



## Opioid-related Deaths in Washington State, 2006–2016

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, 2006–2016<sup>^</sup>

Year	State Population	Number of opioid-related deaths	METHOD 1*			METHOD 2**		
			Number of prescription opioid overdose deaths	Number of heroin overdose deaths	Number of synthetic opioid overdose deaths	Number of opioid-related deaths	Number of prescription opioid overdose deaths	Number of heroin overdose deaths
2006	6420263	678	565	53	51	584	464	120
2007	6525095	666	522	77	37	597	454	143
2008	6608240	709	577	73	54	658	512	146
2009	6672168	719	583	68	70	644	490	154
2010	6724544	649	532	67	66	570	420	150
2011	6767911	707	550	145	57	607	407	200
2012	6817763	713	518	186	61	619	388	231
2013	6882394	647	437	212	59	608	381	227
2014	6968173	695	425	301	66	612	319	293
2015	7061402	718	415	313	69	632	287	345
2016 Preliminary	7183713	694	435	287	87	N/A	N/A	N/A

<sup>^</sup> 2016 data are preliminary

\*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. It includes all Washington State residents regardless of where they died and non-residents who died within Washington State.

\*\*Method 2 includes unintentional and undetermined deaths only. Deaths due to "morphine" with no other information are assumed to be heroin overdose deaths. It includes Washington residents who died in Washington. Washington residents who die outside of Washington are excluded.

### Number and age-adjusted rate of opioid-related overdose deaths by county of residence, Washington State, 2012–2016, using Method 1

County	Number of Deaths	Rate per 100,000 population	County	Number of Deaths	Rate per 100,000 population
Adams	2	***Suppressed	Lewis	34	9.1
Asotin	12	10.8	Lincoln	5	***Suppressed
Benton	84	9.3	Mason	44	14.7
Chelan	31	8.6	Okanogan	13	7.3
Clallam	54	16.5	Pacific	8	***Suppressed
Clark	199	8.8	Pend Oreille	6	***Suppressed
Columbia	2	***Suppressed	Pierce	423	9.9
Cowlitz	71	13.6	San Juan	9	***Suppressed
Douglas	20	10.5	Skagit	66	11.2
Ferry	5	***Suppressed	Skamania	2	***Suppressed
Franklin	17	4.4	Snohomish	488	12.4
Garfield	0	0	Spokane	215	8.8
Grant	24	5.9	Stevens	15	7.8
Grays Harbor	42	12.3	Thurston	106	7.7
Island	38	10.9	Wahkiakum	0	0
Jefferson	15	10.3	Walla Walla	25	8.5
King	995	9	Whatcom	69	7
Kitsap	104	7.8	Whitman	13	8.1
Kittitas	17	9.1	Yakima	65	5.5
Klickitat	4	4.3	<b>WA State</b>	<b>3,467</b>	<b>9.6</b>

\*\*\*Suppressed due to small numbers

**Number and rate of opioid-related overdose deaths by age group and type of opioid, Washington State, 2012–2016<sup>^</sup>, using Method 1**

Age Group (yrs)	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	Number of synthetic opioid overdose deaths	Rate per 100,000 population
15-24	285	6.2	124	2.7	158	3.4	33	0.7
25-34	713	14.7	329	6.8	399	8.2	57	1.2
35-44	674	14.8	422	9.3	274	6	65	1.4
45-54	896	18.8	632	13.2	281	5.9	84	1.8
55-64	687	15.1	537	11.8	159	3.5	75	1.6
65+	205	4.2	180	3.7	27	0.5	28	0.6

<sup>^</sup> 2016 data are preliminary

**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.
- The 2016 death data are still preliminary.

## 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.