

# *Opioid Surveillance*

*\*Data for 2020 are preliminary*

*2010 - 2020*

*Hospital Billing: January 1, 2010 - December 31, 2020*

*Death Registry System Data: January 1, 2010 - December 31, 2020\**



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## Technical Notes

### Emergency Department Encounters and Inpatient Visits

Data Source: Division of Public and Behavioral Health, Hospital Inpatient and Emergency Department Billing Data.

Data Provided by: Center for Health Information Analysis.

*In October 2015, ICD-10-CM codes were implemented. Previous to October 2015, ICD-9-CM codes were used for medical billing. Therefore, 2015 data consists of two distinct coding schemes, ICD-9-CM and ICD-10-CM respectively. Due to this change in coding schemes, hospital billing data from October 2015 forward may not be directly comparable to previous data.*

The following ICD Codes are included in these data:

#### Opioid Related Disorders

##### All Diagnosis

304.0	Opioid type dependence ICD-9-CM
304.7	Combinations of opioid type drug with any other drug dependence ICD-9-CM
305.5	Nondependent opioid abuse ICD-9-CM
F11	Opioid related disorders ICD-10-CM

#### Opiate Poisoning

##### Principal Diagnosis

965.0	Poisoning by opiates and related narcotics ICD-9-CM
T40.0	Poisoning by, adverse effect of and underdosing of opium ICD-10-CM
T40.1	Poisoning by and adverse effect of heroin ICD-10-CM
T40.2	Poisoning by, adverse effect of and underdosing of other opioids ICD-10-CM
T40.3	Poisoning by, adverse effect of and underdosing of methadone ICD-10-CM
T40.4	Poisoning by, adverse effect of and underdosing of other synthetic narcotics ICD-10-CM
T40.6	Poisoning by, adverse effect of and underdosing of other and unspecified narcotics ICD-10-CM

##### All Diagnosis

E850.0-E850.2	Accidental poisoning by heroin, methadone, and other opiates ICD-9-CM
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### Deaths

Data Source: Division of Public and Behavioral Health, Electronic Death Registry System.

Deaths with any of the following ICD-10 codes as an underlying cause of death were first selected:

X40-X44	Accidental poisonings by drugs
X60-X64	Intentional self poisoning by drugs
X85	Assault by drug poisoning
Y10-Y14	Drug poisoning of undetermined intent
	Opioids listed as a contributing cause of death:
T40.0	Opium~
T40.1	Heroin
T40.2	Natural and semi-synthetic opioids
T40.3	Methadone
T40.4	Synthetic opioids
T40.6	Other and unspecified opioids

~Opium was included in analysis, since there have been 1 deaths related to opium it is not included in the tables and charts.

## Summary

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From 2010 to 2020 emergency department encounters increased by 67% and inpatient admissions increased by 66%. The rate of emergency department encounters per 100,000 Nevada residents increased from 109.5 to 183.4, and the rate per 100,000 Nevada residents of inpatient admissions increased from 161.2 to 268.3.

In terms of demographics in 2020, 68% of the opioid-related emergency department encounters were White non-Hispanic. In the hospital, 68% of the inpatient admissions were White non-Hispanic and were most prevalent among 25-34 years old Nevada residents (24%).

In 2020, Medicaid paid 52% of the opioid-related emergency department encounters and 45% of the opioid-related inpatient admissions.

From 2010 to 2020, opioid poisonings in the emergency department increased by 5%, and inpatient admissions decreased by 36%. The rate per 100,000 Nevada residents in the emergency department increased from 28.8 to 30.4 and inpatient admissions rates per 100,000 Nevada population decreased from 22.1 to 14.2.

In 2020:

- Heroin was included in 32% of the emergency department encounters and 19% of the inpatient admissions.
- Methadone was included in 1% of the emergency department encounters and 3% of the inpatient admissions.
- Other opioids and narcotics accounted for 67% of the emergency department encounters and 77% of the inpatient admissions.

From 2010 to 2020, the number of opioid-related overdose deaths increased. The rate per 100,000 Nevada residents for opioid-related overdose deaths increased by 5% from 16.2 to 16.9.

From 2010 to 2020, each year

- Roughly 85% of all benzodiazepine-related overdose deaths also involve opioids.
- Roughly 30% of all opioid-related overdose deaths also involve benzodiazepines.

In terms of demographics in 2020, 66% of the opioid-related overdose deaths were White non-Hispanic and opioid-related deaths were most prevalent among 25-34 years old Nevada residents, which is different than other years.

Opioid-related overdose deaths, in 2020, were more prevalent among the male gender.

Opioid-related overdose deaths in Nevada by suicide accounted for 12% of all opioid-related deaths. Nevada has had 558 opioid-related suicide deaths between 2010 and 2020.

