

Understanding Connecticut's Evolving Drug Landscape

Robert Lawlor Jr., Drug Intelligence Officer,
New England HIDTA
Anna Gasinski, Public Health Analyst,
CDC Foundation



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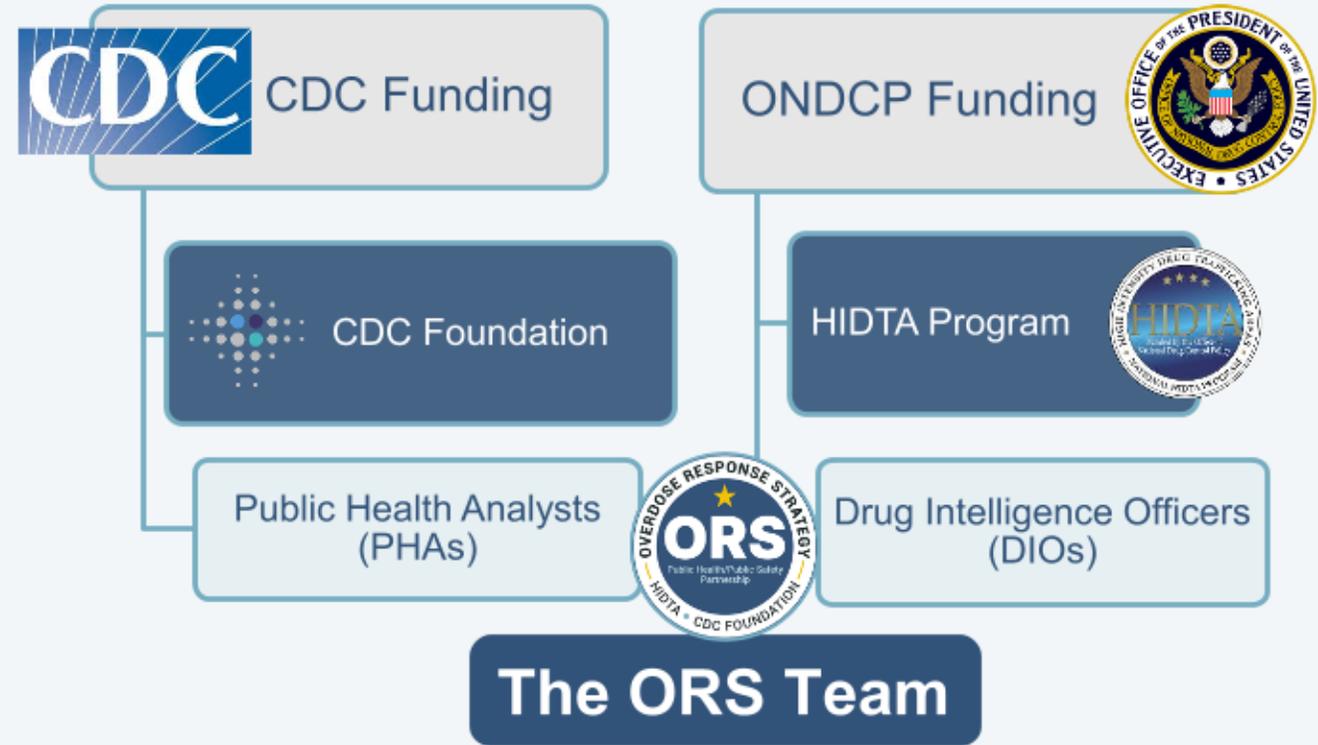
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Overdose Response Strategy

About the ORS

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.



