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DEA BULLETIN
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(U) Medetomidine Emerging as a Significant Adulterant in Indiana

(U) This DEA Bulletin is based on preliminary reporting and may be subject to updating as additional information becomes available.

Statement of Analysis

In April 2026, the Indiana Department of Health (IDH) released a Health Alert Network notification about the emergence of the veterinary sedative medetomidine in Indiana. Medetomidine has been increasingly detected in toxicology data submitted by Indiana county coroners and as a residual substance in data from the Indiana syringe surveillance program.

Medetomidine is a nonscheduled, alpha-2 agonist nonopioid sedative not approved for human use. Medetomidine is used illicitly as an adulterant and has been detected in cases of drug overdose deaths. Cessation of medetomidine after regular use may also cause severe withdrawal symptoms.

Details

According to the IDH alert, research findings suggest that, although medetomidine is more potent than xylazine, both cause similar side effects, such as dry mouth, hypotension, hypothermia, low heart rate, respiratory depression, sedation, and vasoconstriction. Medetomidine will likely not cause the necrotic wounds associated with xylazine; however, it can cause blue discoloration of extremities, hallucinations, and muscle twitches that are atypical of xylazine use.

When combined with an opioid, the sedative effects of medetomidine are longer lasting and stronger. Medetomidine is not an opioid, thus naloxone may not be as effective at fully reversing a medetomidine-involved overdose. Furthermore, in veterinary literature, combining medetomidine and opioids has resulted in greater respiratory depression. This is noteworthy, since medetomidine has commonly been detected in toxicological results, alongside opioids.

According to an April 2026 Centers for Disease Control and Prevention Health Alert, a severe withdrawal reaction is possible when users stop taking medetomidine after regular use. Withdrawal symptoms may include increased heart rate and blood pressure, as well as changes in alertness, agitation, chest pain, severe nausea, and vomiting. Symptoms may begin within hours of ingestion and peak 18–36 hours later. These symptoms are like opioid or stimulant overdose and withdrawal symptoms.

An October 2024 DEA State and Territory Report on Enduring and Emerging Threats (STREET) warned of a significant increase in medetomidine and dexmedetomidine submissions to the DEA National Forensic Laboratory Information System (NFLIS), which tracks controlled and noncontrolled substances seized by law enforcement. From 2021 to 2023, approximately 482 medetomidine submissions were received into NFLIS. In addition, a query of DEA forensic laboratory exhibits reported that 777 distinct cases and 1,878 laboratory exhibits involving medetomidine were submitted to DEA laboratories from August 2022 to April 2026. Nearly 96 percent of the exhibits involving medetomidine occurred between August 2024 and March 2026. Medetomidine submissions from Indiana accounted for 87 of the total laboratory exhibits.

The IDH alert reported that from November 2023 to February 2026, there were 2,231 detections of medetomidine in syringes: 1,281 detections in 2025, and another 209 detections through February 2026. Cocaine, diphenhydramine, fentanyl, fentanyl analogues, lidocaine, methamphetamine, quinine, and xylazine are commonly co-detected drugs in the Indiana syringe surveillance program. Fentanyl was present in 99.5 percent of specimens where medetomidine was detected.

From December 2024 to March 2026, there were 70 total detections of medetomidine in Indiana toxicology data submitted by Indiana coroners in suspected overdose death cases; 26 detections occurred in 2026 through March. Medetomidine was detected in toxicology data for 24 counties in Indiana. Marion County accounted for 45.7 percent (32 total) of all positives, followed by Wayne County at 7.1 percent (five total). Drugs commonly co-detected in overdose death toxicology data include amphetamine, cannabis, cocaine, fentanyl, fentanyl analogues, and methamphetamine.

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