

# National Drug Early Warning System (NDEWS): A New Approach for Multi-Level Monitoring of Opioid Trends in the U.S.

EMCDDA PDU  
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**NDEWS** *National Drug Early Warning System*

Funded at the Center for Substance Abuse Research by the National Institute on Drug Abuse

NDEWS is supported by Cooperative Agreement DA038360 from NIDA/NIH to the University of Maryland CESAR. Opinions expressed in this presentation may not represent those of NIH or NIDA.

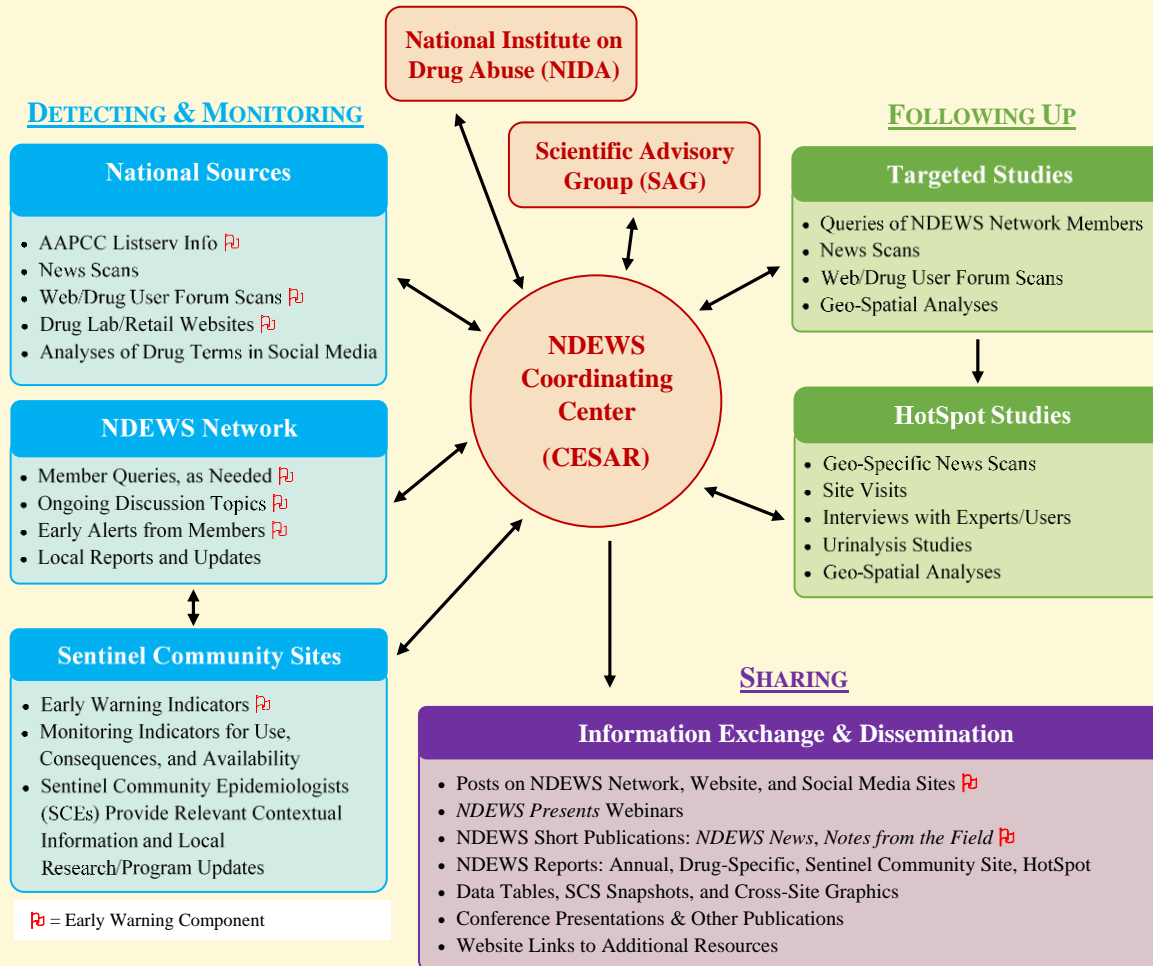
# NDEWS Mission

- 5 year program funded by a cooperative agreement from NIH/NIDA
- Coordinating Center at CESAR, UMCP
- National public health surveillance system
- Generates critically needed information about drugs and their public health consequences
- Leverages resources and collaborations to harmonize approaches to analyzing and presenting data

