

Rapid Analysis of Drugs

2025 Calendar Year Q4 Newsletter



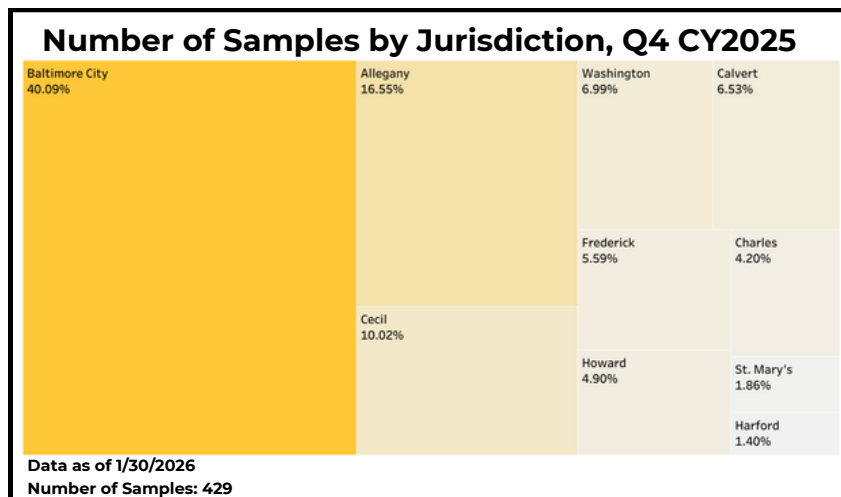
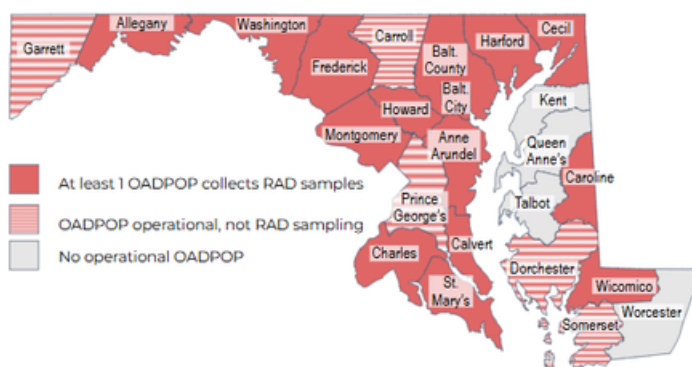
RAD BACKGROUND AND DATA DISCLAIMER

The Rapid Analysis of Drugs (RAD) is a statewide drug checking program that tests routinely returned paraphernalia voluntarily provided by Maryland Opioid Associated Disease Prevention and Outreach Programs (OADPOP), participants in partnership with the National Institute of Standards and Technology (NIST). RAD was piloted in 8 OADPOPs from Oct 2021 through Sept of 2022, when it expanded to be an ongoing service for any interested OADPOP. Since Oct 2021, a total of 5,853 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 OADPOPs 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, as of 1/30/2026.

