

Opioid Surveillance

2010 - 2019

Hospital Billing: January 1, 2010 - March 31, 2019

Death Registry System Data: January 1, 2010 - March 31, 2019



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**Data for 2019 are preliminary and includes Quarter 1 only.*

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 (Includes Opioid Poisoning)

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

Opioid 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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Methamphetamine Related Disorders

Principal Diagnosis

969.72	Poisoning by amphetamines, ICD-9-CM
T436.2	Poisoning by, adverse effect of and underdosing of psychostimulants, ICD-10-CM

All Diagnosis

305.7	Nondependent amphetamine or related acting sympathomimetic abuse, ICD-9-CM
E980.3	Poisoning by tranquilizers and other psychotropic agents, undetermined whether accidentally or purposely inflicted, ICD-9-CM
E854.2	Accidental poisoning by psychostimulants, ICD-9-CM
F15	Other stimulant related disorders, ICD-10-CM

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

Methamphetamine listed as a contributing cause of death:

T43.6	Poisoning by, adverse effect of and underdosing of psychostimulants
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~Opium was included in analysis, since there have been 0 deaths related to opium it is not included in the tables and charts.

Opioid Surveillance Summary, 2010 - 2018

From 2010 to 2018 emergency department encounters increased by 97% and inpatient admissions increased by 97%. The rate of emergency department encounters per 100,000 Nevada residents increased from 109.5 to 215.4, and the rate per 100,000 Nevada residents of inpatient admissions increased from 161.2 to 317.2.

Opioid-related hospitalization visits, from 2010 to 2018, with stays 15 or more days has increased by 119%.

In terms of demographics in 2018, 73% of the opioid-related emergency department encounters were white non-hispanic. In the hospital, 73% of the inpatient admissions were white and were most prevalent among 25-34 years old Nevada residents (23%).

In 2018 Medicaid paid 48% of the opioid-related Emergency department encounters and 40% of the opioid-related inpatient admissions.

From 2010 to 2018, opioid poisonings in the emergency department decreased by 16%, and inpatient admissions decreased by 28%. The rate per 100,000 Nevada residents in the emergency department decreased from 28.8 to 24.2 and inpatient admissions rates per 100,000 Nevada population decreased from 22.1 to 16.0.

In 2018:

- Heroin was included in 47% of the emergency department encounters and 21% of the inpatient admissions.
- Methadone was included in 3% of the emergency department encounters and 6% of the inpatient admissions.
- Other opioids and narcotics accounted for 51% of the emergency department encounters and 73% of the inpatient admissions.

From 2010 to 2018, the number of opioid-related overdose deaths decreased. The rate per 100,000 Nevada residents for opioid-related overdose deaths decreased by 27% from 16.2 to 11.7.

From 2010 to 2018, 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 2018, heroin accounted for 24%, natural and semi-synthetic, 48%, methadone, 8%, synthetic Opioids, 18%, and unspecified narcotics, 2%, of all opioid-related overdose deaths.

In terms of demographics in 2018, 78% of the opioid-related overdose deaths were white non-hispanic and opioid-related deaths were most prevalent among 45-54 years old Nevada residents.

Opioid-related overdose deaths, in 2018, were more prevalent among the male gender.

Opioid-related overdose deaths in Nevada by suicide accounted for 13% of all opioid-related deaths in 2018. Nevada has had 482 opioid-related suicide deaths between 2010 and 2018.