# NDEWS Components

## NDEWS National Drug Early Warning System

Funded at the Center for Substance Abuse Research by the National Institute on Drug Abuse



# NDEWS Resources for Assessing Drug Trends

- **The People: NDEWS Network**

- American Association of Poison Control Centers, Medical Directors
- SAG
- SCEs

- **The Data**

- Sentinel Community Sites Local Data and Information
- DEA National Forensic Laboratory Information System (NFLIS)
- DEA Emerging Threats Reports
- CDC WONDER drug-related deaths

- **HotSpot Research**

- New Hampshire Fentanyl Study

- **Sources in Development**

- NDEWS News Scans
- Social Media Scans

# Scientific Advisory Group

## Non-Federal Members (11)

- Academic Researchers
- Medical Doctors
- W/B HIDTA Director

## Federal Members (8)

- National Institute on Drug Abuse (NIDA)
- Office of National Drug Control Policy (ONDCP)
- U.S. Drug Enforcement Administration (DEA)
- U.S. Substance Abuse and Mental Health Services Administration (SAMHSA)
- Centers for Disease Control and Prevention (CDC)
- Armed Forces Medical Examiner System (AFMES)
- Office of the Assistant Secretary of the Navy

# NDEWS Network

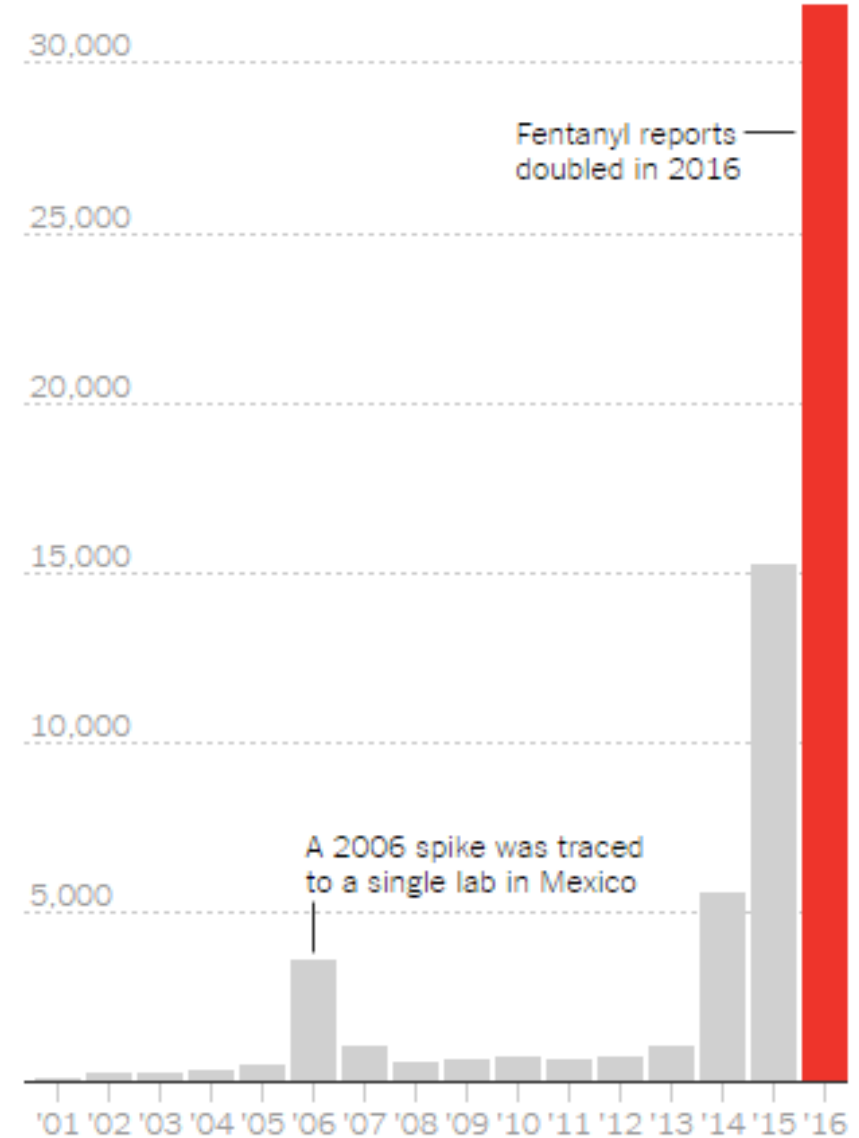
- The NDEWS Network is a virtual community of 1600+ experts in medicine, toxicology, ethnography, epidemiology, law enforcement, and other fields as well as concerned citizens and others
- Use the NDEWS Network to:
  - Get rapid access to information on emerging drugs and drug trends
  - Join cross-disciplinary discussions
  - Learn about new resources and successful local solutions
  - Ask others about drugs/emerging trends in your area

