United States Sentencing Commission
Public Hearing on
Fentanyl, Fentanyl Analogues, and Synthetic Cannabinoids

Testimony Prepared by
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Tuesday, December 5, 2017
Thurgood Marshall Federal Judiciary Building
One Columbus Circle, N.E.,
Suite 2-500 (South Lobby)
Washington, DC
9:00 am

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Prepared Testimony of Roger A. Mitchell, Jr MD
Chief Medical Examiner
DC Office of the Chief Medical Examiner
Before the United States Sentencing Commission

December 5, 2017

To the Honorable Judge Pryor and Commissioners, I want to thank you for inviting me to appear before you today. I am humbled to share my thoughts and expertise on the opioid crisis through the lens and perspective of a Medical Examiner.

My name is Dr. Roger A. Mitchell Jr. I am a board certified Anatomic and Forensic Pathologist with the American Board of Pathology. I currently serve as the Chief Medical Examiner for the Office of the Chief Medical Examiner in Washington DC. I have served as a medical examiner in major cities such as New York, Newark, NJ and Houston, TX. I sit on national subcommittees for the National Association of Medical Examiners; most relevant is the Strategic Planning Subcommittee. The NAME Strategic Planning Subcommittee is tasked with analyzing the strengths, weaknesses, opportunities, and threats for the organization and discipline as a whole.

So I am no stranger to the fatal effects of drug addiction in this country. I must say at outset that I am not here to advocate nor support stricter sentencing penalties or guidelines for our communities. I am here, however, as a leader in the field of forensic pathology who understands the public health nature of this problem. We know that this crisis is all over the country. We know that it is being discussed in the halls of Congress as well as in local jurisdictions amongst law enforcement, emergency physicians and response personnel, as well as public health providers. So this Commission should be applauded for looking at common sense ways to handle the sentencing of those who find themselves in the unfortunate positions of drug addiction or sales. We know that we can never arrest our way out of this problem but public safety serves a critical role in the larger solution towards its eradication.

In the short time that I have with you today; I will clarify the role of the Medical Examiner in the response to the opioid crisis, I will give some background to the structure and function of opiates on the human subject and how it imposes its lethal effects on the body, I will provide some general national statistics that may already be known to this committee, I will focus on the straining effects of the epidemic on the medical examiner system, and finally I will spend specific time highlighting challenges unique to the District of Columbia.

Most medical examiner systems in this country operate 24 hours/7 days a week. The role of the medical examiner is to investigate all unnatural, sudden, and violent causes of death. The investigation normally includes scene documentation, body transport, medical chart and police

document review, full or partial autopsy examination, toxicology testing, and the establishment of final cause and manner of death. Opiate drug overdoses in this country are to be considered an accidental cause of death and therefore fall directly under the jurisdiction of the local coroner or medical examiner. So let us put this into perspective, in late 2014/early 2015, the nation started to notice an increase in the number of fatal and nonfatal overdoses due to opioids. According to the Centers for Disease Control and Prevention (CDC), there are now more than 33,000 deaths due to opioids each year, including prescription opioids, heroin and non-pharmaceutical fentanyl. As a matter of fact, the CDC reports that 91 Americans die every day from the use of opioids.

So the medical examiner system is in a unique position to understand this crisis in a way that others may not. The 33,000 deaths annually and the 91 deaths per day reported by the CDC are being investigated, examined, and certified by the local coroner or medical examiner. The drug mixture profiles found within the bodies of the overdose victims are being identified by the toxicologists and pathologists of these local jurisdictions. Drug profiles that are not often able to be identified by normal hospital testing. Medical Examiner offices all over the country are being inundated by these deaths, to the point where many offices have lost National Accreditation.

Although the DC OCME is not at risk of losing National Accreditation, we have witnessed a 178% increase in the number of overdoses due to opioid use disorder between 2014 (83) and 2016 (231). This trend does not appear to be declining in the foreseeable future. Through the end of September in 2017, our office certified 216 deaths related to opioid us disorder. If the rates continue, we will see approximately 1 death per day. The majority of DC OCME cases are due to mixed drug toxicity with heroin found in nearly 70% of all deaths and fentanyl or fentanyl analogs present in 72% of the cases. The highest percentage of opioid drug overdose deaths containing fentanyl or a fentanyl analog occurred in August of 2017 at 88%. Here in Washington, DC we have identified numerous forms of fentanyl and other opiates including Fentanyl, Norfentanyl, Acetyl fentanyl, Furanyl-Fentanyl, 4-ANPP (Fentanyl Precursor), FIBF/para-Fluorobutyryl Fentanyl, Carfentanil, Butyryl Fentanyl, U-47700 (Designer Opioid, Non-Fentanyl).

