

National Poison Prevention Week

Tisha Carson RPh, CSPI

More than 2 million poisonings are reported each year to the 55 poison control centers across the country. More than 90 percent of these poisonings occur in the home. The majority of non-fatal poisonings occur in children younger than six years old. Poisonings are one of the leading causes of death among adults.

National Poison Prevention Week, the third week in March each year, is nationally designated to highlight the dangers of poisonings and how to prevent them. However, every day people, can and do prevent poisonings. **We invite you to review the information at <https://poisonhelp.hrsa.gov/what-can-you-do/national-poison-prevention-week/index.html> and become actively involved in helping ensure the safety of children and adults in your home and your community.**

The following daily themes will be promoted in 2017:

- ⇒ **Monday, March 20—Children Act Fast...So Do Poisons**
- ⇒ **Tuesday, March 21– Poison Centers: Saving You Time and Money**
- ⇒ **Wednesday, March 22– Poisonings Span a Lifetime**
- ⇒ **Thursday, March 23-Home Safe Home**
- ⇒ **Friday, March 24– Medicine Safety**

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How did you come to work here? During my first weeks of pharmacy college, I noticed flyers around the buildings that advertised, “It’s not a job. It’s an adventure.” That appealed to my adventurous 22 year old spirit! And, it has been ...enough so that I’m still with it nearly 25 years later!

What is your favorite thing about your job? I never get bored. That is my mantra sometimes, even. “At least I’m not bored. At least I’m not bored....” I find toxicology fascinating. There is so much to learn and constantly new information put forth. Although there are common exposures/concerns posed via hotline calls, you can always count on something that you’ve never heard of before to keep you on your toes!

What is your most memorable call? As I think back about all my call experiences over the years, the ones that shine are those involving childhood exposures, where I’ve had the opportunity to calm and reassure a frantic parent, and also those involving our elders, who are often overwhelmingly appreciative of the information and guidance we provide... and perhaps just a few minutes to be heard and connect with someone. The strongest memories of individual calls though, are honestly the ones where the patients were the sickest. (Fortunately, those are few and far between.) One of my worst calls involved a young family with a serious carbon monoxide exposure. An infant was involved and very sick, having seizures. The mother and child had initially been taken to different facilities and the logistics of trying to reunite them so that they could be placed together in a hyperbaric chamber as quickly as possible was very stressful. I still think of them from time to time, and hope they are all well.

What are your other interests? Hiking, birdwatching, flower and vegetable gardening, minimalism (living simply, with a small footprint), land preservation/stewardship, environmental justice .

What is your biggest personal accomplishment? My husband and I have put our hearts and resources into preserving a large tract of land in eastern Ohio. We manage it as a nature preserve and are working to make the right choices to insure its protection forever. For now, we have the honor of living on it and enjoying lots of time in the woods. Also, I have two wonderful sons, who at 14 and 16 seem to be on their way to becoming fine young men. Of course, they are and will continue to be works in progress.

What is your biggest professional accomplishment? I have grown tremendously in my expertise over so many years of working with poison control. Although toxicology is a dynamic field and I will always have a sense of unease about what I don’t know, I am proud to have finally reached the point that I am pretty confident with my abilities.



Cannabis that could replace pills?

Evaluating HMBLDT vape pens

Angel Cox, PharmD candidate, James L Winkle College of Pharmacy
Jan Scaglione MT, PharmD, D.ABAT



Photo: www.hmbldt.com

Currently in the U.S. 28 states (including Ohio) have legalized medicinal use of marijuana. On a federal level, the Drug Enforcement Administration (DEA) placed marijuana in Schedule I category where it is considered illegal to possess or use. Despite this there is rising interest in marijuana for purposes of therapy and medical relief for various conditions. Recently TIME magazine released an article listing the “25 Best Inventions of 2016.” The article listed many interesting devices but of particular interest was number 7, “Cannabis That Could Replace Pills.”

