



Opioid-related Deaths in Washington State, 2006–2015

The Department of Health monitors opioid-related deaths by analyzing data from death certificates using two different methods. Details on these methods are in Appendix A. Differentiating between overdose deaths involving prescription opioids or heroin can be very challenging.

Opioid-related Overdose Deaths

Number of opioid-related overdose deaths by year, Washington State, 2006–2015

Year	State Population	METHOD 1*			METHOD 2**		
		Number of opioid-related deaths	Number of prescription opioid overdose deaths	Number of heroin overdose deaths	Number of opioid-related deaths	Number of prescription opioid overdose deaths	Number of heroin overdose deaths
2006	6420263	678	565	53	584	464	120
2007	6525095	666	522	77	597	454	143
2008	6608240	709	577	73	658	512	146
2009	6672168	719	583	68	644	490	154
2010	6724544	649	532	67	570	420	150
2011	6767911	707	550	145	607	407	200
2012	6817763	713	518	186	619	388	231
2013	6882394	647	437	212	608	381	227
2014	6968173	695	425	301	612	319	293
2015	7061402	718	415	313	632	287	345
Preliminary information : Washington deaths first quarter 2016 (through March 31)							
Jan-Mar 2015	N/A	179	104	76	N/A	N/A	N/A
Jan-Mar 2016	N/A	188	112	82	N/A	N/A	N/A

*Method 1 includes intentional, unintentional, and undetermined deaths. Deaths due to "morphine" with no other information are assumed to be prescription overdose death. Deaths involving both heroin and prescription opioids will appear twice, once in each column.

**Method 2 includes unintentional and undetermined deaths only. Deaths due to "morphine" with no other information are assumed to be heroin overdose deaths.

Number and age-adjusted rate of opioid-related overdose deaths by county of residence, Washington State, 2011–2015, using Method 1

County	Number of Deaths	Rate per 100,000 population	County	Number of Deaths	Rate per 100,000 population
Adams	3	Suppressed***	Lewis	42	10.9
Asotin	12	10.7	Lincoln	5	Suppressed***
Benton	76	8.6	Mason	42	14.1
Chelan	40	11.2	Okanogan	16	7.8
Clallam	49	14.6**	Pacific	8	Suppressed***
Clark	197	9.1	Pend Oreille	9	Suppressed***
Columbia	2	Suppressed***	Pierce	431	10.2
Cowlitz	85	16.4**	San Juan	7	Suppressed***
Douglas	19	10.2	Skagit	64	10.8
Ferry	5	Suppressed***	Skamania	6	Suppressed***
Franklin	17	4.4*	Snohomish	545	13.9**
Garfield	0	0	Spokane	187	7.8*
Grant	24	5.7*	Stevens	16	8.2
Grays Harbor	36	10.5	Thurston	113	8.4
Island	39	11.0	Wahkiakum	1	Suppressed***
Jefferson	12	8.0	Walla Walla	23	7.9
King	964	8.9	Whatcom	77	7.8*
Kitsap	99	7.5*	Whitman	11	7.0*
Kittitas	18	9.3	Yakima	64	5.5
Klickitat	5	Suppressed***	WA State	3,369	9.8

*Rate is statistically lower than the state average
 **Rate is statistically higher than the state average
 ***Suppressed due to small numbers

Number and rate of opioid-related overdose deaths by age group and type of opioid, Washington State, 2011–2015, using Method 1

Age Group (yrs)	Population	Number of opioid-related deaths	Rate per 100,000 population	Number of prescription opioid overdose deaths	Rate per 100,000 population	Number of heroin overdose deaths	Rate per 100,000 population
15-24	4607408	283	6.1	122	2.6	153	3.3
25-34	4785237	695	14.5	357	7.5	349	7.3
35-44	4541352	687	15.1	450	9.9	244	5.4
45-54	4800218	949	19.8	707	14.7	255	5.3
55-64	4483706	678	15.1	538	12	138	3.1
65+	4692059	180	3.8	163	3.5	18	0.4

Summary:

- In both methods, the total number of opioid overdose deaths has not changed substantially since 2008. And, the number of prescription opioid involved overdoses has declined, while heroin overdoses have increased.
- Method 1 likely underestimates heroin overdoses, and by a greater extent in earlier years. This underestimation makes the increase in the number of heroin overdose deaths appear more dramatic compared to Method 2.
- Method 1 results in a higher number of overdoses because it includes intentional overdoses, including suicides and homicides.
- The counties that have opioid overdose rates higher than the state rate are Clallam, Cowlitz and Snohomish.
- Persons who die from heroin overdoses tend to be younger than those who die from overdoses due to prescription opioids.

Appendix A: Description of Methods

Method 1: This method is used by the Centers for Disease Control and Prevention. A death is considered to be opioid-related if the death certificate lists any of the following ICD-10 codes as an underlying cause of death:

- 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

And, includes any of the following ICD-10 codes as a contributing cause-of-death:

- T40.0: Opium
- T40.1: Heroin
- T40.2: Natural and semisynthetic opioids
- T40.3: Methadone
- T40.4: Synthetic opioids, other than methadone
- T40.6: Other and unspecified narcotics

Method 2: This method was developed by Department of Health with input from University of Washington and Department of Labor and Industries in 2006. This method is time intensive, so data are currently available through 2014. Deaths are selected for further review if they have any of the following ICD-10 codes as a contributing cause-of-death:

- T40.0: Opium
- T40.1: Heroin
- T40.2: Natural and semisynthetic opioids
- T40.3: Methadone
- T40.4: Synthetic opioids, other than methadone
- T40.6: Other and unspecified narcotics
- F11: Mental and behavioral disorders due to use of opioids

And, the manner of death is either natural, accident or undetermined and a term describing an overdose is written on the death certificate.

Deaths are classified as a prescription opioid if a prescription was listed on the death certificate, except if the drug was morphine or hydromorphone and it was not clear that these were prescriptions. This is because heroin metabolizes into these drugs, is what is detected by the toxicology testing, and therefore often written on the death certificate.