Sentinel Site Report - September 2026
Prevalence of Diphenhydramine Use

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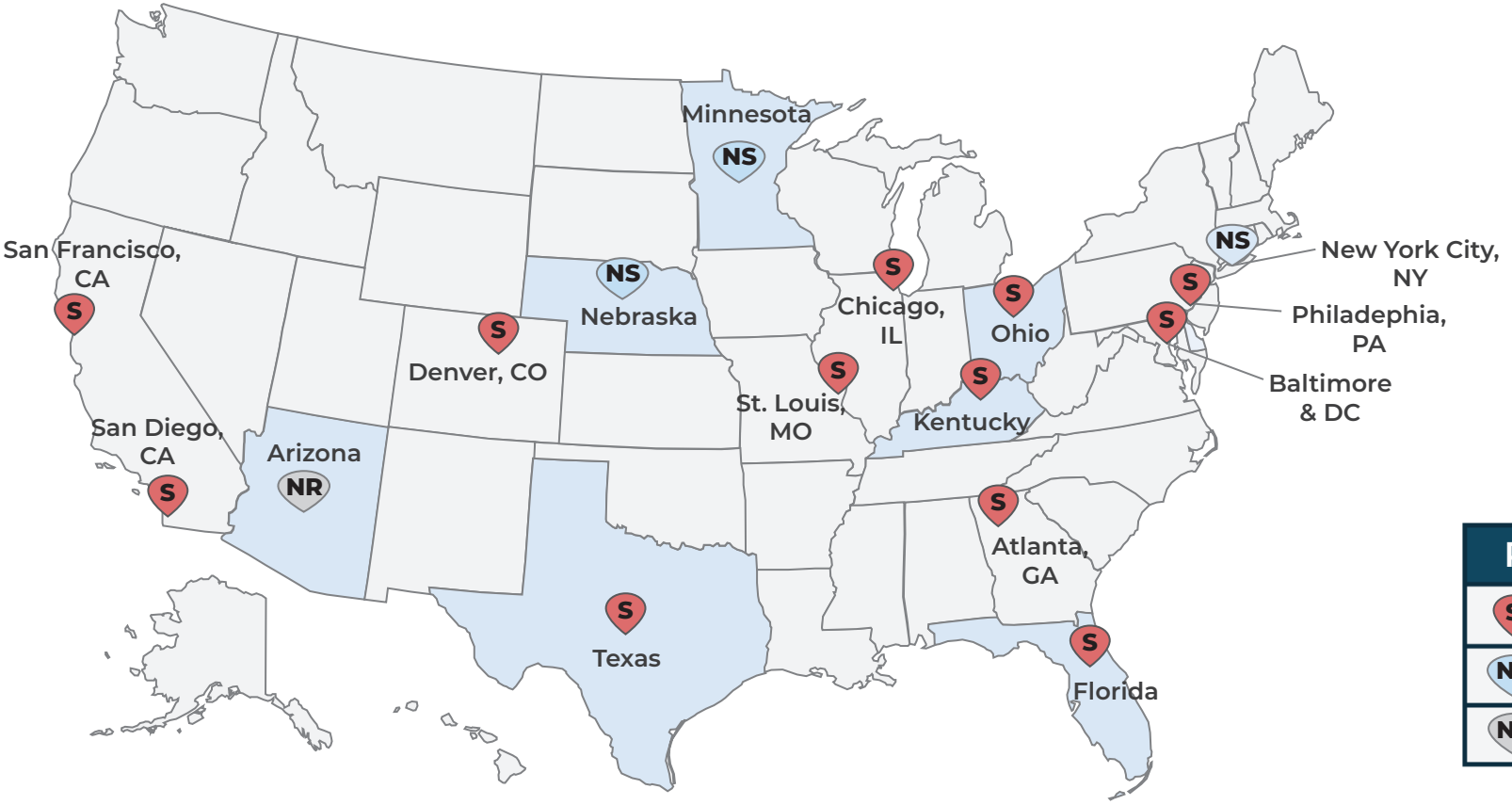
TOPIC: Sentinel Site Directors were asked to report on the prevalence of diphenhydramine use in their areas as a follow-up to the August 7th NDEWS Weekly Briefing Issue 297. Additional substance use observations are also included.



Response Key	
S	Signal
NS	No signal
NR	No report

What can you tell us about the prevalence of diphenhydramine use?

West Region

San Diego, CA: Annick Bórquez, PhD

In May, ~5 young adults (16-22 years of age) were treated at a Children's Hospital for severe overdoses of diphenhydramine. According to news reports[1,2], these overdoses were associated with a TikTok challenge to consume large amounts of Benadryl® to trigger hallucinations.

