Trends, Analysis & Threats

Overdose Response Strategy Webinar Series

Funded by the Office of National Drug Control Policy and the Centers for Disease Control and Prevention

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Agenda

Opening Remarks

Christopher Jakim, HIDTA National Coordinator, Overdose Response Strategy

National Overdose Data Highlight

Steve Barnes, Technical Advisor, Overdose Response Strategy

Speaker Briefings

- **Joshua Schrecker, Pharm.D.**, Senior Director, Clinical Affairs, Aegis Sciences Corporation
- **Joshua DeBord, PhD**, Senior Scientist, The Center for Forensic Science Research and Education (CFSRE)

Q&A and Closing Remarks

Accessing ORS TAT Materials

After today's webinar, remember to access all follow-up and recorded materials for our ORS TAT Webinars on the 'Resources' tab of the ORS website.

https://orsprogram.org/tat-webinars/

***We will still be sending follow-up emails to our mailing list and will include the materials link to our website within that communication.**

Overdose Response Strategy

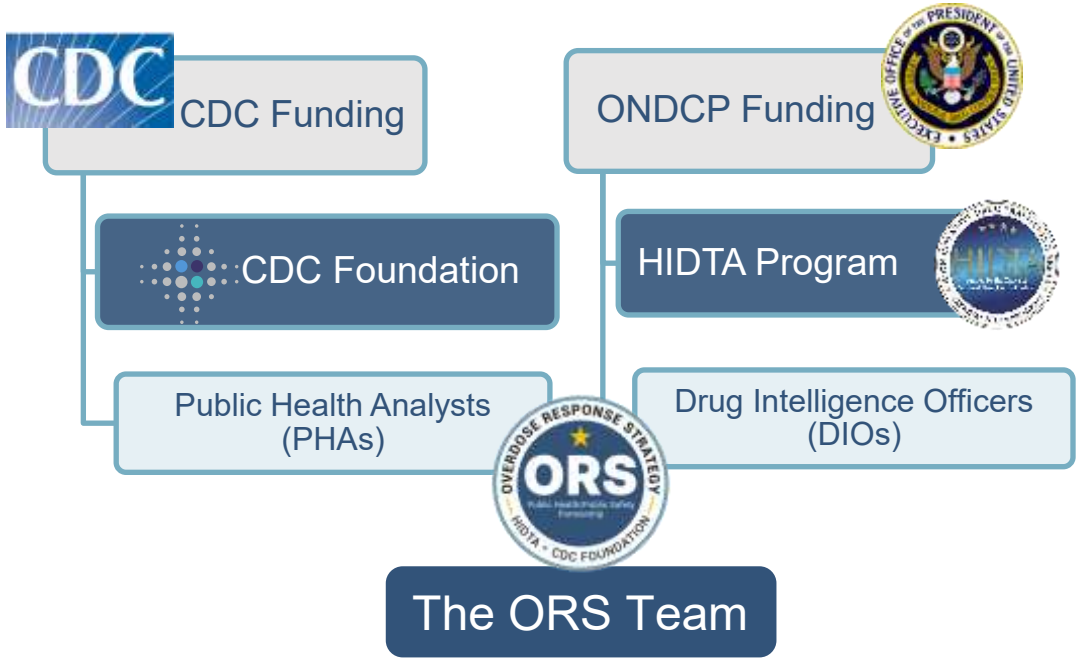
The ORS is a nationally coordinated, cross-sector collaboration between public health and public safety.

The mission of the ORS is to **help communities reduce fatal and non-fatal drug overdoses** by connecting public health and public safety agencies, sharing information and supporting evidence-based interventions.

Connect

1. Go to www.orsprogram.org

2. Visit **"ORS Interactive Teams Map"** for team contact info



The ORS is implemented by 61 teams of DIOs and PHAs covering all 50 states, D.C., Puerto Rico, and the U.S. Virgin Islands.

Overdose Response Strategy News

https://www.whitehouse.gov/briefings-statements/2026/05/rising-to-the-challenge-together-how-ondcp-and-cdc-support-jurisdictions-through-the-overdose-response-strategy/

https://www.cdc.gov/overdose-prevention/php/public-health-strategy/index.html

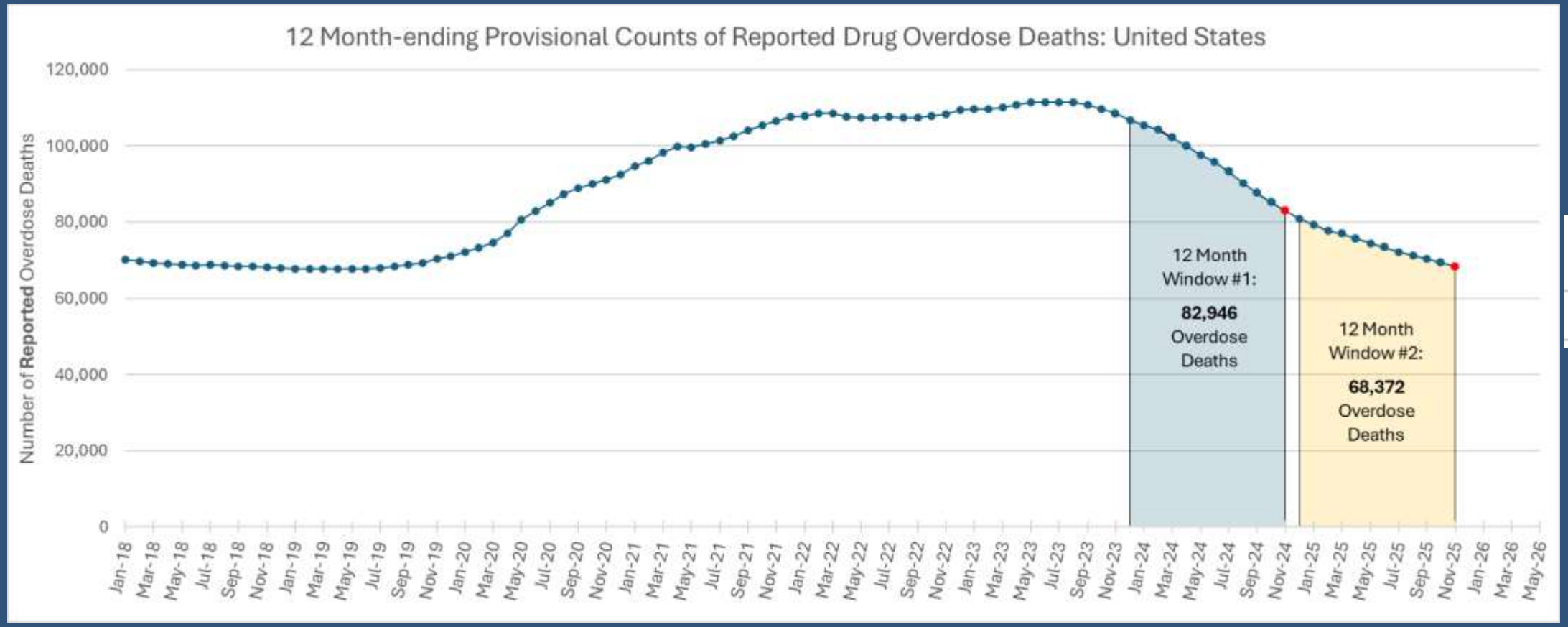
Trends, Analysis & Threats Webinar: Acknowledgement of Data Sensitivity and Use

The information presented and discussed at ORS Trends, Analysis & Threats (TAT) meetings is shared voluntarily by data owners, often in advance of public release and is often preliminary and incomplete. The Overdose Response Strategy (ORS) does not own or manage any of the data presented.

National Overdose Data Snapshot

Steve Barnes, *Technical Advisor, Overdose Response Strategy*

National Picture - Overdose Mortality



Percent Change for United States

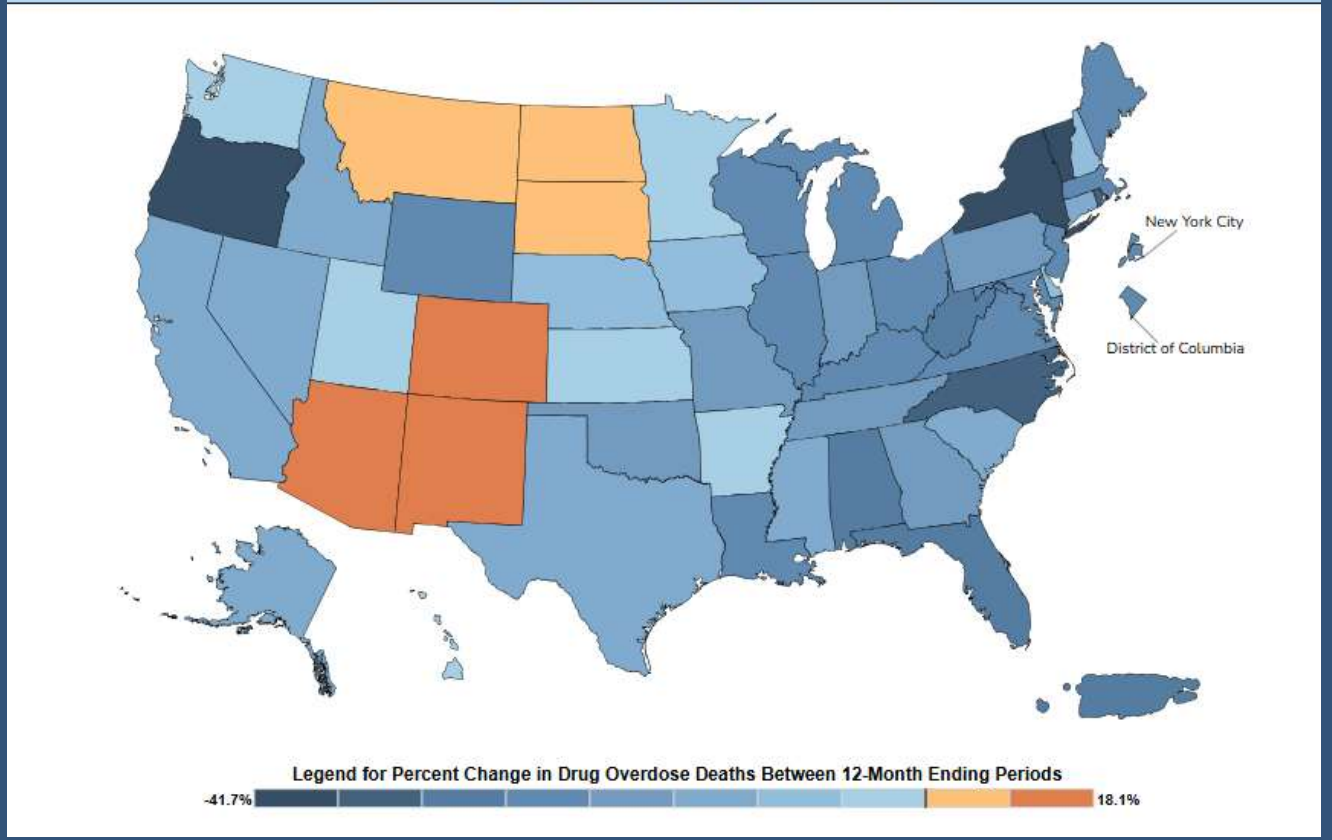
-17.6

Based on data available for analysis on: **April 5th, 2026**

National Center for Health Statistics, Provisional Drug Overdose Death Counts

National Picture - Overdose Mortality

Figure 1b. Percent Change in Reported 12 Month-ending Count of Drug Overdose Deaths, by Jurisdiction: November 2024 to November 2025



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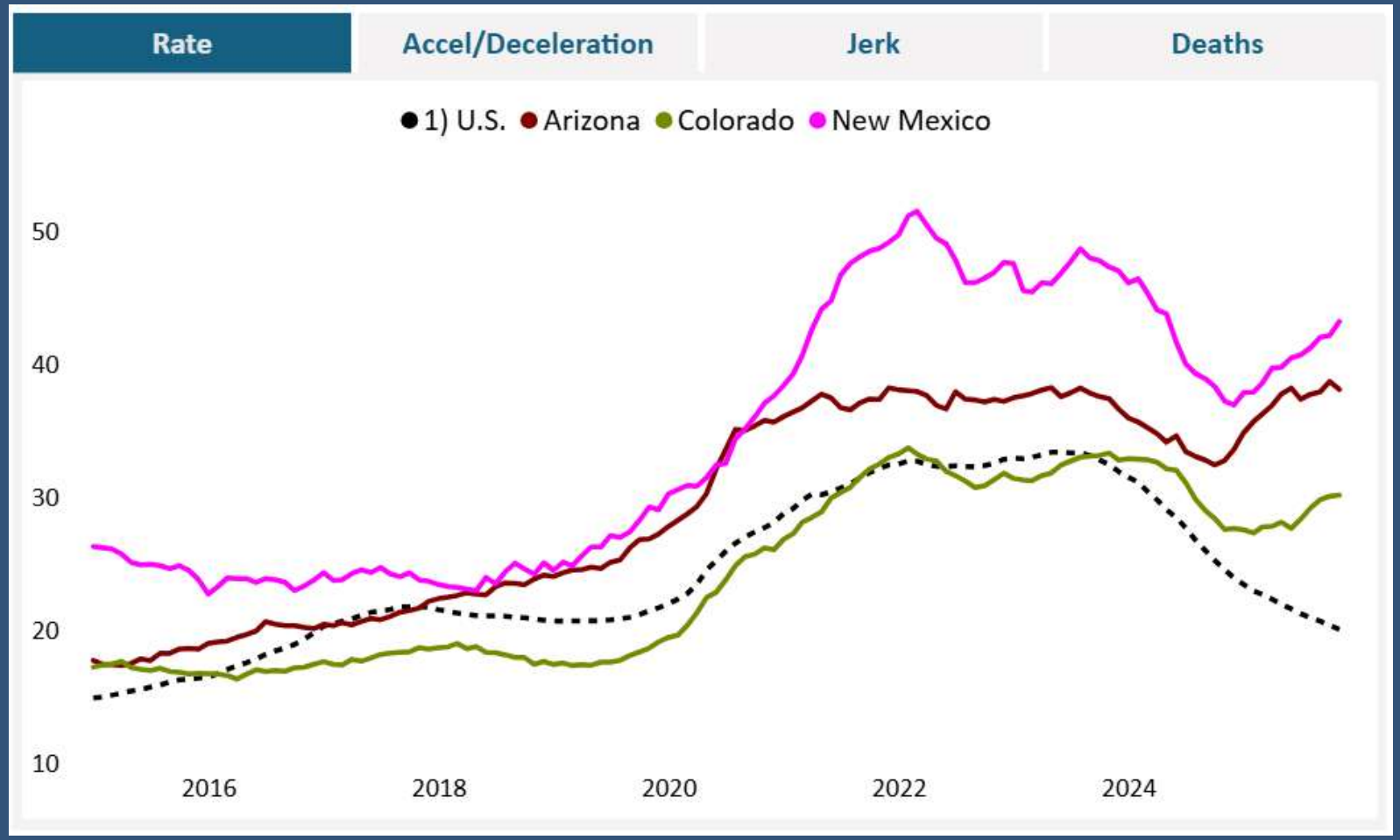
National Center for Health Statistics, Provisional Drug Overdose Death Counts

Northwestern University “OD Pulse” Dashboard



National summaries provide useful context but obscure important regional variation

Public dashboards, like OD Pulse, are useful tools for understanding trends by region and state

Source (visualization): Northwestern University “The OD Pulse” Dashboard, (accessed 05 MAY 2026)

Data: Provisional drug overdose death counts. National Center for Health Statistics. Based on data available for analysis on: **April 5th, 2026**

New CDC Clinical Drug Test Dashboard

Fentanyl

Increased in the West

+10.1%

The percentage of urine specimens positive for fentanyl **increased 10.1% in the West** from October–December 2024 to October–December 2025 (19.1% vs. 21.0%). [B]

Declined in the Midwest and South

-30.1%

The percentage of urine specimens positive for fentanyl **declined 30.1% in the South and 15.5% in the Midwest** from October–December 2024 to October–December 2025 (South: 8.3% vs. 5.8%, Midwest: 8.9% vs. 7.5%). [B]

Centers for Disease Control and Prevention. *Clinical Drug Test Dashboard*. Atlanta, GA: U.S. Department of Health and Human Services, CDC; 05 MAY 2026.

