

National Center for Injury Prevention and Control

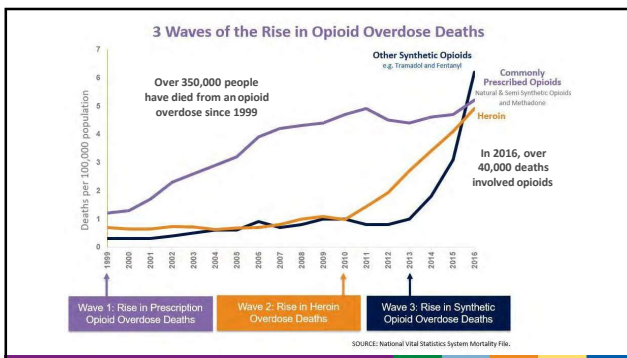

Enhancing Opioid Overdose Surveillance in States

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National Association of Medical Examiners
2018 Annual Meeting


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Pillars of CDC Activity

- **Improve data** quality and track trends
- **Strengthen state efforts** by scaling up effective public health interventions
- **Supply healthcare providers with resources** to improve patient safety
- **Collaborate with public safety** to respond quicker and more effectively
- **Empower consumers** to make safe choices







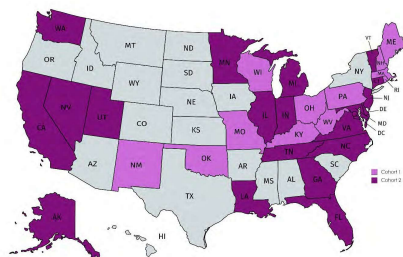
CDC's Enhanced State Opioid Overdose Surveillance (ESOOS) Program

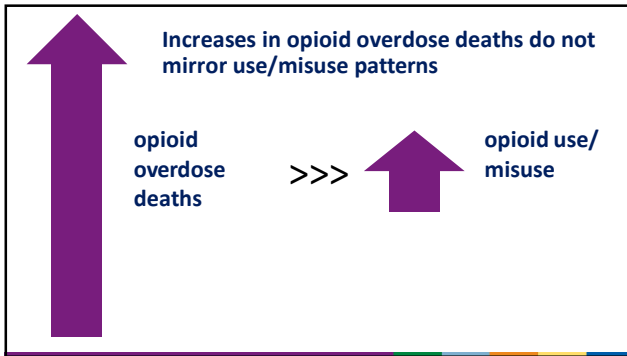
- **Strategy One: Increase timeliness of non-fatal opioid overdose reporting**
 - Use syndromic surveillance to establish an early warning system to detect sharp increases or decreases in non-fatal opioid overdoses
 - Three indicators: suspected all-drug, opioid, and heroin overdoses
- **Strategy Two: Increase timeliness and comprehensiveness of fatal opioid overdose reporting**
 - Capture detailed information on toxicology, death scene investigations, and other risk factors that may be associated with a fatal overdose.
- **Strategy Three: widespread dissemination**
 - Rapidly disseminate surveillance findings to key stakeholders working to prevent or respond to opioid overdoses

Funding for Enhanced Toxicology Testing

- Supplemental funding for all ESOOS-funded states
- 40% of base funding
 - 60% of supplemental funds must go directly to ME/Cs to support comprehensive toxicology testing
 - If ME/Cs already fully funded for testing, can use funds for other innovative projects to improve timeliness/comprehensiveness of data

