

**2019 Monroe County Opioid Overdoses:
Data Analysis for Project CLEAN**

CLEAN-2020-01

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2019 Monroe County Overdose Data Executive Summary

Researchers from the Center for Public Safety Initiatives at RIT analyzed the 2019 overdose data tracked by the Monroe County Heroin Task Force. This work is part of CPSI's role as research partner on the federally funded Project CLEAN, led by Ibero-American Development Corporation, which aims to disrupt the open-air heroin market in Northeast Rochester.

Key findings include:

- Overdoses are down 26% from 2018 (n = 1133) to 2019 (n = 840)
- While the overall number of overdoses in Monroe County towns/villages and Rochester decreased, the *proportion* of overdoses that occurred in the towns/villages increased from 2018 (36%) to 2019 (43%)
- Greece, Brockport, and Ogden responded to a higher number of overdoses in 2019 than in 2018
- 15% of all overdoses continue to be fatal overdoses
- The majority of overdose victims in Monroe County continue to be male (70%), and white (73%), including a disproportionate number of white overdose victims in Rochester (66%) while 36% of the general population in Rochester is white
- Overdoses continue to peak in the warmer summer months
- The peak times continue to be in the evening, 4 – 9 pm, with very few overdoses occurring in the early morning hours
- Overdose victims are slightly older than in previous years
- RPD's Clinton Patrol section responded to 1/3rd of all Rochester overdoses
- An area of RPD's Lake Patrol section emerged as a hot spot in 2019
- The vast majority of overdoses in the towns/villages occurred in victims' homes or other private residences in 2018 and 2019; in Rochester, 1/3rd of overdoses occurred in private residences while a quarter occurred outside/in the street, demonstrating the open-air nature of opioid use in Rochester
- The overall numbers of overdoses are decreasing and, across Rochester, the overdoses are becoming slightly less concentrated in one geographic location
- Interventions, including the wide availability of Narcan, residents' No Más efforts in the hardest hit neighborhood (El Camino in Northeast Rochester), and RPD's engagement in walking patrols along the North Clinton corridor, likely contributed to the slight decrease and spreading out of overdoses in Rochester; efforts like these should continue

Introduction

The focus of this paper is on opioid overdoses for 2019. The data presented in this paper are from the Monroe Crime Analysis Center's Heroin Task Force Overdose Database. The data were analyzed as part of the Center for Public Safety Initiatives ongoing work with Project CLEAN, a federally funded program run through Ibero-American Development Corporation to disrupt the open-air heroin market in Northeast Rochester. This data is compared with the 2018 overdose data. The data represents *only overdoses known to law enforcement*. It is unknown how many overdoses occurred without emergency personnel being contacted.

Overdose Incidence

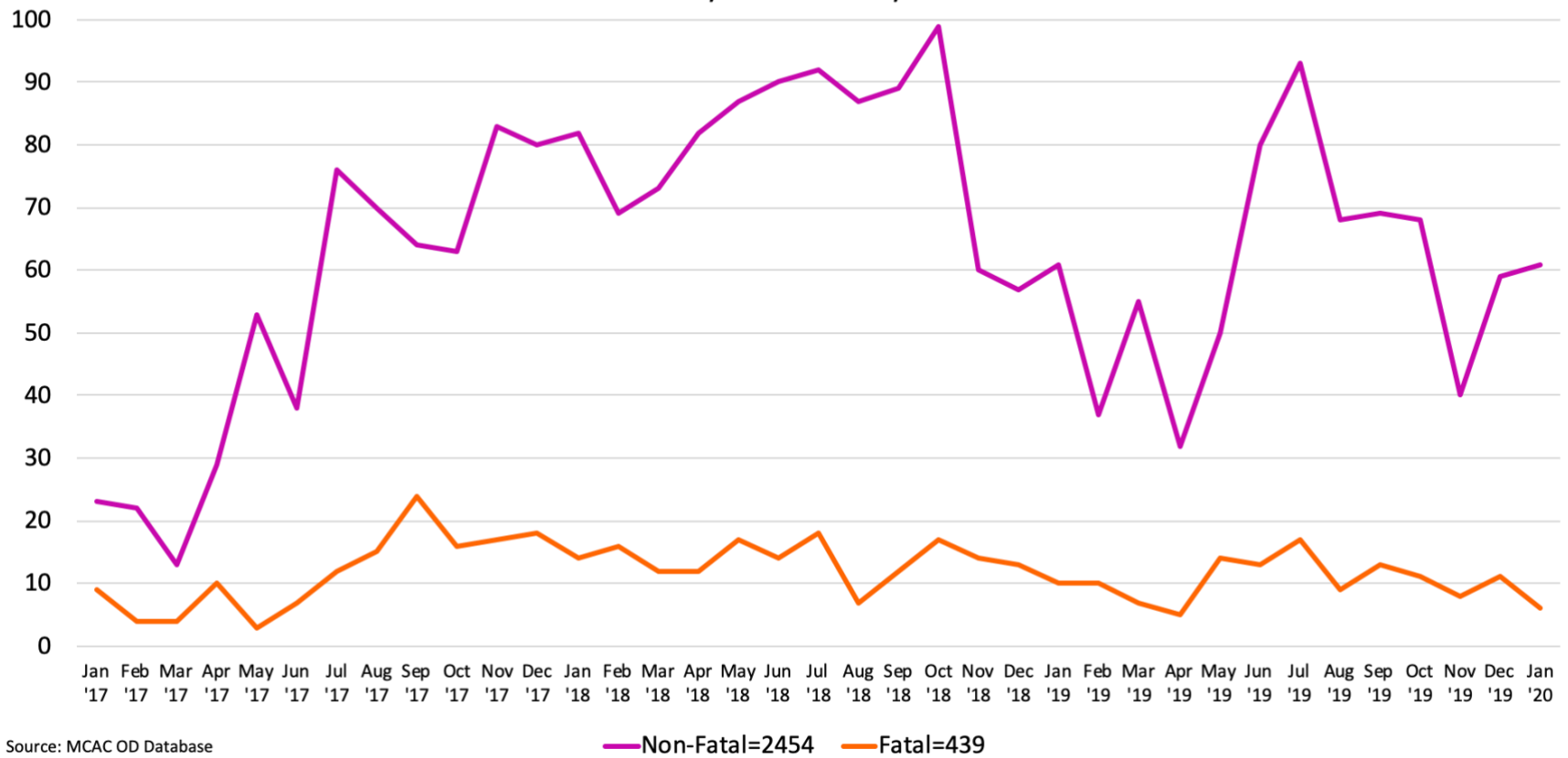
In 2019, there were 840 overdoses in Monroe County, of which 15.2% were fatal (n=128). This is a 26% decrease compared with the total number of overdoses for 2018 (n=1133), of which 14.7% (n=166) were fatal. The reductions in overdoses could be associated with the increased availability of the opioid reversal medication, Narcan, potentially reducing the likelihood of calling 911 for an overdose. The decrease in overdoses known to law enforcement is consistent with the trend across the nation, with opioid overdose fatalities on a slight decline in 2018 from 2017 (4.1% decrease, Centers for Disease Control and Prevention) (National Institute on Drug Abuse).

