
Maine's Overdose Data and The Fentanyl Epidemic

Governor's Monthly Opioid Response Webinar, February 2023

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Outline

What do the overdose data show?

Why is this happening?

What is Maine doing about it?

What is an overdose?

- A medical emergency
- In an opioid emergency the body's signals to keep breathing and keep the heart going slow down or stop entirely
- The person experiencing the overdose has no control over this progression. They need others to intervene with CPR and/or naloxone to keep them alive.
- Even when their life is saved, the reduced oxygen supply to the brain may cause trauma to the body's organs, including the brain.
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What is an overdose?

- Opioid overdose severity and presentation can be exacerbated by the presence of co-intoxicants
 - Most individuals experiencing a fatal overdose in Maine have three or more substances in their bloodstream
 - Cocaine, methamphetamine, xylazine
- Both opioid and stimulant overdose symptoms can mimic other emergent medical conditions
- First responders usually do not know what substance(s) are involved in a presumed overdose
 - Positive response to naloxone serves as a proxy

Fatal & Nonfatal Overdoses

- There are thousands of overdoses in Maine every month, and currently **about 10,000 a year**.
- Some people have multiple overdoses in a year.
- Of those 10,000, **about 7% are fatal**.

- **93% of the time, people who have overdoses are saved by people with them, EMS, or the emergency department.**
- We know a lot about the fatalities, but we are learning more about nonfatal overdoses.

Investigating *Fatal* Overdoses

- By Maine law, all deaths that are traumatic, unnatural or suspicious must be reported to the Office of Chief Medical Examiner. **This includes all suspected fatal overdoses.**
- **Purpose: to document who died, where they died, and the determine the cause and manner of death**
- All suspected fatal overdoses are investigated:
 - Physical examination
 - Comprehensive toxicology testing for a wide range of pharmaceutical and illicit substances
 - Review of medical records
 - About 10-20% have complete autopsies (fewer during pandemic)

Tracking Overdoses in Maine

- Maine has been reporting on fatal drug overdoses since 2002, supported by the Office of Chief Medical Examiner and Office of Attorney General –**annual reports**
- Starting in 2016, we have participated in the U.S. C.D.C.'s fatal overdose surveillance, collecting many variables about accidental overdoses, including circumstances –**federal public health surveillance**
- Starting in 2021, we have been providing **monthly reports** to the public on **fatal and nonfatal** overdoses --circumstances, victims, distribution around the state—supported by both the Office of Behavioral Health and the Office of Attorney General, and collaboration of the Office of Chief Medical Examiner.

Maine Drug Data Hub

- The Annual and Monthly overdose reports are posted on Maine's "Drug Data Hub"
- mainedrugdata.org

Monthly Overdose Report

- Reports data from the previous month, and year-to-date
- Most recent 1-2 months –suspected and confirmed drug deaths
- The suspected drug death totals are not final and are likely to change slightly during the following 1-2 months.
- We don't have a final number for 2022.

Fatal overdoses are increasing

- 2019 -----380 ...7% increase
- 2020-----504 ...33% increase (pandemic)
- 2021-----631 ...25% increase (pandemic)
- 2022 est---716 ...**13.5%** increase
 - **Fatal + nonfatal.. 4.5% increase**

Brief History

- 1996 Release of OxyContin (synthetic opiate) by Purdue Pharma
 - False advertising:
 - If pain, you can't get addicted
 - OxyContin less addicting
- Rise of movement in medical care to treat pain as “the fifth vital sign”
 - Rise of excess prescribing
- By 2002, deaths in Maine had increased, mostly due to misuse of prescription drugs: 34 drug deaths in 1997, 165 in 2002

Fentanyl Supply Explosion in 2012

- Fentanyl is a synthetic opioid manufactured in China and shipped to drug cartels in Mexico for distribution.
- Fentanyl can be synthesized with common industrial chemicals – much easier than growing opium poppy.
- Higher purity/potency of fentanyl vs. opium/heroin means much smaller amounts are needed for same opioid effect.

