



LORAIN COUNTY COMMISSIONERS

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LabINFO NEWSLETTER

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This newsletter is provided by the Lorain County Crime/Drug Lab discussing technical and general information dedicated to local agencies within Lorain County. The information has been collected from various sources and journals.

WHY DO PEOPLE LOSE CONTROL OVER THEIR COCAINE USE?

[Source: www.drugabuse.gov]

Researchers monitored the activity of two types of neurons in mice: “urge” neurons, which promote feelings of reward and repeating behaviors that have produced rewards, and “control” neurons, which dampen those feelings and inhibit behavior. Cocaine shifted the balance of activity strongly to the “urge” neurons. When mice received the drug for the first time, the balance quickly returned to normal; but when they received the drug after already having had it many times, the “urge” neurons continued to predominate for much longer. The researchers suggest that the same dynamic occurs when people use cocaine repeatedly, so that early episodic drug use evolves over time into a perpetual strong urge to seek the drug.

Why take the same drug if it doesn't give you pleasure anymore? Is this the reason why we have Heroin epidemic?

MEDICAL MARIJUANA

[Source: Ohio State Board of Pharmacy]

House Bill 523, effective on September 8, 2016, legalizes medical marijuana in Ohio. The Ohio Medical Marijuana Control Program will allow people with certain medical conditions, upon the recommendation of an Ohio-licensed physician certified by the State Medical Board, to purchase and use medical marijuana.

CARFENTANIL FACTS

[Source: www.dea.gov]

Carfentanil is a Schedule II substance under the Controlled Substances Act and is used as a tranquilizing agent for elephants and other large mammals. The lethal dose range for Carfentanil in humans is unknown. However, as noted, Carfentanil is approximately 100 times more potent than fentanyl, which can be lethal at the 2-milligram range, depending on route of administration and other factors (e.g., mixed with other designer drugs, alcohol, etc.).



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Carfentanil and other fentanyl-related compounds are a serious danger to public safety, first responder, medical treatment, and laboratory personnel. These substances can come in several forms, including powder, blotter paper, tablets, and spray – they can be absorbed through the skin or accidental inhalation of airborne powder.

If encountered, do not handle it yourself but contact responding authorized and qualified responding personnel. Trained responding personnel should do the following:

1. *Exercise extreme caution.*
 - Only properly trained and outfitted law enforcement professionals should handle any substance suspected to contain fentanyl or fentanyl-related substance.
2. *Be aware of any sign of exposure.*
 - Symptoms include: respiratory depression or arrest, drowsiness, disorientation, sedation, pinpoint pupils, and clammy skin. The onset of these symptoms usually occurs within minutes of exposure.
3. *Seek IMMEDIATE medical attention.*
 - Fentanyl-related substances can work very quickly, so in cases of suspected exposure, it is important to call EMS immediately. If inhaled, move the victim to fresh air. If ingested and the victim is conscious, wash out the victim's eyes and mouth with cool water.
4. *Be ready to administer Naloxone in the event of exposure.*
 - Immediately administering Naloxone can reverse an overdose of Carfentanil, fentanyl, or other opioids. Multiple doses of Naloxone may be required. Continue to administer a dose Naloxone every 2-3 minutes until the individual is breathing on his/her own for at least 15 minutes or until EMS arrives.
5. *Remember that Carfentanil can resemble powdered cocaine or heroin.*
 - If you suspect the presence of Carfentanil or any synthetic opioid, do not take samples or otherwise disturb the substance, as this could lead to accidental exposure. Rather, secure the substance and wait for properly trained professionals.

Carfentanil seizures have become more and more prevalent in recent months, with more than 400 cases documented in eight states since July alone with the majority of the chemicals coming from increased trade with China. The Drug Enforcement Administration (DEA) has confirmed at least 407 carfentanil seizures in eight states, with the main geographic cluster in Ohio. Of the 407 cases, 343 of them occurred in Ohio, with many others in surrounding states.



