2017 AMR and MCAC Combined Overdose Data for all Incidents Where Narcan was Administered

Working Paper #CLEAN 2018 -14

Janelle Duda-Banwar
Senior Researcher
Center for Public Safety Initiatives
Rochester Institute of Technology
jmdgcj@rit.edu

Kayla Macano
Research Associate
Center for Public Safety Initiatives
kmmgcj@rit.edu

John Klofas, PhD
Director *Emeritus*, Center for Public Safety Initiatives
John.Klofas@rit.edu

Irshad Altheimer, PhD
Director, Center for Public Safety Initiatives
iaxgcj@rit.edu

Map 1. Opioid-Related Overdose Responses in Rochester in 2017, Total = 908[1]
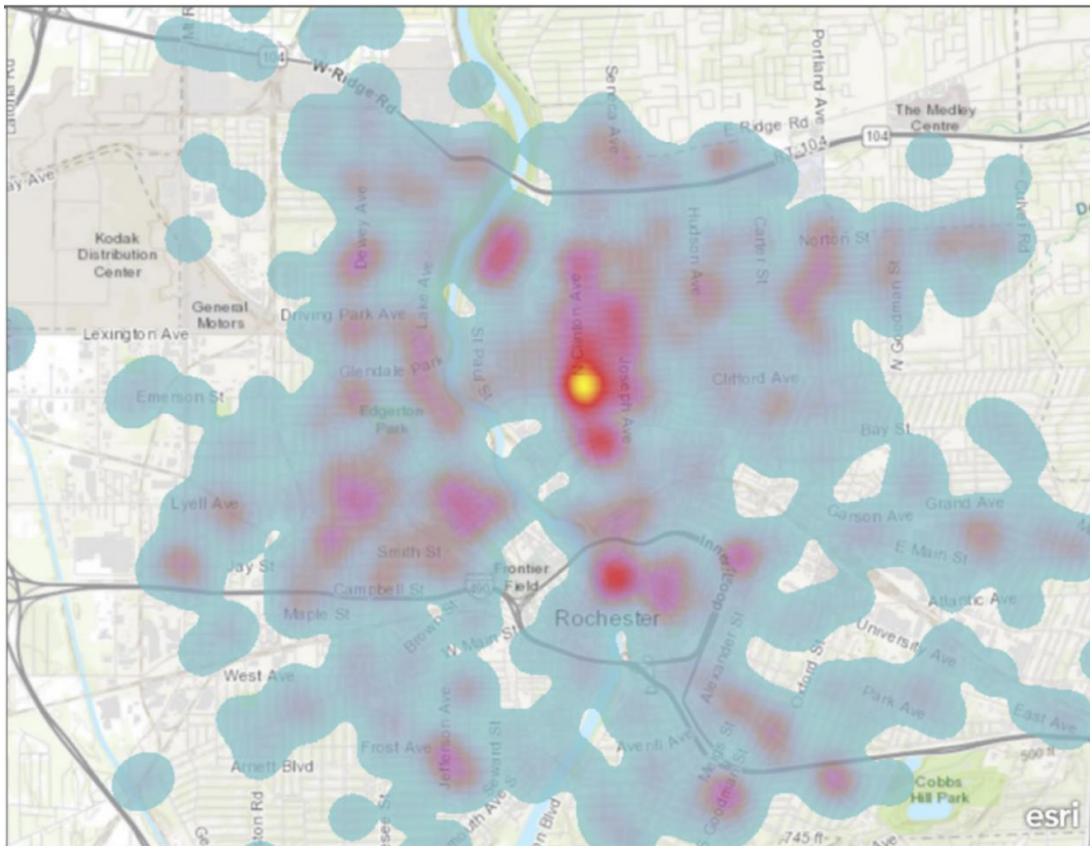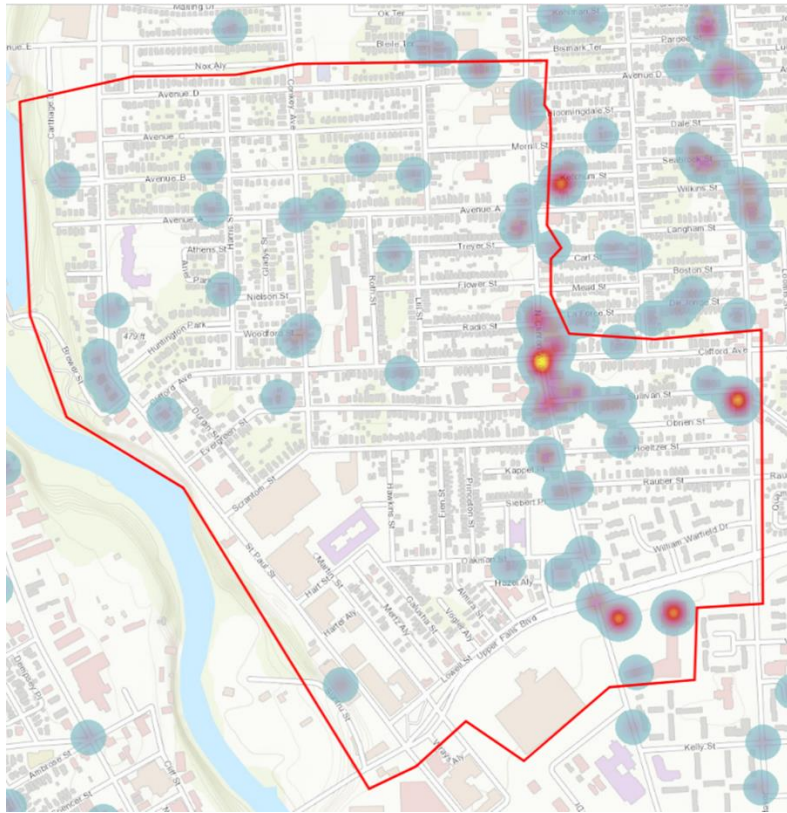

