



Emerging Drug Trends and Response Guidance

*Maryland's Overdose Response Strategy (ORS) and
Overdose Data to Action in States (OD2A) Programs*

December 2025



Introductions and Background



MARYLAND DRUG TRENDS 2025

MD ORS TEAM

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ORS Program Strategies

- 1 **Share data systems** to inform rapid and effective community overdose prevention efforts
- 2 Support immediate, **evidence-based response** efforts that can directly reduce overdose deaths
- 3 Design and use promising strategies at the **intersection of public health and public safety**
- 4 Disseminate information to support the implementation of evidence-informed prevention strategies that can reduce substance use and overdose



OD2A-STATES

4.5 million annual funding supports: state-level staff, equipment + supplies, local programs

Primary goals include:

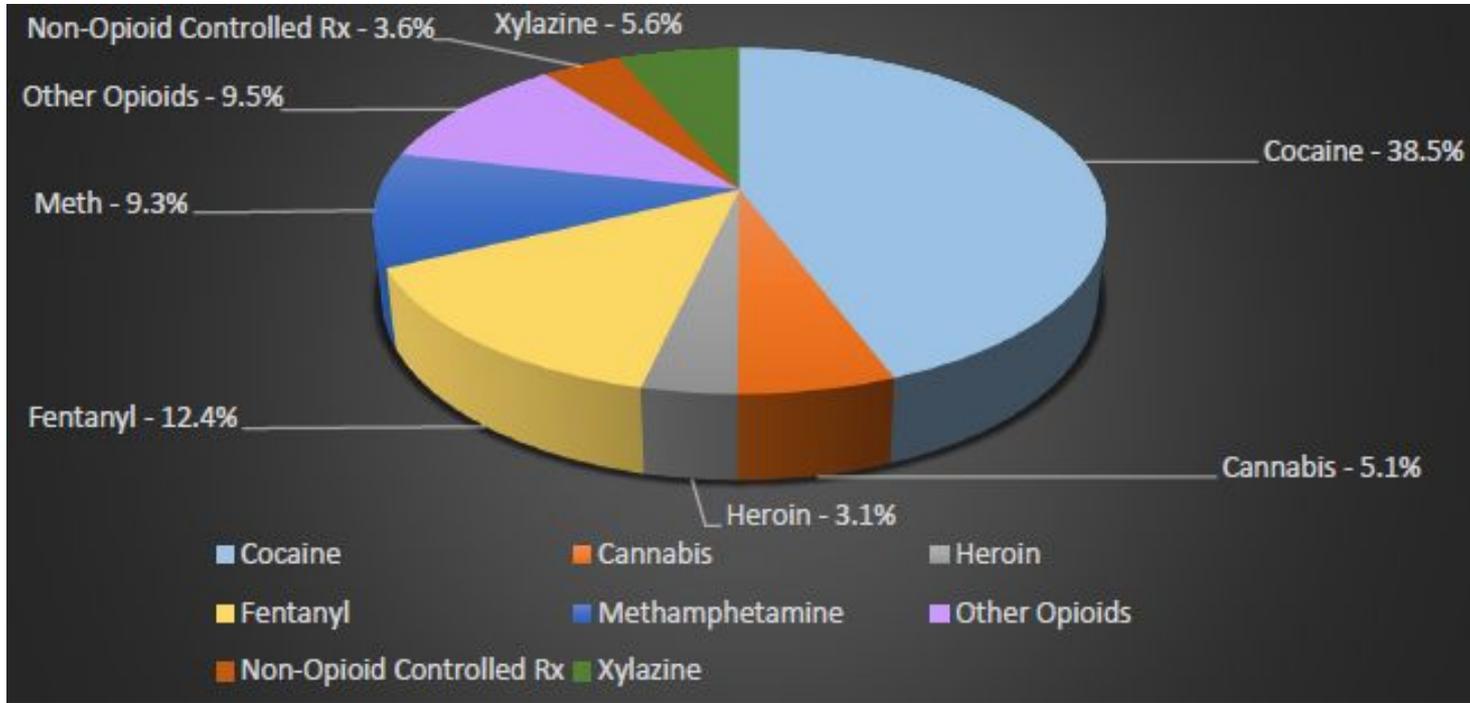
- Enhance ability to track, prevent nonfatal and fatal overdoses, identify emerging drugs
- Promote *evidence-based interventions* for immediate impact on reducing overdose
- Close gaps related to access to care and services to reduce health inequities
- Engage partners and people with lived experience in four stage data to action framework: data synthesis, prioritizing interventions with immediate impact, high fidelity implementation, and rigorous evaluation

