The Opiate Crisis

Presented by
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Franklin County Coroner

October 24, 2018
Why Words Matter
Person First Language

Person-first language is a philosophy of putting individuals before their disability.
**Why Words Matter**

**Say This**
- Person who struggles with addiction
- Person in recovery
- Person living with an addiction
- Person who was arrested for a drug violation
- Chooses not to at this point
- Medication as treatment tool
- Had a setback
- Maintained recovery
- Positive urine screen

**Not That**
- Junkie/Addict
- Ex-addict
- Battling/suffering with addiction
- Drug Offender
- Non-compliant/bombed out
- Medication as a crutch
- Relapsed
- Stayed clean
- Dirty drug screen
What are the Opiates?

- Morphine
- Codeine
- Oxycodone (Vicodin, Oxycontin)
- Percocet
- Hydrocodone
- Fentanyl
- Methadone
- Heroin
- Carfentanil
- Fentanyl analogues
History of Opiates

• **4000 - 2000 BC**: Opium believe to be discovered in the Mediterranean area.

• **1500 BC**: Egyptian papyri list opium as one of 7000 remedies.

• **1st Century AD**: Opium poisoning described.

• **1655**: Portuguese physician, Acosta, wrote of withdrawal sickness.

• **1701**: British physician, John Jones, advocated moderation in the use of the drug in order to avoid the discomforts with its continued use.

• **1805**: Morphine isolated as the main active ingredient in opium.
Opioid Effects

1. Relief of physical pain
2. Relief of emotional pain
3. Euphoria
4. Decreased anxiety, calmness
5. Cough suppression
Opioid Intoxication

1. Constricted pupils
2. Constipation
3. Nausea and vomiting (often projectile)
4. Respiratory depression
5. Coma and death

➢ Treat with naloxone.

What is naloxone?
Naloxone, also known as Narcan®, is a medication that can block the effects of opioids and reverse an overdose.
Naloxone is very safe and cannot be abused. If you give naloxone to someone who is not experiencing an opioid overdose, it will not harm them. In Ohio, anyone can legally carry and administer naloxone.
People who are dependent on opioids may go into withdrawal when given naloxone. Withdrawal, though unpleasant, is not life-threatening. Naloxone does not reverse overdoses caused by alcohol, cocaine, methamphetamines, or other non-opioid drugs.

What does an overdose look like?
A person experiencing an overdose may have the following symptoms:
- Unresponsiveness
- Slow or shallow breaths (less than one breath every six seconds) or not breathing at all
- Choking, snoring, or gurgling sounds
- Blue, grey, or ashen lips and fingernails
- Pale or clammy face
- Slow, erratic, or absent pulse
- Vomiting
- Seizures

What do I do if someone is overdosing?
A person experiencing an overdose may die if they do not get help. If you suspect someone is overdosing:

1. Check to see if they can respond
   - Shake them or call their name
   - Rub your knuckles hard in the middle of their chest (“sternal rub”)

2. Call 9-1-1
   - Give the address and location
   - If you don’t want to mention drugs, say, “Someone has stopped breathing and is unresponsive.”

3. Give rescue breaths
   - Place the person on their back, head tilted back and chin up
   - Make sure there is nothing in their mouth and pinch their nose closed
   - Breathe two slow breaths into their lungs, making sure the chest rises

4. Give naloxone
   - Follow the instructions for the type you have
   - If the person does not respond in 2-5 minutes, give another dose

5. Stay until help arrives
   - Continue rescue breathing, one breath every 5 seconds
   - The person may start to overdose again when the naloxone wears off, so it is very important to call 911

How do I give naloxone?

Narcan® Nasal Spray
This nasal spray needs no assembly and can be sprayed up one nostril by pushing the plunger.

