



## Suspected Opioid Overdose in Emergency Medical Services (EMS) Data, 2020

### Background

This report describes suspected opioid overdoses documented by EMS providers during 2020. The data comes from the Montana EMS incident dataset.<sup>1</sup> Montana statute requires that licensed ground and air transporting EMS agencies submit a patient care report (PCR) to the dataset for each patient they encounter. Non-transporting agencies may also submit data. Therefore, the dataset may contain multiple records (EMS activations) that pertain to the same patient or incident.

In order to zero-in on a single record per overdose event, this report is restricted to 911 responses by ground transporting agencies (N=70 records excluded). It includes records with an incident date between January 1, 2020, and December 31, 2020, and scene location in Montana. EMS activations are labelled as opioid-related if they meet the [Montana opioid overdose syndrome criteria](#).<sup>2</sup>

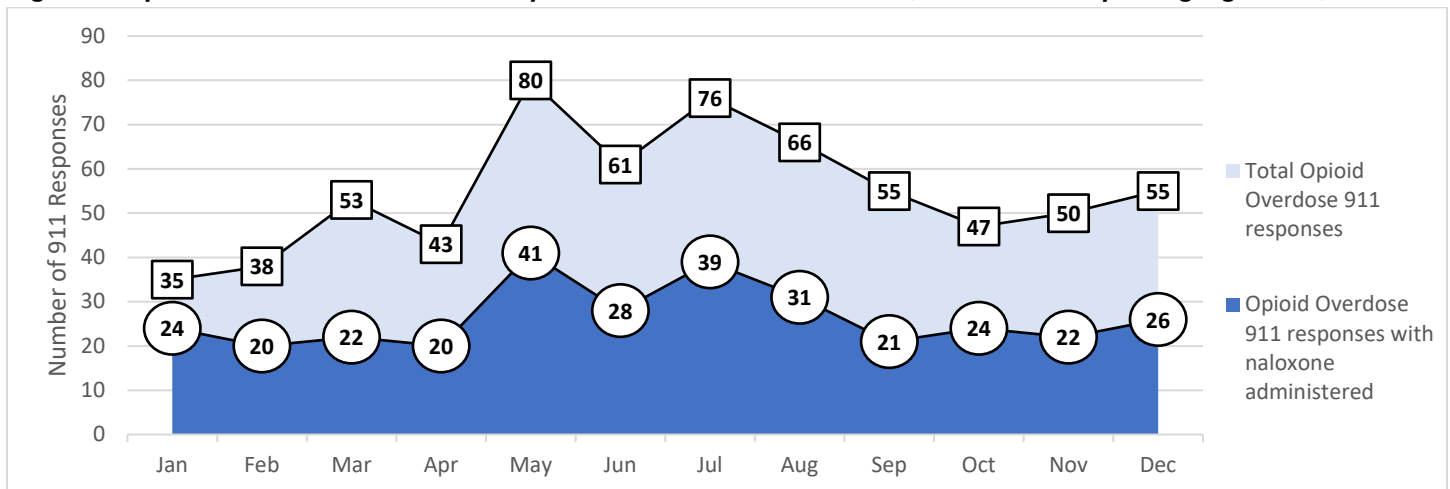
### Data Limitations

- Numbers in this report are provisional and subject to change due to latent record submissions or updates
- Data quality issues
- Does not capture overdoses where EMS did not make patient contact
- Does not capture most naloxone administrations by law enforcement or the public

### Results

There were **659** opioid overdose-related 911 responses by ground transporting EMS agencies in 2020 – an average of 55 per month. May had the highest number of opioid overdose-related 911 responses (Figure 1). Naloxone, a medication used for the emergency treatment of a known or suspected overdose, was documented in **318** of the 659 cases (**48.3%**)<sup>3</sup>.

**Figure 1. Opioid-overdose related 911 responses with/without naloxone, Ground Transporting Agencies, 2020**



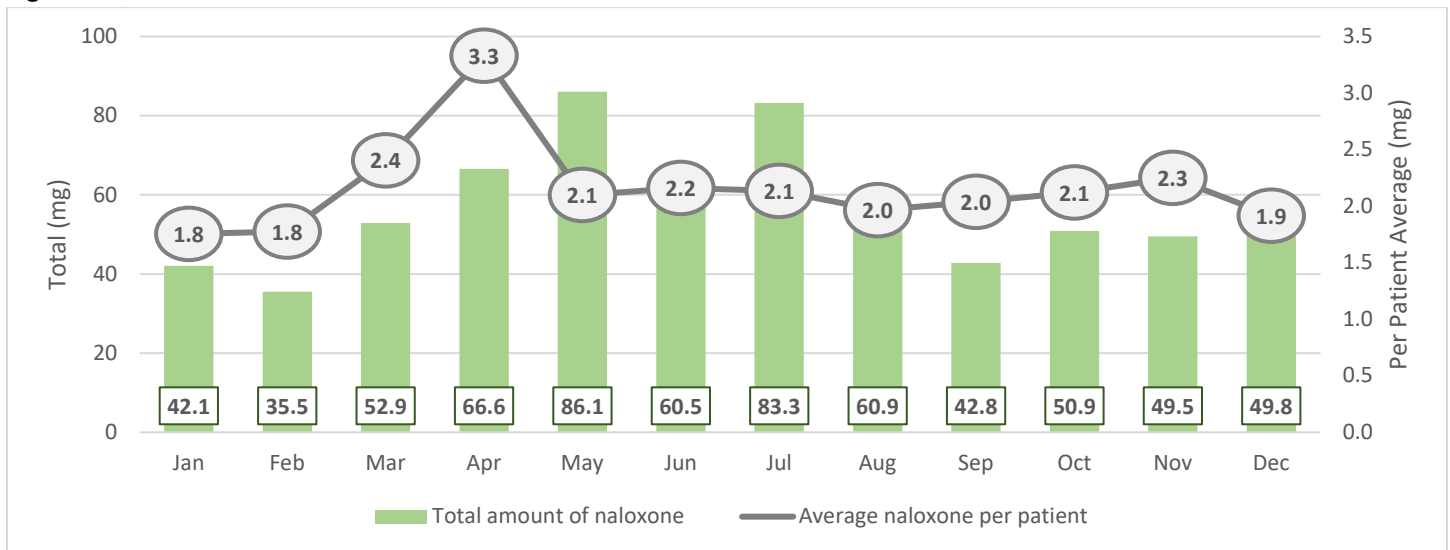
<sup>1</sup> Montana uses the [NEMSIS v3.4.0 data standard](#)

