08/29/2024

Connecticut Clearing House Educational Forum

Unintentional Drug Overdoses in Connecticut: Data Trends and Meeting People Where They Are!

Part A:

Drug Overdose Data Trends

Shobha Thangada, Injury and Violence Surveillance Unit, Connecticut Public Health

Part B:

Meeting People Where They Are!

Kevin Shuler, Connecticut Community for Addiction Recovery (CCAR)

Part C:

Community Drug Checking - A Harm Reduction Approach to Mitigate Overdose Risk

Heather Clinton, Injury and Violence Surveillance Unit, Connecticut Public Health

Part A

DRUG OVERDOSE DATA TRENDS

Shobha Thangada
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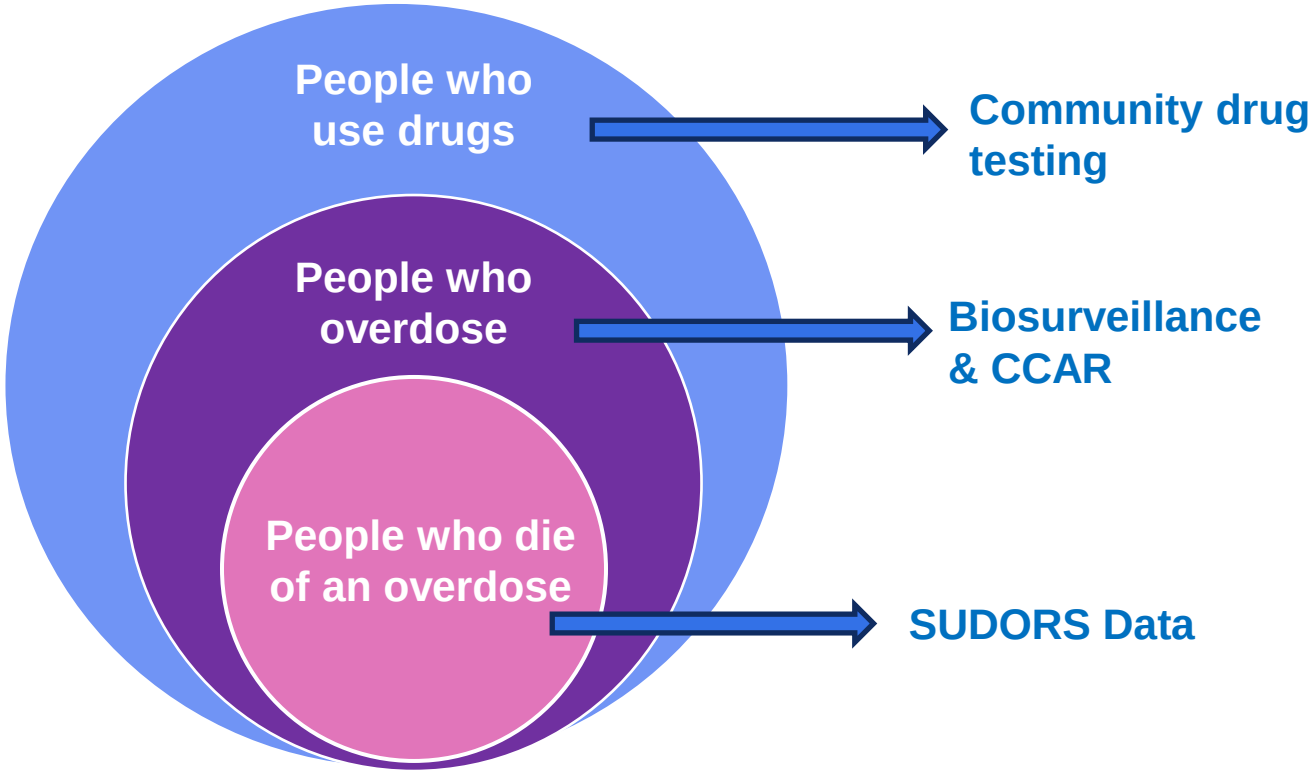
Injury and Violence Surveillance Unit
Community, Family Health and Prevention Branch
Connecticut Public Health

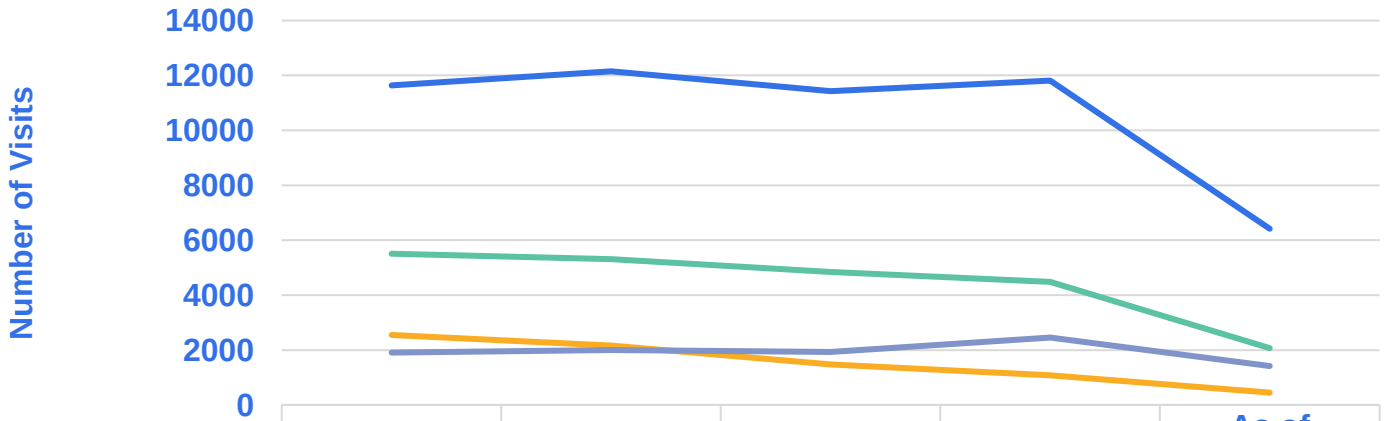
Participants will learn about:

- Fatal drug overdose data trends.
- Demographic data of drug overdose deaths.
- Primary substances involved in drug overdose deaths and emerging substances.
- Circumstances surrounding fatal drug overdoses and potential opportunities to prevent deaths.
- Public Health Act 24-120 and its impact on nonfatal drug overdose surveillance.

Drug Use


People who use drugs
People who overdose
People who die of an overdose
Community drug testing
Biosurveillance & CCAR
SUDORS Data

Suspected Drug Overdoses, Syndromic Surveillance Data, Connecticut, 2020-8/21/2024***

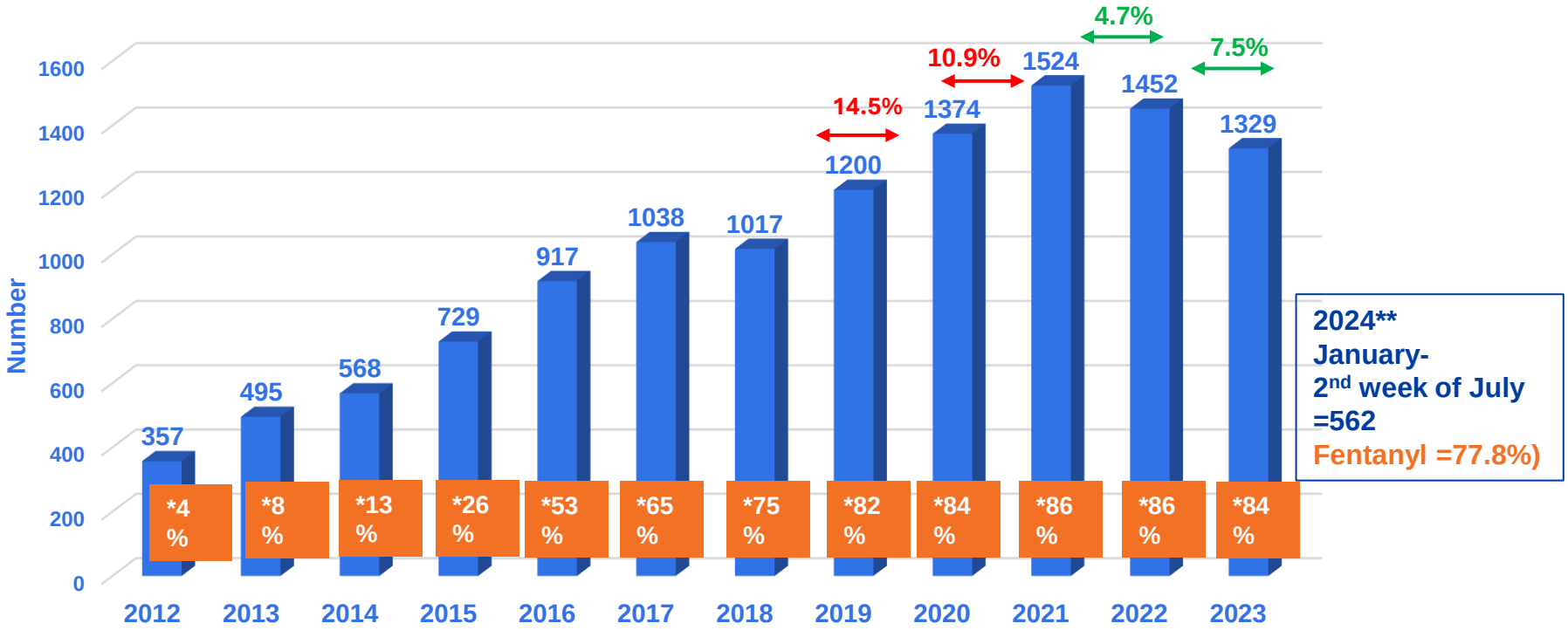


	2020	2021	2022	2023	As of 8/21/2024***
All Drug*	11641	12157	11433	11,819	6418
Any Opioid**	5,509	5,308	4,848	4,491	2078
Heroin	2,556	2,163	1,483	1,085	450
Stimulants	1,913	2,003	1,934	2,454	1418