	2018						2019					
	Fatal		Nonfatal		Total		Fatal		Nonfatal		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Rochester	91	55%	638	66%	729	64%	71	55%	399	56%	470	57%
Monroe County Towns/Villages	75	45%	329	34%	404	36%	57	45%	313	44%	370	43%
Monroe County Total	166	100%	967	100%	1133	100%	128	100%	712	100%	840	100%

The chart on the next page shows the number of fatal and nonfatal overdoses in Monroe County over the last three years. The data indicate that nonfatal and fatal overdoses began a decline in November 2018 that continued through June of 2019 when they picked up again. As of this publication, overdoses have continued to remain steady, with 68 overdoses in January 2020 (7 of which were fatal) and 69 overdoses in February 2020 (16 of which were fatal).

Data Note: As the country and local jurisdictions were being hit with the sharply increasing opioid problem, new ways of tracking these overdoses were developed and refined over time. Therefore, exercise caution when using the overdose data from 2017. The data presented are likely an underestimate of the number of overdoses known to law enforcement. Further, because of the nature of overdoses, it is difficult to confidently identify what type of drug led to the overdose based on the 911 response. Initially the Monroe County Heroin Task Force collected data on what type of drug they reasonably thought had led to the overdose; over 90% of the overdoses were categorized as opioid overdoses. The Heroin Task Force stopped tracking this variable in the most recent year. While we will present the data as opioid overdoses, it is possible that for some overdoses, the main contributor is another drug, such as cocaine.

Fatal and Non-Fatal Opioid Overdoses known to Law Enforcement
in Monroe County
January 2017 - January 2020



Responding Agency

In 2019, 470 of the overdoses occurred in Rochester (defined as RPD or U of R being the responding agency). While there were fewer *overall* overdoses in Monroe County in 2019 compared to 2018, a smaller proportion of overdoses occurred in Rochester in 2019 (55.8%), compared to 2018 (64.3%). The Monroe County Sheriff's Office responded to a slight increase in the proportion of overdoses from 2018 (12.9%) to 2019 (13.8%), but Greece almost doubled in proportion of overdoses from 2018 (8%) to 2019 (14%).

While overdoses are on an overall downward trend across Monroe County, the proportion of overdoses occurring outside of Rochester increased in 2019. This could be related to targeted efforts in 2018 that led to overdoses being less concentrated in specific geographic locations.

Responding Agency, 2019

Agency	Frequency	Percentage
ROCHESTER	469	55.8%
MCSO	116	13.8%
GREECE	121	14.4%
IRONDEQUOIT	47	5.6%
GATES	26	3.1%
OGDEN	16	1.9%
BRIGHTON	11	1.3%
E ROCHESTER	13	1.6%
WEBSTER	11	1.3%
BROCKPORT	7	0.8%
NYSP	2	0.2%
U of R	1	0.1%
Total	840	100%

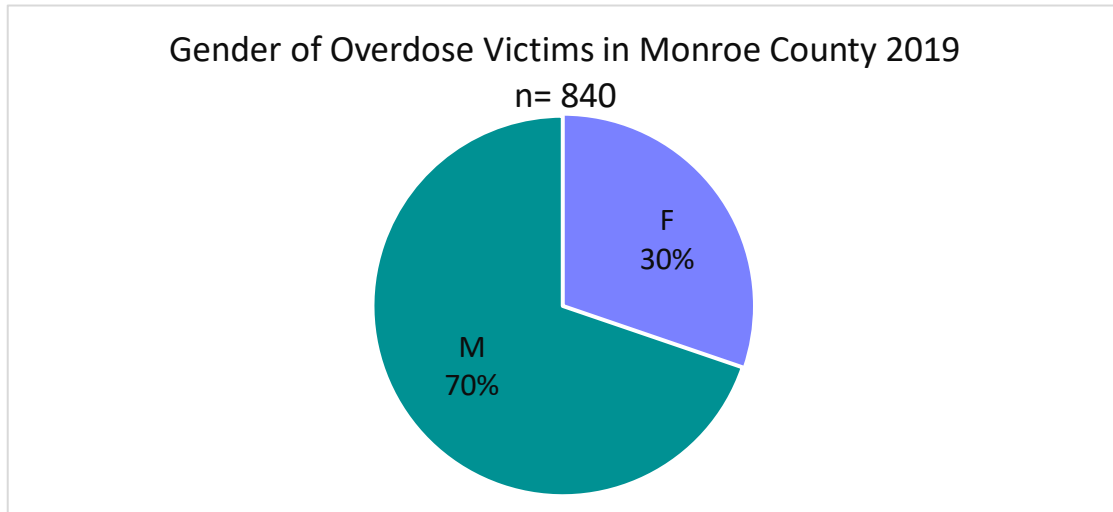
Responding Agency, 2018

Agency	Frequency	Percentage
ROCHESTER	728	64.3%
MCSO	146	12.9%
GREECE	90	7.9%
IRONDEQUOIT	53	4.7%
GATES	41	3.6%
WEBSTER	25	2.2%
OGDEN	12	1.1%
BRIGHTON	13	1.1%
E ROCHESTER	10	0.9%
FAIRPORT	11	1.0%
BROCKPORT	3	0.3%
U of R	1	0.1%
Total	1133	100.0%

In the next section we provide data on gender, race/ethnicity, and age of overdose victims for 2019. We then provide information on month, time, day of week, town residence, and responding agency. We then provide a map of the location of the overdoses and conclude with the location type of the overdoses.

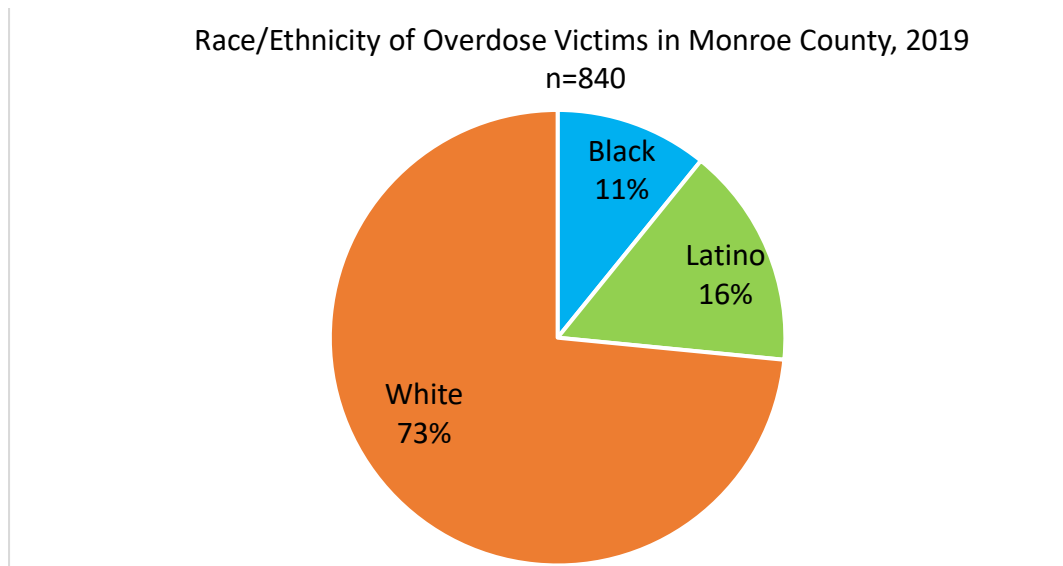
Gender

The majority of overdose victims continue to be male which is consistent with the overdoses data from 2018.



