## State to State Data: Drug Overdose in Ohio



Luke Werhan, MPA OH-VDRS Program Manager Ohio Department of Health

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### Agenda

- Ohio Drug Overdose Data
- Syndromic Surveillance and Community Response
- Overdose Prevention Initiatives
- Data Dashboards



### **Ohio Drug Overdose Data**





## Unintentional Drug Overdose Deaths, US vs. Ohio, 1999-2017



Source: Ohio Department of Health; CDC WONDER Includes Ohio residents who died due to unintentional drug poisoning (underlying cause of death ICD-10 codes X40-X44).



## Number and Rate of Unintentional Drug Overdose Deaths by Year, Ohio, 2000-2017



Source: Ohio Department of Health Includes Ohio residents who died due to unintentional drug poisoning (underlying cause of death ICD-10 codes X40-X44).



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## Number of Fentanyl and Related Drug Deaths, by Year, Ohio, 2013-2017



Health

Source: Ohio Department of Health Includes Ohio residents who died due to unintentional drug poisoning (underlying cause of death ICD-10 codes X40-X44).





## Relative Potency of Morphine, Fentanyl and Carfentanil



## Relative Potency of Morphine, Fentanyl and Carfentanil



## Number of Fentanyl and Related Drug Deaths, by Year, Ohio, 2013-2017



Health

Source: Ohio Department of Health Includes Ohio residents who died due to unintentional drug poisoning (underlying cause of death ICD-10 codes X40-X44).

## Unintentional Drug Overdose Deaths of Ohio Residents by Specific Drug(s) Involved, 2000-17\*





## There has been an Increase in Fentanyl-Related Overdose Deaths since 2013





## There has been an Increase in Cocaine-Related Overdose Deaths since 2010





## There has been an Increase in Psychostimulants-Related Overdose Deaths since 2015





## There has been a Decrease in Heroin-Related Overdose Deaths from 2016-2017





## There has been a Decrease in Rx-Related Overdose Deaths since 2011





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### Number of Opioid Solid Doses Dispensed to Ohio Patients, by Year, Ohio, 2011-2017



Source: State of Ohio Board of Pharmacy, Ohio Automated Rx Reporting System



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### Number of Prescriber OARRS Queries, Ohio, 2011-2017



Source: State of Ohio Board of Pharmacy, Ohio Automated Rx Reporting System



### **U.S. County Prescribing Rates, 2016**



https://www.cdc.gov/drugoverdose/maps/rxcounty2016.html



### Average Age-Adjusted Unintentional Drug Overdose Death Rate, 2012-2017



## Unintentional Drug Overdose Death Rate by Age Group and Sex, Ohio, 2016-2017



Source: ODH Bureau of Vital Statistics; Analysis Conducted by ODH Injury Prevention Program



## Unintentional Drug Overdose Death Rate by Race and Age Group, Ohio, 2016-2017



Source: ODH Bureau of Vital Statistics; Analysis Conducted by ODH Injury Prevention Program \*Non-Hispanic

Ohio Department of Health

## The Rate of Overdose is Highest Among White Decedents Aged <u>25-34</u> (2016-2017)



Source: ODH Bureau of Vital Statistics; Analysis Conducted by ODH Injury Prevention Program \*Non-Hispanic



## The Rate of Overdose is Highest Among Black Decedents Aged <u>55-64</u> (2016-2017)





### Syndromic Surveillance and Community Response



# Syndromic Surveillance

- EpiCenter is a web-based application developed by Health Monitoring Systems
- Chief complaint data from participating hospitals is automatically collected and categorized into syndrome categories (e.g respiratory, gastrointestinal, neurologic) in near real time.
- Approximately 91% percent of Ohio's emergency department visits are captured by this system. 95.3% of all Ohio's Emergency departments are submitting to the system
  - Cross-jurisdiction data feeds in Michigan and Kentucky



#### Number of Emergency Department Visits Due to Suspected Drug Overdoses and Drug-Related Visits, Ohio Residents, July 2016 - October 2018





# **Drug-Related Anomaly**

 If predetermined threshold is breached based on historical data, the system automatically notifies the Ohio Department of Health and the effected local health departments. (Epi Alert)



### Number of drug anomaly alerts by county,



## Requirements for an Anomaly

- 1. The observed count is greater than or equal to 10.
- 2. The observed count is greater than the threshold.
- 3. If other threshold(s) are applied (i.e. normalized or day of week), these threshold(s) are exceeded.
- No anomaly using identical parameters has been created in the past 24 hours.



