less seriously than heroin.

²³ Additional bills currently pending in the New Jersey Legislature would similarly impose upgraded penalties for certain crimes involving fentanyl (A2459, S2492, and A998/S617).

²⁴ FLA. STAT. ANN. § 893.135; MINN. STAT. ANN. § 152.021; OHIO REV. CODE ANN. § 2925.03.

the scope of the fentanyl problem and the reasons for this recommendation are set out below.²⁵

i. Fentanyl's Pervasiveness and Evolution

Fentanyl is a Schedule II²⁶ synthetic opioid.²⁷ It was approved by the Food and Drug Administration (FDA) because, when properly prescribed and used, it is useful as a pain reliever and analgesic.²⁸

Fentanyl is approximately 100 times more potent than morphine and 50 times more potent than heroin.²⁹ Because it is such a powerful narcotic, when misused, it has become the deadliest drug threat the country faces. Approximately 76,000 people in the United States died of fentanyl-related overdoses in 2023 alone, including 2,210 New Jersey residents.³⁰

²⁵ In addition, it is worth noting that the New Jersey Legislature is currently considering bills (A3909/S2818) that would mandate instruction pertaining to the dangers of fentanyl and xylazine.

²⁶ Schedule II controlled substances have approved medical uses, but a high potential for abuse, with use potentially leading to severe psychological or physical dependence. See United States Drug Enforcement Administration, [Drug Scheduling](#).

²⁷ Synthetic opioids are substances that are synthesized in a laboratory and that act on the same targets in the brain as natural opioids to produce analgesic effects. In contrast, natural opioids are naturally occurring substances extracted from the seed pod of certain varieties of poppy plants. See United States Drug Enforcement Administration, [Drug Fact Sheet: Synthetic Opioids](#) (Apr. 2020).

²⁸ United States Drug Enforcement Administration, [Drug Fact Sheet: Fentanyl](#) (Oct. 2022).

²⁹ *Id.*

³⁰ 2023 is the most recent year for which overdose death statistics from the New Jersey State Unintentional Drug Overdose Reporting System (SUDORS), maintained by the New Jersey Department of Health, are available. See United States Centers for Disease Control and Prevention, [U.S. Overdose Deaths Decrease Almost 27% in 2024](#) (May 14, 2025); [New Jersey SUDORS Overdose Mortality Data Explorer](#).

Fentanyl works by binding to the body's opioid receptors, found in areas of the brain that control pain and emotions.³¹ By binding with these receptors, fentanyl has the effect of, among other things, reducing pain and increasing euphoria.³² However, it also decreases respiration, which can ultimately cause death.³³ Fentanyl's potency greatly increases the risk of overdose, especially if a person who uses drugs does not know that a powder or pill contains it. As is true of other opioids, after taking them many times, the brain adapts by diminishing sensitivity and requiring an increased dose to produce a comparable high.³⁴

Fentanyl can be delivered to a user in various forms, including: (i) pills legitimately created for pharmaceutical use, but which are improperly prescribed or used; (ii) pills or tablets that are illicitly manufactured and distributed; and (iii) other illicit forms, such as powder for snorting or sniffing, smoking, or spiking onto blotter paper and on patches.³⁵

The wider availability of naloxone (commercially available as Narcan) has resulted in an overall decrease in the number of individuals seeking hospital treatment for drug overdoses.³⁶ Nonetheless, physicians at New Jersey's only state-owned acute care hospital – University Hospital in Newark – told SCI investigators

³¹ National Institute on Drug Abuse, [Research Topics: Fentanyl](#) (June 2025).

³² *Id.*

³³ *Id.*

³⁴ *Id.*

³⁵ United States Drug Enforcement Administration, [Drug Fact Sheet: Fentanyl](#) (April 2020).

³⁶ United States Centers for Disease Control and Prevention, [CDC Reports Nearly 24% Decline in U.S. Drug Overdose Deaths](#) (Feb. 25, 2025).

that they still see approximately six or more fentanyl-related overdose cases every day, with roughly 30% of those patients being admitted.

