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# MEMORANDUM

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Date: February 22, 2018

To: The Honorable Chairman and Members  
Pima County Board of Supervisors

From: C.H. Huckelberry  
County Administrator 

Re: **Annual Report from the Medical Examiner Regarding Pima County Overdose Deaths**

Attached is the Pima County Medical Examiner's annual report regarding 2017 drug overdose deaths. The report is self-explanatory. The report contains data on a number of overdose deaths related directly to opiate compounds as well as other drugs.

The number of overdose deaths increased in 2017 to 282 as compared to 222 deaths in 2010. The overdose deaths commonly involved males between the ages of 50 and 59. The Medical Examiner identifies 89 percent of the deaths as accidental. The largest number of overdose deaths were attributed to methamphetamine abuse followed by heroin.

On Page 11 of the report demonstrates the Medical Examiner's findings on overdose deaths by drug and by year from 2014 to 2017. The largest increase is in methamphetamine while heroin overdose deaths remain relatively constantly over the period. Fentanyl deaths have also risen similarly to methamphetamine.

Please contact me if you require any additional information from the Medical Examiner on this annual report related to Pima County overdose deaths.

CHH/anc

Attachment

c: Jan Leshar, Chief Deputy County Administrator  
Dr. Francisco Garcia, Assistant County Administrator for Community and Health Services  
Dr. Greg Hess, Pima County Medical Examiner

# PIMA COUNTY OVERDOSE DEATHS

## Overdose Deaths in 2017

There were 282 deaths (F1) attributed to an overdose of either a single drug (147 deaths, 52%) or a combination of drugs (135 deaths, 48%) in 2017. Overdose deaths commonly involved males (69%) (F2) between the ages of 50-59 (26%) (F3). The majority of these deaths were classified as accidents (89%) (F4). The average number of overdose deaths by month was 23.5 deaths/month (F5). September had the least number and December had the highest number of overdose deaths (F5).

Opiate compounds are typically heroin, oxycodone, methadone, hydrocodone, morphine, oxymorphone, hydromorphone, tramadol, codeine, fentanyl (a synthetic opioid narcotic) and clandestinely manufactured fentanyl analogs. In 2017 an opiate compound contributed to 187 (66%) of the 282 total overdose deaths with an average of 15.6 deaths/month (F6) related to opiate consumption. Opiate compounds, which contributed to an overdose death in 2017, are indicated in red in Figure 7 (F7).

The number of heroin deaths is likely underreported as heroin is rapidly metabolized to morphine by the body and if the parent compound indicative for heroin (6-monoacetylmorphine) is not present on the toxicology report these deaths may be classified as either morphine intoxication (morphine) or opiate intoxication (opiate unspecified) (F7). Heroin contributed to an average of 6 overdose deaths/month in 2017 with a peak of 11 deaths in April (F8).

Methamphetamine was the most commonly abused illicit drug contributing to death in 2017 followed by heroin (F7). Methamphetamine contributed to an average of 7.5 overdose deaths/month in 2017 with peaks in April and November (F9).

Acute alcohol (ethanol) intoxication alone, not as component of a poly-drug overdose, accounted for 5 overdose (2%) deaths in 2017. Alcohol was a contributor in 27 additional deaths (F7) with an average of 2.6 overdose deaths/month with a peak of 9 deaths in December (F10).

The number of overdose deaths/month involving morphine (F11), oxycodone (F12), fentanyl (F13), benzodiazepines (F14) and cocaine (F15) are detailed in the indicated figures.

## Overdose Trends

Overdose deaths in Pima County increased 27% overall from 2010 (222) to 2017 (282), punctuated by plateaus from 2013 (240) to 2014 (241) and again from 2015 (262) to 2016 (263) (F1). The PCOME has not historically reported overdose deaths in which an opiate compound was a component of the death separately from the total number of overdose deaths. That stated, 2016 overdose deaths were re-examined and an opiate compound contributed to 175 (67%) of the 263 total overdose deaths in 2016 either as a single or poly-drug overdose. In 2017 an opiate or an opiate compound contributed to 187 (66%) of the 282 total overdose deaths as described above.

Pima County is experiencing an increase in the number of synthetic opiate deaths (fentanyl type compounds), but not to the same magnitude that other regions of the country. Fentanyl contributed to 5 overdose deaths in 2014 in contrast to 34 deaths in 2017, a 580% increase in the number of deaths involving fentanyl from 2014 (F16). One of the 34 fentanyl deaths in 2017 was a fentanyl analog, cyclopropyl fentanyl.

