Double-Duty Dopers: Managing Fentanyl-Laced Heroin Abuse

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Some Context

- In 2006, Philadelphia M.E.’s Office reported 252 drug-related deaths from fentanyl
- Most cases in 2 neighborhoods, prompting police to warn users to stay away
  – They flocked there instead
Broader Context

• CDC and DEA identified 1,013 fentanyl-related deaths between 2005-2007
• Made in clan labs in Mexico, CA, elsewhere
• Distinct trafficking patterns/gang ties
• Some regions heavily affected, others not at all
The 2006 Outbreak

1. Cook County, IL (Chicago)
2. Philadelphia
3. Wayne County, MI
   – Detroit (12 deaths in one day)
   • Camden, NJ
   • Allegheny County, PA
     – Includes Pittsburgh
Previous Episodes

1. In 1979, “China White” appeared in California
   - 3-methylnfentanyln
   - Killed > 100 over next 5 years

2. Resurfaced in Allegheny County, PA, in 1987-88, killing 18
Fentanyl

- 80 times as potent as morphine
- Duration of action ~ 30 min.
- Reversible with naloxone
- Routine lab testing may miss it
  - Detected by ELISA, GC-MS
And Now The Present

- In April 2013, Philadelphia Medical Examiner’s Office reported death due to acetyl fentanyl
  - 6 fentanyl-related deaths between May and Sept. 2013
  - Mixed with heroin in packets labeled “Flashback” and “Audi”
Rhode Island: The Present

• CDC reported 14 OD deaths from acetyl fentanyl in RI from March 6-June 20, 2013

• From Jan 1-Feb 20, 2014, 28 fentanyl-related deaths
New heroin, painkiller mix 'all over Pittsburgh' kills at least 13

- The deadliest batch of heroin to hit Western Pennsylvania in more than 25 years killed as many as 13 people during past week
- Sold under names *Theraflu, Bud Light, Diesel*
- Affecting Allegheny County
The Present

• Cases reported in:
  – New Orleans area
  – North Carolina
  – Michigan
  – Maryland
  – New Jersey
  – Connecticut
  – Estonia
Community and EMS Response

- Robust surveillance capability so fentanyl recognized early
- Collaborate with law enforcement, public health, media
- Partner with substance abuse prevention programs to educate users

http://www.ems1.com/drugs/articles/1647680-Wis-EMS-gets-Naloxone-under-pilot-program
Response Options

- Promote community naloxone programs
  - Prevention Point Philadelphia provides to users, families, friends, with training
- Allow EMTs to give naloxone
  - Wisconsin
- Nasal administration by police
  - NM, MA, etc.

http://ppponline.org
Appropriate Naloxone Dose?

• Very little published data
• 0.1, 0.2, and 0.4 mg IV reversed respiratory depression caused by 50 μg IV fentanyl administered to anesthetized patients in dose-dependent fashion.

Appropriate Naloxone Dose?

- Per PA Statewide ALS Protocols:
  - 0.4 mg IV/IO, repeating to total 2 mg
- Maryland Poison Center (and others)
  - Initial: 0.4-2 mg
    - Repeat dose: 2 mg every 2-3 min. to 10 mg
    - If no response after 10 mg, reconsider diagnosis

Appropriate Naloxone Dose?

- Dozens of fentanyl analogs
  - Differing potencies, durations
  - Carfentanil 100x as potent as fentanyl
    - Used to tranquilize rhinos and elephants
    - 2002 Moscow theatre hostage crisis?
  - Which analog, in what proportion?

Appropriate Naloxone Dose?

- Give lowest dose needed to restore spontaneous respirations
- *Watch out for withdrawal*
Summary

• Fentanyl-laced heroin is back and is a serious public health threat
• Standard prehospital care probably sufficient
  – Higher doses of naloxone *may* be needed
• Vigilance, public education, collaboration with other agencies key to minimizing deaths
Thank You