

CUYAHOGA COUNTY BOARD OF HEALTH

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5550 Venture Drive Parma, Ohio 44130
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Cuyahoga County Board of Health

February 28, 2022
Innovative Surveillance Community of Practice
Local Outbreak Detection Workgroup

Cuyahoga County Overdose Data to Action Surveillance

Information about our Overdose Surveillance Quarterly Bulletin
and Overdose Alerts, including the successes and challenges

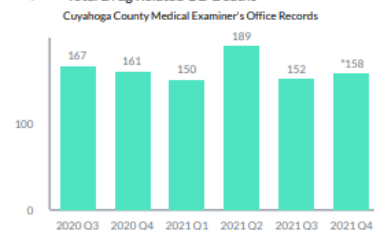
Overdose Data to Action Cuyahoga County, Ohio

Cuyahoga County Board of Health &
Begun Center, Case Western Reserve University

Overdose data surveillance is intended to generate insight to drive more effective prevention and response activities by providing timely dissemination of drug overdose related trends.

Overdose Deaths ↑ 4%

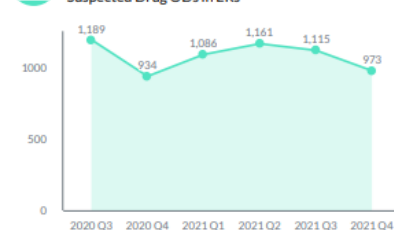
Total Drug Related OD Deaths
Cuyahoga County Medical Examiner's Office Records



*These data are preliminary and subject to change.

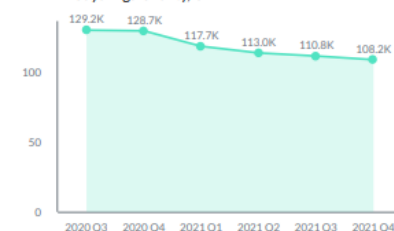
Emergency Room Visits ↓ 12.7%

Suspected Drug ODs in ERs



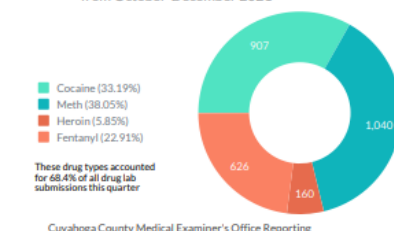
Opioid Prescribing ↓ 2.4%

Opioid Prescriptions Dispensed in
Cuyahoga County, OH



Drug Seizure & Lab Testing

Number of Lab Submissions by Drug Types
from October-December 2021

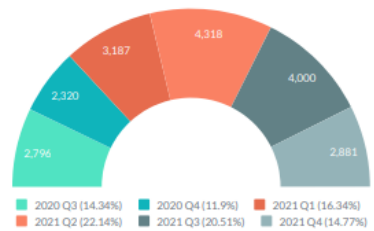


These drug types accounted for 68.4% of all drug lab submissions this quarter

Cuyahoga County Medical Examiner's Office Reporting

Project DAWN ↓ 28%

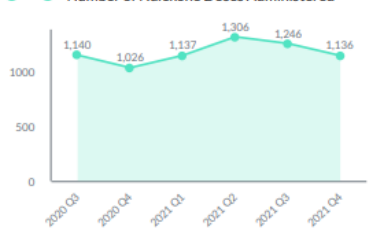
Naloxone Kits Distributed



This data represents state registered Project DAWN programs distributing naloxone in Cuyahoga County. It is not required to register as a Project DAWN program to distribute naloxone in the state.

