



Health Analytics and Vital Records

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Alaska Facts and Figures

Excess deaths, Alaska, January – December 2020 *(Updated 01/28/2020)*

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 2020 for a specific time period and expected numbers of deaths in the same time period.ⁱ

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. Expected deaths were calculated as the average counts and rates of death for January to December of 2017, 2018, and 2019. These expected counts and rates were then subtracted from the January to December 2020 counts and rates, our observed deaths, to estimate excess deaths (Table 1).

Mortality rates were calculated using Alaska Department of Labor and Workforce Development Research and Analysis Section population estimatesⁱⁱ as the denominator. The estimates for 2017-2019 used an average of the population for the 3 years.

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 12/29/2020) there were 413 deaths from all-causes for the month of November. Currently there are 488 deaths recorded for the month of November, for a difference of 75 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. Also, differences between values were not tested for statistical significance.

Summary:

- Compared to average deaths from January to December in 2017 - 2019, all-cause mortality counts and rates for 2020 appear higher.
- During January through December 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, mortality counts for 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 (Stroke)	DIABETES	NEPHRITIS, NEPHROTIC SYNDROME AND NEPHROSIS (Kidney Disease)	CHRONIC LIVER DISEASE AND CIRRHOSIS
Counts	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec
2017	4,428	66	819	926	204	199	78	102	443	190	130	54	121
2018	4,461	70	816	957	221	187	56	95	399	213	123	46	121
2019	4,622	45	842	1,023	202	209	79	93	434	210	111	62	110
Avg. 2017-19	4,504	60	826	969	209	198	71	97	425	204	121	54	117
2020 ¹	5,033	50	861	1,007	201	193	48	77	400	204	164	60	159
Excess Deaths (2020-Avg)	529	-10	35	38	-8	-5	-23	-20	-25	0	43	6	42
Crude Rates per 100,000													
Rate 2017-2019 ²	613.34	8.22	112.45	131.92	28.46	27.01	9.67	13.16	57.93	27.83	16.52	7.35	15.98
Rate 2020 ¹	690.49	6.86	118.12	138.15	27.58	26.48	6.59	10.56	54.88	27.99	22.50	8.23	21.81
Excess Deaths (2020-Avg)	77.15	-1.36	5.68	6.23	-0.89	-0.53	-3.08	-2.60	-3.05	0.16	5.98	0.88	5.83

¹2020 estimates are preliminary and subject to change

²Used 2017-2019 average population for denominator for 2017-2019 average rate

*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 1/28/2020

ⁱ https://www.cdc.gov/nchs/nvss/vsrr/covid19/excess_deaths.htm

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