<sup>2</sup> Version 01.11.2022

<sup>3</sup> To learn more about accessing free naloxone, contact Ki-Ai McBride, Opioid Prevention Program Manager at [naloxone@mt.gov](mailto:naloxone@mt.gov)

Among the 318 opioid-related cases where naloxone was given, there were 434 naloxone administrations documented with a total amount of **681 milligrams (mg)**—however, this total does not include data from records missing dosage information. The yearly average was **57 mg** per month. May and July both saw totals over 80 mg (Figure 2). An average of **2.4 mg** of naloxone was given per opioid overdose patient, with month-to-month variation. Individuals overdosing from stronger opioids may require a higher dose of naloxone to reverse their overdose.

**Figure 2. Monthly total mg naloxone administered and average mg per patient, 911 responses, Ground Transporting Agencies, 2020**



Note that Montana’s COVID-19 stay-at-home order occurred in April 2020. This resulted in decreased EMS call volume statewide during the month of April<sup>4</sup>.

<sup>4</sup> See [Montana EMS Annual Report 2020](#)



Opioid overdose-related 911 responses, Ground Transporting Agencies, Montana, 2020

	Q1	Q2	Q3	Q4	All	All %
<b>Naloxone Administration</b>						
No documentation of naloxone administration	60	95	106	80	341	51.7%
Naloxone administered, Response=Improved	57	77	75	63	272	41.3%
Naloxone administered, Response=Unchanged	9	12	15	9	45	6.8%
Naloxone administered, Response=No answer	†	†	†	†	†	0.2%
<b>Patient Disposition</b>						
Patient Transported by this EMS Unit	118	163	175	140	596	90.4%
Patient Treated/Evaluated, No Transport (per protocol)	†	7	6	†	16	2.4%
Patient Refusal, No Transport	†	9	12	9	33	5.0%
Patient Dead at Scene, No Transport	†	5	†	†	14	2.1%
<b>Incident County NCHS Urban-Rural Classification</b>						
Small Metro	48	73	78	60	259	39.3%
Micropolitan	42	53	65	51	211	32.0%
Non-core (Rural)	29	52	45	38	164	24.9%
Not Reported	7	6	9	†	25	3.8%
<b>Patient Sex</b>						
Female	55	75	98	65	293	44.5%
Male	67	105	99	87	358	54.3%
Not Reported	†	†	0	0	8	1.2%
<b>Patient Age</b>						
0-17 Years	5	†	†	†	15	2.3%
18-24 Years	5	16	23	14	58	8.8%
25-44 Years	71	80	84	70	305	46.3%
45-64 Years	28	53	47	35	163	24.7%
65+ Years	16	28	37	30	111	16.8%
Not Reported	†	†	†	†	7	1.1%
<b>Patient Race*</b>						
American Indian or Alaska Native	19	35	30	25	109	16.5%
Asian	0	0	0	0	0	0.0%
Black or African American	0	0	0	†	†	0.3%
Hispanic or Latinx	0	†	†	†	8	1.2%
Native Hawaiian or Other Pacific Islander	0	0	0	0	0	0.0%
White	68	105	132	95	400	60.7%
Other Race	†	6	6	11	27	4.1%
Race Not Listed	35	36	26	16	113	17.1%
<b>Total</b>	<b>126</b>	<b>184</b>	<b>197</b>	<b>152</b>	<b>659</b>	<b>100.0%</b>

\*Race is a multi-select field, therefore the sum of all race categories may exceed the total.

†= Suppressed according to departmental policy if cell count is <5

For further information, please visit our website: [Injury Prevention Program](#)

Victoria Troeger, Epidemiologist [Victoria.troeger@mt.gov](mailto:Victoria.troeger@mt.gov)

Hannah Yang, Epidemiologist [hannah.yang@mt.gov](mailto:hannah.yang@mt.gov)

Maureen Ward, Injury Prevention Coordinator, [maureen.ward@mt.gov](mailto:maureen.ward@mt.gov)