Funded ESOOS states

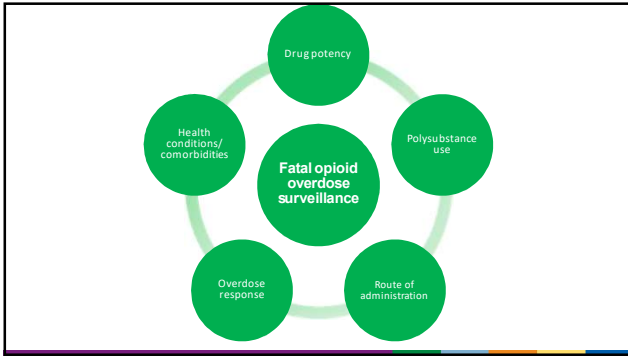


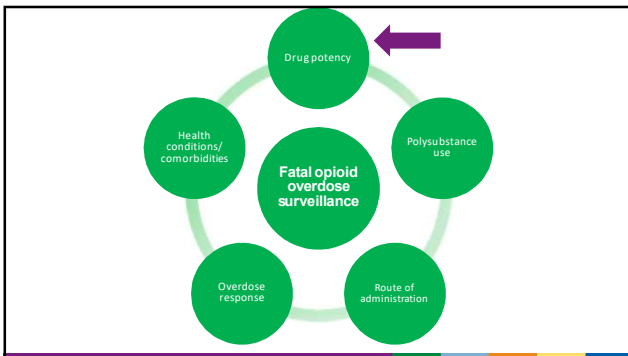


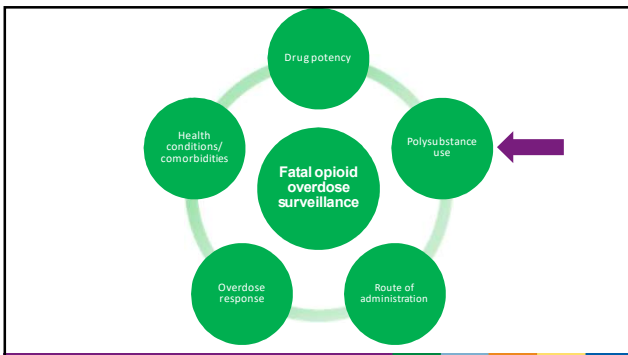


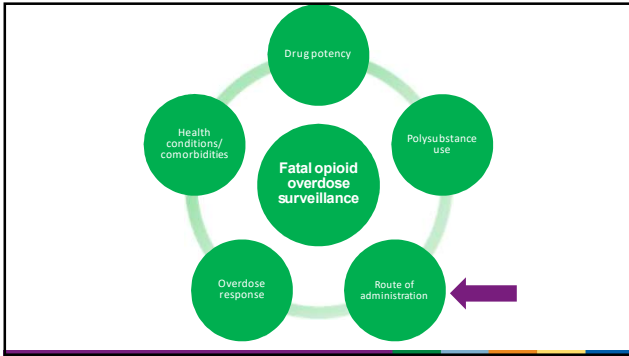
If use is not increasing substantially,

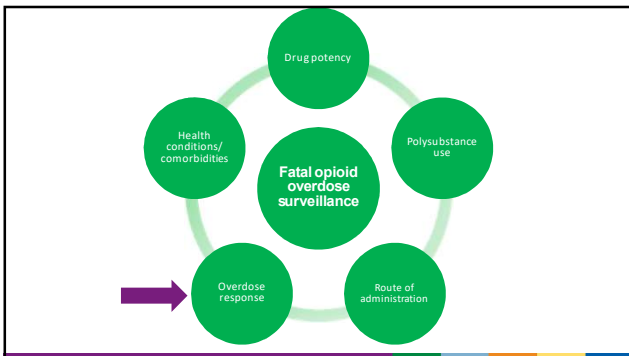
why are people dying?

