GOVERNMENT OF THE DISTRICT OF COLUMBIA
OFFICE OF THE CHIEF MEDICAL EXAMINER
401 E Street, SW – 6th Floor
Washington, DC 20024

Opioid-related Fatal Overdoses: January 1, 2014 to March 31, 2018[1]

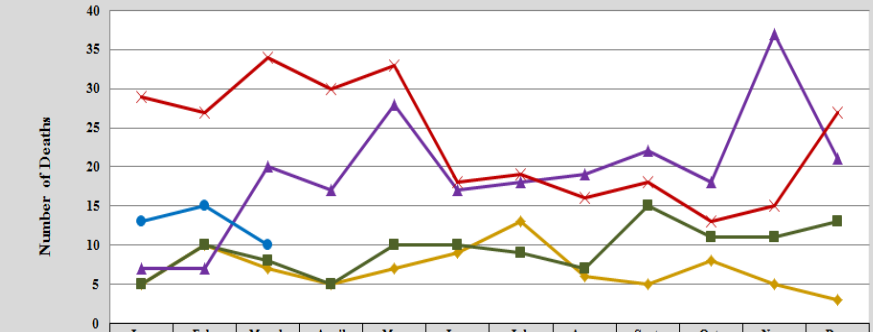
Report Date: May 29, 2018

The DC Office of the Chief Medical Examiner (OCME) investigated a total of **745**[2] deaths due to the use of opioids from Jan. 1, 2014 through March. 31, 2018: **83** deaths in CY 2014, **114** in CY 2015, **231** deaths in CY 2016, **279** deaths in CY 2017 and **38** in CY 2018 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.

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). Despite the downward trend observed between June and November, there were 27 fatal overdoses in December of 2017. **Overall, there was a 21% increase in opioid overdoses between 2016 and 2017.**

Fig. 1: Number of Drug Overdoses due to Opioid Use by Month and Year (N=745)

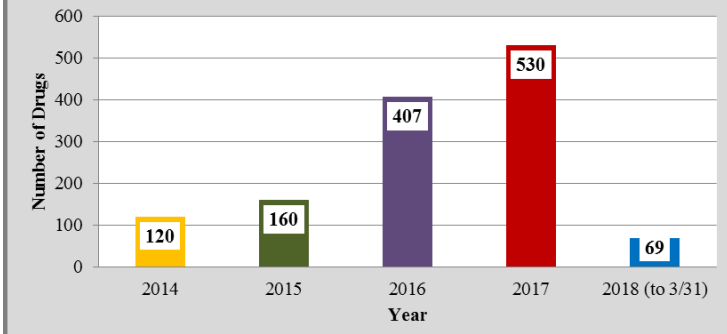


	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
2014 (n=83)	5	10	7	5	7	9	13	6	5	8	5	3
2015 (n=114)	5	10	8	5	10	10	9	7	15	11	11	13
2016 (n=231)	7	7	20	17	28	17	18	19	22	18	37	21
2017 (n=279)	29	27	34	30	33	18	19	16	18	13	15	27
2018 (n=38)	13	15	10									

Incidence of Opioids by Year

As depicted in Figure 2(a), the total number of opioids that caused a death has steadily increased from 2014 to 2017. The majority of opioid overdoses was due to multiple drug toxicity and ranged from 1 to 7 opioids identified per death. There were a total of **120** opioids[3] found in the 83 deaths in 2014, **160** opioids found in the 114 deaths in 2015, **407** opioids found in the 231 deaths in 2016 and **530** opioids found in the 279 deaths in 2017. To date, there have been **69** opioids identified in the 8 decedents in 2018.

