

# Suspected Nevada Drug Overdose Surveillance Quarterly Report

April 2020

**Overview:** The Centers for Disease Control and Prevention (CDC) Overdose Data to Action (OD2A) is a program that supports state, territorial, county, and city health departments in obtaining more comprehensive and timelier data on overdose morbidity and mortality. The program is meant to enhance opioid overdose surveillance, reporting, and dissemination efforts to better inform prevention and early intervention strategies.

The information contained in this quarterly report highlights suspected **overdose morbidity** within the state of Nevada utilizing emergency department (ED) visits data for the period beginning *June 1, 2019 to December 31, 2019*. The report includes details on (1) all drug-related overdose ED visits; (2) opioid-related overdose ED visits; (3) heroin-related overdose ED visits; and (4) stimulant-related overdose ED visits. ED visits during each month are stratified by sex (male and female) and by age (0-14; 15-24; 25-34; 35-54; 55+) for ED visits greater than 20.

**Data Sources:** National Syndromic Surveillance Program is a near real-time method of categorizing visits to the ED across the state of Nevada based on a patient's chief complaint and/or discharge diagnosis.

**Case definitions:** Case definitions and queries for all drug, opioid, heroin, and stimulant ED visits are created and provided by CDC and include chief complaint keywords and ICD-10-CM discharge diagnosis codes.

**Rate Calculations:** Rates per 10,000 ED visits were calculated based on dividing the number of ED visits by the total number of ED visits during that month and multiplying by 10,000. Crude rates per 100,000 were calculated based on dividing the number of ED visits by the total Nevada population and multiplying by 100,000 (based on State Demographer 2019 population estimates).

**Analysis:** Rates with fewer than 20 counts are unreliable when comparing between months and are not included in analyses. Analyses were conducted using Cochran-Armitage Test for Trend to assess the trend across a six-month period, with a p-value cut-off of 0.05 to denote a significant trend across months.

**Limitations:** Statewide, the National Syndromic Surveillance Program is estimated to capture approximately 80% of Nevada emergency department visits, and thus may underestimate the occurrence of overdoses across the state.

## Key Findings:

There were 624,729 total ED visits from June 1, 2019 to December 31, 2019 in Nevada.

- There was a significant **decreasing trend in all-drug, opioid, heroin, and stimulant ED visits** from July 2019 to December 2019 (Figure 1).
- There was a significant **decreasing trend in all-drug ED visits in females** from July 2019 to December 2019 (Figure 2).
- There was a significant **decreasing trend in all-drug, opioid, heroin, and stimulant ED visits in males** from July 2019 to December 2019 (Figure 3).
- There was a significant **decreasing trend in all-drug ED visits in the 0-14 and 55+ age groups** from July 2019 to December 2019 (Figure 4).