According to Lucas Zarebinski, author of the TIME article, millions of Americans who use over the counter medicines for routine ailments like headache and insomnia may benefit from the use of Hmbldt vape pens. He muses “what if they took hits of pot instead?” This is exactly what the California-based company Hmbldt intends. Hmbldt has developed a line of vape pens containing chemically engineered cannabis oil that is capable of a wide range of therapeutic benefits without the high. Currently, Hmbldt has 4 different formulations available for purchase in California with 3 more formulations in the pipeline. Available formulations include Bliss, Sleep, Calm, and Relief. Each cannabis oil product contains varying amounts of major and minor cannabinoids and terpenes purported to deliver targeted benefits.

Bliss purportedly contains 1.49 mg of THC per dose and 0.16 mg of cannabidiol (CBD) per dose. This precise combination was designed to provide an uplifting effect making you feel “just the right amount of good”. In comparison, the Calm formulation contains 0.10 mg of THC per dose and 1.54 mg of CBD per dose, an amount designed to provide a soothing effect to help your mind and body relax “naturally.”

To date, several studies of the therapeutic benefits of cannabinoids have reported benefit in treating chronic pain. The quality of evidence available to support the use of medicinal cannabinoids, however, is quite varied. The best route of administration remains unanswered. Hmbldt boasts that their devices provide a safe, controlled, and accurate dose of standardized THC and CBD concentrations. The pens are capsule shaped with a sleek design reminiscent of many pharmaceutical products. They were designed to have a 3 second time controlled dose, a custom battery that provides precise heating, a reservoir that delivers exact oil flow, a medical grade reservoir, and a series of airflow controls.

Hmbldt claims their products have undergone consumer trials, but there were no published clinical trials or consumer trials found in researching for this article. In a review of two commercially available vapor products which contained CBD, Peace et al highlighted issues with the manufacturing and quality control of products resulting from unregulated industry. The CBD content was found to be within 15% of the claimed concentration, but they also contained a variety of other compounds such as ethanol, vegetable glycerin, propylene glycol, and food grade flavorings. The effects of these additives are not fully known. As with many vape pens and e-cigarette devices, there is currently insufficient evidence to recommend the Hmbldt products for clinical use.

References:

<http://time.com/4572079/best-inventions-2016/>

Peace MR, Butler KE, Wolf CE, Poklis JL, Poklis A. Evaluation of Two Commercially Available Cannabidiol Formulations for Use in Electronic Cigarettes. *Frontiers in Pharmacology*. 2016;7:279. doi:10.3389/fphar.2016.00279.

Fun with Mary Jane and Joe

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Photo, courtesy of foodbeast.com

As cannabis continues its advance from the extralegal edge of counterculture, the presence of marijuana-containing products has likewise grown. For both medical and recreational users, alternatives to smoking have long existed, often in the form of “edibles.” These marijuana-laced food products resemble familiar baked goods (cookies, brownies, etc.), and are infused with concentrated cannabis oil. The internet is filled with blogs and forums with both recipes for the adventurous chef, and tips/cautions for the user to extract the most benefit from ingestion. Now the market has expanded to deliver marijuana as a “potable” to give one’s morning pick-me-up an extra boost. That’s right—marijuana-containing coffee seems to be among the latest trends of the weed-consuming community. Perhaps as a way to imitate the spirit of Dutch coffee shops, there are many companies pedaling their own cannabis-infused blends of coffee, tea, and even hot chocolate to appeal to virtually any potential user. More recently, the San Diego company BrewBudz® launched a line of single-use coffee cups that contain a whole cannabis flower right in with the coffee.

Users prefer the ingestion of marijuana over inhalation due to a longer duration of action and avoidance of the odor associated with smoking. Ingestion of marijuana appeals to medical users needing relief from chronic conditions, that do not want to be exposed to the pungency of inhaled cannabis. BrewBudz® vice president, Jeffry Paul, stated his belief that the bringing together of two daily rituals was only natural. But what is the result of combining caffeine and concentrated marijuana oil? Do the stimulant effects of caffeine cancel out the depressant effects of cannabinoids? Given the continued illegal status of cannabis on a national level, there has been little research in this area. Animal studies suggest that caffeine synergistically increases the psychoactive component of marijuana, THC, leading to an increase in marijuana cravings. This observation reinforces the complex nature of psychoactive substances. As with any drug, the dual consumption of caffeine and cannabis has variable effects from person to person, and users need to be aware of a possible interaction. Additionally, edible cannabis products are often not standardized. Despite cannabis coffee being a relative novelty, these products seem to have a definite market niche and will likely to continue to expand.