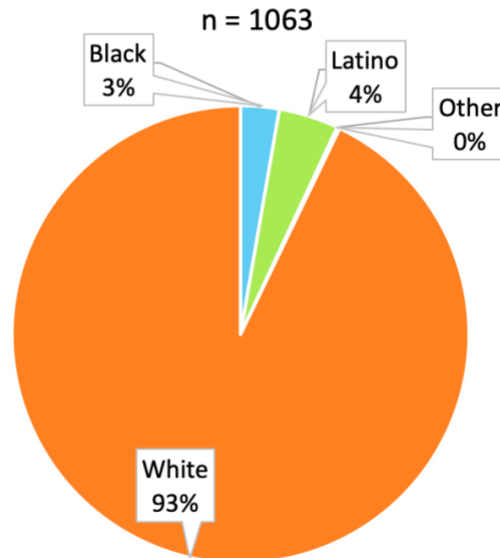
Race/ethnicity

The majority of overdose victims continue to be white (n = 617), which is also consistent with the 2018 data. This is followed by Latino victims (n = 132) and Black victims (n = 91). Note that in the chart below, one Latino victim was identified as black Latino in the data; this individual was categorized as Latino for the purposes of this paper.

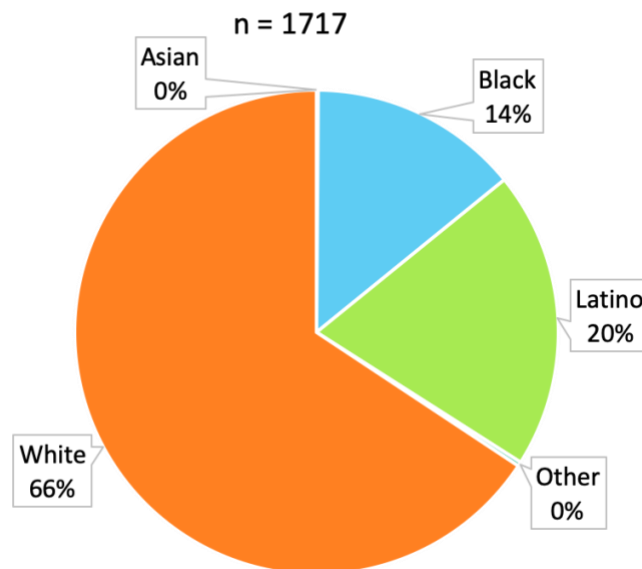


Another way to analyze the data is to compare overdoses that occurred in towns and villages to overdoses that occurred in Rochester. To do this, we analyzed race/ethnicity data for three years, 2017-2019. The results are shown below and indicate that overdose victims in the towns/counties are overwhelmingly white (93%); however in Rochester, the demographic proportions shift differently. Nearly two-thirds of the overdose victims are white in the city of Rochester, yet only 36% of the entire Rochester population is white, non-Latino (US Census). This indicates that there is a disproportionate amount of white individuals overdosing in the city of Rochester.

**Race/Ethnicity of Monroe County Town/Village
Overdose Victims, 2017 - 2019**

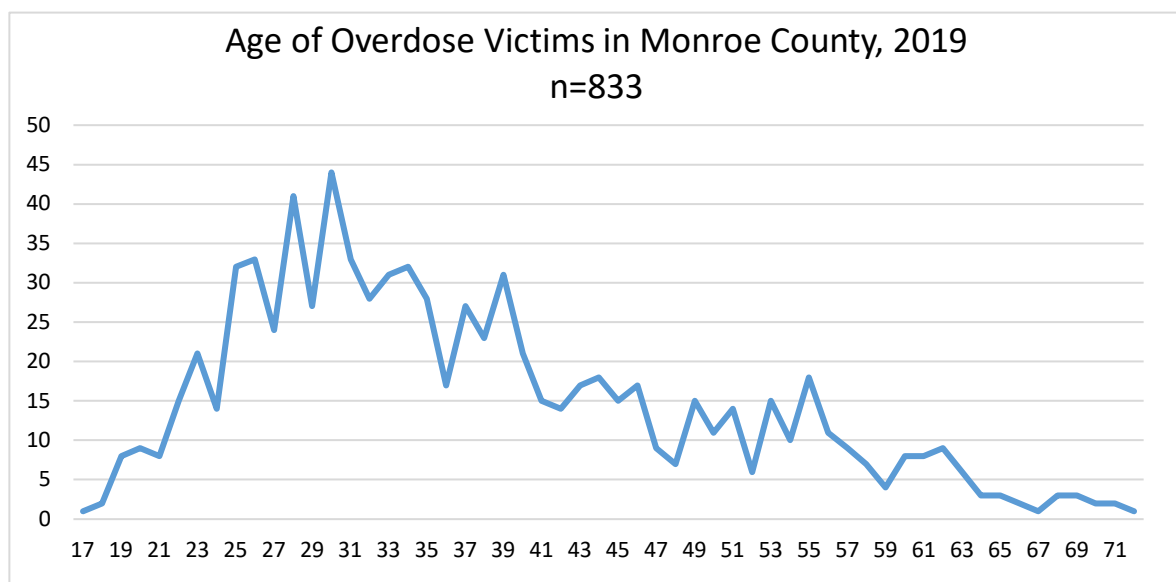


**Race/Ethnicity of Overdose Victims in Rochester,
2017 - 2019**



Age

The most common age (mode) was 30 years old; average age was 37.7 years old. This is also similar with the overdoses in 2018. The average age in 2018 was slightly lower, at 36.1 years old (One count of age “0” was removed from analysis).



County of Residence

In 2019, 753 (90%) of the 840 overdose victims were Monroe County residents, followed by Wayne County (n = 18) and Ontario County (n = 17) residents. Of the 1133 overdoses in 2018, 988 were Monroe County residents (87%), followed by Ontario (n = 25) and Livingston (n = 20).

Town of Residence

For 2019, nearly half of the overdose victims were Rochester residents (by zip code). There were 81 different cities/towns represented. This was similar for 2018 but with 94 different towns/cities represented. **Caution** should be taken with interpreting the meaning because, in most cases, town residence is determined by mailing address, which is a poor indicator of the actual town the individual lives in. For example, someone can have a Rochester zip code (e.g., 14625, 14621, 14615) but live in the town of Penfield, Irondequoit, or Greece.

