

Drug Overdose Surveillance Report

Lake County, Ohio: April 2019

The following report outlines Emergency Department (ED) and Urgent Care (UC) drug overdose (OD) visits by Lake County residents during the month of April, 2019, and includes one reported fatality. During the aforementioned timeframe, a total of 55 recorded drug overdose ED/UC visits met the inclusion criteria listed below and occurred among Lake County residents, accounting for 0.7% of all April ED/UC visits, and increasing from the previous month's 50 drug overdose ED/UC visits.

April Lake County drug overdoses occurred among individuals ranging from 8 to 69 years of age. Four cases involved minors ages 8 to 13 (whom were excluded from the average age calculation), for which the cause of overdose was unclear. In total, five events involved an illicit substance, one involved an OTC medication, and 49 involved an unspecified substance (Figure 1). Moreover, 31 ED/UC visits resulted in routine discharge, eight were discharged to treatment, four left against medical advice, two were admitted for inpatient care, one was discharged to court/law enforcement, one was discharged to a federal healthcare facility, one event resulted in a fatality, and seven lacked reported discharge information.

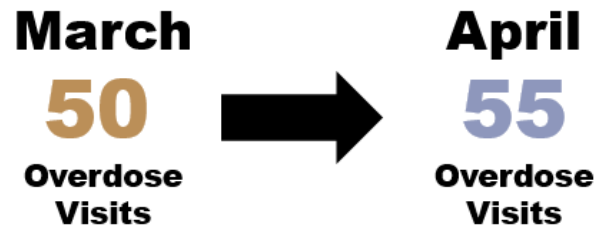
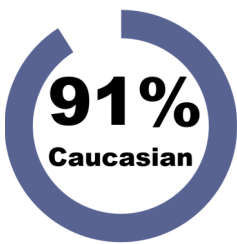
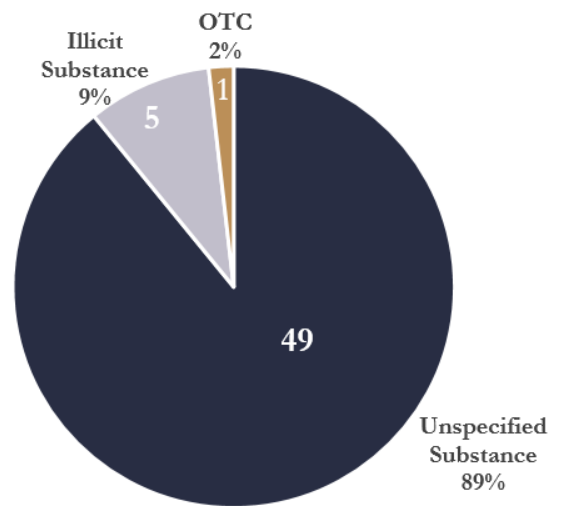
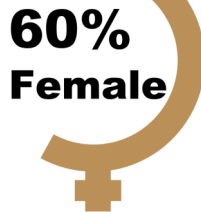


Figure 1. Overdoses by Type



Ages:
8 to 69
Average:
36 Years



Inclusion Criteria:

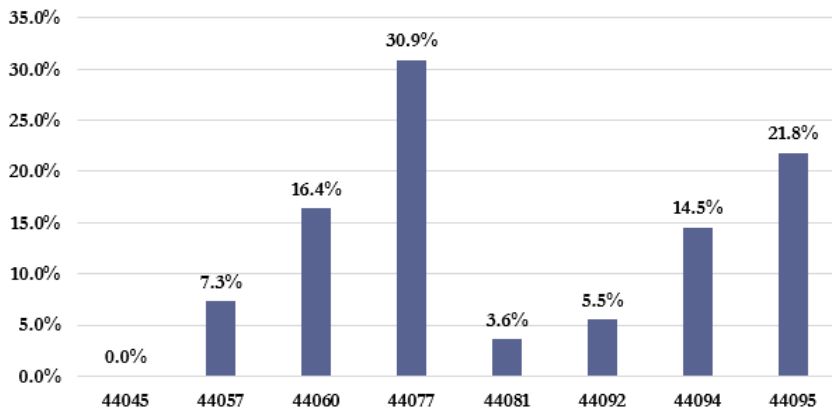
The data presented in this report was retrieved from Ohio's EpiCenter Health Monitoring System, as identified by the "Traumatic Injury: Drugs" classifier. This report contains information about Lake County residents, regardless of ED/UC location, and drug-related cases include all ED/UC admits specifying overdose or poisoning. Admits without supporting information, or otherwise indicative of a suicide attempt, intentional overdose, or accidental insulin overdose were excluded from this analysis, as were cases presenting for detox or withdrawal symptoms. In most cases, the drug responsible for the overdose is not indicated. As such, the included figures are not limited to opioid-related events.



