

The Nexus of Public Health and Public Safety in Combating Fentanyl

Bruce A. Goldberger, Ph.D.
 Chief, Director and Professor
 Division of Forensic Medicine
 Department of Pathology, Immunology and Laboratory Medicine
 University of Florida College of Medicine



The New York Times

TheUpshot

Bleak New Estimates in Drug Epidemic: A Record 72,000 Overdose Deaths in 2017

Fentanyl is a big culprit, but there are also encouraging signs from states that have prioritized public health campaigns and addiction treatment.

By Margot Sanger-Katz

The New York Times

TheUpshot

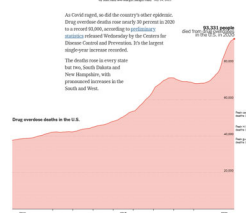
Drug Overdose Deaths Drop in U.S. for First Time Since 1990

By Abby Goodnough, Josh Katz and Margot Sanger-Katz
 July 17, 2019

Three decades of ever-escalating deaths from drug overdoses in the United States may have come to an end, according to preliminary government data made public Wednesday. Total drug overdose deaths in America declined by around 5 percent last year, the first drop since 1990.

The New York Times

'It's Huge, It's Historic, It's Unheard-of': Drug Overdose Deaths Spike



RESEARCH

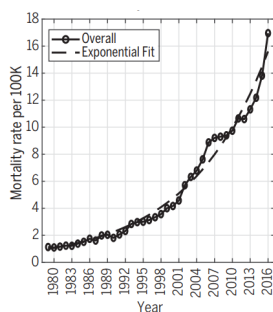
RESEARCH ARTICLE SUMMARY

PUBLIC HEALTH

Changing dynamics of the drug overdose epidemic in the United States from 1979 through 2016

Heather Jahn, Jonathan M. Rehm, Mark A. Roberts, Laura C. Roberts, Kim Zhang, Donald S. Reker

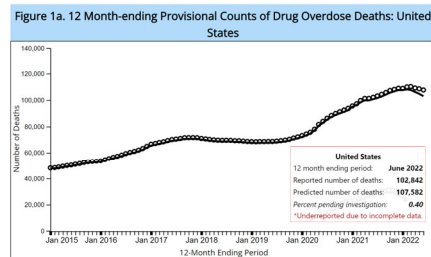
Indeed, it is possible that in the future, the drug overdose epidemic may be driven by a new or heretofore obscure psychoactive substance.



Jalal H, Buchanich JM, Roberts MS, Balmert LC, Zhang K, Burke DS. Changing dynamics of the drug overdose epidemic in the United States from 1979 through 2016. Science. 2018 Sep 21;361(6408).

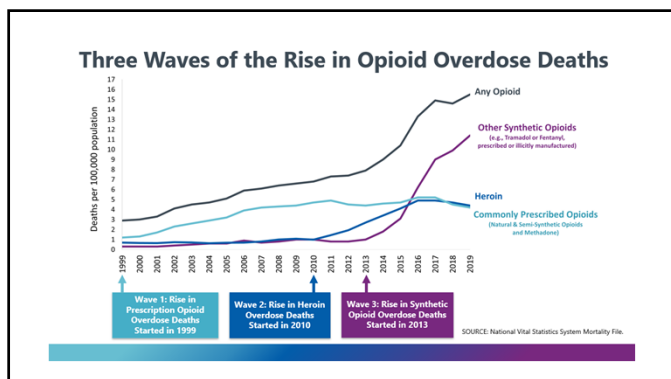
12 Month-ending Provisional Number and Percent Change of Drug Overdose Deaths

Based on data available for analysis on: November 06, 2022



<https://www.cdc.gov/nchs/nvss/rf/drug-overdose-data.htm#dashboard>





What is a New Psychoactive Substance (NPS)

NPS have been known in the market by terms such as "legal highs", "bath salts" and "research chemicals". UNODC uses the term "new psychoactive substances (NPS)" which are defined as "substances of abuse, either in a pure form or a preparation, that are not controlled by the 1961 Single Convention on Narcotic Drugs or the 1971 Convention on Psychotropic Substances, but which may pose a public health threat".

Source: United Nations Office on Drugs and Crime

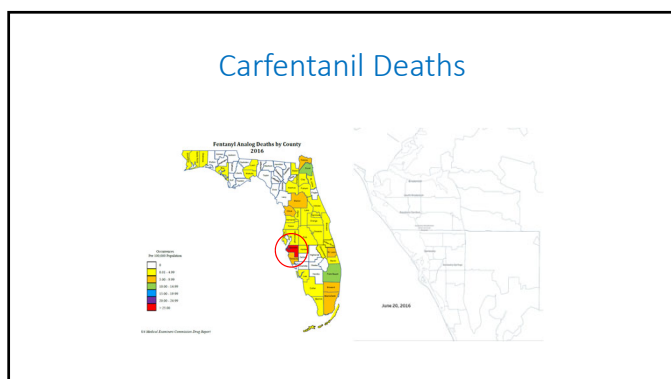
What is an NPS

- A natural, synthetic, or semi-synthetic substance in pure form, mixture, or preparation
- Previously discovered, synthesized, or reported
- Used in a novel way or differing manner from its original intended use
- Not well described or studied, but now presents significant challenges or threats due to its toxicological effect profile
- Classes of substances include - benzodiazepines, cannabinoids, hallucinogens, opioids, stimulants, and others

