Controlled Substances Advisory Committee

This meeting is being held virtually on Microsoft Teams.
August 26, 2026
1:00 pm – 2:00 pm

Welcome and Introductions	**1:00pm**
Review of the Controlled Substance Scheduling Process	**1:10pm**
Presentation of 8-Factor Analysis for the Scheduling of Medetomidine	**1:15pm**
Discussion and Review of Medetomidine Proposal	**1:35pm**
Next Steps / Adjourn	**1:55pm**

How to access the meeting:

Microsoft Teams Need help?
Join the meeting now
Meeting ID: 215 791 867 572 371
Passcode: AH3z5iD6

The Ohio Board of Pharmacy is committed to providing access and inclusion and reasonable accommodation in its services, activities, programs, and employment opportunities in accordance with the Americans with Disabilities Act (ADA) and other applicable laws. To request a reasonable accommodation due to a disability, please contact Janelle D. Tyson, Human Resources Manager, 614-315-9835, janelle.tyson@pharmacy.ohio.gov.

Hamilton County

Addiction Response Coalition

Drug Trends Workgroup

8-Factor Analysis for the Scheduling of Medetomidine

Hamilton County
Addiction Response Coalition

Drug Trends Workgroup Chair
Chief Tom Synan
Village of Newtown

Federal Bureau of Investigations
Antonia Redmond
Caroline Adams

Drug Enforcement Administration
Brian Mulcahy
Jonathan Weaver

Ohio Narcotics Intelligence Center
Nick Warnecke
Alexander Vandyke

Hamilton County Office of Addiction Response
Meagan Guthrie
Abigail Fritsch

Hamilton County Heroin Task Force
Commander Michael Davenport

Hamilton County Coroner's Office
Laura Kimble

Hamilton County Public Health
Alex Woroncow
Darci Smith
Devin Knutson
Ross Combs
Lauren Duba

Dear Members of the State of Ohio Board of Pharmacy Controlled Substances Advisory Committee,

On behalf of the Hamilton County Addiction Response Coalition Drug Trends Working Group, we respectfully submit the enclosed eight-factor analysis in support of the scheduling of medetomidine that is not in final dosage form as a schedule III-controlled substance.

The Drug Trends Working Group convenes multidisciplinary partners from law enforcement, public health, healthcare, and community-based organizations to collaboratively pool intelligence and data across systems. Our mission is to develop a comprehensive, real-time understanding of emerging drug threats in order to strengthen prevention, treatment, and enforcement responses throughout Hamilton County.

The Working Group serves as a collaborative intelligence hub, aligning local toxicology and surveillance data with state, federal, and international trends, to better understand how shifts in the global drug supply affect local distribution patterns, user behavior, and community health outcomes. Our objective is to construct a complete picture of the drug supply chain, from international production and trafficking routes to local, street-level distribution.

To inform this analysis, the Working Group leverages insights from:

- Federal intelligence, including substances entering the United States, their origins, dark web distribution patterns, and geopolitical forces driving emerging drug trends; and
- Local toxicology and surveillance data, identifying how these national and international patterns are manifesting within Hamilton County.

Through this cross-sector collaboration, we seek to anticipate emerging threats and mitigate harm through data-driven enforcement strategies, clinical preparedness, and community-based interventions. While controlling supply alone remains challenging, coordinated, intelligence-informed responses can significantly enhance public safety and health outcomes.

We appreciate the Committee's careful review of this analysis and your consideration of the urgent public health risks posed by medetomidine. Should you have any questions, require additional documentation, or wish to provide feedback, we welcome the opportunity to engage further and to revise or supplement this submission as needed. We stand ready to work collaboratively with the Committee to ensure this dangerous substance receives the appropriate regulatory response.

Thank you for your time, service, and thoughtful consideration.

Section 1: Summary
The Ohio Board of Pharmacy (Board), pursuant to section 3719.44 of the Ohio Revised Code, proposes the placement of the following into Schedule III: Medetomidine.

Section 2: Background
In making a determination to add, remove, or transfer a compound or drug in accordance with section 3719.44 of the Ohio Revised Code, the Board is required to consider the following 8 criteria:

(1) The actual or relative potential for abuse;
(2) The scientific evidence of the pharmacological effect of the substance;
(3) The state of current scientific knowledge regarding the substance;
(4) The history and current pattern of abuse;
(5) The scope, duration, and significance of abuse;
(6) The risk to the public health.
(7) The potential of the substance to produce psychic or physiological dependence liability; and
(8) Whether the substance is an immediate precursor.

Section 3: Evaluation Under the Eight Criteria

(1) The actual or relative potential for abuse.