# NFLIS Reports

- Key National indicator for identifying and tracking emerging drugs
- Data collection consistent across sites and over time
- Cross analysis shows regional differences
- Fentanyl: 3 SCS in top 10 in 2015; 7 SCS in top 10 in 2016 (6 of 7 east of Mississippi)

Source: NDEWS Coordinating Center, CESAR, June 2017.  
University of Maryland College Park. [www.ndews.org](http://www.ndews.org)

## Drug seizures containing fentanyl



Source: D.E.A. National Forensic Laboratory Information System

# 12 NDEWS Sentinel Community Sites

- States or areas from all regions of the U.S.
- Experienced local experts
- Committed local resources
- Available data: mortality, treatment admissions, poison center



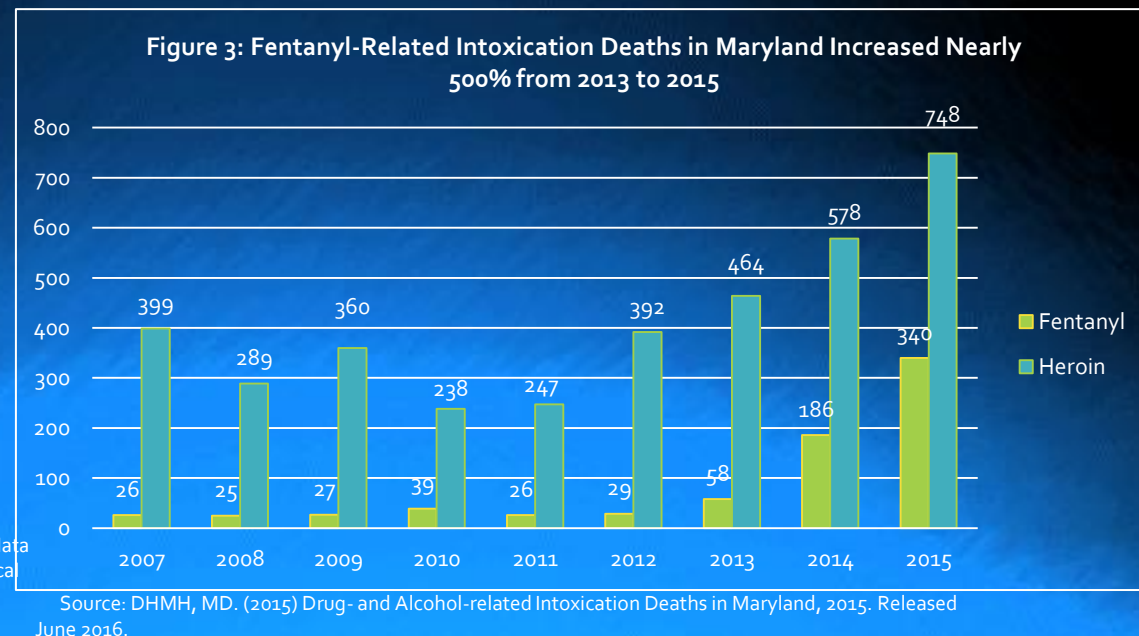
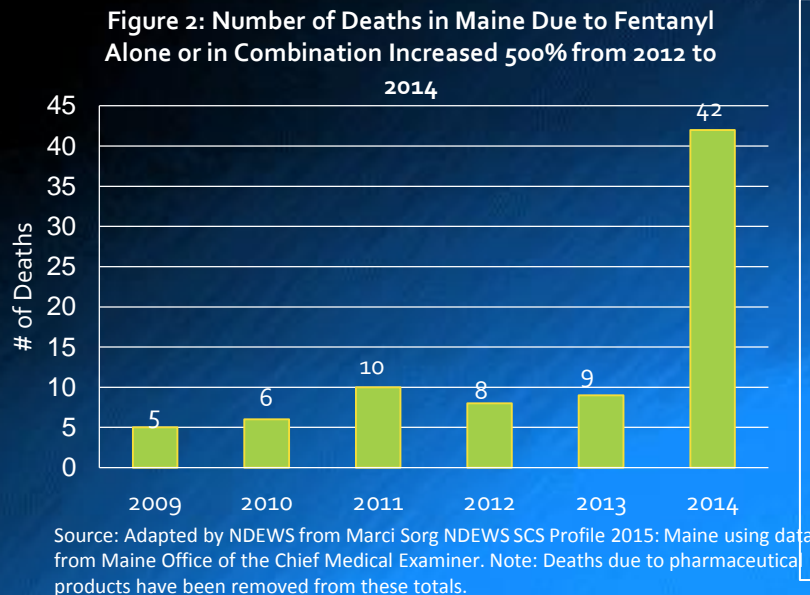