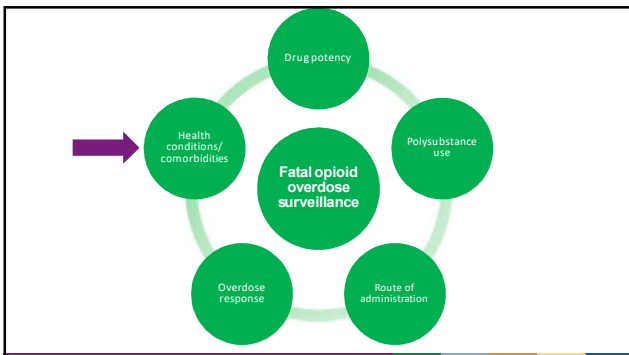


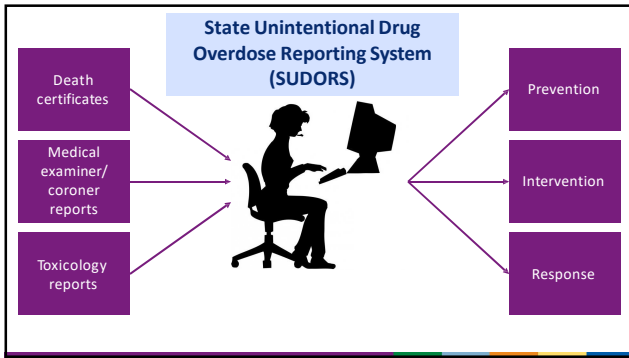


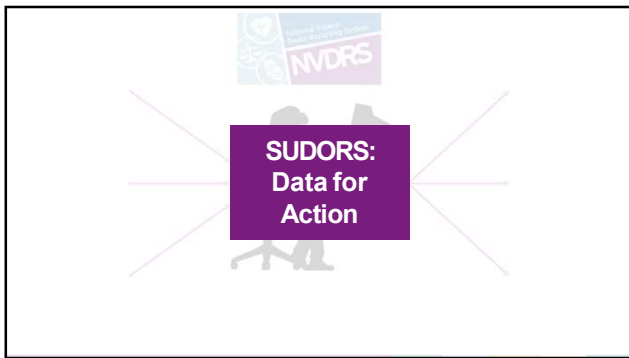


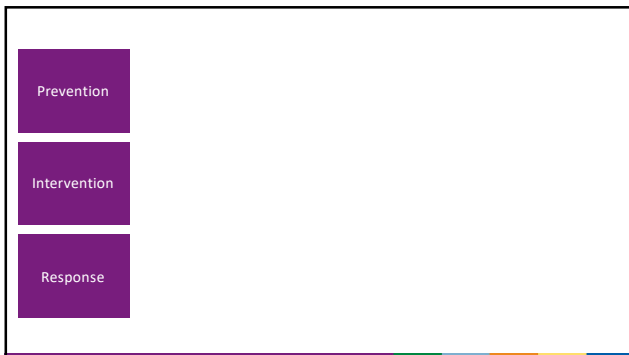


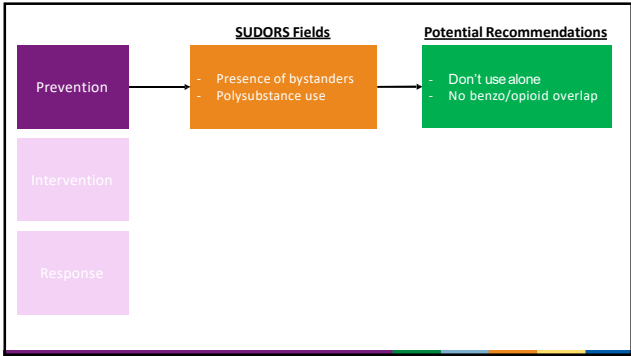


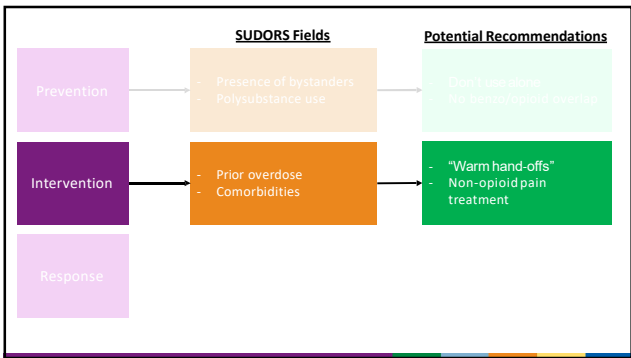


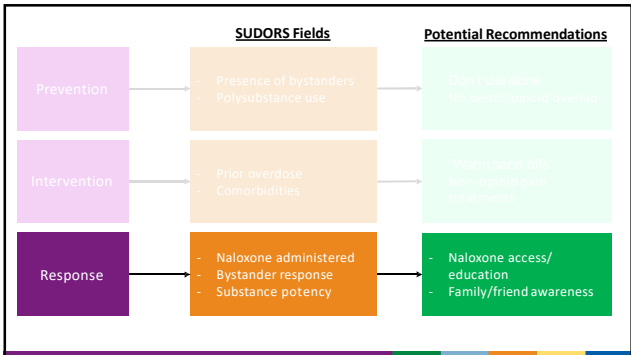












SUDORS case definitions for opioid overdose deaths

- Cases identified using death certificate cause of death information
 - Literal cause of death text fields
 - Underlying cause-of-death codes X40–44 (unintentional poisoning) and Y10–14 (undetermined intent)
 - Multiple cause-of-death codes
 - T40.0 (poisoning by opium)
 - T40.1 (poisoning by heroin)
 - T40.2 (poisoning by natural and semi-synthetic opioids)
 - T40.3 (poisoning by methadone)
 - T40.4 (poisoning by synthetic opioids other than methadone)
 - T40.6 (poisoning by other unspecified narcotics)

SUDORS case definitions for opioid overdose deaths

- Cases identified using medical examiner/coroner (ME/C) reports to supplement cause-of-death codes
 - E.g., death certificate says “drug toxicity” but does not specify any substance(s), but ME/C report mentions lethal amount of fentanyl
 - E.g., death certificate has pending cause of death but ME/C report indicates a drug overdose with a contributing opioid

SUDORS leverages the web-based platform of the National Violent Death Reporting System



Substance Abuse

Previous drug overdose

Treatment for substance abuse

Recent opioid use relapse

Scene Indications of Drug Use

☐ Any evidence of drug use

☐ Evidence of rapid overdose

☐ No evidence of drug use