All Drug* Any Opioid** Heroin Stimulants

*Suspected drug overdoses may include overdoses with suicidal ideation *** Data are incomplete and are from 1/1/2024 to 8/21/2024
**Suspected opioid overdoses include prescription and illicit opioids

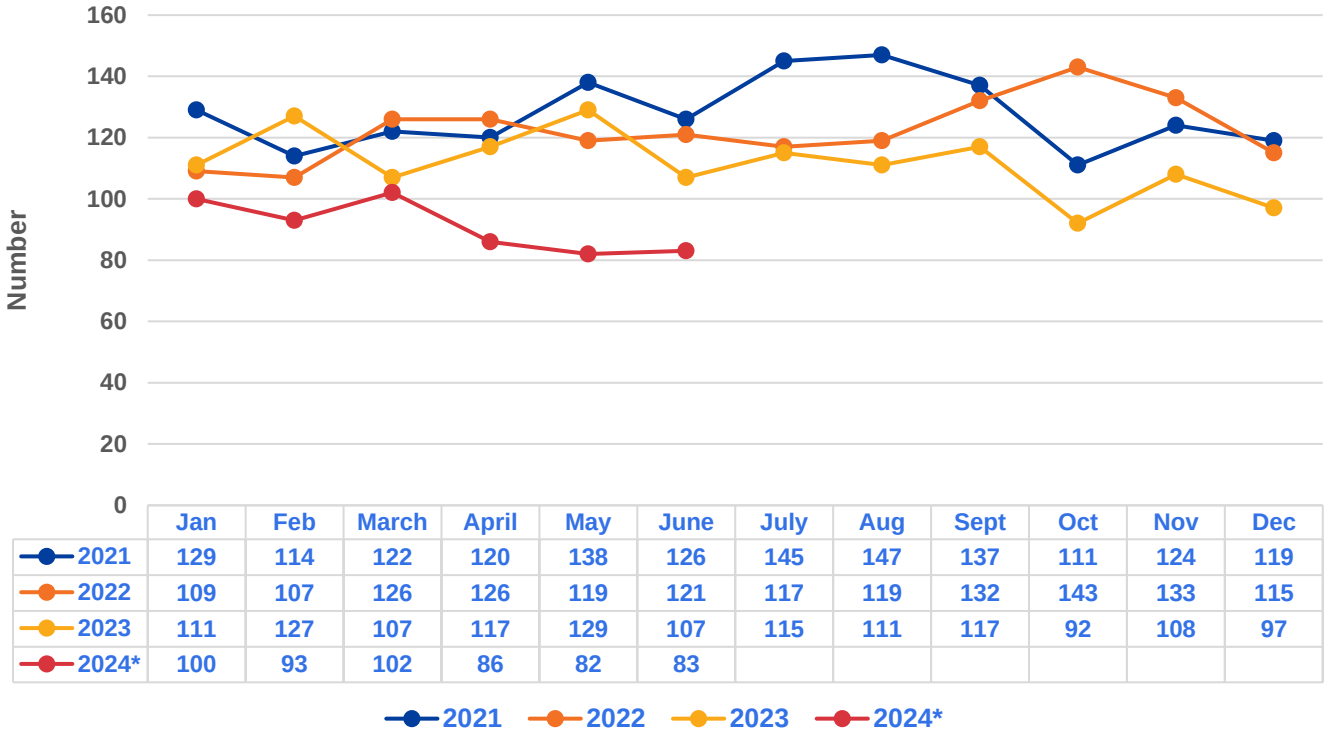
Unintentional Drug Overdose Deaths, Connecticut, 2012- 2023



* Fentanyl involved deaths,
** Data are subject to change

Data sources: Office of Chief Medical Examiner (OCME) https://portal.ct.gov/OCME/Statistics
State Unintentional Drug Overdose Reporting System (SUDORS)

Number of Unintentional and Undetermined Intent Drug Overdose Deaths, by Month, Connecticut, 2020 - June 2024*

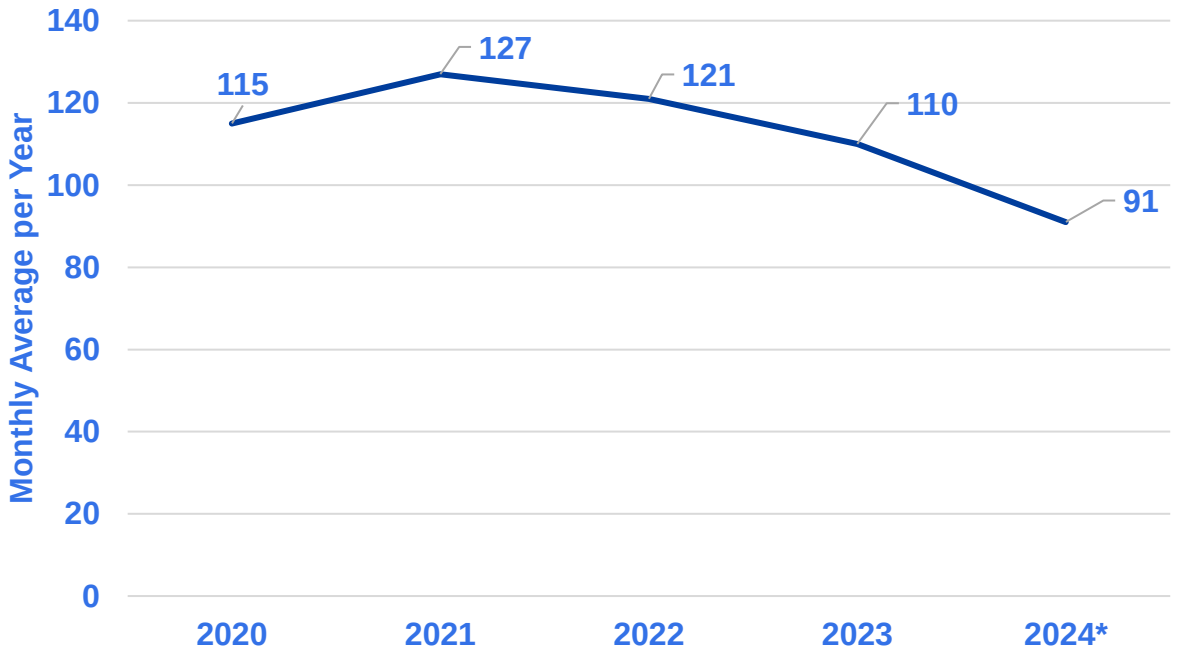


	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2021	129	114	122	120	138	126	145	147	137	111	124	119
2022	109	107	126	126	119	121	117	119	132	143	133	115
2023	111	127	107	117	129	107	115	111	117	92	108	97
2024*	100	93	102	86	82	83						

*Data subject to change

Data sources: Office of Chief Medical Examiner (OCME) https://portal.ct.gov/OCME/Statistics
State Unintentional Drug Overdose Reporting System (SUDORS)