References:

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“Drunkorexia”

Robyn Davis MSN, RNII, CNL, CSPI

It should not be a surprise to you that college kids drink alcohol. It should also not surprise you that college aged students drink alcohol in excess

amounts. What may surprise and concern you is a new trend that started around July of 2016 called “Drunkorexia.” If you search the word ‘Drunkorexia’ on the internet, you will find several links to stories related to this concerning new trend. Many of the stories are self-reports of college students who have survived this phenomenon and are trying to increase awareness of its dangers. “Drunkorexia” has been described as purposeful calorie restriction prior to drinking alcohol. There are several reasons individuals are choosing to do this: increase their level of intoxication, accelerate the onset of intoxication, or weight management.

A recent study by Dipali V. Rinker, PhD was conducted and presented at the 39th Annual Research Society on Alcoholism Scientific meeting. The mean age of 1184 college students surveyed was 22.3 years with 60% of the sample being women and 40% men. Students who had engaged in at least 1 episode of heavy drinking within the last 30 days were surveyed via web based survey. Heavy drinking was defined as women having four or more drinks in a sitting whereas men would have 5 or more.

8 in 10 college students reported engagement in this behavior. Some contributing factors to students’ willingness to participate in such risky behavior were students living away from home for the first time or those coping with the stress of college.



<http://www.villagevoice.com/news/drunkorexia-the-new-not-eating-is-drinking-6699840>

Among the reasons for engaging in this behavior was because it is a coping mechanism for stress and is seen as highly normal behavior in college students. Most everyone is aware that excessive alcohol consumption causes

short and long term physical and mental health issues. Frequent calorie restriction may lead to malnutrition which can have a major impact on students’ physical and mental health. Each of them has their own set of concerns but combining them on a frequent basis could have a major impact on student’s health as well as their ability to be productive. It will be interesting to see if this phenomenon continues and if it has a negative impact on matriculation rates.

Parents and health care professionals (HCPs) should be aware of this developing trend and educate college students of the dangers participating in practices like “Drunkorexia.” One major area of education that parents and HCPs can educate students in is to decrease the perception that these types of alcohol practices are normal and encourage other ways to safely cope with the stress of college.

References: Research Society on Alcoholism. "Drunkorexia 101: Increasing Alcohol's Effects Through Diet and Exercise Behaviors." ScienceDaily. ScienceDaily, 27 June 2016. <www.sciencedaily.com/releases/2016/06/160627100223.htm>.

<http://www.medscape.com/viewarticle/865488>

Shiitake Mushroom Dermatitis

Rob Goetz PharmD, DABAT



Shiitake mushroom dermatitis was first described by Nakamura in Japanese patients who ate uncooked or partially cooked shiitake mushrooms (*Lentinus edodes*). However, it has become increasingly common in the United States and Europe as the popularity of Shiitake mushrooms has grown. This unusual dermatitis manifests as intensely itchy, linear, red papules most commonly on the trunk, beginning 1-2 days after eating raw, partially cooked shiitake mushrooms. The lesions have been described as flagellate or looking as if inflicted by a whip and are not induced by scratching.

Shiitake mushroom dermatitis is a separate entity from occupational dermatitis of the hands and respiratory distress that may be seen in workers growing and handling the mushrooms. Instead of being caused by an allergic reaction, the rash is thought to be caused by a toxic reaction to lentinan, a heat labile polysaccharide present in the uncooked mushrooms. Cooking denatures lentinan and prevents the reaction. However, the exact cause is not entirely clear because the reaction has rarely been reported in patients after eating the fully cooked mushrooms.

The rash appears most commonly on the trunk with extremities, neck, face and head involvement in decreasing order. Treatment should include topical steroids and oral antihistamines. The rash usually abates completely in 4-8 weeks.

Shiitake Mushrooms have become very popular as interest in Asian food and awareness of their health benefits has increased. It is important to increase awareness of the distinctive highly itchy rash appearing on the trunk 1-2 days after eating raw or partially cooked Shiitakes. This reaction can be entirely prevented if the mushrooms are fully cooked prior to eating them.

