Rapid Analysis of Drugs

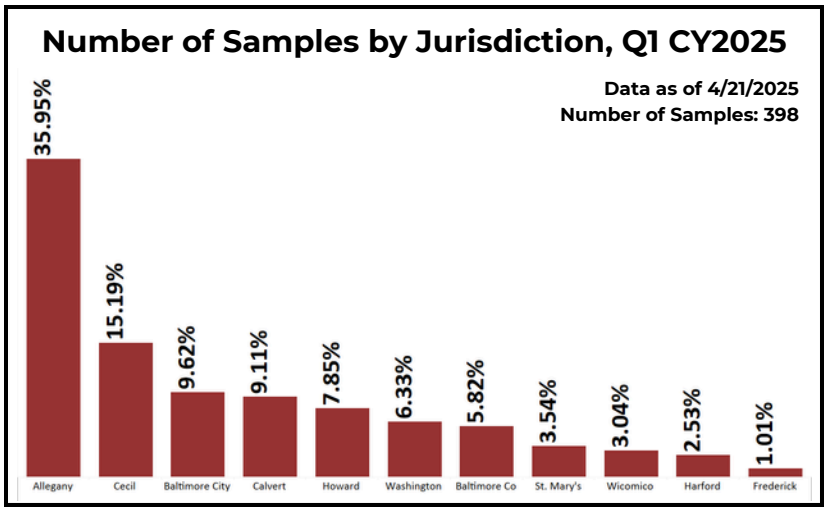
2025 Calendar Year Q1 Newsletter

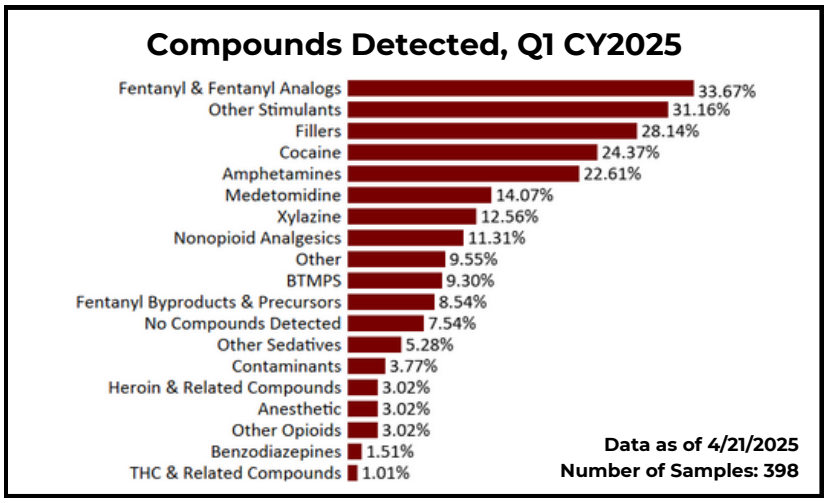
Maryland DEPARTMENT OF HEALTH

RAD BACKGROUND AND DATA DISCLAIMER

The Rapid Analysis of Drugs (RAD) is a statewide drug checking program that tests routinely returned paraphernalia voluntarily provided by Maryland Syringe Services Program (SSP) participants in partnership with the National Institute of Standards and Technology (NIST). RAD was piloted in 8 SSPs from Oct 2021 through Sept of 2022, when it expanded to be an ongoing service for any interested SSP. Since Oct 2021, a total of 4,331 samples have been collected.

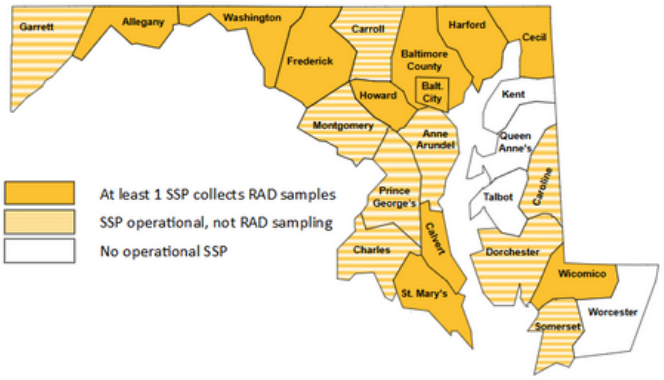
RAD gives us insight into the near real time drug supply in MD, but is not fully representative. RAD is completely voluntary for SSPs and their participants, making it a convenience sample. No personally identifiable information is collected, therefore we do not know how many individuals account for the sample size. All data in this report comes from the RAD database and is current as of 4/21/2025.





