Data-Driven Initiatives to End Overdoses

Chauncey Parker, JD, Director, New York/New Jersey HIDTA, and Member, National Rx Drug Abuse & Heroin Summit Advisory Board

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Scott Proescholdbell, MPH, Head of Injury Epidemiology and Surveillance Unit, North Carolina Division of Public Health, Injury and Violence Prevention Branch

Jeff Beeson, MS, Deputy Director, Washington/Baltimore HIDTA

Moderator: Chauncey Parker
Disclosures

- Chauncey Parker, JD; Sherani Jagroep, MPH; Scott Proescholdbell, MPH; and Jeff Beeson, MS, have disclosed no relevant, real, or apparent personal or professional financial relationships with proprietary entities that produce healthcare goods and services.
Disclosures

- All planners/managers hereby state that they or their spouse/life partner do not have any financial relationships or relationships to products or devices with any commercial interest related to the content of this activity of any amount during the past 12 months.

- The following planners/managers have the following to disclose:
  - Kelly J. Clark, MD, MBA, FASAM, DFAPA – Consulting fees: Braeburn, Indivior
Learning Objectives

- Describe differences and tensions that exist between public health and public safety partner agencies.
- Explain how data sharing can be used to identify mutual policy goals.
- Define strategies to build and strengthen health/safety partnerships within participants' jurisdictions.
- Evaluate availability, access and timeliness of statewide drug seizure data.
- Use maps to identify gaps in decentralized drug seizure data.
- Discuss the need to improve access, accuracy and timeliness of statewide drug seizure data to better track emerging threats relating to the opioid epidemic.
- Describe the Overdose Detection Mapping Application Program and how it is being used in the field.
- Recognize how the Overdose Detection Mapping Application Program tool can stimulate a public health response across multiple jurisdictions.
- Acknowledge the need to bridge the gap between how public health and safety entities share information beyond their own jurisdiction to better address the opioid epidemic.
Data-Driven Initiatives to End Overdoses

Chauncey Parker, JD, Director, New York/New Jersey HIDTA
THE CRIME FIGHTER

PUTTING THE BAD GUYS OUT OF BUSINESS

JACK MAPLE

with CHRIS MITCHELL
Unintentional Drug Poisoning (Overdose) Deaths and Murders in NYC: 2000-2017

Data from the New York City Department of Health and Mental Hygiene, the New York City Police Department, and the NYC Office of the Chief Medical Examiner
RxStat
Drug Seizures in North Carolina

Sherani Jagroep, MPH
Public Health Analyst, Atlanta-Carolinas HIDTA

Scott Proeschooldbell, MPH
Epidemiologist, North Carolina DHHS
Disclosure:

Scott Proescholdbell, MPH and Sherani Jagroep, MPH have disclosed no relevant, real or apparent personal or professional financial relationships with proprietary entities that produce health care goods and services.
Learning objectives:

- Evaluate availability, access, and timeliness of statewide drug seizure data

- Use maps to identify gaps in decentralized drug seizure data

- Discuss the need to improve access, accuracy, timeliness of statewide drug seizure data to better track emerging threats relating to the opioid epidemic
Overview

- Background overdoses in North Carolina
- HIDTA Heroin Response Strategy
- Drug seizure data sources
- Maps of drug trends and health outcomes
- Utility for public health surveillance
Opioid Epidemic in North Carolina
Unintentional Opioid Overdose Deaths by Opioid Type
North Carolina Residents, 1999-2016

Unintentional medication/drug (X40-X44) with specific T-codes by drug type, Commonly Prescribed Opioid Medications=T40.2 or T40.3; Heroin and/or Other Synthetic Narcotics=T40.1 or T40.4.
Analysis by Injury Epidemiology and Surveillance Unit

Heroin or other synthetic narcotics were involved in over 60% of unintentional opioid deaths in 2016.
With unprecedented availability of cheap heroin and fentanyl...

MORE PEOPLE ARE DYING

Opioid Potency

Carfentanil: 10,000x
Fentanyl: 100x
Heroin: 2x
Morphine: 1x
Demographics of Unintentional Opioid Overdose Deaths
North Carolina Residents, 2016

N=1,384

Age group (years)

- <18: 0.3%
- 18-24: 9.9%
- 25-44: 57.2%
- 45-64: 30.9%
- 65+: 1.7%

Unintentional medication/drug deaths (X40-X44)
Analysis by Injury Epidemiology and Surveillance Unit
In 2016, for every 1 opioid overdose death, there were just under 2 hospitalizations and nearly 3 ED visits due to opioid overdose.

