



## Health Analytics and Vital Records

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## Alaska Facts and Figures

### Excess deaths associated with COVID-19, Alaska, January – August 2020 *(Updated 09/28/2020)*

#### Background

Estimates of excess deaths can provide information about the burden of mortality both directly and indirectly related to the COVID-19 pandemic. Excess deaths can be defined as the difference between the observed numbers of deaths in a specific time period and expected numbers of deaths in the same time period.<sup>i</sup>

#### Methods

Excess death counts and rates were estimated for all-cause deaths and selected underlying causes of death that may be related or affected by the COVID-19 pandemic. The average counts and rates of death per year were calculated for 2017 to 2019 from January to August, which represent our expected deaths. These expected counts and rates were then subtracted from the 2020 counts and rates, our observed deaths, to estimate excess deaths (Table 1). Because rates were calculated for a partial year, they cannot be compared with mortality rates that are based on deaths occurring over an entire year (annual mortality rates).

Mortality rates were calculated using Alaska Department of Labor and Workforce Development Research and Analysis Section population estimates<sup>ii</sup> as the denominator. The estimates for 2017-2019 used an average of the population for the 3 years; the estimates for 2020 used the population for 2019 as 2020 population counts are not yet available.

#### Limitations

Note that 2020 deaths in general, especially the most recent month of death counts shown, may be incomplete. For example, at the time the previous data brief was updated (on 08/24/2020) there were 358 deaths from all-causes for the month of July. Currently there are 414 deaths recorded for the month of July, for a difference of 56 additional deaths reported since our last data brief. The average lag between the date of death and the date that the death is registered in our Electronic Vital Records System is approximately nine days. Differences between values were not tested for statistical significance.

#### Summary:

- Compared to average deaths from January to August in 2017 - 2019, all-cause mortality counts and rates for 2020 are slightly higher.
- During January through August of 2020, compared to average deaths from the same time period in 2017 - 2019, mortality counts and rates appear lower for assault (homicide), and motor vehicle accidents.
- Compared to 2017-2019, heart disease, diabetes and chronic liver disease are slightly elevated in 2020.

Table 1: Excess Deaths by Selected Cause, 2017-2019 compared to 2020, Alaska Residents

	ALL CAUSES	INFLUENZA AND PNEUMONIA	DISEASES OF THE HEART	MALIGNANT NEOPLASMS	CHRONIC LOWER RESPIRATORY DISEASES	INTENTIONAL SELF-HARM (SUICIDE)	ASSAULT (HOMICIDE)	MOTOR VEHICLE ACCIDENTS	ALL UNINTENTIONAL INJURIES (including Motor Vehicle Accidents)	CEREBROVASCULAR DISEASES	DIABETES	NEPHRITIS, NEPHROTIC SYNDROME AND NEPHROSIS	CHRONIC LIVER DISEASE AND CIRRHOSIS
Counts	Jan-Aug	Jan-Aug	Jan-Aug	Jan-Aug	Jan-Aug	Jan-Aug	Jan-Aug	Jan-Aug	Jan-Aug	Jan-Aug	Jan-Aug	Jan-Aug	Jan-Aug
2017	2,839	42	532	592	128	124	50	65	289	114	83	32	74
2018	2,928	54	517	638	162	132	34	59	265	138	83	29	77
2019	3,020	36	531	672	139	137	47	61	293	139	74	35	67
Avg. 2017-19	2,929	44	527	634	143	131	44	62	282	130	80	32	73
2020 <sup>1</sup>	3,109	40	560	648	140	129	28	54	282	123	108	34	91
<b>Excess Deaths (2020-Avg)</b>	<b>180</b>	<b>-4</b>	<b>33</b>	<b>14</b>	<b>-3</b>	<b>-2</b>	<b>-16</b>	<b>-8</b>	<b>0</b>	<b>-7</b>	<b>28</b>	<b>2</b>	<b>18</b>
<b>Crude Rates per 100,000</b>													
Rate 2017-2019 <sup>2</sup>	397.00	5.99	71.73	86.34	19.47	17.84	5.95	8.40	38.45	17.75	10.90	4.36	9.90
Rate 2020 <sup>1,3</sup>	425.30	5.47	76.61	88.64	19.15	17.65	3.83	7.39	38.58	16.83	14.77	4.65	12.45
<b>Excess Deaths (2020-Avg)</b>	<b>28.30</b>	<b>-0.52</b>	<b>4.88</b>	<b>2.30</b>	<b>-0.32</b>	<b>-0.19</b>	<b>-2.12</b>	<b>-1.01</b>	<b>0.13</b>	<b>-0.92</b>	<b>3.88</b>	<b>0.29</b>	<b>2.55</b>

<sup>1</sup>2020 estimates are preliminary and subject to change

<sup>2</sup>Used 2017-2019 average population for denominator for 2017-2019 average rate

<sup>3</sup>Used 2019 population for denominator for 2020

\*Crude rates based on fewer than 20 events are statistically unreliable and should be used with caution.

\*\*Crude rates based on fewer than 6 events are not reported.

NOTE: Rates are not annualized and only reflect rates for the specified time period, therefore they cannot be compared with annual mortality rates. Statistical significance was not estimated between 2020 and 2017-2019 average estimates

Source: Alaska Division of Public Health, Vital Statistics, Mortality.

Last updated on 09/28/2020.

<sup>i</sup> [https://www.cdc.gov/nchs/nvss/vsrr/covid19/excess\\_deaths.htm](https://www.cdc.gov/nchs/nvss/vsrr/covid19/excess_deaths.htm)

<sup>ii</sup> <https://live.laborstats.alaska.gov/pop/>