Proportion of deaths due to fentanyl has been increasing since 2012

2020 67%

2021 77%

2022 est. 79%

Note: Multiple substances usually involved in an overdose fatality, but fentanyl identified as the ultimate cause of death

Fentanyl is extremely lethal

- 25X more potent than oxycodone
- 50-100X more potent than heroin
- Very fast-acting
- Fentanyl contamination frequently unknown to the user
- Fentanyl concentration uneven and unknown to user

<https://www.ncbi.nlm.nih.gov/books/NBK537482/table/appanex6.tab2/>

Fentanyl Lethality is Multifactorial

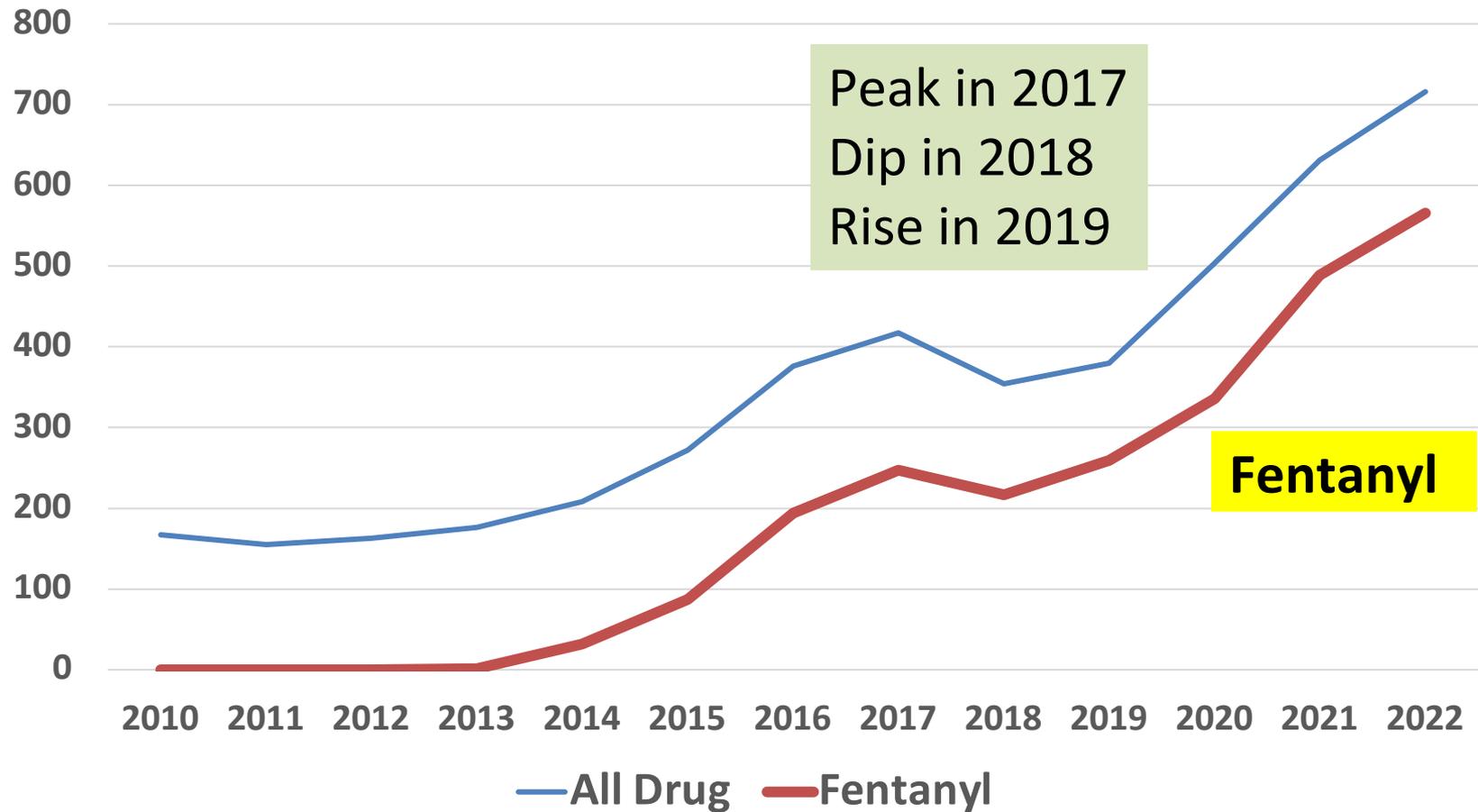
- Accidental, in-the-moment events due primarily to **lethality**
 - More toxic in much smaller amounts, **easy to misjudge dose**
 - Faster-acting: **in seconds**, frequently before they remove needle
 - **“Wooden chest syndrome”** unique with fentanyl --can prevent resuscitation without inserting airway
 - Hidden as **additive in other types of drugs**: users often unaware
- Users frequently using alone: **isolation –about 80%**
 - Discovery and rescue attempts often too late (need immediate response with fentanyl)
 - Naloxone may not be readily available; may wear off
 - Pandemic has made this worse