References:

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www.aapcc.org

Ohio House Bill 388 “Annie’s Law”

Deborah A. Donald MSN, RNII, CSPI



An alcohol ignition interlock is a breath-test device connected to a vehicle’s ignition. The vehicle will not start unless the driver blows into the interlock and has a blood alcohol concentration [BAC] below a pre-set low limit, usually .02 BAC.

Figure 1. Ignition Interlock Device [IDD]

Source: (CDC), 2016

Currently, every state has Ignition Interlock Device [IID] laws in place. The difference in each state is how the [IID] laws are implemented. Most states still identify any individual driving with alcohol in their body as Driving Under the Influence [DUI] or Driving While Intoxicated [DWI]. In Ohio, any individual operating a vehicle with alcohol and/or drugs in their body is identified as Operating a Vehicle Impaired [OVI]. The four major offenses that require IID are as follows: (1) Repeat DUI/OVI offenses, (2) Blood Alcohol Content (BAC) > .15, (3) DUI/OVI with a child under 18 years of age in the vehicle, and (4) DUI/OVI with an accident and/or injury. There are 17 states (Table 1) that mandate IID for any convicted drunk drivers, and no exceptions are made for first-time offenders. An image of a generic IID is depicted in Figure 1. There are multiple companies marketing devices across the country, and every state has specific requirements and guidelines when selecting the devices they will utilize (Ignition Interlock Help (IIH), 2016; Center for Disease Control and Prevention (CDC), 2016).

Table 1.

States with Mandatory Ignition Interlock Devices for Drunk Drivers/First-Time Offenders

Alaska	Arizona	Arkansas
Colorado	Connecticut	Hawaii
Illinois	Kansas	Louisiana
Missouri	Nebraska	New Mexico
New York	Oregon	Utah
Virginia	Washington	

Source: (IIH, 2016)

On July 4, 2013, at 9:20 p.m., in an area outside Chillicothe, OH Annie Rooney was killed in a head-on collision on Route 50. She was a local attorney with family ties in the area. The drunk-driver had a history of alcohol abuse that included five arrests and three license suspensions. The drunk-driver survived and was sentenced to 8 years in prison. Mothers Against Drunk Drivers and the family of Annie Rooney sought out state legislators to start the process of making it mandatory for all drunk-driver offenders to use ignition interlock devices (Zachariah, 2014).

In honor of Annie Rooney, this **Ohio legislation** is known as “Annie’s Law”. Effective April 4, 2017, House Bill (HB) 388 modifies penalties for drunk driving. The bill addresses first-time offenders specifically. The bill allows judges to decrease the suspension time for offenders when Operating a Vehicle Impaired (OVI). The offender is required to install an (IID) to continue unlimited driving privileges. In addition there will be an increase from six to ten years when reviewing OVI offenses. Penalties are modified related to OVI offenses, and penalties are expanded for IID violations. IID installation and monitoring laws are also modified. The Legislation Text for (HB) 388 is available in its entirety at <https://www.legislature.ohio.gov/legislation/legislation-status?id=GA131-HB-388> (The Ohio Legislature, 2017).

Epicenter Report for Oct 26-Nov1, 2016

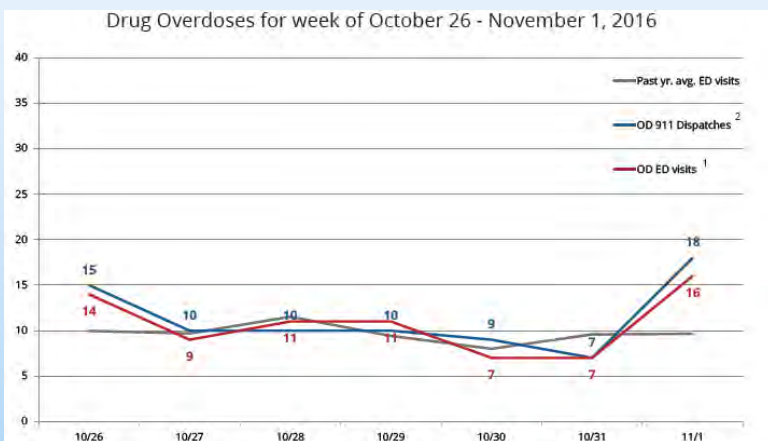
Sara K. Pinkston RN, MSN, CSPI



The Hamilton County Heroin Coalition issued a daily EpiCenter report on November 1st, 2016, indicating a 10 day high in the number of overdoses presenting to area emergency departments. This was sent to promote awareness of something unique possibly happening in the community on that day.