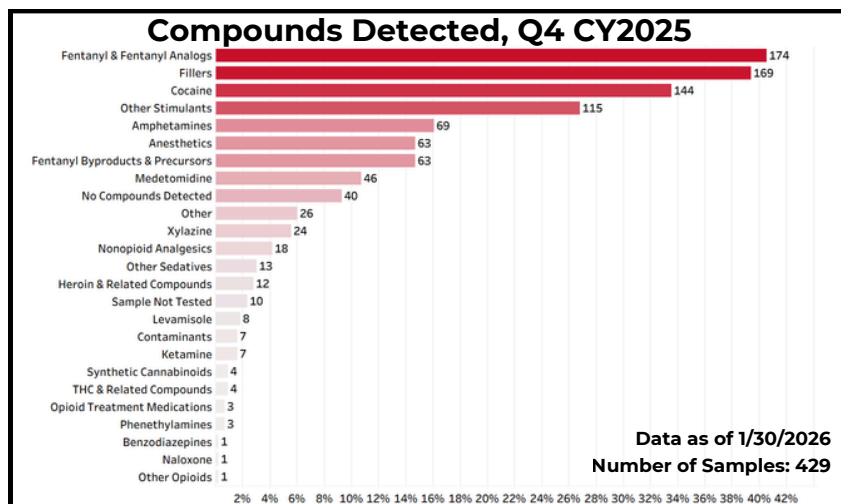
GOALS OF RAD

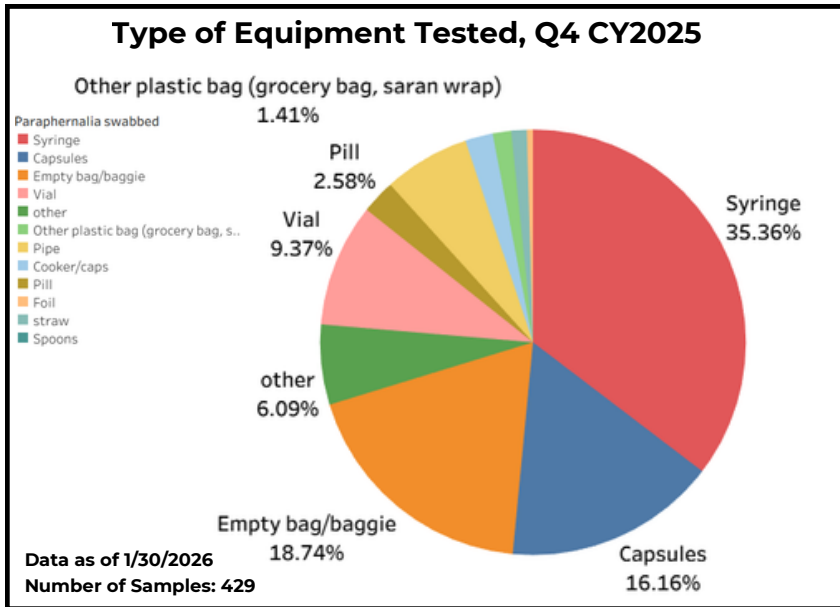
1. Increase stakeholder understanding of the Maryland drug market landscape.
2. Empower people who use drugs with knowledge about the drug supply that enables them to make informed decisions and employ risk reduction strategies.
3. Provide critical, timely information about new and emerging trends in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



KEY FINDINGS FOR Q4 CY2025

- In Q4 CY2025 (10/1/25 - 12/31/25), **429 samples** were collected from 21 OADPOPs in 14 jurisdictions. Of those samples:
 - **58.7% contained opioids**
 - *Of those samples, 94% contained fentanyl.*
 - **33.57% contained cocaine**
 - **16.08% contained amphetamines**
 - **10.72% contained medetomidine**
 - **5.59% contained xylazine**
- **46.37%** of samples were collected through street outreach or mobile units.
- **55.24%** of samples had multiple active ingredients.
- Identification of **emerging substances** in MD:
 - **Medetomidine** (veterinary sedative) and **anesthetics** - both commonly seen in combination with fentanyl.
 - **Kratom/ Mitragynine** - seen in 11 samples from 4 jurisdictions (Baltimore County, Baltimore City, Frederick, and St. Mary's)
 - **Azaperone** - veterinary sedative, not yet seen in MD RAD, seen in other eastern states.





RESOURCE CORNER:

RAD Website



NPHL MD OADPOP Law



Find an OADPOP Near You

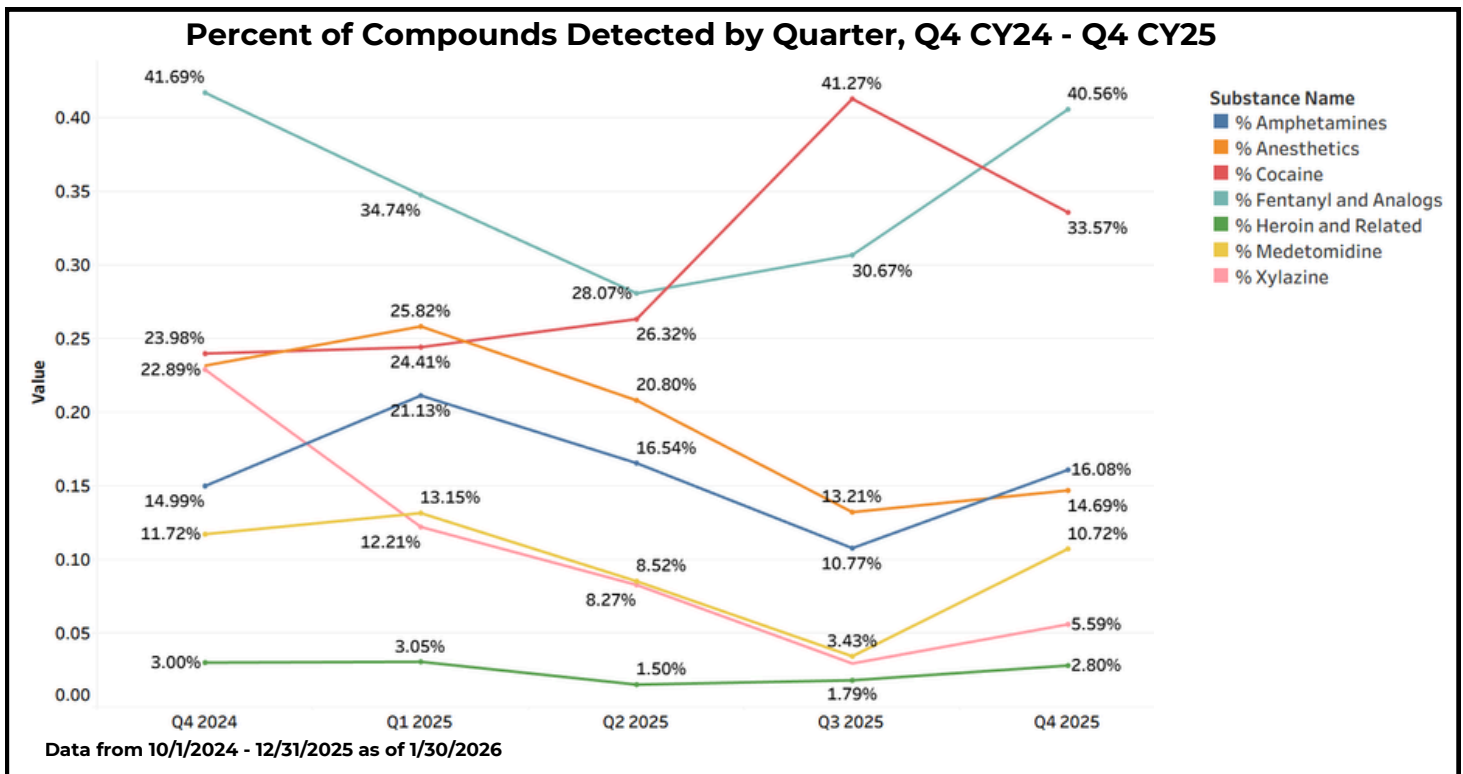


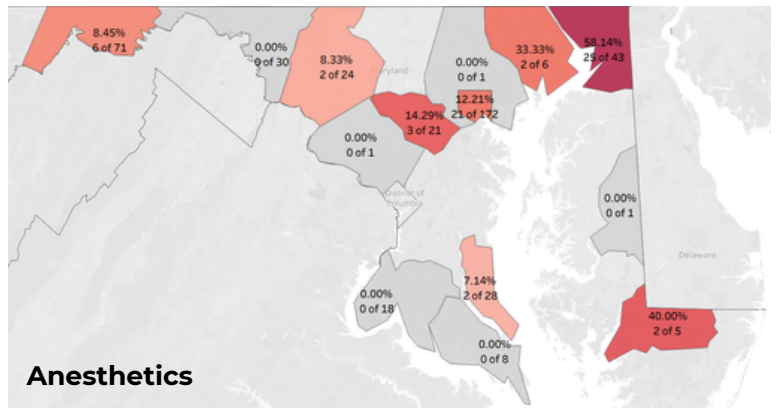
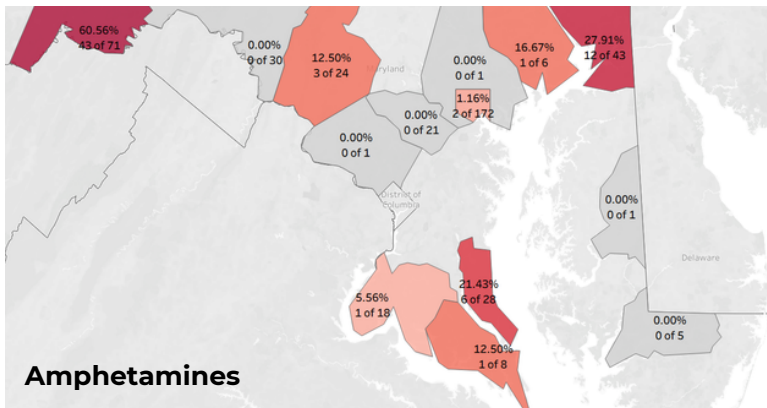