7 Required Strategies:

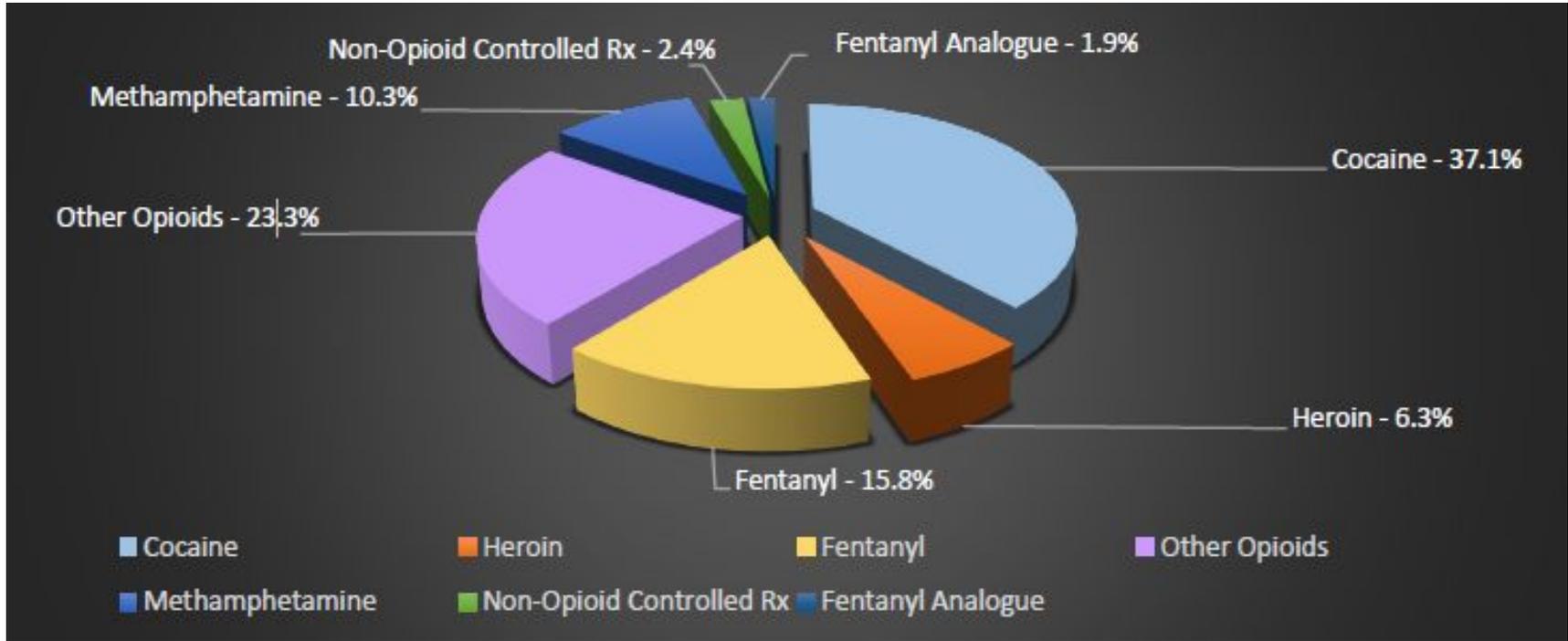
- Surveillance Infrastructure, Morbidity and Mortality Surveillance
- Clinician + Health System Engagement, Public Safety Partnerships, Harm reduction, Community-based linkages to care

Emerging Drugs and Trends of Concern

Top Identified Drugs, Q1 2025



Central Maryland Top Identified Drugs Q1 2025



Central Maryland Drug Pricing – May 2025

	<u>Average Low</u>	<u>Average High</u>
• <u>Fentanyl - Kilo</u>	<u>\$20,000</u>	<u>\$25,000</u>
• <u>Fentanyl - Ounce</u>	<u>\$1,750</u>	<u>\$2,000</u>
• <u>Fentanyl - Gram</u>	<u>\$60</u>	<u>\$80</u>
• <u>Cocaine HCL (Powder) - Kilo</u>	<u>\$17,000</u>	<u>\$40,000</u>
• <u>Cocaine HCL (Powder) - Ounce</u>	<u>\$800</u>	<u>\$12,500</u>
• <u>Cocaine HCL (Powder) - 1/8 Ounce</u>	<u>\$150</u>	<u>\$250</u>
• <u>Methamphetamine - Kilo</u>	<u>\$12,000</u>	<u>\$13,200</u>
• <u>Methamphetamine - Pound</u>	<u>\$6,000</u>	<u>\$6,600</u>
• <u>PCP (Liquid) - Ounce</u>	<u>\$160</u>	<u>\$200</u>
• <u>Marijuana - Pound</u>	<u>\$800</u>	<u>\$2,000</u>
• <u>Marijuana - Ounce</u>	<u>\$100</u>	<u>\$350</u>



Baltimore's Fentanyl - "Scramble"



Emerging Drugs + Trends - Ongoing Monitoring

Emerging Drugs Workgroup:

- *Quarterly closed meetings*, report-out from all data partners
- Triangulating and co-interpreting across data source
- Regional Emerging Drugs Forum

Current drugs of concern:

- Opioids
 - Illicitly manufactured fentanyl (IMF)
 - Fentanyl analogues - Carfentanil, pFF
 - Nitazenes
- Stimulants - Cocaine, Methamphetamine
- ***Sedative adulterants - Xylazine, Medetomidine***
- ***Bromazolam and other designer benzodiazepines***
- Tianeptine (aka Gas Station)

Emerging drug trends:

- Route of administration - change from injection to smoking and ingestion
- Packaging - increase in counterfeit pills
- Potency - significant increase in opioid and sedative adulterant potency
- Adulterants - increasing toxicity, sedatives complicate OD response
- Disparities - ongoing disparity in polydrug overdose among African American men 55 yo+

St. Mary's County - Fatal Overdose (<http://bit.ly/OverdoseData>)

November 2024 to October 2025

Please check [Historic Trends](#) page for data prior to this time period

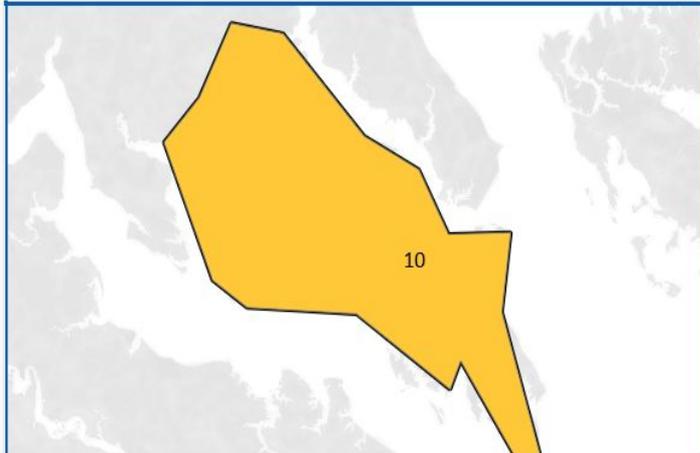
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Total Overdose Deaths