Partner Briefings

Identifying and Reporting Emerging Drug Use Trends in Ambulatory Chronic Pain and Behavioral Health Populations

Josh Schrecker, PharmD
Aegis Sciences Corporation

OBJECTIVES

- Characterize the provider and patient populations served by Aegis Sciences Corporation
- Assess the criteria used for inclusion of substances in the testing provided by Aegis Sciences Corporation
- Review trends in drug identification for select drug and drug classes of interest

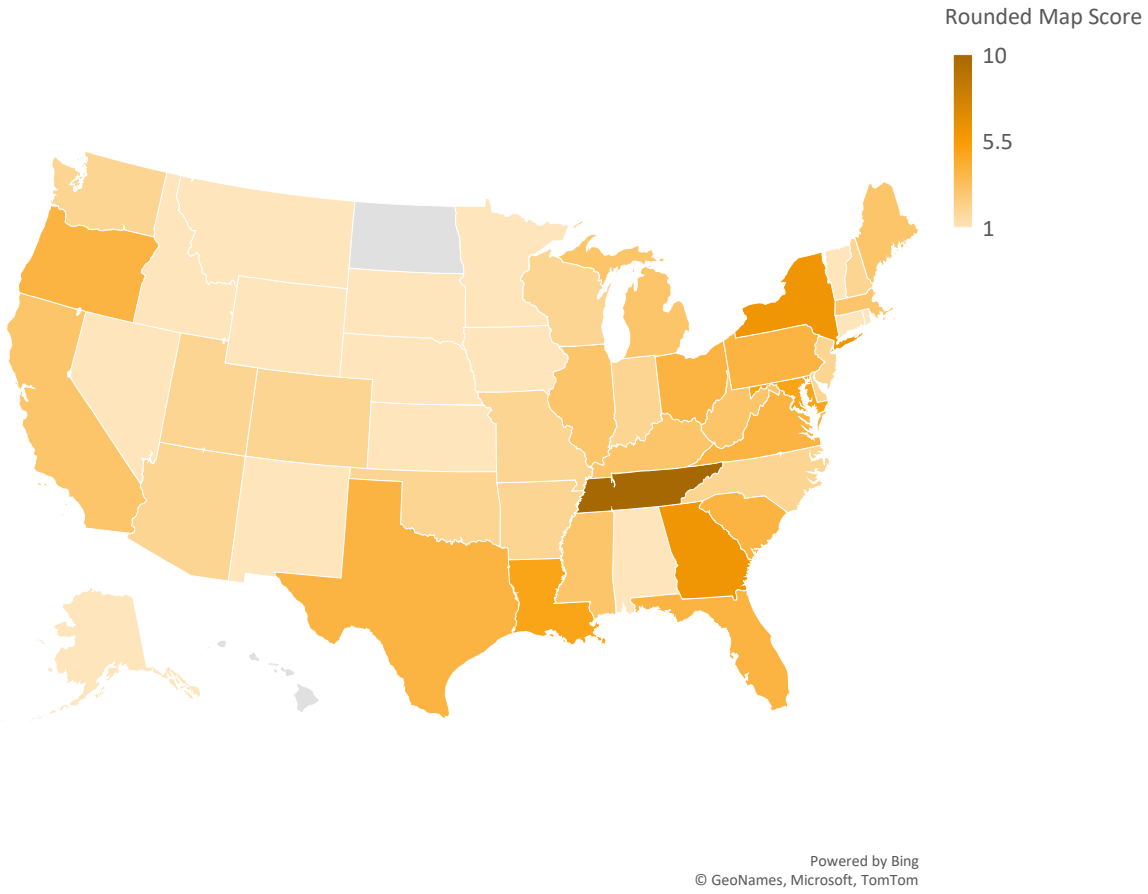
DATA DISCLOSURE

- All analyses presented in this presentation are based on findings of presumptive and definitive toxicology testing performed by Aegis Sciences Corporation
- Data is presented
  - in an aggregated manner to ensure there is no risk for reidentification
  - based on findings at the sample level. Aggregated results may include findings for individuals tested multiple times within the timeframe analyzed
  - based on the validated method employed at time of test request (analytes within test menu change over time)
- Retrospective analyses of result data for testing performed by Aegis Sciences Corporation are IRB approved. Results of testing previously reported to healthcare sites were analyzed in accordance with an IRB approved protocol: Pearl IRB #AG-08-01v2.0. (Pearl IRB #AG-08-01v2.0)

DEFINING OUR POPULATION

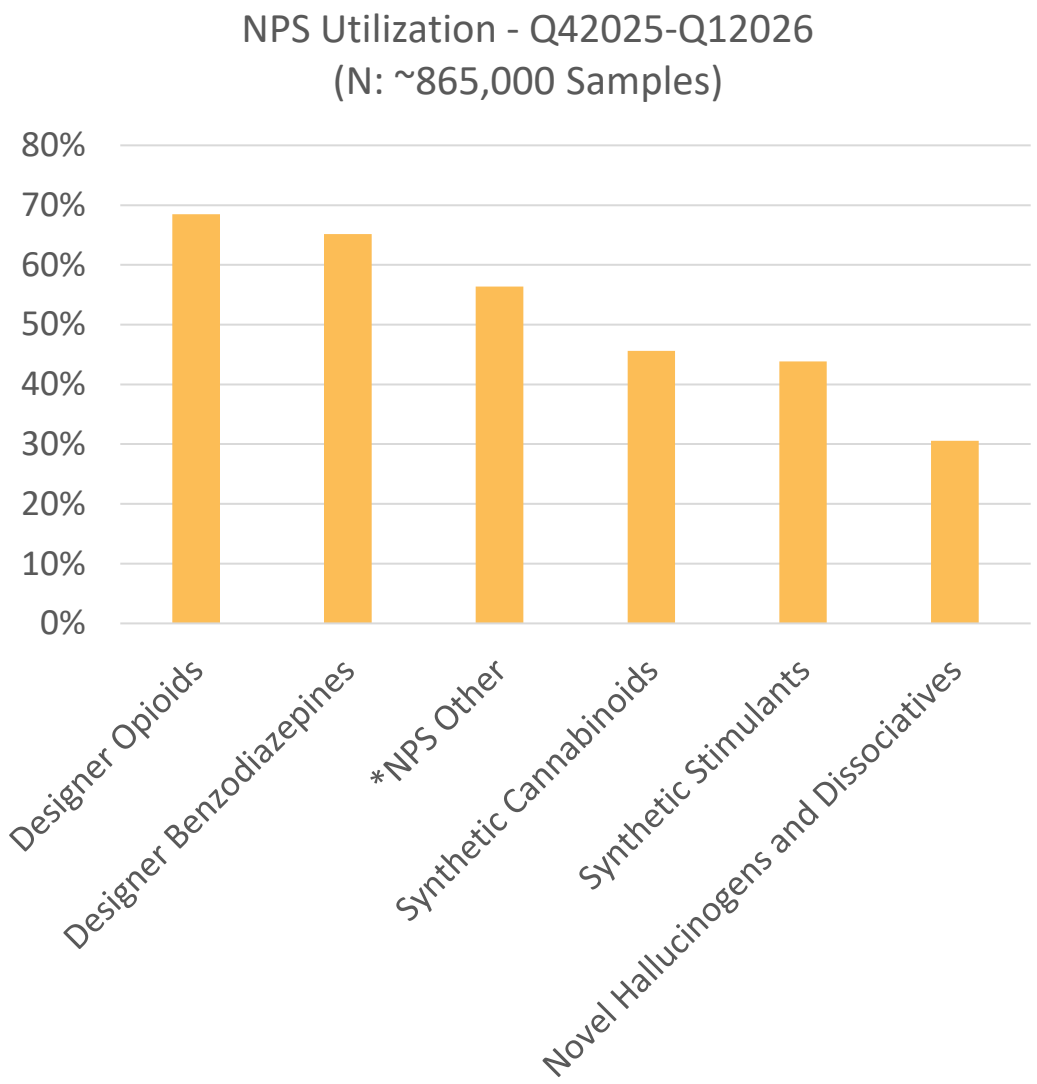
- Our laboratory is located in Nashville, TN
- We provide presumptive and definitive testing services for providers that are managing care for individuals with chronic pain, substance use disorders, or mental illness
- Testing is ordered for medically necessary purposes. Results are reported to ordering providers on the basis of what is ordered and what is found to be positive.
- Testing is primarily performed on urine or oral fluid specimens collected from ambulatory individuals receiving treatment.
  - Urine specimens tested: ~85% of total volume
  - Oral fluid specimens tested: ~15% of total volume

Normalized Sample Volume by State
Q42025-Q12026
(N: ~865,000 samples)



DEFINING OUR POPULATION

- Defining population based on medication(s) indicated as prescribed at time of order placement (Based on Q425-Q126 Data)
  - Chronic Opioid Therapy: 28%
  - Opioid or Substance Use Disorders: 18%
  - Other: 18%
  - Medications not indicated or prescribed: 36%
- From Q42025-Q12026, we received requests to test at least one class of novel psychoactive substances (NPS) on 73% of samples
  - Chronic Opioid Therapy: 60%
  - Opioid or Substance Use Disorders: 80%
- *NPS Other – Miscellaneous novel substances that fall outside of other drug categories based on their mechanism of action; includes novel adulterants (e.g., xylazine, medetomidine)



ANALYTE AND TEST SELECTION

- Primary resource utilized in selection of testing: Center for Forensic Science Research and Education (CFSRE) Quarterly Scope Recommendations
  - NPS offering updated twice annually (urine and oral fluid); primarily focus on Tier One and Two compounds

BENZODIAZEPINES		OPIOIDS		STIMULANTS & HALLUCINOGENS		SYNTHETIC CANNABINOIDS		SEMI-SYNTHETIC CANNABINOIDS		MISCELLANEOUS	
TIER ONE (STRONGLY RECOMMEND)											
Bromazolam	1-10	Carfentanil	<1	2/3/4-Methylmethcathinone	>10	5F-MDMB-PINACA (5F-ADB)	<1	THCP	1-10	Medetomidine	1-10
Phenazolam	1-10	Metonitazene	<1	alpha-PiHpP / alpha-PHpP	>10	MDMB-4en-PINACA	<1	Δ^8-THC	1-10	Xylazine	1-10
Desalkylgidazepam†	1-10	*N-Propionitrile Chlorphine*	<1	*N*-Isopropyl Butylone	>10	MDMB-BINACA (-BUTINACA)	<1	Δ^8-THC-COOH	1-10	Mitragynine	>10
*Ethylbromazolam	1-10	*5,6-Dichloro Desmethylchlorphine*	1-10	2F-2oxo-PCE / Fluorexetamine	>10	*4F-MDMB-BINACA (-BUTINACA)	<1	9(R)-HHC / 9(S)-HHC	1-10	7OH-Mitragynine	1-10
8-Aminoclonazolam‡	1-10	*o/m/p*-Fluorofentanyl	1-10	2/3/4-Chloromethcathinone	>10	ADB-4en-PINACA	<1	9(R)-HHC-COOH / 9(S)-HHC-COOH	1-10	Mitragynine Pseudoindoxyl	1-10
TIER TWO (RECOMMEND)											
Clonazolam‡	<1	*o/m/p*-Methylfentanyl	1-10	*N,N*-Dimethylpentylone	>10	*ADB-BINACA (-BUTINACA)	<1	Δ^{10}-THC	1-10	4-AcO-DMT	1-10
*Flubromazepam	1-10	*Protonitazene	<1	alpha-PiHP / alpha-PHP	>10	ADB-CHMINACA	<1	Δ^{10}-THC-COOH	1-10	Tianeptine	>10
Flualprazolam	1-10	*N*-Pyrrolidino Protonitazene	<1	MDPHP / MDPiHP	>10	4CN-CUMYL-BINACA (-BUTINACA)	<1	THC-O-Acetate	1-10	Kavain & Kavalactones	>10
Etizolam†	1-10	*N*-Pyrrolidino Metonitazene	<1	*N-#Butyl Butylone	>10	5F-MDMB-PICA	<1	HHC-O-Acetate	1-10	*Etomidate	>10
TIER THREE (CONSIDER)											
Ethylflualprazolam	1-10	Spirochlorphine	<1	2C-B	<1	4F-MDMB-BICA	<1	HHCP	1-10	*Dihydro-7OH-Mitragynine*	1-10
Desalkylflurazepam†	1-10	*N-Pyrrolidino Etonitazene	<1	*N*-Cyclohexyl Methylone	>10	MDMB-INACA	<1	HHCH	1-10	Phenibut	>10
Pyrazolam	1-10	*N*-Pyrrolidino Ethylene Isotonitazene	<1	Eutylone	>10	ADB-INACA	<1	THCM	1-10	BTMPS	>10
*4'Cl-Deschloroalprazolam	1-10	*5,6-Dichloro Brorphine	<1	Pentylone	>10	*AMB-4en-PINACA	<1	*THCB	1-10	*Dextro/Levo Methorphan	>10
Note: This may not be an all-inclusive list. Laboratories should consider additional NPS for inclusion (or exclusion) based on local, national, and/or international trends.											

https://www.cfsre.org/nps-discovery/scope-recommendations

ANALYTE AND TEST SELECTION

- Additional resources utilized in selection of testing include:
  - Data from other surveillance organizations including National Drug Early Warning System (NDEWS), SAMHSA Drug Abuse Warning Network (DAWN), NIST Novel Psychoactive Substance Data Hub, European Union Drugs Agency (EUDA)
  - Peer-Reviewed publications
  - Drug Checking resources that are publicly available (e.g., Opioid Data Lab)
  - Online forums discussing substance use
    - Reddit (r/researchchemicals)
    - Erowid
    - Bluelight
  - Vendors that provide analytical standards (e.g., Cayman Chemicals)

WHY SHOULD NPS TESTING BE PERFORMED IN AN AMBULATORY POPULATION?