# Sentinel Community Site Reports

- 3 Parts: Data Snapshot, Narrative, Indicator tables and graphics
- Primary data sources: treatment admissions, drug-related deaths, poison center calls, law enforcement seizures, ED cases
- Focus on emerging drugs and changing drug trends
- Also have opportunity to include information about changes in local laws and policies and results of recent local research
- 2015 and 2016 reports and the 2016 NDEWS Selected Findings report available at [www.ndews.org](http://www.ndews.org) under Sentinel Sites
- 2017 reports underway now

# 2016 Profile Preview: Fentanyl Trends

- Maine, Philadelphia, Wayne County (Detroit), Cincinnati, Atlanta, Florida, San Francisco, and Maryland reported increases in fentanyl-related deaths in 2015.
- Some sites – Atlanta, Philadelphia, Cincinnati, and Los Angeles – reported evidence of heroin being mixed with fentanyl, while other sites, such as Texas, reported this practice as extremely rare.
- Seizures have been made in all Sentinel Sites, and the number of items doubled or more than doubled for most sites from 2014 to 2015.



# NDEWS SCS Updates

- Drug overdose deaths in the U.S. have increased from under 10,000 per year in the 1980s to an estimated 59,000 to 65,000 in 2016 (Katz, NYT, 6/5/17)
- Fentanyl deaths continued to increase in many sites in 2016, including Philadelphia, Maryland, and Maine
- In Maryland, the number of drug intoxication deaths increased 66% from 2015 to 2016 to a high of 2,089; fentanyl-related deaths more than tripled from 340 to 1,119
- In Maine, fentanyl and/or fentanyl analog deaths increased 126% from 86 in 2015 to 194 in 2016
- New York released a health advisory this week about fentanyl being found in cocaine
- Georgia is currently experiencing the largest cluster of opioid overdoses in state history
- New opioid cocktail, grey death, now reported in the U.S.

# Data Indicator Challenges

- National
  - Sensitivity of data
  - Timeliness of results
  - Ability to be site specific
- Local
  - Consistency of data over time dues to changes in policies and reporting
  - Consistency across sites

# NDEWS New Hampshire HotSpot Study

1. Collect and review available data and information (May-June 2016)
2. Identify core contacts – e.g. local experts in public health, law enforcement, research, policy (May 2016)
3. Convene Planning Committee (May 27, 2016)
4. Conduct site visit (June 29 – July 1, 2016)
5. Conduct 2 additional rapid studies to develop a more comprehensive understanding of current user of fentanyl and the people who have died from fentanyl-related overdoses

# Understanding Opioid Overdoses in New Hampshire (Meier & Marsch et al., 2017)

- In-depth interviews with 76 users, 18 first responders, and 18 ED personnel—Lisa Marsch, PhD, Dartmouth College
- Nearly all of the consumers were White (91%), half (51%) were female, 38% were working at least part time, and three-quarters had completed high school/GED or some college
- Consumers reported 3 trajectories: early recreational use, intergenerational use, injuries/surgeries resulting in prescriptions for opioids
- Opinions about fentanyl ranged from adverse to neutral to actively seeking

# In-Depth Analysis of NH Fentanyl Deaths Jan. 2015-Sept. 2016 (Sorg, Wren, & Stewart, 2017)

- 540 deaths recorded, 505 in-depth case reviews conducted
- A majority of decedents were White (95%) males (78%) aged 20 to 49 (64%) with high school/GED or less (78%)
- History of IDU and other drug use
- Took the fatal dose (70%) and died (60%) at home, alone (58% when died, 63% when took fatal dose), within five miles of an interstate highway (70%)
- 90% of decedents had more than one drug in their toxicologies
- The mean number of drugs found per decedent was 6.23