Deaths Related to Any Opioids

Deaths Related to Fentanyl

Number of Overdose Deaths by Place of Occurrence



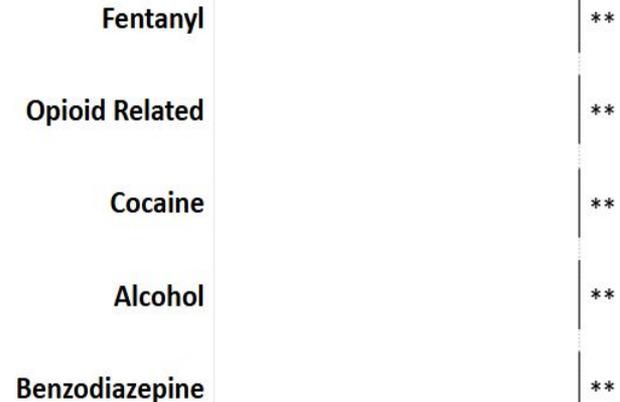
County View

Map Legend

10-100

Non-shaded areas indicate no cases.

Number of Overdose Deaths Involving Specific Substances



0

St. Mary's County - Fatal Overdose VSA Comparisons

St. Mary's	2024 Fatalities	YTD 2025 Fatalities	# Difference YTD
Total State	1521	1044	-477
St. Mary's Totals	21	8	-13
Opioids	13	5	-8
Fentanyl	10	5	-5
Heroin	1	0	-1
Prescription Opioids	6	0	-6
Cocaine	9	5	-4
Methamphetamine	1	0	-1
Benzodiazepines	3	1	-2
PCP	1	0	-1
Alcohol	4	2	-2

Tri-County (St. Mary's, Calvert, Charles) - Fatal Overdose

(<http://bit.ly/OverdoseData>)

November 2024 to October 2025

Please check Historic Trends page for data prior to this time period

24

Total Overdose Deaths

16

Deaths Related to Any Opioids

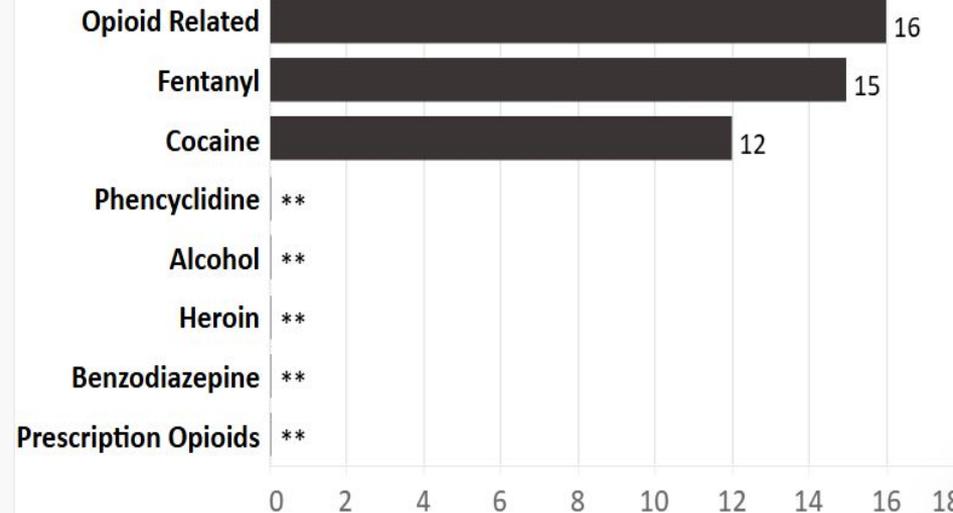
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Deaths Related to Fentanyl

Number of Overdose Deaths by Place of Occurrence



Number of Overdose Deaths Involving Specific Substances



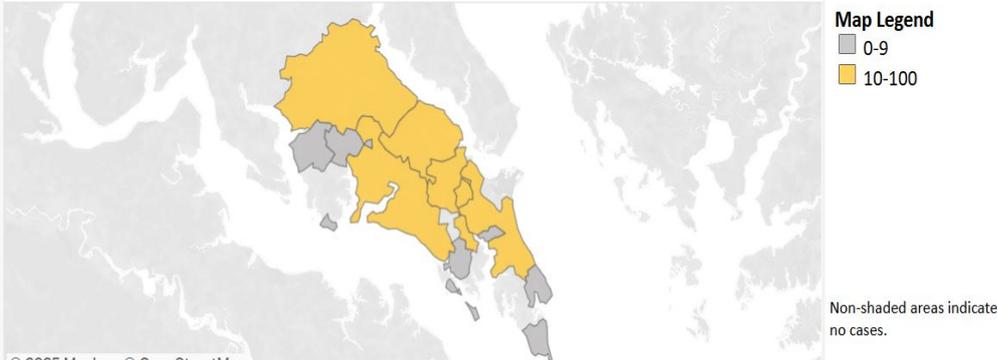
St. Mary's County - Nonfatal Opioid Overdose