Why is this important? Fentanyl is 50-100 times more potent than morphine. Fentanyl's synthetic analogs can be even more potent. These drugs cause death through the binding property to the respiratory centers at the central brainstem that controls our breathing. When opiates bind to these brain receptors, breathing slows down. The breathing slows down causing drowsiness, sleepiness, and has the potential to render the patient difficult to arouse and even cause death. I am convinced it is the fentanyl in the drug supply that is the cause of an increase in the number of deaths along with the increase of opioid novel users.

Much of national narrative surrounding opioid use disorder is that the average user experiencing an opioid overdose is a white male or female age 20-35. Typically, these users began using prescription pain medications and then escalated to heroin. These users represent 80% of those

affected by the epidemic in the US. However the majority of opioid overdoses in DC happen among African American men between 40-60 years of age. Many of whom have a 30 year history of heroin use and now find themselves faced with fentanyl laced heroin.

No single solution to this problem will be absolute. There will be a need for a multidisciplinary approach in order to ensure sustainable positive outcomes for the communities suffering from the opioid crisis. The solution will entail the improved availability of treatment, prevention, testing, and deterrence. Again, I applaud the commission for taking the time to gather information from multiple sectors as you develop your response to this very important public health issue.

Thank you and I am now available to answer any questions.

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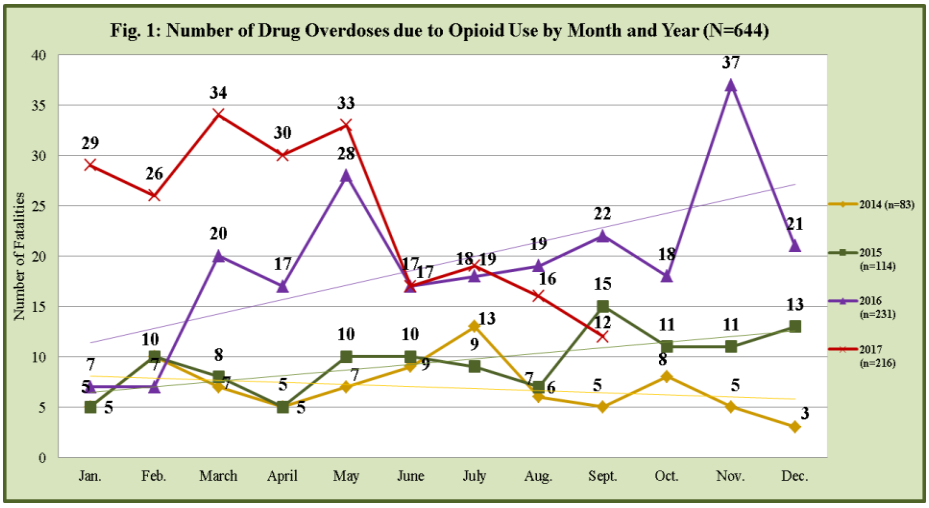
Opioid-related Fatal Overdoses: January 1, 2014 to September 30, 2017[1]

Report Date: November 25, 2017

The DC Office of the Chief Medical Examiner (OCME) investigated a total of **644**[2] deaths due to use of opioids from Jan. 1, 2014 through May 31, 2017: **83** deaths in CY 2014, **114** in CY 2015, **231** deaths to in CY 2016, and **216** deaths in CY 2017 respectively. This report examines the presence of opioids (*heroin, fentanyl, fentanyl analogs, morphine, prescription opioids and the general category of opiates*) in deaths observed at OCME. Tables and graphs below present decedent information by trends, demographics and jurisdiction of residence.