- Identification of polysubstance use at initiation of opioid or substance use disorder treatment
  - Alexander R, Agwuncha C, Wilson C, Schrecker J, Holt A, Heltsley R. Withdrawal Signs and Symptoms Among Patients Positive for Fentanyl With and Without Xylazine. J Addict Med. 2025;19(2):202-207. doi:10.1097/ADM.0000000000001423
  - "**Individuals copositive for xylazine** were less likely to complete treatment (43.2% vs 55.9%, P = 0.23) and **more likely to have self-directed discharge** (67.6% vs 44.1%; OR, 2.64; 95% CI, 1.0-6.9) although not statistically significant."
- Detection and risk-stratification of substance use beyond clinical assessment and self-report
  - Weimer MB, Herring AA, Kawasaki SS, Meyer M, Kleykamp BA, Ramsey KS. ASAM Clinical Considerations: Buprenorphine Treatment of Opioid Use Disorder for Individuals Using High-potency Synthetic Opioids. J Addict Med. 2023;17(6):632-639. doi:10.1097/ADM.0000000000001202
  - "**Consider using comprehensive toxicology testing** and drug checking to identify drug components; **use this information to inform harm reduction and overdose prevention strategies**."

POLYDRUG USE IN THE CURRENT OVERDOSE ERA

- Contemporary overdoses are predominantly polydrug events, rather than single-substance exposures
- In ED patients with suspected unregulated drug poisoning:
  - >90% had ≥3 concurrent drug classes
  - ~50% had ≥6 substances detected
- Most common combinations include stimulants + opioids + benzodiazepines, often unintentionally
- Key Trends:
  - Opioid–stimulant co-use
  - Rising detection of non-prescription benzodiazepines
  - Highly unpredictable drug supply
  - Polydrug use of substances with similar adverse effect profiles may be intentional or unintentional

Martens A, Li E, Georgi K, et al. Comprehensive toxicology testing and clinical outcomes of ED patients with unregulated drug poisoning. *CJEM*. Published online March 30, 2026. doi:10.1007/s43678-026-01156-9
Mortensen HL, Sibley AL, Colston DC, et al. Beyond Overdose: How People Who Use Drugs Navigate Competing Risks in the Polydrug Era. *Subst Use Misuse*. Published online February 5, 2026. doi:10.1080/10826084.2026.2621981

POLYDRUG USE IN THE CURRENT OVERDOSE ERA

- Table below represents top 3 co-positive findings by category for substances in fentanyl positive samples received for testing from 3/1/26-3/31/26 (N: 2,776)
  - Excluded samples with any opiate or opioid indicated as prescribed
  - 99% of fentanyl positive samples were tested for at least 1 of these 9 classes
  - 88% of fentanyl positive samples had at least 1 co-positive drug amongst the 9 classes listed below

Traditional Illicit Drugs		Novel Psychoactive Substances		Prescription Medications	
Drug	**Order Rate/ Positivity Rate**	**Drug**	**Order Rate/ Positivity Rate**	**Drug**	**Order Rate/ Positivity Rate**
Cocaine	99% / 44%	Novel Adulterants	75% / 32%	Gabapentin*	72% / 23%
Amphetamines	99% / 36%	Novel Synthetic Opioids	81% / 31%	Opiates / Opioids	99% / 22%
Cannabinoids, natural	74% / 29%	Novel Synthetic Benzodiazepine	64% / 6%	Benzodiazepine*	99% / 18%

*Co-positives could include prescribed medications

**Buprenorphine, naloxone, methadone excluded from analysis

POLYDRUG USE IN THE CURRENT OVERDOSE ERA

- Table below represents top 3 co-positive findings by category for substances in fentanyl positive samples received for testing from 3/1/26-3/31/26 (N: 2,776)
  - Excluded samples with any opiate or opioid indicated as prescribed

Midwest	Northeast	South	West
Drug: Order Rate / Positivity Rate	**Drug: Order Rate / Positivity Rate**	**Drug: Order Rate / Positivity Rate**	**Drug: Order Rate / Positivity Rate**
Cannabinoids, natural: 88% / 39%	Cocaine: 99% / 57%	Cocaine: 99% / 52%	Amphetamines: 99% / 71%
Novel Adulterants: 80% / 38%	Novel Synthetic Opioids: 91% / 41%	Novel Adulterants: 65% / 39%	Novel Synthetic Opioids: 91% / 30%
Amphetamines: 98% / 36%	Cannabinoids, natural: 85% / 35%	Novel Synthetic Opioids: 82% / 26%	Novel Adulterants: 89% / 13%

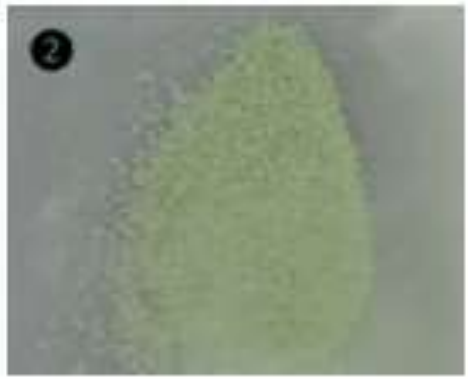
*Co-positives could include prescribed medications

**Buprenorphine, naloxone, methadone excluded from analysis

DESIGNER BENZODIAZEPINES

Overview:

- Designer benzodiazepines (DBZDs) are novel psychoactive substances created by chemically modifying traditional benzodiazepines to evade regulation, increase potency, or alter duration.
- First detected in Europe around 2007, with >30 compounds identified; most emerged between 2014–2020.
- Common examples in illicit markets include etizolam, clonazolam, flubromazolam, bromazolam, and flualprazolam.
- In the U.S., DBZDs are increasingly detected in overdose cases, impaired driving, counterfeit pills, and polysubstance exposures.
- DEA emergently scheduled bromazolam, one of the most frequently detected designer benzodiazepines over the last 18-24 months, in March 2026

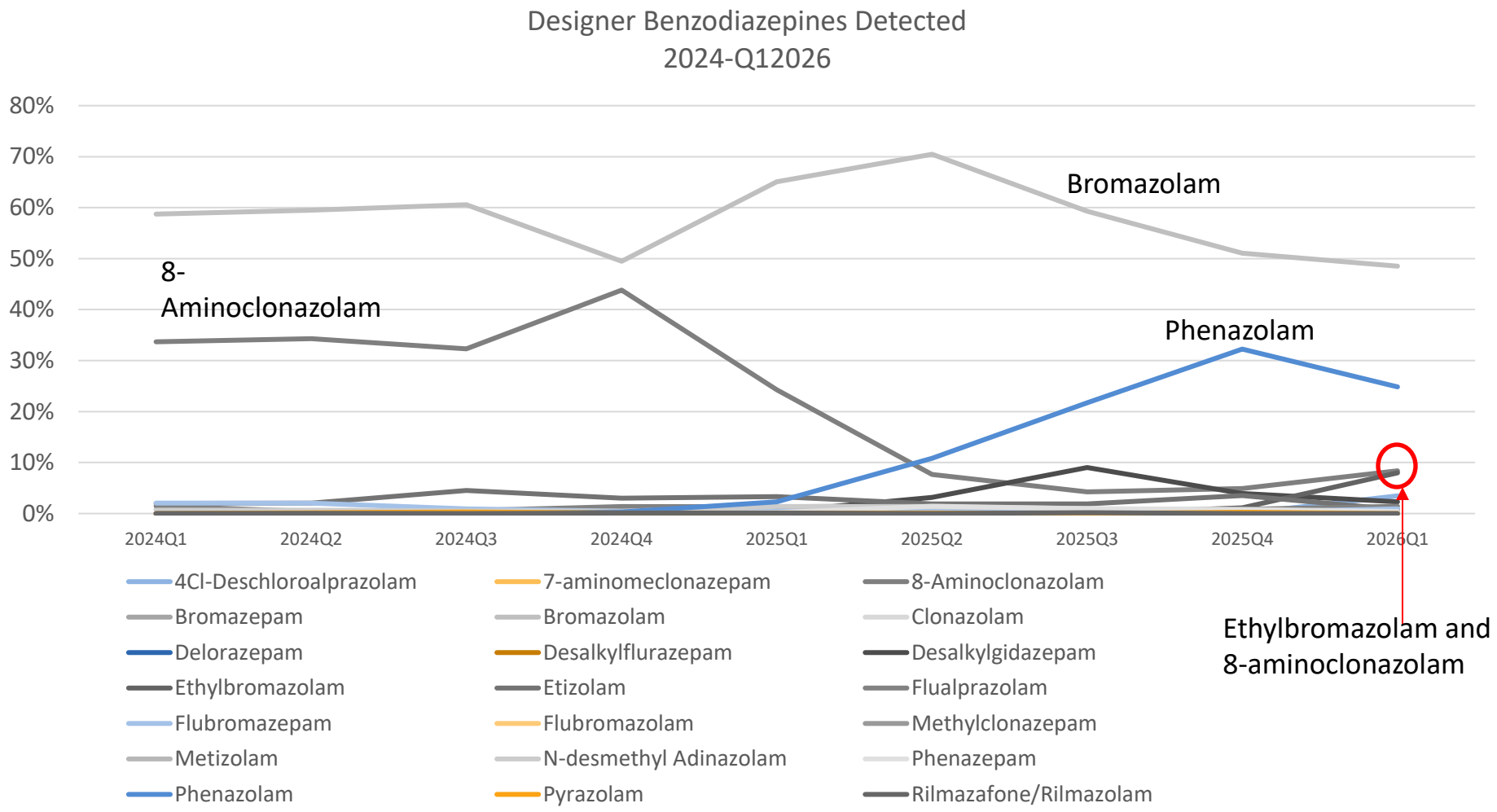


Drug powder suspected to be alprazolam, but identified as clonazolam, in August 2022

Source: https://www.cfsre.org/images/content/reports/drug_checking/2022_Q3_Drug_Checking_Quarterly_Report_Philadelphia.pdf

Bazydlo LAL, Larkey NE. Testing Strategies and the Emergence of Designer Benzodiazepines. *Clin Lab Med*. 2025;45(2):305-314. doi:10.1016/j.cll.2025.01.013
Noe G, McDuffee N, Li K, Munjal S. Clinical Management of Designer Benzodiazepine Intoxication: A Systematic Review. *J Clin Psychopharmacol*. 2025;45(2):116-126. doi:10.1097/JCP.0000000000001963
https://www.dea.gov/press-releases/2026/03/18/dea-emergency-schedules-bromazolam

DESIGNER BENZODIAZEPINE TRENDS



*Total Detections by Drug/Total Detections within Class

DESIGNER BENZODIAZEPINE TRENDS

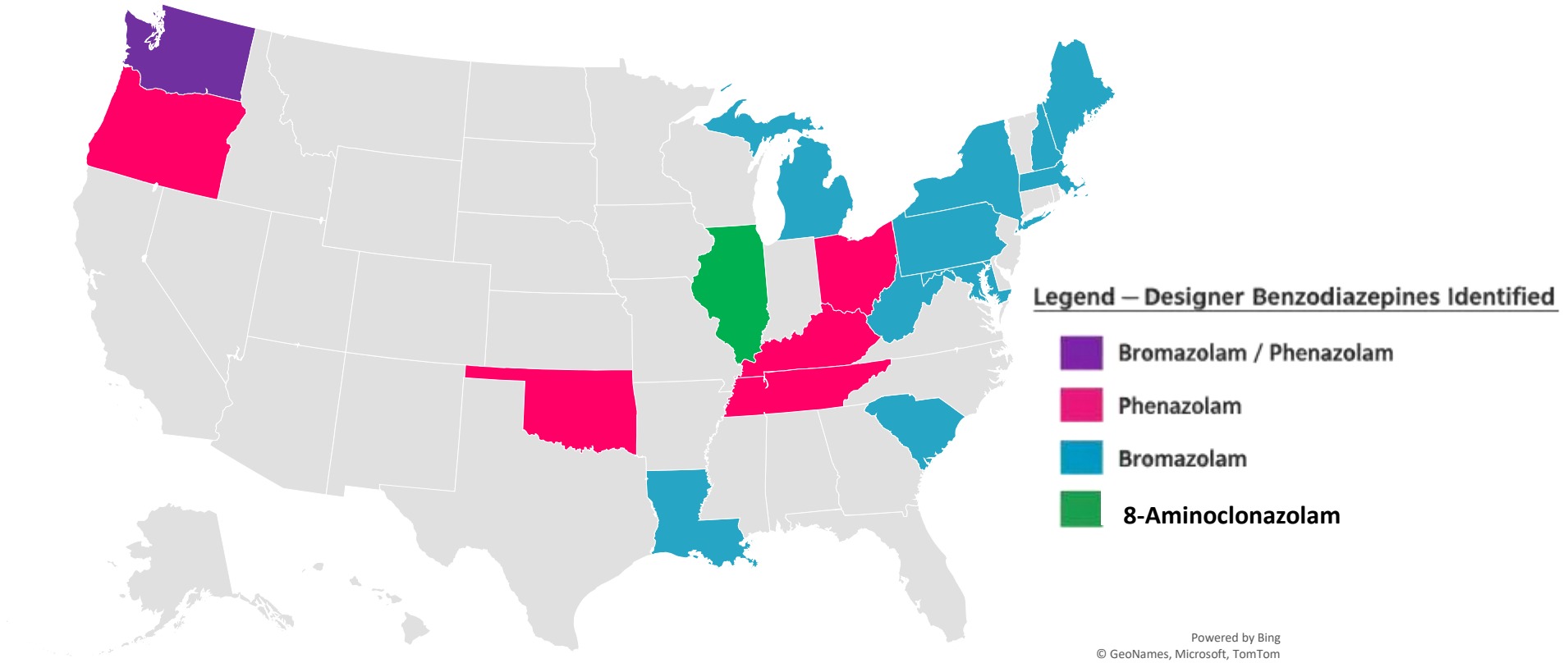
Findings for Samples Received Q12026

Compound	Proportion of Identifications in Midwest	Proportion of Identifications in Northeast	Proportion of Identifications in South	Proportion of Identifications in West
Bromazolam	**37%**	**61%**	**43%**	35%
8-Aminoclonazolam	33%	3%	6%	7%
Phenazolam	17%	17%	31%	**46%**
Flualprazolam	4%	0%	2%	2%
Desalkylgidazepam	3%	2%	3%	0%
Ethylbromazolam	3%	13%	7%	0%
Flubromazepam	2%	1%	0%	0%
4Cl-Deschloroalprazolam	1%	2%	6%	0%
Etizolam	1%	0%	2%	0%
Bromazepam	0%	0%	0%	7%
Desalkylflurazepam	0%	0%	0%	4%
Methylclonazepam	0%	0%	0%	0%
Phenazepam	0%	1%	0%	0%