History of opioid/heroin abuse

1. None

2. Current or past abuse of prescription opioids

3. Current or past abuse of heroin

4. Current or past abuse of both prescription opioids and heroin

8. History of substance abuse noted, specific substances unknown

REV 2.5.04.5

Route of Drug Administration (Check all that apply)

☐ No information on route of administration

☐ Evidence of injection (Check all that apply)

☐ Track marks on victim

☐ Needles/Syringe

☐ Tourniquet

☐ Filters

☐ Cookers

☐ Witness Report

☐ Other injection evidence - Specify:

☐ Evidence of Snorting/Sniffing

☐ Evidence of Smoking

☐ Evidence of Transdermal

☐ Evidence of Ingestion

☐ Evidence of Suppository

☐ Evidence of Sublingual

Illicit or Prescription Drugs (Check all that apply)

☐ Evidence of prescription drugs (Check all that apply)

☐ Prescribed to victim

☐ Not prescribed to victim

☐ Unknown who prescribed

Type of prescription drug found (Check all that apply)

☐ Pills/Tablets

☐ Patch

☐ Prescription bottle

☐ Liquid

☐ Lozenges/lollipops

☐ Vial

☐ Witness report of prescription use

☐ Other form - Specify:

☐ Evidence of illicit drugs (Check all that apply)

☐ Powder

☐ Witness report

☐ Counterfeit pills

☐ Tar

☐ Crystal

☐ Other illicit drug - Specify:

Naloxone Administered (Check all that apply)

☐ Naloxone administered

☐ Not administered

☐ Unknown

☐ Administered, unknown by whom

☐ Administered by law enforcement

☐ Administered by EMS/fire

☐ Administered by hospital (ED/inpatient)

☐ Other (specify in narrative)

☐ Administered by bystander

Who administered?