In 2017, there were 908 opioid-related overdoses in Rochester where the paramedics and/or law enforcement responded to the scene. The heat map above indicates that the highest concentration of opioid-related overdoses in the city is in the project's target area, specifically at the Clinton and Clifford intersection.

-A few notes about the data-

- The data include fatal and non-fatal overdoses.
- The AMR data presented are from the AMR Opioid Overdose database, which includes only cases when Narcan was administered; the MCAC data presented are from the MCAC Overdose database and includes only cases that occurred in the City and Narcan was administered.
- The data do not include individuals who walked into the hospital on their own, nor does it include instances when someone overdosed but 911 was not contacted.
- It is possible that there were instances when an individual received Narcan due to their symptoms, but it was not an opioid-related overdose. However, per conversations with the data providers, it is believed that these types of cases are uncommon in the dataset.
- Census demographic data are compared to overdose demographics; note that the census tracts are larger than the Project CLEAN Target Area

---

[1] There were 912 total overdoses, but four could not be mapped due to missing data

Map 2. Opioid-Related Overdose Responses in Project CLEAN Target Area in 2017, n = 83

The map above is a heat map that shows the concentration of opioid-related overdose locations within the project area. There were 85 opioid overdoses known to law enforcement and AMR in the project area in 2017. The two yellow spots along the southern border are for the McDonald's and the Tops plaza. The yellow spot to the east along Joseph Ave is the Catholic Family Center's Francis Center and Community Resources Service Program. The two yellow spots merged in the middle, at Clinton and Clifford represent the multiple overdoses that happened there. Note the concentration of overdoses along the Clinton Avenue Corridor. In the target area, repeat locations in 2017 are along the main corridors (N. Clinton, Upper Falls, and Joseph) while the single incident locations are more common in the residential areas.