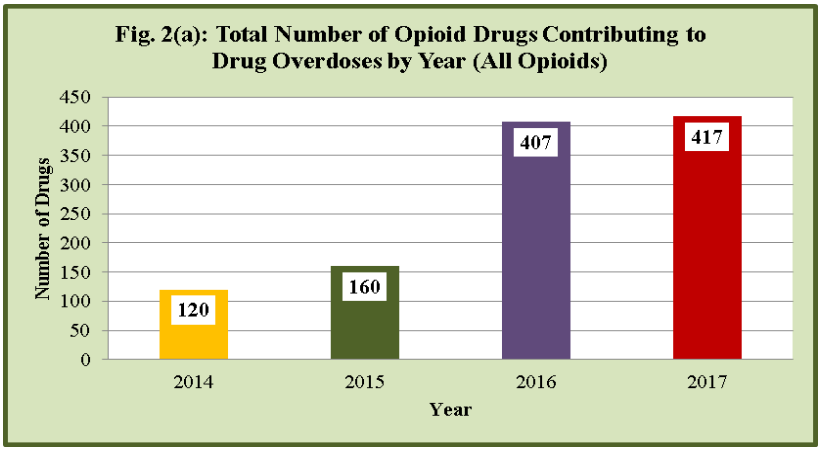
Trends in Deaths due to Opioid Use

The number of deaths due to opioid use in November 2016 was higher than any other month over the past three years (Fig. 1). Overall, there was a **178%** increase in fatal overdoses due to opioid use from 2014 (n=83) to 2016 (n=231). **Currently, there are more opioid overdoses in 2017 than there were in 2016 during the same time period (Jan.-Sept.).**



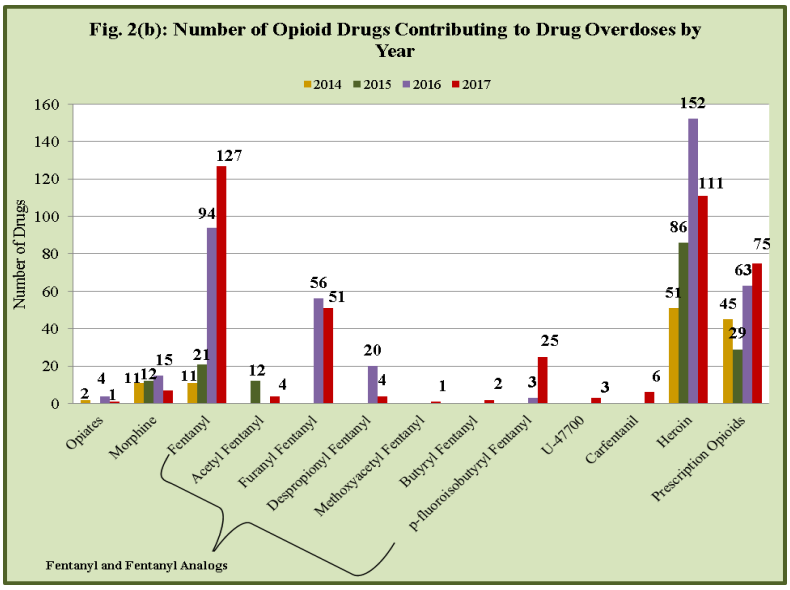
Incidence of Opioids by Year

Each drug is counted independently in fatalities involving more than one of these drugs and ranged from 1 to 7 opioids identified per death. Therefore, there were a total of **120** opioids[3] found in the 83 deaths in 2014, **160** opioids found in the 114 deaths in 2015 and **407** opioids found in the 231 deaths in 2016. In 2017, there have been **417** opioids found in the 216 deaths year-to-date. As depicted in Figure 2(a), the total number of opioids that caused a death increased from 2014 to 2016.