Nasal spray with assembly
1. Take off yellow caps.
2. Screw on white cone.
3. Take purple cap off capsule of naloxone.
4. Gently screw capsule of naloxone into barrel of syringe.
5. Insert white cone into nostril; give a short, strong push on end of capsule to spray naloxone into nose; ONE HALF OF THE CAPSULE INTO EACH NOSTRIL. Push to spray.
6. If no reaction in 2-5 minutes, give second dose

Be safe! Do not touch uncapped needles, avoid contact with drug paraphernalia, use gloves and a face shield if you have them, and wash your hands thoroughly after helping with an overdose.
“Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry.”

- Must be treated, managed and monitored over a person's lifetime
- As a **chronic disease**, periods of relapse are a common feature of addiction
- The classification of chronic disease puts addiction in same category as hypertension and diabetes.
SUD Meets Definition of Chronic Illness

Shares many features with other chronic illnesses including:

- Heritability
- Influenced by environment and behavior
- Responds to appropriate treatment
- Without adequate treatment can be progressive and result in substantial morbidity & mortality
- Has a biological/physiological basis, is ongoing and long term, can be cyclical in the response, i.e. recurrence

https://archives.drugabuse.gov/about/welcome/aboutdrugabuse/chronicdisease/de long-term lifestyle modification
http://www.asam.org/quality-practice/definition-of-addiction
• Opiates work in the brain at specific “opiate receptors”

• There are several types of opiate receptors but the main receptor is called “Mu”
Addiction

• The reward pathway is primarily involved in addiction.

• The natural function of the reward pathway is to release dopamine when we do something that supports our survival, setting up a drive to repeat that behavior.

• What drugs of abuse have in common is that they stimulate the reward pathway, tricking us into thinking we did something important for our survival.
Addiction

- Chronic exposure to drugs disrupts the way critical brain structures interact to control behavior.

- In other words, drug addiction erodes a person’s self-control and ability to make sound decisions.

- Adaptive changes may be permanent. No one is ever “cured” of addiction; it can only be put into remission. Some studies showing improvement with CBT, yoga, meditation.
A SPECT scan. A healthy brain shows a smooth pattern of energy. Low blood flow and poor functioning appear as “holes”.
Scientists estimate that genetic factors account for between 40 and 60 percent of a person’s vulnerability to addiction; this includes the effects of environmental factors on the function and expression of a person’s genes.
One of the brain areas still maturing during adolescence is the prefrontal cortex—the part of the brain that enables us to assess situations, make sound decisions, and keep our emotions and desires under control. The fact that this critical part of an adolescent’s brain is still in progress puts them at increased risk for making poor decisions (such as trying drugs or continuing to take them). Also, introducing drugs during this period of development may cause brain changes that have profound and long-lasting consequences.
Connections from PFC to amygdala are not fully established in adolescence.
The Adolescent Brain

- Major growth occurs in the PFC between ages 13-26 with maturation at 25 or 26. PFC responsible for attention, complex planning, decision making, impulse control, risk management and logical thinking.
- Adolescents can become addicted 5x faster than adults.
- People who start using as teenagers have immature PFCs.
- Although taking drugs at any age can lead to addiction, research shows that the earlier a person begins to use drugs, the more likely he or she is to develop serious problems such as addiction.
Understanding Risk and Protection

Risk Factors
- Genetic disposition
- Prenatal alcohol and/or drug exposure
- Parents who use drugs and/or alcohol or who suffer from mental illness
- Mental health problems
- Neighborhood poverty and violence
- Peer substance use and availability
- Trauma and childhood adversity (ACEs)

Protective Factors
- Parental involvement
- Healthy peer involvement
- Availability of faith-based resources
- After-school activities
- Health/Neuro development: coping skills, emotional reg.
- Attachment to community
- Pro-social engagement
- Connectedness to adults outside of family
Effectiveness of Treatment

- Goal of treatment is to return to productive functioning
- Treatment reduces drug use by 40-60%
- Treatment reduces crime by 40-60%
- Treatment increases employment prospects by 40%
- Drug treatment is a successful as treatment of diabetes, asthma, and hypertension
1. Mutual Help Groups e.g. 12 step
2. Psychotherapy: CBT and MI
3. Medications: buprenorphine, naltrexone, methadone
4. Family Therapy
5. Primary Care Services
6. Mental Health Services
7. Aftercare: Recovery
Mindfulness may be the next frontier in the psychosocial treatment of addiction.