Medetomidine has emerged as a non-opioid sedative being increasingly misused in combination with opioids and other central nervous system depressants. Medetomidine is chemically and pharmacologically similar to xylazine but is 100-200 times more potent. Its pharmacology closely mirrors that of xylazine, a veterinary sedative, which is already scheduled in the U.S. due to its lethal role in overdose deaths. Like xylazine, medetomidine is not approved for human use but has been detected in toxicology screens of overdose cases, particularly in synthetic opioid mixtures, indicating diversion for non-medical purposes. The drug's sedative properties and synergy with opioids significantly increase its abuse potential.

- Early detections: First confirmed in the U.S. drug supply around 2022–2023, now rising in prevalence in the Midwest (including Hamilton County).
- Local impact: In recent Hamilton County data, medetomidine surpassed xylazine in frequency of detection in seized drug samples by 2025, signaling rapid adoption by illicit suppliers.

Multiple drugs are usually involved in overdose deaths. Individual deaths may be reported in more than one category. All of the medetomidine-related unintentional drug overdose deaths included in this time period involved multiple substances. Of the 21 unintentional drug overdose deaths involving medetomidine in Hamilton County, 100% also involved fentanyl. Medetomidine was not available on postmortem toxicology testing until June

2024 with the first positive being reported July 17, 2024. The first evidence of medetomidine in samples being used by individuals in Hamilton County was January 3, 2024. We know, however, that medetomidine has been present as early as October 2023 in Hamilton County through criminal seizures. Postmortem toxicology testing on medetomidine is not available throughout Ohio."

(2) The scientific evidence of the pharmacological effect of the substance.

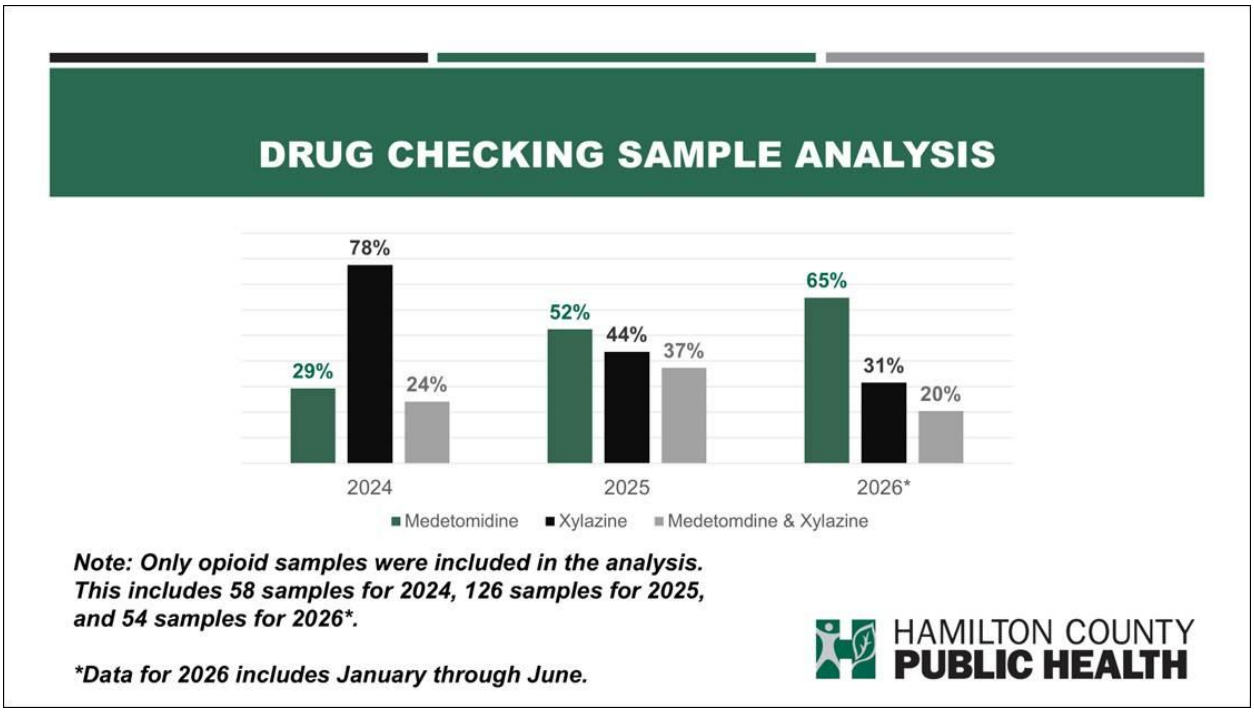
Medetomidine is a potent alpha-2 adrenergic receptor agonist that produces sedation, analgesia, and muscle relaxation, bradycardia, hypotension, and hypothermia. It is approved in veterinary medicine as a pre-anesthetic and sedative, but not for human use. Its effects are similar to dexmedetomidine (Precedex), a Schedule IV sedative used in ICUs, but medetomidine has not been clinically tested for human safety. The compound can exacerbate the depressant effects of opioids, heightening the risk of overdose. Importantly, naloxone does not reverse its effects, making it a particularly dangerous additive in opioid overdoses.

