Lakewood Police Department (Ohio) Drug-Related Overdose Incidents 2017—2020: An analysis of police and medical examiner data

Begun Center for Violence Prevention Research and Education
Jack, Joseph and Morton Mandel School of Applied Social Sciences
Case Western Reserve University
11402 Bellflower Road
Cleveland, Ohio 44106

March 2022

Contents

Recommended Citation

McMaster, R., Rinderle, D., Deo, V., Syzmanski, E., Kavadas, A., Flynn, K. C, AlMasarweh, L., Riske-Morris, M., & Flannery, D. J. (2022). Lakewood Police Department (Ohio), Drug-Related Overdose Incidents, January 1, 2017—December 31, 2020. Begun Center for Violence Prevention Research and Education, Jack, Joseph and Morton Mandel School of Applied Social Sciences, Case Western Reserve University.

Acknowledgments

The Begun Center for Violence Prevention Research and Education in the Jack, Joseph and Morton Mandel School of Applied Social Sciences at Case Western Reserve University promotes social justice and community development by conducting applied, community-based and interdisciplinary research on the causes and prevention of violence, and by educating and training social workers, teachers, law enforcement and other professionals in the principles of effective violence prevention. The Center also develops and evaluates the impact of evidence-based best practices in violence prevention and intervention, and seeks to understand the influence of mental health, substance use, youth development, and related issues on violent behavior and public health.

This publication was supported by Bureau of Justice Assistance grant #2018-AR-BX-K033 awarded to the Alcohol, Drug Addiction and Mental Health Services Board of Cuyahoga County. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Bureau of Justice Assistance.

We thank our partners at the Lakewood Police Department who facilitated access to the data and helped to provide updates and clarification along the way:

Chief of Police Kevin Kauchek, Lakewood Department
Lieutenant Kevin Fischer, Lakewood Police Department

We wish to acknowledge the following at the Begun Center who contributed to this report:

Dan Flannery, Ph.D., Director
Ryan McMaster, Research Data Manager
David Rinderle, MPH, Research Associate
Luma AlMasarweh, Ph.D., Research Associate
Vaishali Deo, MD, MPH, Research Associate
Emily Szymanski, MLIS, Research Associate
Angela Kavadas, MPH, Research Associate
Karen Coen Flynn, Ph.D., Senior Research Associate
Michelle Riske-Morris, Ph.D., JD, Senior Research Associate

About the Data

Utilizing information from various data sets for this report creates challenges in clearly communicating the data's differences while examining the same population, time frame, and issue. Individual sections differentiate the data utilized for various analyses. This report analyzes:

1. Fatal and nonfatal drug overdose data from the Lakewood Police Department (LPD) in Lakewood, Ohio; and
2. Fatal drug overdose data from the Cuyahoga County Medical Examiner's Office (CCMEO) for all drug-related deaths that occurred in Lakewood.

Both data sets include all drug types tracked; neither set is specific to opioids. There are four important data considerations:

1. Data descriptions will differ based on whether the LPD or the CCMEO data is used. LPD data includes incident location (e.g., the overdose scene), whereas CCMEO data includes residence location (e.g., the known city of a person who experienced overdose).
2. Data reported in one table may appear different or inconsistent with that reported in another table even though they are conveying similar information. Any apparent inconsistencies are due to using only LPD or only CCMEO individual data sets instead of combining them.
3. LPD incidents include individuals who have experienced fatal and nonfatal overdose incidents within the City of Lakewood, regardless of whether those individuals are residents of Lakewood. There are statements herein, however, that specifically focus on residents of Lakewood who may have died from drug-related overdoses within the City of Lakewood or outside. These data are specific to CCMEO reporting who report all deaths in Cuyahoga County.
4. Data pertaining to demographics (age, sex, and race) reflect reporting that may or may not be based on self-reports.

Key Takeaways

Between 1 January 2017 – 31 December 2020:

LPD responded to an average of 101 overdose incidents per year

19.4% (n = 78) of suspected drug overdose incidents to which Lakewood Police Department (LPD) responded resulted in a fatality

Individuals reported as "males" by the LPD between the ages of 20 to 44 represented 55% of all incidents (fatal and nonfatal) (n = 222)

Individuals reported as "white" by the LPD accounted for 95.5% (n = 384) of all incidents; white males accounted for 66% (n = 266)

91.7% (n = 66) of accidental drug-related deaths in which LPD responded were caused by fentanyl and fentanyl analogues (including carfentanil)

82% of cocaine-related deaths (n = 23) also included fentanyl or carfentanil as a cause of death drug

Of 78 fatal overdoses in which Lakewood PD responded, 55 of the decedents (70.5%) were residents of Lakewood

40 individuals (of 345 total subjects) overdosed two or more times and accounted for 24.1% of all incident responses (97 of 402)

LPD responded to 277 unique addresses in Lakewood; 68 locations were reported more than two times and the top location was reported 13 times

