



Rapid Analysis of Drugs (RAD)

Collaborative Call

October 15th, 2025

Goals of Rapid Analysis of Drugs (RAD)

The Office of Harm Reduction (OHR) RAD project tests routine paraphernalia from Maryland Syringe Services Program (SSP) participants.

The goals of RAD are to:

- Increase stakeholder understanding of the Maryland drug market landscape.
- Empower people who use drugs with knowledge about the drug supply that enables them to make informed decisions and employ risk reduction strategies.
- Provide critical, timely information about new and emerging trends in the drug supply, informing the statewide and local response to mitigate harm.

Agenda

1. Updates and Reminders
2. Recent Results
3. Emerging Trends
4. Program Report Out

Updates and Reminders

NIST Updates

- Federal Impacts
 - Continue shipping samples to NIST
 - Email radar@NIST.gov when you ship samples, with a tracking number if possible
 - Delay in results is expected
 - If results are high priority - email edward.sisco611@gmail.com and margaret.rybak@maryland.gov

Materials from Calls

- Materials from [September Training](#) can be found here.
- Materials from collaborative calls can be found in the folder corresponding to the meeting date [here](#).
- Here is the link to the [RAD submission Cognito form](#).
- Law enforcement [memo](#)
- [RAD Flyer](#)
- [Maryland SSP Law Fact Sheet](#)

Complete Cognito Webform

- The [Cognito web form](#) must be completed for EVERY sample **before** the sample is mailed.
- If a webform is not completed for a sample, you will receive an email - ***please stay alert to emails!***

Requesting Supplies

- Supply requests go directly to NIST.
- The link for the supply request is:
forms.gle/FHUxCT8GwrZhkWcw5

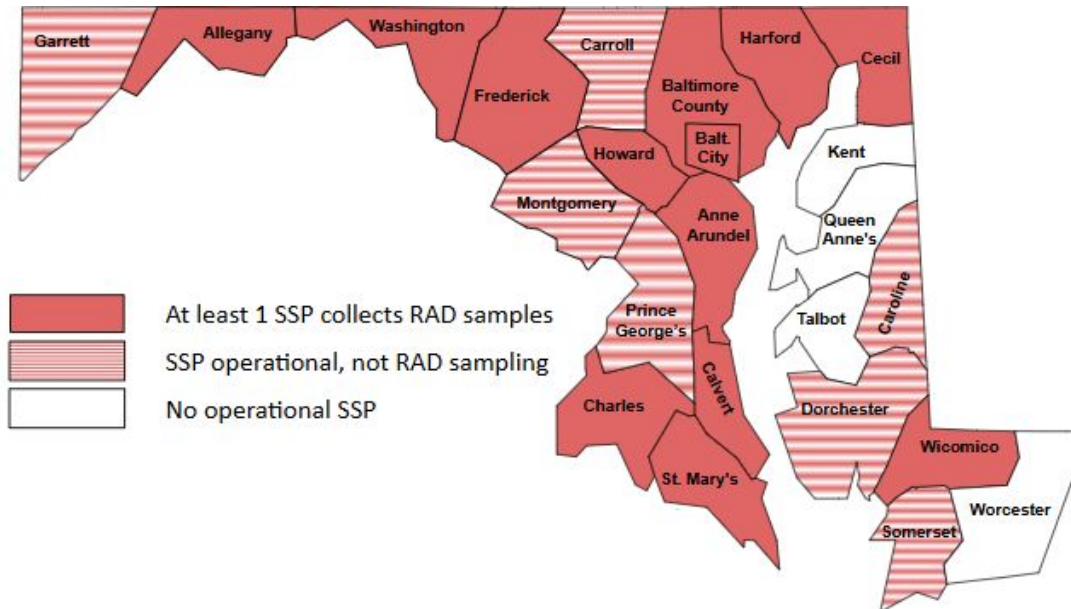
Mailing envelopes shipped in early August. If you did not receive yours or need more at any point, let Maggie know.

RAD Data/Publication Updates

- Working on incorporating RAD on the public overdose dashboard.
- [Pre-print RAD Impacts Paper](#) - Journal of Harm Reduction
- [RAD CY2025 Q2 Newsletter](#) (Q3 in the works)
- [NIST July Newsletter](#) (*impacted by the shutdown*)

Want to get started?

- If you are an SSP not currently sampling for RAD and you want to get involved, please reach out to Maggie