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



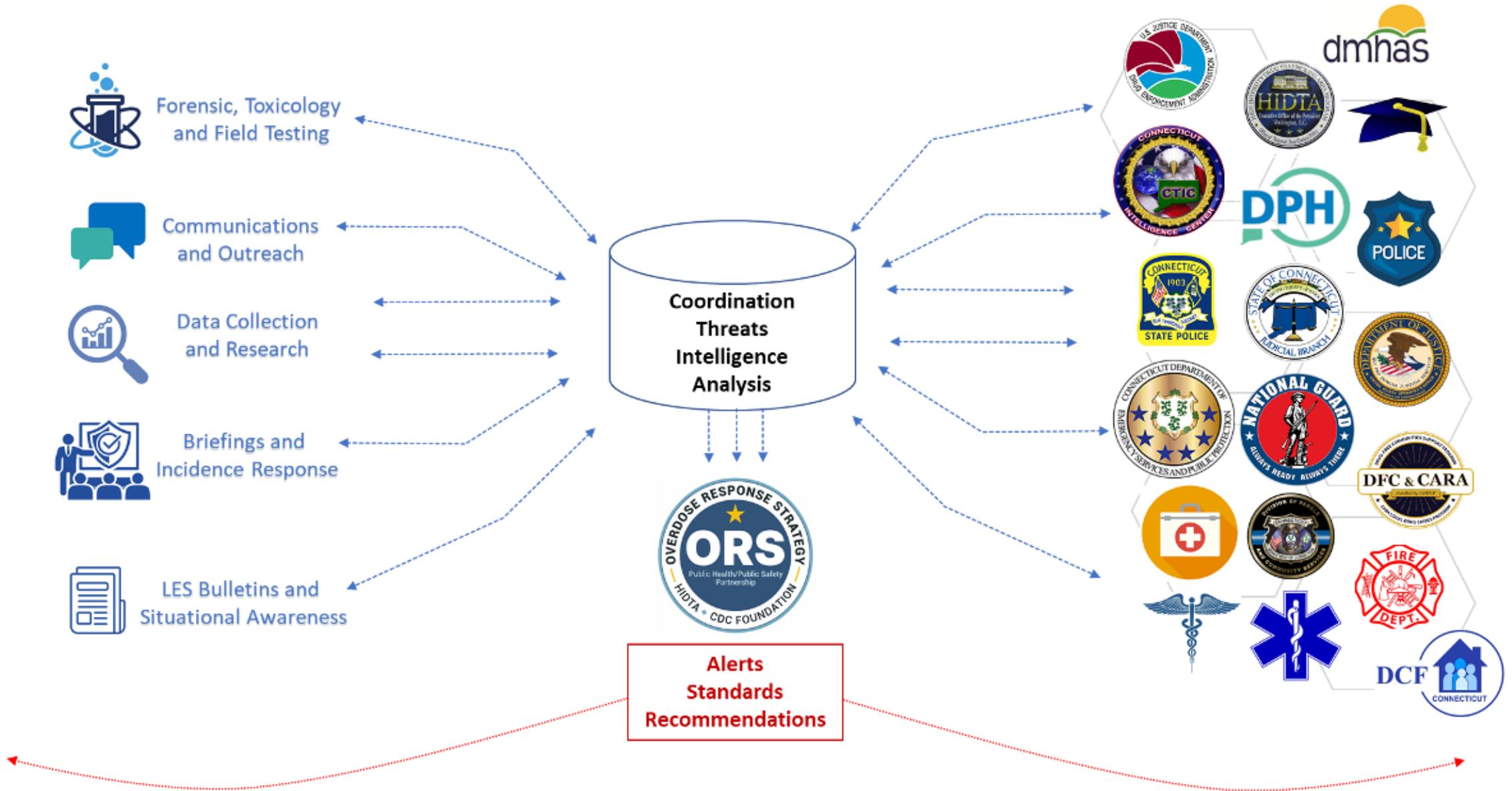
Program Goals

- 1 Share data systems to inform rapid and effective community overdose prevention efforts
- 2 Support immediate, evidence-based response efforts that can directly reduce overdose deaths
- 3 Design and use promising strategies at the intersection of public health and public safety
- 4 Support the implementation of evidence-informed prevention strategies that can reduce substance use and overdose