Total Overdose Incidents
402

Total Fatal Overdose Incidents Responded to by LPD
78

Total Persons
345

Persons Experiencing a Single Overdose
305

Persons Experiencing Two or More Overdoses
40

All Overdose Incidents in which Naloxone was Administered
71.1%

Nonfatal Overdose Incidents in which Naloxone was administered
82.2%

Average Overdose Incidents per Week
2

Introduction

In 2018 the Alcohol, Drug Addiction and Mental Health Services Board of Cuyahoga County (ADAMHS) was awarded four years of funding for the Northern District of Ohio Opioid Data Sharing Action Plan (award #2108-AR-BX-K033) by the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Assistance Comprehensive Opioid Abuse Site-based Program (BJA COAP) Public Safety and Public Health Information-sharing Partnership. The Action Researcher for this project is Daniel Flannery, Ph.D., the Dr. Semi J., and Ruth Begun Professor and Director of the Begun Center for Violence Prevention Research and Education (Begun Center) in the Jack, Joseph and Morton Mandel School of Applied Social Sciences at Case Western Reserve University (CWRU). Dr. Flannery is supported by a team of researchers and data analysts at the Begun Center. The product of this effort will be a blueprint for an integrated information platform that will inform opioid[1] epidemic-related evidence-based practices and policymaking, as well as enhance monitoring of community trends and outcomes.

The U.S. Attorney's Office for the Northern District of Ohio Heroin and Opioid Task Force (HOTF) was established in 2013. It is comprised of multidisciplinary stakeholder leadership who meet bimonthly to mitigate the effects of the opioid epidemic in alignment with the HOTF Community Action Plan. The HOTF is comprised of four subcommittees: Prevention and Education, Healthcare Policy and Treatment, Law Enforcement, and Data. The Data Subcommittee (DS) was initially structured as a small workgroup that provided data updates to the HOTF under the BJA COAP. In January 2019, the DS structure was redesigned as an expanded, multidisciplinary action group charged with laying the groundwork for the sharing of timely, accurate, and integrated law enforcement, healthcare, public health, social welfare, and medical examiner data to more effectively inform opioid epidemic best practices and policy. The DS is chaired by the Cuyahoga County Medical Examiner's Office (CCMEO) Administrator with the support of the Begun Center team.

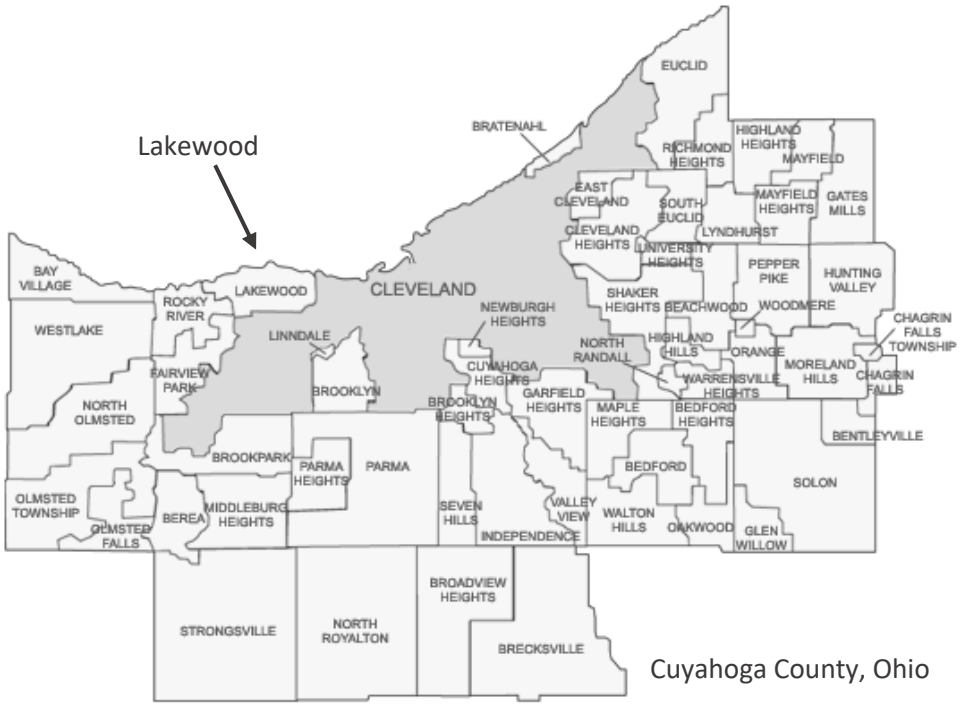
In late May 2019 three pilot groups and one geospatial collaboration were formed within the DS. The pilot groups and geospatial collaboration were formed to focus on nonfatal data sharing and access efforts on actionable tasks. Unfortunately, no single source compiles data on fatal and nonfatal overdose incidents at the county level; however, restructuring of the pilot groups has furthered efforts to link multi-disciplinary data sets to better understand the burden the opioid crisis has had in some areas in Cuyahoga County. This report provides a summary of persons experiencing opioid-related overdose incidents within the City of Lakewood as reported by the Lakewood Police Department (LPD). Overdose incidents and related activities reported by LPD have been linked, when applicable, with CCMEO decedent data from January 1, 2017, through December 31, 2020.