EMS Naloxone ↓ 8.8%

Number of Naloxone Doses Administered

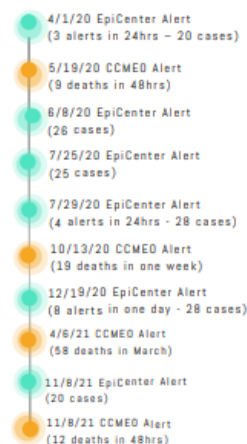


EMS Naloxone administrations are provided by agencies reporting to Ohio EMS



Overdose Alert Periods

(April 2020 - Present)



Data Highlight

Demographic Characteristics of Overdose Alerts
Administered on 11/08/2021

	CCMEO Alert N=12	EpiCenter Alert N=20
Age Group (N)		
18-24	--	20% (4)
25-34	8% (1)	20% (4)
35-49	67% (8)	20% (4)
50-65+	25% (3)	40% (8)
Sex (N)		
Male	42% (5)	50% (10)
Female	58% (7)	50% (10)
Race/Ethnicity (N)		
Black	25% (3)	30% (6)
White	75% (9)	50% (10)
Other	--	20% (4)
Hispanic	17% (2)	--

CCMEO shows trends from 11/06/21-11/07/21 and EpiCenter shows trends from 11/06/21-11/07/21; both alerts were sent out on 11/08/21.

On November 8th, 2021, Cuyahoga County Medical Examiner's Office (CCMEO) issued a public health alert stating that, Cuyahoga County, suffered at least 12 suspected overdose deaths in a two-day period. The toxicology results are still pending, but it has been confirmed that half of the deaths involved fluoro-fentanyl. On that same day, based on EpiCenter data, the Cuyahoga County Board of Health sent out an alert regarding an increase in the number of patients presenting to the emergency departments for suspected drug overdose. This is the first time both alerts (EpiCenter and CCMEO) have been sent out during the same time period. Also, the alerts presented a change of trend; more females than males in the CCMEO alert and both females and males presenting equally in the EpiCenter Alert.

Important Findings / Trends

Increases or decreases are from Q3 2021 to Q4 2021 unless otherwise stated.
2021 data are preliminary and subject to change.

Quarter over Quarter.

Overall, fatal overdoses increased, and non-fatal overdoses decreased over the last quarter. Fatal overdoses increased by 4%. There was also 1 carfentanyl related death in quarter 4.¹

There was a decrease of 12.7% for persons presenting to the emergency departments for suspected drug overdose.²

The majority of all other data indicators decreased from last quarter including opioid prescribing which slightly decreased by 2.4%.³ There was a 28% decrease in the number of Project DAWN naloxone kits distributed in quarter 4 of 2021.⁴ EMS naloxone administrations decreased by 8.8%.⁵

From October to December 2021, methamphetamine ranked highest in number of lab submissions (1,040) closely followed by cocaine (907). While heroin and fentanyl decreased slightly from last quarter, methamphetamine lab submissions increased by 30%, while cocaine lab submissions increased by 3.5% from last quarter. There were zero carfentanyl drug seizures in quarter 4.¹

Statement from the CCMEO:

"Cuyahoga County has seen the recent emergence of two benzimidazole opioids, also referred to as "the nitazenes," involved in overdose fatalities. Through Q1-Q3 the CCMEO has confirmed, 11 isotrizene related fatalities, and 16 metonitazene related fatalities. Most of these fatalities were mixtures also involving fentanyl or its analogs. The nitazenes are potent synthetic opioids, but naloxone should be effective in reversing overdose."

Cuyahoga County Board of Health

<https://www.ccbh.net/overdose-data-dashboards/>

Data Sources and Notes:

¹ Heroin and Fentanyl Related Deaths in Cuyahoga County. December 2021 Update. Cuyahoga County Medical Examiner's Office. Available at [December 2021 Heroin & Fentanyl Cocaine Related Deaths in Cuyahoga County](#)

² Emergency Department Visits for Suspected Drug Overdose Among Cuyahoga County Residents. EpiCenter. Ohio Department of Health. Data used for this report is accessed by the Cuyahoga County Board of Health. Similar data is available to the public at <https://ohio.ohio.gov/web/portals/100/ohio-know-our-programs/violence-injury-prevention-program/suspected-od-dashboards>

³ Ohio Automated Rx Reporting System. Ohio Board of Pharmacy. Available at <https://www.ohio.gov/web/portals/100/ohio-know-our-programs/violence-injury-prevention-program/suspected-od-dashboards>

⁴ Ohio Department of Health, Violence and Injury Prevention Section - Project DAWN Monthly Distribution Logs. Analyzed by Cuyahoga County Board of Health.