2019 Town Residence for Overdoses (n = 840)

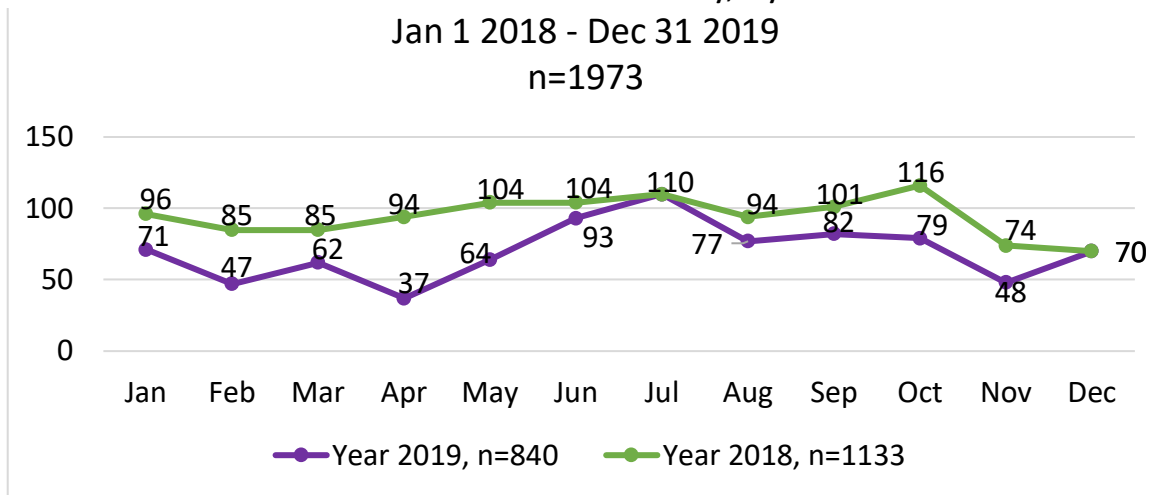
Town Residence	Frequency	Percent of Total
Rochester	413	49.17%
Greece	94	11.19%
Irondequoit	33	3.93%
Penfield	30	3.57%
Gates	28	3.33%
Henrietta	18	2.14%
Remainder	224	26.67%

2018 Town Residence for Overdoses (n = 1133)

Town Residence	Frequency	Percent of Total
Rochester	560	49.43%
Greece	102	9.00%
Irondequoit	47	4.15%
Penfield	37	3.27%
Webster	34	3.00%
Gates	36	3.18%
Remainder	317	27.98%

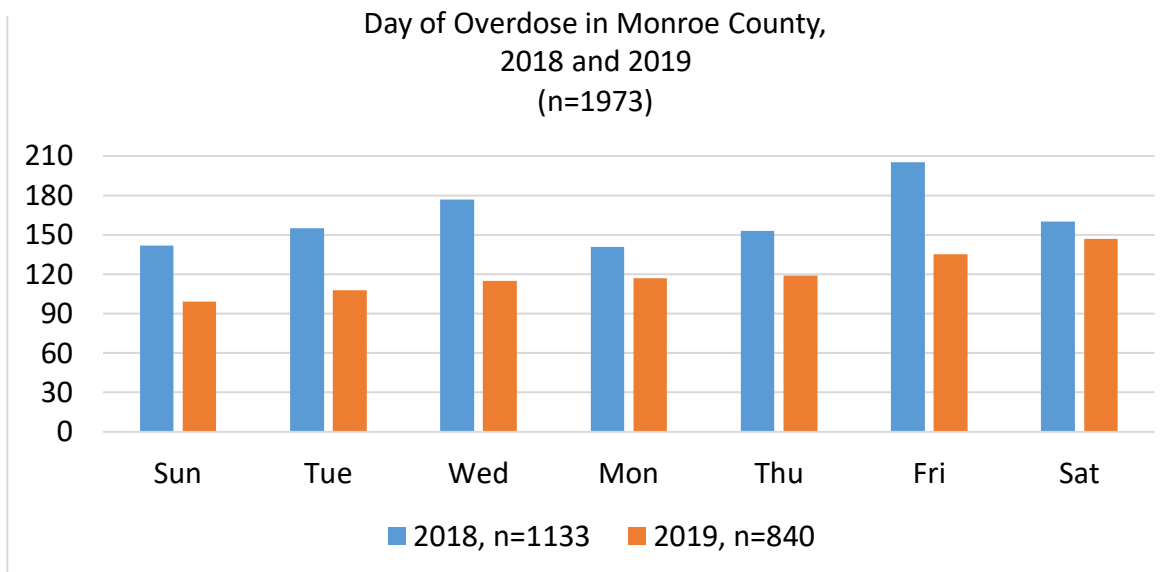
Month

During 2019, July had the highest number of overdoses, followed by June; with April having the lowest number. Overdoses were overall lower January through April and then began to pick up in the warmer months. In contrast, the number of overdoses were more stable by month in 2018, with a peak in October and low in November/December.



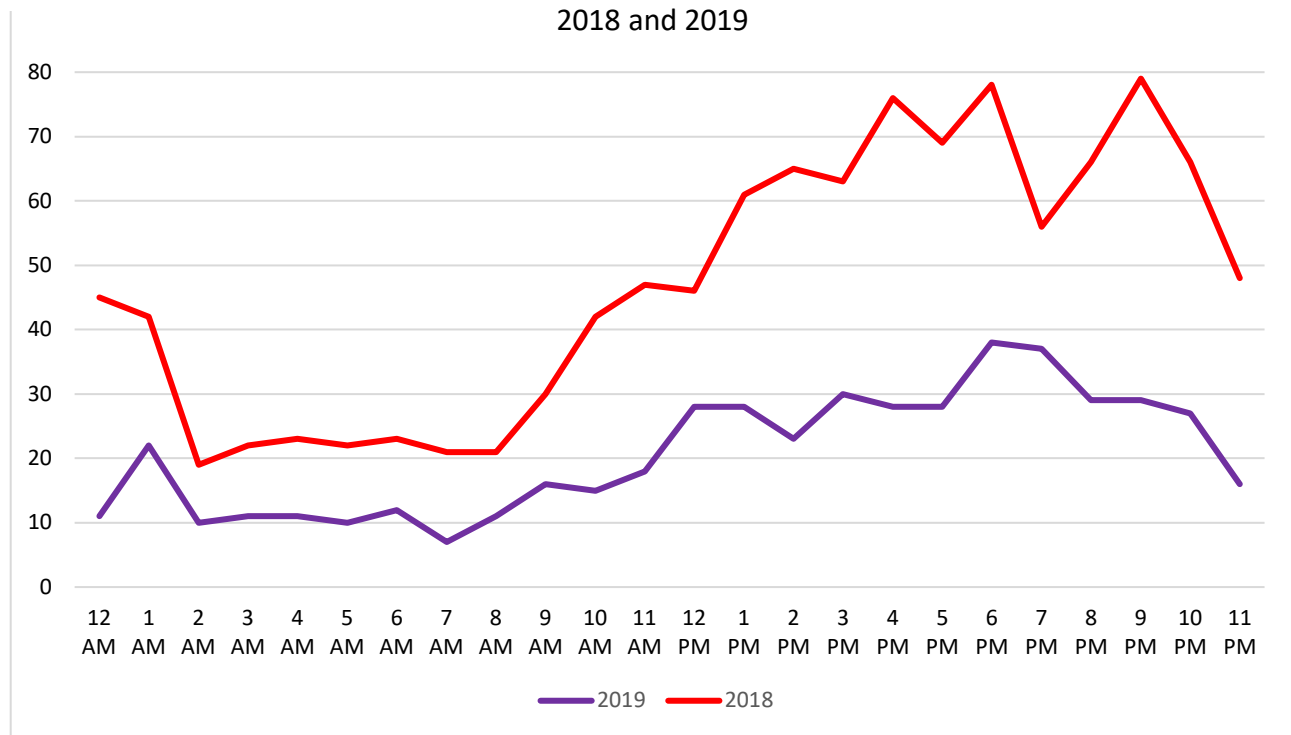
Day of Week

The number of overdoses for day of the week in 2019 have been relatively stable, however a slight increase is seen on Saturday and Friday of 2019. A similar distribution of overdoses during 2018 is seen below, with peaks on Friday and Wednesday.