Maine Reflects National Trends

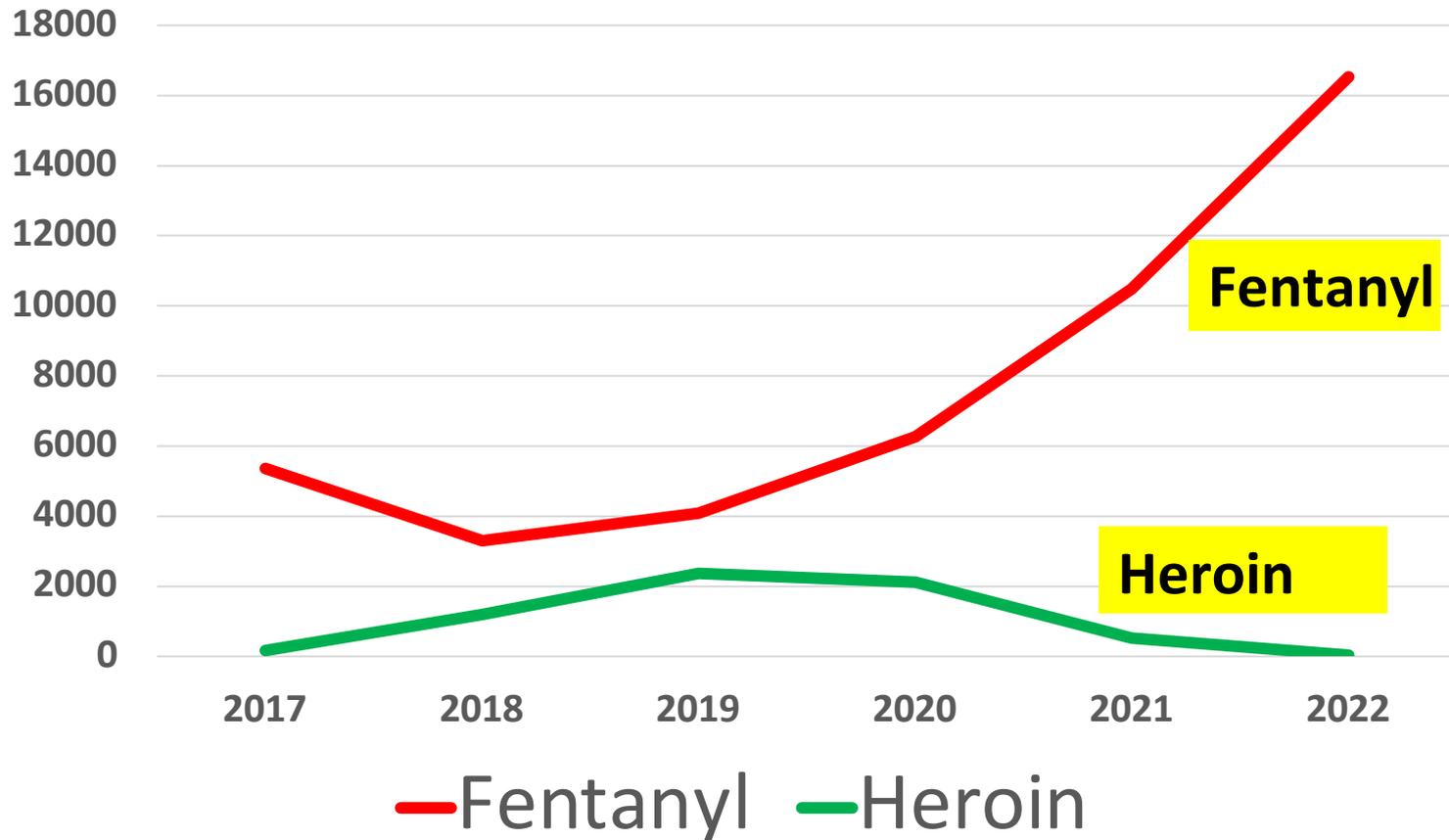
Drug deaths are being driven by fentanyl lethality in Maine and nationally