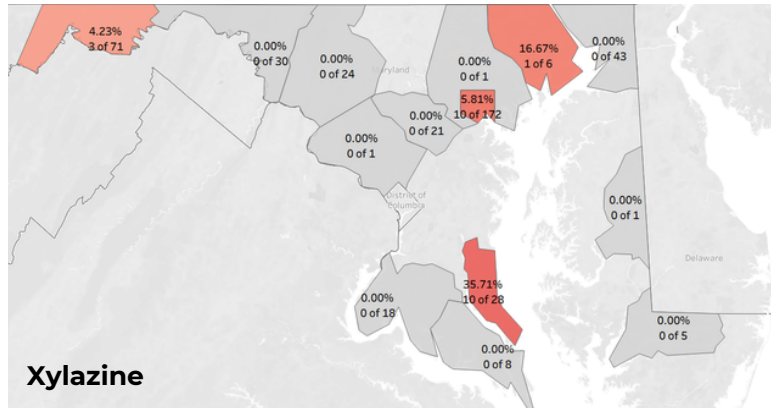
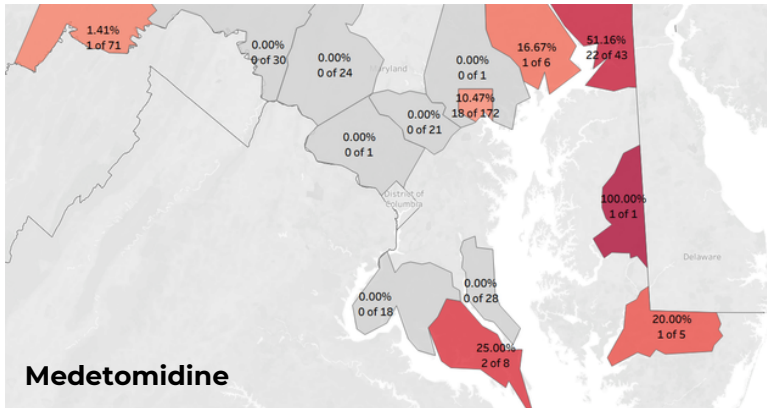
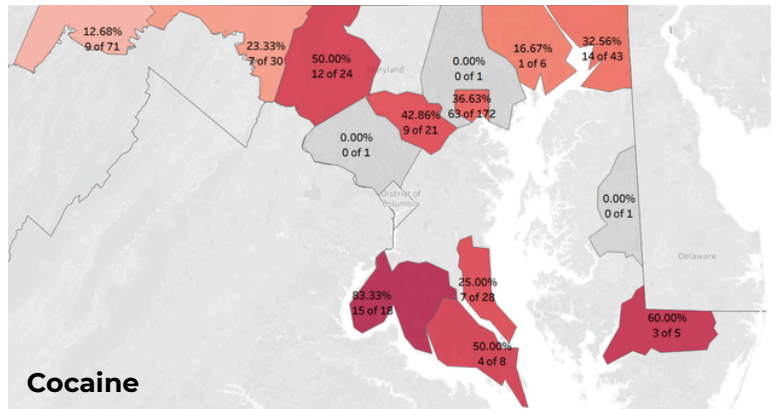
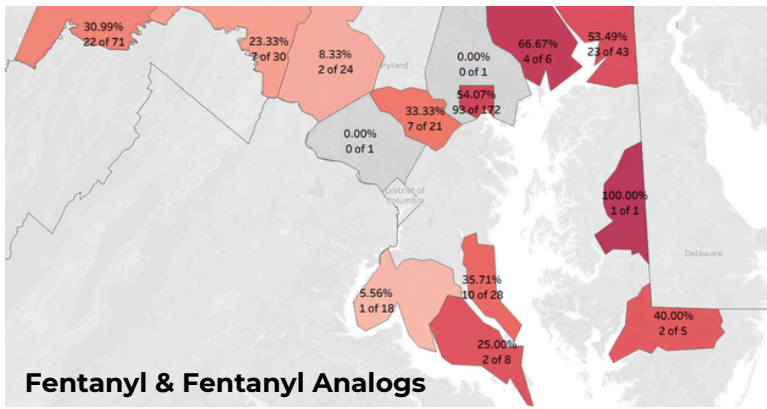
NIST Monthly Newsletters



