

ALASKA NATIVE MORTALITY UPDATE: 2009-2013

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EXECUTIVE SUMMARY

All-Cause Mortality

- The Alaska Native people all-cause mortality rate, both genders combined, during the period 2009-2013, was 51% higher than the U.S. White rate (2009-2013).
- Alaska Native people, both genders combined, had significantly higher rates than U.S. Whites for nine of the ten leading causes of death (i.e., cancer, heart disease, unintentional injuries, suicide, chronic obstructive pulmonary disease, cerebrovascular disease, chronic liver disease, pneumonia and influenza, and alcohol abuse).
- Rate ratios of Alaska Native people compared to U.S. Whites were highest for alcohol abuse (7.1), suicide (2.9), unintentional injury (2.6), and chronic liver disease (2.4).
- Age-specific mortality rates for all causes combined showed significantly higher mortality rates among Alaska Native people than among U.S. Whites for all age categories except those 75 years and older. Disparities between the two populations were highest under 45 years of age, and appeared to decline progressively in both genders as age increased. The decrease in rate ratios with increasing age occurred in both males and females separately. Age-specific rates were significantly higher among males than females for all ages.
- All-cause mortality rates were significantly higher for the Norton Sound service region as compared to all other service regions combined. All-cause rates were significantly lower for the Aleutian and Pribilof service region than all other service regions combined.
- The all-cause mortality rate for Alaska Native people declined significantly (13%) between 1980-1983 and 2009-2013; similar to the significant 25% decline among U.S. Whites during this period.
- After a number of periods of declining mortality rates, the Alaska Native all-cause mortality rate increased 4% since the last five year period.

Excess Mortality

- The three leading causes of excess mortality among Alaska Native people, both genders combined, were unintentional injury (22.2%), cancer (16.1%), and suicide (11.3%).
- Among Alaska Native men, unintentional injury (38.3%), suicide (34.9%), and homicide (7.9%) were the leading causes of excess mortality.
- Among Alaska Native women, unintentional injury (19.8%), cancer (12.3%), and chronic liver disease (7.9%) were the leading causes of excess mortality.

Years of Potential Life Lost

- Alaska Native people experienced an average of 27.1 years of potential life lost before age 75 from all-causes during the 2009-2013 time period.
- Unintentional injury (YPLL=19,349) caused the greatest number of years of potential life lost among Alaska Native people, both genders combined, and among men (YPLL=12,310) and women (YPLL=7,005), separately.

First Leading Cause of Death - Cancer

- Cancer was the leading cause of death among Alaska Native people, for males, females, and both genders combined, for the time period 2009-2013.
- The cancer mortality rate for Alaska Native people, both genders combined, was significantly higher than for U.S. Whites (RR=1.4).
- Among Alaska Native people, both genders combined, cancer was the leading cause of death for all age groups 45 and older.
- There was a significant increase (5%) in Alaska Native cancer mortality rates between 1980-1983 and 2009-2013. U.S. White rates did not change significantly during this period.

Second Leading Cause of Death - Heart Disease

- For the first time, heart disease mortality rates for Alaska Native people, both genders combined, were significantly higher than U.S. White rates (RR=1.1).

- The rates for Alaska Native males were significantly higher than those of U.S. White males (RR=1.2). Alaska Native females had a slightly lower heart disease mortality rate than U.S. White females, but the difference was not significant.
- Heart disease mortality rates for Alaska Native people declined 30% between 1980-1983 and 2009-2013. Heart disease mortality for U.S. Whites declined 56% during this period.

Third Leading Cause of Death - Unintentional Injury

- Unintentional injury was the third leading cause of death for Alaska Native people, both genders combined. It ranked third among causes of death for both Alaska Native males and females.
- For Alaska Native people, both genders combined, unintentional injury mortality rates were 2.6 times the U.S. White rate. Rates for Alaska Native males were 2.3 times the U.S. White male rate. Rates for Alaska Native females were 3.0 times those for U.S. White females.
- Unintentional injury deaths resulted in an average of 37.5 years of potential life lost.
- Unintentional injury mortality rates declined 43% for Alaska Native people, both genders combined, between 1980-1983 and 2009-2013. U.S. Whites experienced a 4% decline during this period.

Fourth Leading Cause of Death - Suicide

- Suicide was the fourth leading cause of death among Alaska Native people, both genders combined. It ranked fourth among Alaska Native males and seventh among Alaska Native females.
- The suicide rate for Alaska Native people, both genders combined, was 2.9 times the U.S. White rates. The rate ratios were 2.9 for both Alaska Native males and females compared to U.S. White males and females.

- There has been a significant decrease of 3% in suicide mortality rates among Alaska Native people between 1980-1983 and 2009-2013. U.S. Whites experienced a significant 5% increase during this period.

Fifth Leading Cause of Death – COPD

- Alaska Native people, both genders combined, experienced an COPD mortality rate 1.5 times the U.S. White rate. The mortality rate for Alaska Native males was 1.5 times the U.S. White male rate. The mortality rate for Alaska Native females was 1.4 times the U.S. White female rate.
- Alaska Native COPD mortality rates increased 150% between 1980-1983 and 2009-2013. COPD mortality rates increased 47% among U.S. Whites during this period.

Sixth Leading Cause of Death - Cerebrovascular Disease

- Alaska Native people, both genders combined, experienced cerebrovascular disease mortality rates 1.5 times the U.S. White rate. The mortality rate for Alaska Native females was a significant 1.7 times the rate for U.S. White females.
- Alaska Native cerebrovascular disease mortality rates decreased 15% between the 1980-1983 and 2009-2013. Cerebrovascular disease mortality rates decreased 57% among U.S. Whites during this period.

Seventh Leading Cause of Death – Chronic Liver Disease

- The chronic liver disease and cirrhosis mortality rate for Alaska Native people, both genders combined, was a significant 2.4 times the U.S. White rate. Rates for Alaska Native males were a significant 1.5 times the U.S. White male rate, and Alaska Native females were a significant 4.1 times the U.S. White female rate.
- Chronic liver disease and cirrhosis mortality rates for Alaska Native people declined significantly (15%) between 1980-1983 and 2009-2013. Rates declined 21% among U.S. Whites during this period.

Eighth Leading Cause of Death - Pneumonia and Influenza

- Mortality rates for Alaska Native people, both genders combined, were 1.7 times the U.S. White rate. Rates for Alaska Native males were 1.4 times those for U.S. White males. Rates for Alaska Native females, however, were 1.9 times the U.S. White female rate.
- There was a 50% decline in pneumonia and influenza mortality rates for Alaska Native people, both genders combined, between 1980-1983 and 2009-2013. U.S. Whites experienced a significant 47% decline during this period.

Ninth Leading Cause of Death – Diabetes Mellitus

- This is the first time period where diabetes is in the top ten leading causes of death among Alaska Native people.
- Diabetes mellitus mortality rates among Alaska Native people, both genders combined, were 1.1 times the U.S. White rate, though this difference was not significant. Alaska Native males compared to U.S. White males had 10% lower mortality rates, and Alaska Native females compared to U.S. White females had 30% higher rates.
- Alaska Native people experienced a 302% increase in diabetes mortality rates between 1980-1983 and 2009-2013. Among U.S. Whites there was a 3% increase during this period.

Tenth Leading Cause of Death – Alcohol Abuse

- Alcohol abuse mortality rates for Alaska Native people, both genders combined, were 7.1 times the U.S. White rate. Alaska Native males had rates 4.7 times the U.S. White male rate. Rates for Alaska Native females were 15.7 times the rate for U.S. White females.
- Alaska Native alcohol abuse mortality rates declined 51% between 1980-1983 and 2009-2013. U.S. White rates did not change significantly during this period.

Life Expectancy

- Life expectancy for Alaska Native people born between 2009-2013 is estimated to be 70.7 years.
- For Alaska Native people, both genders combined, life expectancy was 8.4 years shorter than U.S. Whites. In males, Alaska Native life expectancy was 68.5 years (8.2 years shorter than U.S. White males) and in females, life expectancy was 72.9 years (8.5 years shorter than U.S. White females).
- Alaska Native life expectancy increased 8% between 1980-1983 and 2009-2013. U.S. Whites experienced a 6% increase during this period.

INTRODUCTION

Reliable information on cause of death is essential to the development of policies and programs for prevention and control of disease and injury. This report provides information about the leading causes of Alaska Native mortality in the following sections: rank order of leading causes; age-specific mortality rates; excess death calculations; estimates of years of potential life lost; mortality rates by service regions; trends over time for Alaska Natives statewide; regional trends over time; and a section focusing on each of the ten age-adjusted leading causes of death.

Produced by the Alaska Native Epidemiology Center, this report provides information for health care planners, providers and other professionals throughout Alaska and elsewhere.

METHODS

Population

Alaska Native people are those inhabitants whose ancestors occupied the state of Alaska. The U.S. Bureau of the Census estimates that in the year 2010 there were 130,998 Alaska Native

people residing in Alaska, 104,871 of whom checked only the American Indian/Alaska Native category for race among multiple options. For this report, bridged population estimates were used. The bridged estimate for the year 2010 Alaska Native population was 120,767, an intermediate value between the single race and multiple race estimates reported by the census.^a Estimates for year 2013 were generated by using a weighted average of the preceding years (50% for 2012, 25% for both 2011 and 2010). Population tables for 1980 to 2013 are presented in Appendix A.

Mortality Data

Mortality data for Alaska Native people who were resident in Alaska and died there were provided by the State of Alaska Bureau of Vital Statistics. Cases from this database listed race as Alaska

^a Population bridging is a method used to make multiple-race and single-race data comparable enough for analysis. In population bridging, all single race respondents are counted in the race category (in this case, all 104,871 AN). Persons who reported multiple races (in this case, an additional 26,127 individuals) are assigned to a single race category based upon fairly complex mathematical models.

Native (85%), Eskimo (10%), Canadian Eskimo and Indian (3%), Aleut (1%), and Indian (1%).

For current estimates we calculated average annual mortality rates for Alaska Native people using only the underlying cause of death. Individuals with no underlying cause of death listed were excluded from the analysis. Because of small numbers, cases were aggregated for the five year time period, 2009-2013, and the bridged Alaska Native population estimate for this period was used as the denominator.^b

^b Population estimates for Alaska Native people for the years 1990-2013 are based on the NCHS postcensal series by year, census area, age, sex, bridged race, and Hispanic origin. Census areas were combined to form Service Regions as outlined in Appendix C.

Population counts for communities that received health services from regions other than those to which their census areas belonged were added or subtracted from the appropriate service region. Counts for Alaska Native people in these villages came from 2010 Census data. Changes in annual community estimates were calculated based on annual changes for the census area of the community. Data for 1990-2013 is available on the Internet at: http://www.cdc.gov/nchs/nvss/bridged_race.htm. as of September 1, 2013.

Population estimates for Alaska Native people for the years 1980-1999 are based on NCI SEER bridged estimates. Age-gender estimates were calculated by applying the 1980 Census age-gender distribution for Alaska Native people to the years 1980-1984. An average of the 1980 and 1990 Census age-gender distributions was applied to 1985-1989 estimates.

We only reported and calculated rates for those causes that had at least five deaths during the interval studied.

Race is assigned at time of death by either next of kin, or the coroner. There is often concern about under-reporting of minority groups on death certificate data, however, a 1996 study estimated that misclassification of Alaska Native people on death certificates is low (5%).¹

Alaska Native rates for 2009-2013 were compared to mortality rates for U.S. Whites for the time period, 2009-2013. U.S. Whites were chosen as a comparison group since they are frequently used as a standard population. These large numbers provide accurate estimates by age and gender with which to compare. U.S. White data for both numerators and denominators came from the CDC National Center for Health Statistics.² Data for U.S. Whites are available for the years 1969-2013.

All mortality rates were age-adjusted to the 2000 standard population by the direct method. Rate ratios were created to compare Alaska Native to U.S. White rates and confidence intervals calculated

around these ratios.³ Alaska Native rates were considered significantly different if the 95% confidence interval did not contain one. Age-adjusted rates based on fewer than 20 occurrences are statistically unreliable and should be used with caution.

Rank Order

In order for the data in this report to be comparable to other studies, mortality rates for the 10 leading causes of death for Alaska Native people statewide were calculated from a standardized list of 50 leading causes of death as defined by the National Center for Health Statistics (NCHS) with the exception of alcohol abuse (F10). Deaths due to Alcohol Abuse (F10) do not appear on the NCHS list of leading causes because of its low rate of occurrence nationwide. It does, however, rank in the top 10 leading causes of death among Alaska Native people, and was included in this report. A list of ICD-9 and ICD-10 code groupings used is included in the Appendix B.

Throughout this document, certain conditions originating in the perinatal period are listed as *perinatal conditions*;

chronic liver disease and cirrhosis are referred to as *chronic liver disease*; chronic obstructive pulmonary disease is listed as *COPD*; congenital malformations, deformations and chromosomal abnormalities are listed as *congenital abnormalities*; diseases of heart are listed as *heart disease*; essential (primary) hypertension and hypertensive renal disease are listed as *hypertension*; homicide and legal intervention is listed as *homicide*; nephritis, nephrotic syndrome and nephrosis are listed as *nephritis*, and mental and behavioral disorders due to alcohol abuse are listed as *alcohol abuse*; diabetes mellitus are listed as *diabetes*.

Age-Specific Rates

This section examines causes of death for each age group. For the most recent time period, 2009-2013, age-specific rates for Alaska Native people were compared with age-specific U.S. White rates. Age-specific rates are not age-adjusted.

Excess Deaths

This section examines the ten leading causes of excess deaths among Alaska

Native people. Alaska Native deaths are considered excess if the numbers for a particular cause were greater than what would have occurred in a similarly sized U.S. White population.

Excess deaths were calculated by multiplying the age-specific and cause-specific death rates for U.S. Whites by the Alaska Native population for each age group to determine the expected number of deaths. The difference between the expected and the observed number of Alaska Native deaths was considered excess.⁴

Years of Potential Life Lost (YPLL)

YPLL is an estimate of the average years a person would have lived if he or she had not died prematurely. It is an alternative to death rates that gives more weight to deaths that occur among younger people. This section lists the ten leading causes of years of potential life lost among Alaska Native people.

If the average life span for the population is 75 years, the number of years of potential life lost is calculated by subtracting the age at death for each individual from 75. Only those people

who died before 75 years of age are included in the calculation.

Service Regions

Alaska has been divided into twelve service regions for the purpose of reporting health data. The twelve service regions are:

- 1) Aleutians & Pribilofs
- 2) Anchorage/MatSu
- 3) Arctic Slope
- 4) Bristol Bay
- 5) Copper River/Prince William Sound
- 6) Interior
- 7) Kenai Peninsula
- 8) Kodiak Area
- 9) Northwest Arctic
- 10) Norton Sound
- 11) Southeast
- 12) Yukon-Kuskokwim

In addition, the rural regions of Aleutians & Pribilofs, Copper River/Prince William Sound (Copper River/PWS), Kenai Peninsula and Kodiak Area are aggregated under the title Anchorage Service Unit-Combined Rural service region (ASU-Combined Rural service region).

Deaths were assigned to the service region in which the person was resident, regardless of place of death in Alaska. This report does not include deaths of Alaska residents who died outside of Alaska.

This section examines the ten leading causes of death for each region. More than ten causes were included if candidates for the tenth position had the same number of cases. Fewer causes were reported if causes had fewer than five cases. Causes of death with fewer than 5 cases were recorded as <5.

Appendix C contains the service regions and their corresponding Indian Health Service (IHS) service units, tribal health organizations and communities.

Trends Over Time

Changes in mortality rates over the period, 1980 to 2013, were analyzed for the leading causes of death among Alaska Native people statewide.

Mantel-Haenszel Chi-square tests for trend stratified by age group were used to test for a significant trend over time for each age-adjusted time period.⁵

Percentage change over time was calculated by subtracting the rate for the first time period from the rate for the most recent time period and dividing by the rate for the first time period.

Appendix D contains the number of deaths for Alaska Native people from each leading cause for the years 1980-2013 by time period.

Regional Trends Over Time

This section examines the current leading causes of death for each service region and the five preceding time periods, 1980-2013.

¹ Indian Health Service. Adjusting for Miscoding of Indian Race on State Death Certificates. Washington DC: Department of Health and Human Services, Indian Health Services;1996.

² Underlying Cause of Death 1999-2013 on CDC WONDER Online Database, released 2015. Data are from the Multiple Cause of Death Files, 1999-2013, 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>. Underlying mortality data provided by NCHS (www.cdc.gov/nchs).

³ Armitage P, Berry G, Matthews. JNS. Statistical Methods in Medical Research (4th edition). Oxford: Blackwell Science 2002.

⁴ Berry G. The Analysis of Mortality by the Subject-Years Method. Biometrics. 1983;39(1): 173-184.

⁵ Schlesselman. "Case-Control Studies", New York, Oxford Univ. Press, 1982, pp.203-206.

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RANK ORDER OF LEADING CAUSES OF DEATH

Highlights

- Alaska Native people had significantly higher rates than U.S. Whites for nine of the ten leading causes of death i.e., cancer, heart disease, unintentional injury, suicide, COPD, cerebrovascular disease, chronic liver disease and cirrhosis, pneumonia and influenza, and alcohol abuse. The diabetes mortality rate for Alaska Native people was not significantly different than that for U.S. Whites.
- Cancer was the leading cause of death among Alaska Native people, both genders combined, as well as among both Alaska Native males and females separately.
- The heart disease mortality rate was significantly higher, both genders combined, but was only significantly different for males.
- Unintentional injury was the third leading cause of death among Alaska Native people, both genders combined. It ranked third among both males and females.
- The Alaska Native suicide rate, both genders combined, was 2.9 times the U.S. White rate.
- The Alaska Native chronic obstructive pulmonary disease mortality rate, both genders combined, was 1.5 times the U.S. White rate.
- The Alaska Native cerebrovascular disease mortality rate, both genders combined, was also 1.5 times the U.S. White rate.
- Chronic liver disease and cirrhosis mortality rates for Alaska Native people, both genders combined, were 2.4 times the U.S. White rate. Rates for Alaska Native males were 1.5 times the rate for U.S. White males. Rates for Alaska Native females were 4.1 times higher than those for U.S. White females.
- The Alaska Native pneumonia and influenza mortality rate, both genders combined, was 1.7 times the U.S. White rate.
- The Alaska Native diabetes mortality rate, both genders combined, was higher than the rate for U.S. Whites, but this difference was not statistically significant.

- The Alaska Native alcohol abuse mortality rate, both genders combined, was 7.1 times the U.S. White rate.

Overview

Age-adjusted mortality rates control for the effects of differences in population age distributions. Direct age-adjustment is the same as calculating a weighted average. It weights the age-specific rates observed in a population by the proportion of each age group in a standard population. In this case, the U.S. 2000 standard population is used.

This section contains Tables 1a-c listing the ten leading causes of death among Alaska Native people for the five year period, 2009-2013. Separate tables are presented for Alaska Native people, both genders combined, males, and females.

The tables provide causes of death among Alaska Native people in rank order. Numbers of deaths for each cause and age-adjusted rates are listed for both Alaska Native people and U.S. Whites. Rate ratios with 95% confidence intervals are used to compare the two populations. Rates are considered

statistically different if the confidence intervals do not contain one.

This section also contains Figures 1a-c comparing rates for Alaska Native people and U.S. Whites for each of the leading causes of death in rank order. Figures 2a-c display rate ratios ranked by disparity between Alaska Native people and U.S. Whites. Data for these figures comes from Tables 1a-c.

TABLE 1a.

Data Source: State of Alaska Bureau of Vital Statistics (AN), National Cancer Institute's Surveillance, Epidemiology, and End Results Program. (USW)

Leading Causes of Death

Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Ranked by Percentage of Mortality for Alaska Natives
Both Genders

	Alaska Natives			U.S. Whites			Rate Ratio	95% CI
	#	%	Rate per 100,000 ^a	#	%	Rate per 100,000 ^a		
1 Cancer	908	20.9%	234.6	2,466,030	22.9%	168.8	1.4 *	1.28-1.50
2 Heart Disease	723	16.6%	190.3	2,580,628	24.0%	173.1	1.1 *	1.00-1.19
3 Unintentional Injury	552	12.7%	104.8	540,458	5.0%	41.0	2.6 *	2.31-2.81
4 Suicide	250	5.7%	40.6	177,650	1.7%	13.8	2.9 *	2.54-3.40
5 COPD	218	5.0%	65.6	653,868	6.1%	44.7	1.5 *	1.25-1.71
6 Cerebrovascular Disease	173	4.0%	54.7	542,298	5.0%	36.6	1.5 *	1.25-1.78
7 Chronic Liver Disease and Cirrhosis	121	2.8%	24.0	146,959	1.4%	10.2	2.4 *	1.90-2.90
8 Influenza and Pneumonia	95	2.2%	26.1	228,984	2.1%	15.4	1.7 *	1.33-2.14
9 Diabetes Mellitus	78	1.8%	21.3	283,068	2.6%	19.4	1.1	0.84-1.42
10 Alcohol Abuse	73	1.7%	14.2	28,693	0.4%	2.0	7.1 *	5.42-9.29
All Others	1,154	26.5%	300.5	3,100,826	28.8%	221.3	1.4 *	1.26-1.45
All-Cause^b	4,345	100.0%	1076.7	10,749,462	172.5%	736.9	1.5 *	1.41-1.51

*95% CI does not contain 1.

^a Rates are age-adjusted to the U.S. 2000 Standard population

^b Contains two individuals of unknown sex

TABLE 1b.

Data Source: State of
Alaska Bureau of Vital
Statistics (AN), National
Cancer Institute's
Surveillance,
Epidemiology, and End
Results Program.(USW)

Leading Causes of Death
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Ranked by Percentage of Mortality for Alaska Natives
Males

	Alaska Natives			U.S. Whites			Rate Ratio	95% CI
	#	%	Rate per 100,000 ^a	#	%	Rate per 100,000 ^a		
1 Cancer	474	20.3%	276.0	1,297,779	24.2%	203.0	1.4 *	1.22-1.51
2 Heart Disease	446	19.1%	256.8	1,337,068	25.0%	218.4	1.2 *	1.05-1.31
3 Unintentional Injury	340	14.5%	126.0	336,822	6.3%	54.9	2.3 *	2.02-2.60
4 Suicide	200	8.5%	63.4	139,575	2.6%	22.2	2.9 *	2.42-3.36
5 COPD	115	4.9%	75.5	305,813	5.7%	50.2	1.5 *	1.21-1.86
6 Cerebrovascular Diseases	70	3.0%	47.4	217,516	4.1%	36.4	1.3	0.98-1.71
7 Homicide	51	2.2%	17.7	28,232	0.5%	4.6	3.8 *	2.78-5.31
8 Chronic Liver Disease and Cirrhosis	46	2.0%	20.9	95,751	1.8%	13.9	1.5 *	1.07-2.11
9 Pneumonia & Influenza	45	1.9%	26.2	107,287	2.0%	18.2	1.4 *	1.02-2.02
10 Diabetes Mellitus	38	1.6%	21.8	150,051	2.8%	23.7	0.9	0.63-1.33
All Others	512	21.9%	280.7	1,341,267	25.0%	223.9	1.3 *	1.13-1.38
All-Cause	2,337	99.9%	1212.4	5,357,161	100.0%	869.4	1.3 *	1.26-1.39

*95% CI does not contain 1.

^a Rates are age-adjusted to the U.S. 2000 Standard population

TABLE 1c.

Data Source: State of
Alaska Bureau of Vital
Statistics (AN), National
Cancer Institute's
Surveillance,
Epidemiology, and End
Results Program.(USW)

Leading Causes of Death**Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)****Ranked by Percentage of Mortality for Alaska Natives****Females**

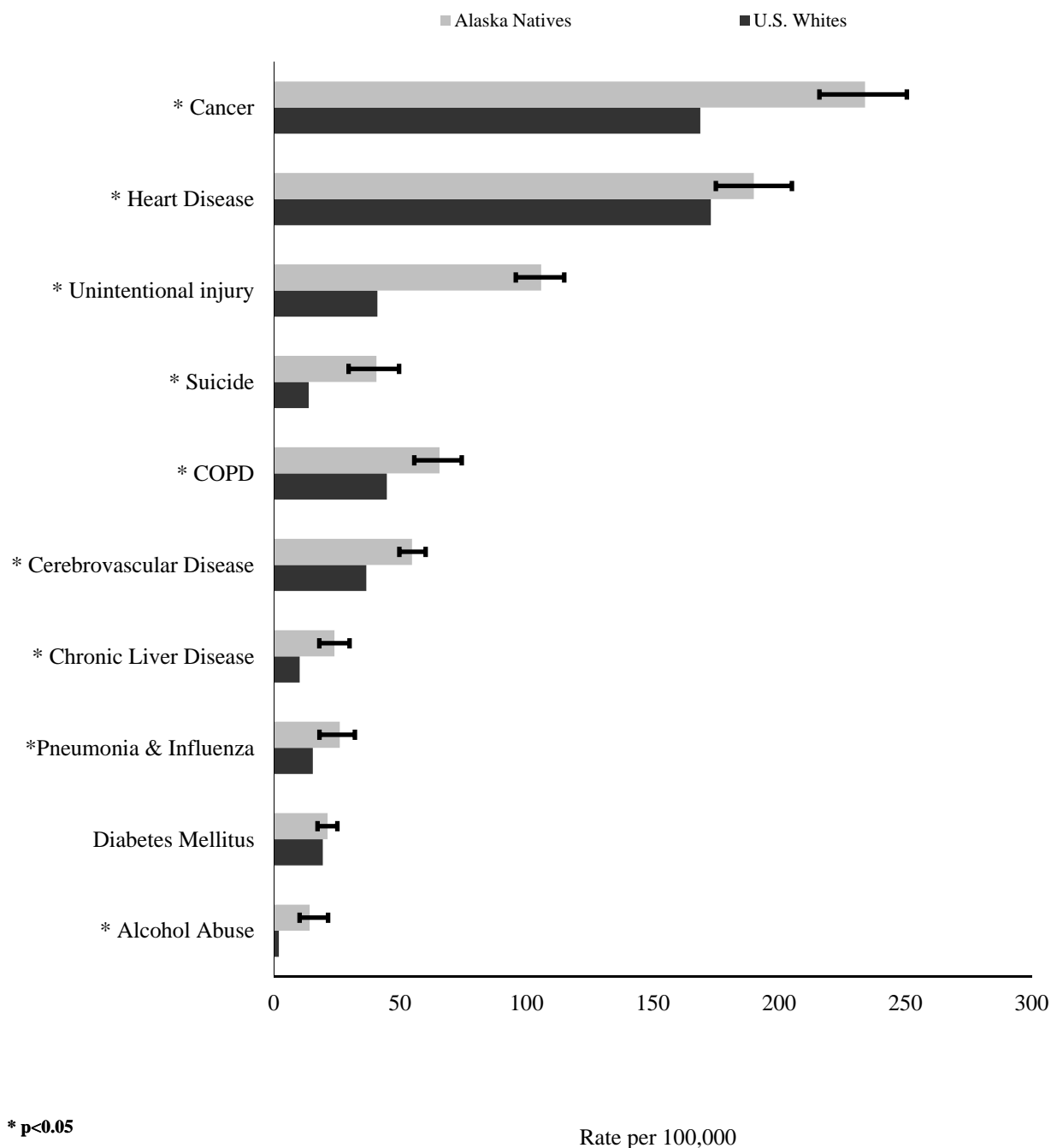
	Alaska Natives			U.S. Whites			Rate Ratio	95% CI
	#	%	Rate per 100,000 ^a	#	%	Rate per 100,000 ^a		
1 Cancer	433	21.6%	202.8	1,168,251	21.7%	144.2	1.4 *	1.25-1.57
2 Heart Disease	277	13.8%	136.4	1,243,560	23.1%	137.1	1.0	0.86-1.14
3 Unintentional Injury	211	10.5%	82.5	203,636	3.8%	27.8	3.0 *	2.53-3.47
4 Cerebrovascular Diseases	103	5.1%	59.6	324,782	6.0%	36.0	1.7 *	1.31-2.07
5 COPD	103	5.1%	57.7	348,055	6.5%	41.2	1.4 *	1.11-1.75
6 Chronic Liver Disease and Cirrhosis	75	3.7%	27.6	51,208	0.9%	6.8	4.1 *	3.11-5.29
7 Suicide	50	2.5%	17.1	38,075	0.7%	5.9	2.9 *	2.09-4.01
8 Pneumonia & Influenza	50	2.5%	25.8	121,697	2.3%	13.5	1.9 *	1.37-2.64
9 Diabetes Mellitus	40	2.0%	20.4	133,017	2.5%	15.9	1.3	0.89-1.84
10 Alcohol Abuse	38	1.9%	14.1	6,552	0.1%	0.9	15.7 *	10.7-22.7
All Others	626	31.2%	305.8	1,753,468	32.5%	198.6	1.5 *	1.40-1.68
All-Cause	2,006	100.1%	949.8	5,392,301	100.0%	627.9	1.3 *	1.26-1.40

*95% CI does not contain 1.

^a Rates are age-adjusted to the U.S. 2000 Standard population

FIGURE 1a.
Data Source: Table 1a.

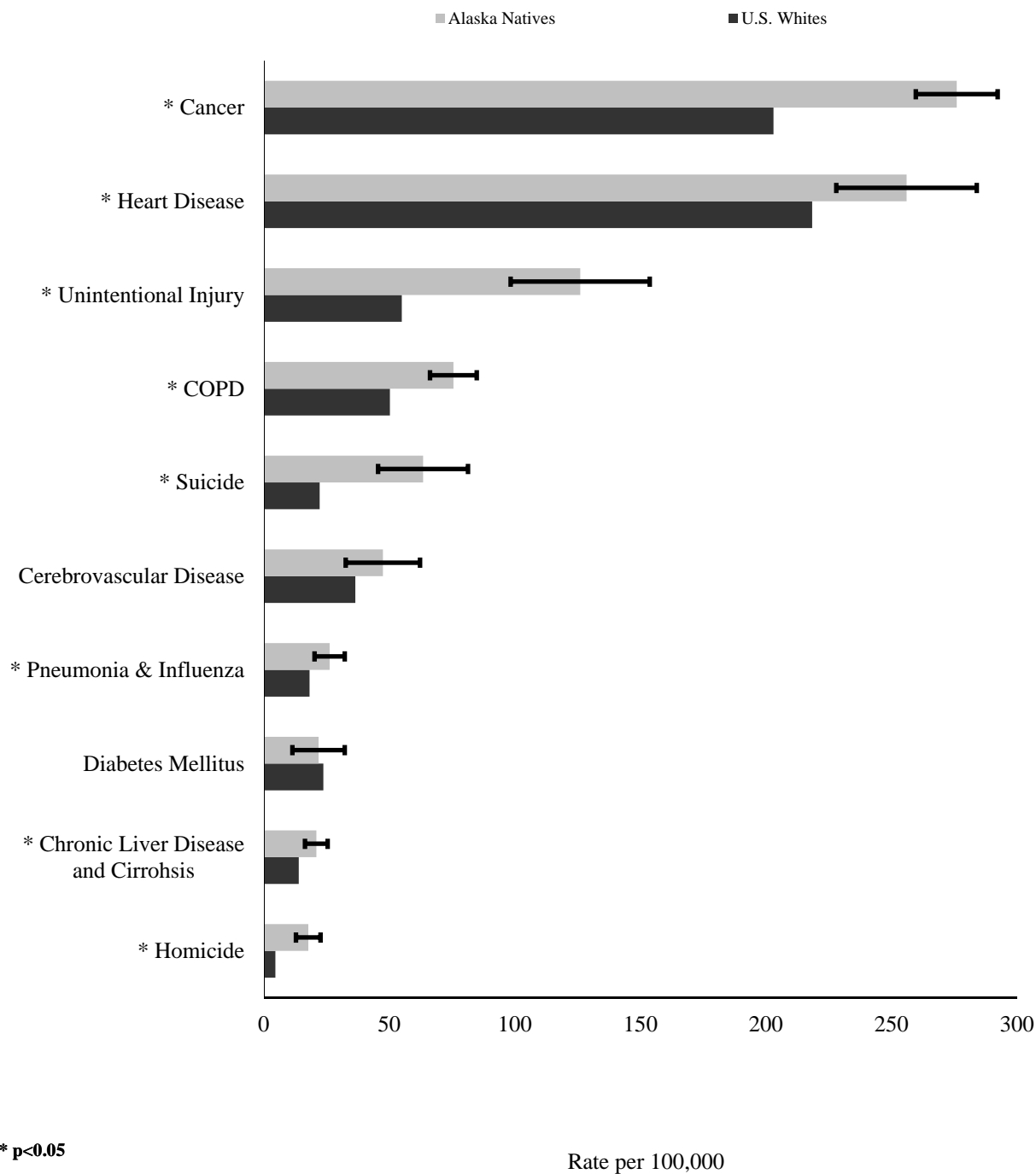
**Age-Adjusted Mortality Rates
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**



RANK ORDER OF LEADING CAUSES OF DEATH

FIGURE 1b.
Data Source: Table 1b.

Age-Adjusted Mortality Rates
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males

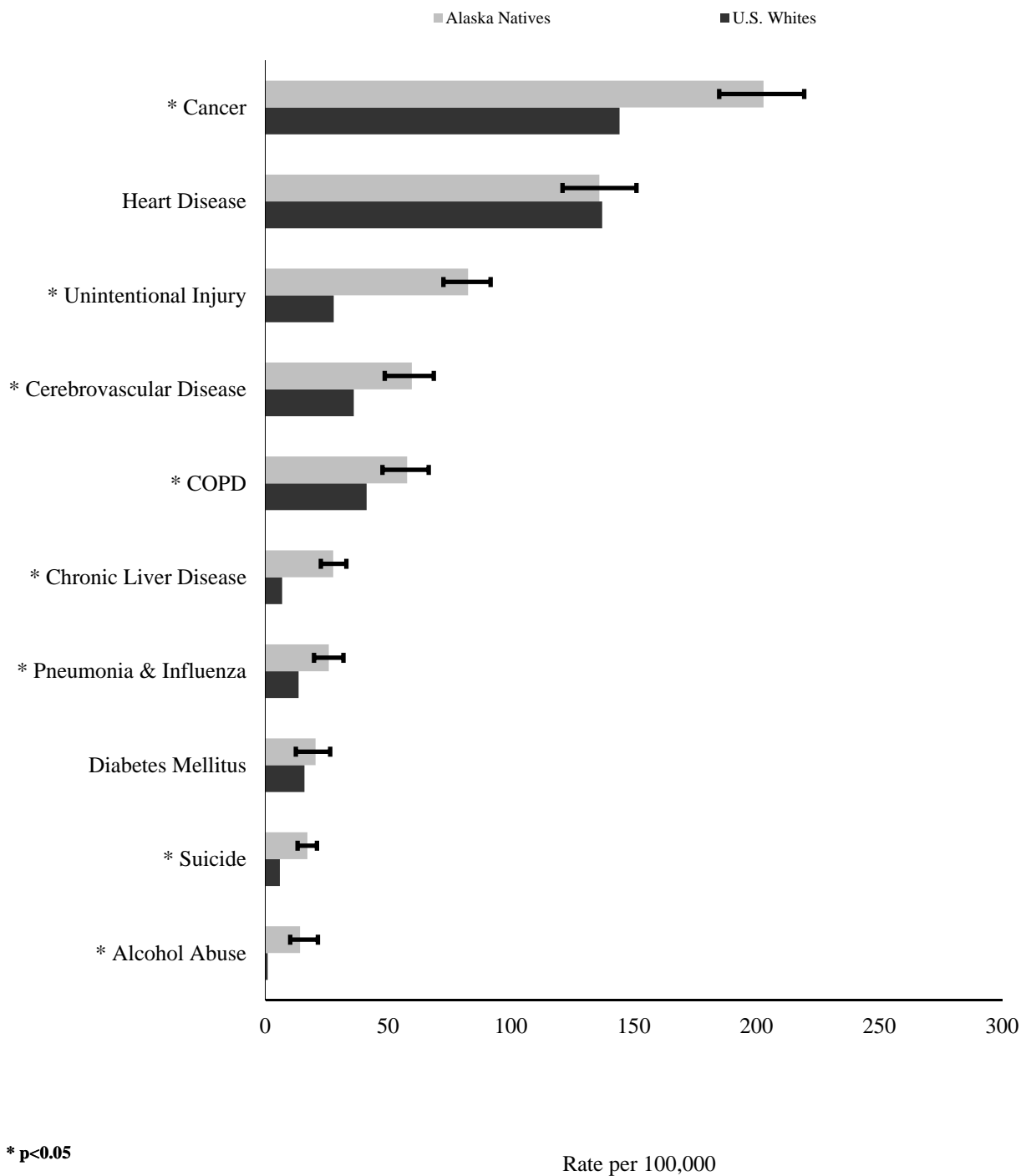


RANK ORDER OF LEADING CAUSES OF DEATH

FIGURE 1c.

Data Source: Table 1c.

Age-Adjusted Mortality Rates
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females

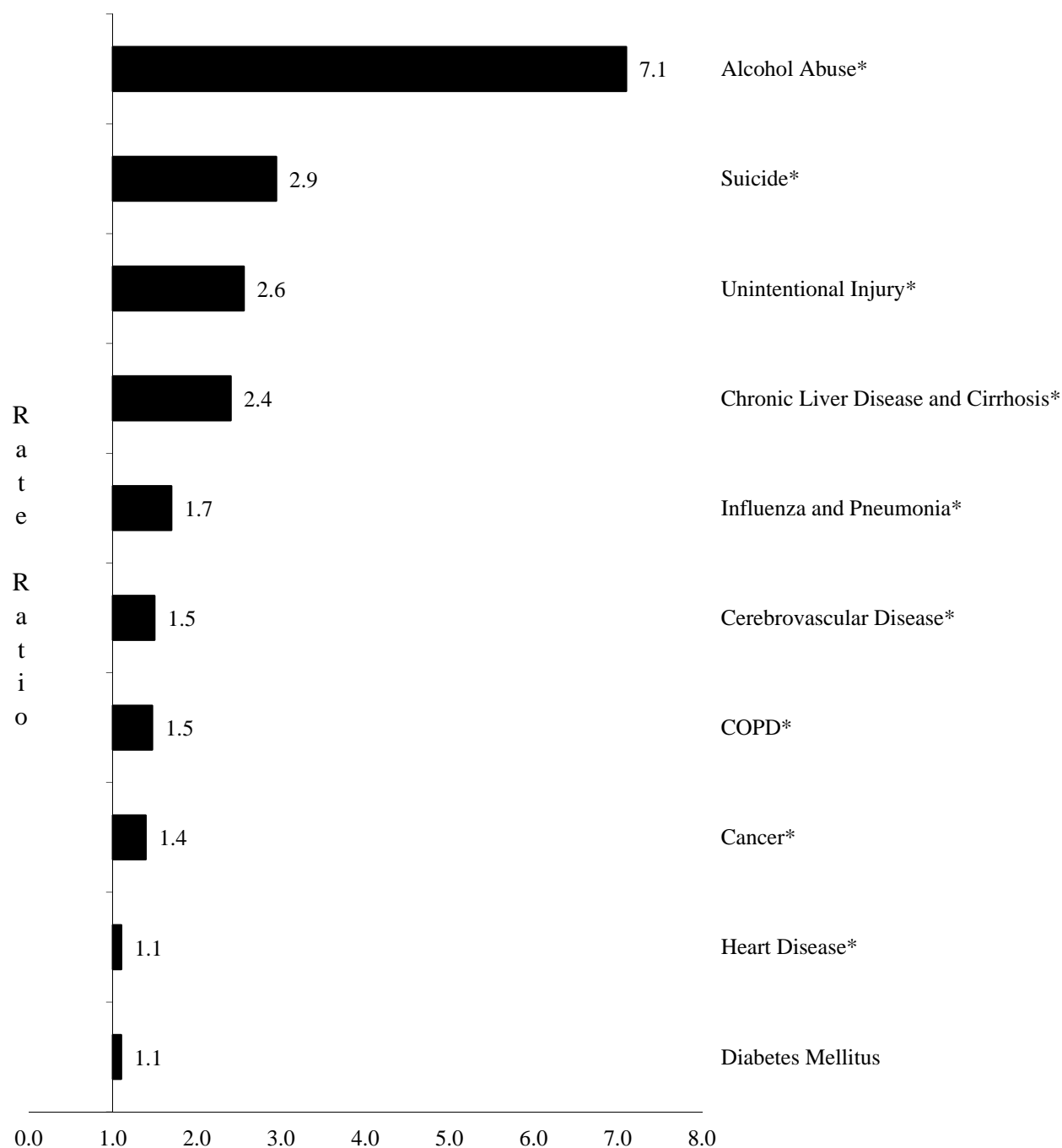


RANK ORDER OF LEADING CAUSES OF DEATH

FIGURE 2a.

Data Source: Table 1a.

**Rate Ratios of Mortality from Leading Causes
Alaska Natives (2009-13) vs U.S. Whites (2009-13)
Both Genders**

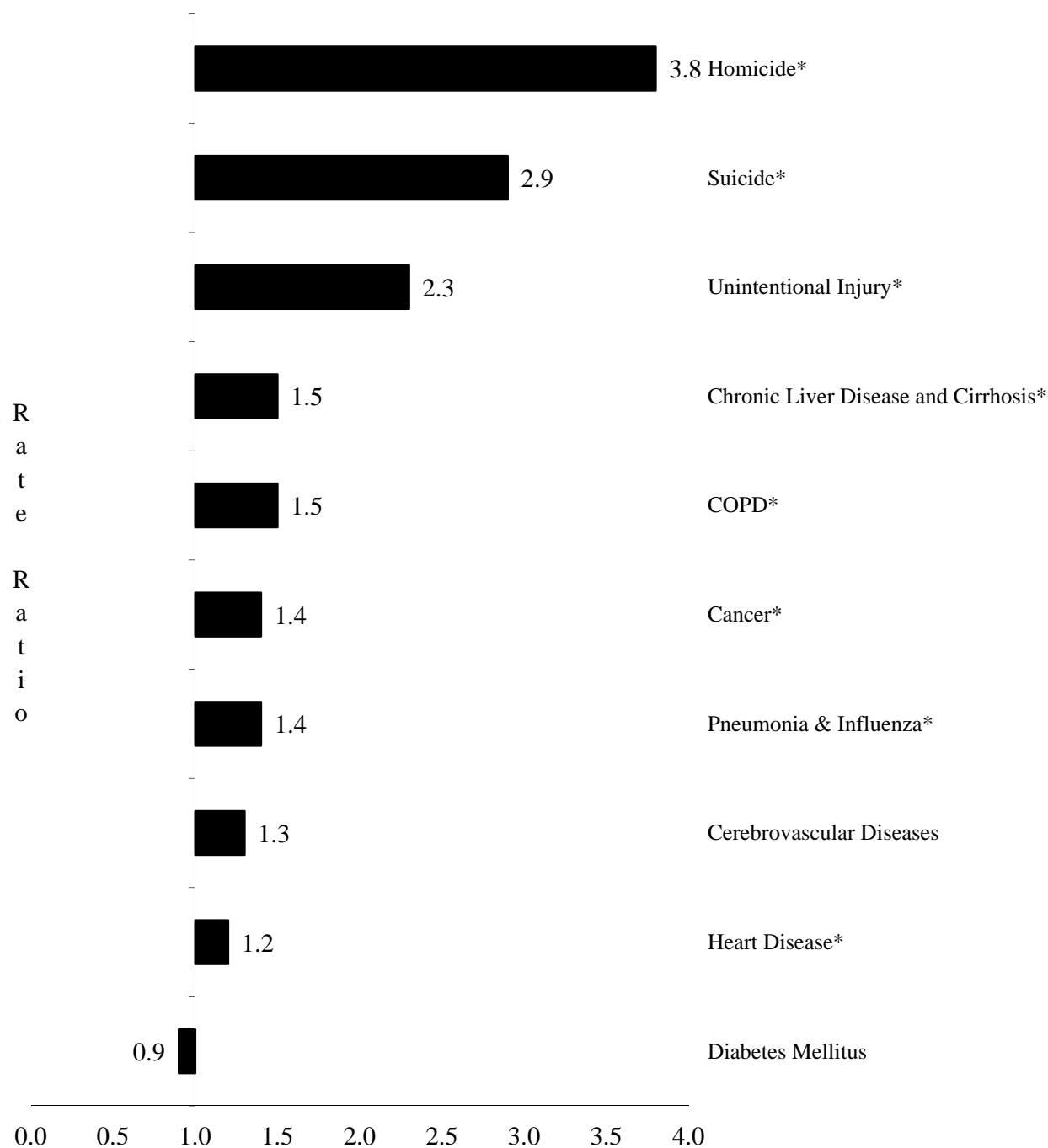


* p<0.05

FIGURE 2b.

Data Source: Table 1b.

**Rate Ratios of Mortality from Leading Causes
Alaska Natives (2009-13) vs U.S. Whites (2009-13)
Males**

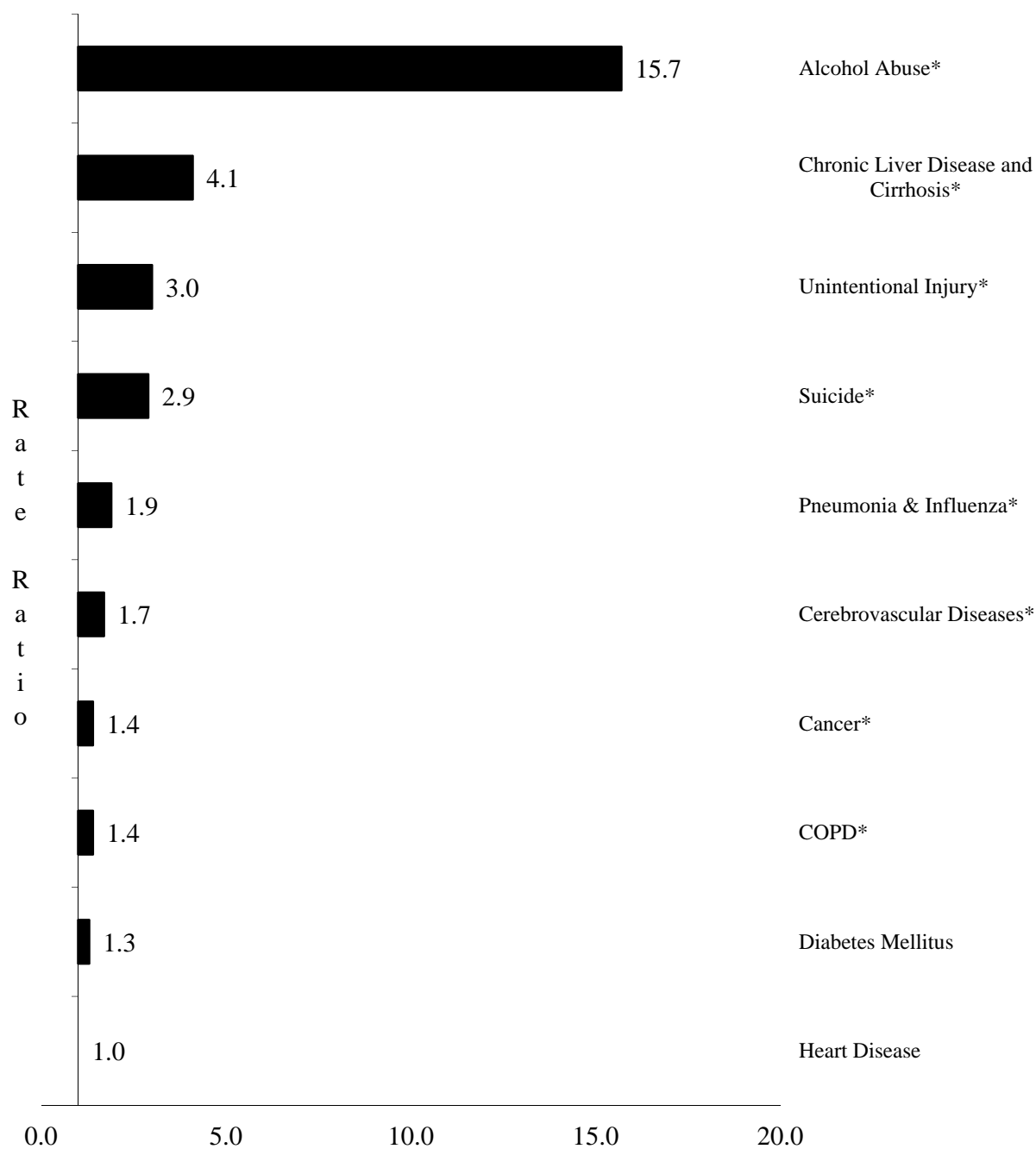


* p<0.05

FIGURE 2c.

Data Source: Table 1c.

Rate Ratios of Mortality from Leading Causes
Alaska Natives (2009-13) vs U.S. Whites (2009-13)
Females

* $p < 0.05$

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AGE-SPECIFIC MORTALITY RATES

Highlights

- Among Alaska Native people, both genders combined, unintentional injury was the leading cause of death for age groups 0 to 14 and 25-44 years.
- Suicide was the leading cause of death among Alaska Native people, both genders combined, for the 15-24 year old age group.
- Cancer was the leading cause of death for all age groups over 45 years.
- Compared to U.S. Whites, Alaska Native people had significantly higher rates of all-cause mortality for all age groups 0-75+ years. For Alaska Native males, the rate was significantly higher than U.S. White males for age groups 0-64, the same for 65-74, and significantly lower than U.S. White males in the 75+ age group. For Alaska Native females the rate was significantly higher than U.S. White females across all age groups except the 5-14 year old age group.

- The greatest disparity for all-cause mortality between Alaska Native people and U.S. Whites occurred for both genders combined in the 15-24 age group. This disparity was due to high rates of suicide (RR=8.7), unintentional injury (RR=2.4), homicide (RR=3.5), and heart disease (RR=4.4) among Alaska Native people. Among males, the greatest disparity between Alaska Native males and U.S. White males for all-cause mortality occurred in the 5-14 year age group. This disparity was due to high rates of unintentional injury (RR=6.3). Among females, the greatest disparity between Alaska Native females and U.S. White females occurred in the 15-24 year age group. This disparity was due to high rates of unintentional injury (RR=3.4) and suicide (RR=6.9).

Overview

Age-specific mortality rates are the total number of deaths per year per 100,000 people of a given age. Age-specific rates allow an examination of health risks for each age group of the population. This section examines causes of death for

each age group. Causes with fewer than five cases were not included.

Tables 2a-c report the leading causes of death among Alaska Native people by age group. Separate tables are presented for Alaska Native people, both genders combined, males, and females.

The tables provide the numbers of deaths for each cause and deaths from all causes for each age group. Age-specific rates for both Alaska Native people and U.S. Whites are compared using rate ratios and 95% confidence intervals. Rates are considered statistically different if the confidence intervals do not contain one.

Table 3 in this section compares age-specific numbers and rates for Alaska Native males to those for Alaska Native females.

Figures 3a-21a in this section are bar graphs comparing rates for Alaska Native people and U.S. Whites by age group for both genders combined. Figures 3b-21b display this information for males, and Figures 3c-21c for

females. Data for these figures comes from Tables 2a-c.

Figures 22-40 are bar graphs of rates by age group for Alaska Native males compared to Alaska Native females. Data for these figures comes from Table 3.

TABLE 2a.

Data Source: State of Alaska
Bureau of Vital Statistics (AN),
CDC Wonder.(USW)

Age-Specific Rates for Leading Causes of Death
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders

	Alaska Native # Deaths	Alaska Native Rate ^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
0-4 Years						
Unintentional Injury	22	33.9	8,659	11.5	3.0 *	1.81-4.84
Perinatal Conditions	20	30.9	37,271	49.3	0.6	0.37-1.05
Congenital Abnormalities	17	26.2	20,543	27.2	1.0	0.55-1.69
Homicide	7	10.8	1,946	2.6	4.2 *	1.75-10.03
Pneumonia & Influenza	6	9.3	932	1.2	7.5 *	2.92-19.28
All-Cause	150	231.4	93,482	123.7	1.9 *	1.55-2.26
Population	64,812		75,594,871			
	Alaska Native # Deaths	Alaska Native Rate ^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
5-14 Years						
Unintentional Injury	22	19.4	5,901	3.8	5.1 *	3.15-8.41
All-Cause	42	37.1	19,325	12.4	3.0 *	2.10-4.28
Population	113,299		156,337,205			
	Alaska Native # Deaths	Alaska Native Rate ^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
15-24 Years						
Suicide	111	101.7	19,438	11.7	8.7 *	6.99-10.84
Unintentional Injury	81	74.2	50,994	30.7	2.4 *	1.87-3.13
Homicide	19	17.4	8,319	5.0	3.5 *	2.05-5.91
Heart Disease	9	8.2	3,140	1.9	4.4 *	2.03-9.42
Cancer	7	6.4	6,122	3.7	1.7	0.73-4.16
All-Cause	258	236.5	107,123	64.4	3.7 *	3.18-4.24
Population	109,102		166,329,327			

*p<0.05.

^a Alaska Native numbers and rates are not reported for fewer than 5 deaths.

	Alaska Native # Deaths	Alaska Native Rate^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
25-44 Years						
Unintentional Injury	190	123.5	129,055	40.4	3.1 *	2.59-3.62
Suicide	93	60.4	54,958	17.2	3.5 *	2.77-4.47
Heart Disease	73	47.4	47,855	15.0	3.2 *	2.42-4.15
Chronic Liver Disease	42	27.3	12,489	3.9	7.0 *	5.17-10.37
Cancer	31	20.1	58,933	18.4	1.1	0.75-1.70
Homicide	24	15.6	15,107	4.7	3.3 *	2.06-5.29
Alcohol Abuse	19	12.3	7,330	1.3	9.5 *	3.17-9.14
Influenza and Pneumonia	10	6.5	5,258	1.6	4.0 *	1.91-8.19
Cerebrovascular Disease	7	4.5	7,518	2.4	1.9	0.81-4.62
COPD	5	3.2	3,474	1.1	3.0 *	1.07-8.38
All-Cause	595	386.7	429,929	134.4	2.9 *	2.63-3.16
Population	153,891		319,817,438			
	Alaska Native # Deaths	Alaska Native Rate^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
45-54 Years						
Cancer	135	182.0	192,765	107.4	1.7 *	1.39-2.08
Unintentional Injury	123	165.8	86,213	48.1	3.5 *	2.80-4.25
Heart Disease	113	152.3	135,282	75.4	2.0 *	1.63-2.51
Chronic Liver Disease	40	53.9	37,771	21.1	2.6 *	1.78-2.86
Suicide	32	43.1	40,669	22.7	1.9 *	1.27-2.86
Alcohol Abuse	21	28.3	10,027	5.6	5.1 *	3.06-8.38
Influenza and Pneumonia	13	17.5	8,538	4.8	3.7 *	1.94-6.98
COPD	12	16.2	19,100	10.6	1.5	0.78-2.95
Diabetes mellitus	10	13.5	20,740	11.6	1.2	0.56-2.42
Viral Hepatitis	8	10.8	9,420	5.3	2.1	0.91-4.64
Cerebrovascular Disease	7	9.4	18,953	10.6	0.9	0.37-2.13
Homicide	5	6.7	6,079	3.4	2.0 *	0.71-5.57
All-Cause	625	842.6	711,808	396.7	2.1 *	1.94-2.33
Population	74,188		179,419,358			

*p<0.05.

^a Alaska Native numbers and rates are not reported for fewer than 5 deaths.

55-64 Years	Alaska Native # Deaths	Alaska Native Rate^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
Cancer	207	369.6	452,850	290.4	1.3 *	1.09-1.50
Heart Disease	146	260.7	272,010	174.5	1.5 *	1.23-1.81
Unintentional Injuries	45	80.3	62,912	40.3	2.0 *	1.41-2.81
COPD	37	66.1	65,785	42.2	1.6 *	3.25-5.19
Chronic Liver Disease	23	41.1	45,746	29.3	1.4	0.87-2.26
Alcohol Abuse	21	37.5	10,333	6.6	5.7 *	3.63-9.69
Cerebrovascular Disease	20	35.7	38,694	24.8	1.4	0.86-2.41
Influenza and Pneumonia	12	21.4	16,379	10.5	2.0 *	1.05-3.97
Diabetes mellitus	12	21.4	45,484	29.2	0.7	0.38-1.43
Suicide	8	14.3	30,858	19.8	0.7	0.32-1.63
Septicemia	8	14.3	18,240	11.7	1.2	0.54-2.76
Homicide	5	8.9	3,601	2.3	3.9 *	1.38-10.83
All-Cause	669	1194.4	1,286,024	824.8	1.4 *	1.33-1.59
Population	56,011		155,923,297			
65-74 Years	Alaska Native # Deaths	Alaska Native Rate^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
Cancer	242	916.9	632,520	646.1	1.4 *	1.22-1.65
Heart Disease	119	450.9	378,716	386.9	1.2	0.94-1.44
COPD	48	181.9	151,095	154.3	1.2	0.85-1.64
Cerebrovascular Disease	28	106.1	70,484	72.0	1.5	0.95-2.28
Unintentional Injuries	27	102.3	43,411	44.3	2.3 *	1.48-3.60
Diabetes mellitus	23	87.1	61,466	62.8	1.4	0.86-2.24
Septicemia	10	37.9	27,239	27.8	1.4	0.66-2.82
Chronic Liver Disease	9	34.1	27,568	28.2	1.2	0.56-2.61
Influenza and Pneumonia	9	34.1	26,858	27.4	1.2	0.58-2.68
Alcohol Abuse	9	34.1	3,765	3.8	8.9 *	4.11-19.13
Alzheimer's Disease	7	26.5	19,183	19.6	1.4	0.57-3.23
Nutritional Deficiencies	7	26.5	1,686	1.7	15.4 *	6.44-36.85
Essential Hypertension	6	22.7	13,574	13.9	1.6	0.64-4.20
Parkinson's Disease	6	22.7	12,792	13.1	1.7	0.68-4.46
Nephritis	5	18.9	30,219	30.9	0.6	0.22-1.72
All-Cause	688	2606.9	1,778,892	1817.2	1.4 *	1.32-1.57
Population	26,392		97,891,623			

*p<0.05

^a Alaska Native numbers and rates are not reported for fewer than 5 deaths.

75+ Years	Alaska Native	Alaska Native	U.S. White	U.S. White	Rate Ratio	95% CI
Cancer	281	1816.7	1,117,671	1344.0	1.4 *	1.18-1.56
Heart Disease	262	1693.8	1,741,354	2093.9	0.8 *	0.70-0.93
COPD	114	737.0	413,553	497.3	1.5 *	1.20-1.84
Cerebrovascular Disease	106	685.3	405,159	487.2	1.4 *	1.13-1.76
Nephritis	43	278.0	132,491	159.3	1.7 *	1.23-2.48
Influenza and Pneumonia	43	278.0	169,681	204.0	1.4	0.96-1.94
Unintentional Injuries	42	271.5	153,215	184.2	1.5 *	1.03-2.11
Alzheimer's Disease	32	206.9	358,338	430.9	0.5 *	0.32-0.72
Diabetes mellitus	28	181.0	146,296	175.9	1.0	0.67-1.59
Septicemia	25	161.6	85,934	103.3	1.6	0.99-2.48
Essential Hypertension	21	135.8	81,362	97.8	1.4	0.84-2.30
Parkinson's Disease	15	97.0	92,356	111.1	0.9	0.48-1.58
Pneumonitis due to solids	11	71.1	61,870	74.4	1.0	0.48-1.92
Chronic Liver Disease	7	45.3	23,242	27.9	1.6	0.68-3.87
Tuberculosis	5	32.3	743	0.9	36.2 *	12.89-101.81
All-Cause	1,318	8520.8	6,322,271	7602.3	1.1 *	1.05-1.20
Population	15,468		83,162,436			

*p<0.05.

^a Alaska Native numbers and rates are not reported for fewer than 5 deaths.

TABLE 2b.

Data Source: State of Alaska
Bureau of Vital Statistics (AN),
National Cancer Institute's
Surveillance Epidemiology and
End Results Program.(USW)

**Age-Specific Rates for Leading Causes of Death
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

	Alaska Native # Deaths	Alaska Native Rate^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
0-4 Years						
Perinatal Conditions	13	39.2	20,873	54.0	0.7	0.38-1.37
Unintentional Injury	11	33.1	5,243	13.6	2.4 *	1.22-4.90
Congenital Abnormalities	11	33.1	20,873	27.0	1.2	0.31-1.23
All-Cause	81	244.1	52,340	135.4	1.8 *	1.40-2.33
Population	33,189		38,669,339			
	Alaska Native # Deaths	Alaska Native Rate^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
5-14 Years						
Unintentional Injury	17	28.9	3,697	4.6	6.3 *	3.57-10.94
All-Cause	29	49.2	11,208	14.0	3.5 *	2.29-5.40
Population	58,915		80,081,648			
	Alaska Native # Deaths	Alaska Native Rate^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
15-24 Years						
Suicide	95	165.1	15,891	18.6	8.9 *	7.00-11.24
Unintentional Injury	52	90.4	37,830	44.2	2.0 *	1.48-2.81
Homicide	15	26.1	6,761	7.9	3.3 *	1.82-5.99
All-Cause	186	560.4	77,985	201.7	2.8 *	2.34-3.29
Population	56,271		85,511,764			

*p<0.05.

^a Alaska Native numbers and rates are not reported for fewer than 5 deaths.

	Alaska Native # Deaths	Alaska Native Rate ^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
25-44 Years						
Unintentional Injury	121	155.7	92,536	57.0	2.7 *	2.21-3.36
Suicide	71	91.3	43,051	26.5	3.4 *	2.62-4.53
Heart Disease	44	56.6	33,922	20.9	2.7 *	1.91-3.83
Chronic Liver Disease	17	21.9	8,314	6.9	3.2 *	1.81-5.54
Homicide	17	21.9	11,219	5.1	4.3 *	2.45-7.49
Cancer	9	11.6	27,010	16.6	0.7 *	0.33-0.99
Alcohol Abuse	6	7.7	2,132	1.7	4.5 *	1.77-11.6
All-Cause	345	443.9	281,182	276.0	1.6 *	1.42-1.82
Population	77,725		101,885,628			

	Alaska Native # Deaths	Alaska Native Rate ^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
45-54 Years						
Unintentional Injury	74	205.4	57,609	64.5	3.2 *	2.43-4.16
Cancer	71	197.1	97,624	109.4	1.8 *	1.35-2.34
Heart Disease	70	194.3	98,778	110.7	1.8 *	1.34-2.33
Suicide	26	72.2	30,532	34.2	2.1 *	1.34-3.31
Alcohol Abuse	9	25.0	9,625	7.6	3.3 *	1.52-7.08
Chronic Liver Disease	8	22.2	25,800	28.9	0.8	0.34-1.73
Pneumonia & Influenza	7	19.4	4,773	10.1	1.9	0.80-4.59
COPD	7	19.4	8,984	5.3	3.7 *	1.53-8.75
Homicide	5	13.9	4,295	4.8	2.9 *	1.03-8.10
All-Cause	340	943.9	441,025	271.8	3.5 *	3.06-3.93
Population	36,020		162,271,194			

*p<0.05.

^a Alaska Native numbers and rates are not reported for fewer than 5 deaths.

55-64 Years	Alaska Native # Deaths	Alaska Native Rate^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
Cancer	106	391.6	251,656	331.0	1.2	0.95-1.48
Heart Disease	98	362.1	193,813	254.9	1.4 *	1.13-1.79
Unintentional Injury	33	121.9	42,947	56.5	2.2 *	1.45-3.22
COPD	25	92.4	34,101	44.8	2.1 *	1.30-3.26
Cerebrovascular Diseases	13	48.0	22,346	29.4	1.6	0.86-3.10
Alcohol Abuse	12	44.3	3,315	4.4	10.2 *	5.23-19.79
Chronic Liver Disease	9	33.3	32,565	42.8	0.8	0.42-1.79
Pneumonia & Influenza	7	25.9	9,474	12.5	2.1	0.87-4.96
Septicemia	6	22.2	9,828	12.9	1.7	0.67-4.39
Diabetes Mellitus	6	22.2	28,273	37.2	0.6	0.23-1.53
All-Cause	383	1415.1	789,796	1038.7	1.4 *	1.21-1.53
Population	27,065		76,035,034			

65-74 Years	Alaska Native # Deaths	Alaska Native Rate^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
Cancer	134	1072.8	349,074	1052.8	1.0	0.84-1.25
Heart Disease	85	680.5	243,262	733.7	0.9	0.72-1.19
COPD	26	208.1	75,605	228.0	0.9	0.58-1.43
Unintentional Injury	20	160.1	27,416	82.7	1.9 *	1.16-3.24
Diabetes Mellitus	14	112.1	35,785	107.9	1.0	0.56-1.92
Cerebrovascular Diseases	13	104.1	37,304	112.5	0.9	0.49-1.75
Chronic Liver Disease	7	56.0	17,213	51.9	1.1	0.64-2.99
Pneumonia & Influenza	7	56.0	14,955	45.1	1.2	0.52-2.97
Alcohol Abuse	6	48.0	4,002	12.1	4.0 *	1.55-10.20
All-Cause	389	3114.2	1,011,516	3050.8	1.0	0.91-1.15
Population	12,491		33,155,785			

*p<0.05.

^a Alaska Native numbers and rates are not reported for fewer than 5 deaths.

75+ Years	Alaska Native # Deaths	Alaska Native Rate^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
Cancer	147	2309.1	565,891	3065.0	0.8 *	0.63-0.90
Heart Disease	142	2230.6	763,893	4137.5	0.5 *	0.45-0.66
COPD	52	816.8	184,959	1001.8	0.8	0.59-1.12
Cerebrovascular Diseases	35	549.8	142,218	770.3	0.7	0.49-1.05
Nephritis	18	282.8	63,392	343.4	0.8	0.48-1.42
Pneumonia & Influenza	16	251.3	73,901	400.3	0.6	0.35-1.12
Unintentional Injury	12	188.5	69,465	376.2	0.5 *	0.26-0.97
Septicemia	10	157.1	36,496	197.7	0.8	0.38-1.65
Diabetes Mellitus	10	157.1	67,061	363.2	0.4 *	0.21-0.90
Alzheimer's Disease	10	157.1	106,258	575.5	0.3 *	0.13-0.57
Hypertension	8	125.7	27,145	147.0	0.9	0.38-1.93
Pneumonitis due to Solids	6	94.3	32,203	174.4	0.5	0.21-1.38
Parkinson's Disease	5	78.5	53,456	289.5	0.3 *	0.10-0.76
Chronic Liver Disease	5	78.5	11,767	63.7	1.2	0.44-3.45
All-Cause	584	9173.7	2,691,679	14579.0	0.6 *	0.57-0.69
Population	6,366		18,462,763			

*p<0.05.

^a Alaska Native numbers and rates are not reported for fewer than 5 deaths.

TABLE 2c.

Data Source: State of Alaska
Bureau of Vital Statistics (AN),
National Cancer Institute's
Surveillance Epidemiology and
End Results Program.(USW)

**Age-Specific Rates for Leading Causes of Death
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**

	Alaska Native # Deaths	Alaska Native Rate ^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
0-4 Years						
Unintentional Injury	11	34.8	3,416	9.3	3.8 *	1.88-7.54
Perinatal Conditions	7	22.1	16,398	44.4	0.5	0.21-1.19
Congenital Abnormalities	6	19.0	9,838	26.6	0.7	0.28-1.82
All-Cause	69	218.2	41,142	111.4	2.0 *	1.46-2.55
Population	31,623		36,925,532			
	Alaska Native # Deaths	Alaska Native Rate ^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
5-14 Years						
Unintentional Injury	5	9.2	2,204	3.0	3.1 *	1.09-8.59
All-Cause	13	23.9	8,117	22.0	1.1	0.57-2.06
Population	54,384		76,255,557			
	Alaska Native # Deaths	Alaska Native Rate ^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
15-24 Years						
Unintentional Injury	29	54.9	13,164	16.3	3.4 *	2.20-5.17
Suicide	16	30.3	3,547	4.4	6.9 *	3.88-12.29
Heart Disease	5	9.5	980	1.2	7.8 *	2.78-21.91
All-Cause	72	136.3	29,138	36.1	3.8 *	2.88-4.96
Population	52,831		80,817,563			

*p<0.05.

^a Alaska Native numbers and rates are not reported for fewer than 5 deaths.

	Alaska Native # Deaths	Alaska Native Rate ^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
25-44 Years						
Unintentional Injury	68	89.3	36,519	23.2	3.9 *	2.91-5.09
Heart Disease	29	38.1	13,933	8.8	4.3 *	2.81-6.61
Chronic Liver Disease	25	32.8	4,175	2.7	12.4 *	8.58-20.87
Cancer	22	28.9	31,923	20.3	1.4	0.87-2.33
Suicide	22	28.9	11,907	7.6	3.8 *	2.34-6.25
Alcohol Abuse	13	17.1	3,045	0.9	19.0 *	10.00-35.97
Homicide	7	9.2	3,888	2.5	3.7 *	1.56-8.90
Pneumonia & Influenza	6	7.9	2,349	1.5	5.3 *	2.06-13.54
All-Cause	249	326.9	148,747	94.4	3.5 *	2.99-4.01
Population	76,166		157,546,244			
	Alaska Native # Deaths	Alaska Native Rate ^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
45-54 Years						
Cancer	64	167.7	95,141	105.5	1.6 *	1.19-2.12
Unintentional Injury	49	128.4	28,604	31.7	4.0 *	2.91-5.62
Heart Disease	43	112.7	36,504	40.5	2.8 *	1.96-3.95
Chronic Liver Disease	32	83.8	11,971	13.3	6.3 *	4.68-10.20
Alcohol Abuse	12	31.4	4,059	2.5	12.6 *	6.46-24.47
Suicide	6	15.7	10,137	11.2	1.4	0.55-3.58
Diabetes Mellitus	6	15.7	7,384	8.2	1.9	0.75-4.92
Viral Hepatitis	6	15.7	2,740	3.0	5.2 *	2.02-13.26
Pneumonia & Influenza	6	15.7	3,765	4.2	3.8 *	1.47-9.64
COPD	5	13.1	10,116	11.2	1.2	0.42-3.27
All-Cause	285	746.7	270,783	300.4	2.5 *	2.20-2.89
Population	38,168		90,154,079			

*p<0.05.

^a Alaska Native numbers and rates are not reported for fewer than 5 deaths.

	Alaska Native # Deaths	Alaska Native Rate^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
55-64 Years						
Cancer	102	352.4	201,194	251.8	1.4 *	1.11-1.76
Heart Disease	48	165.8	78,197	97.9	1.7 *	1.21-2.36
Chronic Liver Disease	14	48.4	13,181	16.5	2.9 *	2.19-6.49
Unintentional Injury	12	41.5	19,965	25.0	1.7	0.85-3.23
COPD	12	41.5	31,684	39.7	1.0	0.54-2.03
Alcohol Abuse	9	31.1	8,717	2.4	13.0 *	6.01-27.92
Cerebrovascular Diseases	7	24.2	16,348	20.5	1.2	0.49-2.82
Diabetes Mellitus	6	20.7	17,211	21.5	1.0	0.38-2.46
Pneumonia & Influenza	6	20.7	6,905	8.6	2.4	0.94-6.14
Suicide	5	17.3	7,270	9.1	1.9	0.68-5.32
All-Cause	286	988.0	496,228	621.2	1.6 *	1.38-1.82
Population	28,946		79,888,263			
	Alaska Native # Deaths	Alaska Native Rate^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
65-74 Years						
Cancer	107	769.7	283,446	547.4	1.4 *	1.13-1.76
Heart Disease	34	244.6	135,454	261.6	0.9	0.63-1.39
COPD	22	158.3	75,490	145.8	1.1	0.66-1.77
Cerebrovascular Diseases	15	107.9	33,180	64.1	1.7	0.93-3.05
Diabetes Mellitus	9	64.7	25,681	49.6	1.3	0.61-2.81
Unintentional Injury	7	50.4	15,995	30.9	1.6	0.68-3.89
Septicemia	7	50.4	13,188	25.5	2.0	0.83-4.72
All-Cause	299	2150.9	767,376	1482.1	1.5 *	1.27-1.65
Population	13,901		51,777,847			

*p<0.05.

^a Alaska Native numbers and rates are not reported for fewer than 5 deaths.

75+ Years	Alaska Native # Deaths	Alaska Native Rate^a	U.S. White # Deaths	U.S. White Rate	Rate Ratio	95% CI
Cancer	135	1483.2	551,780	1103.4	1.3 *	1.10-1.64
Heart Disease	119	1307.4	977,461	1954.7	0.7 *	0.54-0.83
Cerebrovascular Diseases	71	780.0	262,941	525.8	1.5 *	1.13-1.95
COPD	62	681.2	228,594	457.1	1.5 *	1.11-2.00
Unintentional Injury	31	340.6	83,750	167.5	2.0 *	1.34-3.08
Pneumonia & Influenza	27	296.6	95,780	191.5	1.5	0.99-2.41
Nephritis	25	274.7	69,099	138.2	2.0 *	1.25-3.15
Alzheimer's Disease	22	241.7	252,080	504.1	0.5 *	0.29-0.78
Diabetes Mellitus	18	197.8	79,235	158.4	1.2	0.73-2.15
Septicemia	15	164.8	49,438	98.9	1.7	0.92-3.02
Hypertension	13	142.8	54,217	108.4	1.3	0.70-2.50
Parkinson's Disease	10	109.9	38,900	77.8	1.4	0.68-2.93
All-Cause	733	8053.2	3,630,592	7260.2	1.1 *	1.02-1.21
Population	9,102		50,006,651			

*p<0.05.

^a Alaska Native numbers and rates are not reported for fewer than 5 deaths.

FIGURE 3a. Age-Specific Mortality Rates from All-Cause
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Both Genders
 Data Source: Table 2a.

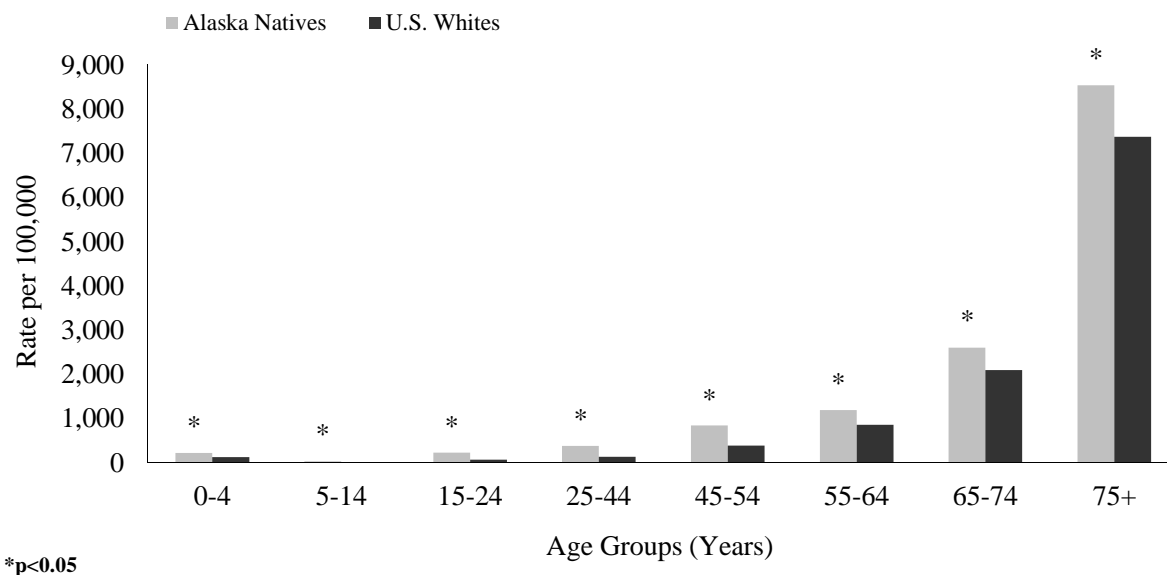


FIGURE 4a. Age-Specific Mortality Rates from Alcohol Abuse
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Both Genders
 Data Source: Table 2a.

