



NEWSLETTER

JULY 2016

Community Announcements

Upcoming Events

August Webinar: Development of the Arkansas (AR) Poison Control Center (PCC) Mission Ready Package to Support Continuity of Operations and Surge Utilizing the Emergency Management Assistance Compact (EMAC)

Date: Thursday August 11, 2016, 3:00–4:00PM EST

Presenters: Dr. Howell Foster, Director, AR PCC, University of AR for Medical Sciences; Aaron Adams, Associate Branch Chief, Trauma, Preparedness, and EMS Branch, Arkansas Department of Health (ADH); Carol Walton, Operations Branch Manager, Response and Recovery Division, AR Department of Emergency Management (ADEM)

Details: This presentation will describe how Arkansas used the EMAC to address surge capacity needs during emergency response. We will describe:

- How existing AR PCC, ADH, and ADEM partnerships used the EMAC Mission Ready Package (MRP) system to address surge capacity
- The MRP development process as well as the activation procedures and integration of the AR PCC into the state's response process

Past Events (at Time of Newsletter Release)

June Webinar: Adulterated medications sold on the street as prescriptions: The Fake Xanax Bars in San Francisco

Date: Thursday June 16, 2016 @ 1:00–2:00PM EST

Presenters: Ann Arens, MD and Kathy Vo, MD, Medical Toxicology Fellows, California Poison Control System, San Francisco Division; Dr. van Wijk, Clinical Chemistry Fellow at the University of California, San Francisco; Dr. Coffin, Director of Substance Use Research at the San Francisco Department of Public Health (SFPDH)

Details: Drs. Arens, Vo, van Wijk, and Coffin presented a cluster of opioid-related poisoning cases and deaths in San Francisco following ingestion of counterfeit pills designed to look like prescription medication. They described the clinical cases and detailed the coordinated public health response, which included the local PCC, a toxicology lab, a public health officer, the local medical examiner, and affected hospitals.

Roundtable: CSTE 2016—Poison Center & Public Health Collaborations

Date: Tuesday, June 21, 2016: 7:30–8:15AM

Location: ECC, Summit Halls 9 and 10

Presenter: Jay Schauben, PharmD, DABAT, FAACT, PC PH CoP Steering Committee Chair

Details: Dr. Schauben provided an overview of activities and accomplishments of the PC PH CoP and discussed ways to overcome key barriers to PC and public health collaboration.

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Centers for Disease Control and Prevention
National Center for Environmental Health

The findings and conclusions in this newsletter are those of the author(s) and do not necessarily represent the official position of the CDC/ATSDR.

CS267102

Letter from the Editor

Dear CoP Members,

Our featured topic in this issue is the opioid epidemic in the United States (U.S.). Opioid abuse and overdose is not a new issue; it's been a topic of concern for many years. However, trends in opioid use are shifting, and the rate of opioid deaths—both from prescription opioid pain relievers and illicit versions such as heroin and illicitly manufactured fentanyl—is on the rise. While much has been done at the local, state, and federal level to reduce opioid-related deaths, there is still a lot of work to do. The epidemic is complex, affecting people in every state, of every sex, ethnic group, and socioeconomic background. Opioid abuse is a public health, policy, socioeconomic, and law enforcement issue. For these reasons, a collaborative effort may be the most effective way to tackle the opioid epidemic. The intersection between toxicology and opioid abuse makes the opioid epidemic an important topic for both public health departments and poison centers. We have selected two articles that address surveillance of opioids for discussion.

The first article (Dart et. al 2015), was selected because of its novel use of PC data in opioid overdose surveillance. Because the first article looks at data only through 2013, and 2014 saw a dramatic increase in opioid deaths and a shift from prescription-related deaths to deaths from adulterated heroin, we decided to include the second article (Rudd et. al 2016). This second article not only provides an update on the opioid epidemic, but also informs readers of some of the research Centers for Disease Control and Prevention (CDC) is doing on opioid overdose. Before we present highlights of the two articles on this topic, we will give you a background on opioids and the current state of the epidemic. This information includes several excellent resources which we hope will teach you something new about opioids and existing collaborations aimed at tackling this epidemic.