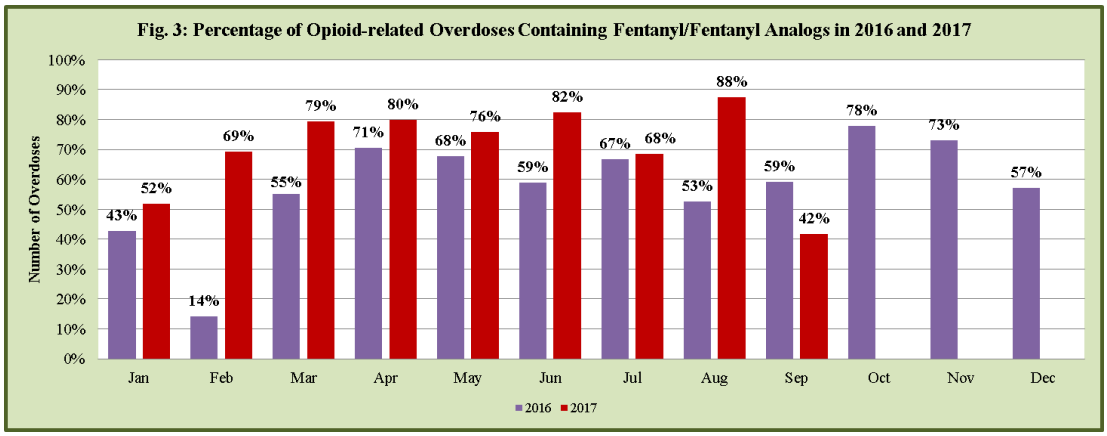
[1] Data for 2017 is inconclusive and subject to change due to cases where cause and manner of death is "Pending Further Investigation"
[2] The data presented in this report includes 11 cases with a Manner of Death other than Accidental Intoxication- three cases in 2014, one case in 2015, and one case in 2016 in which the Manner of Death was Undetermined but the Cause of Death was due to opioid drug use. Additionally there were two cases with Manner of Death of Suicide in 2014, one case in 2015 and three cases in 2016.
[3] Morphine and fentanyl can both be prescribed. However, for the sake of this report, they are included under the illicit opioids.

Figure. 2(b) displays the illicit and prescription opioids identified through toxicology testing of the 644 decedents from 2014 to 2017. The most prevalent drugs identified are heroin followed by fentanyl.



Increase in the Presence of Fentanyl/Fentanyl Analogs

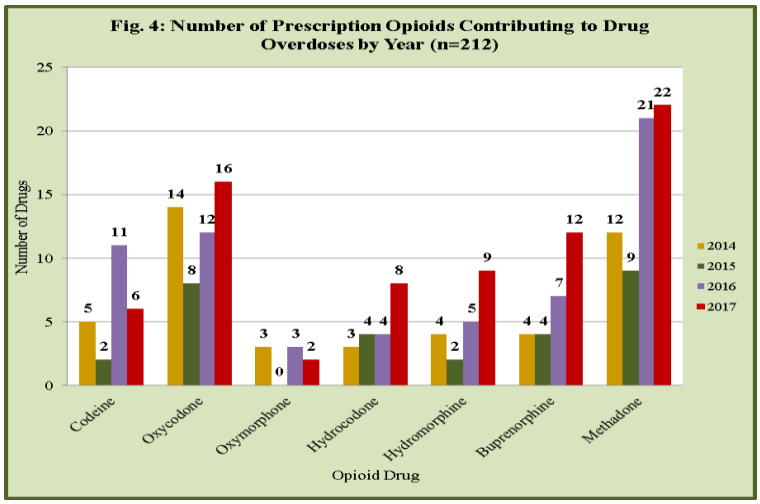
In 2016, **62%** of cases involved fentanyl or a fentanyl analog (fentanyl, furanyl-fentanyl, despropionyl-fentanyl, or p-fluoroisobutyryl-fentanyl). Figure 3 highlights the number of cases containing fentanyl or fentanyl analogs. There was a noticeable increase in the presence of fentanyl and fentanyl analogs beginning in March 2016 (n=11).



The highest percentage of cases involving fentanyl or a fentanyl analog occurred in October 2016 (78%) and March 2017 (79%). The fewest cases involving fentanyl or a fentanyl analog occurred in February 2016 (14%). In 2017 to date, **72%** of the cases contain fentanyl or a fentanyl analog. **In addition, drugs (U-47700, carfentanil and butyryl fentanyl) present in other regions of the country were found amongst several of our decedents.**

Prescription Opioids

There were **212** prescription opioids found in the 644 drug overdoses between January 2014 and August 2017 (Fig. 4). Despite the downward trend in the number of fatal overdoses related to prescription opioids between 2014 and 2015, the number of fatal overdoses involving prescription opioids in 2016 (n=63) was higher than the number of fatal overdoses involving prescription opioids over the past two years (2014, n=45) and (2015, n=29). This trend appears to be continuing in 2017 (n=62).