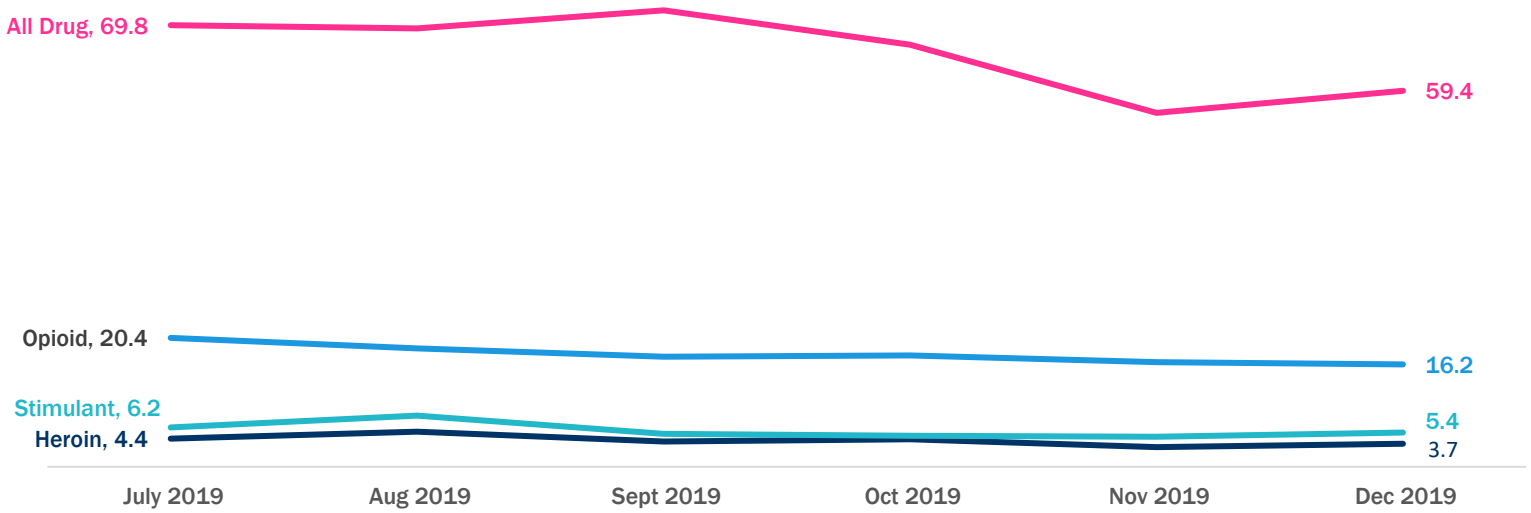
## Questions or comments?

Please contact Nevada OD2A's opioid epidemiologist, Shawn Thomas, MPH, at [shawnt@unr.edu](mailto:shawnt@unr.edu).



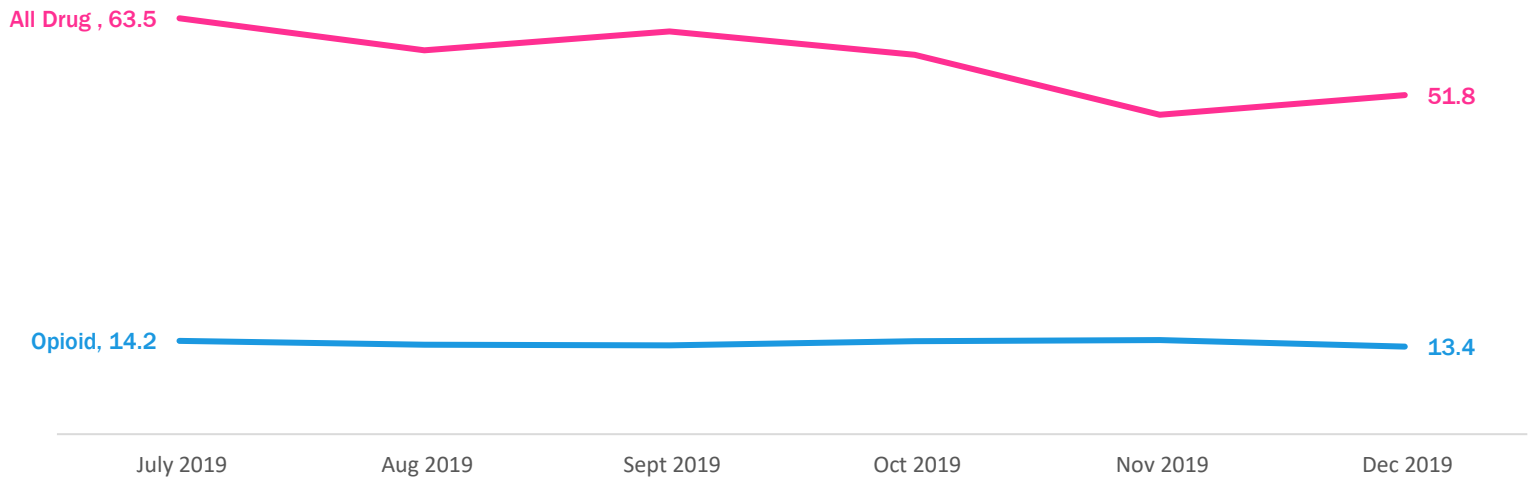
# Results:

Figure 1. All drug ED visits decreased from 69.8 to 59.4 (per 10,000 ED visits)



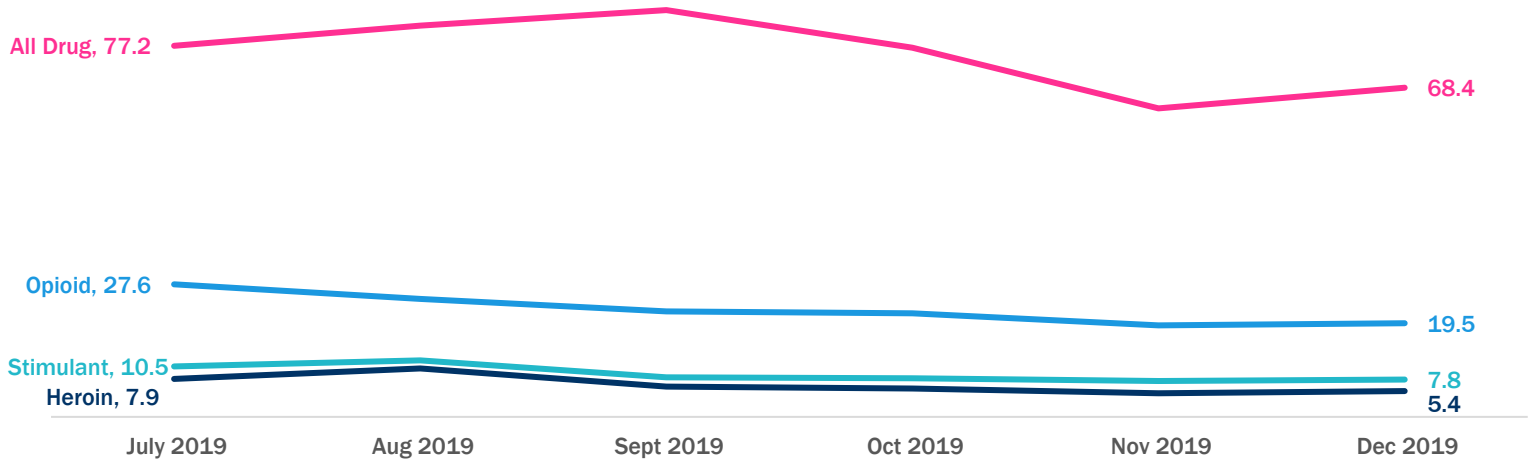
**Figure 1:** There was a significant decreasing trend in all drug, opioid, heroin, and stimulant ED visits from July 2019 to December 2019. All drug-related ED visits decreased from 69.8 to 59.4 per 10,000 ED visits (p-value=0.0001). Opioid-related ED visits decreased from 20.4 to 16.2 per 10,000 ED visits (p-value=0.0124). Heroin-related ED visits decreased from 4.4 to 3.7 per 10,000 ED visits (p-value=0.0374). Stimulant-related ED visits decreased from 6.2 to 5.4 per 10,000 ED visits (p-value=0.0212).

Figure 2. Female drug ED visits decreased from 63.5 to 51.8 (per 10,000 ED visits)