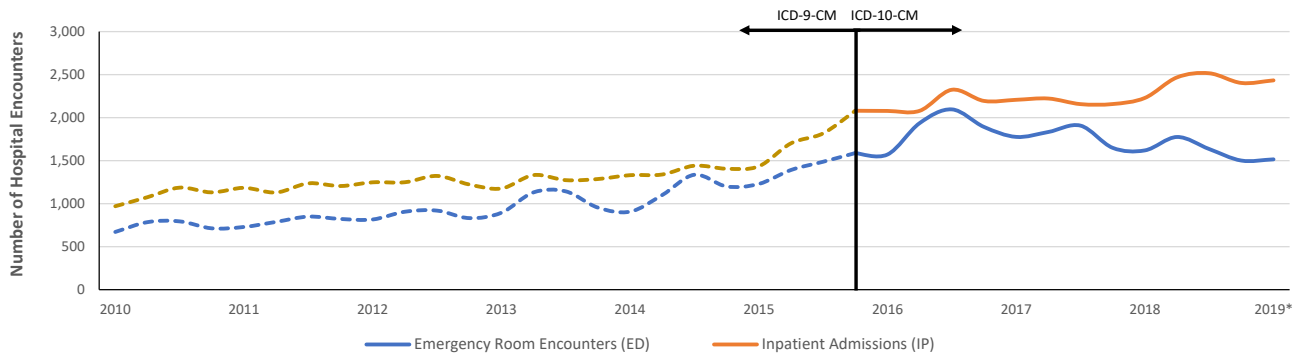
Opioid-Related Hospital Data, State of Nevada Residents, 2010-2019*

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.

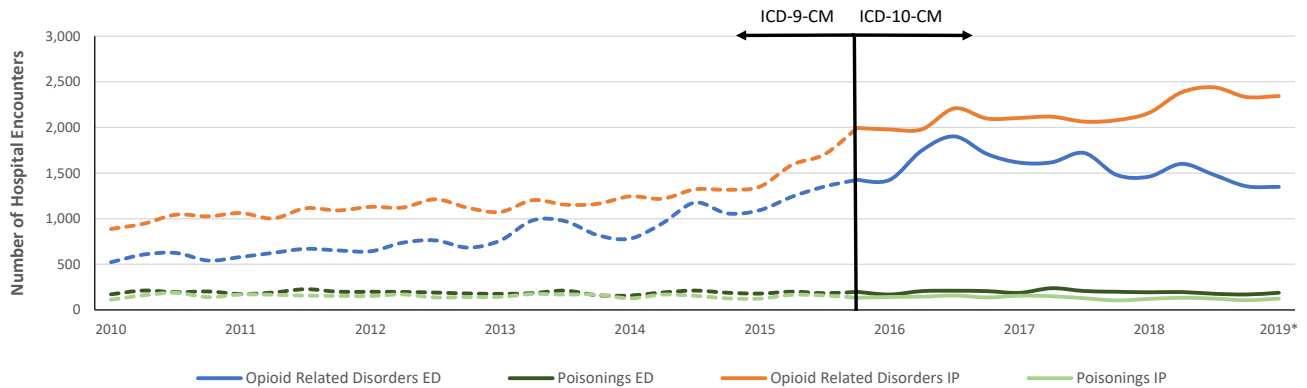
Year	Emergency Room Encounters (ED)	Emergency Room Crude Rates	Percent Change	Inpatient Admissions (IP)	Inpatient Crude Rates	Percent Change
2010	2,963	109.5		4,362	161.2	
2011	3,188	117.1	7%	4,755	174.7	8%
2012	3,473	126.3	8%	5,042	183.3	5%
2013	4,122	147.2	17%	5,067	180.9	-1%
2014	4,543	159.8	9%	5,517	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	215.4	-10%	9,616	317.2	8%
2019*	1,515			2,433		
Percent Change 2010-2018			97%			97%

Rates are per 100,000 State of Nevada Population.