“Between stimulus and response there is a space. In that space is our power to choose our response. In our response lie our growth and our freedom.”

Viktor E. Frankl

Zerbo, Schlechter, Desai, and Levounis, *Becoming Mindful*, 2017
“In most cases, treatment will be required in the long term or even throughout life. Such long-term treatment, common for many medical conditions, should not be seen as treatment failure, but rather as a cost-effective way of prolonging life and improving quality of life, supporting the natural and long-term process of change and recovery.”

World Health Organization
http://apps.who.int/iris/bitstream/10665/43948/1/9789241547543_eng.pdf

Example: Diabetes and Insulin
Does relapse to drug abuse mean treatment has failed?

No. The chronic nature of the disease means that relapsing to drug abuse at some point is not only possible, but likely. Relapse rates (i.e., how often symptoms recur) for people with addiction and other substance use disorders are similar to relapse rates for other well-understood chronic medical illnesses such as diabetes, hypertension, and asthma, which also have both physiological and behavioral components. Treatment of chronic diseases involves changing deeply imbedded behaviors, and relapse does not mean treatment has failed. For a person recovering from addiction, lapsing back to drug use indicates that treatment needs to be reinstated or adjusted or that another treatment should be tried.  

Source: JAMA, 284:1689-1695, 2000
Some of the more devastating and troubling consequences of addiction are:

- **Negative effects of prenatal drug exposure on infants and children**
  A mother's abuse of heroin or prescription opioids during pregnancy can cause a withdrawal syndrome (called neonatal abstinence syndrome, or NAS) in her infant.

- **Hepatitis C**
  Injection drug use is also a major factor in the spread of hepatitis C, a serious, chronic, potentially fatal liver disease.

- **HIV**
  Rates here in FC have not risen but in pockets of the country we are seeing an increase of HIV due to injection drug use.
Latinos and Addiction

Age Adjusted Rate per 100,000 Population from Unintentional Drug Overdose Deaths by Year, Ohio

for External Injury Intent - (Unintentional) . External Injury Mechanism - (Drug Poisoning) . Res State - (OH) . Drug Induced Indicator - (Yes) . Race - (White, Black)

Year of death

Hispanic ethnicity

<table>
<thead>
<tr>
<th>Year</th>
<th>Hispanic</th>
<th>Non-Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017 **</td>
<td>21.3</td>
<td>45.3</td>
</tr>
<tr>
<td>2016</td>
<td>15.1</td>
<td>33</td>
</tr>
<tr>
<td>2015</td>
<td>12.7</td>
<td>28.4</td>
</tr>
<tr>
<td>2014</td>
<td>8.8</td>
<td>23.4</td>
</tr>
</tbody>
</table>

Includes Ohio residents who died due to unintentional drug poisoning (underlying cause of death ICD-10 codes X40-X44)
Latinos and Addiction

Risk Factors

• Immigration itself can create a potential for SUD i.e. lack of jobs, fear of deportation, lack of legal protection, trauma in the case of fleeing violence.

• Latinos who are more acculturated have 13 times the risk of becoming addicted than those who follow more of the culture’s traditions and have more contact with family
Latinos have poorer outcomes in SUD treatment:
• Reduced access
• Lower levels of participation in recovery activities
• Higher dropout rates

A successful treatment program for Latinos should:
• Include bilingual recovery activities
• Acknowledge Latino cultural values
• Understand family structure and gender roles in the more traditional cultures
Casa Esperanza Executive Director Emily Stewart says Massachusetts needs a public information campaign via Spanish-language media that explains treatment options. She'd like that to include medication-assisted treatment, which she says is not well understood.