# Conclusions

- HotSpot methodology successfully implemented during an outbreak
- Phase 2 findings reinforced and built on findings in Phase 1
- Uncovered new information
  - Users actively seek fentanyl
  - Users think they can distinguish fentanyl and heroin
  - Evidence of poly drug use
  - Multiple overdoses
- Need to review more than just one source of information about overdose deaths to collect complete information



[www.ndews.org](http://www.ndews.org)

# NDEWS New Hampshire HotSpot Report

The Increase in Fentanyl Overdoses

NDEWS Coordinating Center  
October 14, 2016

## NDEWS New Hampshire HotSpot Studies: Overview and Initial Results

February 3, 2017

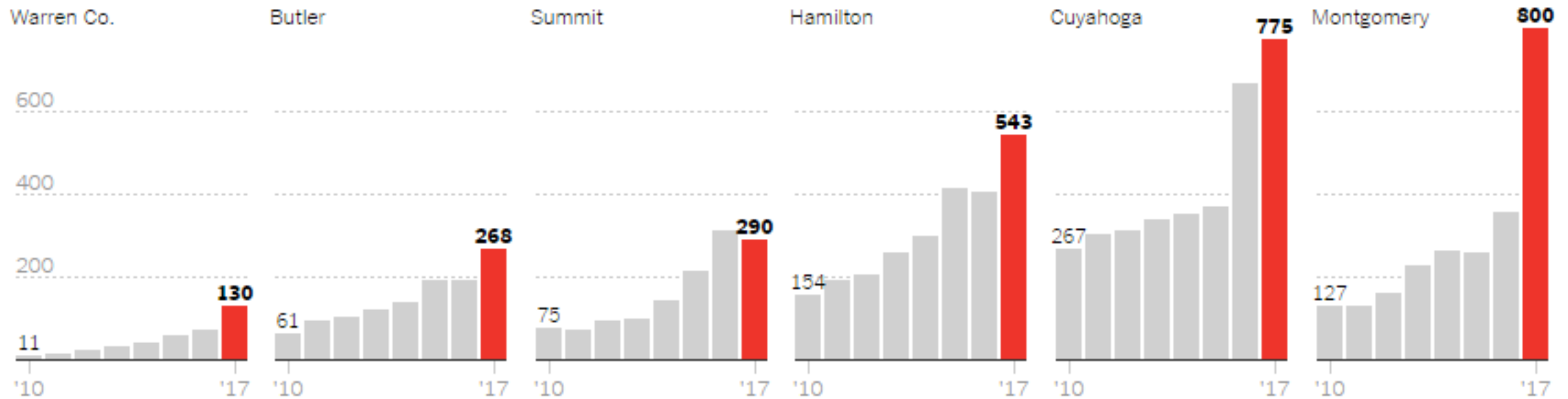
For additional information please contact: Dr. Marcella Sorg at [mhsorg@maine.edu](mailto:mhsorg@maine.edu) about the Mortality Study, Dr. Lisa Marsch at [lisa.a.marsch@dartmouth.edu](mailto:lisa.a.marsch@dartmouth.edu) about the systematic interviews, and Erin Artigiani, NDEWS CESAR Co-I, at [eartigia@umd.edu](mailto:eartigia@umd.edu) about NDEWS

NDEWS is funded under NIDA Cooperative Agreement DA038360 awarded to the Center for Substance Abuse Research at the University of Maryland, College Park. Opinions expressed in this report may not represent those of NIH or NIDA.

Source: NDEWS Coordinating Center, CESAR, June 2017.  
University of Maryland College Park. [www.ndews.org](http://www.ndews.org)

# The Next NDEWS HotSpot?

Drug overdose deaths in six Ohio counties, 2010 to 2017



Totals for 2017 assume that overdose deaths continue at the same rate through the remainder of the year.

