

DRUG OVERDOSE DEATHS ANALYSIS

Analysis of Fentanyl-Related Overdose Deaths in Cleveland/Cuyahoga County, Ohio in 2014

April 2015

Overview

The Cuyahoga County Medical Examiner's Office (CCMEO) conducted analysis of fentanyl-related overdose deaths in the Ohio county of Cuyahoga, containing the city of Cleveland for 2014. Ohio is home to over 11 million people and Cleveland is the 31st largest Metropolitan Statistical area (MSA) in the country.

Background

CCMEO conducts continuous monitoring of a wide variety of drugs that are leading causes of overdose deaths. Since 2007, the drugs which were leading causes of overdose death are: cocaine, heroin, diverted pharmaceuticals, specifically opioids and benzodiazepines.

In the past year, fentanyl, a powerful synthetic opioid, has re-emerged as a drug threat in Ohio. Fentanyl abuse is intrinsically tied to the use of illicit drugs such as heroin and cocaine, as well as to the misuse of other prescription opioids.

Several different forms of powder fentanyl have been identified in Cuyahoga County and surrounding counties in the Cleveland MSA, as well as mixtures with both heroin and cocaine.

Abuse

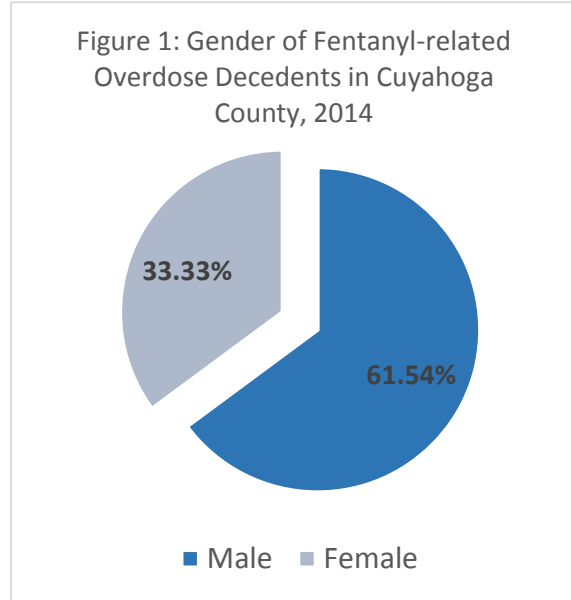
The Cuyahoga County Medical Examiner's Office has robust information gathering and analysis capabilities and strong relationships with local law enforcement and heroin specific investigative teams.

Data include decedents for which the cause of death was drug intoxication of fentanyl or mixed drug toxicity with fentanyl present. Upon receipt of data, analysis was conducted as follows:

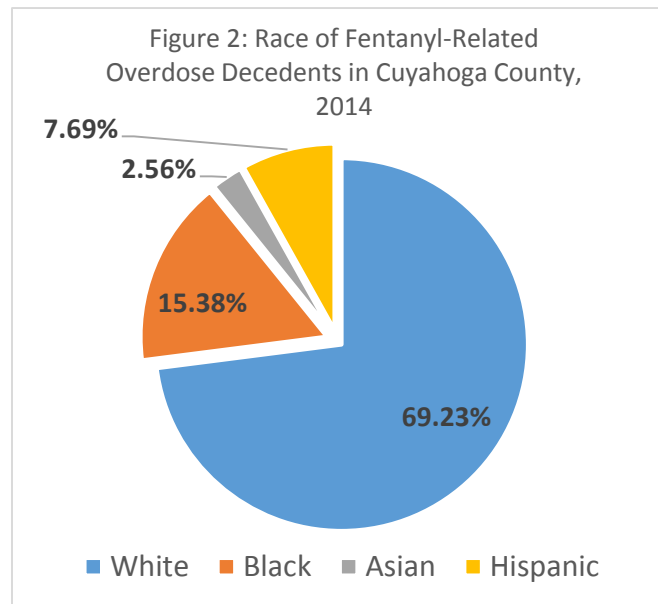
CUYAHOGA COUNTY MEDICAL EXAMINER

Fentanyl-Related Overdose Deaths in Cuyahoga County

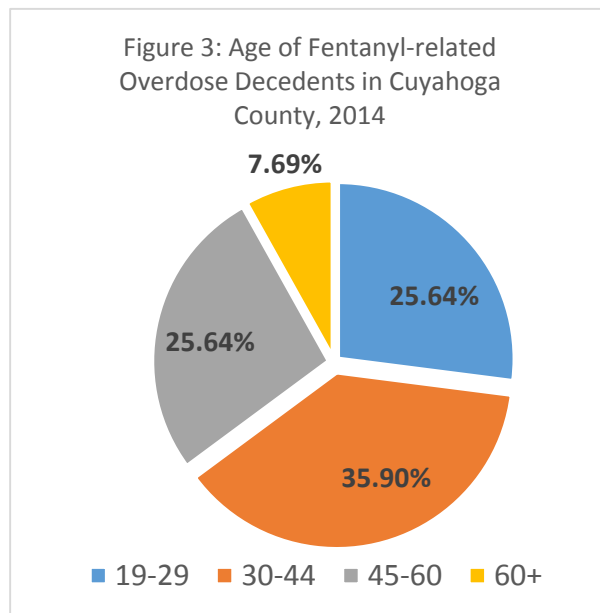
Data on 37 decedents is provided. Of note, the CCMEO reported just 5 fentanyl-related overdose deaths in 2013; the 2014 data represents a 640 percent increase from the previous year. Gender, age and race analysis for 2014 is as follows:



Source: Cuyahoga County Medical Examiner's Office



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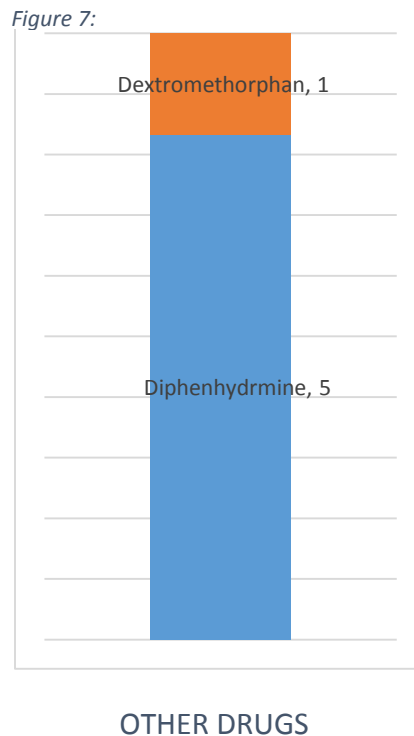
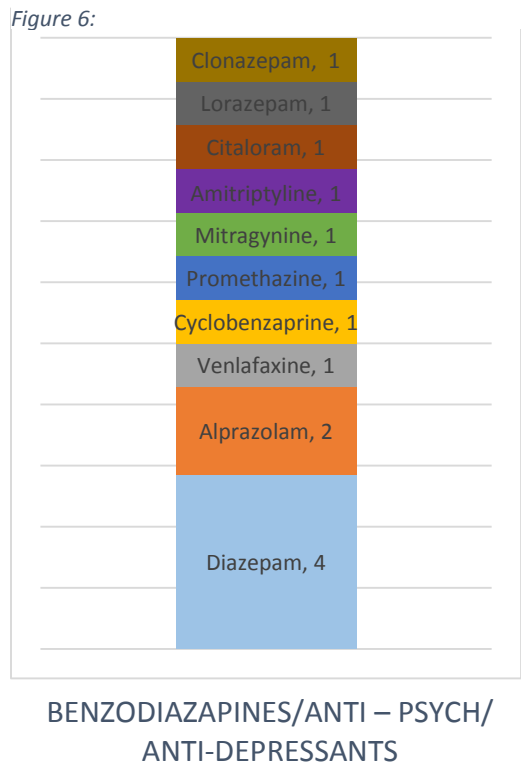
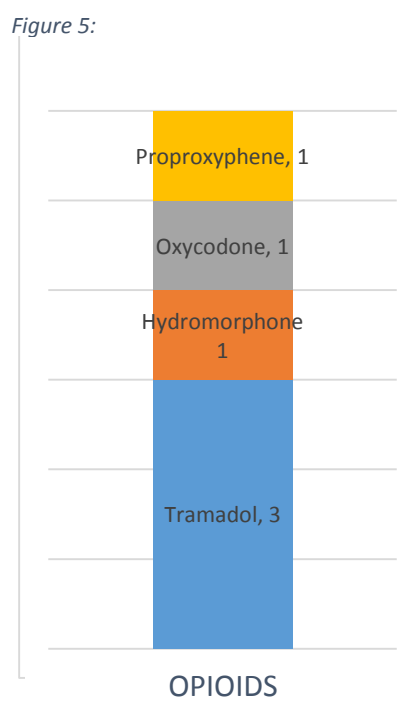
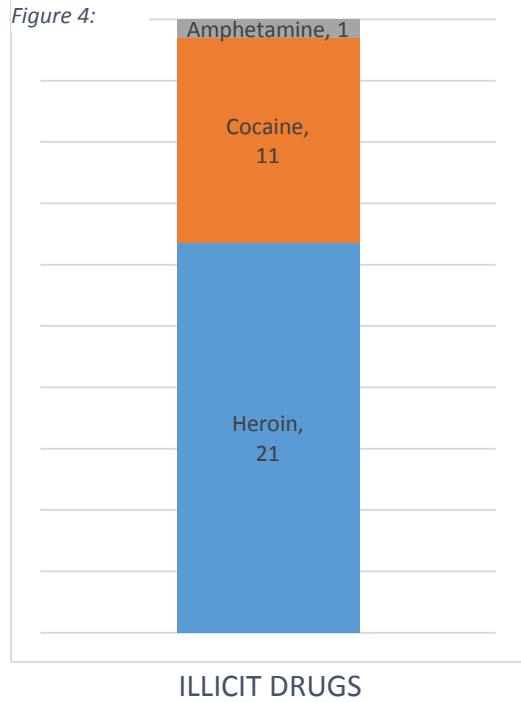
Source: Cuyahoga County Medical Examiner's Office