Aside from an increased overdose risk, regular fentanyl users may also develop the “fentanyl fold,” a neuromuscular side effect that results in severe and widespread muscle rigidity.³⁷ Chronic users who develop the “fentanyl fold” are often unable to respond or move and appear bent at the waist and slumped forward, with their knees bent and heads bowed.³⁸ It can last for minutes to hours and, apart from its alarming appearance, can cause decreased breath rate, poor circulation, and increased risk of falls and injuries.³⁹

ii. The Trend Towards Polydrug Combination

Heightening the challenges already associated with the fight against the fentanyl crisis is the increased mixing of fentanyl with other drugs. Because of fentanyl’s strong potency, a small amount can be used to replace a larger quantity of heroin in illicit drugs being marketed as “heroin.” In addition, traffickers are increasingly adding other substances, such as the veterinary sedative xylazine, to fentanyl or heroin in order to prolong highs.

Accordingly, many users, and even dealers, simply do not know the exact content of what they are consuming or selling. So, for example, a user who thinks she is buying heroin may, in fact, be buying heroin mixed with fentanyl and xylazine, a

³⁷ Jessica Sherer, [What Is The “Fentanyl Fold”?](#), Addiction Center Blog (May 30, 2025).

³⁸ *Id.*

³⁹ *Id.*

far more deadly cocktail. Moreover, the purity levels and strength of illicitly manufactured fentanyl can vary widely, putting users at greater risk. The same dose of one illicitly manufactured pill, even of those from the same batch, can cause a fatal overdose for one user, but not trigger a severe reaction in another.

Drug mixing occurs throughout the supply stream, from production in Mexico to street level distribution in the United States, but most mixtures occur at the distribution level because local traffickers know their users' preferences in a particular area.⁴⁰ With respect to polydrug mixtures, the SCI's investigation identified two particular trends of note:

1. Industrial Compounds in the Illicit Fentanyl Supply: BTMPS

Recent forensic analyses detected the emergence of bis (2,2,6,6-tetramethyl-4-piperidyl) sebacate ("BTMPS"), an industrial chemical used in plastics and adhesives as a protectant against ultraviolet (UV) rays, in regional fentanyl samples. An October 2024 DEA Joint Bulletin flagged the compound as a potential precursor⁴¹ substitute introduced by Mexican drug cartels, which are adapting to enforcement crackdowns on traditional chemical inputs. Although the effects of BTMPS on human health remain uncertain, animal studies have linked it to cardiotoxicity, ocular

⁴⁰ United States Drug Enforcement Administration, [*2025 National Drug Threat Assessment*](#) (May 2025).

⁴¹ Precursors are chemicals used in the synthesis and manufacture of illicit drugs. Precursor chemicals also can have legitimate uses.

damage, and sudden death, raising serious concerns and prompting a need for increased awareness about its continued use in illicit drug formulations.⁴²

2. Tusi

Tusi is a potent and unpredictable pink-colored cocktail of psychoactive substances that increasingly includes fentanyl.⁴³ Originally a slang term for the synthetic hallucinogenic drug 2C-B, tusi has recently evolved into new mixtures that are combinations of ketamine and other drugs like cocaine, methamphetamine, and fentanyl.⁴⁴ Its vibrant pink form belies that it poses serious risks, including hallucinations, increased heart rate, and loss of inhibition.⁴⁵ Originally surfacing in the 1970s, today's iterations of tusi are more toxic and potent than ever.⁴⁶ The DEA has reported significant seizures, with large quantities originating from Spain and Colombia. Particularly concerning is the drug's growing popularity among younger users – the DEA reported it is primarily marketed to the polydrug user population.

B. Classify Xylazine and Medetomidine as Controlled Dangerous Substances Under New Jersey Law

i. Xylazine and Medetomidine: The Problem of Veterinary Tranquilizers

⁴² Shover CL, Godvin ME, Appley M, et al. [*UV Stabilizer BTMPS in the Illicit Fentanyl Supply in 9 US Locations*](#), The Journal of the American Medical Association (JAMA) (Feb. 5, 2025).

⁴³ United States Drug Enforcement Administration, [*2025 National Drug Threat Assessment*](#) (May 2025).

⁴⁴ *Id.*

⁴⁵ Palamar, J. J., Tusi: [*A New Ketamine Concoction Complicating the Drug Landscape*](#), The American Journal of Drug and Alcohol Abuse (2023).

