UPDATES IN THE OPIOID EPIDEMIC

NICOLE T. LABOR, DO
NICOLE T. LABOR, DO

- Board Certified in Family Medicine.
- Board certified in Addiction medicine
- Associate Medical Director of Addiction Medicine, Summa Physicians Inc., Akron, OH
- Medical Director Esper Treatment Center, Erie, PA
- Chief Medical Officer, Interval Brotherhood Home, Akron, OH
- Director of Medication Assisted Treatment, STEPs, Wooster, OH
- Associate Clinical Professor of psychiatry and family and community medicine, NEOMED
- Director of Addiction Medicine Fellowship, Summa
LEARNING OBJECTIVES

• 1. Discuss the current trends with the opioid epidemic
• 2. Discuss the current issues with fentanyl, fentanyl analogs, carfentanil and U-47700.
• 3. Discuss treatment options
• 4. Discuss when to refer to Addiction Medicine.
WHY AN EPIDEMIC?

- **EPIDEMIC:**
  - The occurrence of more cases of a disease than would be expected in a community or region during a given time period.
  - A sudden severe outbreak of a disease.
  - From the Greek "epi-", "upon" + "demos", "people or population" = "epidemos" = "upon the population."

• **Crack cocaine**: In 1985, cocaine-related hospital emergencies rose by 12 percent, from 23,500 to 26,300. In 1986, these incidents increased 110 percent, from 26,300 to 55,200. Between 1984 and 1987, cocaine incidents increased to 94,000.

• **Methamphetamine**: The **Combat Methamphetamine Epidemic Act of 2005 (CMEA)** is federal legislation enacted in the United States on March 9, 2006, to regulate, among other things, retail over-the-counter sales of following products because of their use in the manufacture of illegal drugs: ephedrine, pseudephedrine, phenapropanolamine.

• **Bath Salts**: In October 2011, the DEA used its administrative powers to institute an emergency but temporary one-year ban on the three basic bath-salt chemicals, declaring them Schedule 1 substances. Possession can now lead to a four-year federal felony sentence.
1. Late 1800s: Morphine
   • Mainly middle class
   • Female > Male

2. Early 1900s: Heroin (pharmaceutical grade)
   • First generation Italians, Jews, Irish
   • Male > Female

3. 1950s-1970s- Heroin (illicit)
   • African American/Latinos
   • Male > Female
Historical perspective

**PAIN**
- Decade of chronic pain epidemic
- *Joint Commission* “Pain as the 5th vital sign”
- Intractable Pain Act 2001
- Pharmaceutical marketing of opioids as having a low addictive potential

**OPIOIDS**
- Increased prescribing by practitioners
- Improper prescribing through pill mills
- Increased number of opioid prescriptions
- Increased opioid doses: morphine milligram equivalents

**ADDICTION**
- Increased doctor shopping
- Increased drug related offenses
- Increased drug dependent babies
- Increased treatment need
- Increased overdose deaths
DUE TO A LACK OF FUNDING, MOST PEOPLE IN NEED OF SUBSTANCE ABUSE TREATMENT DO NOT RECEIVE IT.

Percent of individuals with select medical conditions who receive treatment

- Hypertension: 77%
- Diabetes: 73%
- Addiction (excluding Nicotine): 11%

Source: Centers for Disease Control and Prevention and National Survey on Drug Use and Health
OPIOIDS

• Morphine
• Codeine
• Thebaine
• Diacetylmorphine (Heroin)
• Hydrocodone (Vicodin)
• Oxycodone (Oxycontin)
• Oxymorphone (Opana)
• Hydromorphone (Dilaudid)

Naturally occurring opioids - also called opiates

Semi-synthetic opioids
WHEN PRESCRIPTIONS ARE NO LONGER AVAILABLE...