- Began in 2012
- Growth nearly exponential
- Recent mixing with stimulants like cocaine, methamphetamine
- Beginning to see xylazine (veterinary sedative) in Maine

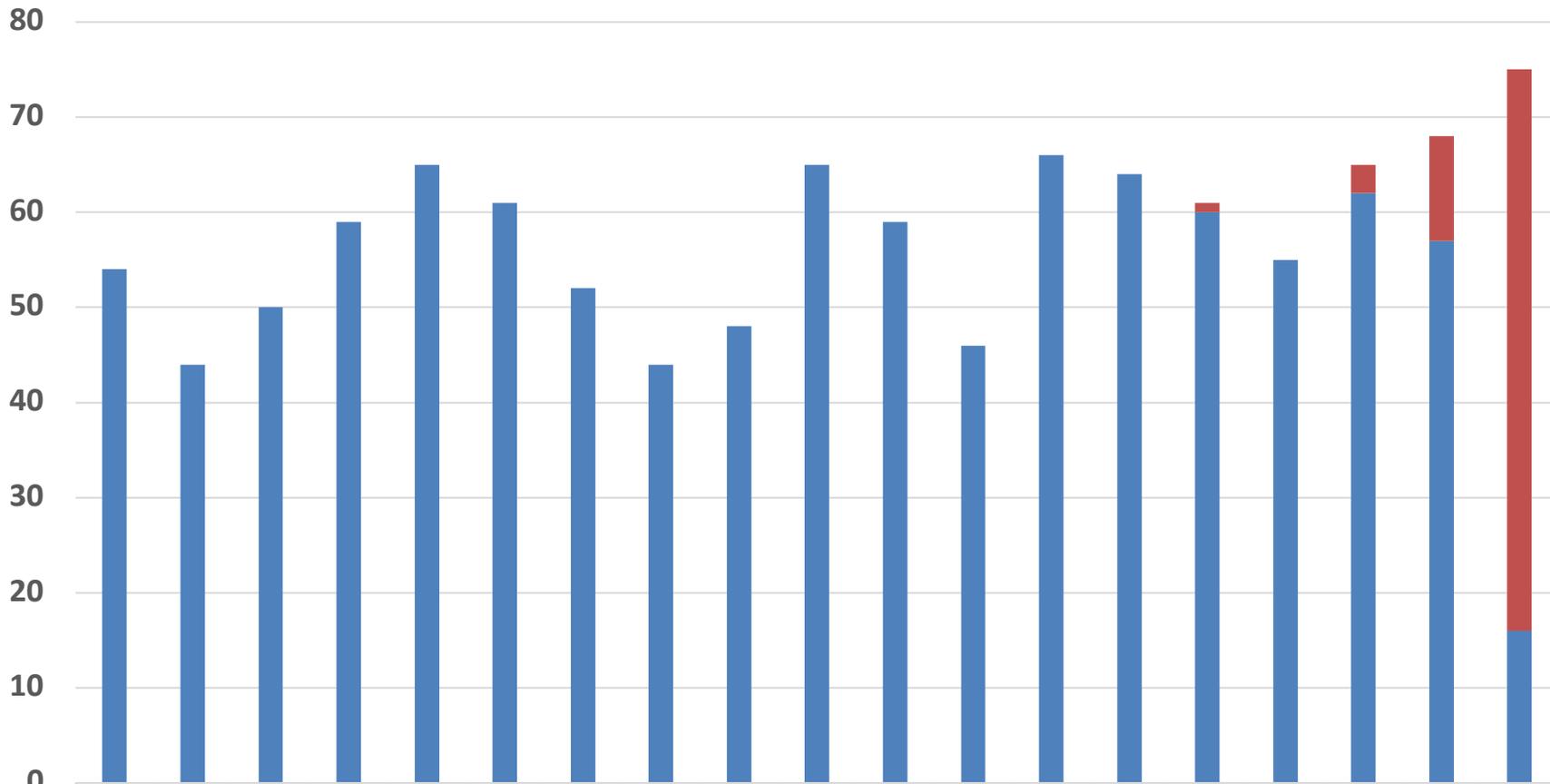
All Drug Deaths vs. Fentanyl Drug Deaths



