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 September 17, 2019[1]

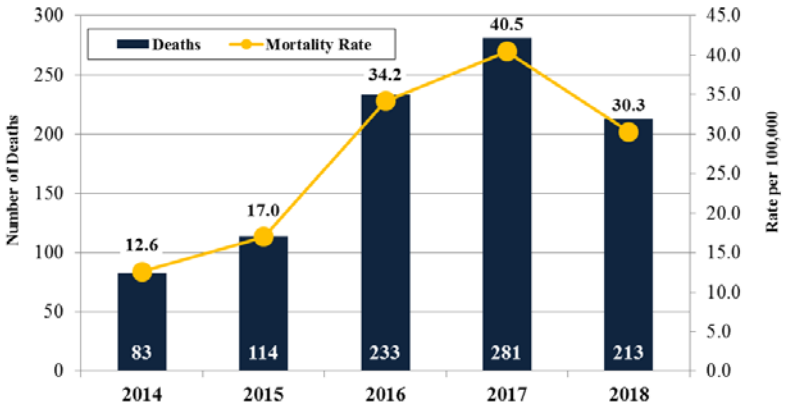
Report Date: November 18, 2019

The DC Office of the Chief Medical Examiner (OCME) investigated a total of **1096**[2] deaths due to the use of opioids from January 1, 2014 through September 17, 2019. This report examines the presence of opioids (*heroin, fentanyl, fentanyl analogs, morphine, prescription opioids and the general category of opiates*) in deaths observed at the OCME.

Trends in Deaths due to Opioid Use

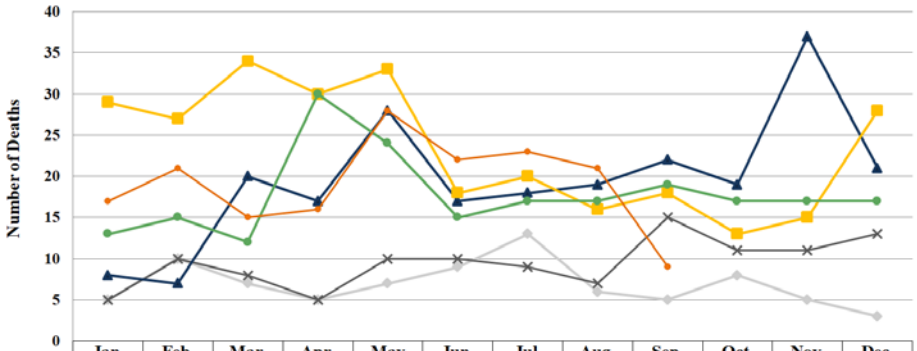
There was a steady increase in the number of fatal opioid overdoses between 2014 and 2017 (Fig.1(a)). However, the number of opioid overdoses in 2018 decreased by 24.2% compared to 2017.

Fig. 1(a): Number and Rate of Fatal Opioid Overdose Cases by Year, 2014-2018



In 2017, there was an average of 23 opioid-related fatal overdoses per month. However, the number of opioid-related overdoses per month decreased to average 17 per month in 2018. Compared to 2018 between January and June, there is an increase in opioid overdoses in 2019 during the same time period. **In the first half of 2019, there are 20 fatal opioid overdoses per month.** Data for 2019 is inconclusive and subject to change due to cases where cause and manner of death is "Pending Further Investigation.

Fig. 1(b): Number of Drug Overdoses due to Opioid Use by Month and Year (N=1096)



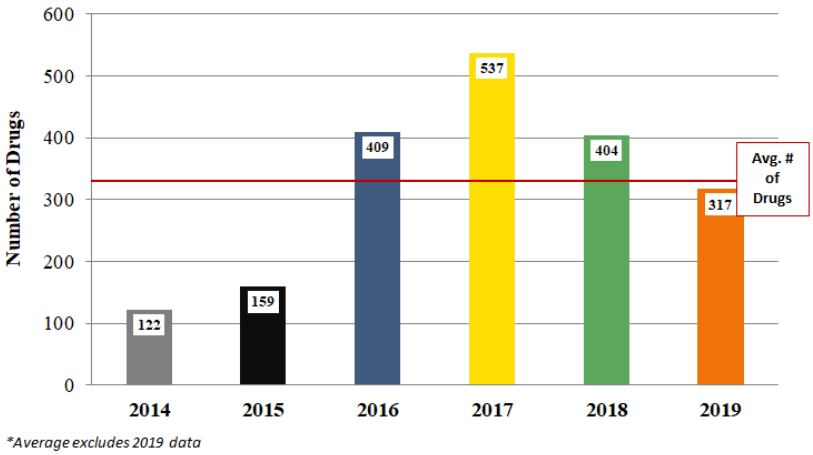
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2014 (n=83)	5	10	7	5	7	9	13	6	5	8	5	3
2015 (n=114)	5	10	8	5	10	10	9	7	15	11	11	13
2016 (n=233)	8	7	20	17	28	17	18	19	22	19	37	21
2017 (n=281)	29	27	34	30	33	18	20	16	18	13	15	28
2018 (n=213)	13	15	12	30	24	15	17	17	19	17	17	17
2019 (n=172)	17	21	15	16	28	22	23	21	9			