- Patient discharge for abuse of prescription/use of other illicit substances/violation of narcotic contract
- Provider is no longer able to practice
- Patient no longer has viable diagnosis for continuation of prescribing
The average cost of a single dose (0.1 g) of heroin purchased on the street has been reported as approximately $15–$20 in the U.S. state of Ohio.

Fentanyl from China costs $200/g (0.1g = $20)

Fentanyl is 10 x more potent than heroin.

Dealers can ‘cut’ 1g of heroin with 0.1g of fentanyl and make it more potent.

Lethal dose of heroin (left) 30mg vs lethal dose of fentanyl (right) 3mg.
FENTANYL ANALOGUES

- 2,5-dimethylfentanyl
- 3-Allylfentanyl
- 3-Methylbutyrfentanyl
- 3-methylfentanyl
- 3-methylthiofentanyl
- 4-fluorobutyrfentanyl
- p-chloroisobutyrfentanyl
- p-fluoroisobutyrfentanyl
- 4-fluorofentanyl
- 4-phenylfentanyl
- 4-methoxybutyrfentanyl
- Acrylfentanyl
- alpha-methylacetylfentanyl
- alpha-methylbutyrfentanyl
- alpha-methylfentanyl
- α-Methylthiofentanyl
- Acetylfentanyl
- Alfentanyl
- Benzylfentanyl
- β-Hydroxyfentanyl
- β-Hydroxythiofentanyl
- β-Methylfentanyl
- Butyrfentanyl
- Brifentanyl
- Carfentanyl
- Cyclopentylfentanyl
- Isobutyrfentanyl
- Fentranyl [102504-49-4] (Tranyl tany)
- Furanyl entering
- Furanylethylfentanyl
- Lofentanyl
- N-Methylcarfentanyl
- Methoxyacetylfentanyl
- Mirfentanyl
- Ocftanent
- Ohmefentanyl
- R-30490
- Remifentanyl
- Sufentanil
- Thenylfentanyl
- Thiofentanyl
- Trefentanyl
- Valerylfentanyl
Update: Another week, another torturous update of devastating numbers.

The Akron Beacon Journal reports on the current OD toll in the city, and the escalation of the problem, tied by authorities to the influx of a powerful elephant sedative in the heroin chain:
CARFENTANYL (CARFENTANIL) THIS IS AN ELEPHANT TRANQUILIZER
U-47700 (PINK)

• **U-47700** is an opioid analgesic drug developed by a team at Upjohn in the 1970s that has around 7.5 x the potency of morphine in animal models.

• U-47700 was emergency scheduled in Ohio on May 3, 2016 by executive order of Governor John Kasich.

• U-47700 was found in combination with fentanyl during the autopsy of the American guitarist Prince in 2016.

• Typically it appears as a white or light pinkish, chalky powder. It may be sold in glassine bags stamped with logos imitating heroin, in envelopes and inside knotted corners of plastic bags. In Ohio, authorities seized 500 pills resembling a manufacturer’s oxycodone immediate-release tablets, but they were confirmed by chemical analysis to contain “Pink”. U-47700 has also been identified and sold on the Internet misleadingly as a “research chemical” at roughly $30 per gram.
U-47700 CASE

- 46 year old attorney with a 5 year history of opioid and benzodiazepine dependence presented after a relapse on “something I bought on the internet”
- Patient believed it was a sedative to ‘help me relax’
- Used the substance prior to admission and was clearly intoxicated/nodding on presentation
- No other medical problems
- Spent the following 4 days in a state of confusion/delirium
- Ultimately was transferred to the psychiatric unit where it took another 7 days to become cognitively stable for discharge
- Discovered later that the substance was U-47700
ACCORDING TO ASAM

• Drug overdose is the leading cause of accidental death in the US, with 52,404 lethal drug overdoses in 2015. Opioid addiction is driving this epidemic, with 20,101 overdose deaths related to prescription pain relievers, and 12,990 overdose deaths related to heroin in 2015.