⁵ Ohio EMS. Naloxone Administration Doses, by County. "Naloxone Watch" Available <https://www.ems.ohio.gov/#sc.tab=0>

Sources Used for the OD2A Overdose Surveillance Quarterly Bulletin

- Cuyahoga County Medical Examiner Data (CCMEO):
<https://cuyahogacounty.us/medical-examiner/resources/overdose-statistics>
- Project DAWN (naloxone distribution):
<https://www.metrohealth.org/office-of-opioid-safety>
- EpiCenter (Directly from CCBH): Public website -
<https://odh.ohio.gov/know-our-programs/violence-injury-prevention-program/Suspected-OD-Dashboard2>
- EMS System (State of EMS): Naloxone watch -
<https://www.ems.ohio.gov/#gsc.tab=0>
- OARRS Reports Online (PDMP):
<https://www.ohiopmp.gov/stats.aspx>



Quarterly Bulletin Surveillance Data

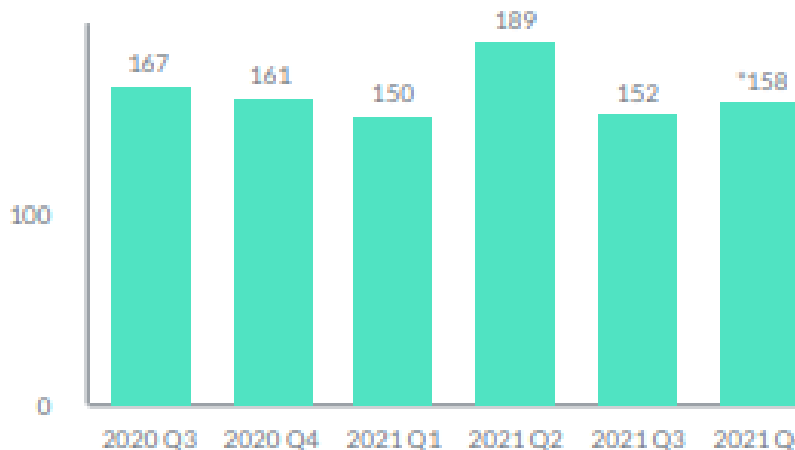


Overdose Deaths

Total Drug Related OD Deaths

Cuyahoga County Medical Examiner's Office Records

↑ 4%



*These data are preliminary and subject to change.

Data Source: Cuyahoga County Medical Examiner's Office (CCMEO) (website)

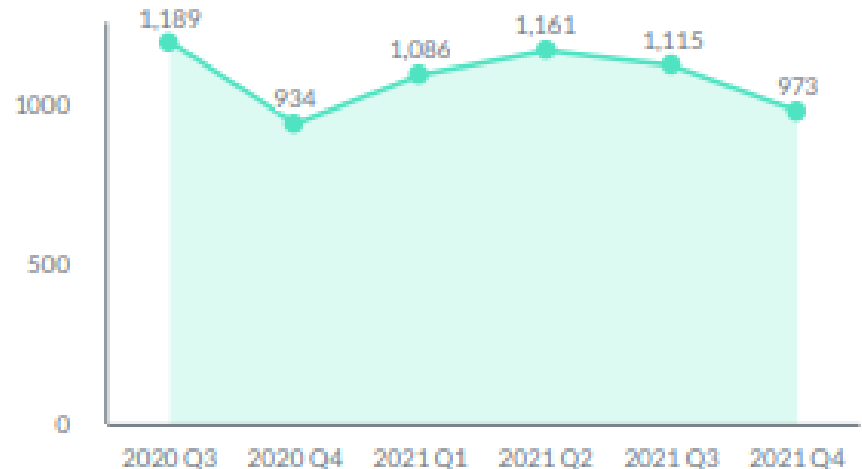
<https://cuyahogacounty.us/medical-examiner/resources/overdose-statistics>



