Drug Overdose Calls

Synthetic Opioid Safety
Introduction

- Jessica Toms
- Employed by the Ohio Bureau of Criminal Investigation (BCI) under the Ohio Attorney General’s Office
- Quality Assurance Supervisor since May 2015
- Safety Coordinator since 2011
- Forensic Scientist for 9 years, performing casework in Questioned Documents, Trace Evidence, and Drug Chemistry Sections
Ohio leads nation in overdose deaths

Youngest Opiate Overdose On Record, 1-Year-Old Ohio Boy Revived With Narcan

Cuyahoga County hits record number of opioid-related overdose deaths in February

January record month for Clark County overdose deaths

Record 189 overdoses in March Trumbull County

44 dead from overdoses breaks record, again

Dayton-area drug deaths may set new annual record – by June

Too Many Bodies in Ohio Morgue, so Coroner Gets Death Trailer
Fentanyl

• Schedule II Controlled Substance

• Synthetic opioid

• Binds to opioid receptors in brain
  → Decreasing perception of pain, blood pressure, and heart rate

• Most potent opioid approved for use in medical treatment in U.S.
  • Approx. 100x more potent than morphine

• Typically used to treat severe cases of pain including cancer patients and terminally ill
Fentanyl

- Powder form introduced into illicit drug trade, being sold as heroin

- Cheaper to manufacture, more potent than heroin= less product needed for larger profit

- Evidence processed shows fentanyl being used in combination with other controlled substances such as Cocaine, Methamphetamine, Heroin, other opiates, etc.
Fentanyl-related Compounds

- Over 30 different fentanyl-related compounds are known to exist
- BCI Drug Chemistry Section has seen at least 13 different fentanyl-related compounds in illicit drug samples in Ohio
- Many have a greater potency than fentanyl

<table>
<thead>
<tr>
<th>Compound</th>
<th>Times Potency of Morphine</th>
<th>Identified by BCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fentanyl</td>
<td>50-300</td>
<td>Yes</td>
</tr>
<tr>
<td>Acetyl Fentanyl</td>
<td>15</td>
<td>Yes</td>
</tr>
<tr>
<td>Alfentanil</td>
<td>72</td>
<td>No</td>
</tr>
<tr>
<td>Sufentanil</td>
<td>2,400</td>
<td>No</td>
</tr>
<tr>
<td>3-methyl fentanyl</td>
<td>7,000</td>
<td>Yes</td>
</tr>
<tr>
<td>Carfentanil</td>
<td>7000-10,000</td>
<td>Yes</td>
</tr>
<tr>
<td>Ohmefentanyl</td>
<td>20,000-50,000</td>
<td>No</td>
</tr>
</tbody>
</table>

Data from "A Review of the Synthesis and Analysis of Fentanyl and its Analogs, Andrew C. Allen, Ph.D., Second Printing 1997"
Evidence Types

- Powders
- Tablets
- Paraphernalia items:
  - Syringes
  - Spoons
  - Other drug paraphernalia
- Drug Trafficking/Packaging:
  - Scales
  - Plastic bags
  - Paper folds
Safety/Health Concerns

• Easily absorbs through the skin
  – Broken skin and mucous membranes (eyes, nose, mouth) particularly susceptible

• Rapidly crosses the blood-brain barrier

• Potency
Exposure Incidents

East Liverpool Police officer suffers fentanyl overdose from drug call

Orwell police officer given Narcan for possible overdose after being exposed to unknown substance

Fostoria police officer taken to hospital after being exposed to dangerous opioid

Cincinnati officer hospitalized after touching illegal substance
## First Responder Exposure Incidents

<table>
<thead>
<tr>
<th>Agency</th>
<th>Event</th>
<th>Exposure Route</th>
<th>Lab Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHP</td>
<td>Traffic stop/pursuit</td>
<td>Inhalation/skin contact</td>
<td>Cocaine, heroin, acryl fentanyl, and carfentanil*</td>
</tr>
<tr>
<td>East Liverpool PD</td>
<td>Narcotics related traffic stop</td>
<td>Skin contact**</td>
<td>Fentanyl</td>
</tr>
<tr>
<td>Cincinnati PD</td>
<td>Narcotics related traffic stop</td>
<td>Skin contact</td>
<td>Results unpublished</td>
</tr>
<tr>
<td>Cincinnati PD</td>
<td>Evidence Tagging/Handling</td>
<td>Contact (not specified)</td>
<td>Results unpublished</td>
</tr>
<tr>
<td>Fostoria PD</td>
<td>Traffic Stop (leading to drug arrest)</td>
<td>Contact (not specified)</td>
<td>Fentanyl and carfentanil (18g)</td>
</tr>
<tr>
<td>Orwell PD</td>
<td>Property Complaint</td>
<td>Contact (not specified)</td>
<td>No controlled substance found (residue on plastic card)</td>
</tr>
<tr>
<td>Cleveland PD</td>
<td>Execution of Search Warrant on Residence</td>
<td>Contact (not specified)</td>
<td>Fentanyl</td>
</tr>
<tr>
<td>Cincinnati Probation Officers (2)</td>
<td>Confiscation of substance from client</td>
<td>Contact (not specified)</td>
<td>Cyclopropyl fentanyl and fentanyl</td>
</tr>
<tr>
<td>Nurses- Affinity Medical Center (3)</td>
<td>Cleaning room where OD victim treated</td>
<td>Not specified</td>
<td>Results not published</td>
</tr>
<tr>
<td>Fairborn EMT</td>
<td>Treatment of OD victim</td>
<td>Not specified</td>
<td>Results not published</td>
</tr>
</tbody>
</table>
## 2017 Child Exposure Incidents in News

Columbus 12-year-old’s death at birthday party ruled a fentanyl overdose

Toddler dies of carfentanil, fentanyl intoxication while with grandmother. Grandma died three days later.