Interestingly, methamphetamine related deaths have also increased in frequency from 38 deaths in 2014 to 90 deaths in 2017, a 137% increase (F16). The largest decrease is in oxycodone deaths, a 36% decrease from 2014 (39 deaths) to 2017 (25 deaths) (F16).

The frequency of cocaine, morphine, alcohol and benzodiazepine related deaths are also displayed in Figure 16 (F16).

**FIGURE 1 (F1)**

### **Pima County Overdose Deaths 2010 - 2017**

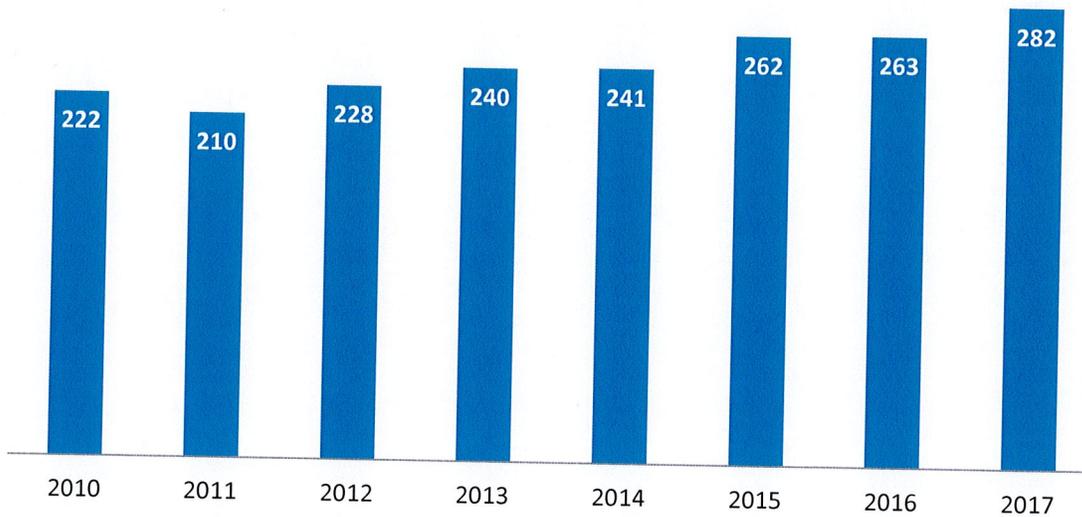


FIGURE 2 (F2)

### Pima County Overdose Deaths by Sex 2017

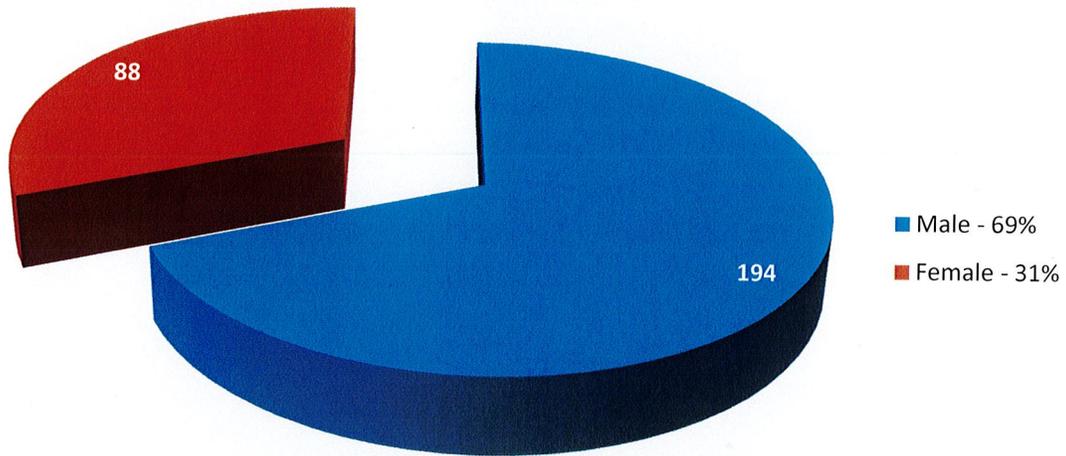


FIGURE 3 (F3)