Opioid-Related Hospitalizations by Quarter, State of Nevada Resident, 2010-2019*



Opioid-Related Hospital Data by Quarter, State of Nevada, 2010-2019*



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

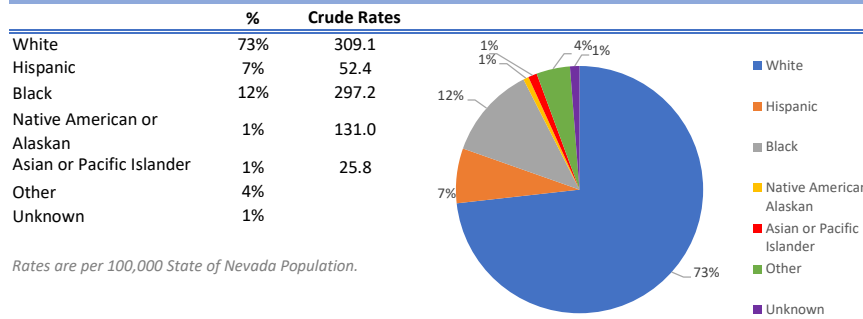
Opioid-Related Hospitalization (Inpatient) Visits by Length of Stay (Days), State of Nevada Residents, 2010-2019*

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*	330	966	719	210	100	38	70

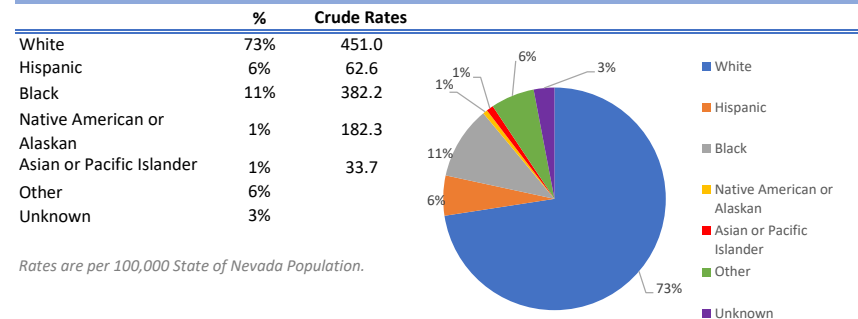
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Opioid-Related Emergency Department Encounters by Race/Ethnicity, State of Nevada Residents, 2018



Opioid-Related Inpatient Admissions by Race/Ethnicity, State of Nevada Residents, 2018



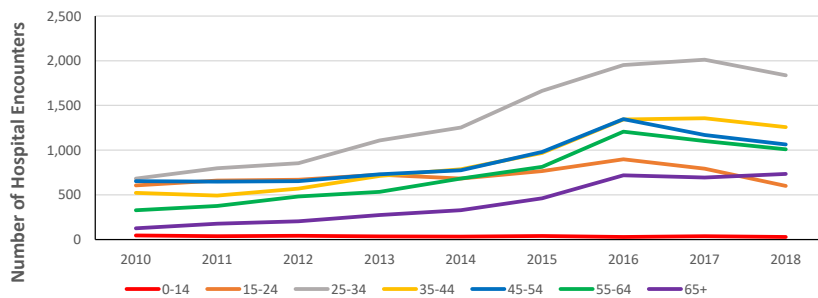
Opioid-Related Emergency Department Encounters by Age Group, State of Nevada Residents, 2010-2019*

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*	8	130	433	295	245	241	163

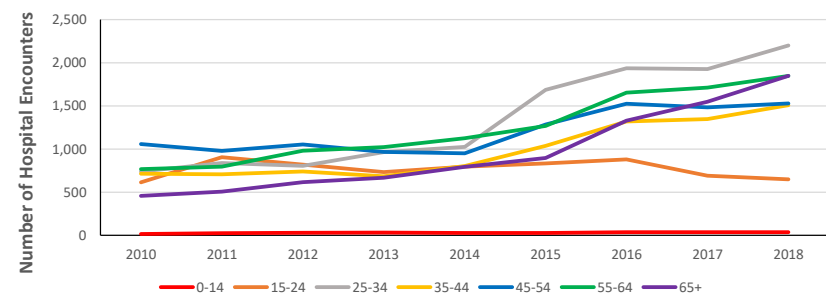
Opioid-Related Inpatient Admissions by Age Group, State of Nevada Residents, 2010-2019*

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*	14	145	562	378	357	498	479

Opioid-Related Emergency Department Encounters by Age Group, State of Nevada Residents, 2010-2018



