AMR Fatal and Non-Fatal Overdose Response Citywide in Rochester, NY: 2017

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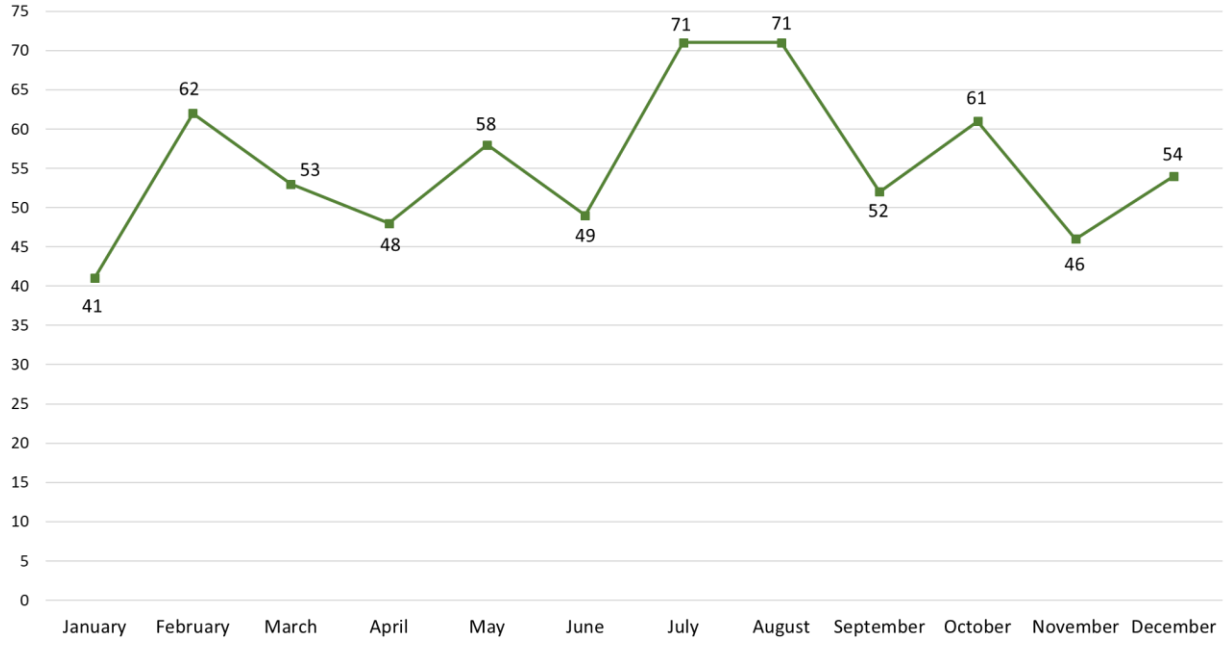
Introduction

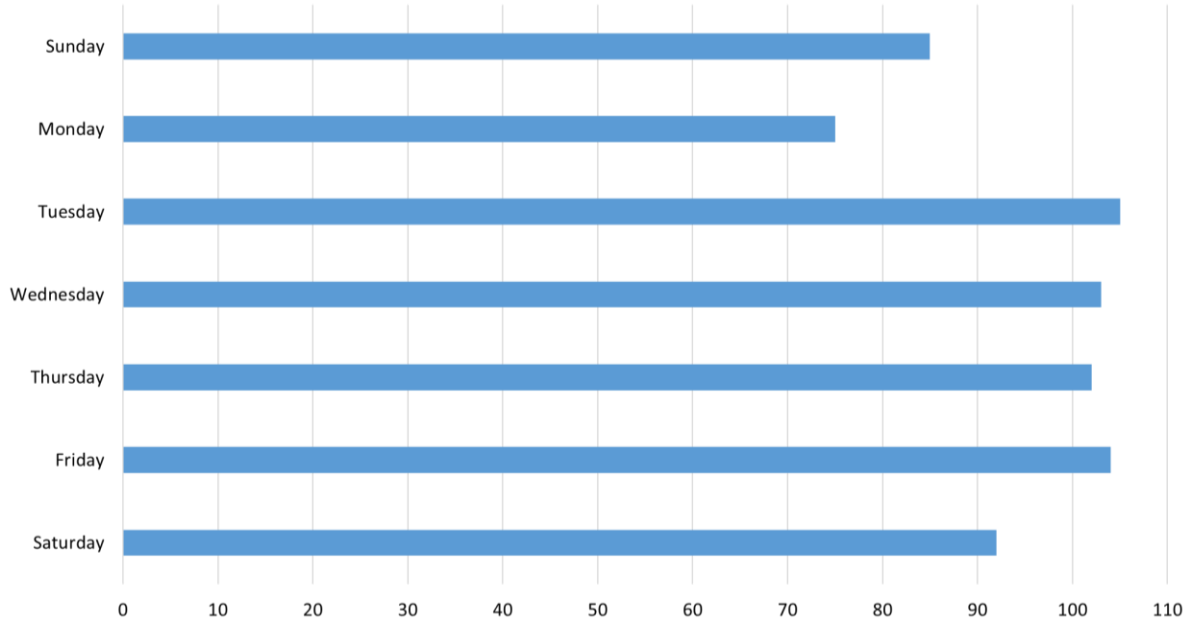
The following information is from the database compiled from the American Medical Response (AMR) team, based on calls for service to the 911 Call Center. The data includes any case that had Narcan administered. There were several instances when Narcan was administered multiple times to the same individual, and these duplicate cases were removed to get an accurate count of overdose responses. There were a total of **666** overdose responses with Narcan administrations from AMR in 2017. Refer to the working paper 'AMR Fatal and Non-Fatal Overdose Response in the Project CLEAN Target Area: 2017' for a focused look at overdoses that occurred in the El Camino target area.