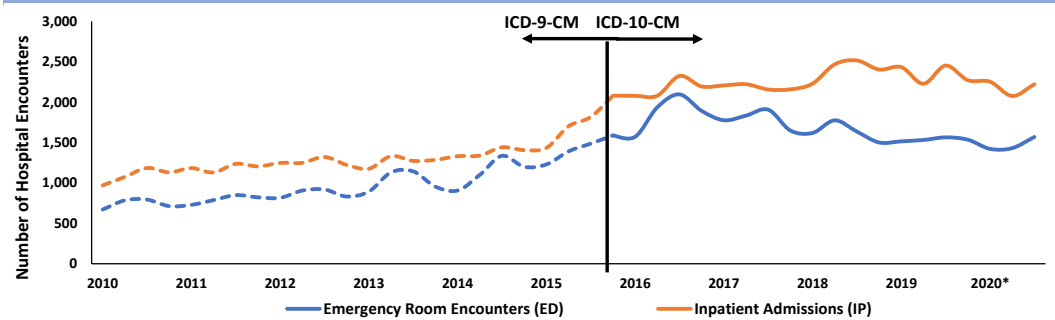
## Opioid-Related Hospital Data

In October 2015, ICD-10-CM codes were implemented. Previous to October 2015, ICD-9-CM codes were used for medical billing. Therefore, 2015 data consists of two distinct coding schemes, ICD-9-CM and ICD-10-CM respectively. Due to this change in coding schemes, hospital billing data from October 2015 forward may not be directly comparable to previous data.

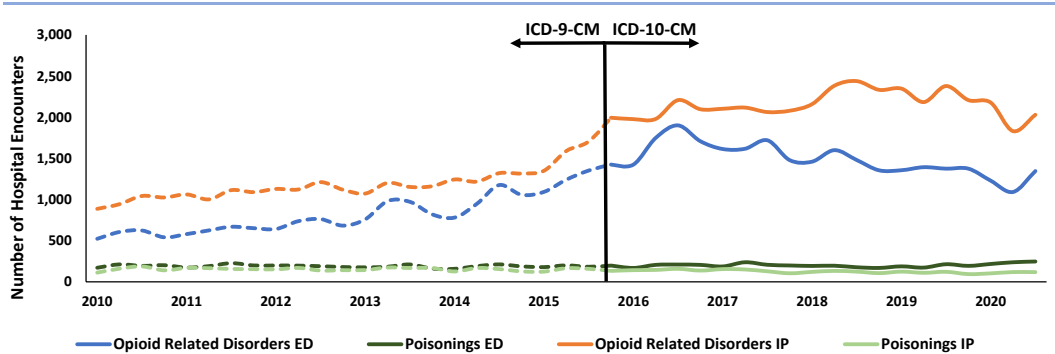
Year	Emergency Department Encounters (ED)	Emergency Department Crude Rates	Percent Change	Inpatient Admissions (IP)	Inpatient Crude Rates	Percent Change
2010	2,963	109.5		4,362	161.2	
2011	3,188	117.1	7%	4,755	174.7	8%
2012	3,473	126.3	8%	5,042	183.3	5%
2013	4,122	147.2	17%	5,067	180.9	-1%
2014	4,543	159.8	9%	5,517	194.0	7%
2015	5,695	196.5	23%	7,032	242.7	25%
2016	7,495	253.8	29%	8,675	293.7	21%
2017	7,165	239.9	-5%	8,744	292.8	0%
2018	6,530	213.6	-11%	9,616	314.5	7%
2019	6,158	197.8	-7%	9,421	302.6	-4%
2020	5,805	183.4	-7%	8,492	268.3	-11%
Percent Change 2010-2020			67%			66%

Rates are per 100,000 State of Nevada Population.

Opioid-Related Hospitalizations by Quarter, Nevada Residents, 2010-2020



Opioid-Related Hospital Data, Nevada Residents, 2010-2020



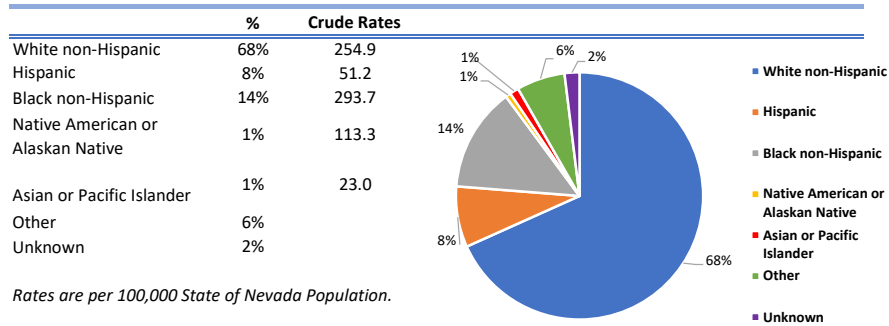
A person can be included in more than one drug group, and therefore the counts above are not mutually exclusive.