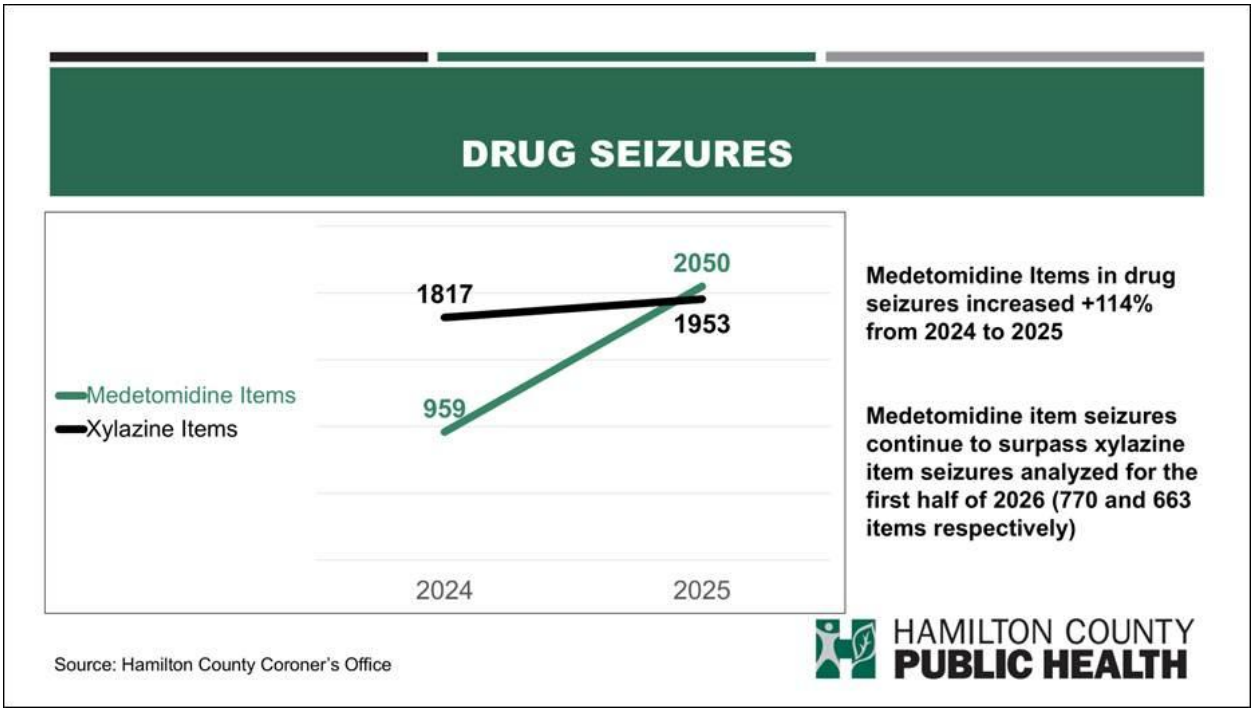
(3) The state of current scientific knowledge regarding the substance.

Medetomidine is a well-characterized alpha-2 adrenergic agonist in veterinary pharmacology but lacks comprehensive clinical data in humans. Its pharmacokinetics and pharmacodynamics are well established in animals, and structurally, it is closely related to other alpha-2 agonists known to produce significant central nervous system effects. Human data are limited to case reports and toxicology findings; no controlled clinical trials or established dosing guidelines exist.

Recent forensic and toxicological data from multiple jurisdictions, including DEA reports and local coroner analyses, demonstrate an increasing identification of medetomidine in postmortem samples, often in combination with fentanyl, xylazine, and other synthetic opioids. Emerging drug checking data in Hamilton County corroborate these findings, indicating that medetomidine is increasingly detected in street-level samples, has begun to surpass Xylazine in prevalence. The presence of medetomidine in the illicit drug supply is notable because, like Xylazine, it is a potent sedative with no approved human use, and its co-administration with opioids may exacerbate respiratory depression and cardiovascular complications.

These observations underscore a rapidly evolving drug landscape that remains incompletely documented in the scientific literature, highlighting the need for continued monitoring, research, and public health surveillance.