• From 1999 to 2008, overdose death rates, sales and substance use disorder treatment admissions related to prescription pain relievers increased in parallel. The overdose death rate in 2008 was nearly four times the 1999 rate; sales of prescription pain relievers in 2010 were four times those in 1999; and the substance use disorder treatment admission rate in 2009 was six times the 1999 rate.

• In 2012, 259 million prescriptions were written for opioids, which is more than enough to give every American adult their own bottle of pills.

• Four in five new heroin users started out misusing prescription painkillers.

• 94% of respondents in a 2014 survey of people in treatment for opioid addiction said they chose to use heroin because prescription opioids were “far more expensive and harder to obtain.”
CURRENT TRENDS

Overdose Deaths in Ohio

Chart by Mother Jones
Source: Ohio Department of Health
Fentanyl Deaths Are Skyrocketing in Ohio

Overdose deaths involving selected drugs in Ohio

Chart by Mother Jones
Source: Ohio Department of Health
CURRENT TRENDS

Figure 6. Opioid Solid Doses Dispensed to Ohio Patients, by Year, 2011-2016

Source: State of Ohio Board of Pharmacy, Ohio Automated Rx Reporting System.
# Current Trends

## Table 1. Number of Unintentional Drug Overdose Deaths As Mentioned on Death Certificate, by Year,

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All opioids*</td>
<td>429</td>
<td>489</td>
<td>551</td>
<td>631</td>
<td>733</td>
<td>783</td>
<td>980</td>
<td>1,163</td>
<td>1,272</td>
<td>1,539</td>
<td>2,020</td>
<td>2,590</td>
<td>3,495</td>
<td>86.3%</td>
</tr>
<tr>
<td>Fentanyl &amp; related drugs</td>
<td>75</td>
<td>84</td>
<td>117</td>
<td>146</td>
<td>233</td>
<td>283</td>
<td>338</td>
<td>431</td>
<td>680</td>
<td>983</td>
<td>1,196</td>
<td>1,424</td>
<td>1,444</td>
<td>35.7%</td>
</tr>
<tr>
<td>Heroin</td>
<td>124</td>
<td>131</td>
<td>117</td>
<td>146</td>
<td>233</td>
<td>283</td>
<td>338</td>
<td>431</td>
<td>326</td>
<td>405</td>
<td>517</td>
<td>685</td>
<td>1,109</td>
<td>27.4%</td>
</tr>
<tr>
<td>Cocaine</td>
<td>221</td>
<td>223</td>
<td>237</td>
<td>287</td>
<td>252</td>
<td>220</td>
<td>213</td>
<td>309</td>
<td>628</td>
<td>644</td>
<td>672</td>
<td>667</td>
<td>564</td>
<td>13.9%</td>
</tr>
<tr>
<td>Prescription opioids**</td>
<td>319</td>
<td>388</td>
<td>462</td>
<td>435</td>
<td>480</td>
<td>482</td>
<td>623</td>
<td>724</td>
<td>311</td>
<td>328</td>
<td>420</td>
<td>504</td>
<td>553</td>
<td>13.7%</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>69</td>
<td>90</td>
<td>121</td>
<td>133</td>
<td>154</td>
<td>211</td>
<td>305</td>
<td>376</td>
<td>282</td>
<td>304</td>
<td>383</td>
<td>380</td>
<td>539</td>
<td>13.3%</td>
</tr>
<tr>
<td>Alcohol***</td>
<td>38</td>
<td>58</td>
<td>89</td>
<td>135</td>
<td>181</td>
<td>173</td>
<td>195</td>
<td>226</td>
<td>30</td>
<td>49</td>
<td>59</td>
<td>96</td>
<td>233</td>
<td>5.8%</td>
</tr>
<tr>
<td>Psychostimulants*** (e.g., methamphetamines)</td>
<td>6</td>
<td>9</td>
<td>4</td>
<td>7</td>
<td>7</td>
<td>9</td>
<td>10</td>
<td>28</td>
<td>31</td>
<td>43</td>
<td>49</td>
<td>61</td>
<td>100</td>
<td>2.5%</td>
</tr>
<tr>
<td>Hallucinogens</td>
<td>8</td>
<td>8</td>
<td>10</td>
<td>13</td>
<td>14</td>
<td>9</td>
<td>26</td>
<td>31</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>19</td>
<td>14</td>
<td>0.3%</td>
</tr>
<tr>
<td>Methadone</td>
<td>116</td>
<td>144</td>
<td>161</td>
<td>176</td>
<td>168</td>
<td>169</td>
<td>155</td>
<td>156</td>
<td>28</td>
<td>51</td>
<td>63</td>
<td>84</td>
<td>117</td>
<td>3.1%</td>
</tr>
<tr>
<td>Barbiturates</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>13</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other/unspecified drugs only****</td>
<td>256</td>
<td>289</td>
<td>378</td>
<td>453</td>
<td>475</td>
<td>396</td>
<td>343</td>
<td>373</td>
<td>289</td>
<td>319</td>
<td>274</td>
<td>194</td>
<td>182</td>
<td>4.5%</td>
</tr>
<tr>
<td>Multiple Drug Involvement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>888</td>
<td>980</td>
<td>1,016</td>
<td>1,014</td>
<td>1,321</td>
<td>1,747</td>
<td>2,451</td>
<td>60.5%</td>
</tr>
<tr>
<td>Total unintentional poisoning deaths</td>
<td>904</td>
<td>1,020</td>
<td>1,261</td>
<td>1,351</td>
<td>1,473</td>
<td>1,423</td>
<td>1,544</td>
<td>1,772</td>
<td>1,914</td>
<td>2,110</td>
<td>2,531</td>
<td>3,050</td>
<td>4,050</td>
<td></td>
</tr>
<tr>
<td>Age-adjusted annual death rate per 100,000</td>
<td>7.9</td>
<td>8.9</td>
<td>11.0</td>
<td>11.8</td>
<td>12.9</td>
<td>12.7</td>
<td>13.7</td>
<td>15.4</td>
<td>17.0</td>
<td>18.7</td>
<td>22.7</td>
<td>27.7</td>
<td>36.8</td>
<td></td>
</tr>
</tbody>
</table>

