
Maine's Overdose Data and The Fentanyl Epidemic

Marcella H. Sorg
Rural Drug & Alcohol Research Program
Margaret Chase Smith Policy Center
University of Maine

Outline

What do the overdose data show?

Why is this happening?

What is Maine doing about it?

Drug deaths are increasing despite efforts by public health & public safety

- 2019 -----380 ...7% increase
- 2020-----515 ...36% increase
- 2021 est.–636 ...23% increase

Proportion of deaths due to fentanyl has been increasing

2020 336.....67%

2021 est. 490.....77%

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

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

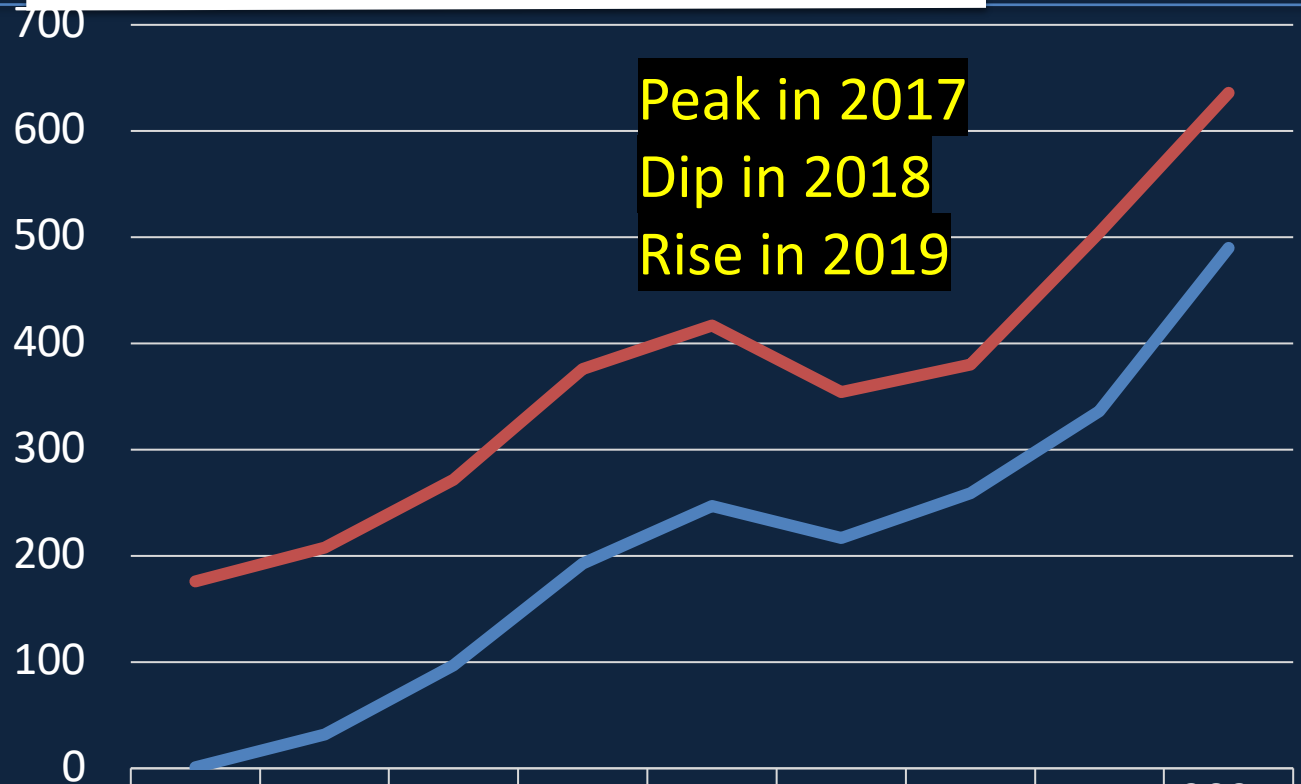
Maine Reflects National Trends

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

- Began in 2013
- Growth nearly exponential
- Recent mixing with cocaine & methamphetamine