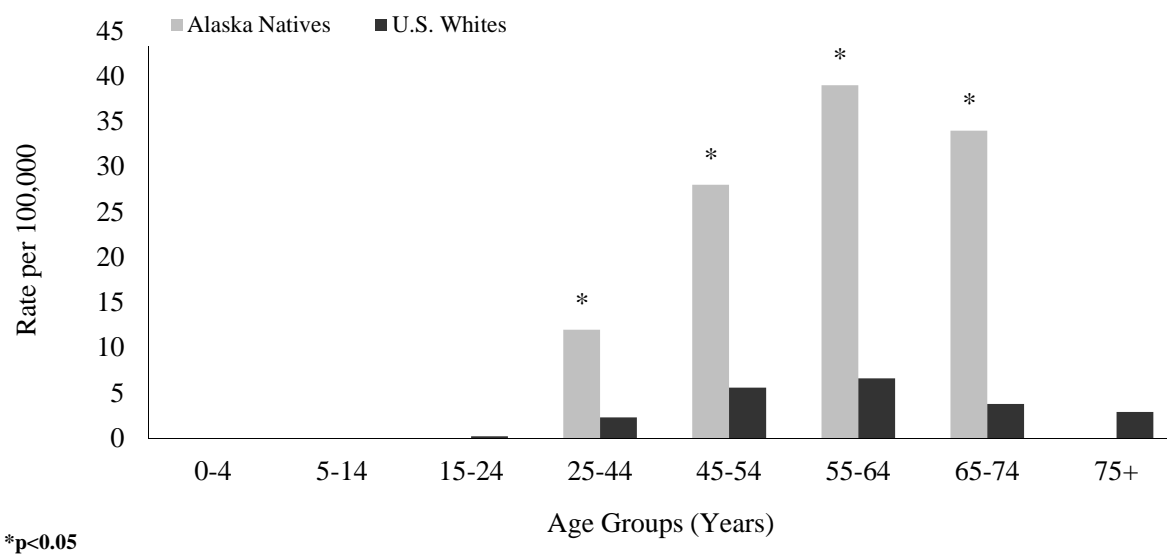


FIGURE 5a. Age-Specific Mortality Rates from Alzheimer's Disease
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Both Genders

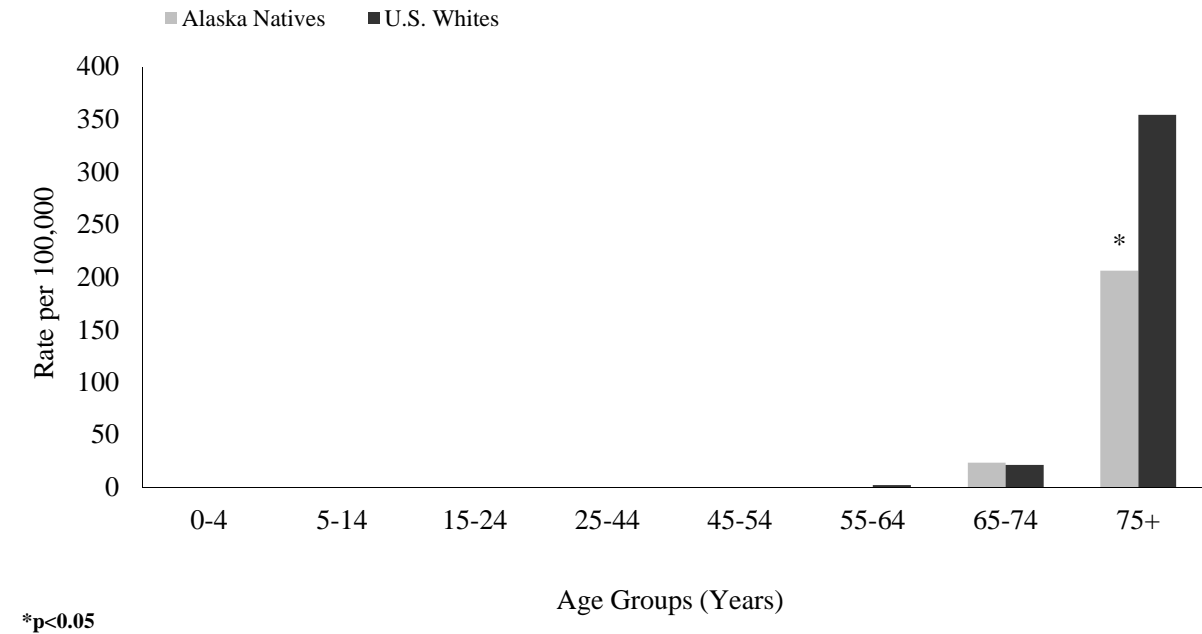


FIGURE 6a. Age-Specific Mortality Rates from Cancer
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Both Genders

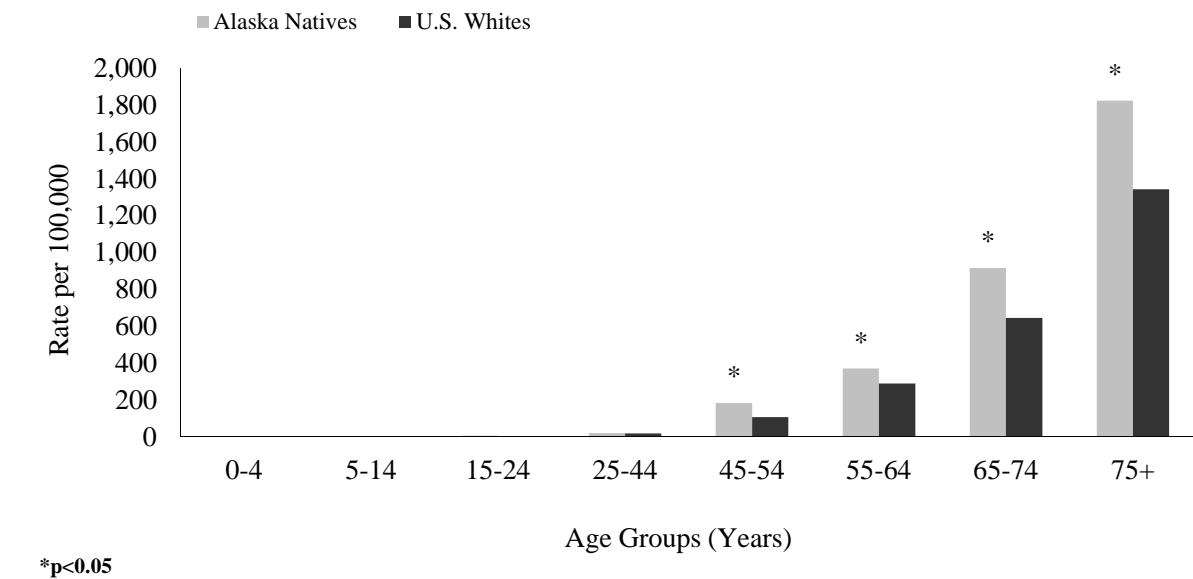


FIGURE 7a. Age-Specific Mortality Rates from Cerebrovascular Disease
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Both Genders

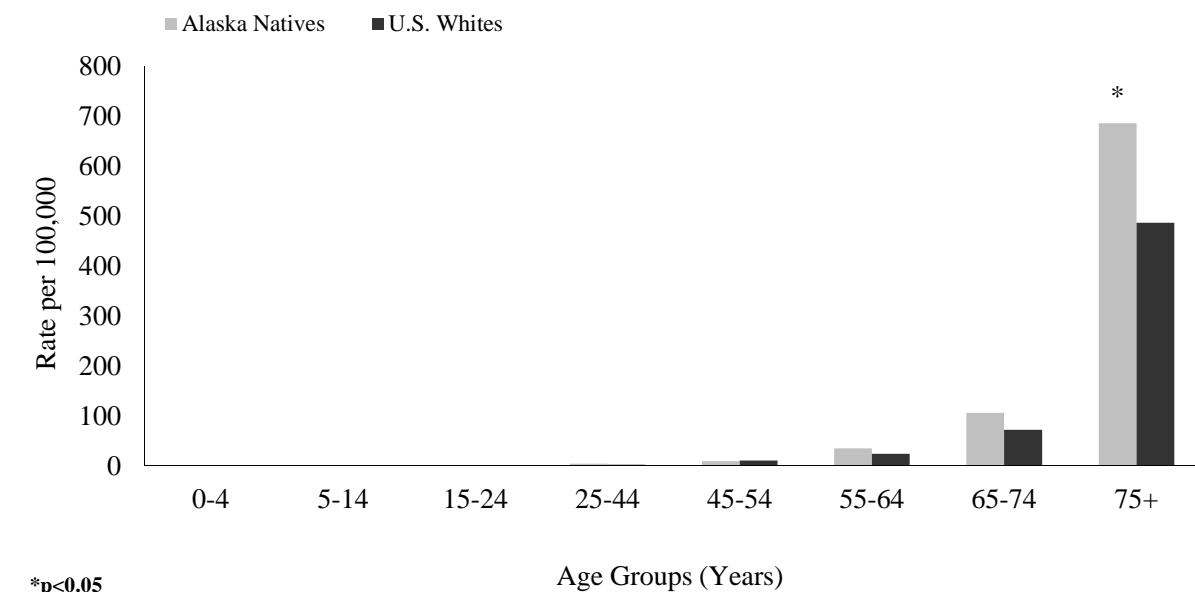


FIGURE 8a. Age-Specific Mortality Rates from Chronic Liver Disease
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Both Genders

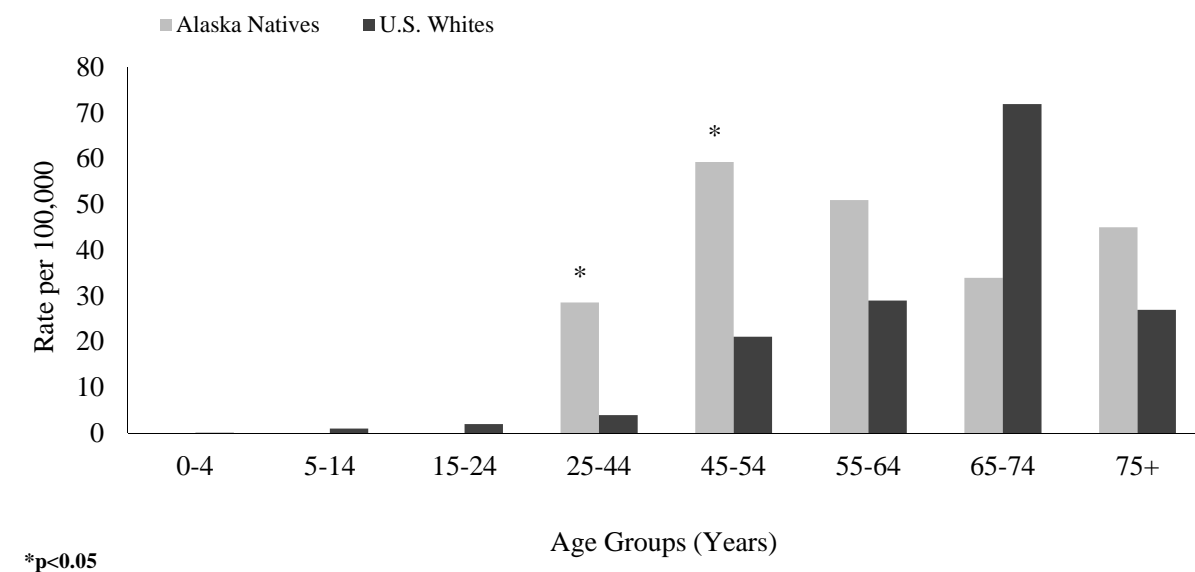


FIGURE 9a. Age-Specific Mortality Rates from Congenital Abnormalities
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Both Genders

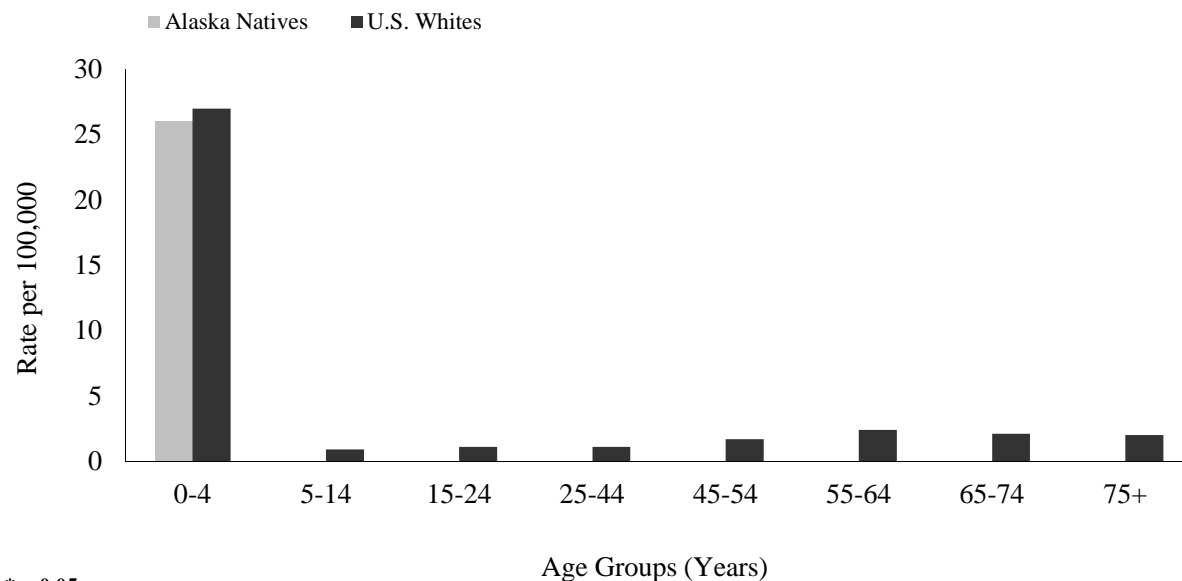


FIGURE 10a. Age-Specific Mortality Rates from COPD
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Both Genders

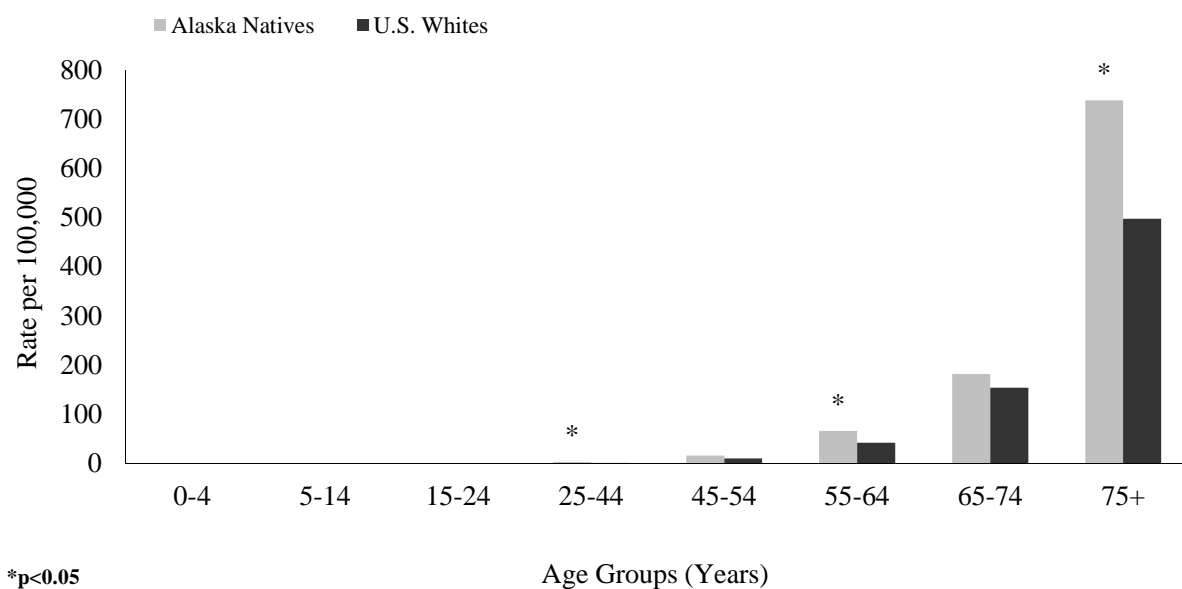


FIGURE 11a. Age-Specific Mortality Rates from Diabetes Mellitus
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Both Genders

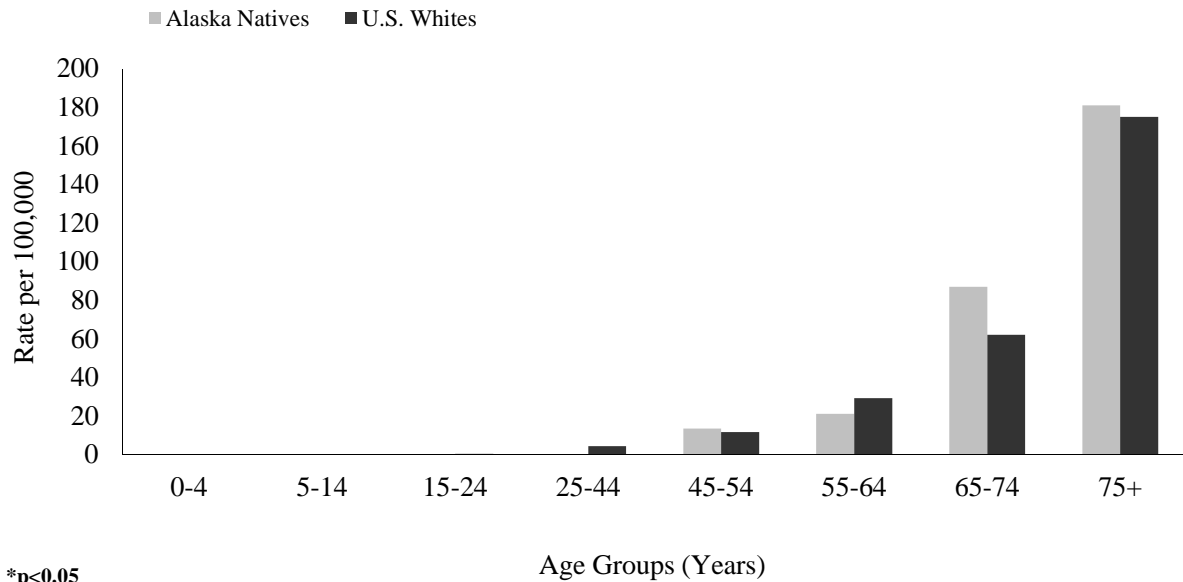


FIGURE 12a. Age-Specific Mortality Rates from Heart Disease
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Both Genders

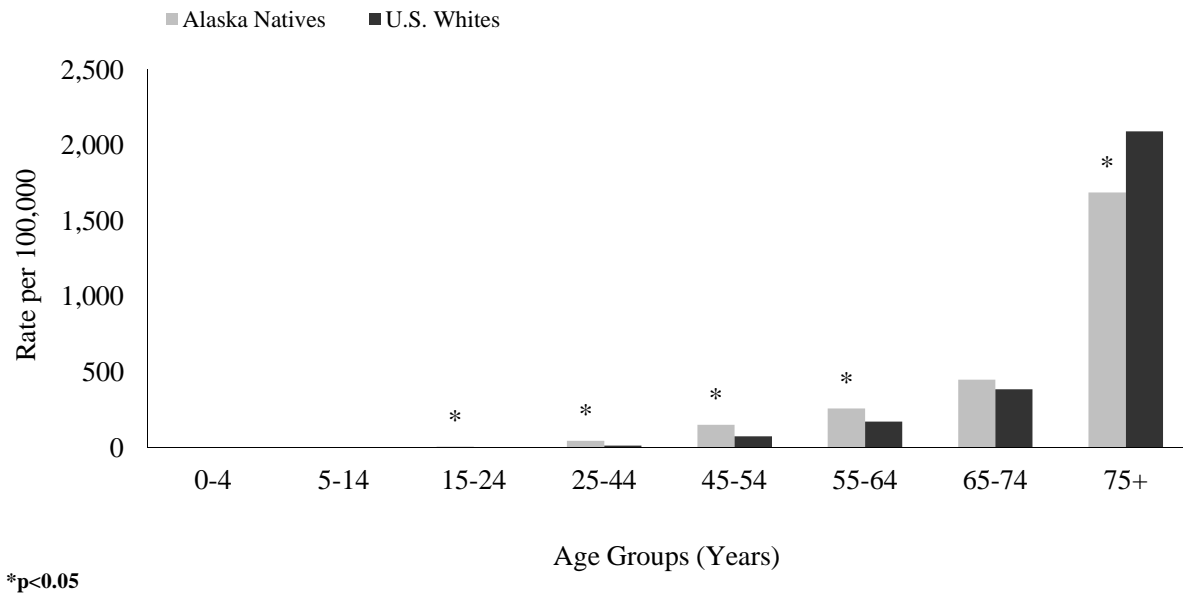


FIGURE 13a. Age-Specific Mortality Rates from Homicide
 Data Source: Table 2a. Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Both Genders

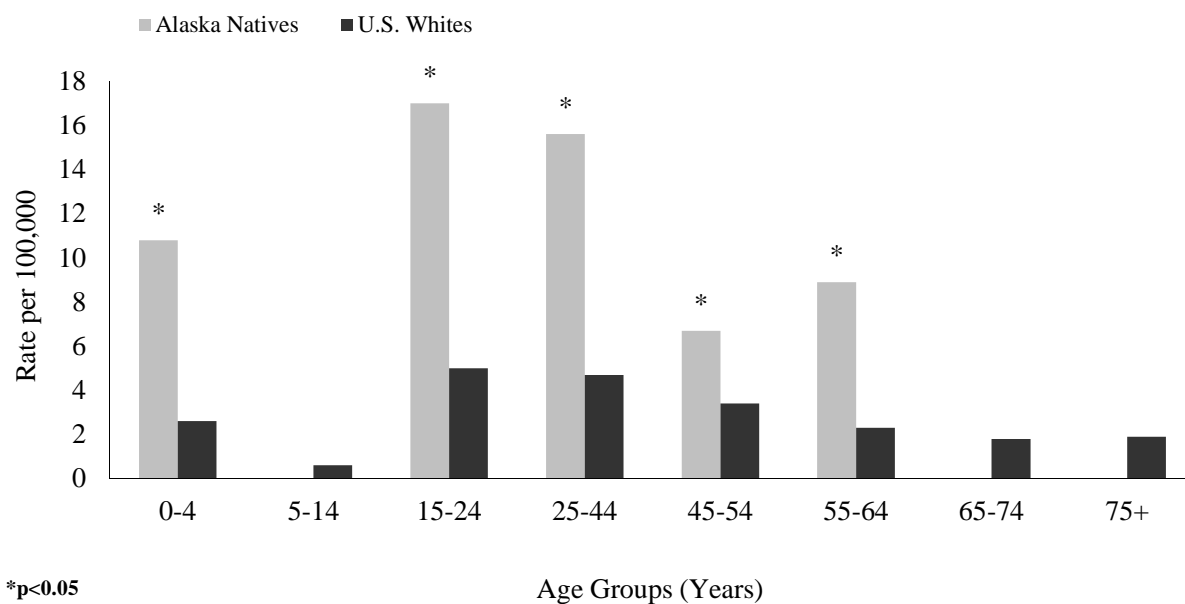


FIGURE 14a. Age-Specific Mortality Rates from Hypertension
 Data Source: Table 2a. Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Both Genders

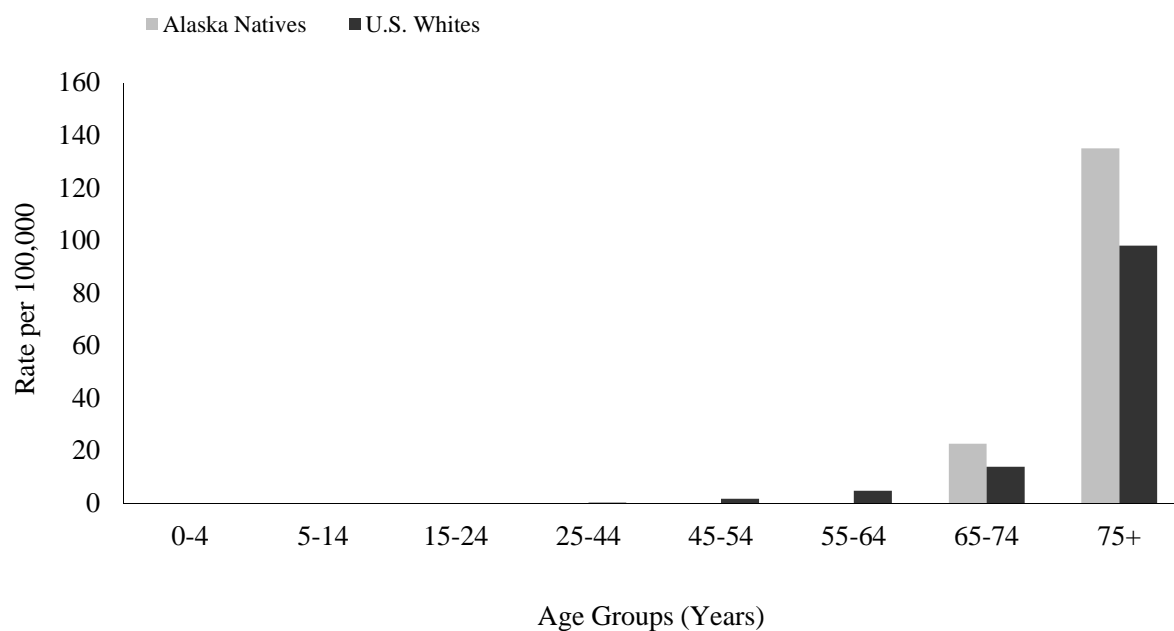


FIGURE 15a. Age-Specific Mortality Rates from Nephritis
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Both Genders

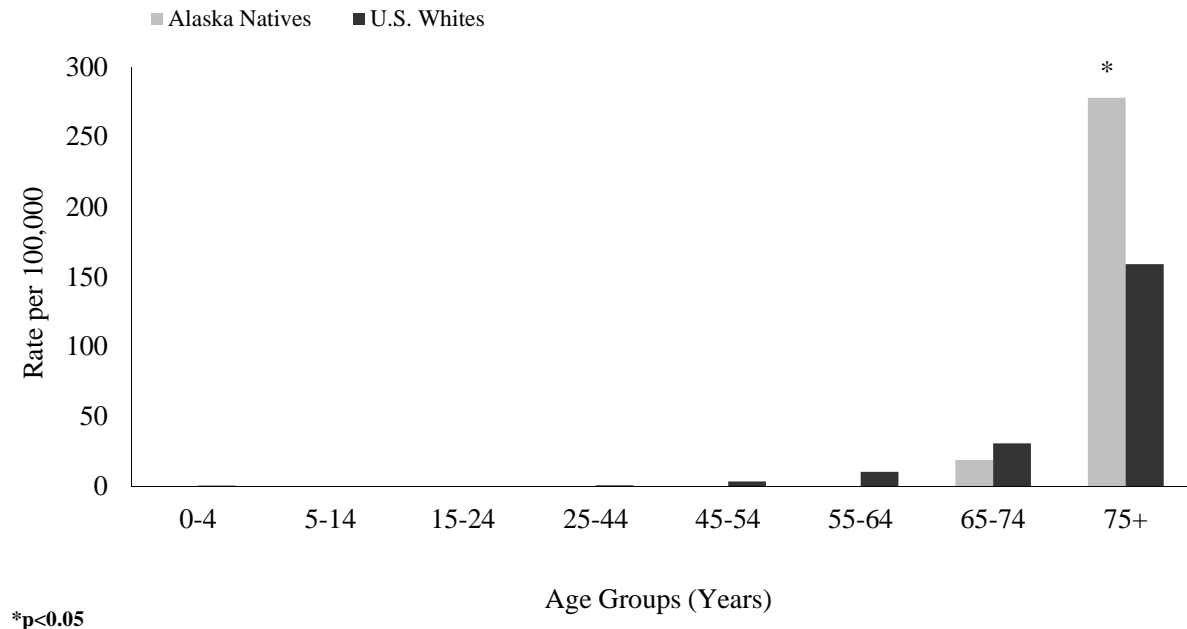


FIGURE 16a. Age-Specific Mortality Rates from Parkinson's Disease
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Both Genders

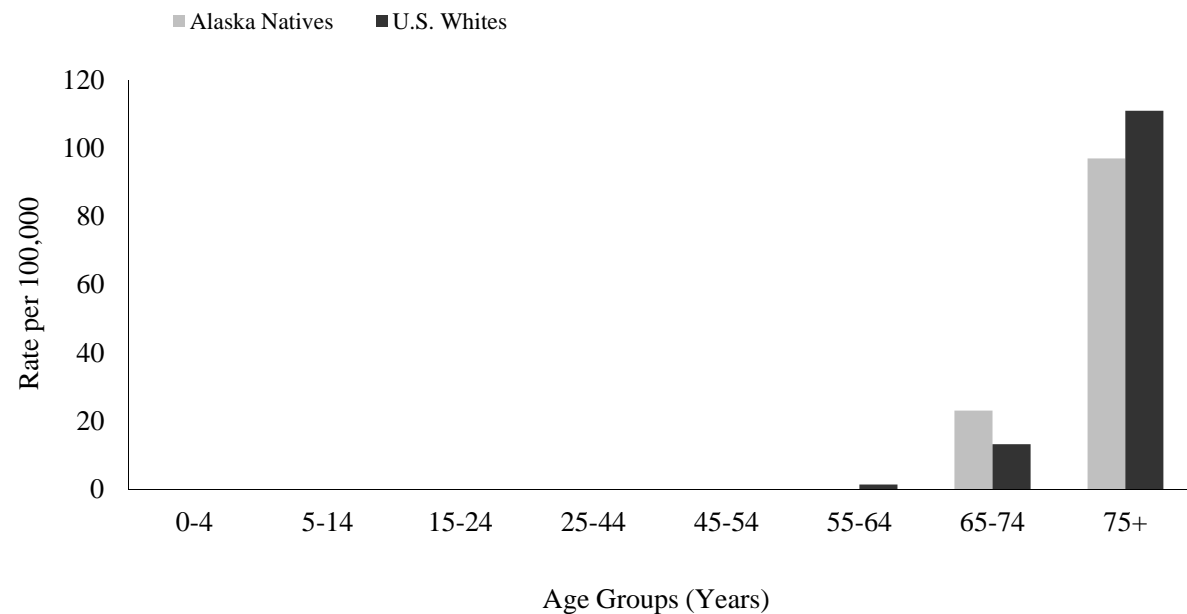


FIGURE 17a. Age-Specific Mortality Rates from Perinatal Conditions
Data Source: Table 2a. Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders

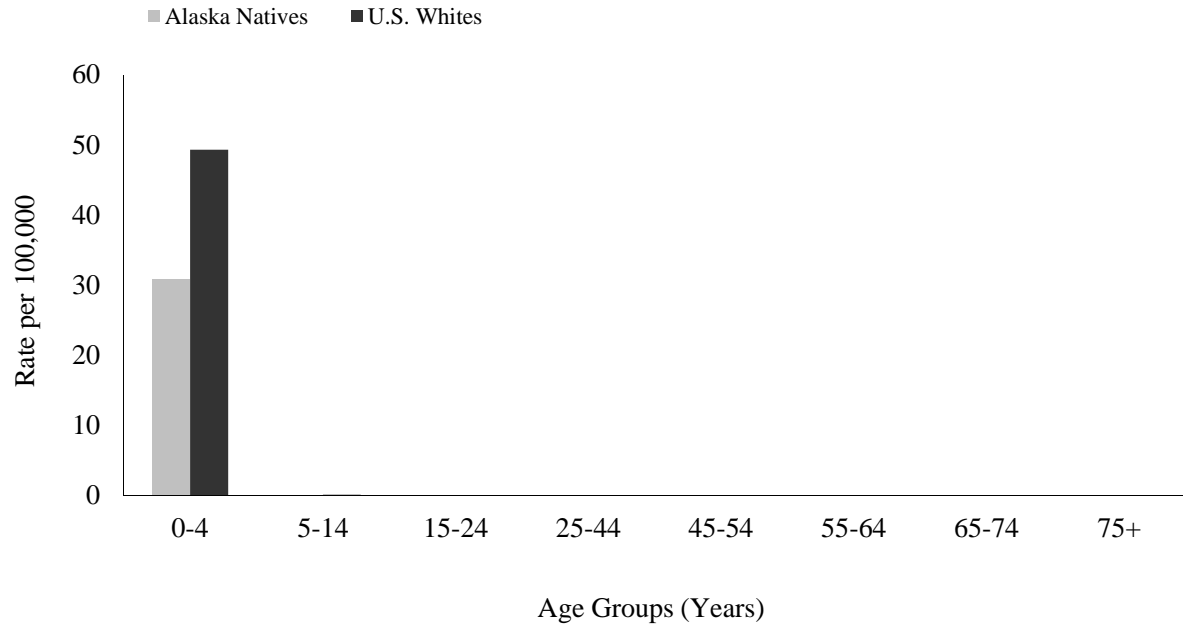
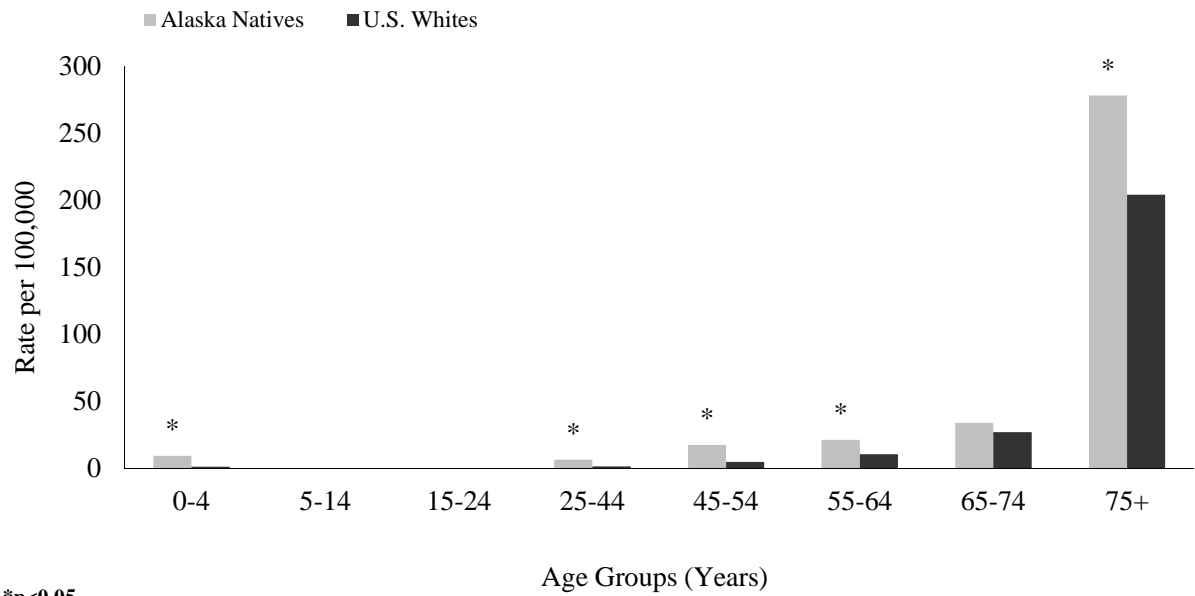


FIGURE 18a. Age-Specific Mortality Rates from Pneumonia & Influenza
Data Source: Table 2a. Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders



*p<0.05

FIGURE 19a. Age-Specific Mortality Rates from Septicemia
 Data Source: Table 2a. Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Both Genders

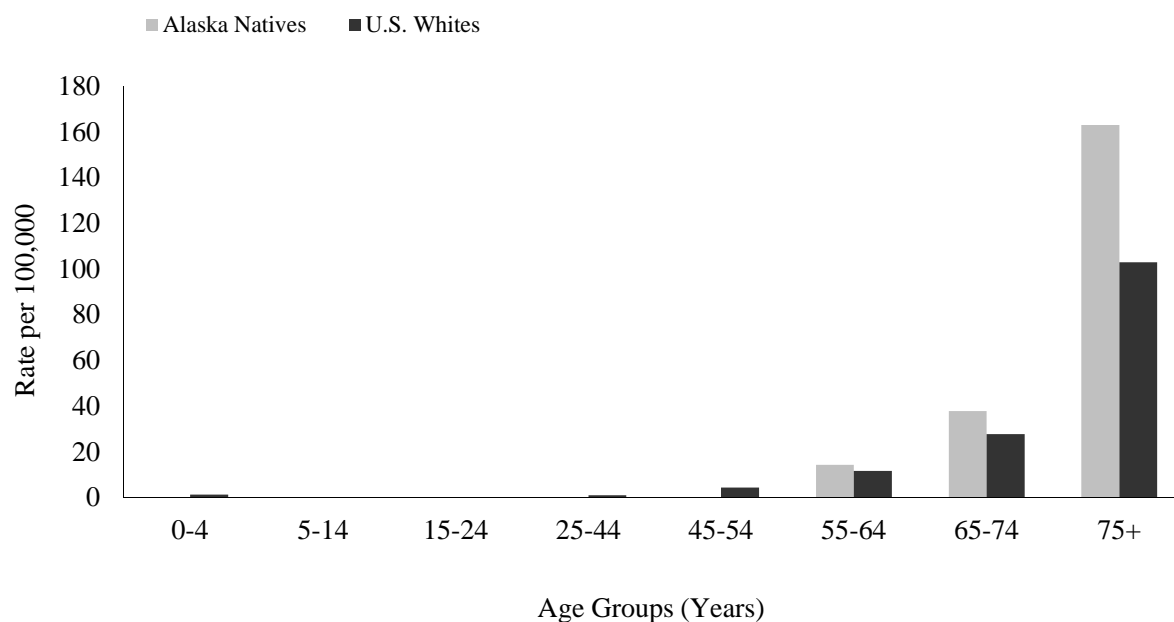
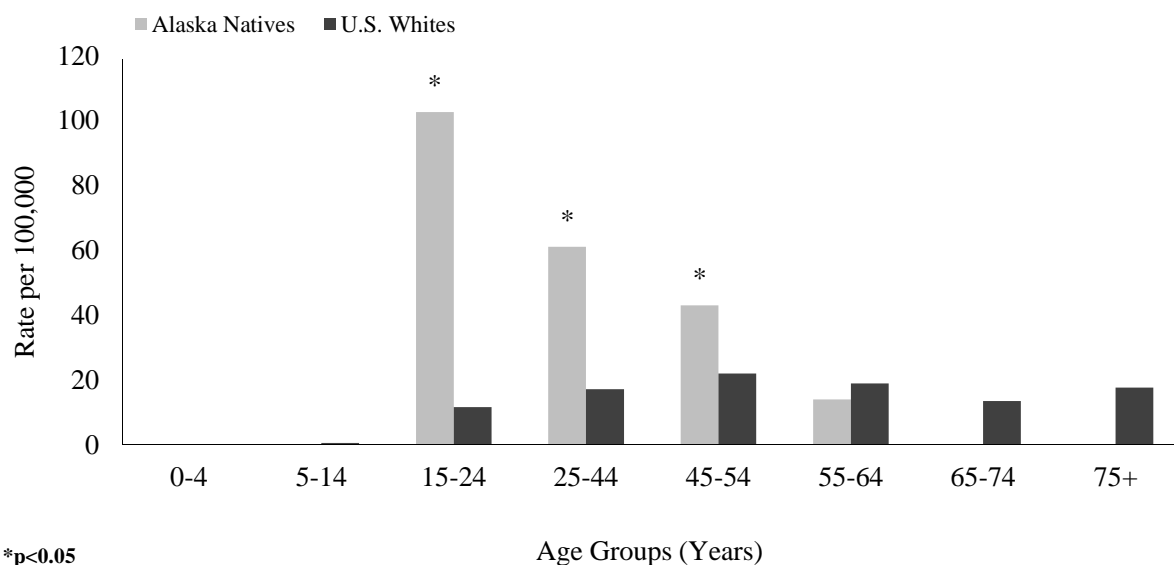


FIGURE 20a. Age-Specific Mortality Rates from Suicide
 Data Source: Table 2a. Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Both Genders



*p<0.05

FIGURE 21a. Age-Specific Mortality Rates from Unintentional Injury
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Both Genders

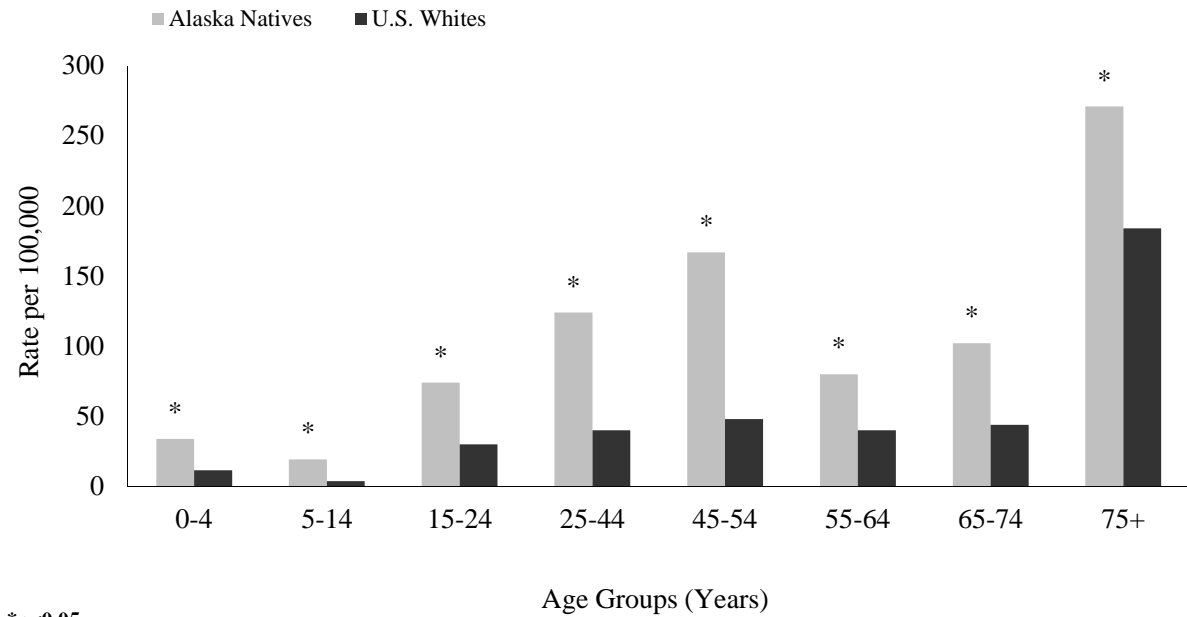


Figure 3b.
Data Source: Table 2b.

**Age-Specific Mortality Rates from All-Cause
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

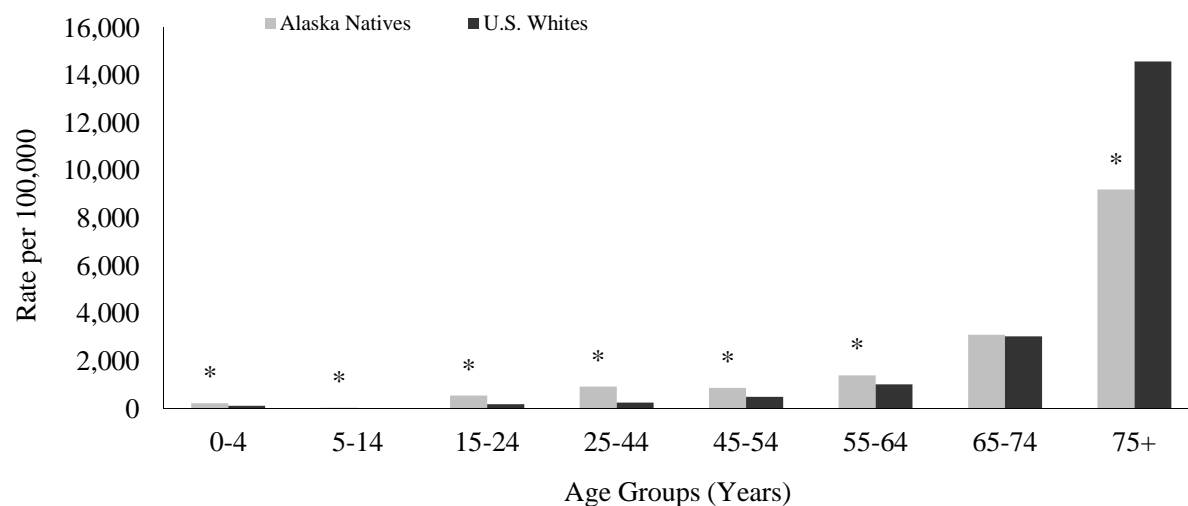


Figure 4b.
Data Source: Table 2b.

**Age-Specific Mortality Rates from Alcohol Abuse
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

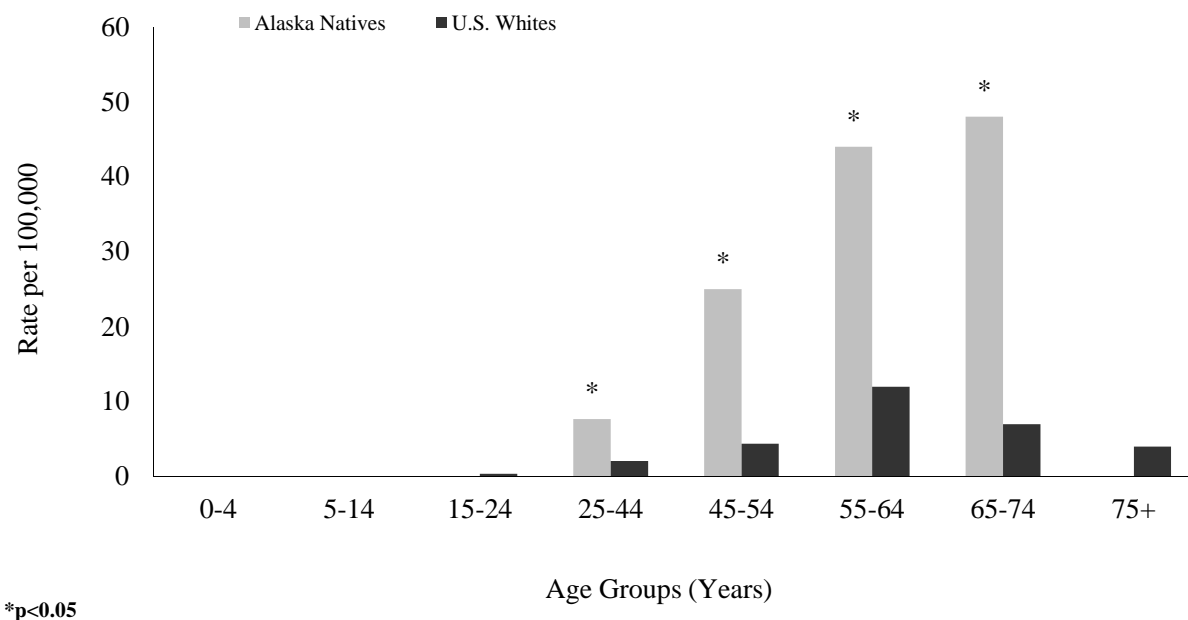


FIGURE 5b. Age-Specific Mortality Rates from Alzheimer's Disease
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Males

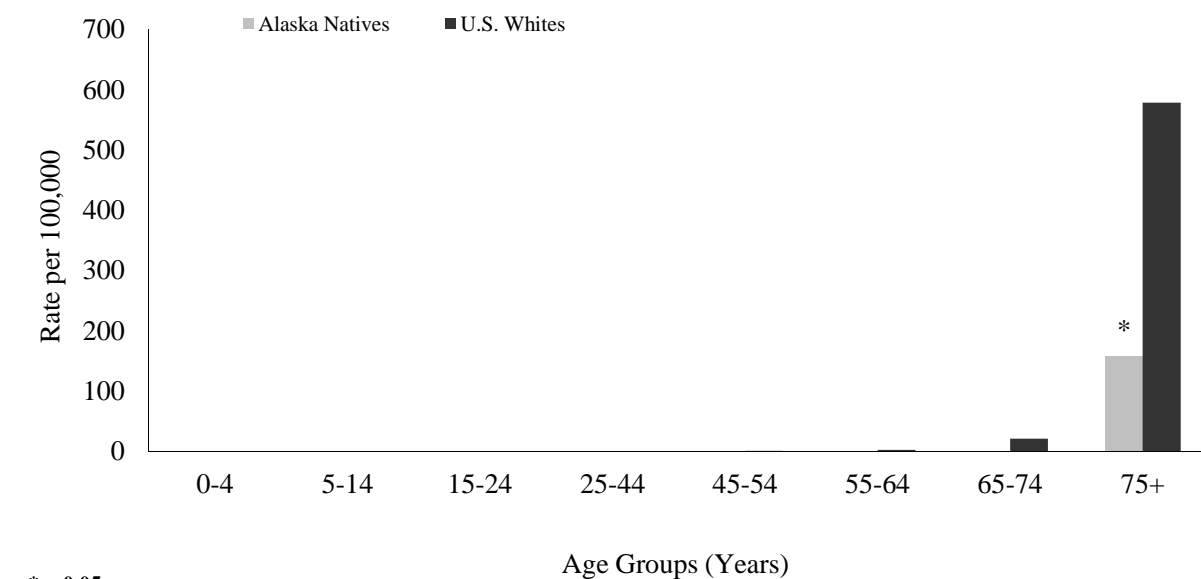


FIGURE 6b. Age-Specific Mortality Rates from Cancer
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Males

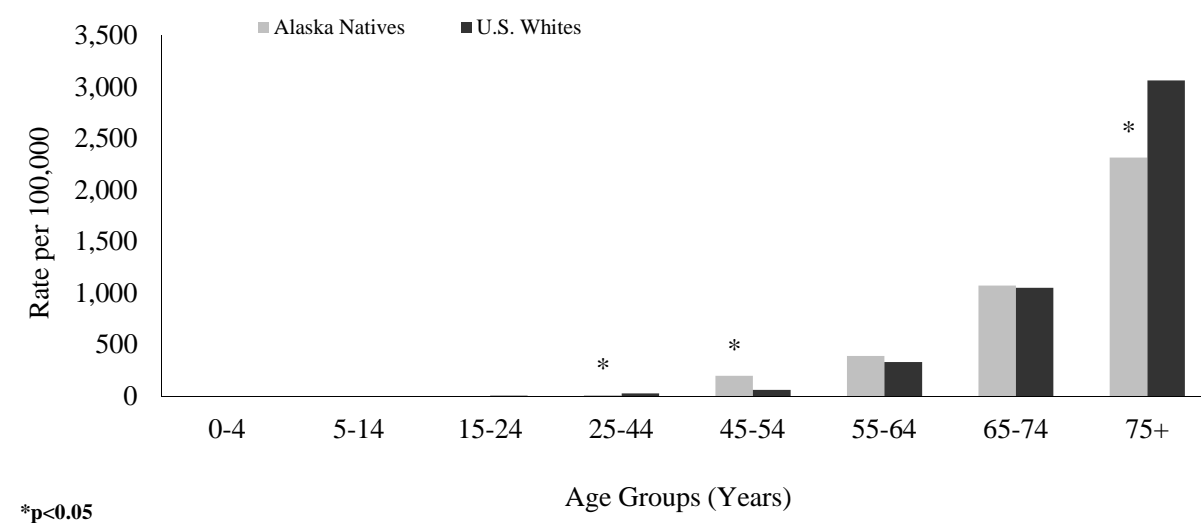


FIGURE 7b.
Data Source: Table 2b.

**Age-Specific Mortality Rates from Cerebrovascular Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

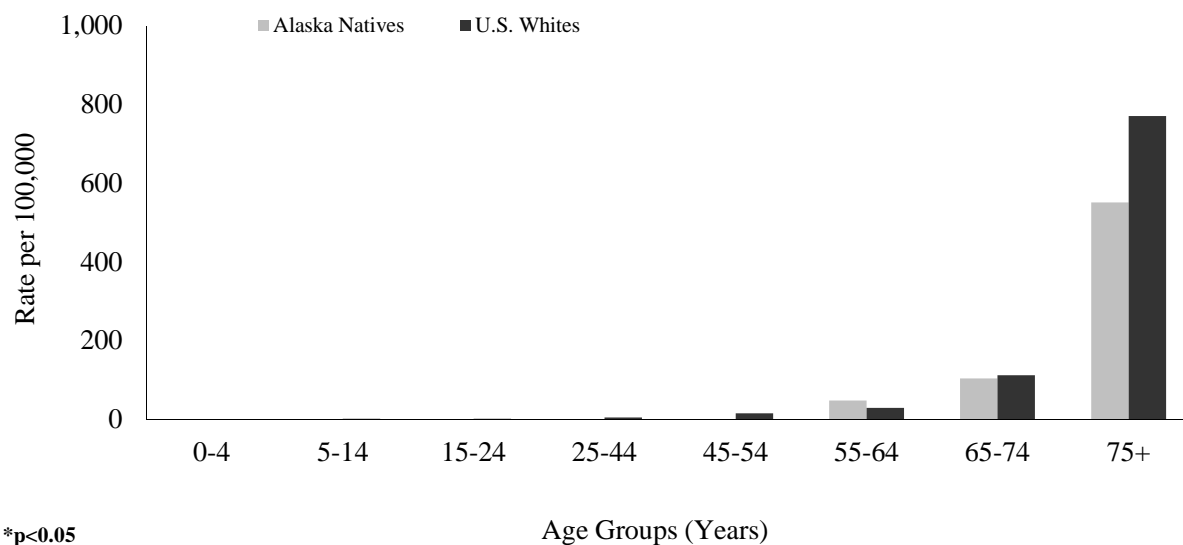


FIGURE 8b.
Data Source: Table 2b.

**Age-Specific Mortality Rates from Chronic Liver Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

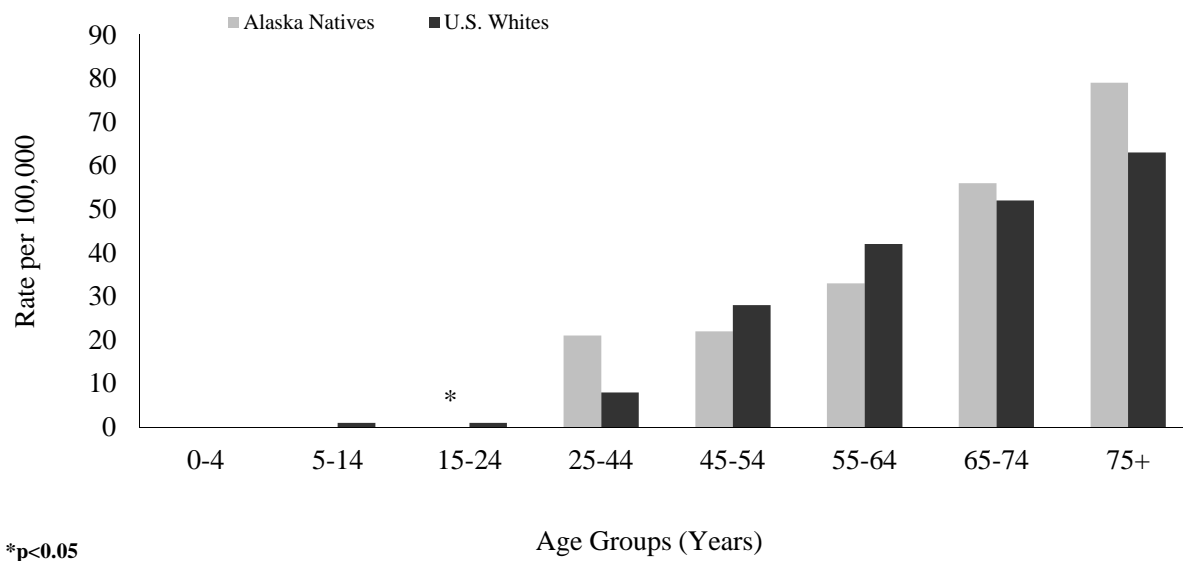


FIGURE 9b. Age-Specific Mortality Rates from Congenital Abnormalities
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Males

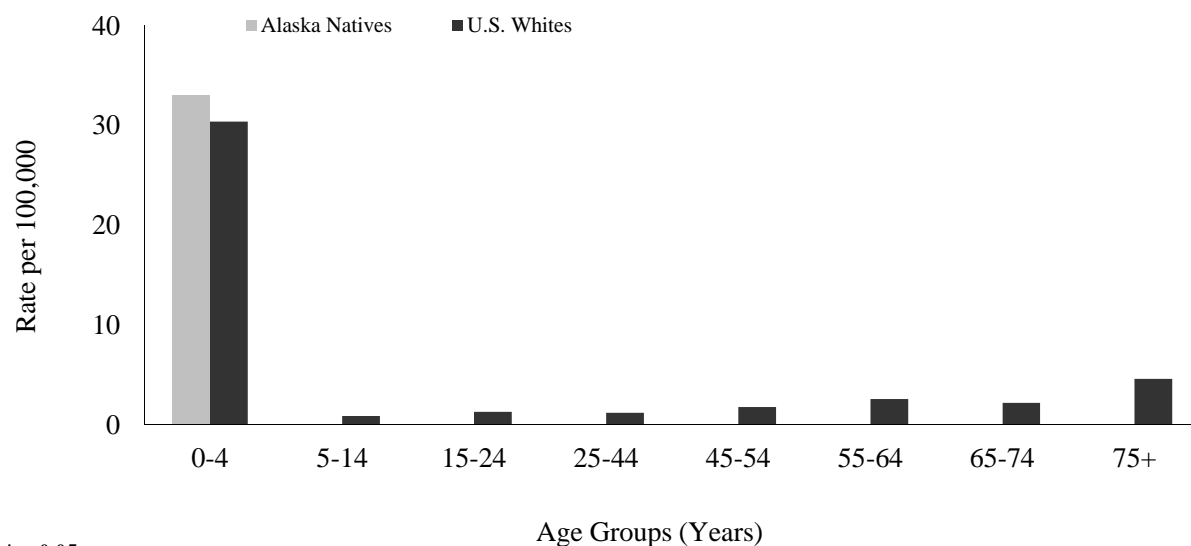


FIGURE 10b. Age-Specific Mortality Rates from COPD
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Males

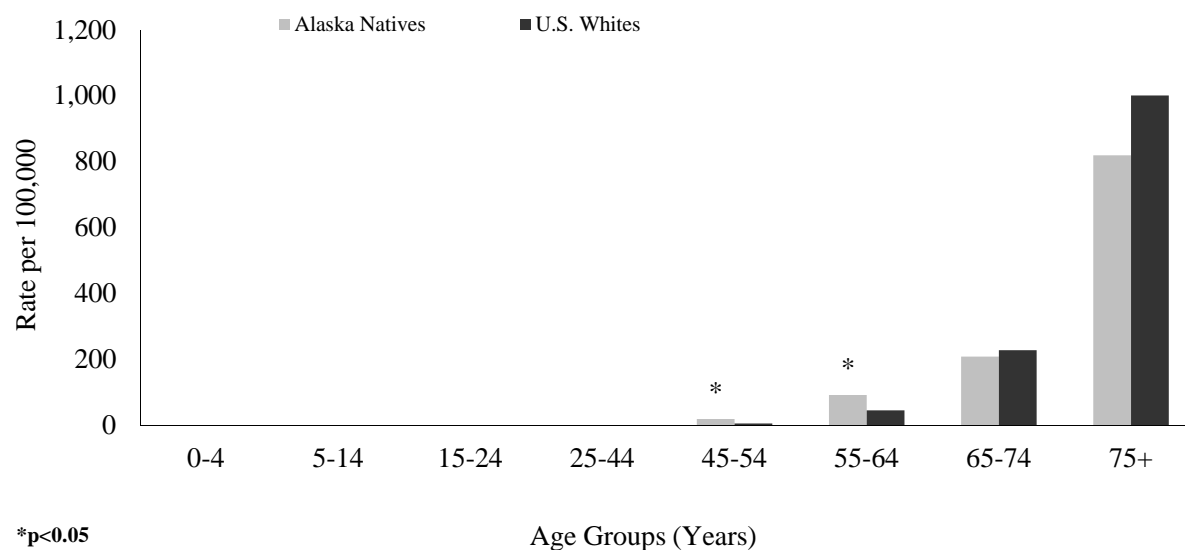


FIGURE 11b. Age-Specific Mortality Rates from Diabetes Mellitus
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Males

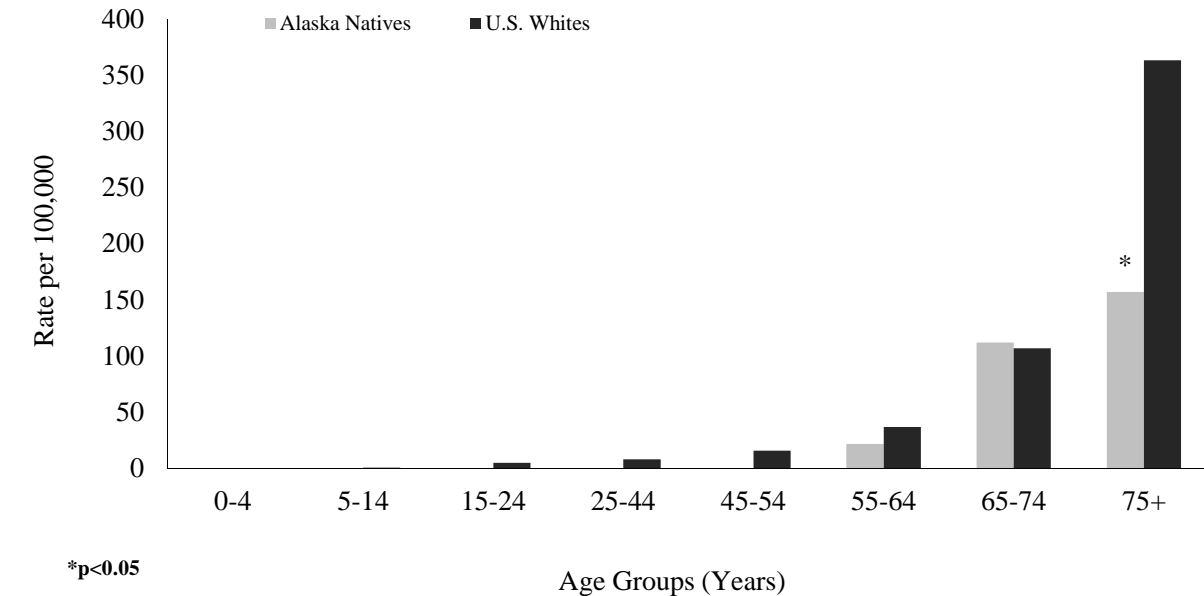


FIGURE 12b. Age-Specific Mortality Rates from Heart Disease
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Males

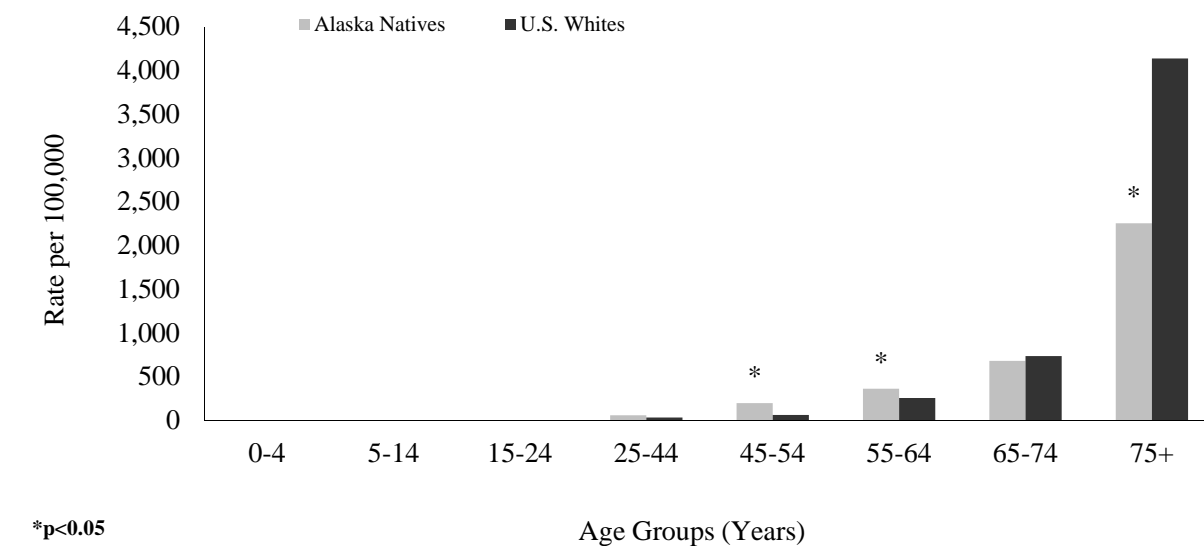


FIGURE 13b. Age-Specific Mortality Rates from Homicide
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Males

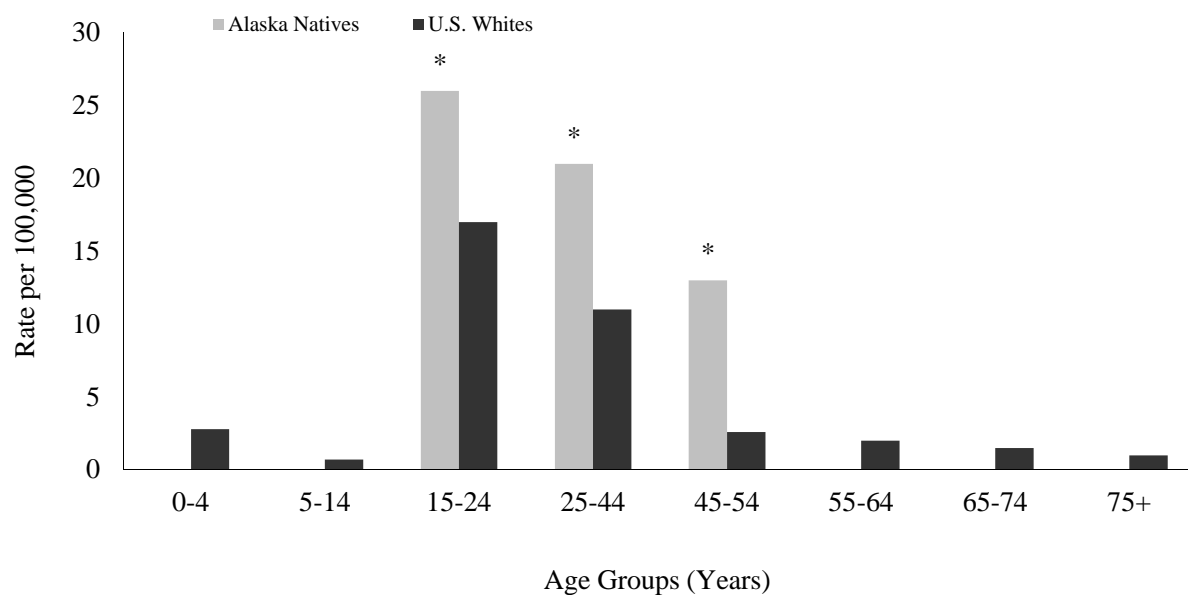


FIGURE 14b. Age-Specific Mortality Rates from Hypertension
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Males



FIGURE 15b. Age-Specific Mortality Rates from Nephritis
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Males
 Data Source: Table 2b.

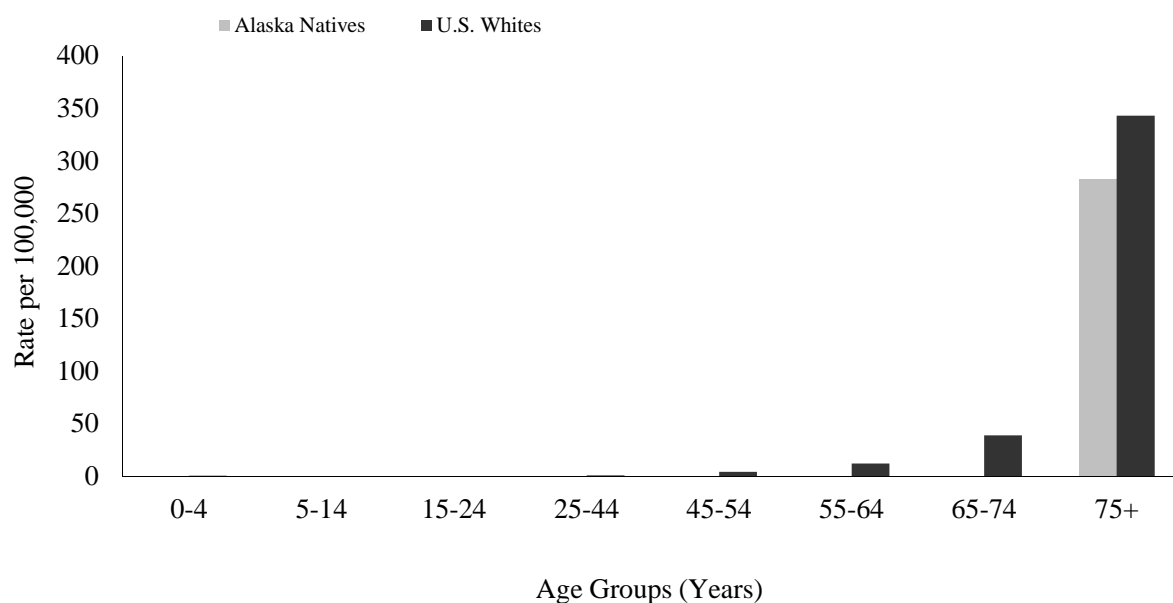


FIGURE 16b. Age-Specific Mortality Rates from Parkinson's Disease
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Males
 Data Source: Table 2b.



FIGURE 17b. Age-Specific Mortality Rates from Perinatal Conditions
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Males

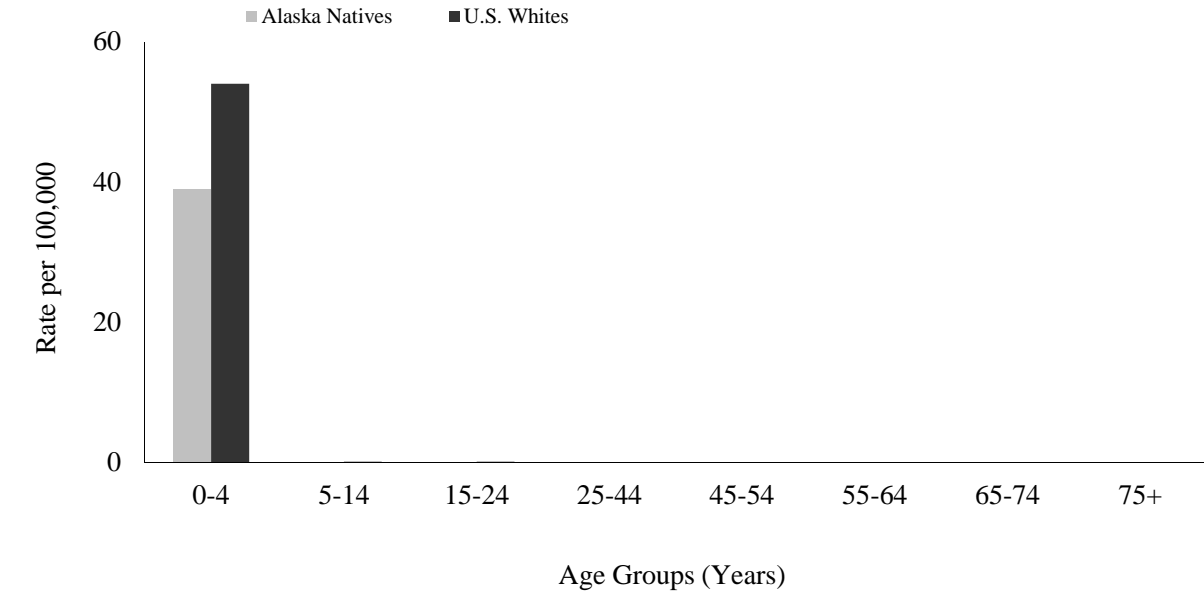
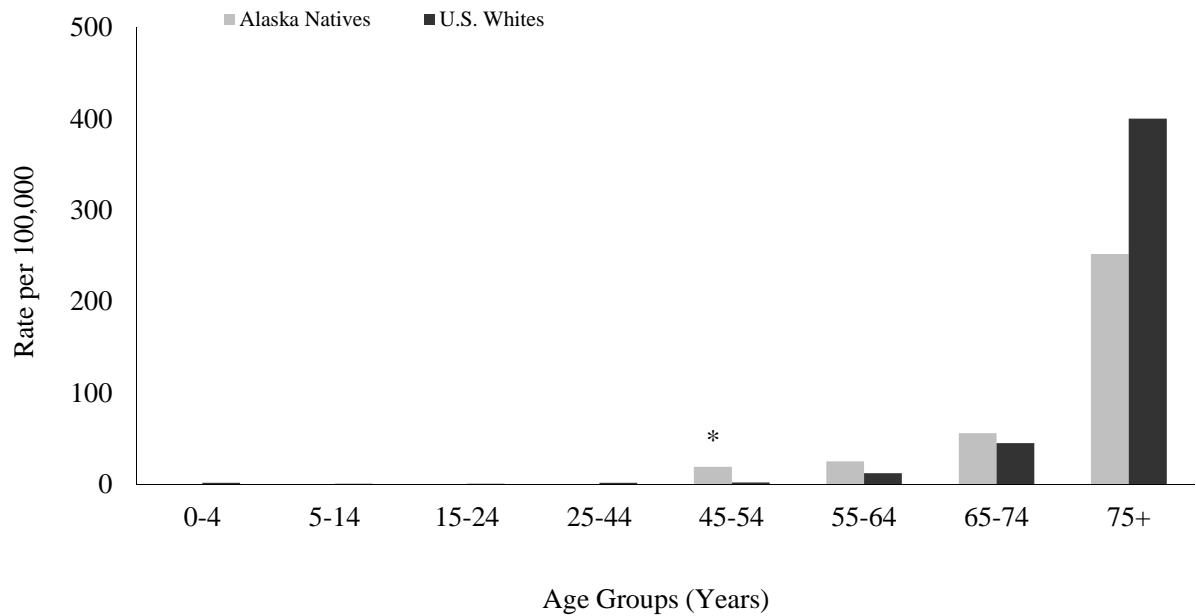
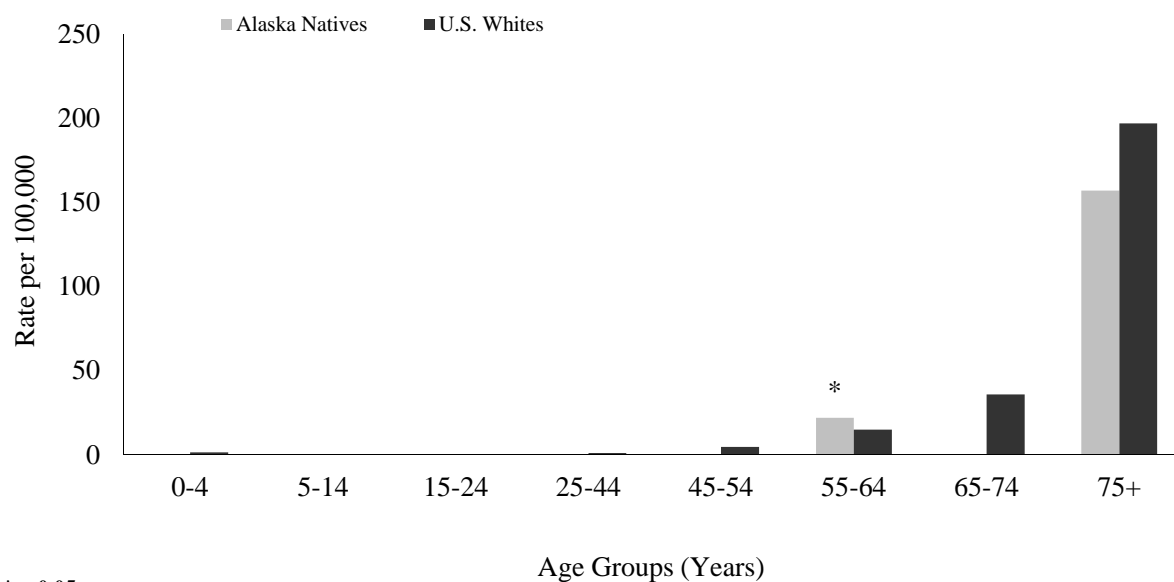


FIGURE 18b. Age-Specific Mortality Rates from Pneumonia & Influenza
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Males



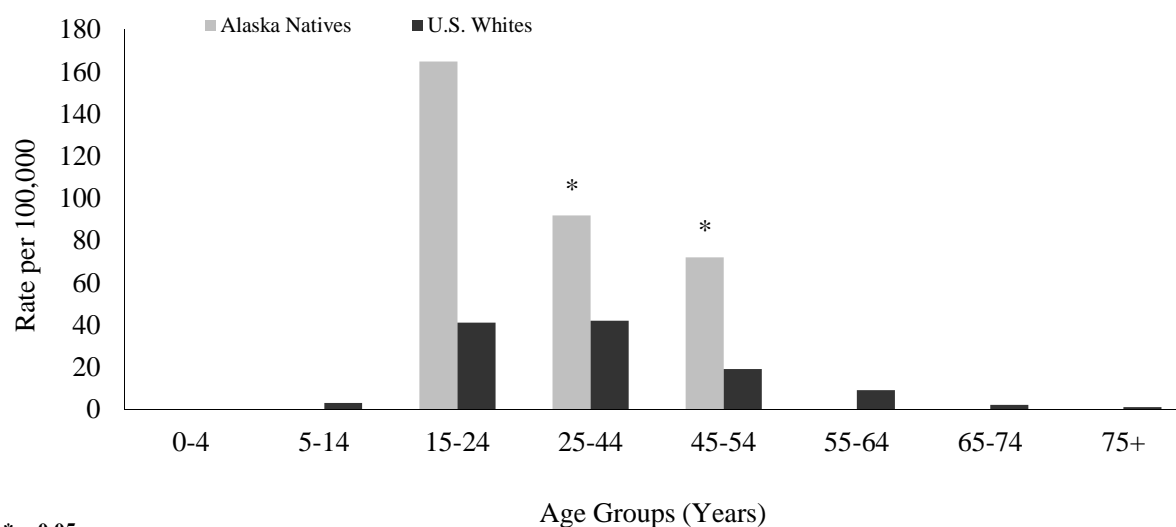
*p<0.05

FIGURE 19b. Age-Specific Mortality Rates from Septicemia
 Data Source: Table 2b. Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Males



*p<0.05

FIGURE 20b. Age-Specific Mortality Rates from Suicide
 Data Source: Table 2b. Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Males



*p<0.05

FIGURE 21b. Age-Specific Mortality Rates from Unintentional Injury
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Males

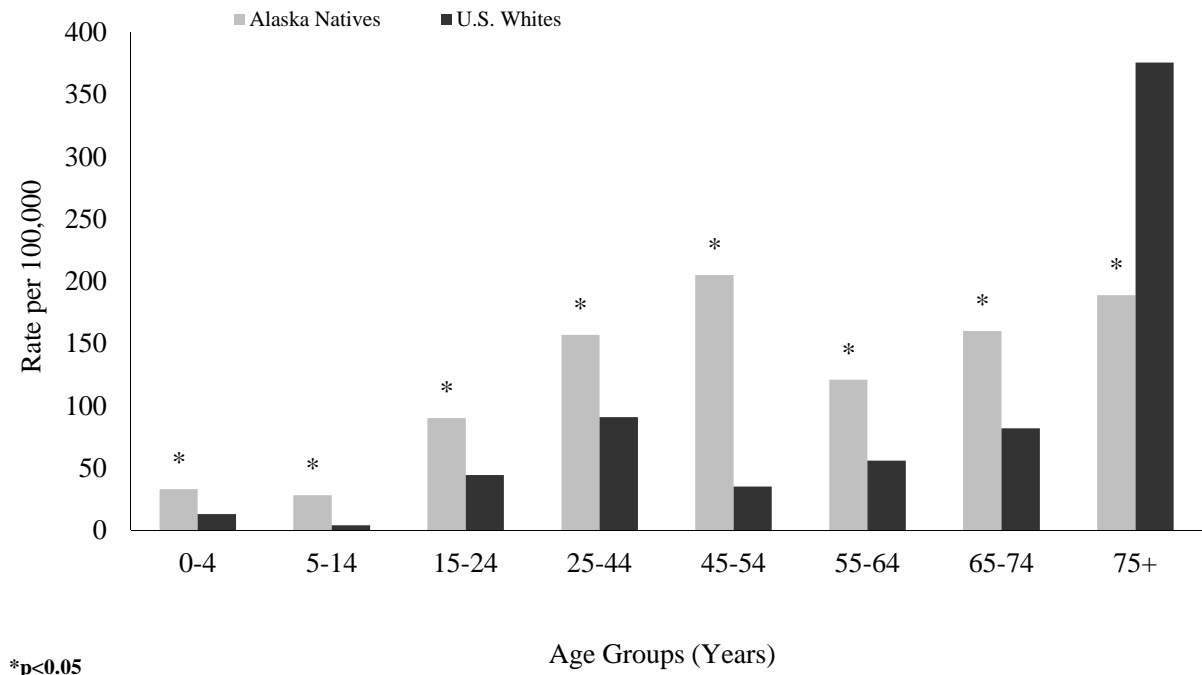
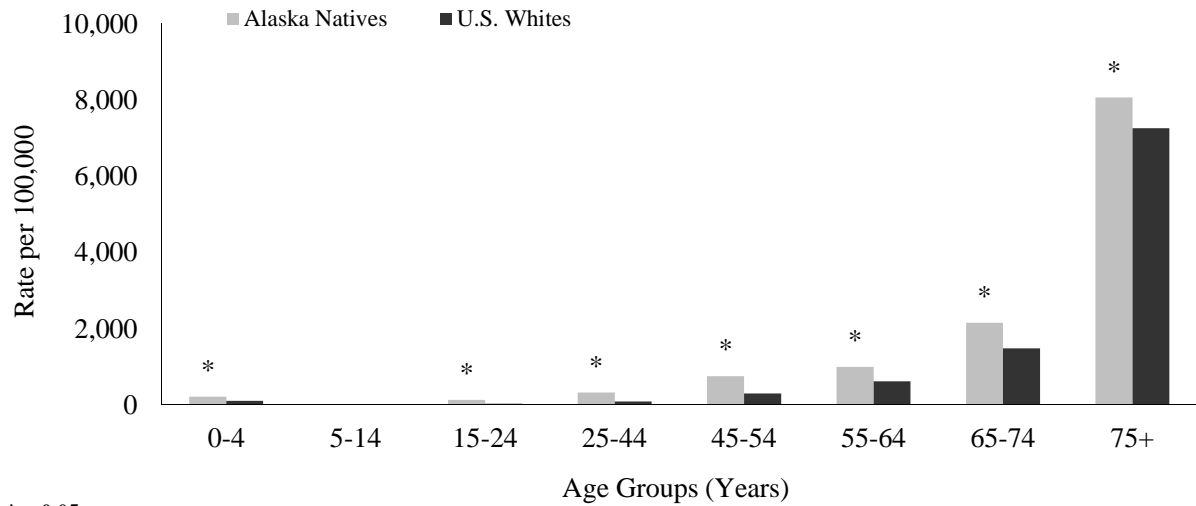


Figure 3c.

Data Source: Table 2c.

Age-Specific Mortality Rates from All-Cause Alaska Natives (2009-2013) vs U.S. Whites (2009-2013) Females

**Figure 4c.**

Data Source: Table 2c.

Age-Specific Mortality Rates from Alcohol Abuse Alaska Natives (2009-2013) vs U.S. Whites (2009-2013) Females

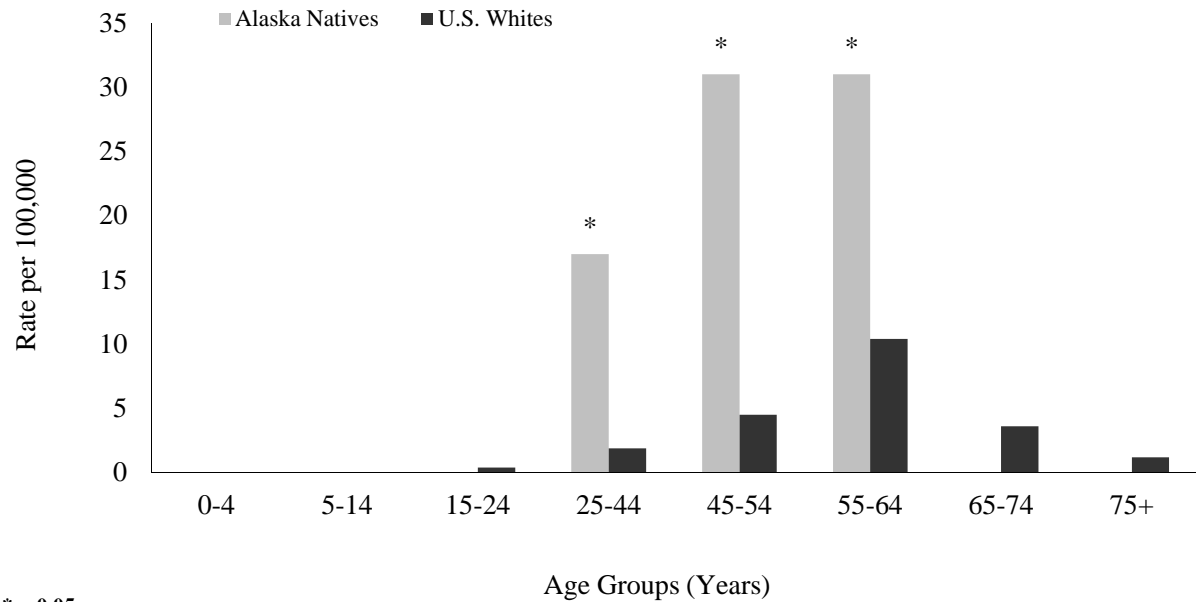


FIGURE 5c. Age-Specific Mortality Rates from Alzheimer's Disease
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Females
 Data Source: Table 2c.

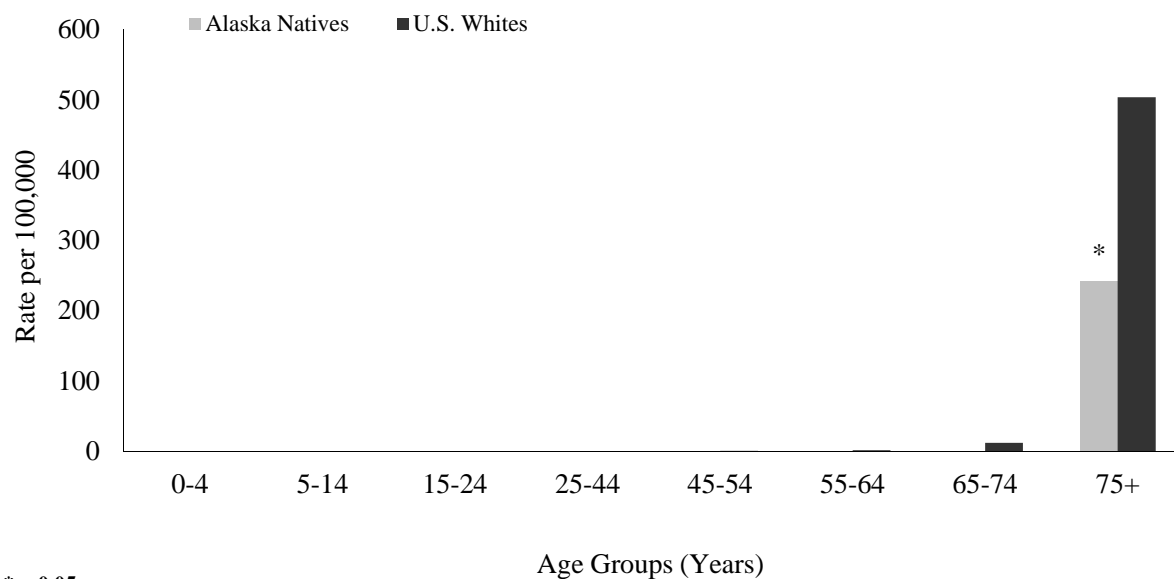


FIGURE 6c. Age-Specific Mortality Rates from Cancer
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Females
 Data Source: Table 2c.