Source: Ohio Department of Health, Bureau of Vital Statistics; analysis conducted by ODH Violence and Injury Prevention Section. 1. Includes Ohio residents who died due to unintentional drug poisoning (underlying cause of death ICD-10 codes X40-X44). 2. Total includes out-of-state deaths of Ohio residents for all years. 3. Individual drugs do not add up to totals as more than one drug may be listed on the death certificate for one death. 4. Data completeness varies from year to year for residents who died out of state; approximately 2 percent of the fatal overdose deaths are out-of-state. 5. Data restated to incorporate coroner supplemental records not previously reflected in ODH Public Health Data Warehouse. 6. Includes prescription opioids, fentanyl and heroin. 7. Does not include deaths involving fentanyl and related drugs; fentanyl was not captured in the data prior to 2007. 8. Excludes deaths involving methadone, methamphetamine, and other psychostimulants with potential for abuse (ICD-10 codes T43.6). 9. Includes only those instances where no other drug than T50.9 (other/unspecified) is included as contributing to death.
DR. LABOR’S RESEARCH:

• Methods:
  – Google search on phone
  – screenshots
A quick Google search...

“buy fentanyl from china online”
THE FIRST LINK I FOUND WAS ‘DEAD’

But this one was active

Fentanyl treats severe, ongoing pain that cannot be controlled with other medicines. This medicine is a narcotic pain reliever. Buy Fentanyl online today at very ...

Fentanyl Powder, Buy Fentanyl Patch, Buy Fentanyl Pills, Buy ... - Firsttrustchemicals.com
They are super proud of their claims.

