



Health Analytics and Vital Records

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Alaska Facts and Figures

Leading Causes of Death in Alaska, 2017

Introduction

In 2017, the ten leading causes of death (LCOD) claimed the lives of 3,139 Alaska residents, accounting for 76% of 4,114 total deaths. This document presents key findings for the 2017 LCODs by age, sex, race group and Public Health Region, and also makes comparisons over the past decade in Alaska and the US as a whole. A broader analysis of mortality and tables detailing LCODs in Alaska in 2017 can be found in the *Alaska Vital Statistics 2017 Annual Report*.¹

Methods

Mortality data from Alaska Vital Statistics were analyzed to determine the leading causes of death. LCODs are ranked by the number of deaths rather than rates to be consistent with national rankings. Mortality rates were calculated using Alaska Department of Labor and Workforce Development, Research and Analysis Section population estimates² as the denominator. All rates in this document, aside from age-group specific rates, are age-adjusted (AA) per 100,000 people using the 2000 US standard population ratios.³ AA rates allow comparisons between populations with different age distributions, from different areas, from different demographic groups (e.g. race, sex), or during different time periods. The following statistics are descriptive and were not tested for statistical significance. Percent changes were calculated as relative percent difference: $[(2008 \text{ AA rate} - 2017 \text{ AA rate}) \div 2008 \text{ AA rate}] \times 100$.

Results

Overview

In Alaska, 9 of 10 LCODs were the same in 2017 (Figure 1) as in 2016⁴ and in 2008⁵, with the order changing slightly. The exception was assault (homicide), which replaced influenza and pneumonia as the 10th LCOD. Compared to the US as a whole, in 2017 (Figure 2), 8 of the 10 LCODs were the same, of which chronic liver disease/cirrhosis and assault (homicide) were not in the 10 LCODs in the US for 2017.⁶ A more detailed look at each LCOD for Alaska in 2017 follows.

Figure 1: Leading Causes of Death by Count of Deaths, Alaska Residents, 2017

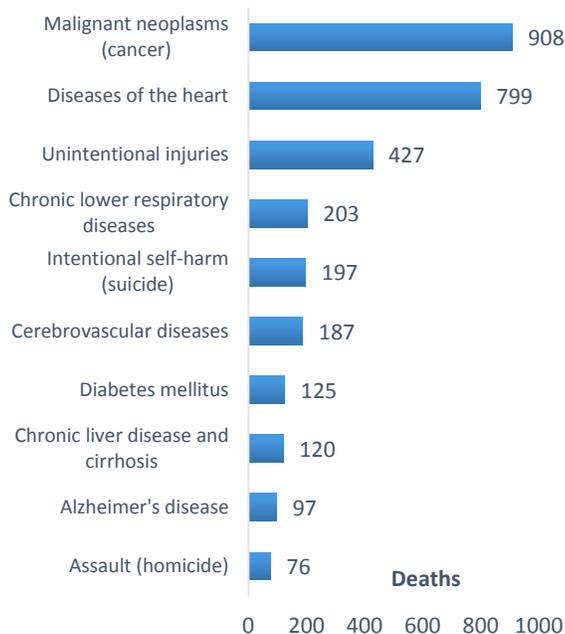
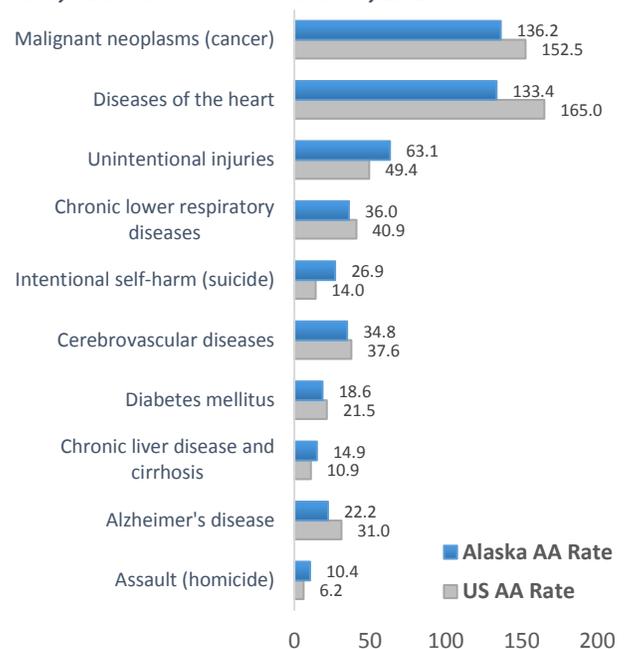
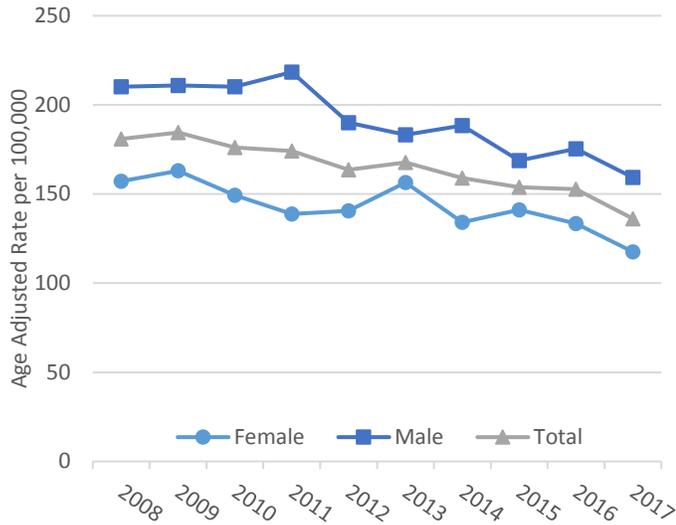