[1] "Opioid(s)" is used in this report in the same inclusive way as the Centers for Disease Control and Prevention uses it to describe "natural, synthetic, or semi-synthetic chemicals that interact with opioid receptors on nerve cells in the body and brain, and reduce the intensity of pain signals and feelings of pain. This class of drugs includes the illegal drug heroin, synthetic opioids such as fentanyl, and pain medications available legally by prescription, such as oxycodone, hydrocodone, codeine, morphine, and many others" (see https://www.cdc.gov/drugoverdose/opioids/terms.html).

Lakewood Overview

The City of Lakewood is in Cuyahoga County on the northwestern edge of the City of Cleveland. Lakewood is the third-largest city in Cuyahoga County (behind Cleveland and Parma) and the fifteenth largest city in the state of Ohio with a population of 50,942 (U.S. Census, 2022). Lakewood City Hall located at 12650 Detroit Avenue, houses the LPD, the Municipal Court, and the city jail. At the time of this analysis, LPD employed 94 officers whose jurisdiction covers approximately 5.5 square miles. Lakewood is divided into four wards with one Neighborhood Patrol Officer assigned to each ward.

LPD has one lieutenant and five detectives assigned to the Narcotics and Vice Unit. One narcotics detective was assigned to the FBI Northern Ohio Law Enforcement Task Force (NOLETF) from 2017 to early 2021. All of Lakewood's officers are issued the lifesaving drug naloxone to administer to those who have overdosed. LPD participates in Operation Medicine Cabinet by providing the community with a prescription pill drop-off location in the lobby of the department. LPD also participates in the multi-agency and community peer support Project SOAR (Supporting Opiate Addiction Recovery) to assist those having overdosed into recovery opportunities. Project SOAR partners include: The Woodrow Project; City of Lakewood; Lakewood Fire Department; Lakewood Municipal Court Probation Office; Alcohol, Drug Addiction & Mental Health Services Board of Cuyahoga County; Cleveland Clinic Lakewood & Lutheran Emergency Departments; and Berea, Bedford, Middleburg Heights, Newburgh Heights, Olmstead Township, Solon, and Strongsville police departments.



Summary of Overdose Incidents by Year

During the reporting period, LPD responded to 402 suspected overdose incidents, 78 of which resulted in fatalities (see Table 1). LPD assisted 40 individuals who had experienced an overdose more than one time during the reporting period. Of the 78 fatal overdose incidents to which LPD responded, 55 were Lakewood residents. Seventy-two of the 78 fatal overdose incidents were ultimately ruled by the Cuyahoga County Medical Examiner (CCMEO) as accidental drug-related overdose deaths, while the remaining six suspected drug-related deaths reported by LPD were either not found in CCMEO records or were not reported as drug-related deaths by CCMEO.

Table 1

Lakewood PD Suspected Drug Overdose Incidents by Year, Lakewood Residents and Non-Lakewood Residents

Year	2017	2018	2019	2020	Total
Nonfatal Drug-Related Overdoses	107	69	75	73	324
Fatal Drug-Related Overdoses	21	24	14	19	78
Total	128	93	89	92	402

During the same reporting period, CCMEO records indicate there were 70 accidental drug-related overdose deaths[2] in which the decedent's residential address was reported as Lakewood (see Table 2), 60 of which occurred in Lakewood city limits, compared to 55 reported by LPD.[3] Discrepancies in data can be due to reporting parameters of these agencies, lack of evidence of drug overdose at the incident scene, or various other possible factors. This discrepancy highlights the challenges of comparing and merging data across agencies, as well as the value of utilizing multiple data sources to build a more accurate picture.

Table 2

CCMEO Reported Accidental Drug-Related Overdose Deaths for all Lakewood Residents

Year	2017	2018	2019	2020	Total
Drug-Related Overdose Deaths	18	19	15	18	70

[2] 70 of the 75 drug-related overdose deaths for Lakewood residents from 2017 to 2020 as reported by CCMEO were ruled accidental deaths, five were ruled death by suicide.

[3] LPD reported 55 of the 78 suspected drug-related overdose deaths were Lakewood residents, the remaining persons were primarily from surrounding cities (see Table 4).