⁴⁶ *Id.*

As noted, fentanyl increasingly is being mixed with other drugs. That problem is exacerbated by the rise of veterinary sedatives in the illegal drug supply – a new and dangerous phase in the opioid crisis. These drugs include xylazine and medetomidine, both of which presently are unregulated in New Jersey. The SCI therefore recommends that xylazine and medetomidine be classified as controlled dangerous substances under New Jersey law. The reasons for this recommendation are explained further below.

Xylazine is a tranquilizer, pain reliever, and central nervous system depressant that is FDA-approved for use in veterinary medicine, where it is a vital medication for large animal sedation.⁴⁷ Although not approved for human use, it now is commonly found in New Jersey’s fentanyl samples. Users who inject xylazine or drug mixtures with xylazine often develop soft tissue injuries that can lead to necrotic tissue and may result in amputation.⁴⁸ Xylazine has no approved antidote for human use.⁴⁹ Because it is not an opioid, naloxone does not reverse its effects.⁵⁰

The absence of any effective antidote is underscored by the increase in xylazine overdose deaths. In 2019, only 19 deaths involving xylazine were documented in New Jersey. Three years later, in 2022, the number of fatal overdoses where xylazine was detected in toxicology reports had climbed to 210. According to the DEA, “[o]verdoses

⁴⁷ American Veterinary Medical Association Blog, [*Xylazine Legislation to be Considered by New Congress*](#) (Jan. 18, 2025).

⁴⁸ United States Drug Enforcement Administration, [*The Growing Threat of Xylazine and its Mixture with Illicit Drugs*](#) (October 2022).

⁴⁹ *Id.*

⁵⁰ *Id.*

associated with xylazine may be more difficult to identify in clinical settings, as they often appear similar to opioid overdoses and may not be included in routine drug screening tests.”⁵¹ Similarly, in 2019, only 3% of lab submissions contained xylazine. In 2024, 57% of lab submissions did.

When sold legally to veterinarians, xylazine is available in liquid form, either in vials or preloaded syringes.⁵² These solutions are prepared at a concentration appropriate for administration by injection based on the general size and weight of the species.⁵³ It is legitimately sold directly through pharmaceutical distributors and Internet sites catering to veterinarians.⁵⁴ According to the DEA, xylazine is also readily available for purchase on other Internet sites in liquid and powder form, often with no association to the veterinary profession nor requirements to prove legitimate need.⁵⁵ A kilogram of xylazine powder can be purchased online from Chinese suppliers with common prices ranging from \$6 to \$20 per kilogram.⁵⁶

Medetomidine is a non-opioid analgesic used in veterinary medicine.⁵⁷ It is 100 to 300 times more potent than xylazine.⁵⁸ Illicit medetomidine often is mixed with

⁵¹ *Id.*

⁵² *Id.*

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ *Id.*; New Jersey State Police Office of Drug Monitoring and Analysis (ODMA), New Jersey Drug Environment Overview Presentation (Aug. 28, 2024).

fentanyl, heroin and xylazine.⁵⁹ Like xylazine, because medetomidine is not an opioid, it does not respond to naloxone.⁶⁰

Severe medetomidine withdrawal symptoms include elevated blood pressures and elevated heart rates. These are difficult to treat and could require prolonged hospitalization. In other instances, some patients experience withdrawal symptoms like trouble breathing and extremely low heart rates. At Cooper University Hospital in Camden, doctors reported observing an increased use of medetomidine in patients. The extreme withdrawal symptoms associated with medetomidine are making treatment very difficult for hospital personnel, though there are several reported instances of the administration of dexmedetomidine to treat patients experiencing withdrawal.⁶¹ There has been an increase in withdrawal patients being admitted into Intensive Care Units (ICU), with 1 out of 5 patients needing intubation for survival.⁶²

The DEA reports that, as of 2024, medetomidine recently has cracked the top ten list of the drugs commonly mixed with fentanyl nationwide.⁶³ Similarly, before 2024, medetomidine was not seen in drugs seized by law enforcement in New Jersey. From January 2024 to May 2025, however, New Jersey forensic laboratories analyzed

⁵⁹ United States Drug Enforcement Administration, [*The Growing Threat of Xylazine and its Mixture with Illicit Drugs*](#) (October 2022).

⁶⁰ *Id.*

⁶¹ See e.g., Huo S, London K, Murphy L, et al. [*Notes from the Field: Suspected Medetomidine Withdrawal Syndrome Among Fentanyl-Exposed Patients — Philadelphia, Pennsylvania, September 2024–January 2025*](#) (May 1, 2025).