Mortality:
From January-August 2026, there were 4 deaths involving diphenhydramine in San Diego. 3 were suicides. All 4 involved a combination of other substances such as acetaminophen (3 of 4), gabapentin (2 of 4), as well as alcohol, buspirone, cocaine, dextromethorphan, doxylamine, hydroxyzine, lamotrigine, mirtazapine, morphine, ondansetron, propranolol, or trazodone.

Diphenhydramine has not been identified by the San Diego drug checking program (FTIR and NIST confirmatory testing).

Sources:
[1]https://www.wwlp.com/news/national/doctors-issue-warning-over-reemerging-benadryl-challenge-thats-sending-kids-to-the-hospital/
[2]https://nypost.com/2026/05/29/us-news/dangerous-tiktok-challenge-associated-with-rise-in-benadryl-overdoses/

Additional observations: In September, the drug checking program identified 3 samples containing medetomidine. Fentanyl was co-detected in all; 2 contained methamphetamine as well.

San Francisco, CA: Phillip Coffin, MD, MIA

Diphenhydramine continues to be a common adulterant in street drugs; however, no new trends have been identified.

Additional observations: Overdose deaths continue to decrease in 2026, compared to previous years.

Denver, CO: Alexandra Tillman, MS

Overdose deaths: As of September 2026, there were 4 diphenhydramine-involved overdose deaths. (12 in 2025.) The counts for 2026 are provisional and likely to increase when finalized.

ED nonfatal overdoses: Based on syndromic surveillance, ED visits for nonfatal diphenhydramine overdoses remains low and stable since 2020 ranging from 7-21 visits per year. From billing data, 60% of ED visits and 80% of hospitalizations with T45.0X codes (includes diphenhydramine) were intentional self-harm.

Denver Department of Public Health and Environment: Drug checking program rarely sees diphenhydramine cut into fentanyl (5/1300 total samples).

Testing for diphenhydramine is not available for Denver Wastewater pilot and Safety-net Outpatient Substance Use Treatment Urinalysis Results.

Arizona: Steven Dudley, PharmD, DABAT

No report submitted for September 2026.

Midwest Region

Chicago, IL: Mary Mackesy-Amiti, PhD

Diphenhydramine is commonly used as an adulterant with heroin and fentanyl and was present in about 2% of opioid-related overdose deaths in the past 6 months.

Minnesota: Deepa McGriff, MPH

Nothing to report on diphenhydramine prevalence since our biosurveillance system does not differentiate therapeutic use of diphenhydramine vs. misuse.

St. Louis, MO: Heidi Israel, PhD, FNP, LCSW, CCRG

Drug checking results showed that Benadryl® is mixed with many other substances. In August, the drug checking samples included one with Benadryl® with trace fentanyl and heroin (diacetylmorphine). In September, samples with Benadryl® had trace fentanyl, mono- and diacetylmorphine, acetaminophen, caffeine, cocaine, ketamine, and/or BTMPS while samples with methamphetamine had ketamine or cocaine. There were no reports of Benadryl® in decedents from medical examiner data in the last 3 months. MO Poison Center reports indicate an increase in poisonings among youth aged 13-19 associated with intentional misuse of substances to achieve psychoactive effects rather than for medicinal purposes.

Additional observations: Polysubstance use is the most prominent issue. Project Fang drug checking identified presence of multiple substances and medical examiner data showed multiple substances in most decedents.

Midwest HIDTA issued a “Hot Sheet” bulletin[1] on the use and abuse of gabapentin and its combination with other substances (i.e., benzodiazepines, opioids, and alcohol) to enhance intoxication.

Source:
[1]https://img1.wsimg.com/blobby/go/893a8d74-0308-463e-b5f2-5dc56ff67d71/downloads/0ab45b01-aae3-4e7f-bff9-14b6ad71065b/Midwest%20HIDTA%20Bulletin%20-%20Gabapentin.pdf?ver=1790106185650

Ohio: Kelley Kampman, PhD

From January-August 2026, the Cuyahoga County's Pilot Drug Checking Program reported that diphenhydramine was the most commonly found active adulterant in samples[1]. 55% of samples in Q2 of 2026 contained diphenhydramine.

In June and July, the Ohio Poison Centers posted warnings on social media and in the news about the Benadryl® Challenge citing an increase in intentional Benadryl® overdoses in southwest and northeast Ohio[2].

State forensic labs do not currently provide data on diphenhydramine found in samples.