- Reported clinical effects include:
  - Profound sedation and altered mental status
  - Respiratory depression, coma, and impaired airway protection
  - Anterograde amnesia and impaired judgment
  - Agitation, delirium, or seizures, particularly during withdrawal
  - Potency, duration, and metabolism are highly variable and unpredictable
- Standard benzodiazepine immunoassay urine drug screens may:
  - Cross-react with some DBZDs, producing a positive screen
  - Fail to detect others, resulting in false-negative benzodiazepine screens

DESIGNER BENZODIAZEPINE TRENDS

Top Designer Benzodiazepine Identified
States with at least 10 Positive Samples
Q12026

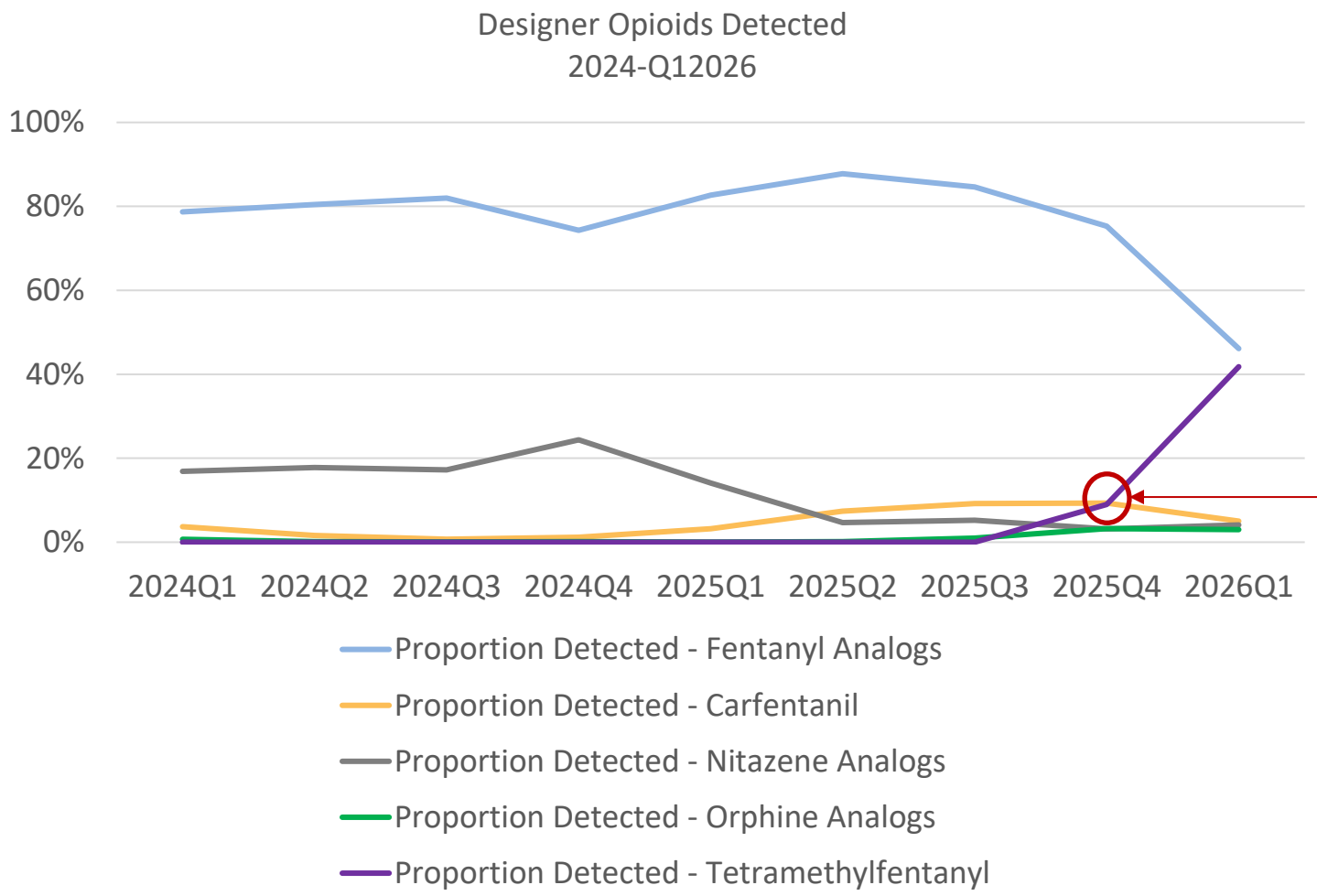


NOVEL SYNTHETIC OPIOIDS

- The landscape of illicit opioids continues to evolve
  - Illicit fentanyl remains the primary driver of opioid overdose deaths in the U.S.
  - Rapid emergence of novel synthetic opioids (NSOs) has increased toxicity, unpredictability, and overdose risk
- Fentanyl-Related Substances
  - Continued presence of new fentanyl analogs despite core-structure bans
  - Different analogs = potentially different potency, naloxone responsiveness
- Non-Fentanyl NSOs: Nitazenes
  - Emerged post-fentanyl scheduling
  - Often more potent than fentanyl
  - Active metabolites extend risk window
- Non-Fentanyl NSOs: Orphines
  - Comparable potency to fentanyl
  - Evidence of partial naloxone resistance

Baumann MH, Glatfelter GC, Vandeputte MM. Neuropharmacology of novel synthetic opioids (NSOs): An ever-expanding challenge for public health and safety. *Neuropharmacology*. 2026;291:110913. doi:10.1016/j.neuropharm.2026.110913

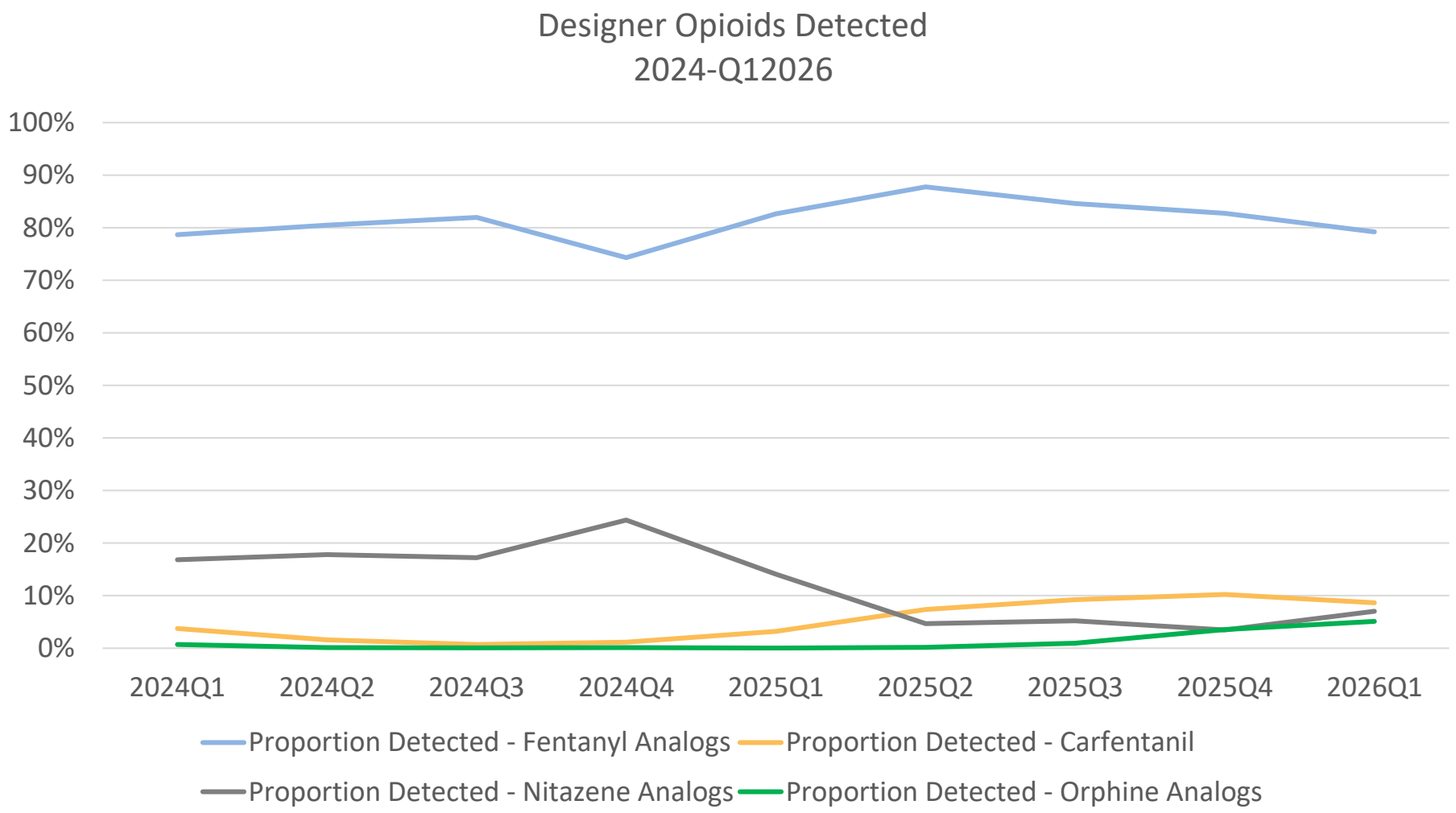
NOVEL SYNTHETIC OPIOIDS TRENDS



Tetramethyl-4-AP and Tetramethyl Norfentanyl added to test menu on 12/15/26

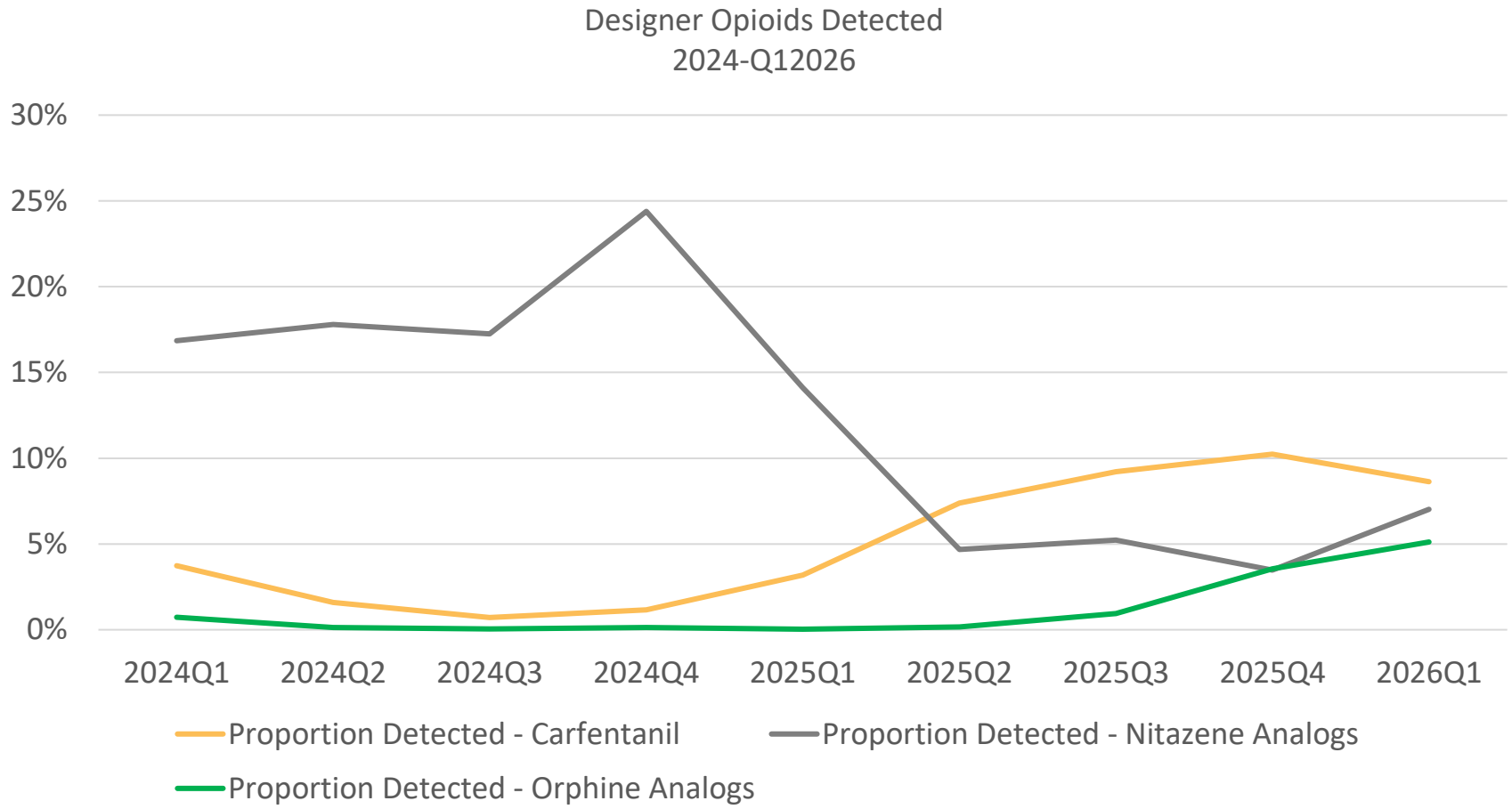
*Total Detections by Drug/Total Detections within Class

NOVEL SYNTHETIC OPIOIDS TRENDS



*Total Detections by Drug/Total Detections within Class
** Excludes tetramethylfentanyl