⁶² *Id.*

⁶³ United States Drug Enforcement Administration, [*2025 National Drug Threat Assessment*](#) (May 2025).

910 cases of suspected heroin which contained medetomidine. All of those 910 submissions involved polydrug combinations, including heroin, fentanyl or xylazine.

It is unclear whether the medetomidine in the illicit drug market is being illegally diverted from veterinary supplies,⁶⁴ though across several states, illicit, as opposed to pharmaceutical, medetomidine has been to blame for overdose cases.⁶⁵ According to an October 2024 DEA Report on Enduring and Emerging Threats, medetomidine is also offered in powder form by Chinese suppliers, ranging in price from \$10 to \$300 per kilogram.⁶⁶

The scheduling system for controlled dangerous substances evaluates factors like the drug's potential for abuse, its accepted medical use, and the likelihood of addiction.⁶⁷ Scheduling a drug as a controlled substance increases regulation of the drug and is intended to limit access to only those who have a legitimate, authorized need for it.⁶⁸ For example, scheduling a drug restricts who can possess the drug, who can prescribe the drug, and what records must be kept regarding those prescriptions.

⁶⁴ Brian Mann, [*Gangs mix another potent sedative into U.S. street drugs causing 'mass overdoses'*](#), National Public Radio (June 3, 2024); Legislative Analysis and Public Policy Association, [*Novel Psychoactive Substances: Medetomidine*](#) (June 2024).

⁶⁵ See American Veterinary Medical Association News, [*Health Officials Finding Different Illicit Veterinary Sedative in US Drug Supply*](#) (June 23, 2025) (“FDA-approved pharmaceuticals with medetomidine as the active ingredient have not been implicated.”).

⁶⁶ United States Drug Enforcement Administration, [*State and Territory Report on Enduring and Emerging Threats: Medetomidine and Dexmedetomidine Submissions Increase Significantly*](#) (October 2024).

⁶⁷ See United States Drug Enforcement Administration, [*Drug Scheduling*](#).

⁶⁸ *Id.*

In addition, scheduling a drug provides criminal penalties for unlawful possession.⁶⁹ The dangers associated with xylazine and medetomidine, as explained above, warrant additional regulation by classifying them as controlled dangerous substances.

Although there have been efforts in the United States Congress to designate xylazine as a Schedule III drug,⁷⁰ xylazine and medetomidine currently are not federally controlled substances. Seven states, however, – Florida, Ohio, Pennsylvania, Delaware, South Dakota, West Virginia, and Rhode Island – have already scheduled xylazine as a controlled substance.⁷¹ Several others, including New Jersey, are considering similar legislation.

In 2016, Florida became the first state to classify xylazine as a controlled substance.⁷² It appears that Florida is currently the only state to designate xylazine as a Schedule I narcotic, meaning that it has a high potential for abuse and has no accepted human medical use in the United States.⁷³

Some states, such as Ohio, Pennsylvania, Delaware, and South Dakota, now classify xylazine as a Schedule III controlled substance at the state-level and took

⁶⁹ Lampe, Joanna R. [*The Controlled Substances Act \(CSA\): A Legal Overview for the 119th Congress*](#), Library of Congress (Jan. 22, 2025).

⁷⁰ American Veterinary Medical Association Blog, [*Xylazine Legislation to be Considered by New Congress*](#) (Jan. 18, 2025).

⁷¹ Massachusetts appears to have adopted a different approach by scheduling xylazine as a controlled substance under its unique Schedule VI designation which applies to prescription drugs that are not federally controlled. See Olivia Sugarman and Hridika Shah, [*Tracking “Tranq” Laws: The State of Policy Responses to the Growing Xylazine Crisis*](#), Johns Hopkins Bloomberg School of Public Health.

⁷² FLA. STAT. ANN. § 893.03.