Geographical Distribution

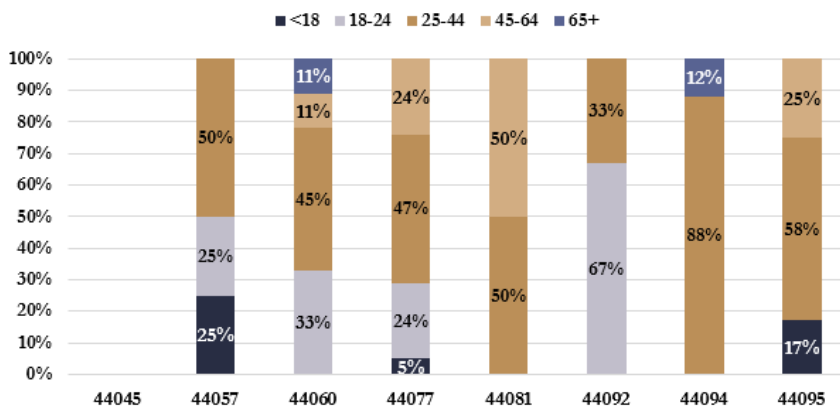
In what areas were overdoses most prevalent?

Figure 2. Overdose Occurrences by Zip Code of Residence



The greatest frequency of overdose events occurred amongst those residing in zip codes 44077 and 44095, and were lowest for those in zip codes 44045 and 44081 (Figure 2). The proportion of overdose events increased by 12.9% for 44077, 1.6% for 44081, and 4.5% for 44094, as compared to the month of March, while decreasing 2.7% for 44057, 1.6% for 44060, 6.5% for 44092, and 8.2% for 44095.

Figure 3. Overdose Ages by Zip Code of Residence



Overdose events varied by age across each of the reported zip codes (Figure 3). Overdose event frequency was highest among those 25 to 44 years of age (55%), followed by those 18 to 24 years of age (18%), 45 to 64 years of age (18%), and under 18 years of age (7%). Overdose event frequency was lowest among those 65 years of age and older (2%) during the month of April.

At which Lake County facilities did overdose events present?

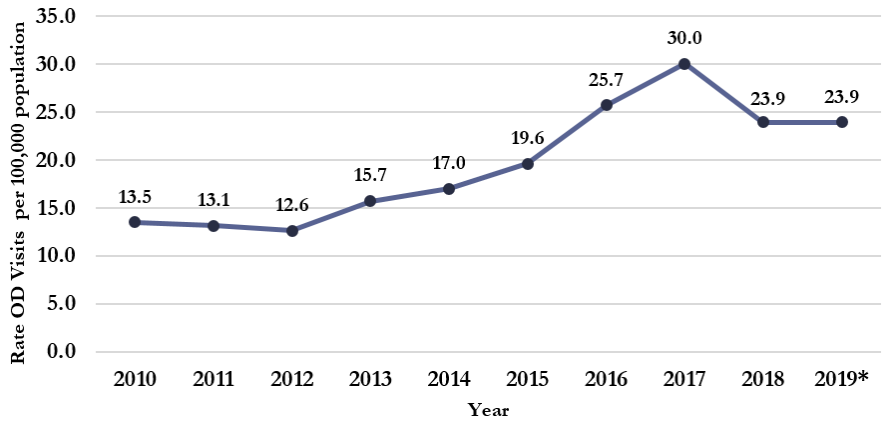
Table 1. Overdose Reporting Facility

Facility	N	(%)
Madison Campus	3	6
TriPoint Medical Center	18	33
West Medical Center	20	36
Outside of County	14	25
Total	55	100