Source: Butler County Coroner's Office; Cuyahoga County Medical Examiner's Office; Hamilton County Coroner; Montgomery County Alcohol, Drug Addiction & Mental Health Service; Montgomery County Sheriff's Office; Summit County Department of the Medical Examiner

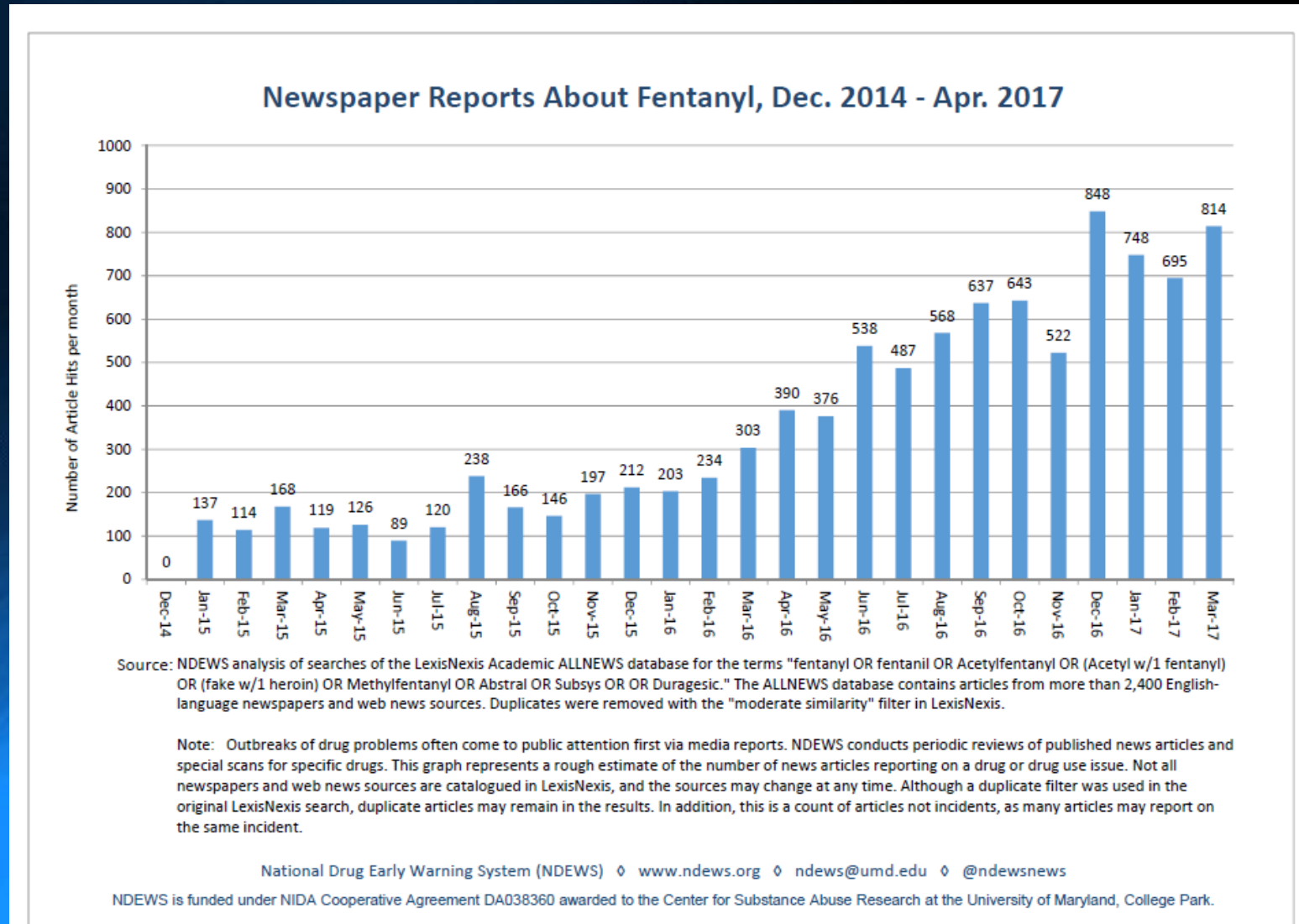
Katz, Josh. Drug Deaths in America are Rising Faster than Ever. New York Times, June 5, 2017.