Opioid-Related Hospitalization (Inpatient) Visits by Length of Stay (Days), Nevada Residents, 2010-2020

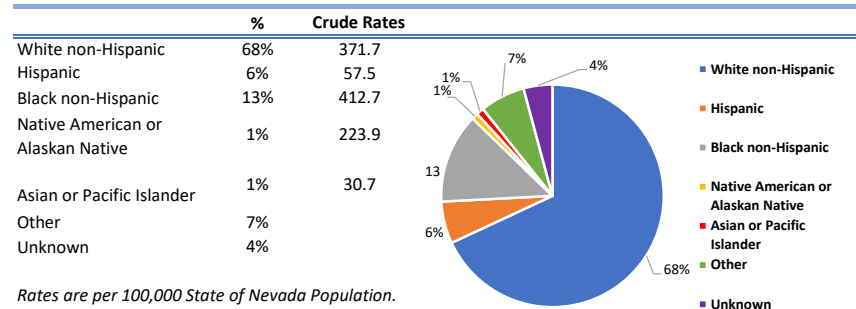
Year	0-1	2-4	5-9	10-14	15-19	20-24	25+
2010	648	1,833	1,158	380	132	97	114
2011	691	1,977	1,339	403	132	74	139
2012	670	1,953	1,531	467	160	102	159
2013	754	1,952	1,483	411	192	111	164
2014	740	2,124	1,604	505	215	111	218
2015	882	2,771	2,201	591	247	119	221
2016	988	3,216	2,934	726	315	175	321
2017	1,117	3,385	2,761	708	322	184	267
2018	1,339	3,892	2,873	762	334	187	229
2019	1,397	3,743	2,759	774	354	142	252
2020	1,390	3,298	2,386	713	320	131	254

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Opioid-Related Emergency Department Encounters by Race/Ethnicity, Nevada Residents, 2020



Opioid-Related Inpatient Admissions by Race/Ethnicity, Nevada Residents, 2020



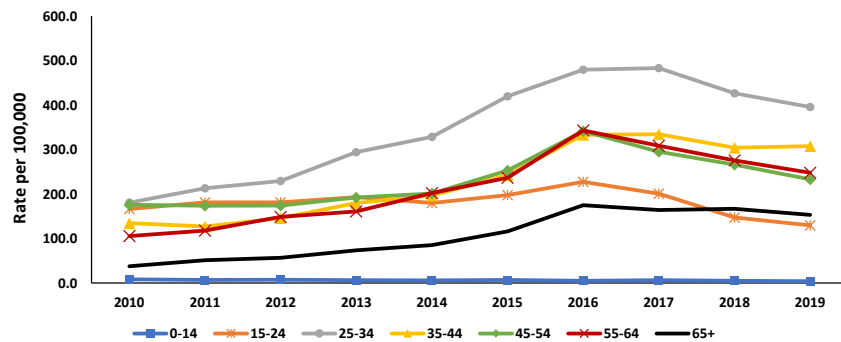
Opioid-Related Emergency Department Encounters by Age Group, Nevada Residents, 2010-2020

Year	0-14	15-24	25-34	35-44	45-54	55-64	65+
2010	46	605	682	522	654	328	126
2011	37	661	798	492	648	375	177
2012	42	669	855	569	653	481	204
2013	35	726	1,109	712	731	534	275
2014	33	683	1,253	786	776	683	329
2015	41	765	1,664	968	981	814	462
2016	29	898	1,953	1,343	1,347	1,207	718
2017	38	794	2,012	1,357	1,169	1,102	693
2018	29	600	1,837	1,258	1,063	1,009	734
2019	24	540	1,746	1,285	938	928	697
2020	18	556	1,741	1,326	774	819	571

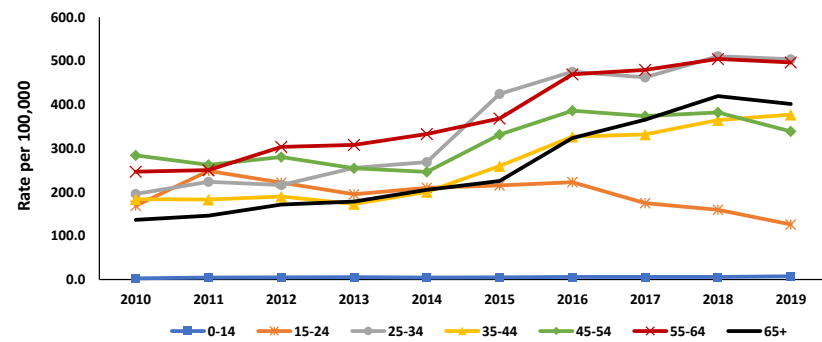
Opioid-Related Inpatient Admissions by Age Group, Nevada Residents, 2010-2020