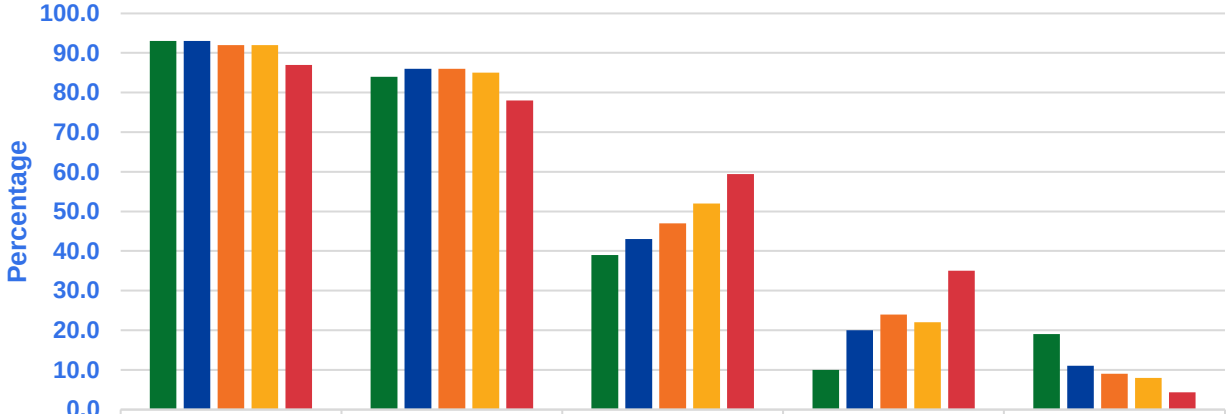
Monthly Average of Unintentional Drug Overdose Deaths, Connecticut, 2020- June 2024*



* Data are subject to change

Data sources: Office of Chief Medical Examiner (OCME) https://portal.ct.gov/OCME/Statistics
State Unintentional Drug Overdose Reporting System (SUDORS)

Percentages of Primary Substances Involved in Unintentional Drug Overdose Deaths, Connecticut, 2020-2024*



	Any opioid	Fentanyl	Cocaine	Xylazine	Heroin
2020	93.0	84.0	39.0	10.0	19.0
2021	93.0	86.0	43.0	20.0	11.0
2022	92.0	86.0	47.0	24.0	9.0
2023	92.0	85.0	52.0	22.0	8.0
2024*	87.0	78.0	59.4	35.0	4.3

* Data are subject to change

Data sources: Office of Chief Medical Examiner (OCME) https://portal.ct.gov/OCME/Statistics
State Unintentional Drug Overdose Reporting System (SUDORS)

Complete toxicology tables link:
https://portal.ct.gov/-/media/dph/injury-and-violence-prevention/opioid-overdose-data/toxicology-tables/unintentional-drug-overdose-deaths-involving-different-drugs-connecticut-2012-2023.pdf

Emerging substances

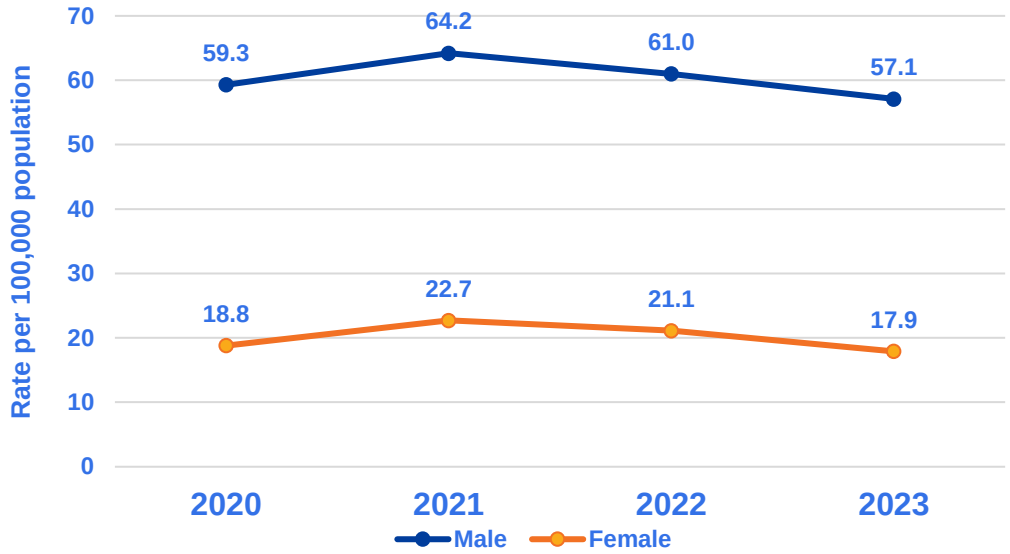
Other Emerging Substances in Fatal Drug Overdoses, Connecticut, 2019- 2024*

Substance	2019	2020	2021	2022	2023	2024*
Carfentanil	0	2	1	0	7	2
Designer benzodiazepines**	0	3	5	5	31	18
Nitazenes	0	0	2	1	10	5

*Data are as of the 2nd week of July 2024 and are subject to change
**Designer benzodiazepines include bromazolam and flubromazolam

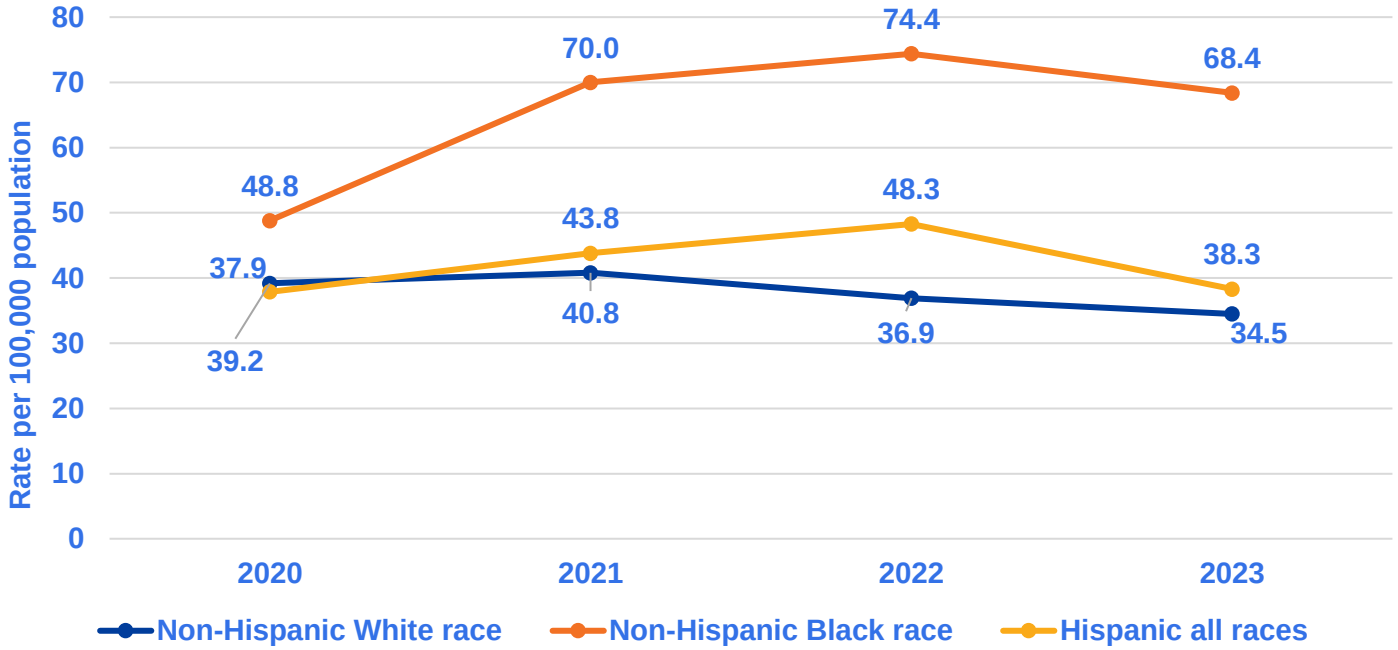
Data sources: Office of Chief Medical Examiner (OCME) https://portal.ct.gov/OCME/Statistics
State Unintentional Drug Overdose Reporting System (SUDORS)

Rate of Unintentional Drug Overdose Deaths per 100,000 Population, by Sex, Connecticut, 2020-2023