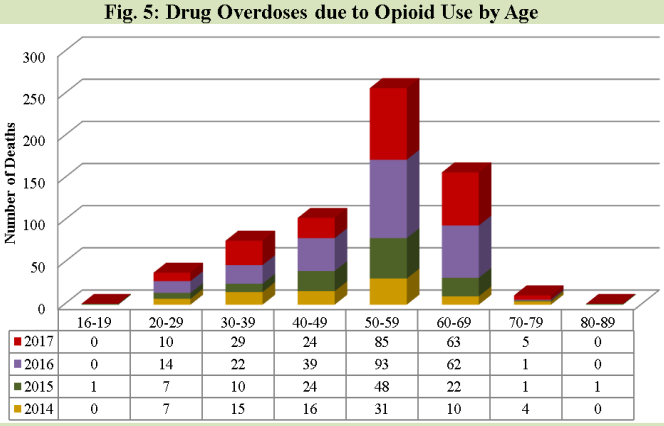


Demographics[1]

Age

Approximately **84%** of all overdoses due to opioid drug use happen among adults between the ages of 40-69 years old (Fig. 5). Deaths due to opioid use were most prevalent among people ages 50 to 59 (n=40%).

Fig. 5: Drug Overdoses due to Opioid Use by Age

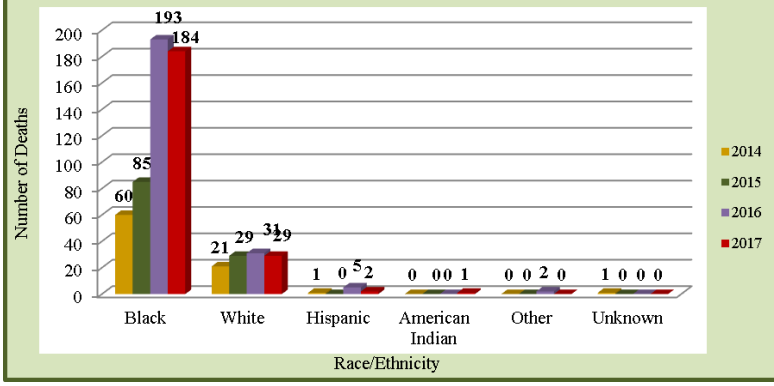


	16-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89
2017	0	10	29	24	85	63	5	0
2016	0	14	22	39	93	62	1	0
2015	1	7	10	24	48	22	1	1
2014	0	7	15	16	31	10	4	0

Race/Ethnicity

Overall, **522** or **81%** of all deaths due to opioid use were among Blacks (Fig. 6). This trend remains when across years. Deaths among Blacks increased 127% from 2015 to 2016.

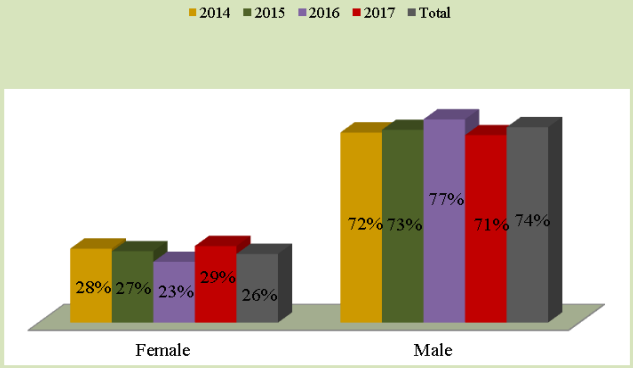
Fig. 6: Number of Drug Overdoses due to Opioid Use by Race/Ethnicity and Year



Gender

Fatal overdoses due to opioid drug use were more common among **males** (Fig. 7).

Fig. 7: Percentage of Drug Overdoses due to Opioid Use by Gender and Year



Jurisdiction of Residence[1]

The majority of the decedents were residents of DC (Fig.8). From 2014 to 2017, opioid-related fatal overdoses were most prevalent in **Wards 7 & 8** (n=224) (Fig.9). However, there are variations across years.