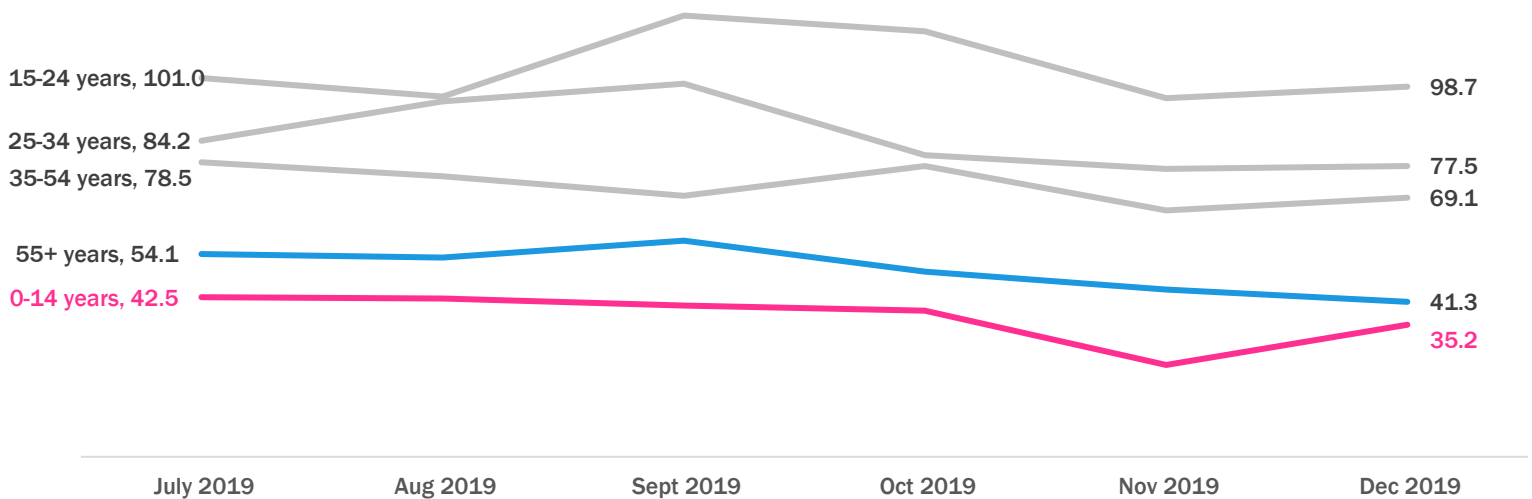
**Figure 2:** There was a significant decreasing trend in all drug ED visits in females from July 2019 to December 2019. All drug-related ED visits in females decreased from 63.5 to 51.8 per 10,000 ED visits (p-value=0.0005). There was no significant change in opioid-related ED visits in females.

Figure 3. Male drug-related ED visits decreased across all substances (per 10,000 ED visits)



**Figure 3:** There was a significant decreasing trend in all drug, opioid, heroin, and stimulant ED visits in males from July 2019 to December 2019. Male all drug-related ED visits decreased from 77.2 to 68.4 per 10,000 ED visits (p-value=0.0014). Male opioid-related ED visits decreased from 27.6 to 19.5 per 10,000 ED visits (p-value=0.0014). Male heroin-related ED visits decreased from 7.9 to 5.4 per 10,000 ED visits (p-value=0.0036). Male stimulant-related ED visits decreased from 10.5 to 7.8 per 10,000 ED visits (p-value=0.0187).