Time of Day

In terms of time of day, a similar pattern emerges for both years, with lower numbers between 11 pm and 9 am, followed by a steady increase during daytime hours. However, the peak in 2019 is 6 and 7 pm, and in 2018 it was 6 and 9 pm.



*Missing time (2018, total of 3; 2019, total of 345).

Rochester Police Department Car Beat

Of the 470 overdoses that occurred within the city of Rochester in 2019, car beats 277, 247, and 291 responded to the highest volume. This was consistent with 2018 for car beats 277 and 247 (both in Clinton Patrol Section). Car beat 291 (in Lake Patrol Section) doubled in proportion of OD responses from 2018 (3%) to 2019 (6%). This beat covers Lyle, Jay, and Child Streets. During 2019, 15.5% of all Rochester overdoses occurred in car beats 247 and 277 (Clinton Section); 14.7% of Rochester overdoses occurred in these two beats in 2018. Please see appendix A for a map of the police sections and car beats in addition to charts showing the number of overdoses and proportion of overdoses for *each* RPD car beat.

Clinton Patrol Section

Project CLEAN efforts are focused in the Clinton section of RPD, particularly car beats 277 and 247. This section and these car beats respond to the highest proportion of overdoses across the County. This is true for both 2019 and 2018. The Clinton section responded to more than a third of all the overdoses in the city of Rochester in 2018 and 2019. Car beats 277 and 247 continue to have the highest volume of overdoses.

Just Clinton Section 2019:

Car Beat	2019 Frequency	% of Roc ODs in the Car Beat
277	43	9.1%
247	30	6.4%
227	22	4.7%
287	16	3.4%
257	15	3.2%
217	13	2.8%
237	9	1.9%
207	7	1.5%
267	4	0.9%
297	3	0.6%
Clinton Total	162	34.5%
Roc (Incl. Clinton) Total	470	100.0%

Just Clinton Section 2018:

RPD Car Beat	2018 Frequency	% of Roc ODs in the Car Beat
277	58	8.0%
247	49	6.7%
217	44	6.0%
287	33	4.5%
207	31	4.3%
227	29	4.0%
257	27	3.7%
237	11	1.5%
267	10	1.4%
297	9	1.2%
Clinton Total	301	41.3%
Roc (Incl. Clinton) Total	729	100.0%

Overdose Town/City Location (Determined by Zip Code)

The tables below show the number and percent of responses that occurred in the towns across Monroe County. As indicated on page 2, there has been a 26% reduction in the total number of overdoses known to law enforcement in Monroe County from 2018 to 2019. However, the proportion of overdoses in Rochester (based on zip code) has slightly decreased to 60% in 2019 from 66% in 2018. Gates and Irondequoit have a slight decrease in its actual numbers of overdoses, while Greece, Penfield, and Chili have seen a slight increase in its actual numbers of overdoses. Webster, Fairport and Brighton had fewer overdoses compared to 2018. It is useful to compare this data to the responding agency data on page 4.

Overdose Town/City Location (determined by Zip Code) 2019

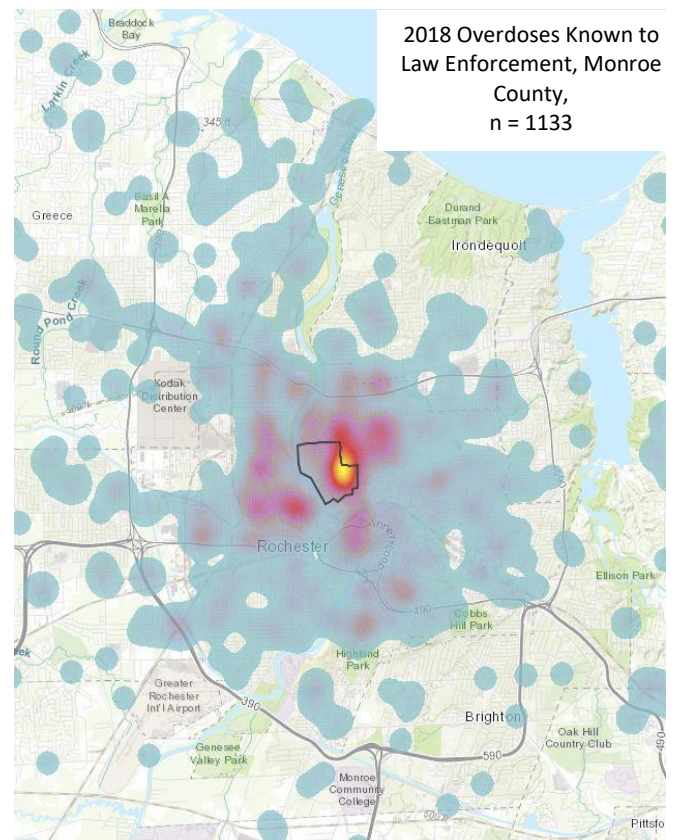
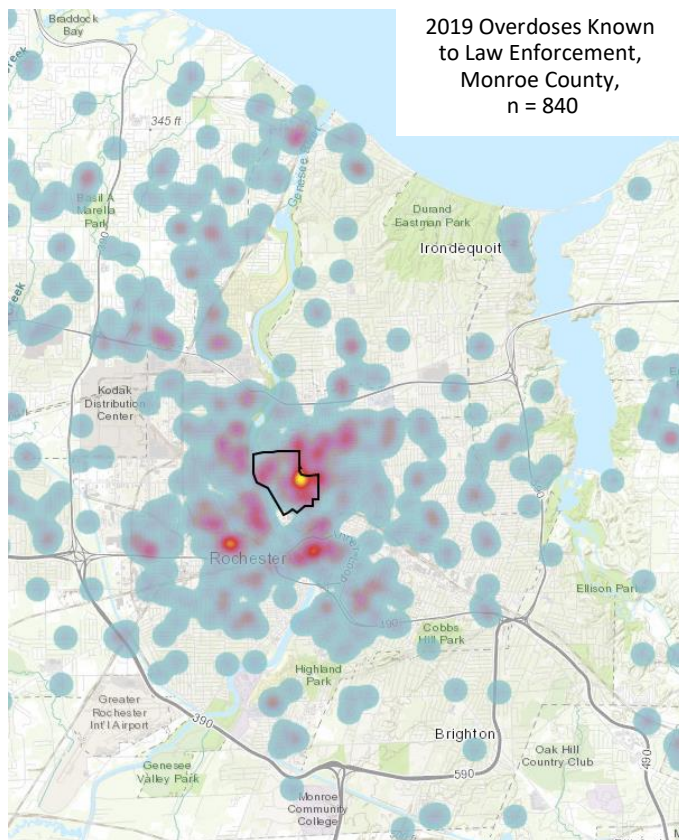
Location	Frequency	% of Total
Rochester	502	59.76%
Greece	105	12.50%
Irondequoit	41	4.88%
Penfield	32	3.81%
Gates	23	2.74%
Henrietta	20	2.38%
Chili	17	2.02%
East Rochester	13	1.55%
Webster	12	1.43%
Brighton	11	1.31%
Pittsford	9	1.07%
Spencerport	9	1.07%
Brockport	7	0.83%
Perinton	7	0.83%
Ogden	6	0.71%
Odgen	4	0.48%
Churchville	3	0.36%
Parma	3	0.36%
Rush	3	0.36%
Honeoye Falls	2	0.24%
Scottsville	2	0.24%
Sweden	2	0.24%
Clarkson	1	0.12%
Fairport	1	0.12%
Hamlin	1	0.12%
Hilton	1	0.12%
Mendon	1	0.12%
Riga	1	0.12%
Wheatland	1	0.12%
Grand Total	840	100.00%