Opioid Deaths, Hospitalizations, ED Visits:
North Carolina, 2016

1,518 Deaths
2,705 Hospitalizations
4,177 Emergency Department Visits

HIDTA Heroin Response Strategy
HIDTA Heroin Response Strategy

- **Mission:** Reduce fatal and non-fatal opioid overdose by developing and sharing information about heroin and other opioids between public health and public safety partners, and offering evidence-based intervention strategies.
Drug Seizures in North Carolina:

- **National Forensic Laboratory Information System (NFLIS).**
  - **Accurate but not:**
    - Accessible
    - Timely
    - Complete
    - Seizure quantity

- **El Paso Intelligence Center (EPIC) National Seizure System (NSS).**
  - **Timely and accessible but not:**
    - Accurate
    - Complete
Purpose:

- Understand drug seizure data available through EPIC for North Carolina
  - How complete?
  - How accurate?
  - How timely?

- Assess utility for public health surveillance
Contributing Organizations:

Federal
- FBI
- HIDTA
- DEA
- Border Control
- Postal

State
- SBI
- Domestic Highway Enforcement

Local
- Sheriff
- Local PD

Voluntary & no drug seizure thresholds quantities required
Methods:

- Drug seizures reported to EPIC for North Carolina between 2011 and 2017 (n=21,371)

- Drug seizures reported by Federal vs. Local/State agencies
  - Federal (n=6,167)
  - State or Local (n=15,204)

Total of 10,937 drug seizure records.
*Excluding 10,434 cannabis records.


Total of 4,449 drug seizure records.
*Excluding 1,718 cannabis records.


Threshold
100 grams of Heroin
500 grams of Cocaine
250 grams of Meth
100 grams of Morphine

Geographical Considerations
Note: 10,937 drug seizure records are not unique seizure events (date, location, agency). One drug seizure event may have had multiple drug types and drug quantities seized, these are all reported as separate seizures in NSS.

Drug Seizure Records* in EPIC: North Carolina, 2011 to 2017

Count of Drug Seizure Records
- No drug seizures
- 1 to 9 seizures
- 9 to 49 seizures
- 49 to 261 seizures
- 261 to 6,595 seizures
- Urban area

Drug Seizure Records* in EPIC: North Carolina, 2011 to 2017

Count of Drug Seizure Records
- No drug seizures
- 1 to 9 seizures
- 9 to 49 seizures
- 49 to 261 seizures
- 261 to 6,595 seizures

Drug Seizure Records* in EPIC: North Carolina, 2011 to 2017

Count of Drug Seizure Records
- No drug seizures
- 1 to 9 seizures
- 9 to 49 seizures
- 49 to 261 seizures
- 261 to 6,595 seizures
- Interstate Highways

Drug Trends

Kilograms of Heroin Seizures in EPIC: North Carolina, 2011 to 2017

Note: Total 510 kg of Heroin

Greater Quantity of Heroin Seized by HIDTA Taskforces than EPIC:
North Carolina, 2011 to 2017

Heroin and Public Health Outcomes
Heroin Overdose ED Visits & Heroin Seizures in EPIC:
North Carolina, 2011 to 2017

Kilograms of Heroin
- No seizure cases
- ≤ 1 kg
- 1 to 6.5 kg
- 6.5 to 28 kg
- 28 to 249 kg

Heroin Overdose ED Visits
Rate per 100,000 residents
- < 28.8
- 28.9 to 62.6
- >62.6

Note: Heroin ED visit rates suppressed for counties < 10 visits.

Cocaine and Public Health Outcomes
Note: Cocaine death rates suppressed for counties < 10 deaths.

Opioid Pill Seizures and Public Health Outcomes
Opioid Pills Dispensed & Opioid Pill Seizures in EPIC:
North Carolina, 2011 to 2017

Opioid dispensing- NC Division of Mental Health, Controlled Substance Reporting System.

Opioid pill seizures
- No seizure cases
- 1 to 99 pills
- 100 to 1,181 pills
- 1,182 to 8,097 pills
- 8,098 to 87,519 pills

Opioid pills dispensed per person
- 175 to 335 pills
- 336 to 493 pills
- 494 to 758 pills
Summary:

Benefits of timely, complete, and accurate drug seizure data to public safety, and public health

- Real-time surveillance of drug trends
- Mapping drug trends with health outcomes
- Identify where to allocate resources
- Targeted public health interventions
Thank you!