AMR Fatal and Non-Fatal Overdose Response in Rochester
In 2017, by Month (n = 666)



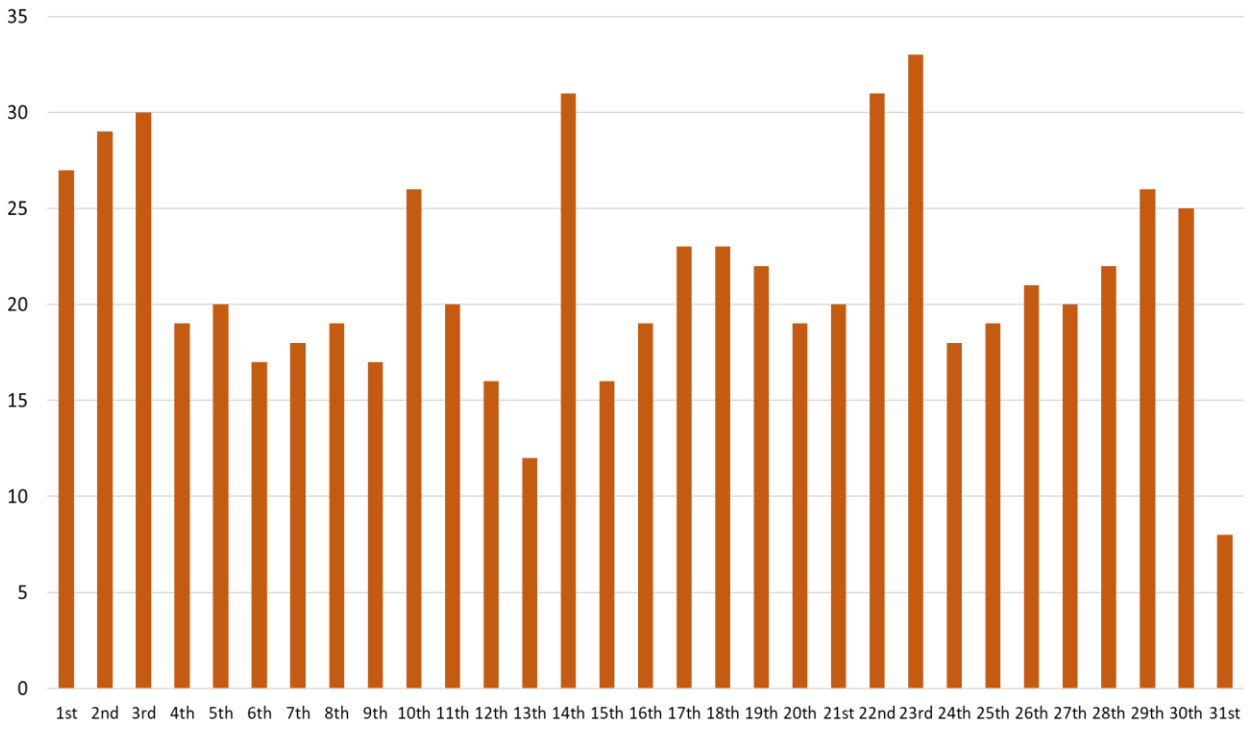
During 2017, the AMR team responded to an average of 55 overdoses per month, with a range of responses from 41 at the lowest, and peaking at 71 in January and July/August, respectively. The monthly data is mostly stable, with peaks in two summer months (July and August). These months may be the best time to implement interventions.