Overdose Town/City Location (determined by Zip Code) 2018

Location	Frequency	% of total
Rochester	753	66.46%
Greece	84	7.41%
Irondequoit	48	4.24%
Gates	35	3.09%
Penfield	29	2.56%
Henrietta	27	2.38%
Webster	27	2.38%
Fairport	15	1.32%
Brighton	13	1.15%
Chili	13	1.15%
Pittsford	11	0.97%
East Rochester	10	0.88%
Hilton	9	0.79%
Perinton	9	0.79%
Spencerport	8	0.71%
Parma	7	0.62%
Brockport	5	0.44%
Hamlin	5	0.44%
Honeoye Falls	5	0.44%
Clarkson	4	0.35%
Ogden	4	0.35%
Scottsville	3	0.26%
Sweden	3	0.26%
Churchville	1	0.09%
N Chili	1	0.09%
Odgen	1	0.09%
Rush	1	0.09%
West Henrietta	1	0.09%
Wheatland	1	0.09%
Grand Total	1133	100.00%

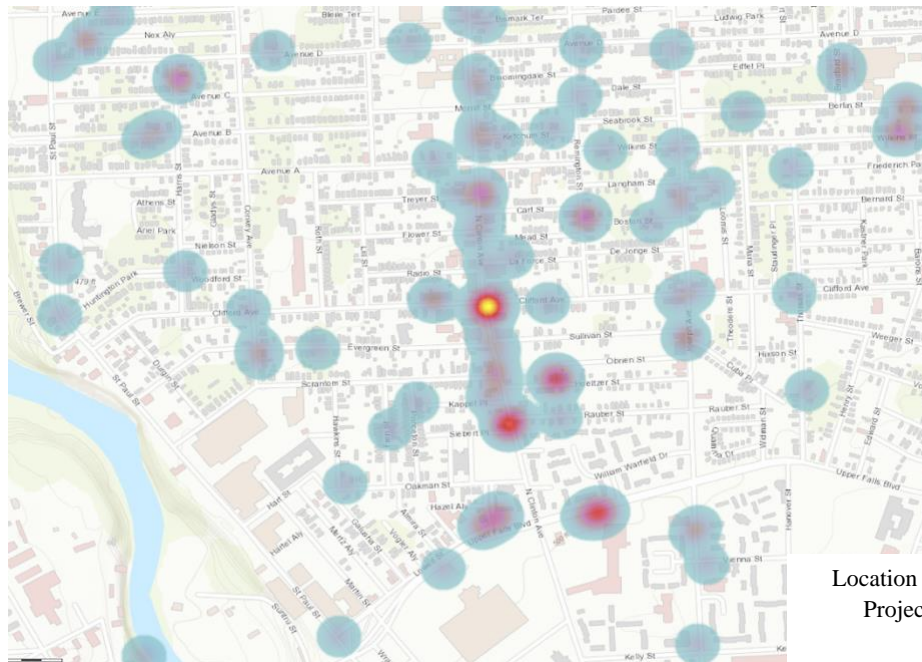
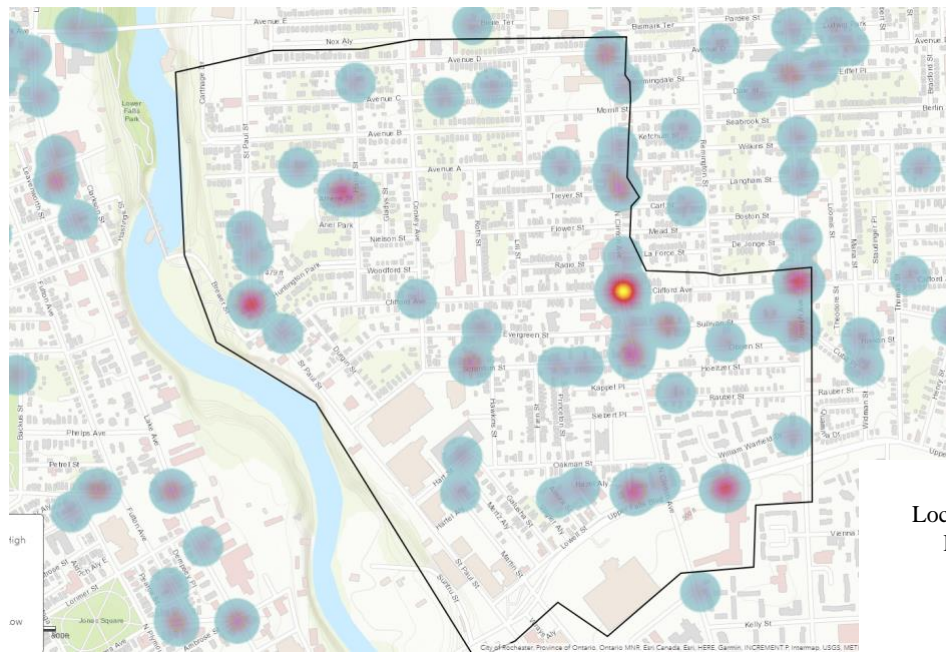
Location of Overdoses

The maps below show the concentration of overdoses across the County. In 2019, three overdose hot spots are identified, with the Clinton/Clifford intersection remaining steady, two other locations have emerged, one is at 60 St. Paul St, which is the RTS hub and the second one is along Smith and Jay streets where they intersect with Orchard St. While the concentration of overdose locations seems to be spreading, the actual numbers of overdoses are lower than in 2018. This may be related to focused efforts in the El Camino neighborhood occurring at the same time as other efforts across the community, including the wide availability of Narcan.



CLEAN Project Area

The maps below show the location of overdoses in the CLEAN project area. A hot spot still remains at the Clifford and Clinton intersection, however, similar to what was found across the county, overdoses in the target area also seem to be spreading, becoming less concentrated along N. Clinton Ave. While the overdose locations are shifting, the overall numbers are down 29.5%, from 94 overdoses to 66 overdoses in the project area.