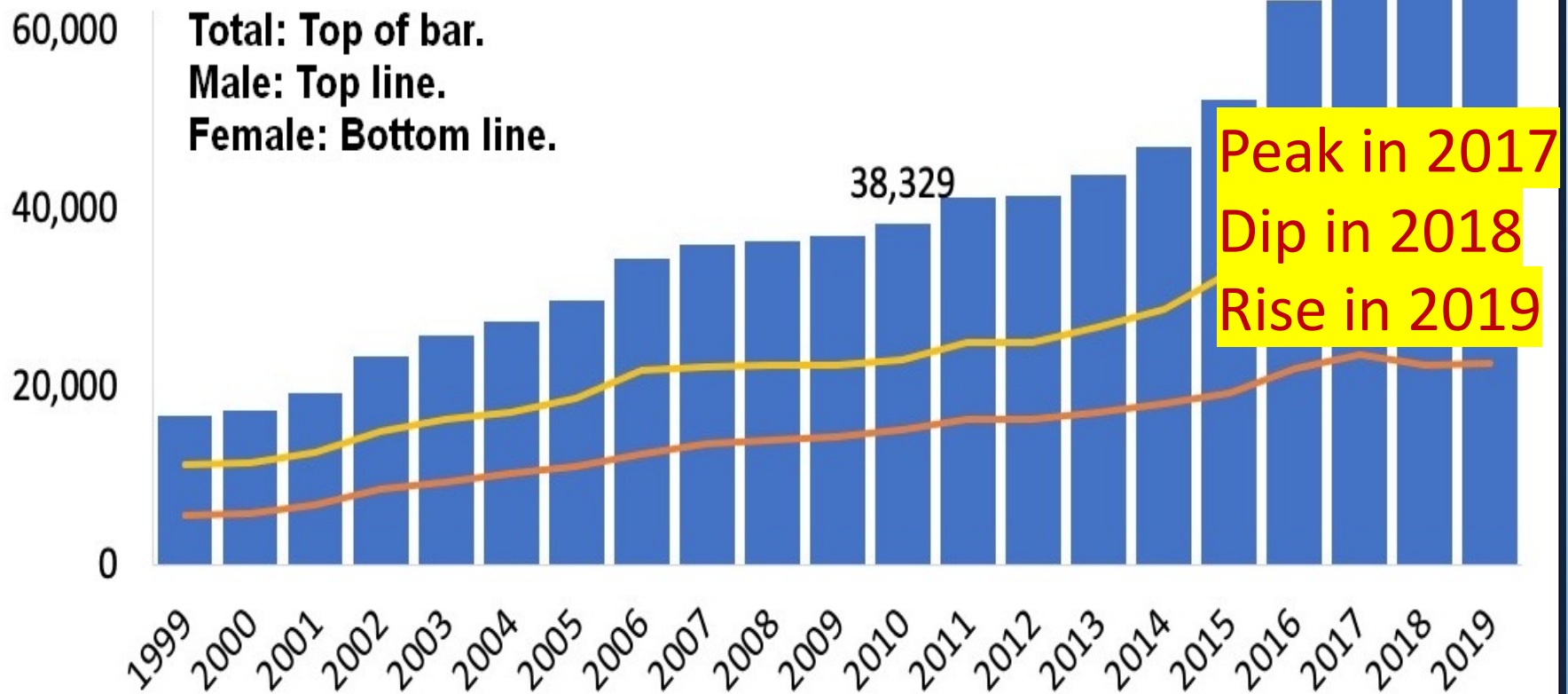
Rise and fall of Maine drug death numbers mirrors national trends

Number of Fentanyl Deaths Compared with Number of all Drug Deaths



	2013	2014	2015	2016	2017	2018	2019	2020	2021 EST
Fentanyl deaths	1	32	97	193	247	217	259	336	490
All drug deaths	176	208	272	376	417	354	380	504	636

USA. National Drug-Involved Overdose Deaths. Number among all ages, by gender, 1999-2019.