Please contact me and let me know your thoughts on the newsletter. We are eager for your feedback and look forward to your input!

Sincerely,

Rebecca Lyons, MPH

Community of Practice Administrator

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Featured Topic

OPIOIDS

Intro to Opioids

According to the [National Institute on Drug Abuse \(NIDA\)](#), opioids are a class of drugs used to reduce pain. Opioids reduce the intensity of pain signals that reach the brain and diminish the effects of a painful stimuli.

CDC defines opioids as follows:

Prescription Opioids

Prescription opioids are medications prescribed by doctors to treat moderate to severe pain. They can have serious risks and side effects. Common types include

- Oxycodone (OxyContin)
- Hydrocodone (Vicodin)
- Morphine
- Methadone

Illicit Opioids

Illicit opioids are drugs such as heroin. Their use has increased across the U.S. among men and women, most age groups, and all income levels.

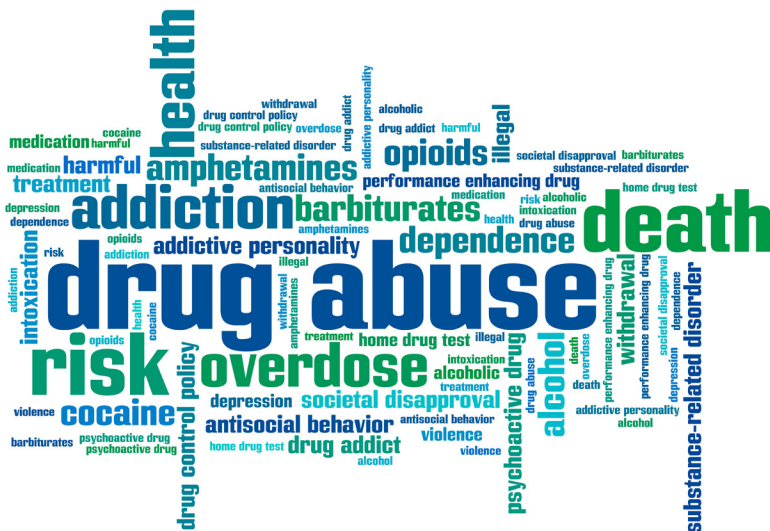
Emerging Opioid of Abuse: Fentanyl

- Fentanyl is a synthetic opioid pain reliever.
- Fentanyl is many times more powerful than other opioids.
- Fentanyl is FDA approved for treating severe pain (i.e., advanced stage cancer pain).
- Because fentanyl is also illegally made and distributed, fentanyl abuse has been on the rise in several states.

The Opioid Epidemic

The [National Rx Drug Abuse & Heroin Summit](#), presented by [Operation UNITE](#), is the largest national collaboration of professionals from local, state, and federal agencies, business, academia, clinicians, treatment providers, counselors, educators, state and national leaders, and advocates affected by prescription drug abuse and heroin use. During the summit, held in Atlanta, Georgia, March 28–31, 2016, CDC Director Dr. Tom Frieden gave a presentation entitled “From Sounding the Alarm to Turning the Tide: Action to Combat the Opioid Epidemic.” He quoted statistics such as the following:

- There have been **500,000** drug overdoses since 1999.
- Every day, **44** people in the U.S. die from prescription drug overdose, and many more become addicted.
- Health care providers wrote **249 million** prescriptions for opioids in 2013, enough for every American adult to have a bottle of pills.
- Among those reporting prescription opioid and heroin addiction in the last year, **3 out of 4** took prescription opioids first.



Find Dr. Frieden's full presentation by clicking the following link:
<https://vimeo.com/162843894>.