[1] Data for 2019 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 19 cases with deaths due to opioid drug use where the Manner of Death was not "Accident:" 5 cases in 2014, 2 cases in 2015, 4 cases in 2016, 5 cases in 2017, 2 cases in 2018 and 1 case in 2019 YTD.

Incidence of Opioids by Year

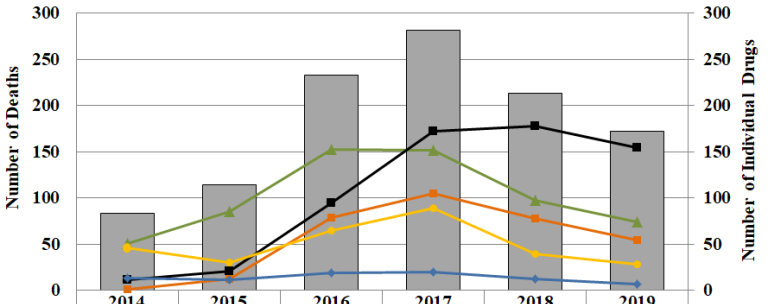
As depicted in Figure 2(a), there has been a steady increase in the total number of opioids found in fatal overdoses between 2014 and 2017. The majority of opioid overdoses were due to multiple drug toxicity, ranging from 1 to 7 opioids per death. The total number of opioids[3] identified in the fatal opioid overdoses per year ranges from the lowest being **122** in 2014 to the highest being **537** in 2017. **If current trends persist, there will be more opioids identified in the 2019 fatal opioid overdoses than in the past year.**

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



*Average excludes 2019 data

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



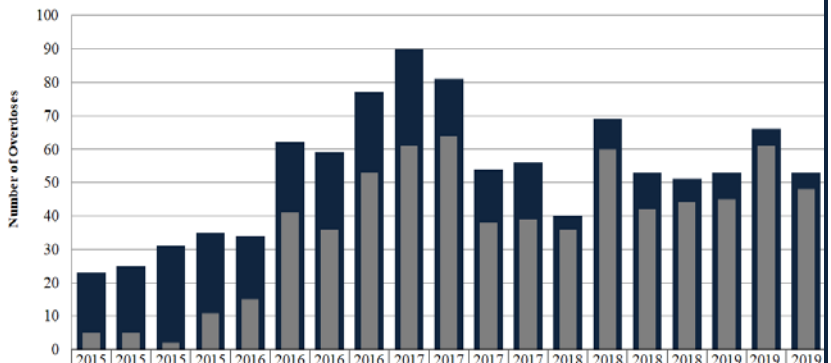
	2014	2015	2016	2017	2018	2019
Number of Deaths	83	114	233	281	213	172
Heroin	51	85	152	151	97	74
Fentanyl	11	21	94	172	178	154
Fentanyl Analogs	1	12	79	105	78	54
Prescription Opioids	46	30	65	89	39	28
Other	13	11	19	20	12	7

Figure 2(b) displays the illicit and prescription opioids identified through toxicology testing of the 1096 decedents from 2014 to September 17, 2019. Between 2014 and 2016, the most prevalent drug identified was heroin. However, beginning in 2017, the most prevalent drug identified is fentanyl. The most prevalent fentanyl analogs identified are furanyl fentanyl, p-fluoroisbutyryl fentanyl, acetyl fentanyl and despropionyl fentanyl.