Year	0-14	15-24	25-34	35-44	45-54	55-64	65+
2010	15	614	739	713	1,057	767	457
2011	25	905	837	708	979	796	505
2012	29	818	806	740	1,052	981	616
2013	31	733	963	684	967	1,022	667
2014	26	796	1,025	802	950	1,125	793
2015	28	833	1,685	1,036	1,285	1,268	897
2016	36	880	1,936	1,318	1,524	1,652	1,329
2017	36	691	1,927	1,348	1,483	1,712	1,547
2018	36	649	2,200	1,508	1,528	1,847	1,848
2019	45	525	2,225	1,575	1,365	1,859	1,827
2020	25	488	1,998	1,500	1,203	1,697	1,581

Opioid-Related Emergency Department Encounters by Age Group Crude Rates, Nevada Residents, 2010-2020

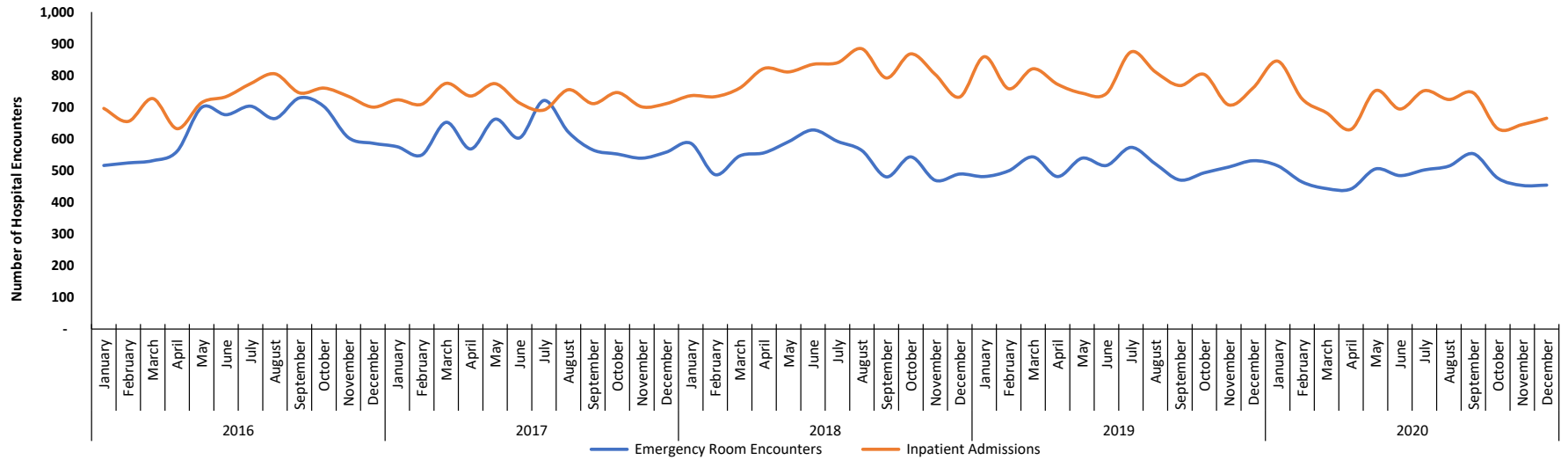


Opioid-Related Inpatient Admissions by Age Group Crude Rates, Nevada Residents, 2010-2020



Opioid-Related Hospital Data by Month, Nevada Residents, 2016-2020

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In October 2015, ICD-10-CM codes were implemented. Previous to October 2015, ICD-9-CM codes were used for medical billing. Therefore, 2015 data consists of two distinct coding schemes, ICD-9-CM and ICD-10-CM respectively. Due to this change in coding schemes, hospital billing data from October 2015 forward may not be directly comparable to previous data.