GOALS OF RAD

1. Improve the understanding of the Maryland drug supply
2. Empower people who use drugs with knowledge about the drug supply to help inform their decisions and reduce risk
3. Provide critical information about new and emerging trends in the drug supply



KEY FINDINGS FOR Q1 CY2025

- In Q1 CY2025, **398 samples** were collected from 17 SSPs in 11 jurisdictions. Of those samples:
  - **45.48% contained opioids**
    - *Of those samples,* 92.8 *% contained fentanyl.*
  - **24.37% contained cocaine**
  - **22.61% contained amphetamines**
  - **14.07% contained medetomidine**
  - **12.56% contained xylazine**
- 36% of samples were collected through street outreach or mobile units.
- **34.4 %** of samples had multiple active ingredients.
- Identification of ***emerging substances*** in MD:
  - **Medetomidine** - a vet sedative similar to xylazine, seen in 145 samples from 11 jurisdictions since 10/22.
  - **BTMPS** (Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate) - UV light stabilizer with various industrial applications, seen in 113 samples from 10 jurisdictions since 10/22
  - **Benzodiazepines derivatives (3)** - in 79 samples from 11 jurisdictions since 10/22

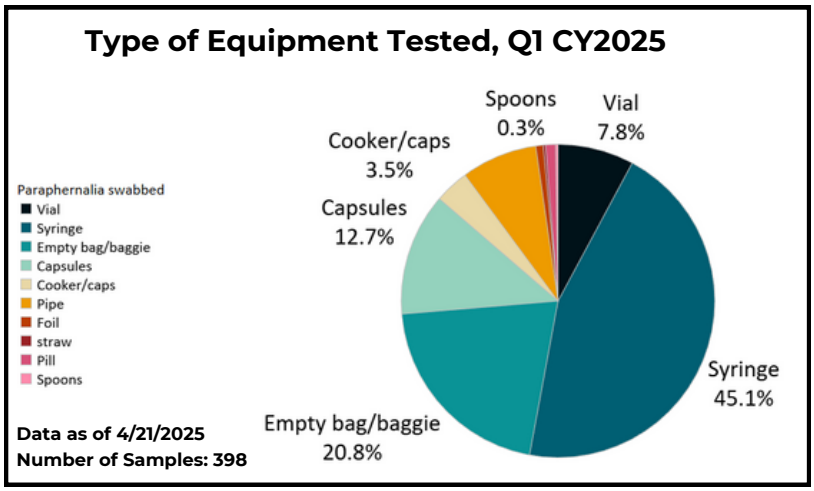
RESOURCE CORNER:

RAD Website

NPHL MD SSP Law

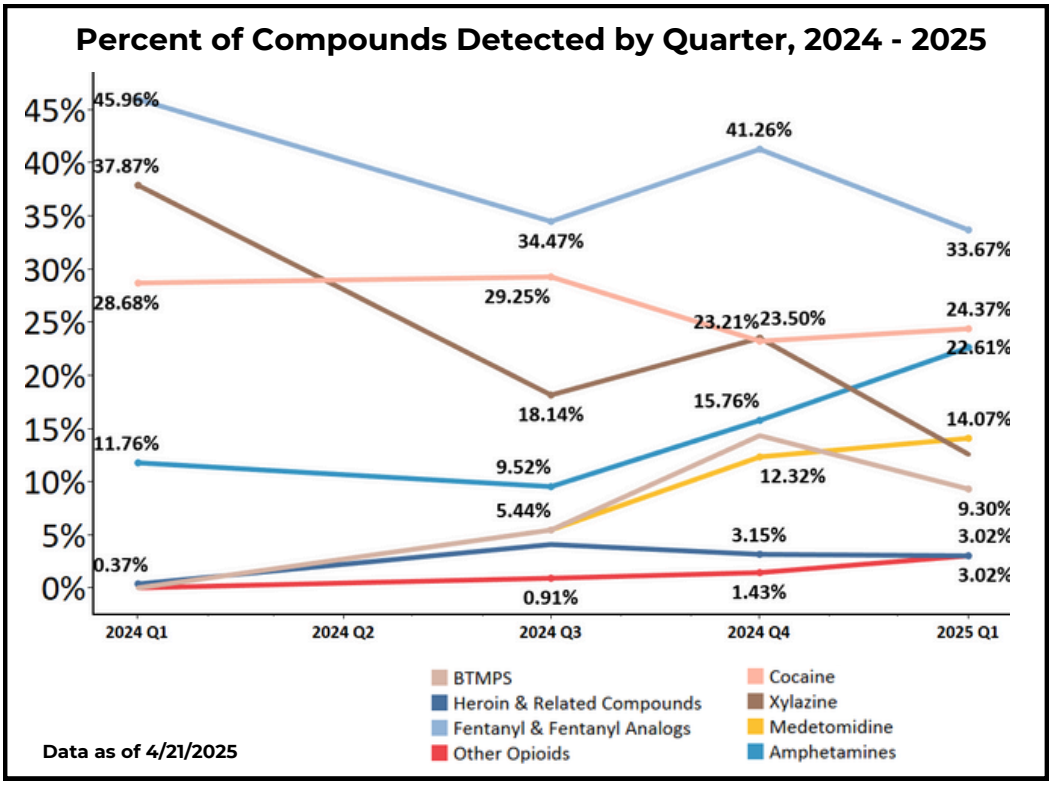
Find an Syringe Service Program Near You