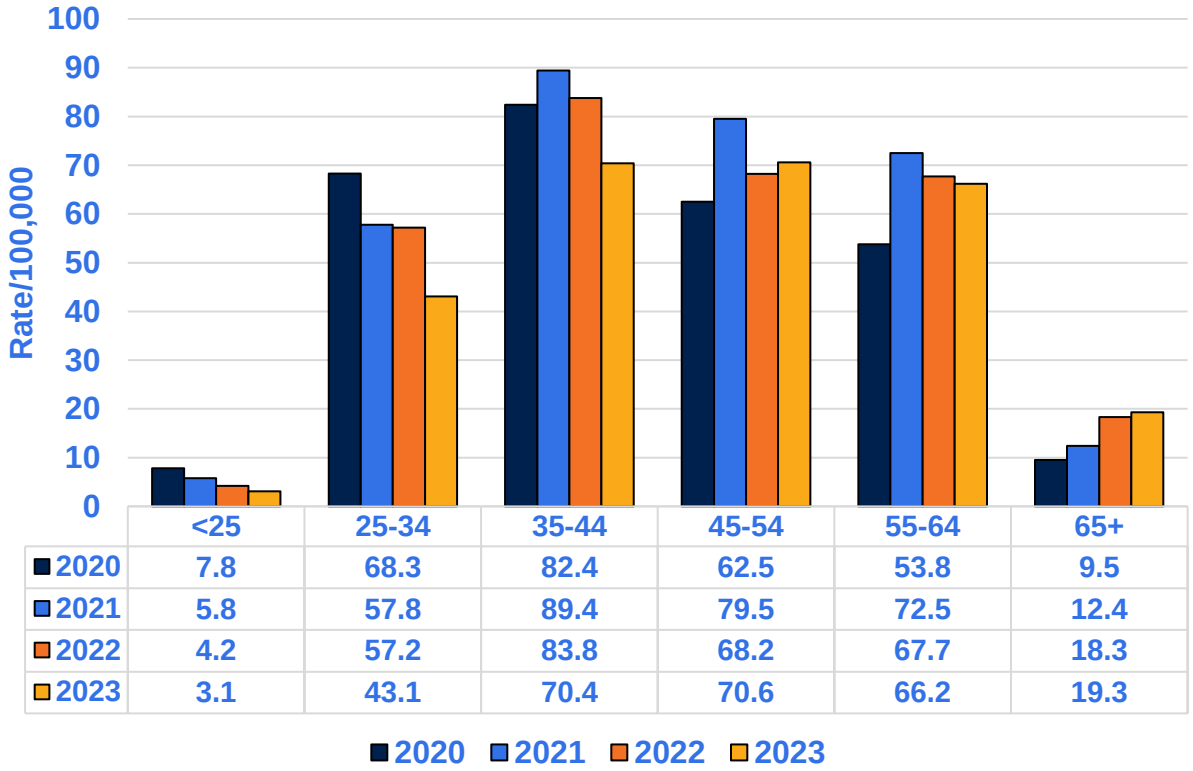
Data sources: Office of Chief Medical Examiner (OCME) https://portal.ct.gov/OCME/Statistics
State Unintentional Drug Overdose Reporting System (SUDORS)

Rate of Unintentional and Undetermined Drug Overdose Deaths per 100,000 Population, by Race/Ethnicity, Connecticut, 2020–2023



Data sources: Office of Chief Medical Examiner (OCME) https://portal.ct.gov/OCME/Statistics
State Unintentional Drug Overdose Reporting System (SUDORS)

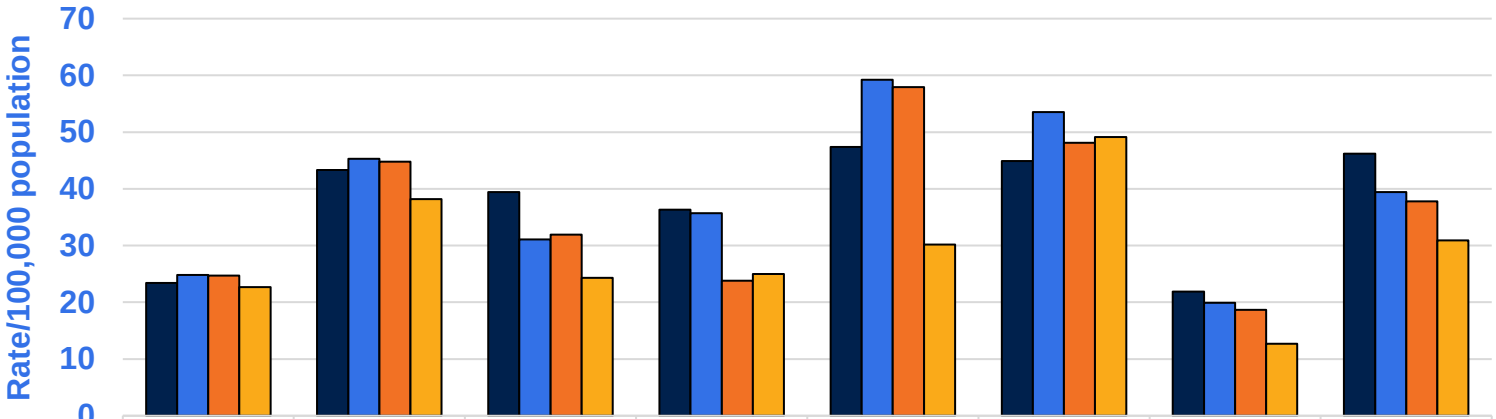
Rate of Unintentional Drug Overdose Deaths per 100,000 Population, by Age Group, Connecticut, 2020-2023



	<25	25-34	35-44	45-54	55-64	65+
2020	7.8	68.3	82.4	62.5	53.8	9.5
2021	5.8	57.8	89.4	79.5	72.5	12.4
2022	4.2	57.2	83.8	68.2	67.7	18.3
2023	3.1	43.1	70.4	70.6	66.2	19.3

Data sources: Office of Chief Medical Examiner (OCME) https://portal.ct.gov/OCME/Statistics
State Unintentional Drug Overdose Reporting System (SUDORS)

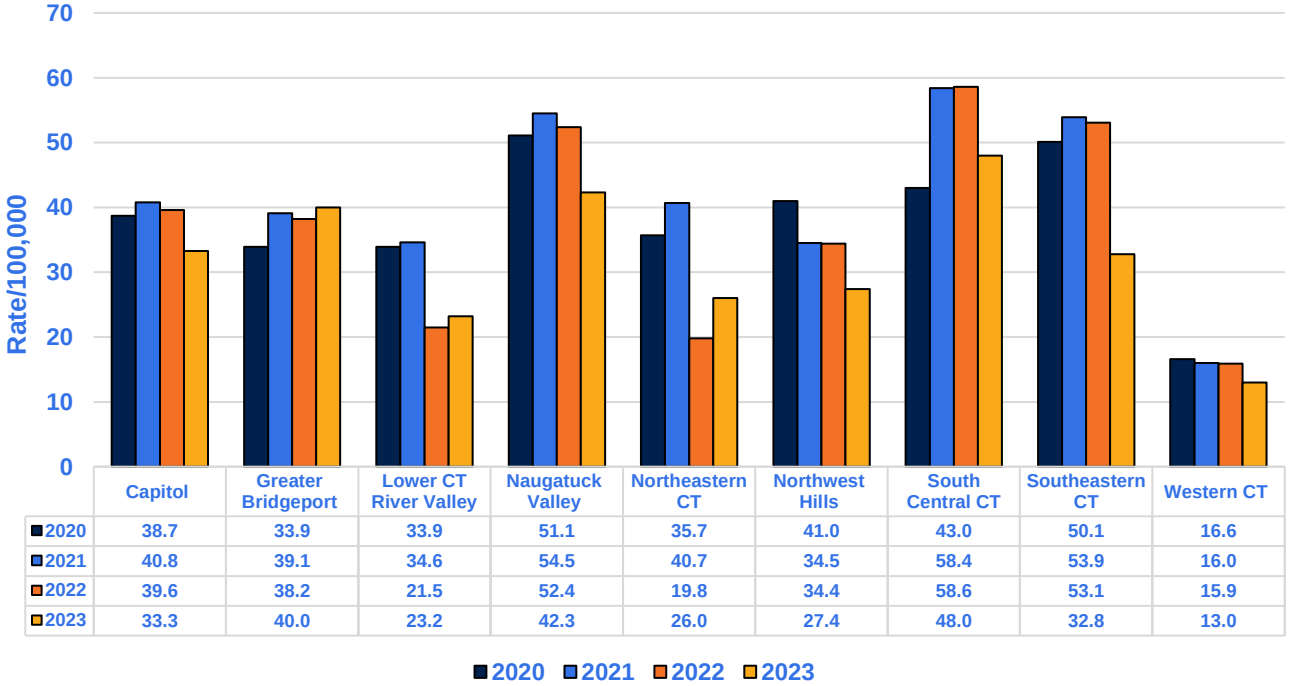
Rate of Unintentional Drug Overdose Deaths per 100,000 Population, by Injury County, Connecticut, 2020-2023



	Fairfield	Hartford	Litchfield	Middlesex	New London	New Haven	Tolland	Windham
2020	23.4	43.3	39.4	36.3	47.4	44.9	21.9	46.2
2021	24.8	45.3	31.1	35.7	59.2	53.5	19.9	39.4
2022	24.7	44.8	31.9	23.8	57.9	48.1	18.7	37.8
2023	22.7	38.2	24.3	25.0	30.2	49.1	12.7	30.9

Data sources: Office of Chief Medical Examiner (OCME) https://portal.ct.gov/OCME/Statistics
State Unintentional Drug Overdose Reporting System (SUDORS)

Rate of Unintentional and Undetermined Intent Drug Overdose Deaths per 100,000 Population, by Injury County Equivalent Planning Region, Connecticut, 2020-2023