Figure 2: Age-Adjusted Rates for the Leading Causes of Death, Alaska Residents and US, 2017



#1 Malignant Neoplasms (Cancer)

Age-Adjusted Cancer Mortality Rates by Year and Sex, Alaska Residents, 2008-2017



Summary:

In Alaska, the 2017 AA mortality rate from cancer was down 25% since 2008 (136.2 vs 180.9 per 100,000). Cancer was the second leading cause of death in the US (AA rate = 152.5), which decreased by 13.5% nationally since 2008 (AA rate = 176.4).⁶

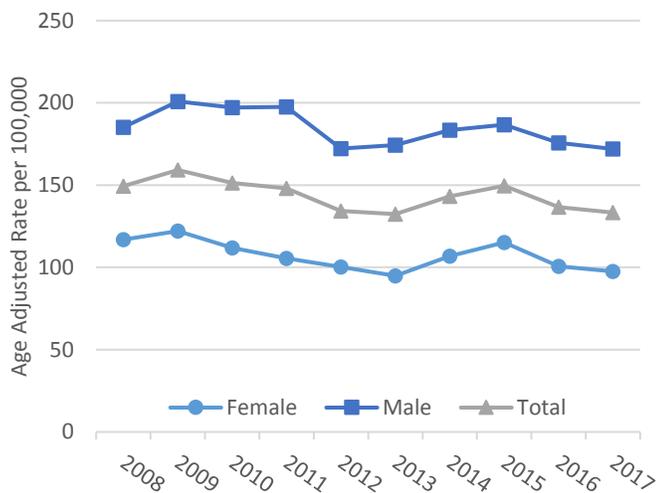
In the last decade, AA mortality rates of cancer:

- Decreased the most in the Northern region (47%).
- Decreased by 6% in American Indian/Alaska Native people, 27% in white people and 43% in other race groups.
- Decreased in both sexes by approximately 25%. AA rates were consistently lower in Alaska females than Alaska males.
- Decreased in all age groups; the largest decrease was in those age 65 and older (AA rates = 1,017.8 in 2008; 684.5 in 2017).