November 2024 to October 2025

Please check Historic Trends section below for data prior to this time period

113
ED Visits Related To Opioid
Overdose

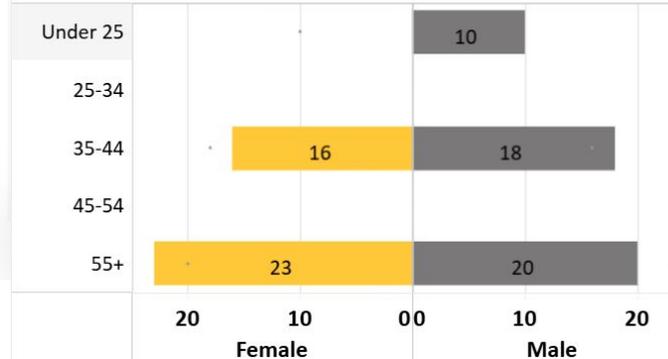
Number of ED Visits by Patient's Residence Jurisdiction



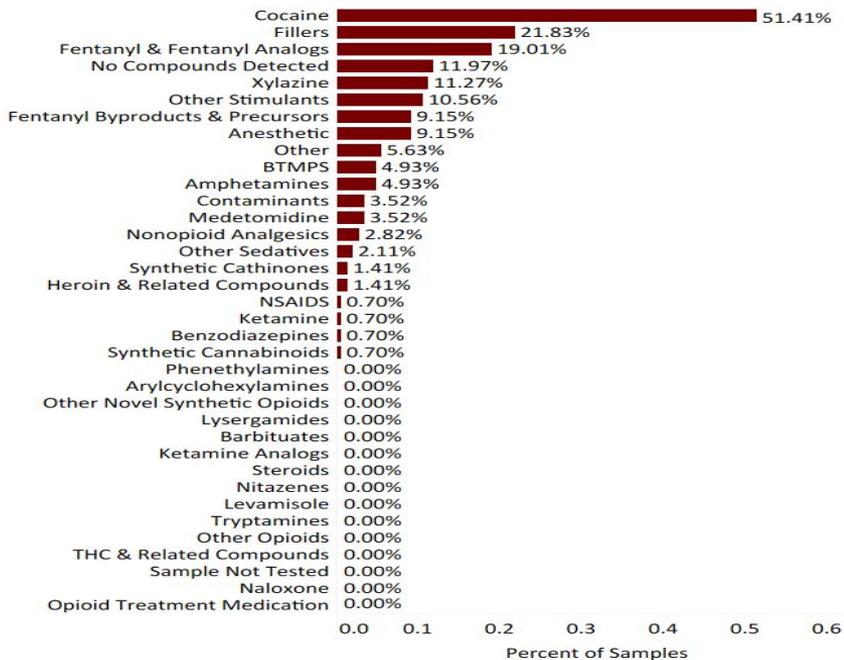
Number of ED Visits by Race/ Ethnicity and Sex



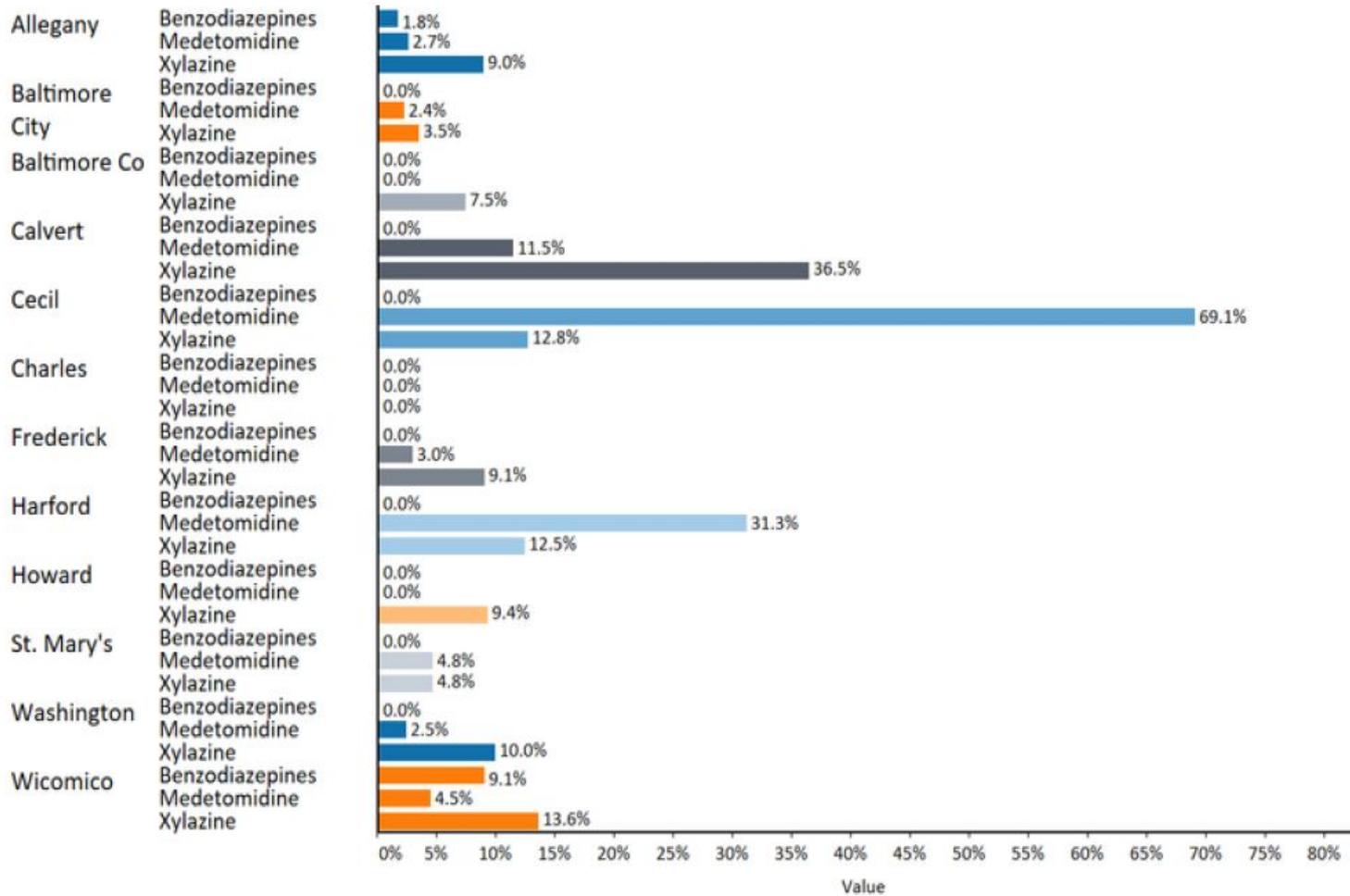
Number of ED Visits by Sex and Age Group