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Scott.Proeschooldbell@dhhs.nc.gov
Data-Driven Initiatives to End Overdoses – ODMAP

Jeff Beeson, Deputy Director
Washington/Baltimore HIDTA
HIDTA Mission

To disrupt the market for illegal drugs in the United States by assisting federal, state, local, and tribal law enforcement entities participating in the HIDTA program to dismantle and disrupt drug trafficking organizations, with particular emphasis on drug trafficking regions that have harmful effects on other parts of the United States.
US Overdose Deaths

- Over 64,000 overdose deaths in 2016
- Surpassed Peak Gun, HIV, and car crash deaths
- Leading cause of death for individuals under 50
- Fentanyl Crisis – 540% increase in fatalities over 3 years
The Problem

- Increase in lethal drugs on the streets
- Lack of real time data
- Insufficient information sharing
- No consensus on spikes
Part of the Solution – ODMAP
Overdose Detection Mapping Application Program

- Real time data
- Link public health and safety entities
- Cross jurisdictional information sharing
- Evidence based solutions – effective response strategies
- Keep it simple
Data Sharing Agreement –
www.hidta.org

Request Agency Access

For every agency who wishes to come on board with ODMAP L1, we require the following fields. Once we receive them the following will happen:

- It will be entered into our system, the person listed as “Signor” below will receive an email with a link to our participation agreement. They need to click that link and enter their initials and submit it.
- We will receive notification on our end that the “Signor” has submitted their initials and we will approve it. This will send the signor an email, along with registration instructions, and it will contain their agency code.
- The signor can then distribute the agency code to their members/users.

Agency Name *

Agency Type *
Federal

State *

Signor Name *

Signor Phone *

Agency Identifier

County

Signor Title *
The system – Level I user
Level I User – Data Intake

Location and Demographics

ENTER LOCATION

- Use my current location
- I will enter an address below (Include city/state/zip)
- I will enter coordinates

CASE INFORMATION

Case Number  Suspected Drug  Age  Gender
Select  Select
Level I User – Overdose Type

NON-FATAL OVERDOSES
- Naloxone Not Administered
- Naloxone Single Dose Administered
- Naloxone Multiple Doses Administered

FATAL OVERDOSES
- Naloxone Not Administered
- Naloxone Single Dose Administered
- Naloxone Multiple Doses Administered
Level I User – Law Enforcement (ODForm)

Overdose Data Collection Form

All BLUE fields are required for successful submission of this form.

OFFICER INFORMATION

First Name: Jeff
Last Name: Beeson
Badge Number: 
Email: jbeeson@wbs.hidta.org
Phone: 301-489-1734
Agency: W/B HIDTA

CASE INFORMATION

Police Department: Select
Case Number: 4578
Date of Report: 03/09/2018
Notes/Comments:

INCIDENT INFORMATION

Type of Overdose: Fatal
Non-Fatal
Date of Overdose: 03/09/2018
Time of Overdose: 02:08 AM
Incident Address: 300 E Joppa Rd, Towson, Maryland, 21286
Latitude: 39.402117528772
Longitude: -76.5984425559912
Type of Address: Business
Residential
Neither
Drug Packaging Present
Drugs Seized
Drug Paraphernalia Seized

VICTIM INFORMATION

First Name: 
Last Name: 
DOB: 
Gender: Male
Race: Select

#Rx Summit  www.NationalRxDrugAbuseSummit.org
Level I User – Record Search

Search Overdose Records

Search Criteria

- Incident Type: Select
- Suspected Drug: Select
- Case Number
- Date Range
- Age Range
- Gender: Select

Options:
- Toggle Map
- Search
- Export to Excel
Level II User – Data Analysis

[Image of a map showing suspected overdoses with a legend and filters for data analysis.]

- Total Suspected Overdoses: 19,581 ODs
- Fatal: 2,889
- Naloxone Administrations: 13,604

Legend:
- Fatal: No Naloxone
- Fatal: Single Dose Naloxone
- Fatal: Multiple Dose Naloxone
- Non-Fatal: No Naloxone
- Non-Fatal: Single Dose Naloxone
- Non-Fatal: Multiple Dose Naloxone
- Unknown

[Map showing distribution of suspected overdoses across the United States.]
Level II User – Data Analysis

Total Suspected Overdoses: 19,581 ODs

- Fatal: No Naloxone
- Fatal: Single Dose Naloxone
- Fatal: Multiple Doses Naloxone
- Non-Fatal: No Naloxone
- Non-Fatal: Single Dose Naloxone
- Non-Fatal: Multiple Doses Naloxone
- Unknown