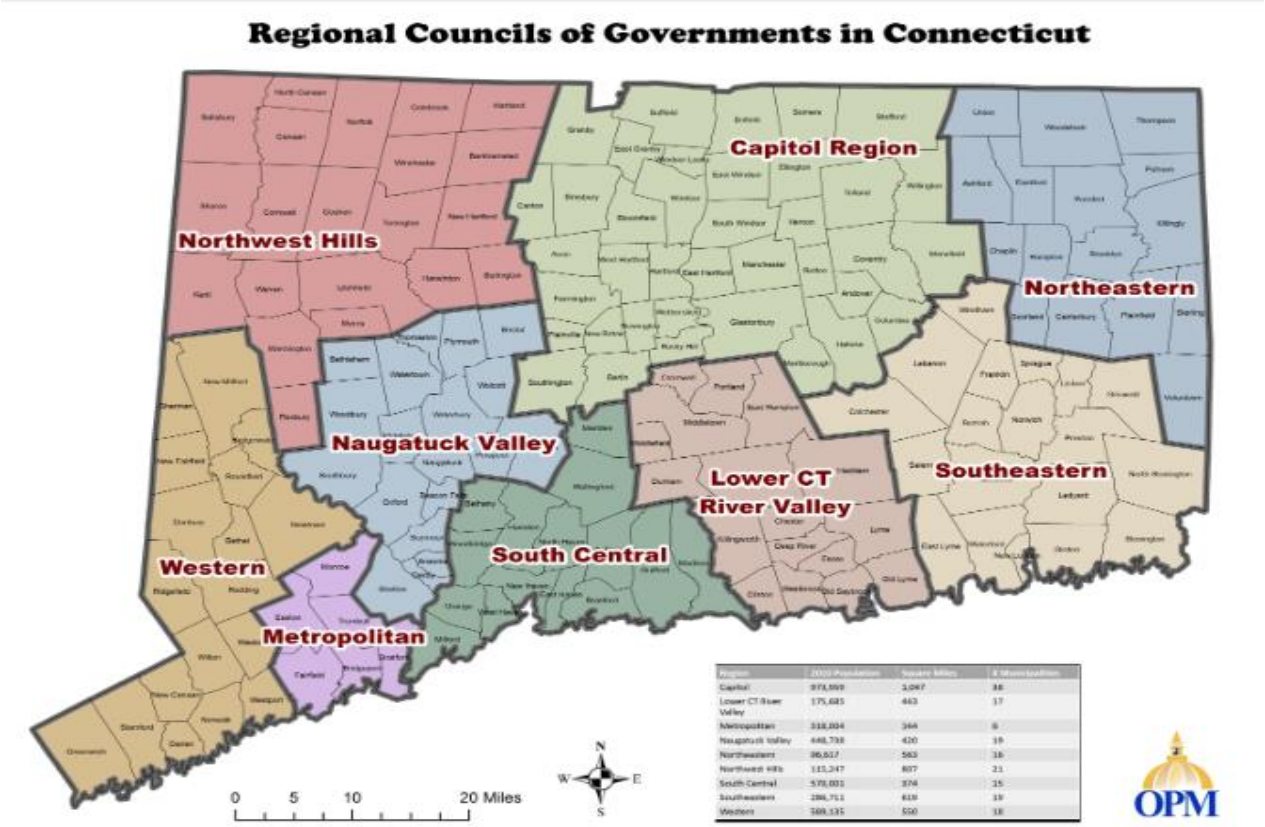


	Capitol	Greater Bridgeport	Lower CT River Valley	Naugatuck Valley	Northeastern CT	Northwest Hills	South Central CT	Southeastern CT	Western CT
2020	38.7	33.9	33.9	51.1	35.7	41.0	43.0	50.1	16.6
2021	40.8	39.1	34.6	54.5	40.7	34.5	58.4	53.9	16.0
2022	39.6	38.2	21.5	52.4	19.8	34.4	58.6	53.1	15.9
2023	33.3	40.0	23.2	42.3	26.0	27.4	48.0	32.8	13.0

Major towns/cities in South Central:
New Haven
West haven
Meriden
Naugatuck:
Waterbury
Bristol
Western Connecticut:
Danbury
Norwalk
Stamford
Lower CT River Valley:
Middletown

CEPR: https://www.federalregister.gov/documents/2022/06/06/2022-12063/change-to-county-equivalents-in-the-state-of-Connecticut

Data sources: Office of Chief Medical Examiner (OCME) https://portal.ct.gov/OCME/Statistics
State Unintentional Drug Overdose Reporting System (SUDORS)



Regional Councils of Governments in Connecticut: https://libguides.ctstatelibrary.org/regionalplanning/maps

What are the circumstances surrounding overdose deaths and potential opportunities for intervention to prevent drug overdose deaths?

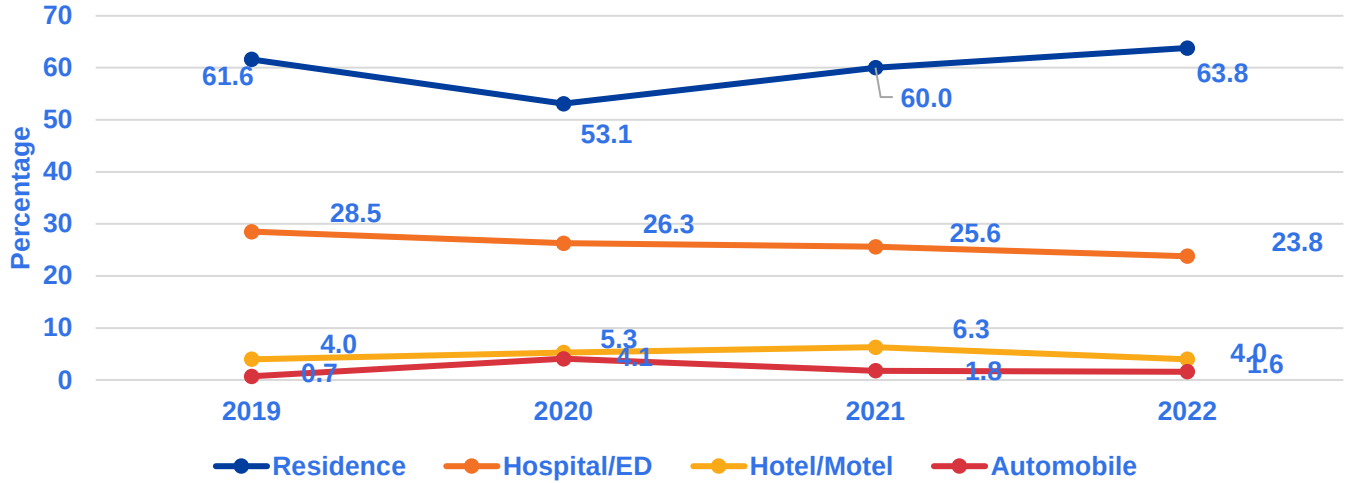
What is SUDORS?

(**S**tate **U**nintentional **D**rug **O**verdose **R**eporting **S**ystem)

* SUDORS collects data on unintentional and undetermined intent drug overdose deaths from death certificates, medical examiner or coroner reports, and postmortem toxicology results.

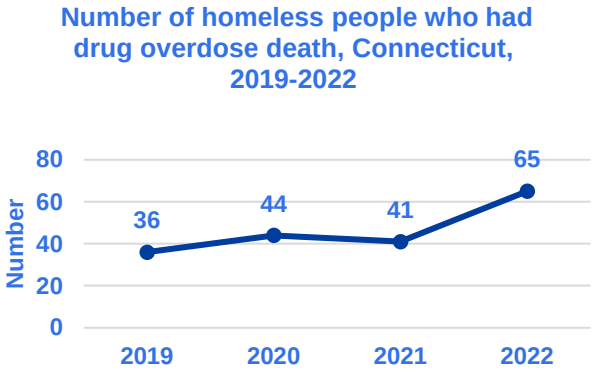
* States and local jurisdictions are better informed by systems like SUDORS, which presents comprehensive information on the characteristics and circumstances surrounding drug overdose deaths to inform prevention and response efforts.