Some research shows Latino drug users are less likely than others to have access to or use the addiction treatment medicines, methadone and buprenorphine. One study shows that may be shifting. But, Latinos with experience in the field say, access to buprenorphine (which is also known by the brand name Suboxone) is limited because there are few Spanish-speaking doctors who prescribe it.

*Health News From NPR, May 16, 2018*
Women and Addiction

Women escalate drug use more rapidly than men: all drugs of abuse. Increased dopamine production and estradiol

In general, women show greater propensity to drug relapse than men. Relapse is more likely triggered by stressful or emotional stimuli in women

Sex differences in initiation of drug use are small to negligible in early to mid adolescence. As puberty starts and maturation begins the differences in rates of use of alcohol, marijuana and smoking are notable.
From 2014 to 2017, there has been an about a 150% increase in rate of Blacks dying of an OD in Franklin County.
African Americans: Disparities

• African Americans are more likely than white Americans to have an undetected mental illness: self medicate with drugs and alcohol
• African Americans have high rates of exposure to trauma
• Access to drugs: communities where drugs are widely available
• Crime and violence: again communities
• Poverty and homelessness: 20% of AA in poverty in 2016 vs. 9% of white Americans. 40% of the homeless population is black. (HUD)
• Racism and discrimination
African Americans: Barriers to Treatment

• Failure to recognize signs of addiction and mental illness
• Attaching stigma to addiction
• Distrust: due to a history of racial inequality and discrimination that has led to a distrust of public and govt. policies
• Cost: unable to afford tx and not having access to health insurance
• Lack of childcare: unable to seek tx due to childcare issues
• Lack of knowledge about services
The opioid crisis may be part of a larger, longer-term process

According to the authors, there has been a 38 year exponential growth in overdose mortality rates, not specific to any one drug. This strongly suggests that the epidemic will continue along this path for several more years.

The authors posit that economic and technological “push” factors may be at work to increase supply, such as improved communications and supply chains, efficiencies in drug manufacturing, and expanding drug markets, leading to lower prices and higher drug purities. In addition, sociological and psychological “pull” forces may be operative to accelerate demand, such as despair, loss of purpose, and dissolution of communities i.e. social determinants of health.
### Drug-related mortality rate and number of drug-related deaths, by region, 2014

<table>
<thead>
<tr>
<th>Region</th>
<th>Drug-related mortality rate per million population aged 15-64</th>
<th>Estimated number of drug-related deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>61.9</td>
<td>39,200</td>
</tr>
<tr>
<td>North America</td>
<td>164.5</td>
<td>52,500</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>15.6</td>
<td>5,200</td>
</tr>
<tr>
<td>Asia</td>
<td>29.6</td>
<td>85,900</td>
</tr>
<tr>
<td>Western and Central Europe</td>
<td>28.9</td>
<td>9,200</td>
</tr>
<tr>
<td>Eastern and South-Eastern Europe</td>
<td>55.9</td>
<td>12,700</td>
</tr>
<tr>
<td>Oceania</td>
<td>101.5</td>
<td>2,500</td>
</tr>
</tbody>
</table>

Latest trends
Main opiate trafficking flows, 2011-2015

Sources: UNODC elaboration, based on responses to annual report questionnaire and individual drug seizure database.

Notes: The trafficking flows are determined on the basis of country of origin/destination, trend and destination of seized drugs as reported by Member States in the annual report questionnaire and individual drug seizure database. They are to be considered as broadly indicative of existing trafficking routes while several secondary flows may not be reflected. Flow arrows represent the direction of trafficking; origins of the arrows indicate either the area of manufacture or the one of last provenance, and points of arrows indicate either the area of consumption or the one of next destination of trafficking. The boundaries shown on this map do not imply official endorsement or acceptance by the United Nations. Dashed lines represent undetermined boundaries. The dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. The final boundary between the Sudan and South Sudan has not yet been determined. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).
Cocaine trafficking

MAP 1 | Main cocaine trafficking flows, 2012–2016

Global cocaine trafficking flows by size of flows estimated on the basis of reported seizures, 2012–2016:

Sources: UNODC, responses to the annual report questionnaire and individual drug seizure database.