In 2017, cancer of the trachea, bronchus and lung was the most frequent type of cancer mortality, by both count and AA rate, in Alaska and the US.⁶ It has consistently been the most frequent type of cancer mortality in Alaska from 2008 – 2016.⁷

#2 Diseases of the heart

Age-Adjusted Heart Disease Mortality Rates by Year and Sex, Alaska Residents, 2008-2017



Summary:

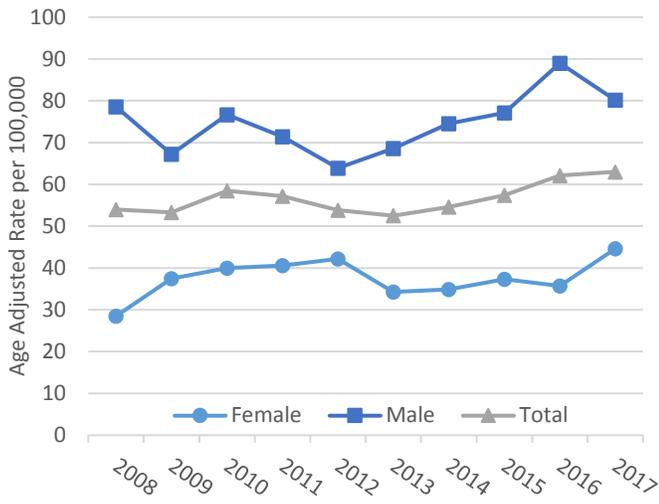
In 2017, Alaska's AA mortality rate from heart disease was lower than the US (133.4 vs. 165.0 per 100,000).⁶ The AA rate of heart disease decreased 11% in Alaska and 14% in the US⁶ since 2008.

From 2008 to 2017, heart disease mortality:

- Decreased in all regions except the Interior and Southwest regions. Of note, heart disease mortality increased in the Southwest by 109% from what was relatively low rate in 2008 (AA rate = 85.9 in 2008; 179.5 in 2017).
- Increased 28% in American Indian/Alaska Native people, and decreased in other race groups (by 20% for white and 12% for other races).
- Decreased for both males (by 7%) and females (by 17%); females had lower heart disease AA rates than males each year.
- Increased in those age 25 to 64 years but decreased in those age 65 and older.

#3 Unintentional Injuries

Age-Adjusted Unintentional Injury Mortality Rates by Year and Sex, Alaska Residents, 2008-2017



Summary:

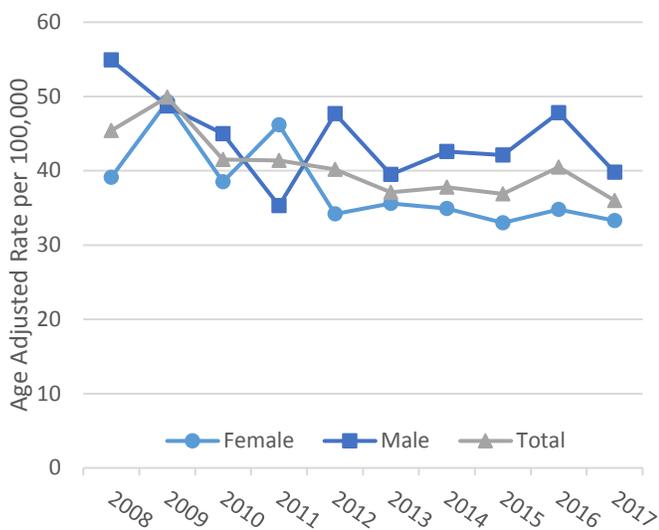
In 2017, the AA mortality rate due to unintentional injuries and poisonings was 63.1 per 100,000 in Alaska and 49.4 per 100,000 in the US.⁶ Injury mortality has increased in the last decade in both Alaska (by 17%) and the US (by 26%).⁶

In the last decade, injury mortality:

- Did not show a clear trend in most regions and varied across the time period from 2008 to 2017.*
- Was the highest among American Indian/Alaska Native people in all years from 2008 to 2017. AA rates in other race groups appeared to increase though were statistically unreliable for all but white individuals.*
- AA rates increased in females by 56% from 2008 to 2017 (28.5 to 44.6), but stayed relatively steady in males.
- Was highest in the 65 and older age group in all years from 2008 to 2017 (AA Rates = 111.7 in 2008; 113.7 in 2017).