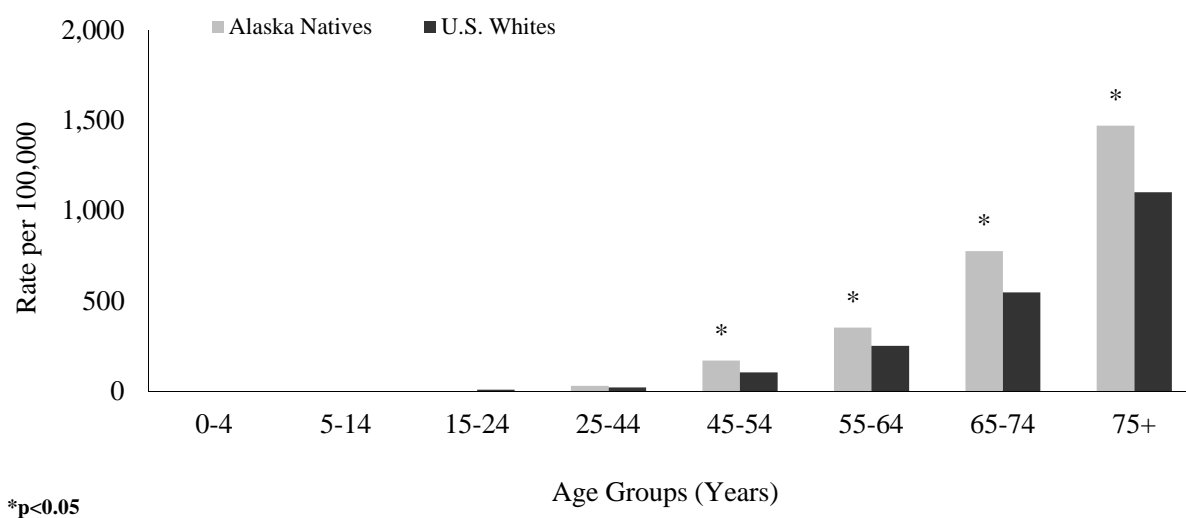


FIGURE 7c. Age-Specific Mortality Rates from Cerebrovascular Disease
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Females

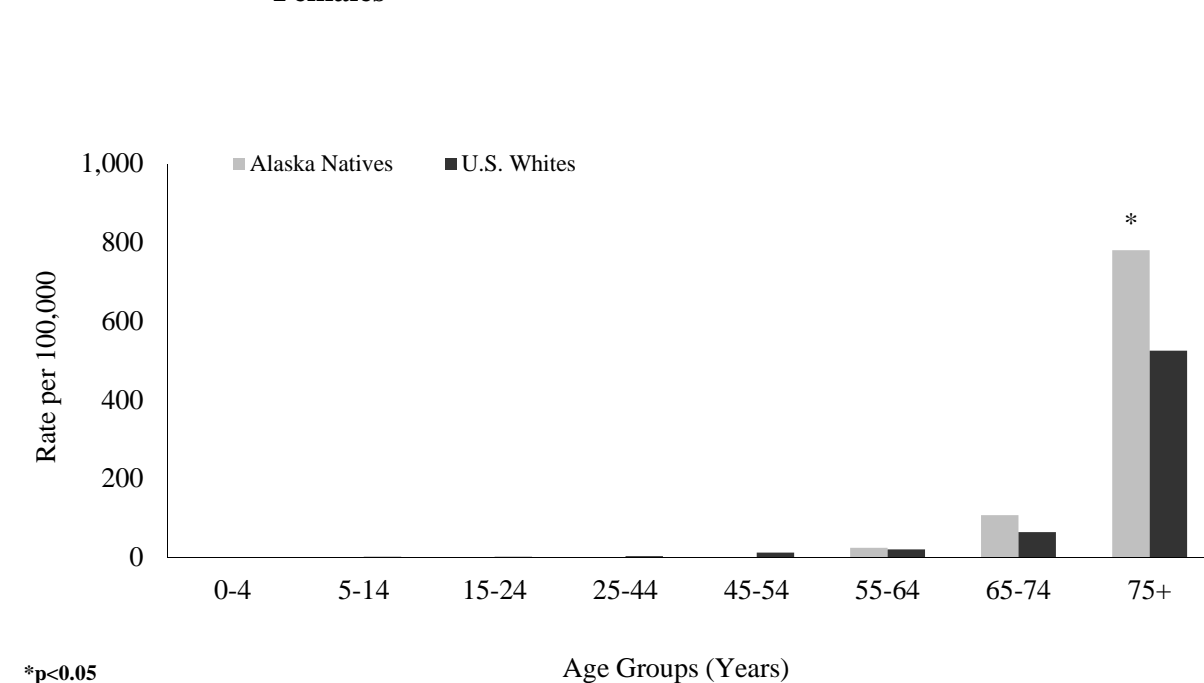


FIGURE 8c. Age-Specific Mortality Rates from Chronic Liver Disease
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Females

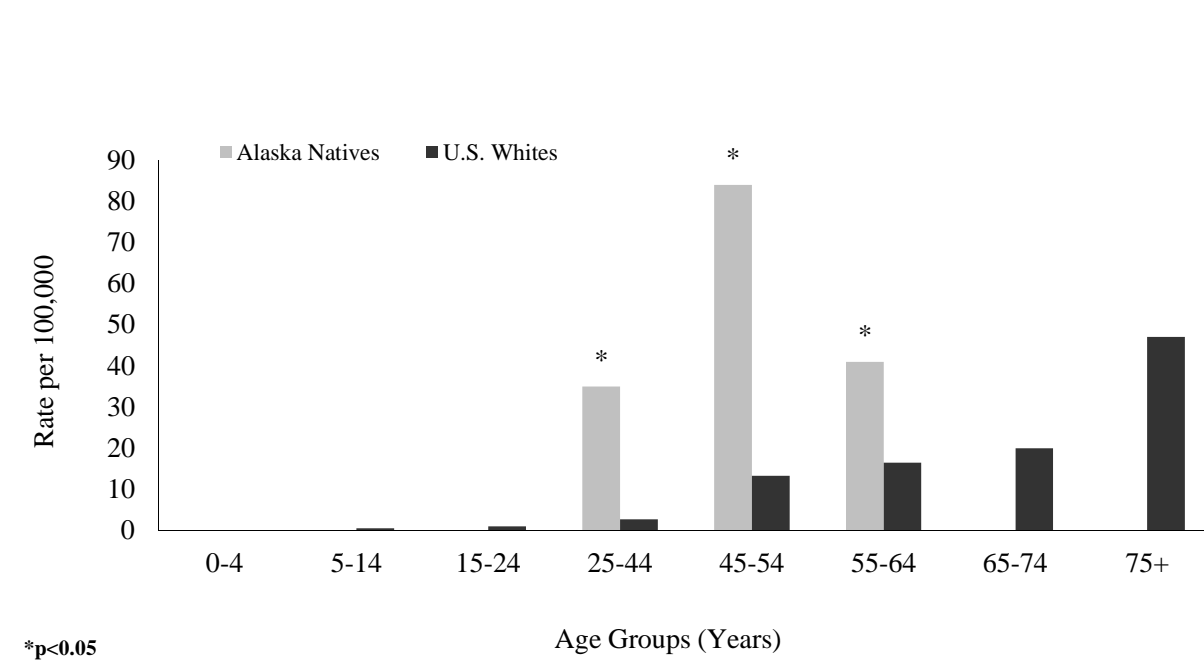


FIGURE 9c. Age-Specific Mortality Rates from Congenital Abnormalities
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Females

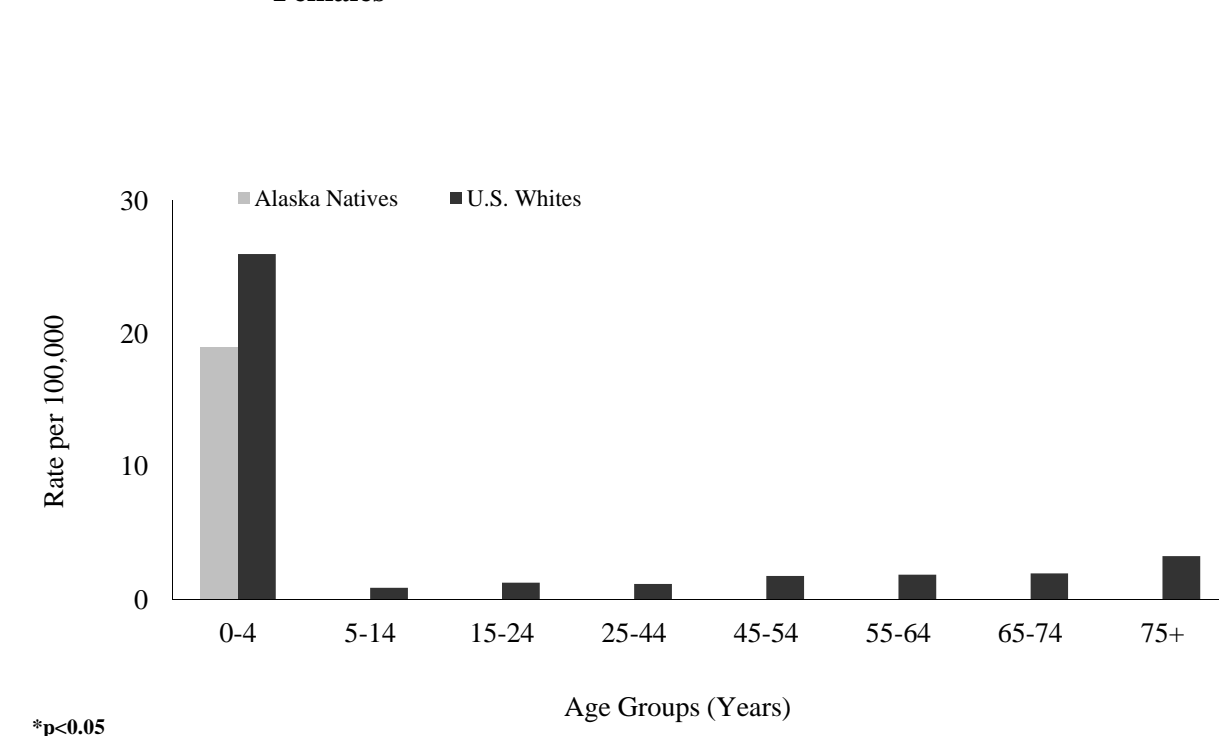


FIGURE 10c. Age-Specific Mortality Rates from COPD
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Females

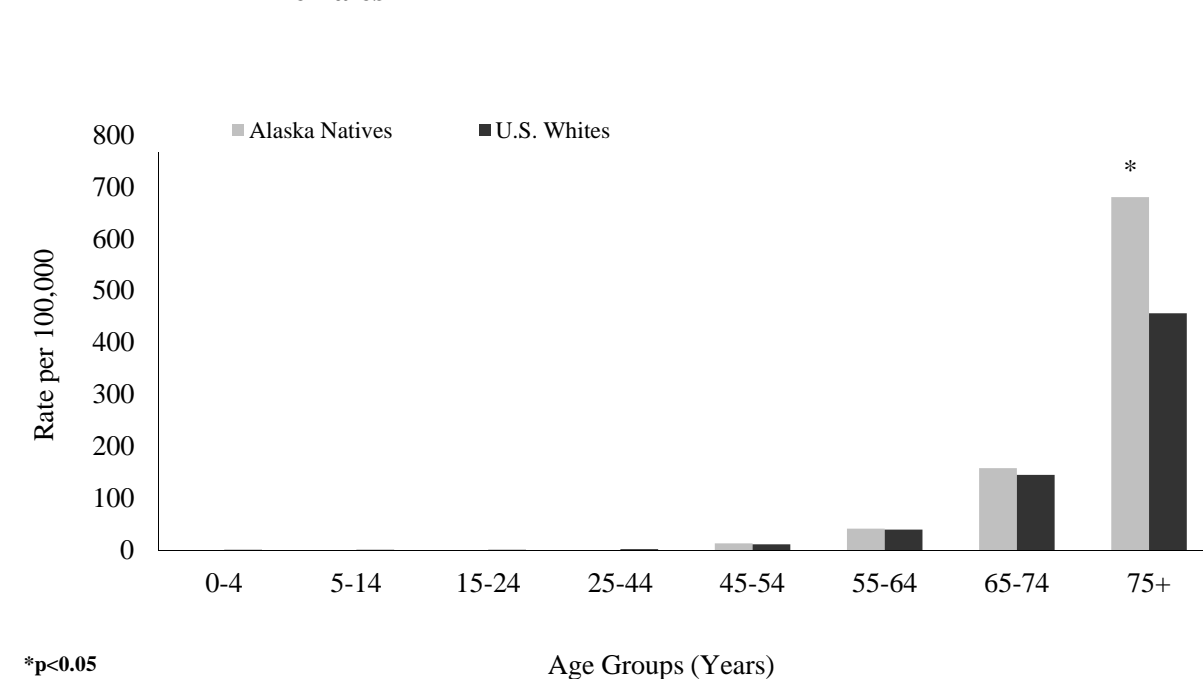


FIGURE 11c. Age-Specific Mortality Rates from Diabetes Mellitus
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Females

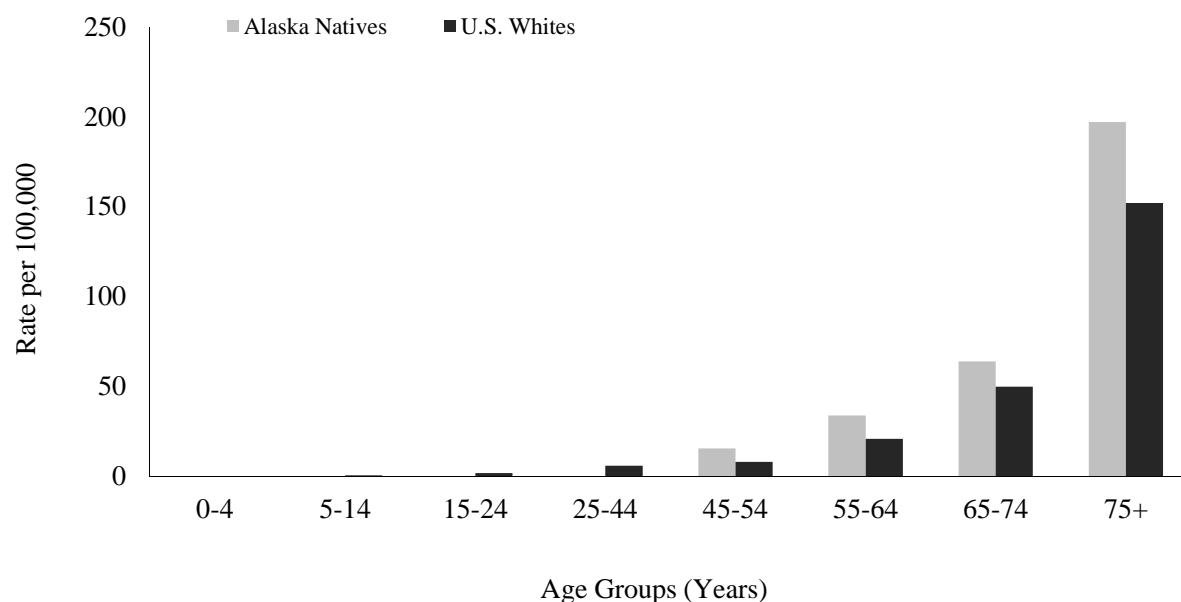


FIGURE 12c. Age-Specific Mortality Rates from Heart Disease
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Females

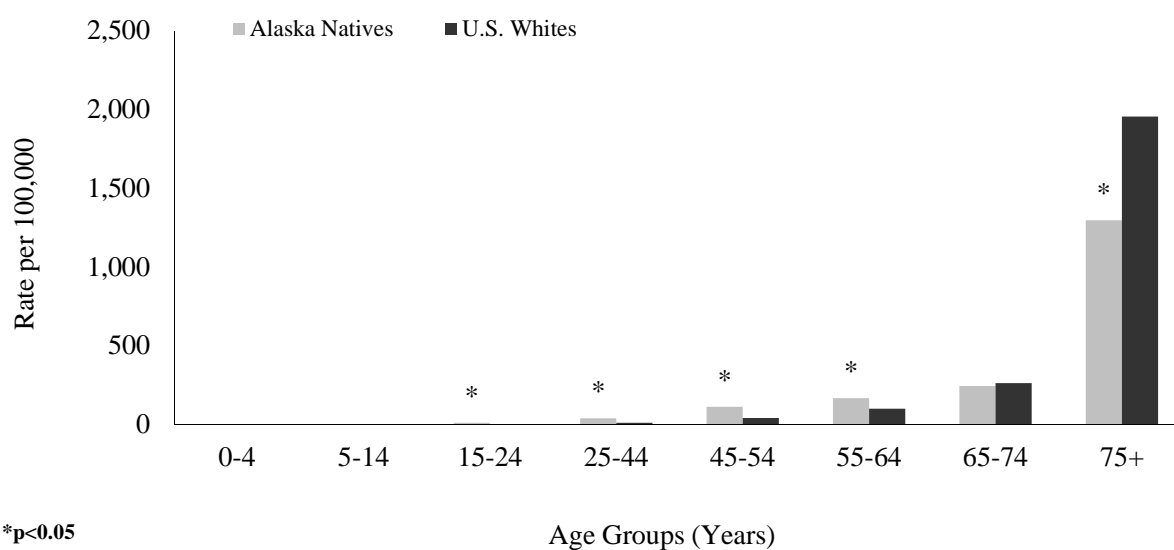


FIGURE 13c. Age-Specific Mortality Rates from Homicide
Data Source: Table 2c. Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females

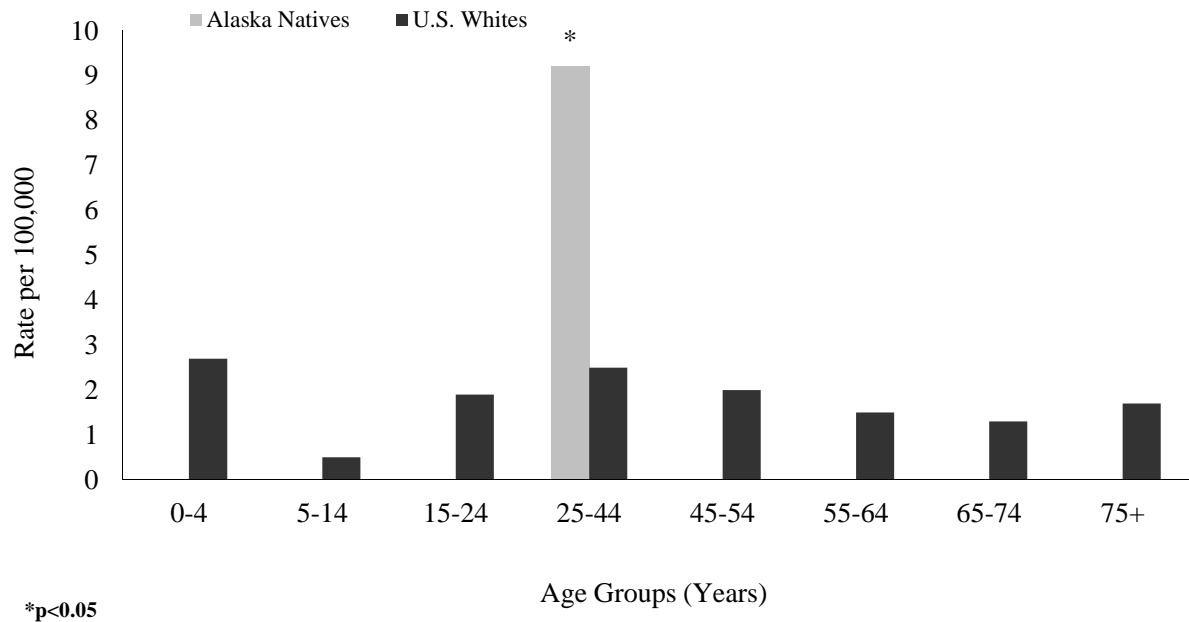


FIGURE 14c. Age-Specific Mortality Rates from Hypertension
Data Source: Table 2c. Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females

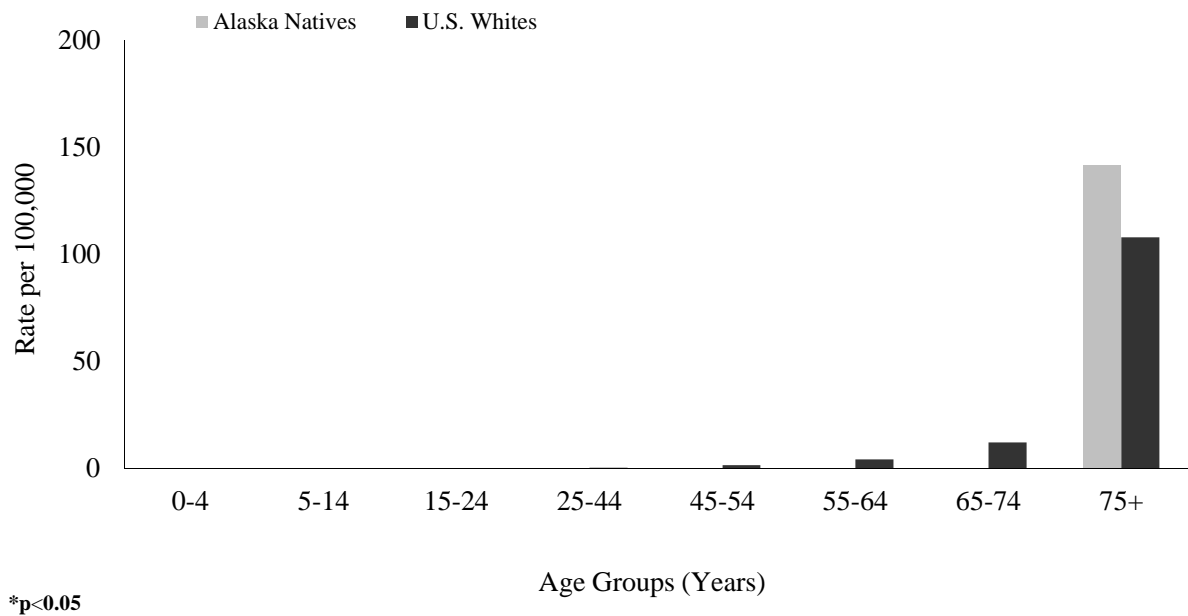


FIGURE 15c. Age-Specific Mortality Rates from Nephritis
 Data Source: Table 2c. Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Females

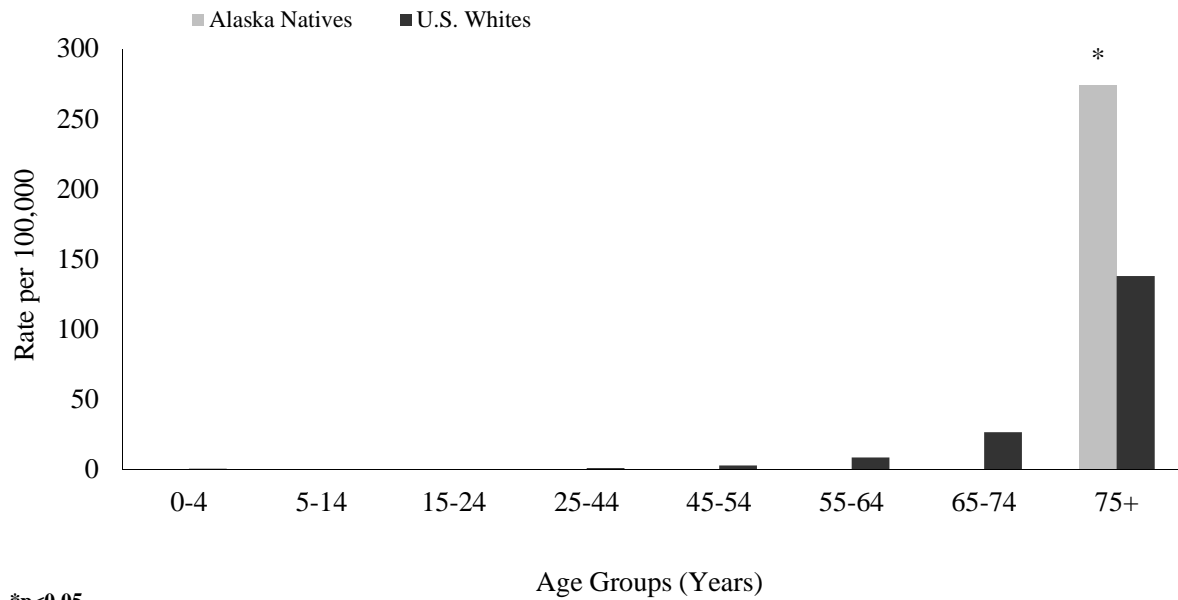


FIGURE 16c. Age-Specific Mortality Rates from Parkinson's Disease
 Data Source: Table 2c. Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Females

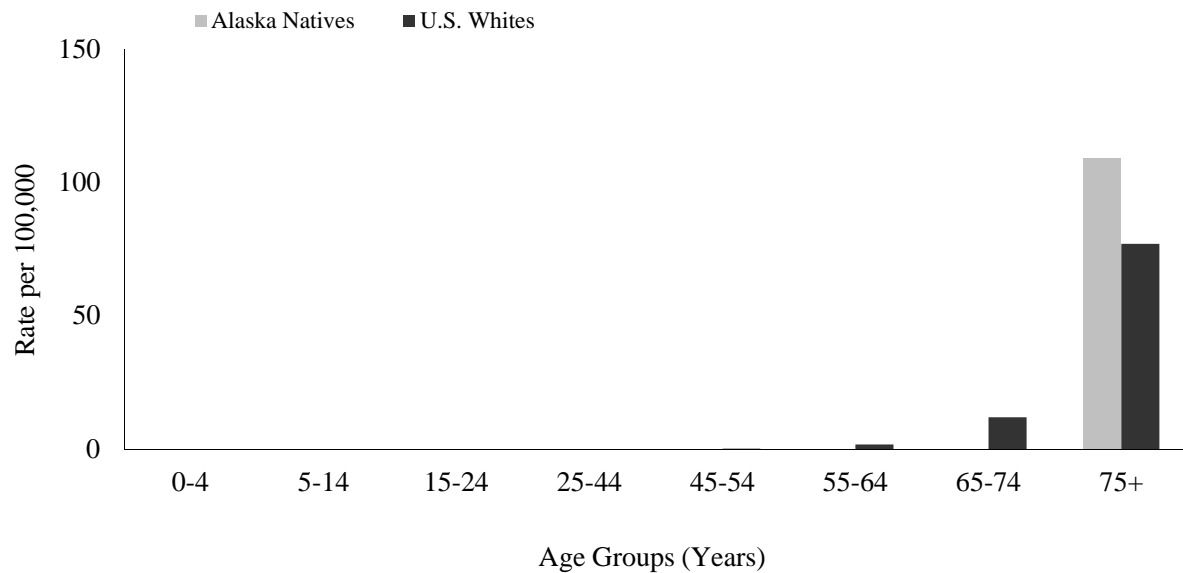


FIGURE 17c. Age-Specific Mortality Rates from Perinatal Conditions
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Females

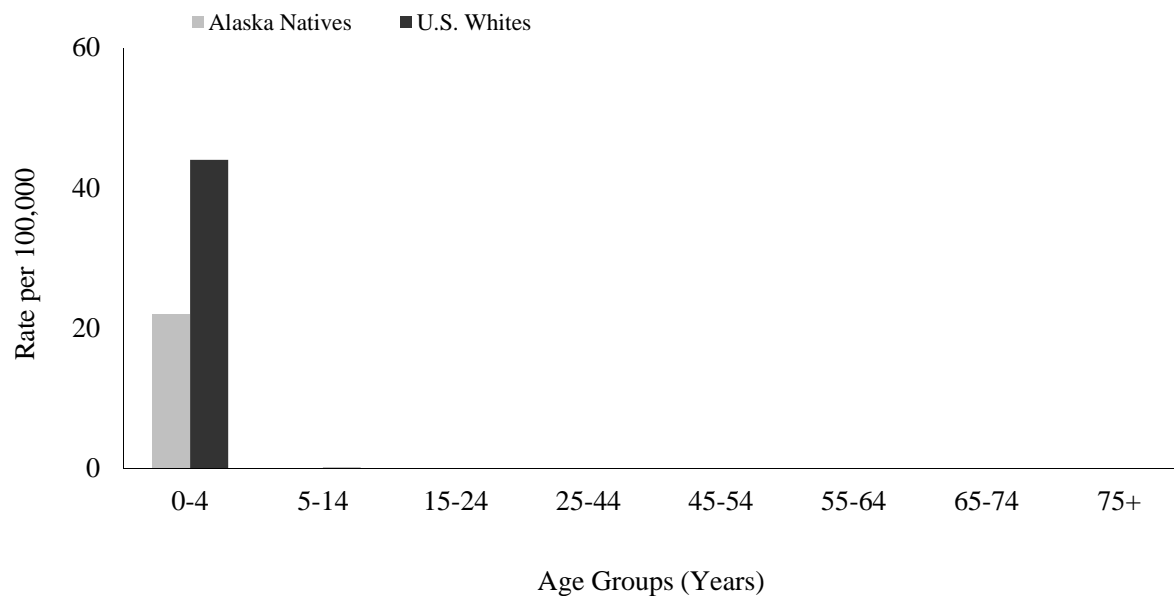
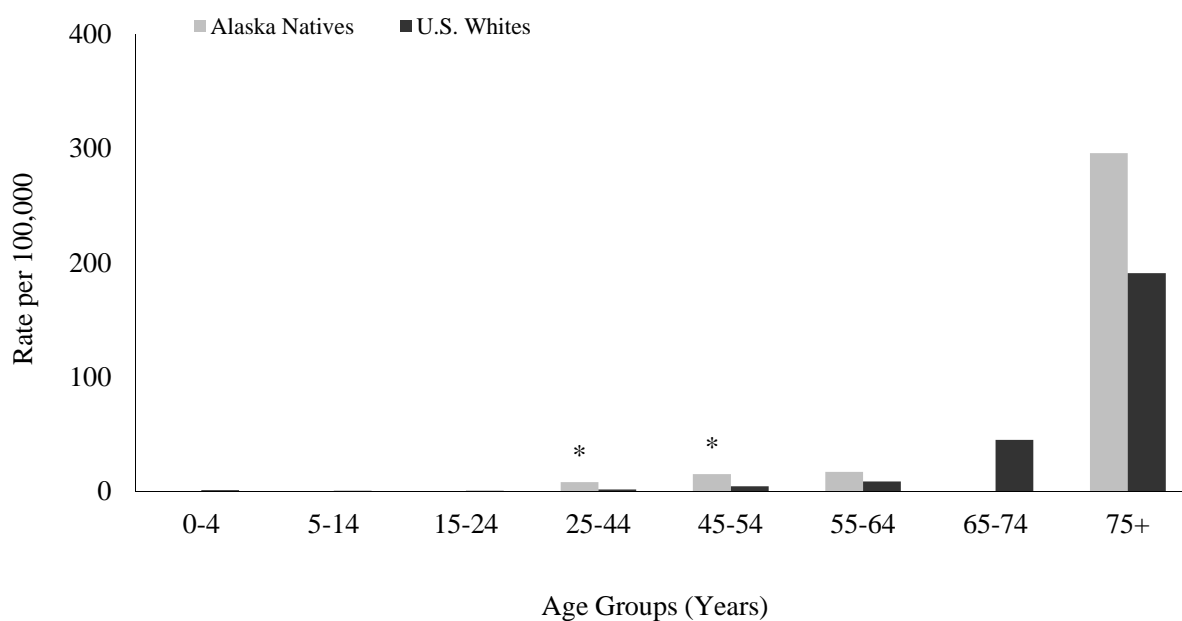


FIGURE 18c. Age-Specific Mortality Rates from Pneumonia & Influenza
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Females



*p<0.05

FIGURE 19c. Age-Specific Mortality Rates from Septicemia
 Data Source: Table 2c. Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Females

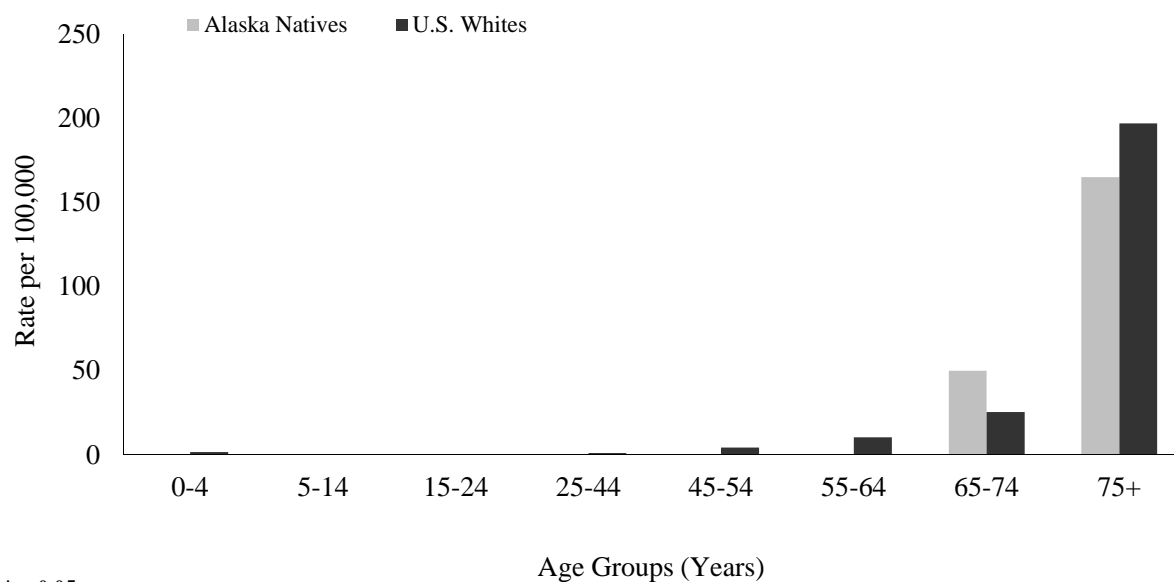


FIGURE 20c. Age-Specific Mortality Rates from Suicide
 Data Source: Table 2c. Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Females

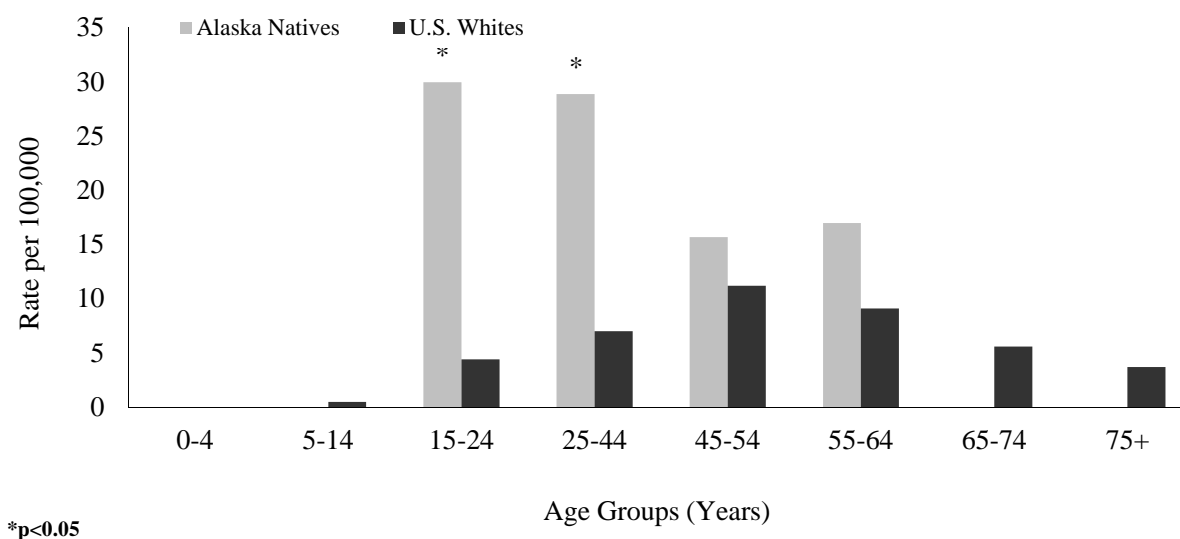


FIGURE 21c. Age-Specific Mortality Rates from Unintentional Injury
 Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
 Females

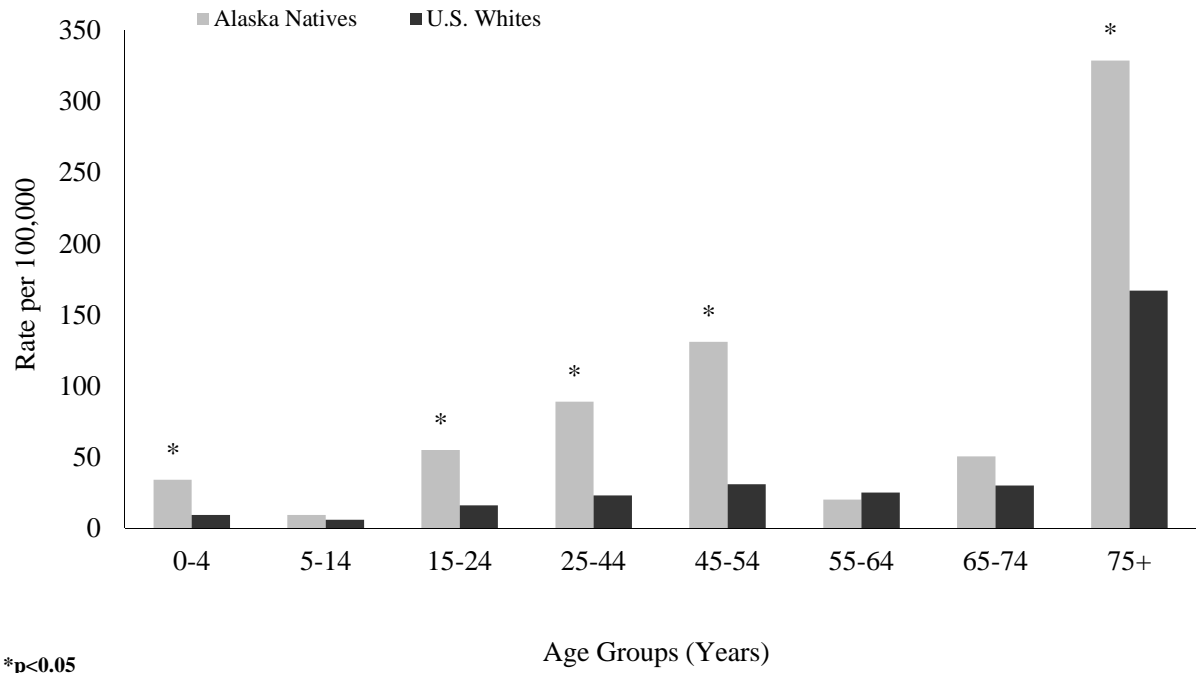


TABLE 3.Data Source: State of Alaska
Bureau of Vital Statistics.**Age-Specific Rates for Leading Causes of Death
Alaska Natives (2009-2013)
Males versus Females**

0-4 Years	# Male Deaths	Male Rate^a	# Female Deaths	Female Rate^a	Rate Ratio	95% CI
Perinatal Conditions	13	39.2	7	22.1	1.8	0.12-14.71
Unintentional Injury	11	33.1	11	34.8	1.0	0.14-6.516
Congenital Abnormalities	11	33.1	6	19.0	0.7	0.10-7.01
All-Cause	81	244.1	69	218.2	1.1	0.47-2.34
Population	33,189		31,623			
5-14 Years	# Male Deaths	Male Rate^a	# Female Deaths	Female Rate^a	Rate Ratio	95% CI
Unintentional Injury	17	28.9	5	9.2	3.1	0.10-31.20
All-Cause	29	49.2	13	23.9	2.1	0.22-9.28
Population	58,915		54,384			
15-24 Years	# Male Deaths	Male Rate^a	# Female Deaths	Female Rate^{a, b}	Rate Ratio	95% CI
Suicide	95	165.1	16	30.3	5.4	0.29-18.44
Unintentional Injury	52	90.4	29	54.9	1.6	0.35-4.68
Homicide	15	26.1	-	-	-	-
Heart Disease	-	-	5	9.5	-	-
All-Cause	186	560.4	72	136.3	4.1	0.53-7.69
Population	56,271		52,831			

*p<0.05

^a Alaska Native numbers and rates are not reported for fewer than 5 deaths.

25-44 Years	# Male Deaths	Male Rate^a	# Female Deaths	Female Rate^a	Rate Ratio	95% CI
Unintentional Injury	121	155.7	68	89.3	1.7	0.50-3.45
Suicide	71	91.3	22	28.9	3.2	0.33-9.50
Heart Disease	44	56.6	29	38.1	1.5	0.33-4.37
Chronic Liver Disease	17	21.9	25	32.8	0.7	0.24-2.75
Homicide	17	21.9	7	9.2	2.4	0.13-18.06
Cancer	9	11.6	22	28.9	0.4	0.16-2.39
Alcohol Abuse	6	7.7	13	17.1	0.5	0.10-4.17
Pneumonia & Influenza	-	-	6	7.9	-	-
All-Cause	345	443.9	249	326.9	1.4	0.68-1.97
Population	77,725		76,166			
45-54 Years	# Male Deaths	Male Rate^a	# Female Deaths	Female Rate^a	Rate Ratio	95% CI
Unintentional Injury	74	205.5	49	128.4	1.6	0.43-3.67
Cancer	71	197.2	64	167.7	1.7	0.45-2.52
Heart Disease	70	194.3	43	112.7	1.2	0.41-4.18
Suicide	26	72.2	6	15.7	4.6	0.12-35.50
Alcohol Abuse	9	25.0	12	31.4	0.8	0.13-5.82
Chronic Liver Disease	8	22.2	32	83.8	0.2	0.16-1.44
Pneumonia & Influenza	7	19.4	6	15.7	1.2	0.08-15.2
COPD	7	19.4	5	13.1	1.5	0.07-20.80
Homicide	5	13.9	5	14.3	1.0	0.05-16.88
Diabetes Mellitus	-	-	6	15.7	-	-
Viral Hepatitis	-	-	6	15.7	-	-
All-Cause	340	943.9	285	746.7	1.3	0.69-1.81
Population	36,020		38,168			

^a Alaska Native numbers and rates are not reported for fewer than 5 deaths.

55-64 Years	# Male Deaths	Male Rate^a	# Female Deaths	Female Rate^a	Rate Ratio	95% CI
Cancer	106	391.7	102	352.4	1.1	0.53-2.07
Heart Disease	98	362.1	48	165.8	2.2	0.45-4.83
Unintentional Injury	33	121.9	12	41.5	2.9	0.21-13.44
COPD	25	92.4	12	41.5	2.2	0.20-10.86
Cerebrovascular Diseases	13	48.0	7	24.2	2.0	0.12-16.45
Alcohol Abuse	12	44.3	9	31.1	1.4	0.13-10.42
Chronic Liver Disease	9	33.3	14	48.4	0.7	0.14-4.73
Pneumonia & Influenza	7	25.9	7	17.3	1.5	0.08-16.7
Septicemia	6	22.2	-	-	-	-
Diabetes Mellitus	6	22.2	9	20.7	1.1	0.09-11.57
Nephritis	-	-	5	17.3	-	-
All-Cause	383	1415.1	286	988.0	1.4	0.70-2.03
Population	27,065		20,832			
65-74 Years	# Male Deaths	Male Rate^a	# Female Deaths	Female Rate^a	Rate Ratio	95% CI
Cancer	134	1072.8	107	769.7	1.4	0.55-2.50
Heart Disease	85	680.5	34	244.6	2.8	0.40-6.95
COPD	26	208.1	22	158.3	1.3	0.27-4.85
Unintentional Injury	20	160.1	7	50.4	3.2	0.13-23.05
Diabetes Mellitus	14	112.1	9	64.7	1.7	0.14-11.91
Cerebrovascular Diseases	13	104.1	15	107.9	1.0	0.18-5.33
Chronic Liver Disease	7	56.0	-	-	-	-
Pneumonia & Influenza	7	56.0	-	-	-	-
Alcohol Abuse	6	48.0	-	-	-	-
Septicemia	-	-	7	50.4	-	-
All-Cause	389	3114.2	299	2150.9	1.4	0.70-2.04
Population	12,491		13,901			

*p<0.05

^a Alaska Native numbers and rates are not reported for fewer than 5 deaths.

75+ Years	# Male Deaths	Male Rate^a	# Female Deaths	Female Rate^a	Rate Ratio	95% CI
Cancer	147	2517.1	135	1483.2	1.7	0.58-2.90
Heart Disease	142	2230.6	119	1307.4	1.7	0.57-2.98
COPD	52	816.8	62	681.2	1.2	0.42-2.80
Cerebrovascular Diseases	35	549.8	71	780.0	0.7	0.39-1.79
Nephritis	18	282.8	25	274.7	1.0	0.24-4.15
Pneumonia & Influenza	16	251.3	27	296.6	0.8	0.24-3.51
Unintentional Injury	12	188.5	31	340.6	0.6	0.21-2.56
Septicemia	10	157.1	15	164.8	1.0	0.15-6.01
Diabetes Mellitus	10	157.1	18	197.8	0.8	0.16-4.70
Alzheimer's Disease	10	157.1	22	241.7	0.6	0.17-3.63
Hypertension	8	125.7	13	142.8	0.9	0.13-6.69
Pneumonitis due to Solids	6	94.3	-	-	-	-
Parkinson's Disease	5	78.5	10	109.9	0.7	0.08-8.46
Chronic Liver Disease	5	78.5	-	-	-	-
All-Cause	584	9173.7	733	8053.2	1.1	0.77-1.46
Population	6,366		9,102			

^a Alaska Native numbers and rates are not reported for fewer than 5 deaths.

FIGURE 22. Age-Specific Mortality Rates from All-Cause
Alaska Natives (2009-2013)
Males vs Females

Data Source: Table 3.

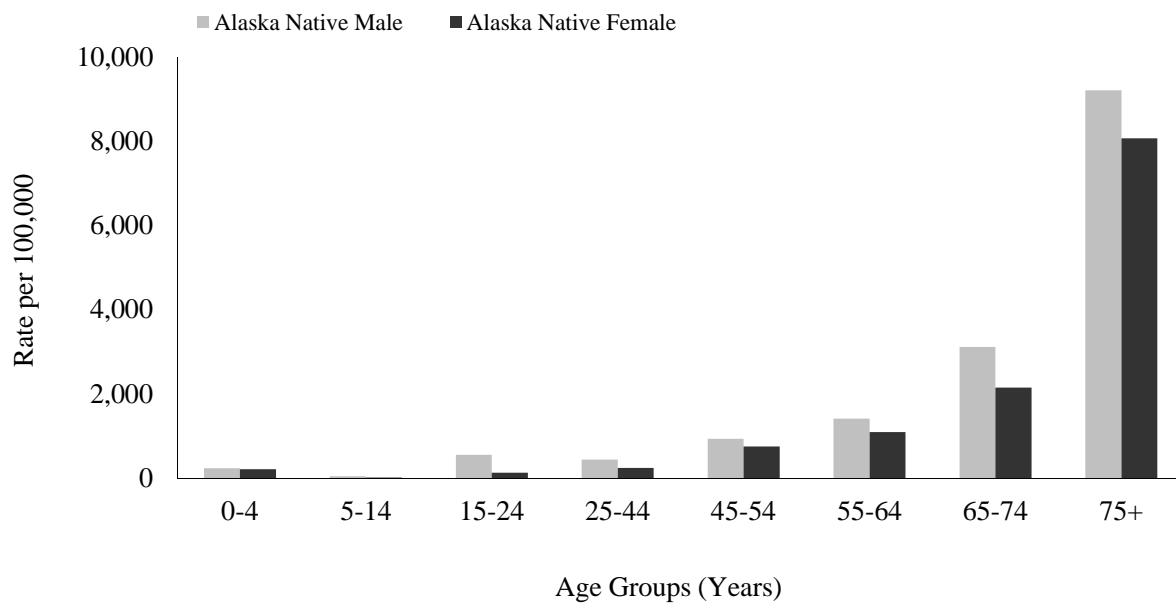


FIGURE 23. Age-Specific Mortality Rates from Alcohol Abuse
Alaska Natives (2009-2013)
Males vs Females

Data Source: Table 3.

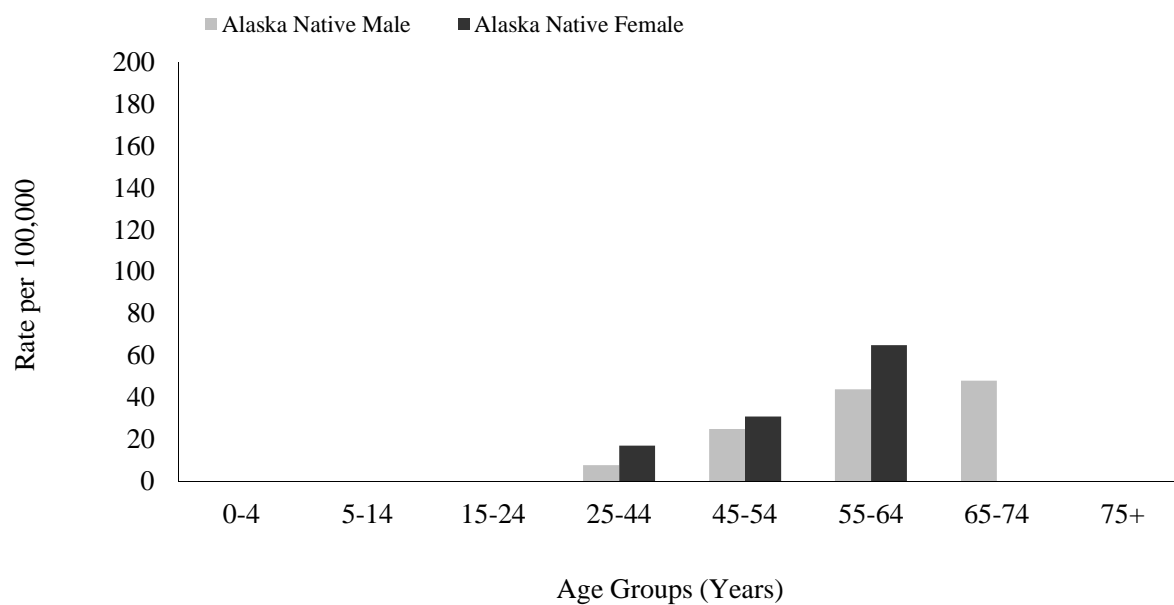


FIGURE 24. Age-Specific Mortality Rates from Alzheimer's Disease
 Alaska Natives (2009-2013)
 Males vs Females

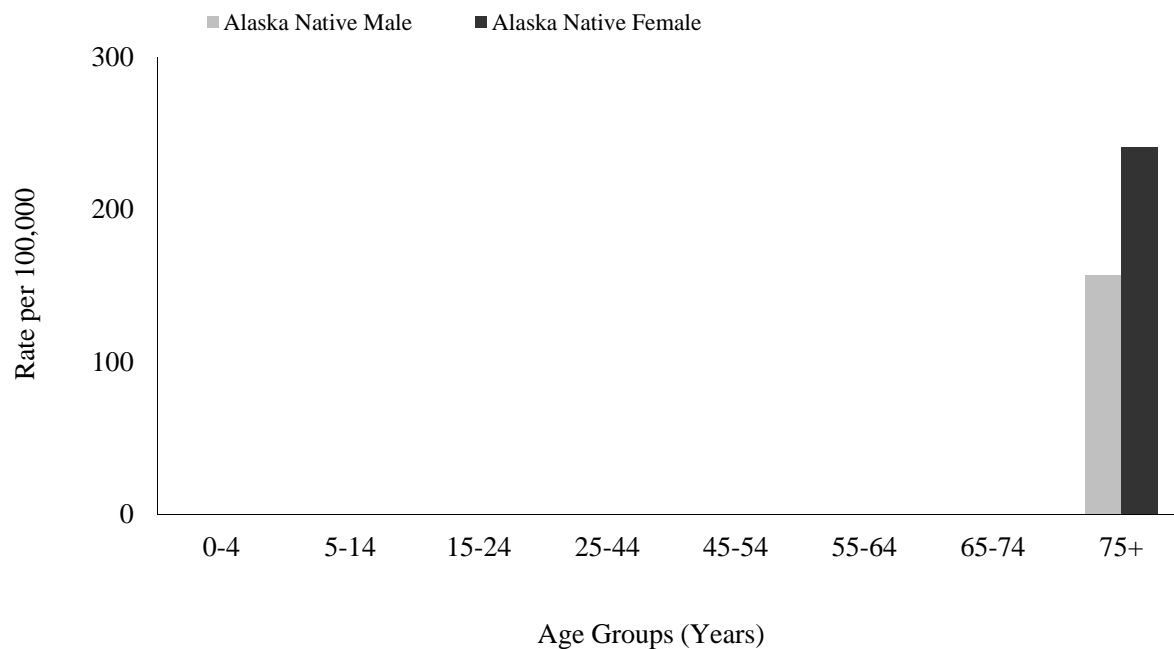


FIGURE 25. Age-Specific Mortality Rates from Cancer
 Alaska Natives (2009-2013)
 Males vs Females

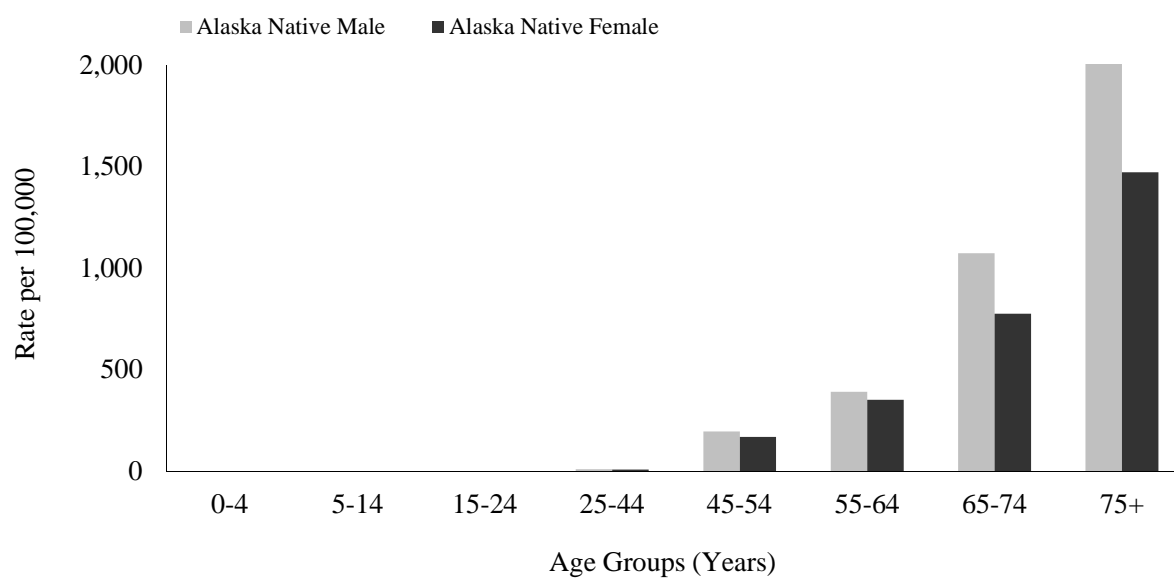


FIGURE 26. Age-Specific Mortality Rates from Cerebrovascular Disease
Alaska Natives (2009-2013)
Males vs Females

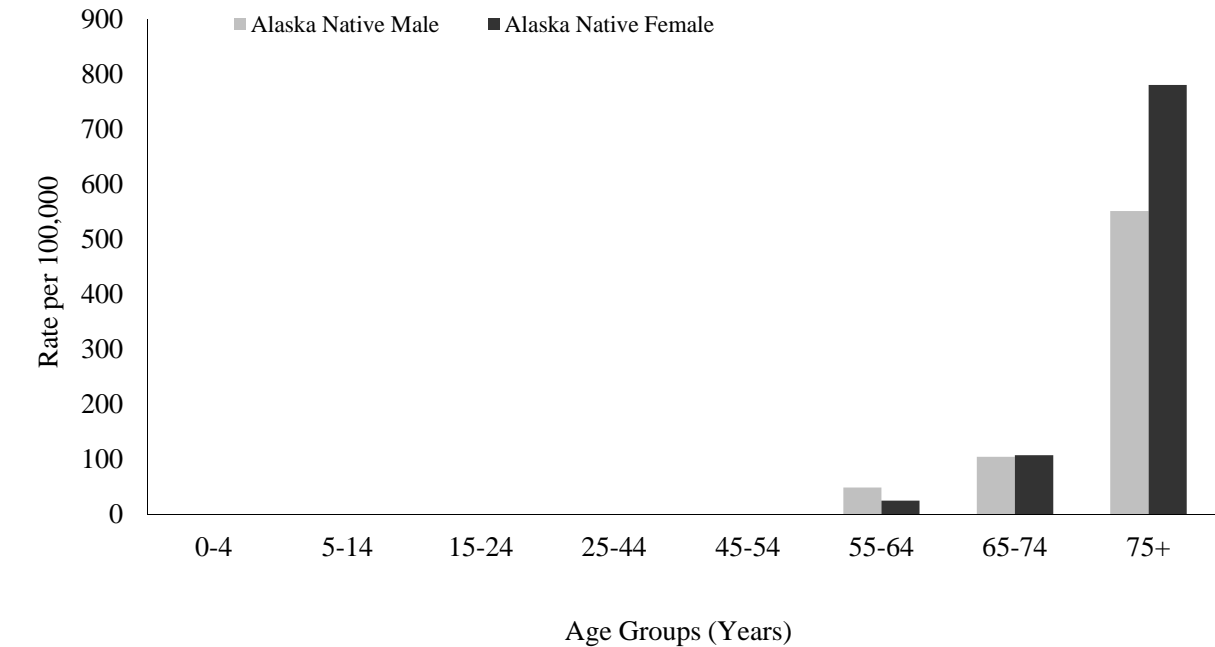


FIGURE 27. Age-Specific Mortality Rates from Chronic Liver Disease
Alaska Natives (2009-2013)
Males vs Females

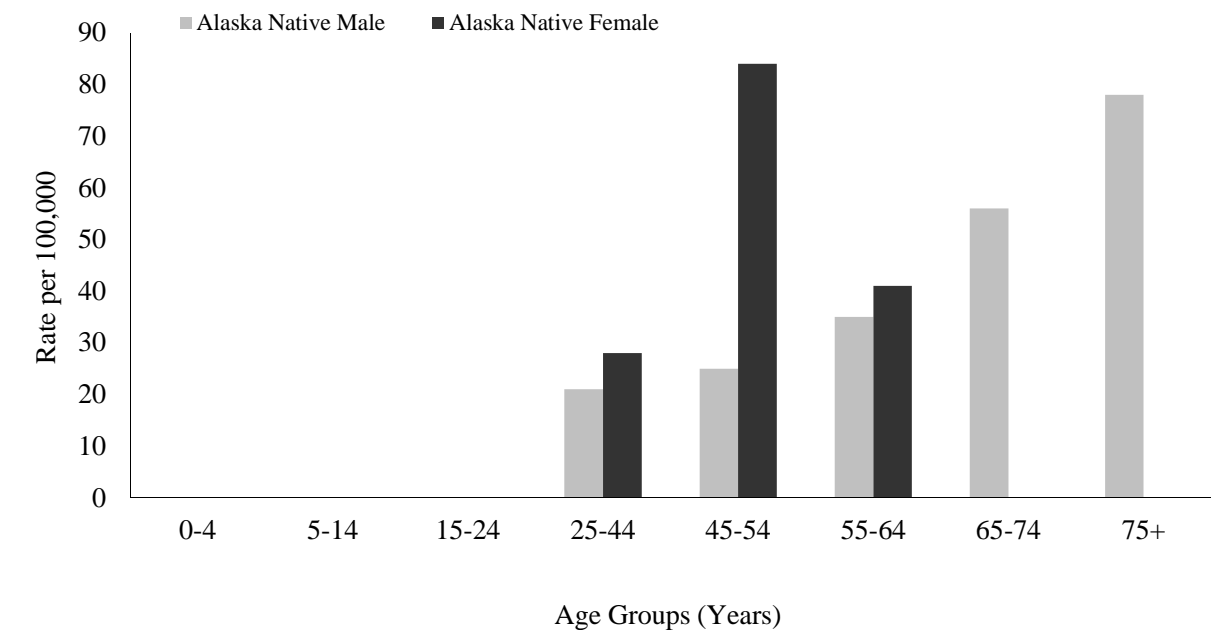


FIGURE 28. Age-Specific Mortality Rates from Congenital Abnormalities
Data Source: Table 3.
Alaska Natives (2009-2013)
Males vs Females

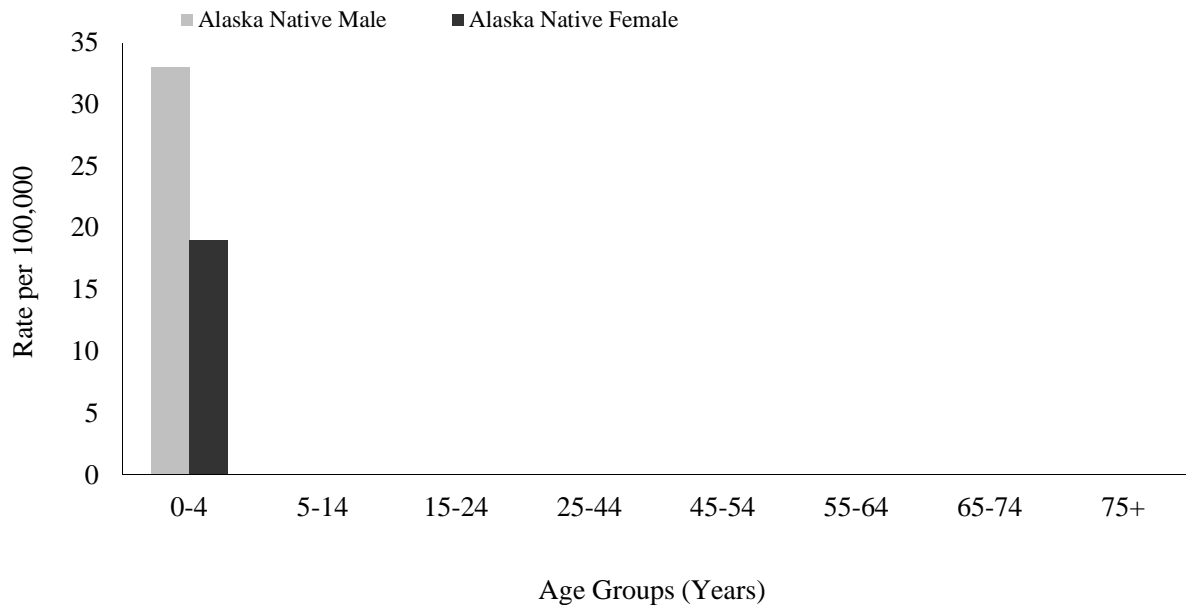


FIGURE 29. Age-Specific Mortality Rates from COPD
Data Source: Table 3.
Alaska Natives (2009-2013)
Males vs Females

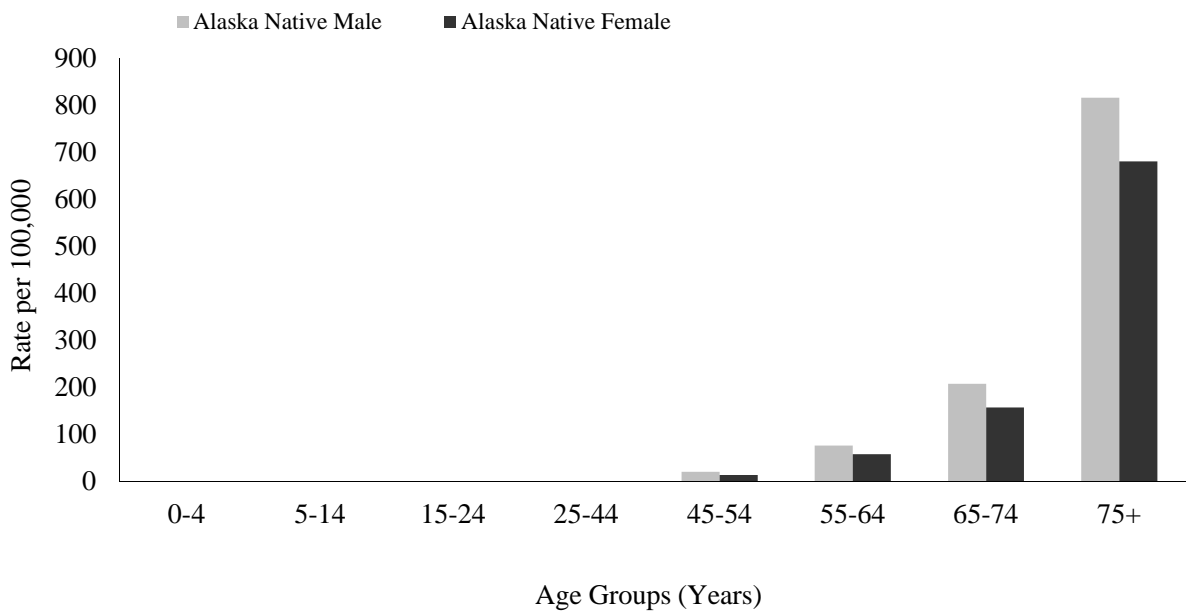


FIGURE 30. Age-Specific Mortality Rates from Diabetes Mellitus
 Alaska Natives (2009-2013)
 Males vs Females

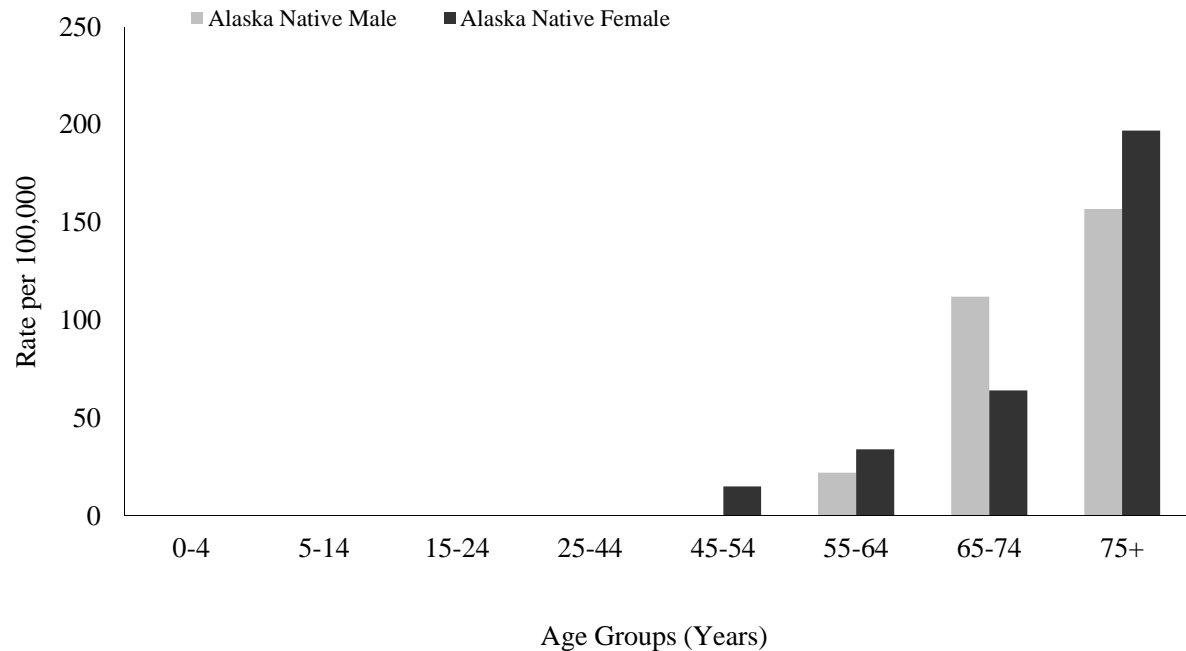


FIGURE 31. Age-Specific Mortality Rates from Heart Disease
 Alaska Natives (2009-2013)
 Males vs Females

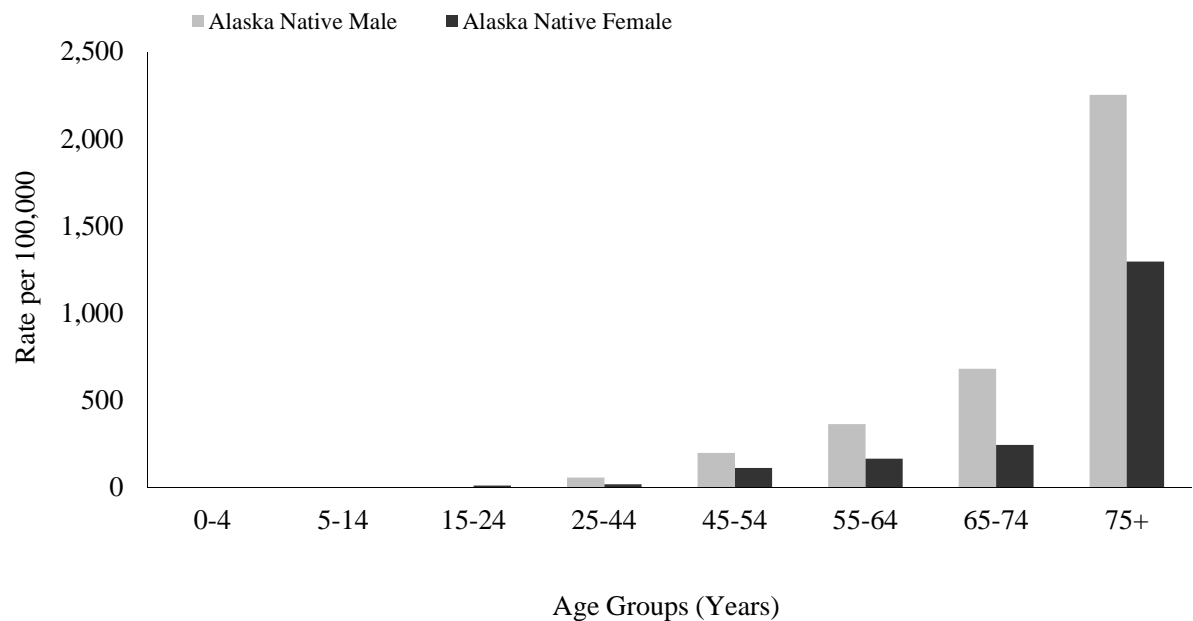


FIGURE 32. Age-Specific Mortality Rates from Homicide
Data Source: Table 3.
Alaska Natives (2009-2013)
Males vs Females

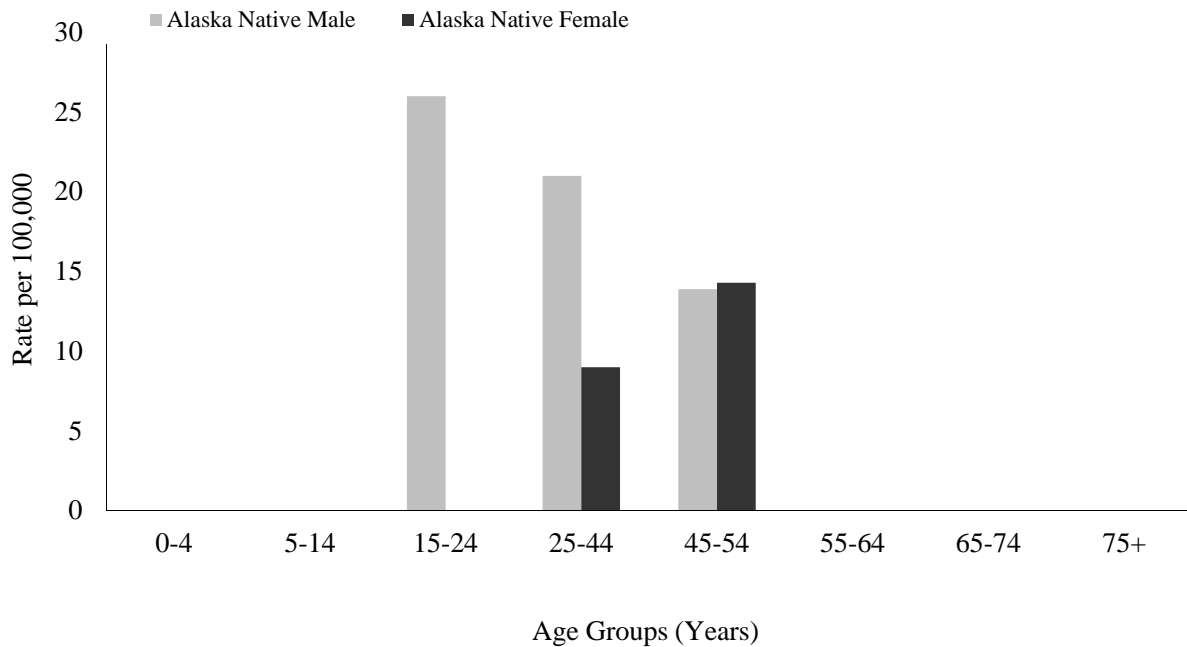


FIGURE 33. Age-Specific Mortality Rates from Hypertension
Data Source: Table 3.
Alaska Natives (2009-2013)
Males vs Females

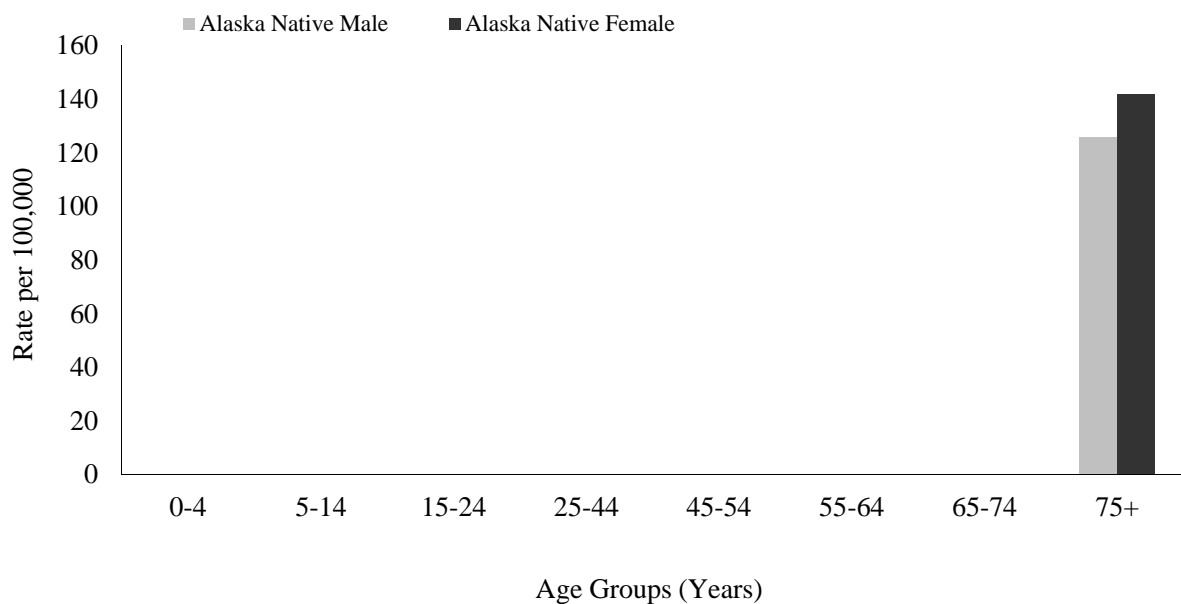


FIGURE 34. Age-Specific Mortality Rates from Nephritis
Alaska Natives (2009-2013)
Males vs Females
 Data Source: Table 3.

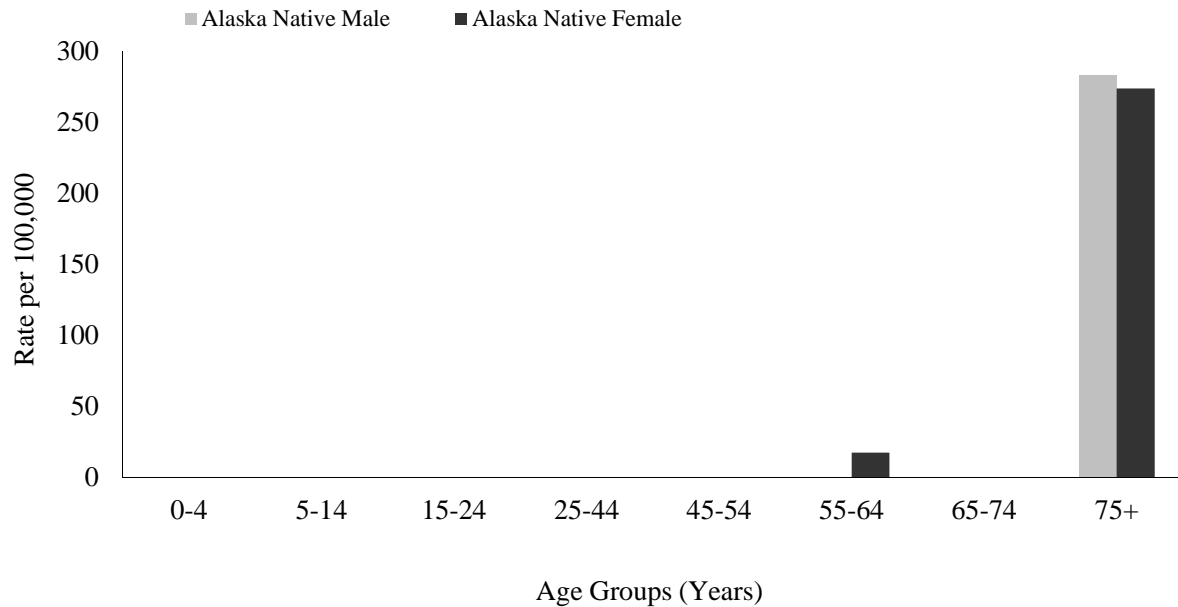


FIGURE 35. Age-Specific Mortality Rates from Parkinson's Disease
Alaska Natives (2009-2013)
Males vs Females
 Data Source: Table 3.

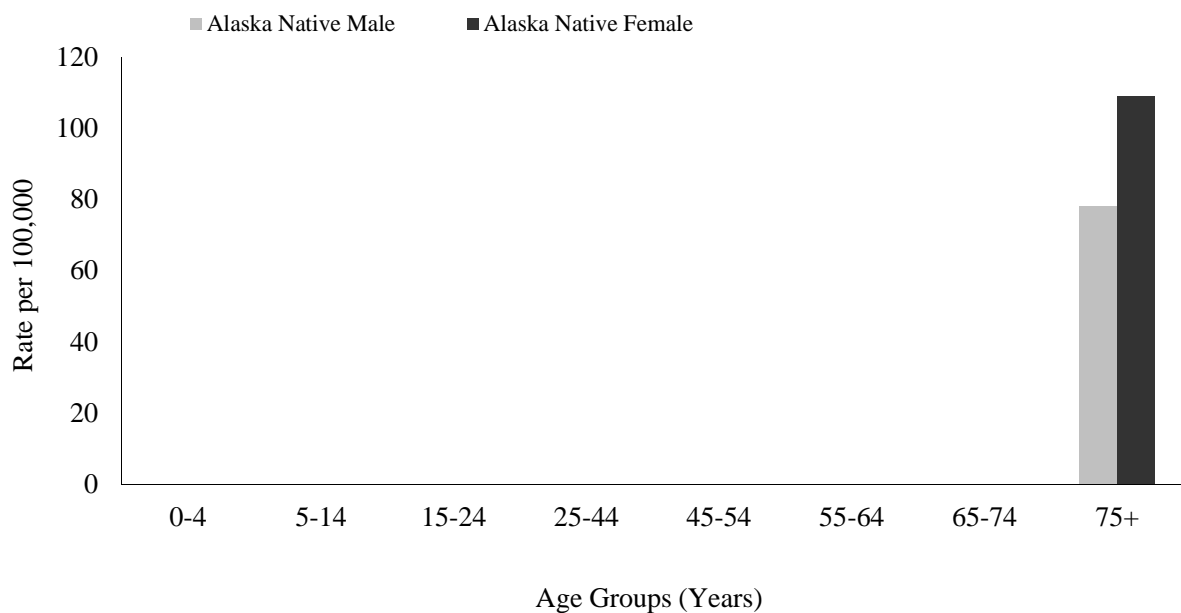


FIGURE 36. Age-Specific Mortality Rates from Perinatal Conditions
 Alaska Natives (2009-2013)
 Males vs Females

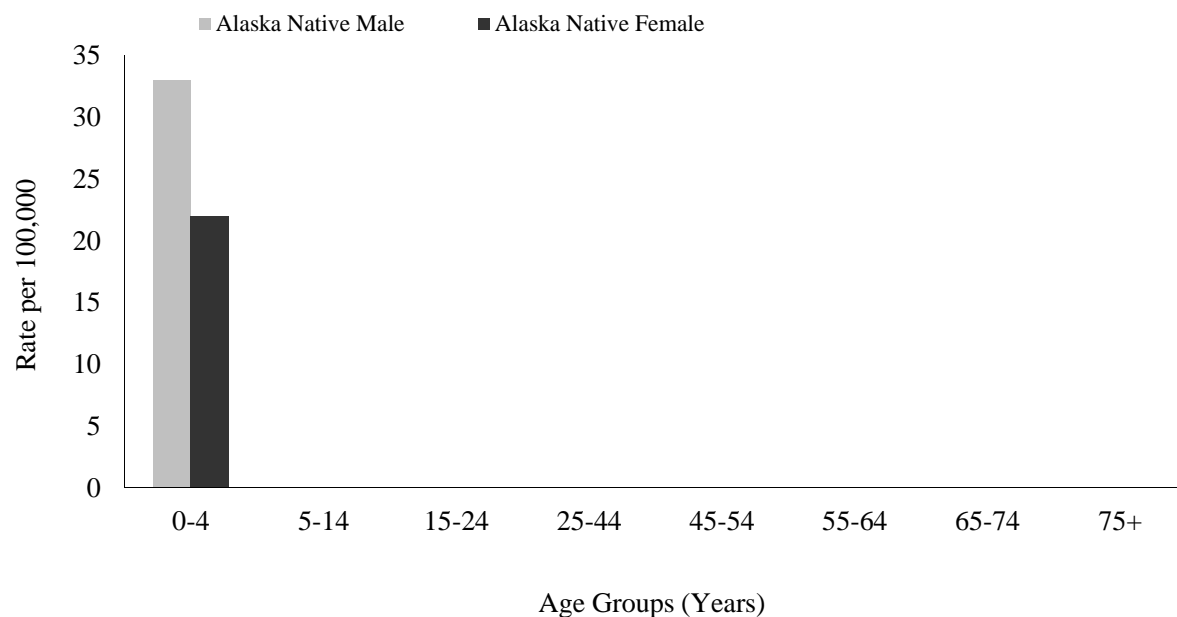


FIGURE 37. Age-Specific Mortality Rates from Pneumonia & Influenza
 Alaska Natives (2009-2013)
 Males vs Females

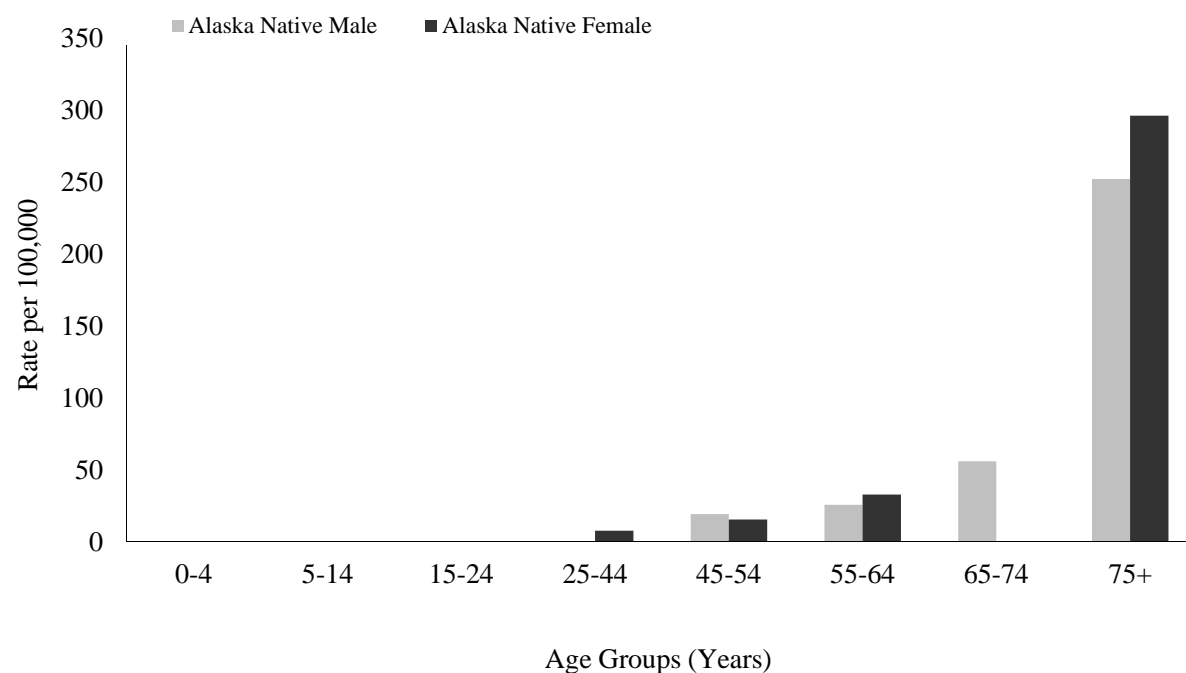


FIGURE 38. Age-Specific Mortality Rates from Septicemia
 Alaska Natives (2009-2013)
 Males vs Females

Data Source: Table 3.