⁷³ *Id.*

action in response to their respective increases in overdose deaths involving xylazine. In Ohio, such fatalities had increased every year since 2019, prompting that state's Governor to sign a 2023 executive order directing xylazine's immediate scheduling as a Schedule III controlled substance drug.⁷⁴ In Pennsylvania, legislation classifying xylazine as a Schedule III controlled substance was signed into law in 2024.⁷⁵ There, xylazine contributed to 760 overdose deaths in 2022, a 31.9% increase from 2021 at 575 fatal overdoses.⁷⁶ In 2023, xylazine contributed to 1,135 overdose deaths across 51 counties – a 22-fold increase in just five years from 2018 (51 overdose deaths).⁷⁷ In Delaware, the Governor signed a law permanently making xylazine a Schedule III controlled substance in August 2023.⁷⁸ In South Dakota, legislation classifying xylazine as a Schedule III substance was signed into law in February 2024.⁷⁹

In West Virginia, a law making xylazine a Schedule IV controlled substance went into effect in June 2023.⁸⁰ In Rhode Island, xylazine was made a Schedule V controlled substance effective June 2023.⁸¹

⁷⁴ OHIO ADMIN. CODE 4729:9-1-03; State of Ohio Office of the Governor News Release, [*Governor DeWine Authorizes Emergency Classification of Xylazine as Schedule III Controlled Substance*](#) (March 29, 2023);

⁷⁵ 2024 Pa. Legis. Serv. Act 2024-17 (H.B. 1661).

⁷⁶ Commonwealth of Pennsylvania Office of the Governor Newsroom, [*Governor Shapiro Signs Bill into Law Permanently Classifying Xylazine as Schedule III Drug, Taking Further Action Against the Dangerous Drug While Maintaining Legal Access for Veterinary Use*](#) (May 15, 2024).

⁷⁷ *Id.*

⁷⁸ DEL. CODE ANN. tit. 16, § 4718.

⁷⁹ S.D. CODIFIED LAWS § 34-20B-20.2.

⁸⁰ W. VA. CODE ANN. § 60A-2-210.

⁸¹ 21 R.I. GEN. LAWS ANN. § 21-28-2.08.

There are several other states that have legislation to schedule xylazine currently pending. Arizona, Illinois, and New York have introduced legislation to make xylazine a Schedule I substance.⁸² Illinois and Michigan introduced legislation to make xylazine a Schedule II substance.⁸³ California, Hawaii, Illinois, Missouri, Nebraska, New Jersey, New York, and South Carolina introduced legislation to make xylazine a Schedule III substance.⁸⁴

Louisiana and Tennessee have chosen to criminalize the illicit production, manufacturing, distribution, and possession of xylazine without scheduling the substance.⁸⁵

Pennsylvania is the only state with proposed legislation to make medetomidine a controlled substance.⁸⁶ It does not appear that any other states currently classify medetomidine as a controlled substance.

⁸² H.B. 2045, 56th Leg, 2nd Reg. Sess. (Ariz. 2024); S.B. 2089, 103rd Gen. Assemb., Reg. Sess. (Ill. 2024); A. 8395, 2023-2024 Gen. Assemb., Reg. Sess. (N.Y. 2024) and S. 7763, 2023-2024 Gen. Assemb., Reg. Sess. (N.Y. 2024).

⁸³ H.B. 4352, 103rd Gen. Assemb., Reg. Sess. (Ill. 2024) and H.B. 3873, 103rd Gen. Assemb., Reg. Sess. (Ill. 2024); H.B. 4913, 2023-2024 Leg., Reg. Sess. (Mich. 2023).

⁸⁴ A.B. 3029, 2023-2024 Leg., Reg. Sess. (Cal. 2024); H.B. 2086, 2023-2024 Leg., Reg. Sess. (Haw. 2024) and S.B. 2749, 2023-2024 Leg., Reg. Sess. (Haw. 2024); H.B. 4450, 103rd Gen. Assemb., Reg. Sess. (Ill. 2024) and S.B. 3640, 103rd Gen. Assemb., Reg. Sess. (Ill. 2024); H.B. 2749, 102nd Gen. Assemb., 2nd Reg. Sess. (Mo. 2024); L.B. 892, 108th Leg., Reg. Sess. (Neb. 2024); S. 191, 2024-2025 Leg., Reg. Sess. (N.J. 2024) and A. 1526, 2024-2025 Leg., Reg. Sess. (N.J. 2024); A. 5914, 2023-2024 Gen. Assemb., Reg. Sess. (N.Y. 2024) and S. 5439, 2023-2024 Gen. Assemb., Reg. Sess. (N.Y. 2024); S. 5421, 2025-2026 Gen. Assemb., Reg. Sess. (N.Y. 2025); H.B. 4617, 2023-2024 Leg., Reg. Sess. (S.C. 2024) and S.B. 849, 2023-2024 Leg., Reg. Sess. (S.C. 2024).