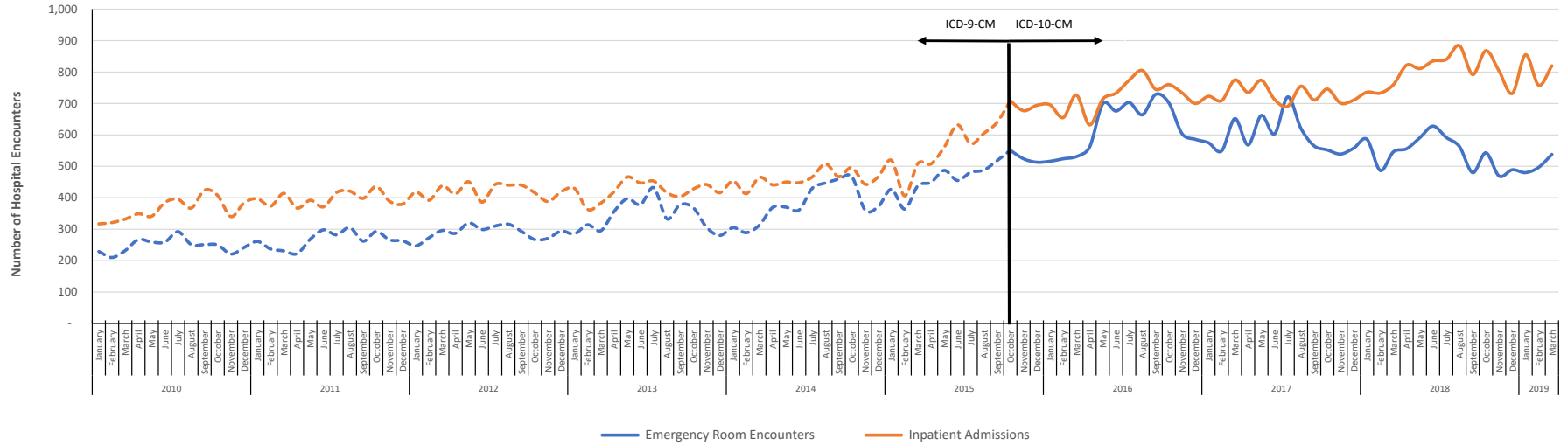
Opioid-Related Inpatient Admissions by Age Group, State of Nevada Residents, 2010-2018



*Data 2019 are preliminary and includes Quarter 1 only.

Opioid-Related Hospital Data by Month, State of Nevada Residents, 2010-2019*

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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, State of Nevada Residents, 2010-2019*

Number of Encounters by Payer											Percent of Encounters by Payer										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019*		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019*
Medicaid	400	435	462	597	1,631	2,544	3,592	3,463	3,149	786	Medicaid	13%	14%	13%	14%	36%	45%	48%	48%	48%	52%
Medicare	405	480	597	744	844	1,081	1,633	1,490	1,386	323	Medicare	14%	15%	17%	18%	19%	19%	22%	21%	21%	21%
Self Pay	1,126	1,094	1,216	1,445	850	701	669	606	539	122	Self Pay	38%	34%	35%	35%	19%	12%	9%	8%	8%	8%
HMO	376	433	462	456	343	354	404	397	452	101	HMO	13%	14%	13%	11%	8%	6%	5%	6%	7%	7%
Negotiated Discounts e.g. PPO	159	189	224	228	221	241	276	339	284	72	Negotiated Discounts e.g. PPO	5%	6%	6%	6%	5%	4%	4%	5%	4%	5%
Commercial Insurer	95	99	120	173	369	510	612	605	405	52	Commercial Insurer	3%	3%	3%	4%	8%	9%	8%	8%	6%	3%
Charity	160	166	176	125	87	58	127	89	123	21	Charity	5%	5%	5%	3%	2%	1%	2%	1%	2%	1%
Miscellaneous	48	43	39	169	133	118	77	67	44	17	Miscellaneous	2%	1%	1%	4%	3%	2%	1%	1%	1%	1%
CHAMPUS OR CHAMPVA	31	26	39	51	47	74	74	78	65	13	CHAMPUS OR CHAMPVA	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Missing	1	43	52	34	3	5	4	9	59	4	Missing	0%	1%	1%	1%	0%	0%	0%	0%	1%	0%
All Workers Compensation e.g. (SII)	5	8	8	9	9	2	15	15	13	3	All Workers Compensation e.g. (SII)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
County Indigent Referral	157	165	66	57	5	7	10	7	11	1	County Indigent Referral	5%	5%	2%	1%	0%	0%	0%	0%	0%	0%
Unknown	0	7	12	34	1	0	2	0	0	0	Unknown	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%
Total	2,963	3,188	3,473	4,122	4,543	5,695	7,495	7,165	6,530	1,515	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Opioid-Related Inpatient Hospital Admissions by Payer, State of Nevada Residents, 2010-2019*