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### **EpiCenter Alerts**



Blue line - observed encounters Green line - predicted daily encounters Red line - four standard deviation threshold



## When the Blue line crosses the Red line an anomaly alert is triggered

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Department of Health

### **Communication to Local Partners**





## **Community Response Plan**

Development of the Overdose Response Protocol

- Ohio Injury Prevention Partnership, Prescription Drug Abuse Action Group Committee
- Local Health Departments
- Local Alcohol, Drug & Mental Health Board Staff
- Project DAWNs (Deaths Avoided With Naloxone)
- ODH Bureau of Infectious Disease
- Required Activity for Local Drug Overdose Grants





### **Community Response Plan Template**

- A. Introduction/Background
- B. Goals/Objectives
- C. Surveillance/Public Health Investigation/Analysis
- D. Key Partners/Roles
- E. Communication with Partners
- F. Partner Response





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### Surveillance/Public Health Investigation/Analysis

- Review of Anomaly
- Utilize EpiCenter to review free-text reason for visit, chief complaint in reason field, discharge codes, triage/nurses notes
- Identification of duplicate encounters of individuals
- Identification of the number of overdose cases and type
- Confirmation that the ED visit was related to a suspected drug overdose verses another drug-related condition such as alcohol or withdrawal.
- If available collaborate with other data sources and partners (EMS, EDs, coroner/medical examiner)





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### **Key Partners/Roles**

- Local health department
- ADAMH boards/Mental Health and Recovery Services Board
- Local law enforcement
- County jails
- Local media
- Project DAWN

- Hospital ED
- County coroner's office
- Pharmacies providing Naloxone without Script
- Emergency management agencies
  - Physicians/health systems
- Schools/universities



### **Partner Response**

### **Project DAWN/Community Distribution Sites**

- Naloxone resources
- Increase outreach to populations at risk
- Provide Naloxone to friends and family of those at risk

### **Mental Health and Addiction Treatment**

- Messaging to at risk populations
- Increase in community distribution of naloxone
- Disseminate to local treatment centers

### **Emergency Room Departments**

• Dispense naloxone to those at risk on discharge





### **Partner Response**

### Local Law Enforcement (LE) -

- Acknowledge alert within 24 hours of receipt
- Equip officers with additional naloxone kits
- Identify additional resources needed based on LHD characterization of the event (populations or geographic areas)
- Activate response team that is equipped with referral resources
- **Ongoing Supporting Activities** Work with county health department(s) to ensure officers are trained and equipped with naloxone, consider implementation of a response team for connecting people with treatment

### **Emergency Medical Services**

- Assess Naloxone Supplies
- Activate response team that is equipped with referral resources

### **County Jails**

PROJECT DAWN



### **Example of Local Response**

- Issued media release.
- County contacted law enforcement who are carrying naloxone.
- County Mental Health and Recovery Board has staff on call to provide treatment options at the ED if a person who has experienced an overdose wants to seek treatment.
- County proactively ordered an additional supply of naloxone.

Mental Health and Recovery Board



#### FOR IMMEDIATE RELEASE

#### OVERDOSES CONTINUE IN TRUMBULL COUNTY

#### News Release – September 21, 2017

Trumbull County Combined Health District the Trumbull County Mental Health and Recovery Board (TCMHRB) are reporting that there have been 34 overdoses since September 18, 2017, resulting in another epicenter alert from the Ohio Department of Health. Health Commissioner Frank Migliozzi said we have had 130 overdoses since September 1, 2017. In March of 2017 there were 189 overdoses, which is our largest amount on record.

We are urging people to seek help. Cost should not be a barrier to treatment in Trumbull County, said April Caraway, executive director of the Trumbull County Mental Health and Recovery Board. We pay certified behavioral health and detox centers with whom we contract for people to get the help they need if they don't have Medicaid or private insurance. Please call 211 for linkage to treatment.

Emergency departments, police, fire and EMS have all been inundated with people overdosing and in crisis. Please check on those with addiction issues and urge them to get help. Their life depends on it.

For more information, contact April Caraway at the TCMHRB (330-675-2765 x 107; acaraway@trumbullmhrb.org).