Increase in Fentanyl/Fentanyl Analogs in Opioid Overdoses

Figure 3 highlights the increasing percentage of cases containing fentanyl or fentanyl analogs. The percentage of cases containing fentanyl or a fentanyl analog has gradually increased since 2015. In 2016, **60%** of cases involved fentanyl or a fentanyl analog. The noticeable increase in the presence of fentanyl and fentanyl analogs began in March 2016, with over half of the cases containing fentanyl. In 2018, **86%** of the cases contained fentanyl or a fentanyl analog.

Fig. 3 Number of Opioid Overdoses Containing Fentanyl/Fentanyl Analogs by Quarter, 2015-2019



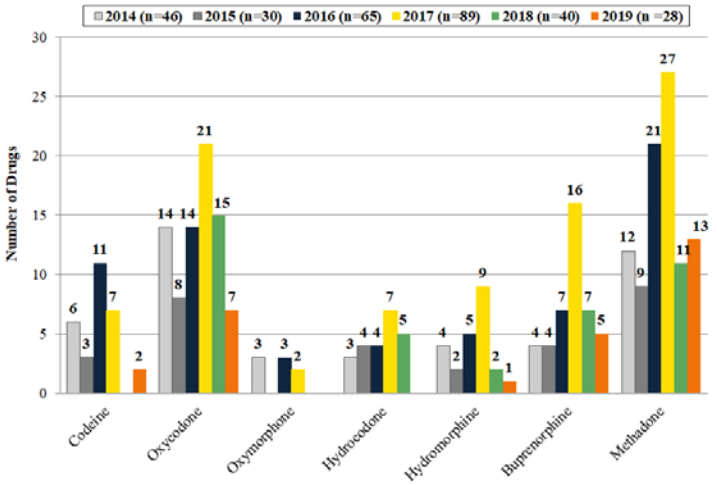
	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1	2018 Q2	2018 Q3	2018 Q4	2019 Q1	2019 Q2	2019 Q3
Number of overdoses	23	25	31	35	34	62	59	77	90	81	54	56	40	69	53	51	53	66	53
# involving fentanyl	5	5	2	11	15	41	36	53	61	64	38	39	36	60	42	44	45	61	48
% involving fentanyl	22%	20%	6%	31%	44%	66%	61%	69%	68%	79%	70%	70%	90%	87%	79%	86%	85%	92%	91%

[3] Morphine and fentanyl can both be prescribed. However, for the sake of this report, they are included under the illicit opioids.

Prescription Opioids

There were **298** prescription opioids found in the 1074 opioid related drug overdoses between January 2014 and July 2019 (Fig. 4). Despite the downward trend between 2014 (n=46) and 2015 (n=30), the number of prescription opioids identified in fatal opioid overdoses had increased steadily between 2016 (n=65) and 2017 (n=89). However, the number of prescription opioids identified in fatal opioid deaths has decreased to 40 in 2018. Figure 4 illustrates that methadone and oxycodone are currently the most prevalent prescription opioids identified.

Fig. 4: Number of Prescription Opioids Contributing to Drug Overdoses by Year (n=298)

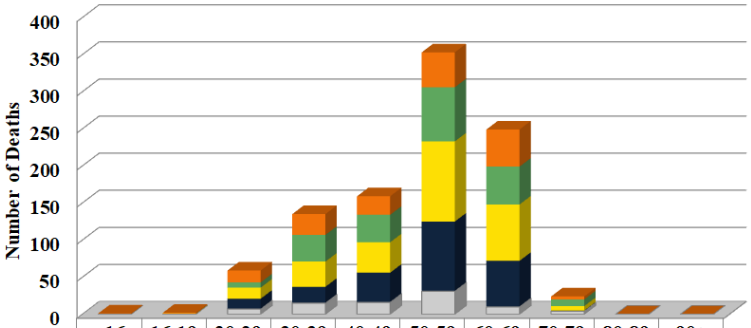


Demographics

Age

Approximately **78%** 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=37%).

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

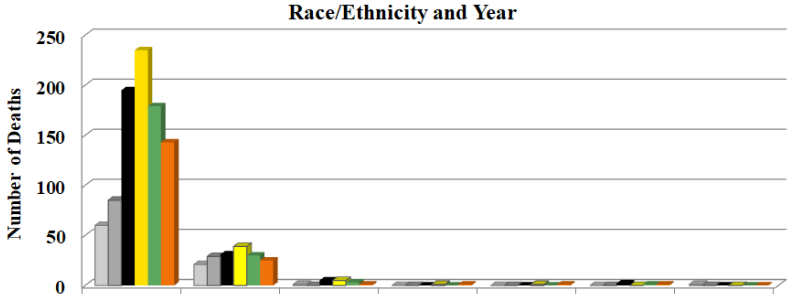


	<16	16-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90+
2019	1	1	16	28	25	47	50	4	0	0
2018	0	0	7	36	37	73	51	9	0	0
2017	0	1	15	34	41	108	76	6	0	0
2016	0	0	14	22	40	94	62	1	0	0
2014	0	0	7	15	16	31	10	4	0	0