Percent of Drug Deaths due to Fentanyl

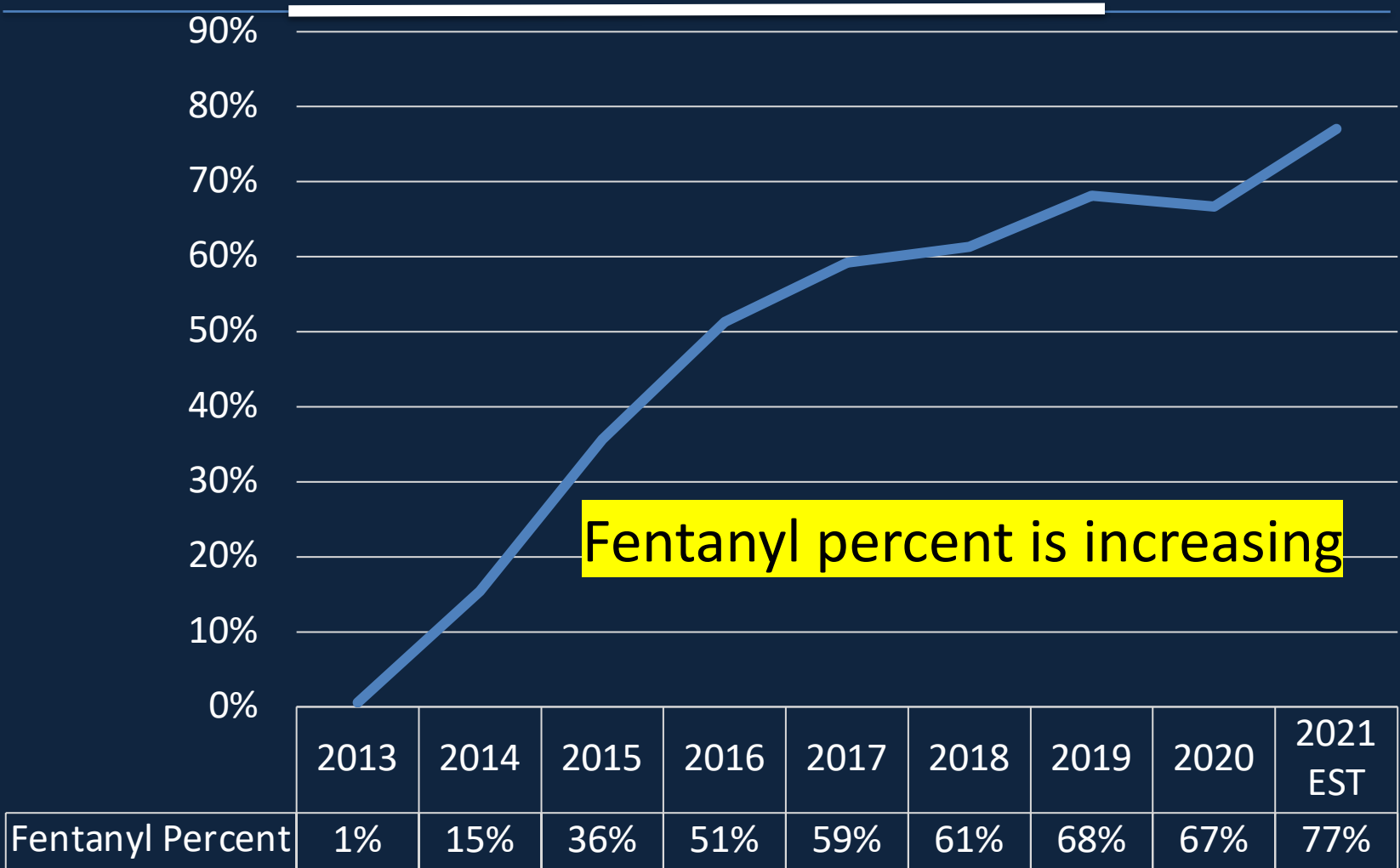
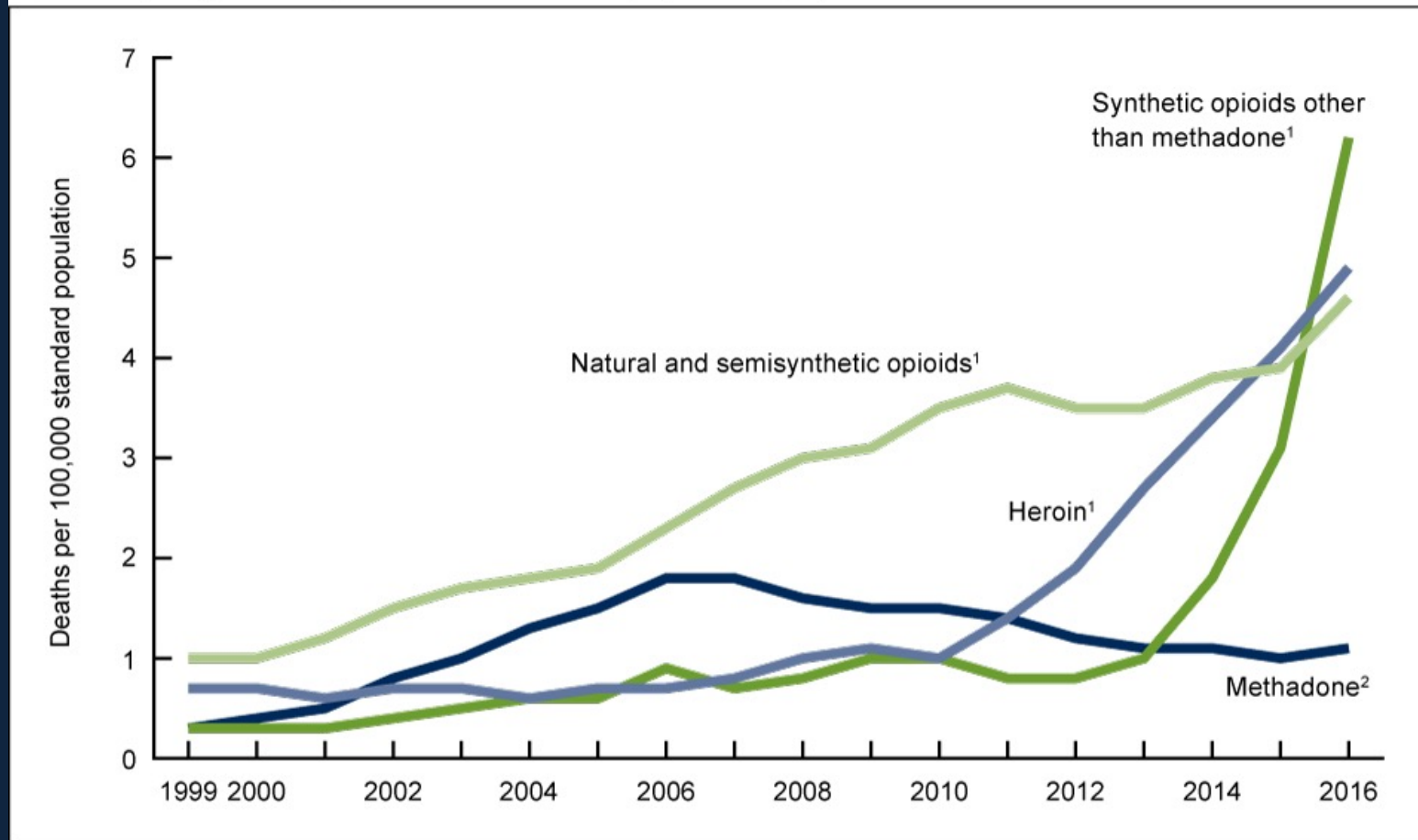