⁸⁵ LA. STAT. ANN. § 40:989.4; TENN. CODE ANN. § 39-17-456.

⁸⁶ S.B. 866, 1st Sess. (Pa. 2025).

Both xylazine and medetomidine remain unregulated in New Jersey, but bills to classify xylazine as a Schedule III Controlled Dangerous Substance were introduced in the New Jersey Legislature (A1526/S191) in January 2024. No action has been taken, however, since their introduction.

C. Regulate Access to “Over-the-Counter” Synthetic Opioids and Other Emerging Substances in New Jersey

As detailed below, a number of synthetic substances are emerging in the illicit drug market that warrant further regulation by the State of New Jersey.

i. Bromazolam

Recent forensic lab testing conducted by the New Jersey State Police has revealed the synthetic benzodiazepine Bromazolam is increasingly being mixed with fentanyl and has been found in counterfeit Xanax pills. According to the DEA, 96% of seized counterfeit pills containing Bromazolam had markings imitating those associated with Xanax.⁸⁷ Originally synthesized in the 1970s but never approved for medical use because no pharmaceutical company ever submitted it to the FDA for review, Bromazolam mimics the effects of prescription drugs like Xanax, inducing sedation and reducing anxiety.⁸⁸ First appearing in the illicit drug market in 2016, it has become more prevalent since 2022.⁸⁹ Its unregulated nature and powerful

⁸⁷ United States Drug Enforcement Administration, [*Bromazolam: An Uncontrolled Benzodiazepine is Frequently Bought from Foreign Websites for Use in Counterfeit Pills*](#) (Nov. 2025).

⁸⁸ The Center for Forensic Science Research and Education, [*Bromazolam Prevalence Surging Across the United States Driven In Part by Increasing Detections Alongside Fentanyl*](#) (June 2022).

⁸⁹ *Id.*

sedative properties make it particularly dangerous when mixed with opioids, increasing the risk of respiratory depression and complicating emergency response protocols. Bromazolam is not federally regulated, but six states – Kentucky, Nevada, New Mexico, North Dakota, Virginia, and West Virginia – have taken action to classify the drug as a Schedule I controlled substance.⁹⁰ New Jersey should take similar steps to regulate access to Bromazolam at the state level.

ii. Nitazenes

In Camden, physicians at Cooper University Hospital told SCI investigators they are seeing an increase in patients who are using nitazenes – a group of highly potent synthetic opioids⁹¹ now emerging in the illicit drug market. First developed by researchers in the 1950s as an alternative to morphine, nitazenes were never released or approved for medical use in the United States or any other country because of their high potential for overdose.⁹² The most common nitazene – isonitazene (ISO) – is five to nine times stronger than fentanyl, while other types of nitazenes can be up to forty-three times more potent than fentanyl.⁹³ Although naloxone can reverse a nitazene overdose, the high potency often necessitates multiple administrations.⁹⁴

⁹⁰ 902 KAR 55:015E; NEV. ADMIN. CODE § 453.510; N.M. CODE R. § 16.19.20.65; N.D. CENT. CODE ANN. § 19-03.1-05; VA. CODE ANN. § 54.1-3446; W. VA. CODE ANN. § 60A-2-204.

⁹¹ United States Drug Enforcement Administration, [Drug Fact Sheet: Synthetic Opioids](#) (Apr. 2020).

⁹² Organization of American States, [Information Bulletin: The Emergence of Nitazenes in the America](#) (September 2024).

⁹³ *Id.*

⁹⁴ *Id.*

According to the DEA, “[i]n both powder and pill form, nitazenes have been encountered in polydrug mixtures containing fentanyl, heroin, and/or cocaine. When combined with other drugs, the effects of each drug are exaggerated, significantly increasing the risk of an overdose and addiction.”⁹⁵ In the United States, two specific types of nitazenes – clonitazene and etonitazene – were included in the original Controlled Substances Act of 1971 as Schedule 1 substances.⁹⁶ In 2020, the DEA classified ISO as Schedule I, and since then, several other nitazenes have been similarly scheduled.⁹⁷ Because New Jersey recognizes the federal scheduling of drugs, ISO’s designation as a Schedule I controlled dangerous substance by the DEA also applies in New Jersey.⁹⁸

Although clonitazene and etonitazene also are specifically enumerated as Schedule I substances under New Jersey law,⁹⁹ New Jersey should take action to classify all nitazenes as controlled substances. In July 2025, Pennsylvania announced the temporary scheduling of nitazenes as Schedule I substances under its respective state laws.¹⁰⁰ The presence of nitazenes in Pennsylvania’s illicit drug supply has been

⁹⁵ United States Drug Enforcement Administration, [*2025 National Drug Threat Assessment*](#) (May 2025).