- Fatal Count: 2,889
- Naloxone Count: 13,604

Select a State: Ohio
Select a County Name: Cuyahoga
Incident Date is between Wed Mar 01 2021 and today
Set a maximum of one time filter at a time
Incidents in the last... days
Select a Time Range (Set a maximum of one time filter at a time)
Select Fetal Incidents: Y
Choose 'N' to select non-fatal
Select for Naloxone Administration: N
Level II User – Data Analysis
Level II User – Weekly Reports

### ODMAP Suspected Overdose Submissions - in the last month

- **Total Submissions**: 502
- **Average Daily Count (All Time)**: 3.35
- **Standard Deviation**: 1.861
- **Max Count (Single Day)**: 15
- **Suggested Spike Value**: 7

### Last 7 Days (7/4/2017 - 7/10/2017)

- **Total Submissions**: 16

### In the Last Month (6/11/2017 - 7/10/2017)

- **Total Submissions**: 43

### ODMAP Suspected Overdose Submissions - All Data Submitted

- **Hour of Day (Time of submission is not necessarily the time of the incident)**

### ODMAP Suspected Overdose Submissions - 2017

- **Total Submissions In Last Week**: 29
- **Daily Max**: 7
- **Fatal**: 3
- **Non-Fatal**: 26
- **Naloxone Administrations**: 23

**SENSITIVE DATA**
Spike Alert System

- ODMAP is designed to alert Level II users when an overdose spike occurs in real time
- Level II users can receive spike alerts within their jurisdiction or surrounding jurisdictions
- It is intended to give the public safety and health community real time alerts to mobilize a response strategy

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From: ODMapAlert@wb.hidta.org [mailto:ODMapAlert@wb.hidta.org]
Sent: Monday, April 3, 2017 11:35 AM
To: Cibor, Jack <jcibor@wb.hidta.org>; Beeson, Jeff <jbeeson@wb.hidta.org>
Subject: ODMap - OD Spike Detected

OD Spike Alert!!!! An OD Spike was detected in X County, MD. There have been 5 incidents in X County, MD in the last 24 hours. The Spike Alert Threshold for X County, MD is currently set to 5 ODs in a 24 hour period.

To learn more about these incidents and to monitor incoming data, ODMAP Level 2 Users can log into the ODMAP Dashboard application at https://secure.hidta.org. You can register for ODMAP Level 2 access at that same URL.
Public/Behavioral Health Response

- Alert notifications
- Emails
- Text alerts
- Deployment of rapid response teams for treatment referrals
- Targeted prevention efforts

County Public Health Alert – Drug Overdose Spike (SAMPLE)

County, MD (April 23, 2017) – The County Department of Health is aware of six drug overdoses that occurred in the County within the past 24 hours. Individuals in active use are encouraged to seek treatment; loved ones of those in active use are encouraged to obtain naloxone. Treatment works and recovery is possible.

If you are with someone who overdoses, call 911. Administer naloxone, if available.

Signs of OVERDOSE:
- Person is not responsive
- Fingertips or lips turn blue or grey
- Breathing is slow, shallow, or has stopped
- Person is gurgling or making snoring noises

What can you do if you see an opioid overdose?
- Call 911
- If you have naloxone, give the person naloxone and perform rescue breathing
- If not response after 2-3 minutes, give a second dose of naloxone
- Do not leave the person alone. Help will arrive.
- If the person starts to breathe or becomes more alert, lay the person in the recovery position: put the person slightly on the left side so that their body is supported by a bent knee with their face turned to the side and bottom arm reaching out to stabilize the position.

Remember the Good Samaritan Law – Save a Life!
- If you provide help or assist a person experiencing a medical emergency due to alcohol or drugs, you are criminally IMMUNE from being charged, arrested and prosecuted from certain crimes in Maryland.
- The police and the courts believe that saving a life is more important than a charge or arrest.

Where do I get free naloxone?
Go to www.XHealth.org, there is a calendar listing all public naloxone trainings sponsored by the Health Department.

Where to get Treatment
Call the Substance Abuse Treatment and Referral Line: 410-555-0000
If you have questions contact the Health Department - 410-555-0000
Overdose Spike Response Framework

- Developed based on informational interviews
- Provides pre-spike, during spike, and post-spike activities for 14 stakeholder groups

**State Health Departments**

**Recommended Role**

State Health Departments serve as a resource for Local Health Departments and other entities that are involved in overdose spike response strategies. State Health Departments support the implementation of response plans by determining the level of severity of the spike, facilitating communication, and leveraging necessary resources to assist Local Health Departments and entities with “boots on the ground.”