Percentage of samples containing each substance or group of substances in St. Mary's, Since 2022



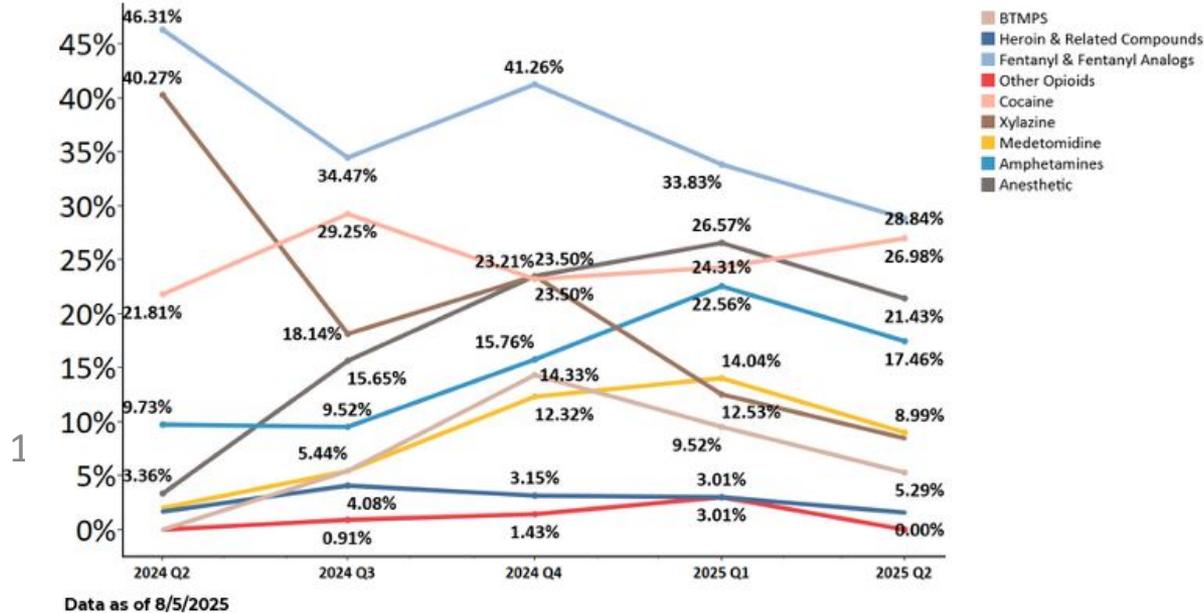
Percent of Benzodiazepines, Medetomidine and Xylazine by Jurisdictions, April 2024 - June 2025