### Pima County Overdose Deaths by Age 2017

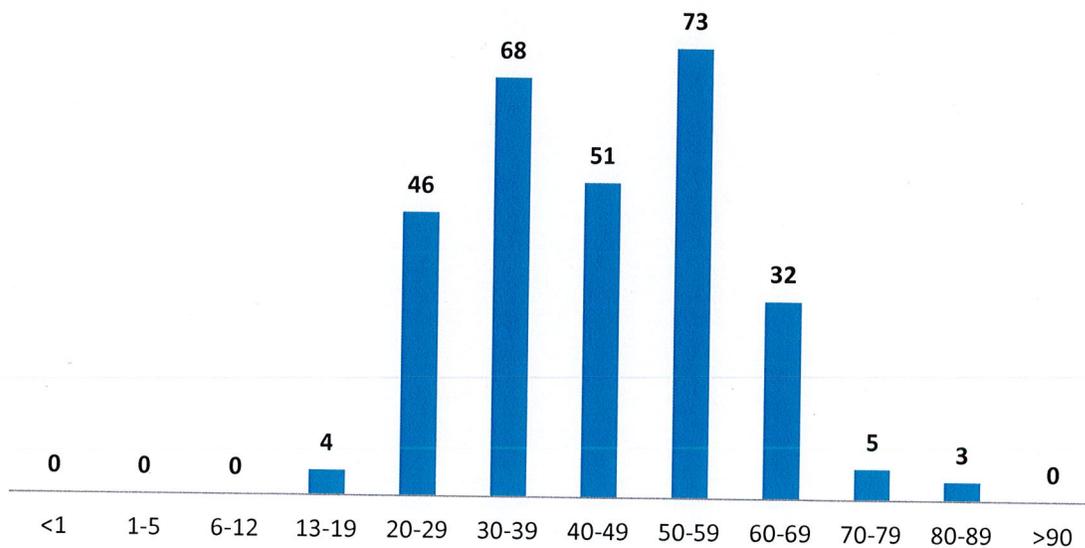


FIGURE 4 (F4)

### Pima County Overdose Deaths by Manner 2017

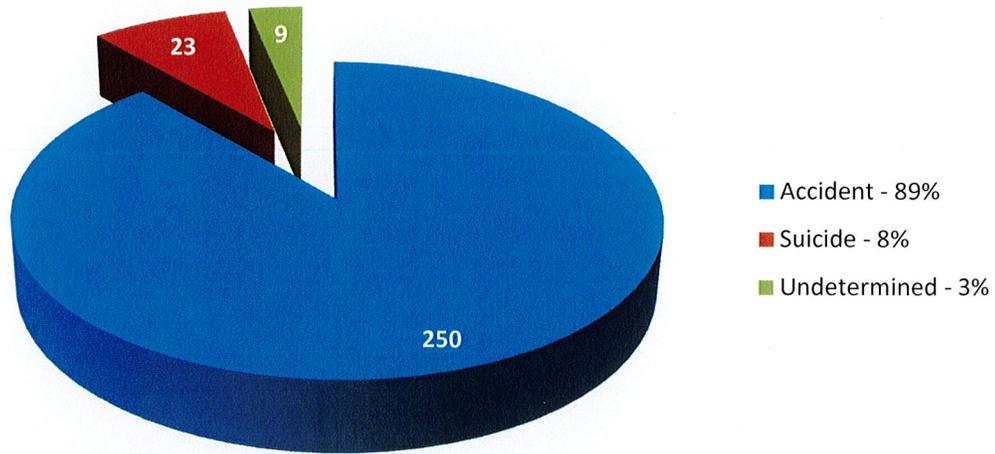
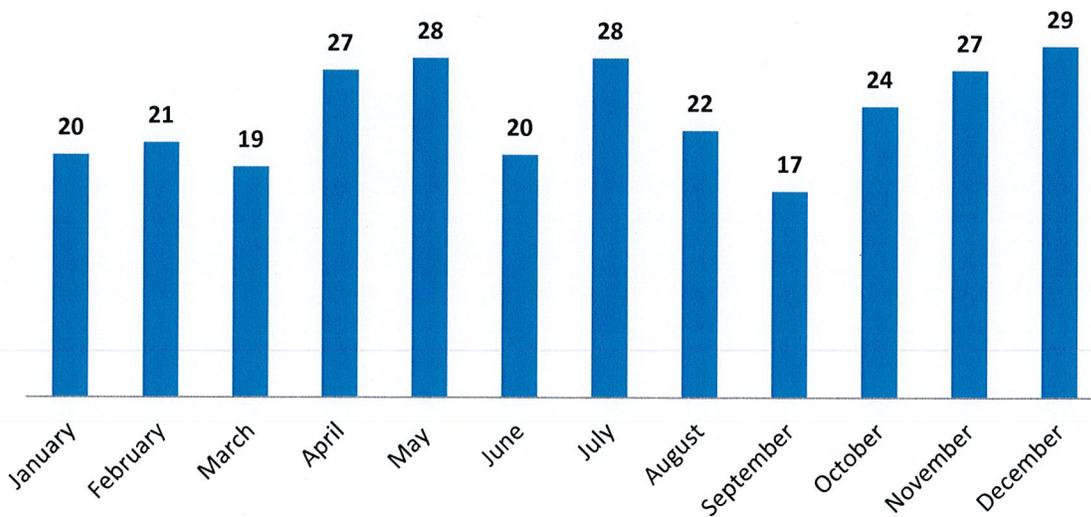