AMR Fatal and Non-Fatal Overdose Response in Rochester In 2017, by Day of the Week



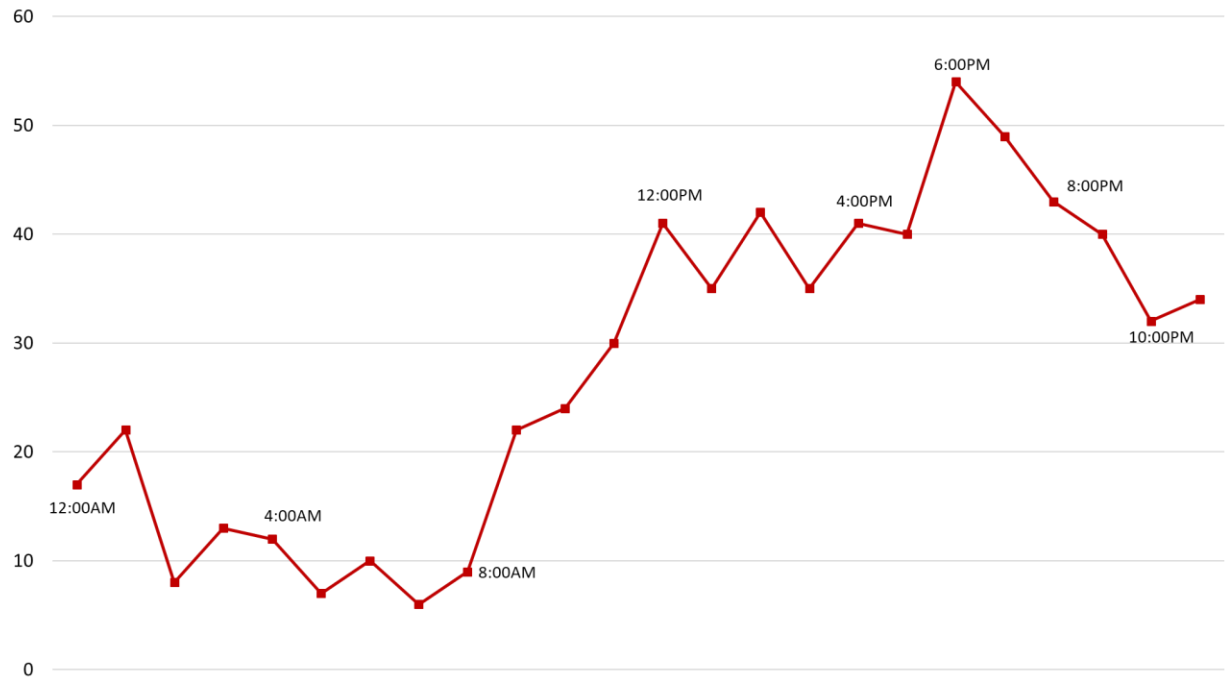
Similar to the number of overdose responses by month, there is not a high amount of variation between days of the week. Tuesdays had the highest number of overdose responses at 105, closely followed by Wednesdays, Thursdays and Fridays (103, 102, and 104, respectively). Mondays exhibited the lowest number of overdose responses, with a total of 75. These days with peak overdose responses may also be helpful in framing the best days to implement interventions.

AMR Fatal and Non-Fatal Overdose Response in Rochester In 2017, by Day of the Month



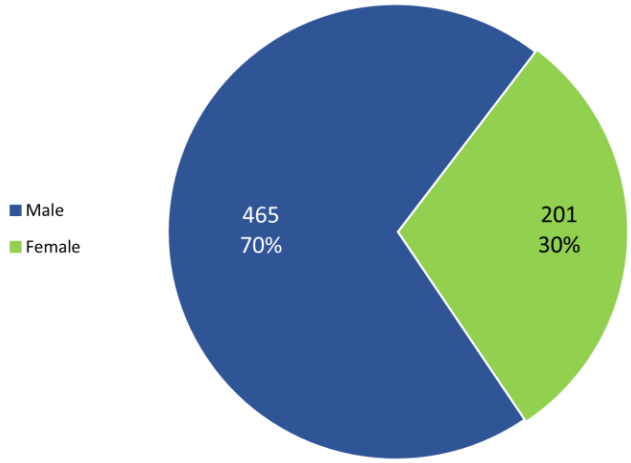
Overdose responses were analyzed to determine if any dates had strong peaks (i.e., pay days, 1st of the month, beginning or end of the month, etc.). As the chart above shows, there are some peaks around the 1st – 3rd, 14th, 22nd and 23rd. . The beginning of the month may reflect pay days, as with the mid-month date of the 14th. The 22nd – 23rd are presumed to the 3rd weekend of the month, which may reflect paydays for some employment types (i.e., jobs that pay each week versus bi-monthly). This may also reflect DSS payments which occur on the 1st and 15th of the months.