Drug overdose data is retrieved from the state's EpiCenter surveillance tool. "Overdose" cases include all emergency visits to Hamilton County medical care providers in which drugs were indicated as a cause of traumatic injury. Cases were included in analysis if the case notes for the patient included the term "overdose" or "OD."

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.



Drug Overdoses by Patient's ZIP code*; November 1, 2016

ZIP Code	Number	Percent**
45212	2	12.5%
45216	2	12.5%
45219	2	12.5%
45005	1	6.3%
45011	1	6.3%
45013	1	6.3%
45205	1	6.3%
45229	1	6.3%
45230	1	6.3%
45255	1	6.3%
TOTAL	16	100.0%

Overdoses reported by 911 dispatches saw an uptick from 7 on October 31st to 18 on November 1st, while ED visits in Hamilton County went up from 7 on October 31st to 16 on November 1st. Average ED visits for the same time period in 2015 were just under 10. Emergency dispatches refer to fire/EMS and Law Enforcement responses to 911 emergency calls related to drug overdose in which a unit was dispatched.

Of the 16 cases reporting to the ED on November 1st for drug overdose, 5 were female (31.3%) and 11 were male (68.8%). These individuals were primarily in the age group of 35-49 (37.5%) with the age group of 25-34 a close second at 31.3%. One individual was younger than 18, and one was 65 and older. The age group of 18-24 saw a total of 3 (18.8%) individuals reported.

*Ten most frequent ZIP codes displayed, if more than 10 ZIP codes reported in a cluster, percentages will not add to 100 and ZIP codes beginning "452" are given precedence for inclusion over other ZIP codes.

**Percent among those who do not have missing information for the respective demographic factor.

ZIP codes refer to the ZIP code of residence of the patient visiting the ED.

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

Data compiled cooperatively by Hamilton County Law Enforcement, Public Health, and Fire/EMS agencies



National Drug and Alcohol Facts Week 2017 took place Monday January 23 – Tuesday January 29, 2017.

The Drug and Poison Information Center joined scientific experts across the U.S. in this week-long effort to unplug the facts on drugs. The Drug and Poison Information Center distributed the following information to counteract the myths associated with legalized marijuana and employment. Please see the infographic on the right of this page.

People of Color Wellness Alliance (POCWA) Community Gems Award Focuses on Addressing Childhood Trauma



Sarah Collins Rudolph
2016 POCWA Community Guest Speaker

The Drug and Poison Information Center in collaboration with the People Of Color Wellness Alliance (POCWA) sponsored Sarah Collins-Rudolph as a keynote speaker at the POCWA Community Gems Award Ceremony. A native of Birmingham, Alabama, Sarah continues to recover from the September 15, 1963 bombing of the 16th Street Baptist Church. Mrs. Collins-Rudolph was the “fifth girl” inside the ladies lounge when the bomb was detonated. Her struggle to overcome this traumatic event resulted in a lifelong battle with alcoholism, mental health issues and emotional harm. Her visit underscores the Children’s Hospital/ DPIC focus on addressing childhood trauma through the Cincinnati – Community Oriented Trauma System (C-COTS). For more information on the impact of exposure to unresolved trauma call Marsha Polk 513-636-5087 or Alysia Longmire 513-636-5094.

The Facts about Legalized Marijuana and Your Job

National Drug & Alcohol Facts Week
January 23- 29, 2017

Shatter the Myths

Your employer
Is NOT required to accommodate your use or possession

Job Opportunities
Employers can REFUSE to hire you

No Cash
You will NOT receive unemployment benefits

Source: Ohio Working Partners Drug Free Workforce Community Initiative

HOW CAN WE HELP YOU

Do you have Questions?
We can help!
Call the Drug and Poison Information Center Hotline at 1 800 222 1222

Treatment Questions?
People Of Color Wellness Alliance (POCWA) can connect you to the right people
• Call Us: 513 636 5095

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Opiate Overdoses Through the Years

Shannon Staton-Growcock MSN, RN, CSPI

Through the Years

On a national level

We now know that overdoses from prescription opioids are a driving factor in the 15 year increase in opioid overdose deaths. Since 1999, the amount of prescription opioids sold in the U.S. nearly quadrupled. Yet there has been no decrease in the amount of pain Americans report. Deaths from prescription opioids like oxycodone, hydrocodone, and methadone have quadrupled since 1999.