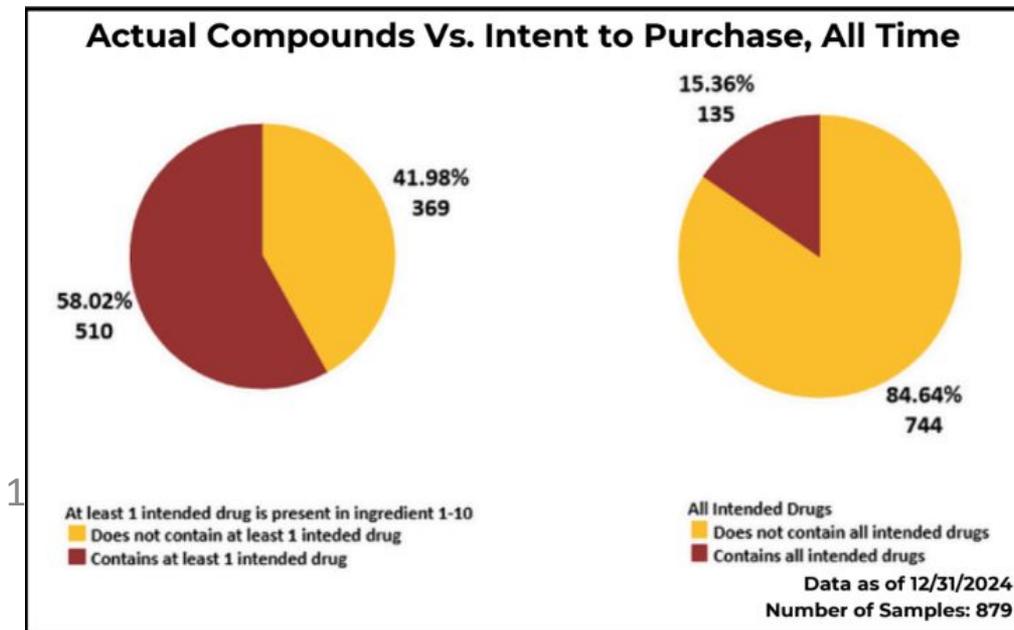
RAD data
Data as of 8/5/2025

Emerging drugs + trends - ongoing monitoring

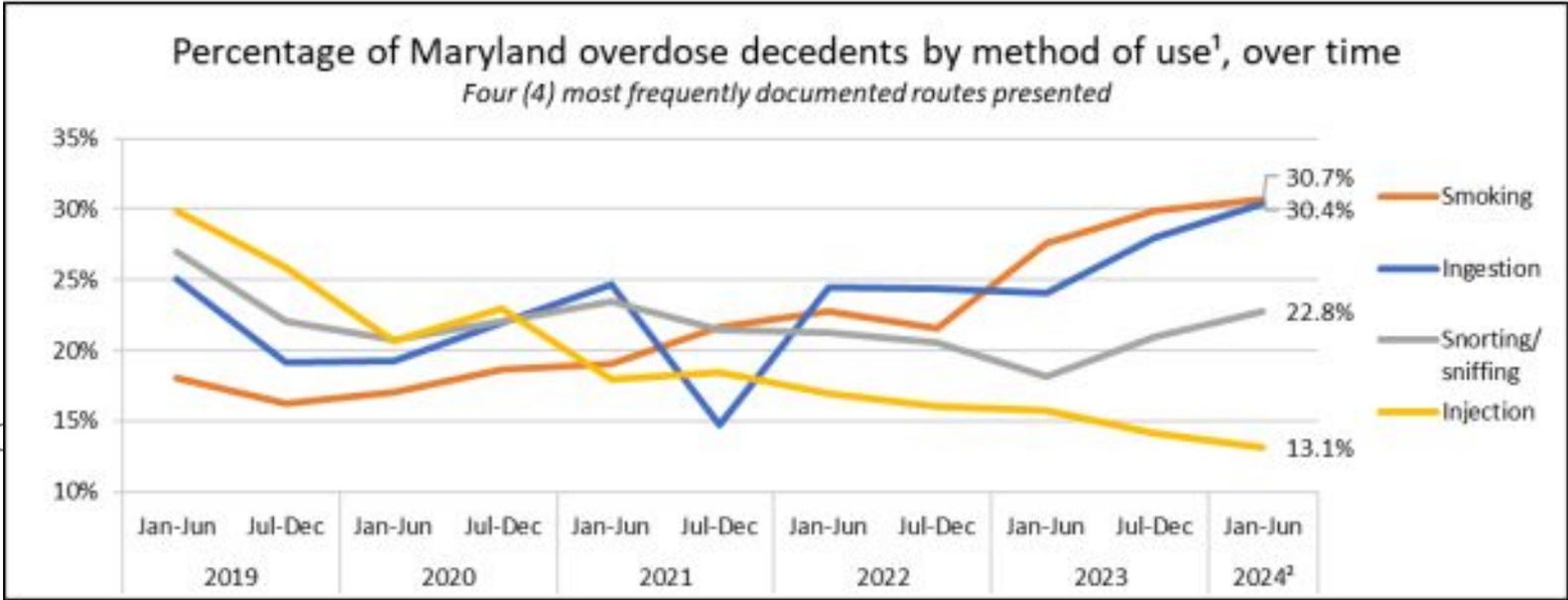
Percent of Compounds Detected by Quarter, April 2024 - June 2025



Emerging drugs + trends - ongoing monitoring



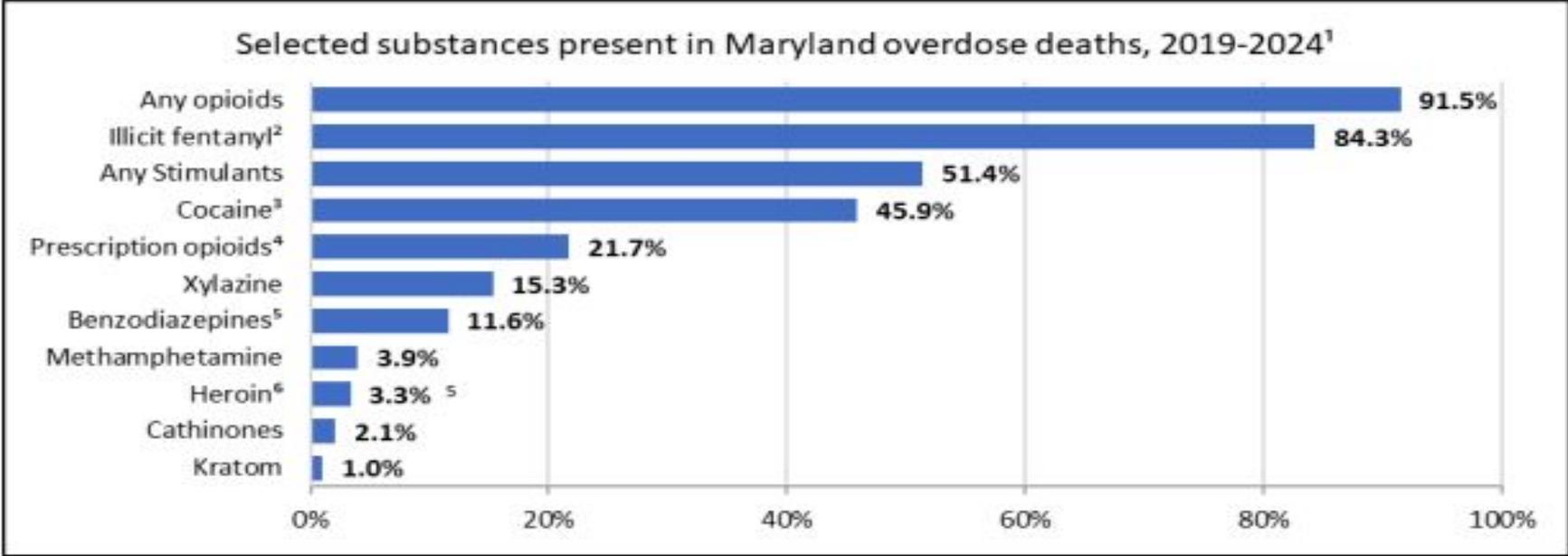
Emerging drugs + trends - ongoing monitoring