### **Example of Local Health Department Report**



#### ED Visits and Emergency Response due to Drug Overdose:

PUBLIC HEALTH

Daily Surveillance Report for July 12, 2017 Data compiled cooperatively by Hamilton County Law Enforcement, Public Health, and Fire/EMS agencies

Estimated Overdose Hospital Visits<sup>1</sup> for July 12:

12

HAMILTON COUNTY HEROIN COALITION

#### Estimated Fire/EMS and Law Enforcement Overdose Emergency Responses<sup>2</sup> for July 12:

#### Drug Overdoses\* by Patient's Residence\*\*; July 6 - July 12, 2017

| Home Location       | Number | Percent** |
|---------------------|--------|-----------|
| Butler County, OH   | 2      | 3%        |
| Clermont County, OH | 10     | 15%       |
| Hamilton County, OH | 32     | 48%       |
| Northern Kentucky   | 9      | 14%       |
| Other               | 13     | 20%       |
| TOTAL               | 66     | 100%      |

#### Drug Overdoses\* by Sex; July 6 - July 12, 2017

| Sex    | Number | Percent** |
|--------|--------|-----------|
| Female | 23     | 35%       |
| Male   | 43     | 65%       |
| TOTAL  | 66     | 100%      |

#### Drug Overdoses\* by Age; July 6 - July 12, 2017

| Age             | Number | Percent** |
|-----------------|--------|-----------|
| Younger than 18 | 4      | 6%        |
| 18-24           | 8      | 13%       |
| 25-34           | 16     | 25%       |
| 35-49           | 20     | 32%       |
| 50-64           | 13     | 21%       |
| 65 and Older    | 2      | 3%        |
| TOTAL           | 63     | 100%      |



1. Drug overdose data are retrieved from the state's Ep/Center surveillance tool, "Overdose" case include all ED visits to Hamilton County hospitals in which drugs were indicated as reason for visit. Cases were included in analysis if the case notes for the patient included the term "overdose" or "OD." Where specified, traumatic injuries due to drugs caused by suicide attempts, adverse reactions to normal medications, or accidental overdose of over-the-counter or common drugs such as Tylenol or insulin were excluded from analysis. ZP codes refer to the ZP code of residence of the patient visiting the emergency department (ED). Dates are defined as 6 am. of day to 6 am. of the following day, which more accurately reflects drug use patterns than standard day intervals. For example, January 1st refers to the period of 6 am. on January 1st to 6 am. on January 1st.

Data from the EpiCenter surveillance tool is subject to at least 2 limitations. First, case notes in the EpiCenter tool are limited and often do not include full details of ED visit, such as drug used or intent of use. As such, overdose estimates will include not just opioids, but potentially any drug. Second, case notes are recorded at patient intake and may change from a patient's initial examination to their final diagnosis.

 Emergency dispatches refer to fire/EMS and law enforcement responses to 911 emergency calls related to drug overdose, in which a unit was dispatched. Call notes are reviewed and included/excluded using the same criteria as EpiCenter, adapted for the format of 911 dispatch call loss.

\* Demographics reported from hospital & ED visits (red line), and do not include demographic information from 911 dispatches (blue line).
\*\*\* Percent among those who do not have missing information for the respective demographic factor.

For any questions, contact: Kevin Strobino, MPH; Epidemiologist at HCPH; 513-945-7620; kevin.strobino@hamilton-co.org,



### **Post Response Survey**



#### Post EpiCenter Alert Survey

In an effort to evaluate the effectiveness of Ohio's EpiCenter Alert system for drug-related anomalies, a survey has been created to ascertain information about response at the local level. Please take a few minutes to reply to this survey based on your *most recent* EpiCenter Alert for drug-related emergency department (ED) visits.

| Today's date<br>* must provide value  | Today M-D-Y                                    |
|---|--|
| County<br>* must provide value  | •  |
| Was the alert verified (i.e., confirmed by a review of<br>EpiCenter data and /or other data sources)?   | <ul> <li>Yes</li> <li>No</li> </ul>            |
| Does your health department have a written<br>community response plan for increases in suspected<br>drug overdose (drug anomalies from EpiCenter)<br>developed? | <ul><li>Yes</li><li>No</li><li>reset</li></ul> |
| Did you activate a response to your most recent<br>EpiCenter alert for drug-related ED visits?  | <ul> <li>Yes</li> <li>No</li> </ul>            |



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## **State Monitoring**



### **EpiCenter Alerts by Month and Year**





#### Number of Emergency Department Visits Due to Suspected Drug Overdoses and Drug-Related Visits, Ohio Residents, July 2016 - October 2018





Emergency Department Encounters Involving Suspected Drug Overdoses among Hamilton County Residents, July 2016 - July 2018





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- Multiple Anomalies in several counties
  - Butler, Hamilton, Lake, Lorain, Lucas, Montgomery and Stark
- After multiple quarters of decrease, observed a increase in ED encounters for suspected drug overdose

#### 8/3/2018

#### Health Alert

#### Increase in Drug-Related Emergency Department Visits

Local Health Departments Should Monitor Encounters, Activate Community Response Plan if Needed

The Ohio Department of Health (ODH) and local public health agencies utilize Ohio's statewide syndromic surveillance system (EpiCenter) to detect, track and characterize health events. The system is used to track drug-related emergency department visits, including but not limited to drug overdose.