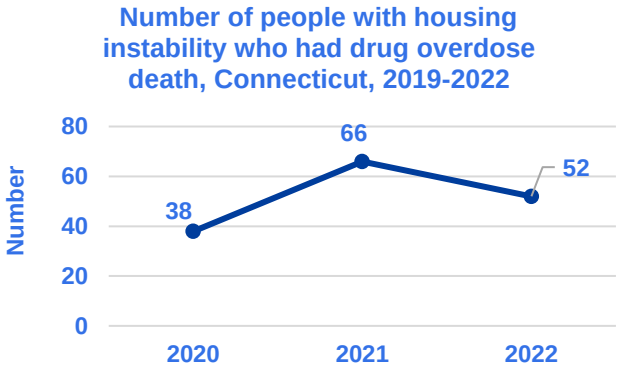
Percentage of Death Location for Drug Overdose Deaths, Connecticut, 2019-2022

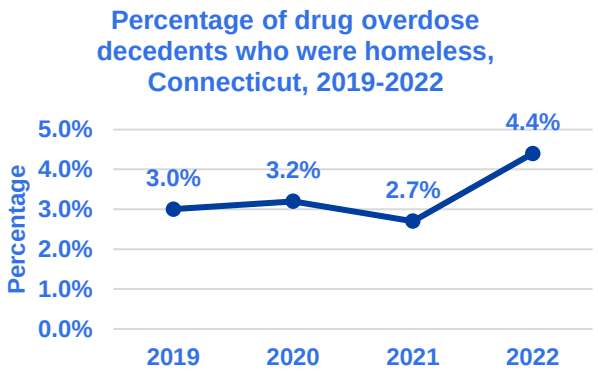


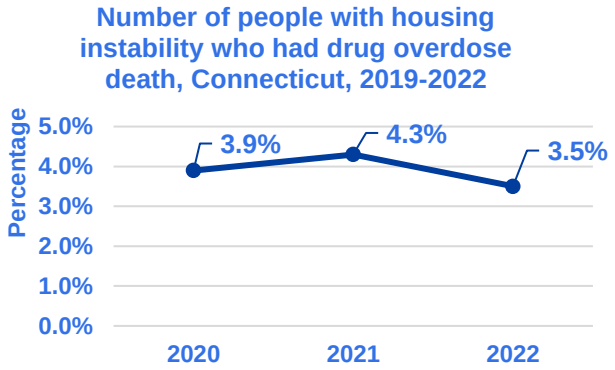
Data sources: Office of Chief Medical Examiner (OCME) https://portal.ct.gov/OCME/Statistics
State Unintentional Drug Overdose Reporting System (SUDORS)

Homelessness and Housing Instability Among Drug Overdose Decedents.





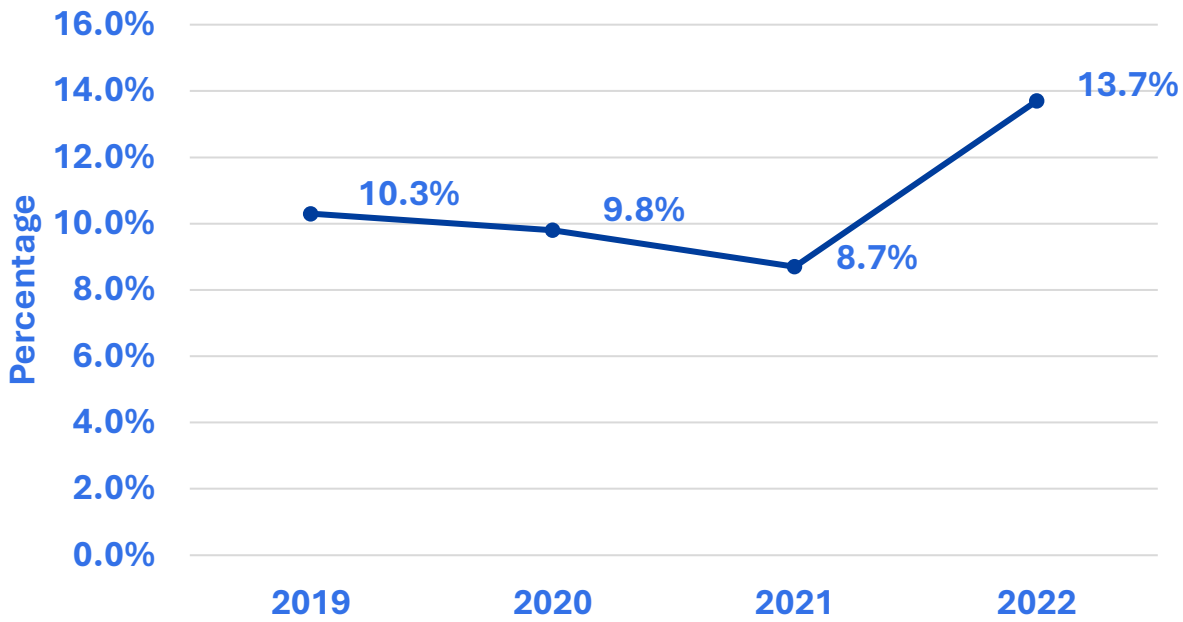




Data sources: Office of Chief Medical Examiner (OCME) https://portal.ct.gov/OCME/Statistics
State Unintentional Drug Overdose Reporting System (SUDORS)

***Housing instability data are available from July-December 2020**

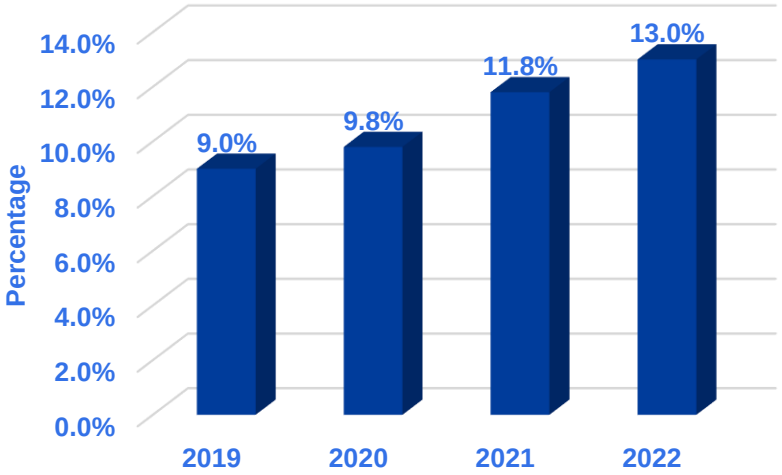
Percentage of Decedents Recently Released From an Institution*, Connecticut, 2019-2022



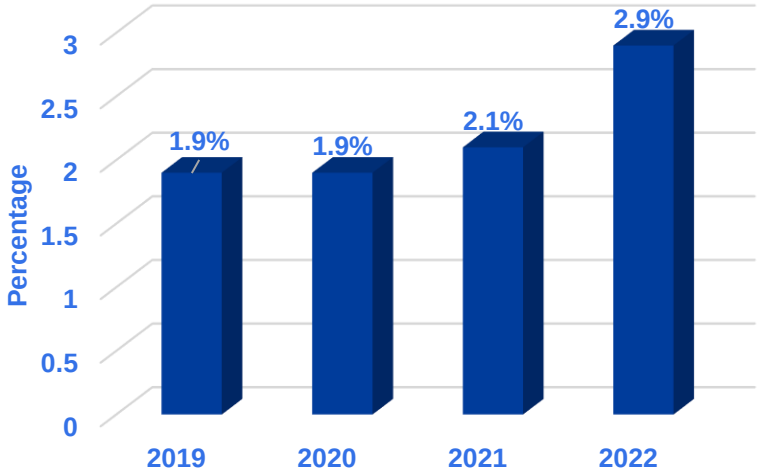
*Decedents died of an overdose within 30 days after being released from an institution which includes : prison/jail, hospital, psychiatric institute, nursing home, residential treatment facility, halfway/sober/work release homes, supervised facility, other types of psychiatric facilities etc.

Data sources: Office of Chief Medical Examiner (OCME)
https://portal.ct.gov/OCME/Statistics
State Unintentional Drug Overdose Reporting System (SUDORS)

History of Prior Overdose Among Decedents who had Fatal Overdose, Connecticut, 2019-2022



History of Suicide Attempts/ Ideation Among Decedents who had Fatal Overdose, Connecticut, 2019-2022



Data sources: Office of Chief Medical Examiner (OCME) https://portal.ct.gov/OCME/Statistics
State Unintentional Drug Overdose Reporting System (SUDORS)

Usual Occupation of Drug Overdose Decedents as Reported on Death Certificate, Connecticut, 2019-2022

Year	Total # of Decedents	Percent Disabled	Percent Unknown/ NA	Percent Unemployed	Percent Not seeking paid work	Percent Self-employed	Percent Professionals: Business, Management, Science, Arts	Percent Service	Percent Natural Resources, Construction, Maintenance	Percent Sales and Office	Percent Transport, Production, Moving	Percent Armed Forces
2019	1,206	3.6%	14.4%	2.8%	4.9%	4.2%	13.0%	12.3%	28.9%	6.6%	9.0%	ND
2020	1,375	2.5%	12.4%	3.9%	3.9%	4.9%	13.5%	12.7%	27.9%	8.1%	9.5%	ND
2021	1,527	3.8%	11.1%	4.7%	3.3%	5.1%	13.4%	12.4%	29.1%	8.2%	8.4%	ND
2022	1,464	6.4%	7.0%	6.3%	4.3%	2.7%	13.5%	13.9%	28.0%	8.7%	9.2%	ND

Brief Description: The current version of International Classification of Occupations (ISCO) known as ISCO-08 was published in 2008. Using the guidelines, different occupations are categorized into 11 industries. The key explains which occupations could fit in which industry. There were several different occupations that were not able to fit into occupational groups that were categorized based on skill specialization and analyst judgment call.