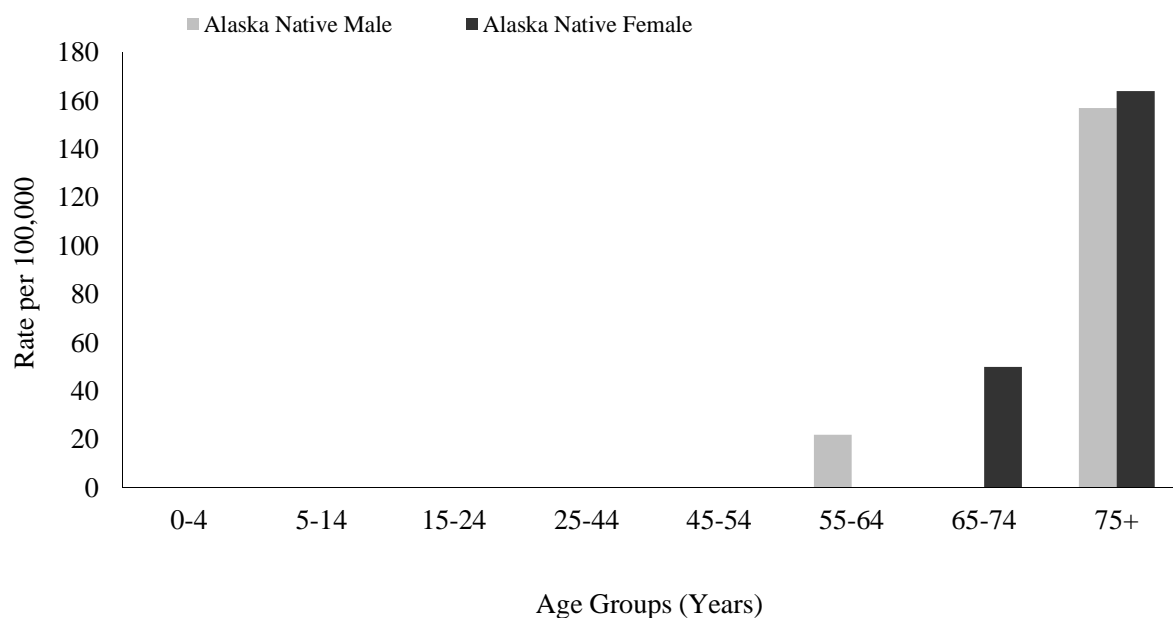


FIGURE 39. Age-Specific Mortality Rates from Suicide
 Alaska Natives (2009-2013)
 Males vs Females

Data Source: Table 3.

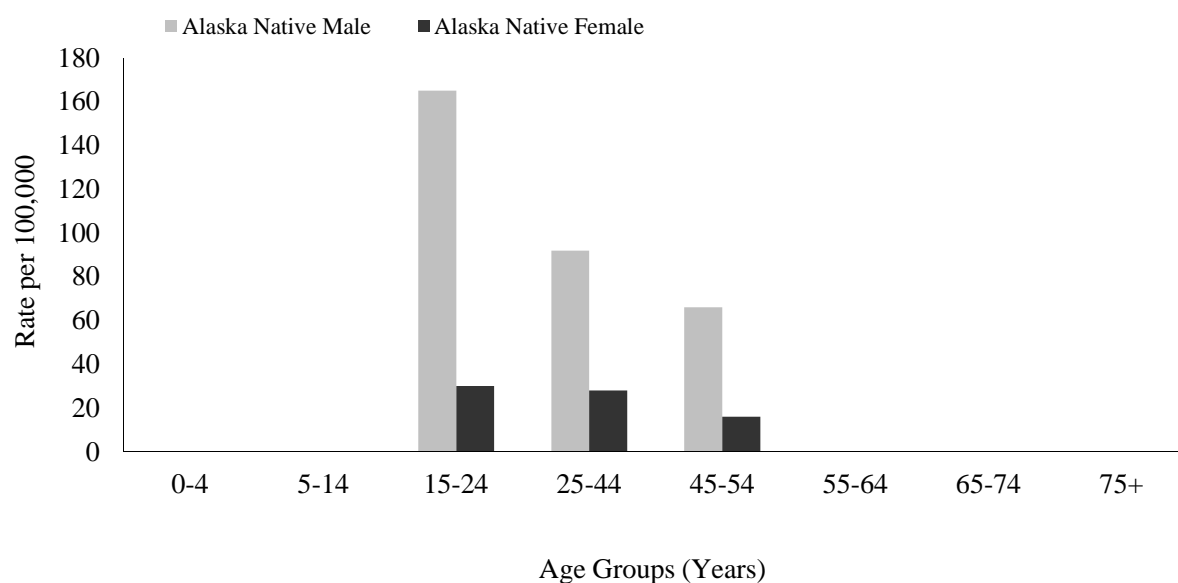
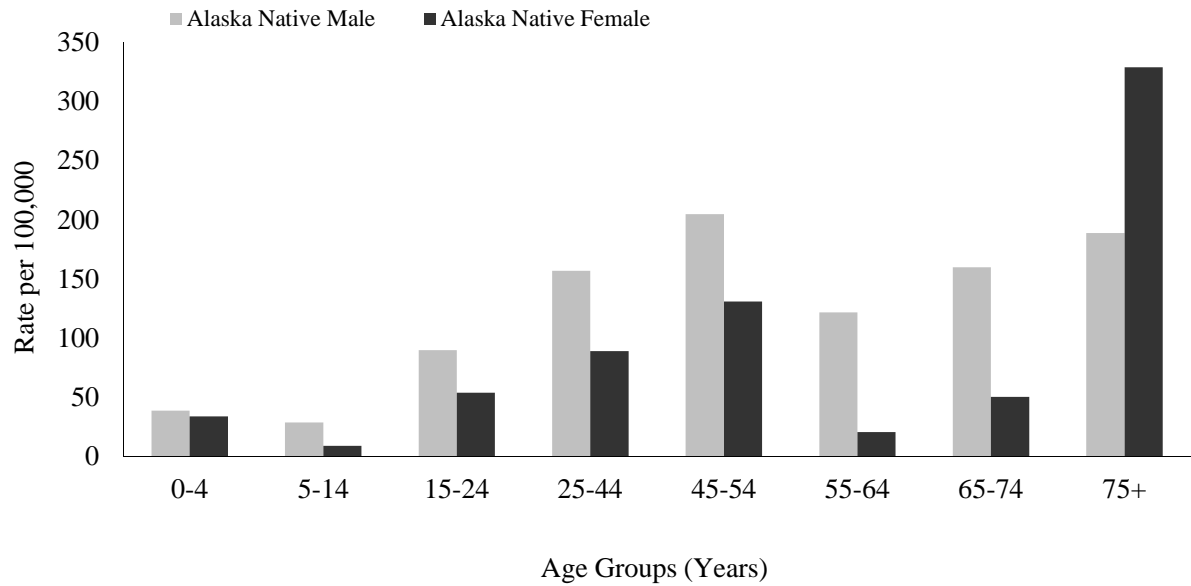


FIGURE 40. Age-Specific Mortality Rates from Unintentional Injury
Alaska Natives (2009-2013)
Males vs Females

Data Source: Table 3.



EXCESS DEATHS

Highlights

- The three leading causes of excess mortality among Alaska Native people, both genders combined, were unintentional injury (22.2%), cancer (16.1%), and suicide (11.3%).
- Among Alaska Native men, unintentional injury (38.3%), suicide (34.9%), and homicide (7.9%) were the leading causes of excess mortality. Other causes had a higher rate of death for U.S. White males, leading to a negative number of excess deaths.
- Among Alaska Native women, unintentional injury (19.8%), cancer (12.3%), and chronic liver disease (7.9%) were the leading causes of excess mortality.

Overview

Tables 4a-c in this section list the ten leading causes of excess deaths among Alaska Native people for the five year period, 2009-2013. Separate tables are presented for Alaska Native people, both genders combined, males, and females.

Excess deaths for Alaska Native people are determined in relation to U.S. White rates. Thus excess deaths are calculated by multiplying the U.S. White age-specific death rate for each cause of death by the Alaska Native population for each age group. This determines the expected number of deaths. The difference between the expected and the observed number of Alaska Native deaths is considered excess. If the number is positive it means there were more deaths among Alaska Native people than expected. If the number is negative it means there were fewer deaths among Alaska Native people than expected.

This section also contains Figures 41a-c which are bar graphs of the numbers of excess deaths among Alaska Native people in rank order. Data for these figures comes from Tables 4a-c.

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TABLE 4a.

Data Source: State of Alaska
Bureau of Vital Statistics (AN), CDC
Wonder (USW)

**Excess Deaths Among Alaska Natives (2009-2013)
Based on U.S. White Rates (2009-2013)
Both Genders**

Both Genders	Alaska Native Deaths	Expected Deaths^a	Excess Deaths^b	Percentage of Excess Deaths
Unintentional Injury	552	204	348	22.2%
Cancer	908	656	252	16.1%
Suicide	250	73	177	11.3%
Heart Disease	723	605	118	7.5%
COPD	218	151	67	4.3%
Alcohol Abuse	73	13	60	3.8%
Chronic Liver Disease and Cirrhosis	121	64	57	3.6%
Homicide	68	20	48	3.1%
Pneumonia & Influenza	95	52	43	2.7%
Diabetes	78	75	3	0.2%
All Others	1,259	865	404	25.8%
All-Cause	4,345	2,778	1,567	100.0%

^a Expected Deaths = (age and cause-specific death rates for USW) x (AN population for each age group)

^b Excess Deaths = (Alaska Native deaths - Expected deaths)

TABLE 4b.

Data Source: State of Alaska
Bureau of Vital Statistics (AN), CDC
Wonder (USW)

**Excess Deaths Among Alaska Natives (2009-2013)
Based on U.S. White Rates (2009-2013)
Males**

Males	Alaska Native Deaths	Expected Deaths^a	Excess Deaths^b	Percentage of Excess Deaths
Unintentional Injury	340	194	146	38.3%
Suicide	200	67	133	34.9%
Homicide	51	21	30	7.9%
Alcohol Abuse	35	8	27	7.1%
Cancer	474	462	12	3.1%
Chronic Liver Disease	46	35	11	2.9%
COPD	115	107	8	2.1%
Pneumonia & Influenza	45	37	8	2.1%
All Others	1,031	1,215	-178	NA
All-Cause	2,337	2,146	191	100.0%

^a Expected Deaths = (age and cause-specific death rates for USW) x (AN population for each age group)

^b Excess Deaths = (Alaska Native deaths - Expected deaths)

TABLE 4c.

Data Source: State of Alaska
Bureau of Vital Statistics (AN), CDC
Wonder (USW)

**Excess Deaths Among Alaska Natives (2009-2013)
Based on U.S. White Rates (2009-2013)
Females**

Females	Alaska Native Deaths	Expected Deaths^a	Excess Deaths^b	Percentage of Excess Deaths
Unintentional Injury	211	71	140	19.8%
Cancer	433	307	87	12.3%
Chronic Liver Disease	75	19	56	7.9%
Suicide	50	16	34	4.8%
Alcohol Abuse	39	7	32	4.5%
COPD	103	79	24	3.4%
Homicide	17	6	21	3.0%
Pneumonia & Influenza	50	30	20	2.8%
Heart Disease	277	265	12	1.7%
Diabetes	40	35	5	0.7%
All Others	711	464	276	39.0%
All-Cause	2,006	1,299	707	100.0%

^a Expected Deaths = (age and cause-specific death rates for USW) x (AN population for each age group)

^b Excess Deaths = (Alaska Native deaths - Expected deaths)

FIGURE 41a.

Data Source: Table 4a.

**Excess Deaths for Alaska Natives (2009-2013)
Based on U.S. White Rates (2009-2013)
Both Genders**

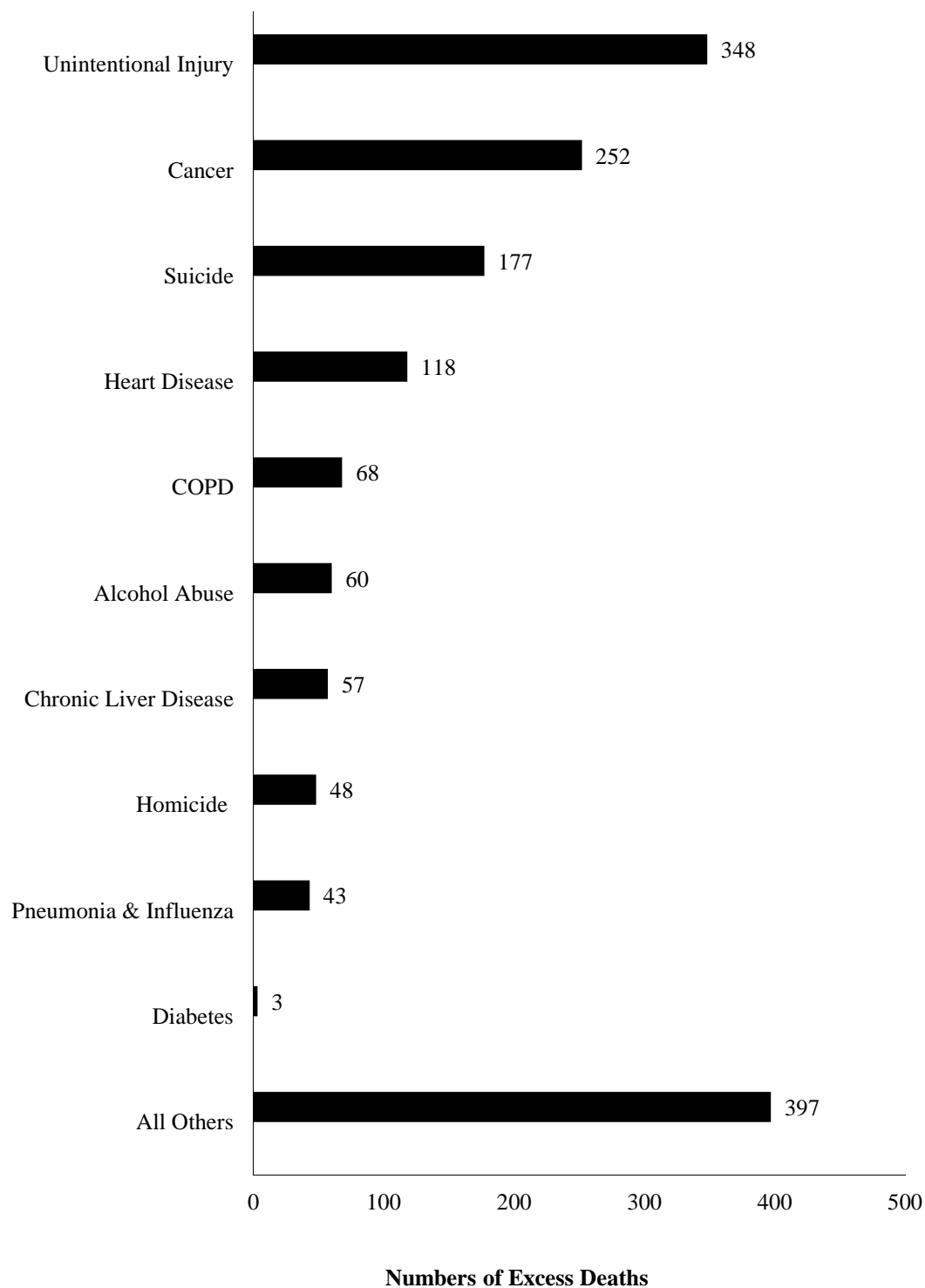


FIGURE 41b.

Data Source: Table 4b.

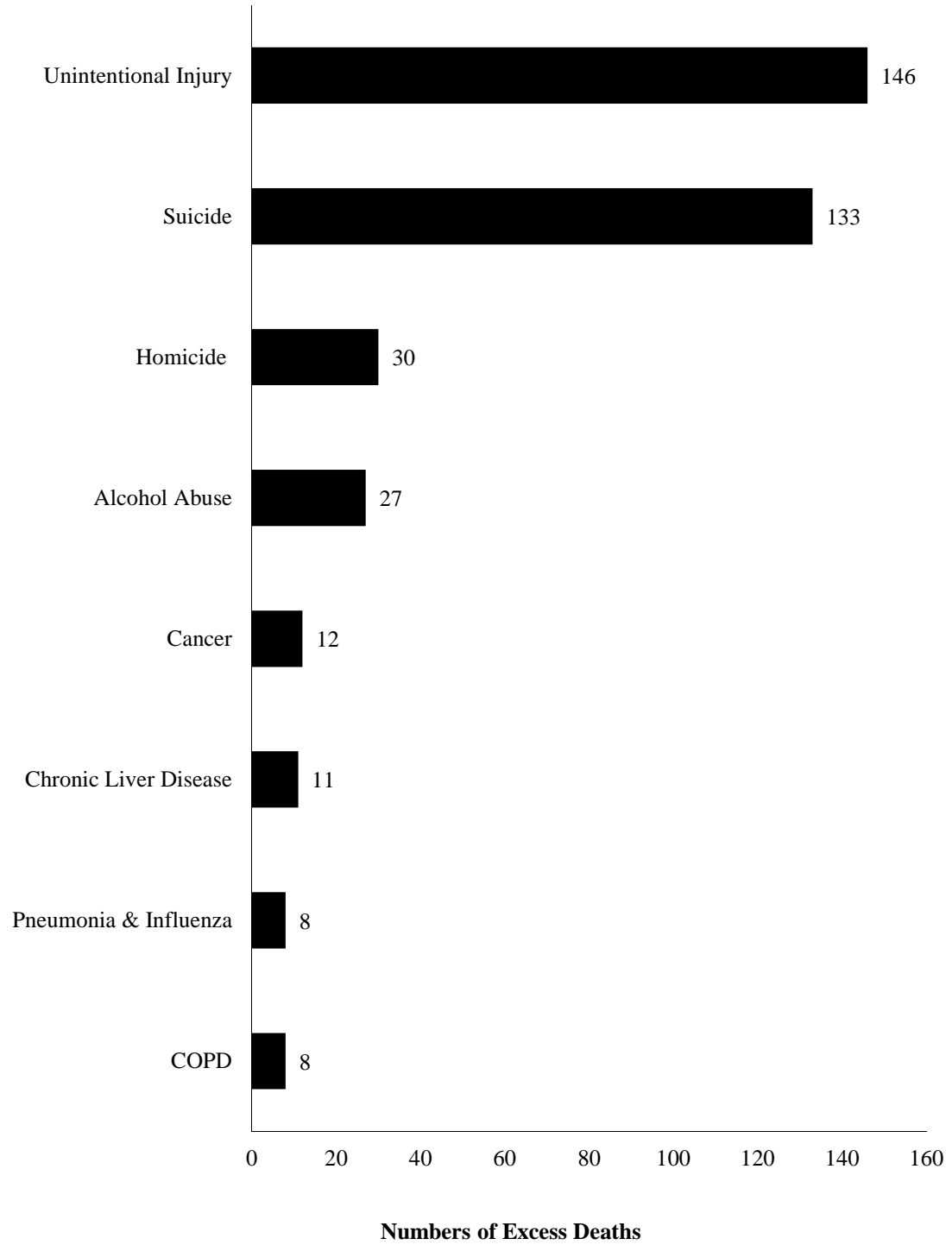
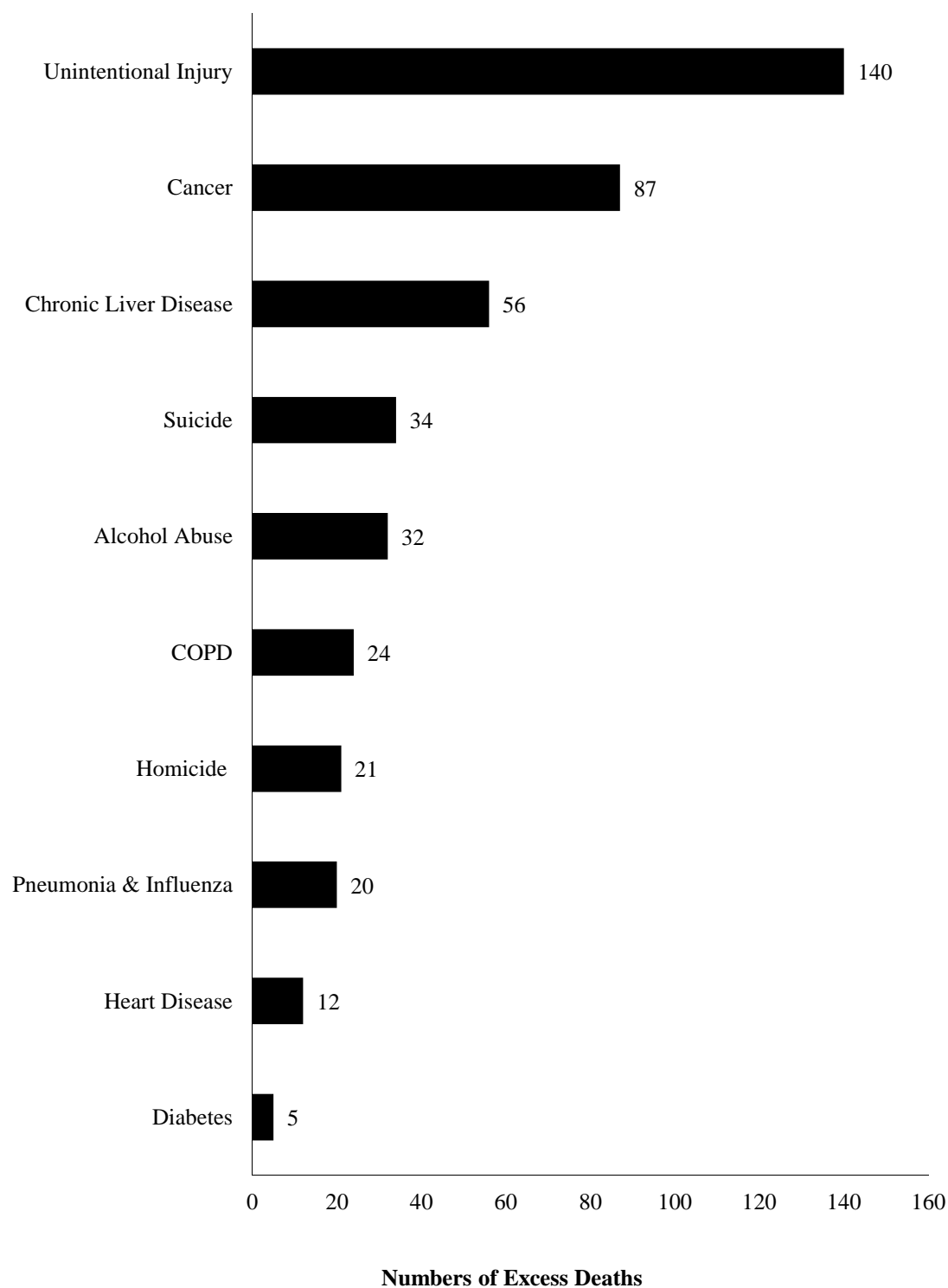
**Excess Deaths for Alaska Natives (2009-2013)
Based on U.S. White Rates (2009-2013)
Males**

FIGURE 41c.

Data Source: Table 4c.

**Excess Deaths for Alaska Natives (2009-2013)
Based on U.S. White Rates (2009-2013)
Females**



YEARS OF POTENTIAL LIFE LOST (YPLL)

Highlights

- Alaska Native people experienced an average of 27.1 years of potential life lost from all-causes during the 2009-2013 time period.
- Unintentional injury (YPLL=19,349) caused the greatest number of years of potential life lost among Alaska Native people, both genders combined, and among men (YPLL=12,310) and women (YPLL=7,005), separately.
- Suicide (YPLL=11,069) was the second leading cause of years of potential life lost among Alaska Native people, both genders combined, and among men (YPLL=9,039).
- Among Alaska Native women, cancer (YPLL=4,880) was the second leading cause of years of potential life lost. Among Alaska Native men, cancer (YPLL=5,034) ranked fourth in years of potential life lost.

Overview

Years of potential life lost (YPLL) is an estimate of the average years a person would have lived if he or she had not died prematurely. It is an alternative to death rates that gives more weight to deaths that occur among younger people.

If the average life span for the population is 75 years, the number of years of potential life lost is calculated by subtracting the age at death for each individual from 75. Only those people who died before 75 years of age are included in the calculation.

Tables 5a-c in this section report YPLL for the period 2009-2013. Separate tables are presented for Alaska Native people, both genders combined, males, and females.

This section also contains Figures 5a-c which are bar graphs of the average number of years of potential life lost by cause of death. Data for these figures comes from Tables 5a-c.

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TABLE 5a. Years of Potential Life Lost Before 75 Years
Alaska Natives (2009-2013)
Both Genders
 Data Source: State of
 Alaska Bureau of Vital
 Statistics

	Both Genders	Total YPLL	# Deaths	Percentage of Total YPLL	Mean YPLL
1	Unintentional Injury	19,349	510	23.6%	37.9
2	Suicide	11,069	249	13.5%	44.5
3	Cancer	9,914	627	12.1%	15.8
4	Heart Disease	9,091	462	11.1%	19.7
5	Chronic Liver Disease	3,091	114	3.8%	27.1
6	Homicide	2,966	66	3.6%	44.9
7	Alcohol Abuse	1,679	70	2.1%	24.0
8	Perinatal Conditions	1,555	21	1.9%	74.0
9	Congenital Malformations	1,546	26	1.9%	59.5
10	Pneumonia & Influenza	1,480	52	1.8%	28.5
	All-Cause	81,858	3,026	100.0%	27.1

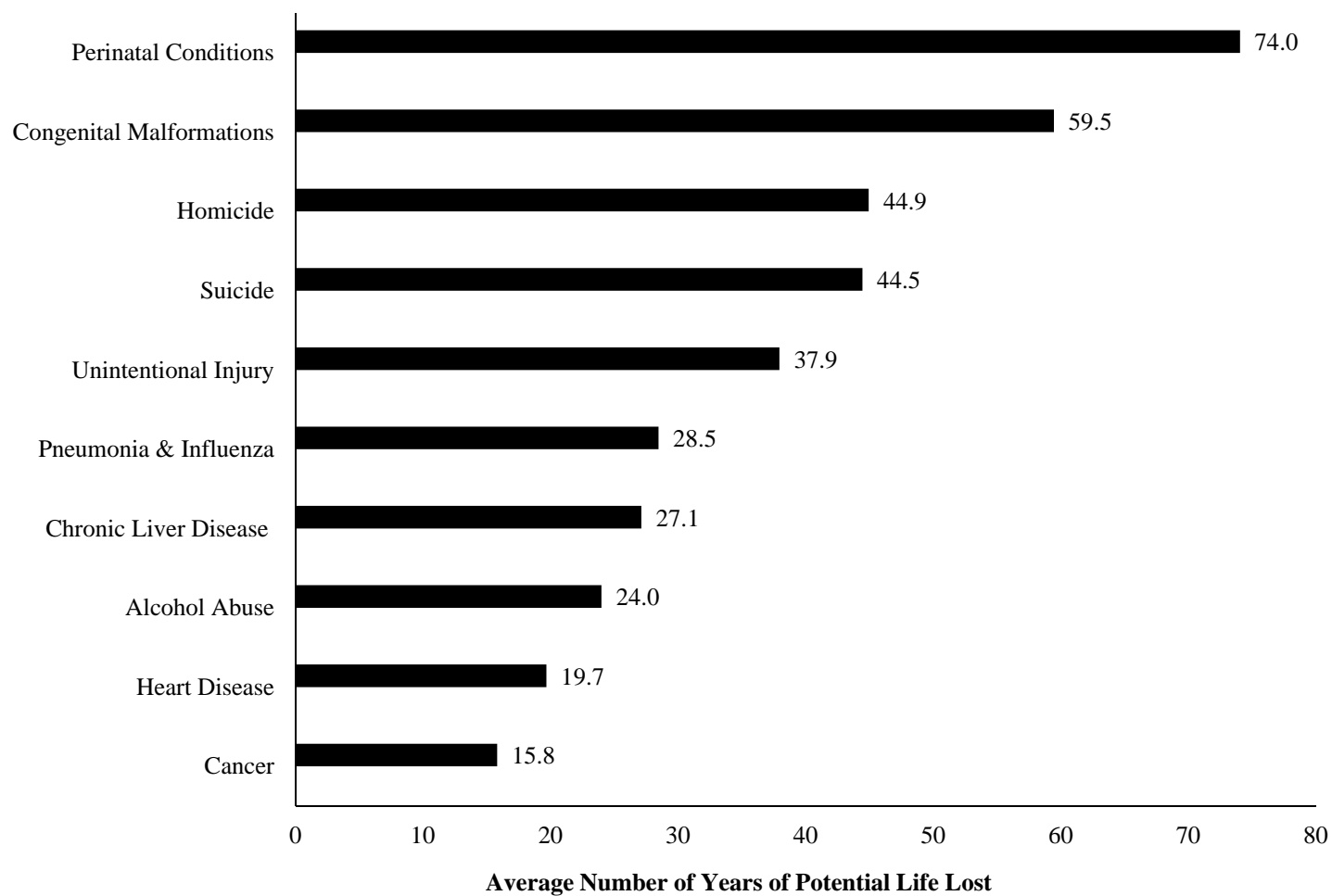
TABLE 5b. Years of Potential Life Lost Before 75 Years
Alaska Natives (2009-2013)
Males
 Data Source: State of
 Alaska Bureau of Vital
 Statistics

	Males	Total YPLL	# Deaths	Percentage of Total YPLL	Mean YPLL
1	Unintentional Injury	12,310	328	25.2%	37.5
2	Suicide	9,039	200	18.5%	45.2
3	Heart Disease	5,640	303	11.6%	18.6
4	Cancer	5,034	327	10.3%	15.4
5	Homicide	2,172	49	4.5%	44.3
6	Chronic Liver Disease	1,047	41	2.1%	25.5
7	Perinatal Conditions	1,030	14	2.1%	73.6
8	Congenital Abnormalities	965	17	2.0%	56.8
9	COPD	954	63	2.0%	15.1
10	Pneumonia & Influenza	793	29	1.6%	27.3
	All-Cause	48,793	1,753	100.0%	27.8

TABLE 5c. Years of Potential Life Lost Before 75 Years
Alaska Natives (2009-2013)
Females
 Data Source: State of
 Alaska Bureau of Vital
 Statistics

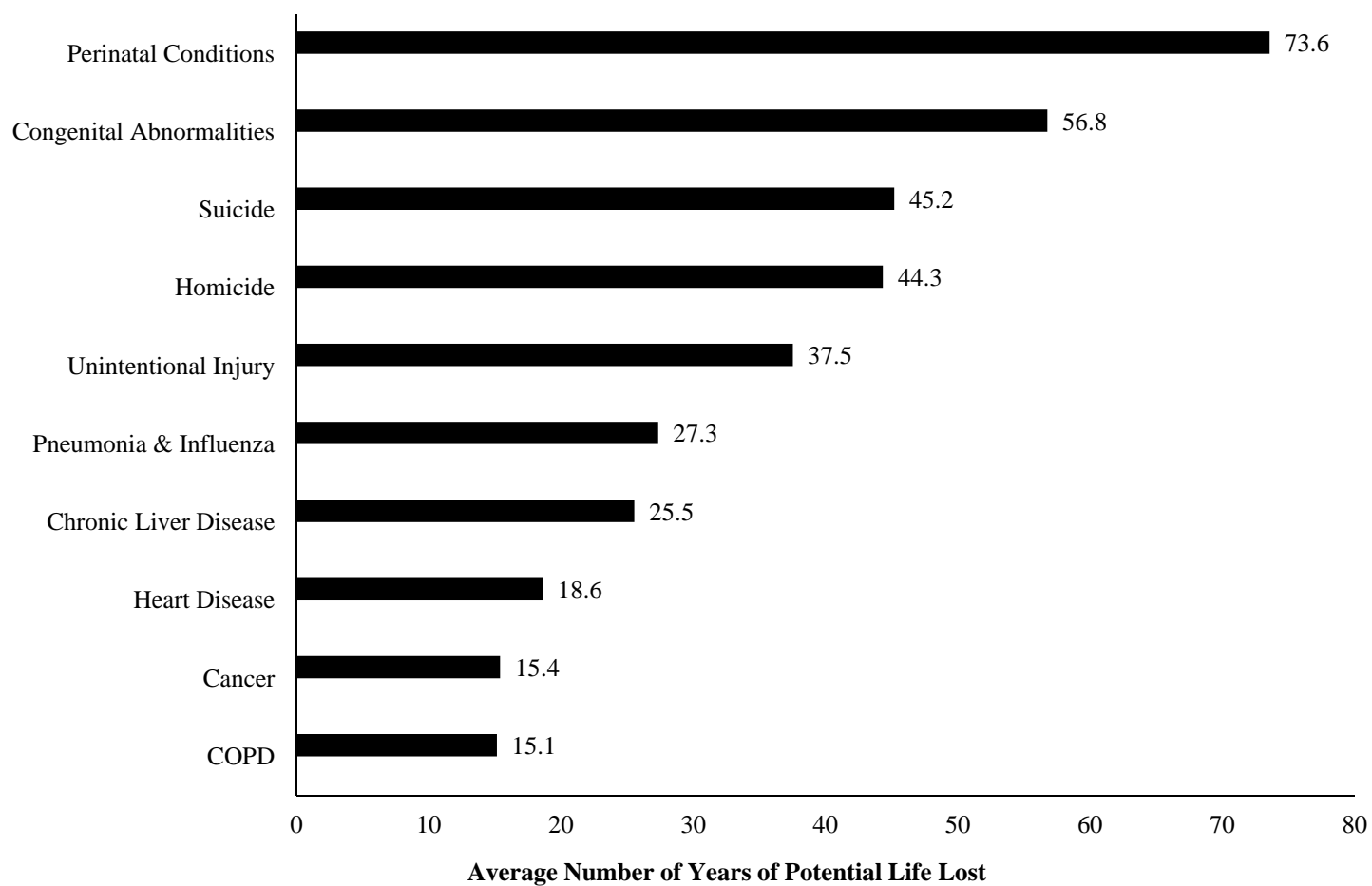
	Females	Total YPLL	# Deaths	Percentage of Total YPLL	Mean YPLL
1	Unintentional Injury	7,005	181	21.2%	38.7
2	Cancer	4,880	300	14.8%	16.3
3	Heart Disease	3,451	159	10.4%	21.7
4	Chronic Liver Disease	2,044	73	6.2%	28.0
5	Suicide	2,030	49	6.1%	41.4
6	Alcohol Abuse	1,007	37	3.0%	27.2
7	Homicide	794	17	2.4%	46.7
8	Pneumonia & Influenza	687	23	2.1%	29.9
9	Cerebrovascular Disease	606	32	1.8%	18.9
10	Congenital Abnormalities	581	9	1.8%	64.6
	All-Cause	33,031	1,272	100.0%	26.0

FIGURE 42a. Data **Average Years of Potential Life Lost by Cause**
 Source: State of Alaska **2009-2013**
 Bureau of Vital Statistics **Both Genders**



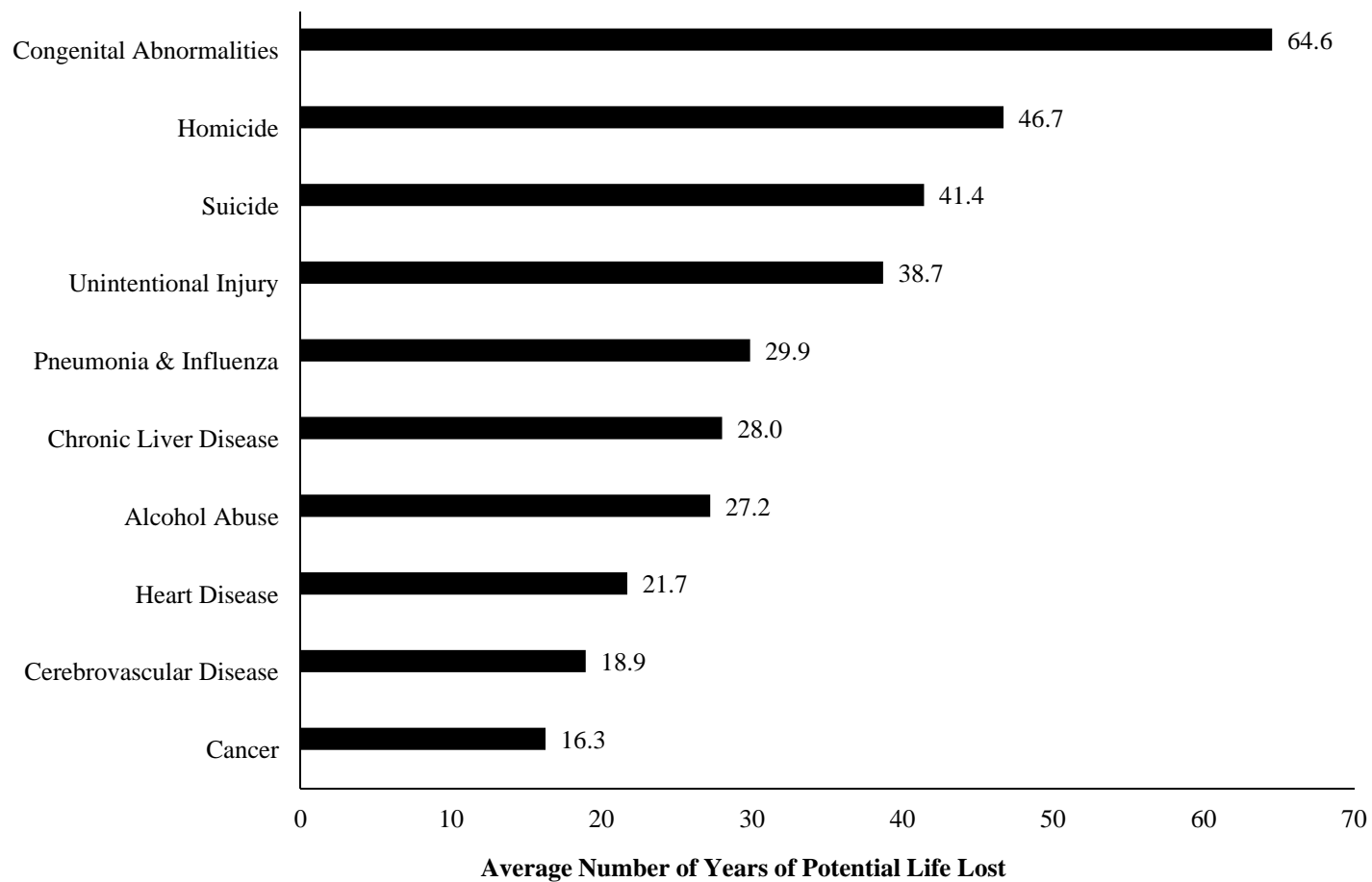
YEARS OF POTENTIAL LIFE LOST

FIGURE 42b. Data **Average Years of Potential Life Lost by Cause**
 Source: State of Alaska **2009-2013**
 Bureau of Vital Statistics **Males**



YEARS OF POTENTIAL LIFE LOST

FIGURE 42c. Data **Average Years of Potential Life Lost by Cause**
Source: State of Alaska
Bureau of Vital Statistics
2009-2013
Females



YEARS OF POTENTIAL LIFE LOST

SERVICE REGIONS

Highlights

- Mortality rates for the Aleutians & Pribilofs service region were significantly lower from the rest of the state for all-causes, heart disease, and unintentional injury.
- The Anchorage/Mat-Su service region had significantly lower mortality rates for suicide as compared to the rest of the state.
- The ASU-Combined Rural service region had a significantly lower mortality rate for suicide and cerebrovascular diseases as compared to the rest of the state.
- The Arctic Slope service region had significantly lower mortality rates than the rest of the state for heart disease and suicide. Mortality rates due to cancer were significantly higher than the rest of the state.
- The Bristol Bay service region had significantly higher mortality rates than the rest of the state for unintentional injury.
- Mortality rates for the Copper River/ Prince William Sound service region were significantly higher than the rest of the state for cancer and unintentional injury.
- The Interior service region had a significantly lower mortality rate for cerebrovascular disease as compared to the rest of the state.
- The Kenai Peninsula service region did not have any mortality rates that were significantly different than the rest of the state.
- Mortality rates for the Kodiak Area service region were significantly higher than the rest of the state for heart disease.
- The Northwest Arctic service region had significantly lower mortality rates from cerebrovascular disease than the rest of the state.
- The Norton Sound service region had significantly higher mortality rates from cancer, heart disease, suicide, and cerebrovascular disease than the rest of the state. The all-cause mortality rate was also significantly higher than the rest of the state.
- The Southeast service region had significantly lower rates of mortality from cancer, unintentional injury, suicide, COPD, and cerebrovascular disease as compared to the rest of the state.

- The Yukon-Kuskokwim service region had significantly lower rates of mortality from chronic liver disease as compared to the rest of the state.

Overview

Alaska has been divided into twelve service regions for the purpose of reporting health data. In general, these regions match the larger Tribal Health Organization (THO) service areas. Smaller service areas required aggregation. There are twelve service regions:

- 1) Aleutians & Pribilofs
- 2) Anchorage/MatSu
- 3) Arctic Slope
- 4) Bristol Bay
- 5) Copper River/Prince William Sound
- 6) Interior
- 7) Kenai Peninsula
- 8) Kodiak Area
- 9) Northwest Arctic
- 10) Norton Sound
- 11) Southeast
- 12) Yukon-Kuskokwim.

In addition, the rural regions of Aleutians & Pribilofs, Copper River/Prince William Sound (Copper

River/PWS), Kenai Peninsula and Kodiak Area are aggregated under the title Anchorage Service Unit - Combined Rural (ASU-Combined Rural) service region.

Deaths were assigned to the service region in which the person was resident, regardless of place of death in Alaska. This report does not include deaths of residents who died outside of Alaska.

Table 6 in this section lists the ten leading causes of death for each region in rank order. Fewer causes were reported if there were fewer than five cases. The table also reports the percentage of total deaths from each cause.

Tables 7a-c report counts for leading causes of death for each service region for both genders combined, males, and females. Causes of death with fewer than 5 cases were recorded as <5.

Tables 8a-c report age-adjusted rates for the causes of death by service region. There are separate tables for rates for both genders combined, males, and

females. Rates were not reported for those causes with fewer than 5 cases.

Rate ratios were used to compare each region to all regions combined minus the region of interest. Confidence intervals were calculated around the ratios. Mortality rates for a region were considered to be significantly different from the rest of the state if the confidence interval did not contain one. Up and down arrows on the table indicate if a rate is significantly higher or lower than the rate for the other regions combined.

**TABLE 6. Ranking of Leading Causes of Death
Alaska Natives by Service Region (2009-2013)
Both Genders**

Alaska Native People Statewide		Aleutians & Pribilofs Service Region	
Cause of Death	% Deaths	Cause of Death	% Deaths
1 Cancer	20.9%	1 Cancer	29.9%
2 Heart Disease	16.6%	2 Heart Disease	16.4%
3 Unintentional Injury	12.7%	3 Unintentional Injury	9.0%
4 Suicide	5.8%		
5 COPD	5.0%		
6 Cerebrovascular Disease	4.0%		
7 Chronic Liver Disease	2.8%		
8 Pneumonia & Influenza	2.2%		
9 Diabetes Mellitus	1.8%		
10 Alcohol Abuse	1.7%		
All Others	26.5%	All Others	44.7%
Total - All-Cause	100.0%	Total - All-Cause	100.0%

Anchorage/MatSu Service Region		ASU-Combined Rural Service Region	
Cause of Death	% Deaths	Cause of Death	% Deaths
1 Cancer	18.4%	1 Cancer	23.1%
2 Heart Disease	16.6%	2 Heart Disease	18.7%
3 Unintentional Injury	11.4%	3 Unintentional Injury	12.0%
4 Chronic Liver Disease	4.6%	4 COPD	5.3%
5 COPD	4.5%	5 Chronic Liver Disease	3.9%
6 Suicide	4.2%	6 Suicide	3.6%
7 Cerebrovascular Disease	3.3%	7 Diabetes mellitus	3.1%
8 Homicide	2.5%	8 Cerebrovascular Disease	2.2%
9 Alcohol Abuse	2.3%	9 Pneumonia & Influenza	1.9%
10 Influenza and Pneumonia	2.2%	10 Alzheimer's Disease	1.9%
All Others	28.5%	All Others	24.3%
Total - All-Cause	100.0%	Total - All-Cause	100.0%

Arctic Slope Service Region		Bristol Bay Service Region	
Cause of Death	% Deaths	Cause of Death	% Deaths
1 Cancer	28.0%	1 Cancer	21.1%
2 Heart Disease	12.5%	2 Unintentional Injury	19.4%
3 Unintentional Injury	11.9%	3 Heart Disease	17.7%
4 COPD	7.1%	4 Suicide	5.1%
5 Suicide	4.8%	5 Cerebrovascular Disease	4.6%
6 Nephritis	4.2%	6 COPD	3.8%
7 Cerebrovascular Disease	3.0%	7 Pneumonia & Influenza	3.0%
		8 Chronic Liver Disease	2.1%
All Others	28.6%	All Others	23.2%
Total - All-Cause	100.0%	Total - All-Cause	100.0%

Copper River/Prince William Sound Service Region		Interior Service Region	
Cause of Death	% Deaths	Cause of Death	% Deaths
1 Cancer	30.3%	1 Cancer	21.1%
2 Unintentional Injury	18.2%	2 Heart Disease	17.9%
3 Heart Disease	13.6%	3 Unintentional Injury	14.5%
		4 Suicide	5.7%
		5 COPD	5.5%
		6 Chronic Liver Disease	3.8%
		7 Cerebrovascular Disease	3.6%
		8 Pneumonia & Influenza	3.6%
		9 Diabetes mellitus	2.7%
		10 Alcohol Abuse	1.9%
All Others	37.9%	All Others	24.0%
Total - All-Cause	100.0%	Total - All-Cause	100.0%

Kenai Peninsula Service Region		Kodiak Area Service Region	
Cause of Death	% Deaths	Cause of Death	% Deaths
1 Cancer	22.6%	1 Heart Disease	21.1%
2 Heart Disease	17.3%	2 Cancer	21.1%
3 Unintentional Injury	11.3%	3 Unintentional Injury	10.5%
4 COPD	5.4%	4 COPD	6.3%
5 Suicide	4.8%	5 Chronic Liver Disease	5.3%
6 Chronic Liver Disease	3.0%		
7 Alcohol Abuse	3.0%		
All Others	32.7%	All Others	35.8%
Total - All-Cause	100.0%	Total - All-Cause	100.0%

Northwest Arctic Service Region		Norton Sound Service Region	
Cause of Death	% Deaths	Cause of Death	% Deaths
1 Cancer	21.4%	1 Cancer	23.0%
2 Heart Disease	17.0%	2 Heart Disease	19.9%
3 Unintentional Injury	14.4%	3 Suicide	11.5%
4 Suicide	7.4%	4 Unintentional Injury	11.2%
5 COPD	5.2%	5 Cerebrovascular Disease	5.9%
6 Cerebrovascular Disease	3.1%	6 COPD	5.3%
		7 Congenital malformations	1.6%
All Others	31.4%	All Others	21.7%
Total - All-Cause	100.0%	Total - All-Cause	100.0%

Southeast Service Region		Yukon-Kuskokwim Service Region	
Cause of Death	% Deaths	Cause of Death	% Deaths
1 Cancer	22.1%	1 Cancer	19.5%
2 Heart Disease	18.1%	2 Unintentional Injury	14.8%
3 Unintentional Injury	9.2%	3 Heart Disease	13.5%
4 COPD	4.4%	4 Suicide	9.2%
5 Cerebrovascular Disease	4.0%	5 COPD	5.8%
6 Chronic Liver Disease	2.9%	6 Cerebrovascular Disease	5.5%
7 Nephritis	2.7%	7 Homicide	2.5%
8 Diabetes mellitus	2.7%	8 Pneumonia & Influenza	2.1%
9 Suicide	2.5%	9 Septicemia	1.4%
10 Pneumonia & Influenza	2.3%	10 Perinatal Conditions	1.3%
All Others	29.0%	All Others	24.4%
Total - All-Cause	100.0%	Total - All-Cause	100.0%

TABLE 7a. Numbers of Leading Causes of Death
Alaska Natives By Service Region (2009-2013)
 Both Genders

Cause of Death	Aleutians & Pribilofs	Anchorage/MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Statewide^a
Alcohol Abuse	<5	28	8	<5	<5	<5	9	5	<5	<5	<5	9	9	73
Alzheimer's Disease	<5	15	7	<5	<5	<5	<5	<5	<5	<5	<5	6	6	40
Cancer	20	227	83	47	50	20	100	38	20	49	73	115	149	908
Cerebrovascular Disease	<5	41	8	<5	<5	<5	17	<5	<5	7	19	21	42	173
Chronic Liver Disease	<5	57	14	<5	5	<5	16	<5	5	<5	<5	15	9	121
COPD	<5	55	19	12	9	<5	26	9	6	12	17	23	44	218
Diabetes	<5	21	11	<5	<5	<5	13	<5	<5	<5	<5	14	5	78
Heart Disease	11	204	69	21	36	9	85	29	20	39	64	94	103	723
Homicide	<5	31	<5	<5	<5	<5	6	<5	<5	<5	<5	<5	19	68
Hypertension	<5	10	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	6	33
Perinatal Conditions	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	10	21

^a ASU-Combined Rural numbers are not counted in the total column since this region is a combination of Aleutians & Pribilofs, Copper River/Prince William Sound, Kenai Peninsula, and Kodiak Area.

<5 means the value is 0-4

TABLE 7a. Both Genders, continued

Cause of Death	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Statewide^a
Pneumonia & Influenza	<5	27	7	<5	7	<5	17	<5	<5	<5	<5	12	16	95
Septicemia	<5	16	6	<5	<5	<5	8	<5	<5	<5	<5	<5	11	53
Suicide	<5	52	13	8	12	<5	27	8	<5	17	37	13	70	250
Unintentional Injury	6	140	43	13	40	12	69	19	10	33	36	48	113	552
Total - All-Cause	67	1232	395	168	237	66	475	168	95	229	322	520	763	4345

^a ASU-Combined Rural numbers are not counted in the total column since this region is a combination of Aleutians & Pribilofs, Copper River/Prince William Sound, Kenai Peninsula, and Kodiak Area.

<5 means the value is 0-4

TABLE 7b. Numbers of Leading Causes of Death
Alaska Natives By Service Region (2009-2013)
Males

Cause of Death	Aleutians & Pribilofs	Anchorage/MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Statewide^a
Alcohol Abuse	<5	10	<5	<5	<5	<5	6	<5	<5	<5	<5	<5	<5	35
Alzheimer's Disease	<5	6	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	14
Cancer	7	97	53	25	25	14	56	18	14	30	45	54	87	474
Cerebrovascular Disease	<5	15	5	<5	<5	<5	6	<5	<5	<5	5	8	18	70
Chronic Liver Disease	<5	19	8	<5	<5	<5	8	<5	<5	<5	<5	5	<5	46
COPD	<5	26	7	8	<5	<5	18	<5	<5	7	10	11	24	115
Diabetes	<5	6	6	<5	<5	<5	6	<5	<5	<5	<5	10	<5	38
Heart Disease	8	119	41	13	23	7	53	19	11	23	45	59	64	446
Homicide	<5	20	<5	<5	<5	<5	7	<5	<5	<5	<5	<5	16	51
Hypertension	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	5	15
Perinatal Conditions	<5	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	7	14

^a ASU-Combined Rural numbers are not counted in the total column since this region is a combination of Aleutians & Pribilofs, Copper River/Prince William Sound, Kenai Peninsula, and Kodiak Area.

<5 means the value is 0-4

TABLE 7b. Males, continued

Cause of Death	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Statewide^a
Pneumonia & Influenza	<5	13	<5	<5	<5	<5	6	<5	<5	<5	<5	<5	10	45
Septicemia	<5	<5	<5	<5	<5	<5	5	<5	<5	<5	<5	<5	6	23
Suicide	<5	34	8	7	8	<5	26	<5	<5	14	30	9	64	200
Unintentional Injury	5	66	21	14	32	5	47	9	<5	24	25	29	80	340
Total - All-Cause	30	565	181	94	133	36	274	87	48	137	196	259	476	2337

^a ASU-Combined Rural numbers are not counted in the total column since this region is a combination of Aleutians & Pribilofs, Copper River/Prince William Sound, Kenai Peninsula, and Kodiak Area.

<5 means the value is 0-4

TABLE 7c. Numbers of Leading Causes of Death
Alaska Natives By Service Region (2009-2013)
Females

Cause of Death	Aleutians & Pribilofs	Anchorage/MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Statewide^a
Alcohol Abuse	<5	18	<5	<5	<5	<5	<5	<5	<5	<5	<5	6	10	38
Alzheimer's Disease	<5	9	<5	<5	<5	<5	<5	<5	<5	<5	<5	6	<5	26
Cancer	13	130	30	22	25	6	44	20	6	19	28	61	62	433
Cerebrovascular Disease	<5	26	<5	6	<5	<5	12	<5	<5	<5	<5	13	24	103
Chronic Liver Disease	<5	38	6	<5	<5	<5	8	<5	<5	<5	<5	10	8	75
COPD	<5	29	12	9	5	<5	7	5	<5	<5	5	12	20	103
Diabetes	<5	15	<5	<5	<5	<5	5	<5	<5	<5	<5	<5	<5	40
Heart Disease	<5	85	28	8	13	<5	32	10	9	16	19	35	39	277
Homicide	<5	11	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	17
Hypertension	<5	6	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	18
Perinatal Conditions	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	7

^a ASU-Combined Rural numbers are not counted in the total column since this region is a combination of Aleutians & Pribilofs, Copper River/Prince William Sound, Kenai Peninsula, and Kodiak Area.

<5 means the value is 0-4

TABLE 7c. Females, continued

Cause of Death	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Statewide^a
Pneumonia & Influenza	<5	14	<5	<5	<5	<5	11	<5	<5	<5	<5	8	6	50
Septicemia	<5	12	<5	<5	<5	<5	<5	<5	<5	<5	<5	7	<5	30
Suicide	<5	18	6	<5	<5	<5	<5	<5	<5	<5	<5	<5	6	50
Unintentional Injury	<5	74	22	<5	8	7	22	10	6	9	11	19	33	211
Total - All-Cause	37	667	214	74	103	30	200	81	47	92	126	261	287	2006

^a ASU-Combined Rural numbers are not counted in the total column since this region is a combination of Aleutians & Pribilofs, Copper River/Prince William Sound, Kenai Peninsula, and Kodiak Area.

<5 means the value is 0-4

TABLE 8a. **Age-Adjusted Rates for Leading Causes of Death**
Alaska Natives By Service Region (2009-2013)
Both Genders

Cause of Death	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Statewide
Alcohol Abuse	-	20.8	11.4	-	-	-	15.8	28.1	-	-	-	10.7	14.2	14.2
Alzheimer's Disease	-	26.1	27.1	-	-	-	-	-	-	-	-	12.2	-	14.4
Cancer	262.1	233.5	230.2	↑ 305.4	240.9	↑ 335.5	212.1	256.6	247.8	246.7	↑ 316.8	↓ 184.3	234.8	234.6
Cerebrovascular Disease	-	47.9	↓ 26.8	45.4	74.1	-	↓ 39.1	-	-	↓ 39.2	↑ 109.2	↓ 29.0	86.2	54.7
Chronic Liver Disease	-	46.4	28.4	-	21.9	-	27.7	18.1	51.4	-	-	23.4	↓ 9.7	24.0
COPD	-	63.0	51.0	99.4	52.4	-	62.9	71.1	66.6	71.0	100.9	↓ 42.0	81.6	65.6
Diabetes	-	24.9	32.5	-	-	-	26.0	-	-	-	-	22.0	↓ 11.3	21.3
Heart Disease	↓ 128.8	203.2	186.9	↓ 131.3	218.5	174.5	182.6	192.6	↑ 263.2	204.7	↑ 290.4	162.3	166.2	190.3
Homicide	-	17.8	-	-	-	-	10.0	-	-	-	-	-	18.4	11.4
Hypertension	-	15.6	-	-	-	-	-	-	-	-	-	-	15.4	10.7
Perinatal Conditions	-	2.3	-	-	-	-	-	-	-	-	-	-	5.1	2.5

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined.

"-" Rate not reported for fewer than 5 deaths

TABLE 8a. Both Genders, continued

Cause of Death	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Statewide
Pneumonia & Influenza	-	29.0	20.9	-	35.0	-	39.1	-	-	-	-	22.5	24.7	26.1
Septicemia	-	21.6	20.4	-	-	-	15.7	-	-	-	-	-	-	15.1
Suicide	-	↓29.3	↓23.9	↓29.0	52.8	-	39.1	30.6	-	57.4	↑96.7	↓19.4	58.3	40.6
Unintentional Injury	↓66.8	104.7	87.6	116.8	↑193.4	↑164.0	114.3	85.4	106.1	117.2	115.2	↓71.2	107.8	104.8
Total - All-Cause	↓859.7	1189.8	967.7	1063.8	1166.7	1007.9	962.3	1119.0	1173.3	1090.1	↑1356.1	866.6	1063.8	1076.7

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined.

"-" Rate not reported for fewer than 5 deaths

TABLE 8b. **Age-Adjusted Rates for Leading Causes of Death**
Alaska Natives By Service Region (2009-2013)
Males

Cause of Death	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Statewide
Alcohol Abuse	-	25.5	-	-	-	-	37.5	-	-	-	-	-	-	14.6
Alzheimer's Disease	-	16.8	-	-	-	-	-	-	-	-	-	-	-	11.6
Cancer	197.8	317.5	299.7	319.2	257.6	↑475.2	289.9	327.5	↑420.1	331.2	↑485.2	233.8	301.2	276.0
Cerebrovascular Disease	-	79.0	35.7	-	-	-	30.1	-	-	-	58.2	55.4	↑107.2	47.4
Chronic Liver Disease	-	59.4	33.5	-	-	-	-	-	-	-	-	25.2	-	20.9
COPD	-	93.7	42.8	↑117.2	-	-	52.9	-	-	104.2	↑171.2	58.6	117.8	75.5
Diabetes	-	36.5	36.9	-	-	-	-	-	-	-	-	↑54.1	-	21.8
Heart Disease	230.2	↑345.5	269.4	176.9	280.3	277.1	176.8	↑433.2	321.0	309.8	↑447.0	306.5	240.1	256.8
Homicide	-	30.4	-	-	-	-	21.3	-	-	-	-	-	31.7	17.7
Hypertension	-	-	-	-	-	-	-	-	-	-	-	-	42.5	10.7
Perinatal Conditions	-	4.1	-	-	-	-	-	-	-	-	-	-	4.9	3.0

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined.

"-" Rate not reported for fewer than 5 deaths

TABLE 8b. Males, continued

Cause of Death	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Statewide
Pneumonia & Influenza	-	39.3	-	-	-	-	44.4	-	-	-	-	-	43.2	26.2
Septicemia	-	-	-	-	-	-	14.8	-	-	-	-	-	35.2	14.3
Suicide	-	49.6	28.6	60.8	50.4	-	61.8	-	-	82.2	↑146.7	↓30.9	↑128.3	63.4
Unintentional Injury	98.1	94.8	90.1	171.3	↑226.7	117.2	119.3	↓72.2	-	136.4	↑168.5	↓81.6	140.0	126.0
Total - All-Cause	↓769.5	1138.7	1039.2	1251.1	1390.4	1245.4	1091.6	1263.9	1298.4	1367.3	↑1741.9	920.9	1444.4	1212.4

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined.

"-" Rate not reported for fewer than 5 deaths

TABLE 8c. **Age-Adjusted Rates for Leading Causes of Death**
Alaska Natives By Service Region (2009-2013)
Females

Cause of Death	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Statewide
Alcohol Abuse	-	33.8	-	-	-	-	-	-	-	-	45.1	22.4	18.7	14.1
Alzheimer's Disease	-	14.4	-	-	-	-	-	-	-	-	-	15.8	-	19.8
Cancer	↑369.2	253.7	229.1	252.0	281.3	240.2	208.6	↑317.9	187.6	186.2	261.5	207.9	245.3	202.8
Cerebrovascular Disease	-	79.2	65.3	98.6	-	-	53.2	-	-	-	-	63.9	↑107.0	59.6
Chronic Liver Disease	-	65.9	24.2	-	-	-	22.3	-	-	-	-	29.1	34.5	27.6
COPD	-	↑117.1	66.9	↑121.3	81.9	-	51.9	101.9	-	-	↑120.3	82.3	↑171.3	57.7
Diabetes	-	32.0	30.1	-	-	-	58.6	-	-	-	-	-	-	20.4
Heart Disease	-	123.5	134.8	119.3	207.4	-	↓73.8	130.2	260.4	158.6	↑215.8	134.6	127.3	136.4
Homicide	-	10.5	-	-	-	-	-	-	-	-	-	-	-	7.8
Hypertension	-	-	-	-	-	-	-	-	-	-	-	-	-	5.5
Perinatal Conditions	-	-	-	-	-	-	-	-	-	-	-	-	6.2	3.3

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined.

"-" Rate not reported for fewer than 5 deaths

TABLE 8c. Females, continued

Cause of Death	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Statewide
Pneumonia & Influenza	-	29.6	-	-	-	-	40.8	-	-	-	-	38.9	32.7	25.8
Septicemia	-	25.2	-	-	-	-	-	-	-	-	-	19.7	-	12.5
Suicide	-	27.1	24.1	-	-	-	-	-	-	-	48.1	-	15.4	17.1
Unintentional Injury	-	94.3	102.4	-	101.3	-	85.3	-	-	50.9	74.6	62.3	87.6	82.5
Total - All-Cause	915.6	1029.0	903.7	992.1	955.4	928.8	940.9	1006.8	1067.7	843.7	1029.2	814.2	824.7	949.8

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined.

"-" Rate not reported for fewer than 5 deaths

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TRENDS OVER TIME

Highlights

- Alaska Native all-cause mortality rates declined 13% between the 1980-1983 time period and the most recent five year period, 2009-2013. A decline in all-cause mortality has occurred in every 5 year period, except for the most recent. The greatest decline (7%) occurred between 1999-2003 and 2004-2008. U.S. White all-cause mortality declined 25% between 1980-1983 and 2009-2013.
- Alaska Native cancer mortality rates increased significantly (5%) between the 1980-1983 time period and the most recent five year period, 2009-2013. U.S. White rates did not change significantly between 1980-1983 and 2009-2013.
- Alaska Native heart disease mortality rates declined 30% between the 1980-1983 time period and the most recent five year period, 2009-2013. U.S. White rates declined 56% between 1980-1983 and 2009-2013.
- Alaska Native unintentional injury mortality rates declined 43% between the 1980-1983 time period and the most recent five year period, 2009-2013. U.S. White rates declined 4%.
- Alaska Native suicide rates have decreased by 3% between the 1980-1983 time period and the most recent five year period, 2009-2013. U.S. White rates increased 5% between 1980-1983 and 2009-2013.
- Alaska Native chronic obstructive pulmonary disease mortality rates rose 150% between the 1980-1983 time period and the most recent five year period, 2009-2013. U.S. White rates increased 47% between 1980-1983 and 2009-2013.
- Alaska Native cerebrovascular disease mortality rates decreased significantly (15%) between the 1980-1983 time period and the most recent five year period, 2009-2013. U.S. White rates declined 57% between 1980-1983 and 2009-2013.
- Alaska Native chronic liver disease and cirrhosis mortality rates decreased by 15% between the 1980-1983 time period and the most recent five year period, 2009-2013. U.S. White rates declined 71% between 1980-1983 and 2009-2013.

- Alaska Native pneumonia and influenza mortality rates declined 50% between the 1980-1983 time period and the most recent five year period, 2009-2013. U.S. White rates declined 47% between 1980-1983 and 2009-2013.
- Alaska Native diabetes rates increased 302% between the 1980-1983 time period and the most recent five year period, 2009-2013. U.S. White rates increased 19% between 1980-1983 and 2008-2013.
- Alaska Native alcohol abuse mortality rates decreased 51% between the 1980-1983 time period and the most recent five year period. U.S. White rates increased 15% between 1980-1983 and 2009-2013.

subtracting the rate for the first time period from the rate for the most recent time period and dividing by the rate for the first time period. Rates over time were reported for both Alaska Native people and U. S. Whites.

Figures 61-71 show line graphs of the rates of death for leading causes by five year time periods for both Alaska Native people and U. S. Whites. Data for these figures comes from Table 9.

Overview

Table 9 in this section reports changes in mortality rates over the twenty-nine year period, 1980 to 2013. Mantel-Haenszel Chi-square tests for trend stratified by age group were used to test for a significant trend over time.

Percentage change between the 1980 to 1983 time period and the 2009 to 2013 time period was calculated by

**TABLE 9. Age-Adjusted^a Mortality Rates for Leading Causes of Death
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013) for 5-Year Intervals**

	Time Period	Cancer	Heart Disease	Unintentional Injury	Suicide	COPD	Cerebrovascular Disease	Chronic Liver Disease	Pneumonia & Influenza	Diabetes Mellitus	Alcohol Abuse	All-Cause
Alaska Natives	1980-1983 ^b	224.3	270.9	184.1	41.8	26.2	64.5	28.1	52.2	5.3	28.8	1234.0
	1984-1988	243.3	288.1	174.0	49.5	44.5	65.1	20.4	60.5	10.6	23.2	1226.5
	1989-1993	245.4	271.9	133.1	46.8	58.4	67.5	26.8	56.2	23.9	20.6	1202.1
	1994-1998	248.9	252.0	111.7	42.8	68.3	84.1	18.3	39.6	19.9	31.7	1151.6
	1999-2003	239.5	211.6	107.4	34.7	63.0	66.5	19.4	35.8	19.9	40.9	1111.6
	2004-2008	226.3	169.0	97.7	42.3	57.3	56.7	18.0	25.5	15.1	38.7	1033.3
	2009-2013	234.6	190.3	104.8	40.6	65.6	54.7	24.0	26.1	21.3	14.2	1076.7
	% Change ^c	5%	-30%	-43%	-3%	150%	-15%	-15%	-50%	302%	-51%	-13%
US Whites	1980-1983 ^b	203.9	395.1	42.6	13.1	30.5	85.4	12.9	29.2	16.3	2.0	982.7
	1984-1988	207.6	362.5	39.1	13.5	35.8	72.0	11.3	34.2	15.9	1.9	955.8
	1989-1993	209.9	310.2	35.5	13.0	39.2	61.5	10.3	34.6	18.9	2.2	898.6
	1994-1998	202.9	280.2	35.1	12.4	42.2	59.6	9.6	33.2	21.1	2.3	867.5
	1999-2003	193.5	243.6	36.4	11.6	45.8	55.6	9.6	22.5	22.9	2.2	834.6
	2004-2006	182.4	205.1	39.9	12.0	43.7	44.5	9.2	19.0	22.2	2.4	776.6
	2009-2013	203.0	173.1	41.0	13.8	44.7	36.6	10.2	15.4	19.4	2.0	736.9
	% Change ^c	NS ^d	-56%	-4%	5%	47%	-57%	-21%	-47%	19%	NS ^d	-25%

% Change = (Rate of 2009-2013 - Rate of 1980-1983)/Rate of 1980-1983

^a Age-adjusted to the US 2000 Standard population

^b 1980-1983 time period contains only four years

^c A value for % change is given only when a Chi-square test for trend had significance at p<0.05.

^d NS means that there was no significant difference at p<0.05

FIGURE 43.
Data Source: Table 9.

**Age-Adjusted Mortality Rates for All-Cause
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
by Five Year Intervals**

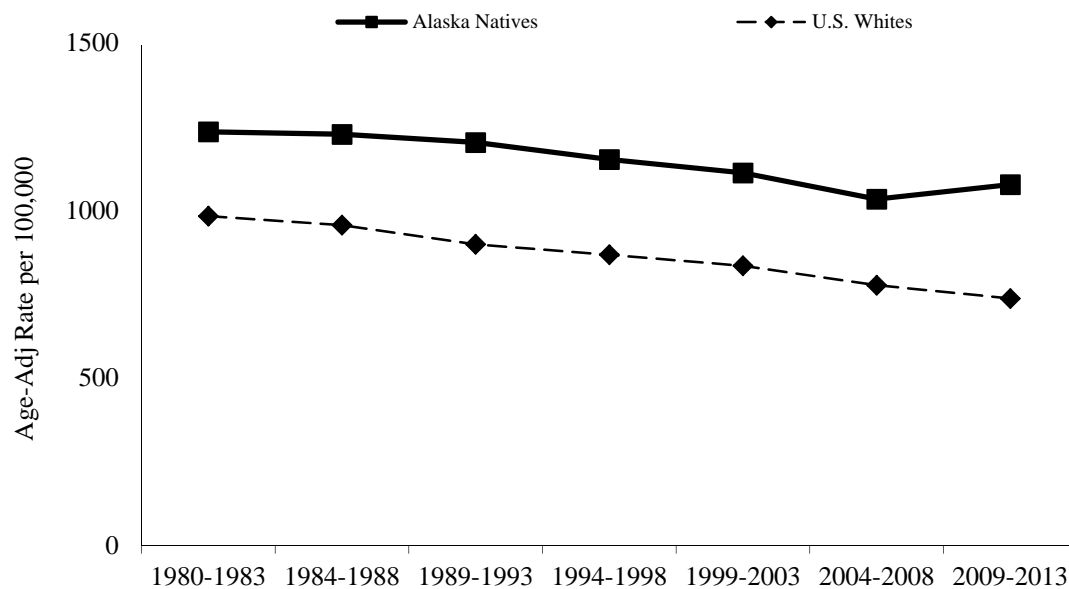


FIGURE 44.
Data Source: Table 9.

**Age-Adjusted Mortality Rates for Alcohol Abuse
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
by Five Year Intervals**

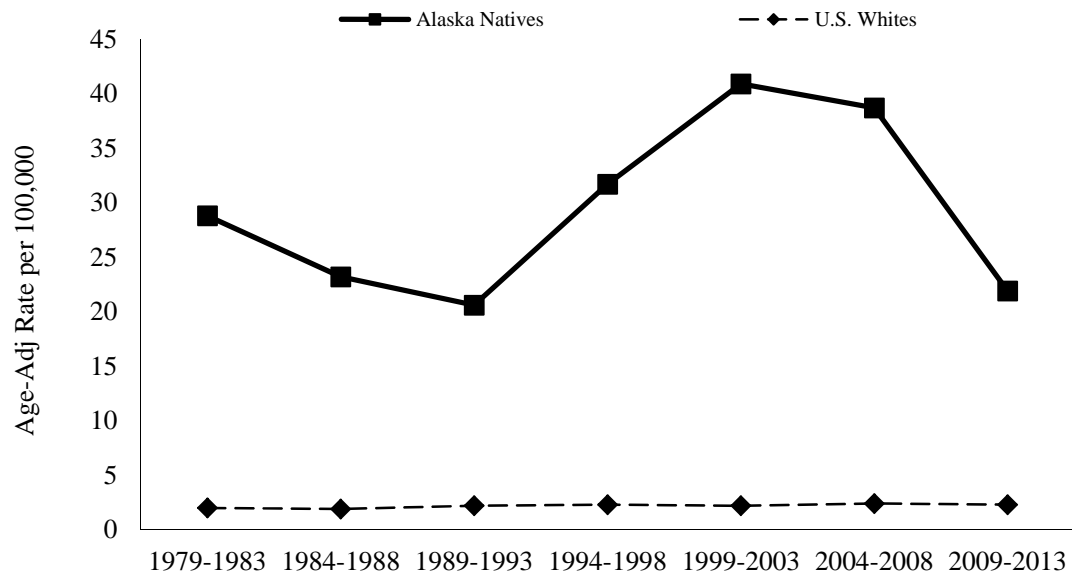


FIGURE 45.
Data Source: Table 9.

**Age-Adjusted Mortality Rates for Cancer
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
by Five Year Intervals**

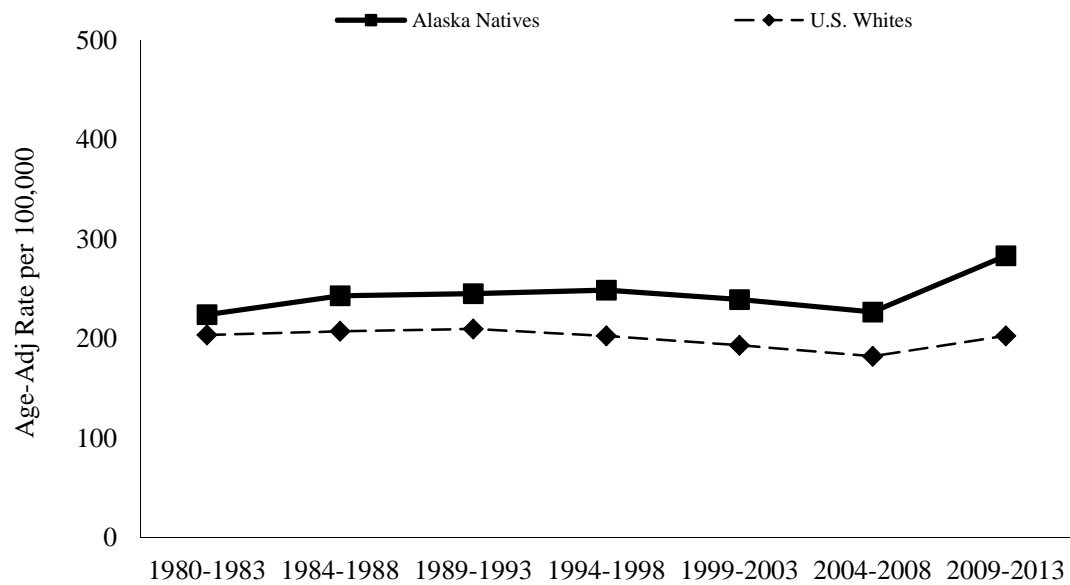


FIGURE 46.
Data Source: Table 9.

**Age-Adjusted Mortality Rates for Cerebrovascular Disease
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
by Five Year Intervals**

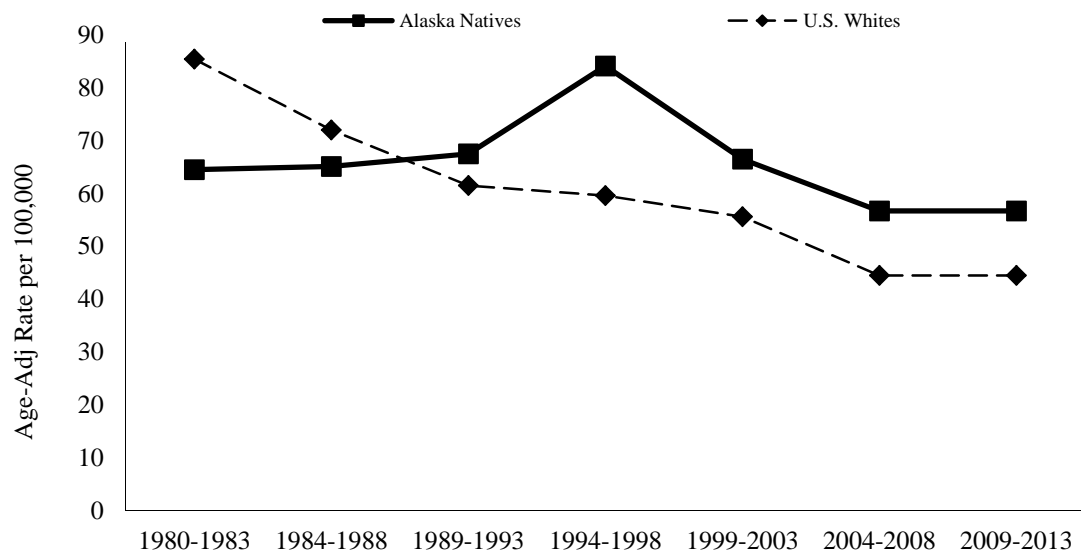


FIGURE 47. Age-Adjusted Mortality Rates for Chronic Liver Disease
 Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
 by Five Year Intervals

Data Source: Table 9.

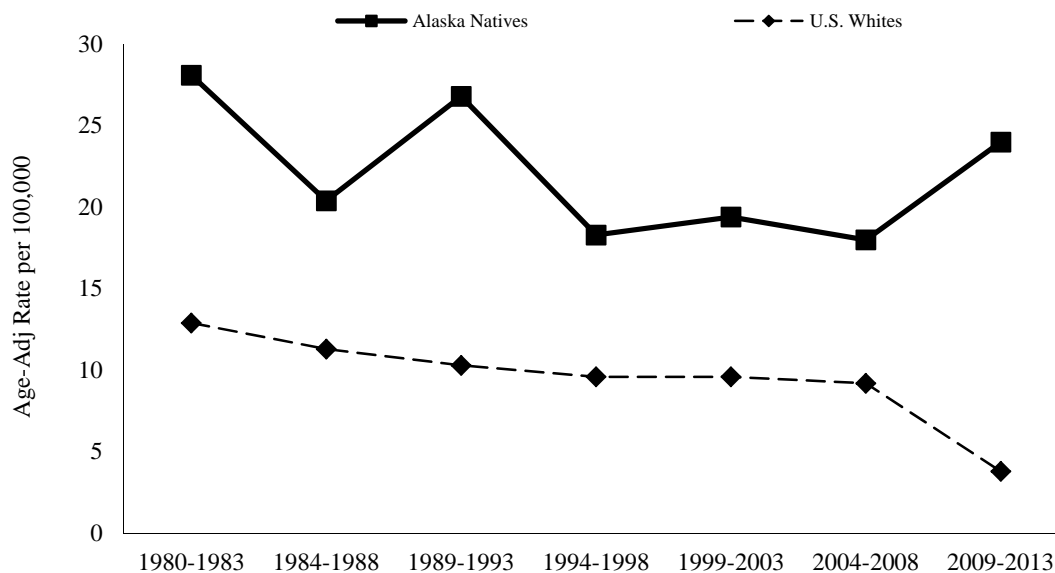


FIGURE 48. Age-Adjusted Mortality Rates for COPD
 Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
 by Five Year Intervals

Data Source: Table 9.

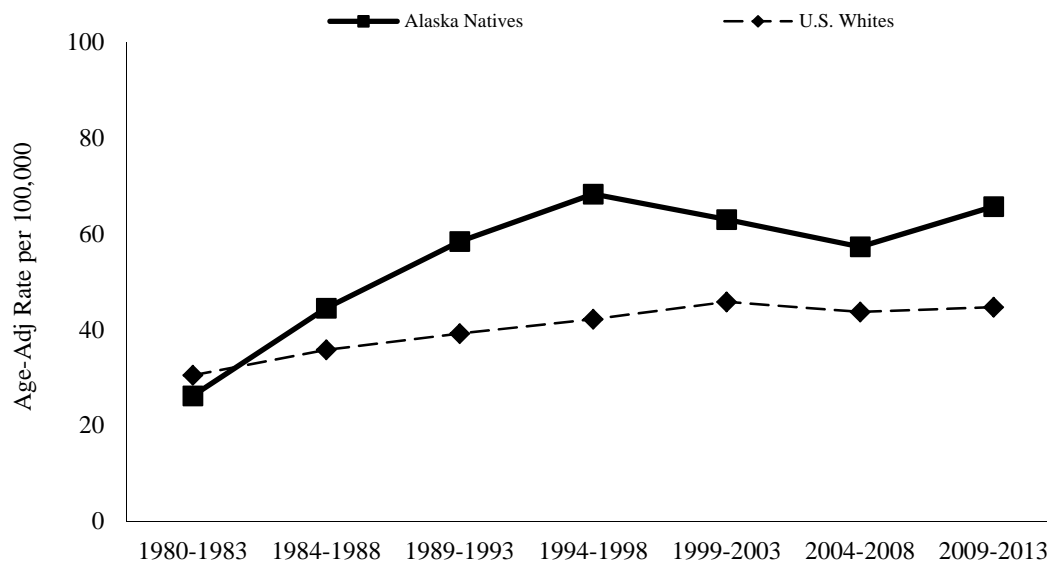


FIGURE 49.
Data Source: Table 9.