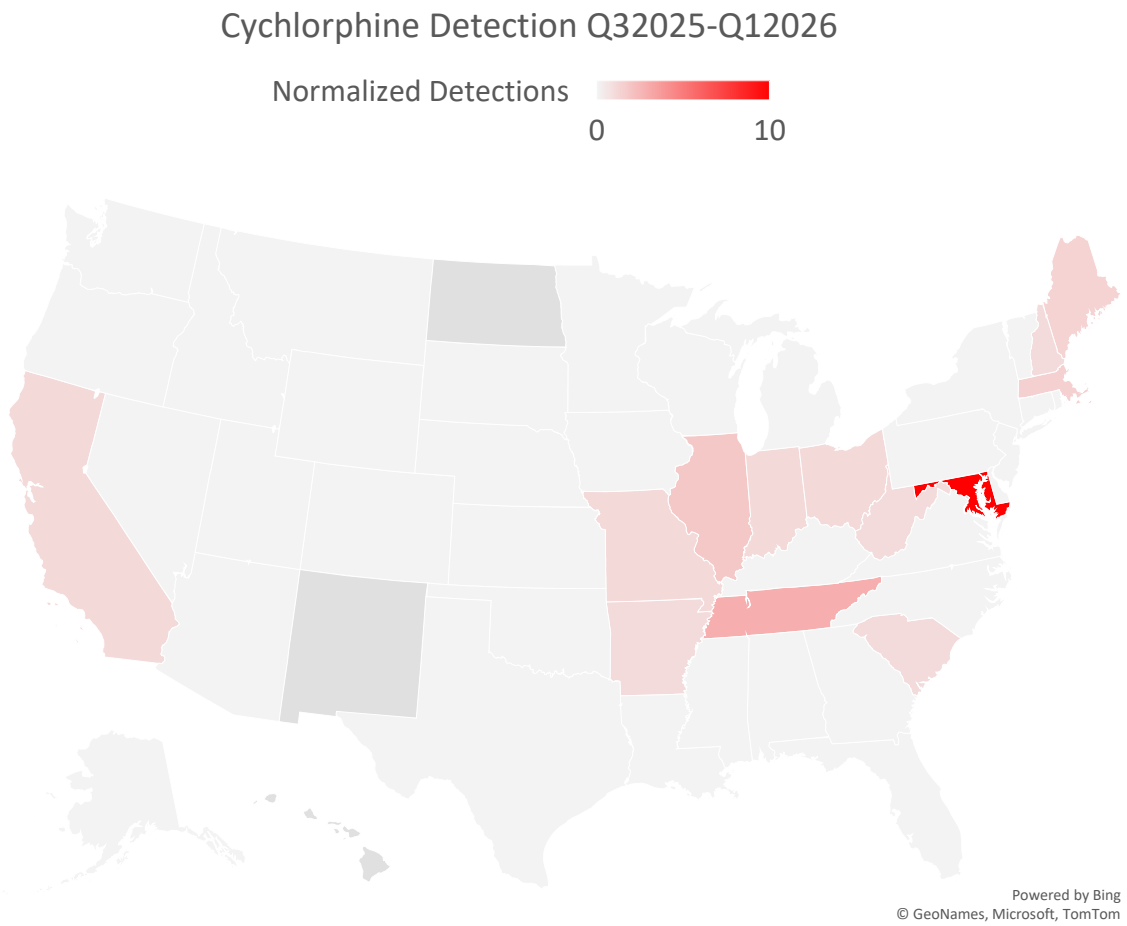
NOVEL SYNTHETIC OPIOIDS TRENDS



*Total Detections by Drug/Total Detections within Class
** Excludes tetramethylfentanyl and fentanyl analogs

NOVEL SYNTHETIC OPIOIDS: CYCHLORPHINE

- Approximately 10× more potent than fentanyl based on in vitro pharmacology data.
- Cychlorphine may be ingested alongside other opioids or designer opioids, stimulants, or benzodiazepines, enhancing the risk for polydrug toxicity and overdose.
- Multiple doses of naloxone may be required to reverse an overdose, and additional emergency care and airway support may be required.
- Detections by Quarter (National)
  - Q32025: 33
  - Q42025: 88
  - Q12026: 96

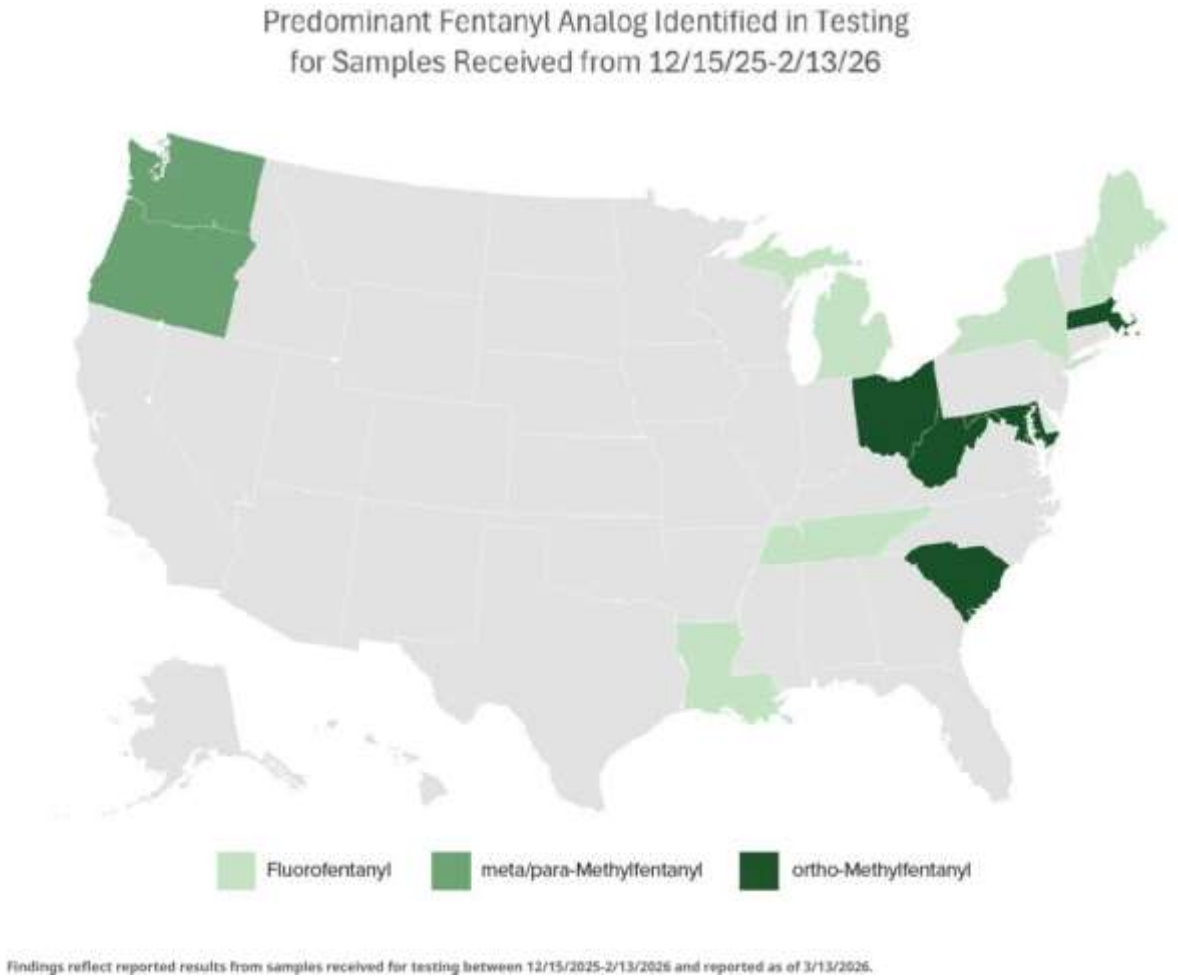


*Testing not performed in North Dakota, New Mexico, or Hawaii in the analyzed time period

Center for Forensic Science Research & Education (CFSRE). *Public Alert: N-Propionitrile Chlorphine.* Published January 30, 2026. Accessed March 18, 2026. https://www.cfsre.org/images/content/reports/public_alerts/Public_Alert_N-Propionitrile_Chlorphine_013026.pdf
Sprague JE, Toms JA, Ratermann CF. Non-fatal opioid overdose associated predominantly with the benzimidazolone, cychlorphine. *Clinical Toxicology.* Published 2025. Accessed March 18, 2026. https://www.tandfonline.com/doi/epdf/10.1080/15563650.2025.2594070?needAccess=true

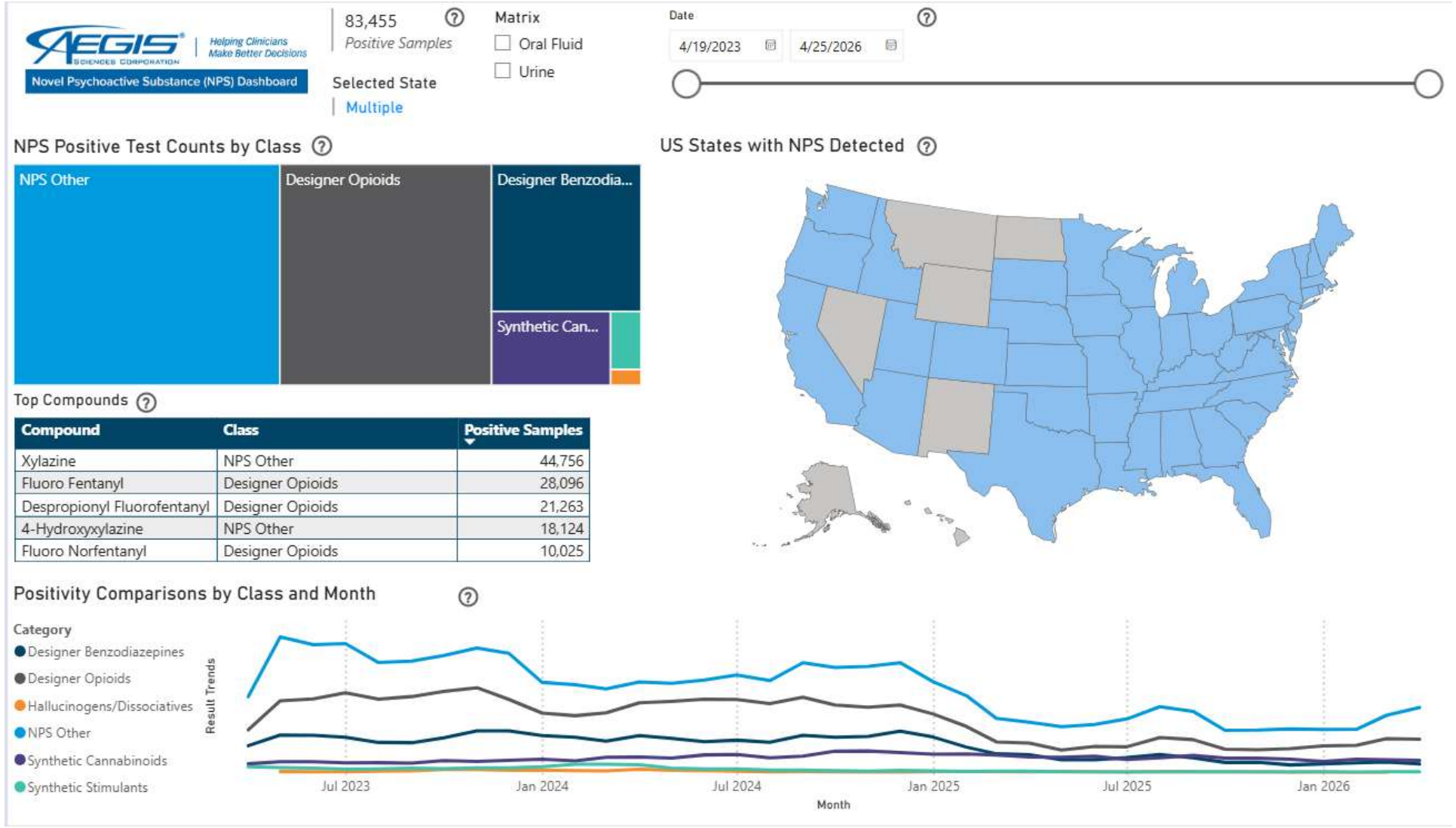
NOVEL SYNTHETIC OPIOIDS: FENTANYL ANALOGS

- As access to core fentanyl precursors declined, fluorofentanyl detection increased; more recently, ortho-methylfentanyl has emerged with the adoption of new precursor materials.
- Fluorofentanyl and ortho-methylfentanyl show fentanyl-like potency, while meta- and para-isomers vary, underscoring the need for precise analytical differentiation for clinical interpretation.
- Early trends indicate movement away from fluorofentanyl toward methyl-substituted analogs as precursor availability shifts.
- Recognizing these transitions is key to anticipating opioid potency and toxicity and reinforces the role of definitive testing in clinical care, risk assessment, and public health response.



Papsun D, Walton S, Mérette S, Krotulski A. Designer Fentanyl Precursors Leading the Way to New Fentanyl Analogs-The Case of ortho-Methylfentanyl. Am J Forensic Med Pathol. 2025;46(4):365-367.

NPS INSIGHTS DASHBOARD



https://www.aegislabs.com/npsinsights/

NPS INSIGHTS DASHBOARD

- Data includes:
  - Aggregated results of urine and oral fluid specimens tested for specific substances based on medically necessary orders placed by treating providers
  - Reported findings are reflective of testing that was performed at the time of order placement
  - State-level data is reported based on the location of the clinical setting from which the specimens were collected
- Features:
  - Customizable date range based on date results were reported back to ordering clinician (April 2023-Current); refreshed weekly
  - Total count of positive specimens with ability to filter based on specimen type on which testing was performed
  - High-level comparison of drug classes tested and detected; filters can be applied based on state(s) and date range selected
  - Top compounds detected; can be filtered by drug class
  - Comparison of high-level positivity rates by drug class over time

CLINICAL TEAM

Phone: 1-877-552-3232
E-mail: clinical@aegislabs.com

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Midwest and MidAtlantic USA Drug Trends

Chemometric Analysis of Qualitative and Quantitative Data

Joshua S. DeBord, PhD

DISCLOSURES & DISCLAIMERS

- I am an employee of CFSRE, but my opinions may not be shared by CFSRE.
- CFSRE's NPS Discovery program is funded in part by the **National Institute of Justice (NIJ), Office of Justice Programs (OJP), U.S. Department of Justice (DOJ)**.
  - Award Number: 15PNIJ-24-GK-00981-COAP
- The opinions, findings, conclusions and/or recommendations expressed in this presentation are those of the author(s) and do not necessarily represent the official position or policies of:
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- ORS
- Any organization, department, or entity that submits samples for testing
- The NFL – Team colors used for reference; no affiliation, sponsorship, or endorsement

OUTLINE

- Laboratory Capabilities for Drugs
  - Qualitative Analysis
  - Quantitative Analysis
- Chemometrics for Public Health
  - Trends in Drug Formulation
  - Trends in Drug Purity
- **Midwest & Mid-Atlantic**