When the number of drug-related emergency department visits within a 24-hour period is higher than the predicted number based on historical data, ODH issues an alert to the local health department for investigation.

ODH has seen an increase in multiple counties across the state in the number of patients presenting to emergency departments for drug overdose based on EpiCenter data. Since Thursday, July 26, there has been an increase in the number of drug overdose anomalies in seven counties – Butler, Hamilton, Lake, Lorain, Lucas, Montgomery and Stark.

According to EpiCenter data, there were approximately 3,600 drug-related ED visits for acute suspected drug overdoses in July, which was about 11 percent more than the monthly average for the first 6 months of 2018.

#### Recommendations for Local Health Departments

- Monitor emergency department visits and work with local health care partners to investigate and verify any suspected increases in overdose in ED settings.
- After confirmation, alert your local and state partners of the increases to activate an appropriate community response, including resource identification and allocation.
- As warranted, implement your county immediate community response plan. ODH offers this template for counties that would like to develop a <u>community response plan</u>.
- Communicate with emergency department physicians and staff about appropriate services for immediate care and treatment and post-overdose protocol to prevent future overdoses among patients.
- Communicate with emergency department physicians and staff about your local Project DAWN sites to ensure those leaving the hospital after an overdose are provided with a referral for naloxone.
- If you need state assistance, such as naloxone for first-responders, please contact Shancie Jenkins, Chief of the ODH Office of Health Improvement and Wellness, at <u>Shancie Jenkins@odh.ohio.gov</u>.
- 7. Please share any pertinent information with ODH.



### **Overdose Prevention Initiatives**



### **Prescribing Guidelines**

- Promoting the adoption of opioid prescribing guidelines and increase education of health care professionals
  - Social Marketing Campaign for public and prescribers
  - Primary Care Setting Quality Improvement Project for Pain Management Guidelines
    - Implementation guidance to operationalize the prescribing guidelines.
- Evaluation the adoption of the ED guidelines by Ohio Hospitals









- 1) Engage and educate prescribers on appropriate prescribing practices; and
- 2) Support positive prescriber interactions with patients by raising awareness of appropriate prescribing practices among the general public







- Media plan and activities
  - Print ads
  - Billboards
  - Digital ads
  - PowerPoint template
  - Direct email to Prescribers
  - TV/Radio PSA's





Get the tools to educate patients on safe medication practices.

Get Educated Today



Are You In Pain? Talk with your doctor about how to manage pain without pills.



## **Educational Materials**

- 4-page patient brochure
- Patient handouts
- Posters
  - 3 for community
  - 2 for doctors' offices
- Video PSAs
  - "Our Mission"
  - "Storage and Disposal Tips"
  - "Managing Pain Properly"





### **Patient Handout**





Before you take any type of prescription pain medication, it is important to be aware of the risks involved as well as safe medication practices, including tips on how to properly consume, store, and dispose of medication.

#### Be Aware of The Risks

Before taking a prescription medication, it is important to be aware of the risks involved, including:

- Psychological dependence or addiction
- Unintentional overdose
- · Serious side effects, such as sedation, nausea, or vomiting · Individuals stealing or accessing your prescribed medications

#### Other Ways to Safely Manage Pain

Before being prescribed pain medication, ask your doctor about other ways to manage pain:



#### Safe Pain Management Practices Start with You

If you decide to take pain pills, it is important to do the following:

- Only use prescription medications as directed by a health professional.
- · Most pain medications are prescribed as needed for pain and can be safely stopped if the pain has subsided, even if there are some pills left. If you have questions or concerns about stopping your pain medication, please do not
- hesitate to contact your physician to discuss.
- Never share or use someone else's prescription medication. Remember that sharing or taking medications that are not
- prescribed by a doctor may be a felony. · Always store and dispose of your medication safely to prevent others
- from taking medications.
- Be a good example to those around you by modeling safe medication habits and discussing medication safety with your family, friends, etc.

#### Safe Storage Practices

After being prescribed a prescription pain medication, consider the following medication storage options:





Store your medication in the original container and out of sight. Keep medication in a locked container, drug-safe cabinet, or drawer, and out of the reach of children and pets.

If you have leftover medication, it is important to safely dispose of any unused or remaining pills.