Illicit Opioid Seizures by MDEA



Confirmed and Suspected Overdoses



	JUN '21	JUL '21	AUG '21	SEPT '21	OCT '21	NOV '21	DEC '21	JAN '22	FEB '22	MAR '22	APR '22	MAY '22	JUN '22	JUL '22	AUG '22	SEP '22	OCT '22	NOV '22	DEC '22
■ Suspected	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	11	59
■ Confirmed	54	44	50	59	65	61	52	44	48	65	59	46	66	64	60	55	62	57	16

COMPARE 2021 & 2022

2021

- 77% Fentanyl
- 27% Methamphetamine
- 25% Cocaine
- 18% Pharmaceutical opioids
- 4% Heroin

2022

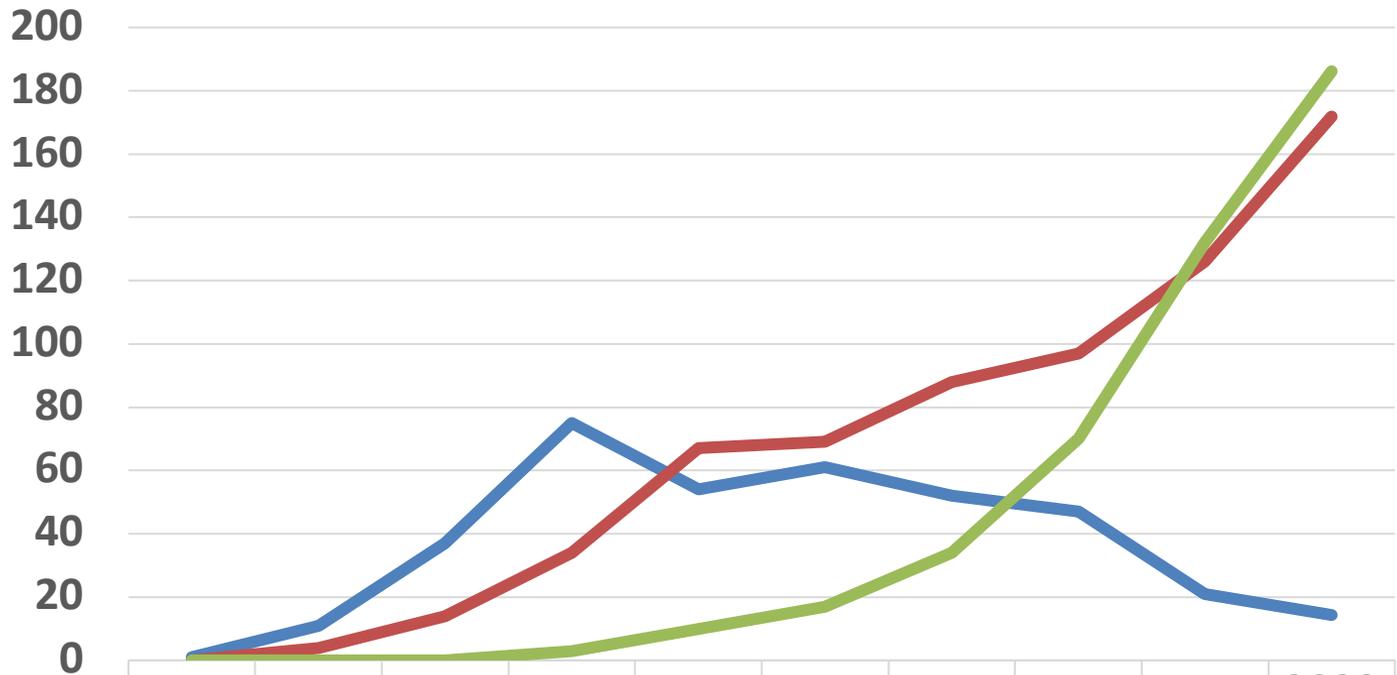
- 79% Fentanyl
- 29% Methamphetamine
- 30% Cocaine
- 20% Pharmaceutical opioids
- 2% Heroin