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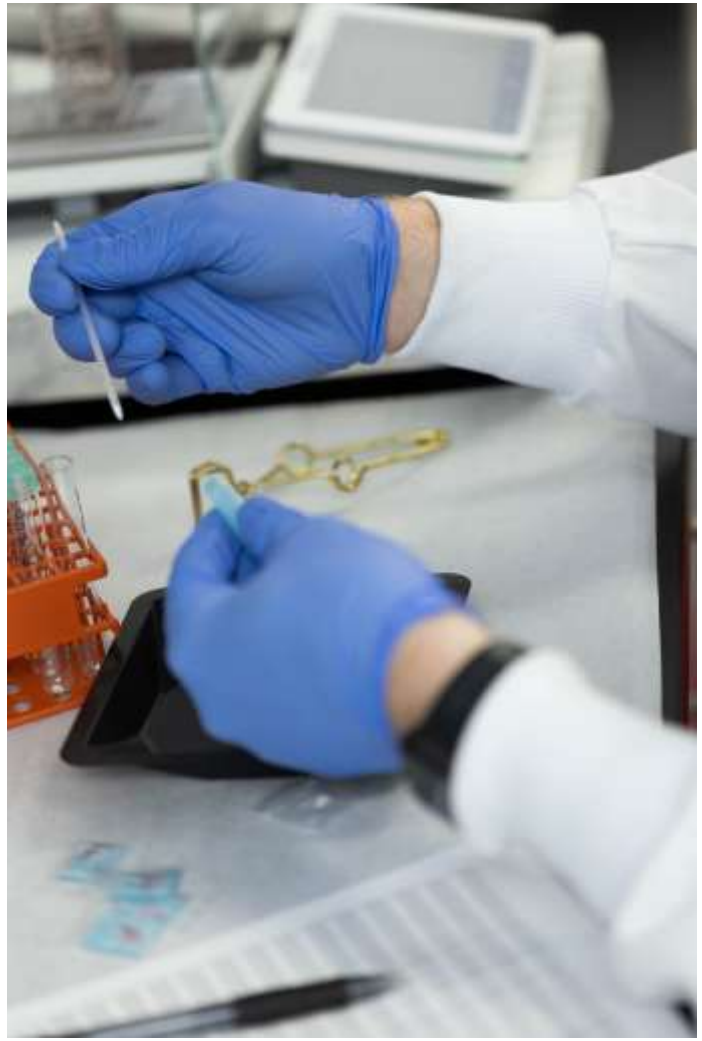
HIGH LEVEL TRENDS

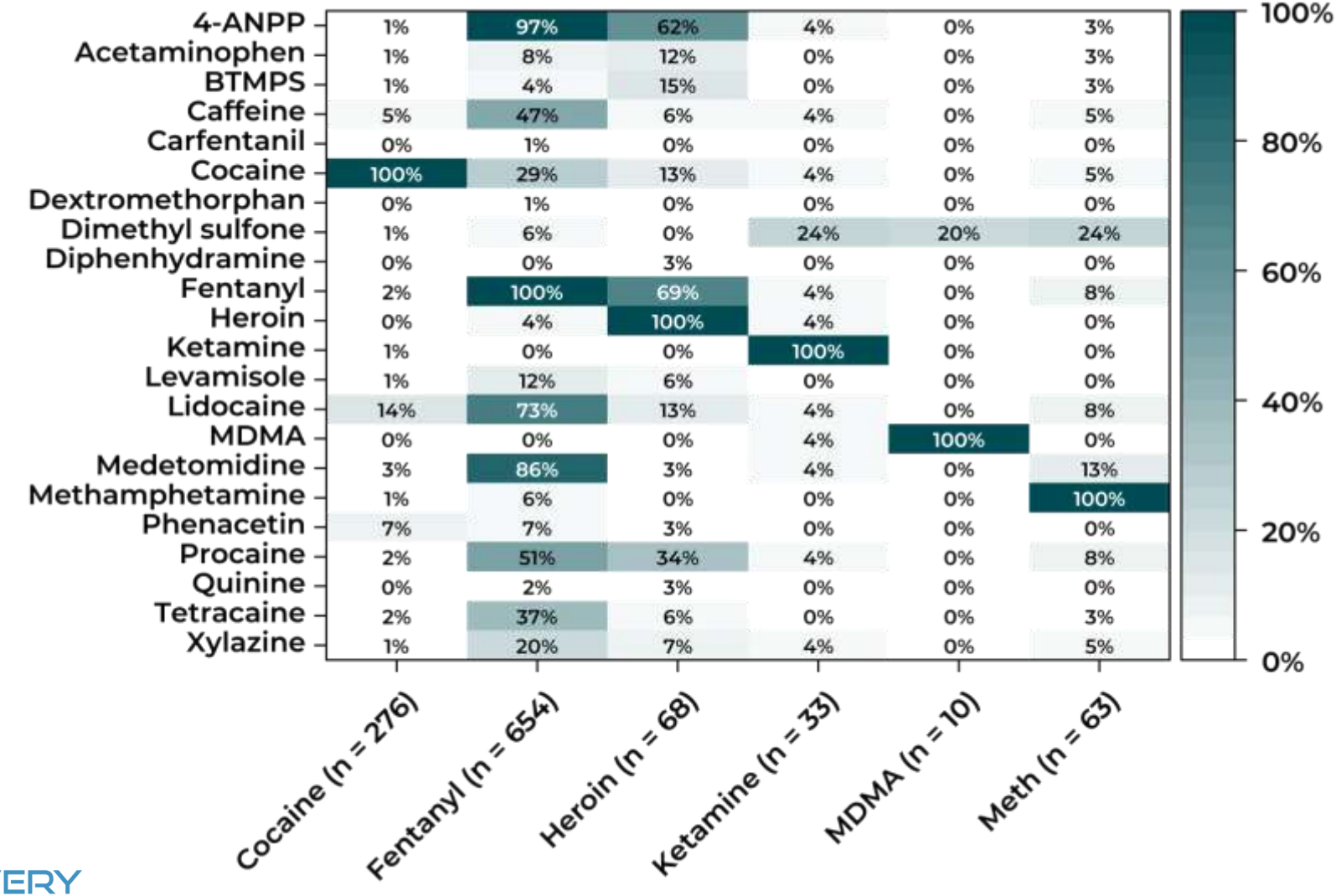
- Adulterants with Opioids - [Qualitative]
  - [MA]: Medetomidine and local anesthetics
  - [MW]: Diphenhydramine
- Synthetic Opioids - [Qualitative]
  - [MA]: carfentanil, decreasing
  - [MW]: somewhat frequent detection of nitazene analogs and orphine analogs; usually not detected by GCMS
- Relative Amounts - [Quantitative]
  - [MA]: fentanyl relative amount average ~5%, down ~50% from 2024
  - [MA]: heroin purity variable, but some very pure samples tested
  - [MW]: samples with many opioids not uncommon
  - [MW]: relative amounts of opioids are very low; <2% for most samples.



TRENDS IN DRUG FORMULATION

MIDATLANTIC COOCCURRENCE (Q4 '25 – Q1 '26)

- Other noteworthy combinations:
- Fentanyl
  - Benzocaine 5.3%
- Much clearer distinction between heroin and fentanyl samples
- Similarly low rates of adulteration of cocaine and methamphetamine



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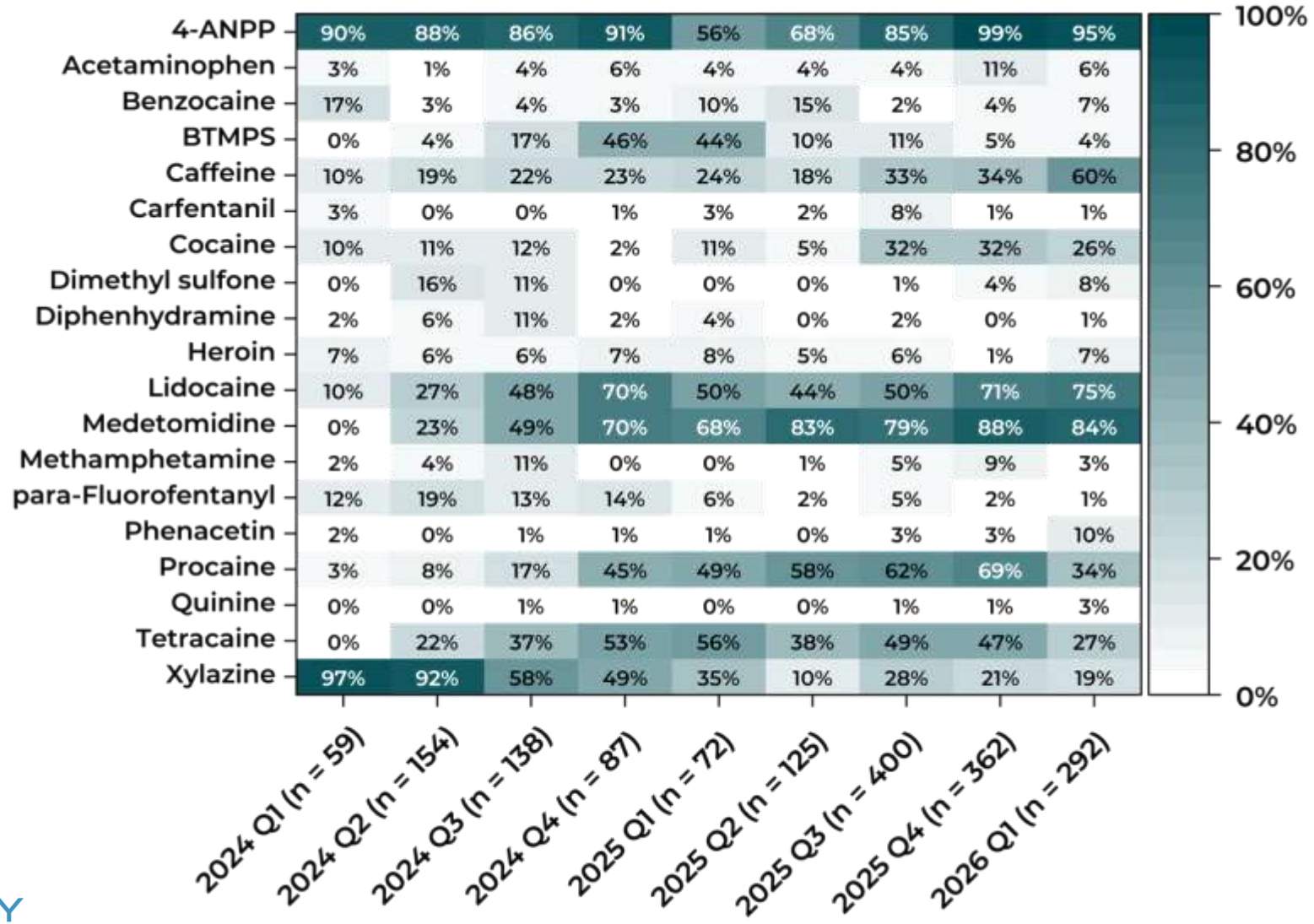
MA FENTANYL SAMPLES (Q1 ’24 – Q1 ‘26)

- 4-ANPP & BTMPS ‘24-’25
- Caffeine ‘25-’26
- Carfentanil ‘25
- Local Anesthetics
  - Benzocaine
  - Lidocaine
  - Procaine
  - Tetracaine
- para-Fluorofentanyl
- Medetomidine & Xylazine



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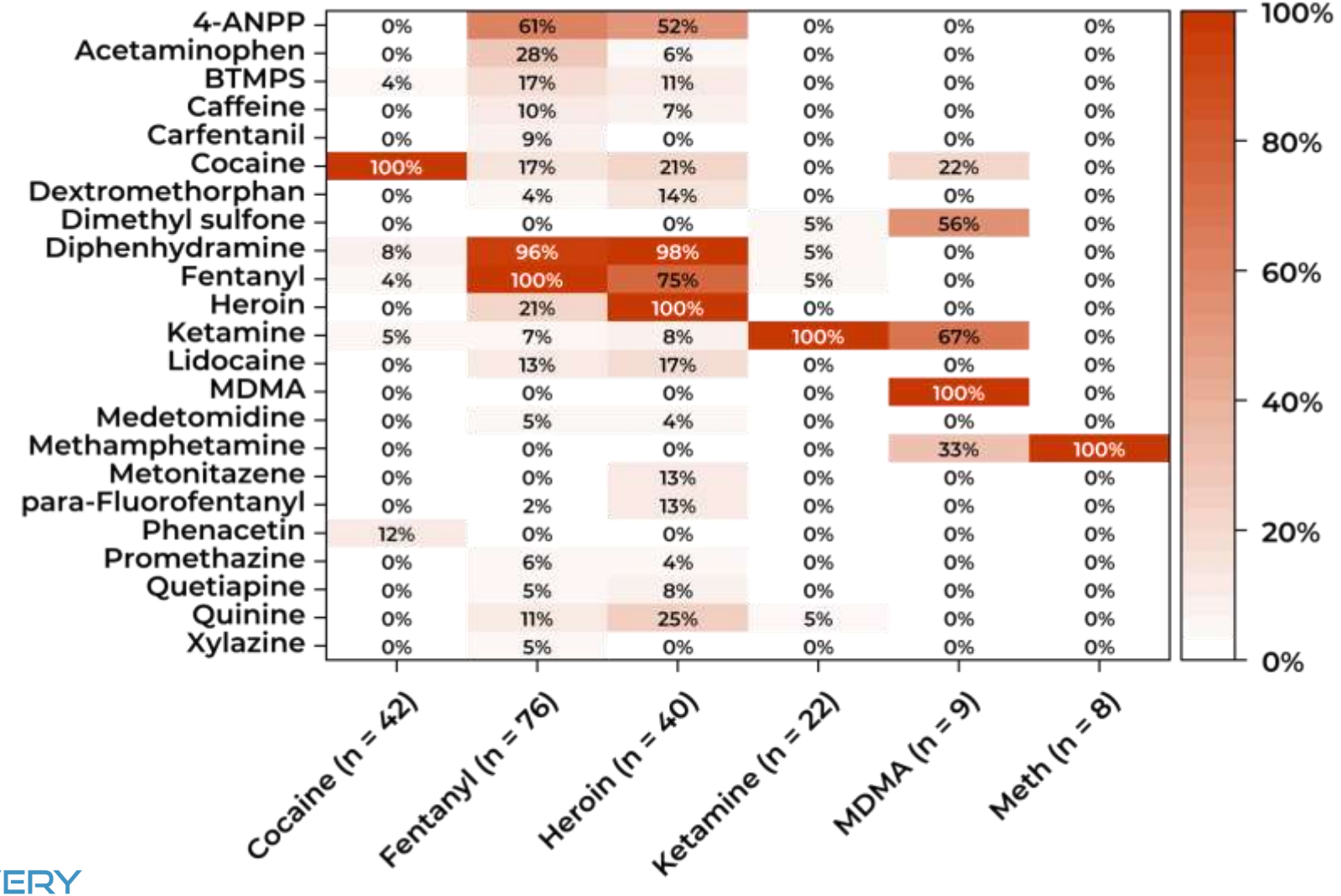
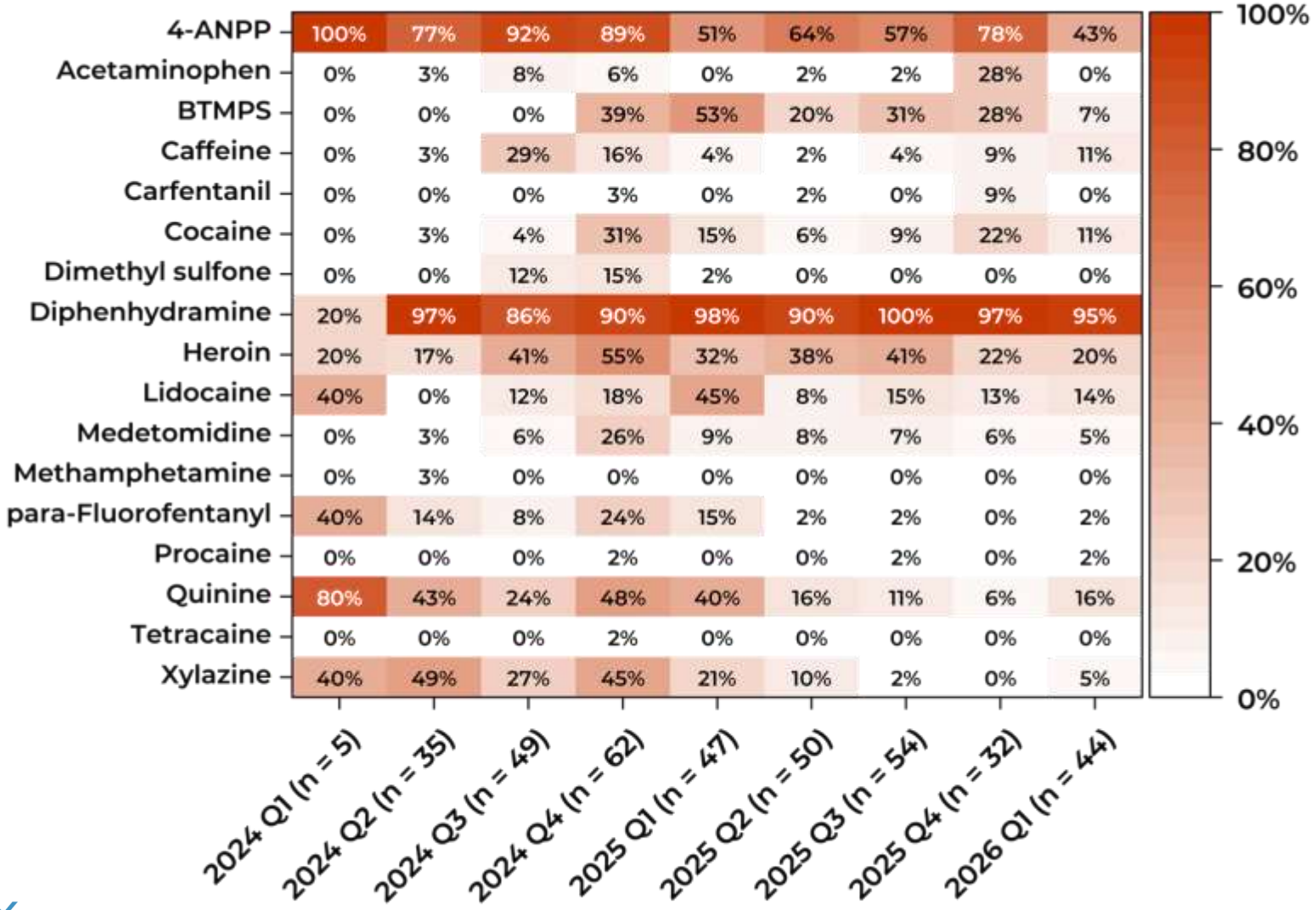
MIDWEST COOCCURRENCE (Q4 '25 – Q1 '26)