**Opioid-Related Emergency Department Encounters by Payer, Nevada Residents, 2011-2020**

	Number of Encounters by Payer										Percent of Encounters by Payer										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
Medicaid	435	462	597	1,631	2,544	3,592	3,463	3,149	3,130	3,026	Medicaid	14%	13%	14%	35%	45%	48%	48%	49%	51%	52%
Medicare	480	597	744	844	1,081	1,633	1,490	1,386	1,298	963	Medicare	15%	17%	18%	18%	19%	22%	21%	21%	21%	17%
Self Pay	1,094	1,216	1,445	850	701	669	606	539	512	563	Self Pay	34%	35%	35%	18%	12%	9%	8%	8%	8%	10%
HMO	433	462	456	343	354	404	397	452	436	459	HMO	14%	13%	11%	7%	6%	5%	6%	7%	7%	8%
Commercial Insurer	99	120	173	369	510	612	605	405	257	270	Commercial Insurer	3%	3%	4%	8%	9%	8%	8%	6%	4%	5%
Negotiated Discounts e.g. PPO	189	224	228	221	241	276	339	284	251	242	Negotiated Discounts e.g. PPO	6%	6%	6%	5%	4%	4%	5%	4%	4%	4%
Charity	166	176	125	87	58	127	89	123	95	103	Charity	5%	5%	3%	2%	1%	2%	1%	2%	2%	2%
Miscellaneous	43	39	169	133	118	77	67	44	69	74	Miscellaneous	1%	1%	4%	3%	2%	1%	1%	1%	1%	1%
CHAMPUS OR CHAMPVA	26	39	51	47	74	74	78	65	61	63	CHAMPUS OR CHAMPVA	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
County Indigent Referral	165	66	57	5	7	10	7	11	5	6	County Indigent Referral	5%	2%	1%	0%	0%	0%	0%	0%	0%	0%
All Workers Compensation e.g. (SIIS)	8	8	9	9	2	15	15	13	8	5	All Workers Compensation e.g. (SIIS)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Missing/Unknown	50	50	64	68	4	5	6	9	59	36	Missing/Unknown	2%	1%	2%	1%	0%	0%	0%	0%	1%	1%
<b>Total</b>	<b>3,188</b>	<b>3,459</b>	<b>4,118</b>	<b>4,607</b>	<b>5,694</b>	<b>7,494</b>	<b>7,162</b>	<b>6,480</b>	<b>6,181</b>	<b>5,810</b>	<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

**Opioid-Related Inpatient Hospital Admissions by Payer, Nevada Residents, 2011-2020**

	Number of Admission by Payer										Percent of Admission by Payer										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
Medicaid	718	814	812	1,554	2,709	3,495	3,416	3,834	3,982	3,825	Medicaid	15%	16%	16%	28%	39%	40%	39%	40%	42%	45%
Medicare	1,353	1,631	1,760	1,816	2,092	2,676	2,977	3,378	3,230	2,701	Medicare	28%	32%	35%	33%	30%	31%	34%	35%	34%	32%
HMO	593	801	812	774	740	663	609	644	579	474	HMO	12%	16%	16%	14%	11%	8%	7%	7%	6%	6%
Commercial Insurer	697	361	171	345	369	555	494	401	287	287	Commercial Insurer	15%	7%	3%	6%	5%	6%	6%	4%	3%	3%
CHAMPUS OR CHAMPVA	112	194	223	319	480	658	541	554	551	445	CHAMPUS OR CHAMPVA	2%	4%	4%	6%	7%	8%	6%	6%	6%	5%
Negotiated Discounts e.g. PPO	297	433	338	263	219	323	392	399	375	383	Negotiated Discounts e.g. PPO	6%	9%	7%	5%	3%	4%	4%	4%	4%	5%
Self Pay	446	515	621	352	209	194	176	243	199	180	Self Pay	9%	10%	12%	6%	3%	2%	2%	3%	2%	2%
County Indigent Referral	237	217	174	3	1	0	0	2	3	4	County Indigent Referral	5%	4%	3%	0%	0%	0%	0%	0%	0%	0%
Miscellaneous	82	37	58	48	101	60	66	77	124	128	Miscellaneous	2%	1%	1%	1%	1%	1%	1%	1%	1%	2%
Charity	62	15	39	21	17	21	11	18	31	22	Charity	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%
All Workers Compensation e.g. (SIIS)	5	11	12	6	17	12	17	11	9	4	All Workers Compensation e.g. (SIIS)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Missing/Unknown	153	13	47	16	78	18	45	55	51	39	Missing/Unknown	3%	0%	1%	0%	1%	0%	1%	1%	1%	0%
<b>Total</b>	<b>4,755</b>	<b>5,042</b>	<b>5,067</b>	<b>5,517</b>	<b>7,032</b>	<b>8,675</b>	<b>8,744</b>	<b>9,616</b>	<b>9,421</b>	<b>8,492</b>	<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



## Opioid-Related Poisonings

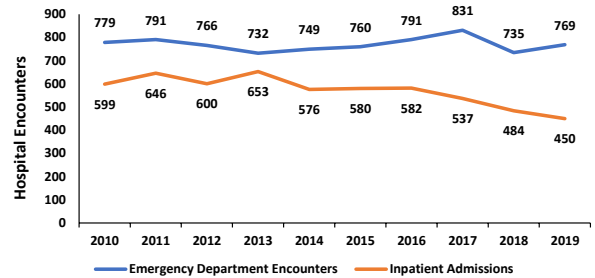
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Opioid-related poisoning is a subset of the opioid-related hospitalization data. The following ICD-9-CM/ICD-10-CM for poisoning include the principal diagnosis: 965.0 ICD-9, T40.0-T40.4, and T40.6 ICD-10, and all E-code diagnosis: E850.0-E850.2 ICD-9.