Number of Admission by Payer											Percent of Admission by Payer										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019*		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019*
Medicaid	681	718	814	812	1,554	2,709	3,495	3,416	3,834	988	Medicaid	16%	15%	16%	16%	28%	39%	40%	39%	40%	41%
Medicare	1,303	1,353	1,631	1,760	1,816	2,092	2,676	2,977	3,378	845	Medicare	30%	28%	32%	35%	33%	30%	31%	34%	35%	35%
HMO	575	593	801	812	774	740	663	609	644	176	HMO	13%	12%	16%	16%	14%	11%	8%	7%	7%	7%
CHAMPUS OR CHAMPVA	83	112	194	223	319	480	658	541	554	152	CHAMPUS OR CHAMPVA	2%	2%	4%	4%	6%	7%	8%	6%	6%	6%
Negotiated Discounts e.g. PPO	296	297	433	338	263	219	323	392	399	97	Negotiated Discounts e.g. PPO	7%	6%	9%	7%	5%	3%	4%	4%	4%	4%
Commercial Insurer	327	697	361	171	345	369	555	494	401	74	Commercial Insurer	7%	15%	7%	3%	6%	5%	6%	6%	4%	3%
Self Pay	448	446	515	621	352	209	194	176	243	58	Self Pay	10%	9%	10%	12%	6%	3%	2%	2%	3%	2%
Miscellaneous	76	82	37	58	48	101	60	66	77	25	Miscellaneous	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%
Missing	217	153	9	38	16	78	18	45	55	11	Missing	5%	3%	0%	1%	0%	1%	0%	1%	1%	0%
Charity	31	62	15	39	21	17	21	11	18	4	Charity	1%	1%	0%	1%	0%	0%	0%	0%	0%	0%
All Workers Compensation e.g. (SII)	12	5	11	12	6	17	12	17	11	3	All Workers Compensation e.g. (SII)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
County Indigent Referral	312	237	217	174	3	1	0	0	2	0	County Indigent Referral	7%	5%	4%	3%	0%	0%	0%	0%	0%	0%
Other Blue Cross/Blue Shield	1	0	0	0	0	0	0	0	0	0	Other Blue Cross/Blue Shield	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	4,362	4,755	5,038	5,058	5,517	7,032	8,675	8,744	9,616	2,433	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

*Data 2019 are preliminary and includes Quarter 1 only.

Opioid-Related Poisonings - Emergency Department Encounters and Inpatient Hospital Admissions, State of Nevada Residents, 2010-2019*

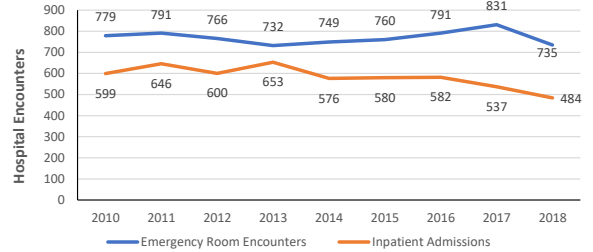
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Opioid-related poisoning is a subset of the opioid-related hospitalization data. The following ICD-9-CM/ICD-10-CM for poisoning include the principal diagnosis: 965.0 ICD-9, T40.0-T40.4, and T40.6 ICD-10, and all E-code diagnosis: E850.0-E850.2 ICD-9.