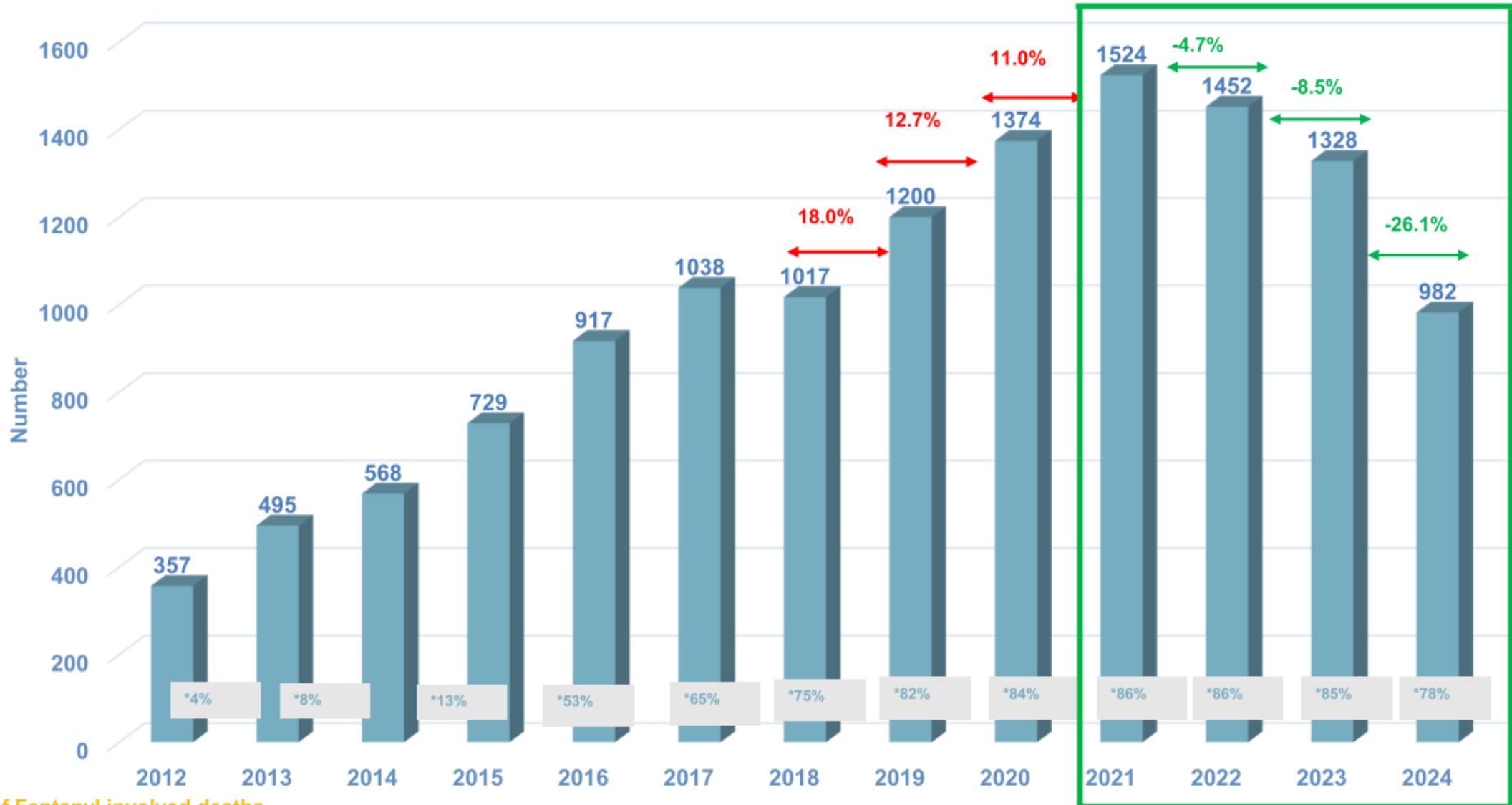


Visit us at ORSprogram.org!