<table>
<thead>
<tr>
<th>Location</th>
<th>Age</th>
<th>Substance</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reynoldsburg</td>
<td>12 year old boy</td>
<td>Fentanyl</td>
<td>Deceased</td>
</tr>
<tr>
<td>Dayton</td>
<td>13 month old girl</td>
<td>Fentanyl/Carfentanil</td>
<td>Deceased</td>
</tr>
<tr>
<td>Akron</td>
<td>1 year old boy</td>
<td>Opiate (not specified)</td>
<td>Deceased</td>
</tr>
<tr>
<td>Akron (4)</td>
<td>Under age of 3</td>
<td>Opiate (not specified)</td>
<td>Revived</td>
</tr>
<tr>
<td>Akron</td>
<td>6 year old girl</td>
<td>Opiate (not specified)</td>
<td>Revived</td>
</tr>
<tr>
<td>Dayton</td>
<td>2 year old girl</td>
<td>Opiate (not specified)</td>
<td>Revived</td>
</tr>
</tbody>
</table>
Drug Overdose Calls

- Establish overdose or exposure has occurred
- Reduce Risk of Further Exposures
- On-site medical assistance
Symptoms of Overdose

Signs of an opioid overdose, include but are not limited to:

– Shallow breathing
– Slow or absent pulse
– Choking/gurgling noises
– Pinpoint pupils
– Vomiting
– Loss of consciousness or awake but unable to talk
– Body is limp, clammy, and bluish in color

Evidence of drug activity at the scene
Symptoms of Exposure

Similar to those of an overdose, but may not be as extreme:

- Euphoria (high feeling)
- Decreased heart rate and respiration
- Itching or flushed skin
- Slurred speech
- Confusion or poor judgement
- Nodding off
- Decreased feeling of pain

Evidence of drug activity at scene
Reduce Risk of Further Exposures

• Scene Assessment
• Contact or Spill Response
• PPE and Personnel Training
Scene Assessment

- Scene considerations:
  - Type of incident
  - Type/location of drug items
  - People
  - Location of incident
  - Other activities occurring at scene
  - Naloxone or PPE on-site
Contact or Spill Response

• What type of incident has occurred?
  – Spill, skin contact, inhalation, etc
  – What specific item(s) were handled?

• What is the status of the individuals involved?

• Who else is at risk?

• Is the area safe to enter?

• Can the hazard be safely contained or removed?

VS.
If it is suspected that someone has come in contact with an unknown drug substance:

- They should not panic
- Wash the affected area thoroughly with soap and warm water
- Avoid use of hand sanitizer
- Remove and dispose of any potentially contaminated clothing
- Continue to communicate with the individual to watch for development of exposure or overdose symptoms
- Seek medical attention if needed
Spill Response

• Universal precautions should be taken

• Minimize handling and creation of particulates

• Responding personnel should wear appropriate PPE based on risk level

• Creates barrier between hazard and at risk areas of the body
PPE Kit Examples

- Nitrile Gloves
- Safety Glasses
- Respirator/Particulate Mask
- Disposable Sleeves OR Coveralls
On-Site Medical Assistance

Administration of:

• Naloxone (Narcan®) if available
• CPR
  – Only in absence of respiration or pulse
• AED
  – Only in absence of respiration of pulse
Naloxone (Narcan)

- A prescription medication that can reverse the effects of an opioid overdose
- Kits contain: Atomizers, pre-filled syringes, and face shields
- Available in 2mg and 4mg doses
- Training video available online
Steps of Administration

HOW TO GIVE NASAL SPRAY NARCAN

1. Pull or pry off yellow caps

2. Pry off red cap

3. Grip clear plastic wings.

4. Screw capsule of naloxone into barrel of syringe.

5. Insert white cone into nostril; give a short, vigorous push on end of capsule to spray naloxone into nose; one half of the capsule into each nostril.

6. If no reaction in 2-5 minutes, give the second dose.

Victim should be placed in the rescue position after the administration of Naloxone.
Rescue Position

1. Bend victim’s arm closest to you at right angle and keep legs straight
2. Place back of person’s other hand against their opposite cheek and hold there
3. Use your other arm and reach across the person and bend the person’s leg farthest from you so their foot is flat on the floor
4. Gently pull their knee towards you and roll the person toward you ensuring hand remains on cheek, rest the bent on the floor
5. Ensure that the person’s mouth is pointed downward and the chin is tilted back/upward.
## Troubleshooting

<table>
<thead>
<tr>
<th>Concern</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naloxone liquid medication spills</td>
<td>Administer remaining amount</td>
</tr>
<tr>
<td>Naloxone only given through one nostril</td>
<td>Will still be effective</td>
</tr>
<tr>
<td>Victim has other medical emergency, not overdose</td>
<td>Naloxone will not cause them harm</td>
</tr>
<tr>
<td>Victim did not regain consciousness after administration</td>
<td>Additional doses may need to be administered</td>
</tr>
<tr>
<td>Victim loses consciousness again after administration of first dose</td>
<td>Administer additional doses if available</td>
</tr>
</tbody>
</table>
Resources

- www.fentanylSafety.com
- The Interagency Board; First Responder PPE and Decontamination Recommendations for Fentanyl, August 2017
- NES Fentanyl Safety Training
- https://www.whitehouse.gov/ondcp/key-issues/fentanyl
- Naloxone Training video:
  - https://www.youtube.com/watch?v=m9wgPiuCtGI&spfrel=10
How to contact us

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