Emergency Room Visits

Suspected Drug ODs in ERs

↓ 12.7%



Data Source: EpiCenter or Ohio Department of Health (website)

<https://odh.ohio.gov/know-our-programs/violence-injury-prevention-program/Suspected-OD-Dashboard2>

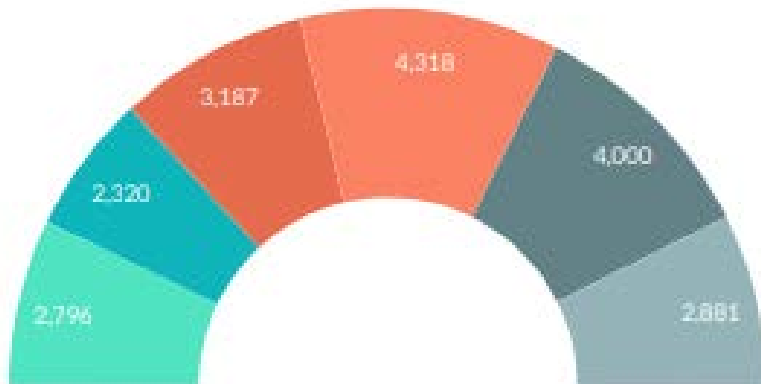
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Quarterly Bulletin Surveillance Data



Project DAWN Naloxone Kits Distributed

↓ 28%



2020 Q3 (14.34%) 2020 Q4 (11.9%) 2021 Q1 (16.34%)
2021 Q2 (22.14%) 2021 Q3 (20.51%) 2021 Q4 (14.77%)

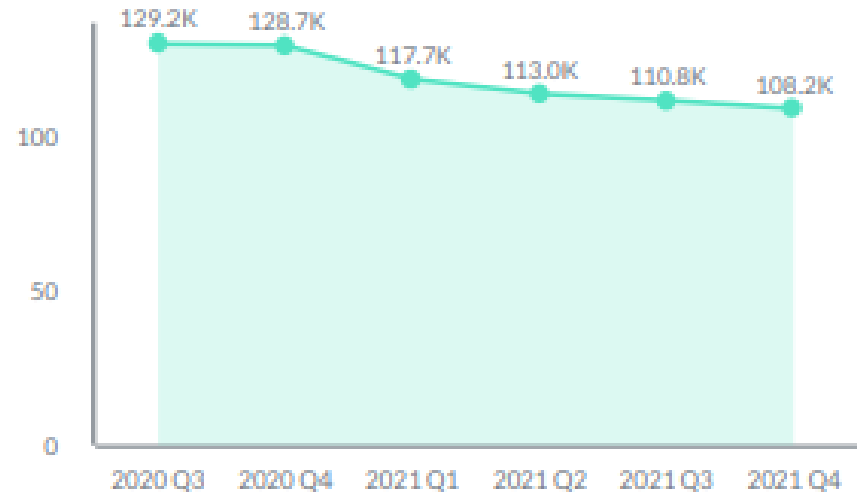
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Data Source: Data Ohio – Project DAWN
Monthly Distribution Log Data (website)
<https://data.ohio.gov/wps/portal/gov/data/view/project-dawn-monthly-distribution-log-data>



Opioid Prescribing Opioid Prescriptions Dispensed in Cuyahoga County, OH

↓ 2.4%



Data Source: Ohio Automated RX Reporting
System (website)
<https://www.ohiopmp.gov/stats.aspx>