For more information about the summit, including presentation slides, video, and audio recordings, the visit the [National RX Drug Abuse & Heroin website](#).

For additional information regarding the opioid epidemic in the United States including the federal response, visit <http://www.hhs.gov/opioids/about-the-epidemic/>.

Opioid Abuse

The following are examples of **prescription opioid abuse**:

- Taking someone else's prescription opioid.
- Taking a prescription opioid in a way other than prescribed.
- Taking more than prescribed.
- Combining a prescription opioid with alcohol or other drugs.
- Crushing pills into powder to snort or inject.
- Taking opioid prescription medications to get high.

Regular **abuse** of opioids, may change the functioning of the brain. Repeated use may result in the following:

- **Tolerance**: more of the drug is needed to achieve the same "high."
- **Dependence**: the need to continue using the drug to avoid withdrawal symptoms.
- **Opioid use disorder**: also known as addiction, a devastating brain disease where, without proper treatment, people can't stop using drugs even when they really want to and even after it causes terrible consequences to their lives and health.

References: [NIDA for Teens Fact Sheet: Opioids & Pain Relievers](#) and [NIDA for Teens Fact Sheet: Heroin](#)

Opioid Overdose

According to the [World Health Organization \(WHO\)'s Information Sheet on Opioid Overdoses](#), opioids in high doses can cause respiratory depression and death because of their effect on the part of the brain which regulates breathing.

An opioid overdose can be identified by a combination of three signs and symptoms—pinpoint pupils, unconsciousness, and respiratory depression—referred to as the "opioid overdose triad." Combining opioids with alcohol and sedative medications increases the risk of respiratory depression and death.

Treatment for Acute Opioid Poisoning

CDC describes **naloxone** as a non-addictive, potentially life-saving drug that can *reverse*¹ the effects of an opioid overdose when administered *in time*². Expanding training on how to administer naloxone can help emergency medical service staff and bystanders reverse an opioid overdose and save more lives.

¹Naloxone is an opioid antagonist—meaning that it binds to opioid receptors and can reverse or block the effects of other opioids (<http://www.cdc.gov/media/releases/2015/p0424-naloxone.html>).

²According to NIDA: by the time medical service staff reach a person having an overdose, it is often too late. Several experimental overdose education and naloxone distribution (OEND) programs have issued emergency naloxone kits directly to opioid users, their friends or loved ones, and other potential bystanders, along with brief training in how to use these kits. Such programs have been shown to be an effective, as well as cost-effective, way of saving lives. (<https://www.drugabuse.gov/about-nida/noras-blog/2014/02/naloxone-potential-lifesaver>).

Featured Articles

OPIOID ABUSE

Summary of: Dart, R. C., Surratt, H.L., Cicero, T.J., Parrino, M.W., Severtson, S.G., Bucher-Bartelson, B. and J.L. Green (2015). Trends in Opioid Analgesic Abuse and Mortality in the United States. *New England Journal of Medicine*, 372 (3): 241–248.

In this article, Dart et. al (2015), used the Researched Abuse, Diversion, and Addiction Related Surveillance (RADARS) System to describe trends in the diversion and abuse of prescription opioids between 2002 and 2013.

Surveillance Programs in Radars:

- Drug Diversion
- Poison Center (PC)
- The Opioid Treatment Program and Survey of Key Informants' Patients (SKIP) Program
- College Survey

Study Medications:

- Oxycodone
- Hydrocodone
- Hydromorphone
- Fentanyl
- Morphine
- Tramadol

For more information on RADARS visit: <http://www.radars.org/>

For more information on prescription opioids visit the American Association of Poison Control Centers (AAPCC) [opioid \(narcotic\) pain medications page](#)



Key Trends Observed:

1. In general, RADARS System programs reported large increases in rates of opioid diversion³ and abuse from 2002–2010, but then rates flattened or decreased from 2011–2013.
2. Rate of opioid-related deaths followed a similar pattern to the rates of opioid diversion and abuse.
3. Reported heroin use generally increased from 2002 to 2013.
4. National Poison Data System (NPDS) shows rate of heroin-related deaths started increasing in 2006 and appeared to accelerate late in 2010.
5. Rate of deaths associated with heroin increased while rates of prescription opioid related deaths decreased. Authors suggest a possible relationship between the trends.