Recent Results

RAD Data Disclaimers

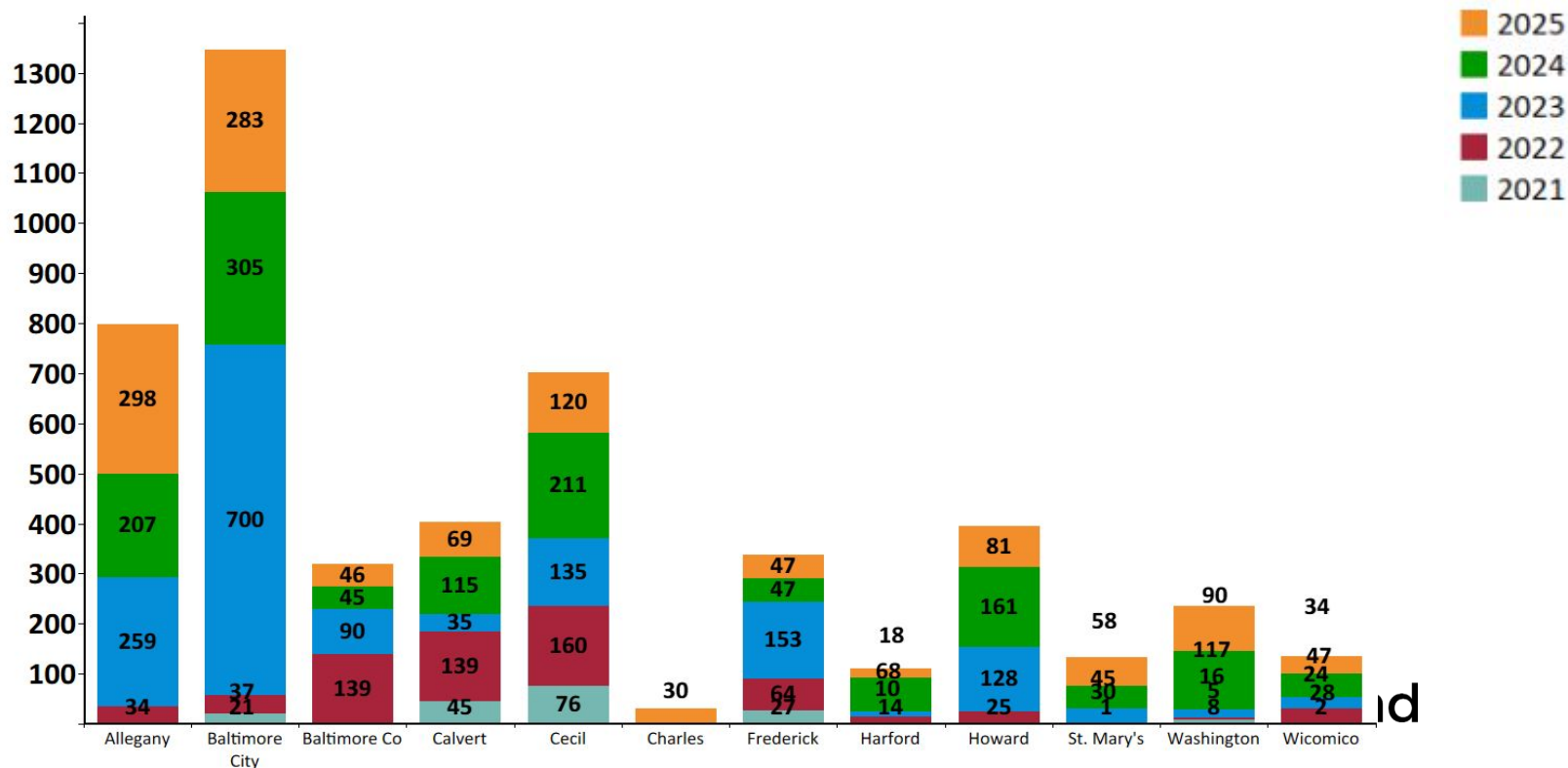
- Convenience Sampling -
 - RAD is a completely voluntary program that Maryland SSP participants can choose to engage in
 - Not all MD jurisdictions have an SSP that participate in RAD
- No personally identifiable data is collected, therefore we do not know how many participants are accounted for in the sample size

RAD gives us some indication of the near real time drug market in Maryland, but it should not be considered as fully representative.

Samples Collected

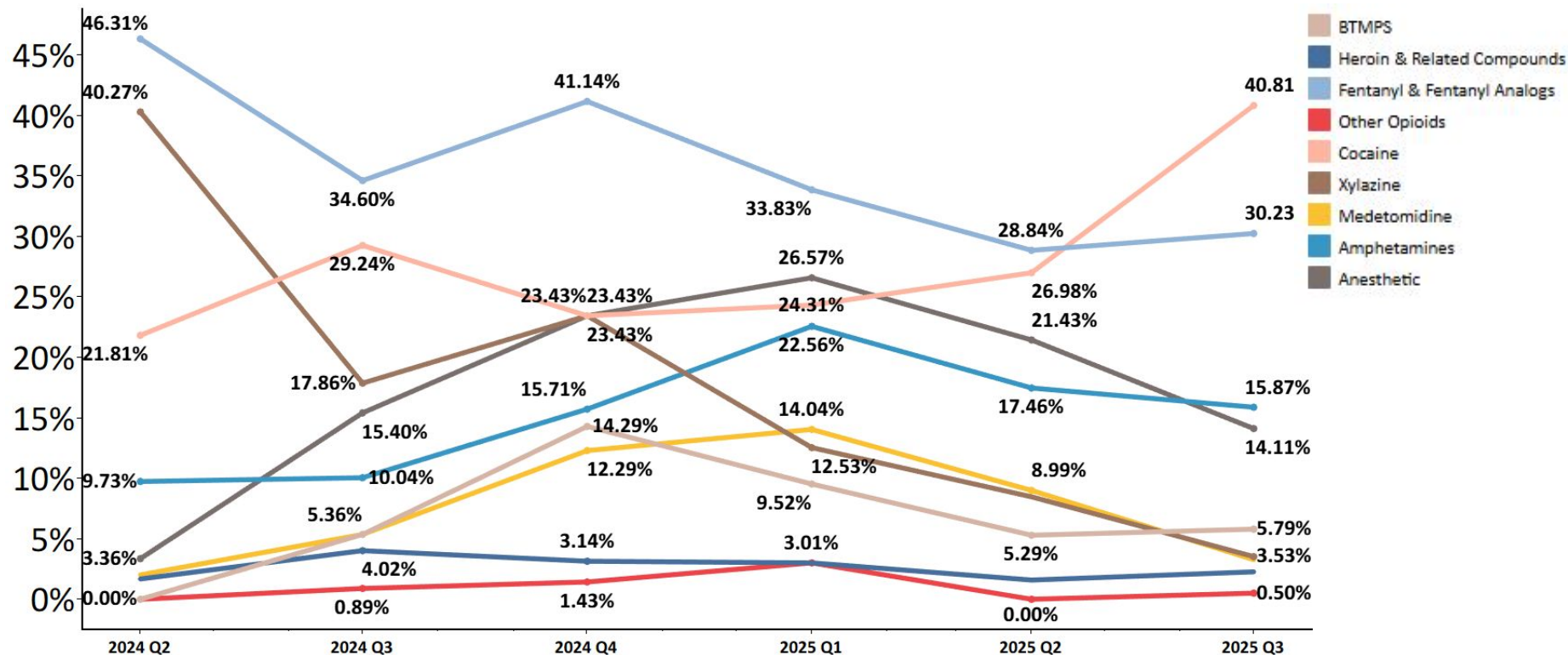
- Sample collection began October 2021
- As of October 7th, 2025: 4926 samples have been tested via NIST
- 18 of the 27 SSPs in Maryland collect samples.
 - Covering 12 jurisdictions