Thirty-five percent of samples tested in Q4 of CY2025 were syringes, followed by baggies (19%), and capsules (16%). Syringe testing is the most common method of RAD testing since OADPOP participants are often returning syringes for safe disposal. RAD is an authorized OADPOP program activity and therefore included in legal protections of OADPOPs through MD General Health Code Ann. § 24-901 through 24-909.

In Q4, fentanyl and fentanyl analogs were the most prevalent compound detected through RAD, found in 41% of samples. Cocaine was detected in 34% of Q4 RAD samples. The presence of fentanyl and fentanyl analogs in RAD samples had steadily decreased from Q4 of 2024 through Q2 of 2025, but increased in Q3 and Q4 of 2025. Anesthetics (15%) rose slightly in Q4, after their prevalence had been decreasing from Q1 - Q3 of 2025. Medetomidine prevalence increased from Q3 (3%) to Q4 (11%), after decreasing from Q1-Q3. Amphetamines were found in 16% of samples, up from Q3 (11%) The NIST's Monthly Newsletters provide similar trends for east coast samples.





Drug trends vary geographically across Maryland, and while RAD is not fully representative of the drug supply in Maryland, it helps us better understand the regional variance in the supply. For example, in Q4 of 2025, cocaine was found in samples from 11 of the 14 jurisdictions that submitted samples, and was the most prevalent compound from samples submitted in Charles (83%), Wicomico (60%), Frederick (50%), and St. Mary's (50%) counties. Fentanyl and fentanyl analogs were found in samples from 12 jurisdictions, and was the most prevalent compound from submitted samples in Caroline (100%), Harford (67%), Baltimore City (54%), and Cecil (53%) counties. Amphetamines were the most commonly found compounds in Allegany County (61%) in Q4 of 2025. Anesthetics and sedatives tend to all follow a similar pattern to fentanyl, since they are commonly found in combination with one another. Xylazine continues to be seen in fewer RAD samples going from being found in 23% of 2024 Q4 samples to 6% of 2025 Q4 samples, now only being found in 4 jurisdictions (Allegany, Baltimore City, Calvert, and Harford). Medetomidine had been primarily seen in Cecil County (51%) due to its proximity to Philadelphia. Baltimore City, Harford, St. Mary's, and Wicomico Counties all saw an increase in medetomidine samples from Q3 to Q4. Caroline County submitted their first RAD sample in Q4 so we are unable to assess trends in their data. Medetomidine use has been associated with severe withdrawal, often requiring hospitalization.