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Examining the Causes of the Recent Surge in Fentanyl Abuse
FENTANYL & FENTANYL ANALOGS:
A PUBLIC HEALTH CRISIS, A LAW ENFORCEMENT CHALLENGE

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ONE OF THE “WRETCHED NEW STREET-DRUGS”

• “One common feature of novel psychoactive substance use is the speed at which the drugs emerge as problematic substances….Experimentation often precedes the development of legal and clinical protocols, forcing law enforcement officers and emergency medical professionals to react to situations for which they are unprepared.” – Stogner Ph.D., *Annals of Emergency Medicine*, Dec. 2014

• "The number of potentially problematic compounds is countless," but“...it is possible to forecast which drugs are likely to become an issue, Stogner said. "Acetyl fentanyl, a slight variant of fentanyl, is one such drug." – Gohlupor, *Live Science*, Aug. 2014
WHAT IS FENTANYL?

- Powerful fully-synthetic opioid
  - Gram for gram:
    - 25-40 times more potent than heroin
    - 50-100 times more potent than morphine
  - Therapeutic doses measure in Micrograms
- Schedule II controlled substance
- Used clinically for severe pain relief
- Fast-acting, short-duration, highly-addictive
ILLICIT FENTANYL & FENTANYL ANALOGS
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- Clandestinely produced, largely in Mexico
- Pre-cursors from China
  - Some controls enacted in 2015
  - Still widely available
- Imported in bulk form
- Added to, or substituted for, heroin or oxycodone
- Increasingly found in “stamp bags” or “folds” sold at the street-level, or pill form
- Though many analogs are Schedule 1 controlled, “one-off” chemicals defy conventional detection, screening, scheduling
FENTANYL ANALOGS: PRODUCT & ADVICE EASY TO FIND ON INTERNET & “DARK WEB”

- Sold as “Research Chemicals” and labeled as “Not For Human Consumption”
- Many vendors overseas: Europe & Asia
- “Bluelight.com”, “Drugs-forum.com” & others loaded with discussions of analogs with the best “rush”, dosage recommendations, how to administer
FENTANYL & HEROIN:
SUPER-CHARGED OPIOID & DEADLY MIXTURE
CLANDESTINELY-PRODUCED FENTANYL’S DEADLY HISTORY

• 1970’s-1980’s: Alpha-methylfentanyl identified in California; “China White” associated with 112 deaths; Controlled as Schedule 1 substance in 1981

• 1980’s: Eight (8) other fentanyl analogs subsequently identified and scheduled

• April 2005 – March 2007: 1,013 deaths reported in CDC/DEA Epi-X surveillance; largest numbers of deaths occurring in metropolitan Chicago, Detroit, and Philadelphia
  • Hundreds more were reported in suburban and rural areas of Illinois, Michigan, and Pennsylvania and in Kentucky, Maine, Maryland, Massachusetts, New Hampshire, Ohio, and Virginia
  • Largest Non-Pharmaceutical Fentanyl epidemic ever reported
  • Source of supply attributed to a single ClanLab in Toluca, MX
Fentanyl and fentanyl analogs are abused for their "intense, albeit short-term high and temporary feelings of euphoria" (DEA, 2015). Although gram-for-gram more expensive to produce than heroin, fentanyl’s potency is so much greater that it is cost-efficient to augment or replace heroin. Inferior-quality Mexican White Heroin needs potency booster to compete with South American White Heroin. Strengthens “street-creds” of a dealer’s heroin “brand”

**WHY “SPIKE” HEROIN WITH FENTANYL?**

- Fentanyl and fentanyl analogs are abused for their "intense, albeit short-term high and temporary feelings of euphoria" (DEA, 2015).
- Although gram-for-gram more expensive to produce than heroin, fentanyl’s potency is so much greater that it is cost-efficient to augment or replace heroin.
- Inferior-quality Mexican White Heroin needs potency booster to compete with South American White Heroin.
- Strengthens “street-creds” of a dealer’s heroin “brand”

**Known Fentanyl Analogs**

- 3-methylfentanyl (TMF)
- 3-methylthiofentanyl
- acetyl fentanyl
- acetyl-alpha-methylfentanyl
- alfentanyl
- alpha-methylfentanyl
- alpha-methylthiofentanyl
- beta-hydroxy-3-methylfentanyl
- beta-hydroxylfentanyl
- beta-hydroxylfentanyl
- beta-hydroxybutyfentanyl
- beta-hydroxybutyfentanyl
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*not currently a controlled substance in the United States.*
DRUG TRAFFICKING ORGANIZATIONS KNOW:

• “Clever and well-informed drug distribution networks will likely take advantage of the 'analogue loophole.'”
CURRENT FENTANYL CRISIS: MORE DEADLY, MORE WIDESPREAD

- April 2013 – Montreal (QB) police seize 300,000 tablets containing desmethyl-fentanyl, 1,500 kg of pre-cursor ingredients in raid; 10,000 pill shipment destined for Colorado
- May 2013 – British Columbia Provincial Health Officer issues bulletin warning of dangerous heroin-fentanyl mixture causing 23 deaths in first 4 months of year
- June 2013 – Erie Co. (NY) Crime Analysis Center issues bulletin regarding heroin-fentanyl mixtures being seized, and overdose episodes increasing sharply
- June 2013 – Phila.-Camden HIDTA issues bulletin noting overdose deaths in Pennsylvania, New Jersey, New York & Rhode Island; warns LE personnel to use personal protective gear when conducting investigations where fentanyl may be present
- April 2014 – CBP-San Clemente seize 6.6 kgs. of fentanyl (initially thought to be cocaine) coming Northbound on I-5
- Aug. 2014 – NJ ROIC Drug Monitoring Initiative issues bulletin reporting multiple fentanyl-laced heroin seizures in NJ; Monmouth & Ocean Cos. most impacted
- Jan. 2015 – PA PaCIC issues Intelligence Brief noting concentration of fentanyl-laced heroin and straight fentanyl being sold in SE and SW Penna., leading to multiple overdose deaths
- June 2015 – Indiana Intelligence Fusion Center issues bulletin noting 29 fentanyl-related deaths in Marion Co. (IN) in 2014
FENTANYL’S SPREADING FOOTPRINT:

- Top States for Fentanyl Seizures (2nd half 2014 NFLIS Data)
  - Ohio = 1245
  - Massachusetts = 630
  - Pennsylvania = 419
  - Maryland = 311
  - New Jersey = 238
  - Kentucky = 232
  - Virginia = 222
  - Florida = 183
  - New Hampshire = 177
  - Indiana = 133
SUMMARY & RECOMMENDATIONS

• Fentanyl & fentanyl analogs are increasingly available, and their availability is expected to remain substantial in the near-term

• Heroin users, whether knowingly or not, are exposed to great risk of death or life-threatening overdose episodes when fentanyl is combined with or substituted for heroin

• First-responders and investigators must be properly protected when responding to and investigating potential fentanyl-involved incidents

• Substantially more naloxone (Narcan) is required to revive persons who have overdosed on fentanyl than on heroin

• Rapid identification of fentanyl, and which variant, in the drug marketplace is essential to locating source(s) of supply, but requires advanced forensic screening by toxicologists

• Treat each overdose episode as a potential source of intelligence and evidence

• Share information about fentanyl observations widely with LE and public health agencies