Year	Emergency Department Encounters	Emergency Department Crude Rates	Percent Change	Inpatient Admissions	Inpatient Crude Rates	Percent Change
2010	779	28.8		599	22.1	
2011	791	29.1	1%	646	23.7	7%
2012	766	27.9	-4%	600	21.8	-8%
2013	732	26.1	-6%	653	23.3	7%
2014	749	26.3	1%	576	20.3	-13%
2015	760	26.2	0%	580	20.0	-1%
2016	791	26.8	2%	582	19.7	-2%
2017	831	27.8	4%	537	18.0	-9%
2018	735	24.0	-14%	484	15.8	-12%
2019	769	24.7	3%	450	14.5	-9%
2020	961	30.4	23%	449	14.2	-2%
Percent Change 2010-2020			5%			-36%

Rates are per 100,000 State of Nevada population.

Opioid-Related Poisonings (ED and IP), Nevada Residents, 2010-2020



Opioid-Related Poisonings - Emergency Department Encounters, Nevada Residents, 2010-2020

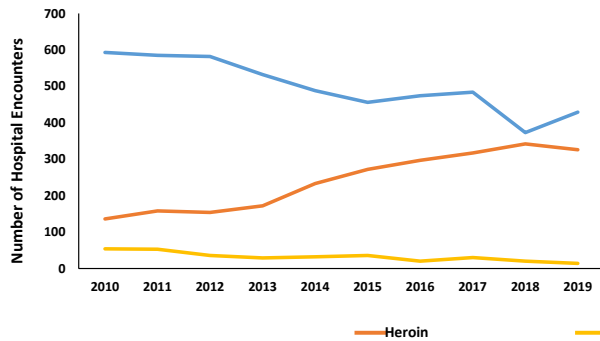
Year	Heroin	Metadone	Other Opioids and Narcotics
2010	136	54	593
2011	158	53	585
2012	154	36	582
2013	172	29	532
2014	233	32	488
2015	272	36	456
2016	297	20	474
2017	317	30	484
2018	342	20	373
2019	326	14	429
2020	308	12	641

Opioid-Related Poisonings - Inpatient Admissions, Nevada Residents, 2010-2020

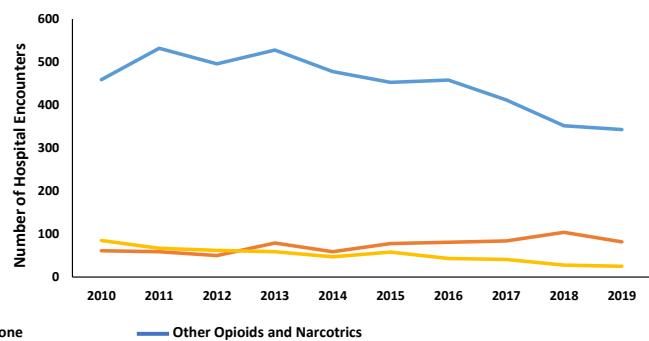
Year	Heroin	Metadone	Other Opioids and Narcotics
2010	61	85	459
2011	59	67	532
2012	50	62	496
2013	79	59	528
2014	59	47	478
2015	78	58	453
2016	81	43	458
2017	84	41	412
2018	104	28	352
2019	82	25	343
2020	87	15	347

A person can be included in more than one drug group, and therefore the counts above are not mutually exclusive.  
In 2016, the use of E-Codes was eliminated and counts will be mutually exclusive.

Emergency Department Encounters, Nevada Residents, 2010-2020



Inpatient Admissions, Nevada Residents, 2010-2020



## Opioid-Related Overdose Deaths

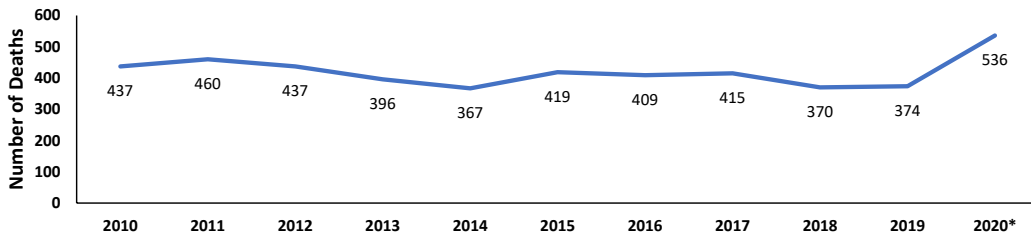
Year	Opioid-Related Overdose Deaths	Crude Rates	Percent Change	Benzodiazepine Related Overdose Deaths	Opioid and Benzodiazepine Related Overdose Deaths
2010	437	16.2		161	139
2011	460	16.9	5%	166	143
2012	437	15.9	-6%	162	140
2013	396	14.1	-11%	126	106
2014	367	12.9	-9%	126	110
2015	419	14.5	12%	133	119
2016	409	13.8	-4%	161	132
2017	415	13.9	0%	127	110
2018	370	12.1	-13%	142	115
2019	374	12.0	-1%	119	98
2020*	536	16.9	41%	183	153
Percent Change 2010-2020*			5%		

Rates are per 100,000 State of Nevada Population.