The company has gotten the approval of ISO9001. We have the authority of export and import, the fine chemical, biochemical, pharmaceutical & its intermediates distributed by the company are sold both in the domestic and international market and highly recommended by our clients. In order to develop the market further, we are eager to cooperate with the manufactory and trading company around the globe to make a prosperous future.

Related Products

- nitrile gloves powder
- Hash-Oil
- Azolol 5mg Winstrol
- Anavar (Oxandrolone)
buy fentanyl powder online

$200.00 - $800.00

Fentanyl powder:

Fentanyl treats severe, ongoing pain that cannot be controlled with other medicines. This medicine is a narcotic pain reliever. Buy Fentanyl online today at very low price.
I opted to buy the maximum amount.

6 grams

Added to my cart

SKU: N/A

Categories: RESEARCH CHEMICALS, PAIN RELIEF
<table>
<thead>
<tr>
<th>Product:</th>
<th>buy fentanyl powder online - 6g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price:</td>
<td>$800.00</td>
</tr>
<tr>
<td>Quantity:</td>
<td>1</td>
</tr>
<tr>
<td>Total:</td>
<td>$800.00</td>
</tr>
</tbody>
</table>

The remainder of this transaction includes an area for discount/coupon and a $50 flat shipping fee and then filling in the rest of the information for shipping and billing.
RESULTS

• IN UNDER 2 MINUTES….

• I was able to find and order 6 grams of ‘fentanyl’ from China
  —(I didn’t actually order it!!)
LETS DO THAT MATH AGAIN...

- If most heroin users are using about 1g daily, the equivalent would be 0.1g fentanyl
- I could purchase 6g of fentanyl for $800
- If one gram of heroin is about $100, then 0.1g fentanyl would be the same
- 6g = 60 tenths of a gram or $6000
- $5200 profit
CONTROLLING THE EPIDEMIC: A THREE-PRONGED APPROACH

• **Prevent** new cases of opioid addiction.

• **Treatment** for people who are already addicted

• **Supply control**- Medical board & law enforcement efforts to reduce over-prescribing and black-market availability.
The governors cabinet opiate action team

1) BUILD YOUR TEAM TO TAKE ACTION
2) ADOPT PREVENTION PRACTICES
3) MONITOR PRESCRIBING, MANAGE MEDICATION AND HALT DIVERSION
4) PREVENT OVERDOSE
5) LINK PEOPLE TO TREATMENT
6) HELP SUSTAIN RECOVERY
7) SUPPORT LAW ENFORCEMENT INTERDICTION
FIGHTING THE OPIATE CRISIS IN OHIO 2011-2017
Opiate Crisis in Ohio | 2011-2017

FEB. '15 — State budget includes $1M investment for naloxone (resulting in 2,300 lives saved in SPY 2016); creates partnership to expand the availability of treatment within state prisons and upon release and authorizes additional $5M to expand Addiction Treatment Program to additional county drug courts.

JULY '14 — Investments target funding for prevention ($6.5M), recovery housing ($10M) and drug courts ($4.4M).

JULY '15 — Gov. Kasich signs legislation that further expands availability of naloxone by permitting physicians to issue a standing order. Governor's Cabinet Opiate Action Team publishes community Health Resource Toolkit for Addressing Opioid Abuse.

OCT. '15 — Gov. Kasich announces $1.5M investment to integrate Ohio's prescription drug monitoring program into electronic medical records and pharmacy systems across the state.

MAR. '16 — A Centers for Disease Control and Prevention report recognizes Ohio's "comprehensive response to the increase in fentanyl-related deaths" and a "wide range of activities across Ohio state government in response to the opiate crisis in Ohio.

JUNE '16 — Gov. Kasich signs "Good Samaritan" legislation that provides immunity from prosecution to those who seek emergency help for the victim of an overdose.