Fig. 2(a): Total Number of Opioid Drugs Contributing to Drug Overdoses by Year (All Opioids)

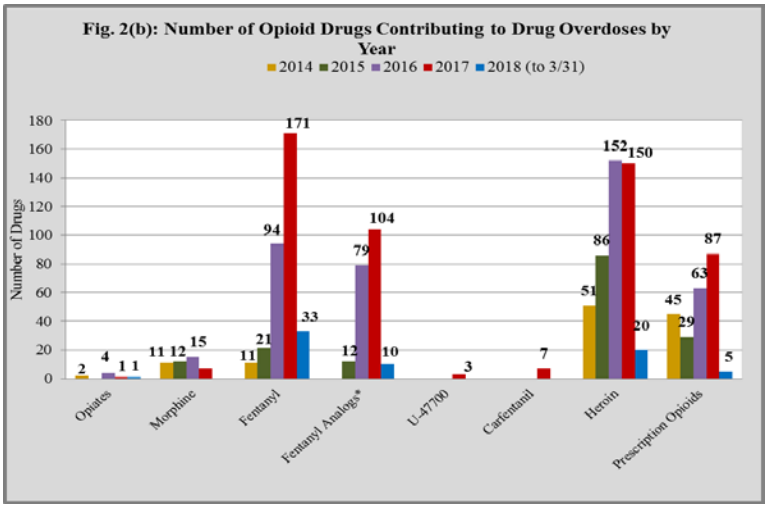


[1] Data for 2018 is inconclusive and subject to change due to cases where cause and manner of death is "Pending Further Investigation"
[2] The data presented in this report includes 11 cases with a Manner of Death other than Accidental Intoxication- three cases in 2014, one case in 2015, and one case 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 745 decedents from 2014 to 2018. The most prevalent drugs identified are heroin followed by fentanyl. Table 1 highlights the various fentanyl analogs found per year.

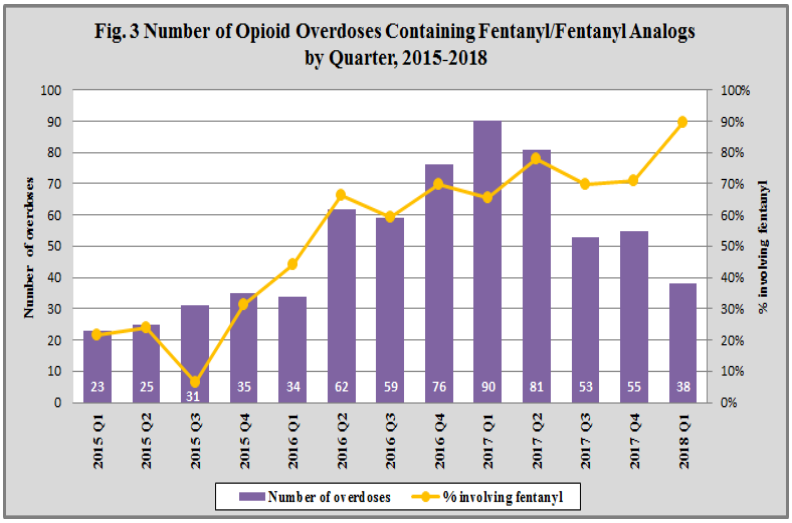
Table 1: Number of Fentanyl Analogs by Year

	2014	2015	2016	2017	2018
Acetyl Fentanyl	0	12	0	10	3
Furanyl Fentanyl	0	0	56	53	0
Despropionyl Fentanyl	0	0	20	7	1
Methoxyacetyl Fentanyl	0	0	0	1	0
Butyryl Fentanyl	0	0	0	2	1
p-fluoroisobutyryl Fentanyl	0	0	3	31	3
Isobutyryl Fentanyl	0	0	0	0	1
p-fluorofentanyl	0	0	0	0	1
	0	**12**	**79**	**104**	**10**



Increase in Fentanyl/Fentanyl Analogs in Opioid Overdoses

Figure 3 highlights the increasing percentage of cases containing fentanyl or fentanyl analogs. With the exception of the beginning of 2017, the percentage of cases containing fentanyl or a fentanyl analog has remained relatively steady throughout 2017. In 2016, **62%** of cases involved fentanyl or a fentanyl analog (fentanyl, furanyl-fentanyl, despropionyl-fentanyl, or p-fluoroisobutyryl-fentanyl). The noticeable increase in the presence of fentanyl and fentanyl analogs began in March 2016, with over half of the cases containing fentanyl. In 2017, **71%** of the cases contained fentanyl or a fentanyl analog. Currently, approximately 90% of the opioid overdoses contain fentanyl.