Each year:

- Roughly 85% of all benzodiazepine-related overdose deaths also involve opioids.
- Roughly 30% of all opioid-related overdose deaths also involve benzodiazepines.

### Opioid-Related Overdose Deaths, Nevada Residents, 2010-2020\*

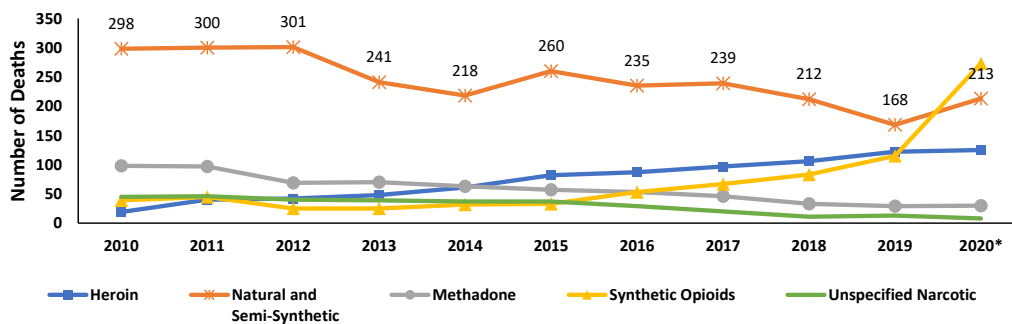


### Opioid-Related Overdose Deaths by Drug Category, Nevada Residents, 2010-2020\*

Year	Heroin	Natural and Semi-Synthetic	Methodone	Synthetic Opioids	Unspecified Narcotic
2010	19	298	98	39	45
2011	40	300	97	45	46
2012	42	301	69	25	40
2013	48	241	70	25	39
2014	61	218	63	32	37
2015	82	260	57	33	37
2016	87	235	53	53	29
2017	97	239	46	67	20
2018	106	212	33	83	11
2019	122	168	29	115	13
2020*	125	213	30	273	8

A person can be included in more than one drug group, and therefore the counts above are not mutually exclusive.

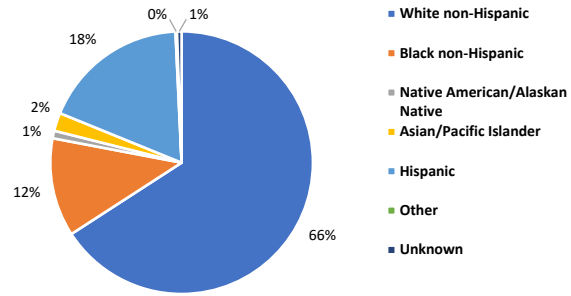
### Opioid-Related Overdose Deaths by Drug Category, Nevada Residents, 2010-2020\*



\*Data for 2020 are preliminary

**Opioid-Related Deaths by Race/Ethnicity, Nevada Residents, 2020\***

Race/Ethnicity	%	Crude Rates
White non-Hispanic	66%	22.5
Black non-Hispanic	12%	22.9
Native American/Alaskan Native	1%	13.9
Asian/Pacific Islander	2%	3.8
Hispanic	18%	10.1
Other	0%	
Unknown	1%	

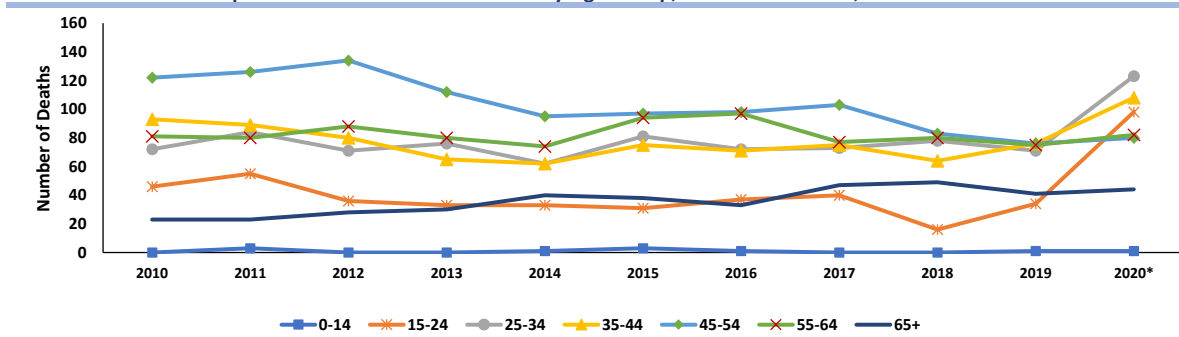


Rates are per 100,000 State of Nevada Population.