RAD Sampling by Jurisdiction, OCT 2021- SEPT 2025



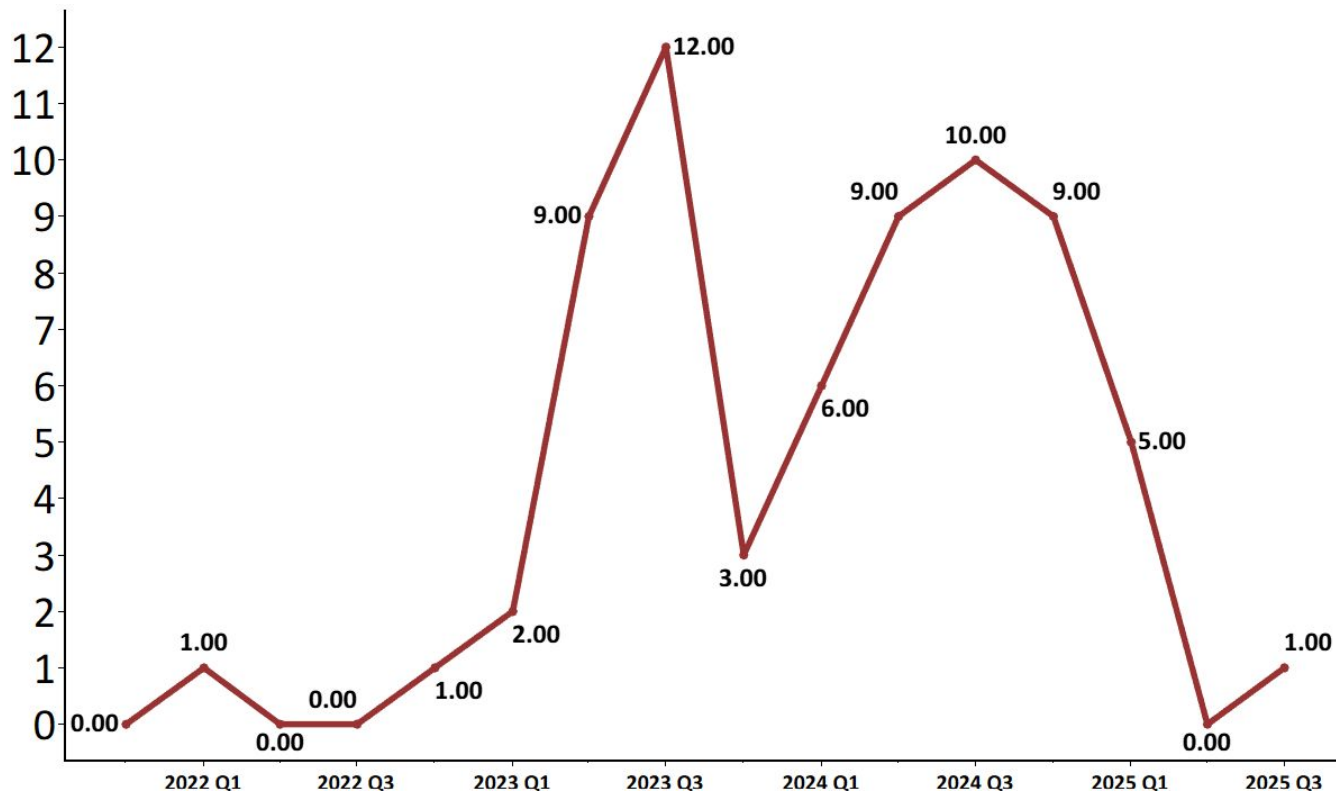
Note: Data is preliminary and subject to change.

RAD Compounds, APR 2024 - SEP 2025



Note: Data is preliminary and subject to change.

Bromazepam, OCT 2021 - SEP 2025



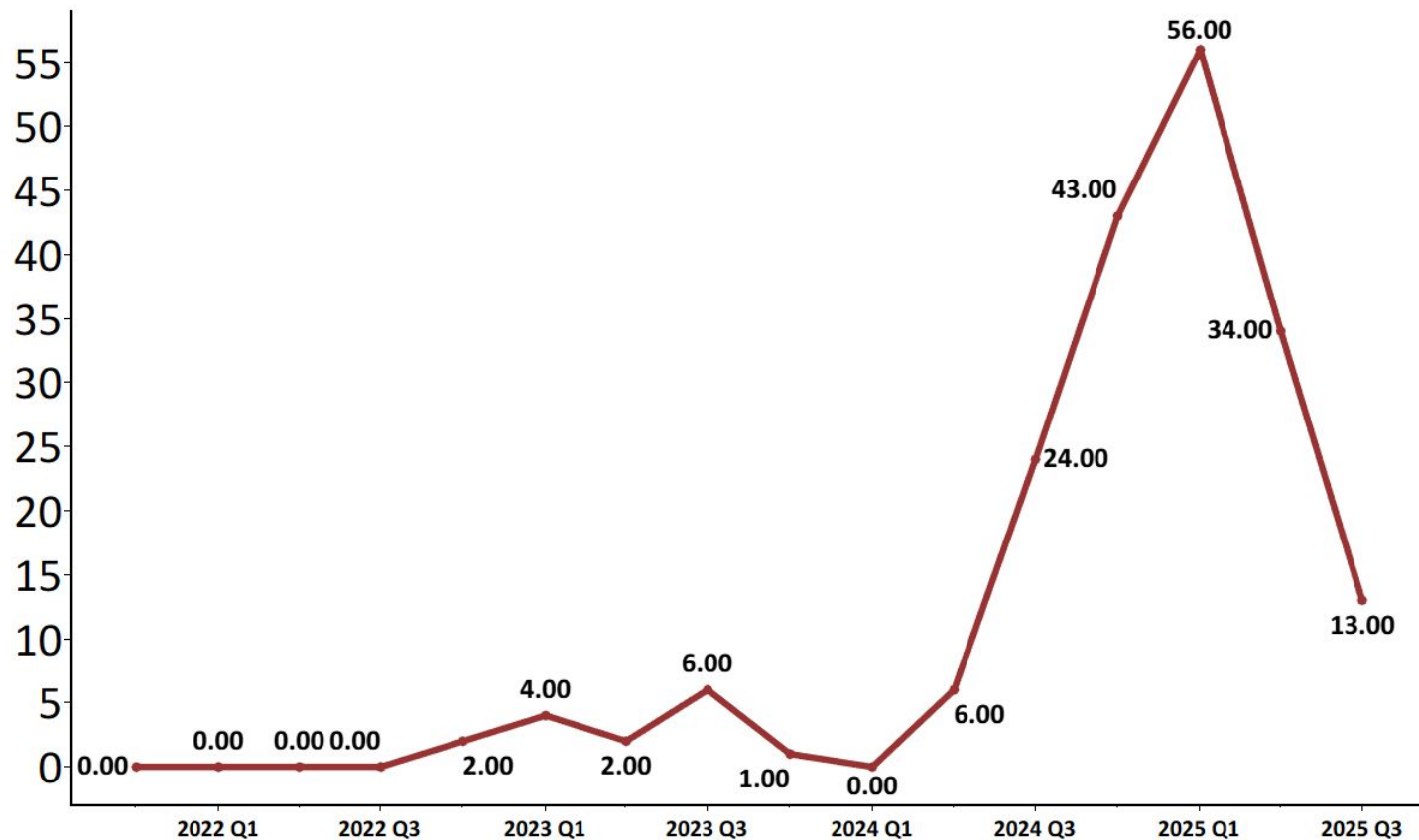
SFY24 Counties:

- Allegany County
- Baltimore City
- Baltimore County
- Calvert County
- Cecil County
- Frederick County
- Harford County
- Howard County
- St. Mary's County
- Washington County
- Wicomico County

Bromazepam is a type of benzodiazepine (sedative)

Maryland
DEPT OF HEALTH

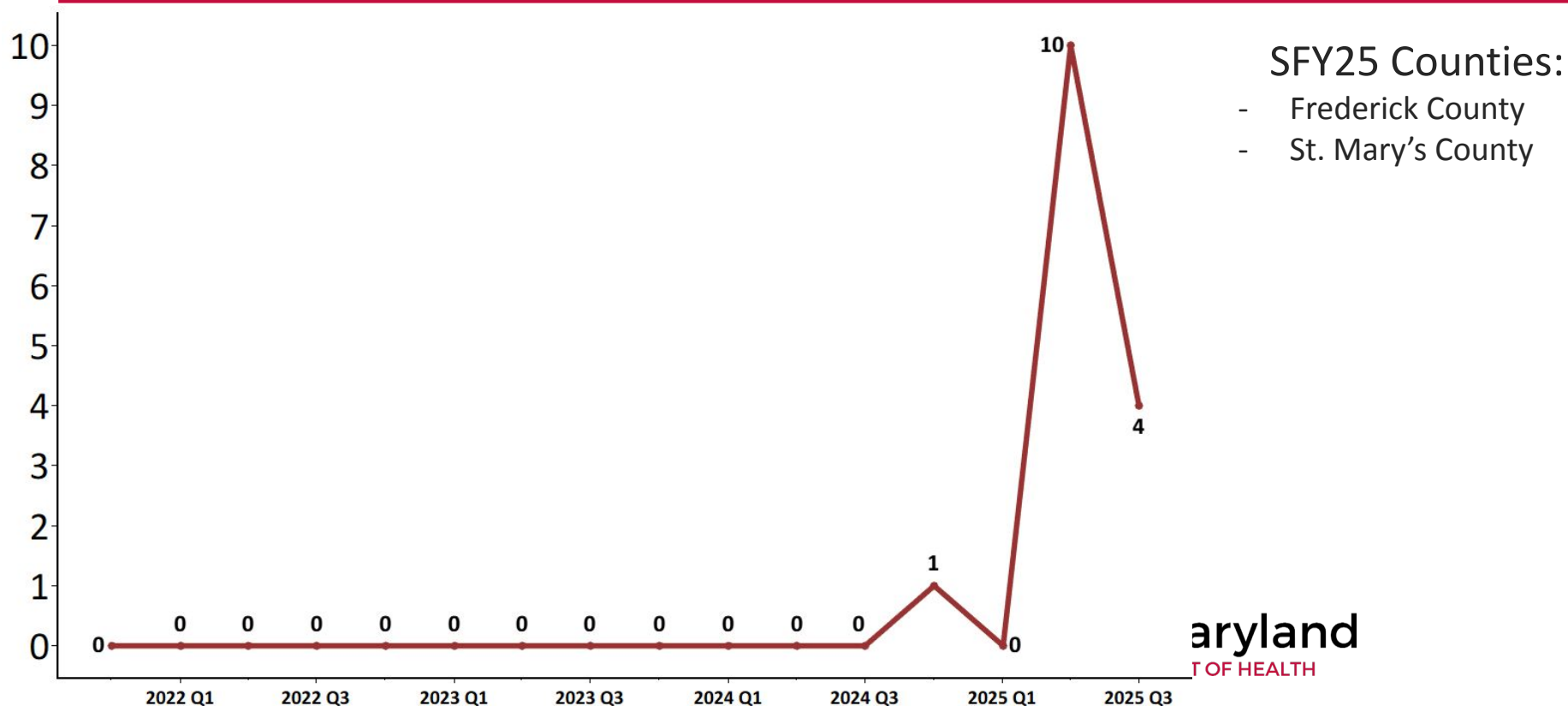
Medetomidine, OCT 2021 - SEP 2025



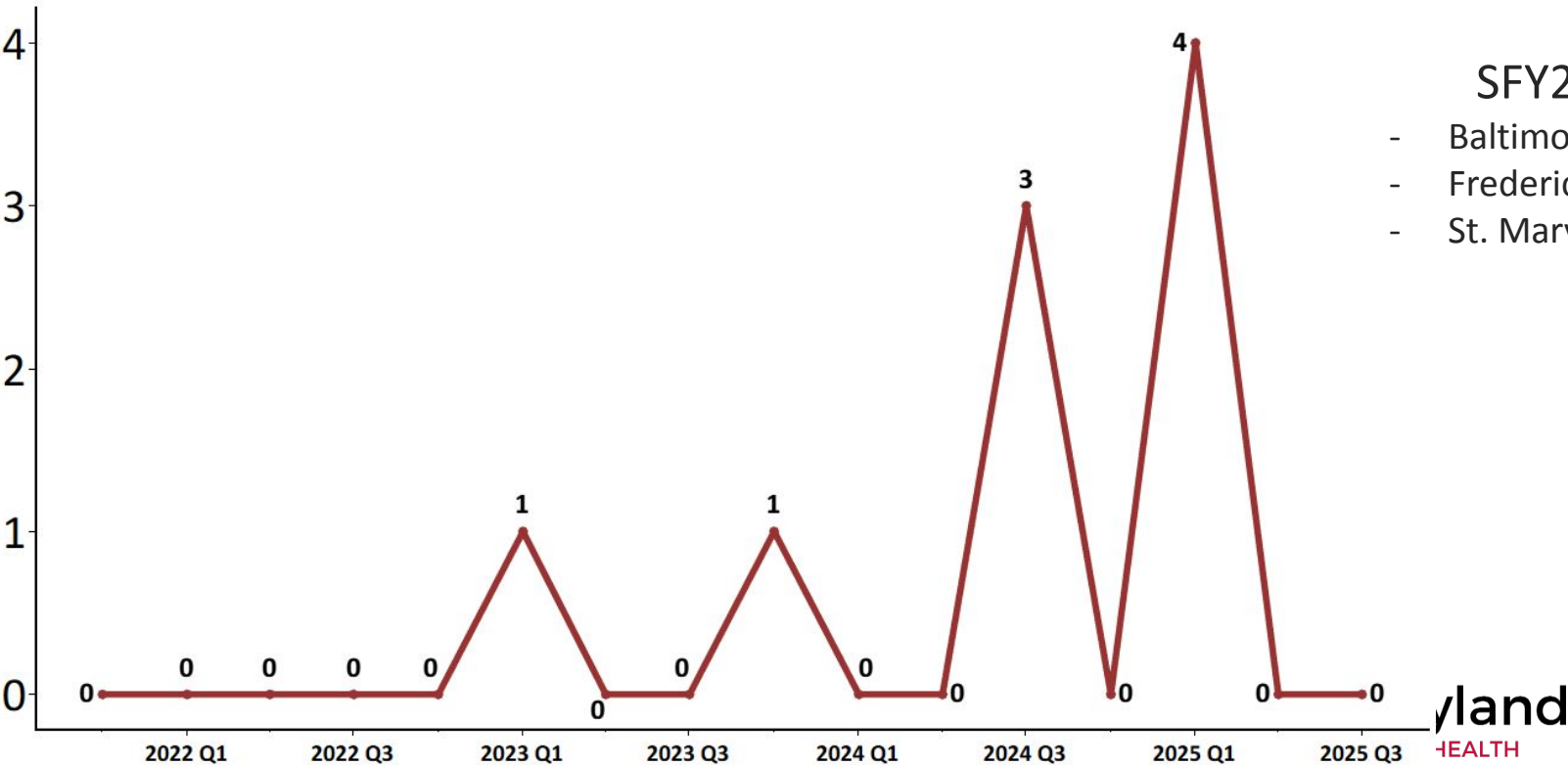
SFY25 Counties:

- Allegany County
- Baltimore City
- Baltimore County
- Calvert County
- Cecil County
- Frederick County
- Harford County
- Howard County
- St. Mary's County
- Washington County
- Wicomico County