#4 Chronic Lower Respiratory Disease

Age-Adjusted Chronic Lower Respiratory Disease Mortality Rates by Year and Sex, Alaska Residents, 2008-2017



Summary:

Chronic lower respiratory diseases (CLRD) were the fourth leading cause of death in Alaska with an AA mortality rate of 36.0 per 100,000 in 2017, very similar to the AA rate in the US of 40.9.⁶ Alaska had a large decrease in the AA rate of CLRD (21%) compared to the US (9% decrease) since 2008.⁶

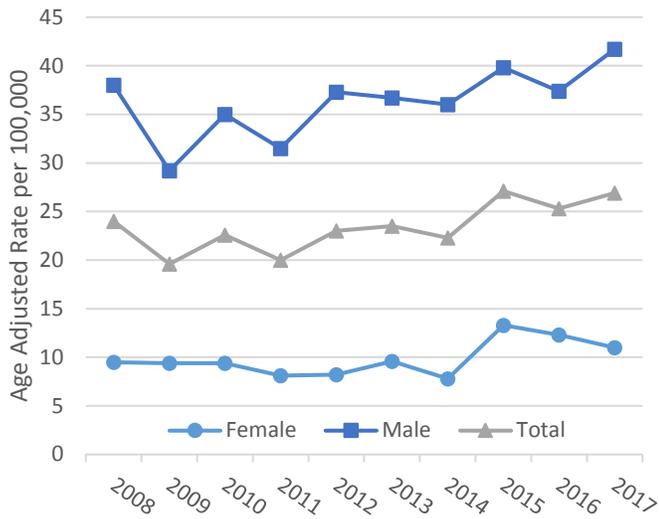
AA rates of CLRD from 2008 to 2017:

- Had the largest decrease in the Interior Public Health Region of 46% (50.1 to 26.9 per 100,000).
- Were highest among American Indian/Alaska Native people but decreased somewhat from 2008 to 2017 by 11% (76.5 to 68.5 per 100,000).
- Showed a larger decrease among males (28%) then females (15%) in Alaska. Females had a lower AA rate than males in 2017 (33.3 vs. 39.8 per 100,000), although this has not been consistent from 2008 to 2017.
- Were highest in those ages 65 and older, but decreased the most (by 30%) in this age group (288.5 to 202.0 per 100,000).

* Rate in one or more years or groups is based on greater than 6 but fewer than 20 occurrences, and may be statistically unreliable.

#5 Intentional Self Harm (Suicide)

Age-Adjusted Intentional Self Harm Mortality Rates by Year and Sex, Alaska Residents, 2008 - 2017



Summary:

The AA mortality rate due to suicide was 26.9 per 100,000 in 2017, nearly twice the rate in the US (14.0).⁶ AA suicide mortality rates increased in both the US (21%)⁶ and Alaska (12%) from 2008 to 2017.

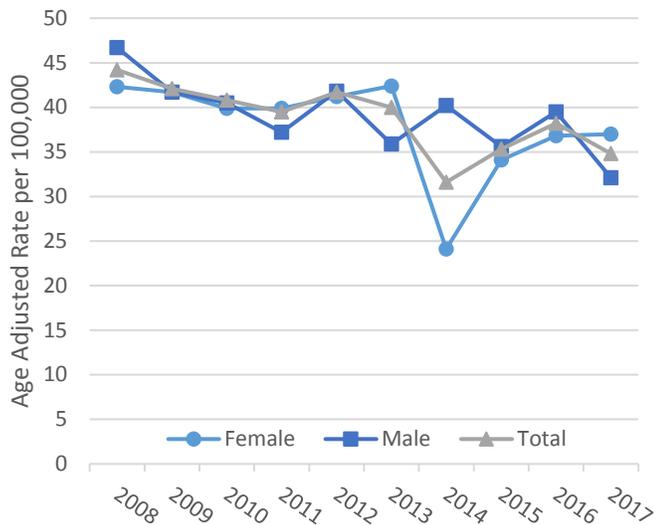
AA mortality due to suicide:

- Was approximately 3 times higher in males than in females from 2008 to 2017.
- Increased the most in the Anchorage (39%, 14.5 in 2008; 20.2 in 2017) and the Mat-Su Public Health Regions (55%, 19.8* in 2008; 30.6 in 2017) in the past decade.
- Was generally highest in the 15 to 24 age group 2008 to 2017; the greatest increase in AA rates was in those age 25-44 (28%, 29.6 in 2008; 37.9 in 2017) during the same time period.