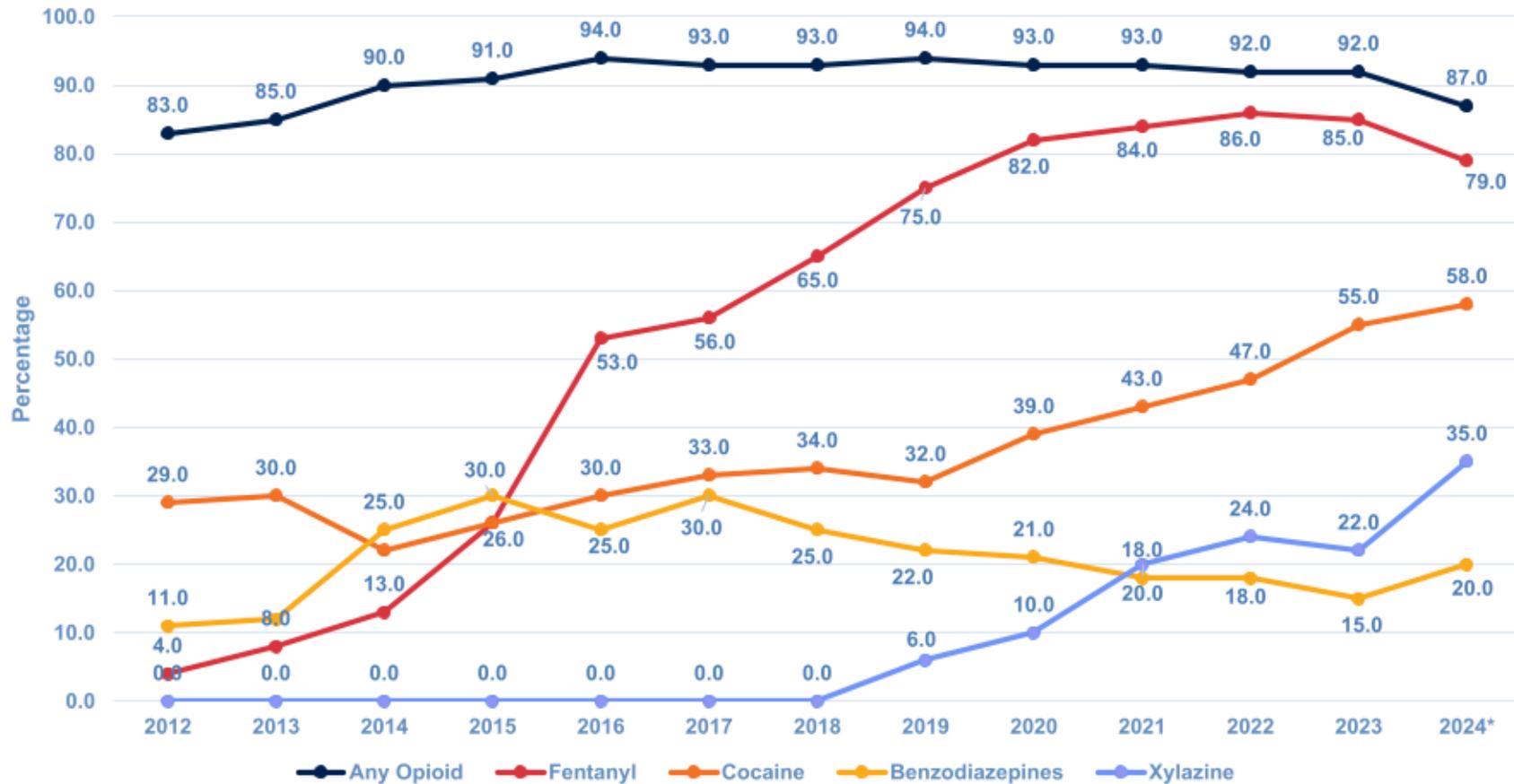
Unintentional Drug Overdose Deaths, Connecticut, 2012-2024



*Percentage of Fentanyl involved deaths



Percentage of Substances Involved in Unintentional and Undetermined Intent Drug Overdose Deaths, Connecticut, 2012-2024



CT-DPH 2025



Circumstances of Fatal Drug Overdoses

Percentages	2020 (N=1374)	2021 (N=1531)	2022 (N=1462)	2023 (N=1329)	2024* (N=1118)
Injury place as residence (own or someone else's)	72.0	72.0	76.0	74.0	71.7
Death location as residence (own or someone else's)	53.0	60.0	64.0	59.0	57.0
Potential opportunities for intervention to prevent death	74.7	75.7	78.1	74.7	N/A
Bystander Presence	55.4	54.6	53.1	49.7	47.7
Prior mental health diagnosis	30.3	34.2	36.3	34.0	30.2
Fatal drug overdose witnessed	11.5	10.8	8.7	8.4	8.1
Prior overdose	10.7	11.8	12.9	12.2	13.1
Current treatment for Substance use disorder	9.6	10.1	9.8	10.0	11.8
Homeless	3.2	2.7	4.1	5.0	4.4

CT-DPH 2025



Current Data

- As of 2nd week of January 2026, there were 836 confirmed drug overdose deaths in 2025 (many cases still pending):

	2025*	2024
Fentanyl involved deaths	69.4%*	76.6%
Cocaine involved deaths	52%*	59.7%
Xylazine involved deaths	13.2%*	34.7%