5-fluoro ADB, OCT 2021 - SEP 2025

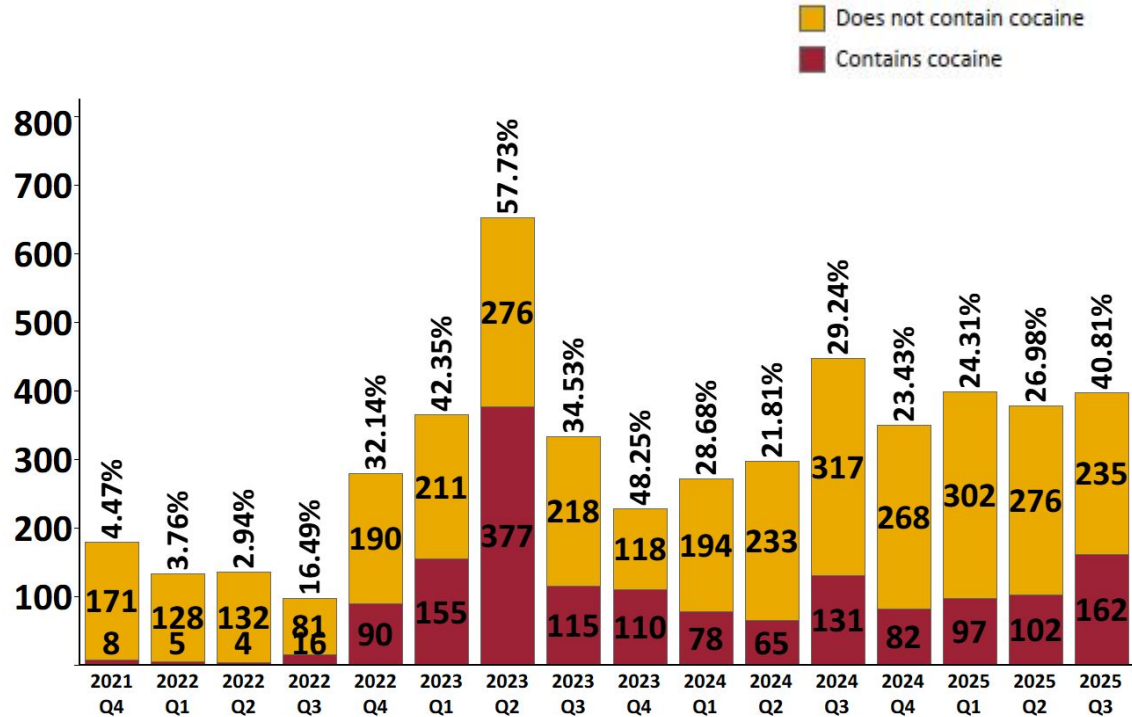


Mitragynine, OCT 2021 - SEP 2025



Samples Containing Cocaine

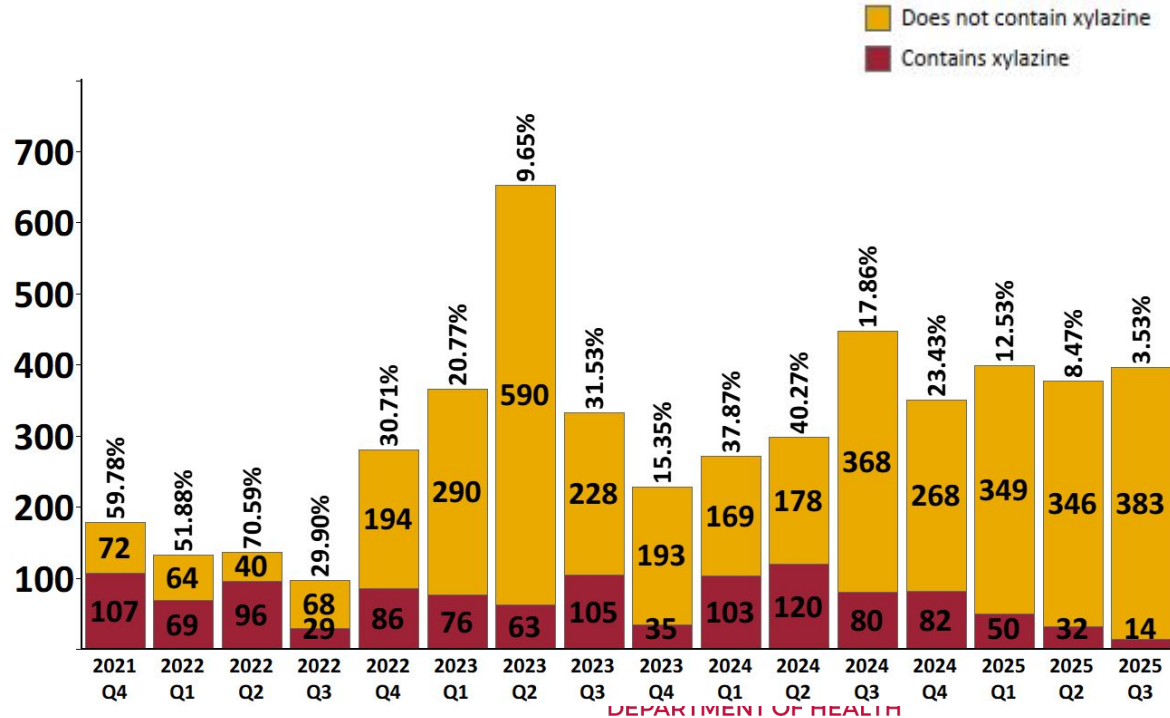
- 40.81 % of samples tested in Q3 of CY 25 contained cocaine
- There were a total of 162 samples that contained cocaine in this time period
- Comparing Q3 of CY 2024 to Q3 of CY 2025 there was a 23.7% increase in samples that contained cocaine.



