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.

### 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?

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.

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>
<thead>
<tr>
<th>Facility</th>
<th>N</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madison Campus</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>TriPoint Medical Center</td>
<td>18</td>
<td>33</td>
</tr>
<tr>
<td>West Medical Center</td>
<td>20</td>
<td>36</td>
</tr>
<tr>
<td>Outside of County</td>
<td>14</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100</td>
</tr>
</tbody>
</table>

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*

*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.*
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.

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.

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

**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*

**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 Donohoe 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

**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**
35045 Chardon Road
Willoughby Hills, OH 44094

**Lakeland Comm. College Police Department**
7700 Clocktower Drive, Building A, Lower Level
Kirtland, OH 44094