⁹⁶ Organization of American States, [*Information Bulletin: The Emergence of Nitazenes in the America*](#) (September 2024).

⁹⁷ United States Drug Enforcement Administration, [*State and Territory Report on Enduring and Emerging Threats*](#) (January 2024).

⁹⁸ N.J.S.A. 24:21-3(c).

⁹⁹ N.J.S.A. 24:21-5(c)(11) and (22).

¹⁰⁰ Commonwealth of Pennsylvania Office of the Governor Newsroom, [*Shapiro Administration Temporarily Schedules Nitazene as a Controlled Substance, Takes Action to Protect Public Health and Keep Pennsylvanians Safe*](#) (July 18, 2025).

a contributing factor in at least 50 deaths since 2020, and a record 29 deaths in 2024 alone.¹⁰¹

One recent media report stated “nitazenes’ presence on the illegal drugs market have been increasing for the past five years, and represents a growing threat to public health.”¹⁰² It emphasized the rise of polydrug mixtures containing nitazenes and attributed the increase in popularity to their being “inexpensive, strong, and addictive[.]”¹⁰³ The report quotes an expert as saying that, because nitazenes are inexpensive, “drug traffickers ‘cut’ their drug supply and make more money.”¹⁰⁴ It reiterated, as noted, that nitazenes are incredibly potent, with a small dose that fits on the tip of a pin being enough to slow or stop breathing.¹⁰⁵ The strength of nitazenes, combined with many users not knowing they are taking them, makes them a significant public health danger.¹⁰⁶

iii. Tianeptine Sodium Salt

Tianeptine sodium salt is an antidepressant used in some European, Asian, and Latin American countries primarily for treating major depressive disorder; however, it is not approved by the FDA for medical use in the United States and its use can lead to unintentional overdose.¹⁰⁷ Other side effects associated with the use

¹⁰¹ Elizabeth Yuko, [*The Next Wave in the Opioid Crisis: A New Drug Stronger Than Fentanyl Is Taking Off*](#), Rolling Stone (Nov. 15, 2025).

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ New Jersey Department of Health, [*Health Alert: Tianeptine Update – Continued Cases Despite January 2024 Recall*](#) (Sept. 24, 2024).

of tianeptine sodium salt include confusion, seizures, drowsiness, dry mouth, and shortness of breath.¹⁰⁸ Because it is now becoming available at convenience stores and gas stations, tianeptine sodium salt is commonly referred to as “Gas Station Heroin,” branded under names like “Zaza,” “Tianna Red,” and “Neptune’s Fix.”¹⁰⁹ Tianeptine sodium salt is often misleadingly promoted as a dietary supplement for mood enhancement and can also be obtained online from independent vendors without a prescription.¹¹⁰

Tianeptine sodium salt is not currently scheduled as a controlled substance by the federal government or in New Jersey. Some states, however, have taken action to regulate the substance. Alabama, Florida, Georgia, Indiana, Kentucky, Minnesota, and Ohio all classify tianeptine sodium salt as a Schedule I controlled substance.¹¹¹ In Arkansas, Michigan, Oklahoma, and Tennessee, it is a Schedule II controlled substance.¹¹² Bills to establish tianeptine sodium salt as a Schedule II controlled dangerous substance in New Jersey were introduced in January 2024 (S729/A4814), but no action has been taken on them since March 2025.

iv. 7-OH

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ ALA. CODE § 20-2-23; FLA. STAT. ANN. § 893.03; GA. CODE ANN. § 16-13-25; IN CODE § 35-48-2-4; 902 KAR 55:015E; MINN. STAT. ANN. § 152.02; OHIO ADMIN. CODE 4729:9-1-01.3.