Year	Emergency Room Encounters	Emergency Room 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	24.2	-13%	484	16.0	-11%
2019*	188			124		
Percent Change 2010-2018			-16%			-28%

Rates are per 100,000 State of Nevada population.

Opioid-Related Poisonings (ED and IP), State of Nevada Residents, 2010-2018



Opioid-Related Poisonings - Emergency Department Encounters, State of Nevada Residents, 2010-2019*

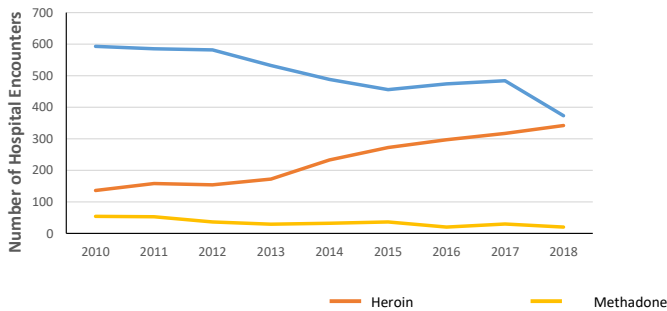
Year	Heroin	Methadone	Other Opioids and Narcotics
2010	136	54	593
2011	158	53	585
2012	154	36	582
2013	172	29	532
2014	233	32	488
2015	272	36	456
2016	297	20	474
2017	317	30	484
2018	342	20	373
2019*	78	3	107

Opioid-Related Poisonings - Inpatient Admissions, State of Nevada Residents, 2010-2019*

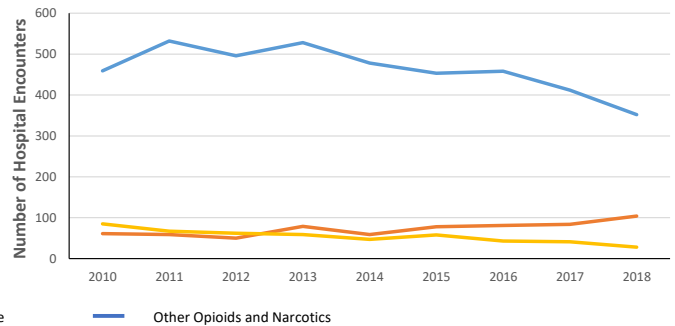
Year	Heroin	Methadone	Other Opioids and Narcotics
2010	61	85	459
2011	59	67	532
2012	50	62	496
2013	79	59	528
2014	59	47	478
2015	78	58	453
2016	81	43	458
2017	84	41	412
2018	104	28	352
2019*	20	5	99

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, State of Nevada Residents, 2010-2018



Inpatient Admissions, State of Nevada Residents, 2010-2018



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Opioid-Related Overdose Deaths, State of Nevada Residents, 2010-2019*

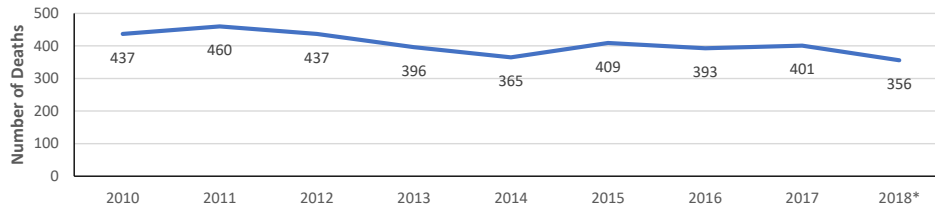
Year	Opioid-Related Overdose Deaths	Crude Rates	Percent Change	Benzodiazepine Related Overdose Deaths	Opioid and Benzodiazepine Related Overdose Deaths
2010	437	16.2		161	139
2011	460	16.9	5%	166	143
2012	437	15.9	-6%	162	140
2013	396	14.1	-11%	126	106
2014	365	12.8	-9%	125	109
2015	409	14.1	10%	130	117
2016	393	13.3	-6%	155	126
2017	401	13.4	1%	123	106
2018*	356	11.7	-13%	139	112
2019*	92			22	19
Percent Change 2010-2018*			-27%		