Drugs Causing Overdose: Suspected and Toxicology Results

Suspected Drug Causing Overdose

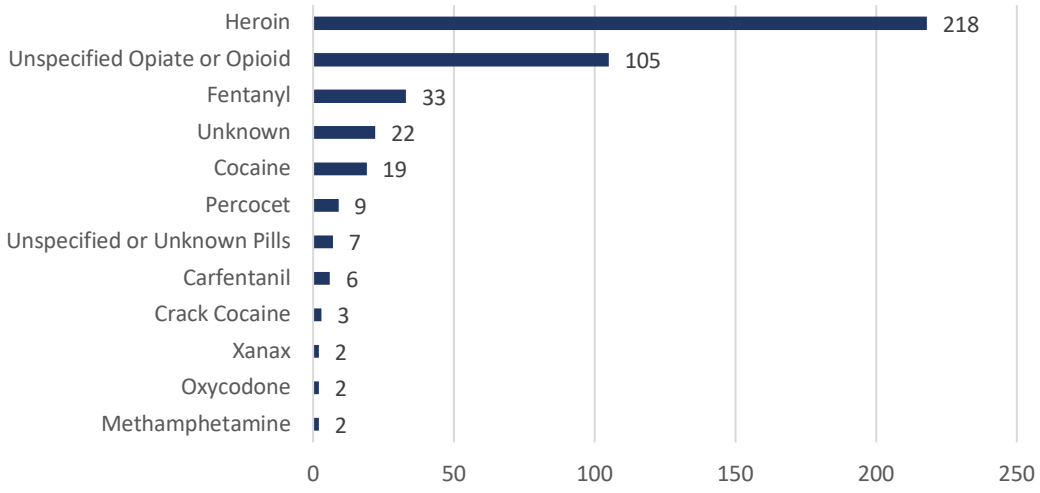
LPD officers routinely record suspected drugs that contribute to an overdose (fatal and nonfatal). More than one suspected drug could be recorded for a single incident, for example cocaine and heroin were both recorded as drugs contributing to a single overdose. A total of 437 drug type counts were included in the analysis of 402 incidents. These numbers are suspected drug types as reported on scene as testing is not completed in the field for safety purposes.

LPD officers reported illicit drugs (e.g., heroin, fentanyl, cocaine) as the suspected drug type in 64.3% (281 of 437 reported drugs) of incidents, while legal prescription medications, diverted legal prescription medications, potentially counterfeit prescription medications, and/or other pills were reported in 5% (22) of incidents. Unspecified or unknown opioids were reported in 24% (105) of incidents. The remaining reported drugs included a variety of other prescription and illicit drug types. See Figure 1 for drugs reported by LPD two or more times.

Opioids, specifically heroin, unspecified opiates or opioids, and fentanyl were the top three suspected drugs causing overdose and accounted for 81.5% of drugs reported by LPD officers (356 of 437). Percocet ranked as the highest licit drug suspected of causing an overdose (9 incidents). Although LPD did not specifically report suspected counterfeit pills, the Drug Enforcement Administration continues to warn the public about the flood of fake pills entering the United States. Counterfeit Percocet and Oxycodone pills containing fentanyl have frequently been reported nationally (DEA, 2021), as well as in Northeast Ohio (USAO, 2019; DEA, 2016).

Figure 1

Lakewood PD Suspected Drug Type at Scene, Reported Two or More Times



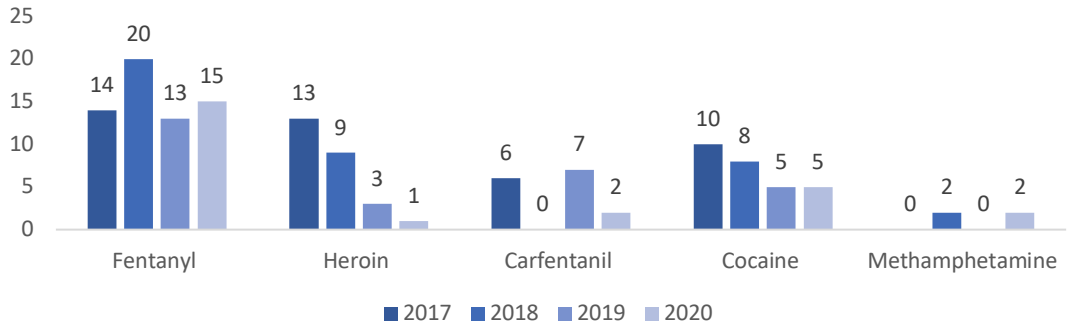
Toxicology Results for Fatal Overdoses

In addition to reporting on suspected drugs identified by LPD officers contributing to an overdose, the Begun Center also compared these police reports to death records and toxicology reports obtained through the CCMEO. LPD records report officers responding to 78 fatalities involving suspected drug overdose. Fifty-five of these fatal overdose incidents involved Lakewood residents and 23 involved individuals from other cities.[4] CCMEO death records were used to analyze further the 78 reported fatalities to which LPD responded. Seventy-two cases (92%) were ruled as accidental drug-related overdose deaths. Six of the individuals reported as deceased by LPD were not recorded in CCMEO records.