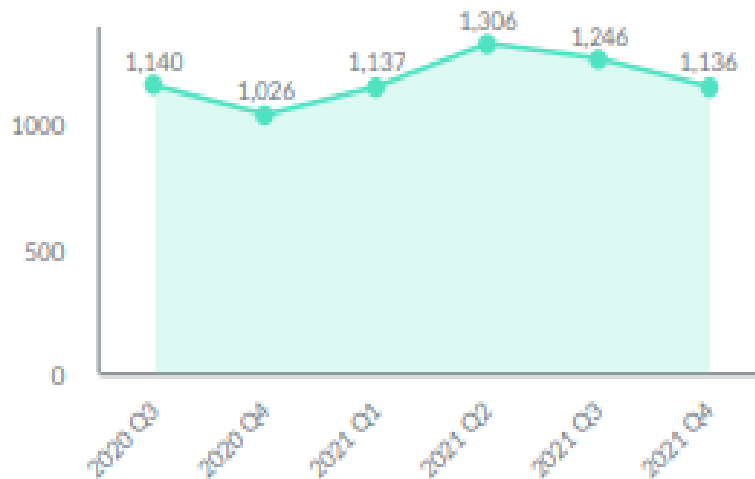
Quarterly Bulletin Surveillance Data



EMS Naloxone

Number of Naloxone Doses Administered

↓ 8.8%



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Data Source: Ohio to Emergency Medical Services (EMS) (website)

<https://www.ems.ohio.gov/#gsc.tab=0>

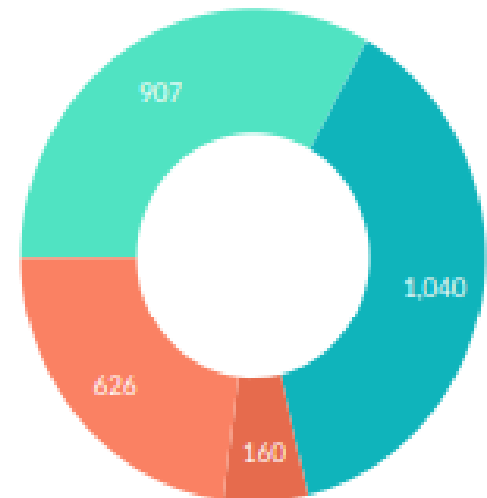


Drug Seizure & Lab Testing

Number of Lab Submissions by Drug Types from October-December 2021

- Cocaine (33.19%)
- Meth (38.05%)
- Heroin (5.85%)
- Fentanyl (22.91%)

These drug types accounted for 68.4% of all drug lab submissions this quarter



Cuyahoga County Medical Examiner's Office Reporting

Data Source: : Cuyahoga County Medical Examiner's Office (website)

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Quarterly Bulletin Surveillance Data



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Quarterly Bulletin Surveillance Data

Quarter 3 Highlight



Agency Highlight

United States Drug Enforcement Administration



On September 27th, 2021, the Drug Enforcement Administration (DEA) issued a public safety alert concerning the alarming increase in the availability of potentially lethal fake prescription pills containing fentanyl and methamphetamine. These counterfeit pills are easy to access, widely available, and often contain deadly doses of fentanyl; killing unsuspecting Americans.

Some of the most common counterfeit pills are made to look like prescription opioids such as oxycodone (Oxycontin®, Percocet®), hydrocodone (Vicodin®), and alprazolam (Xanax®); or stimulants like amphetamines (Adderall®). In the public health alert, the DEA stated that the only safe medications are ones prescribed by a trusted medical professional and dispensed by a licensed pharmacist. Any pills that do not meet this standard are unsafe and potentially deadly.

For more information, visit [One Pill Can Kill \(dea.gov\)](https://www.dea.gov).