<https://health.maryland.gov/bha/Documents/SUDORS%20trend%20report%20summary.pdf>



Emerging drugs + trends - ongoing monitoring



Response Guidance

Medetomidine - Response

•Withdrawal Symptoms:

- Nausea and vomiting
- Coming in and out of alertness
- Severe hypertension
- Tachycardia
- Anxiety
- Restlessness
- Diaphoresis (sweating)

•Overdose Response

- Focus on breathing, not responsiveness
- Low dose of naloxone preferred



Source: [DEA warns of emerging sedative being found in drugs across Marion County](#)



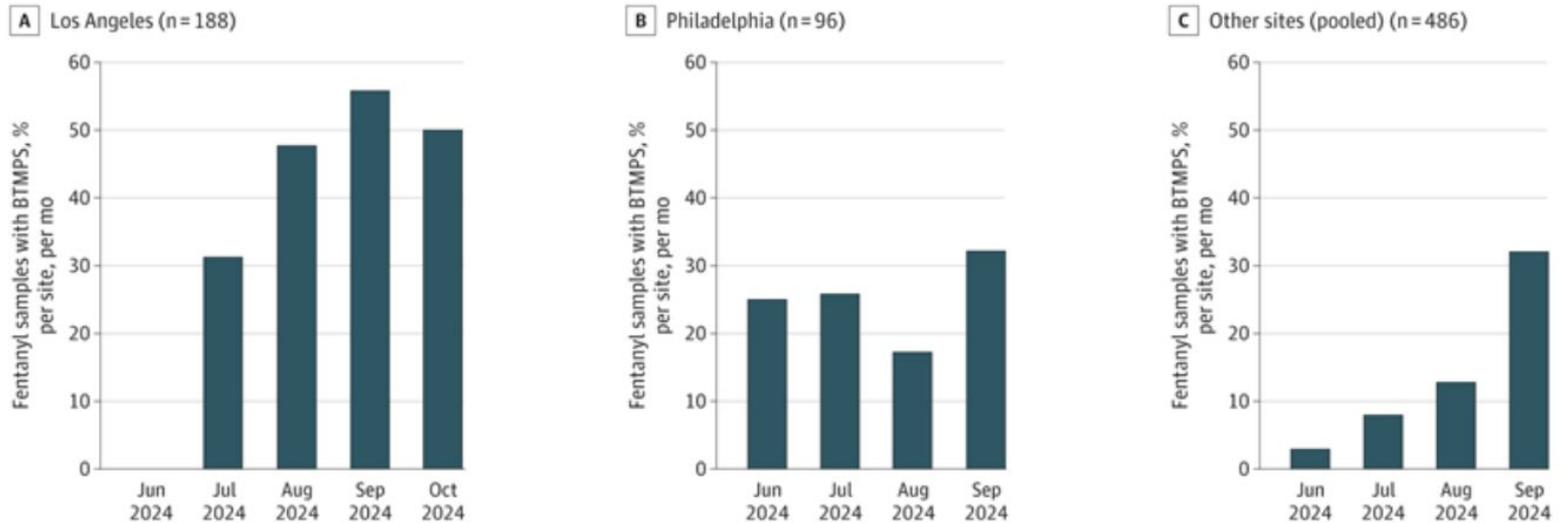
BTMPS — bis(2,2,6,6, tetramethyl – 4- piperidyl) sebacate

- Commercially known as Tinuvin 770
- Hindered amine light stabilizer – UV protectant
 - Used in plastics manufacturing or in adhesives or sealants
- Industrial chemical not approved for human consumption
- Effects include: blurred vision, burning eyes, burning sensation when substance is injected, ringing in ears, coughing and nausea
 - Reports of drugs smelling like bug spray or strong chemicals when containing BTMPS
 - Appears as a white powder



BTMPS — bis(2,2,6,6, tetramethyl – 4- piperidyl) sebacate

Figure. Percentages of Samples Sold as Fentanyl That Contained BTMPS



Source: [UV Stabilizer BTMPS in the Illicit Fentanyl Supply in 9 US Locations | Substance Use and Addiction Medicine | JAMA | JAMA Network](#)





Test Strips: False Positives & Field Limitations

- Presumptive field tools (MX908, TruNarc, D4) provide rapid but non-confirmatory results.
- Test strips can show false positives from cross-reactivity or contamination.
- Only forensic GC/MS or LC/MS confirms substance identity.
- Intended use: harm reduction and situational awareness, not evidence.





Packaging & Stamp Relevance

- Local “stamp” logos no longer indicate actual drug composition
- Designs are reused across multiple trafficking groups and regions
- Visual identifiers are unreliable for source attribution or purity
- Focus must remain on confirmed forensic results and laboratory validation



Clinical Response Guidance

— Emerging Drugs —

Medetomidine and Xylazine



— Reports —

Latest Information & Communications



Vital Statistics Reports



Drug Overdose Surveillance and Epidemiology (DOSE)



Data-Informed Overdose Mitigation (DORM) Report



<https://health.maryland.gov/bha/Pages/Overdose-Data-.aspx>

- **Medetomidine withdrawal protocol** from the Philadelphia Department of Health
- Maryland Addiction Consultation Services' one pager: **Medetomidine in the Illicit Drug Supply: Emerging Clinical Challenges**
- CDC webinar: **Clinical Implications of Medetomidine Mixed with Opioids**
- For clinicians on medetomidine intoxication/withdrawal: **The Shifting Landscape of a Fentanyl Adulterant: Moving From Xylazine to Medetomidine**

First Responder Guidance

Medetomidine

(meh-duh-toh-muh-deen)

→ What is it?