**Age-Adjusted Mortality Rates for Diabetes Mellitus
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
by Five Year Intervals**

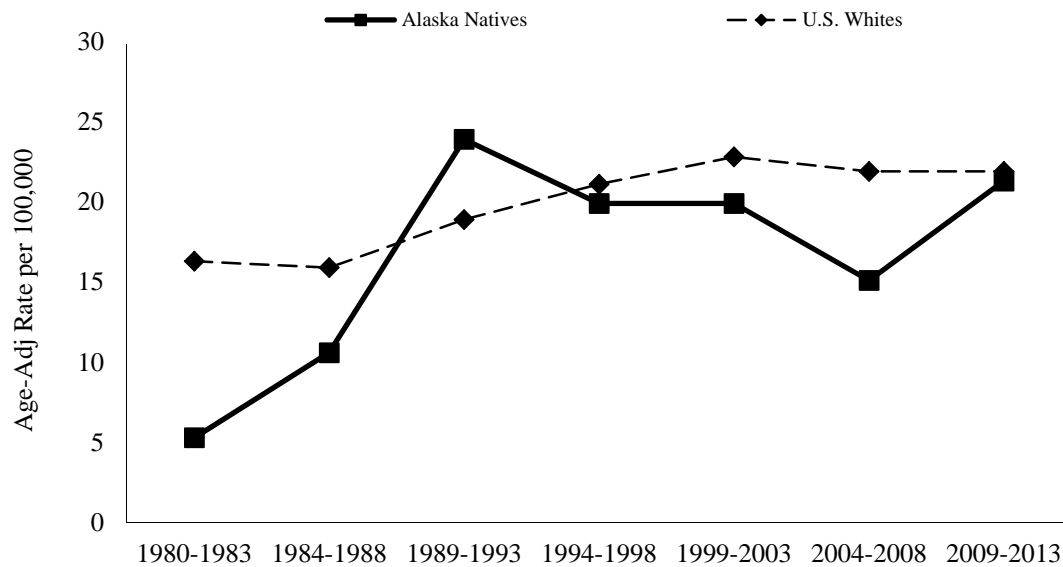


FIGURE 50.
Data Source: Table 9.

**Age-Adjusted Mortality Rates for Heart Disease
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
by Five Year Intervals**

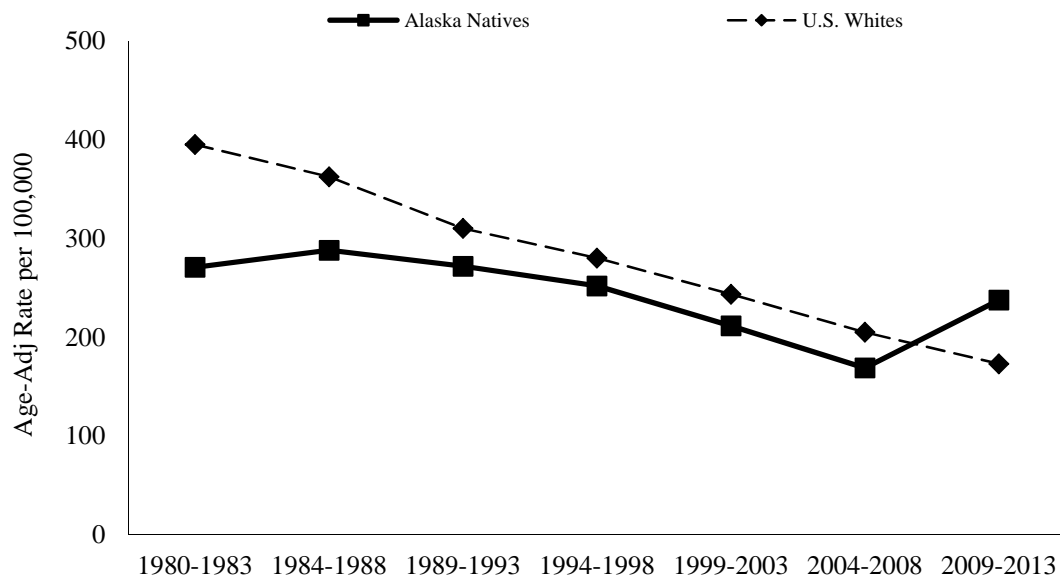


FIGURE 51.
Data Source: Table 9.

**Age-Adjusted Mortality Rates for Pneumonia & Influenza
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
by Five Year Intervals**

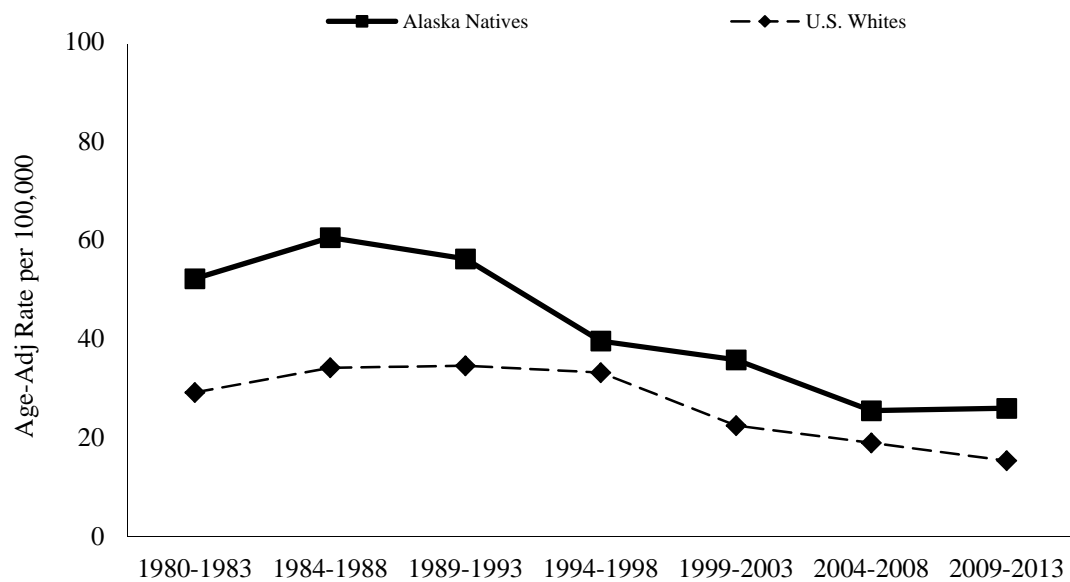


FIGURE 52.
Data Source: Table 9.

**Age-Adjusted Mortality Rates for Suicide
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
by Five Year Intervals**

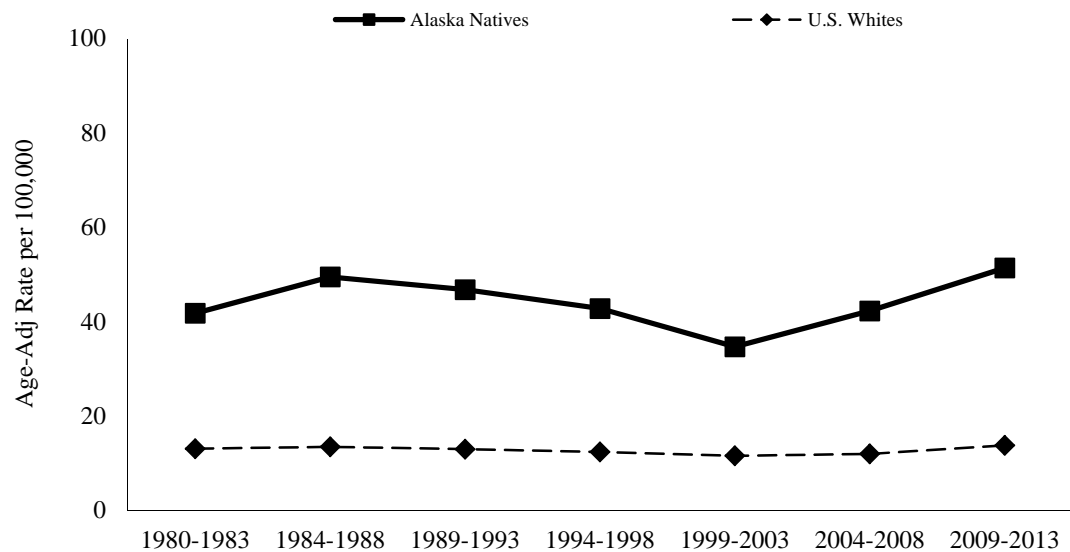
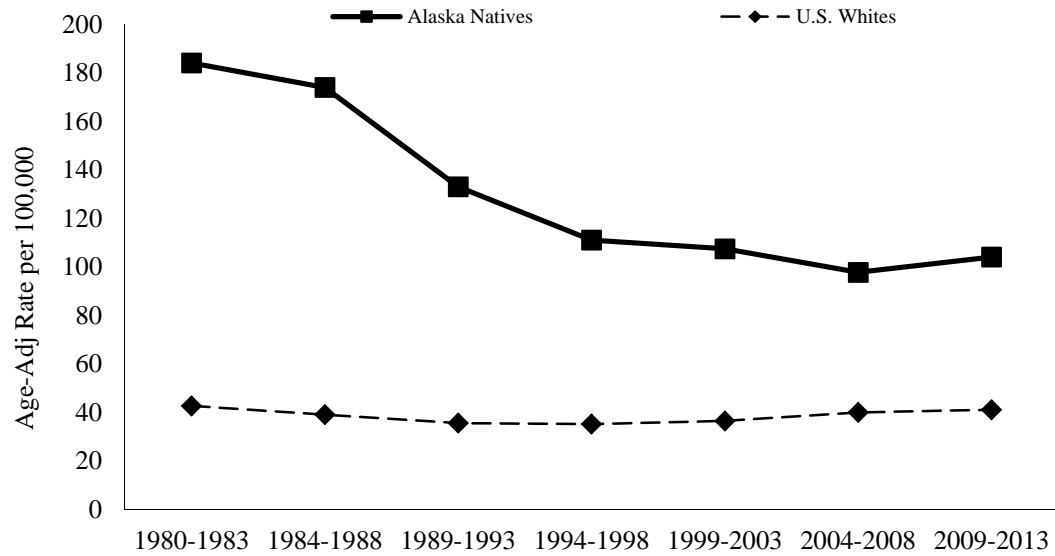


FIGURE 53.
Data Source: Table 9.

**Age-Adjusted Mortality Rates for Unintentional Injury
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
by Five Year Intervals**



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REGIONAL TRENDS OVER TIME

Highlights

- Alaska Native people in the Aleutians & Pribilofs service region experienced a decline in unintentional injury (83%), heart disease (83%), and all-cause (60%) mortality rates between 1980-1983 and 2009-2013.
- Alaska Native people in the Anchorage/MatSu service region had consistently lower rates of suicide mortality than rates for the rest of the state over the period, 1980-1983 to 2009-2013. In addition, mortality rates declined due to pneumonia & influenza (84%) and homicide (50%) between 1980-1983 and 2009-2013.
- For Alaska Native people in the ASU-Combined Rural service region, mortality rates declined for unintentional injury (66%), chronic liver disease (50%), and heart disease (55%) between 1980-1983 and 2009-2013.
- Alaska Native people in the Arctic Slope service region had higher rates of cancer mortality than rates for the rest of the state over the period, 1980-1983 to 2009-2013.
- Alaska Native people in the Bristol Bay service region had higher rates of unintentional injury mortality than rates for the rest of the state over the period, 1980-1983 to 2009-2013.
- Alaska Native people in the Copper River/Prince William Sound service region experienced a 62% decline in unintentional injury mortality rates between 1980-1983 and 2009-2013.
- Alaska Native people in the Interior service region experienced a decline in mortality rates due to alcohol abuse (68%) and unintentional injury (58%) between 1980-1983 and 2009-2013.
- Alaska Native people in the Kenai Peninsula service region experienced a decline in heart disease mortality rates (59%) between 1980-1983 and 2009-2013.
- Alaska Native people in the Kodiak Area service region experienced a decline in mortality rates due to heart disease (41%) and unintentional injury (49%). They had an increase in mortality rates due to cancer (168%) between 1980-1983 and 2009-2013.
- Alaska Native people in the Northwest service region had higher

rates of suicide than rates for the rest of the state, however this is no longer true for the 2009-2013 time period.

- Alaska Native people in the Norton Sound service region had higher rates of suicide than rates for the rest of the state. Mortality rates for cerebrovascular disease increased (76%) between 1980-1983 and 2009-2013.
- Alaska Native people in the Southeast service region had lower mortality rates from cancer, unintentional injuries, suicide, and COPD over the period, 1980-1983 to 2009-2013. Mortality rates declined for heart disease (60%), suicide (49%), and cerebrovascular disease (72%) between 1980-1983 and 2009-2013.
- Alaska Native people in the Yukon-Kuskokwim service region experienced a decline in mortality rates for unintentional injury (50%) and an increase in suicide (156%) rates between 1980-1983 and 2009-2013.

Overview

This section examines mortality rates over the period 1980 to 2013 for the current leading causes of death in each

service region. Rates were not calculated for a cause that had fewer than five cases. Rates based on fewer than 20 occurrences are statistically unreliable and should be used with caution.

The highlights above list those service regions that had significantly different rates for particular causes of death for the time period, 1980-1983 to 2009-2013.

Tables 10b-22b report rates for leading causes of death by service region for the six time periods between 1980 and 2013. Rate ratios were used to compare each region to all other regions combined. Confidence intervals were calculated around the ratios. Mortality rates for a region were considered to be significantly different from the rest of the state if the confidence interval did not contain one.

Significance was denoted in the tables by an up or down arrow indicating a higher or lower rate.

The tables note those service regions that had consistently higher or lower rates than the state as a whole for a particular

cause of death for every time point in the period, 1980-1983 to 2009-2013. This information is depicted in Figures 70-170 which are line graphs of rates for service regions compared to rates for Alaska Native people statewide, and for U.S. Whites. Graphs were only presented when it was possible to calculate rates for at least three consecutive time periods.

Percentage change between the 1980-1983 time period and the 2009-2013 time period was calculated by subtracting the rate for the first time period from the rate for the most recent time period and dividing by the rate for the first time period.

This section also contains Tables 10a-22a which report counts for leading causes of death over the period 1980 to 2013 by service region. Counts and rates are not reported for fewer than 5 cases.

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TABLE 10a. **Counts for Leading Causes of Death Among Alaska Natives**
Aleutians & Pribilofs Service Region
Both Genders

	Cancer	Heart Disease	Unintentional Injury	All-Cause
Aleutians & Pribilofs				
1980-1983 ^a	14	17	32	100
1984-1988	13	18	21	82
1989-1993	12	21	9	81
1994-1998	25	15	13	79
1999-2003	20	6	9	68
2004-2008	17	14	10	75
2009-2013	20	11	6	67

^a 1980-1983 contains only 4 years

Counts are not reported for fewer than 5 deaths

TABLE 10b. **Age-Adjusted Rates^b for Leading Causes of Death Among Alaska Natives**
Aleutians & Pribilofs Service Region
Both Genders

	Cancer	Heart Disease	Unintentional Injury	All-Cause
Aleutians & Pribilofs				
1980-1983 ^a	310.2	751.9	↑387.5	↑2159.0
1984-1988	197.3	↑581.2	227.9	1425.7
1989-1993	189.6	↑707.4	↓64.0	↑2420.5
1994-1998	530.3	203.8	301.3	1492.5
1999-2003	↑396.0	144.1	84.9	1088.3
2004-2008	230.7	231	102.2	1057.3
2009-2013	262.1	↓128.8	↓66.8	↓859.7
Percent Change	-16%	-83%*	-83%*	-60%*

Rates are not reported for fewer than 5 deaths

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined

^a 1980-1983 contains only 4 years

^b Rates per 100,000 population

*p<0.05

FIGURE 54. Age-Adjusted Mortality Rates for All-Cause
Aleutians & Pribilofs vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

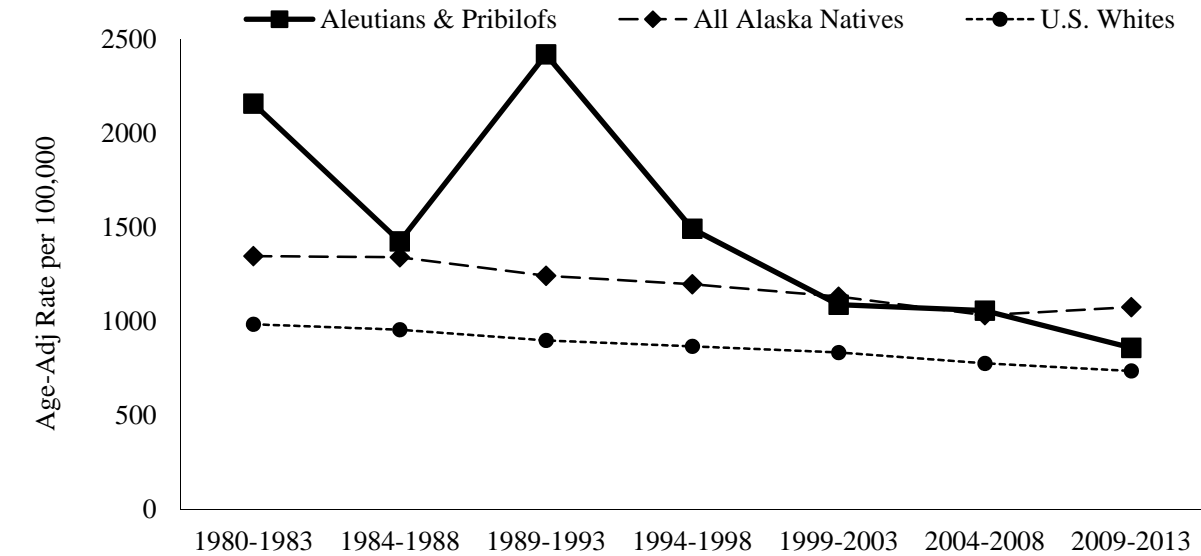


FIGURE 55. Age-Adjusted Mortality Rates for Cancer
Aleutians & Pribilofs vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

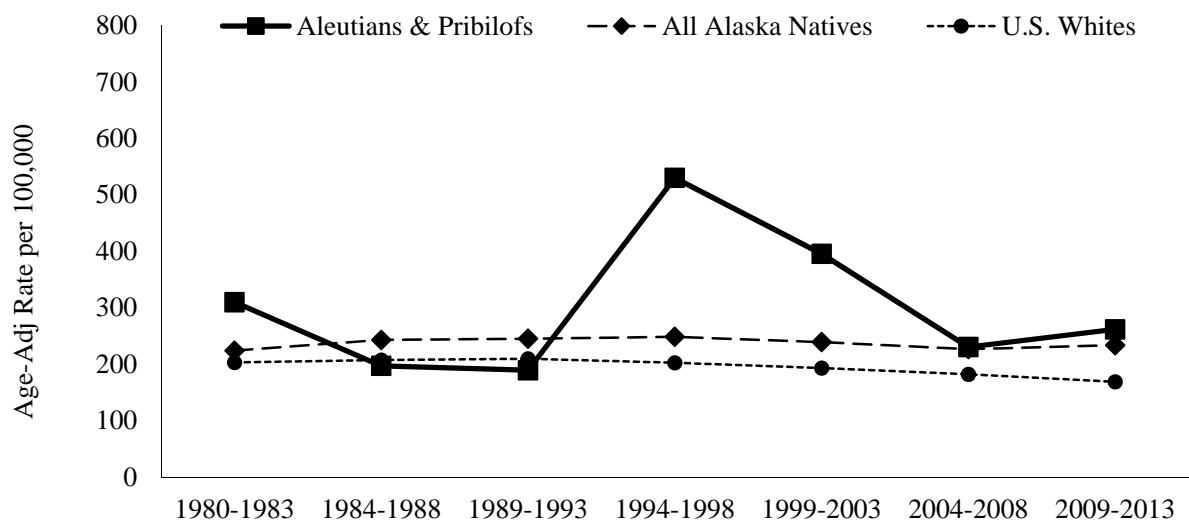


FIGURE 56. Age-Adjusted Mortality Rates for Heart Disease
Aleutians & Pribilofs vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

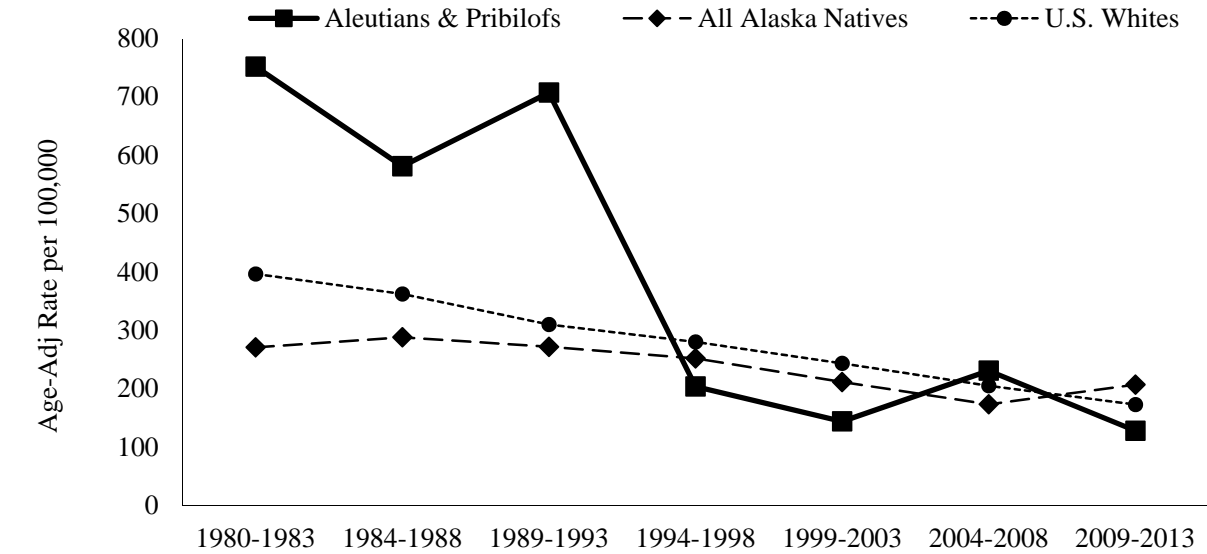


FIGURE 57 Age-Adjusted Mortality Rates for Unintentional Injury
Aleutians & Pribilofs vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

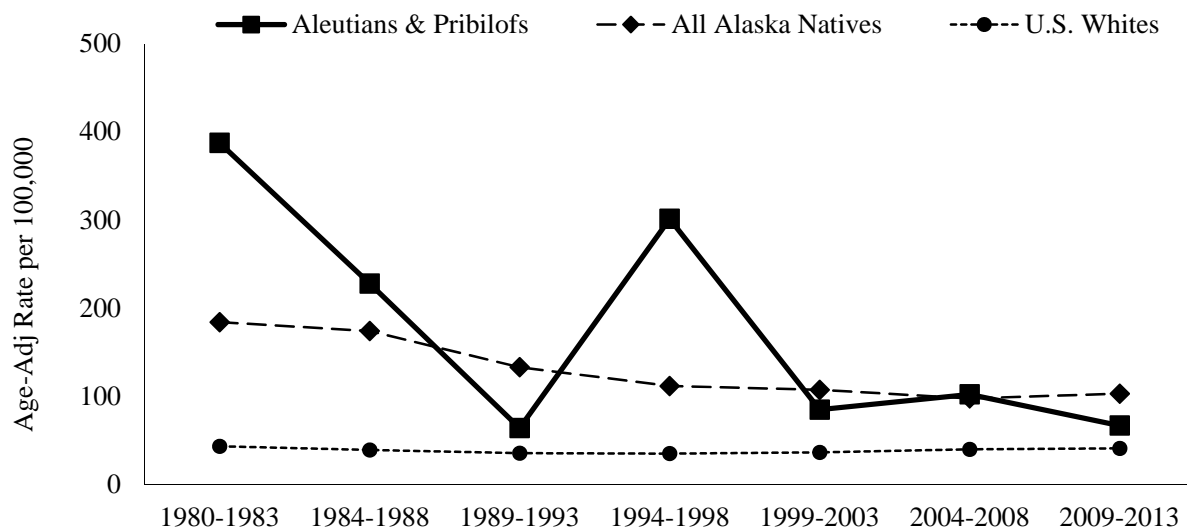


TABLE 11a. **Counts for Leading Causes of Death Among Alaska Natives**
Anchorage/ MatSu Service Region
Both Genders

Anchorage/ MatSu	Alcohol Abuse	Cancer	Cerebrovascular Disease	Chronic Liver Disease	COPD	Diabetes	Heart Disease	Homicide	Pneumonia & Influenza	Suicide	Unintentional Injury	All-Cause
1980-1983 ^a	11	34	8	15	<5	<5	36	19	18	12	41	261
1984-1988	12	54	15	18	12	5	53	13	22	21	64	384
1989-1993	19	84	21	30	19	<5	83	20	14	32	85	522
1994-1998	21	118	43	19	29	11	76	29	5	22	87	592
1999-2003	55	147	38	27	36	11	123	23	14	26	108	802
2004-2008	52	159	35	38	39	17	144	14	14	43	110	931
2009-2013	28	227	41	57	55	21	204	31	27	52	140	1232

^a 1980-1983 contains only 4 years

Counts are not reported for fewer than 5 deaths

TABLE 11b. **Age-Adjusted Rates^b for Leading Causes of Death Among Alaska Natives**
Anchorage/ MatSu Service Region
Both Genders

Anchorage/ MatSu	Alcohol Abuse	Cancer	Cerebrovascular Disease	Chronic Liver Disease	COPD	Diabetes	Heart Disease	Homicide	Pneumonia & Influenza	Suicide	Unintentional Injury	All-Cause
1980-1983 ^a	37.1	231.7	61.4	↑48.3	-	-	278.4	35.3	↑181.5	20.5	99.7	1318.1
1984-1988	25.7	237.3	113.6	↑36.9	↑85.9	19.5	322.5	18.7	↑116.8	↓26.4	↓114.4	1363.3
1989-1993	25.9	240.1	102.8	↑51.7	73.8	-	301.5	18.5	39.2	↓33.2	↓100.8	1334.2
1994-1998	26.0	247.8	↑120.4	22.7	78.1	34.5	206.9	25.9	20.0	↓20.1	↓87.7	↑1271.3
1999-2003	45.3	231.3	76.6	↑27.9	66.3	22.4	226.2	16.7	20.1	↓17.3	96.3	1121.3
2004-2008	44.7	↓176.2	46.9	↑33.1	48.2	16.3	169.9	9.0	18.3	↓27.7	↓82.3	998.9
2009-2013	20.8	233.5	47.9	46.4	63.0	24.9	203.2	17.8	29.0	↓29.3	104.7	1189.8
Percent Change	-44%	1%	-22%*	-4%	N/A	N/A	-27%	-50%*	-84%*	-43%*	5%	-10%*

Rates are not reported for fewer than 5 deaths

^a 1980-1983 contains only 4 years

*p<0.05

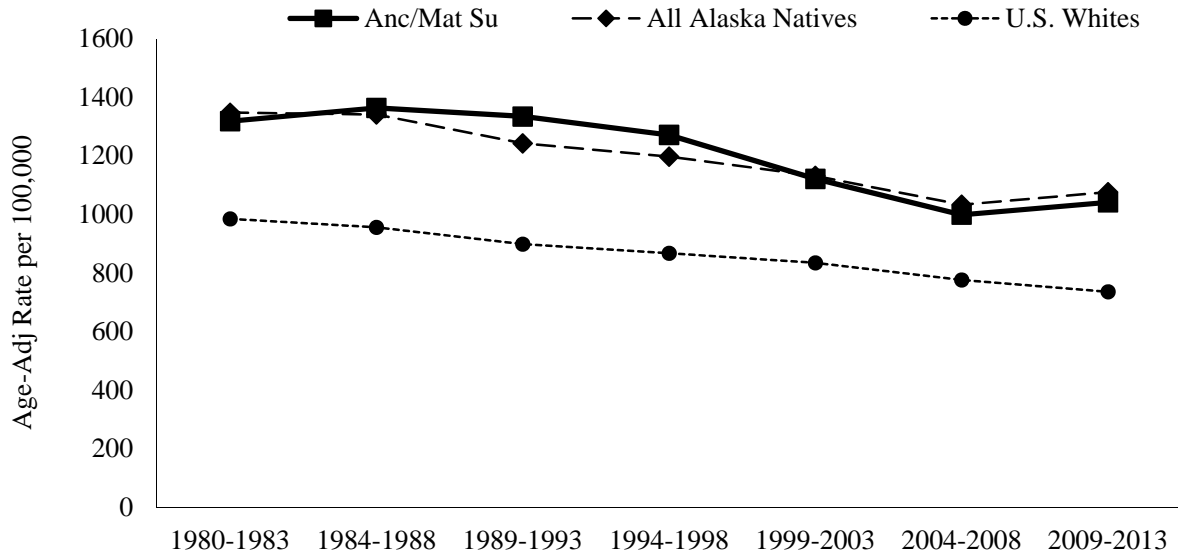
↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined

^b Rates per 100,000 population

FIGURE 58.

Data Source: Table 11b.

**Age-Adjusted Mortality Rates for All-Cause
Anchorage/ MatSu vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)**

**FIGURE 59.**

Data Source: Table 11b.

**Age-Adjusted Mortality Rates for Alcohol Abuse
Anchorage/ MatSu vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)**

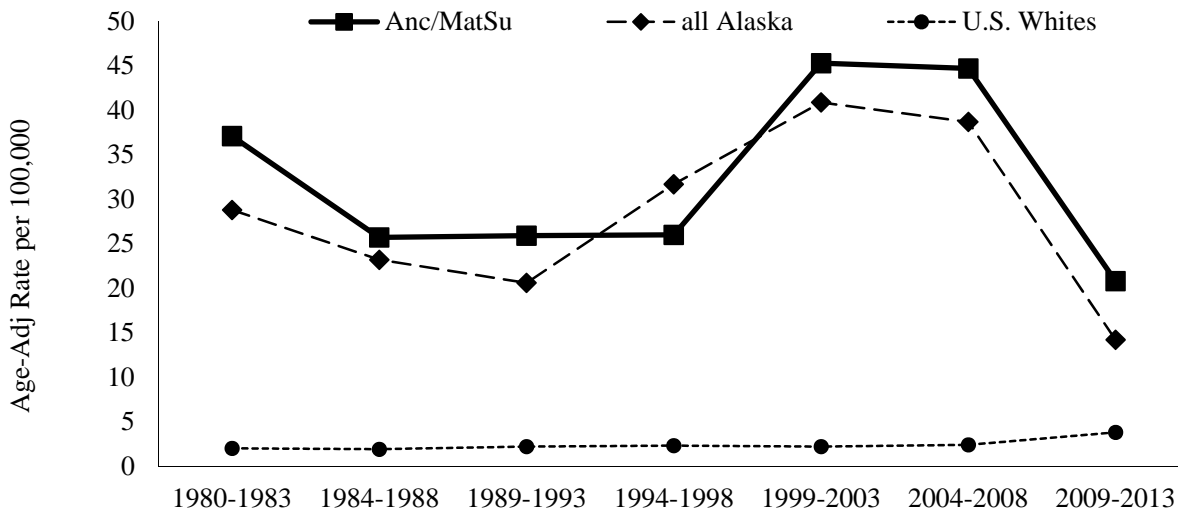
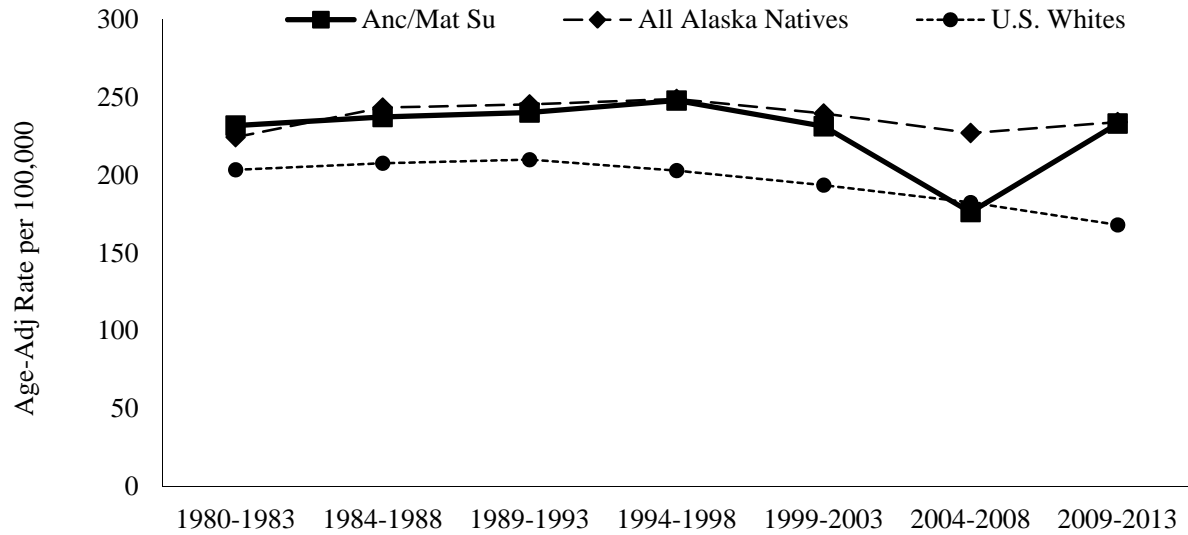


FIGURE 60.

Data Source: Table 11b.

Age-Adjusted Mortality Rates for Cancer
Anchorage/ MatSu vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

**FIGURE 61.**

Data Source: Table 11b.

Age-Adjusted Mortality Rates for Cerebrovascular Disease
Anchorage/ MatSu vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

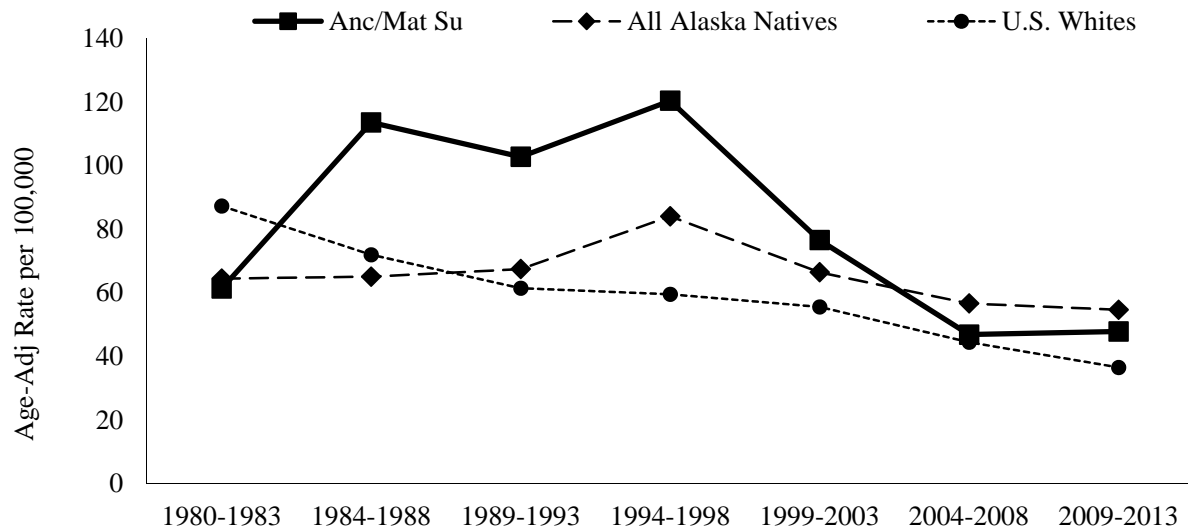
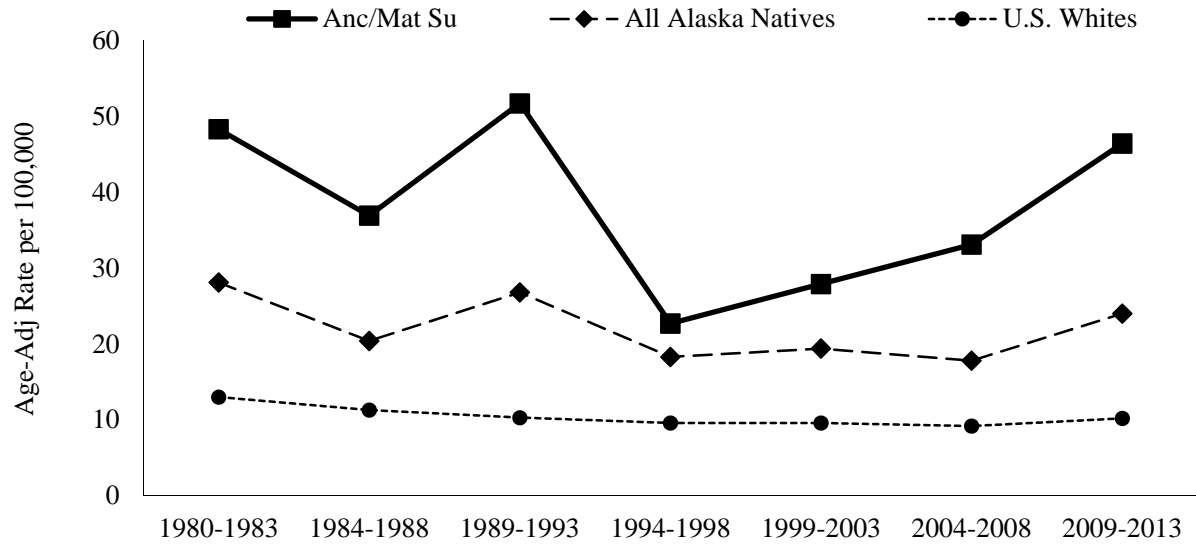


FIGURE 62.

Data Source: Table 11b.

**Age-Adjusted Mortality Rates for Chronic Liver Disease
Anchorage/ MatSu vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)**

**FIGURE 63.**

Data Source: Table 11b.

**Age-Adjusted Mortality Rates for COPD
Anchorage/ MatSu vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)**

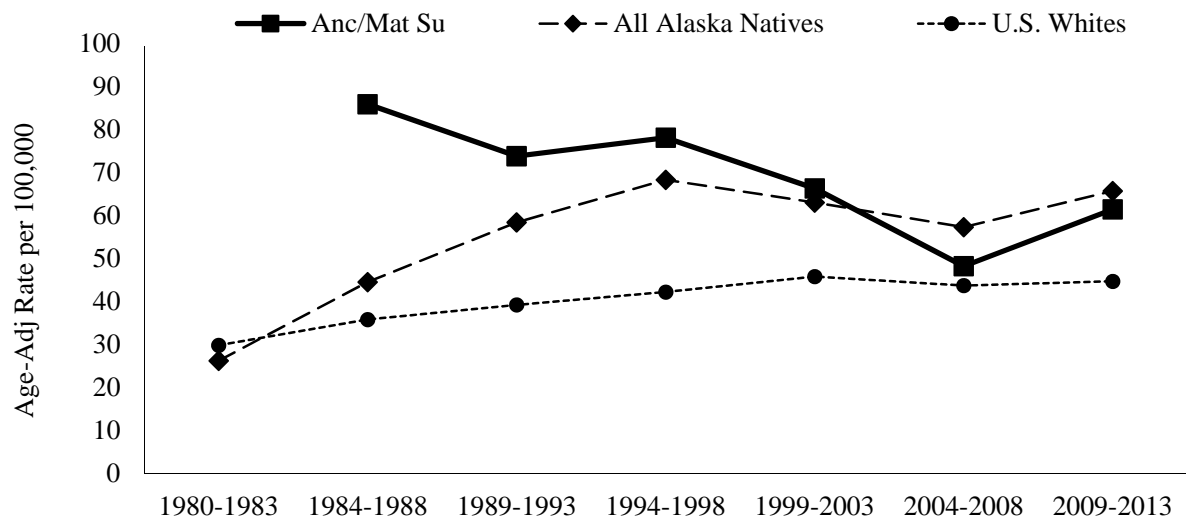
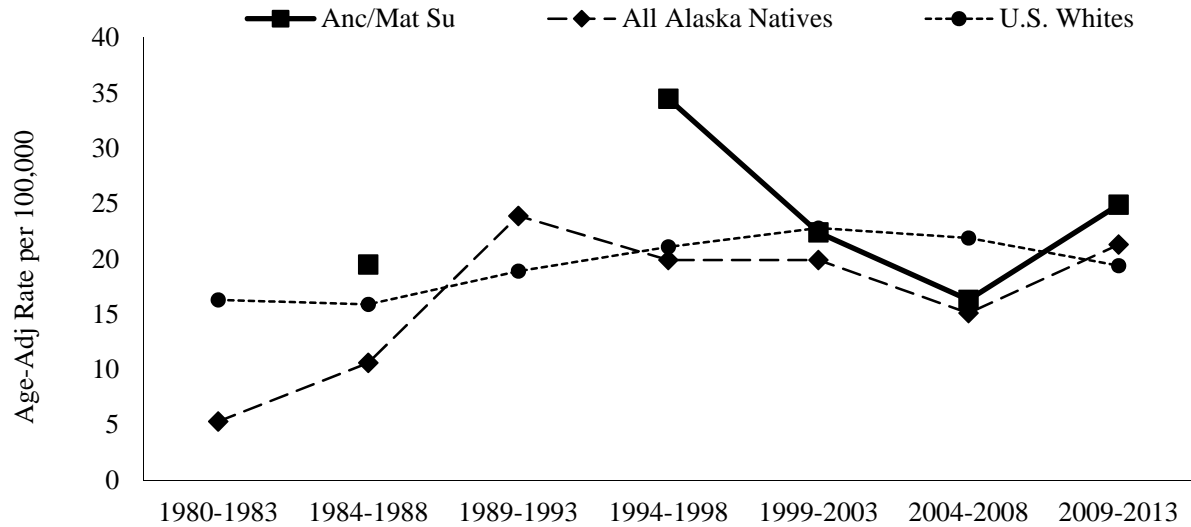


FIGURE 64.

Data Source: Table 11b.

**Age-Adjusted Mortality Rates for Diabetes Mellitus
Anchorage/ MatSu vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)**

**FIGURE 65.**

Data Source: Table 11b.

**Age-Adjusted Mortality Rates for Heart Disease
Anchorage/ MatSu vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)**

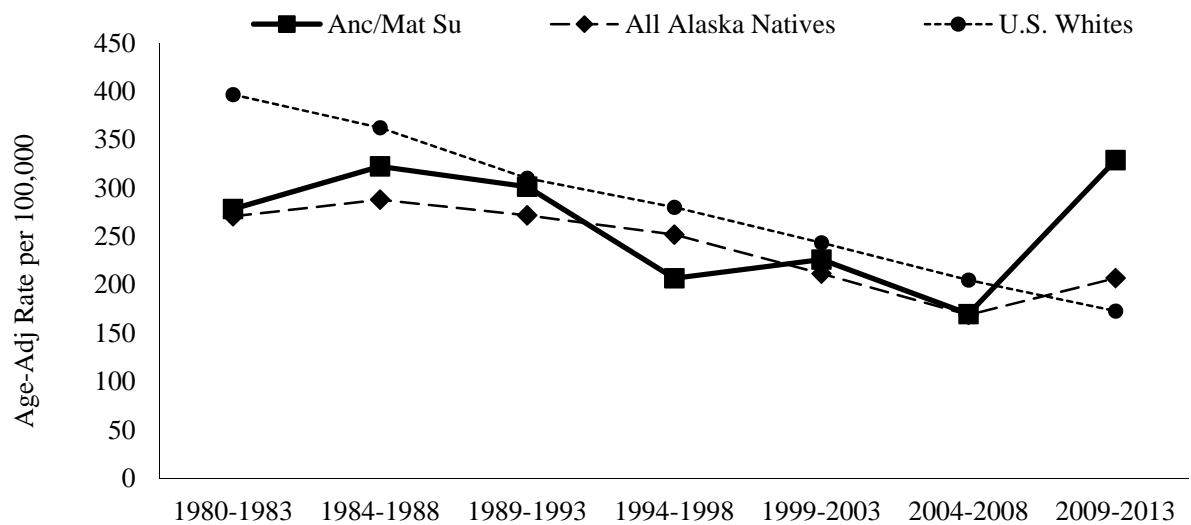
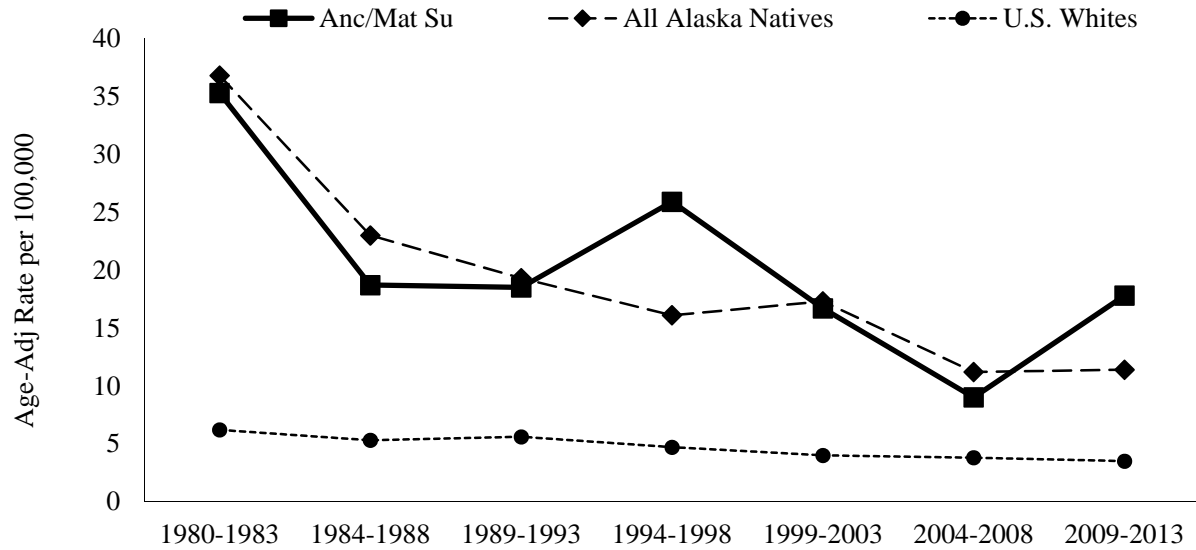


FIGURE 66.

Data Source: Table 11b.

**Age-Adjusted Mortality Rates for Homicide
Anchorage/ MatSu vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)**

**FIGURE 67.**

Data Source: Table 11b.

**Age-Adjusted Mortality Rates for Pneumonia & Influenza
Anchorage/ MatSu vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)**

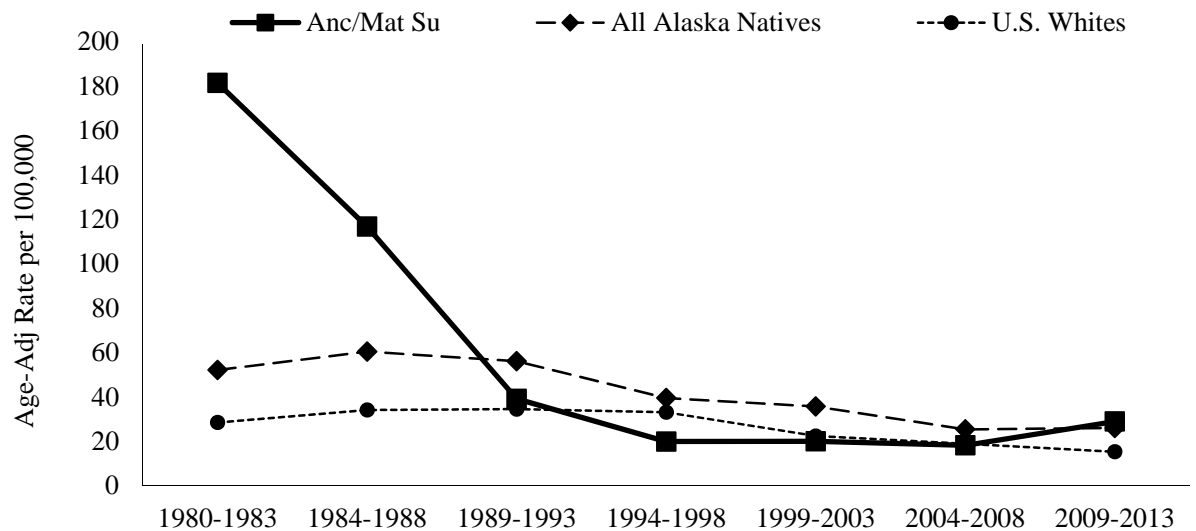
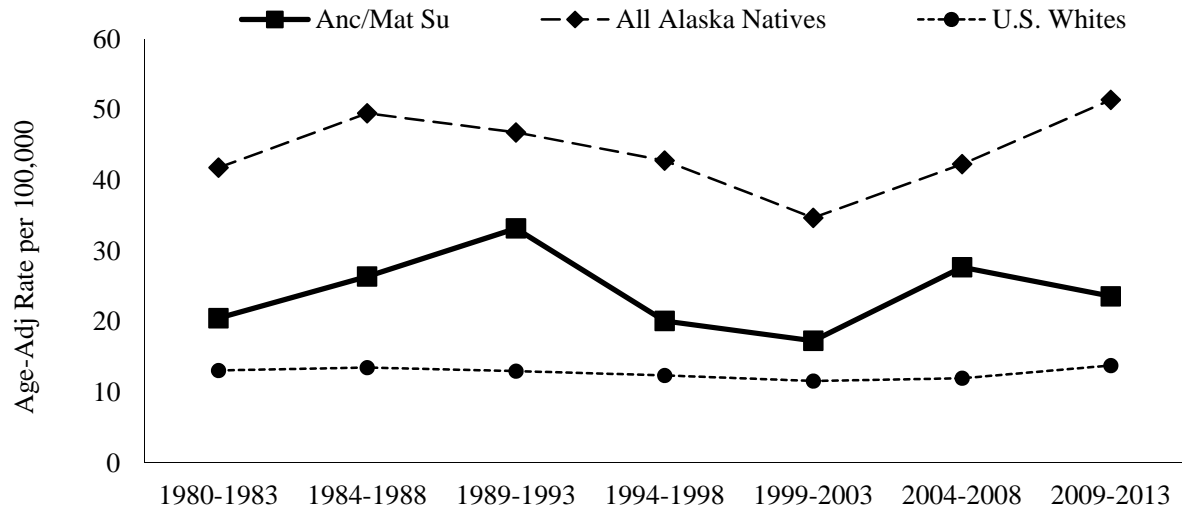


FIGURE 68.

Data Source: Table 11b.

**Age-Adjusted Mortality Rates for Suicide
Anchorage/ MatSu vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)**

**FIGURE 69.**

Data Source: Table 11b.

**Age-Adjusted Mortality Rates for Unintentional Injury
Anchorage/ MatSu vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)**

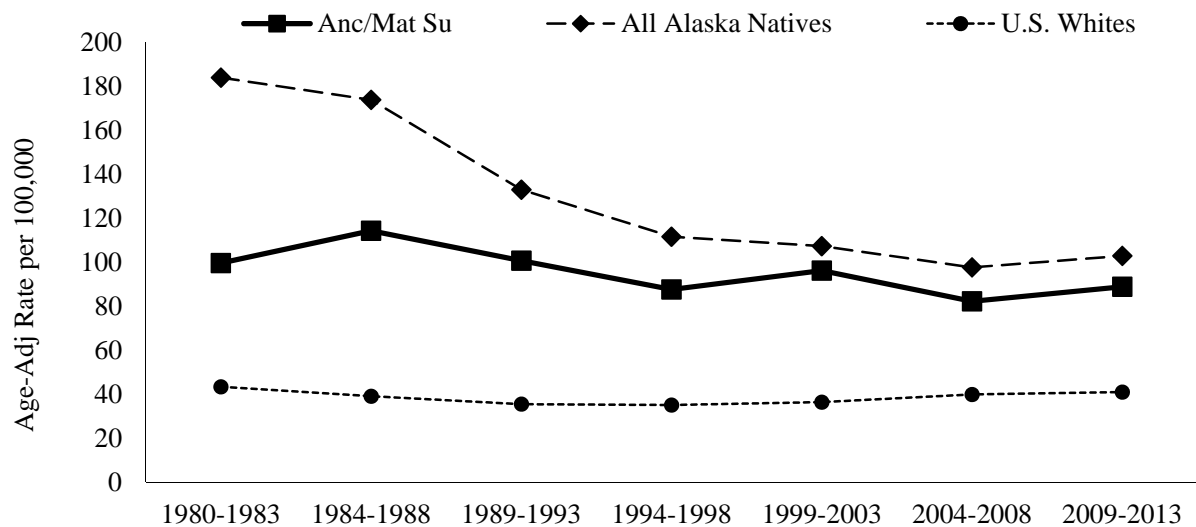


TABLE 12a. **Counts for Leading Causes of Death Among Alaska Natives**
ASU-Combined Rural Service Region
Both Genders

ASU-Combined Rural	Alcohol Abuse	Cancer	Cerebrovascular Disease	Chronic Liver Disease	COPD	Diabetes	Heart Disease	Pneumonia & Influenza	Suicide	Unintentional Injury	All-Cause
1980-1983 ^a	7	35	11	11	<5	<5	52	5	12	66	259
1984-1988	5	66	14	39	8	<5	66	5	27	57	300
1989-1993	5	60	11	12	5	<5	61	10	14	45	290
1994-1998	12	75	11	9	10	<5	74	<5	9	47	318
1999-2003	13	78	17	12	17	<5	57	8	10	37	330
2004-2008	15	89	26	13	20	<5	67	11	15	37	397
2009-2013	8	83	8	14	19	11	69	7	13	43	395

^a 1980-1983 contains only 4 years

Counts are not reported for fewer than 5 deaths

TABLE 12b. **Age-Adjusted Rates^b for Leading Causes of Death Among Alaska Natives**
ASU-Combined Rural Service Region
Both Genders

ASU-Combined Rural	Alcohol Abuse	Cancer	Cerebrovascular Disease	Chronic Liver Disease	COPD	Diabetes	Heart Disease	Pneumonia & Influenza	Suicide	Unintentional Injury	All-Cause
1980-1983 ^a	33.0	233.7	88.4	↑ 57.2	-	-	↑ 418.5	37.2	43.0	↑ 260.7	↑ 1519.7
1984-1988	14.4	↑ 337.5	75.2	↑ 36.9	39.9	-	357.3	39.2	68.9	174.1	1332.8
1989-1993	15.5	269.5	67.0	37.6	25.5	-	327.9	65.9	↓ 27.1	101.0	1234.2
1994-1998	35.1	↑ 320.8	48.6	22.9	45.5	-	289.8	-	↓ 17.8	118.7	1199.8
1999-2003	31.8	251.4	64.3	28.3	66.1	-	212.9	31.8	19.6	↓ 74.5	1070.7
2004-2008	32.4	250.4	↑ 83.4	26.1	61.7	-	198.8	29.0	28.3	75.0	1060.4
2009-2013	11.4	230.2	↓ 26.8	28.4	51.0	32.5	186.9	20.9	↓ 23.9	87.6	967.7
Percent Change	-65%*	-1%	-70%	-50%*	N/A	N/A	-55%*	-44%	-44%*	-66%*	-36%*

Rates are not reported for fewer than 5 deaths

^a 1980-1983 contains only 4 years

*p<0.05

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined

^b Rates per 100,000 population

FIGURE 70. Age-Adjusted Mortality Rates for All-Cause
 Data Source: Table 12b. ASU-Combined Rural vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

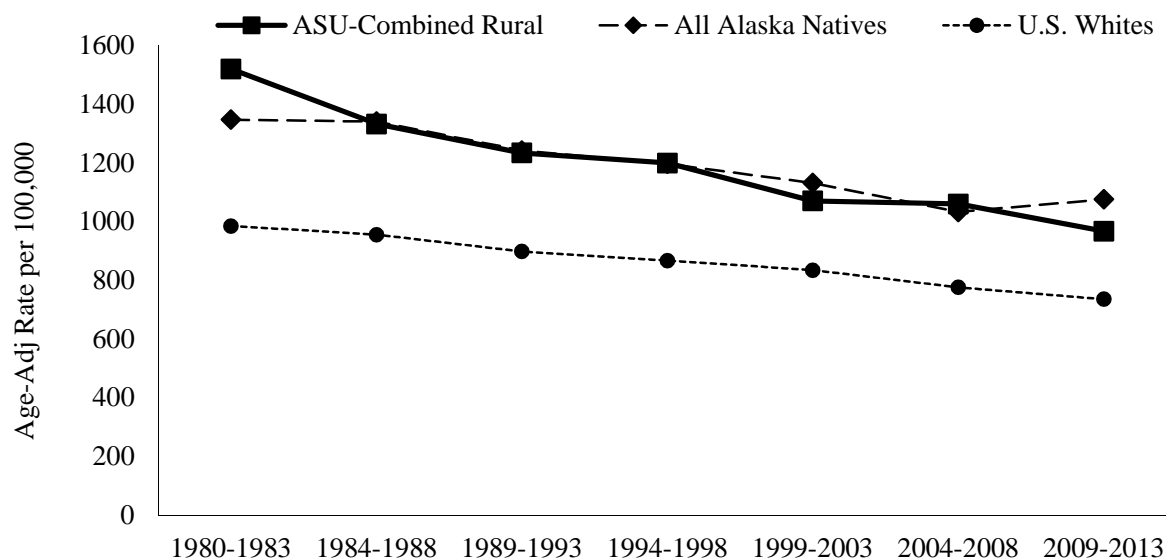


FIGURE 71. Age-Adjusted Mortality Rates for Alcohol Abuse
 Data Source: Table 12b. ASU-Combined Rural vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

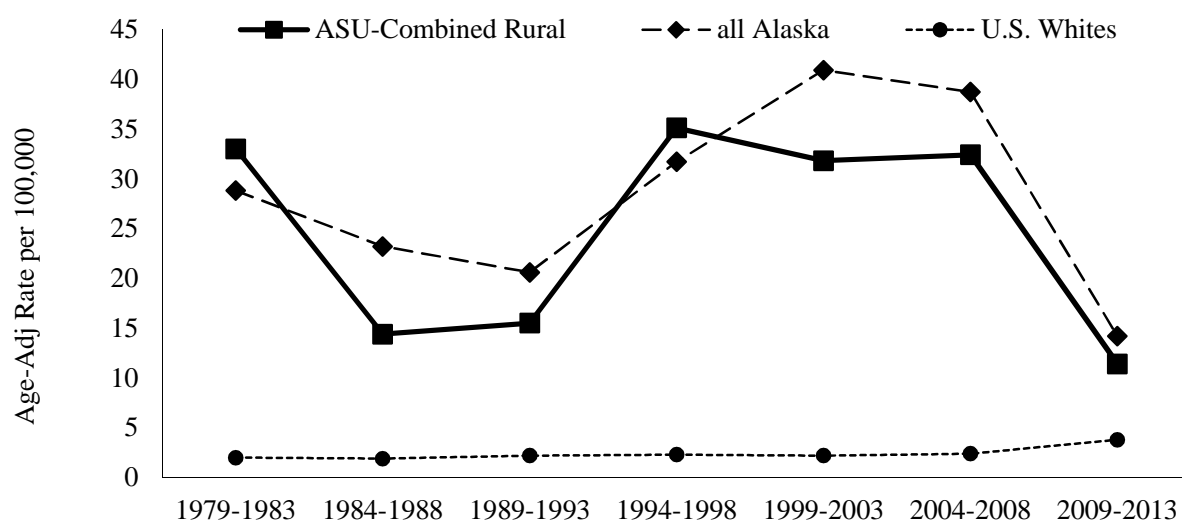


FIGURE 72. Age-Adjusted Mortality Rates for Cancer
 Data Source: Table 12b. ASU-Combined Rural vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

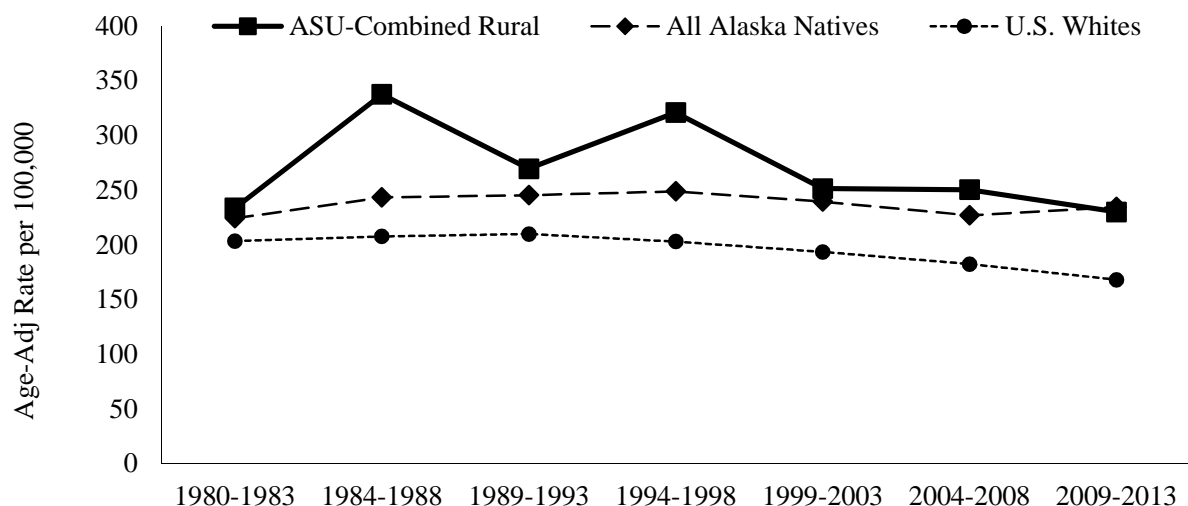


FIGURE 73. Age-Adjusted Mortality Rates for Cerebrovascular Disease
 Data Source: Table 12b. ASU-Combined Rural vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

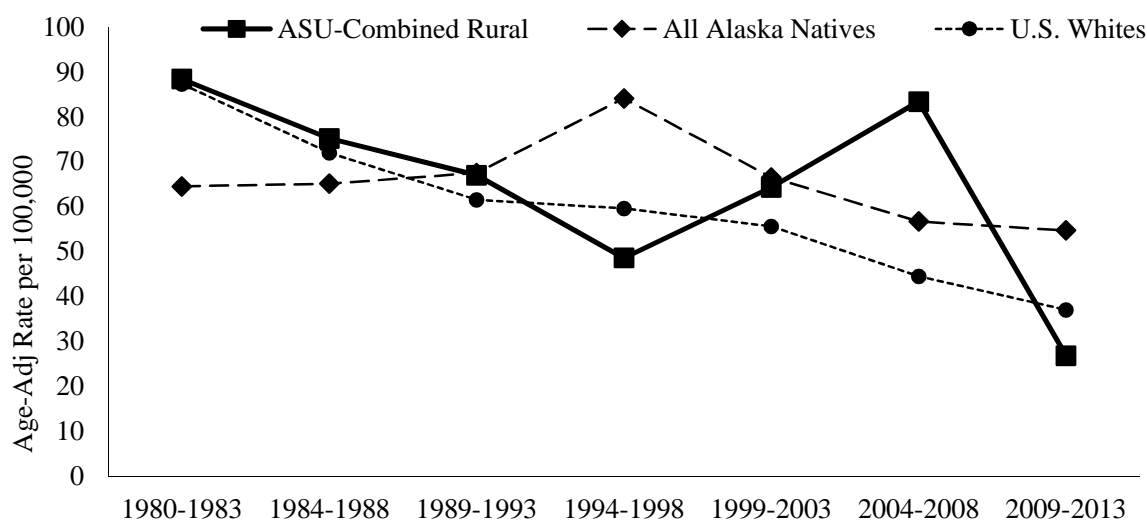


FIGURE 74. Age-Adjusted Mortality Rates for Chronic Liver Disease
 ASU-Combined Rural vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

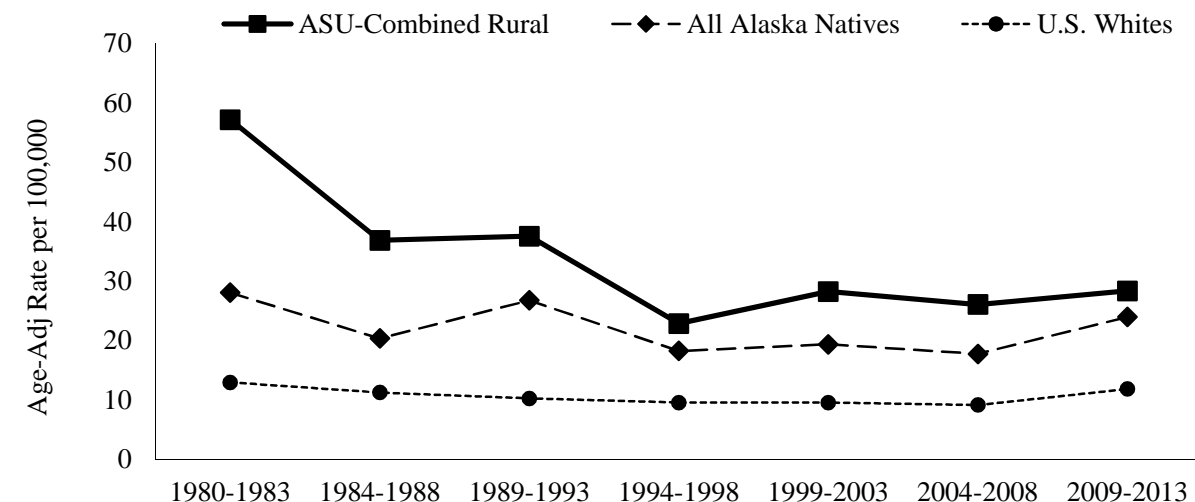


FIGURE 75. Age-Adjusted Mortality Rates for COPD
 ASU-Combined Rural vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

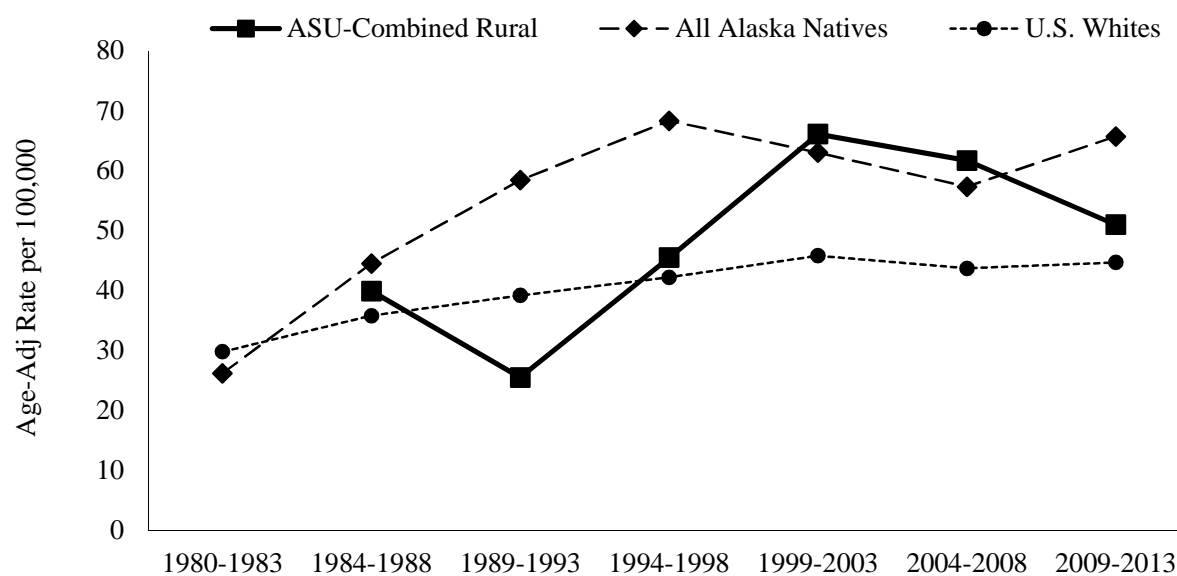


FIGURE 76. Age-Adjusted Mortality Rates for Heart Disease
 ASU-Combined Rural vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

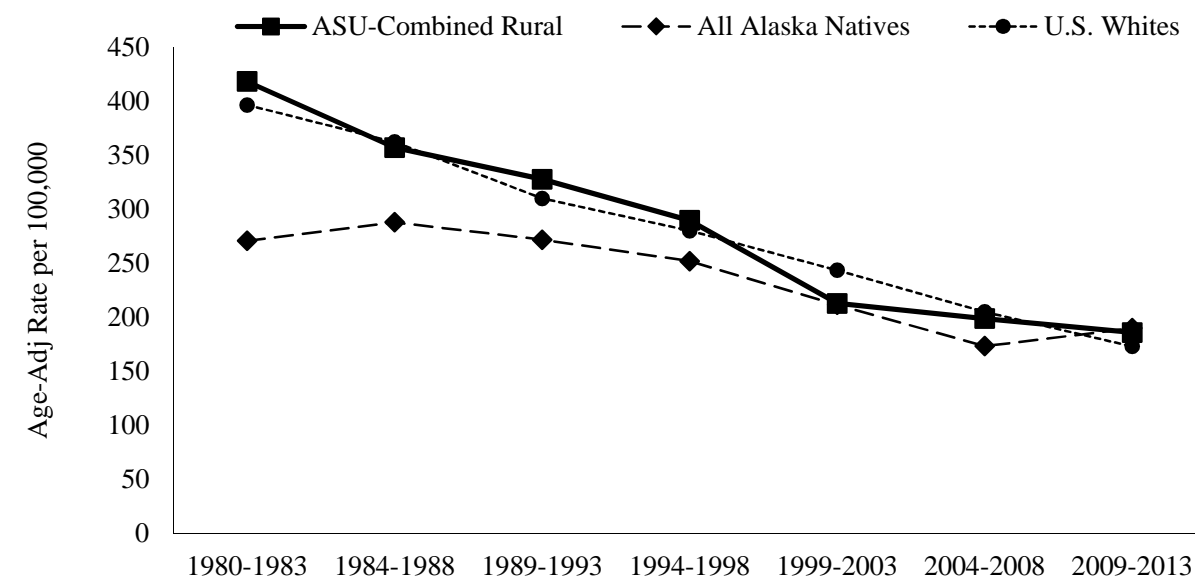


FIGURE 77. Age-Adjusted Mortality Rates for Pneumonia & Influenza
 ASU-Combined Rural vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

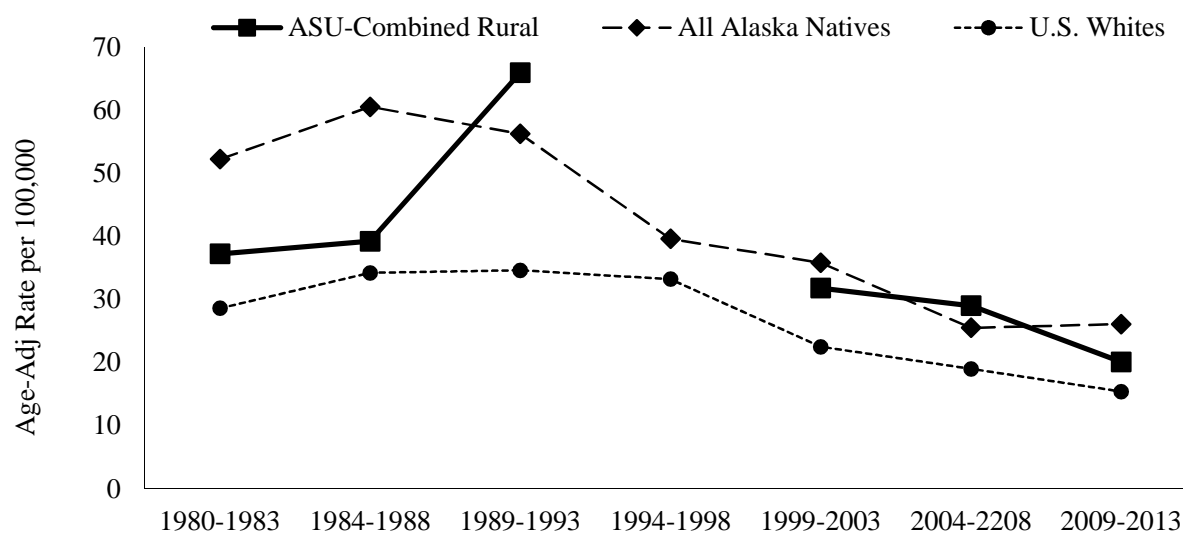


FIGURE 78. Age-Adjusted Mortality Rates for Suicide
ASU-Combined Rural vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

Data Source: Table 12b.

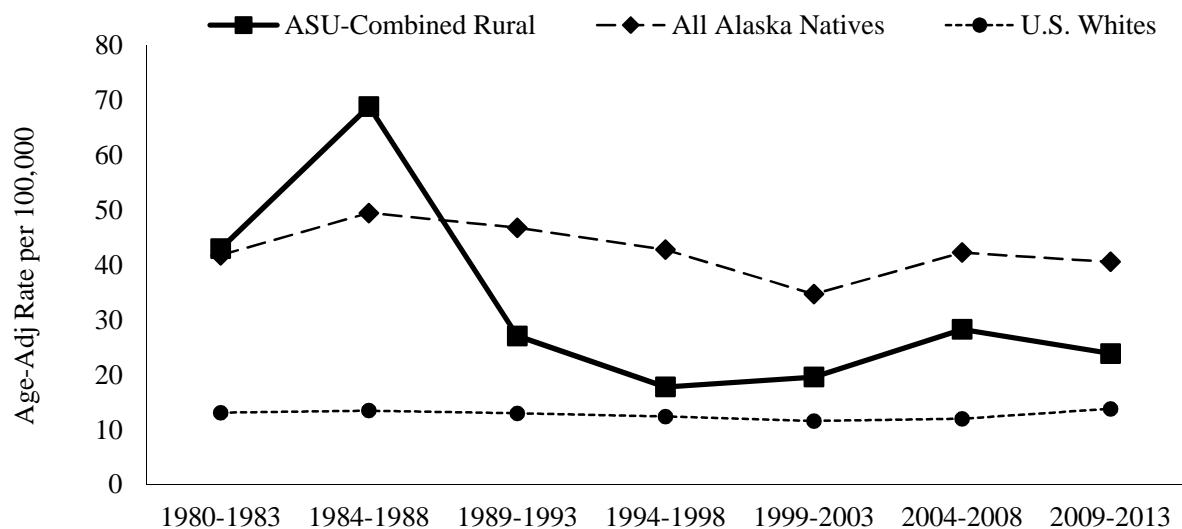


FIGURE 79. Age-Adjusted Mortality Rates for Unintentional Injury
ASU-Combined Rural vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

Data Source: Table 12b.