Fig. 8: Number of Drug Overdoses due to Opioid Use by Jurisdiction of Residence and Year

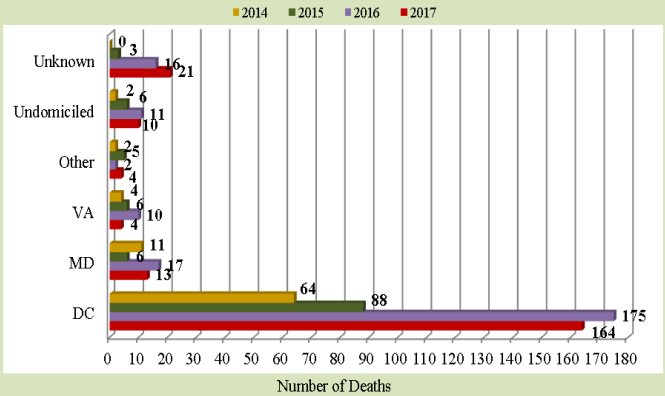
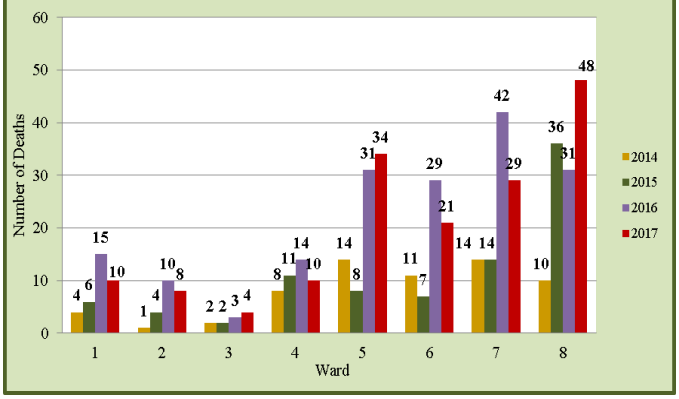
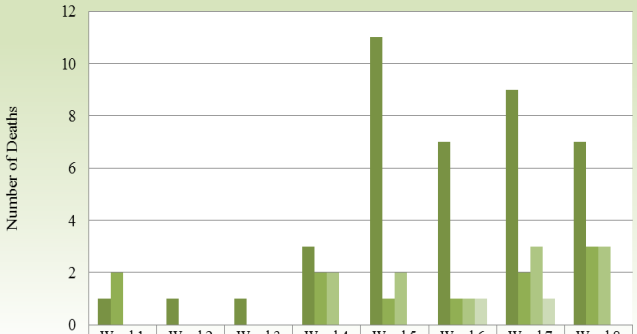


Fig. 9: Number of Drug Overdoses due to Opioid Use by Ward of Residence and Year



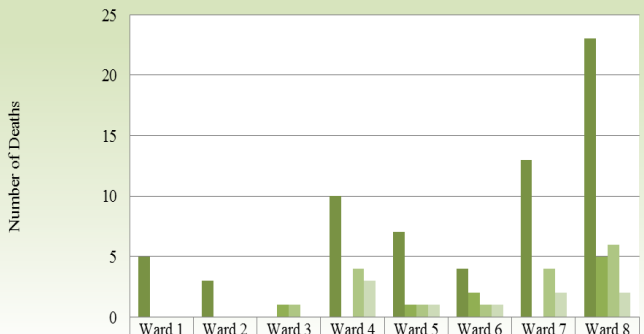
The graphs below depict the total number of heroin, morphine, fentanyl, and fentanyl analogs that contributed to overdose deaths by Ward of Residence. Each drug is counted independently in fatalities involving more than one of these drugs. The total number of opioids found in fatal overdoses increased between 2014 and 2016. Overall, in the District, there were a total of **64** counts of heroin, morphine, and fentanyl that contributed to fatal overdoses in 2014. In 2015, the number of opioids that contributed to a fatal overdose in the District increased to a total of **100** opioids (heroin, morphine, fentanyl, and acetyl fentanyl). There were zero cases of fentanyl analogs in 2014.[4] Nine of the twelve cases of acetyl fentanyl found in 2015 were among decedents that were residents of the District. In 2016, there were a total of **247** illicit opioids (heroin, morphine, fentanyl, furanyl-fentanyl despropionyl-fentanyl, p-flouroisobutyryl-fentanyl) identified. Although, there are zero cases of acetyl fentanyl in 2016, new, equally potent, fentanyl analogs have emerged. In 2017 to date, there have been a total of **262** illicit opioids contributing to drug overdoses. In addition, U-47700 and carfentanil were identified, as well as acetyl fentanyl has reemerged.