For those cases ruled by CCMEO as accidental drug-related overdose deaths, 81.9% (59 of 72) of individuals had more than one drug (ethanol not included) listed as a cause of death drug. Fentanyl and fentanyl analogues (including carfentanil) were listed as the cause of death drugs in 91.7% of cases (66 of 72). Carfentanil, one of the most potent fentanyl analogues, was listed as a cause of death drug in 20.8% of the cases (15 of 72). Cocaine was listed as a cause of death drug in 38.9% (28 of 72) of the cases, and methamphetamine was present in 5.6% (4 of 72) of fatal overdose cases. Heroin was reported in 36.1% (26 of 72) of accidental drug-related overdose deaths. Heroin as a cause of death drug steadily declined over the reporting period. Thirteen heroin-related deaths were reported in 2017 compared to one in 2020. Illicitly manufactured fentanyl has progressively supplanted heroin at the national and state levels. Law enforcement seizure reporting and toxicology reports for drugs causing overdose deaths both reflect this progressive change, and the same trend is evident in Lakewood. From 2014 to 2015, only four Lakewood residents experienced fentanyl-related deaths, but in 2016 fentanyl caused 20 deaths and has maintained a steady presence since. Figure 2 reflects the number of times a drug type was listed as a cause of death drug in the 72 fatal cases and captures only the most prevalent illicit drug types/categories during the reporting period.[5]

Figure 2

Accidental Drug-Related Overdose Deaths by Official Toxicology, 2017-2020 (n = 42)



[4] CCMEO reported 75 Lakewood residents died from drug-related causes during this period compared to the 55 Lakewood residents who died in Lakewood and were reported by LPD. These additional 20 incidents may have occurred outside of Lakewood or were not suspected drug-related overdose deaths when LPD did respond to the incident.

[5] An individual could have more than one drug type listed as a cause of death. For example, cocaine and fentanyl could both be recorded as cause of death drug in the final ruling from the CCMEO.

Demographics of Persons Experiencing Overdose

LPD reported a total of 280 (69.7%) individuals as males and 122 (30.3%) individuals as females who experienced an overdose (fatal and non-fatal). The age distribution for all overdose incidents was relatively even across ages 20 to 44 years. Males from 20 to 44 years represented 55.2% of all overdoses (222 of 402). Persons reported as white by LPD accounted for 95.5% (n = 384) of all incidents. Table 3 details these demographics.

Table 3

Demographics for Suspected Drug Overdose, LPD Incidents

	Incidents (N = 402) no. (%)
Age Group	
15-19	7 (1.7)
20-24	57 (14.2)
25-29	66 (16.4)
30-34	68 (16.9)
35-39	65 (16.2)
40-44	49 (12.2)
45-49	24 (6)
50-54	15 (3.7)
55-59	25 (6.2)
60-64	20 (5)
65+	6 (1.5)
Sex	
Female	122 (30.3)
Male	280 (69.7)
Race	
Black	17 (4.2)
White	384 (95.5)
Not Reported	1 (0.3)

Individuals Experiencing Single and Multiple Overdose Incidents

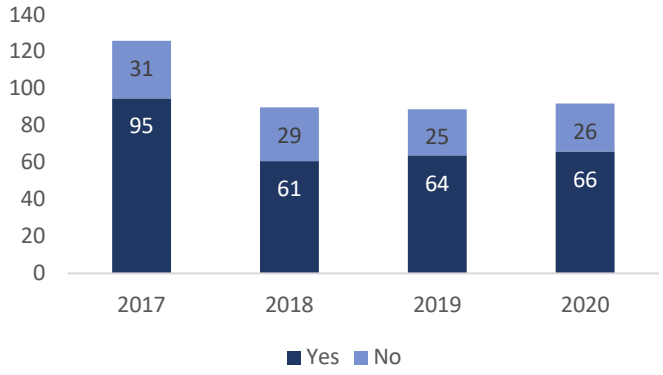
Of the 402 LPD responses to suspected overdose incidents, 305 individuals were categorized as experiencing a single overdose. The remaining 97 responses were for individuals known by the agency to have experienced at least one prior suspected overdose. The 40 individuals who experienced an overdose two or more times accounted for 24.1% of all incident responses (97 of 402). It is possible that people identified by this data set as having a previous single overdose may have experienced one or more other overdoses outside of the timeframe analyzed. Additionally, it is possible that people could have experienced an overdose(s) in locations outside of Lakewood city limits.

Naloxone

Naloxone was administered in 71.1% of all suspected overdose incidents (286 of 402). Naloxone was administered in 23% of fatal overdose incidents (18 of 78) and 82.7% of nonfatal overdose incidents (268 of 324). LPD reported the highest rate of naloxone administrations in 2017 in which 75% (95 of 126) of incidents reported that naloxone was used. The subsequent years reported only slightly lower rates (see Figure 3). Naloxone is generally not administered to individuals who are conscious/alert or those who have passed away before first responders arrive at a scene.

Figure 3

The Number of Incidents in which Naloxone was Administered or Not. Naloxone Administration, 2017-2020 (n = 397)*



*Five incidents did not report naloxone administration (yes or no)

Location of Overdose

Location of Residence

Of the 402 LPD responses to suspected overdose incidents, 64.2% (258 of 402) were for Lakewood residents. The remaining 35.8% (144 of 402) responses were for persons who resided in 45 other cities or were reported by police as "homeless." Residents of Cleveland (65 or 16.2%) were involved in the greatest number of overdose incidents aside from Lakewood residents. The top ten reported cities of residence (including the variable "homeless") are shown in Table 4.