AMR Fatal and Non-Fatal Overdose Response in Rochester In 2017, by Time of Day



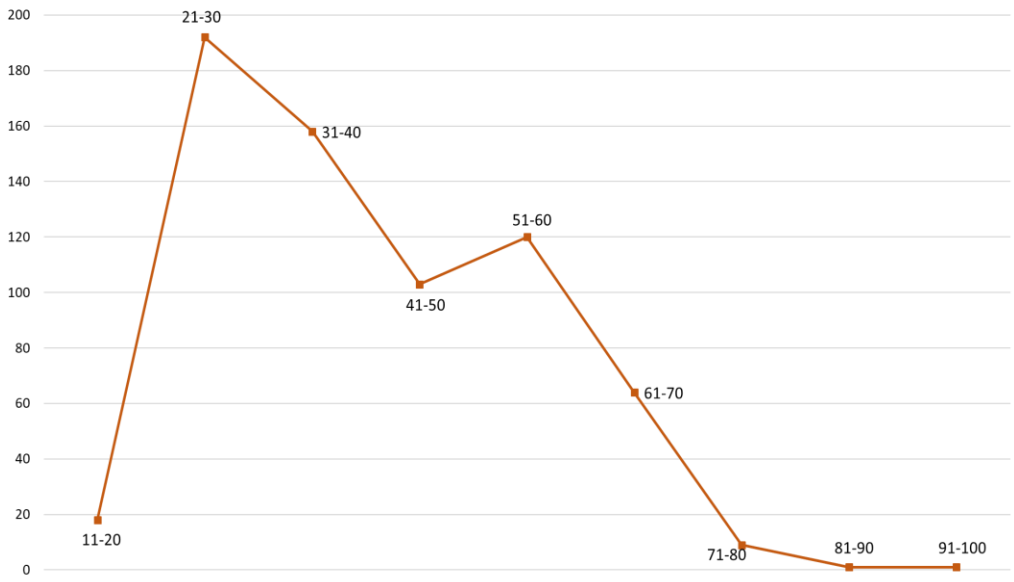
When examining time of day in relation to overdose responses, it is clear that the peak times are around lunch (12:00 PM) and dinner (6:00 PM). These trends may reflect users who are working and use on lunch break and after work. Heroin users need to use about every 6 hours to quell withdrawal symptoms, and that may explain the 12:00 and 6:00 peaks. A steering ocmmitte member suggested that the low number of overdoses in the late night might be explained by a purchase at 6:00 that would hold an individual over until the next day. Therefore, if the heroin batch is cut with toxic substances (e.g., fentanyl), then an overdose would happen during their first use at 6:00; if it is not too toxic, then their use of the same batch through the night would be less likely to result in an overdose. These are also times when more people may be available to help interventions, versus if the majority of overdoses were overnight.

AMR Fatal and Non-Fatal Overdose Response in Rochester In 2017, by Gender



Far more males were likely to received Narcan from AMR than females (70% versus 30%). It may be useful to develop interventions that target males specific to overdoses.

