The following report outlines Emergency Department (ED) and Urgent Care (UC) drug overdose (OD) visits by Lake County residents during the month of May. During the aforementioned timeframe, a total of 45 recorded drug overdose ED/UC visits met the inclusion criteria listed below and occurred among Lake County residents, accounting for 0.6% of all May ED/UC visits, and decreasing from the previous month’s 55 drug overdose ED/UC visits. No fatalities were reported among cases presenting to EDs/UCs during the month of May.

May Lake County drug overdoses occurred among individuals ranging from 14 to 81 years of age. Four cases involved minors, ages 14 to 17, for whom the cause of overdose was unclear. In total, five events involved an illicit substance, two involved prescription medications, one involved a poisoning, and 37 involved an unspecified substance (Figure 1). Moreover, 24 ED/UC visits resulted in routine discharge, two were discharged to treatment, five left against medical advice, one was transferred to another hospital, and 13 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 code 44077, and were lowest for those in zip code 44045 (Figure 2). The proportion of overdose events increased by 6.9% for 44077, 8.3% for 44057, and 1.1% for both 44092 and 44094, as compared to the month of April, while decreasing 3.1% for 44060, 1.4% for 44081, 6.5% for 44092, and 12.9% 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 (49%), followed by those 45 to 64 years of age (27%), 18 to 24 years of age (9%), and those under 18 years of age (9%). Overdose event frequency was lowest among those 65 years of age and older (6%) during the month of May.

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>17</td>
<td>38</td>
</tr>
<tr>
<td>West Medical Center</td>
<td>12</td>
<td>27</td>
</tr>
<tr>
<td>Outside of County</td>
<td>13</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100</td>
</tr>
</tbody>
</table>

Nearly 40% of overdose events presented at TriPoint during the month of May, while 29% presented to facilities outside of the county. This represents a shift from April, wherein 36% of cases presented at West, 33% at TriPoint, and 25% at facilities outside of the county.
The May 2019 Lake County ED/UC overdose visit rate represents a four year low, decreasing 23% from May of 2018 (Figure 4). The respective rate is 52% less than May of 2017, and 27% less than the rate observed in May of 2016.

In order to provide for comparisons of daily overdose frequency, May overdose events by day are illustrated for 2017, 2018, and 2019, respectively (Figure 5). The daily maximum of four overdoses in May 2019 (4) is less than half the daily maximums observed in 2017 (9) and 2018 (8). Mean daily overdose frequency (1.5) has steadily declined from 2.1 in May 2018, and 3.4 in May 2017. A total of six days with no overdose events reported were observed during May of 2019.

A single peak was observed on May 11, with secondary peaks on May 18 and May 22 through May 23. Similarly, a single overdose event peak occurred in May of 2018 and May of 2017, occurring on May 4, 2018, and May 7, 2017.

*Rates based on most current available annual population estimates, as obtained from American Fact Finder; 2019 rates are based on 2018 population estimates.
When organized by day of week, May overdose events peaked on Thursday (20%) and Saturday (20%). Friday remained relatively high (18%), as compared to Sunday through Wednesday (ranging from 6.7% to 13.3%). The percentage of overdoses events occurring on Tuesday is down 13.3% from last month.

May overdose events peaked several times throughout the day, including 3:00 am and 9:00 am, as well as 1:00 pm, 5:00 pm, and 11:00 pm. This trend represents a departure from April, wherein rates peaked at 9:00 pm with subsequent secondary peaks at 7:00 pm and 4:00 am.

When organized by month, overdose events decreased 33% between May and July, increased 35% between July and August, decreased 17% between August and October, increased 31% between October and November, decreased 38% between November and December, increased 41% between December and April, and decreased 18% from April to May (Figure 8). To date, 245 ED/UC drug overdose event visits have been observed in 2019, as compared to 251 during the same time frame in 2018.
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;
June 20th at 7:00 pm.

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

- 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

REV: 6/11/2019