- Medetomidine, like Xylazine, is a veterinary drug used to sedate animals.
- Medetomidine is not approved for human use.
- Medetomidine is being found in the supply of illicit drugs in Cecil County.
- Medetomidine is 200x to 300x stronger than Xylazine.

→ Side Effects & Signs of Overdose

Side effects:

- Unconsciousness or extreme sleepiness
- Slow heart rate
- Trouble breathing
- Dry mouth
- Coma / death

Signs of Overdose:

- Body feels cold
- Pale/Discolored Appearance
- Small pupils

→ Appearance

- Medetomidine appears as a crystalline white solid or in a powder form. It can be used as an IV (intravenous) drug.
- Medetomidine is often mixed with other substances like Fentanyl to enhance the effects of opioids or to increase sedation.

→ How to Respond

If you suspect an overdose:

- Call 911 immediately
- Perform rescue breathing
- Give Narcan
 - Narcan is NOT effective against Medetomidine, but should be given in case there are also opioids in their system.

If you or someone you know needs help, now is the time to reach out.

<p>Voices of Hope Aberdeen (443) 993-7055 7 Aberdeen Shopping Plz, Aberdeen, MD 21001</p>	<p>Voices of Hope Elkton (443) 993-7055 227 Howard St, Elkton, MD 21921</p>	<p>Harmony (443) 907-0112 Harm Reduction Services: 401 Bow Street Elkton, MD, 21901</p>	<p>Cecil Addiction Coordination Hotline (C.A.T.C.H.) Available 24/7 (443) 245-3257</p>
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Rescue Breathing

is one of the quickest ways to get oxygen into the body and one of the most important things you can do to prevent someone from dying from an opioid overdose.

Assess breathing: If the person is not breathing, or if breath is shallow or short, you can

Give rescue breaths
OR
Administer traditional CPR

If you are trained in cardiopulmonary resuscitation (CPR), chest compressions with rescue breaths.
OR
Follow the 9-1-1 dispatcher's instructions.
Continue until the person wakes up or medical help arrives.

Rescue Breathing Steps

→ Step 1:

→ Lay the person on his/her back on a flat surface.

→ Step 2:

→ Tilt the chin to open the airway.

→ Step 3:

→ Remove anything blocking the airway.
Rescue Breathing - Continued

→ Step 4:

→ Pinch the person's nose closed completely. Then cover his/her mouth with your mouth and blow 2 regular breaths about 1 second each.

The chest should rise with each breath.

Turn your head after each breath and look to see if the chest is rising and falling. If it is not, tilt the head back more to open the airway.

→ Step 5:

→ Breathe again.
Give 1 breath every 6-8 seconds.




Resources Available

ORS Resources

- **Overdose Detection Drug Mapping Application (ODMAP)**
- **Overdose and Drug Awareness Coordinators (ODACs)**
- **I-81 and I-95 Workgroups**
- **ORS Trends, Analysis and Threats (TAT) Call**
- **Tabletop Exercises**
- **Law Enforcement Assisted Diversion (LEAD)**



Connect with ORS
Teams



Register for TAT
Call



Tabletop Exercise



Helpful Links

- [Public Safety Resources](#)
- [ADAPT – Prevention Resources](#)
- [Deflection, Diversion, & Situation Tables Resource Sheet](#)
- [Evidence-Based Overdose Prevention Strategies in Criminal Justice Settings](#)
- [ASTHO - Responding to Disruptions in Access to Opioid Prescriptions](#)



OD2A Resources

- [CSTE Overdose Anomaly Toolkit](#) (2022) - Plan, Act, Evaluate
 - Provide public health response team with comprehensive approach to conducting timely and effective investigation to notable increases in overdoses
 - Improve use of overdose surveillance data
 - Guide public health prevention and response activities in ever-changing drug environment with increasingly lethal drugs
- [Public Health and Public Safety toolkit](#) (2025) - S.O.S model
 - Build or formalize multi-sector collaboratives
 - Collaborative data sharing and use guidance to develop *shared understanding* of local overdose crisis
 - Collaborative problem solving and coordination of interventions (*optimized capacity*)
 - Monitor and maintain progress using a performance management approach (*shared accountability*)
- [NACCHO Overdose Spike Response Framework](#) (2021)
Support local health departments to plan, respond and evaluate public health responses to overdose spikes
 - Identify and engage partners
 - Convene partners
 - Develop the plan
 - Exercise the plan
 - Evaluate the plan

OD2A Resources

Technical assistance for high fidelity implementation

Data workshops

- LHD access + TA for public health surveillance data (ESSENCE)
- Data sharing guidance and templates for multi-stakeholder groups
- Data management - how to organize data for triangulation

Provider training

- OD2A - Care coordination across settings
 - Hospitals and community-based providers
 - Focus on harm reduction, drug checking, wound care and care coordination
- [Maryland Addiction Consultation Services](#) - consultation, education and technical assistance

Helpful Links

Maryland Department of Health Public Overdose Dashboard - <https://health.maryland.gov/dataoffice/Pages/mdh-dashboards.aspx>

Maryland Addiction Consultation Services - <https://www.marylandmacs.org/>

National Toolkits

- <https://odalerts.cste.org/>
- http://phast.org/wp-content/uploads/2025/04/PHAST-Toolkit_Final_508-Compliance_03.06.2025.pdf
- <https://www.naccho.org/uploads/downloadable-resources/OVERDOSE-SPIKE-RESPONSE-FRAMEWORK-FOR-COMMUNITIES-LH-DS.pdf>

Open Q+A

QUESTIONS?

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ODMAP TRAINING

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HIDTA

HIGH INTENSITY DRUG TRAFFICKING AREA

Thank you!

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