These significant increases in death rates were driven by synthetic opioids other than methadone (72.2%), most likely illicitly-manufactured fentanyl (2,3), and heroin (20.6%). Increases in these opioid subcategories occurred overall, and across all demographics and regions. Natural/semisynthetic opioid death rates increased by 2.6%, whereas methadone death rates decreased by 9.1%.

Drug overdose deaths increased 23 percent between 2010 and 2014, with more than 47,000 Americans dying in 2014, according to the U.S. Centers for Disease Control and Prevention (CDC) data released in December 2016.

But updated numbers from the CDC also show that more than 52,000 people died from a drug overdose in 2015, and just over 33,000 of those deaths (63 percent) involved a prescription or illicit opioid.

The CDC noted, in its national update released Dec. 16 in the Morbidity and Mortality Weekly Report, that more than 300,000 Americans have lost their lives to an opioid overdose since 2000.

Heroin continues to be the deadliest narcotic in the United States, killing nearly 11,000 people in 2014 -- nearly one of every four overdose deaths that year, according to the report by Margaret Warner, of the CDC's National Center for Health Statistics, and colleagues. Their findings were published Dec. 20 in the agency's National Vital Statistics Reports.

But the threat posed by the more powerful synthetic opioids, such as fentanyl, is rising exponentially as these drugs become more widely available, the investigators found.

In 2015, death rates for all synthetic opioids other than methadone increased 72 percent, while heroin death rates increased about 21 percent, the CDC reported. The increases cut across all demographic groups, regions, and in numerous states.

Meanwhile, the death rate specifically from fentanyl more than doubled in a single year, rising from 1,905 deaths in 2013 to 4,200 deaths in 2014, according to the report by Warner's team.

"Synthetics are cheaper than heroin to make,

and we're seeing them flood the United States," she said. "Drug dealers are cutting heroin with these synthetic drugs because it's cheaper, and it actually makes the drug more potent. If you don't know the heroin you're using is being cut, the normal dose you usually take becomes deadly."

Warner and colleagues created their new report based on a new method that uses the text from death certificates to identify specific drugs involved in overdose deaths.

Of the 10 most deadly drugs in 2014, the list included 6 opiates: heroin (23 percent of overdose deaths); oxycodone, (11.5 percent); fentanyl (8.9 percent); morphine (8.5 percent); methadone (7.4 percent); and hydrocodone/Vicodin (7 percent.)

The ongoing epidemic of opioid deaths requires intense attention and action. In a November 2016 report, the Drug Enforcement Administration referred to prescription drugs, heroin, and fentanyl as the most significant drug-related threats to the United States.

A multifaceted, coordinated approach between public health and public safety is necessary to address the U.S. opioid epidemic.

On an average day in the U.S.:

More than 650,000 opioid prescriptions are dispensed

3,900 people initiate non-medical use of prescription opioids

580 people initiate heroin use

*Opioid-related overdoses include those involving prescription opioids and illicit opioids such as heroin **Source:** IMS Health National Prescription Audit / SAMHSA National Survey on Drug Use and Health / CDC National Vital Statistics

Everyday Deaths



Drug overdose deaths and opioid-involved deaths continue to increase in the United States. The majority of drug overdose deaths (more than six out of ten) involve an opioid.¹ Since 1999, the number of overdose deaths involving opioids (including [prescription opioids](#) and [heroin](#)) quadrupled.² From 2000 to 2015 more than half a million people died from drug overdoses. 91 Americans die every day from an opioid overdose.

Source:

<https://www.cdc.gov/drugoverdose/opioids/prescribed.html>

<https://www.cdc.gov/drugoverdose/opioids/heroin.html>

References:

<https://www.hhs.gov/sites/default/files/Factsheet-opioids-061516.pdf>

<https://www.cdc.gov/drugoverdose/epidemic/index.html>

Rudd RA, Seth P, David F, Scholl L. Increases in Drug and Opioid-Involved Overdose Deaths — United States, 2010–2015. MMWR Morb Mortal Wkly Rep 2016;65:1445–1452. DOI: <http://dx.doi.org/10.15585/mmwr.mm6505a1>.

