

DRUG-RELATED EMERGENCY ROOM VISITS, JANUARY 1– OCTOBER 31, 2016

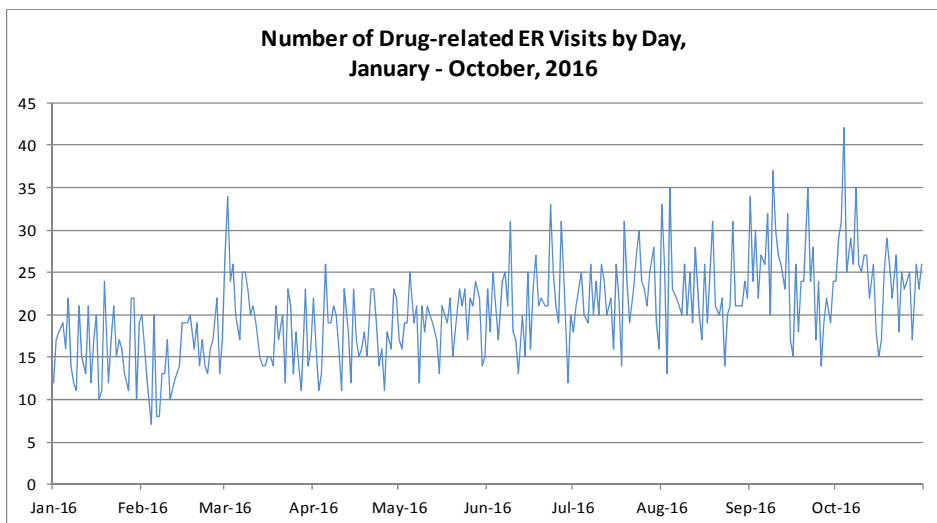
DATA BRIEF: VOLUME TWO, 2016

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From January 1, 2016 through October 31, 2016, emergency rooms in Cuyahoga County have treated an estimated 6,233 patients presenting with drug-related injuries (inclusive of prescription and illicit drug use)*. This amounts to an average of approximately 20.4 patients per day since the beginning of the year (as depicted in Figure 1). In order to account for daily fluctuations in visits, and to better understand the trends in drug-related presentations, a 7 day moving average was calculated (See *Technical Notes* section for details). This indicates that as the year has progressed, the number of patients seen in emergency rooms for drug-related reasons has increased steadily (see figure 2).

The month of October had 780 visits, the highest monthly visit total this year (see figure 3). October also had a spike in visits between October 3rd – 6th that triggered a formal system (i.e. Epicenter) anomaly for drug-related ER visits. System anomalies are generated when the number of visits is more than four standard deviations higher than expected compared to historical information for that same timeframe of the year. Further review of the available information for this anomaly did not suggest that this anomaly was due to any one drug type, nor was it isolated to a specific geographic area within the county.



**Data for this report were taken from EpiCenter, a web-based surveillance tool administered through the Ohio Department of Health. EpiCenter categorizes/classifies information from the chief complaint recorded in emergency room visits. Records of patients initially considered for inclusion in this report had visits that were grouped under the "Drugs" classifier. This included records that had "overdose" indicated. Records were excluded if the chief complaint was related to Tylenol/ acetaminophen, ibuprofen/Motrin, or suicide (where this information was available) – see Technical Notes section for details.*

Figure 1. Drug-Related visits to the emergency rooms in Cuyahoga County by Day for January 1-October 31, 2016.

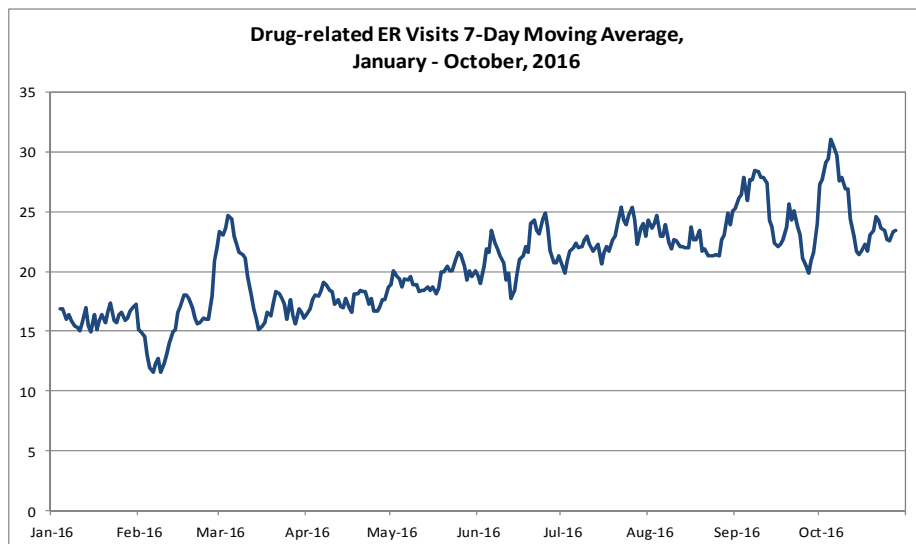


Figure 2. Drug-Related Visits to the emergency rooms in Cuyahoga County by 7-Day Moving Average for January 1-October 31, 2016.