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, State of Nevada Residents, 2010-2018*

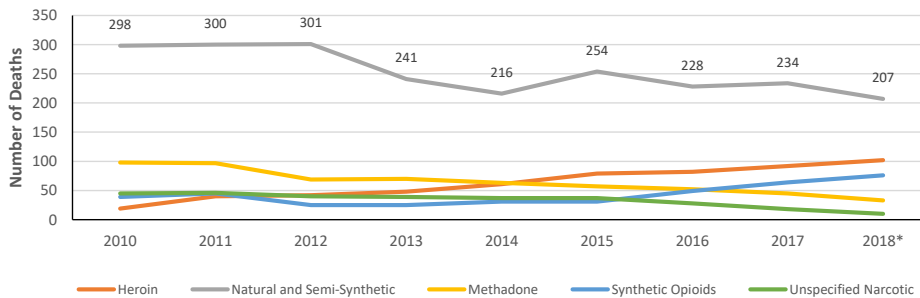


Opioid-Related Overdose Deaths by Drug Category, State of Nevada Residents, 2010-2019*

Year	Heroin	Natural and Semi-Synthetic	Methadone	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	216	63	31	37
2015	79	254	57	31	37
2016	82	228	52	49	28
2017	92	234	45	64	18
2018*	102	207	33	76	10
2019*	32	40	7	26	1

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

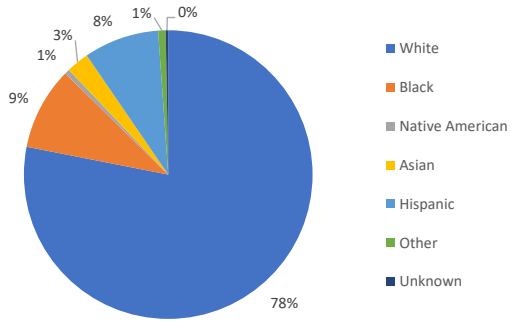
Opioid-Related Overdose Deaths by Drug Category, State of Nevada Residents, 2010-2018*



*Data for 2018 and 2019 are preliminary. Data for 2019 includes Quarter 1 only.

Opioid-Related Deaths by Race/Ethnicity, State of Nevada Residents, 2018*

Race/Ethnicity	%	Crude Rates
White	78%	18.0
Black	9%	12.4
Native American	1%	5.7
Asian	3%	3.1
Hispanic	8%	3.4
Other	1%	
Unknown	0%	

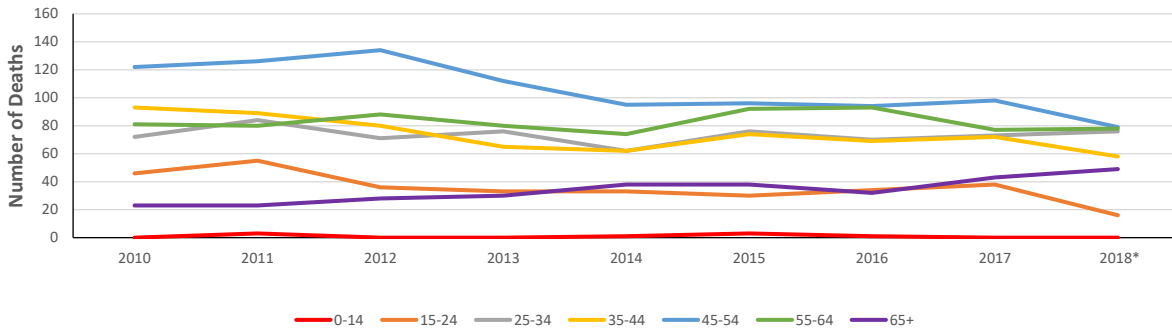


Rates are per 100,000 State of Nevada Population.