Fig. 10: Total Number of Heroin, Morphine, Fentanyl and Acetyl Fentanyl Drugs Contributing to Death, 2014



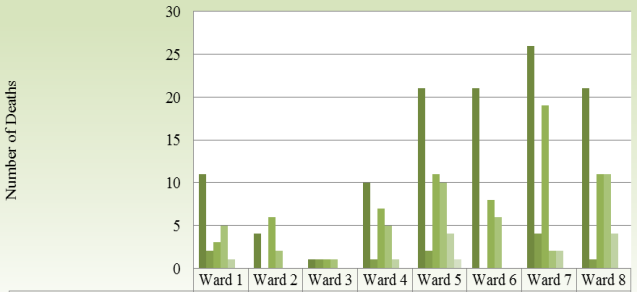
	Ward 1	Ward 2	Ward 3	Ward 4	Ward 5	Ward 6	Ward 7	Ward 8
Heroin	1	1	1	3	11	7	9	7
Morphine	2	0	0	2	1	1	2	3
Fentanyl	0	0	0	2	2	1	3	3
Opiates	0	0	0	0	0	1	1	0

Fig. 11: Total Number of Heroin, Morphine, Fentanyl and Acetyl Fentanyl Drugs Contributing to Death, 2015



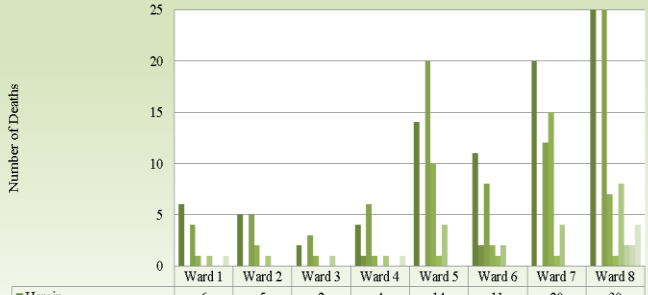
	Ward 1	Ward 2	Ward 3	Ward 4	Ward 5	Ward 6	Ward 7	Ward 8
Heroin	5	3	0	10	7	4	13	23
Morphine	0	0	1	0	1	2	0	5
Fentanyl	0	0	1	4	1	1	4	6
Acetyl Fentanyl	0	0	0	3	1	1	2	2

Fig. 12: Total Number of Heroin, Morphine, Fentanyl, Furanyl-Fentanyl an Despropionyl-Fentanyl Drugs Contributing to Death, 2016



	Ward 1	Ward 2	Ward 3	Ward 4	Ward 5	Ward 6	Ward 7	Ward 8
Heroin	11	4	1	10	21	21	26	21
Morphine	2	0	1	1	2	0	4	1
Fentanyl	3	6	1	7	11	8	19	11
Furanyl-Fentanyl	5	2	1	5	10	6	2	11
Despropionyl- Fentanyl	1	0	0	1	4	0	2	4
p-fluoroisobutyryl-fentanyl	0	0	0	0	1	0	0	0

Fig. 13: Total Number of Heroin, Morphine, Fentanyl, Furanyl-Fentanyl, and Despropionyl-Fentanyl Drugs Contributing to Death, 2017



	Ward 1	Ward 2	Ward 3	Ward 4	Ward 5	Ward 6	Ward 7	Ward 8
Heroin	6	5	2	4	14	11	20	30
Morphine	0	0	0	1	0	2	0	0
Fentanyl	4	5	3	6	20	8	12	34
Furanyl-Fentanyl	1	2	1	1	10	2	15	7
Despropionyl- Fentanyl	0	0	0	0	1	1	1	1
p-fluoroisobutyryl-fentanyl	1	1	0	1	4	2	4	8
Acetyl Fentanyl	0	0	1	0	0	0	0	2
U-47700	0	0	0	0	0	0	0	2
Carfentanil	1	0	0	1	0	0	0	4

[4] OCME began screening for fentanyl analogs in 2015.