AMR Fatal and Non-Fatal Overdose Response in Rochester In 2017, by Age Category



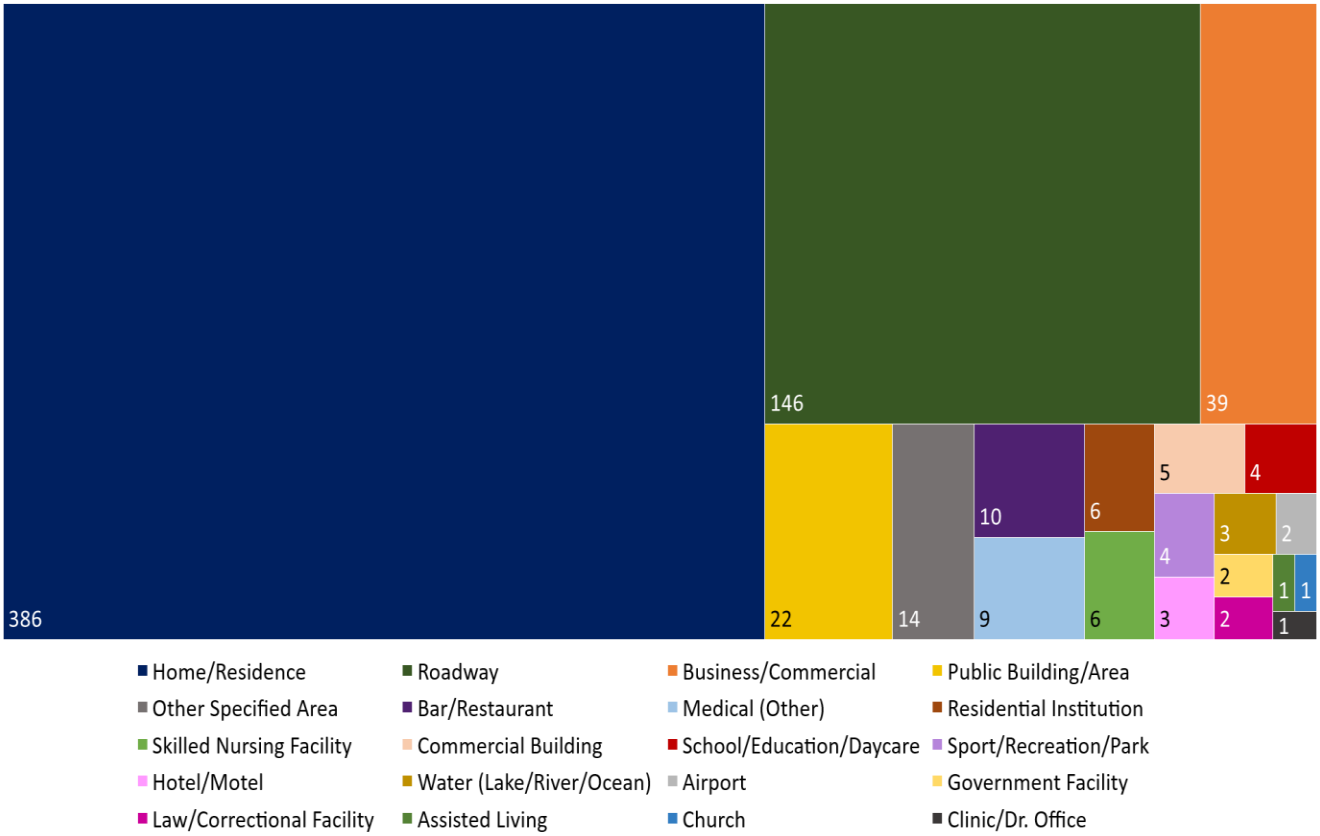
Age data were compiled into categories at increments of 10 years. Peaking at 21-30, this age group may be the first to target with interventions and prevention measures. There is also room for intervention with the second peak, the age group from 51-60.

AMR Fatal and Non-Fatal Overdose Response in Rochester In 2017, by Zip Code

Zip Code	Rate	Frequency
14604	14.92	26
14605	5.87	74
14614	4.90	6
14621	4.88	165
14608	3.83	47
14613	3.80	56
14611	2.93	51
14607	2.16	35
14808	1.69	1
14445	1.62	13
14615	1.62	26
14606	1.59	45
14620	1.35	34
14609	0.92	39
14619	0.54	8
14610	0.42	6
14612	0.41	14
14616	0.14	4
14489	0.14	1
14625	0.10	1
14617	0.09	2
14618	0.09	2
14608	0.08	1
14623	0.07	2
14513	0.07	1
14513	0.07	1
14624	0.06	2
14534	0.03	1
14612	0.03	1
14450	0.02	1

Areas in green are zip codes that are part of the project target area. Though these zip codes do not have the highest *rate* of overdose response, they have the highest *frequencies* of responses. The highest rate of overdose response, in 14604, is part of the central business district of the city; this area has a low population (i.e., 1,700 versus 13,000 in14605), but may have more homeless individuals or other factors that increase drugs sales and use that lead to overdose.

AMR Fatal and Non-Fatal Overdose Response in Rochester In 2017, by Type of Location



In the City of Rochester, the most likely location for overdose response is in a home or residence (58%), followed by a roadway (22%). Homes or residences may include vacant or abandoned houses, and a roadway includes an overdose in a vehicle, a person standing on a sidewalk, someone in a bus stop, etc. Roadways, businesses (6%) and public areas (3%) can be targets for interventions, given that this project is based in the community, and that the open-air nature of the market is so prominent. The high number of overdoses in roadways also points to the open-air nature of heroin.

Conclusions

The data presented on overdose responses by AMR can inform interventions and prevention efforts around the opioid epidemic. Times and days that are more prone to overdose response may be places to begin interventions, followed by the types of locations to target, and who to reach (based on age, gender, etc.). The working paper 'AMR Fatal and Non-Fatal Overdose Response in The Project CLEAN Target Area: 2017' provides specific data on overdose responses in El Camino target area.