Adapted from: Alex J. Krotulski, PhD, CFSRE

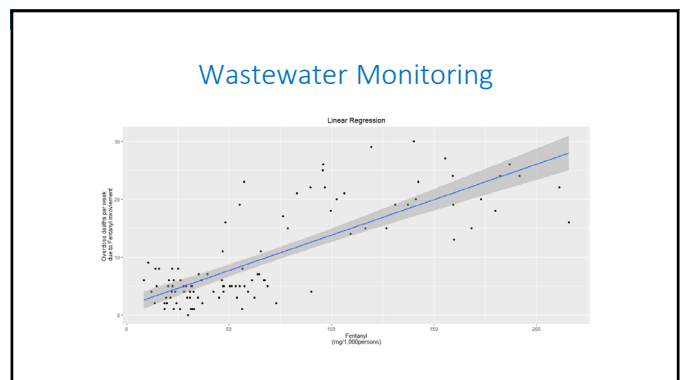
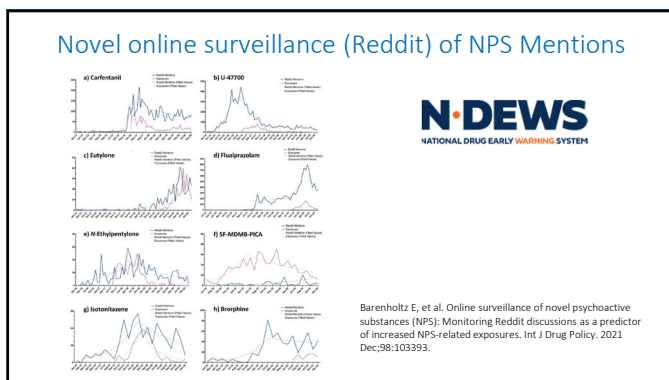
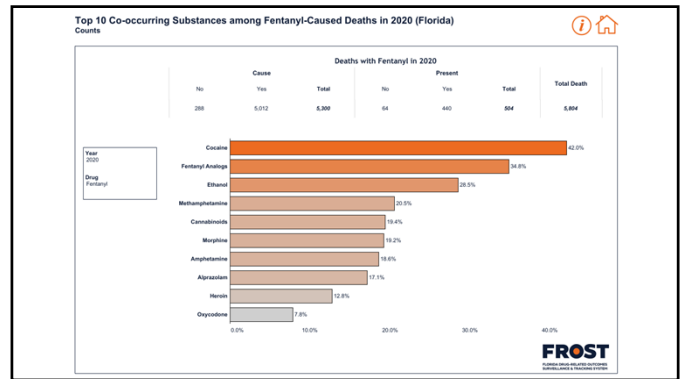
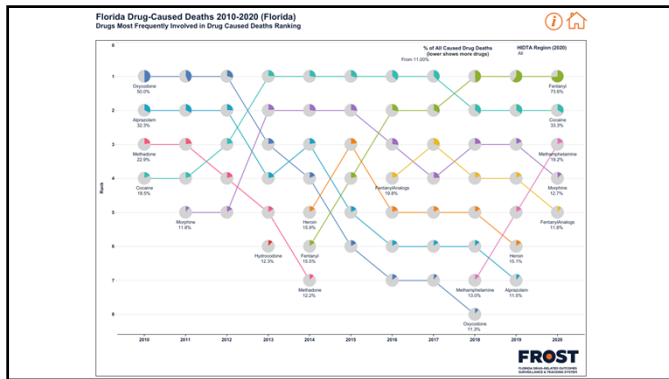
Why NPS - Rationale

- NPS distributors employ chemical compounds that are not scheduled and, therefore, not illegal
- Based on previous studies or structural similarity to other psychoactive drugs, it is assumed these substances will behave in a way that will make them attractive to the illicit drug trade



Recent NPS Trends in Decedents

- Fentanyl
 - Cocaine and/or Methamphetamine
 - 4-ANPP
 - para-Fluorofentanyl
 - Xylazine
- Cathinones
 - N,N-Dimethylpentylone
- Benzodiazepines
 - Bromazolam
 - Clonazolam
 - Etizolam
 - Flualprazolam
- Synthetic Opioids
 - Isotonitazene
 - Metonitazene
 - N-Pyrrolidino Etonitazene
- Others
 - Gabapentin
 - Ketamine
 - Mitragynine
 - Delta-8-THC



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- the Future
- New (and old) drugs
 - New drug delivery systems such as vaping
 - Understanding polysubstance use including the transition to new (and old) drugs
 - Weaponization of drugs

Weaponization of Fentanyl
October 2002 - Dubrovka Theater in Moscow



+ Carfentanil / Remifentanil +