Source: NDEWS Coordinating Center, CESAR, June 2017.  
University of Maryland College Park. [www.ndews.org](http://www.ndews.org)

# NDEWS News Scans

- Conducted by NDEWS staff
- Monthly scans of a LexisNexis Academic database of article references from more than 2,250 national and international English language newspapers
- Approximately 30 drugs and drug terms
- Conducted to provide a monthly snapshot of what local media are reporting about

Source: NDEWS Coordinating Center, CESAR, June 2017.  
University of Maryland College Park. [www.ndews.org](http://www.ndews.org)

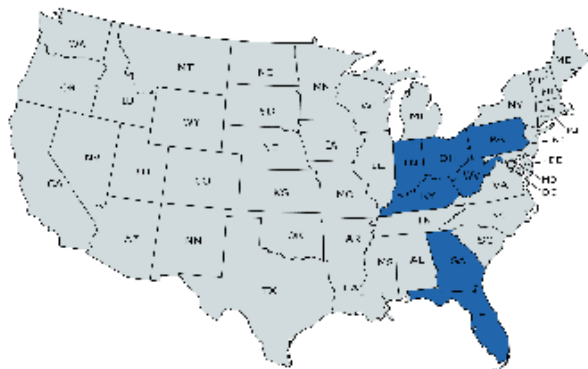


## NDEWS News Scan Finds Suspected Carfentanil-Related Incidents Reported in Seven States

As of September 8, 2016, suspected carfentanil-related incidents\* have been reported by print and online news articles to have occurred in seven eastern states, according to an NDEWS News Scan. Outbreaks of drug problems often come to public attention first via media reports. NDEWS conducts periodic reviews of published news articles and special scans for specific drugs. For this News Scan, NDEWS Coordinating Center staff searched the more than 2,400 news sources indexed by the LexisNexis Academic database and found 129 articles containing the word "carfentanil." An analysis of the content of these articles found that 56 articles—all published in 2016—reported on one or more suspected carfentanil-related overdoses, seizures, arrests, and/or indictments occurring in seven states: Pennsylvania, Ohio, Indiana, Georgia, Kentucky, West Virginia, and Florida. The NDEWS Network Discussion List has had several recent posts on the topic of the identification of carfentanil and other opioids (see below for information about the NDEWS Network). More information about carfentanil, including public health alerts, can be found on the NDEWS website at [ndews.org/resources/carfentanil](http://ndews.org/resources/carfentanil).

**Limitations:** This analysis looked only at news reports of suspected carfentanil incidents, which may or may not have been confirmed by testing of biological or drug samples. While other states may have experienced opioid-related incidents during this time period, any news reports of these incidents we identified did not specifically mention carfentanil. It is also possible that law enforcement personnel have identified carfentanil in other locations that have not been reported by the media. Although 56 articles reported on suspected carfentanil-related incidents, this does not mean that there were 56 incidents as many of the articles reported on the same incidents.

Seven States in Which Print and Online News Articles Have Reported Suspected Carfentanil-Related Incidents, as of 9/8/16



\*Incidents were defined as overdoses, seizures, arrests, and/or indictments.

Source: NDEWS analysis of 129 English-language newspaper articles containing the term "carfentanil" published between 5/2/1998 and 9/8/2016. The majority were published in 2016 (62%). These articles were identified by a search of the more than 2,400 English-language newspapers and web news sources in the LexisNexis Academic database, conducted on September 08, 2016 at 12:19:23 EST.

### Join the NDEWS Network to Share Information About Emerging Drug Trends

The NDEWS Network is an open virtual community of substance abuse experts and concerned citizens who engage in regular interactions with colleagues across the country, exchanging information and ideas about new and emerging drugs and drug trends. Visit [www.ndews.org](http://www.ndews.org) for information on how to join the Network.

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Source: NDEWS Coordinating Center, CESAR, June 2017.  
University of Maryland College Park. [www.ndews.org](http://www.ndews.org)

# NDEWS Social Media Scans

- Conducted by NDEWS affiliates
- Conducted to provide
  - a snapshot of what users and potential users are discussing on Twitter and in drug forums
- Types of information collected
  - New drug terms
  - Experiences of drug users
  - Discussion amongst users about what drug to use in place of U47700
  - Availability of drugs through online markets

# Global Drug Early Warning System (GDEWS) Project

- Visiting Scholar, David Newcombe, from University of Auckland June-July 2017
- Examine existing drug monitoring systems to gain an understanding of how they work, the contexts in which they operate and to describe areas of best practice
- Goal: to develop guidance based on proven practices utilized by existing systems to support countries establishing new drug early warning systems (DEWS)
- Hold series of NDEWS Presents webinars

# For More Information

[www.ndews.org](http://www.ndews.org)

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