Note: Data is preliminary and subject to change.

Samples Containing Xylazine

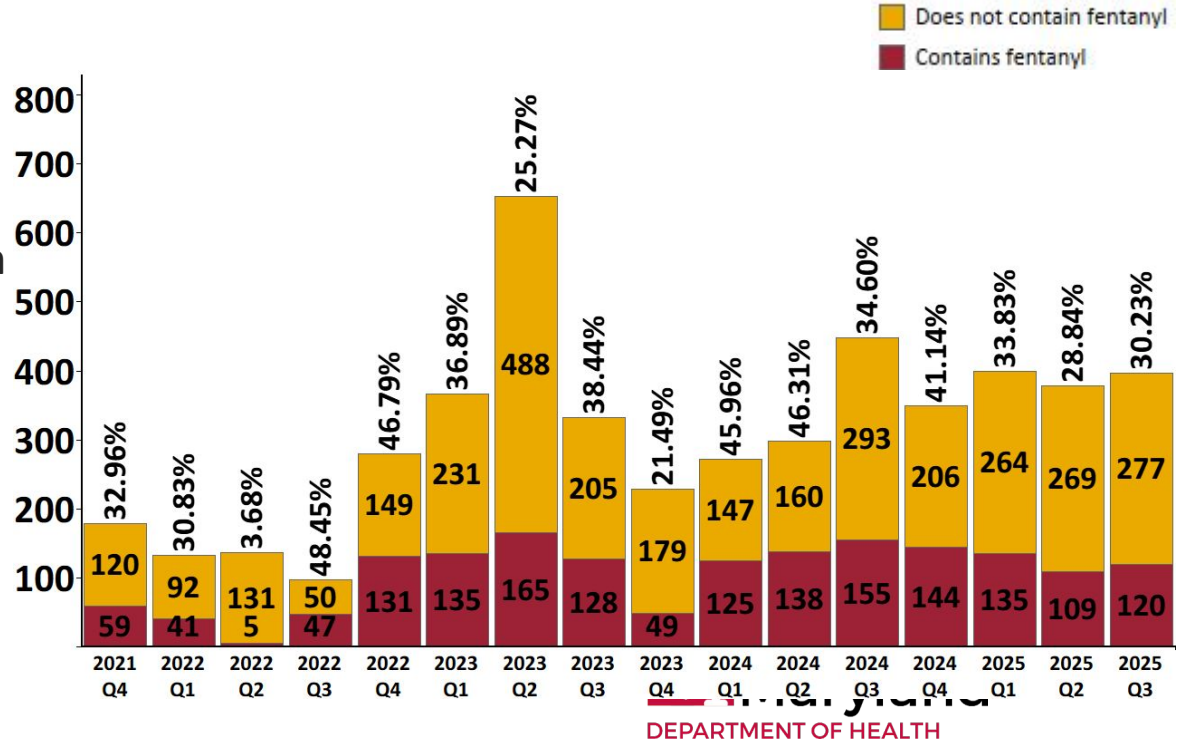
- 3.53% of samples tested in Q3 of CY 25 contained xylazine
- There were a total of 14 samples that contained xylazine in this time period
- Comparing Q3 of CY 2024 to Q3 of CY 2025 there was a 82.5% decrease in samples that contained xylazine.



Note: Data is preliminary and subject to change.