In 2017, American Indian/Alaska Native people had an AA rate (51.9) more than twice that of other race groups. Of note, the AA suicide rate remained relatively steady in white individuals, but increased 19% in Alaska Native/American Indian people from 2008 to 2017.

#6 Cerebrovascular Disease (Stroke)

Age-Adjusted Stroke Mortality Rates by Year and Sex, Alaska Residents, 2008 - 2017



Summary:

In 2017, the AA mortality rate of cerebrovascular disease (stroke) was 34.8 per 100,000 compared to 37.6 in the US; stroke mortality decreased 21% in Alaska and 11% in the US since 2008.⁶

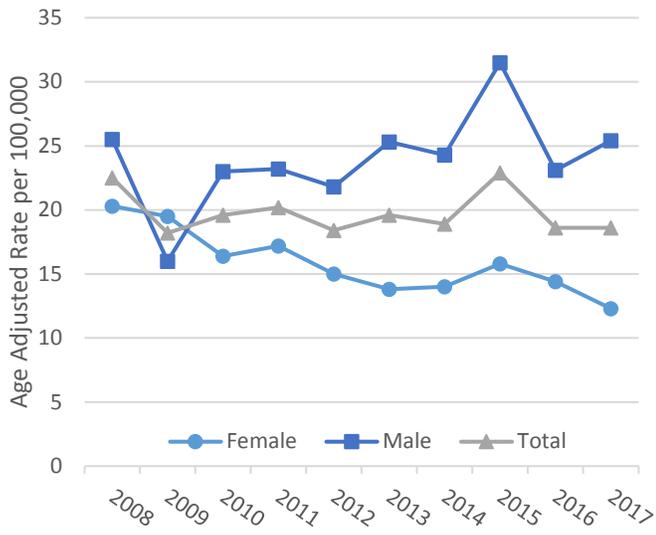
AA mortality rates due to stroke:

- Was highest in the Northern Public Health Region (77.7)* and lowest in the Gulf Coast Public Health Region (21.9)* in 2017. Rates appear to have decreased in the past decade, but are statistically unreliable in some regions.
- Decreased in all race groups except American Indian/Alaska Native people in the past decade.
- Showed a larger decrease in males than females from 2008 to 2017 (31% and 13%, respectively). AA rate in males (32.1) were slightly lower than for females (37.0) in 2017.
- Decreased in those age 45 and older from 2008 to 2017 (by 35% for 45-64, and 22% for age 65+).

* Rate in one or more years or groups is based on greater than 6 but fewer than 20 occurrences, and may be statistically unreliable.

#7 Diabetes Mellitus

Age-Adjusted Diabetes Mortality Rates by Year and Sex, Alaska Residents, 2008 - 2017



Summary:

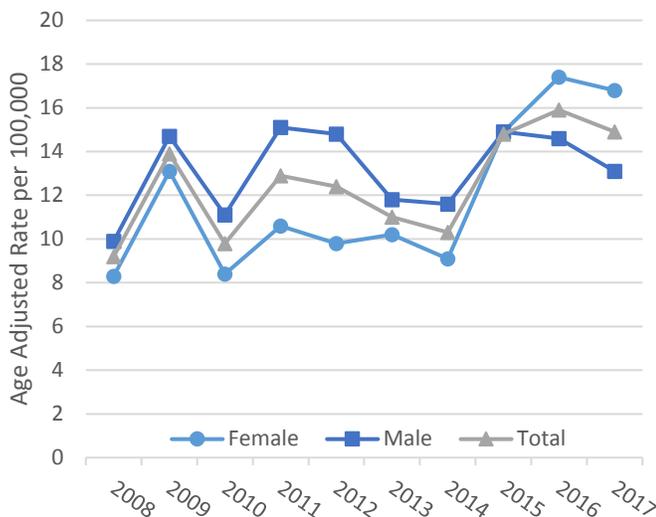
The diabetes AA mortality rate in Alaska was 18.6 per 100,000 in 2017 and has decreased 17% in the past decade. This is compared to a decrease of 2% in the US (22.0 in 2008; 21.5 in 2017).⁶