Map 3. Opioid-Related Overdose Responses in 2017 that occur within .25-, .5-, and 1-mile Radius of Clinton and Clifford Intersection in Project CLEAN Target Area
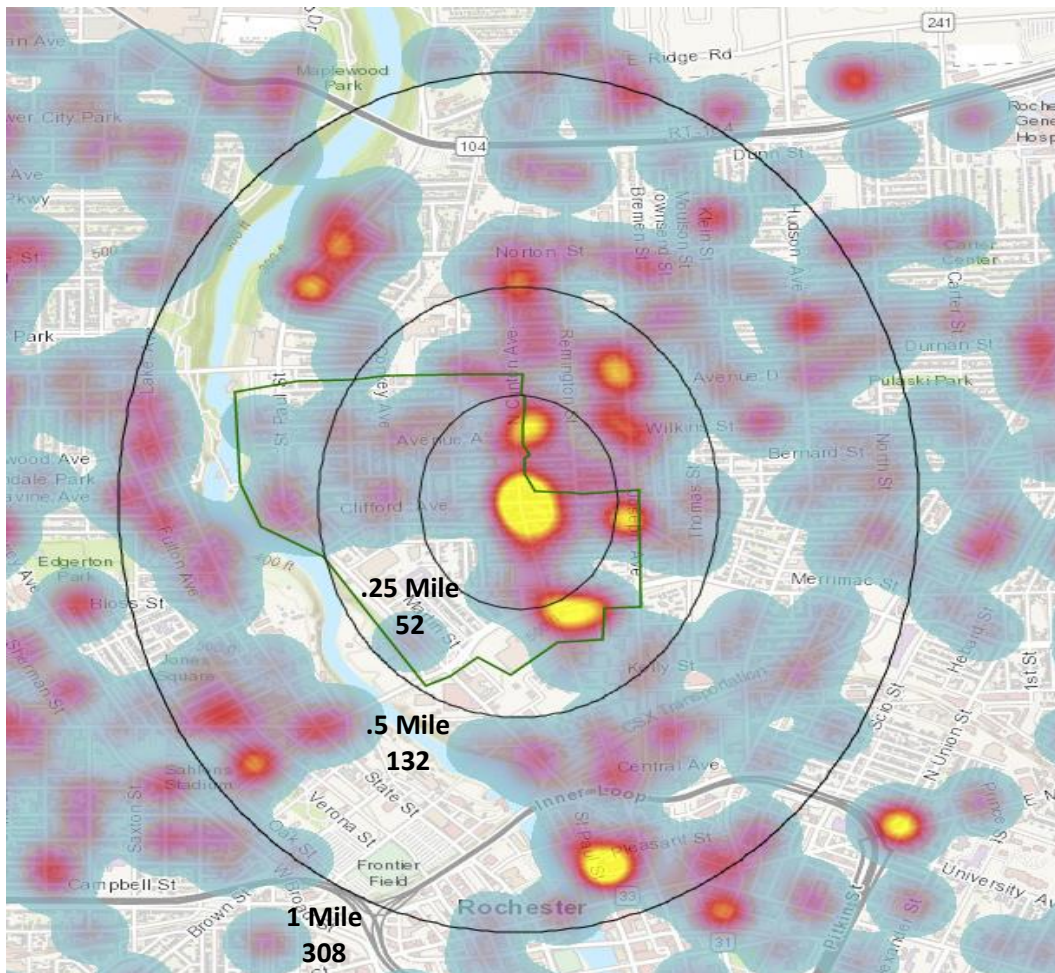
Next, we were interested in how many overdoses occurred within a specific radius of the Clinton and Clifford intersection. This intersection is along the main corridor of the El Camino neighborhood. If you are standing in this intersection, within a quarter mile radius there were 52 opioid-related overdoses, within a half mile radius there were 132 overdoses, and within 1 mile there were 308 overdoses in only a one year period. There were 908 total overdoses across the city. Rochester is 23 square miles, yet one-third of all the opioid-related overdoses in Rochester occurred within a 1 mile radius of the Clinton and Clifford intersection. This concentration of overdoses has an impact on this residential neighborhood, where people live, schools and businesses operate, parks exist, and people are trying to go about their everyday activities. The nature of heroin is that individuals need to use the drug as soon as they get it on order to subdue withdrawal symptoms. Therefore, people are purchasing heroin/fentanyl in the neighborhood, administering it almost immediately (in a vacant lot or house, out in the open, in a bathroom, or in a car), and then overdosing where they use, in this same neighborhood.

Demographic Information and Comparison

	City of Rochester		Project CLEAN Target Area	
Opioid Overdoses in Rochester (MCAC Database Only) **January 1, 2017 – September 31, 2018**				
	Total [2]	**Overdoses (N = 637)**	**Total**	**Overdoses (N = 85)**
Gender	49% Male	72% Male	51% Male	82% Male
Average Age	32 Years of Age	37 Years of Age	30 Years of Age	39 Years of Age
Race / Ethnicity	37% White NH 18% Hispanic / Latino, Any Race	67% White NH 18% White Hispanic	4% White NH 18% Hispanic / Latino[3]	41% White NH 47% White Hispanic
Residence	---	73% Rochester	---	79% Rochester
Peak Time of Overdose	---	6 PM	---	8 PM
Peak Day of Overdose	---	Wed – Sat	---	Wed – Sat

Census data were mapped, and tracts that overlap with the Project CLEAN Target Area were extracted and analyzed. The Target Area does not perfectly line up with the census tracts, so the data cover a slightly larger area.

MCAC overdose data has been collected since 2017, and the demographic information has been analyzed through September 2018. Between these dates, there have been 637 fatal and non-fatal overdoses across the City of Rochester, and 85 overdoses in the Project CLEAN Target Area. The two sides of the table above compare the census demographics and overdose victim demographics between the entire City and the Target Area.

---

[2] https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml?src=bkmk
[3] Researchers believe there may be more people who identify as Hispanic / Latino but are under '2 or more races', because the census information shows that Spanish is the primary language spoken in at least 30% of homes

Discussion

The maps presented provide information on the location and concentration of opioid-related overdoses in the city of Rochester and in the project target area. Data from 2017 indicate that there are specific locations within the project target area that are in need of intervention. Some of the interventions may include opioid overdose prevention training, street outreach efforts, enforcement approaches, and built-environment changes to name a few. The more recent 2018 overdose data are consistent with what is happening across the country: opioid-related overdoses continue to be on the rise. It is unknown, however, as to whether the pool of individuals living with an opioid-related addiction is increasing, or if the number remains consistent, but that the increase in overdoses is due to due to the increased availability of fentanyl (much more potent and lethal than heroin). This will be important to understand to address the overdoses.

Additionally, demographic information can help describe who is using opioids, who is overdoing, and influence the types of interventions that are employed. Trends between citywide overdoses and Target Area overdoses are similar, but these are exaggerated from the census information. This indicates the populations who are more likely to be using opioids.