Notes: The size of the trafficking flow lines is based on the amount of cocaine seized in a subregion and the number of mentions of countries from where the cocaine has departed (including reports of “origin” and “transit”) to a specific subregion over the period 2012–2016. The trafficking flows are determined on the basis of country of origin/departure, transit and destination of seized drugs as reported by Member States in the annual report questionnaire and individual drug seizure database; as such, they must be considered as broadly indicative of existing trafficking routes, while several secondary flows may not be reflected. Flow arrows represent the direction of trafficking; origins of the arrows indicate either the area of manufacture or the area of last provenance, and points ofarenas indicate either the area of consumption or the area of next destination of trafficking.

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Drugs on the Darknet

Annual drug users obtaining drugs over the darknet in the past 12 months

Note: Based on annual information from more than 60,000 past-year drug users. In 2014, the question was asked specifically in relation to the Silk Road, the then dominant darknet market, as the survey was conducted just after the Silk Road’s closure; from 2015, the question was asked in relation to all darknet markets.
**FIG. 18** Importance of drugs and drug-related chemicals for the darknet (based on listings on the main darknet markets)

- Illicit drugs: 77%
- Drug-related chemicals: 18%
- Pharmaceuticals: 5%
- Other: 38%

**Source:** EMCDDA and Europol, Drugs and the darknet, November 2017, p. 15.

**Note:** Based on active listings data from AlphaBay, Dream Market, Hansa, TradeRoute and Valhalla darknet marketplaces, spanning from the launch of each marketplace to 21 August 2017 (or market closure).
More than 72,000 Americans died from drug overdoses in 2017, including illicit drugs and prescription opioids—a 2-fold increase in a decade.

Source: CDC WONDER
National Overdose Deaths
Number of Deaths Involving Cocaine in Combination with Non-Methadone Opioid Synthetics

Source: National Center for Health Statistics, CDC Wonder
Drugs Involved in U.S. Overdose Deaths* - Among the more than 72,000 drug overdose deaths estimated in 2017*, the sharpest increase occurred among deaths related to fentanyl and fentanyl analogs (synthetic opioids) with nearly 30,000 overdose deaths. Source: CDC WONDER

The death count is the latest consequence of an escalating public health crisis: opioid addiction, now made more deadly by an influx of illicitly manufactured fentanyl and similar drugs. Drug overdoses are now the leading cause of death among Americans under 50. The Addiction Policy Forum has run the numbers and found that 174 Americans per day lost their lives to addiction in 2016.
Ohio

NEWS RELEASE

John R. Kasich, Governor
Lance Himes, Director of Health

FOR IMMEDIATE RELEASE

September 27, 2018

Contacts: ODH Office of Communications (614) 644-8562
OhioMHAS Office of Communications (614) 728-5090

Annual Drug Overdose Report Shows Eight-Year Low in Prescription Opioid Deaths and Four-Year Low in Heroin Deaths in Ohio

Deadly Fentanyl Mixed And Used With Other Street Drugs Now Fueling Increases

COLUMBUS – Prescription opioid-related overdose deaths have reached an eight-year low and heroin-related overdose deaths are at a four-year low, according to a new report released by the Ohio Department of Health (ODH). Illegally produced fentanyl which is being mixed and used with other street drugs such as cocaine, heroin and psychostimulants like methamphetamine is now driving Ohio’s unintentional overdose deaths – 4,854 in 2017.
Unintentional drug overdoses caused the deaths of 4,854 Ohio residents in 2017, this is approximately an 19.8% increase from 2016. The number of overdose deaths increased 32.8 percent from 2015 to 2016 compared to an increase of 20.5% from 2014 to 2015.