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Demographic Profile:

Overall demographic data for individuals with drug-related chief complaints in Cuyahoga County ERs remained largely unchanged in October as compared to January-September, with the greatest percentage of presentations occurring in the 25-34 year old category. The overall gender breakdown remained nearly identical in October, with 39.4% of presenting cases being female and 60.6% being male. Interestingly, there were some shifts in the gender breakdown by age categories. In the January-September report, it was noted that males predominated in all age categories except 12-17 year olds (where females predominated 70.7% vs 29.3%) and ≥ 65 year olds (where females and males were nearly equal at 50.6% and 49.4% respectively). October saw the gender gap in the 12-17 year old category close considerably, with 55.6% of cases in this age range being female and 44.4% being male.

Conversely, the gender gap widened in the ≥ 65 year old category, with males predominating in October, representing 79.2% of presentations. The significance of this variation is difficult to understand at this point given that random variations can exist from month to month. Additionally, in October the <12 year old age category shifted to an equal percentage of males and females compared to the January-September report, where males had accounted for 58.9% of visits in this age range.

Drug Category:

Where possible, attempts were made to quantify the number of visits associated with opioids, select prescription drugs, and select illicit drug use (available for 220 of 780 records in October and 1,441 of the 5,453 records in January-September) that were seen most often in emergency room presentations in Cuyahoga County, with the understanding that this information is incomplete and may under-represent actual totals. Table 1 indicates that the proportions of each drug by select category seen in October were similar to that seen from January-September.

Drug Category	October 2016		January – September, 2016	
	N	%	N	%
Heroin	149	67.7	895	62.1
Opioid - General	39	17.7	327	22.7
Cocaine	13	5.9	113	7.8
Polysubstance	8	3.6	43	3.0
Prescription Opioids	7	3.2	42	2.9
Benzodiazepine	4	1.8	16	1.1
Fentanyl Only	0	0.0	5	0.3

Of note, those drugs included in the poly-substance category are as follows: multiple opioids, opioids plus benzodiazepines, and opioids plus cocaine. Additionally, those drugs included in the prescription opioids category are as follows: Percocet, oxycodone, morphine, Dilaudid, hydromorphone, Vicodin, hydrocodone, Opana, and oxymorphone.

Table 1. Drug Category with number and corresponding percent of times it is mentioned in chief complaint data of ER visits in Cuyahoga County for the month of October as well as January 1-September 30, 2016.

Figure 3 illustrates the monthly totals for ER visits that were associated with drug-related injuries. Additionally, it provides information to determine the proportion of the visits that were associated with the select prescription and illicit drugs (as listed in Table 1) in cases where this information is available.