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Drug Combinations in Cuyahoga County

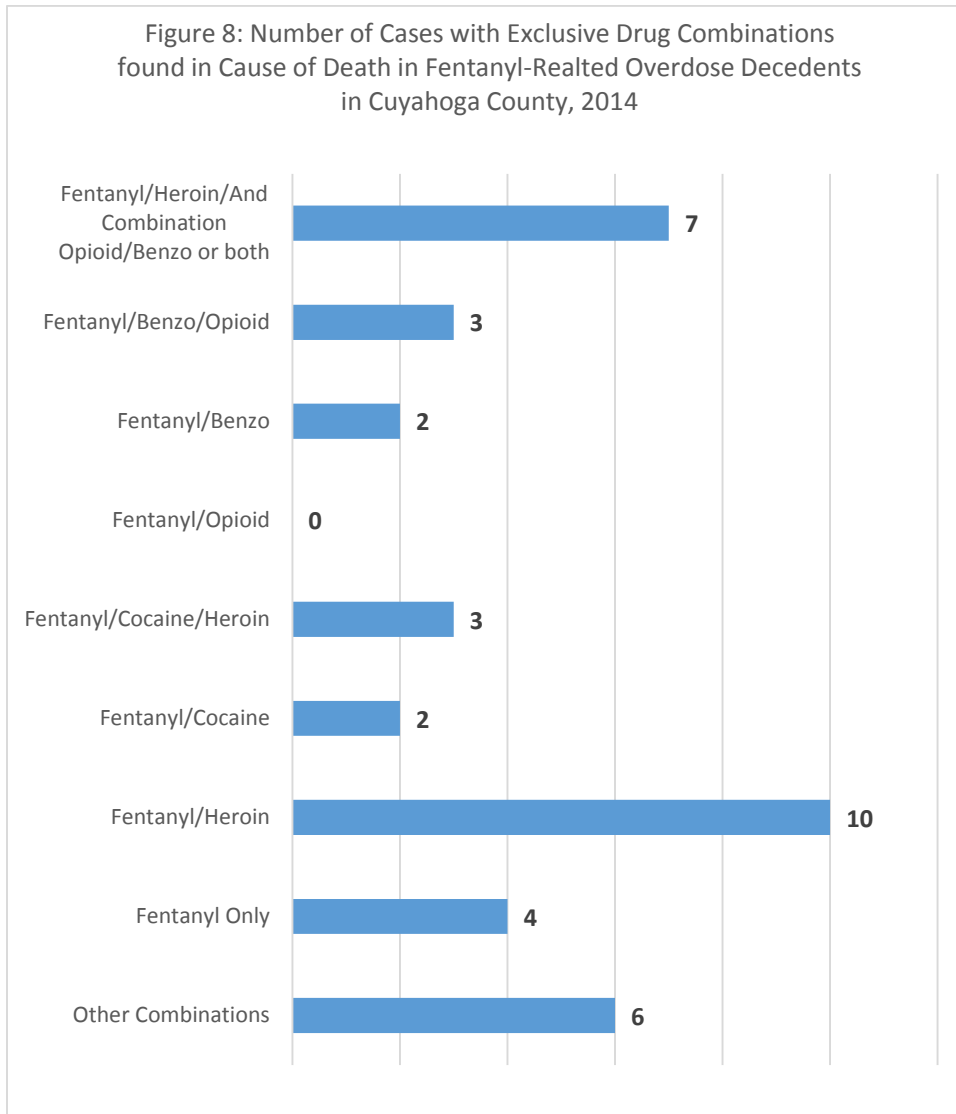
The most commonly reported drugs, (other than fentanyl) present in cause of death and toxicology for fentanyl-related overdose decedents are found in Figures 4-7 and were: heroin, cocaine, diazepam, tramadol and diphenhydramine.

Source: Cuyahoga County Medical Examiner's Office



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The most frequently reported exclusive drug combination in the death certificates, through toxicological test results in the Cuyahoga Regional Forensic Scientific Laboratory are indicated in Figure 8 below.



Fentanyl/heroin drug combination was by far the most frequent drug combination along with fentanyl/cocaine and fentanyl/cocaine/heroin show a likely trend of illicit fentanyl being abused with the belief that the user was purchasing heroin or cocaine.

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Data Challenges

A number of decedents in 2014 were removed from the incident scene and expired in a hospital. Therefore, it is not always possible to conclusively say that illicit fentanyl was used in all cases due to limitations in investigations where deaths occurred in hospitals. While the Cuyahoga Regional Forensic Science Laboratory is housed at the CCMEO, and provides both toxicological and drug chemistry testing, the cross referencing of drug chemistry results with toxicological results has not been completed at his time.

Outlook

Analysis of data in 2014 shows a clear illicit abuse of fentanyl in Cuyahoga County, particularly with heroin. Of the 37 decedents in 2014, 56% showed the presence of heroin in their cause of death. Combined with cocaine, the rate rose to nearly 80%. The widely reported trend of prescription opioid abusers transitioning to heroin, with deadly results, is greatly exacerbated by the re-introduction of illicit fentanyl in the cycle of abuse. A more recent trend is that illicit fentanyl is being specifically sought out by users.

The introduction of a law allowing expanded access to naloxone slowed the number of heroin-related drug overdose deaths in 2014 to a negligible increase. The impact on fentanyl-related deaths is more problematic, due to its potency, making timely administration even more critical.

Trends at the end of 2014, and the first quarter of 2015 show that fentanyl is now a critical and fast increasing drug threat in Cuyahoga County. Its exponential increase as a cause of death in overdose deaths in 2014 could very well continue, doubling or even tripling the number of decedents in 2015.