2015
2016
2017

2016 — Ohio Department of Public Safety provides more than $5.5M to support 40 local drug task forces throughout Ohio.

MAY '16 — Ohio Departments of Health and Mental Health and Addiction Services partner to launch multi-media naloxone/fentanyl awareness campaign.

AUG. '17 — New rules go into effect limiting the amount of opioids that can be prescribed for acute pain to seven days for adults and five days for minors.

DEC. '14 — Gov. Kasich signs bill into law requiring school districts to provide education on Rx medication and other opiate abuse.

Highway Patrol reports that it has seized more than 38,000 prescription pills (1,086 cases) and 14,150 grams of heroin (806 cases) for calendar year 2014.

Ohio EMS personnel administer naloxone 16,121 times for calendar year 2014.

2017 — Gov. Kasich signs legislation strengthening prescription drug oversight, encouraging responsible treatment and supporting overdose prevention. Provisions include registration of all pharmacy technicians; expanded access to naloxone (including schools, homeless shelters and halfway houses); limitations on high volume prescriptions; and streamlined regulations for methadone providers.
PREVENT NEW CASES

• Adolescent intervention strategies
• Stop pharmaceutical companies from being able to advertise heavily
• Monitor and create policy for opiate prescribing
How the opioid industry Frames the Problem

Who Will Be Affected by Rescheduling?

Source: Slide presented by Lynn R. Webster MD at FDA meeting on hydrocodone upscheduling, January 25th, 2013.
This is a **false dichotomy**
Aberrant drug use behaviors are common in pain patients

Pain Patients

- 63% admitted to using opioids for purposes other than pain
- 35% met DSM V criteria for addiction

“Drug Abusers”

- 92% of opioid OD decedents were prescribed opioids for chronic pain.

---


TREATMENT

• Detoxification
• Outpatient
  – Partial hospitalization, intensive outpatient, education and relapse prevention
• Community support groups
  – 12 step
• Inpatient/residential
• MAT (must be used in conjunction with above)
• Lifelong avoidance of ALL SUBSTANCES
INTEGRATED TREATMENT WORKS BETTER
• If a patient is on a chronic pain regimen and there is NO EVIDENCE of abuse but the decision is made to stop the medication, slow outpatient taper is recommended
• If a patient is abusing medication or using illicit substances, refer to addiction medicine for assessment/evaluation and treatment recommendations
SUPPLY CONTROL

• GOVERNMENT CONTROL OF MAIL/IMPORTING REGULATIONS
• GOVERNMENT CONTROL OF POPPY FIELDS IN AFGHANASTAN
• GOVERNMENT CONTROL OF PIPELINE FROM MEXICO
• GOVERNMENT CONTROL OF THIRD PARTY PAYERS
• GOVERNING BOARDS TO REGULATE PRESCRIBING WITH LAW ENFORCEMENT AGENCIES INVOLVEMENT
SUMMARY

• We are in the midst of POSSIBLY the WORST drug epidemic in U.S. history.

• To end the epidemic we need to:
  – PREVENT new cases of opioid addiction
  – TREAT people who are already addicted

  – BUT….
MOST IMPORTANTLY

• STOP FOCUSING ON A SPECIFIC DRUG AND FOCUS ON THE DISEASE
REFERENCES

• American Society of Addiction Medicine Opioid Addiction 2016 Facts & Figures
• Medication Assisted Treatment http://www.samhsa.gov/medication-assisted-treatment
• National Institute on Drug Abuse (NIDA) https://www.drugabuse.gov/
• Schuckit MA. Treatment of Opioid Use Disorders. NEJM (07/28/16) Vol. 375, No. 4, P. 357
• Substance Abuse and Mental Health Services Administration. Managing Chronic Pain in Adults With or in Recovery From Substance Use Disorders. Treatment Improvement Protocol (TIP) Series 54. HHS Publication No. (SMA) 12-4671. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2011