Samples Containing Fentanyl & Fentanyl Analogs

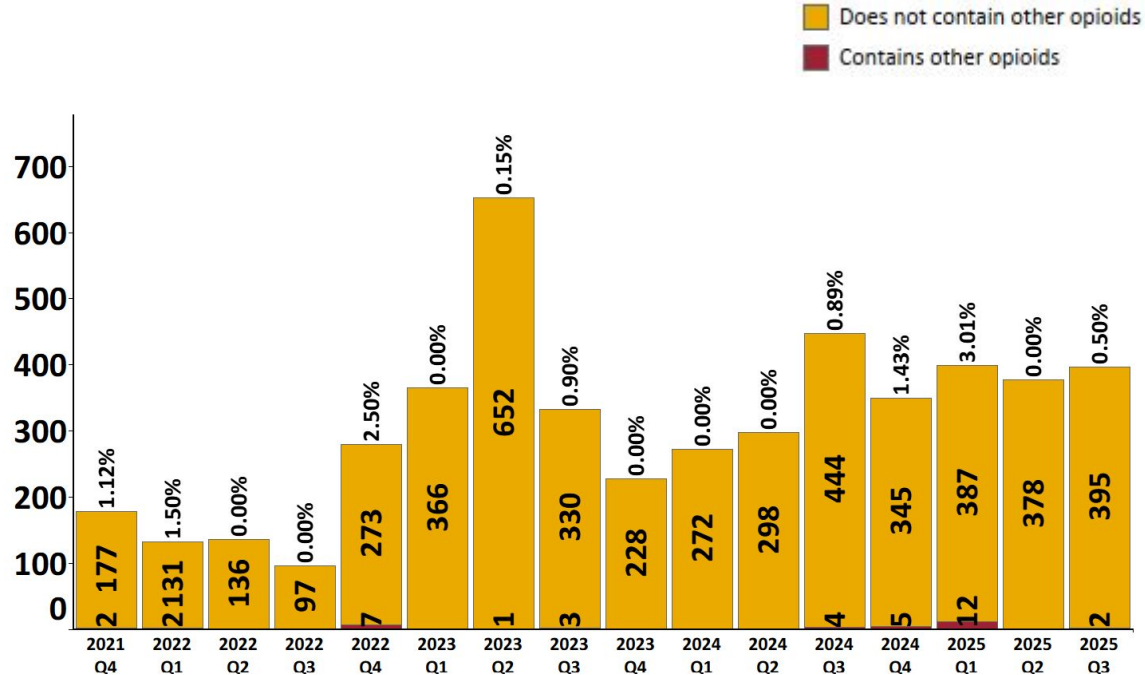
- 22.6% of samples tested in Q3 of CY 25 contained fentanyl & fentanyl analogs.
- There were a total of 120 samples that contained fentanyl & fentanyl analogs in this time period
- Comparing Q3 of CY 2024 to Q3 of CY 2025 there was a 22.6 % decrease in samples that contained fentanyl & fentanyl analogs.



Note: Data is preliminary and subject to change.

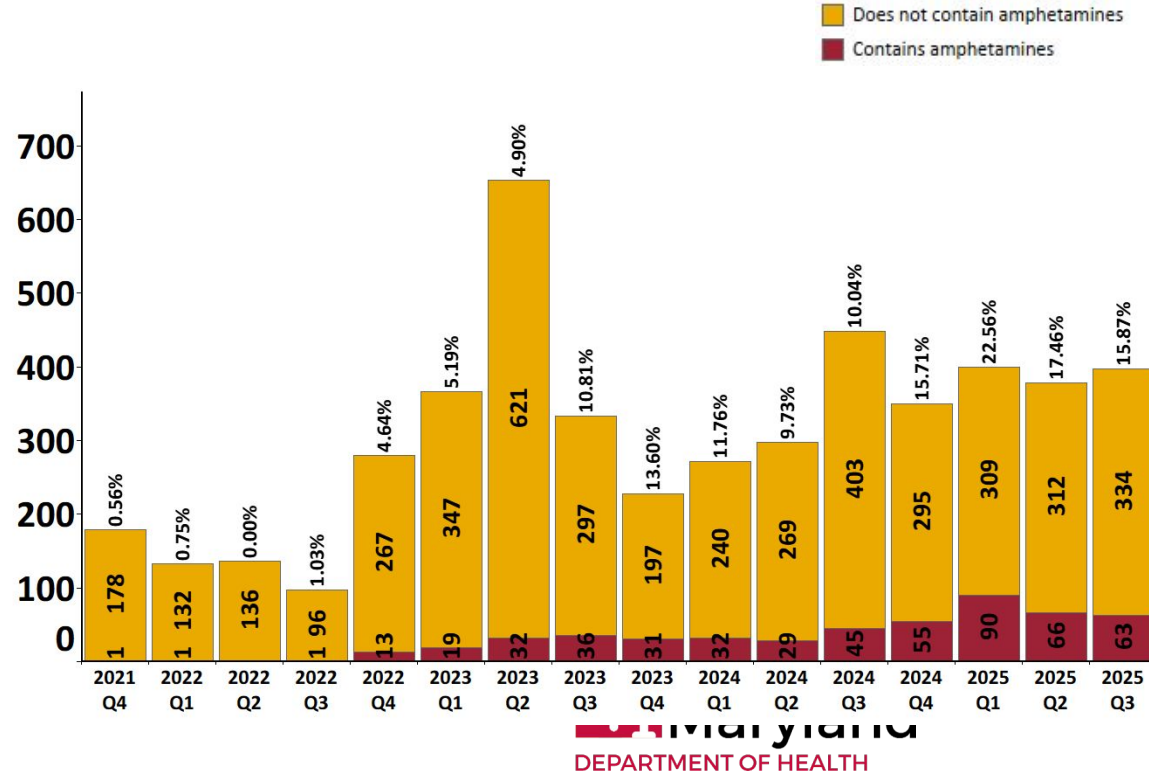
Samples Containing Other Opioids

- .50% of samples tested in Q3 of CY 25 contained other opioids.
- There were a total of 2 samples that contained other opioids in Q3 CY 25.
- Comparing Q3 of CY 2024 to Q3 of CY 2025 there was a 50% decrease in samples other opioids.