Sources:
[1]https://cuyahogacms.blob.core.windows.net/home/docs/default-source/me-library/heroin-fentanyl-cocaine-deaths/2026/august2026-heroinfentanyl.pdf?sfvrsn=9e9b895e_3
[2]https://www.wlwt.com/article/cincinnati-poison-control-expert-social-media-benadryl-challenge/71888835 and https://ohiopoisoncenters.org/benadryl-misuse/

Nebraska: Patrick Habecker, PhD

Nothing to report on diphenhydramine.

Additional observations: Provisional CDC data showed an upward trend in overdose counts between February and April 2026. Concurrently, wastewater surveillance in Lincoln identified the presence of carfentanil and medetomidine. Further monitoring is needed to evaluate whether the increase in overdoses is related or is a separate trend that is not reflected in wastewater surveillance data.

South Region

Florida: Bruce Goldberger, PhD

Diphenhydramine was frequently detected in postmortem toxicology analyses. Further, among antihistamine-positive and antihistamine-involved overdose deaths, diphenhydramine accounts for the majority of reported cases. There is currently no evidence demonstrating a pattern of diphenhydramine misuse; diphenhydramine has not been consistently identified in drug products submitted for toxicological analysis.

Atlanta, GA: Matt Meyers, MS, MPS

No recent data indicate a trend of diphenhydramine abuse. However, August drug seizure data showed an increase in promethazine findings (from 2 or less than 8). This is relevant because, when diphenhydramine is abused, it is often used as a replacement for promethazine syrup by people seeking the “sizzurp” or “purple drank” experience.

Additional observations: In August, dimethylpentylone dropped to its lowest prevalence in drug seizure data over the last several months, dropping from 30 to 50 detections down to 3. In contrast, eutylone increased to its highest level with 6 detections after having been nearly absent for over a year. Overall, the prevalence of synthetic cathinones has fallen to its lowest level in years, and cocaine detections also appear to be declining. Although methamphetamine remains by far the most prevalent drug, the downward trend observed across other stimulants is notable.

Kentucky: Sarah Hargrove, MS

The prevalence of diphenhydramine identified in postmortem toxicology among fatal overdose cases has increased over the past several years. The number of unintentional overdose deaths with diphenhydramine present in postmortem toxicology has more than doubled each year, from less than 1% in 2023 to ~9% in 2025.

More than half of overdose deaths involving diphenhydramine also involved fentanyl, fentanyl analogs and/or methamphetamine. Other substances identified with diphenhydramine included heroin, cocaine, kratom, and THC.

Increases in diphenhydramine involvement have continued into 2026; however, complete data are not yet available for release.

Baltimore & DC: Agnes Winokur, PhD

Based on NFLIS data from January-September 2026, diphenhydramine has been reported in less than 1% of drug samples. Based on DEA forensic data, diphenhydramine has moved up in the ranking of drugs reported in Maryland from #16 in 2025 to #10 in 2026. In DC, diphenhydramine remained #12 from 2025 to 2026.

Additional observations: Based on DEA forensic data from July through September, *N*-isopropyl butylone, MDMB-4en-PINACA, medetomidine, psilocin, and 5F-MDMB-PINACA were the top 5 trending drugs in the Maryland-DC area. When examined separately, Maryland's top 5 trending substances were carfentanil, bromazolam, MDMB-4en-PINACA, 5F-MDMB-PINACA, and medetomidine. In DC, *N*-isopropyl butylone, MDMB-4en-PINACA, medetomidine, dimethyl sulfone, and bromazolam make up the top 5.

Texas: Dayong Lee, PhD

No significant increase in diphenhydramine use has been reported by local contacts in Texas including the Houston Forensic Science Center. A local news article from April 2026 covered the Benadryl® Challenge incidents in Fort Worth[1]. The Tarrant County Medical Examiner's Office reported one recent postmortem case involving an 18-year-old male with a diphenhydramine concentration of 8,359 ng/mL and no other substances detected. It is unknown whether the case was related to the social media challenge. The death was ruled accidental.

Source:
[1]https://www.star-telegram.com/news/local/article315550461.html

Northeast Region

Philadelphia, PA: Jeanmarie Perrone, MD

According to Poison Center reports and discussions from toxicology meetings, there has been a notable increase in diphenhydramine overdoses among young people associated with self-harm attempts and not related to substance misuse. CSFRE reports that diphenhydramine is a known adulterant in fentanyl; however, it is detected at low prevalence and there is no evidence of an increasing trend.

New York City, NY: Ellenie Tuazon, MPH

No prevalence data are available for diphenhydramine. Its occurrence in the drug supply appears sporadic, and there are no signs of increased emergence.

Additional observations: Fentanyl, medetomidine, and xylazine prevalence has decreased in the NYC drug supply[1].

Source:
[1]https://www.nyc.gov/site/doh/health/health-topics/drug-checking-data.page

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