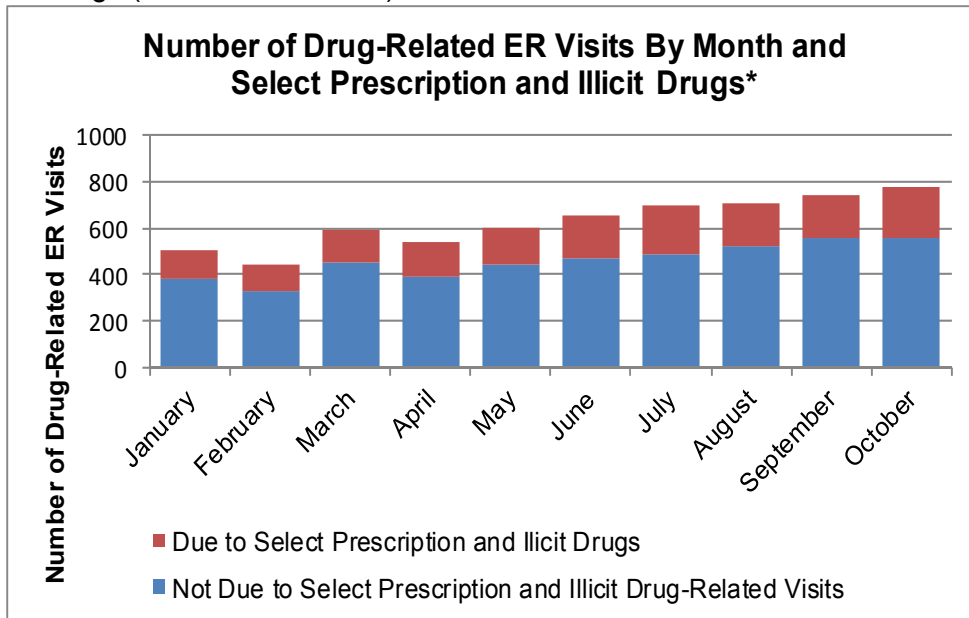


Figure 3. Number of ER Visits Due to Drug-related Injuries By Month and Select Prescription and Illicit Drugs (where information is available) in Cuyahoga County.

Geography

The areas of the county with the highest percent of emergency room visits that were related to drug injuries is clustered in the following zip codes: 44102, 44105, 44107, 44109, 44111, and 44134 (Figure 4). Four of these zip codes (44102, 44107, 44109, and 44111) also had the highest number of ER visits associated with select prescription medications and select illicit drugs (Figure 5).

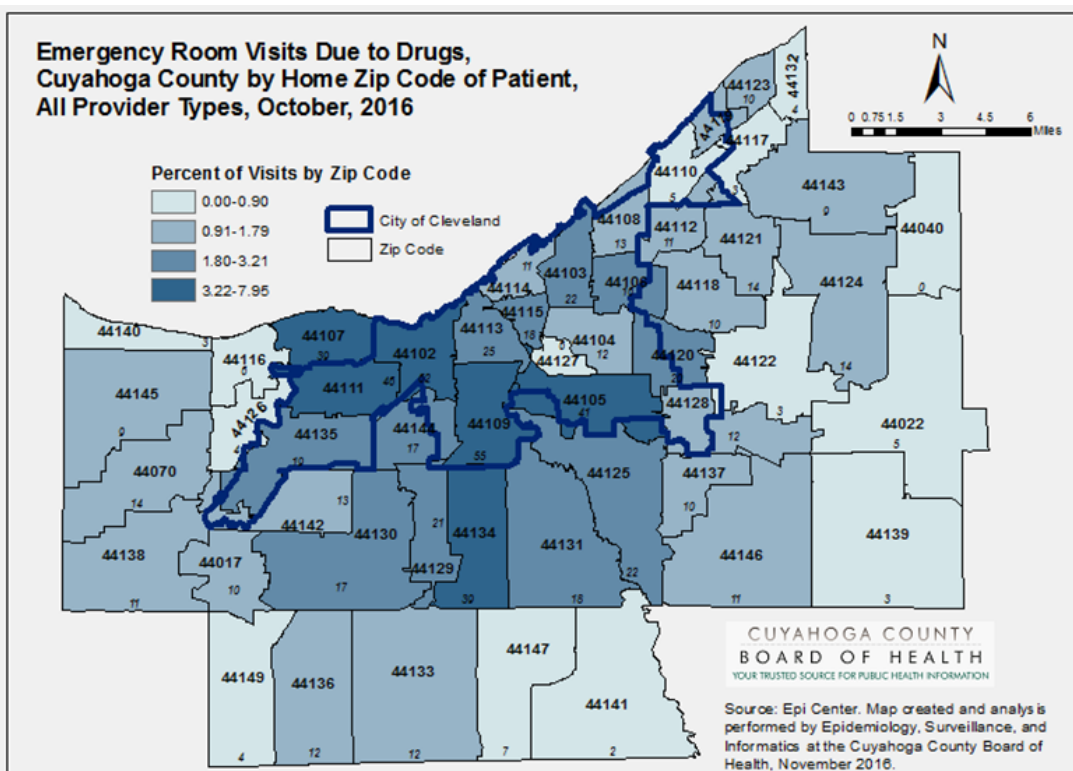


Figure 4: Number and percent of ER Visits Due to Drug-related Injuries By Zip Codes in Cuyahoga County for October 2016.