Prescription Opioids

There were **229** prescription opioids found in the 745 drug overdoses between January 2014 and January 2018 (Fig. 4). Despite the downward trend between 2014 (n=45) and 2015 (n=29), the number of prescription opioids identified in fatal opioid overdoses has increased over the past two years (n=63, 2016) (n=87, 2017).

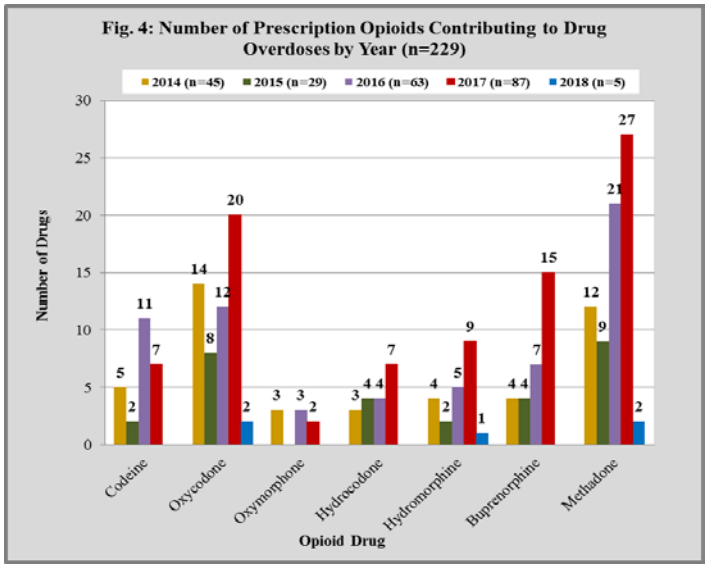


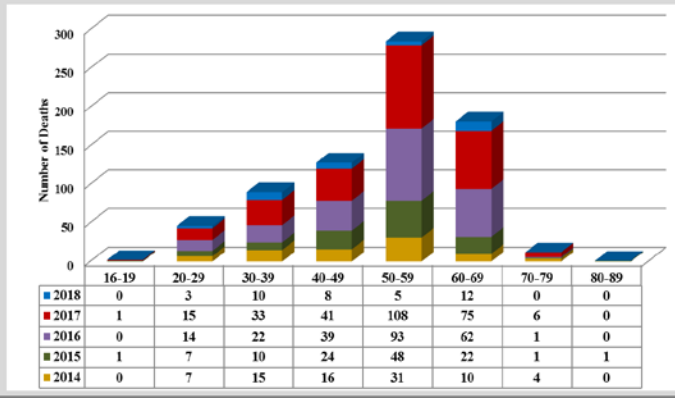
Figure 4, illustrates that methadone and oxycodone are the most prevalent prescription opioids identified.

Demographics[1]

Age

Approximately **80%** 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

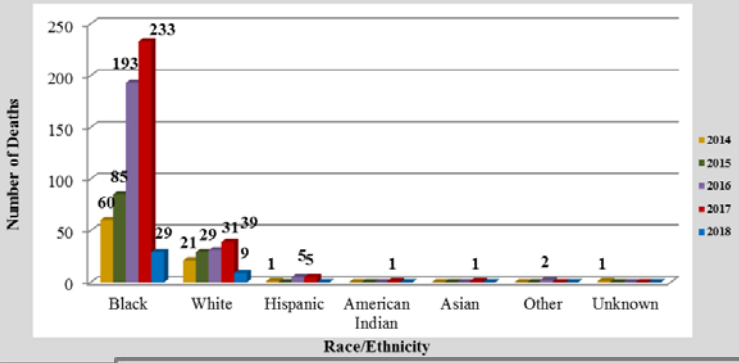


	16-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89
2018	0	3	10	8	5	12	0	0
2017	1	15	33	41	108	75	6	0
2016	0	14	22	39	93	62	1	0
2015	1	7	10	24	48	22	1	1
2014	0	7	15	16	31	10	4	0

Race/Ethnicity

Overall, **600** or **81%** of all deaths due to opioid use were among Blacks (Fig. 6). This trend remains consistent across years.