FIGURE 5 (F5)

### Pima County Overdose Deaths by Month 2017



**FIGURE (F6)**

**Overdose deaths in which an opiate was a component of the overdose by month 2017**

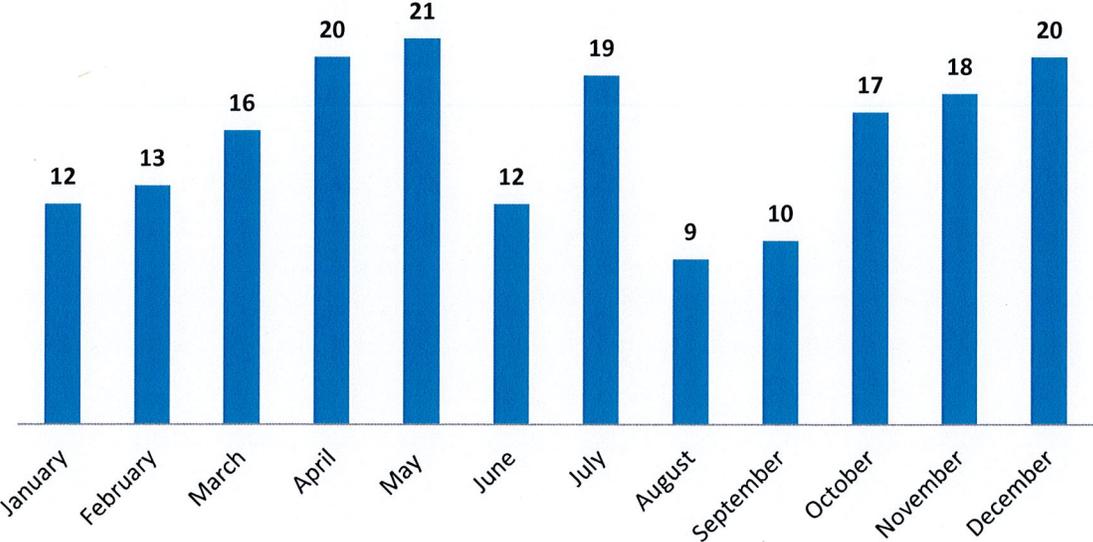
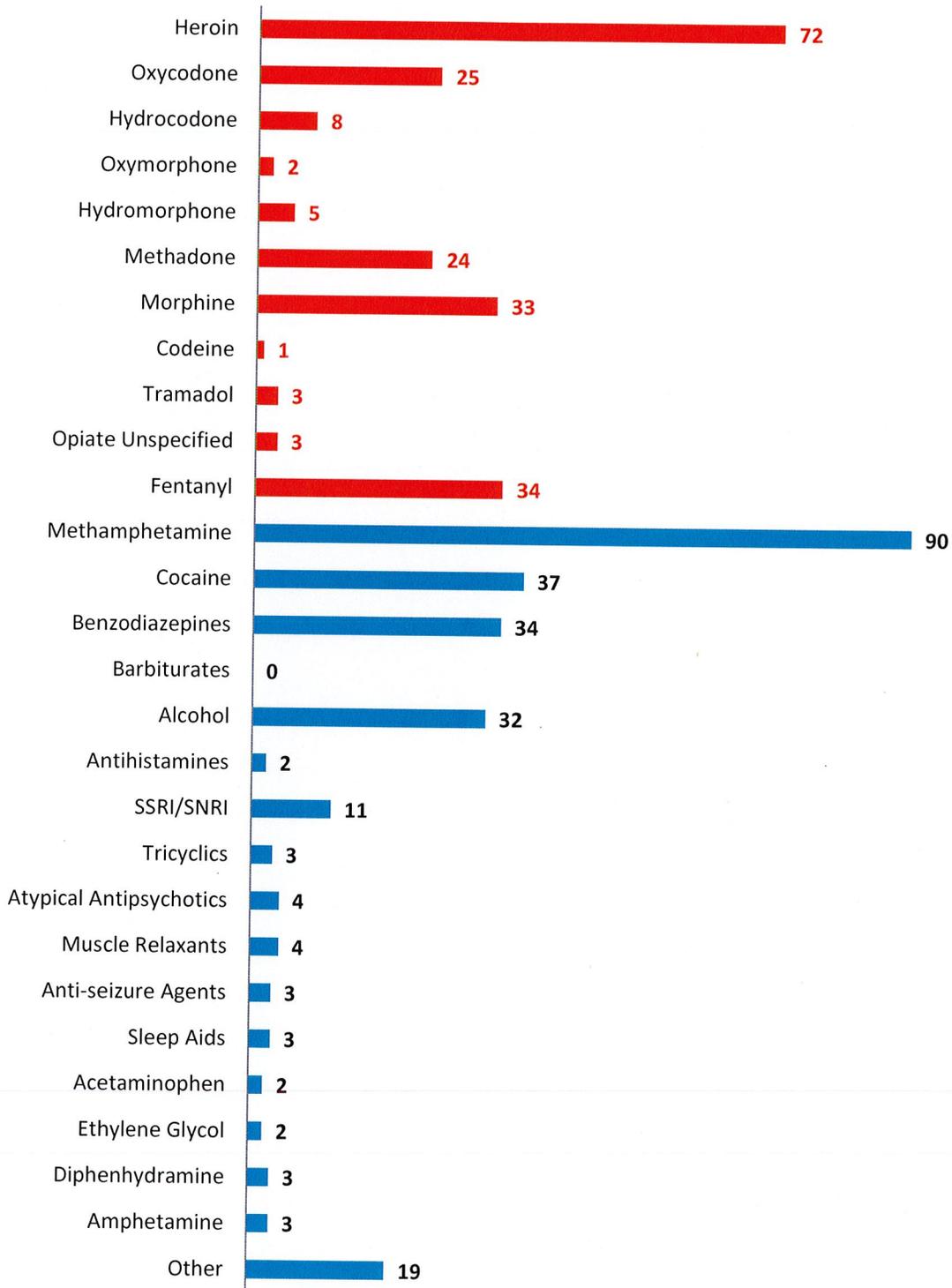