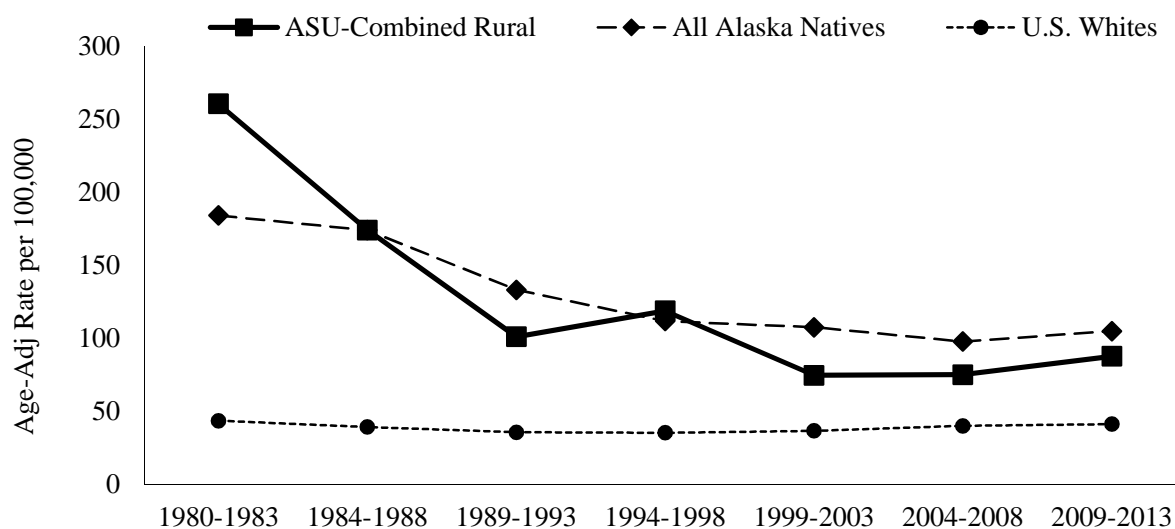


TABLE 13a. Counts for Leading Causes of Death Among Alaska Natives
Arctic Slope Service Region
Both Genders

	Cancer	COPD	Heart Disease	Suicide	Unintentional Injury	All-Cause
Arctic Slope						
1980-1983 ^a	10	<5	13	<5	15	77
1984-1988	26	<5	10	6	27	117
1989-1993	20	7	20	10	22	113
1994-1998	30	7	25	11	23	130
1999-2003	28	8	17	7	16	120
2004-2008	42	12	28	14	16	163
2009-2013	47	12	21	8	13	168

^a 1980-1983 contains only 4 years

Counts are not reported for fewer than 5 deaths

TABLE 13b. Age-Adjusted Rates^b for Leading Causes of Death Among Alaska Natives
Arctic Slope Service Region
Both Genders

	Cancer	COPD	Heart Disease	Suicide	Unintentional Injury	All-Cause
Arctic Slope						
1980-1983 ^a	230.3	-	519.1	-	147.8	1249.7
1984-1988	↑418.8	-	198.1	32.5	188.2	1436.5
1989-1993	250.2	131.7	↑493.8	50.4	116.8	1349.5
1994-1998	334.0	127.2	284.9	52.5	113.7	1339.8
1999-2003	261.0	111.1	218.4	30.4	99.1	1096.1
2004-2008	↑422.3	163.3	↑321.1	69.1	109.1	↑1591.2
2009-2013	↑305.4	99.4	↓131.3	↓29.0	116.8	1063.8
Percent Change	33%	N/A	-75%	N/A	-21%	-15%*

Rates are not reported for fewer than 5 deaths

^a 1980-1983 contains only 4 years

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined

^b Rates per 100,000 population

*p<0.05

FIGURE 80. Age-Adjusted Mortality Rates for All-Cause
Arctic Slope vs All Alaska Natives vs U.S. Whites
Data Source: Table 13b.
by Five Year Intervals (1980-2013)

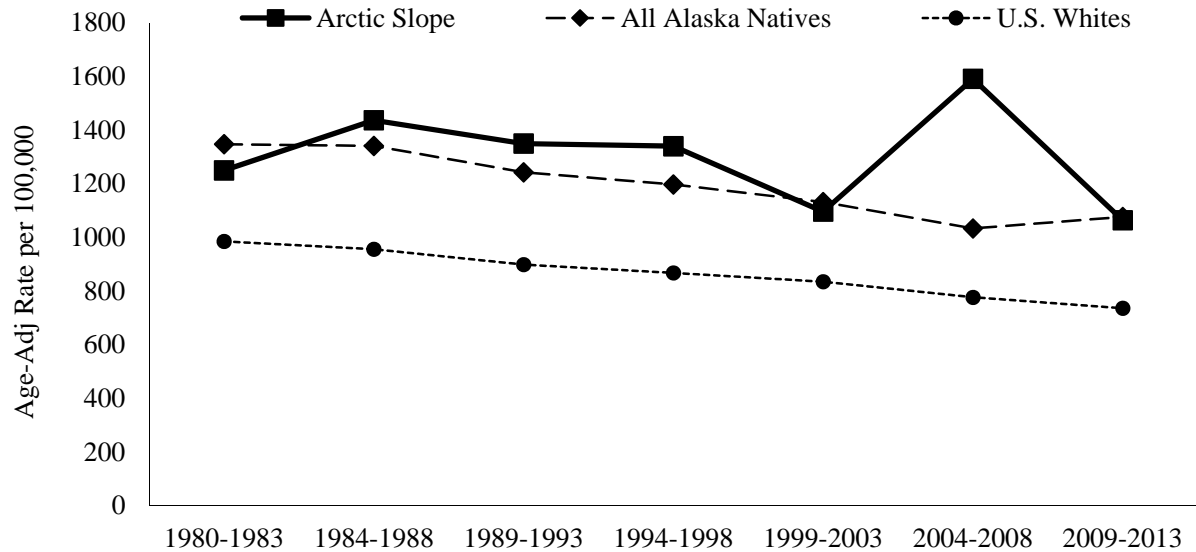


FIGURE 81. Age-Adjusted Mortality Rates for Cancer
Arctic Slope vs All Alaska Natives vs U.S. Whites
Data Source: Table 13b.
by Five Year Intervals (1980-2013)

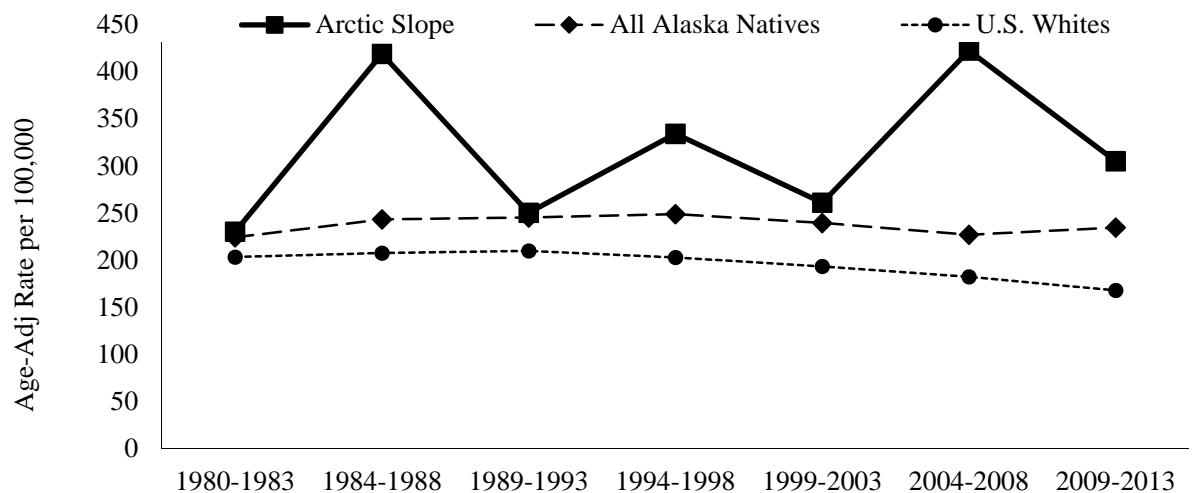


FIGURE 82. Age-Adjusted Mortality Rates for COPD
Arctic Slope vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

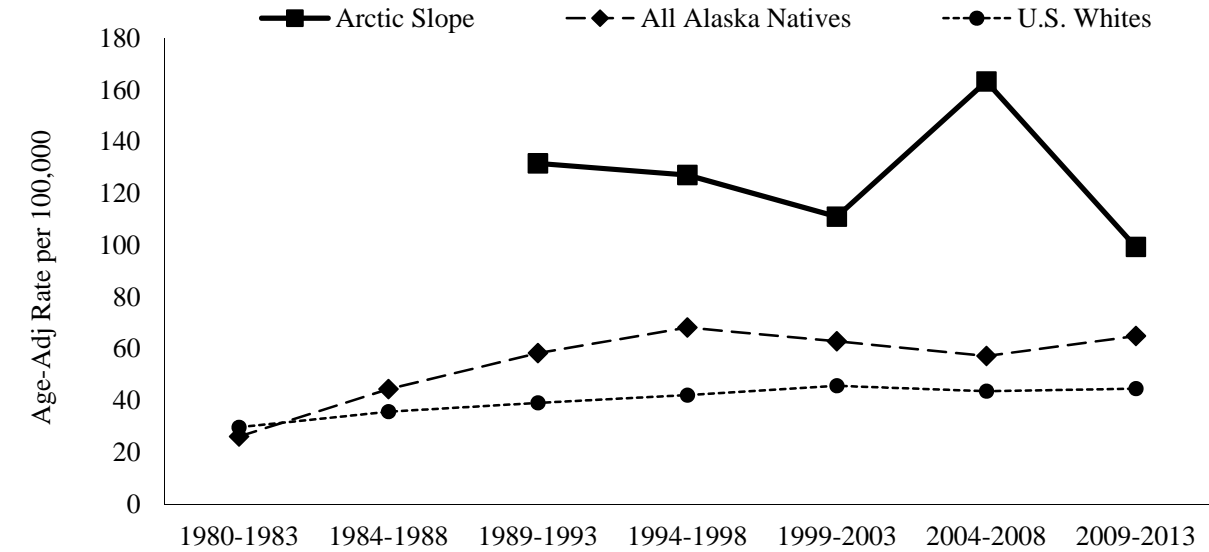


FIGURE 83. Age-Adjusted Mortality Rates for Heart Disease
Arctic Slope vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

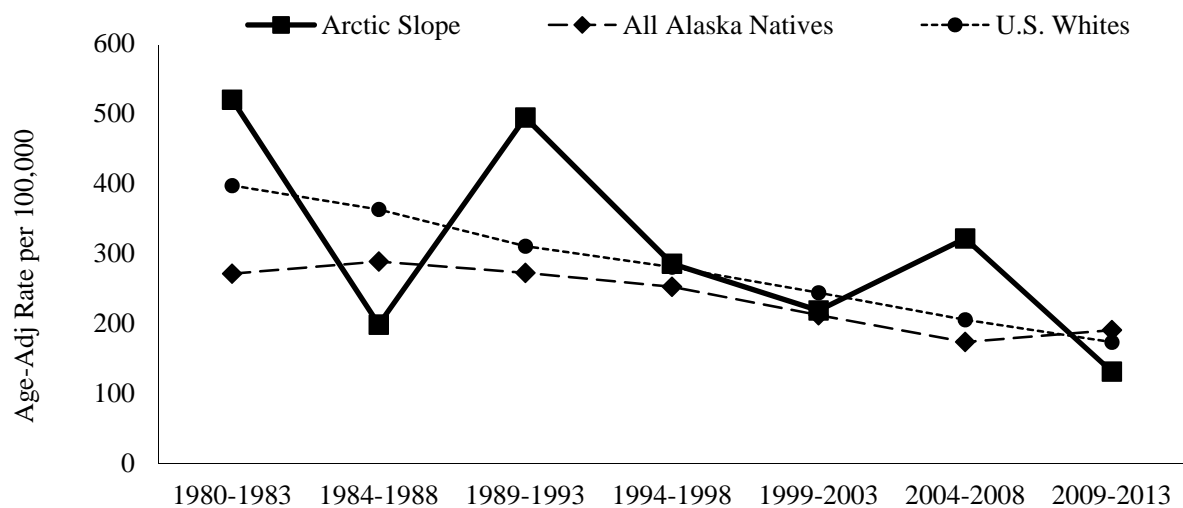


FIGURE 84. Age-Adjusted Mortality Rates for Suicide
Arctic Slope vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

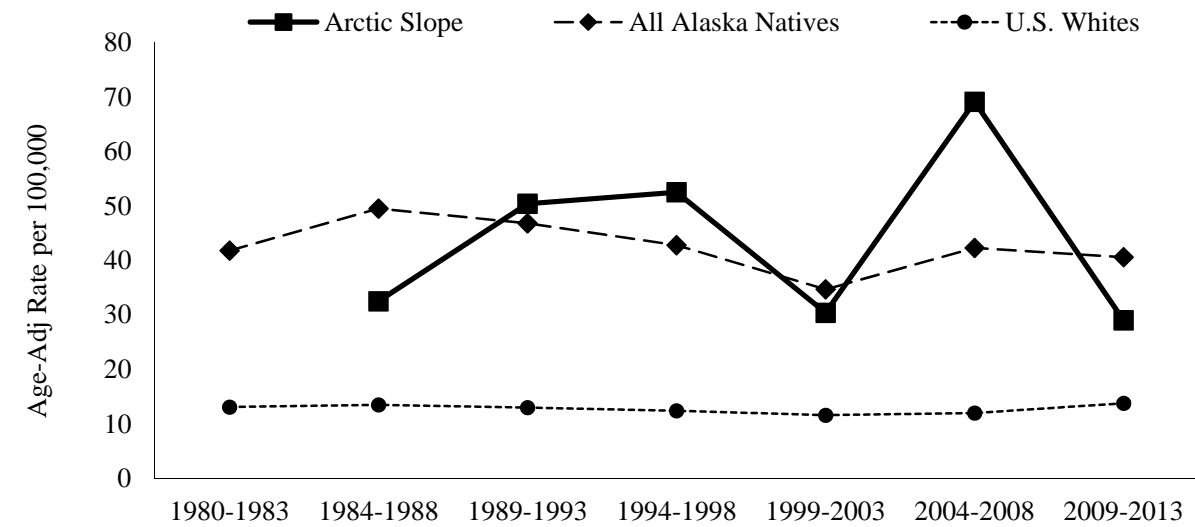
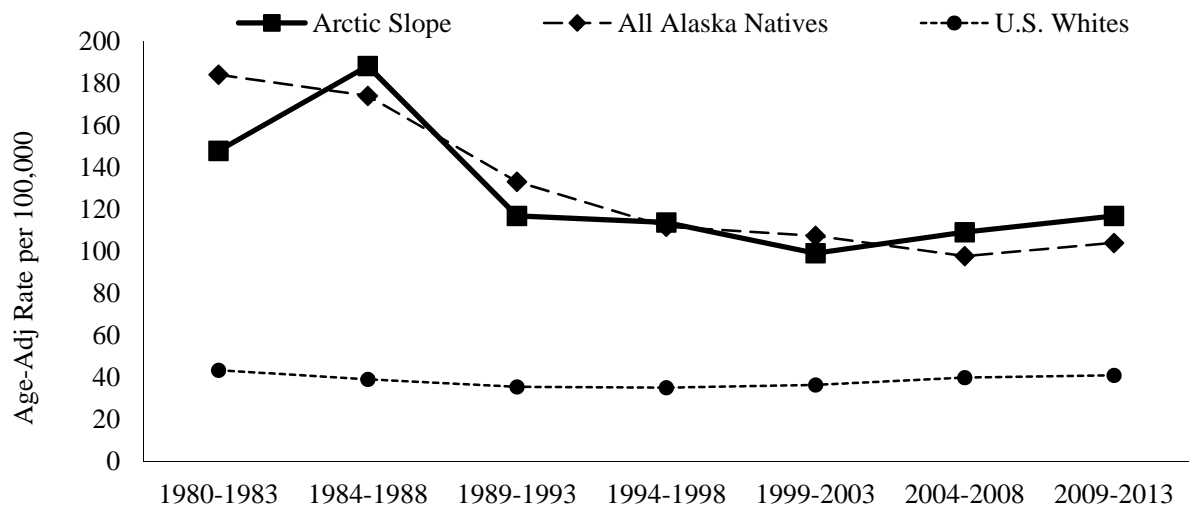


FIGURE 85. Age-Adjusted Mortality Rates for Unintentional Injury
Arctic Slope vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)



**TABLE 14a. Counts for Leading Causes of Death Among Alaska Natives
Bristol Bay Service Region
Both Genders**

	Cancer	COPD	Heart Disease	Suicide	Unintentional Injury	All-Cause
Bristol Bay						
1980-1983 ^a	12	<5	9	<5	45	116
1984-1988	26	<5	30	8	53	160
1989-1993	30	13	28	12	42	180
1994-1998	31	12	23	10	31	169
1999-2003	40	11	26	6	48	209
2004-2008	42	10	29	6	41	191
2009-2013	50	9	36	12	40	237

^a 1980-1983 contains only 4 years

Counts are not reported for fewer than 5 deaths

**TABLE 14b. Age-Adjusted Rates^b for Leading Causes of Death Among Alaska Natives
Bristol Bay Service Region
Both Genders**

	Cancer	COPD	Heart Disease	Suicide	Unintentional Injury	All-Cause
Bristol Bay						
1980-1983 ^a	177.3	-	↓118.1	↑51.9	↑318.2	↓983.1
1984-1988	233.5	-	335.3	29.4	↑278.4	1108.1
1989-1993	263.2	↑117.4	271.1	46.5	168.6	1218.6
1994-1998	205.8	93.7	172.1	37.6	132.6	1088.5
1999-2003	251.6	74.8	207.0	24.2	↑179.9	1216.6
2004-2008	241.1	65.6	173.9	22.3	↑171.6	1063.9
2009-2013	240.9	52.4	218.5	52.8	↑193.4	1166.7
Percent Change	-36%*	N/A	85%*	2%	-39%*	19%*

Rates are not reported for fewer than 5 deaths

^a 1980-1983 contains only 4 years

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined

^b Rates per 100,000 population

*p<0.05

FIGURE 86. Age-Adjusted Mortality Rates for All-Cause
Bristol Bay vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

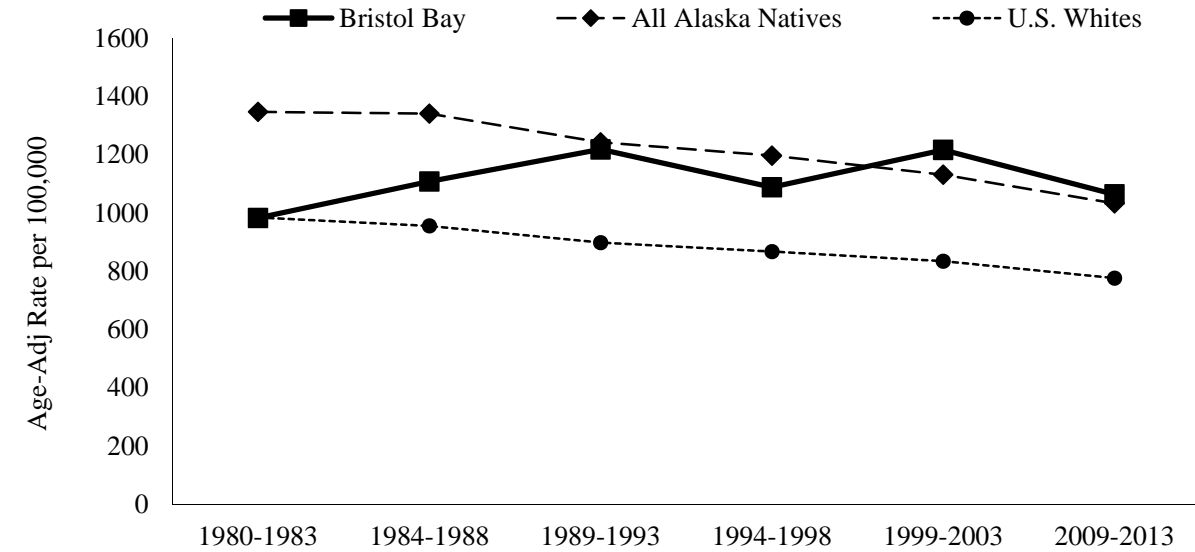


FIGURE 87. Age-Adjusted Mortality Rates for Cancer
Bristol Bay vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

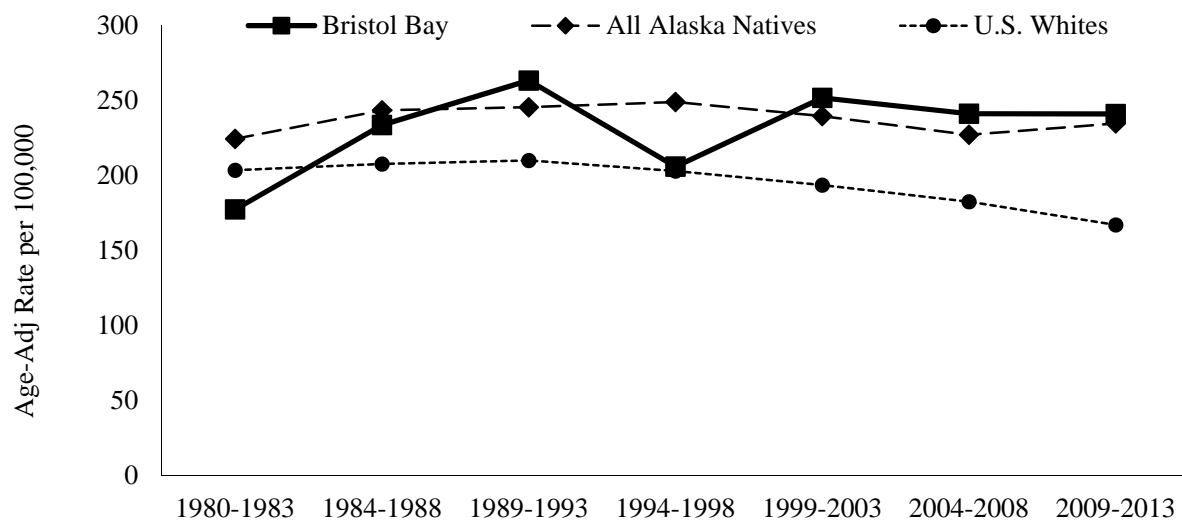


FIGURE 88. Age-Adjusted Mortality Rates for Cerebrovascular Disease
Bristol Bay vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

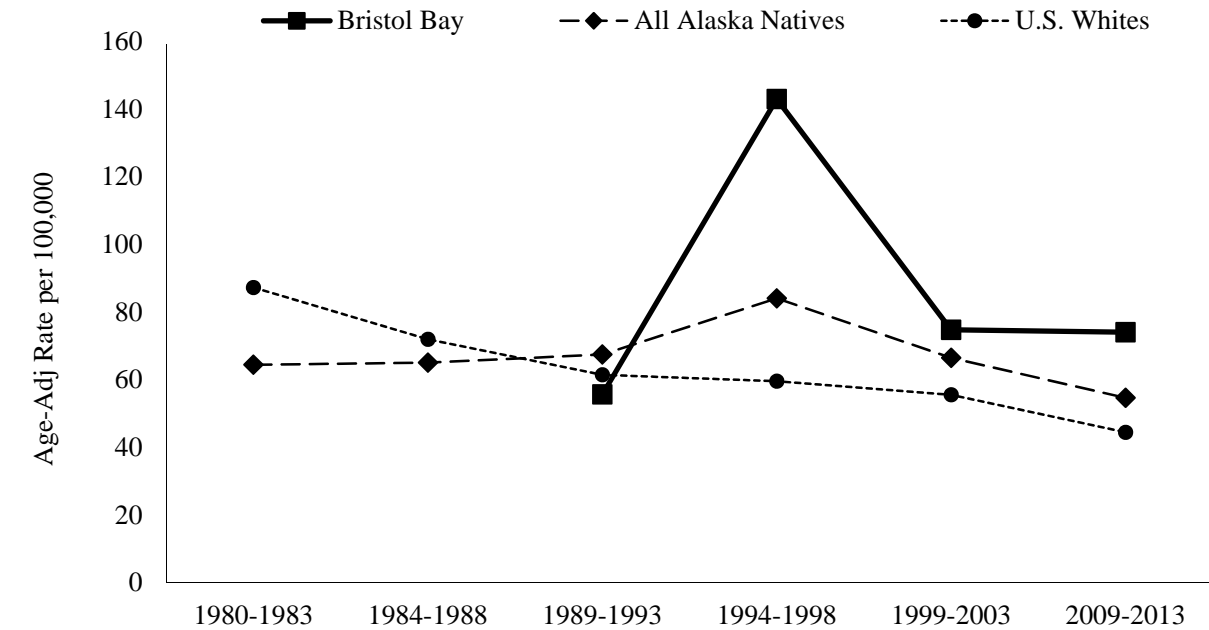


FIGURE 89. Age-Adjusted Mortality Rates for COPD
Bristol Bay vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

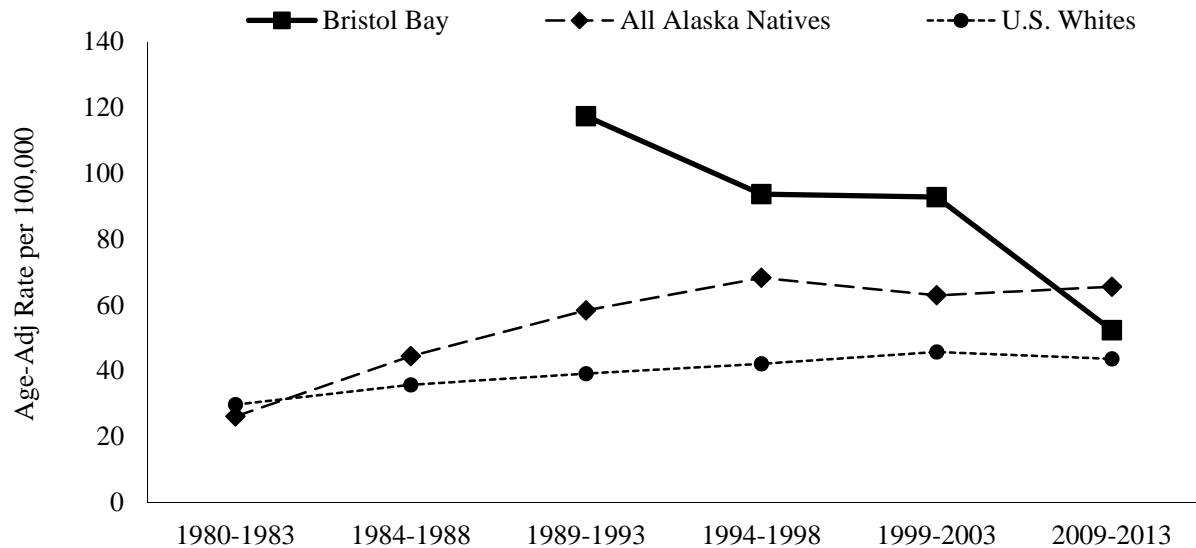


FIGURE 90. Age-Adjusted Mortality Rates for Heart Disease
Bristol Bay vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

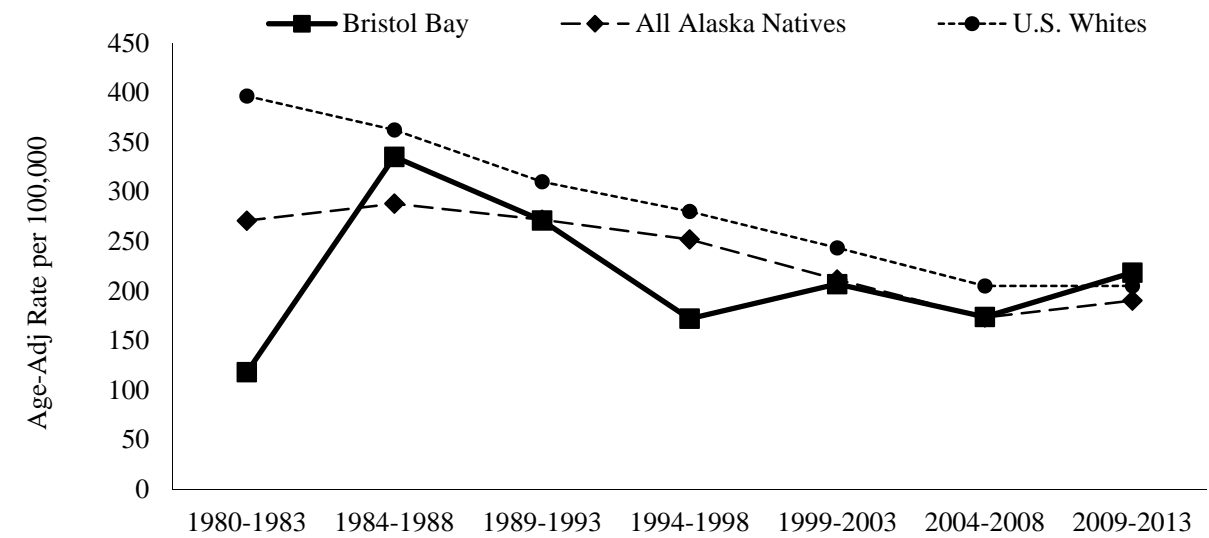


FIGURE 91. Age-Adjusted Mortality Rates for Suicide
Bristol Bay vs All Alaska Natives
by Five Year Intervals (1980-2013)

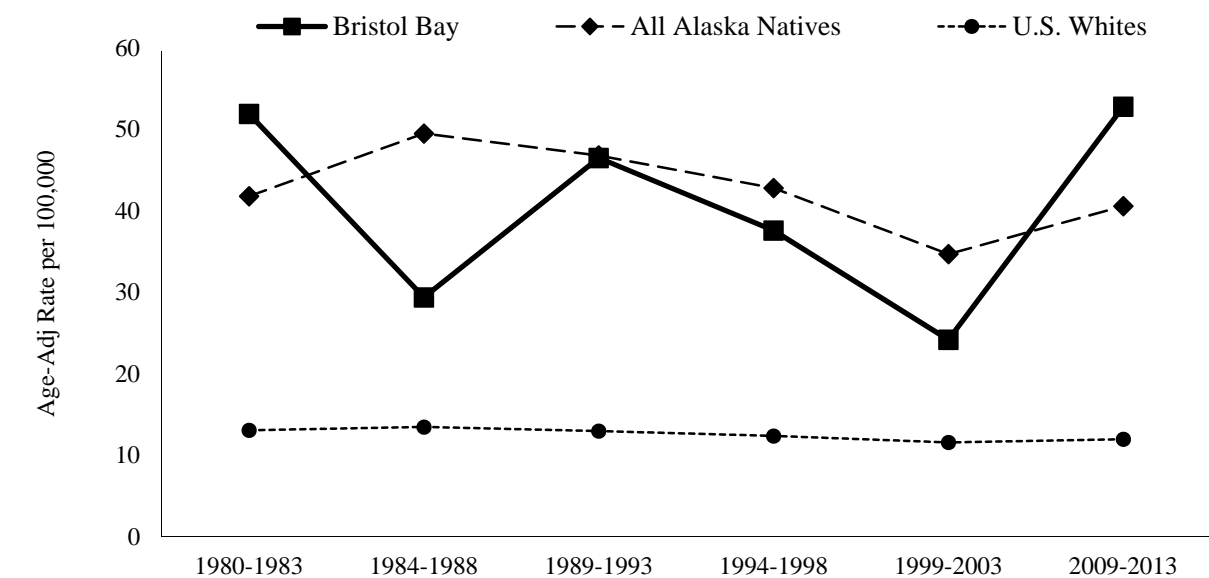


FIGURE 92. Age-Adjusted Mortality Rates for Unintentional Injury
Bristol Bay vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)
Data Source: Table 14b.

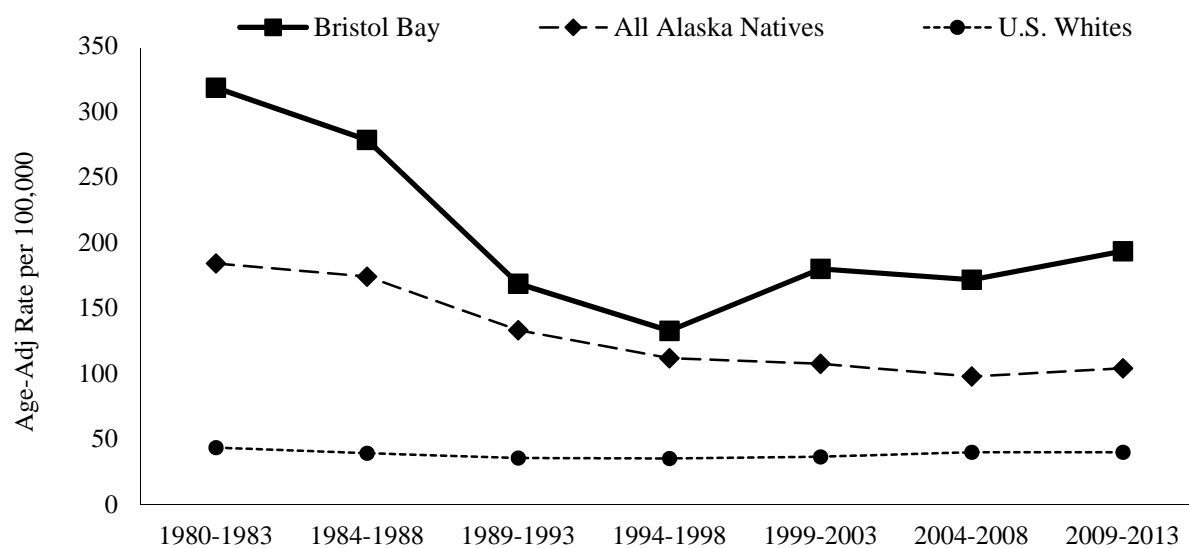


TABLE 15a. **Counts for Leading Causes of Death Among Alaska Natives**
Copper River/ Prince William Sound Service Region
Both Genders

Copper River/ Prince William Sound	Cancer	Heart Disease	Unintentional Injury	All-Cause
1980-1983 ^a	5	7	15	50
1984-1988	11	10	9	53
1989-1993	11	8	10	49
1994-1998	6	9	12	54
1999-2003	19	8	9	67
2004-2008	15	10	6	68
2009-2013	20	9	12	66

^a 1980-1983 contains only 4 years

Counts are not reported for fewer than 5 deaths

TABLE 15b. **Age-Adjusted Rates^b for Leading Causes of Death Among Alaska Natives**
Copper River/ Prince William Sound Service Region
Both Genders

Copper River/ Prince William Sound	Cancer	Heart Disease	Unintentional Injury	All-Cause
1980-1983 ^a	171.6	287	↑ 427.1	1621.4
1984-1988	296.0	257.4	183.7	1203.9
1989-1993	268.7	225.5	145.9	1069.5
1994-1998	122.1	180.5	↑ 222.3	1024.9
1999-2003	337.1	170.3	119.7	1208.6
2004-2008	251.2	160.9	89.5	1055.5
2009-2013	↑ 335.5	174.5	↑ 164.0	1007.9
Percent Change	96%	-39%	-62%*	-38%*

Rates are not reported for fewer than 5 deaths

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined

^a 1980-1983 contains only 4 years

^b Rates per 100,000 population

*p<0.05

FIGURE 93. Age-Adjusted Mortality Rates for All-Cause
Copper River/ PWS vs All Alaska Natives vs U.S. Whites
Data Source: Table 15b.
by Five Year Intervals (1980-2013)

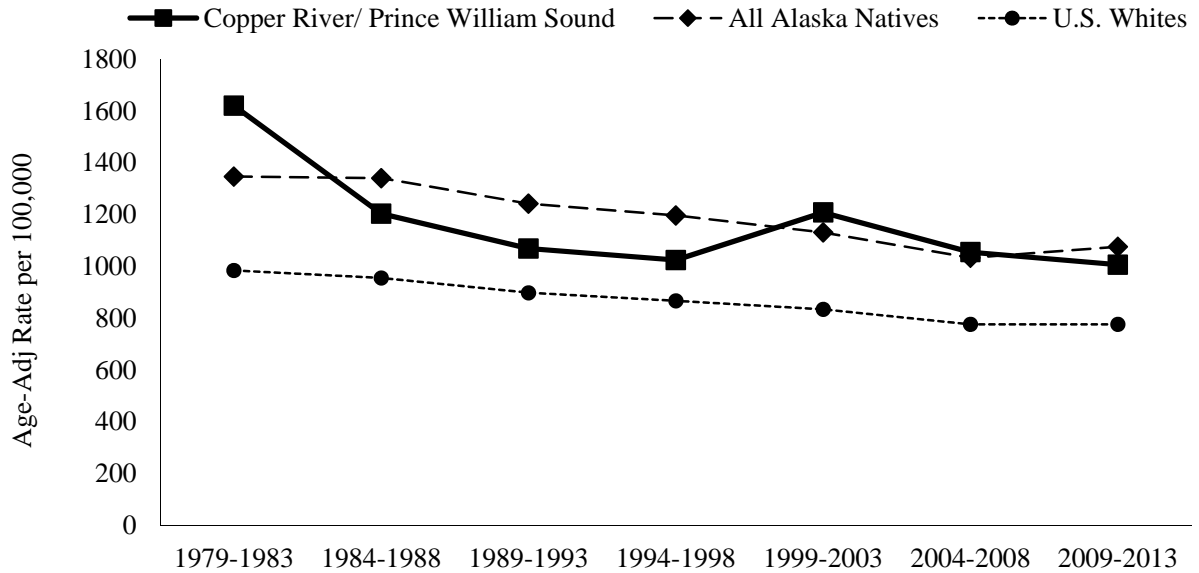


FIGURE 94. Age-Adjusted Mortality Rates for Cancer
Copper River/ PWS vs All Alaska Natives vs U.S. Whites
Data Source: Table 15b.
by Five Year Intervals (1980-2013)

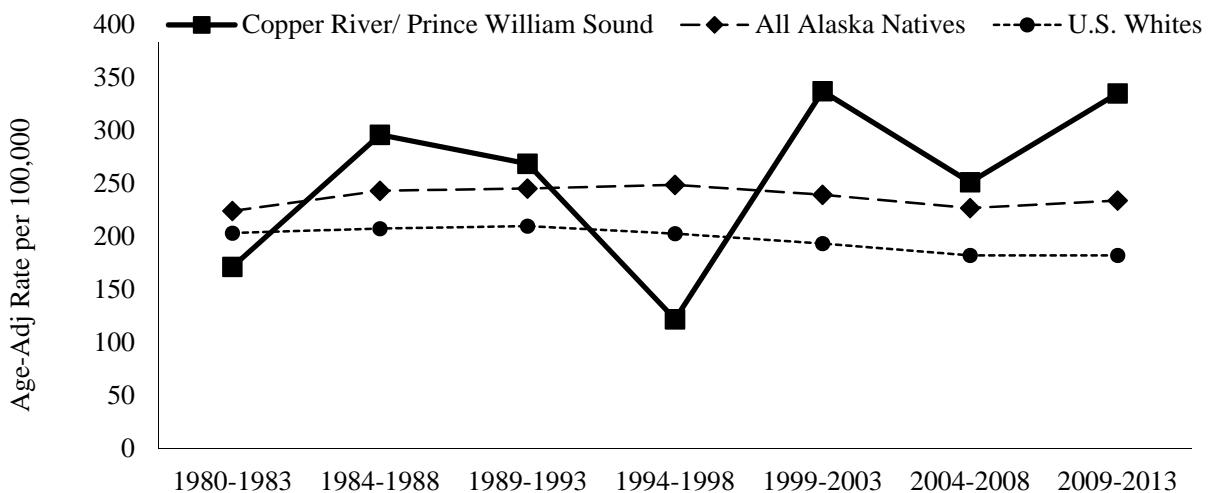


FIGURE 95. Age-Adjusted Mortality Rates for Heart Disease
Copper River/ PWS vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

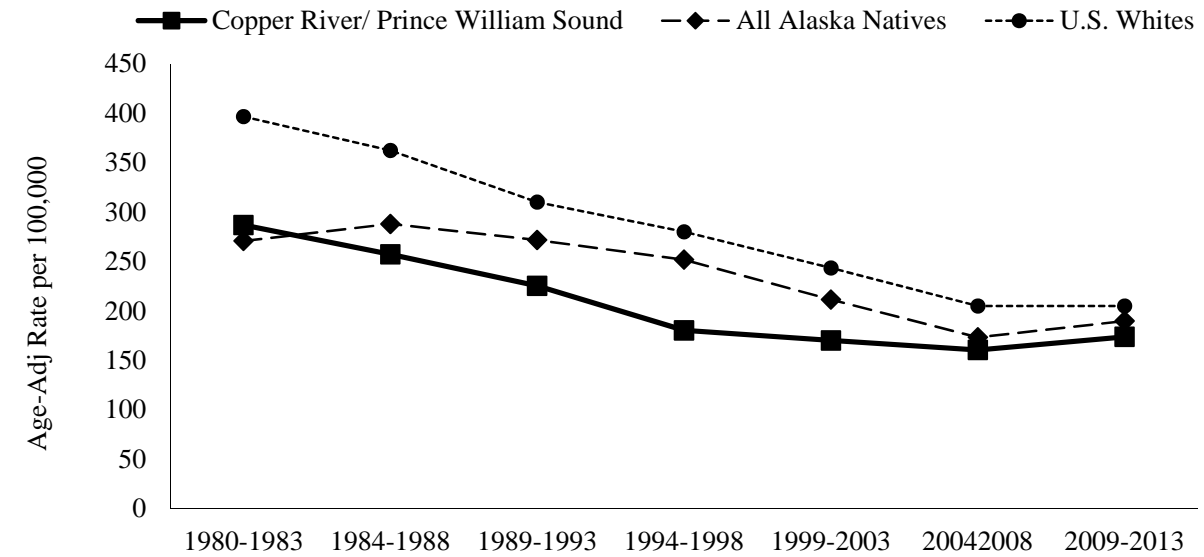


FIGURE 96. Age-Adjusted Mortality Rates for Unintentional Injury
Copper River/ PWS vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

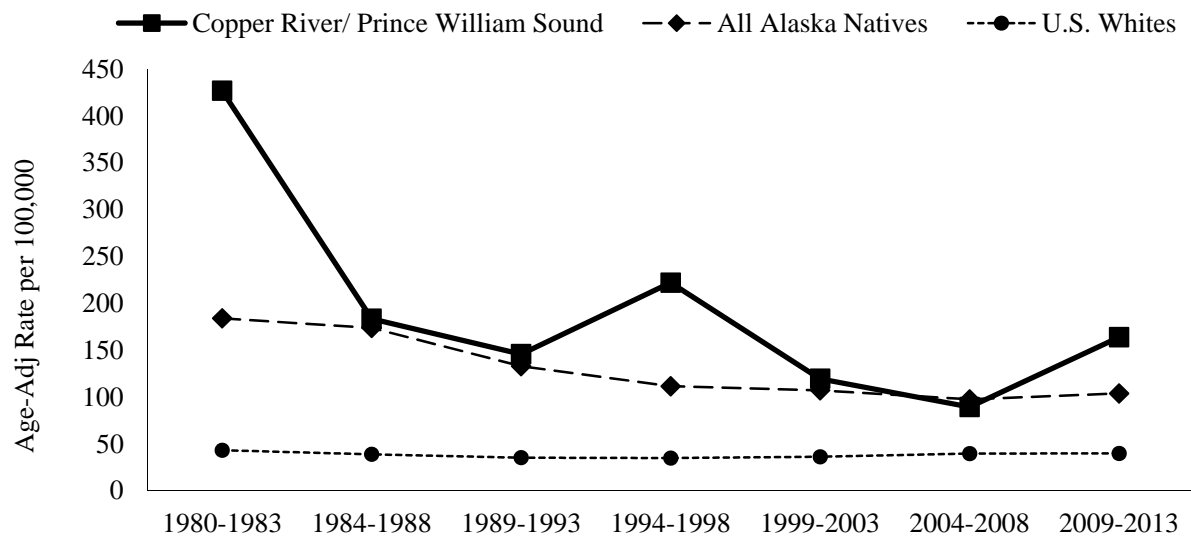


TABLE 16a. **Counts for Leading Causes of Death Among Alaska Natives**
Interior Service Region
Both Genders

	Alcohol Abuse	Cancer	Cerebrovascular Disease	Chronic Liver Disease	COPD	Heart Disease	Pneumonia & Influenza	Suicide	Unintentional Injury	All-Cause
Interior										
1980-1983 ^a	9	28	7	5	8	30	12	16	58	258
1984-1988	11	49	18	<5	8	68	15	24	85	361
1989-1993	9	64	13	8	5	61	16	38	62	375
1994-1998	17	66	16	10	12	65	5	33	66	373
1999-2003	33	66	18	12	17	52	7	31	66	386
2004-2008	40	93	17	9	15	47	10	27	63	446
2009-2013	9	100	17	16	26	85	17	27	69	475

^a 1980-1983 contains only 4 years

Counts are not reported for fewer than 5 deaths

TABLE 16b. **Age-Adjusted Rates^b for Leading Causes of Death Among Alaska Natives**
Interior Service Region
Both Genders

	Alcohol Abuse	Cancer	Cerebrovascular Disease	Chronic Liver Disease	COPD	Heart Disease	Pneumonia & Influenza	Suicide	Unintentional Injury	All-Cause
Interior										
1980-1983 ^a	48.7	237.4	68.5	24.5	↑ 69.8	264.1	72.2	↑ 59.8	↑ 242.9	↑ 1511.9
1984-1988	33.6	225.1	96.3	-	56.8	351.1	94.2	51.2	↑ 248.2	↑ 1465.7
1989-1993	23.4	250.1	48.2	22.4	↓ 20.6	272.0	52.7	↑ 73.4	132.7	1192.7
1994-1998	42.7	233.6	78.3	24.8	48.8	258.8	34.3	55.3	127.4	1153.5
1999-2003	↑ 72.8	205.2	55.9	25.0	65.4	170.4	22.2	↑ 49.5	118.9	1021.8
2004-2008	↑ 74.0	228.7	48.1	16.8	44.3	↓ 124.8	30.9	41.1	110.7	1000.1
2009-2013	15.8	212.1	↓ 39.1	27.7	62.9	182.6	39.1	39.1	114.3	962.3
Percent Change	-68%*	-11%	-43%	13%	-10%	-31%*	-46%	-35%	-53%*	-36%*

Rates are not reported for fewer than 5 deaths

^a 1980-1983 contains only 4 years

*p<0.05

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined

^b Rates per 100,000 population

FIGURE 97. Age-Adjusted Mortality Rates for All-Cause Interior vs All Alaska Natives vs U.S. Whites by Five Year Intervals (1980-2013)
Data Source: Table 16b.

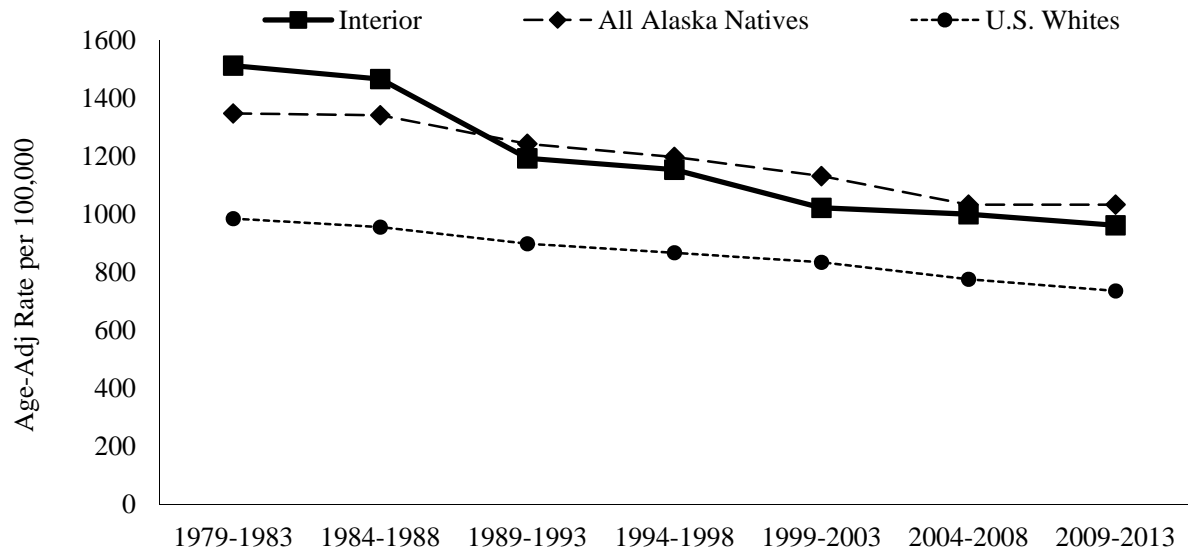


FIGURE 98. Age-Adjusted Mortality Rates for Alcohol Abuse Interior vs All Alaska Natives vs U.S. Whites by Five Year Intervals (1980-2013)
Data Source: Table 16b.

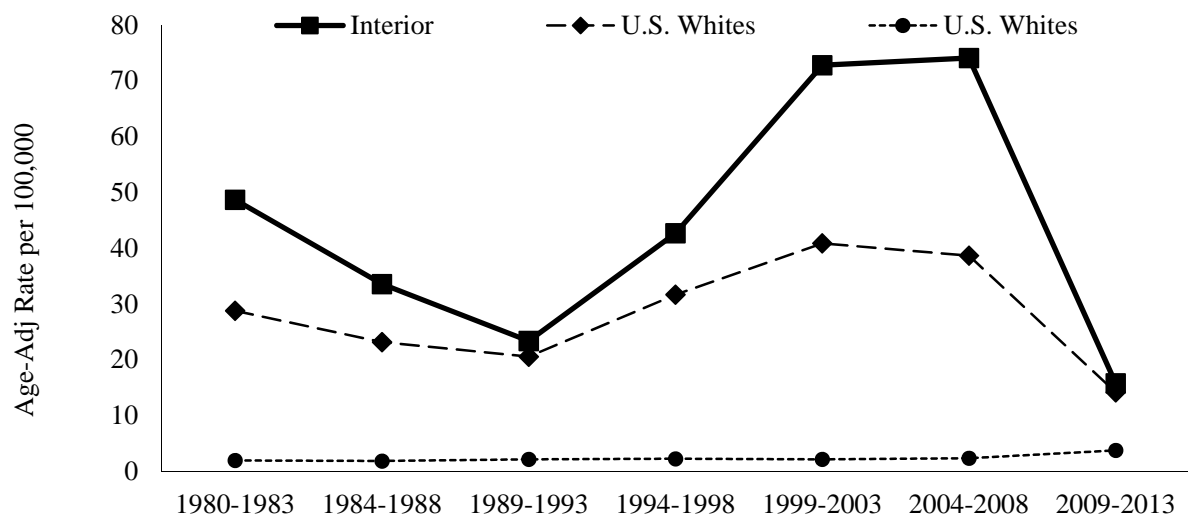


FIGURE 99. Age-Adjusted Mortality Rates for Cancer
Interior vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

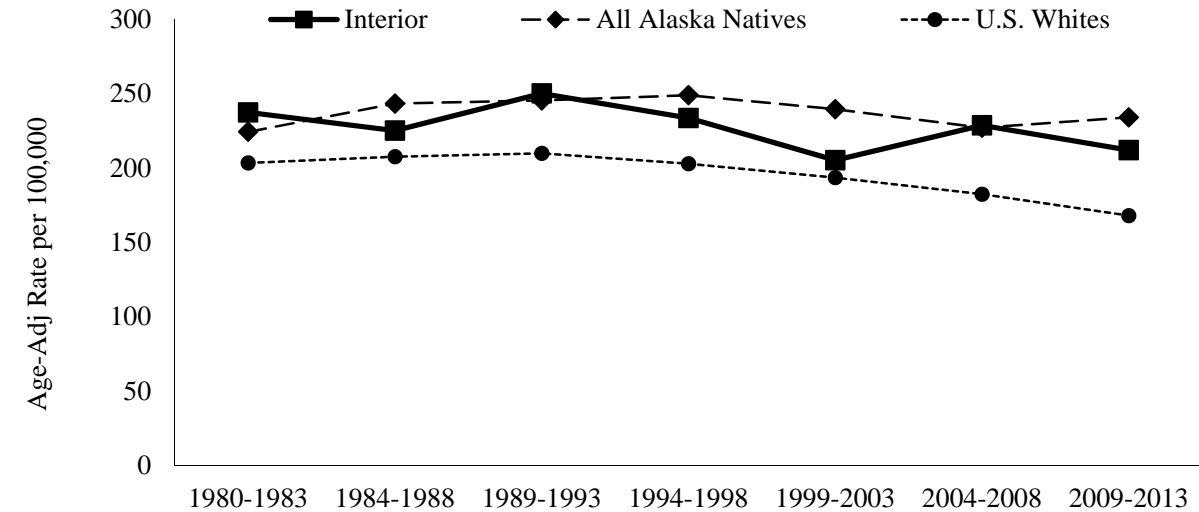


FIGURE 100. Age-Adjusted Mortality Rates for Cerebrovascular Disease
Interior vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

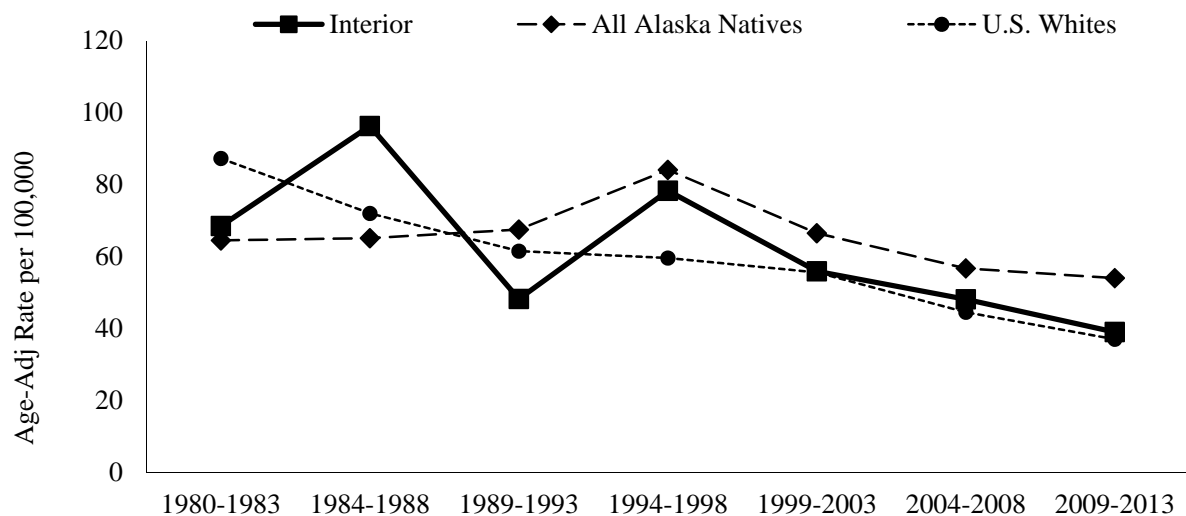


FIGURE 101. Age-Adjusted Mortality Rates for Chronic Liver Disease
Interior vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

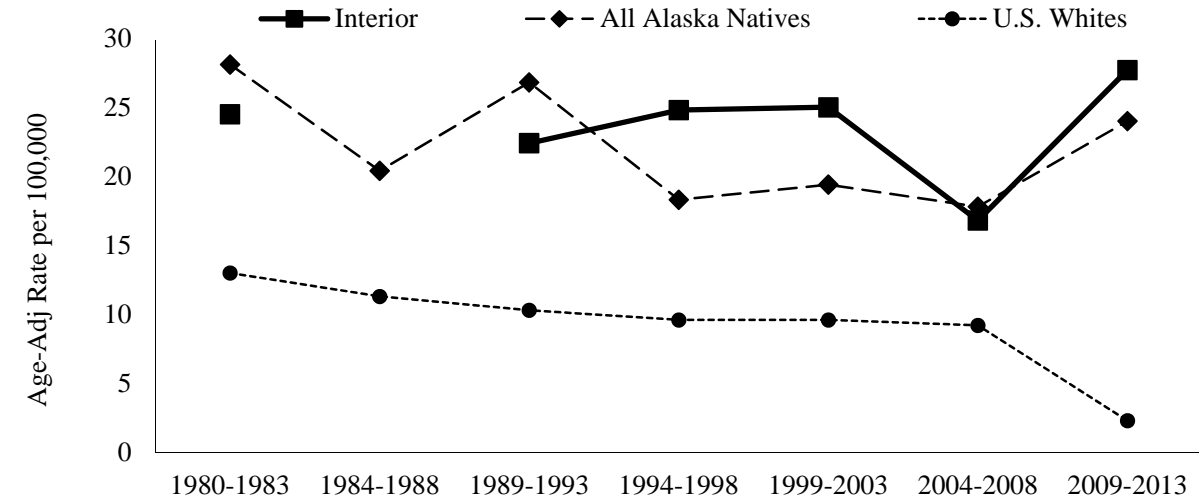


FIGURE 102. Age-Adjusted Mortality Rates for COPD
Interior vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

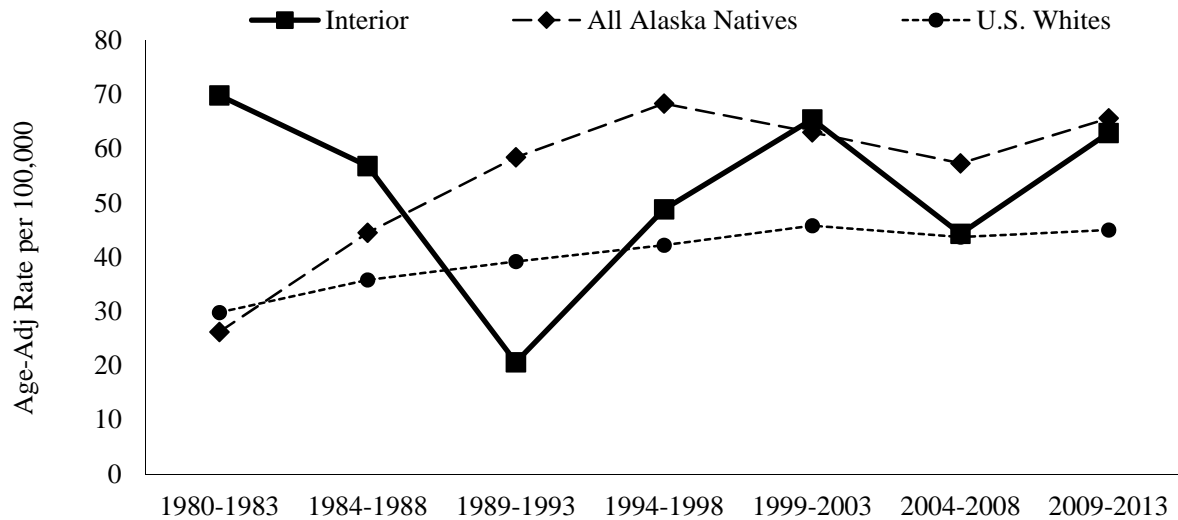


FIGURE 103. Age-Adjusted Mortality Rates for Heart Disease
Interior vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

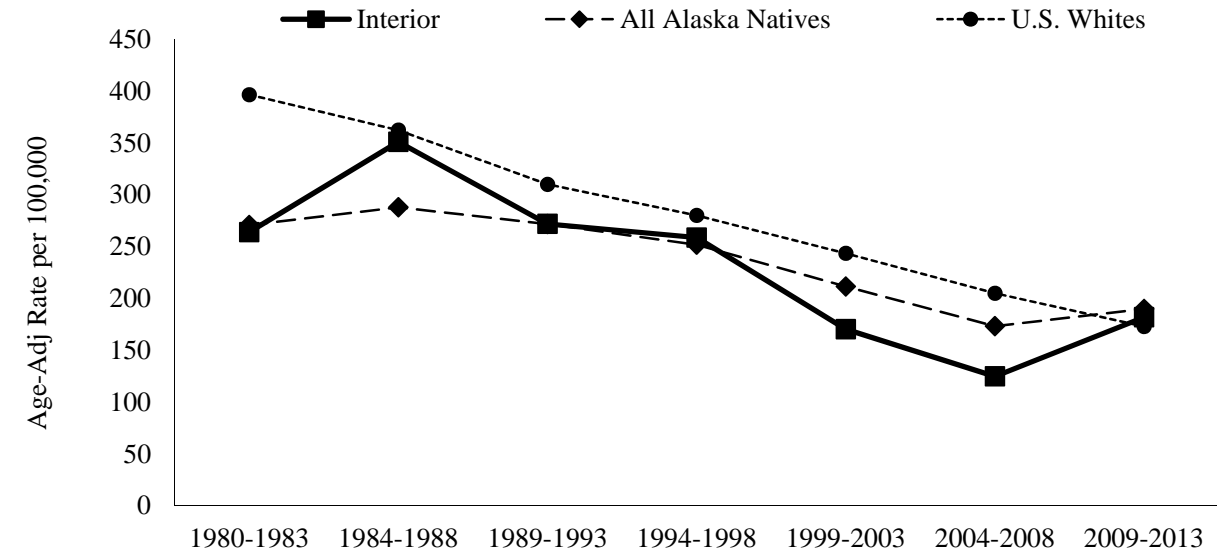


FIGURE 104. Age-Adjusted Mortality Rates for Homicide
Interior vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

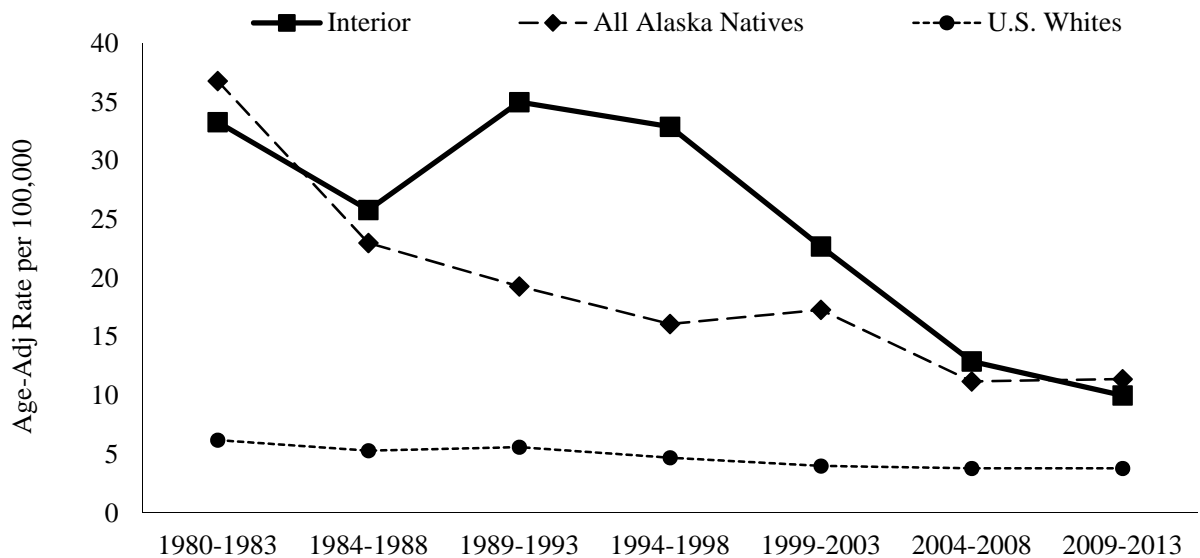


FIGURE 105. Age-Adjusted Mortality Rates for Suicide
Interior vs All Alaska Natives vs U.S. Whites
Data Source: Table 16b.
by Five Year Intervals (1980-2013)

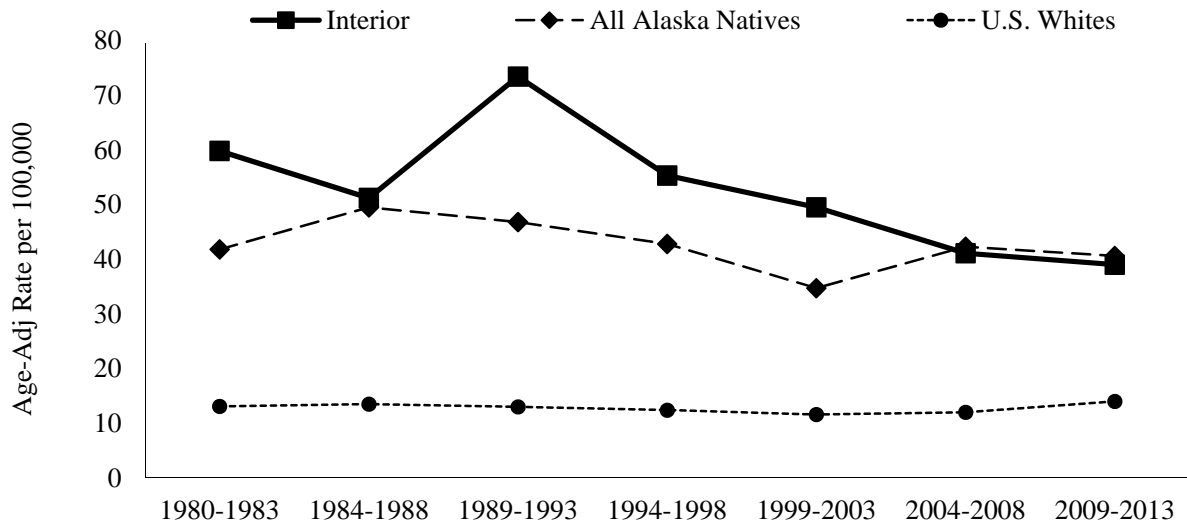


FIGURE 106. Age-Adjusted Mortality Rates for Unintentional Injury
Interior vs All Alaska Natives vs U.S. Whites
Data Source: Table 16b.
by Five Year Intervals (1980-2013)

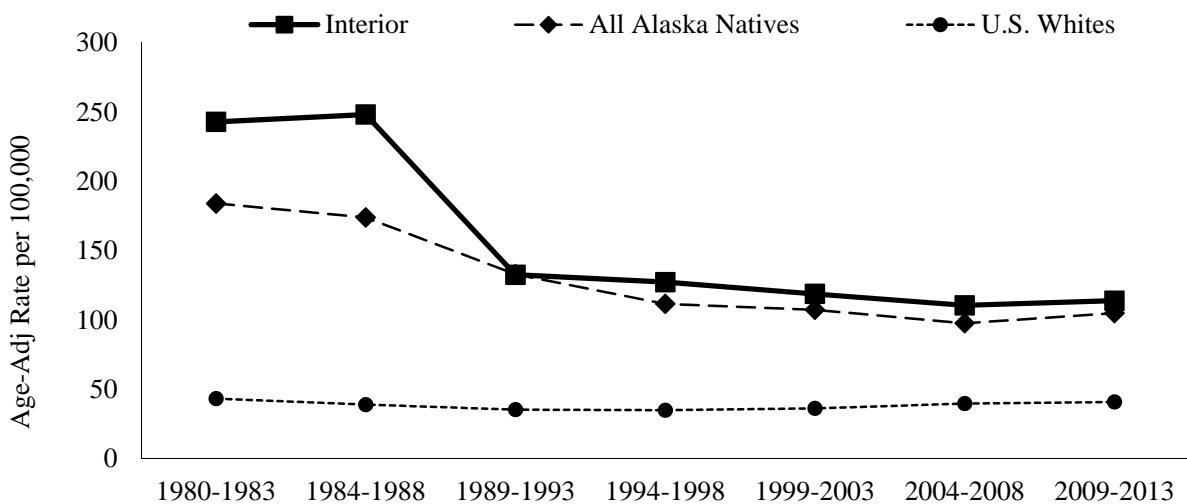


TABLE 17a. **Counts for Leading Causes of Death Among Alaska Natives**
Kenai Peninsula Service Region
Both Genders

	Alcohol Abuse	Cancer	COPD	Heart Disease	Suicide	Unintentional Injury	All-Cause
Kenai Peninsula							
1980-1983 ^a	-	11	<5	13	<5	5	49
1984-1988	-	23	<5	17	8	10	78
1989-1993	-	19	<5	11	<5	16	75
1994-1998	-	27	<5	27	<5	13	101
1999-2003	5	22	6	26	<5	15	124
2004-2008	5	38	9	35	6	15	172
2009-2013	5	38	9	29	8	19	168

^a 1980-1983 contains only 4 years

Counts are not reported for fewer than 5 deaths

TABLE 17b. **Age-Adjusted Rates^b for Leading Causes of Death Among Alaska Natives**
Kenai Peninsula Service Region
Both Genders

	Alcohol Abuse	Cancer	COPD	Heart Disease	Suicide	Unintentional Injury	All-Cause
Kenai Peninsula							
1980-1983 ^a	-	340.8	-	475.5	-	73.8	1440.4
1984-1988	-	↑459.9	-	340.9	74.7	112.4	1359.0
1989-1993	-	287.9	-	198.4	-	122.6	1057.8
1994-1998	-	↑372.1	-	292.1	-	68.2	1149.9
1999-2003	32.0	171.7	61.7	245.2	-	70.9	1075.3
2004-2008	27.6	260.4	74.9	↑262.8	24.6	83.5	1150.4
2009-2013	28.1	256.6	71.1	192.6	30.6	85.4	1119.0
Percent Change	N/A	-25%	N/A	-59%*	N/A	16%	-22%*

Rates are not reported for fewer than 5 deaths

^a 1980-1983 contains only 4 years

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined

^b Rates per 100,000 population

*p<0.05

FIGURE 107. Age-Adjusted Mortality Rates for All-Cause
 Kenai Peninsula vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

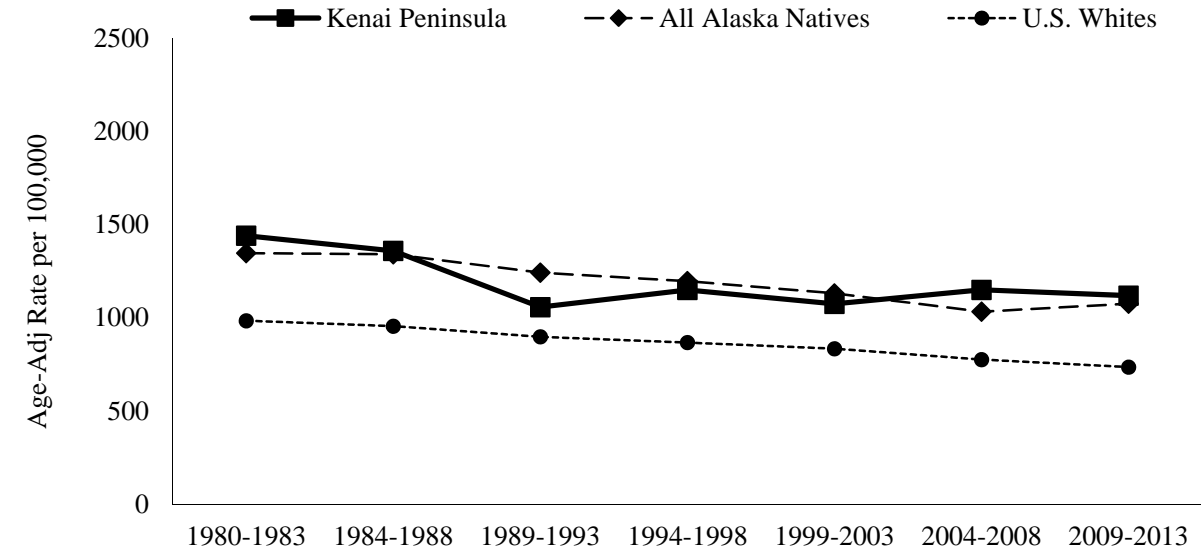


FIGURE 108. Age-Adjusted Mortality Rates for Cancer
 Kenai Peninsula vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

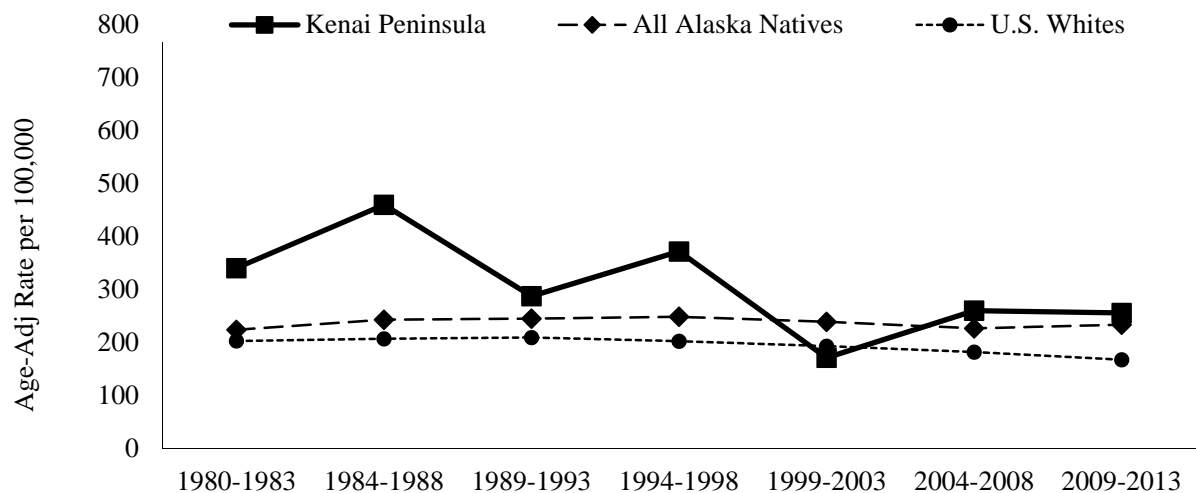


FIGURE 109. Age-Adjusted Mortality Rates for Heart Disease
Kenai Peninsula vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

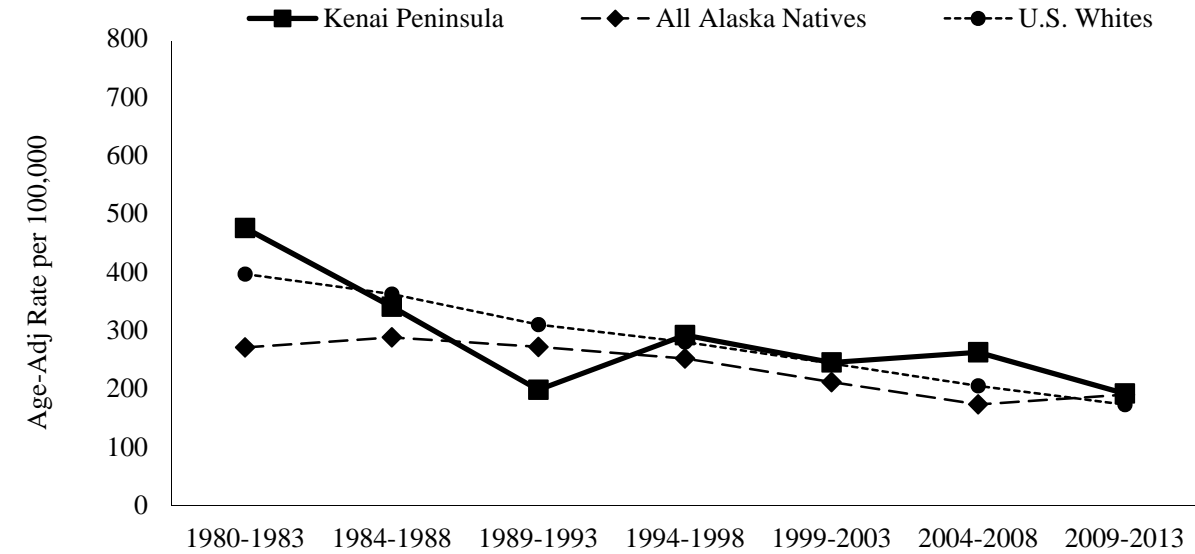


FIGURE 110. Age-Adjusted Mortality Rates for Unintentional Injury
Kenai Peninsula vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

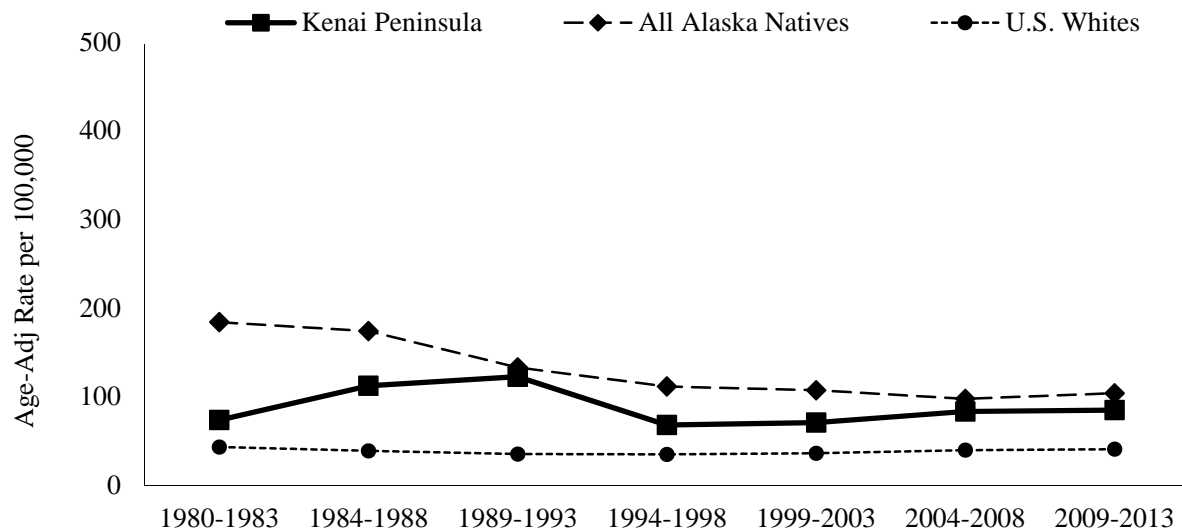


TABLE 18a. **Counts for Leading Causes of Death Among Alaska Natives**
Kodiak Area Service Region
Both Genders

	Cancer	COPD	Heart Disease	Unintentional Injury	All-Cause
Kodiak Area					
1980-1983 ^a	5	<5	15	14	60
1984-1988	19	<5	21	17	87
1989-1993	18	<5	21	10	85
1994-1998	17	7	23	9	84
1999-2003	17	<5	17	<5	71
2004-2008	19	8	8	6	82
2009-2013	20	6	20	10	95

^a 1980-1983 contains only 4 years

Counts are not reported for fewer than 5 deaths

TABLE 18b. **Age-Adjusted Rates^b for Leading Causes of Death Among Alaska Natives**
Kodiak Area Service Region
Both Genders

	Cancer	COPD	Heart Disease	Unintentional Injury	All-Cause
Kodiak Area					
1980-1983 ^a	92.6	-	444.0	↑ 208.8	1307.0
1984-1988	382.7	-	407.9	182.1	1447.6
1989-1993	331.9	-	395.4	94.4	1413.8
1994-1998	323.6	144.1	↑ 423.1	87.9	1368.1
1999-2003	240.8	-	295.4	-	1037.8
2004-2008	251.2	102.6	112.8	54.0	991.9
2009-2013	247.8	66.6	↑ 263.2	106.1	1173.3
Percent Change	168%*	N/A	-41%*	-49%	-10%

Rates are not reported for fewer than 5 deaths

^a 1980-1983 contains only 4 years

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined

^b Rates per 100,000 population

*p<0.05

FIGURE 111. Age-Adjusted Mortality Rates for All-Cause
 Kodiak Area vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

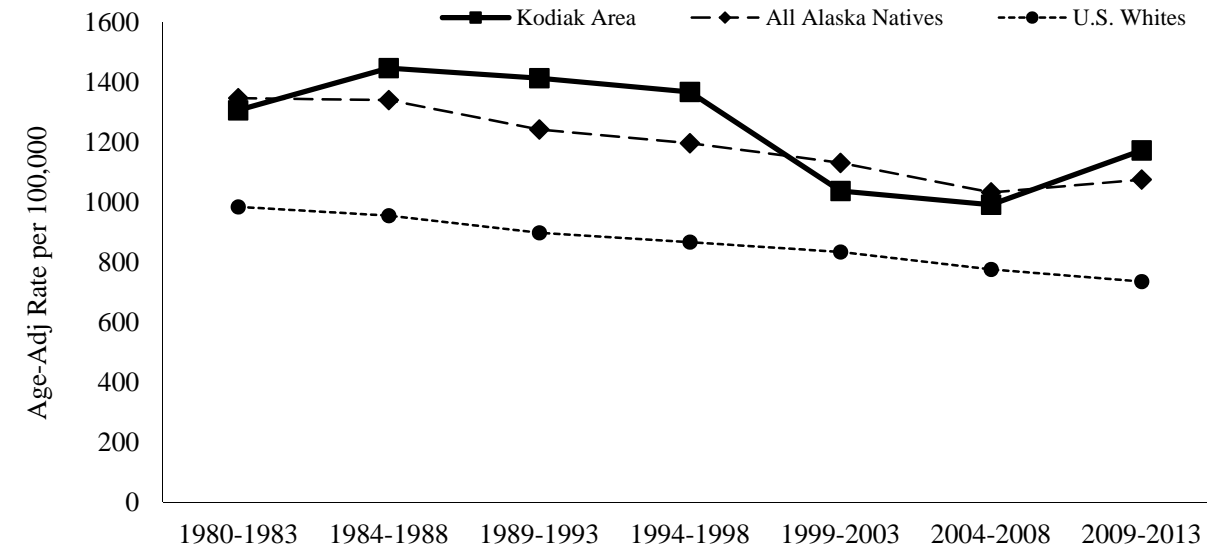


FIGURE 112. Age-Adjusted Mortality Rates for Cancer
 Kodiak Area vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

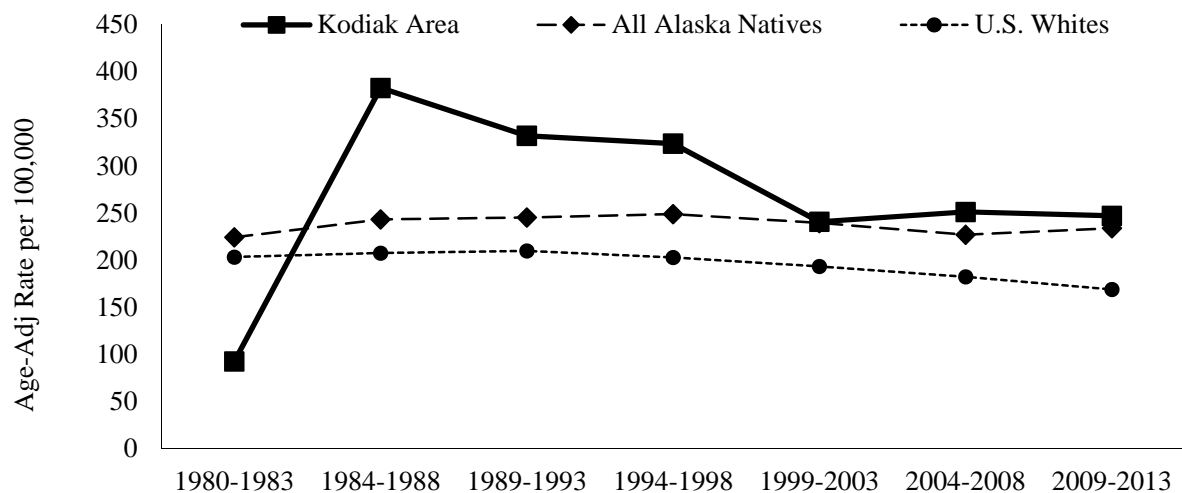


FIGURE 113. Age-Adjusted Mortality Rates for Heart Disease
Kodiak Area vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

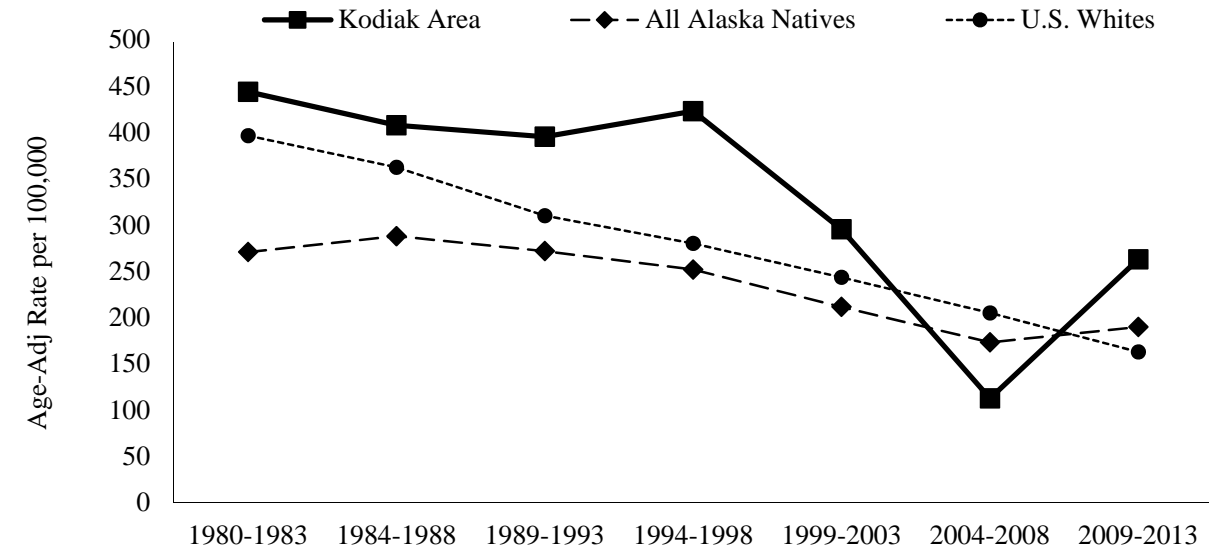


FIGURE 114. Age-Adjusted Mortality Rates for Unintentional Injury
Kodiak Area vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

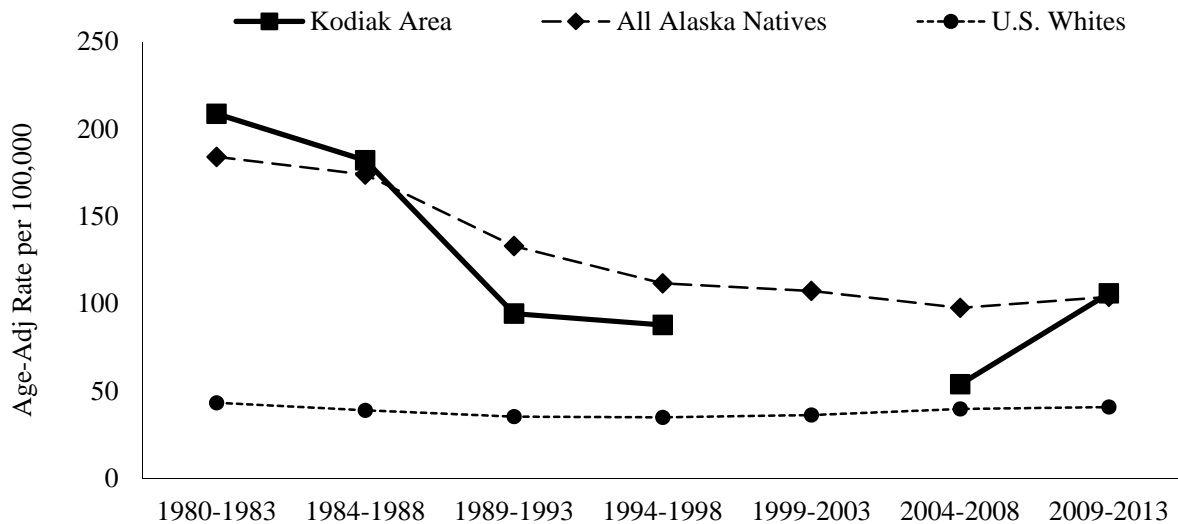


TABLE 19a. Counts for Leading Causes of Death Among Alaska Natives
Northwest Arctic Service Region
Both Genders

	Cancer	Cerebrovascular Disease	COPD	Heart Disease	Suicide	Unintentional Injury	All-Cause
Northwest Arctic							
1980-1983 ^a	16	6	<5	23	19	33	147
1984-1988	37	<5	8	27	22	41	212
1989-1993	30	9	7	33	24	57	214
1994-1998	38	8	8	34	25	28	195
1999-2003	38	12	8	28	30	38	222
2004-2008	51	6	10	32	30	43	219
2009-2013	49	7	12	39	17	33	229

^a 1980-1983 contains only 4 years

Counts are not reported for fewer than 5 deaths

TABLE 19b. Age-Adjusted Rates^b for Leading Causes of Death Among Alaska Natives
Northwest Arctic Service Region
Both Genders

	Cancer	Cerebrovascular Disease	COPD	Heart Disease	Suicide	Unintentional Injury	All-Cause
Northwest Arctic							
1980-1983 ^a	181.9	68.7	-	243.8	↑92.0	↑197.3	1158.3
1984-1988	307.0	-	65.3	250.3	↑78.3	174.1	1361.8
1989-1993	214.5	74.6	63.2	265.5	↑70.7	↑227.6	1238.5
1994-1998	262.8	77.5	61.9	273.5	↑75.8	87.8	1174.8
1999-2003	260.9	101.2	55.6	219.7	↑83.8	132.0	1260.8
2004-2008	282.0	39.6	70.0	207.5	↑79.6	↑151.3	1076.8
2009-2013	246.7	↓39.2	71.0	204.7	57.4	117.2	1090.1
Percent Change	-36%*	-43%	N/A	-16%	-38%	-41%*	-6%

Rates are not reported for fewer than 5 deaths

^a 1980-1983 contains only 4 years

*p<0.05

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined

^b Rates per 100,000 population

FIGURE 115. Age-Adjusted Mortality Rates for All-Cause
 Northwest Arctic vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