- Other noteworthy combinations:
- Cocaine
  - Benzocaine 17.6%
  - Levamisole 4%
- MDMA
  - MDA 11.1%



MW FENTANYL SAMPLES (Q1 ’24 – Q1 ‘26)

- 4-ANPP & BTMPS ‘24-’25
- Caffeine ‘25-’26
- Diphenhydramine
- Heroin & Fentanyl
- No Surge of Local Anesthetics
- para-Fluorofentanyl
- Quinine
- Medetomidine & Xylazine



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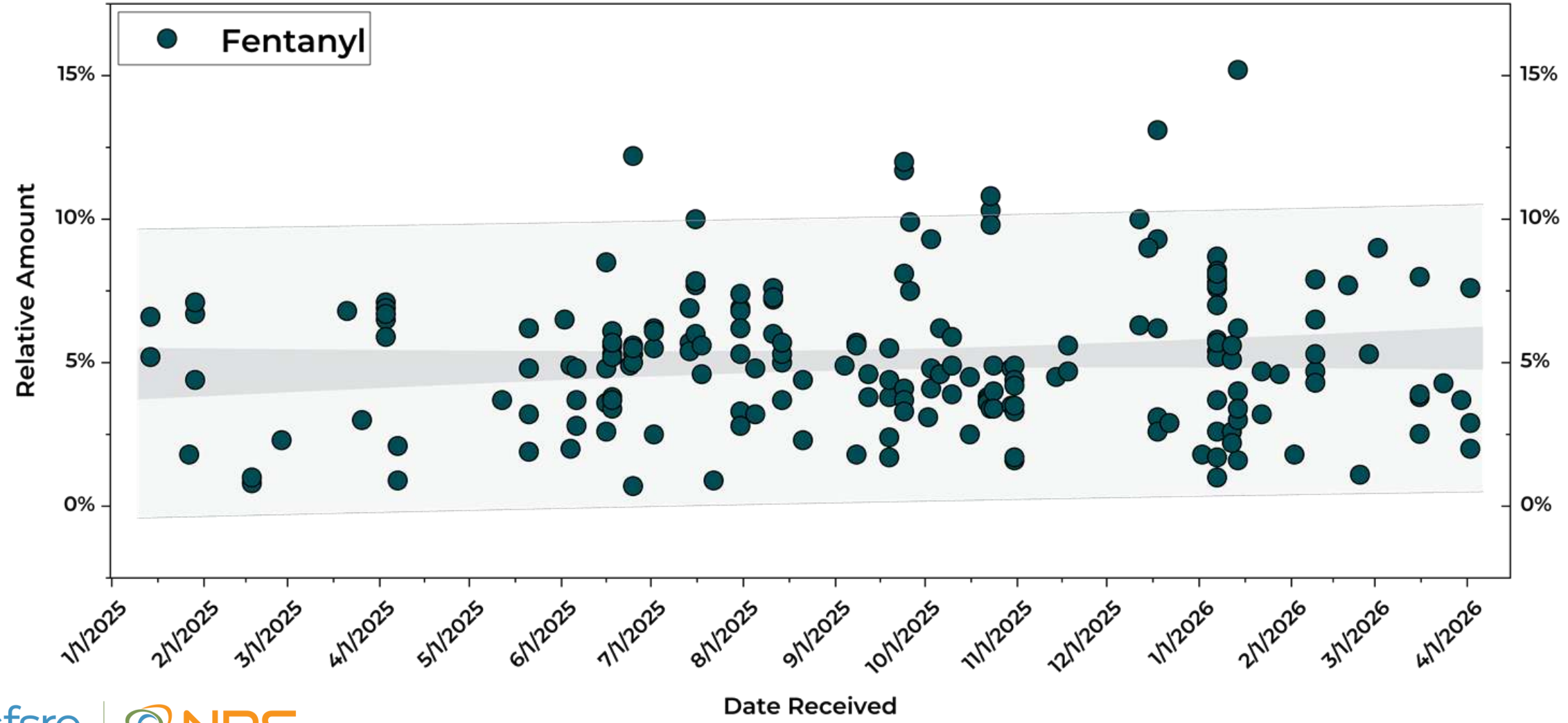
TRENDS IN DRUG “PURITY”

FENTANYL POWDER IN MID-ATLANTIC



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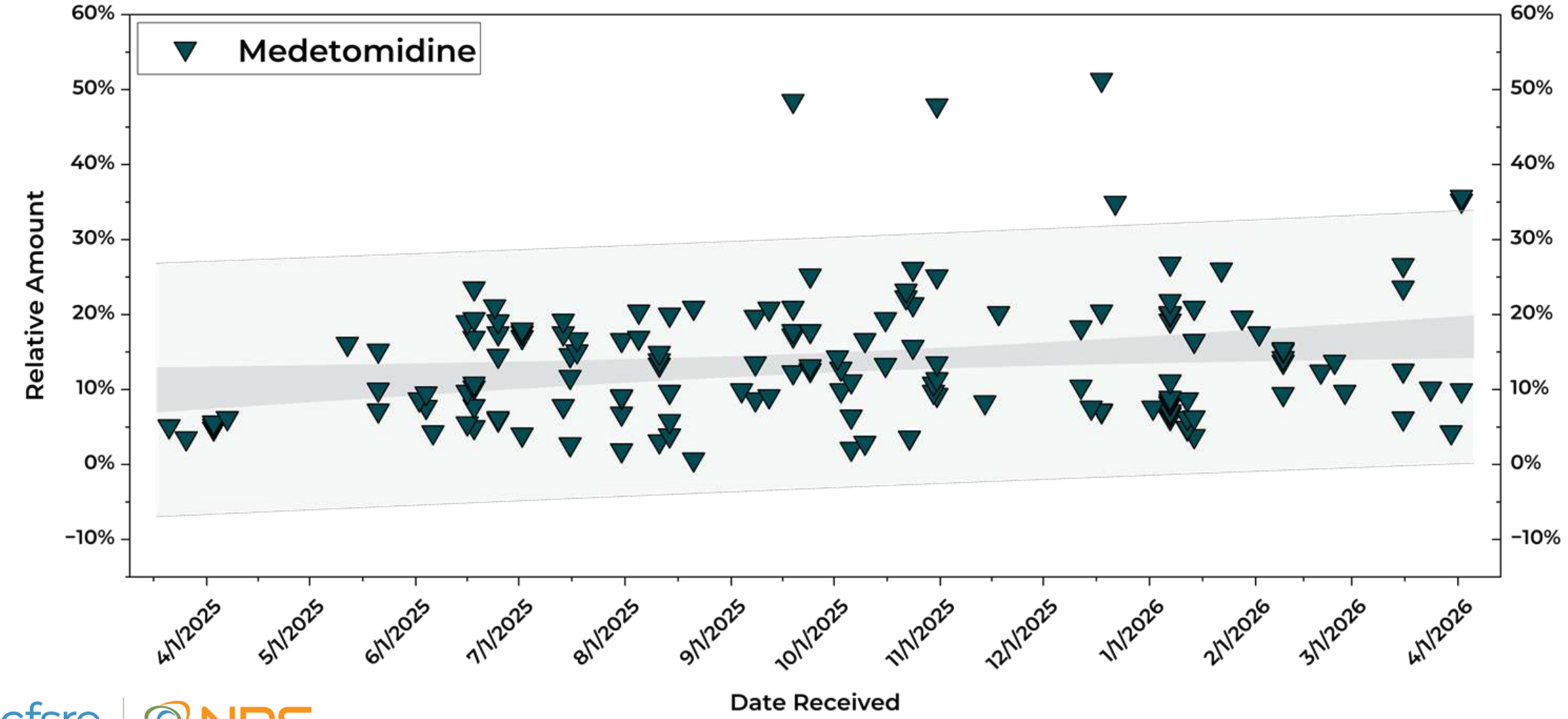
MEDETOMIDINE IN MID-ATLANTIC



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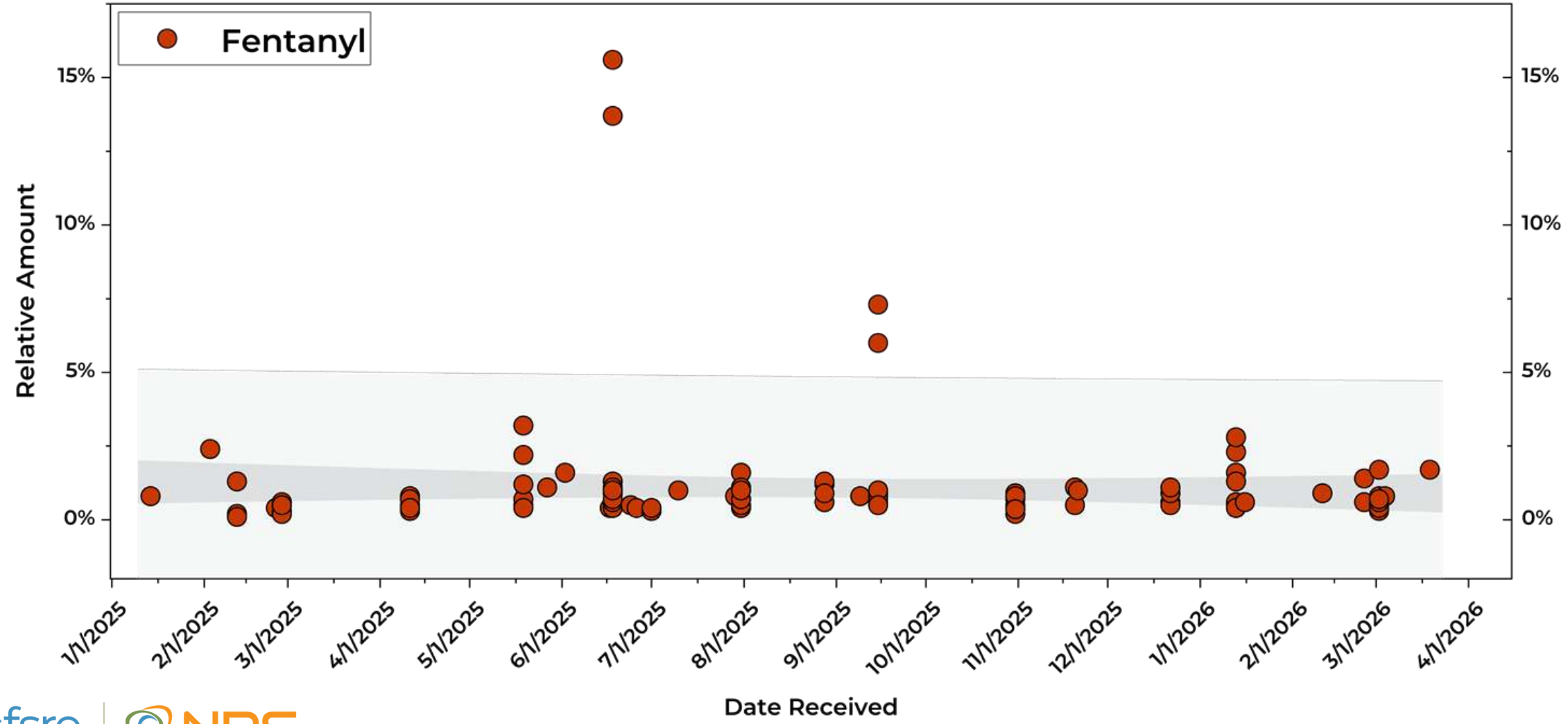
FENTANYL POWDER IN MIDWEST