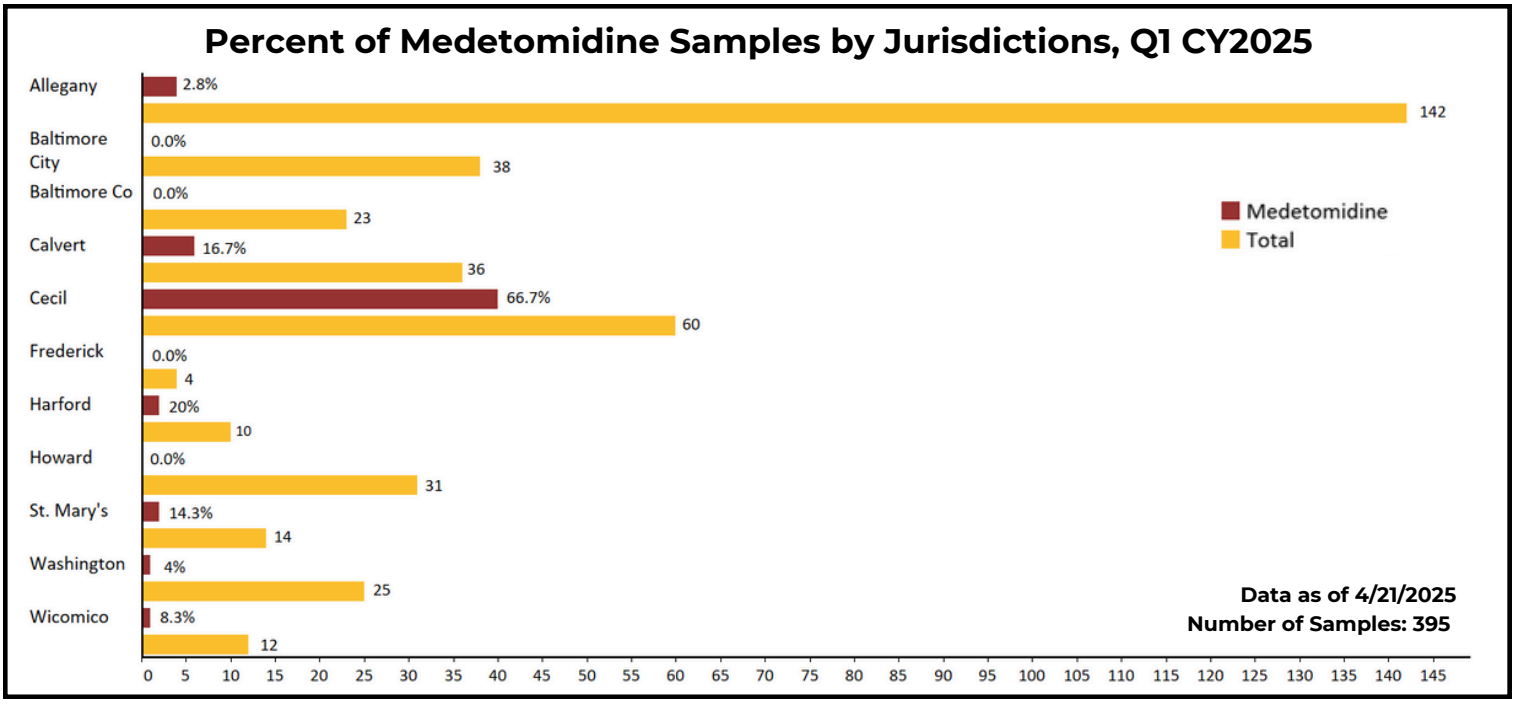
NIST Newsletters



Forty-five percent of samples tested in Q1 of CY2025 were syringes, followed by empty bags (20.8%), and capsules (12.7%). Syringe testing is the most common method of RAD testing since SSP participants are returning syringes for safe disposal at SSPs. RAD is an authorized SSP program activity and therefore included in legal protections granted to SSPs through MD General Health Code Ann. § 24-901 through 24-909.

Fentanyl and its analogs continue to be the most commonly seen compound in RAD data, in Q1 it was present in 33.7% of samples. Cocaine continues to remain a constant in the Maryland drug market, found in 24.4% of samples in Q1 of CY2025. Heroin was almost entirely replaced by fentanyl in Maryland in 2016, but is still found in a small number of RAD samples, in Q1 of 2025 3% of samples had heroin in them. Amphetamines have increased notably from Q3 2024 (9.5%) to Q1 2025 (22.6%). In the NIST's March Newsletter, the same trend was notes along the east coast.





The presence of xylazine, a veterinary sedative, has decreased in 2024 and continues that trend in Q1 2025, being found in 12.6% of samples. Medetomidine continues to replace xylazine in the Maryland RAD samples. Medetomidine is a sedative similar to xylazine that has been increasing in prevalence across the east coast in 2024. In Maryland, medetomidine was seen in 0% of samples in Q1 2024 and in 14.1% of samples in Q1 2025. Medetomidine use has been associated with more severe withdrawal symptoms in Philadelphia and a greater need for rescue breathing during overdose response.

Medetomidine's presence is Maryland is geographically linked. Cecil County saw the highest prevalence, with 66.7% of samples tested in Q1 2025 containing medetomidine, followed by Harford County (20%), Calvert County (16.7%), and St. Mary's County (14.3%). Philadelphia has been acutely affected by the presence of medetomidine and we are seeing the extension of that high prevalence in the Maryland Counties closest to Philadelphia (Cecil and Harford).

Nearly forty percent of RAD samples in Q1 had multiple active ingredients in them, suggesting that intentional or unintentional polysubstance use is very common in Maryland. The high rate of polysubstance use, both intentional and unintentional highlights the need to always respond to an overdose with naloxone and rescue breathing, even if you think it is unlikely that an opioid was present. The volatility of the Maryland drug market puts further emphasis on going slow and never using alone. To learn more about harm reduction resources in Maryland, or find naloxone or an SSP near you, visit our website.

Tracking symptoms: RAD data collection allows participants to report *"how did the drugs make you feel/did they cause any of the following? (select all that apply)"* as a way to track accompanying symptoms assigned to a particular drug sample. However, we are looking into better ways to utilize that data, track symptoms more directly, and report those findings out to the community. Thankfully, Philadelphia Department of Public Health's Health Alerts are an excellent example of the utility of tracking symptoms alongside drug checking services by alerting what's in the supply, what we know about the substance, what symptoms have been reported, and guidance on clinical management of overdose and/or withdrawal of trending substances in combination with other substances. RAD participating programs, we encourage you to log reported symptoms in Cognito and are open to feedback on what else would be useful to your work.