FIGURE 7 (F7)

## Pima County Overdose Deaths by Drug 2017

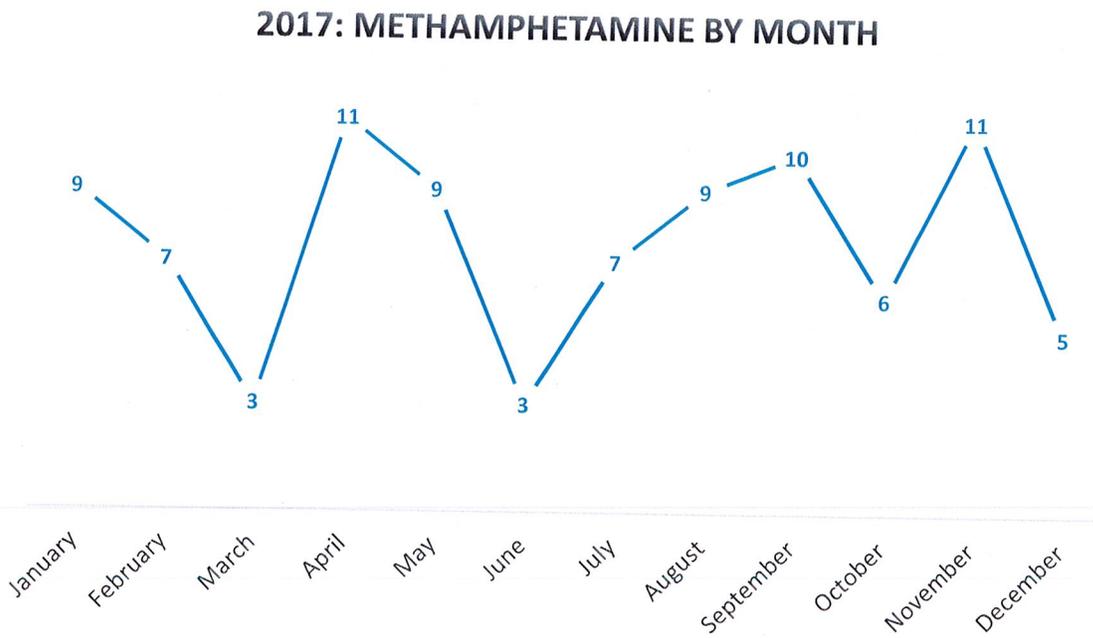
Opiate compounds are red



**FIGURE 8 (F8)**

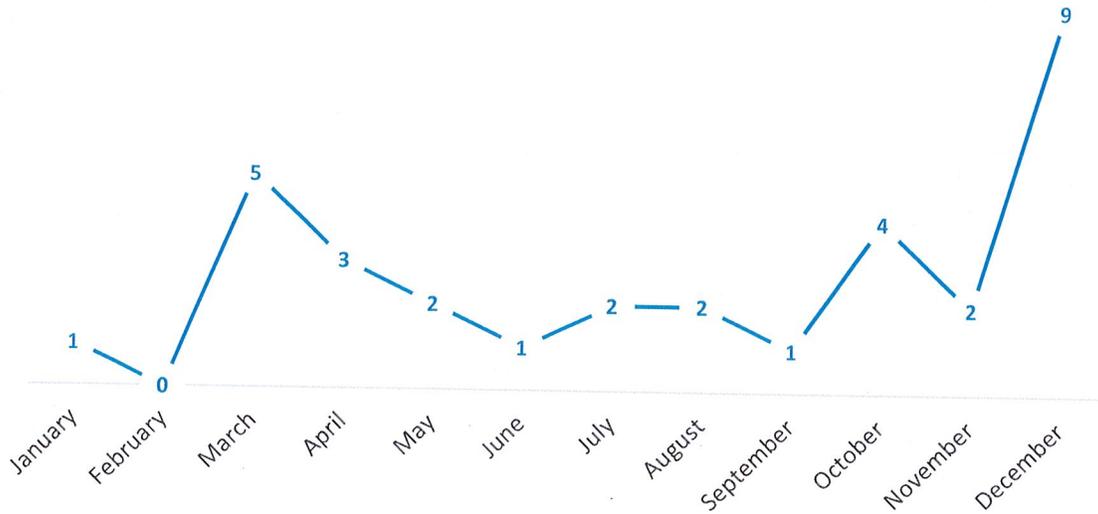


**FIGURE 9 (F9)**



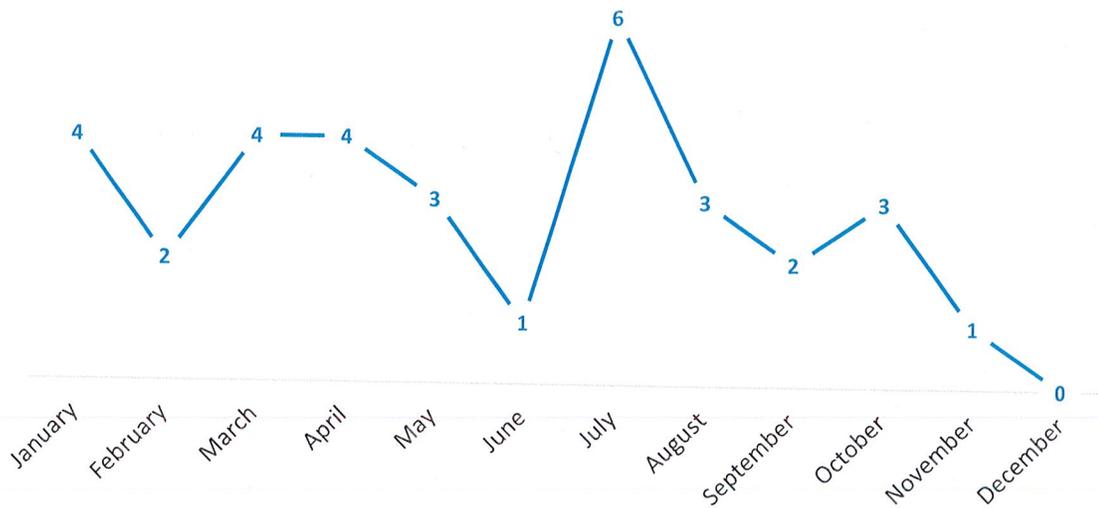