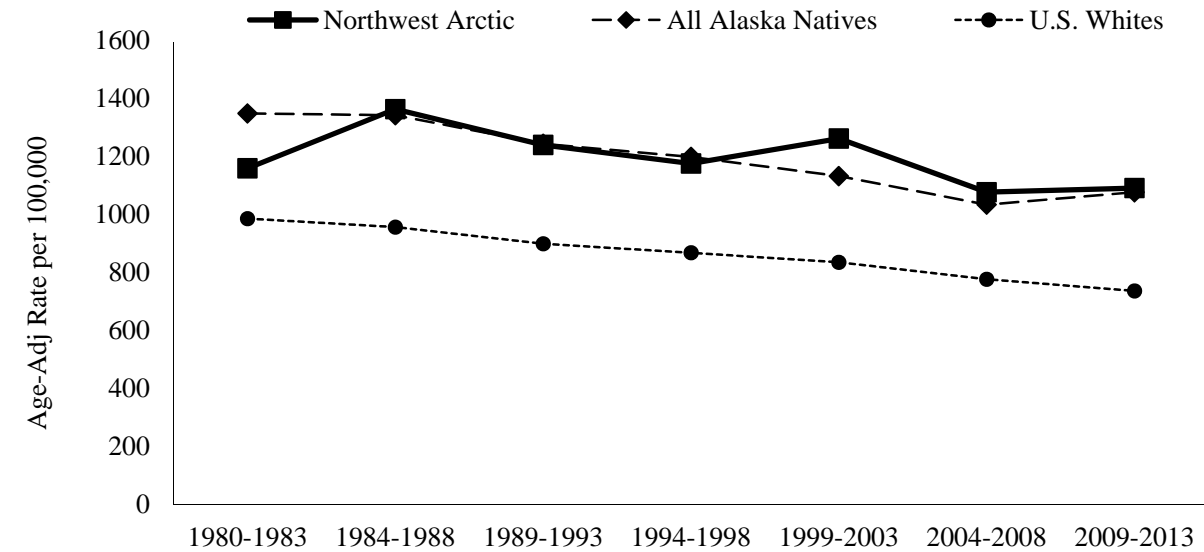


FIGURE 116. Age-Adjusted Mortality Rates for Cancer
 Northwest Arctic vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

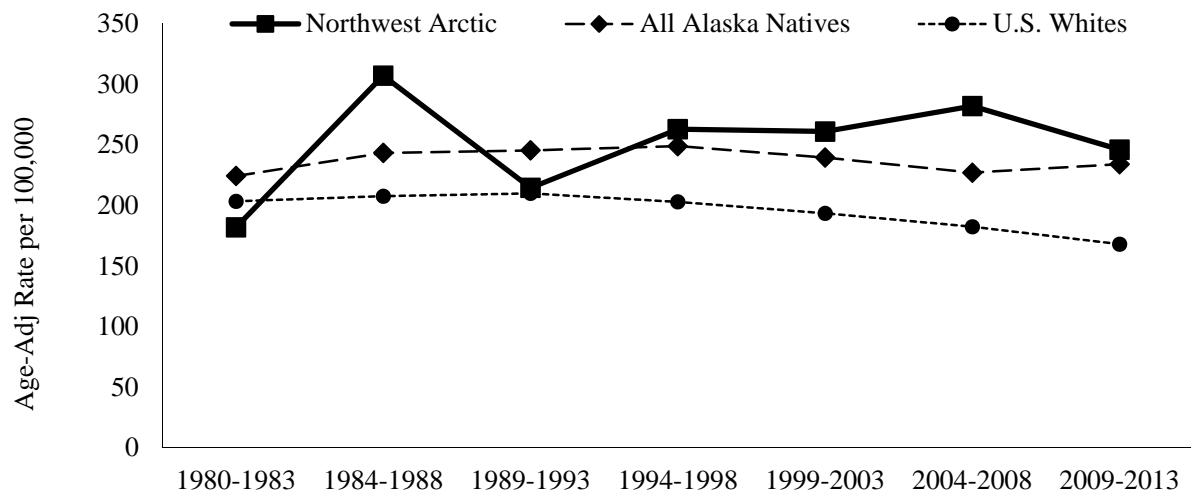


FIGURE 117. Age-Adjusted Mortality Rates for Cerebrovascular Disease
Northwest Arctic vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

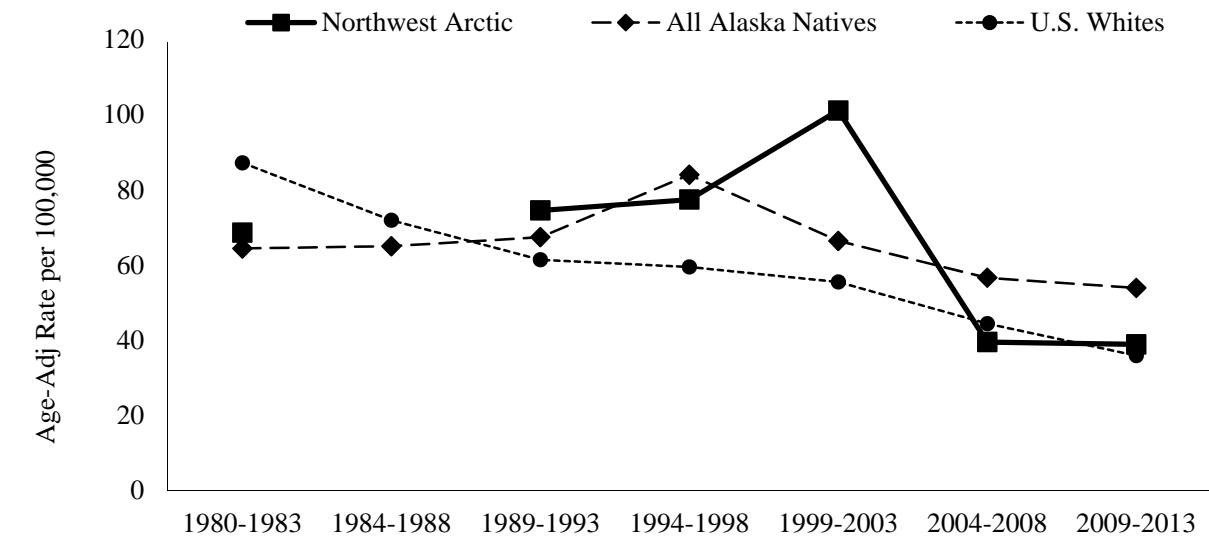


FIGURE 118. Age-Adjusted Mortality Rates for COPD
Northwest Arctic vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

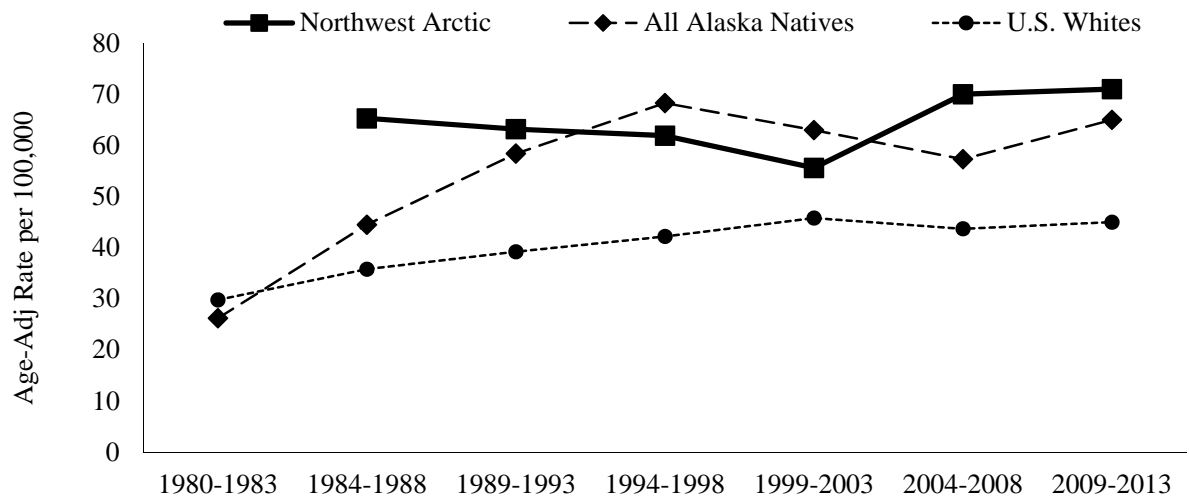


FIGURE 119. Age-Adjusted Mortality Rates for Heart Disease
Northwest Arctic vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

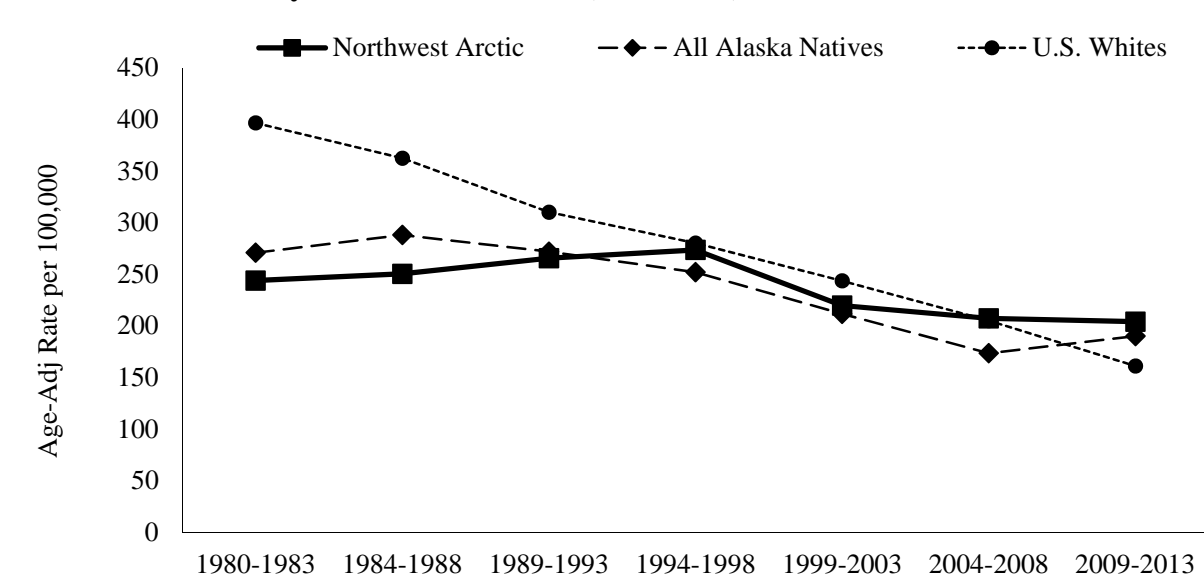


FIGURE 120. Age-Adjusted Mortality Rates for Suicide
Northwest Arctic vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

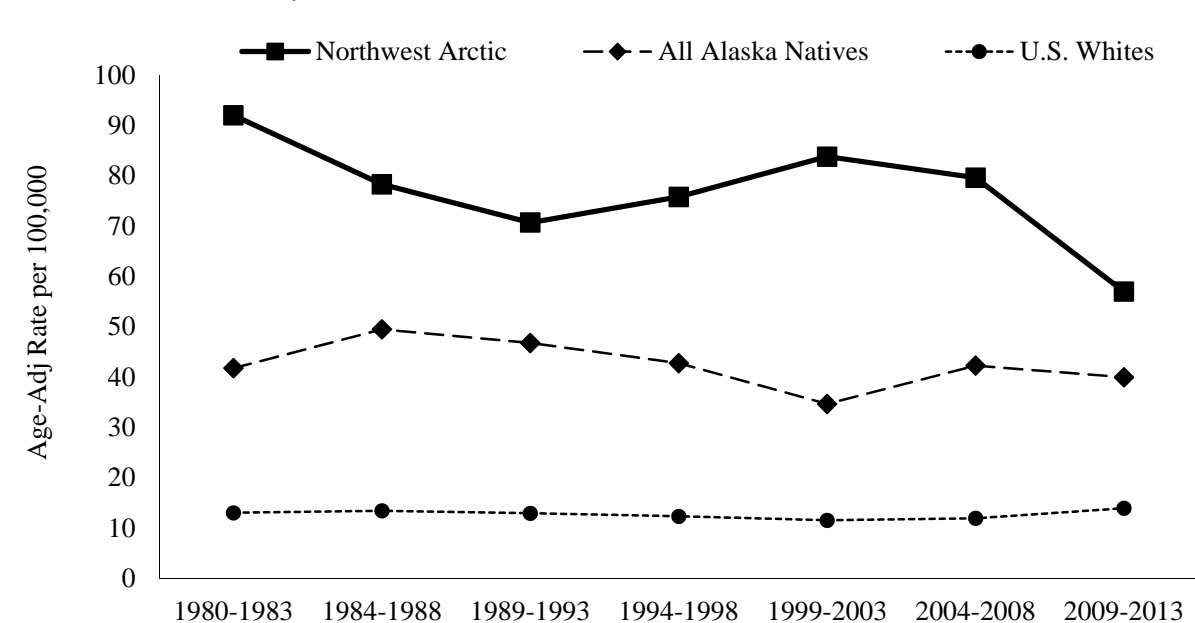
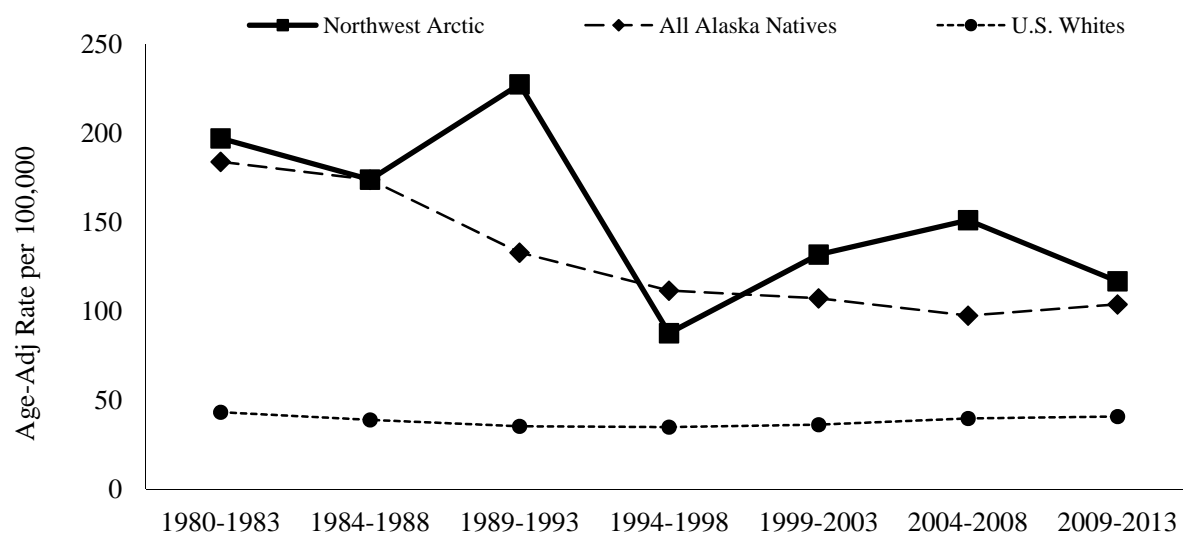


FIGURE 121. Age-Adjusted Mortality Rates for Unintentional Injury
 Northwest Arctic vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)
 Data Source: Table 19b.



**TABLE 20a. Counts for Leading Causes of Death Among Alaska Natives
Norton Sound Service Region
Both Genders**

	Cancer	Cerebrovascular Disease	COPD	Heart Disease	Suicide	Unintentional Injury	All-Cause
Norton Sound							
1980-1983 ^a	38	6	<5	30	19	31	195
1984-1988	40	7	7	44	26	39	213
1989-1993	41	11	10	44	27	39	259
1994-1998	51	14	17	43	26	51	272
1999-2003	56	12	13	36	34	41	291
2004-2008	48	9	11	33	29	43	260
2009-2013	73	19	17	64	37	36	322

^a 1980-1983 contains only 4 years

Counts are not reported for fewer than 5 deaths

**TABLE 20b. Age-Adjusted Rates^b for Leading Causes of Death Among Alaska Natives
Norton Sound Service Region
Both Genders**

	Cancer	Cerebrovascular Disease	COPD	Heart Disease	Suicide	Unintentional Injury	All-Cause
Norton Sound							
1980-1983 ^a	315.2	62.1	-	301.6	↑90.3	↓141.4	1372.7
1984-1988	259.8	46.6	46.1	324.0	↑93.5	156	1137.6
1989-1993	257.1	78.9	62.1	303.1	↑79.5	122.6	1360.7
1994-1998	278.0	79.9	107.7	252.1	↑72.9	↑175.8	1296.6
1999-2003	282.7	60.0	71.4	179.0	↑87.8	143	1243.0
2004-2008	234.6	47.3	58.3	149.9	↑75.8	↑136.1	1047.5
2009-2013	↑316.8	↑109.2	100.9	↑290.4	↑96.7	115.2	↑1356.1
Percent Change	1%	-76%*	N/A	-4%	7%	-19%	-1%

Rates are not reported for fewer than 5 deaths

^a 1980-1983 contains only 4 years

*p<0.05

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined

^b Rates per 100,000 population

FIGURE 122. Age-Adjusted Mortality Rates for All-Cause
Norton Sound vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

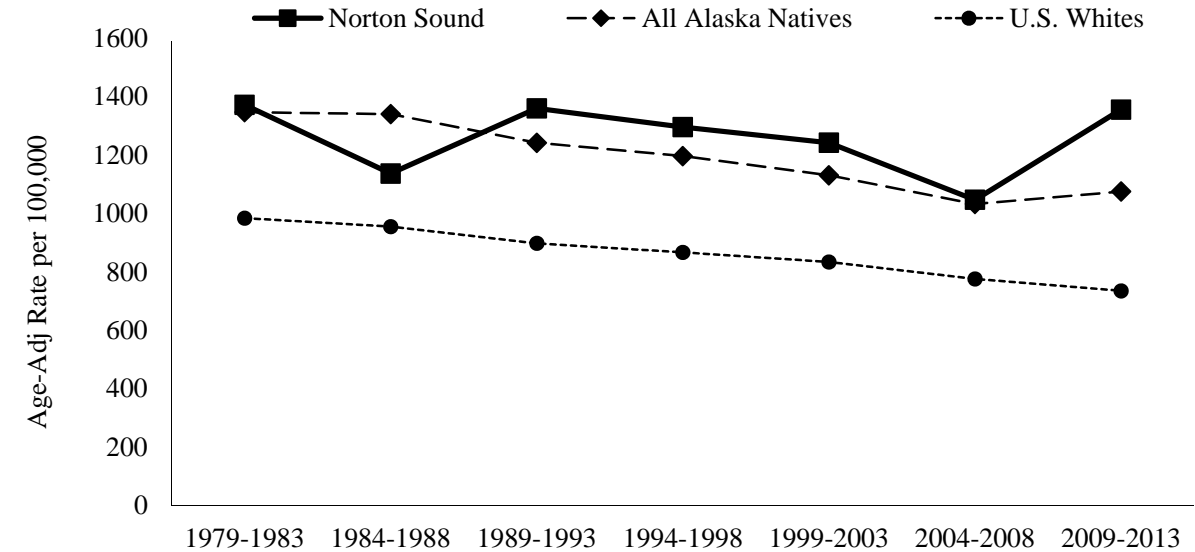


FIGURE 123. Age-Adjusted Mortality Rates for Cancer
Norton Sound vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

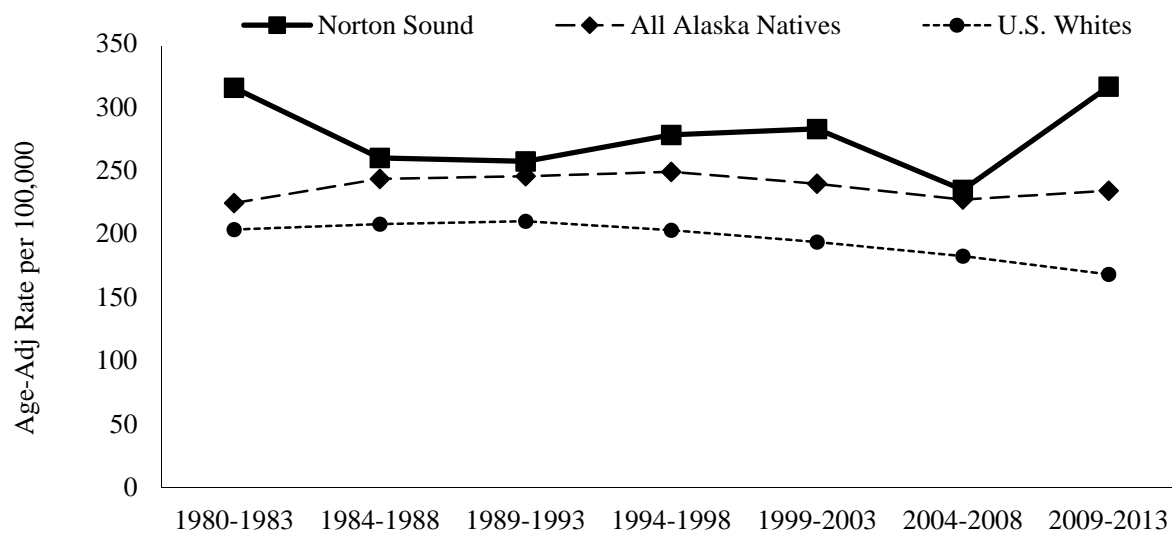


FIGURE 124. Age-Adjusted Mortality Rates for Cerebrovascular Disease
Norton Sound vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

Data Source: Table 20b.

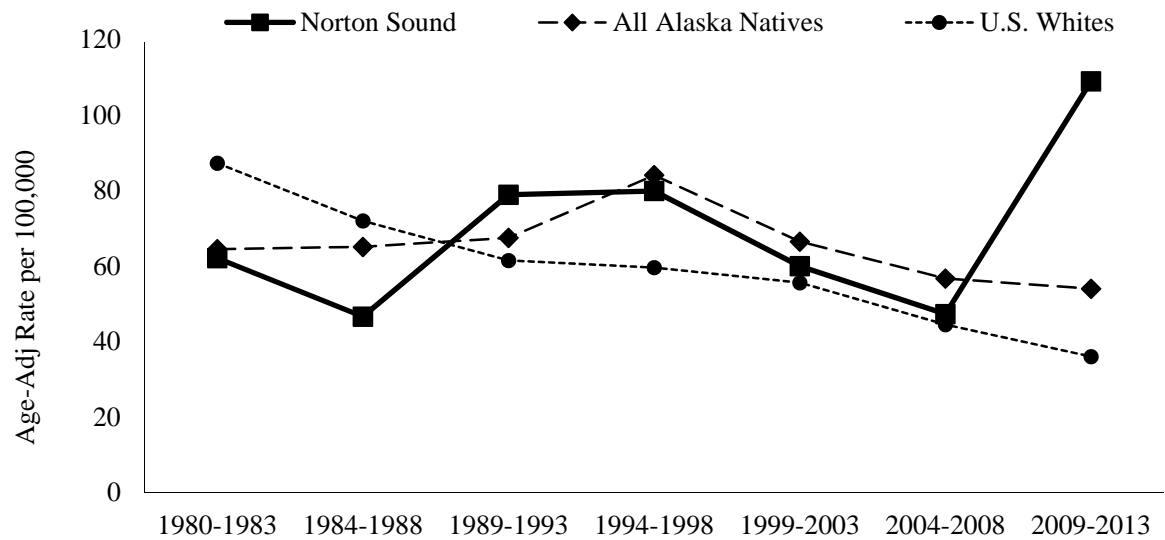


FIGURE 125. Age-Adjusted Mortality Rates for COPD
Norton Sound vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

Data Source: Table 20b.

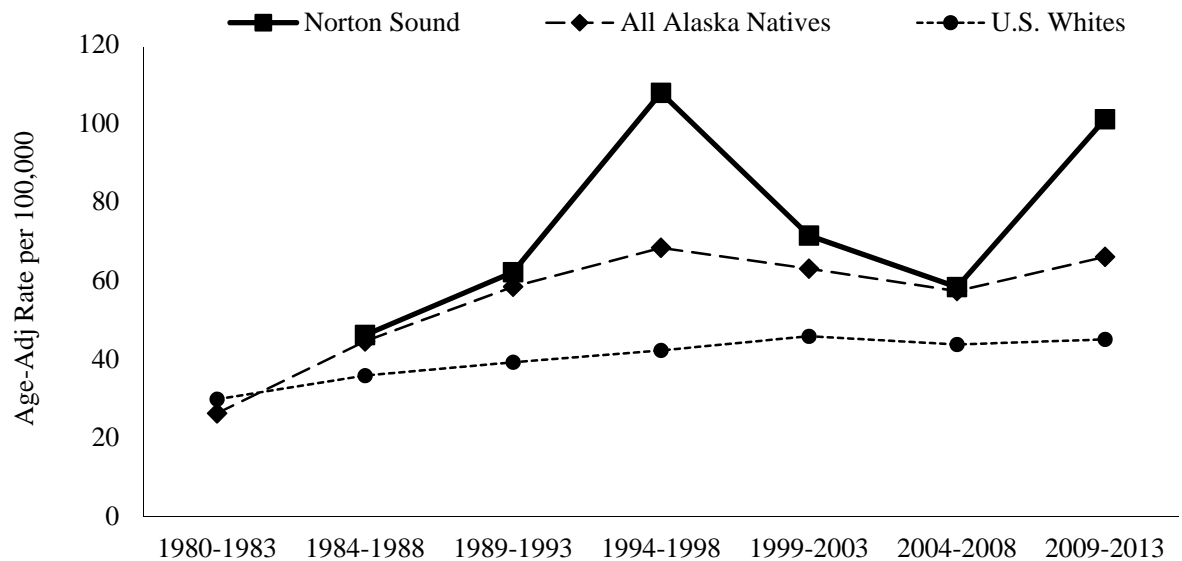


FIGURE 126. Age-Adjusted Mortality Rates for Heart Disease
Norton Sound vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

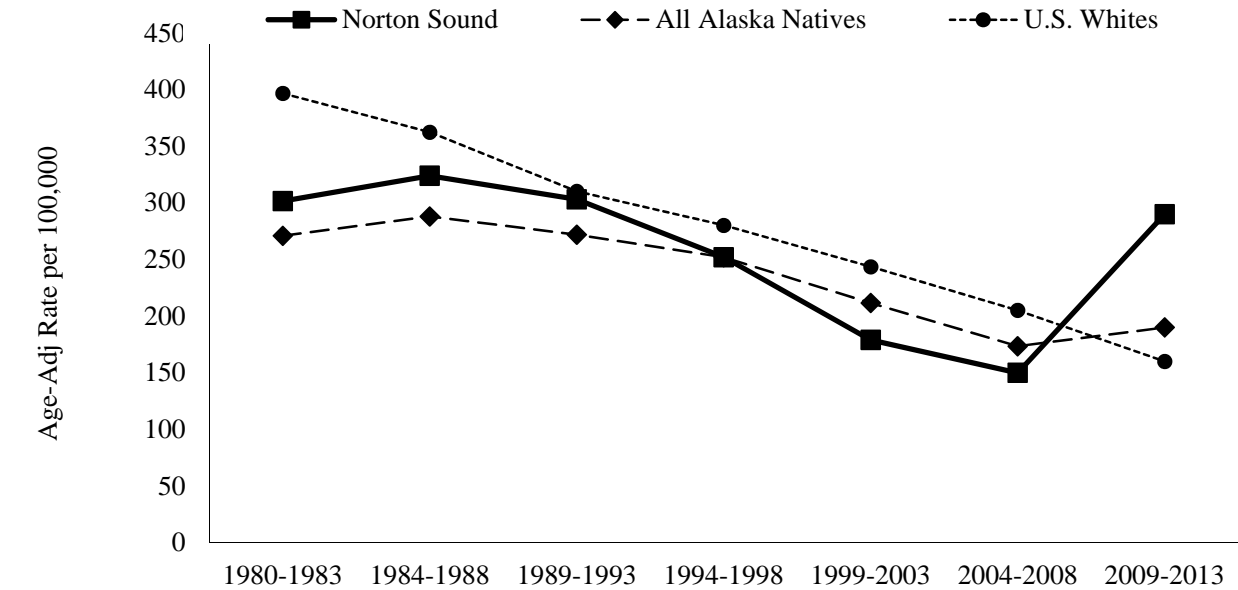


FIGURE 127. Age-Adjusted Mortality Rates for Suicide
Norton Sound vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

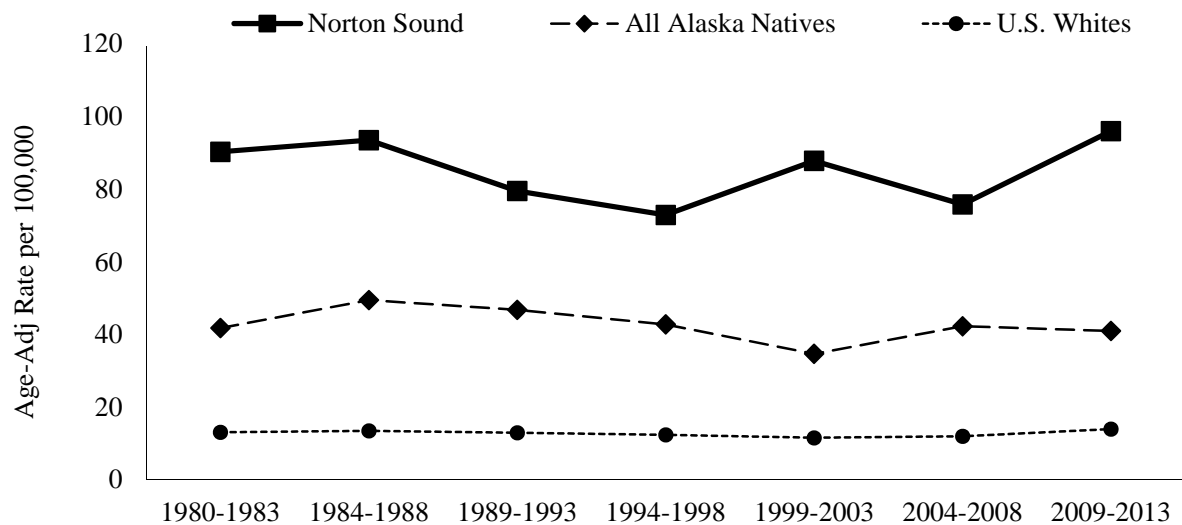


FIGURE 128. Age-Adjusted Mortality Rates for Unintentional Injury
 Norton Sound vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

Data Source: Table 20b.

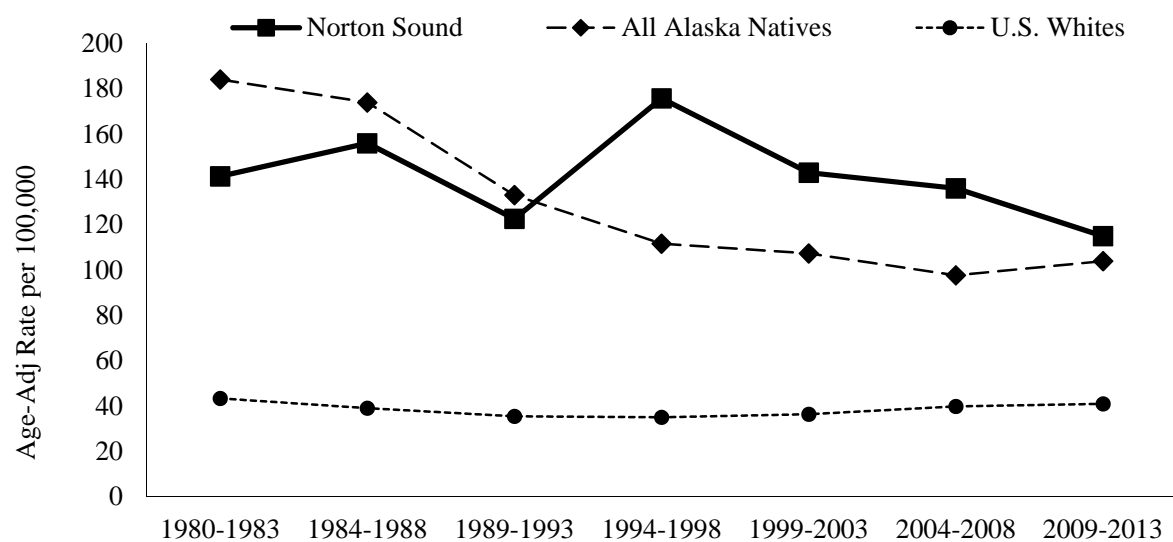


TABLE 21a. **Counts for Leading Causes of Death Among Alaska Natives**
Southeast Service Region
Both Genders

	Alcohol Abuse	Cancer	Cerebrovascular Disease	Chronic Liver Disease	COPD	Diabetes	Heart Disease	Pneumonia & Influenza	Suicide	Unintentional Injury	All-Cause
Southeast											
1980-1983 ^a	-	38	19	6	<5	<5	70	<5	18	52	321
1984-1988	9	37	18	6	7	<5	71	<5	18	59	334
1989-1993	5	57	18	14	12	9	82	<5	19	53	365
1994-1998	13	67	17	12	14	9	99	<5	18	49	373
1999-2003	15	88	22	10	15	12	91	5	7	34	412
2004-2008	20	108	26	11	27	15	79	11	14	44	503
2009-2013	9	115	21	15	23	14	94	12	13	48	520

^a 1980-1983 contains only 4 years

Counts are not reported for fewer than 5 deaths

TABLE 21b. **Age-Adjusted Rates^b for Leading Causes of Death Among Alaska Natives**
Southeast Service Region
Both Genders

	Alcohol Abuse	Cancer	Cerebrovascular Disease	Chronic Liver Disease	COPD	Diabetes	Heart Disease	Pneumonia & Influenza	Suicide	Unintentional Injury	All-Cause
Southeast											
1980-1983 ^a	-	195.5	104.2	17.7	-	-	404.9	-	37.8	125.0	1391.1
1984-1988	17.5	↓135.2	73.7	14.8	25.0	-	280.0	-	32.1	↓110.1	↓1042.3
1989-1993	10.6	203.8	65.8	28.8	45.7	25.7	270.8	-	↓28.8	↓100.1	↓1062.0
1994-1998	29.6	↓177.4	↓51.4	19.8	↓40.9	29.4	296.4	-	↓26.5	↓81.2	↓968.9
1999-2003	↓23.6	↓189.9	55.5	17.7	↓33.7	26.6	210.6	12.4	↓9.2	↓51.2	↓874.8
2004-2008	31.6	191.1	51.1	15.3	47.4	↑26.8	147.1	19.3	↓17.9	74.0	↓881.0
2009-2013	10.7	↓184.3	↓29.0	23.4	↓42.0	22.0	162.3	22.5	↓19.4	↓71.2	866.6
Percent Change	N/A	-6%	-72%*	32%	N/A	N/A	-60%*	N/A	-49%*	-43%*	-38%*

Rates are not reported for fewer than 5 deaths

^a 1980-1983 contains only 4 years

*p<0.05

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined

^b Rates per 100,000 population

FIGURE 129. Age-Adjusted Mortality Rates for All-Cause
Southeast vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

Data Source: Table 21b.

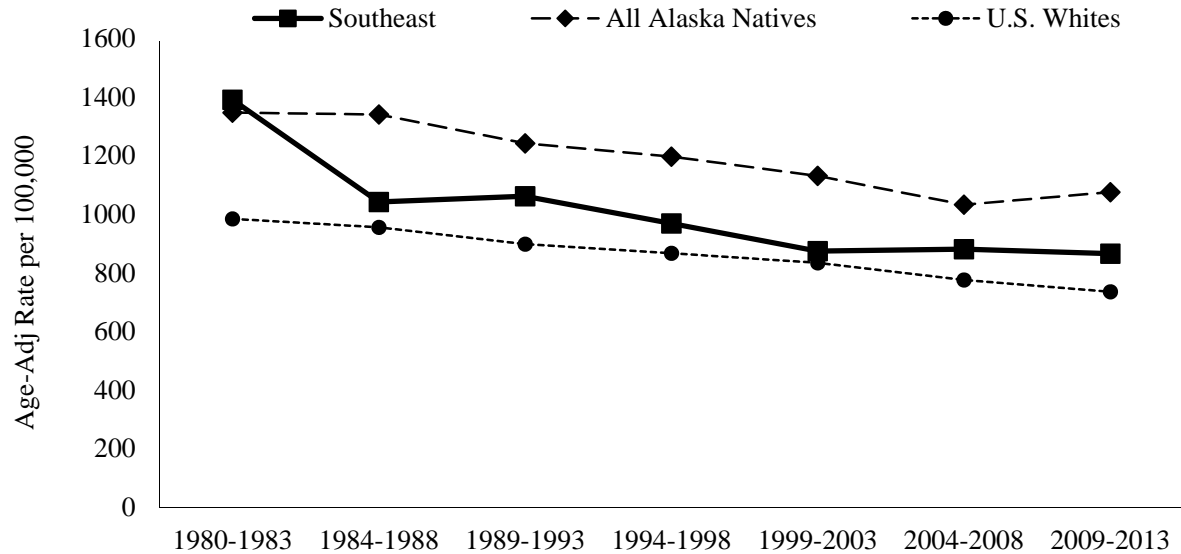


FIGURE 130. Age-Adjusted Mortality Rates for Alcohol Abuse
Southeast vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)

Data Source: Table 21b.

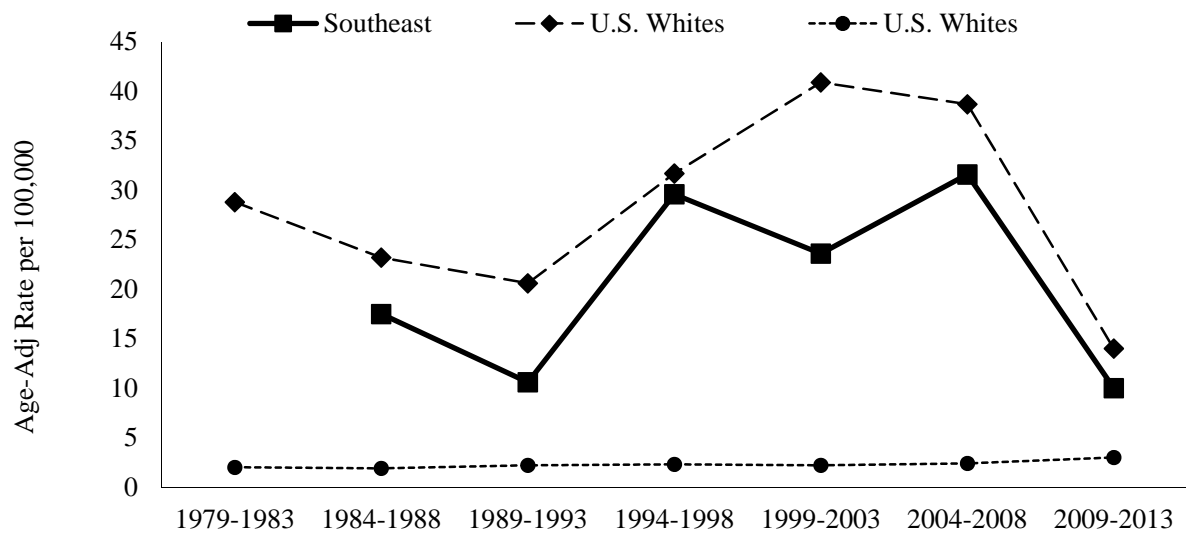


FIGURE 131. Age-Adjusted Mortality Rates for Cancer
 Southeast vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

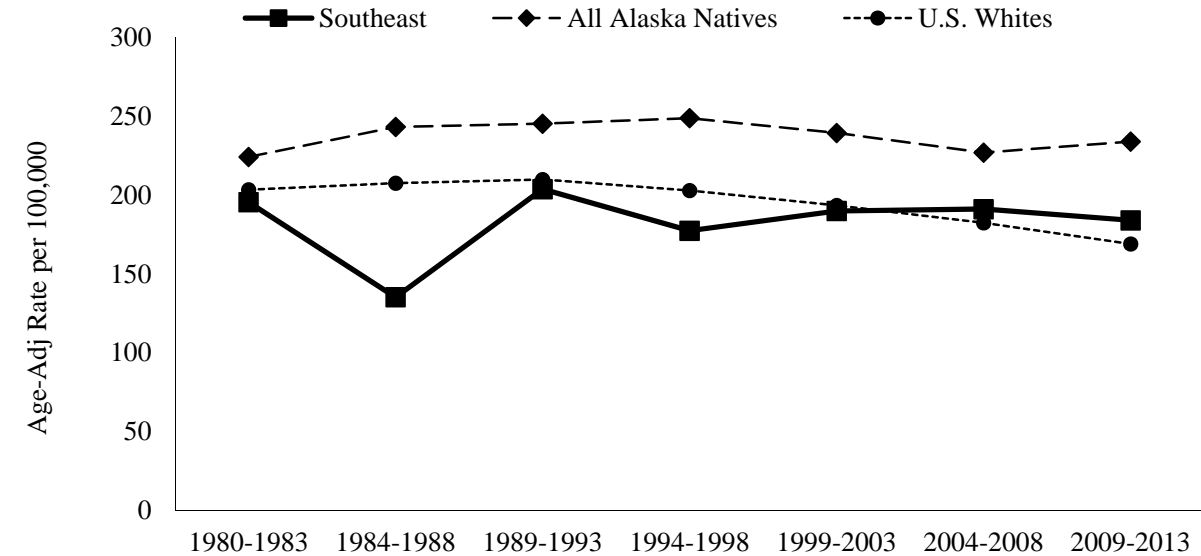


FIGURE 132. Age-Adjusted Mortality Rates for Cerebrovascular Disease
 Southeast vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

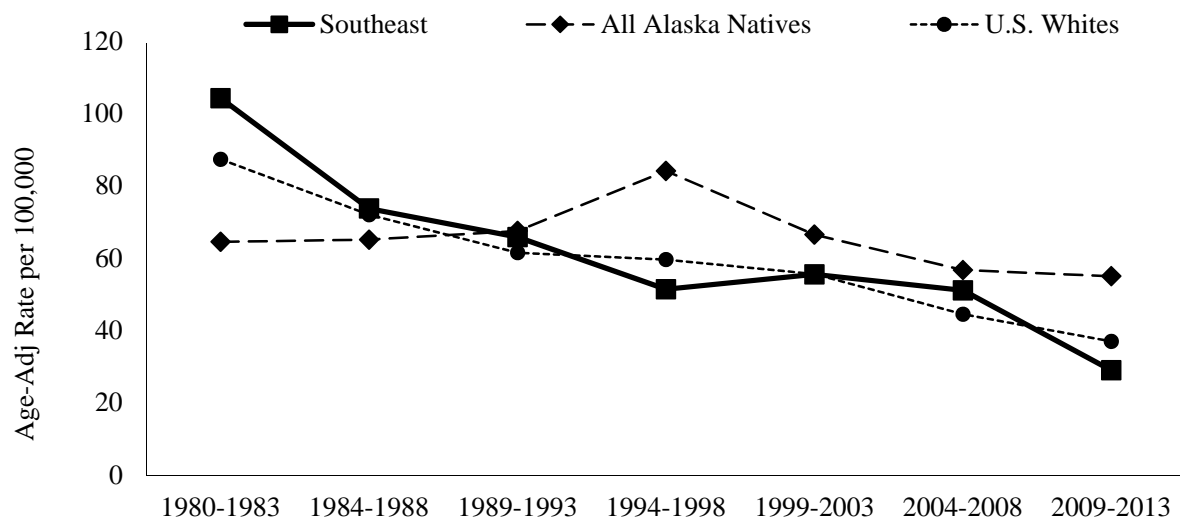
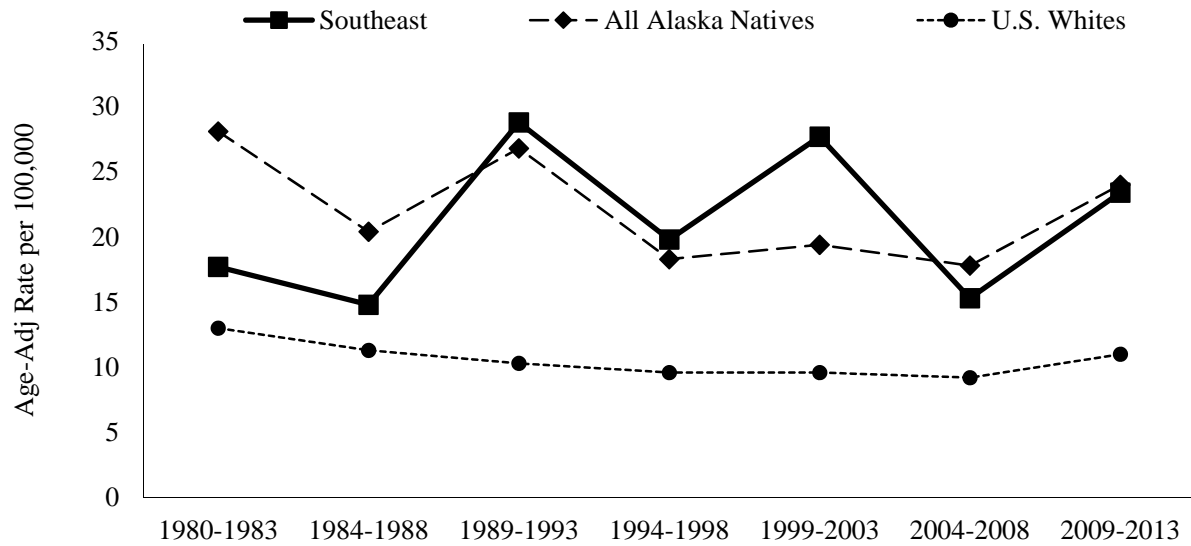


FIGURE 133

Data Source: Table 21b.

**Age-Adjusted Mortality Rates for Chronic Liver Disease
Southeast vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)**

**FIGURE 134.**

Data Source: Table 21b.

**Age-Adjusted Mortality Rates for COPD
Southeast vs All Alaska Natives vs U.S. Whites
by Five Year Intervals (1980-2013)**

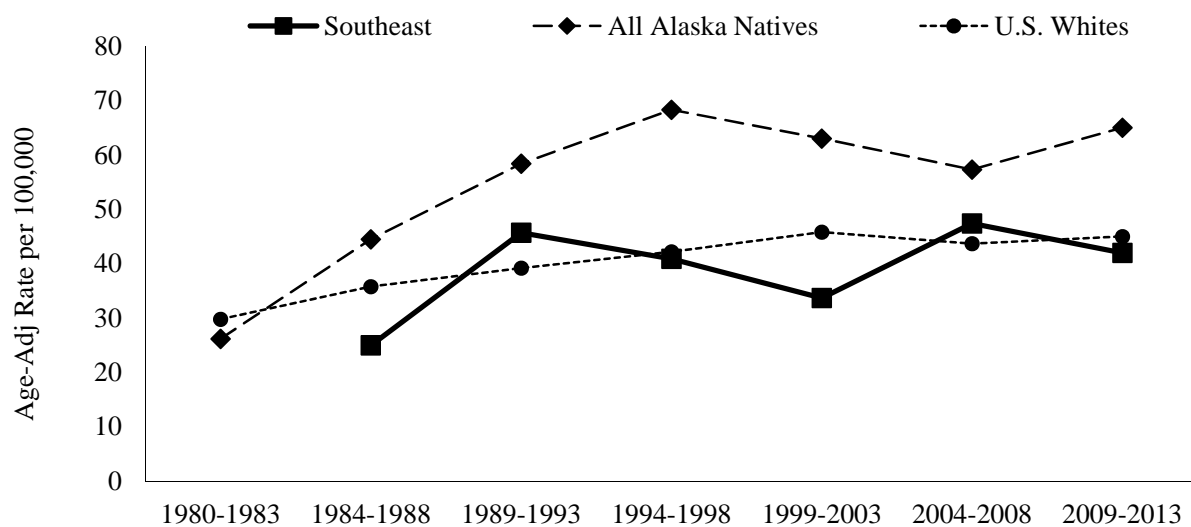


FIGURE 135. Age-Adjusted Mortality Rates for Diabetes Mellitus
 Southeast vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

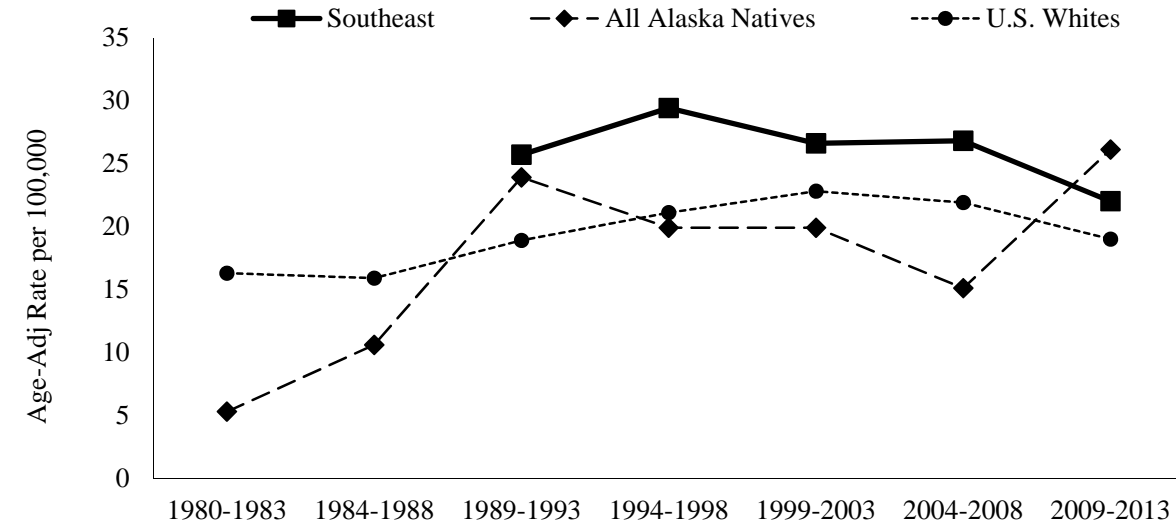


FIGURE 136. Age-Adjusted Mortality Rates for Heart Disease
 Southeast vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

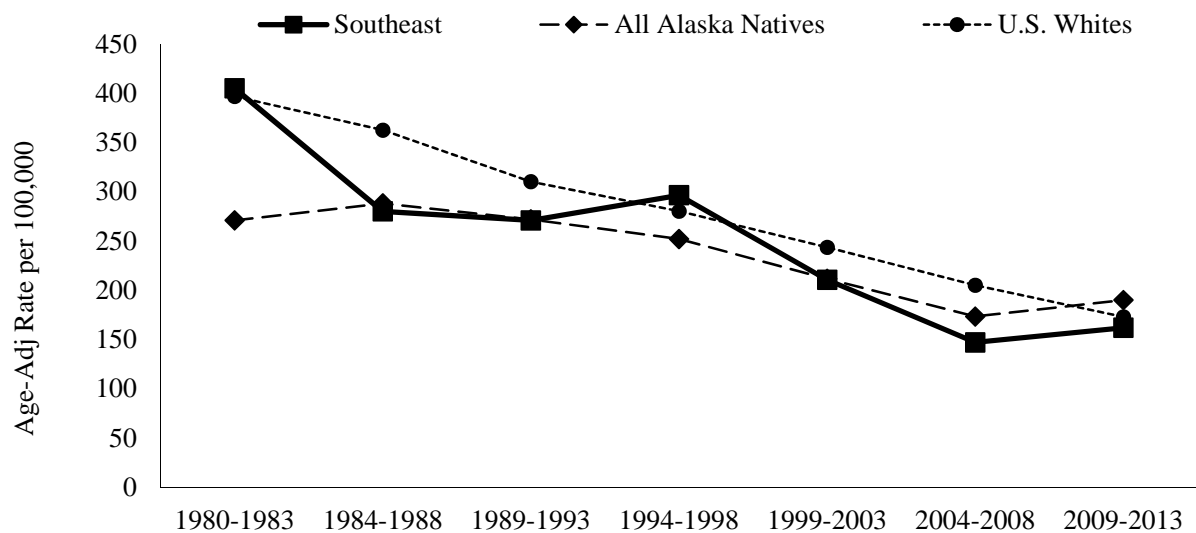


FIGURE 137. Age-Adjusted Mortality Rates for Suicide
 Southeast vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

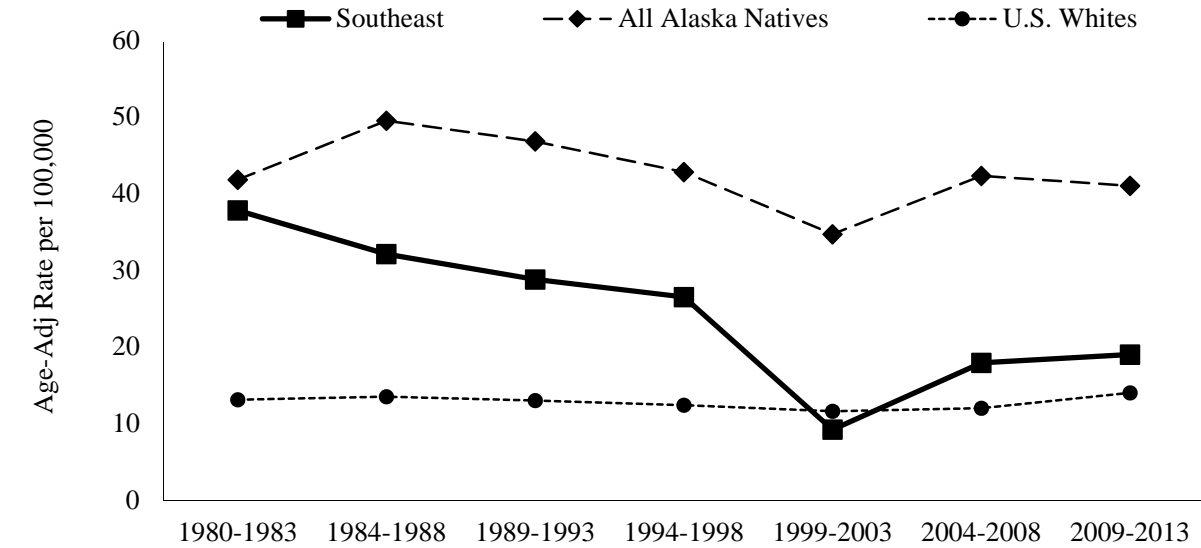


FIGURE 138. Age-Adjusted Mortality Rates for Unintentional Injury
 Southeast vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

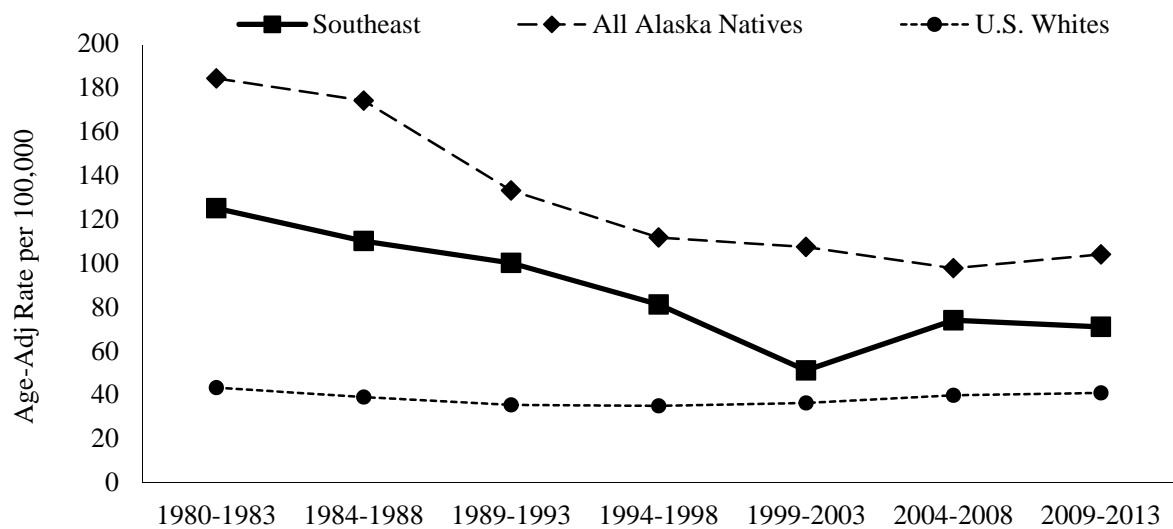


TABLE 22a. **Counts for Leading Causes of Death Among Alaska Natives**
Yukon-Kuskokwim Service Region
Both Genders

Yukon-Kuskokwim	Alcohol Abuse	Cancer	Cerebrovascular Disease	COPD	Heart Disease	Homicide	Perinatal Conditions	Pneumonia & Influenza	Suicide	Unintentional Injury	All-Cause
1980-1983 ^a	9	62	8	7	28	16	8	10	14	122	344
1984-1988	12	98	16	13	67	19	16	15	49	148	559
1989-1993	13	94	22	22	63	17	15	30	49	136	560
1994-1998	18	110	24	24	79	7	7	15	65	102	554
1999-2003	21	119	22	26	87	20	9	25	47	111	619
2004-2008	20	140	31	28	80	15	11	22	74	94	676
2009-2013	9	149	42	44	103	19	10	16	70	113	763

^a 1980-1983 contains only 4 years

Counts are not reported for fewer than 5 deaths

TABLE 22b. **Age-Adjusted Rates^b for Leading Causes of Death Among Alaska Natives**
Yukon-Kuskokwim Service Region
Both Genders

Yukon-Kuskokwim	Alcohol Abuse	Cancer	Cerebrovascular Disease	COPD	Heart Disease	Homicide	Perinatal Conditions	Pneumonia & Influenza	Suicide	Unintentional Injury	All-Cause
1980-1983 ^a	18.8	217.4	39.3	34.1	111.3	28.2	5.6	33.8	22.8	218.4	↓898.3
1984-1988	24.4	256.6	46.1	37.3	↓212.8	22.6	8.4	41.8	55.6	203.9	1159.6
1989-1993	22.1	250.5	69.3	66.8	↓187.6	24.3	7.5	↑85.2	47.6	↑166.2	1148.6
1994-1998	24.6	260.6	62.7	70.3	226.7	↓6.6	4.7	40.4	↑64.4	125.0	1115.3
1999-2003	25.6	249.0	56.6	63.1	209.2	20.7	5.4	↑59.9	43.7	↑130.7	1130.0
2004-2008	25.7	↑273.1	77.7	63.5	175.4	↑18.8	5.6	↑47.0	↑64.3	96.0	↑1153.8
2009-2013	14.2	234.8	86.2	81.6	166.2	18.4	5.1	24.7	58.3	107.8	1063.8
Percent Change	-24%	8%	119%*	139%*	49%*	-35%	-9%	-27%	156%*	-51%	18%*

Rates are not reported for fewer than 5 deaths

^a 1980-1983 contains only 4 years

*p<0.05

↑↓ Rate is significantly higher or lower than the rate for the rest of AN regions combined

^b Rates per 100,000 population

FIGURE 139. Age-Adjusted Mortality Rates for All-Cause
 Yukon-Kuskokwim vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

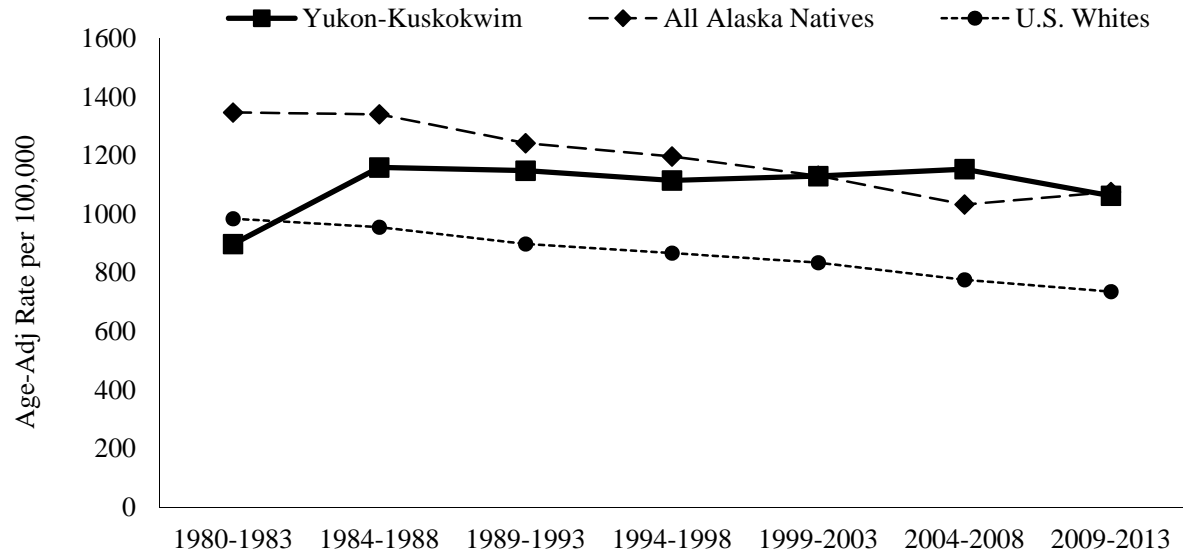


FIGURE 140. Age-Adjusted Mortality Rates for Alcohol Abuse
 Yukon-Kuskokwim vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

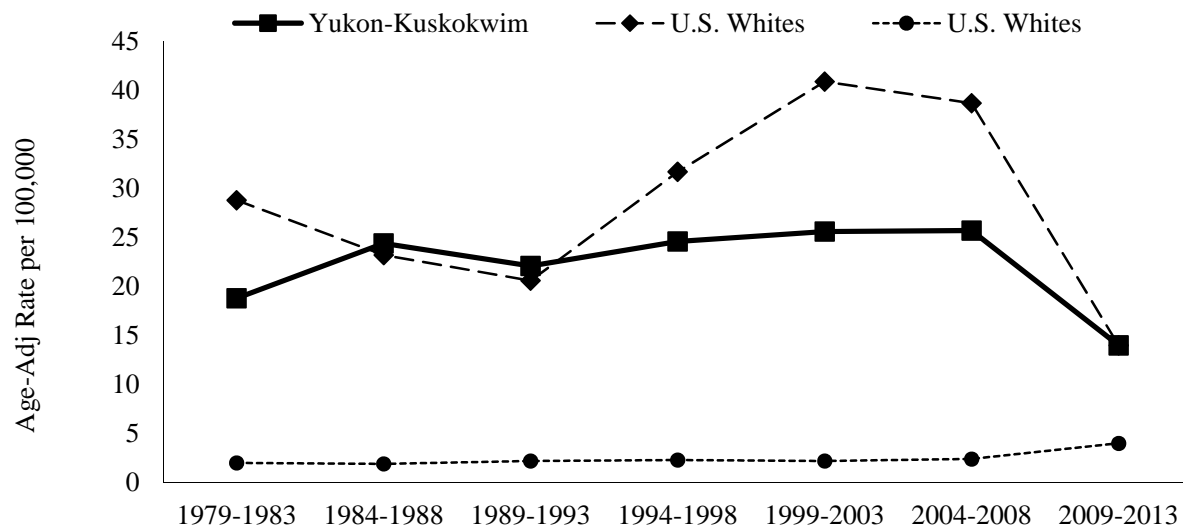


FIGURE 141. Age-Adjusted Mortality Rates for Cancer
Yukon-Kuskokwim vs All Alaska Natives vs U.S. Whites
 Data Source: Table 21b.
by Five Year Intervals (1980-2013)

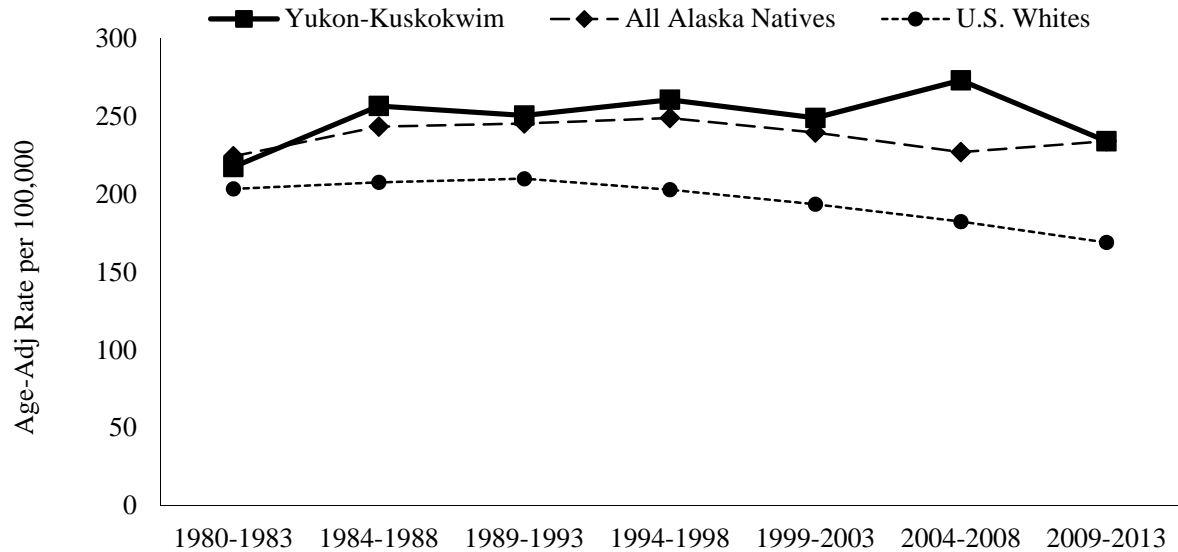


FIGURE 142. Age-Adjusted Mortality Rates for Cerebrovascular Disease
Yukon-Kuskokwim vs All Alaska Natives vs U.S. Whites
 Data Source: Table 21b.
by Five Year Intervals (1980-2013)

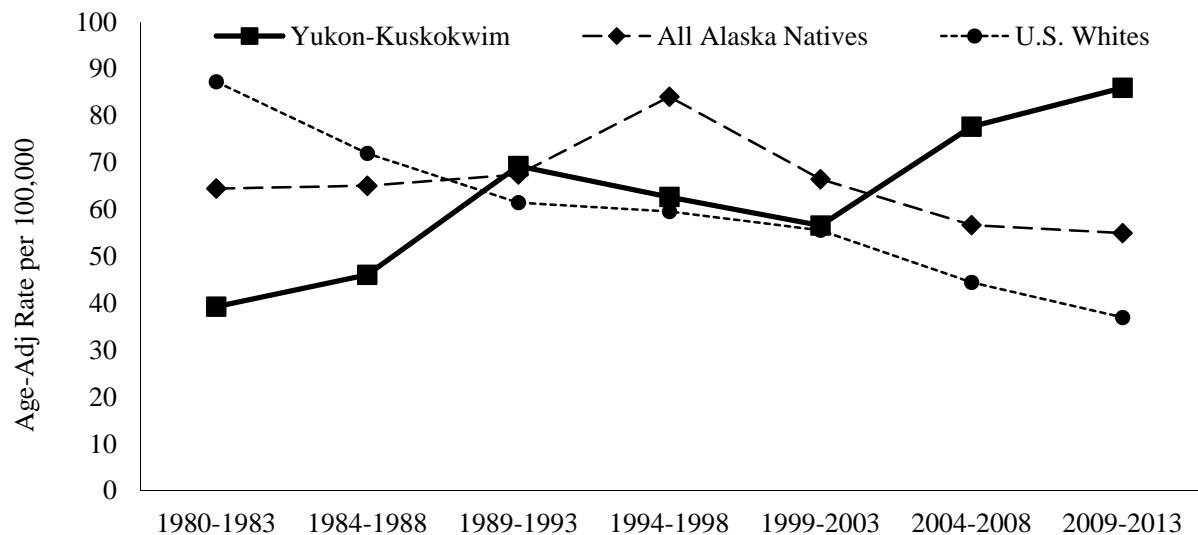


FIGURE 143. Age-Adjusted Mortality Rates for COPD
 Data Source: Table 21b. **Yukon-Kuskokwim vs All Alaska Natives vs U.S. Whites**
 by Five Year Intervals (1980-2013)

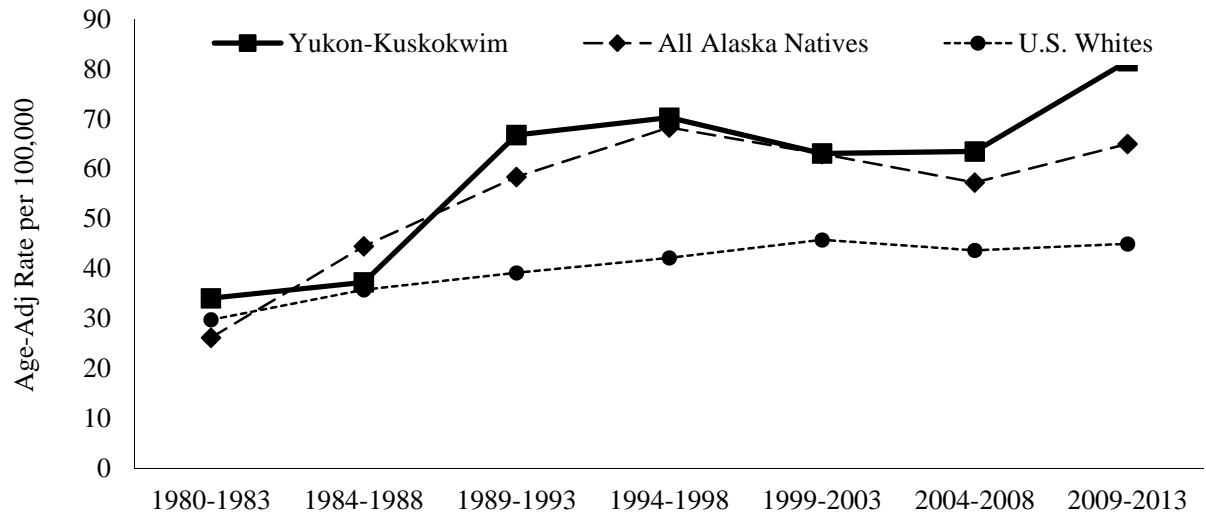


FIGURE 144. Age-Adjusted Mortality Rates for Heart Disease
 Data Source: Table 21b. **Yukon-Kuskokwim vs All Alaska Natives vs U.S. Whites**
 by Five Year Intervals (1980-2013)

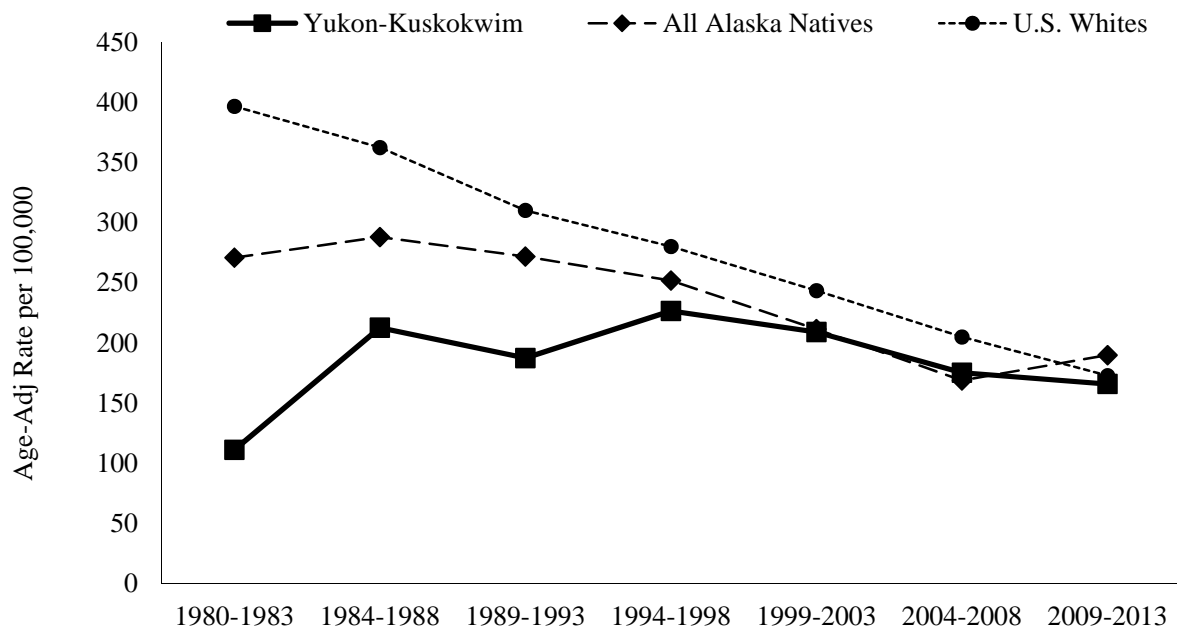


FIGURE 145. Age-Adjusted Mortality Rates for Homicide
 Data Source: Table 21b. **Yukon-Kuskokwim vs All Alaska Natives vs U.S. Whites**
 by Five Year Intervals (1980-2013)

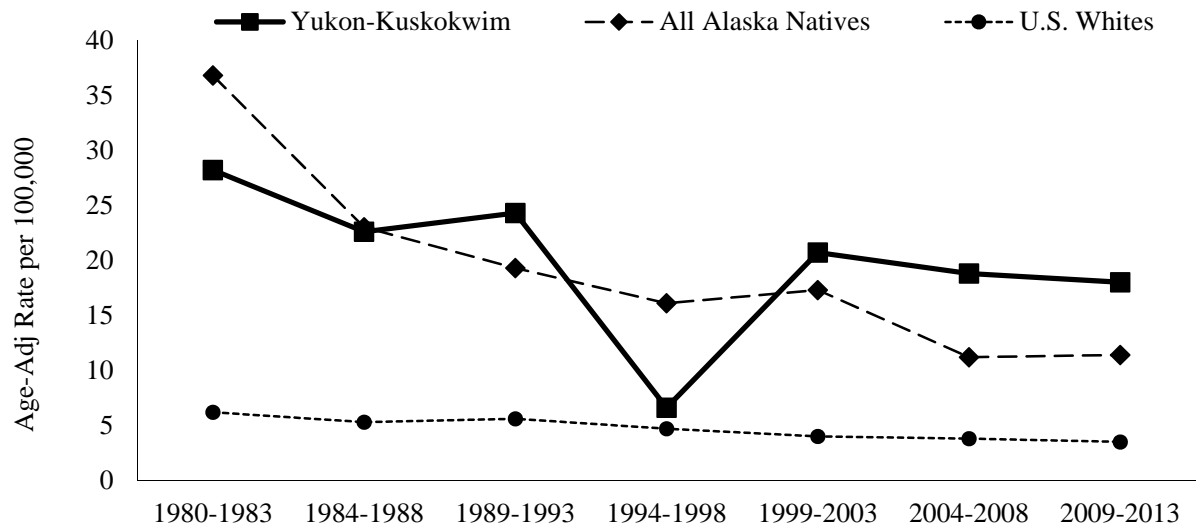


FIGURE 146. Age-Adjusted Mortality Rates for Perinatal Conditions
 Data Source: Table 21b. **Yukon-Kuskokwim vs All Alaska Natives vs U.S. Whites**
 by Five Year Intervals (1980-2013)

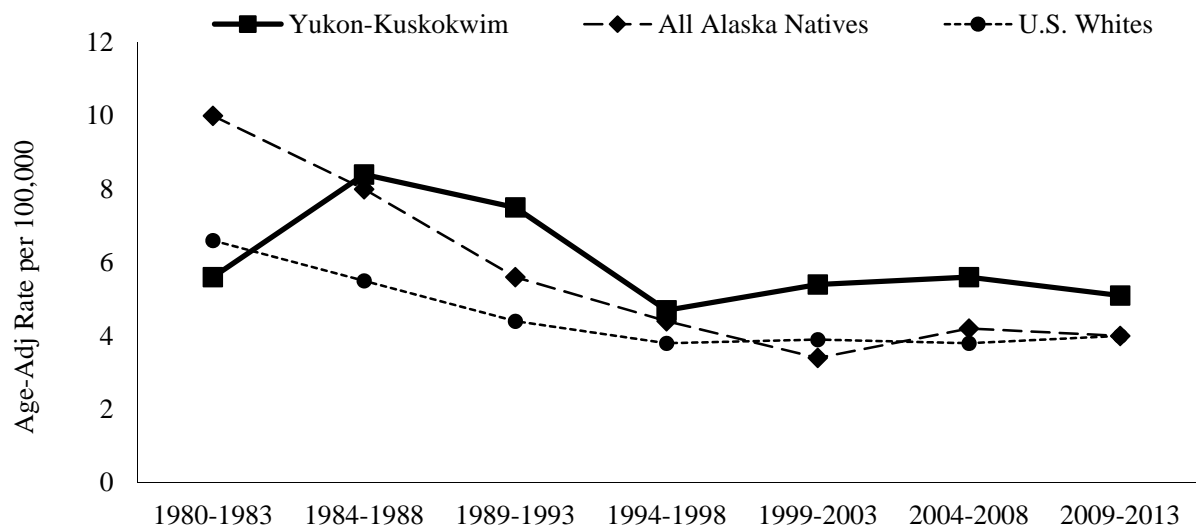


FIGURE 147. Age-Adjusted Mortality Rates for Pneumonia & Influenza
 Data Source: Table 21b. Yukon-Kuskokwim vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

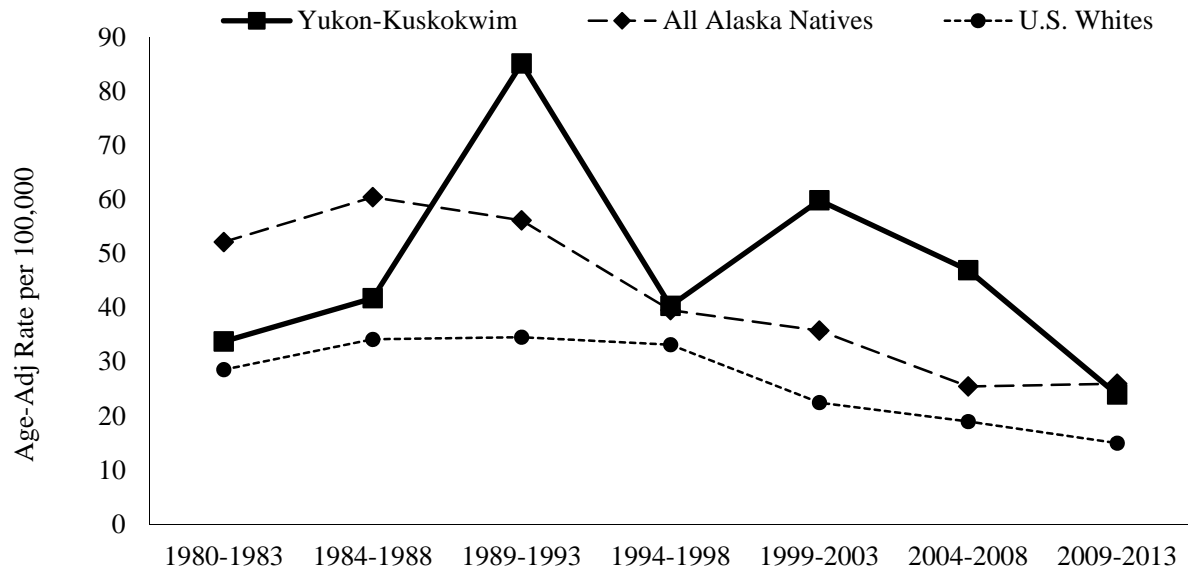


FIGURE 148. Age-Adjusted Mortality Rates for Suicide
 Data Source: Table 21b. Yukon-Kuskokwim vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)

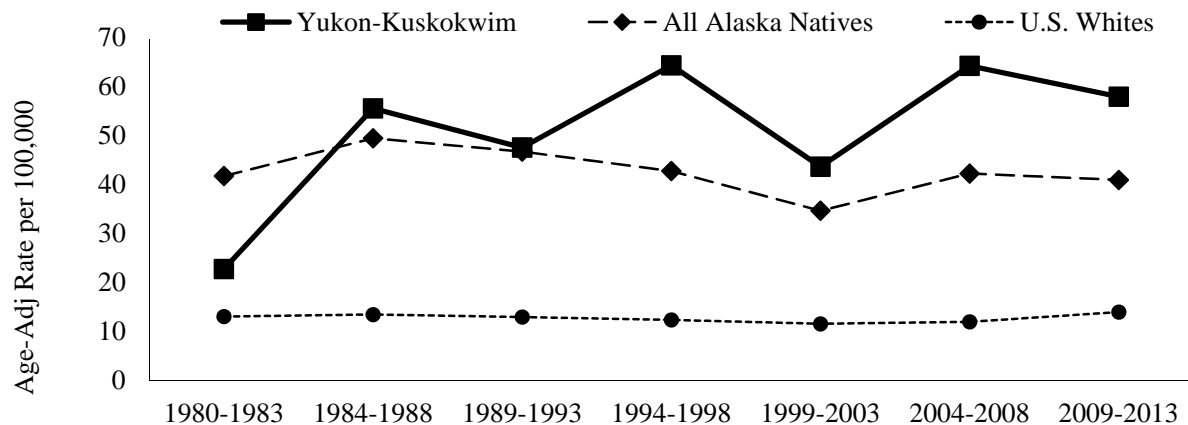
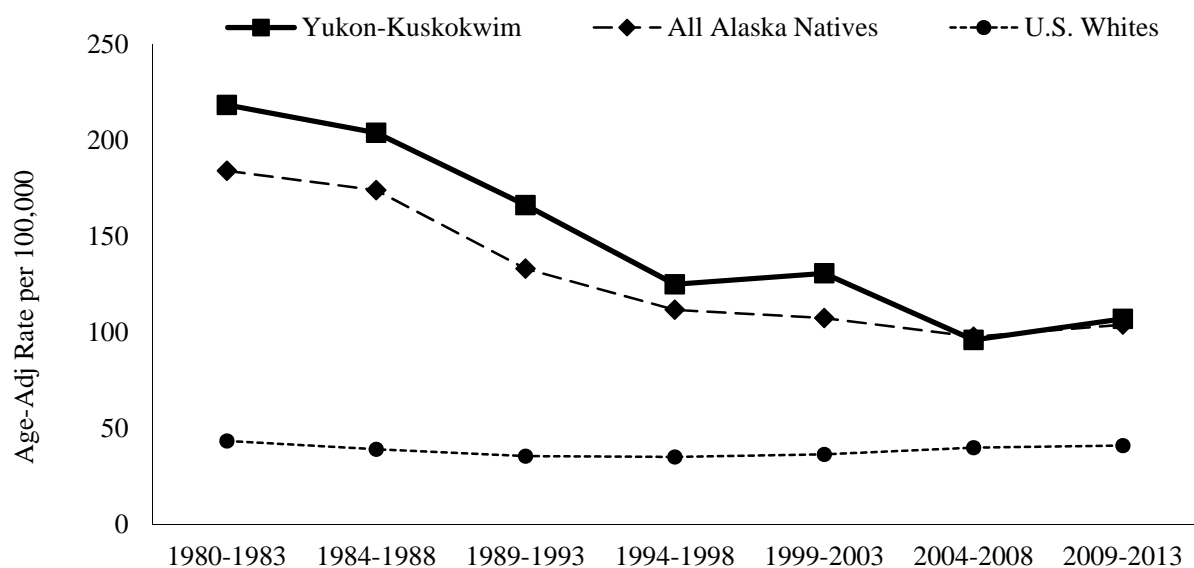


FIGURE 149. Age-Adjusted Mortality Rates for Unintentional Injury
 Yukon-Kuskokwim vs All Alaska Natives vs U.S. Whites
 by Five Year Intervals (1980-2013)
 Data Source: Table 21b.