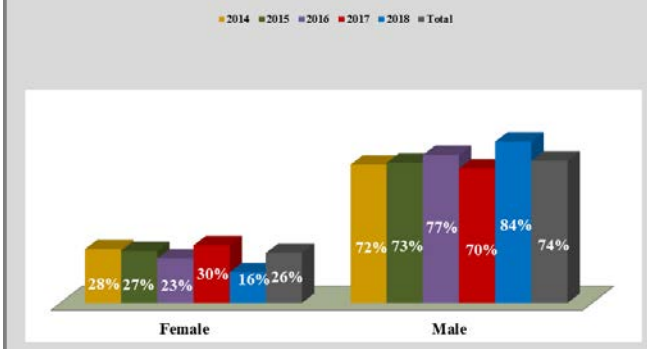
Fig. 6: Number of Drug Overdoses due to Opioid Use by Race/Ethnicity and Year



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 2018, opioid-related fatal overdoses were most prevalent in **Wards 7 & 8** (n=256) (Fig.9). However, there are variations across years.

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

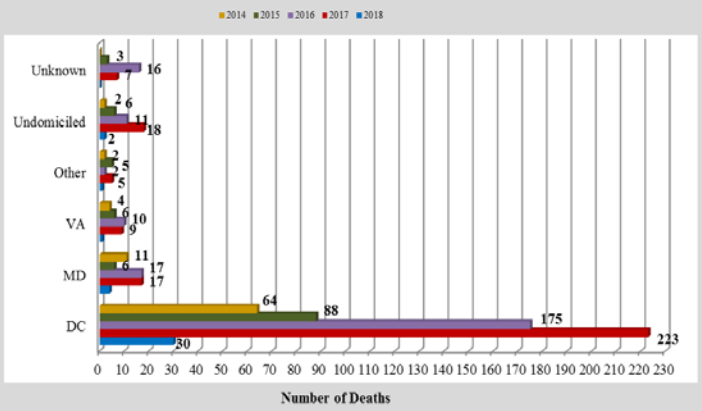
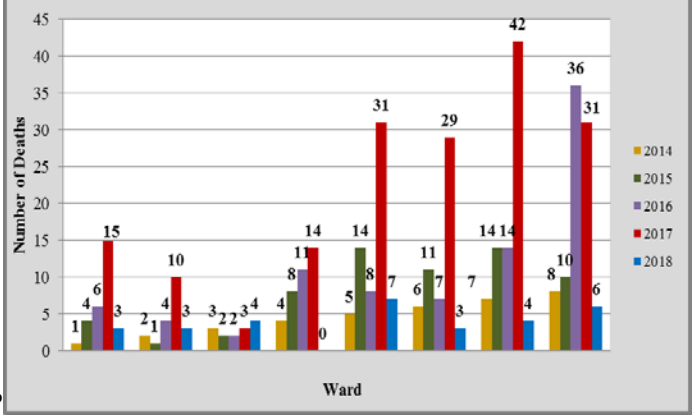


Fig. 9: Number of Drug Overdoses due to Opioid Use by Ward of Residence and Year



Trends in Opioid, Cocaine and PCP Overdoses

Figure 10 highlights the number of Opioid, Cocaine, and PCP related overdoses between 2013 and 2017. Overall, the number of overdoses increased from 2013 to 2016. However, the number of overdoses due to opioids use and abuse was highest among them all. Opioid overdoses increased by 373% followed by 308% for Cocaine and 200% for PCP. The majority of decedents were polysubstance users therefore the drugs included in the graph are not mutually exclusive.