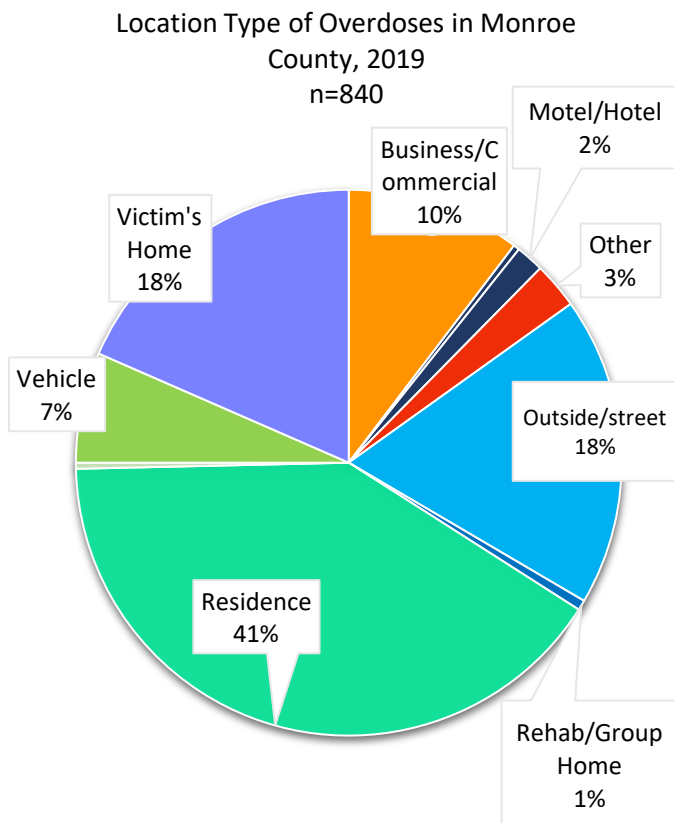


Location Type

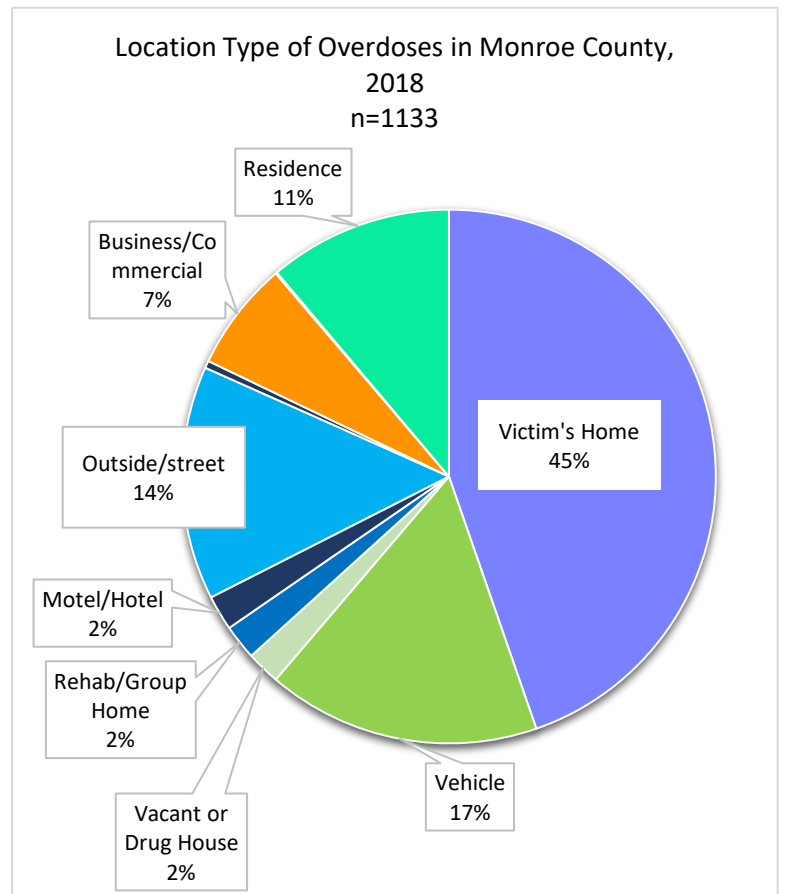
The most common location type in 2019 was a residence (41%) followed by the victim's home (18%) and outside/street (18%). In 2018, nearly half of all overdoses across Monroe County occurred in the victim's home, followed by vehicle (17%), and outside/street (14%). In 2019, 155 (18.5%) out of 840 overdoses occurred in the victim's home, compared to 505 (44.6%) that occurred in the victim's home in 2018. This shows a significant decrease of overdoses occurring in victims' homes from 2018 to 2019. A similar pattern is seen in overdoses that occurred in a vehicle, 6.5% in 2019 compared to 16.5% in 2018, a decrease from 2018 to 2019.

Overdoses occurring outside/street, in vacant or drug houses, rehab/group homes, hotels, and medical facilities slightly decreased from 2018 to 2019 in the number of actual overdoses occurring at those location types. However, it appears that overdoses occurring in residences have significantly increased in 2019 (n=341) compared to 2018 (n=126). Overdoses occurring in business/commercial setting have also slightly increased by from 2018 (n=75) to 2019 (n=87).

