Opioid-related Fatal Overdoses: January 1, 2014 to December 31, 2017

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The DC Office of the Chief Medical Examiner (OCME) investigated a total of 707 deaths due to use of opioids from Jan. 1, 2014 through Dec. 31, 2017: 83 deaths in CY 2014, 114 in CY 2015, 231 deaths in CY 2016, and 279 deaths in CY 2017 respectively. Currently, there are 8 deaths in CY 2018 (See Fig. 1). 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. Overall, there was 21% increase in opioid overdoses between 2016 and 2017.

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. There were a total of 120 opioids 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 530 opioids found in the 279 deaths. As depicted in Figure 2(a), the total number of opioids that caused a death has steadily increased from 2014 to 2017.

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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 707 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 August 2017 (88%). The fewest cases involving fentanyl or a fentanyl analog occurred in February 2016 (14%). In 2017 to date, 71% of the cases contained fentanyl or a fentanyl analog. In addition, drugs (U-47700, carfentanil and butyryl fentanyl) previously found in other regions of the country were identified amongst several of our decedents.

**Prescription Opioids**

There were 224 prescription opioids found in the 707 drug overdoses between January 2014 and December 2017 (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

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%).

Race/Ethnicity
Overall, 559 or 81% of all deaths due to opioid use were among Blacks (Fig. 6). This trend remains consistent across years.

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

Jurisdiction of Residence
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.
Map of Opioid Overdoses by Jurisdiction of Residence

The map below displays opioid overdoses in 2017 by jurisdiction of residence. As stated previously, opioid overdoses are prevalent in Wards 5, 6, 7 and 8. The map also highlights a hotspot in Ward 2.