Residency (address for an individual reported to police) or non-residency of Lakewood did not appear to have an impact on the likelihood of an individual experiencing a fatal overdose. Non-residents of Lakewood experienced a fatal overdose in 16% of cases (23 of 144) and Lakewood residents experienced a fatal overdose in 21.3% of cases (55 of 258).

Table 4

*Residence City of Persons Experiencing Overdose, Top Ten of 46 Cities**

Reported Residence (City)	Number of Overdose Incidents
Lakewood	258
Cleveland	65
Homeless	12
Parma	8
Fairview Park	4
Strongsville	3
North Olmsted	3
Westlake	2
Rocky River	2
North Royalton	2

Geospatial Overview

LPD responded to 277 unique addresses during the reporting period. There were 68 addresses in which LPD reported two or more overdose responses. Locations reported in four or more incidents by LPD are listed in Table 5.

Table 5

Suspected Drug-Overdose Incident Locations Reported Four or More Times[6]

Location Type	Number of Incidents
Hotel / Motel	13
Single-Family Dwelling	6
Residential address located in rear of the top incident location (hotel/motel)	6
Restaurant / Fast Food	6
Street Intersection	6
Apartment Building	5
Condominiums	5
Single-Family Dwelling	4
Multi-Family Dwelling	4
Restaurant / Fast Food	4
Apartment Building	4
Hotel / Motel	4

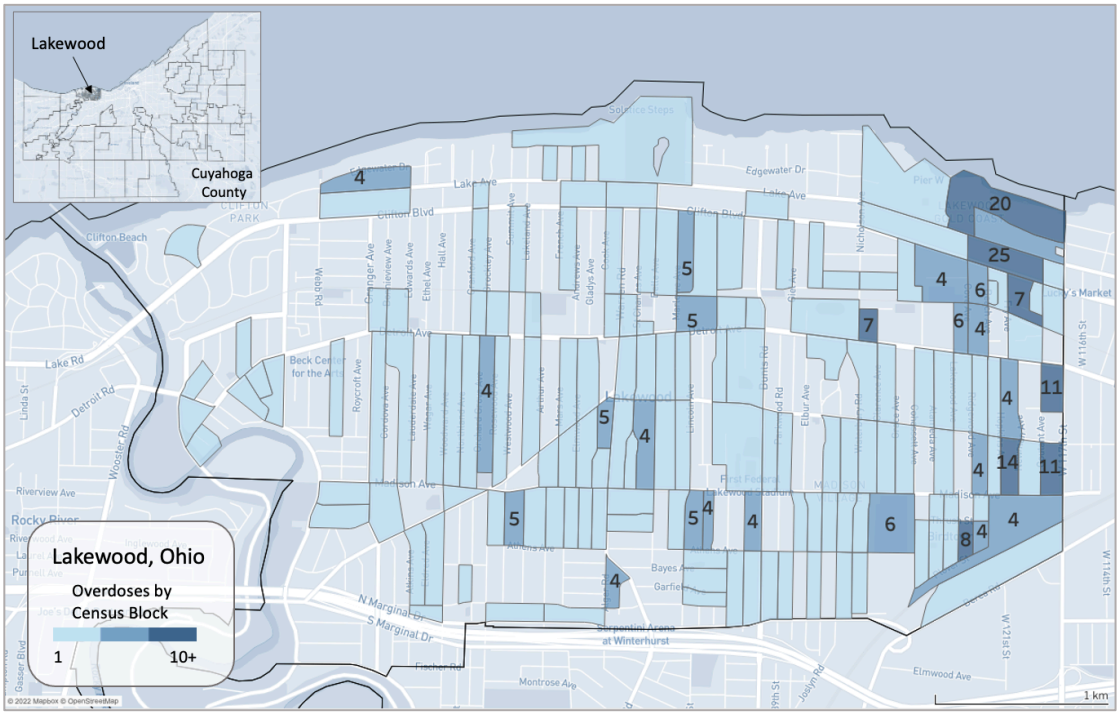
Map 1 displays 402 overdose incidents occurring in Lakewood by census block. Census blocks are colored in blue shades; darker shading indicates a higher number of incidents in that block. The northeast corner of Lakewood experienced substantially more overdose incidents than other census blocks. The eastern section of Lakewood had the highest concentration of overdose incidents but overdose incidents were spread across the city, as seen in Map 2. Census blocks in Map 1 were labeled with the number of incidents for blocks with four or more incidents.

Map 2 displays 402 overdose incidents occurring in Lakewood by incident location. Incidents are differentiated by fatal overdose incidents (red points) and nonfatal overdose incidents (gray points). Larger points indicate a higher number of overdose incidents took place at those specific locations.

[6] Location types were not reported by LPD. These top reported addresses were searched using open-source internet tools for this report.