Monroe County, 2019

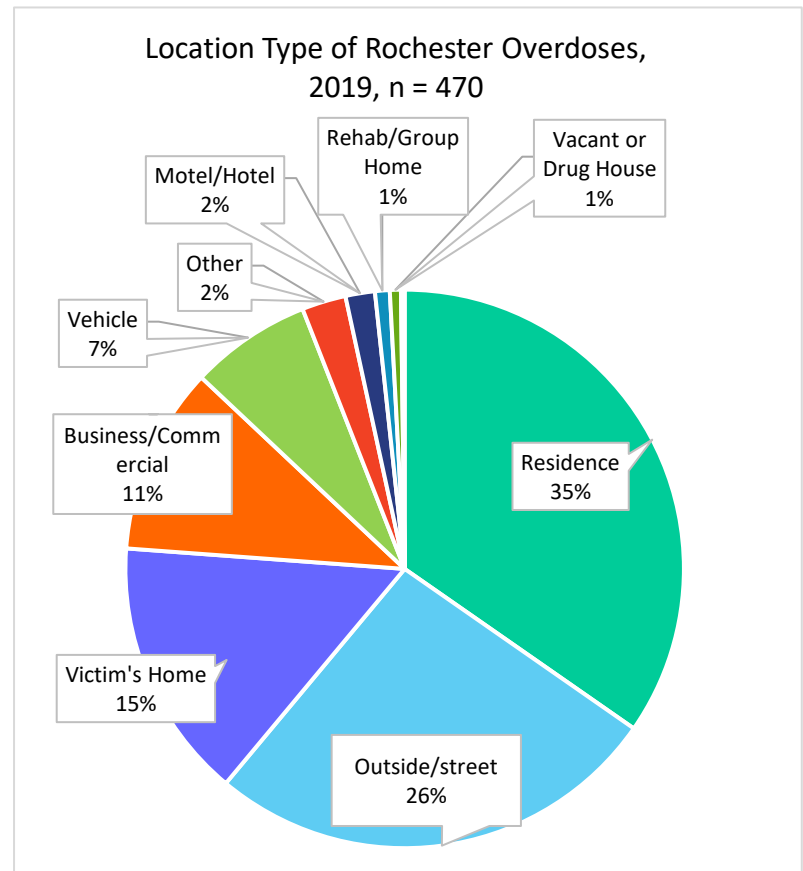
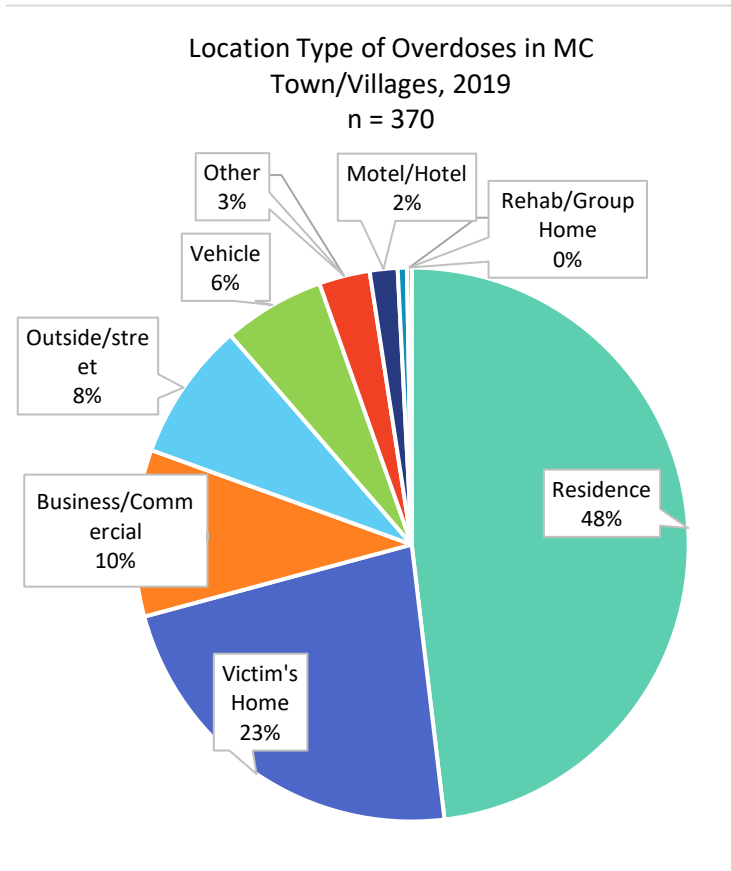


Monroe County, 2018



Rochester and Monroe County Town and Villages

A pattern emerges when comparing the location type of Rochester overdoses and town/village overdoses. Overdoses occurring in Monroe County town and villages were the highest in residences (48%) and victims' homes (23%). This indicates that nearly 75% of overdoses in the towns and villages occurred at a private residence (whether the victim's or someone else's) compared to only 45% in Rochester.



Conclusion

In Monroe County, number of reported overdoses are down from 2018 to 2019 by 26%. Some factors have remained stable between these two years. The majority of overdose victims continue to be male (70%), and white (73%). In 2019, the highest number of overdoses occurred in the month of July, and on Saturdays and Fridays, with peak times at 6pm and 7pm. In 2018, Fridays and Wednesday produced the highest the number of overdoses, with peak times at 6pm and 9pm. Fridays and 6pm continue to be peak days and times for overdoses. Additionally, in the month of July (n=110) and December (n=70), the number of overdoses was the same for 2018 and 2019.

Differences have also emerged between 2018 and 2019. The most common age of overdose victims slightly increased from 28 years old in 2018 to 30 years old in 2019. Overdoses occurring in Rochester have reduced from 64% to 56% from 2018 to 2019. Furthermore, car beats in the Clinton section (i.e., 247 and 277) continue to respond to the highest proportion of overdoses across the city, but car beat 291 is emerging as the third most frequent responder for 2019 overdoses.

Lastly, it appears that in Monroe County, overdoses that occurred in vehicles have significantly decreased from 2018 (17%) to 2019 (7%). A noteworthy pattern is seen in overdoses occurring in residences and victim's home. In 2019, 41% of overdoses occurred in residences compared to 11% in 2018, however in 2018, 45% of overdoses occurred in victim's home, compared to 18% in 2019. Overdoses occurring outside/street have slightly increased in Monroe County, as well as in Rochester from 2018 to 2019. It is unclear why overdoses shifted from victim's homes to other residences. One possible explanation may be that different types of opioid overdoses occur in different location types, such as a heroin overdose versus an overdose from a prescription painkiller. One type of overdose may have increased or decreased between 2018 and 2019.

While the overall numbers of overdoses have shown an annual decrease, it is important to continue to increase efforts to reduce the number of overdoses known to law enforcement. It is important to keep in mind that interventions and efforts to interrupt the drug markets will not only impact the area that interventions that are directly taking place, but also will impact surrounding areas, and this can explain why some patterns changed from 2018 to 2019. Research has shown that targeted interventions often result in benefits to surrounding communities, such as fewer numbers of overdoses and less of a concentration of the problem. Future research can focus on analyzing factors that may influence the number of overdoses, as well as fatal and non-fatal overdoses. Factors include, repeat overdoses, criminal history, and individuals with the person that overdosed.

Appendix A
Overdoses across Rochester Patrol Sections and Car Beats
2019 Rochester Overdoses, n =470

Car Beat	2019 Frequency	% of Roc ODs in the car beat
277	43	9.1%
247	30	6.4%
291	28	6.0%
219	25	5.3%
227	22	4.7%
271	21	4.5%
281	19	4.0%
231	18	3.8%
201	17	3.6%
209	17	3.6%
287	16	3.4%
257	15	3.2%
211	14	3.0%
251	14	3.0%
217	13	2.8%
221	13	2.8%
213	11	2.3%
245	11	2.3%
265	11	2.3%
205	9	1.9%
223	9	1.9%
237	9	1.9%
203	8	1.7%
229	8	1.7%
241	8	1.7%
263	8	1.7%
207	7	1.5%
225	7	1.5%
261	7	1.5%
215	6	1.3%
233	6	1.3%
255	5	1.1%
235	4	0.9%
267	4	0.9%
297	3	0.6%
243	2	0.4%
253	2	0.4%
Total	470	100.0%

2018 Rochester Overdoses, n =729

RPD Car Beat	2018 Frequency	% of Roc ODs in Car Beat
277	58	7.96%
247	49	6.72%
217	44	6.04%
271	42	5.76%
287	33	4.53%
207	31	4.25%
211	27	3.70%
281	26	3.57%
227	29	3.98%
219	25	3.43%
257	27	3.70%
231	24	3.29%
291	24	3.29%
265	20	2.74%
201	18	2.47%
251	20	2.74%
261	20	2.74%
245	16	2.19%
229	17	2.33%
221	20	2.74%
223	11	1.51%
263	11	1.51%
233	12	1.65%
205	13	1.78%
235	11	1.51%
203	8	1.10%
255	13	1.78%
297	9	1.23%
237	11	1.51%
215	9	1.23%
209	9	1.23%
267	10	1.37%
253	6	0.82%
225	5	0.69%
243	5	0.69%
213	6	0.82%
241	9	1.23%
262	1	0.14%
Total	729	100.00%