**FIGURE 10 (F10)**

**2017: ALCOHOL BY MONTH**



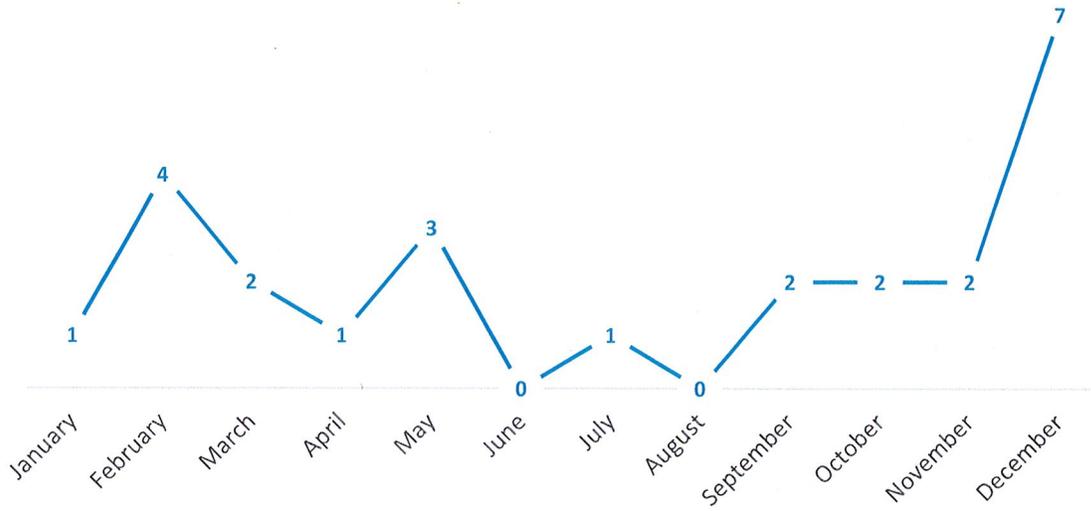
**FIGURE 11 (F11)**

**2017: MORPHINE BY MONTH**



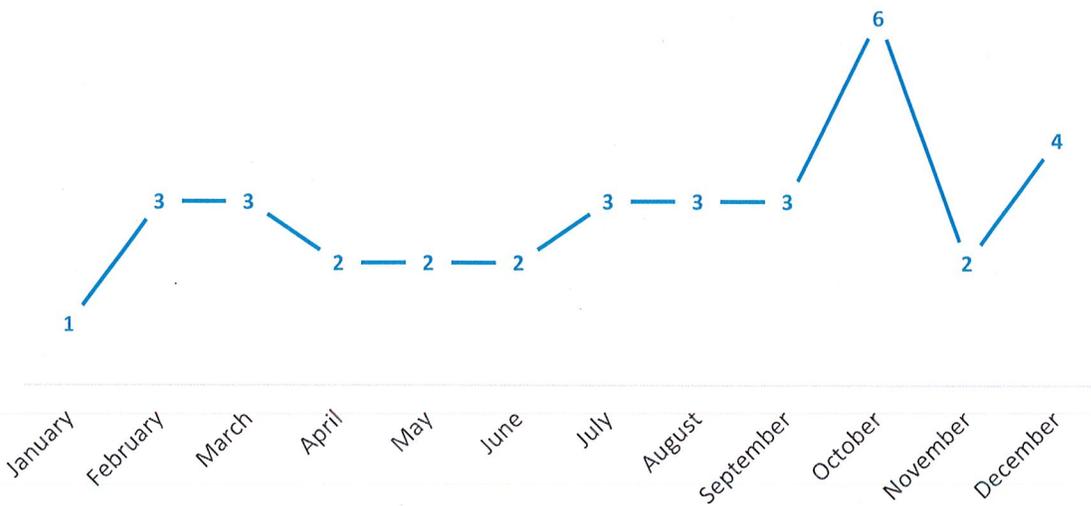
**FIGURE 12 (F12)**

**2017: OXYCODONE BY MONTH**



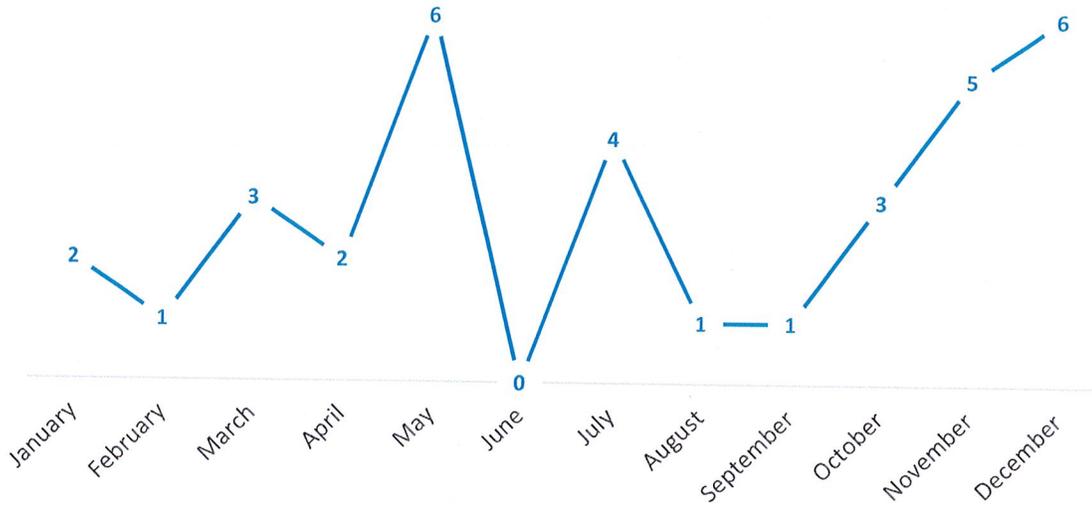