During the month of April, TriPoint and West experienced similar overdose event caseloads, while 25% of reported events were transported to facilities outside of the county. This represents a shift from March, whereas 38% of cases were reported at facilities outside of Lake County, and 50% of cases were reported at West.

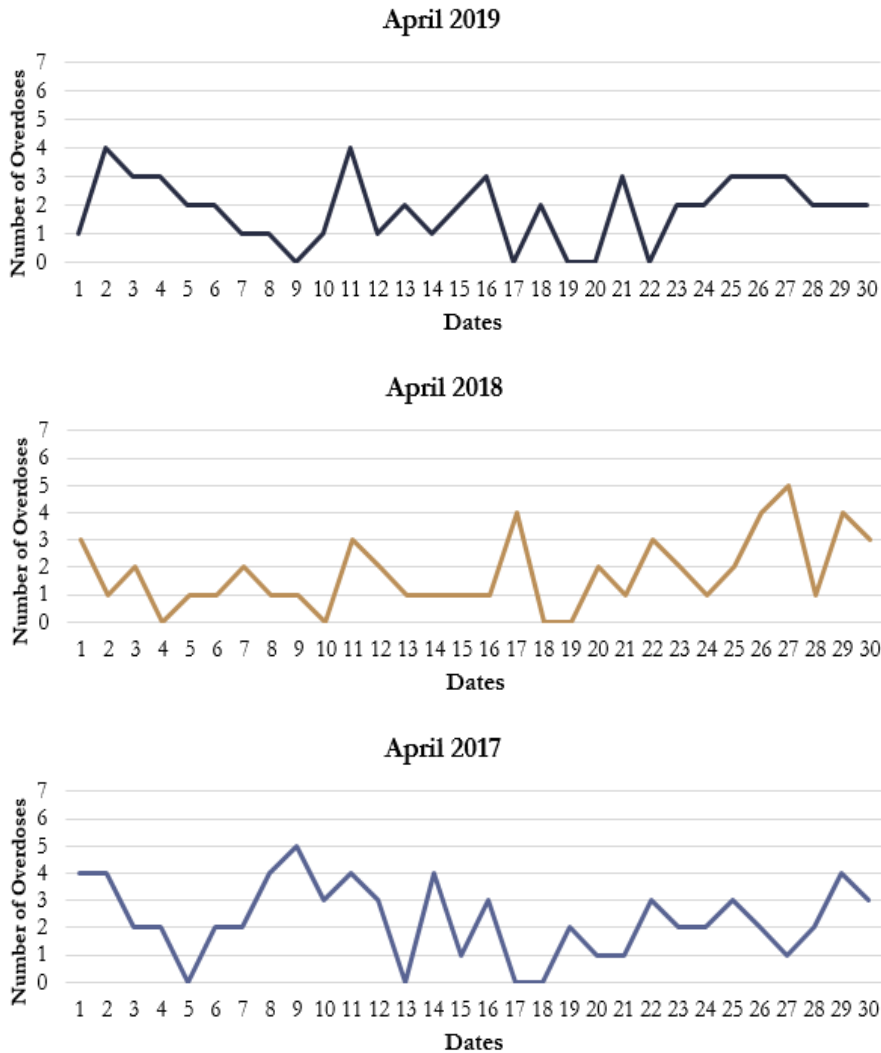
The April 2019 Lake County ED/UC overdose visit rate remained unchanged from April 2018 (Figure 4), is 20% lower than the peak observed in April of 2017, and is below the observed April 2016 rate.

Figure 4. Rate of April OD Visits by Year



*Rates based on most current available annual population estimates, as obtained from American Fact Finder; 2019 rates are based on 2018 population estimates.