National Vital Statistics Report: https://www.cdc.gov/nchs/data/nvsr/nvsr65/nvsr65_10.pdf

DEA announces McKesson will pay record \$150 million settlement for failure to report suspicious orders of prescription painkillers

Jan Scaglione MT, PharmD, D ABAT



On January 17, 2017, the Drug Enforcement Administration (DEA) announced that McKesson Corporation, one of the U.S.'s largest distributors of pharmaceutical drugs, has agreed to pay a \$150 million civil penalty for alleged violations of the Controlled Substances Act (CSA).

The settlement requires McKesson to suspend sales of controlled substances from four distribution centers in Colorado, Ohio, Michigan, and Florida for multiple years. These suspensions are the most severe sanctions ever agreed to by a DEA-registered distributor. McKesson also had to agree to new and enhanced compliance obligations on McKesson's distribution system.

McKesson had similar violations leveled in 2008, and they agreed to a \$13.25 million civil penalty and administrative agreement. The government alleged that McKesson failed to design and implement an effective system to detect and report suspicious orders for controlled substances distributed to its independent and small chain pharmacy customers. These included orders that were unusual in their frequency, size, or deviated significantly from the normal pattern. Three of McKesson's distribution centers received and filled hundreds of suspicious orders placed by pharmacies participating in illicit Internet schemes, but failed to report the orders to DEA. The pharmacies filled purported online "prescriptions" for hydrocodone (contained in drugs such as Vicodin), but the prescriptions were issued outside the normal course of professional practice, and not for a legitimate medical purpose. As a result, millions of dosage units of controlled substances were diverted from legitimate channels of distribution.

From 2008 to 2013, McKesson supplied various U.S. pharmacies increasing amounts of oxycodone and hydrocodone pills, opioids that are part of the current epidemic we face in the U.S. In Colorado, for example, McKesson processed more than 1.6 million orders for controlled substances from June 2008 through May 2013, but reported just 16 orders as suspicious, all connected to one instance related to a recently terminated customer.

In addition to the monetary penalties and suspensions, McKesson agreed to enhanced compliance terms for the next five years. McKesson will need to engage an independent monitor to assess compliance, representing the first time an independent monitor has been assigned in a CSA civil penalty settlement.

McKesson was just the latest pharmaceutical distributor to agree to pay for violations of the CSA. Earlier this month, Cardinal Health, another major pharmaceutical distributor, agreed to \$44 million in fines to resolve allegations that it failed to alert the DEA to suspicious orders of prescription painkillers by pharmacies in Florida, Maryland and New York during the years 2009-2012. Another distributor, AmerisourceBergen, was fined \$16 million recently for similar violations in the state of West Virginia during the years 2007 -2012.

References:

<https://www.dea.gov/divisions/hq/2017/hq011717.shtml>

<https://www.justice.gov/archive/opa/pr/2008/May/08-opa-374.html>

55,622

OPIOID EXPOSURES*

Jan. 1 - October 31, 2016

**These numbers reflect multiple substance exposures to opioids reported to poison centers*

Welcome Soliqua 100/33 & Adlyxin At a Pharmacy Near You

Lisa Geis EMT



In 2016 the FDA approved two new diabetic medications. Both of these medications are used for type 2 diabetes mellitus. The first, Adlyxin, is a glucagon-like peptide-1 (GLP-1) receptor agonist. It is indicated as an adjunct to diet and exercise to help improve glycemic control. Secondly, Soliqua 100/33, is a combination long-acting human insulin analog that also has a glucagon-like peptide-1 (GLP-1) receptor agonist. It is also indicated as an adjunct to diet and exercise to help improve glycemic control. Both medications are injected once daily, one hour prior to the first meal of the day.

Both of these medications contain the GLP-1 receptor agonist; **Lixisenatide**. Lixisenatide increases glucose-dependent insulin release, decreases glucagon secretion, and slows gastric emptying.

Both of these medications after multiple doses in patients with type 2 diabetes had a mean terminal half-life approximately 3 hours and the mean apparent clearance (CL/F) about 35 L/h.