☐ Person using drugs☐ Friend

☐ Intimate partner☐ Roommate

☐ Stranger☐ Other family

☐ Other - Specify:

Total # of Naloxone dosages administered by first responders/health care

Total # of Naloxone dosages administered by bystander:

Data Dissemination

MMWR – SUDORS data, November 2017

FIGURE. Percentage of opioid overdose deaths testing positive for fentanyl and fentanyl analogs, by state – 10 states, July–December 2016

Fentanyl

Fentanyl analog

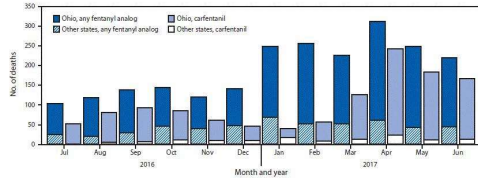
State	Fentanyl (%)	Fentanyl analog (%)
Oklahoma	20	2
New Mexico	25	10
Wisconsin	35	5
West Virginia	45	25
Ohio	55	30
Maine	55	35
Missouri	60	2
Rhode Island	70	5
Massachusetts	75	5
New Hampshire	85	15
Total	55	15

O'Donnell JK, Halpin J, Mattson CL, Goldberger BA, Gladden RM. Deaths Involving Fentanyl, Fentanyl Analogs, and U-47700 – 10 States, July–December 2016. MMWR Morb Mortal Wkly Rep 2017;66:1197–1202. DOI: <http://dx.doi.org/10.15585/mmwr.mm6643e1>

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MMWR – SUDORS data, July 2018

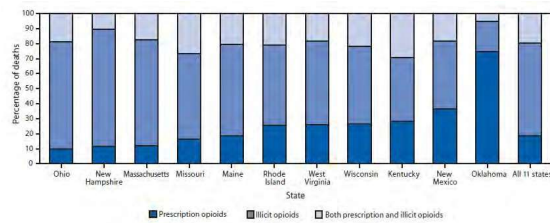
FIGURE. Number of overdose deaths with carfentanil and any fentanyl analog detected* – Ohio and nine other SUDORS states,¹ July 2016–June 2017



O'Donnell J, Gladden RM, Mattson CL, Karisa M. Notes from the Field: Overdose Deaths with Carfentanil and Other Fentanyl Analogs Detected — 10 States, July 2016–June 2017. MMWR Morb Mortal Wkly Rep 2018;67:767–768. DOI: <http://dx.doi.org/10.15585/mmwr.mm6727a4>

MMWR – SUDORS data, August 2018

FIGURE. Percentage of opioid overdose deaths in which prescription opioids only,¹ illicit opioids only,² or both prescription and illicit opioids³ were detected, by state – 11 states, July 1, 2016–June 30, 2017



Mattson CL, O'Donnell J, Karisa M, Seth P, Schell L, Gladden RM. Opportunities to Prevent Overdose Deaths Involving Prescription and Illicit Opioids, 11 States, July 2016–June 2017. MMWR Morb Mortal Wkly Rep 2018;67:945–951. DOI: <http://dx.doi.org/10.15585/mmwr.mm6734a2>

Summary

- ESOS provides rapid data to inform prevention and response efforts for nonfatal and fatal opioid overdose
- SUDORS provides detailed information on deaths involving opioids
 - Substances detected and contributing to death
 - Circumstances surrounding overdose
- Prevention and response should be guided by the substances detected and contributing to overdose deaths as well as the circumstances surrounding the death

Acknowledgements

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 - Vital registrar offices
- CDC staff
 - ESOOS: Matthew Gladden, Alana Vivolo-Kantor, Rose Rudd, Nana Wilson, Felicity David, Mbabazi Kariisa, Brooke Hoots, Lawrence Scholl, Stephen Liu, Londell McGlone, Naomi David, Anita Pullani, Terry Davis, Shelby Alexander, Jocelyn Wheaton, Henrietta Kuoh, Lindsay Culp, Megan Early, Sabeen Bhimani
 - Dr. Grant Baldwin

Thank you!

Questions?

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TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.