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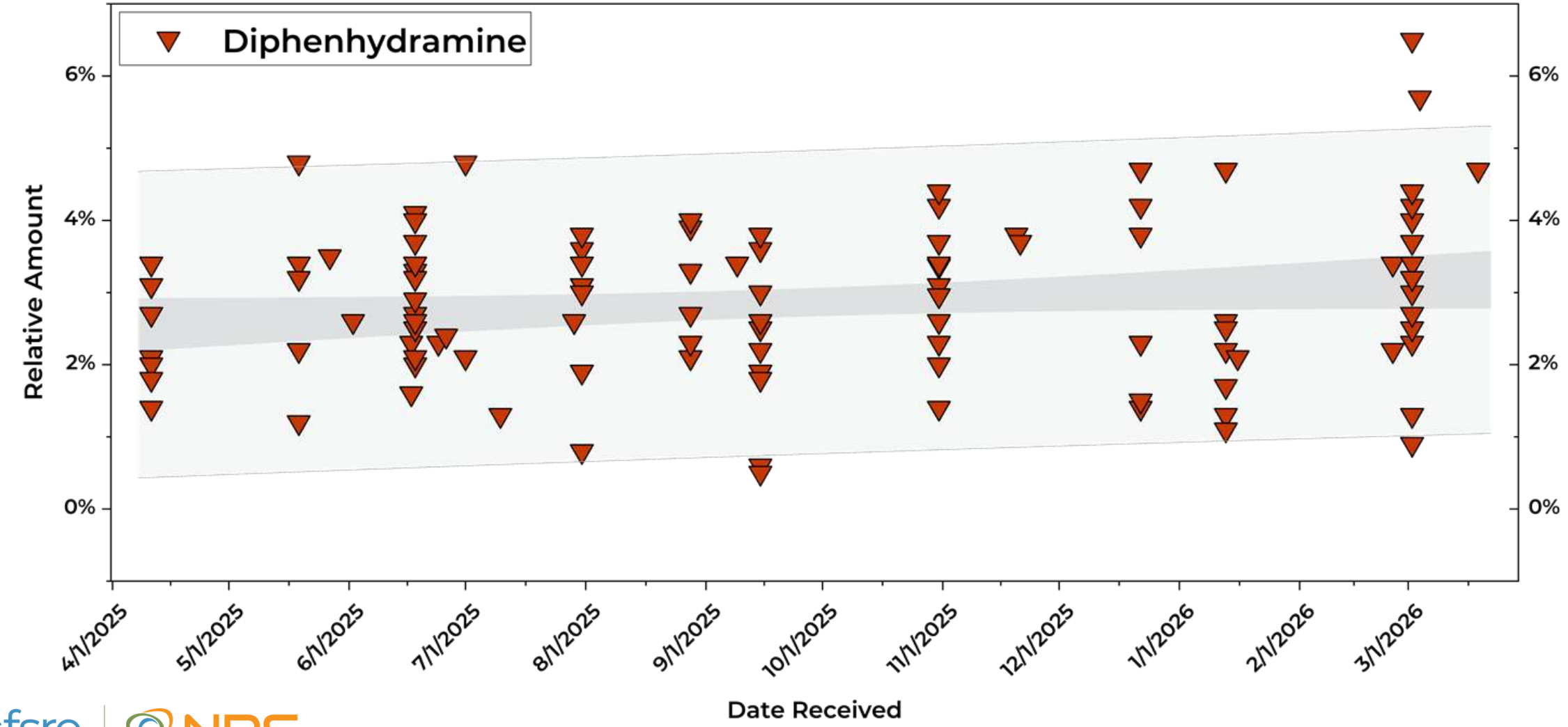
DIPHENHYDRAMINE IN MIDWEST



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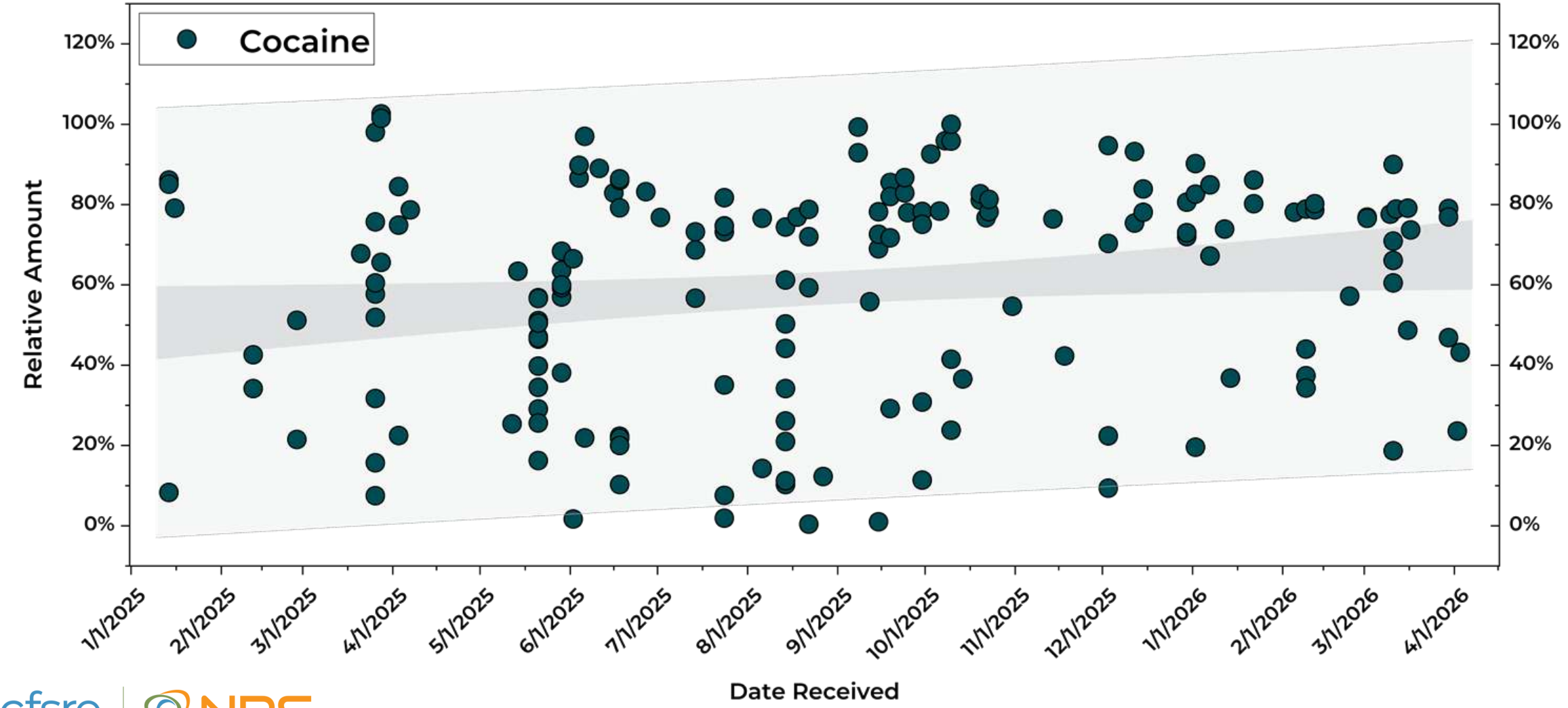
COCAINE IN MID-ATLANTIC



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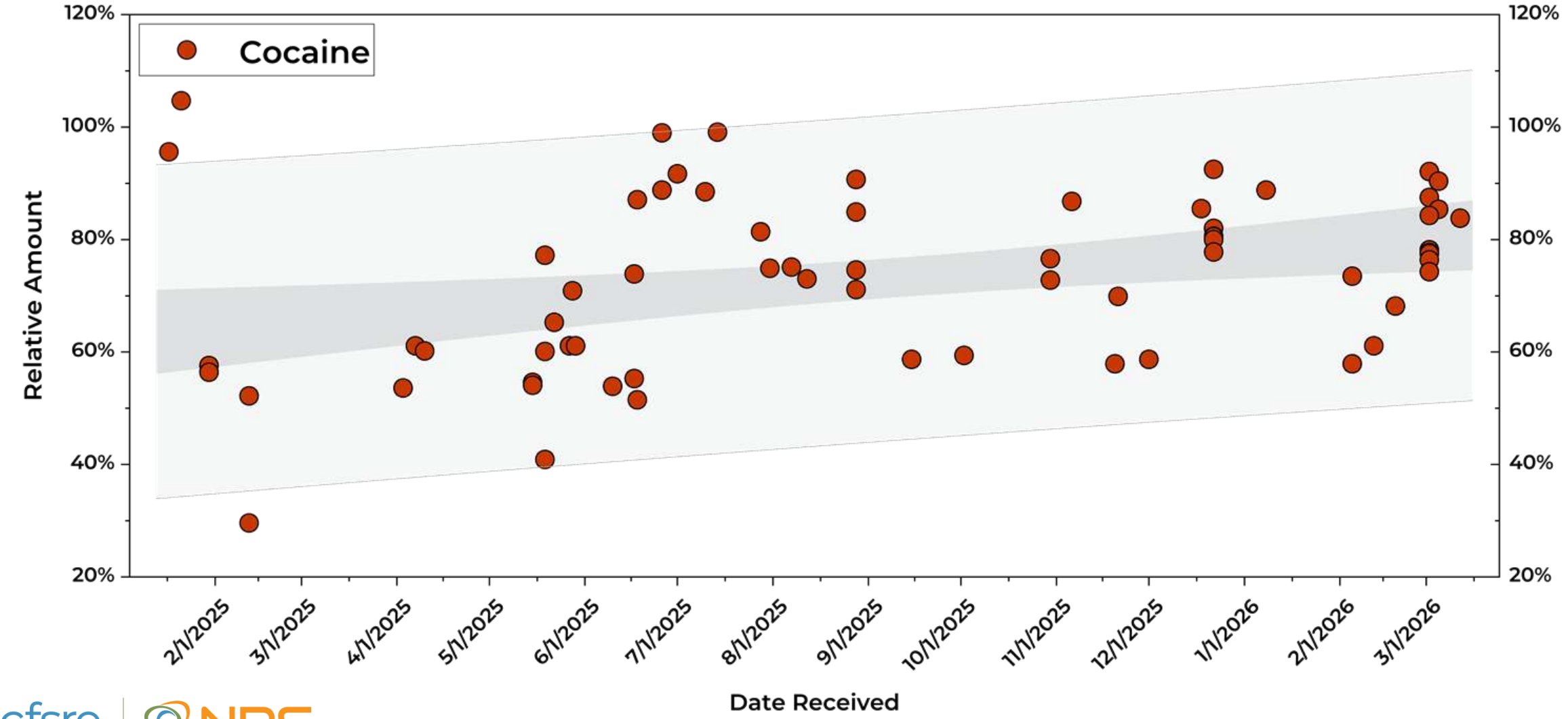
COCAINE IN MIDWEST



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RECAP

- Laboratory Capabilities for Drugs
  - Qualitative Analysis
  - Quantitative Analysis
- Chemometrics for Public Health
  - Trends in Drug Formulation
  - Trends in Drug Purity
- **Midwest & Mid-Atlantic**

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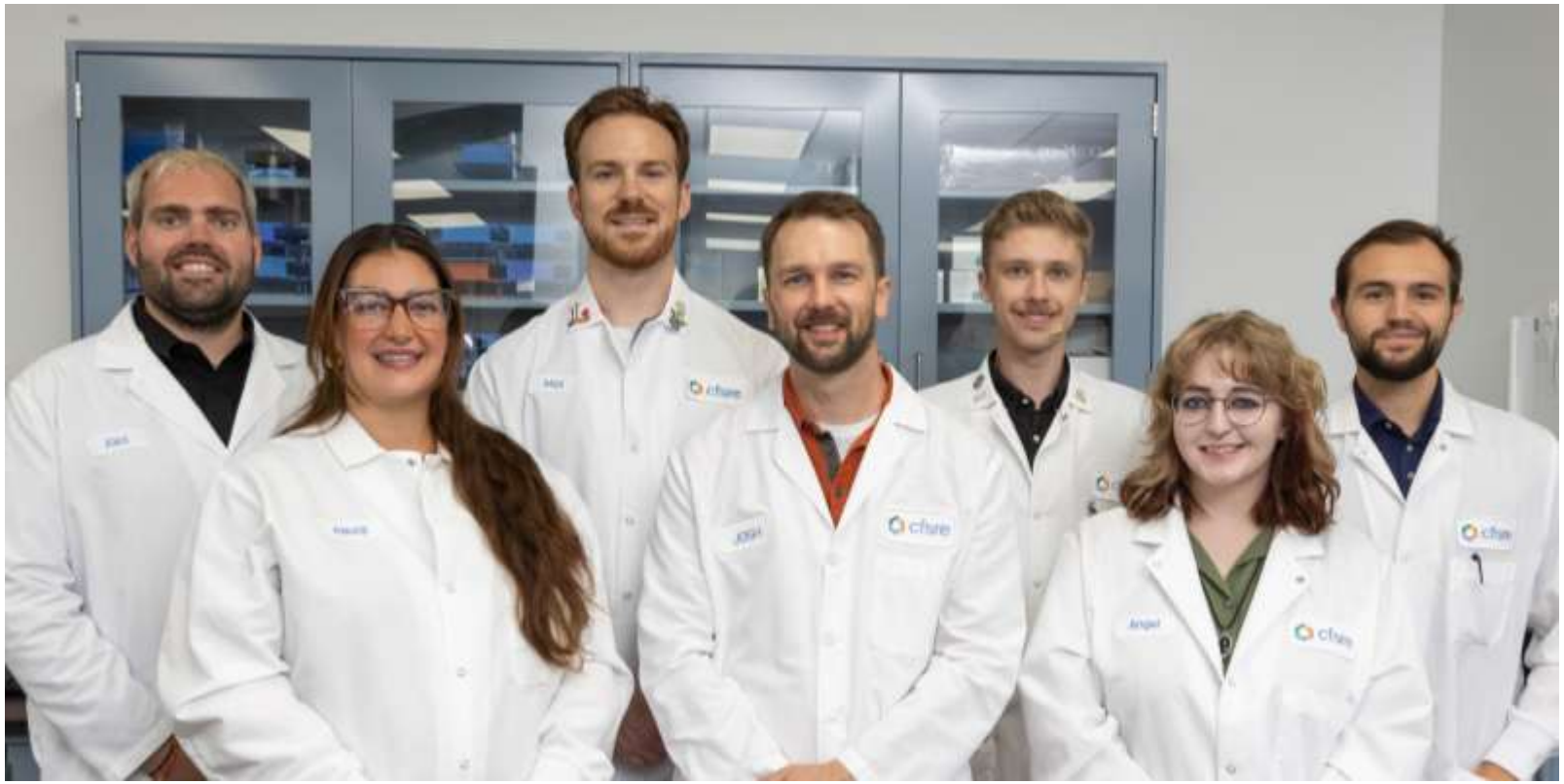
ACKNOWLEDGEMENTS

- The NPS Discovery Team at CFSRE
- NIJ
- Drug Testing Collaborators
- Rieders Family
- NMS Labs
- Overdose Response Strategy
- New Orleans Saints



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Trends, Analysis & Threats Webinar Series

UPCOMING CALLS

Wednesday, July 1 from 2PM-3PM
Wednesday, September 2 from 2PM-3PM
Wednesday, November 4 from 2PM-3PM

Feedback Requested

THANK YOU!