Quarter 4 Highlight



Data Highlight

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Administered on 11/08/2021

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EpiCenter Data

- Syndromic surveillance for drug overdoses
- Emergency department chief complaint data
- Updated daily
- EpiCenter Ohio Opioid-Related Classifiers
 - Suspected drug overdose
 - Suspected overdoses involving any opioid
 - Suspected overdoses involving heroin
 - Suspected overdoses involving stimulants

EpiCenter Variables

Variables in the Patient Details for all Suspected Drug Overdose Report

Encounter date	Opioid-related classifications
Visit number	Opioid-related indicators
Age group	Reason
Geography	Discharge ICD
Zip code	Registration ICD
Gender	Triage note
Patient ID	Facility name
Date of birth	Facility city
Age at interaction	Facility state
Race	Surveilled?
Ethnicity	Facility identifier
Discharge date	Provider type
Discharge disposition	

EpiCenter Anomalies

- EpiCenter generates “alerts” when the number of ED visits exceed the expected threshold.

Suspected drug overdose - By Home Anomaly in Cuyahoga County, [REDACTED]

Monitoring of acute care interactions for residents of Cuyahoga County, OH identified 20 interactions. Suspected drug overdose - related classifier). All interactions occurred between November 06, 2021 6:00 AM EDT and November 07, 2021 6:00 AM EST.

Using Recursive Least Squares analysis, these 20 interactions exceed the predicted value of 10.08 and the 4.0 standard deviations

The time of the anomaly was 6:00 AM EST.

Summary

Time of Anomaly	November 7, 2021 6:00:00 AM EST
Time Detected	November 7, 2021 7:06:07 AM EST
Indication	Acute Care Interactions
Classification(s)	suspected drug overdose (ohio opioid-related classifier)
Location	Cuyahoga County, OH
Analysis Method	Recursive Least Squares
Data Conditioning Method	No Data Conditioning
Results of Analysis	20 (Number of Cases)
Records Totaled By	Home Location

[Click here to view this anomaly in EpiCenter](#)



When an Alert is Received...

- Review and analyze anomaly (pull 24-hour and 7-days worth of data)
 - Is this a real alert?
- Create report with demographic information of the alert
 - Demographics include: age, sex, race and zip code
- Contact CCMEIO to see if there has been an increase in number of deaths
- Results shared via email and community stakeholders notified

EpiCenter Alerts 2019 - 2021

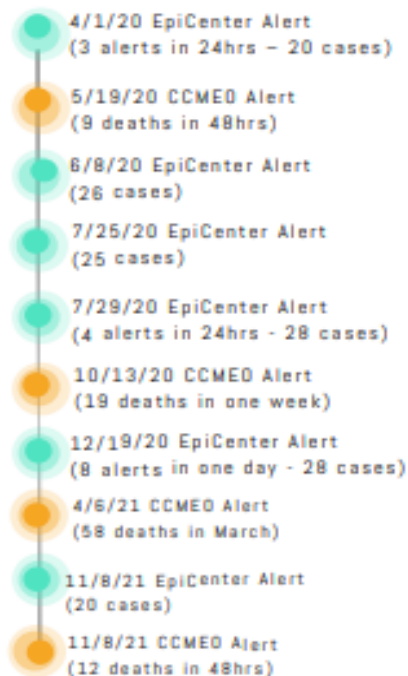
Table 7: Epi-Alerts Administered due to Suspected Drug Overdose, 2019-2020

2019						
2/13/2019	4/8/2019	7/11/2019	8/31/2019	--	--	--
2020						
1/15/2020	2/1/2020	4/1/2020	6/8/2020	7/25/2020	7/29/2020	12/19/2020



Overdose Alert Periods

(April 2020 - Present)



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Lessons Learned

Quarterly Surveillance Bulletin

- Mostly public data, so some time lag, but accessible/replicable
- Data from previous quarters tend to slightly adjust
- Once the bulletin is disseminated, difficult to know who are using the data and how
- Consolidates data and visualizes key indicators for broad consumption
- Highlights trends, emerging issues, and partner work

EpiCenter

- Some hospitals are more systematic and consistent in how they report overdoses compared to others
 - The way encounters are reported reflect the Ohio Opioid-Related Classifiers
- For longitudinal analysis, we cannot see if multiple visits occurred across multiple hospital systems
- Having alert response protocol supports rapid detection and dissemination of outbreaks, and focus on prevention and improvement



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