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When the Prescription Becomes the Problem

- Providers wrote nearly a quarter of a billion opioid prescriptions in 2013—with wide variation across states. This is enough for every American adult to have their own bottle of pills.
- Health care providers in the highest prescribing state, Alabama, wrote almost three times as many of these prescriptions per person as those in the lowest prescribing state, Hawaii.
- Studies suggest that regional variation in use of prescription opioids cannot be explained by the underlying health status of the population.
- The most common drugs involved in prescription opioid overdose deaths include:
 - Methadone
 - Oxycodone (such as OxyContin®)
 - Hydrocodone (such as Vicodin®)

Addiction and Overdose

Anyone who takes prescription opioids can become addicted to them. In fact, as many as one in four patients receiving long-term opioid therapy in a primary care setting struggles with opioid addiction. Once addicted, it can be hard to stop. In 2014, nearly two million Americans either abused or were dependent on prescription opioid pain relievers.



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Taking too many prescription opioids can stop a person's breathing—leading to death.

Prescription opioid overdose deaths also often involve benzodiazepines. Benzodiazepines are central nervous system depressants used to sedate, induce sleep, prevent seizures, and relieve anxiety. Examples include alprazolam (Xanax®), diazepam (Valium®), and lorazepam (Ativan®). Avoid taking benzodiazepines while taking prescription opioids whenever possible.

[Source: www.cdc.gov]

Fentanyl-Related Overdose Deaths

As illegally made fentanyl confiscations have increased, so have fentanyl-related overdose deaths. For example, in 2013, there were a total of 92 fentanyl-related unintentional overdose deaths in Ohio. In 2014, preliminary data show 514 fentanyl-related unintentional overdose deaths, almost a 500% increase.

2015 Rates of fentanyl encounters per 100,000 state residents identified states with higher levels of fentanyl supply per resident. Extremely high rates (>20) were found for Ohio, New Hampshire, and Massachusetts.

References

Centers for Disease Control and Prevention. CDC Health Advisory: Increases in Fentanyl Drug Confiscations and Fentanyl-related Overdose Fatalities. HAN Health Advisory. October 26, 2015.
<http://emergency.cdc.gov/han/han00384.asp>

2015 OHIO DRUG OVERDOSE DATA AT A GLANCE

The number of unintentional drug overdose deaths increased from 2014 to 2015, driven by a significant rise in fentanyl related overdose deaths. Data suggest that the vast majority of such deaths are the result of illegally produced and trafficked fentanyl.

See full details at www.healthy.ohio.gov

DRUG TRAFFICKING

(Source: www.unodc.org)

Drug trafficking is a global illicit trade involving the cultivation, manufacture, distribution and sale of substances which are subject to drug prohibition laws. UNODC (United Nations Office on Drugs and Crime) is continuously monitoring and researching global illicit drug markets in



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order to gain a more comprehensive understanding of their dynamics. Drug trafficking is a key part of this research.

At current levels, world heroin consumption (340 tons) and seizures represent an annual flow of 430-450 tons of heroin into the global heroin market. Of that total, opium from Myanmar (formerly known as Burma) and the Lao People's Democratic Republic yields some 50 tons, while the rest, some 380 tons of heroin and morphine, is produced exclusively from Afghan opium. While approximately 5 tons are consumed and seized in Afghanistan, the remaining bulk of 375 tons is trafficked worldwide via routes flowing into and through the countries neighboring Afghanistan.

The Balkan and northern routes are the main heroin trafficking corridors linking Afghanistan to the huge markets of the Russian Federation and Western Europe. The Balkan route traverses the Islamic Republic of Iran (often via Pakistan), Turkey, Greece and Bulgaria across South-East Europe to the Western European market, with an annual market value of some \$20 billion. The northern route runs mainly through Tajikistan and Kyrgyzstan (or Uzbekistan or Turkmenistan) to Kazakhstan and the Russian Federation. The size of that market is estimated to total \$13 billion per year.

FACTS (Source: www.drugabuse.gov)

According to the 2014 National Survey on Drug Use and Health (NSDUH), 10 million people aged 12 or older reported driving under the influence of illicit drugs during the year prior to being surveyed. NSDUH findings also show that men are more likely than women to drive under the influence of drugs or alcohol. And a higher percentage of young adults aged 18 to 25 drives after taking drugs or drinking than do adults 26 or older.