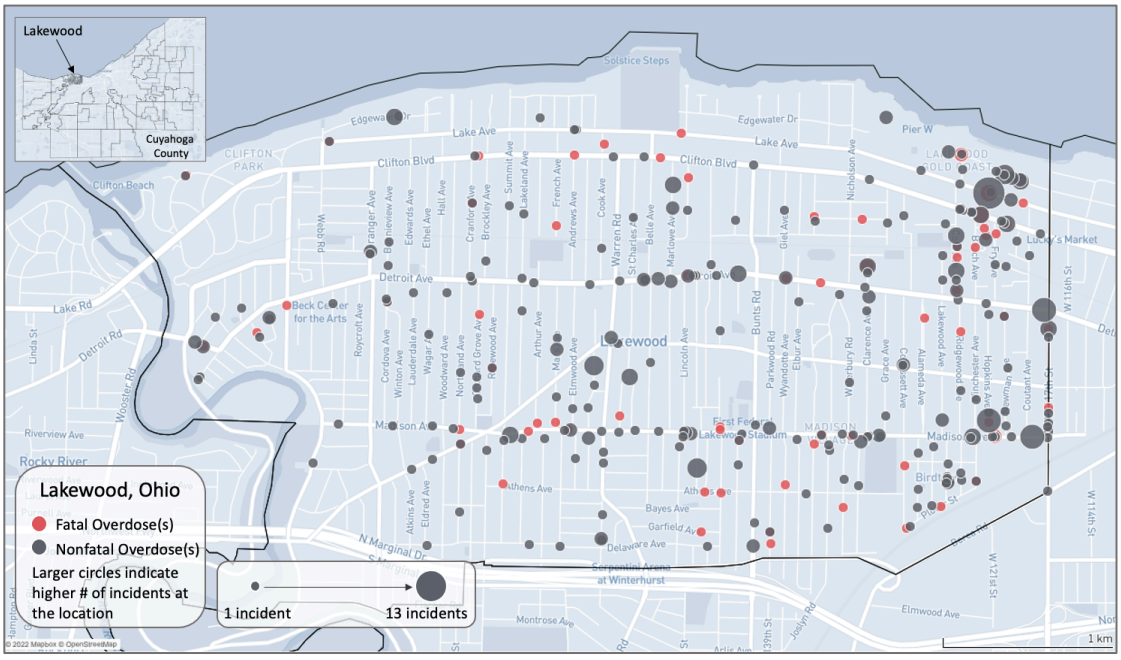
Map 1

Overdose Incidents from 2017 to 2020: Incident Count per Census Block (N = 402)



Map 2

Overdose Incidents from 2017 to 2020: Incident Location and Type (fatal or nonfatal) (N = 402)



Temporal Analysis

Year, month, day, and hour of the day were analyzed to determine if overdose patterns exist (see Figures 4, 5, and Table 6). May, June, and July accounted for the most overdose incidents for the four-year period. July had the highest number of overdose incidents across the four-year period primarily due to the spike seen in July 2017; February had the lowest total. Overdose incidents occurred most often on Fridays and were lowest on Saturdays. Incident time was not provided for 2017 and 2018 but was provided for 2019 and 2020. The peak hours for overdose were from 7 pm to 11 pm; this four-hour period accounted for 34.3% of overdose incidents (62 of 181).

Figure 4

Overdose Incidents by Yearly Trends: 2017-2020 (N=402)

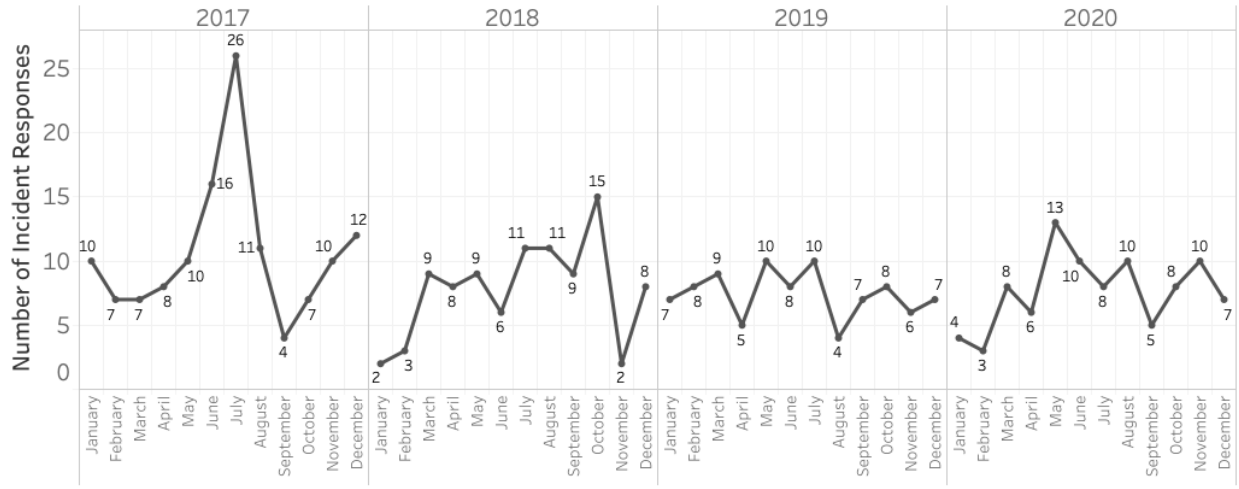


Figure 5

Overdose Incidents by Month and Year: 2017-2020 (N=402)