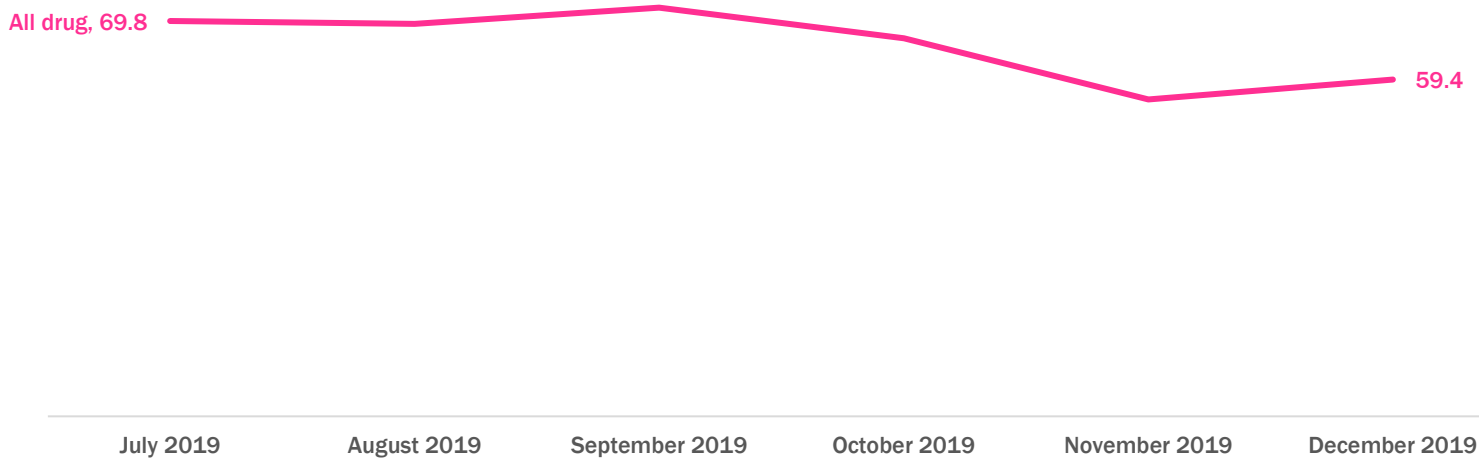
Figure 4. Drug-related ED visits decreased in 0-14 and 55+ age groups (per 10,000 ED visits)



**Figure 4:** There was a significant decreasing trend in all drug-related ED visits in the 0-14 and 55+ age groups from July 2019 to December 2019. All drug-related ED visits in the 0-14 age group decreased from 42.5 to 35.2 per 10,000 ED visits (p-value=0.0141). All drug-related ED visits in the 55+ age group decreased from 54.1 to 41.3 per 10,000 ED visits

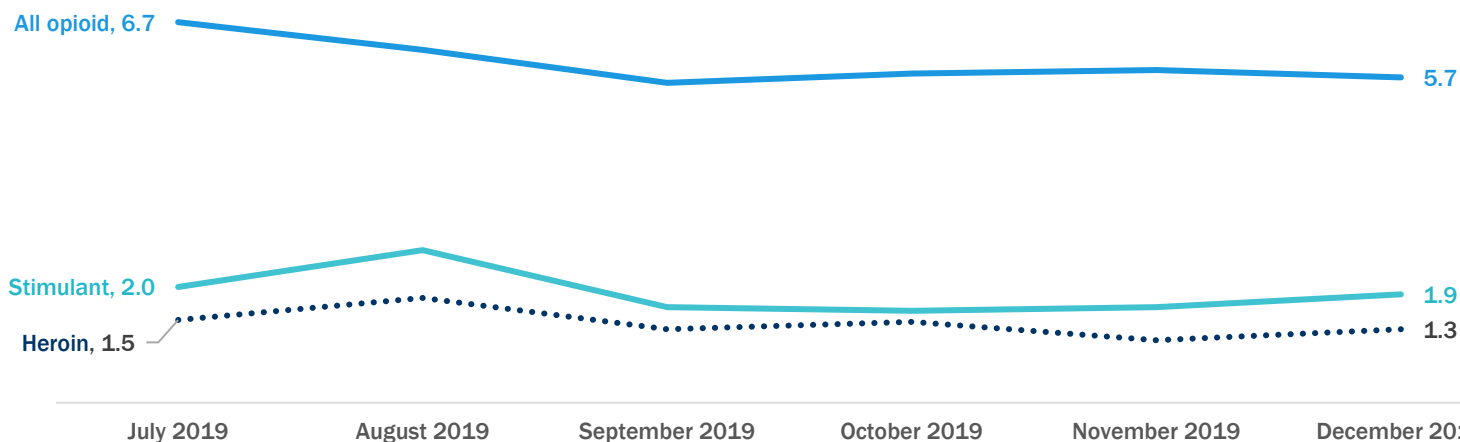
(p-value=0.0024). Although the 15-24, 25-34, and 35-54 age groups showed small decreases, these were not statistically significant decreases.