After alcohol, marijuana is the drug most often found in the blood of drivers involved in crashes. Tests for detecting marijuana in drivers measure the level of *delta-9-tetrahydrocannabinol* (THC), marijuana's mind-altering ingredient, in the blood. But the role that marijuana plays in crashes is often unclear. THC can be detected in body fluids for days or even weeks after use, and it is often combined with alcohol. The risk associated with marijuana in combination with alcohol, cocaine, or benzodiazepines appears to be greater than that for either drug by itself.



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In 2010, more than one-quarter of drugged drivers in deadly crashes were aged 50 years or older.

Illicit drug use in adults aged 50 to 59 has increased, more than doubling from 3 percent in 2002 to 7 percent in 2010.

Mental decline in older adults can lead to taking a prescription drug more or less often than they should or in the wrong amount. Older adults also may not break down the drug in their system as quickly as younger people. These factors can lead to unintended intoxication while behind the wheel of a car.

Nearly 21 million people in America have a substance use disorder involving alcohol or drugs, an astonishing figure that is comparable to the number of people in our country with diabetes and higher than the total number of Americans suffering from all cancers combined. But in spite of the massive scope of this problem, only 1 in 10 people with a substance use disorder receives treatment. {Source: www.Addiction.SurgeonGeneral.gov}

ABUSE OF PRESCRIPTION (Rx) DRUGS AFFECTS YOUNG ADULTS MOST

(Source: www.drugabuse.gov)

Young adults (age 18 to 25) are the biggest abusers of prescription (Rx) opioid pain relievers, ADHD stimulants, and anti-anxiety drugs. They do it for *all kinds of reasons*, including getting high or because they think Rx stimulants will help them study better. But RX abuse is dangerous! In 2014, more than 1,700 young adults died from prescription drug (mainly opioid) overdoses – more than died from overdoses of any other drug, including heroin and cocaine combined – and many more needed emergency treatment. The non-medical use of prescription drugs was highest among young adults:

- 6% (aged 12 to 17) - 12% (aged 18 to 25) - 5% (aged 26 and older)

MOTIVATIONS FOR USE:

- feel better
- lose weight
- sleep
- concentrate
- have a good time with friends
- get high
- study
- relieve pain
- experiment
- deal with problems
- increase alertness
- counter effects of other drugs
- deal with addiction
- relax; decrease anxiety



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DEA NFLIS 2015 Annual Summary Report

Highlights

- From January 1, 2015, through December 31, 2015, an estimated 1,192,079 distinct drug cases were submitted to State and local laboratories in the United States and analyzed by March 31, 2016. From these cases, an estimated 1,549,466 drug reports were identified.
- Cannabis/THC was the most frequently identified drug (395,767 reports) in 2015, followed by methamphetamine (272,823 reports), cocaine (216,129 reports), and heroin (187,868 reports).
- Nationally, alprazolam showed a linear-increasing trend from 2001 through 2015; with significant increases occurring in 2014 and 2015 ($p < .05$). Curved trends are sometimes described as U-shaped (i.e., decreasing in earlier years and increasing in recent years) and S-shaped (i.e., two turns in the trend, roughly either increasing-decreasing-increasing or decreasing-Oxycodone, hydrocodone, buprenorphine, fentanyl, and clonazepam reports showed S-shaped trends. Oxycodone and hydrocodone reports increased dramatically from 2002 to 2010, followed by recent downturns. The trend curve for buprenorphine showed dramatic increases from 2005 to 2010, followed by a steady increase through 2013 and significant increases in 2014 and 2015. Fentanyl reports remained steady from 2001 to 2005, increased in 2006, remained steady again through 2013, then dramatically increased in 2014 and 2015. The most dramatic increase for clonazepam occurred between 2008 and 2010, and then remained fairly steady until further increases occurred in 2014 and 2015.
- From 2014 to 2015, national reports of hydrocodone decreased significantly, while reports of alprazolam, buprenorphine, fentanyl, and clonazepam increased significantly.
- Regionally, for alprazolam, the West, Midwest, and South regions showed linear-increasing trends, while the Northeast region showed an S-shaped trend that began to curve downward in 2011. For oxycodone, all regions showed S-shaped trends. For hydrocodone, all regions showed S-shaped trends except the Northeast region, which had an upside-down U-shaped trend that decreased from 2008 through 2015. For buprenorphine, the West, Midwest, and South regions showed upward-curving trends, and the Northeast region had an S-shaped trend that began to turn downward in 2011. For fentanyl, the Midwest, Northeast, and South regions showed S-shaped trends that dramatically increased from 2013 through 2015, while the West region showed a linear-increasing trend, with a significant increase in 2015. For clonazepam, the West region showed a linear-increasing trend, the Midwest region had an upward-curving trend, and the South and Northeast regions had S-shaped trends.