(*Preliminary data as of 2nd week January 2026, CT-DPH, 2026)



Tracked Substances

Substances	2019	2020	2021	2022	2023	2024	2025*
Carfentanil	0	2	1	0	7	10	31
Designer Benzodiazepines	0	3	5	5	31	39	42
Nitazenes	0	0	2	1	10	10	1

**Preliminary data; CT-DPH, 2026*



Connecticut's Top Drug Issues

Fentanyl

Cocaine/Crack

Fake Pills

Methamphetamine

Synthetic Cannabinoids

Source: CT ORS/NEHIDTA, 2024



The Top Fake Pills in CT

M30 Oxycodone -
Fentanyl

2mg Xanax bars –
Designer
Benzodiazepine or
Fentanyl

Adderall –
Methamphetamine

Ecstasy/MDMA -
Methamphetamine

Source: NEHIDTA/CT-ORS

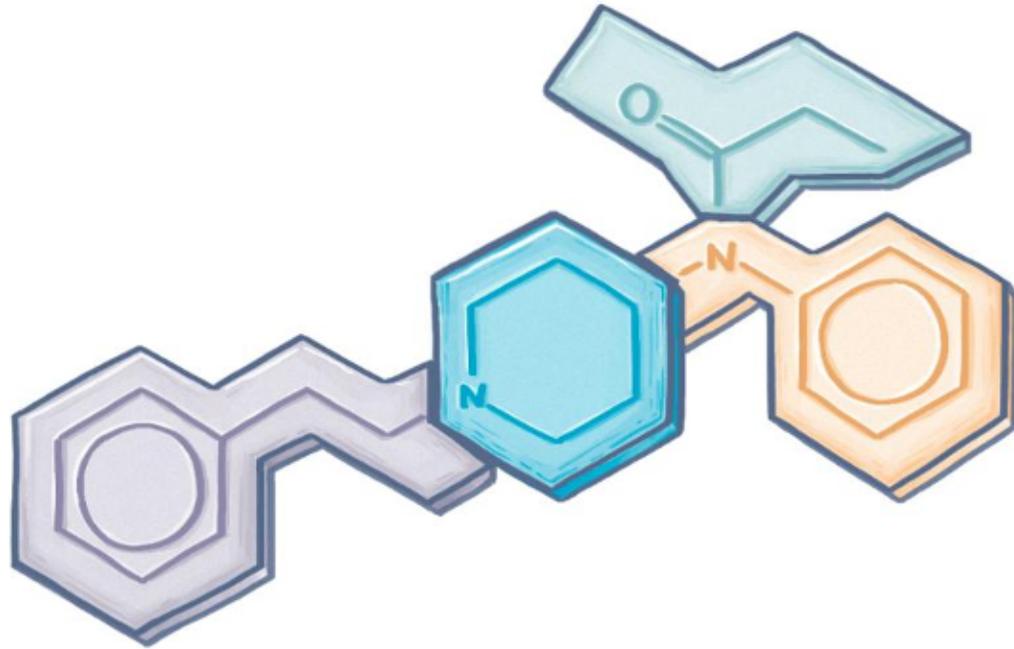


Issues Among Youth and Young Adults

- Stimulants
 - Cocaine
 - Methamphetamine
- Adderall shortage
 - Turn to illicit market
 - Dangers of fake pills
- High potency marijuana
 - Linkage to mental health issues
 - Increased THC intoxications
- Nicotine/Vaping and smokeless products
- Normalization of drugs



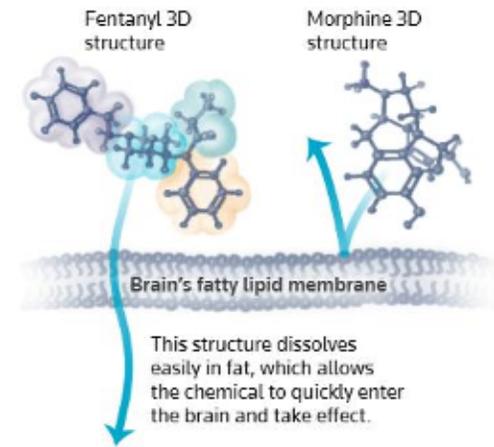
Fentanyl



Structure of fentanyl

To understand these chemistry tricks, first consider the basic structure of fentanyl.