(4) The history and current pattern of abuse.

Reports from law enforcement, medical examiners, and public health agencies reveal a growing trend in the appearance of medetomidine in street drug samples, particularly in the Midwest and Northeast U.S. Its presence is often linked with opioid/fentanyl mixtures in illicit drug markets. In May 2025, the CDC published a report describing 165 patients

admitted to Philadelphia's health systems between Sept 1, 2024 - Jan 31, 2025 with a newly recognized medetomidine withdrawal syndrome, of which 90% were admitted to an intensive care unit and 23% were intubated. Though not traditionally associated with recreational abuse, its use as an adulterant or cutting agent in synthetic opioids is creating new patterns of unintended abuse and toxic exposure.

(5) The scope, duration, and significance of abuse.

While medetomidine abuse remains relatively novel, its rapid emergence mirrors that of xylazine and other veterinary sedatives recently implicated in the opioid crisis. In some communities, medetomidine has been linked to dozens of overdoses and is contributing to the evolving toxicity profile of street opioids. Given its extreme potency, small volumes can lead to fatal outcomes when combined with opioids. The ongoing detection of medetomidine in toxicology reports signals a growing and urgent threat to public health. The CDC early surveillance indicates medetomidine-positive deaths are rising, though still under-recognized.

(6) The risk to the public health.

Medetomidine presents a significant and increasingly substantiated risk to the public health. As a potent α2-adrenergic agonist with central nervous system and respiratory depressant properties, medetomidine produces profound sedation, hypotension, bradycardia, and respiratory compromise. There is no FDA-approved human medical use, and therefore no standardized medical treatment protocols or approved reversal agents exist for the management of medetomidine toxicity in humans.

Medetomidine is now being detected with increasing frequency in the illicit drug supply, often as an adulterant in fentanyl and polysubstance mixtures, where its pharmacologic effects substantially increase the risk of overdose, respiratory failure, and death, particularly when co-ingested with opioids, benzodiazepines, or alcohol.

Critically, the threat to public health is no longer theoretical. As detailed in **Exhibit A**, Hamilton County has documented two confirmed medetomidine-only fatalities with no contributing substances identified (Cases [redacted] and [redacted]), alongside two additional medetomidine-involved deaths featuring complex multi-substance toxicity (Cases [redacted] and [redacted]). These cases establish that medetomidine alone is capable of producing fatal toxicological effects and underscores its inherent lethality independent of opioid involvement.

Further compounding this risk, medetomidine remains unregulated for human use while maintaining high availability through veterinary channels and illicit markets, increasing the likelihood of diversion, misuse, and repeated toxic exposures. Emerging clinical evidence further demonstrates that chronic exposure to α2-adrenergic agonists may result in tolerance and a clinically significant and potentially life-threatening withdrawal syndrome

characterized by rebound hypertension, agitation, tachycardia, and autonomic instability, frequently necessitating intensive care unit–level intervention.

At present, because medetomidine is not a scheduled substance, most clinical toxicology panels used by hospitals and treatment providers do not routinely test for its presence. As a result, clinicians are often unable to promptly identify medetomidine exposure or accurately diagnose and manage withdrawal, leading to delayed or inappropriate treatment and increased risk of severe complications. Scheduling would facilitate routine testing, improve clinical detection, inform appropriate withdrawal management, and materially reduce preventable morbidity and mortality associated with medetomidine exposure.

(7) The potential of the substance to produce psychic or physiological dependence liability; and

Although medetomidine is not traditionally associated with classic substance use disorder symptoms (craving or compulsive use), its pharmacology suggests a strong potential for physiological dependence, particularly in individuals repeatedly exposed through adulterated opioids. Sedative dependence liability has been well-established in similar alpha-2 agonists like clonidine and dexmedetomidine. Chronic exposure may result in tolerance, withdrawal symptoms, and long-term autonomic instability.

(8) Whether the substance is an immediate precursor.
Medetomidine is not known to be a chemical precursor for the synthesis of other controlled substances. However, its structural and pharmacological similarity to other sedatives used in illicit drug markets warrants regulatory control due to its active role as an additive and potentiator in poly-drug use.

Section 4: Finding of the Board

- The Board may add or transfer a compound, mixture, preparation, or substance to schedule III when it appears that there is a potential for abuse less than the substances included in schedules I and II, that it has a currently accepted medical use in treatment in this state, and that its abuse may lead to moderate or low physical or high psychological dependence.

Based on these findings, the Board hereby concludes that medetomidine warrants control in Schedule III and authorizes the filing of amended rule **[4729:9-1-XX]** of the Administrative Code as found in Section 5 of this document.

Section 5: Proposed Rule