Authors' Conclusions:

The authors believe that decreases in prescriptions, diversion, and abuse from 2011–2013 are potentially due to:

- Decrease in supply (decrease in the number of prescriptions written);
- Decrease in demand (number of patients requesting prescriptions has decreased); or
- Programs implemented by local, state, and federal governments to improve opioid prescribing, reduce doctor shopping, limit questionable practices by pain clinics, and decrease the use of opioid pain relievers in the U.S. are working.

Access full article at: <http://www.nejm.org/doi/full/10.1056/NEJMs1406143>

³When prescription medicines are obtained or used illegally, it is called drug diversion. For more information on drug diversion please visit: <http://www.cdc.gov/injectionsafety/drugdiversion/>



For more information:

E-mail: RLyons@cdc.gov

Web: <http://www.cdc.gov/nceh/hsb/chemicals/poisoncenter.htm>

PC PH CoP Partners:
[American Association of Poison Control](#)
[Council of State & Territorial Epidemiologists](#)

OPIOID OVERDOSE

Summary of: Rudd, R.A., Aleshire, N., Zibbell, J.E., and M.R. Gladden (2016). Increases in Drug and Opioid Overdose Deaths—United States, 2000–2014. *MMWR*. (January 1, 2016).

In this study, Rudd et. al (2016), analyzed recent multiple cause-of-death mortality data to examine current trends and characteristics of drug overdose deaths. The authors used multiple cause-of death mortality files from the National Vital Statistics System (NVSS) to identify drug overdose deaths from 2000–2014. Rudd et. al identified increasing trends in opioid overdose deaths from 2013 to 2014.

Trends in data, 2013 to 2014:

- Although deaths related to natural and semisynthetic opioid pain relievers declined in 2012 compared with 2011 and held steady in 2013, there was a 9% increase in 2014.
- The overall number and rate of drug overdose deaths increased significantly from 2013 to 2014, with an additional 3,073 deaths in 2014.
- In 2014, there were approximately one and a half times more drug overdose deaths in the U.S. than deaths from motor vehicle crashes.
- The largest increase in the rate of drug overdose deaths involved synthetic opioids other than methadone (e.g., fentanyl and tramadol), which nearly doubled from 1.0 per 100,000 to 1.8 per 100,000.
- The sharp increase in deaths involving synthetic opioids other than methadone in 2014 coincided with law enforcement reports of increased availability of illicitly manufactured fentanyl.

Key findings from the NVSS—2000 to 2014:

- Nearly half a million persons in the U.S. died from drug overdose and the most common drugs associated with overdose death are opioids
- The U.S. opioid overdose epidemic includes two distinct but interrelated trends:
 - » A 15-year increase in overdose deaths involving prescription opioid pain relievers.
 - » A recent surge in illicit opioid overdose deaths, driven largely by heroin.

Challenges and Limitations in Opioid Surveillance

- Illicitly manufactured fentanyl cannot be distinguished from prescription fentanyl in death certificate data.
- Toxicological laboratory tests might be performed as part of an autopsy, but the substances tested for and circumstances under which the tests are performed vary by jurisdiction.
- Increase in the reporting of specific drugs in 2014 might have contributed to some of the observed increases in drug overdose death rates involving different types of opioids from 2013 to 2014.
- Some heroin deaths might be misclassified as morphine because morphine and heroin are metabolized similarly, which might result in an underreporting of heroin overdose deaths.

Access full article at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6450a3.htm>