#### Safe Disposal Tips

Once finished with a prescription pain medication, consider the following medication disposal options:







Read the materials that came with your prescription to see if there are any special instructions for disposing of unused medication

Take advantage medications in of local drug take-back events the trash with an or community drop boxes like rxdrugdropbox.org.

Visit FDA.gov Dispose of unused unpleasant substance such as coffee grounds or cat litter. flushed

For more information on safe pain management tips, visit TakeChargeOhio.org

to find a list of medications that can be





### **Partnering with Ohio Board of Pharmacy**

### Enhance and Maximize OARRS

- Expand and Improve Proactive Unsolicited Reporting
  - Develop a proactive reporting system (i.e. red flags) and overdose risk score
  - Capture ICD-10 diagnosis codes.
- Make OARRS Easier to Use and Access
  - Develop a batch reporting feature
- Conduct Public Health Surveillance with OARRS Data and Publicly Disseminate Reports
  - Link OARRS data to existing data sets
- Policy Evaluation
  - HB 341 Mandate OARRS registration and use
  - HB 4 Increase access to naloxone through standing protocol



### Violence and Injury Prevention Program (VIPP)

- Funding local agencies for comprehensive community-based efforts to address prescription drug abuse and overdose
  - Build coalitions among health departments, providers, law enforcement, and the community
  - Form a overdose fatality review committee
  - Implement policy, systems and environmental change strategies such as:
    - Expanding access to naloxone
    - Facilitating health care system changes including the implementation of opioid prescribing guidelines and other standardized pain management strategies.
    - Increasing use of OARRS among prescribers to influence prescribing behavior.
- Pilot to enhance community/clinical linkages to prevent overdose in those reentering communities from jails and other institutions (e.g. Emergency Departments)



## Violence and Injury Prevention Program

Fund local agencies for comprehensive community-based efforts to address prescription drug abuse and overdose

**Drug Overdose Prevention Program Grants** 

- 2014 3 Counties
- 2016 5 Counties
- 2017 6 Counties
- 2017- 2 Pilot Projects
- 2018- 7 Additional Projects (Community/Clinical Linkages, Jails) for current grantees
- 2018- up to 10 for new counties (capacity building, PSEC's)









Project DAWN is a community-based overdose education and naloxone distribution program.

- Project DAWN participants receive a Project DAWN kit (with naloxone) and training on:
  - Recognizing the signs and symptoms of overdose
  - Performing rescue breathing
  - Calling emergency medical services
  - Administering intranasal Naloxone
- 71 Sites in 56 Counties
- Current RFP to establish new and expand distribution in up to 20 sites
- Provide Naloxone to high burden counties





### **Naloxone Awareness Campaign**

- Development/Implementation of naloxone
   awareness campaign in high-burden counties
- Digital, billboards, TV/radio PSA
- Provided naloxone to high-burden counties
- STOPOVERDOSES.OHIO.GOV







### **VIPP PDO Prevention**

# STOP OVERDOSES CARRY NALOXONE.

Naloxone can reverse an opiate overdose. Call 911 in an emergency. stopoverdoses.ohio.gov



### Prescription Drug Abuse Action Group



- Coordinating the Prescription Drug Abuse Action Group (PDAAG), an action group of the Ohio Injury Prevention
- Serves as a point-of-contact for sharing information and resources regarding prescription drug abuse across the state
- Data Action Group

To become a member of the OIPP or any of the Action Groups please complete the online membership application at <u>http://www.healthy.ohio.gov/vipp/oipp/oipp.aspx</u>



### **Data Dashboards**





OVERDOSE VISITS - BY THE NUMBERS Overdose-related Emergency Department Visits by Overdose-classification OVERDOSE VISITS - BY THE NUMBERS Overdose-related Emergency Department Visits by Demographic Information

OVERDOSE VISITS - BY THE NUMBERS Overdose-related Emergency Department Visits in a Table View COUNTY RATE MAP

Overdose-related Emergency Department Visit Rate per 10,000 Emergency Department Visits



Note: Data begins for 2016 for Quarter 3. Source: EpiCenter; by the Ohio Violence and Injury Prevention Section, at the Ohio Department of Health



Note: Rates are suppressed for count<10. Data begins for 2016 for Quarter 3. The most recent quarter is preliminary. Source: EpiCenter; by the Ohio Violence and Injury Prevention Section, at the Ohio Department of Health



Source: EpiCenter; by the Ohio Violence and Injury Prevention Section, at the Ohio Department of Health



# **Questions?**

Luke Werhan, MPA luke.werhan@odh.ohio.gov 614.644.8816

"I'll pause for a moment so you can let this information sink in."