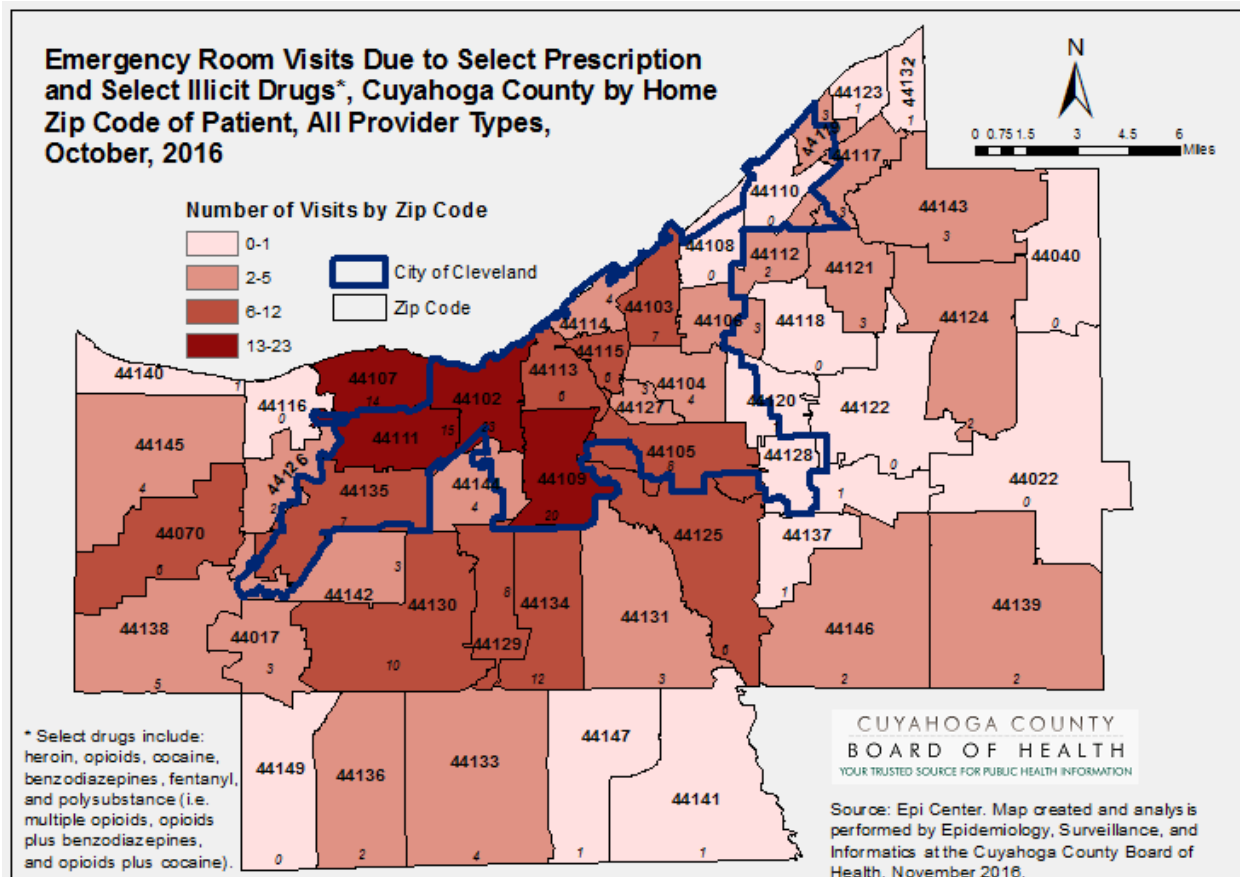


Figure 5. Number of ER Visits Due to Select Prescription and Select Illicit Drugs By Zip Codes in Cuyahoga County for October 2016 (see Table 1).

TECHNICAL NOTES

7 day moving average – To calculate the 7-Day moving average, an average was calculated using a span of seven days around any given date. For example, to calculate the 7-Day moving average for January 4, values from January 1 through January 7 were used. For January 5, values from January 2 through January 8 were used, etc...

Included cases – There were a significant number of cases that did not have “overdose” indicated in the chief complaint but had some indication of prescription drug use and/or illicit drug use suggested. Because of this, the report was not limited to only cases with “overdose” indicated. Additionally, attempts to quantify the number of visits associated with opioid and select prescription and illicit drug use were made (see Table 1).

Excluded cases – Attempts were made to remove records that had a chief complaint indicating the following: Tylenol/acetaminophen, ibuprofen/Motrin, or suicide (where this information was available).

Special Data Considerations

It is important to note that this report only represents estimated figures as opposed to full and/or final counts of the drug related emergency room visits. This is due to the fact that the information is based on initial chief complaint and not the final diagnosis that can result after a patient has been examined and/or had additional tests performed.

It is also important to note that chief complaint information through EpiCenter may not routinely identify specific drug or drugs involved in the injury. Therefore, it is not possible to associate many records with specific drugs.

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