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■ In 2015, oxycodone and hydrocodone accounted for 52% of narcotic analgesic reports. Alprazolam accounted for 56% of the reports of identified tranquilizers and depressants. Among identified synthetic cannabinoids, AB-CHMINACA accounted for 22% and XLR11 accounted for 21% of reports.

■ Nationwide, cannabis/THC, methamphetamine, and cocaine reports showed S-shaped trends. Cannabis/THC decreased from 2001 through 2004, slightly increased from 2005 to 2009, and decreased since 2009. Methamphetamine reports increased from 2001 through 2005, decreased from 2005 through 2010, and increased since 2011. Cocaine reports gradually increased from 2001 to 2006 and steadily decreased through 2014 until a slight increase occurred in 2015. Heroin reports showed a U-shaped trend, with decreases from 2001 through 2005, followed by increases from 2006 to 2015. MDMA reports showed an upside-down U-shaped trend, with an overall increase in MDMA reports from 2001 to 2007, followed by a decrease through 2015.

LORAIN COUNTY CRIME/DRUG LAB:

Total number of submissions by Lorain County LE agencies.

2015	1,472
2014	1,531
2013	1,555
2012	1,380

From January - November of 2016: 1,740 submissions have already been received from Lorain County LE agencies surpassing the number of controlled substances analyzed and processed for the last four (4) years.

Analyzed drugs from **January to November, 2016** (based on submitted substances) - LORAIN COUNTY:

- Cocaine (38.5%) is still the leading illicit drug analyzed.
- Heroin (28.3%) is the second distinct drug of abuse surpassing marijuana use.
- THC (marijuana) (17.9%) follows Cocaine and Heroin as analyzed drug of abuse.
- Fentanyl (15.3%) as fourth on the list behind THC.



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Analyzed drugs from **January to December, 2015**: Lorain County:

- Heroin (40.2%) was the leading drug analyzed.
- Cocaine (35.6%) became the second leading drug analyzed.
- THC (marijuana) follows Cocaine and heroin at 17.5%.
- Fentanyl (6.6%) as always placed as the 4th abused drug.

Prescription Medication- LORAIN COUNTY:

- Oxycodone (43.3%) ranked 1st (52% nationwide in 2015); Hydrocodone at 15.5%.
- Alprazolam (40%) ranked 2nd (56% nationwide in 2015).

HAND SANITIZER- A Warning!

(Source: www.aapcc.org/alerts)

Every year poison control centers manage several thousand calls related to children ingesting hand sanitizer. *14,919 exposures: January 1 – August 31, 2015.*

Many hand sanitizers come in brightly colored bottles, can be laced with glitter, and smell like food or candy. This type of packaging makes them very tempting to young children. While a child who licks a tiny amount of hand sanitizer off of his or her hands is unlikely to become sick, a child ingesting any more than a taste of hand sanitizer could be at risk for alcohol poisoning. This is because the amount of alcohol in hand sanitizer ranges from 40% to 95%. Most hand sanitizer products contain over 60% ethyl alcohol, a stronger alcohol concentration than most hard liquors. By comparison, wine and beer contain about 10-15% and 5-10% alcohol, respectively. Alcohol poisoning can cause confusion, vomiting and drowsiness, and in severe cases, respiratory arrest and death.

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