**Opioid-Related Deaths by Age Group, Nevada Residents, 2010-2020\***

Year	0-14	15-24	25-34	35-44	45-54	55-64	65+
2010	0	46	72	93	122	81	23
2011	3	55	84	89	126	80	23
2012	0	36	71	80	134	88	28
2013	0	33	76	65	112	80	30
2014	1	33	62	62	95	74	40
2015	3	31	81	75	97	94	38
2016	1	37	72	71	98	97	33
2017	0	40	73	75	103	77	47
2018	0	16	78	64	83	80	49
2019	1	34	71	76	76	75	41
2020*	1	98	123	108	80	82	44

**Opioid-Related Death Crude Rate by Age Group, Nevada Residents, 2010-2020\***



**Opioid-Related Deaths by Intent, Nevada Residents, 2010-2020\***

Cause of Death	N	%	Crude Rates
Accident	3,934	85%	6.1
Suicide	558	12%	0.9
Assault/Homicide	5	0%	0.0
Events of Undetermined Intent	123	3%	0.2
Total (2010-2020*)	4,620	100%	7.2

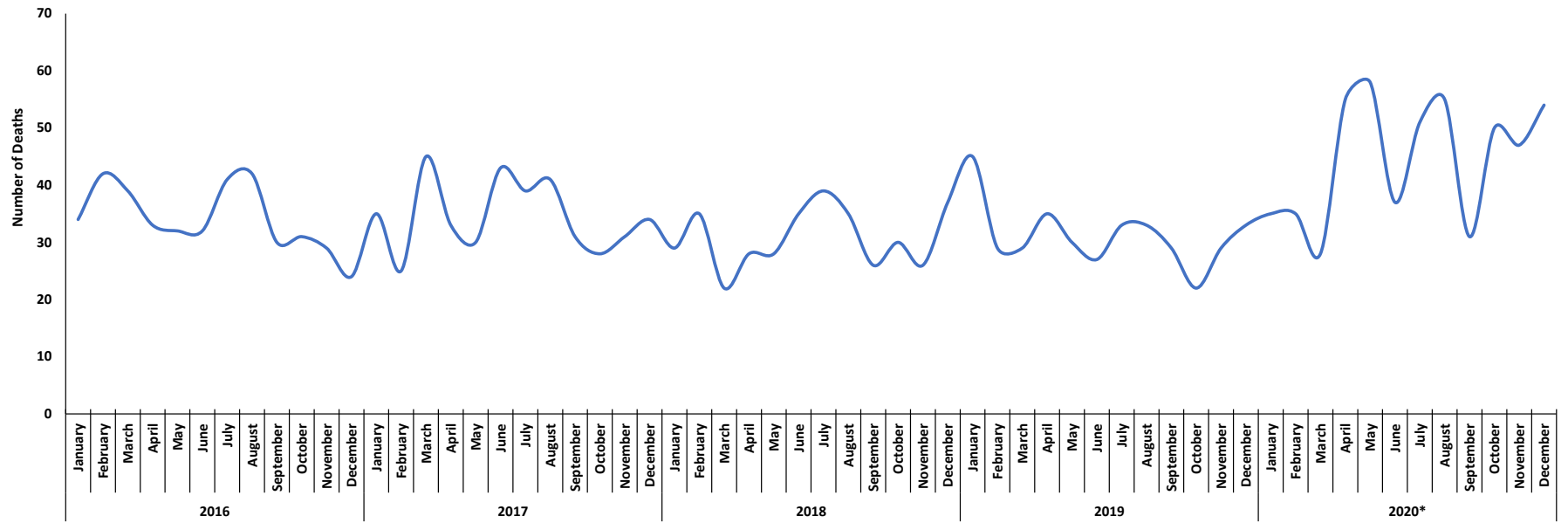
**Opioid-Related Deaths by Sex, Nevada Residents, 2010-2020\***

Year	Male	Crude Rates	Female	Crude Rates
2010	239	17.5	198	14.8
2011	279	20.3	181	13.4
2012	227	16.4	210	15.4
2013	215	15.2	181	13.0
2014	197	13.8	170	12.0
2015	227	15.6	192	13.3
2016	226	15.2	183	12.4
2017	231	15.4	184	12.4
2018	233	15.2	137	9.0
2019	232	14.9	142	9.1
2020*	358	22.6	178	11.2

Rates are per 100,000 State of Nevada Population.

\*Data for 2020 are preliminary

Opioid-Related Deaths by Month, Nevada Residents, 2016-2020\*



\*Data for 2020 are preliminary