Fentanyl is much stronger than other opioids because its unique molecular structure allows it to easily enter parts of the brain that control pain and emotions.



Source:(Chung, Gottesdiener, & Jorgic, 2024)



Illicitly Manufactured Fentanyl (IMF)

IMF is an opioid 50 to 100 times more potent than morphine. IMF analogs have varying degrees of potency relative to morphine – some are more potent, and some are less potent.

IMF has a higher lipophilicity than heroin and morphine. Fentanyl >1000 fold more lipophilic than morphine, resulting in rapid penetration into the Central Nervous System (CNS). Rapid penetration into the CNS closes the window (time) on being able to intervene in an overdose. Studies suggest that a heroin overdose may not be lethal for 20-30 minutes, while an IMF overdose can be lethal in less than 5 minutes.

(Armenian et al 2018)(Hill et al 2019) (Skolnick (2021))



Xylazine

- Alpha 2 agonist
- Not a controlled substance
- A veterinary sedative, analgesic, and muscle relaxant
- Causes central nervous system depression and respiratory depression
- Increases effects of fentanyl and decreases frequency to re-dose
- Not an opioid, does not bind to the opioid receptors
- Does not respond to naloxone

(Thangada et al., 2023)



Xylazine Data

In 2024, the xylazine/fentanyl combination was involved in 34.7% (N=344) of overdose deaths. Prior years are as follows:

- 2020 (N=141; 10.2%)
- 2021 (N=298; 19.8%)
- 2022 (N=354, 24.2%)
- 2023 (N=285; 21.3%)

Although xylazine was at its highest average percentage in 2024, the number of xylazine deaths decreased each quarter in 2024 from 105 to 59 from Q1-Q4.

Preliminary data for 2025 show that 13.7% (N=106) of the deaths involved xylazine in combination with fentanyl and other substances.

CT-DPH, 2026



> Trigger Warning: Graphic Image



Impact: Xylazine Wounds

- Wounds can appear anywhere, despite route of administration
- Untreated wounds can result in infections, which may lead to amputation and/or death
- If wounds appear, seeking medical attention is necessary
- While cleaning the wounds is important, the use of hydrogen peroxide is not recommended



Source: (Downton, A et al, 2023), Police Assisted Addiction & Recovery Initiative (PAARI), 2023



Medetomidine – Xylazine Alternative

Medetomidine is an alpha-2 agonist, belonging to the same family of drugs as xylazine and clonidine. Medetomidine is synthetically manufactured. The effects of medetomidine can include sedation, analgesia, muscle relaxation, anxiolysis, bradycardia, hypotension, hyperglycemia, and hallucinations.

Medetomidine is 100-200 times more potent with a longer duration of action, and acts on both the central and peripheral nervous systems.

Unlike Xylazine wounds have not been observed with medetomidine use.

CT-ORS and CT-DPH have confirmed the presences of medetomidine in CT through forensic and toxicology results. We are monitoring the prevalence of medetomidine.

(ASAM 2026, CFSRE, 2024)



Medetomidine – Xylazine Alternative

Withdrawal Symptoms:

- Nausea and vomiting
- Tremor and myoclonic jerks
- Anxiety
- Diaphoresis
- Sinus tachycardia (>120bpm)
- Hypertension (SBP>170mmHg; DBP>100mmHg)
- Encephalopathy or delirium in severe cases
- Minimal response to symptomatic therapies

The primary concern is tachycardia and hypertension. Severe vomiting may prevent oral medication use to control these. If vomiting persists, dexmedetomidine may be needed in the emergency department or ICU.

(ASAM 2026, CFSRE, 2024)



Carfentanil

- Carfentanil is approximately 100 times more potent than fentanyl and 10,000 times more potent than morphine, originally developed as a tranquilizer for large animals. Carfentanil has been identified in CT in fatal overdoses.
 - 2017: 7 fatal overdoses
 - 2020: 2 fatal overdoses
 - 2021: 1 fatal overdoses
 - 2023: 7 fatal overdoses
 - 2024: 10 fatal overdoses
 - 2025: 31 fatal overdoses

Source: (CT ORS, 2026)CT DPH, 2025, CT-OCME, 2024



Illicitly Manufactured Designer Benzodiazepines

Designer benzodiazepines are benzodiazepine-analogue compounds not approved for medical use. They are in a class of drugs that bind to the GABA receptors. Designer Benzos may be structurally similar to prescription benzodiazepines or their metabolites but were often developed as research chemicals before appearing in illicit markets.