Figure 4. Age-adjusted drug overdose death rates, by opioid category: United States, 1999–2016



¹Significant increasing trend from 1999 to 2016 with different rates of change over time, $p < 0.05$.

²Significant increasing trend from 1999 to 2006, then decreasing trend from 2006 to 2016, $p < 0.05$.

NOTES: Deaths are classified using the *International Classification of Diseases, Tenth Revision*. Drug-poisoning (overdose) deaths are identified using underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Drug overdose deaths involving selected drug categories are identified by specific multiple-cause-of-death codes: heroin, T40.1; natural and semisynthetic opioids, T40.2; methadone, T40.3; and synthetic opioids other than methadone, T40.4. Deaths involving more than one opioid category (e.g., a death involving both methadone and a natural or semisynthetic opioid) are counted in both categories. The percentage of drug overdose deaths that identified the specific drugs involved varied by year, with ranges of 75%–79% from 1999 to 2013, and 81%–85% from 2014 to 2016. Access data table for Figure 4 at: https://www.cdc.gov/nchs/data/databriefs/db294_table.pdf#4.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Fentanyl Supply

Fentanyl is a synthetic opioid manufactured in China, and shipped to drug cartels in Mexico for distribution.

Easier to manufacture than to grow heroin.
Smaller amounts to ship because much smaller amounts are needed for same opioid effect.