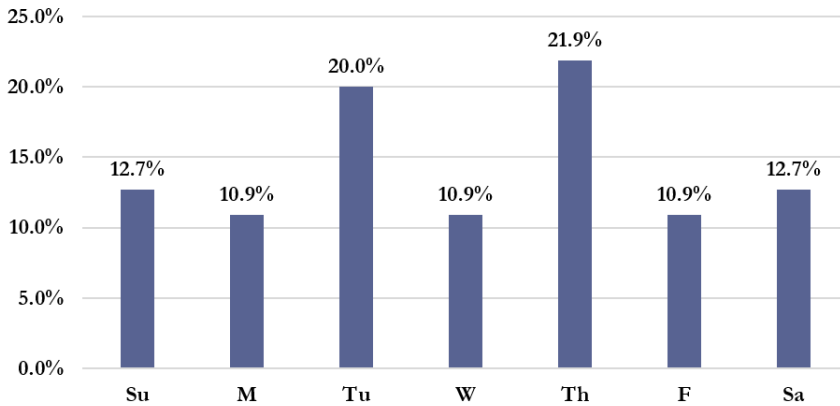
Figure 5. April Drug Overdose Daily Frequencies, 2017 to 2019



In order to provide for comparisons of daily overdose frequency, April overdose events by day are illustrated for 2017, 2018, and 2019, respectively (Figure 5). The daily maximum of four overdoses in April 2019 is lower than the daily maximums of five overdoses in both 2017 and 2018. Mean daily overdose frequency (1.8) was equivalent to April 2018 (1.8), and less than April 2017 (2.3). A total of five days with no overdose events reported were observed in April 2019, as compared to four total days in 2018, and four total days in 2017.

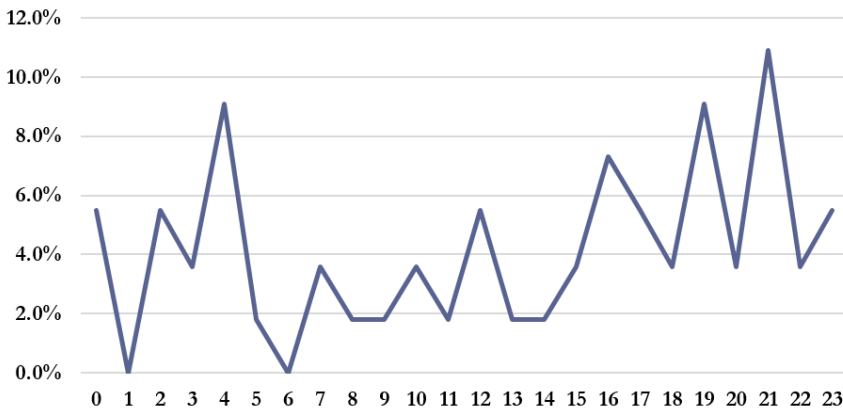
Unlike previous years, two peaks were observed in 2019, and occurred on the April 2 and April 11. April 2018 and April 2017 each experienced a single overdose event peak, which occurred on April 27 in 2018, and April 9 in 2017. Similar to April of 2017, April 2019 experienced multiple secondary peaks. Across all three years, a halt in overdose events for a period of two days occurred during the third week of the month.