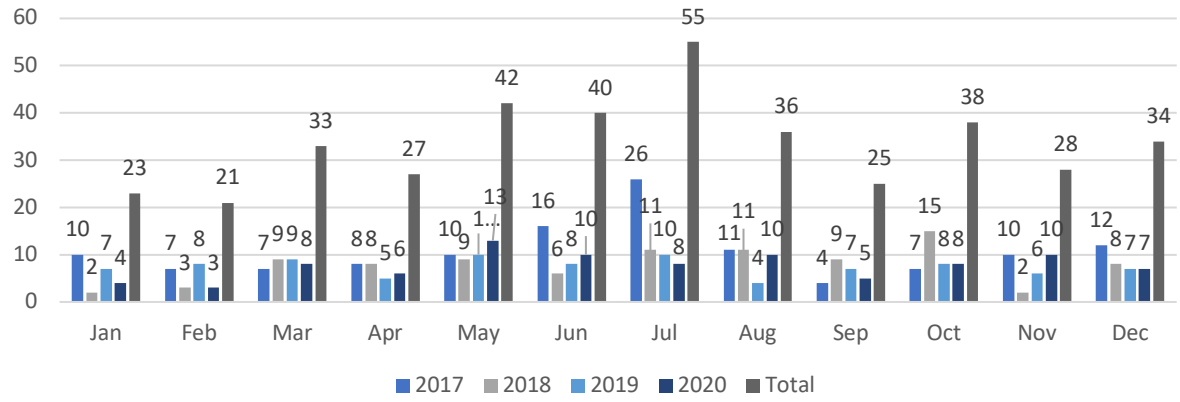


Table 6

Day of Week & Hour of Day Occurrence of Overdose Incidents: 2019-2020 (N=181)

	0*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	TOTAL
Sunday	1	0	0	0	1	0	0	0	0	0	2	1	1	3	2	1	2	1	0	2	1	4	3	1	26
Monday	1	1	1	2	0	2	0	0	0	2	0	0	2	0	2	0	1	2	1	0	0	3	2	1	23
Tuesday	1	1	0	1	3	2	0	0	0	0	2	1	1	0	2	0	0	1	4	1	1	2	2	2	27
Wednesday	1	0	1	0	0	1	0	1	0	1	1	0	2	2	0	2	0	2	2	7	2	2	0	1	28
Thursday	0	1	1	0	0	2	1	1	3	3	0	1	0	1	0	1	1	1	2	2	3	2	1	1	28
Friday	0	1	1	0	0	1	0	0	0	0	1	0	1	2	0	3	2	1	0	2	0	3	8	5	31
Saturday	1	0	0	0	0	0	0	1	0	0	0	1	1	1	2	0	0	2	0	2	4	2	1	0	18
TOTAL	5	4	4	3	4	8	1	3	3	6	6	4	8	9	8	7	6	10	9	16	11	18	17	11	181

*"0" is midnight

Limitations

Data within this report is limited in scope to the City of Lakewood and only those overdoses to which LPD officers responded. Data analysis, cleaning, linking, and merging limitations include:

- Possible errors when matching, merging, or aggregating individuals (e.g., data entry spelling errors, variations of names);
- Individual residential data errors—Responding officers often must rely on sources of information that may contain dated/expired information (e.g., utilizing driver license address for reporting residency);
- Open-source Internet search errors—CWRU employed such searches to identify the top locations where overdoses occurred in Lakewood; and
- Naloxone administration data errors—Reporting by LPD may not include incidents in which bystanders, friends, family, etc., may have administered naloxone and *not* reported to LPD.

References

U.S. Census Bureau. (2022). *Quick facts: Lakewood City, Ohio, United States.* https://www.census.gov/quickfacts/lakewoodcityohio

Lakewood Police Department: The City of Lakewood, Ohio. Lakewood, Ohio. (2021). Retrieved October 22, 2021, from https://www.lakewoodoh.gov/police/

Drug Enforcement Administration. (2021). *2020 National Drug Threat Assessment, March 2021.* U.S. Department of Justice. https://www.dea.gov/sites/default/files/2021-02/DIR-008-21%202020%20National%20Drug%20Threat%20Assessment_WEB.pdf

U.S. Attorney's Office Northern District of Ohio (USAO-NDOH). (2019). *Akron man indicted for stamping pills containing fentanyl and other drugs to look like Percocet, as well as firearms charges.* United States Department of Justice (DOJ). https://www.justice.gov/usao-ndoh/pr/akron-man-indicted- stamping-pills-containing-fentanyl-and-other-drugs-look-percocet

Drug Enforcement Administration. (2016). Counterfeit Prescription Pills Containing Fentanyl: A Global Threat, July 2016. U.S. Department of Justice. https://content.govdelivery.com/attachments/USDOJDEA/2016/07/22/file_attachments/590360/f entanyl%2Bpills%2Breport.pdf