Data sources: Office of Chief Medical Examiner (OCME) https://portal.ct.gov/OCME/Statistics
State Unintentional Drug Overdose Reporting System (SUDORS)

Key to Categorize Occupations: Percent - 4 Year Average 2019-2022 (N=5,572)

Industry		Occupations
Service	(12.8%)	Cook, Bartender, Barber, Certified Nurse Assistance, Security Guard, Maintenance Worker, Housekeeper, Custodian, Cleaning, Bakery, Restaurant, Fast-Food, Hotel, US Postal Service, Casino, Taxi/Uber, Hospitality, Delivery (cab), Beauty/Cosmetology, Home Health Aid
Natural Resources, Construction, Maintenance	(28.5%)	Fishermen, Agriculture, Mechanic, Carpenter, Construction, Demolition, Electrician, Laborer, Plumber, Painting, Tree Services, Landscaping, Tradesman, Fuel, Building, Waste Management, Odd Jobs/Various, Home Improvement, Masonry, Automotive, Heating/Cooling, Water, HVAC, Flooring, Pest Control
Transport, Production, Moving	(9.0%)	Assembler, Model Maker, Trucking, Factory Worker, Driver, Shipping, Packer, Logistics, Manufacturing, Machinery, Warehouse, Industrial, Railroad Service, Airport/Aircraft Corporation
Professionals: Business, Management, Science, Arts	(13.4%)	District Manager, CEO, Owner, Engineer, Artist, Investment Banker, Computer Analyst, Counselor, Teacher, Legal, Doctor, Sportsman, Insurance, Music, Healthcare, Hospital, Rehab Center, Supervisor, Nurse, Environmental, State/Town, Police, Fire Dept, Social Services, Pastor, Insurance, Community Outreach,
Sales and Office	(8.0%)	Administrative Assistant, Cashier, Customer Service, Sales, Retail, Grocery, Bank, Real-Estate, Florist, Property Manager, Commercial, Temp Agency, Communication, Human Resources
Not Seeking Paid Work	(4.1%)	Caretaker, Homemaker, Housewife, Student, Retired, Education, University, College, Nursing Home, Elderly, Daycare, Homeless Shelter, At Home
Unspecified/Unknown/NA	(11.0%)	Unknown, Not Applicable, None, Unobtainable, Unavailable
Unemployed	(4.5%)	Never Worked, Unemployed, Not Working Now, Severance
Disabled	(4.1%)	Disability, Disabled, Special Needs
Self Employed	(4.2%)	Entrepreneurship, Self Employed, Owner, Own Home
Armed Forces	N/A	Army, Navy, Veteran Services, Marine, Airforce , Infantry

Percentage of drug overdose deaths that had at least one potential opportunity for intervention

2021

75.7%

of drug overdose deaths had at least one potential opportunity for intervention

- 10.1% Current treatment for substance use disorder(s)[19]
- 10.8% Fatal drug use witnessed
- 34.2% Mental health diagnosis
- 54.6% Potential bystander present[20]
- 11.8% Prior overdose
- 8.7% Decedent was recently released from institutional setting[21]

[18]Circumstance percentages are only among decedents with an available medical examiner or coroner report

2022

78.1%

of drug overdose deaths had at least one potential opportunity for intervention

- 9.8% Current treatment for substance use disorder(s)[19]
- 8.7% Fatal drug use witnessed
- 36.3% Mental health diagnosis
- 53.1% Potential bystander present[20]
- 12.9% Prior overdose
- 13.7% Decedent was recently released from institutional setting[21]

[18]Circumstance percentages are only among decedents with an available medical examiner or coroner report

Biosurveillance

(2019 to Current)

Toxicology testing in biological specimens (urine)
From nonfatal drug overdose patients

Hospital-specimens from overdose patients

State Public Health Lab for testing

Testing using Mass Spectrometer

Toxicology Results

DPH

Hospital

Toxicology results are linked to Hospital records

Importance of Biosurveillance Project

- The results will be used for surveillance purpose only.
- Drugs that are causing the overdoses can inform communities.
- Quick turnaround of toxicology results so that the health care staff can correlate the clinical symptoms to drugs identified.
- To assess the geographic distribution of different categories of illicit drugs within the state.

Public Health Act No. 24-120

- From January 1, 2025 until August 31, 2028, any licensed hospital that treats a patient for a nonfatal drug overdose of an opioid drug shall administer, with the patient's consent, a toxicology screening of the patient, if medically appropriate.
- Such screening shall include, but need not be limited to, screening for opiates, opioids, benzodiazepines, cannabinoids, methadone, cocaine, gabapentin, xylazine and any other substances.
- Any hospital that administers a toxicology screening shall report the screening results to the Department of Public Health.

Public Health Act No. 24-120 will increase the number of hospitals submitting samples.

Preventing Drug Overdoses

How To Prevent Drug Overdoses?

- Create awareness in communities by providing education on the dangerous consequences of using illicit opioids and harm reduction choices.
- Learn about naloxone, the lifesaving drug that reverses opioid overdoses. Visit: www.norasaves.com
- Share options for safe disposal of unused medications and the sites of local drug collection boxes.
- Maximize use of prescription monitoring programs that monitor the prescriptions written for patients and dispensed by the pharmacies.
- Enhance and promote Medication for Opioid Use Disorder (MOUD) programs.
- For further information visit: www.drugfreect.org and www.ct.gov/dph/injuryprevention

Thank you!

Shobha.thangada@ct.gov

Part B

MEETING PEOPLE WHERE THEY ARE!

Kevin Shuler
Connecticut Community for Addiction Recovery (CCAR)

Part C

COMMUNITY DRUG CHECKING:

A Harm Reduction Approach to Mitigate Overdose Risk

Heather Clinton
Epidemiologist 2
Injury and Violence Surveillance Unit
Community, Family Health and Prevention Branch
Connecticut Public Health

Table of contents

LEARNING OBJECTIVES

- By the end of this session, participants will….
  - Learn what drug checking programs are, and
  - Learn how testing street drugs may help reduce the risk of overdose

BACKGROUND

- Opioids, especially fentanyl, are a major driver of overdoses in CT

- Contamination of street drugs with adulterants or stronger-than-expected substances contributes to both fatal and nonfatal overdoses

Case Study

Using Surveillance With Near–Real-Time Alerts During a Cluster of Overdoses From Fentanyl-Contaminated Crack Cocaine, Connecticut, June 2019

- Identifying the contents of street drugs can help persons who use drugs mitigate their risk for overdose

- Established partnerships with two harm reduction organizations to conduct testing on street drugs in the community
  - Connecticut Harm Reduction Alliance (CTHRA)
  - Alliance for Living (AFL)

METHODOLOGY

INITIAL SETUP AND SUPPORT

- Provided CDC Overdose Data to Action grant funds to CTHRA and AFL to purchase a portable Bruker spectrometer
  - Fourier-transform infrared (FT-IR) spectroscopy

- Provided funds to support a partial FTE to conduct the drug testing and track information

- Harm reduction staff were trained on the use of the Bruker spectrometer to test drugs samples and interpret results

DRUG TESTING

- Clients of the two harm reduction agencies voluntarily submit drug samples for testing
- Harm reduction staff test the drug samples with the Bruker spectrometer and analyze and record the results
- Any remaining portions of the drug samples are sent to the State Public Health Lab for confirmatory testing

DATA COLLECTION

- In addition to drug testing results, the following data are collected on each drug sample:
  - Date of drug purchase
  - Location where drugs were purchased
  - Date of drug sample testing
  - Drug sample form (e.g., powder, rock, pill)
  - Drug sample color
  - Bag color
  - Bag stamp
  - Presumed substance at time of purchase
  - Route of administration, if used
  - Adverse effects or experience, if used

DATA DISSEMINATION

- Substance results are shared back to clients to advise them of the contents of their drugs
- Full results and data are shared periodically with DPH for data surveillance and analysis
- Working to increase data sharing across all drug checking programs in Connecticut
  - Additional non-DPH funded locations in New Haven, Bridgeport and Litchfield

DATA RESULTS

DRUG TESTING RESULTS

- **Over half** of samples contained **fentanyl/fentanyl analog** and **increased from 52% to 65%** between 2023 and 2024
- **Xylazine** positivity **increased from 30% to 42%**
- In 2024, **5 samples** were positive for **designer benzodiazepines** (bromazolam - 4; etizolam - 1) and **2 samples** were positive for **nitazenes** (isotonitazene)