Figure 6. Overdose Occurrences by Day of Week



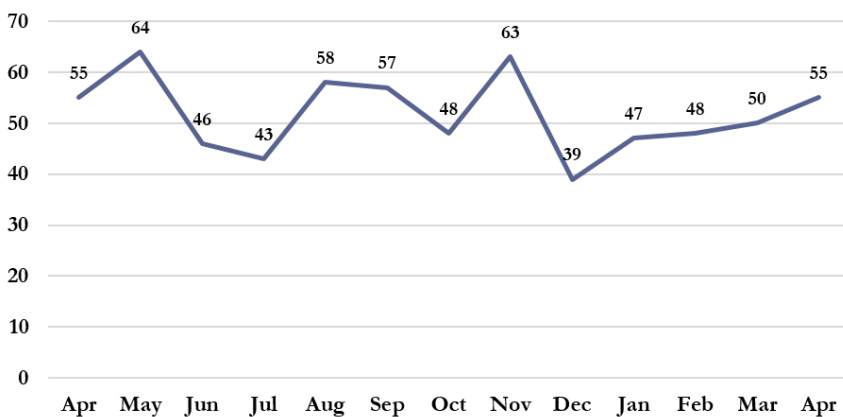
When organized by day of week, April overdose events peaked on Thursday (22%) with a secondary peak on Tuesday (20%), and lows occurring on Monday (11%), Wednesday (11%), and Friday (11%); Saturday and Sunday increased slightly (13%, respectively). Mondays have consistently been characterized by the lowest number of overdose events for the past four consecutive months.

Figure 7. Overdose Occurrences by Hour of Day



April overdose events peaked around 11:00 pm, with secondary peaks at 4:00 am and 7:00 pm, and a tertiary peak around 4:00 pm. While exact hours vary, April overdose events are consistent with the past several months, with overdose event lows occurring in the early morning hours, and peaks in the late afternoon, evening, and nighttime hours.

Figure 8. Overdose Counts - Past 12 Months



When organized by month, overdose events increased from April to May, thereafter decreasing 33% between May and July, increasing 35% between July and August, decreasing 17% between August and October, increasing 31% between October and November, decreasing 38% between November and December, and increasing 41% between December and April (Figure 8). To date in 2019, 200 ED/UC drug overdose event visits have been observed, as compared to 187 during the same time frame in 2018. Frequencies for March and April of 2019, respectively, were equivalent to those observed in March and April of 2018.

Lake County General Health District Resources



Project DAWN Naloxone Clinics

Lake County General Health District

5966 Heisley Road, Mentor, OH 44060;
First Wednesday of each month at 4:30 pm.

Signature Health

38882 Mentor Avenue, Willoughby, OH 44094;
Third Tuesday of each month at 10:00 am.

Lake Area Recovery Center

2711 Donahoe Drive, Ashtabula, OH 44004;
Second Thursday of each month at 7:00 pm.

Ashtabula Library

4335 Park Avenue, Ashtabula, OH 44004;
Last Wednesday of each month at 11:00 am.

Ravenwood

12557 Ravenwood Drive, Chardon, OH 44024;
First Tuesday of each month at 5:30 pm.

Pharmaceutical Disposal Instructions

Before disposing of pharmaceuticals at one of the drop-off locations, be sure to remove or black-out identifiable information on the pharmacy label. Disposable items suitable for drop-off include:

- Unused or expired medications
- Prescriptions, non-prescription pills, syrups, and creams
- Pain and mood altering medications
- Pain relievers, over-the-counter cold and flu medication, vitamins, and pet medications

Pharmaceutical Drug Collection and Disposal Locations

Monday-Friday: 7:00 am - 8:00 pm.

Saturday: 9:00 am - 5:00 pm.

Sunday: 1:00 pm - 5:00 pm.

Note: NO Sunday hours at Lakeland

Eastlake Police Department

35150 Lakeshore Boulevard
Eastlake, OH 44095

Madison Township Police Department

2065 Hubbard Road
Madison, OH 44057

Mentor Police Department

8500 Civic Center Boulevard
Mentor, OH 44060

Mentor-on-the-Lake Police Department

5860 Andrews Road
Mentor-on-the-Lake, OH 44060

Lake County Sheriff's Office

104 East Erie Street
Painesville, OH 44077

Willoughby Police Department

36700 Euclid Avenue
Willoughby, OH 44094

Willoughby Hills Police Department

35405 Chardon Road
Willoughby Hills, OH 44094

Lakeland Comm. College Police Department

7700 Clocktower Drive, Building A, Lower Level
Kirtland, OH 44094



**Lake County
General Health District**

Public Health
Prevent. Promote. Protect.



REV: 5/3/2019