Race/Ethnicity

Overall, **897** or **82%** 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

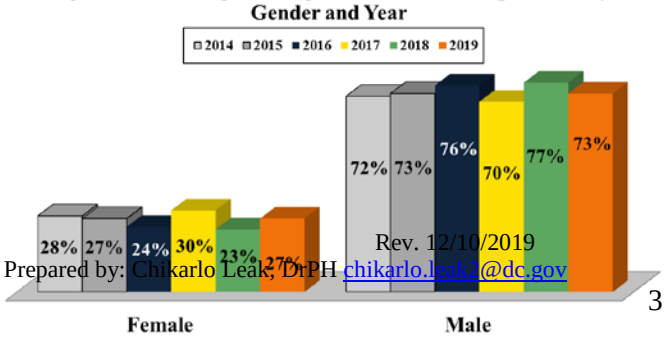


	Black	White	Hispanic	American Indian	Asian	Other	Unknown
2014	60	21	1	0	0	0	1
2015	85	29	0	0	0	0	0
2016	195	31	5	0	0	2	0
2017	235	39	5	1	1	0	0
2018	179	30	3	0	0	1	0
2019	143	25	1	1	1	1	0

Gender

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

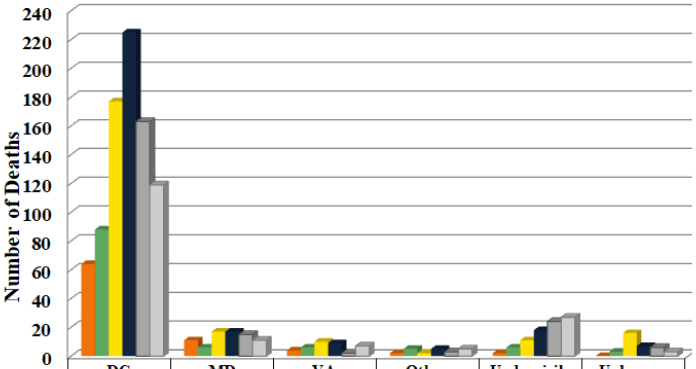
Figure 7: Percentage of Drug Overdoses due to Opioid Use by Gender and Year



Jurisdiction of Residence[1]

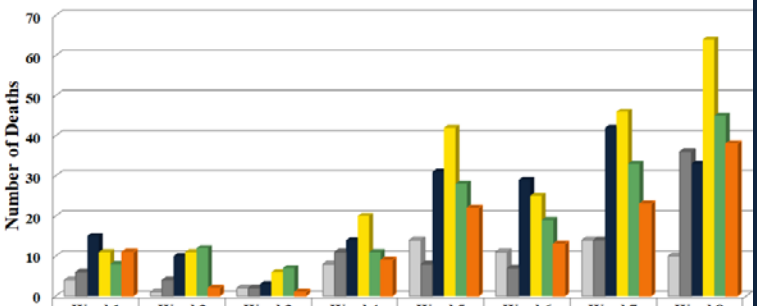
The majority of the decedents were residents of DC (Fig.8). From 2014 to September 17 2019, opioid-related fatal overdoses were most prevalent in **Wards 7 & 8** (n=398) (Fig.9). However, there are variations across years.

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



	DC	MD	VA	Other	Undomiciled	Unknown
2014	64	11	4	2	2	0
2015	88	6	6	5	6	3
2016	177	17	10	2	11	16
2017	225	17	9	5	18	7
2018	163	15	2	3	24	6
2019	119	11	7	5	27	3

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



	Ward 1	Ward 2	Ward 3	Ward 4	Ward 5	Ward 6	Ward 7	Ward 8
2014	4	1	2	8	14	11	14	10
2015	6	4	2	11	8	7	14	36
2016	15	10	3	14	31	29	42	33
2017	11	11	6	20	42	25	46	64
2018	8	12	7	11	28	19	33	45
2019	11	2	1	9	22	13	23	38

Map of 2019 Opioid Overdoses