Figure 5. All drug ED visits decreased from 69.8 to 59.4 (per 100,000 population)



**Figure 5:** There was a significant decrease in trend in all drug ED visits from July 2019 to December 2019. All-drug ED visits decreased from 69.8 to 59.4 per 100,000 population (p-value=0.0001).

Figure 6. Opioid, heroin, and stimulant ED visits all decreased (per 100,000 population)



**Figure 6:** There was a significant decrease in trend in opioid, heroin, and stimulant ED visits from July 2019 to December 2019. Opioid-related ED visits decreased from 6.7 to 5.7 per 100,000 population (p-value=0.0124). Heroin-related ED visits decreased from 1.5 to 1.3 per 100,000 population (p-value=0.0374). Stimulant-related ED visits decreased from 2.0 to 1.9 per 100,000 population (p-value=0.0212).

**Table 1. Substance use-related ED visit rates in Nevada from July-December 2019 (per 10,000 ED visits)**

Variable	Category	July 2019	Aug 2019	Sept 2019	Oct 2019	Nov 2019	Dec 2019	p-value <sup>a</sup>	Change
<b>Total Visits</b>		<b>N=101,629</b>	<b>N=102,649</b>	<b>N=99,972</b>	<b>N=101,640</b>	<b>N=109,440</b>	<b>N=109,399</b>		
<b>All Drug</b>	All	69.8	69.3	72.1	66.7	55.9	59.4	<b>0.0001</b>	<b>Decrease</b>
	Female	63.5	58.6	61.5	57.9	48.8	51.8	<b>0.0005</b>	<b>Decrease</b>
	Male	77.2	81.4	84.6	76.8	64.2	68.4	<b>0.0014</b>	<b>Decrease</b>
	0-14 years	42.5	42.2	40.3	39.0	24.5	35.2	<b>0.0141</b>	<b>Decrease</b>
	15-24 years	101.0	96.1	117.6	113.4	95.6	98.7	0.8127	Not Significant
	25-34 years	84.2	94.7	99.5	80.4	76.7	77.5	0.0752	Not Significant
	35-54 years	78.5	74.8	69.6	77.5	65.7	69.1	0.1226	Not Significant
	55+ years	54.1	53.1	57.6	49.4	44.6	41.3	<b>0.0024</b>	<b>Decrease</b>
<b>Opioid</b>	All	20.4	18.7	17.4	17.6	16.5	16.2	<b>0.0124</b>	<b>Decrease</b>
	Female	14.2	13.7	13.6	14.2	14.4	13.4	0.9040	Not Significant
	Male	27.6	24.5	21.9	21.5	19.0	19.5	<b>0.0014</b>	<b>Decrease</b>
	25-34 years	25.2	32.2	29.3	19.5	25.6	23.2	0.2281	Not Significant
	35-54 years	26.7	21.0	15.3	26.2	23.2	20.1	0.4896	Not Significant
	55+ years	20.2	20.5	22.9	17.3	19.0	15.0	0.0724	Not Significant
<b>Heroin</b>	All	4.4	5.6	4.0	4.3	3.1	3.7	<b>0.0374</b>	<b>Decrease</b>
	Male	7.9	10.1	6.3	5.9	4.9	5.4	<b>0.0036</b>	<b>Decrease</b>
<b>Stimulant</b>	All	6.2	8.1	5.2	4.9	4.8	5.4	<b>0.0212</b>	<b>Decrease</b>
	Male	10.5	11.8	8.2	8.0	7.5	7.8	<b>0.0187</b>	<b>Decrease</b>

**Note:** Rates with less than 20 counts were omitted since they are unreliable when comparing between months and are not included in analyses.

<sup>a</sup>: Cochran-Armitage Trend Test was used to analyze trends across the six-month period. Bolded p-values denote significance at p-value<0.05.