In the past decade, diabetes mortality has:

- Appeared to have decreased in most regions; however, rates for the Northern and Southwest Public Health Regions could not be calculated or were statistically unreliable due to small numbers of events.*
- Decreased in all race groups.* White individuals had the largest decrease of 24% (AA rates = 23.4 in 2008; 17.9 in 2017).
- Been higher for male Alaskans than for females in most years from 2008 to 2017; the rate has decreased more in females than in males during the same time period (39% and <1%, respectively).
- Increased by 105% in adults age 45 to 64 (AA rates = 12.2 in 2008; 25.1 in 2017). However, AA rates decreased 34% in those aged 65 years and older during the same time period.

#8 Chronic Liver Disease and Cirrhosis

Age-Adjusted Chronic Liver Disease and Cirrhosis Mortality Rates by Year and Sex, Alaska Residents, 2008 - 2017



Summary:

The chronic liver disease AA mortality rate in Alaska was 14.9 per 100,000 in 2017, an increase of 62% since 2008. The AA rate was 10.9 in the U.S as a whole in 2017, an increase of 18.5% since 2008.⁶

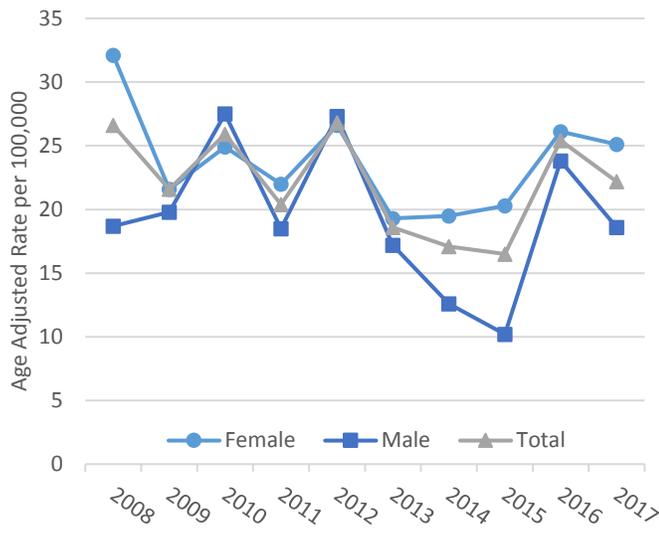
The AA mortality rate of chronic liver disease increased:

- 106% since 2008 in the Anchorage Region (8.7 in 2008; 17.9 in 2017).
- 150% in American Indian/Alaska Native people since 2008* compared to a 24% increase in white individuals.
- 102% in females since 2008. The AA rate was higher in female Alaskans (16.8) than that in male Alaskans (13.1) in 2017, but that was not the case in 2008 to 2015.
- 118% in Alaskans aged 45 to 64 years since 2008. This age group had the largest increase compared to other ages* during that time period.

* Rate in one or more years or groups is based on greater than 6 but fewer than 20 occurrences, and may be statistically unreliable.

#9 Alzheimer's disease

Age-Adjusted Alzheimer's Disease Mortality Rates by Year and Sex, Alaska Residents, 2008 - 2017



Summary:

In 2017 the AA mortality rate due to Alzheimer's disease in Alaska was 22.2 per 100,000 and has decreased 16.5% since 2008 (AA rate=26.6). The AA rate in Alaska was lower than the rate in the US as a whole (31.0) in 2017, however the rate in the US has increased 20% in the past decade.⁶