Overdose Deaths

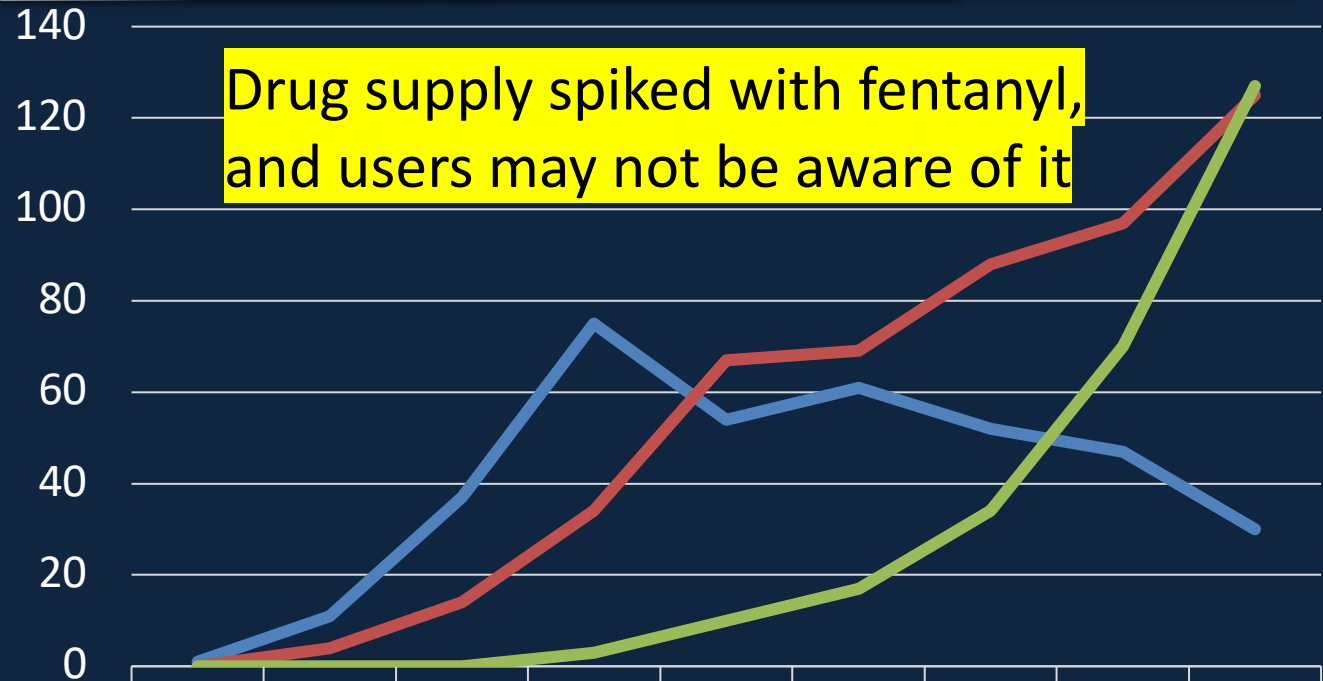
- Overdose deaths are not the best outcome measure of success or failure of state SUD programs.
- Deaths are a biased sample of SUD -- lethal drugs are over-represented
- Fentanyl supply rises and falls due largely to international drug trafficking

Additional Fentanyl Complications

Overdose death toxicology reports in Maine show that fentanyl is being mixed with other potent illicit drugs, especially

- 46% with cocaine or methamphetamine, or both
- 16% with pharmaceutical opioids (most NOT prescribed)
- 10% with xylazine (new in 2021)

Fentanyl Co-Intoxicants



	2013	2014	2015	2016	2017	2018	2019	2020	2021 EST
Fentanyl + Heroin	1	11	37	75	54	61	52	47	30
Fentanyl + Cocaine	0	4	14	34	67	69	88	97	125
Fentanyl + Meth	0	0	0	3	10	17	34	70	127

Fentanyl Overdoses

- Accidental, in-the-moment events due primarily to **lethality**
 - More toxic in much smaller amounts, easy to misjudge dosing
 - Faster-acting: 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**
 - Discovery and rescue attempts often too late (need immediate response with fentanyl)
 - Naloxone may not be readily available
 - Pandemic has made this worse

Impacts of Pandemic on Maine Overdoses Reported by Providers who also Distribute Naloxone

- Reduced social supports: “all those safety nets are gone”
- Increased psychological stressors: “stress tolerance is lower”
- Reduced treatment access and changing modalities
 - Treatment work force is reduced
 - Marginalized populations don’t have access to phones and computers for telehealth services
- Isolation --reduced opportunity for bystanders to save lives
- Drug supply limitations –people taking more risky substances & may not be aware of contamination
- Public safety work force is reduced

(SOURCE: Armstrong 2022)

Interventions to Prevent Fatal Overdoses

Keeping people alive until they get treatment

- Naloxone (Narcan)
- Increasing supply of naloxone in community
- Distribution to those who will be bystanders
- In 2021 Maine Naloxone Distribution Initiative distributed 77,480 doses Jan-Nov (about \$2.9M)
- Get people into treatment –just one example
 - OPTIONS program referred 263 & distributed 909 doses of naloxone in their first program year.