¹¹² 007.07.2 ARK. CODE R. § 2; MICH. COMP. LAWS ANN. § 333.7214; OKLA. STAT. ANN. tit. 63 § 2-206; TENN. CODE ANN. § 39-17-408.

A concentrated byproduct of the kratom plant, 7-OH is considered an opioid, but is not currently regulated either at the federal level or by New Jersey.¹¹³ 7-OH is one specific, highly potent alkaloid that is naturally present in trace amounts in kratom plant leaves.¹¹⁴ When sold in concentrated extract or semi-synthetic form, 7-OH is significantly stronger and more dangerous than natural kratom leaf powder.¹¹⁵ Vape shops, gas stations, corner stores and other similar retail locations now are selling pills, gummies, candies, and other products that contain 7-OH – a substance found to be 13 times more potent than morphine.¹¹⁶ It is readily available over-the-counter in products designed and marketed to look like everyday treats.¹¹⁷

The FDA recently deemed 7-OH an emerging public health threat and recommended placing federal restrictions on 7-OH by designating it as a Schedule I substance, the tier for drugs with no accepted medical value and a high likelihood of abuse.¹¹⁸ It has noted, with particular concern, the growing availability of concentrated 7-OH products appealing to children and teenagers, such as fruit-

¹¹³ United States Food and Drug Administration, [*FDA Takes Steps to Restrict 7-OH Opioid Products Threatening American Consumers*](#) (July 29, 2025).

¹¹⁴ United States Food and Drug Administration, [*7-Hydroxymitragynine \(7-OH\): An Assessment of the Scientific Data and Toxicological Concerns Around an Emerging Opioid Threat*](#) (July 2025).

¹¹⁵ *Id.*; United States Drug Enforcement Administration, [*Drug Fact Sheet: Kratom*](#) (Apr. 2020).

¹¹⁶ United States Food and Drug Administration, [*FDA “Dear Colleague” Letter on 7-OH*](#) (July 29, 2025).

¹¹⁷ *Id.*; United States Food and Drug Administration, [*7-Hydroxymitragynine \(7-OH\): An Assessment of the Scientific Data and Toxicological Concerns Around an Emerging Opioid Threat*](#) (July 2025).

¹¹⁸ *Id.*

flavored gummies, candies, and other shelf-stable sweets designed to look like ice cream cones.¹¹⁹

In August 2025, Florida issued an emergency rule that classifies 7-OH as a Schedule I substance in the state.¹²⁰ The rule applies to synthetic 7-OH concentrates, not the 7-OH that can be found naturally in kratom plant leaves.¹²¹ Louisiana also classified 7-OH as a Schedule I substance, effective August 1, 2025.¹²² Meanwhile, Mississippi and Colorado banned 7-OH in 2025.¹²³ Alabama, Arkansas, Indiana, Vermont, and Wisconsin have all banned kratom or its derivatives, including 7-OH.¹²⁴

In New Jersey, there is pending legislation to criminalize the manufacture, sale, and possession of substances containing kratom (A3797/S3359), but no action has been taken on the bills since June 2024. These bills would amend existing law to include kratom as a controlled dangerous substance and to set out gradations for crimes involving the substance.

In October 2025, legislation to classify 7-OH as a Schedule I controlled substance was introduced in the New Jersey Senate (S4772). That bill would make it illegal to possess any amount of 7-OH without a prescription or not directly obtained from a licensed practitioner.

¹¹⁹ United States Food and Drug Administration, [*Statement from FDA Commissioner Marty Makary, M.D., M.P.H., on Florida Restriction of 7-OH Opioid Products*](#) (Aug. 13, 2025).

¹²⁰ FLA. ADMIN. CODE R. 2ER25-2.

¹²¹ *Id.*

¹²² LA. REV. STAT. § 40:964.

¹²³ MISS. H.B. 1077 (2025); COL. S.B. 25-072 (2025).

¹²⁴ ALA. CODE § 20-2-23; ARK. ADMIN. CODE § 007.07.2; IN CODE § 35-48-2-4; 12-5 VT. CODE R. § 23:7.0; WIS. STAT. ANN. § 961.14.

III. Conclusion: A Call to Action

This summary report offers strategic recommendations aimed at fortifying public policy, enhancing law enforcement capabilities, and safeguarding public health. Additional steps are needed to disrupt the evolving dynamics of this continuing public health emergency. Other states have taken action. New Jersey should not lag behind.