Increasing Polysubstance Use

Maine overdose death certificates show **fentanyl mixed** with other potent illicit drugs

- Average of 3 drugs listed on death certificate
- 43% with cocaine, methamphetamine, or both
- 20% with pharmaceutical opioids (most NOT prescribed)
- 6% with xylazine (new since 2019)

Changing Fentanyl Co-Intoxicants



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 est.
Fentanyl + Heroin	1	11	37	75	54	61	52	47	21	14
Fentanyl + Cocaine	0	4	14	34	67	69	88	97	126	172
Fentanyl + Meth.	0	0	0	3	10	17	34	70	132	186

FATAL OVERDOSES 2022

716 Cases

Naloxone administration at the scene

- 82 (11%) Cases: **Witness/Bystander** naloxone administration
- 98 (14%) Cases: **EMS** naloxone administration at the scene
- 53 (7%) Cases: **Police** naloxone administration

EMS involvement with 577 fatal overdoses

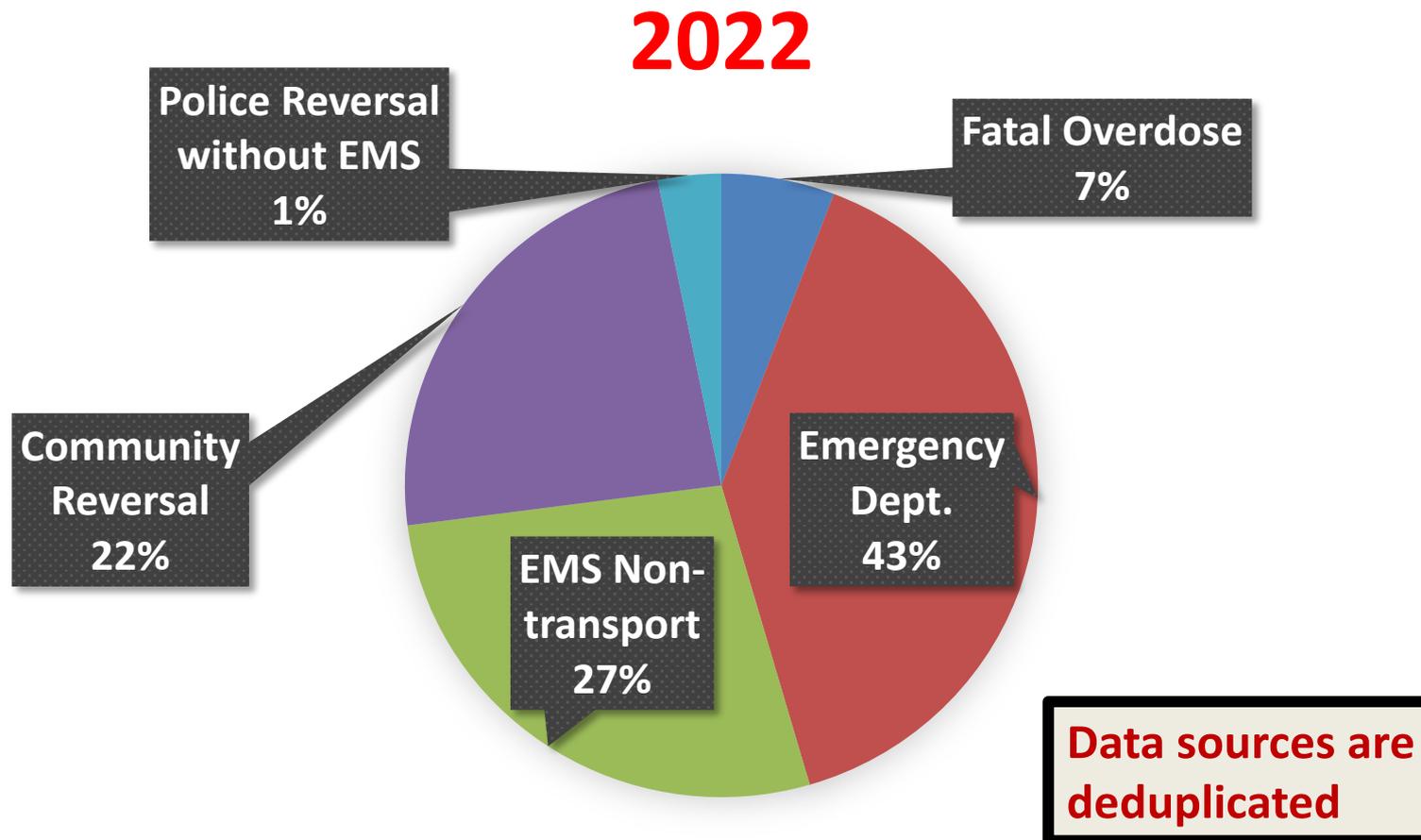
- 300 (52%) Cases EMS arrived and patient already deceased
- 191 (33%) Cases EMS attempted resuscitation at scene without success
- 86 (15%) Cases EMS transported, but patient did not survive