**FIGURE 13 (F13)**

**2017: FENTANYL BY MONTH**



**FIGURE 14 (F14)**

**2017: BENZODIAZEPINES BY MONTH**



**FIGURE 15 (F15)**

**2017: COCAINE BY MONTH**

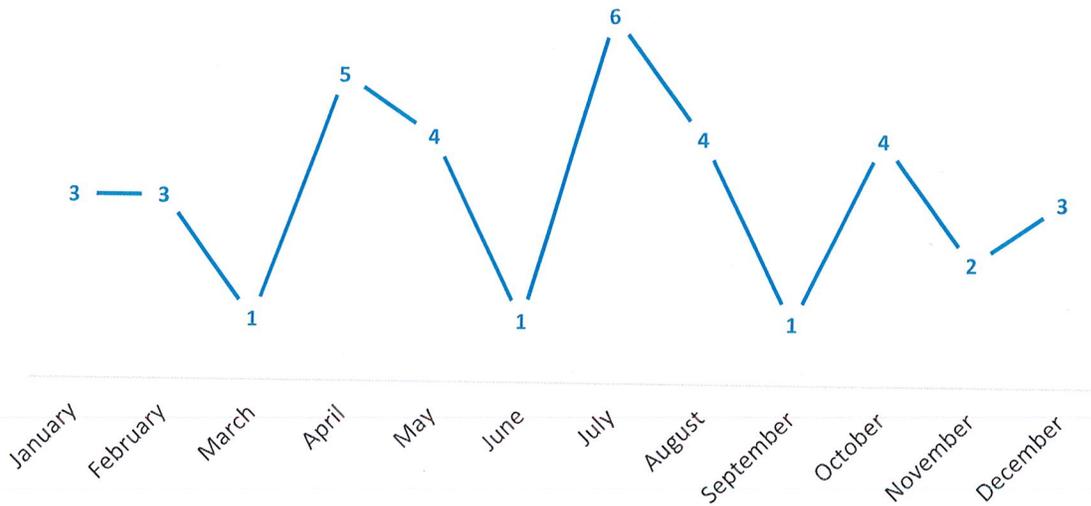


FIGURE 16 (F16)

**PIMA OVERDOSES BY DRUG BY YEAR 2014 - 2017**