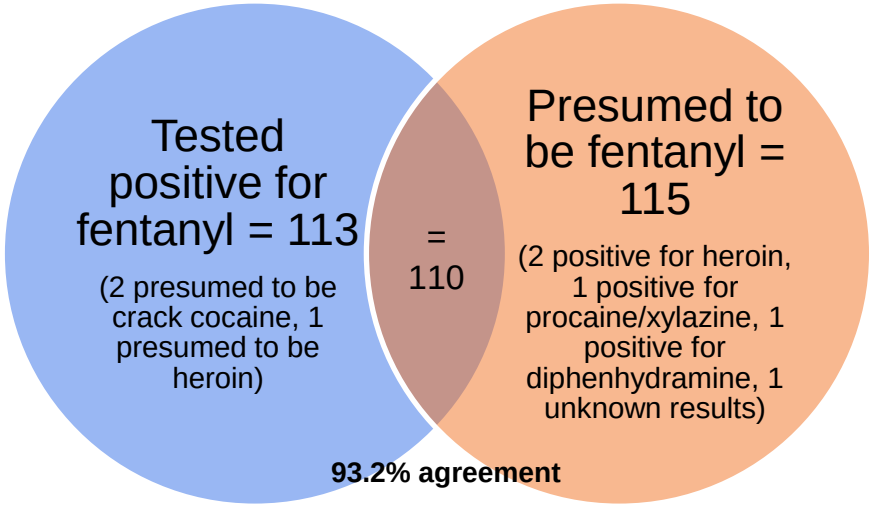
Substance	2023		2024 (as of 8/5/24)	
	Number	%	Number	%
Total	**83**	**100%**	**107**	**100%**
Fentanyl/fentanyl analog	43	51.8%	70	65.4%
Cocaine/crack	20	24.1%	24	22.4%
Xylazine	25	30.1%	45	42.1%
Benzodiazepines	1*	suppressed	9**	suppressed
Nitazenes	0	suppressed	2***	suppressed
Heroin	2	suppressed	8	suppressed

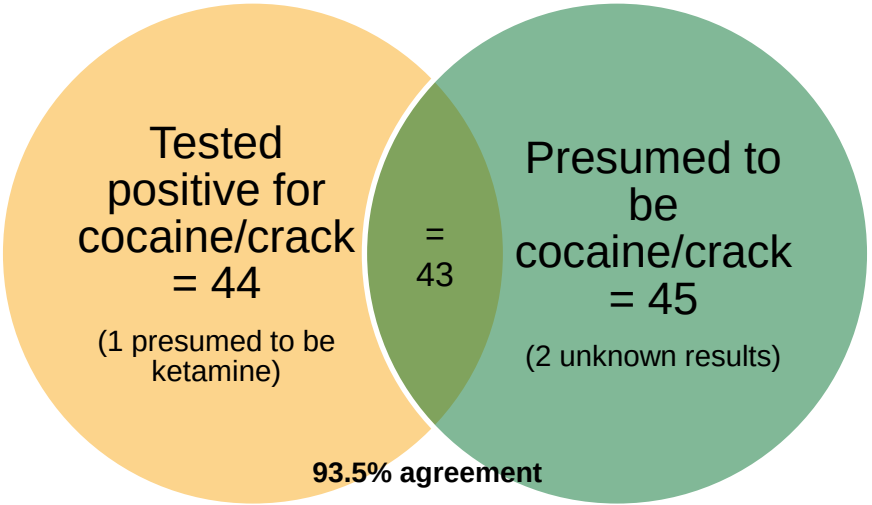
*aprazolam; ** 4 bromazolam, 1 etizolam, 1 alprazolam, 1 clonazepam, 1 diazepam and 1 lorazepam; *** isotonitazene

Data source: Connecticut Harm Reduction Alliance; samples included based on complete information

DRUG SAMPLE RESULTS, 2023-2024

- 190 total samples analyzed between 2023 and August 8, 2024
- Of **115** drug samples **presumed to be fentanyl** upon purchase, **110 (95.7%) tested positive for fentanyl/fentanyl analog**
- Of **45** drug samples **presumed to be cocaine/crack** upon purchase, **43 (95.6%) tested positive for cocaine/crack**, but two of the samples also contained fentanyl





Data source: Connecticut Harm Reduction Alliance; samples included based on complete information

DRUG SAMPLE RESULTS, 2023-2024 CONT.

- Of 190 total samples analyzed:
  - **131 (68.9%)** were in **powder form**
    - Other forms included rock, crystal and pills
  - Of the 131 powders, **most (n=85; 64.5%)** were **white or off-white** in color
    - 30 were purple, 8 were blue, 7 were tan, 1 was yellow
  - **172 (90.5%)** were contained in **wax or plastic baggies** with various colors and stamps (e.g., “Papa Smurf”, “Sour Diesel”, “Poison”, “Game of Death”)

Data source: Connecticut Harm Reduction Alliance; samples included based on complete information

DRUG SAMPLE RESULTS, 2023-2024 CONT.

- Of 190 total samples analyzed, 94 (49.5%) were used prior to testing
  - **Injected: 60 (63.8%)**
  - Smoked: 17 (18.1%)
  - Snorted: 11 (11.7%)
  - Ingested orally: 5
  - Unspecified: 1
- Of 94 drug samples used prior to testing:
  - At least **31 (33.0%) caused adverse or abnormal reactions** to the user
  - Reactions included dizziness, weakness, heavy sedation and overdose
  - One sample caused **an overdose** and an **outreach team responded**
  - One sample caused **multiple overdoses** with **at least one fatality**
  - One sample caused **8 total overdoses** with **two fatalities**

Data source: Connecticut Harm Reduction Alliance; samples included based on complete information

CONFIRMATORY TESTING

CONFIRMATORY TESTING

- After drug samples are tested with the Bruker spectrometer, remaining portions are delivered to the State Public Health Lab for confirmatory testing
- Samples are tested using gas chromatography-mass spectrometry (GC-MS)
- Validate and verify the results of the Bruker spectrometer

CONFIRMATORY TESTING RESULTS

- **Confirmatory testing** has been conducted on **108 drug samples** from CTHRA
- **Most (61.1%)** of samples tested positive for **fentanyl**, in line with Bruker results
- **Over half (53.7%)** of samples tested positive for **cocaine**, 2.2 to 2.4 times the percentage found with the Bruker spectrometer
- Both **xylazine and heroin** were **detected more frequently by GC-MS** than with the Bruker
- GC-MS is more sensitive than FT-IR for detecting certain drugs. Both methods have similar sensitivity for fentanyl, but GC-MS is much more sensitive in detecting cocaine

Substance	Number	%
Total	**108**	**100%**
Fentanyl/fentanyl analog	66	61.1%
Cocaine	58	53.7%
Xylazine	56	51.9%
Heroin	18	16.7%

Data source: Connecticut State Public Health Laboratory

INTENDED OUTCOMES

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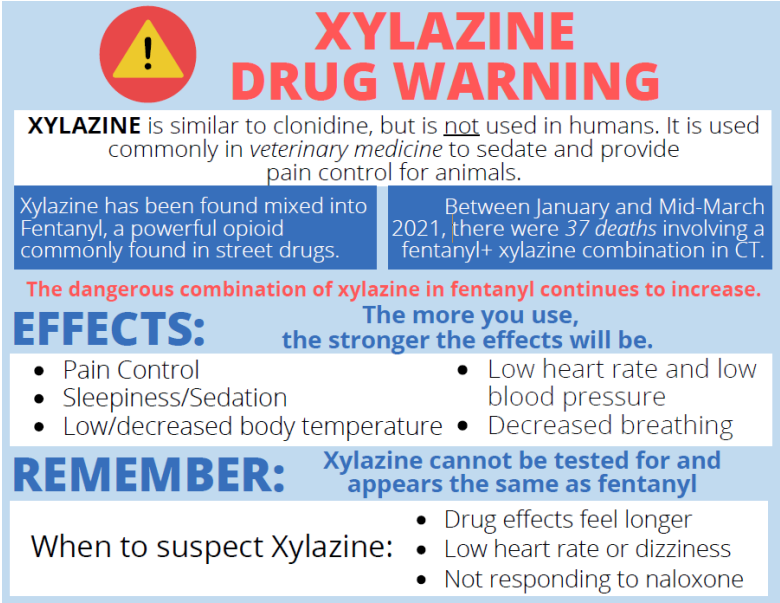
- Provide harm reduction clients with knowledge of the specific substances their drugs contain

- Allow harm reduction clients the opportunity to make better-informed or safer decisions about their drug use to reduce harms

INTENDED OUTCOMES – CONT.

- Allow DPH to track illicit drug trends and respond to emerging dangerous substances in the drug supply in a timelier manner

- Fill gap between forensic testing of drug seizures, clinical toxicology testing following nonfatal overdoses, and postmortem toxicology testing of fatal overdoses



QUESTIONS

Thank you!

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