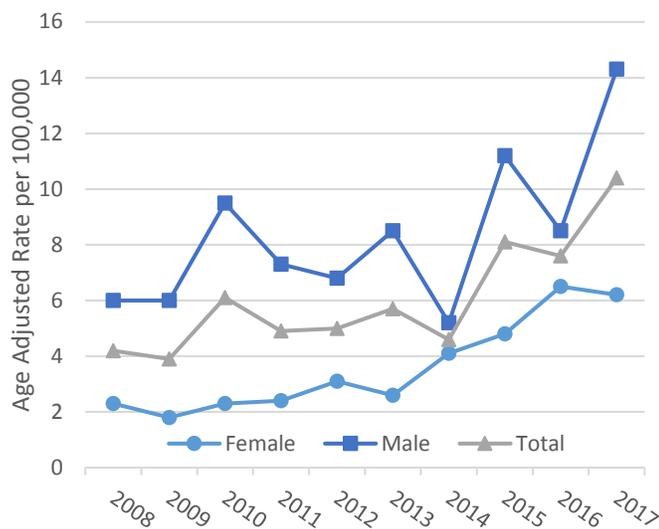
The AA Alzheimer's mortality rate:

- Appears to have decreased for most regions in the past decade; however, rates for some regions (i.e. Northern and Southwest Public Health Regions) could not be calculated or were statistically unreliable due to small numbers of events.
- Was higher in female Alaskans than among males in most years from 2008 to 2017.*
- Decreased in white and American Indian/Alaska Native people between 2008 and 2017*; however, as with sex, the rates showed variation across the decade.

Alzheimer's disease is highly associated with age. From 2008 to 2017, 98% of deaths were in adults age 65 years and older.

#10 Assault (Homicide)

Age-Adjusted Assault (Homicide) Mortality Rates by Year and Sex, Alaska Residents, 2008 - 2017



Summary:

Homicide AA rates in Alaska have more than doubled from 2008 to 2017 (4.0 in 2008; 10.4 in 2017)*. The rate in Alaska was similar to that in the US as a whole from 2008 to 2014 but sharply increased and surpassed the US rate in 2015.⁶

AA Homicide mortality rates were:

- Higher American Indian/Alaska Native people than white Alaskans in all years from 2008 to 2017*. In 2017, the AA rate in AI/AN people (23.9) was 5 times greater than in White individuals (5.0).
- Consistently higher for males than females* in the past decade, but have increased more than 100% in both groups.
- Highest among Alaskans aged 15-24 years in 2017 (AA rate=18.6)*

The homicide AA rate in the Anchorage Public Health Region increased by 359% from 2008 to 2017 (2.7 to 12.4 per 100,000)*. AA rates for some regions could not be calculated due to small counts of events.

* Rate in one or more years or groups is based on greater than 6 but fewer than 20 occurrences, and may be statistically unreliable.

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- ¹ State of Alaska, Division of Public Health, Health Analytics & Vital Records. *Alaska Vital Statistics 2017 Annual Report*. October 2018. Available at: http://dhss.alaska.gov/dph/VitalStats/Documents/PDFs/VitalStatistics_AnnualReport_2017.pdf.
- ² Vintage 2017 Alaska Population Estimates, Alaska Department of Labor and Workforce Development, Research and Analysis Section.
- ³ Klein RJ, Schoenborn CA. Age adjustment using the 2000 projected U.S. population. *Healthy People Statistical Notes*, no. 20. Hyattsville, Maryland: National Center for Health Statistics. January 2001. <https://www.cdc.gov/nchs/data/statnt/statnt20.pdf>
- ⁴ State of Alaska, Division of Public Health, Health Analytics & Vital Records. *Alaska Vital Statistics 2016 Annual Report*. September 2017. Available at: http://dhss.alaska.gov/dph/VitalStats/Documents/PDFs/VitalStatistics_AnnualReport_2016.pdf.
- ⁵ State of Alaska, Division of Public Health, Bureau of Vital Statistics. *Alaska Vital Statistics 2008 Annual Report*. Available at: http://dhss.alaska.gov/dph/VitalStats/Documents/PDFs/2008/2008_Annual_Report.pdf.
- ⁶ Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018. Data are from the Multiple Cause of Death Files, 1999-2017, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/ucd-icd10.html> on Dec 7, 2018
- ⁷ State of Alaska, Division of Public Health, Cancer Control and Prevention. *Cancer Mortality Rates for Alaska, 1996-2016*. Available at: <http://dhss.alaska.gov/dph/Chronic/Documents/Cancer/data/mortality/RatesByYear.pdf>.