“In 2017, illegally produced fentanyl and related drugs like carfentanil, which are opioids, were involved in 71 percent of all unintentional overdose deaths. By comparison, fentanyl was involved in 58 percent of all overdose deaths in 2016, 38 percent in 2015, and 20 percent in 2014.” ODH
The number of prescription opioid-related overdose deaths excluding involvement of fentanyl declined almost 28 percent since 2011, and to an eight-year low. The decline in prescription opioid deaths corresponded with Ohio’s efforts to reduce the prescription opioid supply available for misuse and diversion, which has included shutting down pill mills, putting in place prescribing guidelines, strengthening prescription drug monitoring, stepping up enforcement efforts and developing new regulations for drug wholesalers.
Figure 7. Number of Fentanyl and Related Drug Deaths and Percentage of Unintentional Drug Overdose Deaths, by Year, Ohio, 2013-2017

Ohio

Figure 1. Number of Unintentional Drug Overdose Deaths Involving Prescription Opioids, 2011-2017

Figure 2. Percentage of Unintentional Drug Overdose Deaths Involving Prescription Opioids, 2011-2017

*Prescription opioids reflect ICD-10 codes T40.2-T40.4, T40.6. Deaths are captured in this category only if there is no mention of fentanyl and related drugs (reflected in T40.4 and T40.6) on the death certificate, even if the death involved natural & semi-synthetic opioids (T40.2) or methadone (T40.3).

Statewide Efforts
From January 1, 2017 to December 31, 2017 there were 520 overdose deaths in Franklin County. This is a preliminary number as not all cases have been finalized. We have seen approximately a **47.3% increase in overdose deaths from 2016 to 2017. Fueling the increase is fentanyl.**

**Fentanyl related overdose deaths accounted for 66.5% of all overdoses compared to 2016 when it accounted for 40.7% of all deaths.** Cocaine related overdose deaths were 36% of all overdose deaths compared to 34% in 2016, slightly higher. Methamphetamine related overdose deaths were 4.6% of all overdose deaths in 2017 compared to 2% in 2016. Heroin related overdose deaths have seen a decrease in 2017: 16% in 2017 vs. 40.7% in 2016. Overall opiate related deaths accounted for 81% of overdose deaths vs. 75.3% in 2016. Decedents **under 39 years of age accounted for 56% of the overdose deaths in 2017 which was a slight increase from 2016. In 2016 50% of overdose deaths occurred in those 39 and under.**

The majority of deaths were in males: **68% male vs 32% female. This is an increase of 10% in female overdose deaths from 2016.** 78% male vs 22% female, 2016.

White males were again the majority of overdose deaths in 2017: 78% white vs. 20% African American vs. 2% other. In 2016 we saw: 79.6% white vs. 19.2% African American vs. 1.2% other.
From January 1, 2018 to June 30, 2018 we have seen approximately a 9.6% decrease in overdose deaths from the first six months of 2017. However when comparing first six months data for 2016 to 2018 we have seen a 71% increase. Fentanyl related overdose deaths accounted for 65% of overdose deaths which is similar to the rate for all of 2017. Overall, opiate related deaths the first half of 2018 accounted for 71% of overdose deaths. As you can see fentanyl continues to fuel the numbers of overdose deaths in our county. We have however seen a decrease in deaths from the same period in 2017 to 2018. Some of the factors that have contributed to this are:

• Increase availability of Narcan or naloxone for all
• Large seizures of drugs by federal, state and local law enforcement thereby decreasing supply
• Stricter guidelines for prescribers and pharmacists of opiates again decreasing supply
• Increased awareness of the issue and collaboration by a variety of agencies
Local Efforts

Franklin County Opiate Action Plan:


Five committees:

Treatment, Law Enforcement, Prevention, Health and Harm Reduction, Recovery and Community Engagement
• Grassroots Task Force
• Overdose death review
• Opiate Summits
• Current involvement in Action Plan
• Naloxone training
• HIDTA collaboration
• Quarterly website overdose statistics
Remember
Love and acceptance go a long way
Questions?

Thank You!

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