The most common adverse effects in patients treated with ADLYXIN are nausea, vomiting, headache, diarrhea, dizziness, and hypoglycemia. SOLIQUA 100/33 adverse effects include the above plus possi-

ble allergic reactions, nasopharyngitis, and upper respiratory tract infection.

Reference:

Package inserts for Adlyxin and Soliqua 100/33



<http://www.cincinnatichildrens.org/service/d/dpic/default/>



<http://cincinnatichildrensblog.org/category/safety-and-prevention/>



WINTER

Poison Safety

Winter can be a wonderful time of year, but it also brings some special poison hazards. There are a few easy things you can do to help ensure a poison-free winter season.

Carbon Monoxide

Carbon monoxide (CO) - the "silent killer" - is an odorless and colorless gas, which is released through defective generators, gas furnaces and heaters, and gasoline-powered vehicles and equipment. Breathing in too much CO can cause unconsciousness, impaired coordination, and even death.



- Install a CO detector in your home & replace the battery regularly
- Never use a generator indoors, and never place a generator being used outdoors less than 20 feet from any window, door, or vent
- Have your home's heating system and chimneys inspected regularly to ensure proper ventilation

Toy Safety

Toy & battery safety remains a serious concern during the winter holidays. In 2014, poison centers managed about 94,000 cases of kids and adults swallowing foreign bodies and button batteries, about 6,500 of which involved toys and ornaments.

- Monitor toy recalls as you do your holiday shopping and do not purchase or allow children to play with recalled toys
- Keep antique and vintage toys out of reach of children. Do not allow children to play with antique toys, especially toys with chipping or worn paint
- Keep items containing button batteries (such as watches, toys, games, flashing jewelry, singing greeting cards, and remote control devices) securely fastened or out of the reach of children



Alcohol and Children

Every year poison centers manage thousands of cases of alcohol exposure in children under six. Even a small amount of ingested alcohol can cause severely low blood sugar and distress to a child's central nervous system.

- Take special care to keep wine, beer, liquor and other alcoholic beverages up and away from children.
- Alcohol found in mouthwash, hand sanitizers, and other personal care products can also cause alcohol poisoning, so it is important to keep these products up and away from children, too.



Winter Poison Safety

Winter can be a magical time of year. Families gather for the holidays, exchanging gifts and cards, and sharing meals and resolutions for the coming New Year. Friends catch up with each other over drinks, while neighborhoods and shopping centers twinkle with holiday lights. We bundle up as the air gets chilly, and those of us who live in snow-prone areas dust off our sleds, shovels, and snow blowers.



The best way to be prepared for poisoning emergencies this holiday season is to program the Poison Help line, 1-800-222-1222, into your mobile telephone, and post it in a visible place in your home. The experts at poison centers provide free and confidential information and treatment advice 24/7/365, including holidays.





NACCT 2017

Vancouver, British Columbia

North American Congress of Clinical Toxicology (NACCT)

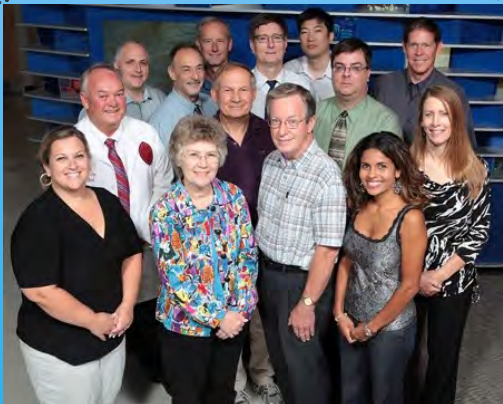
NACCT is an annual conference that allows physicians, pharmacists, nurses, and scientists from around the world to participate in the sharing of knowledge on a wide variety of clinical toxicology topics and issues. In addition, the congress includes presentation of original research papers, a number of symposia, as well as other traditional and novel continuing education sessions.

The Pre-Meeting Symposia will be on October 11-12 and the Main Congress will be on October 13-15, 2017.

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American Association of Poison Control Centers

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When you dial 1-800-222-1222, your call is answered by a medical professional with special training in poison management. Help is fast, free, confidential and available 24 hours a day, every day.