NONFATAL OVERDOSES 2022

9,394 Cases

- 4,372 **Emergency Department**, most are **EMS** transports from the scene
- 2,736 **EMS** successful overdose reversal; refused transport
- 2,213 **Community member** successful overdose reversals
- 1,719 **Law enforcement** overdose incidents
 - 462 **Law enforcement** successful overdose reversals

Maine's Monthly Overdose Report (fatal + nonfatal) Posted at mainedrugdata.org



2022

Overdose Type: De-duplicated totals	Number	Percent
Fatal	716	7%
EMS-Non Transport	2736	27%
Community Reversals	2213	22%
Law Enforcement/ <u>No EMS</u>	73	1%
Emergency Dept.	4372	43%
TOTAL FATAL	716	7%
TOTAL NONFATAL	9,394	93%
TOTAL OVERDOSES.	10,110	100%

Critical Role of Community Naloxone Administration

- Need immediate response with fentanyl overdose. **Seconds count.**
- Possible delay in ambulance arrival due to rural distance or work force shortage
- Reduce pressure on emergency responders (EMS/ED/police)

Demographic Factors Associated with Fatal Overdoses

- 73% Male
- Less than 1% under 18
- 41% age 18-39
- 46% age 40-59
- 13% age 60 plus

Other Factors Associated with Fatal Overdoses

- 93% identify as white
 - 2% identify as Black/African American
 - 2% identify as American Indian
 - 2% identify as other or multiple races
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- 8% report military background
 - 11% undomiciled or transient housing
 - 37% history of prior overdose
 - 17% seen in hospital within prior month

Overdose Deaths as Evaluation Measure?

- Overdose deaths are not the best outcome measure of success or failure of state SUD programs.
- Deaths are a biased sample of drug use
 - lethal drugs are over-represented
 - older people with more medical problems are over-represented
 - Deaths are the result of multiple accidental factors
- Fentanyl supply rises and falls due largely to international drug trafficking

Policy Evaluation Measures

- Reduction in both nonfatal and fatal overdoses as a whole
- Improved overdose emergency engagement & response
- Increased post-overdose response capacity & engagement
- Increased treatment capacity
- Increased recovery support capacity
- Increased harm reduction capacity
- Reduced stigma and marginalization
- Effective primary prevention, public awareness & education, and early intervention

Collective Impact: Reducing Overdose

Coordination and collaboration among disparate agencies focused on a common purpose

Governor's Office

Office of Behavioral Health

Office of the Attorney General

Maine CDC

Department of Public Safety

Maine EMS

Office of Child and Family Services

Office of MaineCare Services

Department of Corrections

Department of Education

Local public health agencies

Community organizations

Harm reduction organizations

Behavioral health providers

Medical organizations

Reasons for Increasing Deaths

FENTANYL INVOLVEMENT

1. Fentanyl lethality--toxic, fast-acting, “wooden chest”
2. Increased drug supply (law enforcement data)
3. Less lethal drugs (stimulants) are contaminated with fentanyl
4. Fentanyl concentration requires more naloxone doses
5. Fentanyl contaminated with drugs that don't respond to naloxone (stimulants, xylazine)

OTHER FACTORS

1. Unwitnessed drug use –no one to intervene, or a delay
2. International drug trafficking -- resistant to Maine policies
3. Work force shortages –still limit Maine's treatment capacity