What about other drugs?

- Most deaths induced by opioids, alone or in combination with other drugs (average = 3 listed on death certificate)
- Medical examiner procedure in identifying causal substances
- 258 accidental overdoses Jan-Jun 2021
 - 100% had one or more opioids listed as cause
 - 88% had fentanyl listed

What about Nonfatal Overdoses?

- New in 2021: **Monthly Overdose Report** (mainedrugdata.org)
- Deaths represent 7% of reported overdoses in 2021 January through November
- We saved 93% of overdose victims Jan-Nov 2021
 - Reported nonfatal overdoses 8619
 - Suspected & confirmed fatal overdoses 578

January - November 2021

Overdose Type: De-duplicated totals	Number	Percent
Fatal	578	7%
EMS-Non Transport	2186	25%
Community Reversals	1876	22%
Law Enforcement/ <u>No EMS</u>	12	<1%
Emergency Dept.	3967	46%
TOTAL FATAL	578	7%
TOTAL NONFATAL	8,041	93%
TOTAL OVERDOSES.	8,619	100%

New: Overdose Review Panel

- LD 1718 Established Overdose Review Panel
- 15 Panelists
- Examine individual histories, make recommendations
- Fatal and nonfatal overdose case review
- Focus first on people recently discharged from jail or prison who died of overdose
- Using medical examiner file data and expanding from there

Police Officers Administer Narcan

Law enforcement participation in Narcan distribution & administration

- In 2021 the Office of Attorney General distributed 5,384 doses of Narcan to law enforcement agencies/departments
- Officers participated in saving 327 overdose victims in 2021

Law Enforcement Emergency Response

- In 2021 (through Oct) law enforcement officers reported to ODMAP responses to
 - 829 nonfatal overdoses
 - 386 emergency co-response with OPTIONS liaisons
 - 99 fatal overdoses
- Law enforcement officers respond to the overwhelming majority of fatal overdoses
 - Jan-Oct law enforcement without EMS --89 (17%)
 - Jan-Oct law enforcement with EMS – 398 (77%)

Naloxone & Overdose Death Scene

- The complexity of naloxone administration among medical examiner cases with EMS presence Jan-Nov
 - 49% already deceased upon EMS arrival
 - 36% of had naloxone administered, up from 33% in 2020
 - 11% had naloxone administered by bystander, up from 4% in 2020
 - Usually naloxone was given also by EMS and often by police as well
 - Sometimes all three: bystanders, EMS and police

What we don't know

- Precise prevalence of substance use disorder in Maine
 - Best evidence is from National Survey of Drug Use and Health, estimated 8.6% in 2019 –approximately 116,000
 - Soon we will have more data from treatment admissions
- Data about what drugs are being used, e.g., among non-fatal overdoses, or more generally by people who use drugs
 - We can assume the deaths are NOT a representative sample of drug use generally (e.g., more lethal drugs, more IV drug use).
 - This is another reason the drug death statistics are not a valid measure for evaluating effectiveness of SUD policies and initiatives

Treatment Data (Medicaid Claims)

	N=22,080	Substance associated with claim
2805	12.7%	Alcohol
0	0.0%	Amphetamines
488	2.2%	Cannibas
412	1.9%	Cocaine
9	0.0%	Hallucinogens
0	0.0%	Inhalants
21	0.1%	Nicotine
15704	71.1%	Opioids
348	1.6%	Other Stimulants
206	0.9%	Multiple psychoactive substances
68	0.3%	Sedatives/hypnotics/anxiolytics/tranquilizers/barbiturates

Fatal Overdose Data

- **All manners** of death, Jan-Jun 2021
- 88% Opioid
- 77% Fentanyl
- 26% Methamphetamine
- 25% Alcohol
- 23% Cocaine
- 23% Pharmaceutical opioids
- 14% Benzodiazepines
- **What about other pharmaceuticals?**

SUMMARY

Four Primary Reasons for Increasing Deaths

- 1. Fentanyl** --toxic, fast-acting, “wooden chest,” hidden in supply & very available
- 2. Isolation** –made worse by pandemic. People are using alone, but fentanyl users need instant response of bystanders with naloxone, plus reduced stigma and more naloxone availability in community
- 3. International drug trafficking** -- resistant to Maine policies
- 4. Work force shortages** --reducing Maine’s treatment capacity and slowing our attempts to increase that capacity

Summary

News is Not All Bad

- Maine has countered with strong naloxone distribution and emergency response, saving lives 93% of the time.