**Tip for Strategic Planning:** State health departments have the ability to provide a global public health view of available resources, including: treatment, crisis, and emergency response. Leveraging existing resources to identify, understand, and reduce gaps in the spectrum of care can improve the efficiency of coordinated responses.

**Recommended Actions**

**Pre-Overdose Spike**
- Develop an action plan for regional-level response
- Analyze historical data to determine baseline averages for fatal and nonfatal overdoses
- Coordinate a state-level surveillance team (with the Emergency Management Department, Establish “go-no-go” criteria for action)
- Develop a communication plan for notifying local leaders and stakeholders
- Identify a strategy for identifying spikes that occur across or along local jurisdictional boundaries
- Provide resources to support the development of local overdose response plans

**During a Spike**
- Confirm ODMAP spike alert with additional syndromic surveillance systems (assess the threat)
- Check ODMAP dashboard to identify potential cross-jurisdictional impact of the spike and notify the local public health leaders in those jurisdictions
- Implement communication plan
- Facilitate data sharing across jurisdictions and disciplines

**Post-Spike**
- Evaluate data on a regional scale, and distribute findings to stakeholders to improve and adapt response strategies
Trend Analysis

- Do correlations exist between jurisdictions?
- Can we anticipate spikes based on data?
OD Rates per 100,000
Anne Arundel, Berkeley, Alexandria
ODMAP User Survey

- Disseminated in January 2018 – response rate of 30%

<table>
<thead>
<tr>
<th>Please rate your overall experience with ODMAP.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>34%</td>
</tr>
<tr>
<td>Good</td>
<td>52%</td>
</tr>
<tr>
<td>Fair</td>
<td>11%</td>
</tr>
<tr>
<td>Poor</td>
<td>3%</td>
</tr>
</tbody>
</table>
## Results

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Unsure/Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODMAP is easy to use.</td>
<td>43%</td>
<td>40%</td>
<td>12%</td>
<td>4%</td>
<td>0%</td>
</tr>
<tr>
<td>ODMAP provides a user-friendly option for my jurisdiction to accurately track suspected overdoses in real-time.</td>
<td>36%</td>
<td>43%</td>
<td>17%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>ODMAP meets the real-time data collection needs of my jurisdiction.</td>
<td>32%</td>
<td>38%</td>
<td>27%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>ODMAP helps my agency share real-time data with other disciplines.</td>
<td>30%</td>
<td>41%</td>
<td>25%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>ODMAP is an accurate reflection of overdoses in my jurisdiction.</td>
<td>21%</td>
<td>45%</td>
<td>26%</td>
<td>6%</td>
<td>3%</td>
</tr>
</tbody>
</table>
## Results

**In what ways does your agency use ODMAP data? (Please check all that apply)**

<table>
<thead>
<tr>
<th>Use of ODMAP Data</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>To guide outreach efforts to persons at risk for overdose and/or their support networks.</td>
<td>24%</td>
</tr>
<tr>
<td>Increase monitoring or patrolling of areas where there is a large number of overdoses.</td>
<td>40%</td>
</tr>
<tr>
<td>Identify where and when to investigate trends in distribution.</td>
<td>34%</td>
</tr>
<tr>
<td>Increase/improve data sharing with other agencies.</td>
<td>53%</td>
</tr>
<tr>
<td>Increase staffing levels.</td>
<td>3%</td>
</tr>
<tr>
<td>Guide procurement and use/distribution of naloxone.</td>
<td>75%</td>
</tr>
<tr>
<td>Assess the impact of intervention efforts at the community level.</td>
<td>5%</td>
</tr>
<tr>
<td>To proactively alert our partner agencies about overdose spikes.</td>
<td>8%</td>
</tr>
<tr>
<td>Determine when to send out public health alerts.</td>
<td>9%</td>
</tr>
<tr>
<td>Other</td>
<td>19%</td>
</tr>
</tbody>
</table>
Benefits

- **Level Sets**
  - ODMAP allows all partners to look at the same data at the same time
- Provides a common language
- Highlights the need and forces the conversation
  - Users feel it is harder to ignore points on the map vs numbers on the page
  - More crucial for smaller communities that have a less prominent problem
Success Stories

- Berkeley County, WV
  - Targeting Data
- Nassau County, NY
  - Investigations
- Anne Arundel County, MD
  - Trend data leads to market disruption
- Broome County, NY
  - Peer Recovery Specialists
- Erie County, NY
  - Integration between police and health
Jeff Beeson, Deputy Director
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301-489-1734
Pre-Summit Workshop

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Moderator: Chauncey Parker
THANK YOU

#RxSummit
www.NationalRxDrugAbuseSummit.org