Samples Containing Amphetamines

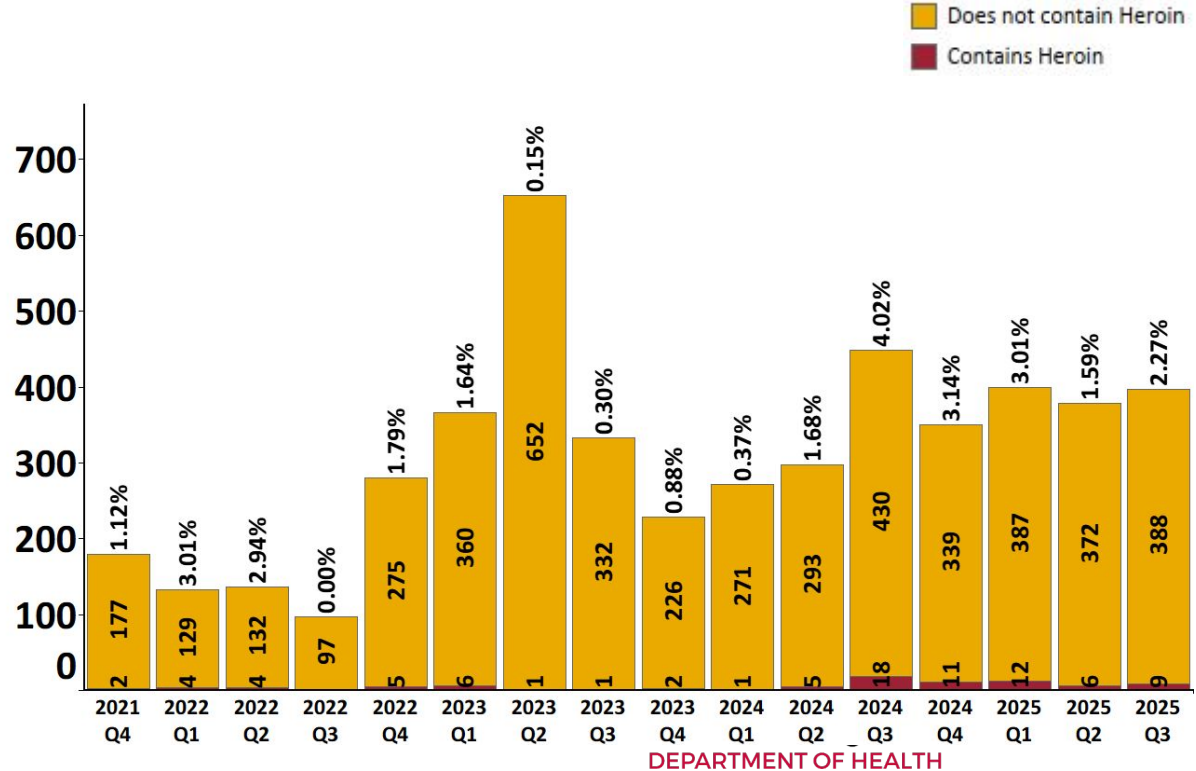
- 15.87% of samples tested in Q3 of CY 25 contained amphetamines
- There were a total of 63 samples that contained amphetamines in this time period
- Comparing Q3 of CY 2024 to Q3 of CY 2025 there was a 40% increase in samples that contained amphetamines.



Note: Data is preliminary and subject to change.

Samples Containing Heroin & Related Compounds

- 2.27 % of samples tested in Q3 of CY 25 contained heroin & related compounds
- There were a total of 9 samples that contained heroin in this time period
- Comparing Q3 of CY 2024 to Q3 of CY 2025 there was a 50% decrease in samples that contained heroin.



Note: Data is preliminary and subject to change.

Emerging Trends Discussion

Medetomidine Present in Penn North Samples

- 11 people experienced a non-fatal overdose in the Penn North area on 10/8 - thank you to all programs who responded!
- 7 samples from BHCD (found in the area) and 1 sample from HARP (from a participant) were submitted to NIST
- 2 samples had very similar results and matched the heavy sedation being reported.
- Not quantitative, but the intensity of the medetomidine peaks show that there was a relatively high amount present.

HARP Sample	BCHD Sample
Fentanyl	Caffeine
Lidocaine	Cocaine
Mannitol	Creatine
Medetomidine	Fentanyl
Quinine	Lidocaine
	Mannitol
	Medetomidine
	Quinine

Medetomidine Increase

- Medetomidine has now been seen in 11 of the 12 RAD jurisdictions.
 - Cecil and Harford Counties have the largest impact
- We encourage emphasis on still administering naloxone and responding with rescuing breathing/ CPR.
- Philadelphia has published [comprehensive withdrawal management protocols](#) for medetomidine.
- [Clinical presentation and treatment of medetomidine paper](#)
- [Maryland Addiction Consultation Services \(MACS\) withdrawal one - pager](#)
- CDC Epi Aid Project results - coming soon!

Kratom/ Mitragynine

- Mitragynine is a product of kratom leaves that procure a similar effect to opioids when it binds to opioid receptors in the human body.
- Kratom is legal and widely available in the US.
- Found in 9 total RAD samples - 7 of the 9 samples originated from West Virginia
- First sample collected in December of 2023. Most recent in February of 2025
- Jurisdictions that tested samples: St. Mary's, Frederick, and Baltimore County
- 7 of the 9 samples had that person's thought they were purchasing "Kratom"
- **No other ingredients were found in the samples**

Increase in Local Anesthetics

- Local anesthetics (LA), like Lidocaine, have been on the rise in RAD samples over the past 2 years.
- Suspected reason for addition - reducing pain associated with injection/ snorting.
- Seen in combination separately with both cocaine and fentanyl/ opioids in RAD.
- Here is [a brief](#) from the Center for Forensic Science Research, and Education on LA's in the drug supply from 2023.
- Philadelphia has reported an [increase in seizures](#) possibly connected to the increase in LAs.

Carfentanil in RAD Samples

3 samples collected between 8/4/2025 and 8/6/2025 contained carfentanil.

- Two samples were collected in Baltimore City and one sample was collected in Cecil County.
- These are the first RAD samples to have identified carfentanil in Maryland
- Previously only seen in Maryland's fatal overdose data
 - [34 fatality cases involving carfentanil this year, 16 in 2024](#)
- Carfentanil made up less than 2% of the sample and there were a number of other substances in the sample

Benzodiazepines

- We continue to see low but variable growth in numbers of Bromazolam.
- Methylclonazepam was the benzodiazepine seen in the samples collected in Penn North during the 7/10 MOE.
- Benzodiazepines seen in RAD sampling are almost always seen in combination of a opioid (mainly fentanyl) and naloxone should still be administered.
- **The increased sedation caused by a benzodiazepine may result in the need to administer rescue breathing during an overdose response.**
- We are working on centrally procuring benzodiazepine test strips - you can now pre-order them [here](#)

**Have you heard of any other
emerging trends?**

Program Report Out

How are things going?

How is testing going?

- Any new barriers?
- Any new successes?
- How can we support?

Future Collaborative Call Schedule

The next call will be Wednesday, December 17th at 11 a.m.

CHRS Contacts

Maggie Rybak - margaret.rybak@maryland.gov (programmatic)

Janelle Acevedo Hodgson - janelle.hodgson@maryland.gov (data)

Thank you! We appreciate you!