Opioid-Related Deaths by Age Group, State of Nevada Residents, 2010-2019*

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	38
2015	3	30	76	74	96	92	38
2016	1	34	70	69	94	93	32
2017	0	38	73	72	98	77	43
2018*	0	16	76	58	79	78	49
2019*	0	5	18	20	18	22	9

Opioid-Related Deaths by Age Group, State of Nevada Residents, 2010-2018*



Opioid-Related Deaths by Intent, State of Nevada Residents, 2010-2019*

Cause of Death	N	%	Crude Rates
Accident	3,161	84%	11.0
Suicide	492	13%	1.7
Assault/Homicide	5	0%	0.0
Events of Undetermined Intent	88	2%	0.3
Total (2010-2019*)	3,746	100%	13.0

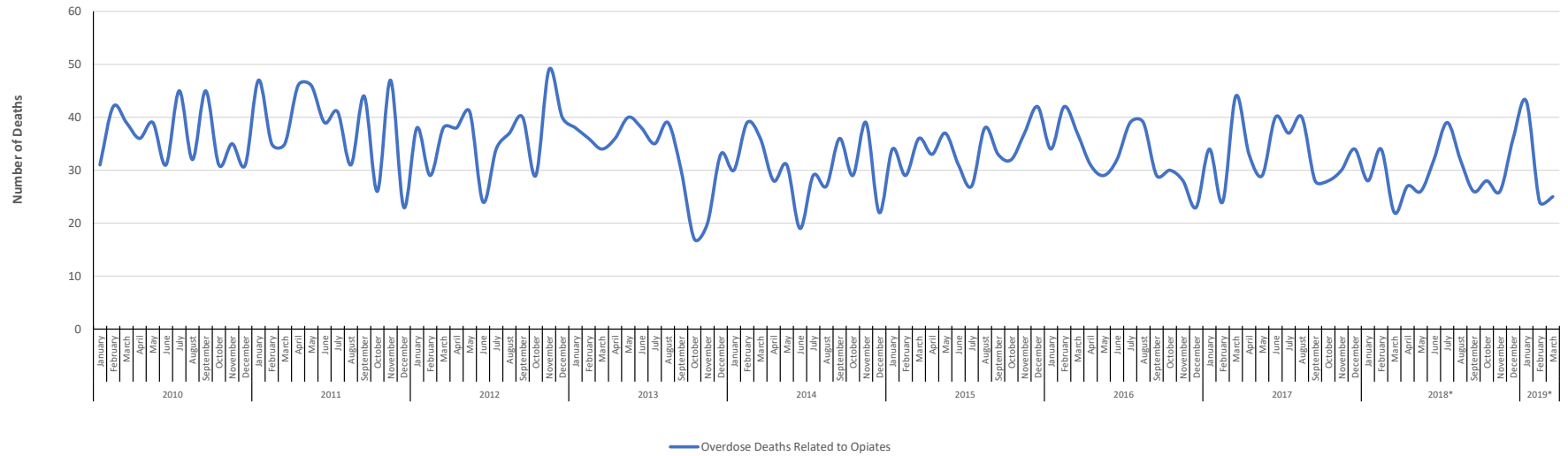
Opioid-Related Deaths by Sex, State of Nevada Residents, 2010-2019*

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	196	13.7	169	12.0
2015	220	15.1	189	13.1
2016	217	14.6	176	12.0
2017	222	14.8	179	12.0
2018*	220	14.3	136	8.9
2019*	57		35	

Rates are per 100,000 State of Nevada Population.

*Data for 2018 and 2019 are preliminary. Data for 2019 includes Quarter 1 only.

Opioid-Related Deaths by Month, State of Nevada Residents, 2010-2019*



*Data for 2019 are preliminary and includes Quarter 1 only.