Designer benzos are often more potent than traditional benzos, sometimes estimated at 6-10 times greater potency than diazepam. Estimates indicate etizolam may be about 10 times more potent than diazepam. They tend to be cheap, short-acting, highly potent, and widely available online or in street markets. Designer benzos may bind to receptors in the Central Nervous System causing depression of the respiratory system

Designer benzos tend to have rapid metabolism and short detection windows, complicating toxicology screening and clinical interventions. Moreover, clinical data remain sparse due to their illicit nature, short market lifespan, and lack of formal trials. Designer benzos are often sold under the guise of familiar benzodiazepine brands (for example fake Xanax tablets may contain flubromazolam or etizolam), increasing overdose risk through unexpected potency or contamination.

(EMCDDA, 2018)(Moosmann & Auwärter, 2021)(UNODC/ACCPD, 2021)(Saboonchi & Weiss, 2024)(Wagmann et al., 2020)(Van Hout & Bingham, 2025)



Nitazines

These compounds are exceptionally potent, ranging from hundreds to thousands of times more potent than morphine and up to 10 times more potent than fentanyl; isotonitazene is particularly widespread in illicit markets.

Nitazenes frequently appear in the illicit drug supply, often mixed with fentanyl or other substances, sometimes without users' knowledge, raising overdose danger.

At equal doses Nitazenes cause more profound and longer lasting respiratory rate of depression than fentanyl. It should respond to naloxone, but because of its strong affinity at the receptor, it may take multiple doses to knock it off the receptor.

(Pergolizzi Jr et al., 2023)(OAS, 2024)(WSJ, 2025)



Receptor Affinity: Nitazenes vs. Fentanyl

Analogy: Velcro vs. Superglue

- Think of the opioid receptor in your brain like a lock, and opioids like keys that fit into that lock.
- Now imagine two substances:
 - Fentanyl is like Velcro—it grabs on quickly and holds strong, but with effort (like naloxone), you can pull it off.
 - Nitazenes are like superglue—once they latch onto the receptor, they bond harder and stay longer. You can't just rip it off, you need more force, more time, or multiple attempts to undo the connection.



Methamphetamine in CT

Methamphetamine use in Connecticut continues to be reported in various forms, including powder, pills and crystal (also known as “ice”). While overall prevalence remains lower than in other regions, increasing detection through forensic analyses and harm reduction outreach signals a growing concern. The CT-ORS team reports that methamphetamine is an emerging concern due to it appearing in less traditional forms. Methamphetamine is increasingly being seized by law enforcement in powder and pill forms, expanding beyond the more commonly recognized crystal or “ice”) form. Of particular concern is its presence in fake pills resembling prescription Adderall® and MDMA (ecstasy or “Molly”) pills, which poses heightened risks for not only unintentional use by youth and adults, overramping and developing an addiction to methamphetamine.



Poly Drug Use

vs

Polysubstances



Fatal Overdoses due to Complications from Poly-Drug Use

Fentanyl, Xylazine,
Fluoxetine, Amitriptyline,
Tramadol and
Gabapentin

Cocaine, Fentanyl,
Methadone,
Hydroxyzine, Duloxetine,
Gabapentin, Quetiapine,
and Despropionyl
Fentanyl (4-ANPP)

Fentanyl, Xylazine,
Cocaine, Clonazepam
and Diphenhydramine

Ethanol, Cocaine,
Fentanyl and Morphine

Fentanyl, Cocaine and
Xylazine

Fentanyl, Promethazine,
Mitragynine and
Lamotrigine

Fentanyl, Para-
fluorofentanyl,
Despropionyl Fentanyl
(4-ANPP) and Xylazine

Source: CT Office of Medical Examiner (CT-OCME)



Law Enforcement Seizure Lab Results

Fentanyl, Heroin,
Tramadol, Chlorfentanyl,
Xylazine, caffeine, sugar
and procaine

Cocaine, Bromazolam
Methadone, phenacetin
and nicotine

Cocaine, Fentanyl, para-
Fluorofentanyl, caffeine,
mannitol and levamisole

Cocaine, Ketamine and
LSD

Cocaine,
Methamphetamine and
acetaminophen

Methamphetamine,
Eutylone and procaine

Cocaine, Fentanyl,
Heroin, acetaminophen,
phenacetin, inositol,
caffeine,
diphenhydramine,
procaine and lidocaine

Cocaine,
Methamphetamine and
Dimethylpentylone

Source: CT DESPP DSS



Community Drug Checking: Confirmatory Testing Samples

HRT_0661	Ketamine	Major
	Methamphetamine	Trace
	MDMA	Trace
	Deschloroketamine	Trace
	Cocaine	Trace
	Benzoyllecgonine	Trace

LP_0811	Cocaine	Major
	Xylazine	Major
	Benzoyllecgonine	Trace
	Ketamine	Trace
	Fentanyl	Minor
	4-ANPP	Trace
	Ecgonine methyl ester	Trace

YNH_0955	Fentanyl	Minor
	Xylazine	Major
	Medetomidine	Minor
	Cocaine	Minor
	Acetyl Fentanyl	Trace
	Diphenhydramine	Trace
	Caffeine	Trace
	4-ANPP	Trace
	Benzoyllecgonine	Trace
	Levamisole	Trace
	6-Acetylmorphine	Trace
Quinine	Trace	
Phenacetin	Trace	

Source: Samples from CT Harm Reduction Alliance, Liberation Programs, New Haven Syringe Service, Results from DPH Lab 2024



> Prevention: National Virtual Assembly on Risks of Fentanyl and Fake Pills

April 7, 2026 12:00PM EST



Attention Middle & High School Educators,
Register Now for an Important School Program!

THE RISKS ARE REAL: The Truth About Fentanyl & Fake Pills

A National Virtual School Assembly
Broadcast LIVE from Nashville, TN – site of the Rx Summit!
on **TUESDAY, APRIL 7, 2026** at **11:00 AM (CDT)**
9:00 AM (PDT); 10:00 AM (MDT); 12:00 PM (EDT)

Join classrooms nationwide for a powerful, **FREE, one-hour virtual program** designed to educate students about the dangers of illicit fentanyl and fake pills, and equip them with the knowledge to make safe, informed choices.

Why Your School Should Participate:

- Helps students understand the real risks of fake pills without stigma.
- Addresses mental health support and prevention strategies.
- Offers practical tools for students to protect themselves and support peers.
- Provides turnkey educational content aligned with national prevention goals.

The Risks are Real: The Truth About Fentanyl & Fake Pills is engaging, interactive, and classroom-ready.

HOSTED BY:



Dee-1

*Award-Winning Rapper,
Educator, and Activist*

*A National Virtual Student
Assembly broadcast LIVE
in front of an audience of
Nashville, TN students.*

TheRisksAreReal.org

REGISTER YOUR CLASSROOM TODAY!

TheRisksAreReal.org

This important educational program is offered **FREE** of charge.
Please share this invitation with colleagues across your district.

The Risks are Real: The Truth About Fentanyl & Fake Pills is hosted by HIDTA/ORS at the Rx and Illicit Drug Summit and presented by Walmart, in partnership with demandZERO and The National Summit on Opioid Awareness.



Walmart demandZERO



Community Partners:



FENTANYL FREE AMERICA
PROTECT · PREVENT · SUPPORT



Voices For Awareness
FACING FENTANYL



Produced and organized by: THE RENDON GROUP

TheRisksAreReal.org



WHAT IS THIS PROGRAM?

FREE

No cost to schools or districts

1 HR

One-hour live virtual assembly

7-12

Middle & High School students

Broadcast LIVE from Nashville, TN — site of the Rx and Illicit Drug Summit 2026

Students hear from a medical expert, a first responder, a DEA official, prevention specialists, and peers — with an interactive Kahoot quiz and student reporters from across the country.



PROGRAM LINEUP

1

Know the Danger

Medical expert: what fentanyl is, why one pill can kill, warning signs

2

Hidden Threats

EMT/First Responder: 911, Narcan, social media exposure, fake pills

3

Peer Discussion

Mental health, stress, early warning signs in friends, coping strategies

4

Prevention & Action

Practical steps, school leadership, safe medication disposal

5

Emerging Drug Threats

DEA expert: xylazine, nitazenes, how drugs target teens

6

Student Reporters + Wrap-Up

Youth voices, Kahoot prizes, Dee-1 closing performance



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