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ALL-CAUSE MORTALITY

During the period, 2009-2013, a total of 4,345 Alaska Native deaths were reported. The average annual age-adjusted mortality from all causes for Alaska Native people, both genders combined, was 1076.7 compared to 736.9 per 100,000 population for U.S. Whites; a statistically significant rate ratio (RR) of 1.5. The rates for Alaska Native males and females were both significantly higher than U.S. Whites (RR = 1.3 for both) as shown in Table 23.

The three leading causes of death for Alaska Native people, cancer, heart disease, and unintentional injury, were responsible for 2,183 deaths, just over half of the total 4,345 deaths. The Alaska Native and U.S. White populations shared eight of the ten leading causes of death, although in different rank order. Mortality rates for Alaska Native people for both genders combined were significantly higher than U.S. Whites for nine of the leading causes of death (cancer, heart disease, unintentional injury, suicide, chronic pulmonary disease, cerebrovascular disease, chronic liver disease,

pneumonia/influenza, and alcohol abuse). Rate ratios of Alaska Native people compared to U.S. Whites were highest for alcohol abuse (7.1), suicide (2.9), unintentional injury (2.6), and chronic liver disease (2.4).

Compared to U.S. Whites, rates were significantly higher among both Alaska Native males and females for eight of the ten leading causes of death: cancer, heart disease, unintentional injury, suicide, chronic pulmonary disease, homicide, chronic liver disease, and pneumonia/influenza. Alaska Native males had a higher mortality rate than U.S. White males for cerebrovascular disease, but the difference was not statistically significant. Alaska Native males had a lower mortality rate due to diabetes than U.S. White males, though the difference was not statistically significant. Alaska Native females had a significantly higher rate than U.S. White females for cancer, unintentional injury, cerebrovascular disease, COPD, chronic liver disease and cirrhosis, suicide, pneumonia/influenza, and alcohol abuse. Alaska Native males had higher rates than Alaska Native females for all of the

leading causes except chronic liver disease (20.9 vs. 27.6 per 100,000).

decline among U.S. Whites between 1980-1983 and 2009-2013.

Age-specific mortality rates for all causes combined showed significantly higher mortality rates among Alaska Native people than among U.S. Whites for all age categories except those 75 years and older. Disparities between the two populations were highest under 45 years of age, and appeared to decline progressively in both genders as age increased. The decrease in rate ratios with increasing age occurred in both males and females separately. Age-specific rates were significantly higher among males than females for all ages.

All-cause mortality rates were significantly higher for the Norton Sound service region as compared to all other service regions combined. All-cause rates were significantly lower for the Aleutian and Pribilof service region than all other service regions combined.

The all-cause mortality rate for Alaska Native people declined significantly (13%) between 1980-1983 and 2009-2013; similar to the significant 25%

Cause of Death Among Alaska Natives, 2009-2013

All-Cause

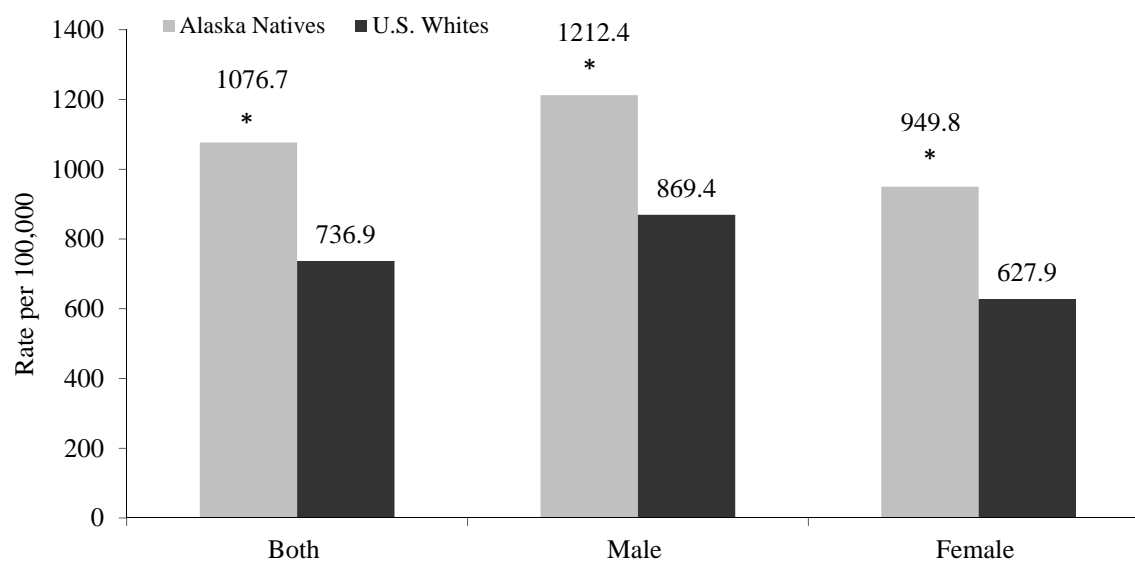
TABLE 23. Age-Adjusted[†] All-Cause Mortality Rates
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

	Alaska Natives			U.S. Whites			Rate Ratio	95% CI
	#	%	Rate per 100,000	#	%	Rate per 100,000		
Both	4,345	100.0%	1076.7	10,749,462	100.0%	736.9	*1.5	1.41-1.50
Male	2,337	100.0%	1212.4	5,357,161	100.0%	869.4	*1.3	1.27-1.39
Female	2,006	100.0%	949.8	5,392,301	100.0%	627.9	*1.3	1.26-1.40

* 95% CI does not include 1.

[†] Age-adjusted to the US 2000 Standard population.

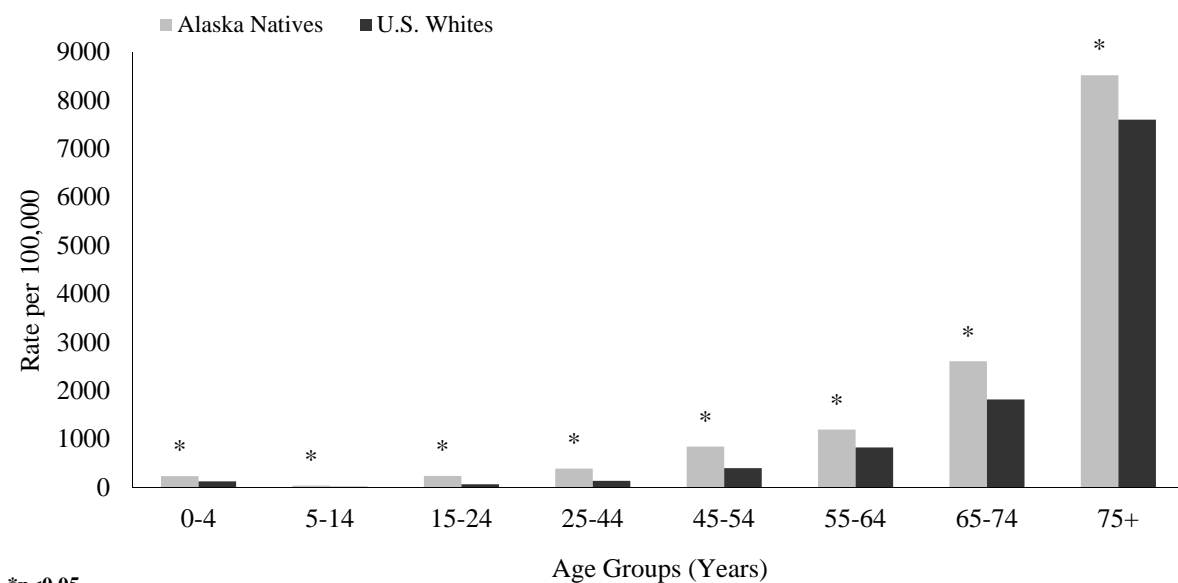
FIGURE 150. Age-Adjusted All-Cause Mortality Rates
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)



**TABLE 24a. Age-Specific Mortality Rates for All-Cause
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	231.4	37.1	236.5	386.7	842.6	1194.4	2606.9	8520.8
U.S. Whites	123.7	12.4	64.4	134.4	396.7	824.8	1817.2	7602.3
Rate Ratio	1.9	3.0	3.7	2.9	2.1	1.4	1.4	1.1

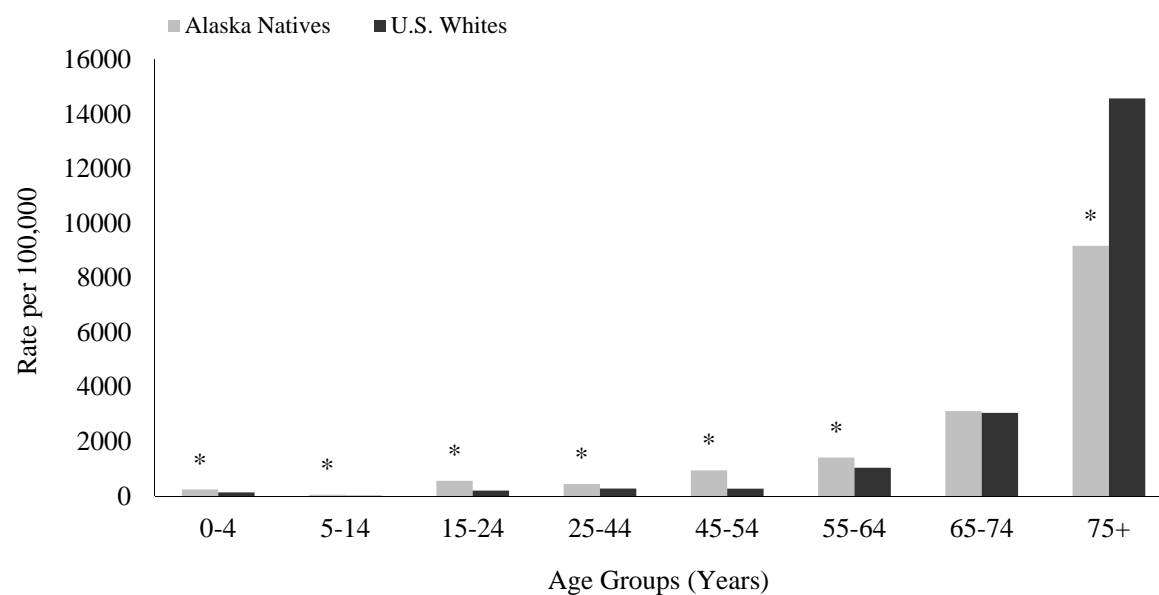
**FIGURE 151a. Age-Specific Mortality Rates for All-Cause
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**



**TABLE 24b. Age-Specific Mortality Rates for All-Cause
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	244.1	49.2	560.4	443.9	943.9	1415.1	3114.2	9173.7
U.S. Whites	135.4	14.0	201.7	276.0	271.8	1038.7	3050.8	14579.0
Rate Ratio	1.8	3.5	2.8	1.6	3.5	1.4	1.0	0.6

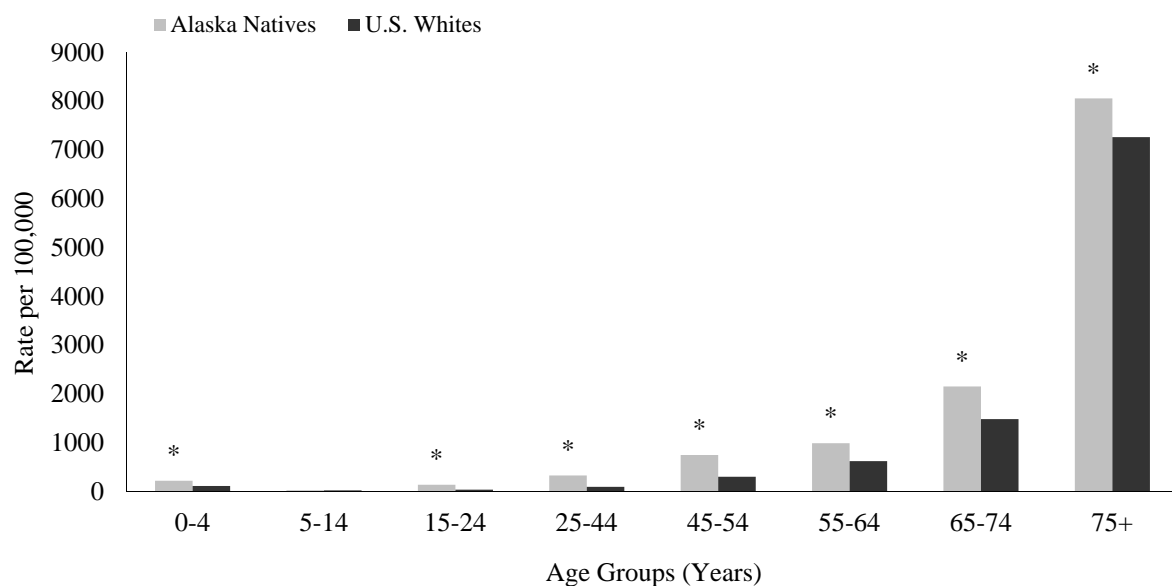
**FIGURE 151b. Age-Specific Mortality Rates for All-Cause
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**



**TABLE 24c. Age-Specific Mortality Rates for All-Cause
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	218.2	23.9	136.3	326.9	746.7	988.0	2150.9	8053.2
U.S. Whites	111.4	22.0	36.1	94.4	300.4	621.2	1482.1	7260.2
Rate Ratio	2.0	1.1	3.8	3.5	2.5	1.6	1.5	1.1

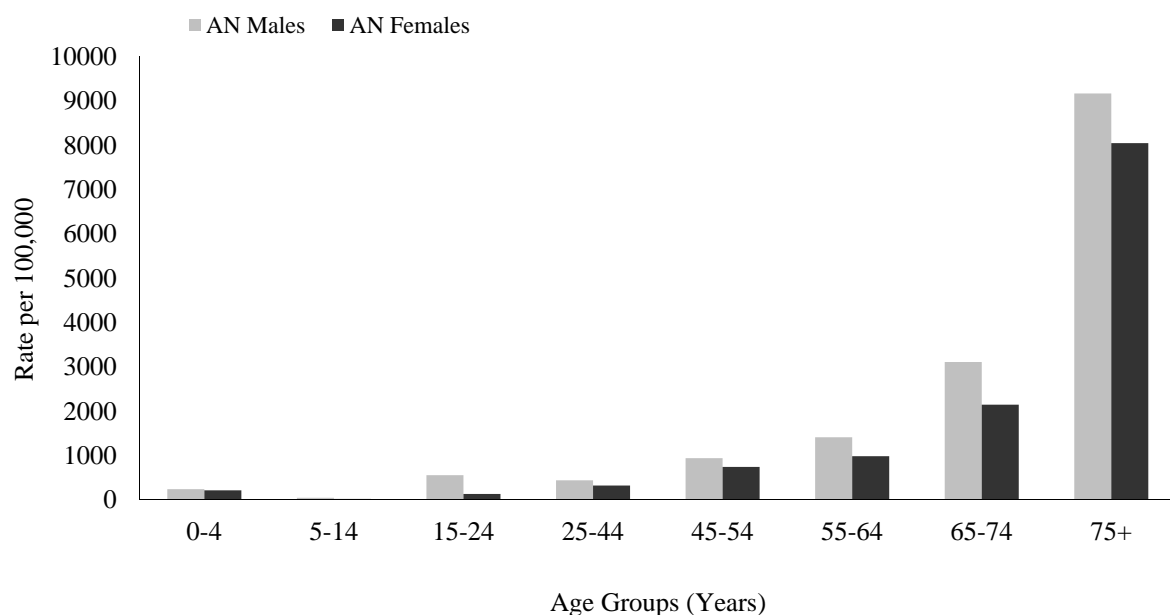
**FIGURE 151c. Age-Specific Mortality Rates for All-Cause
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**



**TABLE 25. Age-Specific Mortality Rates for All-Cause Alaska Natives (2009-2013)
Males versus Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	244.1	49.2	560.4	443.9	943.9	1415.1	3114.2	9173.7
AN Females	218.2	23.9	136.3	326.9	746.7	988.0	2150.9	8053.2
Rate Ratio	1.1	2.1	4.1	1.4	1.3	1.4	1.4	1.1

**FIGURE 152. Age-Specific Mortality Rates for All-Cause Alaska Natives (2009-2013)
Males versus Females**



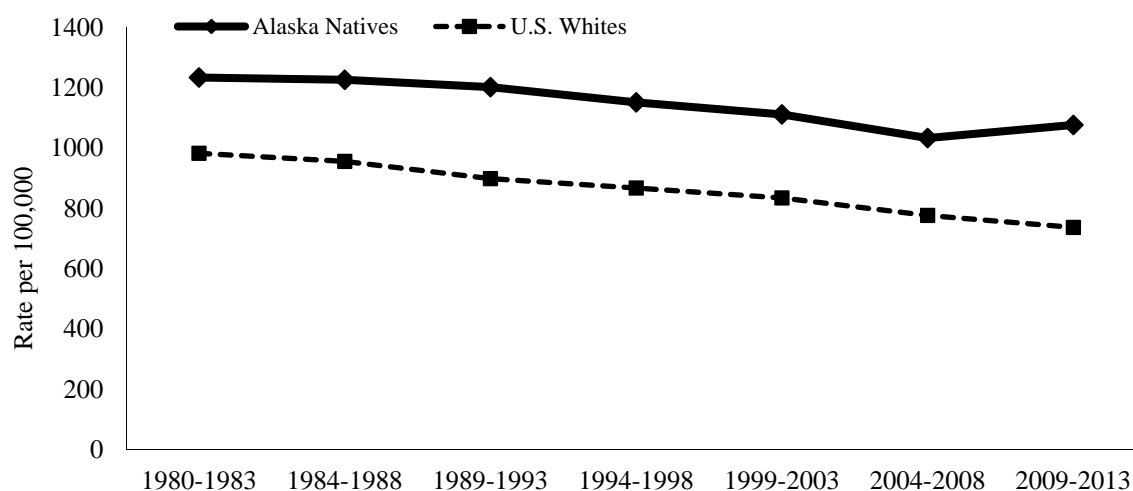
*p<0.05

TABLE 26. **Age-Adjusted Mortality Rates for All-Cause**
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders

	1980-1983 ^a	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013	% Change
Alaska Natives	1234.0	1226.5	1202.1	1151.6	1111.6	1033.3	1076.7	-13%
U.S. Whites	982.7	955.8	898.6	867.5	834.6	776.6	736.9	-25%
Rate Ratio	1.3	1.3	1.3	1.3	1.3	1.3	1.5	

^a 1980-1983 time period contains only four years

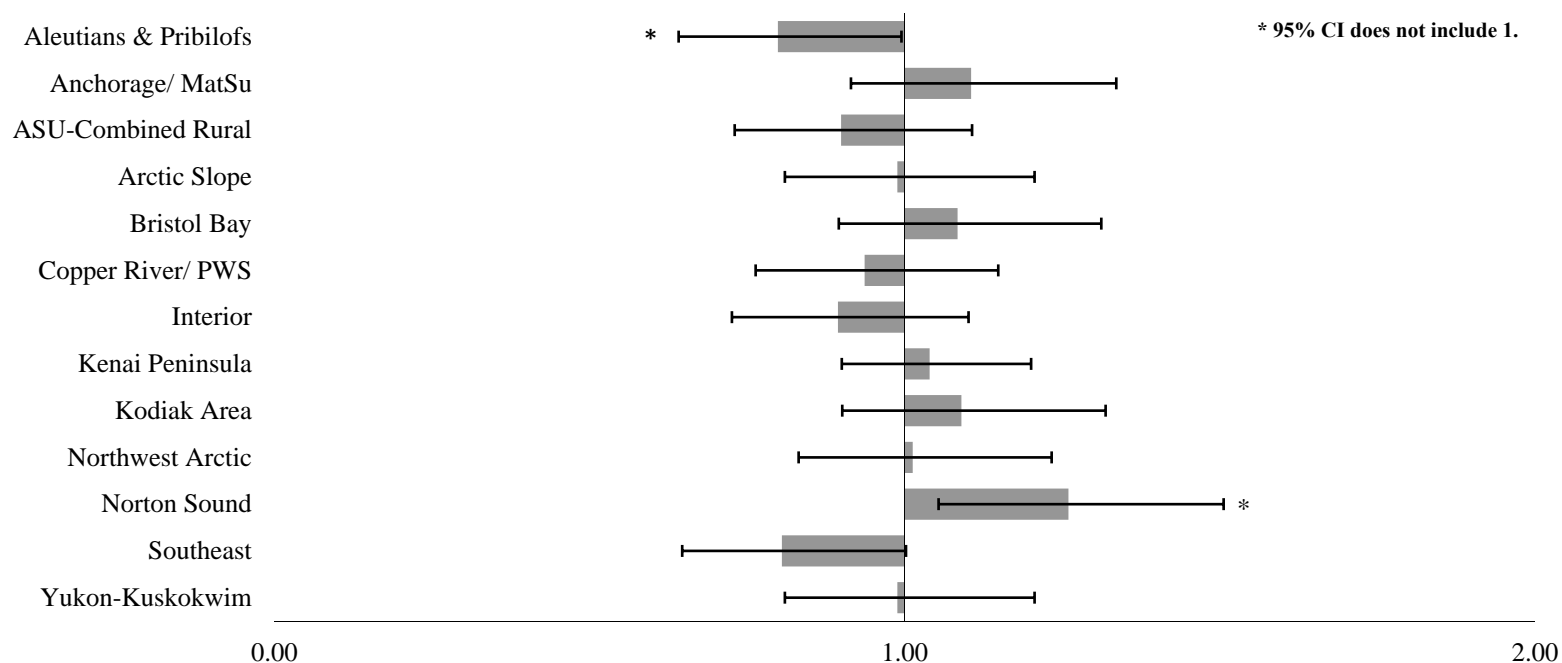
FIGURE 153. **Age-Adjusted Mortality Rates for All-Cause**
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders



**TABLE 27. Age-Adjusted Mortality Rates for All-Cause
Alaska Natives By Service Region (2009-2013), Both Genders**

	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Natives Statewide
Rate	↓859.7	1189.8	967.7	1063.8	1166.7	1007.9	962.3	1119.0	1173.3	1090.1	↑1356.1	866.6	1063.8	1076.7
RR	0.80	1.11	0.90	0.99	1.08	0.94	0.89	1.04	1.09	1.01	1.26	0.80	0.99	

**FIGURE 154. All-Cause Mortality Rate Ratios
Each Service Region vs All Other Regions Combined, Alaska Natives (2009-2013), Both Genders**



FIRST LEADING CAUSE OF DEATH **CANCER**

Cancer was the leading cause of death among Alaska Native people, for males, females, and both genders combined, for the time period 2009-2013. Cancer accounted for 20.9% (n=908) of all deaths. The cancer mortality rate for Alaska Native people, both genders combined, was significantly higher than for U.S. Whites (RR=1.4). Rates were significantly higher for both Alaska Native males and Alaska Native females compared to U.S. White males and females (RR=1.4 for both).

Among Alaska Native people, both genders combined, three cancers comprised nearly half (48%) of all cancer deaths: cancer of the lung and bronchus 27%; colon and rectum 12%; and oral cancers 9%. Among Alaska Native males, the leading cancer deaths were lung and bronchus (31%), colon and rectum (11%), and oral cancers (6%). Among Alaska Native females, the leading cancer deaths were lung and bronchus (23%), colon and rectum (13%), and breast (12%).

There were 252 excess deaths from cancer among Alaska Native people, both genders combined, during this five year period, comprising 16.1% of all excess deaths. Among Alaska Native males (n=12) cancer accounted for 6.3% of excess deaths, the fourth largest cause of excess deaths. Among Alaska Native females (n=87), cancer accounted for 12.3% of all excess deaths, the second largest cause of excess death.

Age-specific cancer mortality rate ratios for Alaska Native people, both genders combined, compared to U.S. Whites, ranged from 1.1 to 1.7, and were highest in the 15-24 and 45-54 year age groups. Rates were significantly higher for Alaska Native people compared to U.S. Whites for all age groups 45 years and older.

Alaska Native males were more likely to die from cancer in all age groups over 25 years than Alaska Native females, but these differences were not significant.

Examining cancer mortality rates by service region, showed that the Arctic Slope (RR=1.3), Copper River/Prince William Sound (RR=1.4), and Norton

Sound (RR=1.4) regions had significantly higher rates than the rest of the state. The Southeast (RR=0.8) region had significantly lower rates than the rest of the state.

There was a significant increase (5%) in Alaska Native cancer mortality rates between 1980-1983 and 2009-2013. U.S. White rates did not change significantly during the period 1980-1983 and 2009-2013.

First Leading Cause of Death Among Alaska Natives, 2009-2013 Cancer

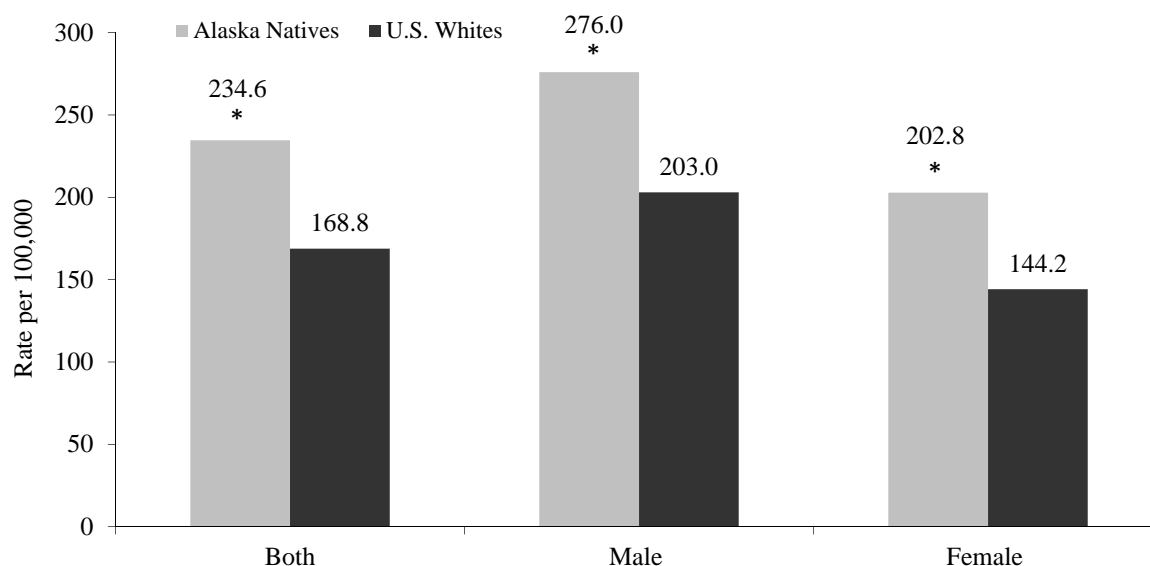
TABLE 28. **Age-Adjusted[†] Cancer Mortality Rates**
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

	Alaska Natives			U.S. Whites			Rate Ratio	95% CI
	#	%	Rate per 100,000	#	%	Rate per 100,000		
Both	908	20.9%	234.6	2,466,030	22.9%	168.8	*1.4	1.29-1.50
Male	474	20.3%	276.0	1,297,779	24.2%	203.0	*1.4	1.22-1.51
Female	433	21.6%	202.8	1,168,251	21.7%	144.2	*1.4	1.26-1.57

* 95% CI does not include 1.

[†] Age-adjusted to the US 2000 Standard population.

FIGURE 155. **Age-Adjusted Cancer Mortality Rates**
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)



**TABLE 29a. Age-Specific Mortality Rates for Cancer
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	6.4	20.1	182.0	369.6	916.9	1816.7
U.S. Whites	1.9	2.2	3.7	18.4	107.4	290.4	646.1	1344.0
Rate Ratio	-	-	1.7	1.1	1.7	1.3	1.4	1.4

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 156a. Age-Specific Mortality Rates for Cancer
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

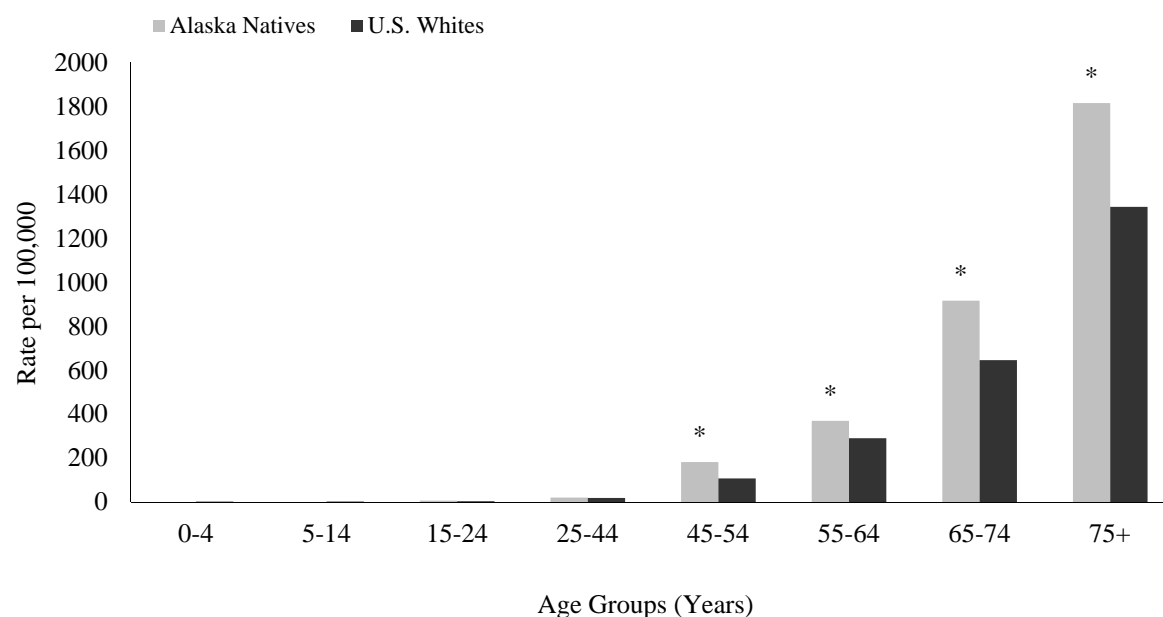
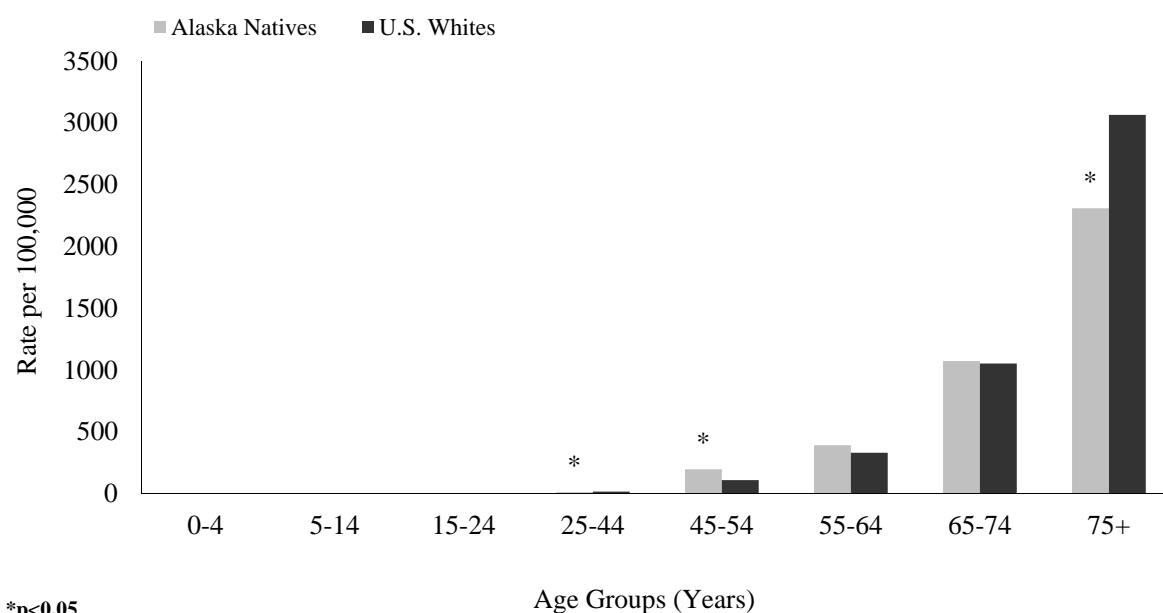


TABLE 29b. Age-Specific Mortality Rates for Cancer
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	11.6	197.1	391.6	1072.8	2309.1
U.S. Whites	2.1	2.4	4.3	16.6	109.4	331.0	1052.8	3065.0
Rate Ratio	-	-	-	0.7	1.8	1.2	1.0	0.8

(-) Rate not calculated for fewer than 5 deaths.

FIGURE 156b. Age-Specific Mortality Rates for Cancer
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males

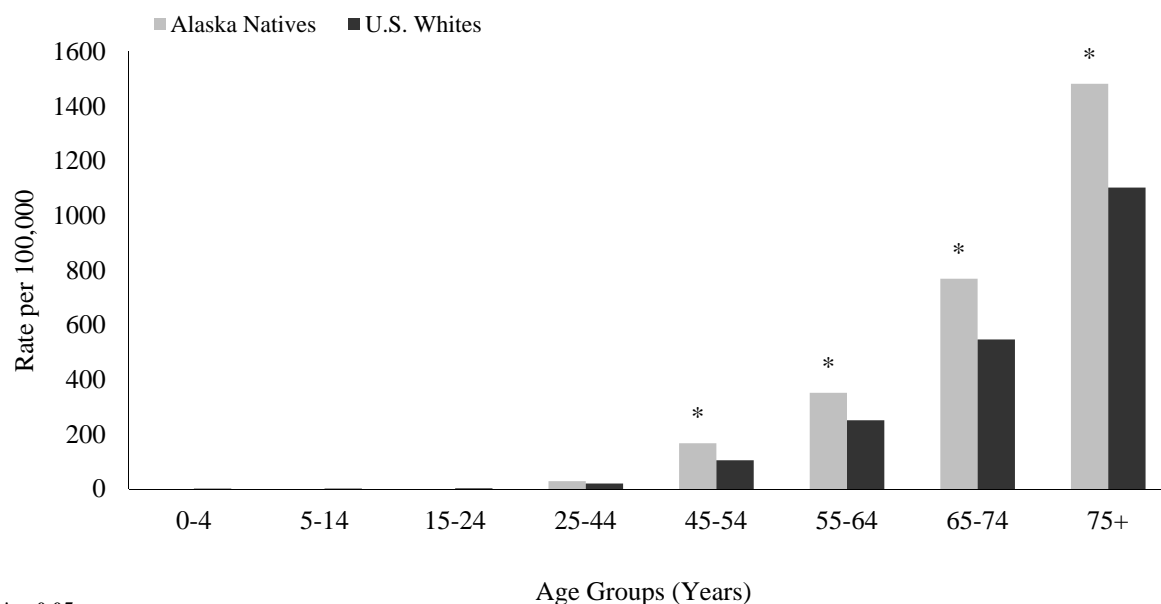


**TABLE 29c. Age-Specific Mortality Rates for Cancer
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	28.9	167.7	352.4	769.7	1483.2
U.S. Whites	1.8	2.1	3.0	20.3	105.5	251.8	547.4	1103.4
Rate Ratio	-	-	-	1.4	1.6	1.4	1.4	1.3

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 156c. Age-Specific Mortality Rates for Cancer
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**

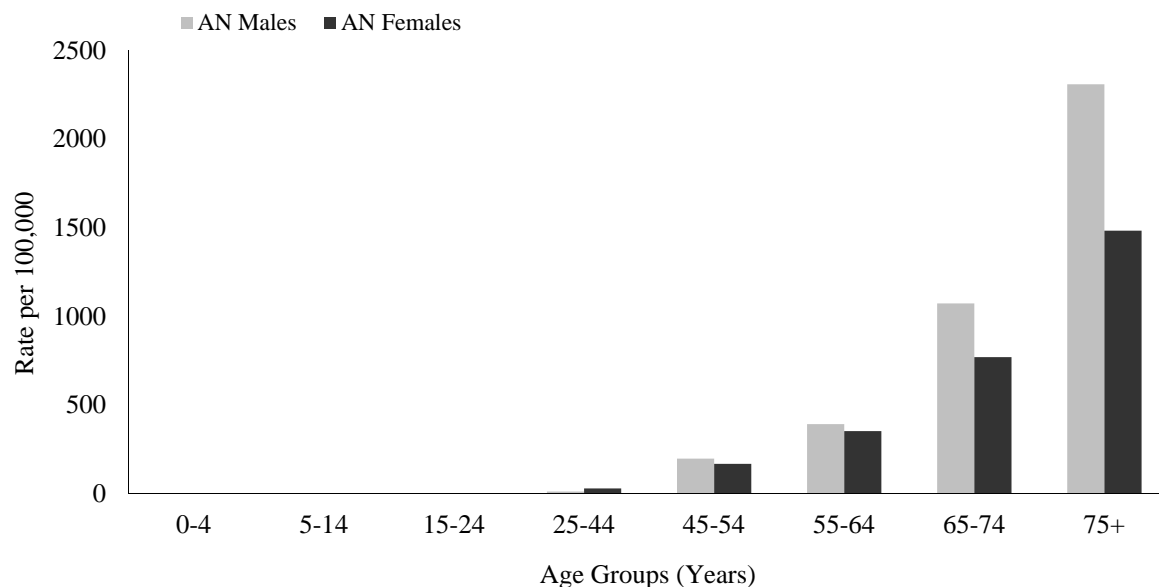


**TABLE 30. Age-Specific Mortality Rates for Cancer
Alaska Natives (2009-2013)
Males versus Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	-	-	-	11.6	197.1	391.7	1072.8	2309.1
AN Females	-	-	-	28.9	167.7	352.4	769.7	1483.2
Rate Ratio	-	-	-	0.4	1.2	1.1	1.4	1.6

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 157. Age-Specific Mortality Rates for Cancer
Alaska Natives (2009-2013)
Males versus Females**



*p<0.05

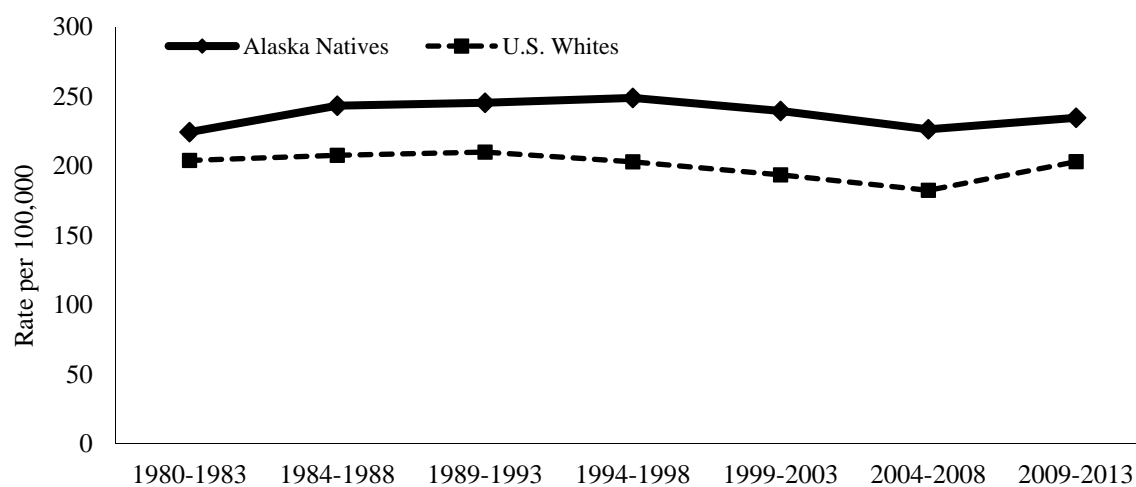
**TABLE 31. Age-Adjusted Mortality Rates for Cancer
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders**

	1980-1983 ^a	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013	% Change
Alaska Natives	224.3	243.3	245.4	248.9	239.5	226.3	234.6	5%
U.S. Whites	203.9	207.6	209.9	202.9	193.5	182.4	203.0	*NS
Rate Ratio	1.1	1.2	1.2	1.2	1.2	1.2	1.2	

* NS means that there was no significant difference at $p < 0.05$

^a 1980-1983 time period contains only four years

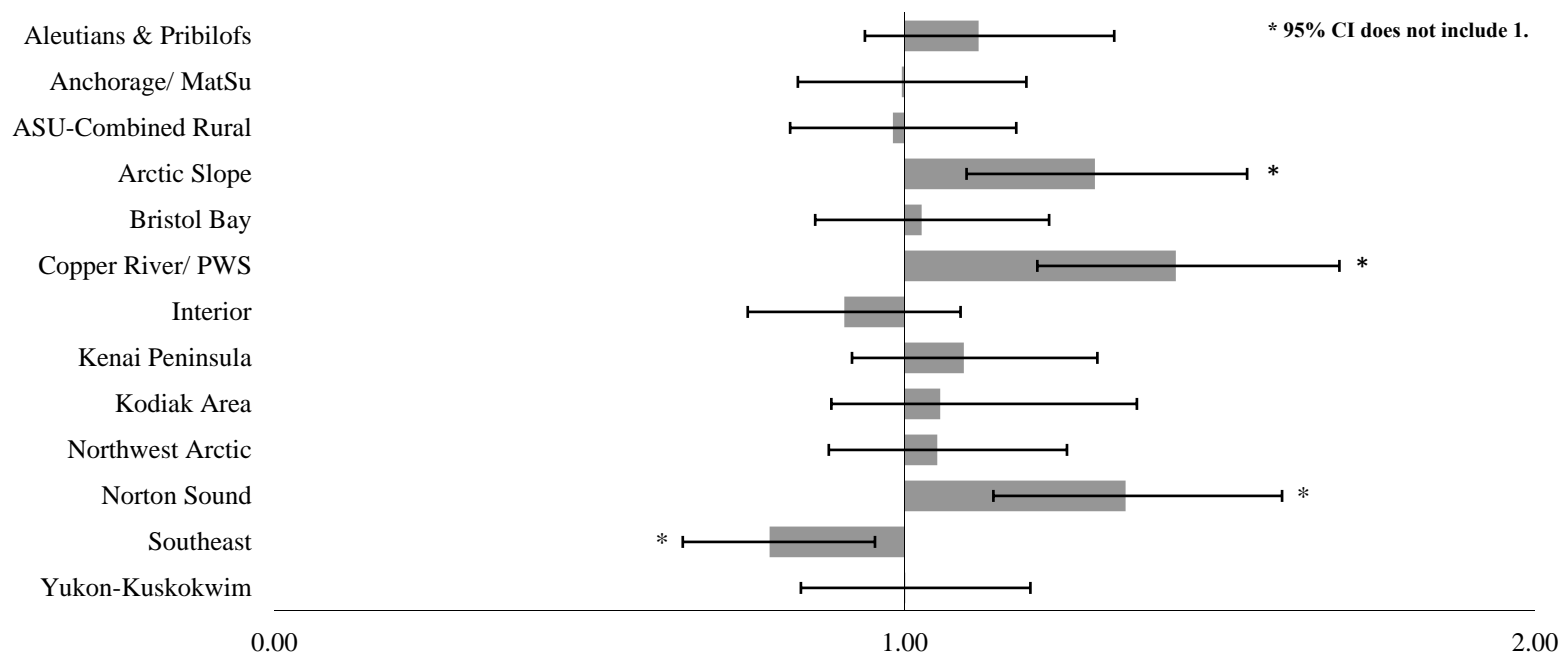
**FIGURE 158. Age-Adjusted Mortality Rates for Cancer
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders**



**TABLE 32. Age-Adjusted Mortality Rates for Cancer
Alaska Natives By Service Region (2009-2013), Both Genders**

	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Natives Statewide
Rate	262.1	233.5	230.2	↑305.4	240.9	↑335.5	212.1	256.6	247.8	246.7	↑316.8	↓184.3	234.8	234.6
RR	1.12	1.00	0.98	1.30	1.03	1.43	0.90	1.09	1.06	1.05	1.35	0.79	1.00	

**FIGURE 159. Cancer Mortality Rate Ratios
Each Service Region vs All Other Regions Combined, Alaska Natives (2009-2013), Both Genders**



SECOND LEADING CAUSE OF DEATH

HEART DISEASE

Heart disease was the second leading cause of death among Alaska Native people, both genders combined. It ranked second among Alaska Native males and among Alaska Native females. Heart disease accounted for 16.6% (n=723) of all deaths among Alaska Native people. For the first time, heart disease mortality rates for Alaska Native people, both genders combined, were significantly higher than U.S. White rates (RR=1.1). The rates for Alaska Native males were significantly higher than those of U.S. White males (RR=1.2). Alaska Native females had a slightly lower heart disease mortality rate than U.S. White females, but the difference was not significant.

Compared to U.S. Whites, age-specific rates of heart disease mortality for Alaska Native people, both genders combined, ranged from 0.8 to 4.3. Rate ratios were significantly higher for Alaska Native people compared to U.S. Whites for the 15 to 64 year age groups. Rates were similar for the two

populations for the 65 to 74 year age groups. Alaska Native people had a significantly lower rate (RR=0.8) among those 75 years and older. These trends were similar for males and females.

Examining heart disease mortality rates by service region showed that the Aleutians & Pribilofs (RR=0.7) and Arctic Slope (RR=0.7) service regions had significantly lower rates of heart disease than Alaska Native people statewide. The Kodiak (RR=1.4) and Norton Sound (RR=1.5) regions had a significantly higher rate ratio than the remainder of the state.

Heart disease mortality rates for Alaska Native people declined 30% between 1980-1983 and 2009-2013. Heart disease mortality for U.S. Whites declined 56% between 1980-1983 and 2009-2013.

Second Leading Cause of Death Among Alaska Natives, 2009-2013 Heart Disease

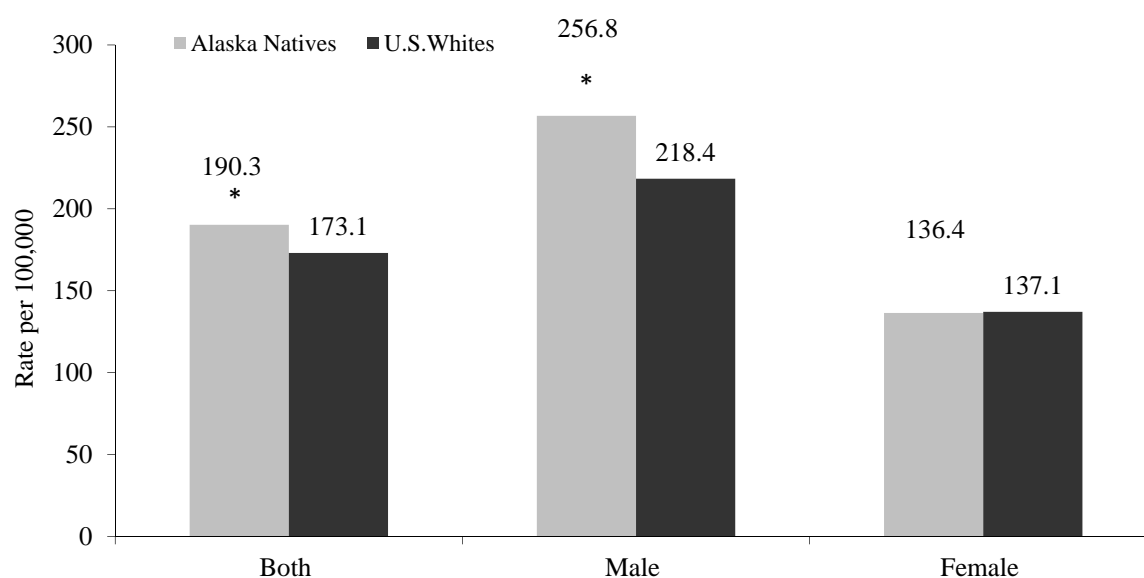
TABLE 33. **Age-Adjusted[†] Heart Disease Mortality Rates**
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

	Alaska Natives			U.S. Whites			Rate Ratio	95% CI
	#	%	Rate per 100,000	#	%	Rate per 100,000		
Both	723	16.6%	190.3	2,580,628	24.0%	173.1	*1.1	1.01-1.20
Male	446	19.1%	256.8	1,337,068	28.7%	218.4	*1.2	1.05-1.31
Female	277	13.9%	136.4	1,243,560	23.1%	137.1	1.0	0.87-1.14

* 95% CI does not include 1.

[†] Age-adjusted to the US 2000 Standard population.

FIGURE 160. **Age-Adjusted Heart Disease Mortality Rates**
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

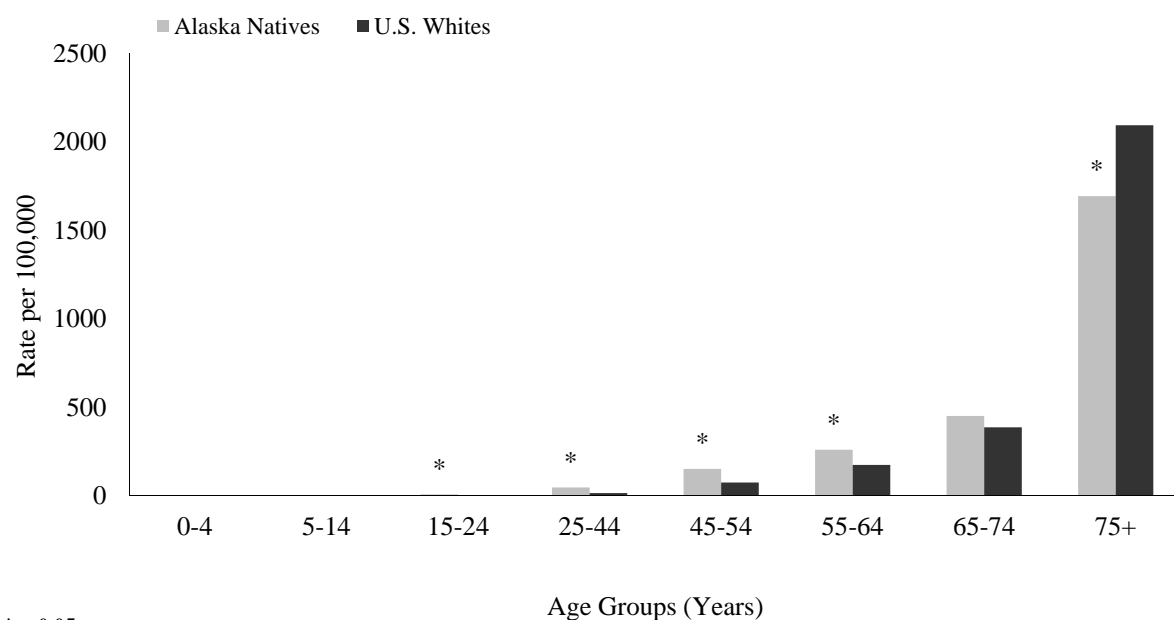


**TABLE 34a. Age-Specific Mortality Rates for Heart Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	8.2	47.4	152.3	260.7	450.9	1693.8
U.S. Whites	2.2	0.4	1.9	15.0	75.4	174.5	386.9	2093.9
Rate Ratio	-	-	4.3	3.2	2.0	1.5	1.2	0.8

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 161a. Age-Specific Mortality Rates for Heart Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

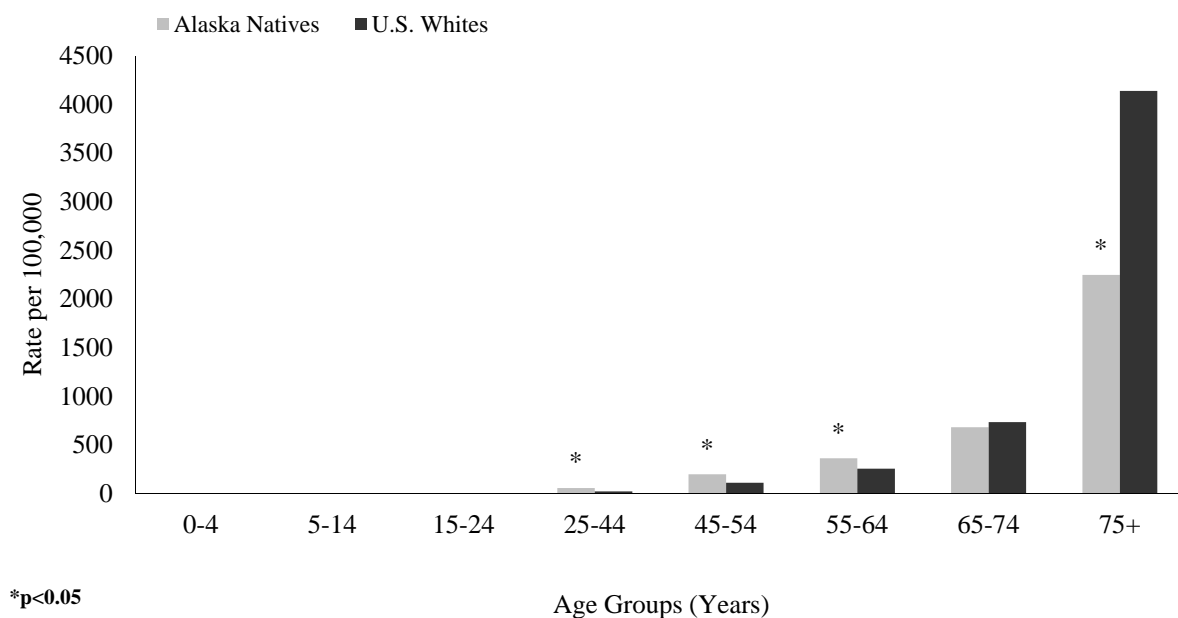


**TABLE 34b. Age-Specific Mortality Rates for Heart Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	56.6	197.1	362.1	680.5	2246.3
U.S. Whites	2.3	0.6	2.9	20.9	110.7	254.9	733.7	4137.5
Rate Ratio	-	-	-	2.7	1.8	1.4	0.9	0.5

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 161b. Age-Specific Mortality Rates for Heart Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

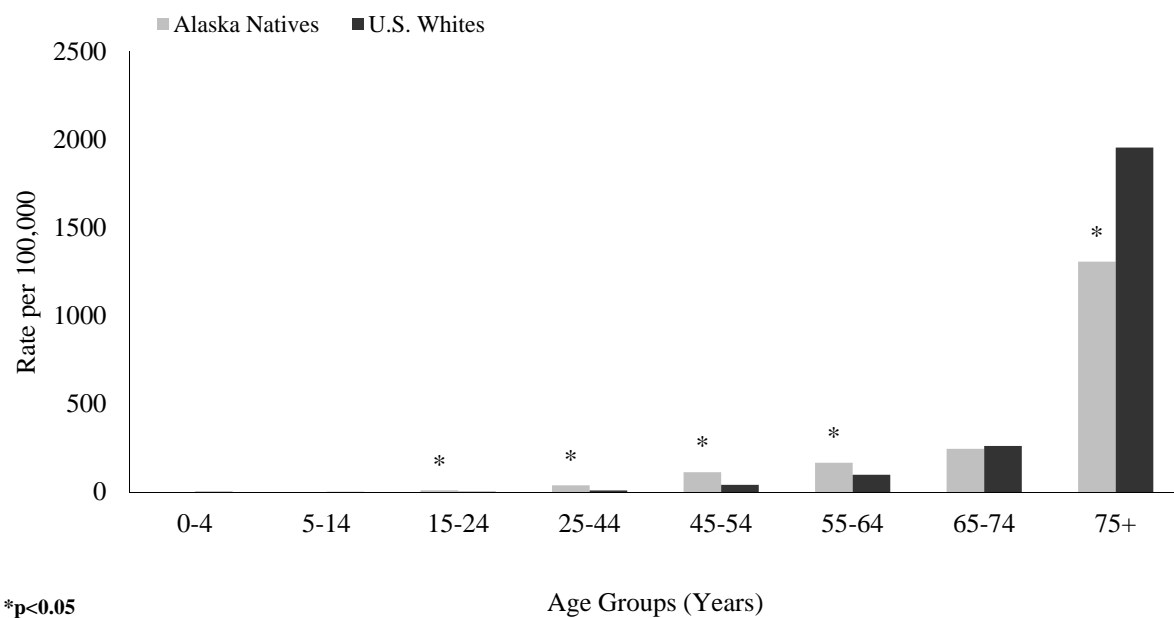


**TABLE 34c. Age-Specific Mortality Rates for Heart Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	9.5	38.1	112.7	165.8	244.6	1307.4
U.S. Whites	1.7	0.3	1.2	8.8	40.5	97.9	261.6	1954.7
Rate Ratio	-	-	7.9	4.3	2.8	1.7	0.9	0.7

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 161c. Age-Specific Mortality Rates for Heart Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**

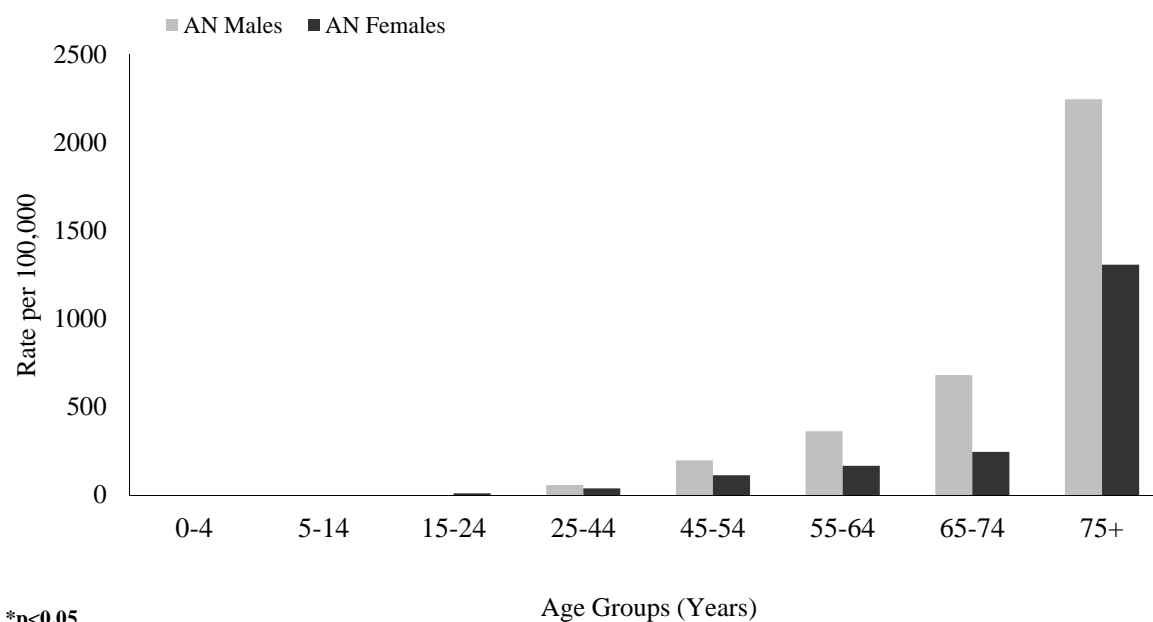


**TABLE 35. Age-Specific Mortality Rates for Heart Disease
Alaska Natives (2009-2013)
Males versus Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	-	-	-	56.6	197.1	362.1	680.5	2246.3
AN Females	-	-	9.5	38.1	112.7	165.8	244.6	1307.4
Rate Ratio	-	-	-	1.5	1.7	2.2	2.8	1.7

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 162. Age-Specific Mortality Rates for Heart Disease
Alaska Natives (2009-2013)
Males versus Females**



**TABLE 36. Age-Adjusted Mortality Rates for Heart Disease
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders**

	1980-1983 ^a	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013	% Change
Alaska Natives	270.9	288.1	271.9	252.0	211.6	169.0	190.3	-30%
U.S. Whites	395.1	362.5	310.2	280.2	243.6	205.1	173.1	-56%
Rate Ratio	0.7	0.8	0.9	0.9	0.9	0.8	1.1	

^a 1980-1983 time period contains only four years

**FIGURE 163. Age-Adjusted Mortality Rates for Heart Disease
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders**

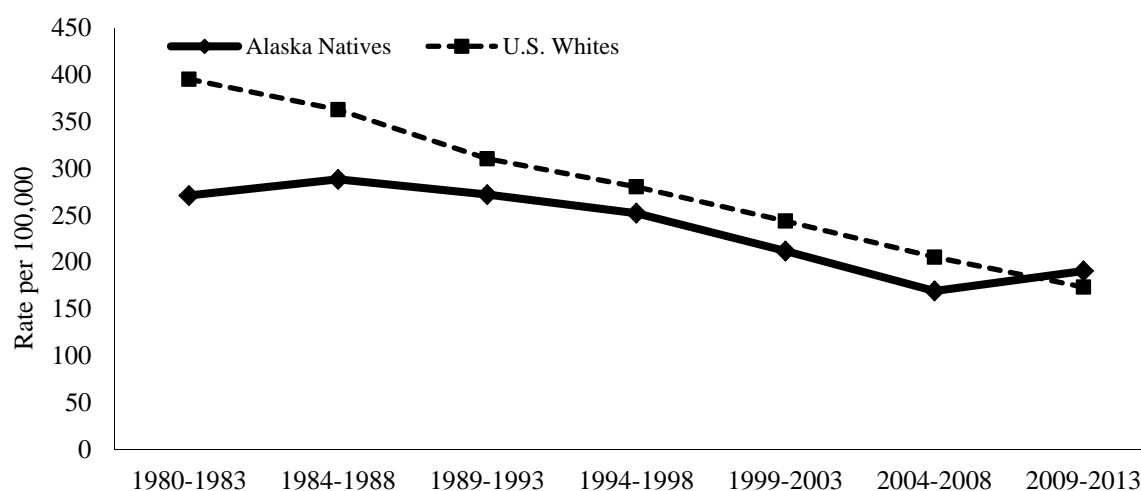
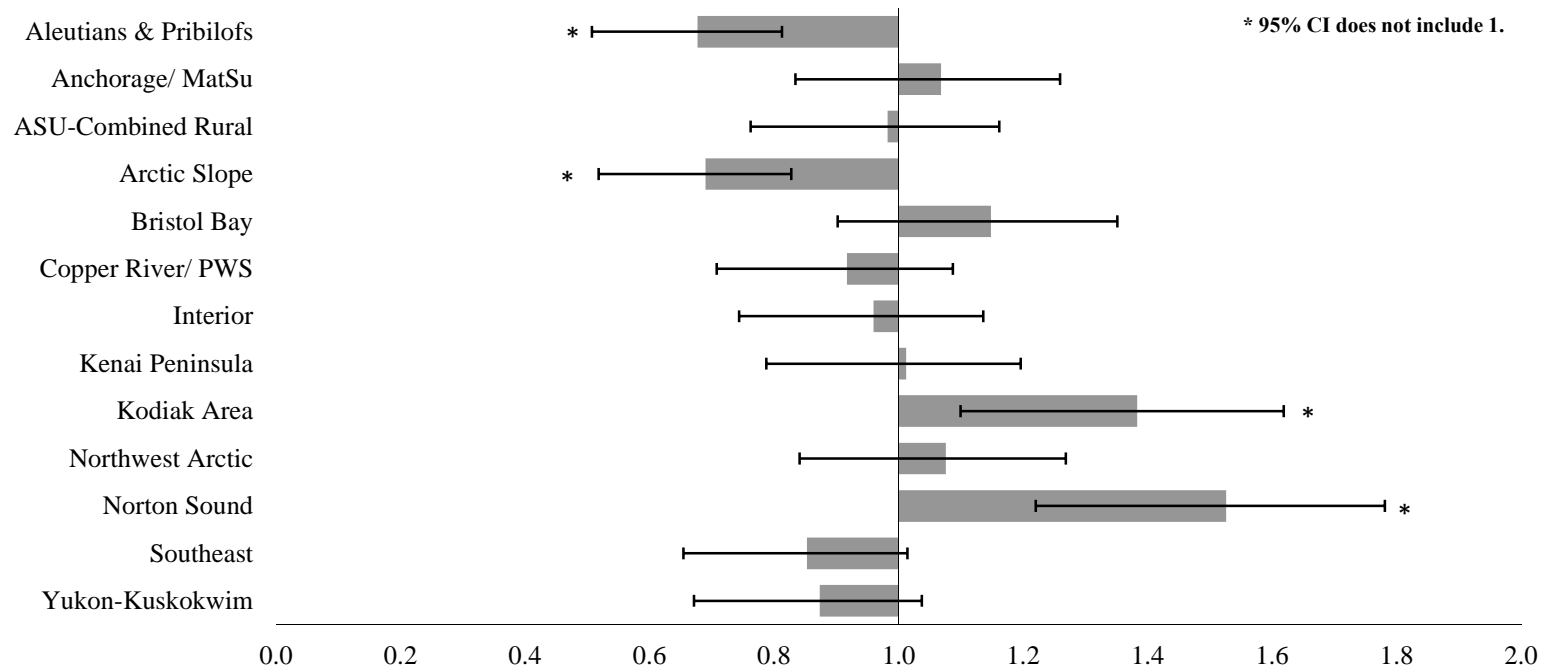


TABLE 37. Age-Adjusted Mortality Rates for Heart Disease
Alaska Natives By Service Region (2009-2013), Both Genders

	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Natives Statewide
Rate	↓128.8	203.2	186.9	↓131.3	218.5	174.5	182.6	192.6	↑263.2	204.7	↑290.4	162.3	166.2	190.3
RR	0.68	1.07	0.98	0.69	1.15	0.92	0.96	1.01	1.38	1.08	1.53	0.85	0.87	

FIGURE 164. Heart Disease Mortality Rate Ratios
Each Service Region vs All Other Regions Combined, Alaska Natives (2009-2013), Both Genders



*THIRD LEADING CAUSE OF DEATH***UNINTENTIONAL INJURY**

Unintentional injury was the third leading cause of death for Alaska Native people, both genders combined. It ranked third among causes of death for both Alaska Native males and females. Unintentional injury comprised 12.6% (n= 552) of all Alaska Native deaths. For Alaska Native people, both genders combined, unintentional injury mortality rates were 2.6 times the U.S. White rate. Rates for Alaska Native males were 2.3 times the U.S. White male rate. Rates for Alaska Native females were 3.0 times those for U.S. White females.

The top five causes of unintentional injury deaths among Alaska Native people, both genders combined, accounted for 75% of all unintentional injury deaths. The leading causes were: poisoning (31%) – just less than half of which were overdoses of alcohol or drugs, motor vehicle traffic injuries (13%), drowning and watercraft injuries (13%), exposure to the elements (10%), and ATV injuries (8%). Firearm injuries comprised about 1% of all unintentional injury mortality.

Unintentional injury was the number one cause of excess deaths among Alaska Native people, accounting for 22.2% (n=348) among both genders combined. Unintentional injury comprised 38.3% of all excess deaths among Alaska Native males (n=146) and 19.8% of excess deaths among Alaska Native females (n=140).

Unintentional injuries were the leading cause of years of potential life lost. This cause accounted for over 23% (19,349 years) of all years of life lost before 75 for Alaska Native people, both genders; 25% (12,310 years) for Alaska Native males; and 21% (7,005 years) for Alaska Native females.

Unintentional injury mortality rates were significantly higher for every age group among Alaska Native people, both genders combined, as compared to U.S. Whites. Rate ratios ranged from 1.5 among those 75 years of age and older to 5.1 among 5 to 14 year olds. Unintentional injury mortality rates were significantly higher for all age groups among Alaska Native males as compared to U.S. White males. Alaska

Native females had significantly higher unintentional injury mortality rates for the 0-4, 15-54, and 75+ age groups as compared U.S. White females. Comparing Alaska Native males to females, Alaska Native males experienced unintentional injury mortality rates that were 1.1 to 3.1 times the Alaska Native female mortality rate for all age groups under 75. For 75 and above, Alaska Native males had lower mortality rates for unintentional injuries than Alaska Native females (RR=0.6).

Examining unintentional injury mortality rates by service region, showed that Bristol Bay (RR=1.8) and Copper River/Prince William Sound (RR=1.6) had significantly higher rates than the rest of the state. The Aleutian and Pribilof (RR = 0.6) and Southeast (RR = 0.7) service regions had significantly lower rates.

Unintentional injury mortality rates declined 43% for Alaska Native people, both genders combined, between 1980-1983 and 2009-2013. U.S. Whites experienced a 4% decline from 1980-1983 to 2009-2013.

Third Leading Cause of Death Among Alaska Natives, 2009-2013 Unintentional Injury

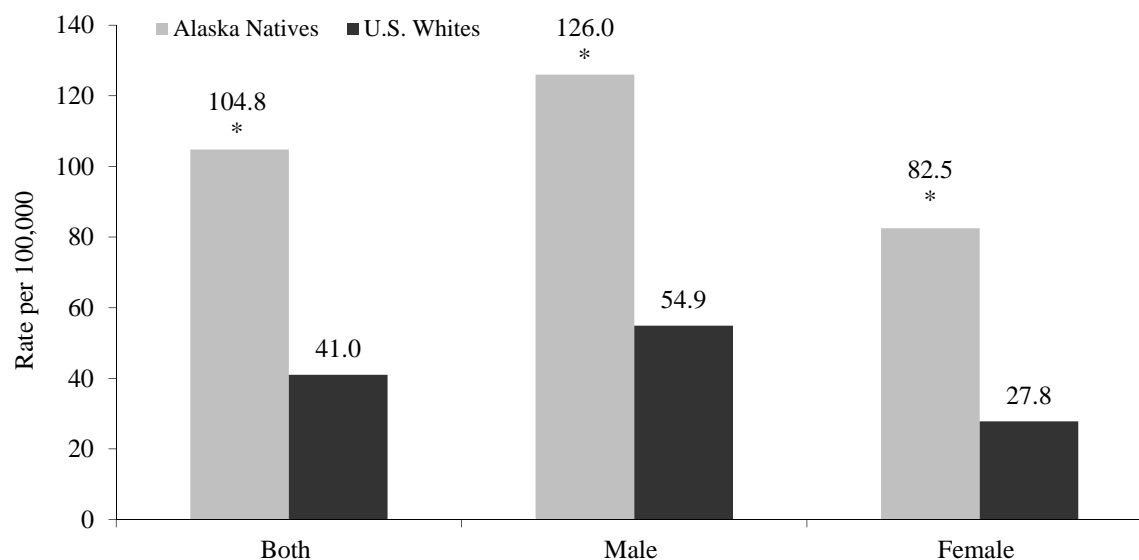
TABLE 38. Age-Adjusted[†] Unintentional Injury Mortality Rates
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

	Alaska Natives			U.S. Whites			Rate Ratio	95% CI
	#	%	Rate per 100,000	#	%	Rate per 100,000		
Both	552	12.6%	104.8	540,458	5.0%	41.0	*2.6	2.32-2.82
Male	340	13.3%	126.0	336,822	6.3%	54.9	*2.3	2.03-2.60
Female	211	10.5%	82.5	203,636	3.8%	27.8	*3.0	2.53-3.48

* 95% CI does not include 1.

[†] Age-adjusted to the US 2000 Standard population.

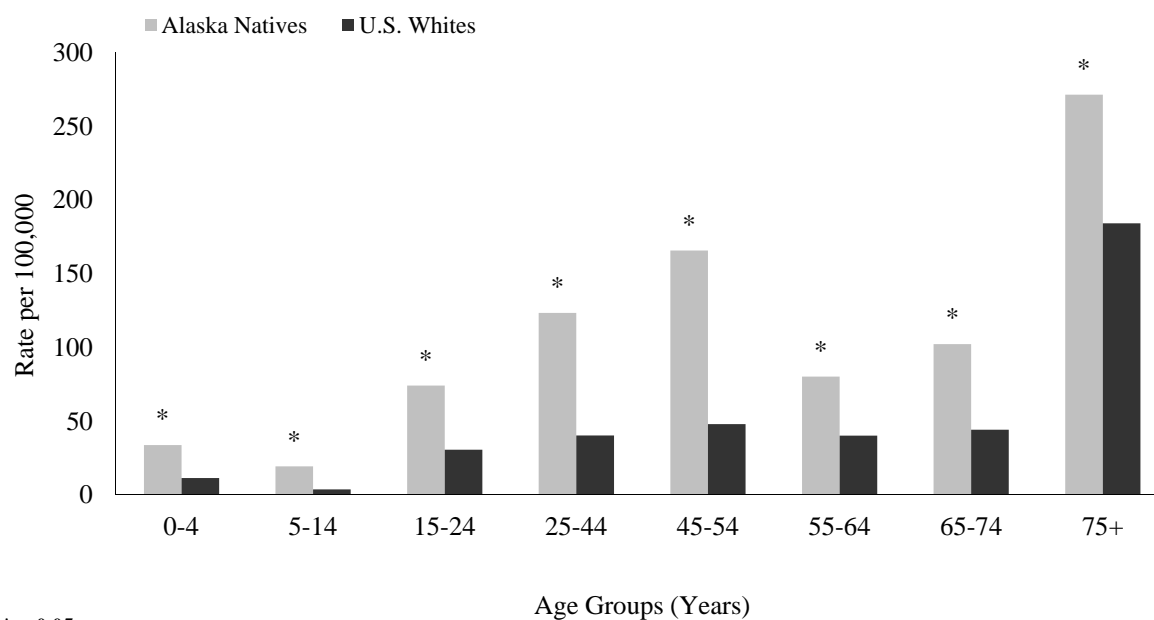
FIGURE 165. Age-Adjusted Unintentional Injury Mortality Rates
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)



**TABLE 39a. Age-Specific Mortality Rates for Unintentional Injury
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	33.9	19.4	74.2	123.5	165.8	80.3	102.3	271.5
U.S. Whites	11.5	3.8	30.7	40.4	48.1	40.3	44.3	184.2
Rate Ratio	3.0	5.1	2.4	3.1	3.5	2.0	2.3	1.5

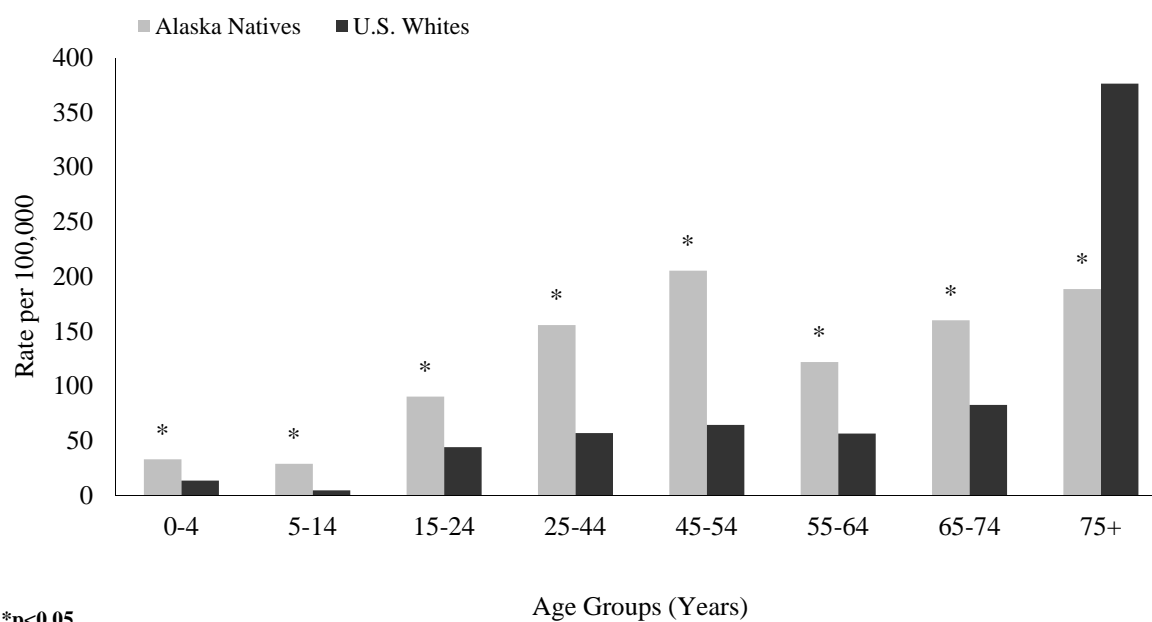
**FIGURE 166a. Age-Specific Mortality Rates for Unintentional Injury
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**



**TABLE 39b. Age-Specific Mortality Rates for Unintentional Injury
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	33.1	28.9	90.4	155.7	205.4	121.9	160.1	188.5
U.S. Whites	13.6	4.6	44.2	57.0	64.5	56.5	82.7	376.2
Rate Ratio	2.4	6.3	2.0	2.7	3.2	2.2	1.9	0.5

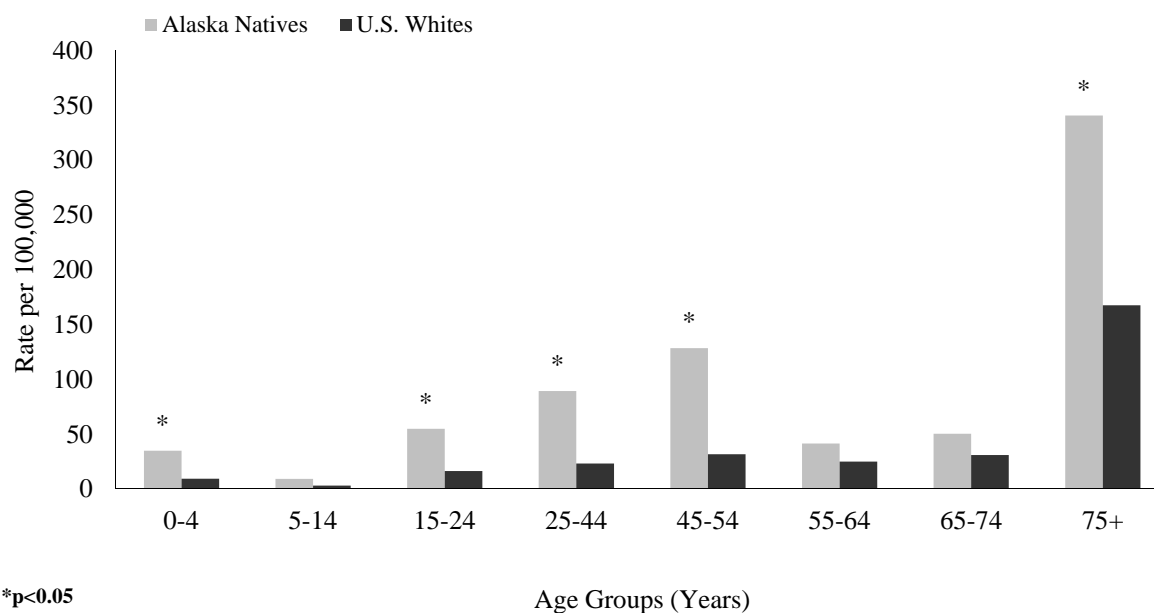
**FIGURE 166b. Age-Specific Mortality Rates for Unintentional Injury
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**



**TABLE 39c. Age-Specific Mortality Rates for Unintentional Injury
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	34.8	9.2	54.9	89.3	128.4	41.5	50.4	340.6
U.S. Whites	9.3	3.0	16.3	23.2	31.7	25.0	30.9	167.5
Rate Ratio	3.8	3.1	3.4	3.9	4.0	1.7	1.6	2.0

**FIGURE 166c. Age-Specific Mortality Rates for Unintentional Injury
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**



**TABLE 40. Age-Specific Mortality Rates for Unintentional Injury
Alaska Natives (2009-2013)
Males versus Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	33.1	28.9	90.4	155.7	205.4	121.9	160.1	188.5
AN Females	34.8	9.2	54.9	89.3	128.4	41.5	50.4	340.6
Rate Ratio	1.0	3.1	1.6	1.7	1.6	2.8	3.1	0.6

**FIGURE 167. Age-Specific Mortality Rates for Unintentional Injury
Alaska Natives (2009-2013)
Males versus Females**

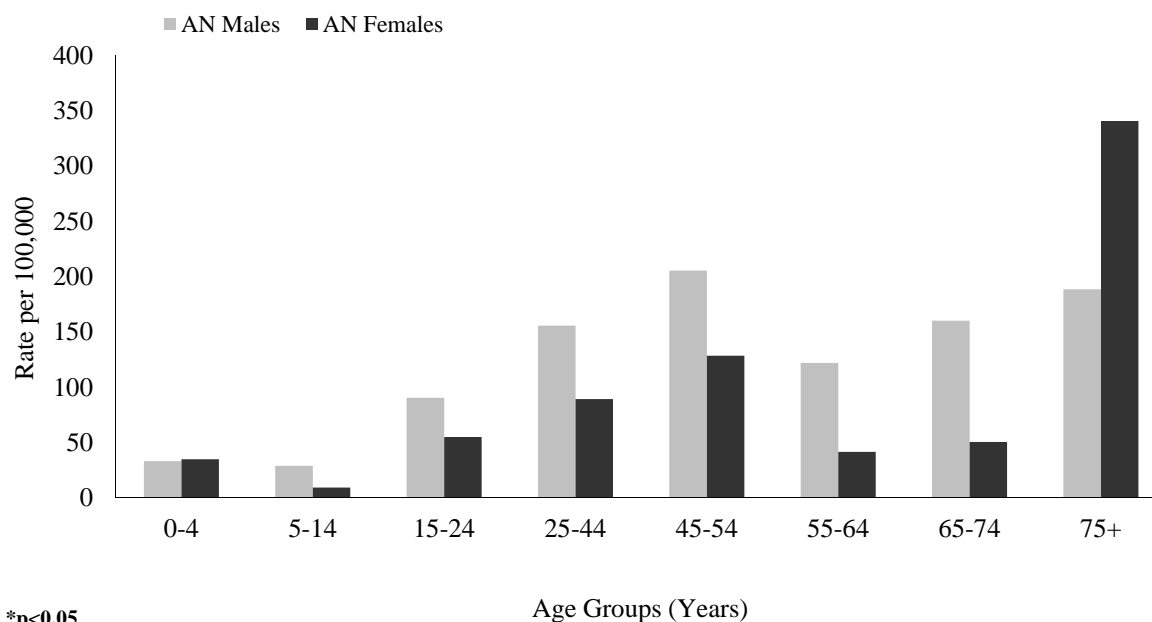
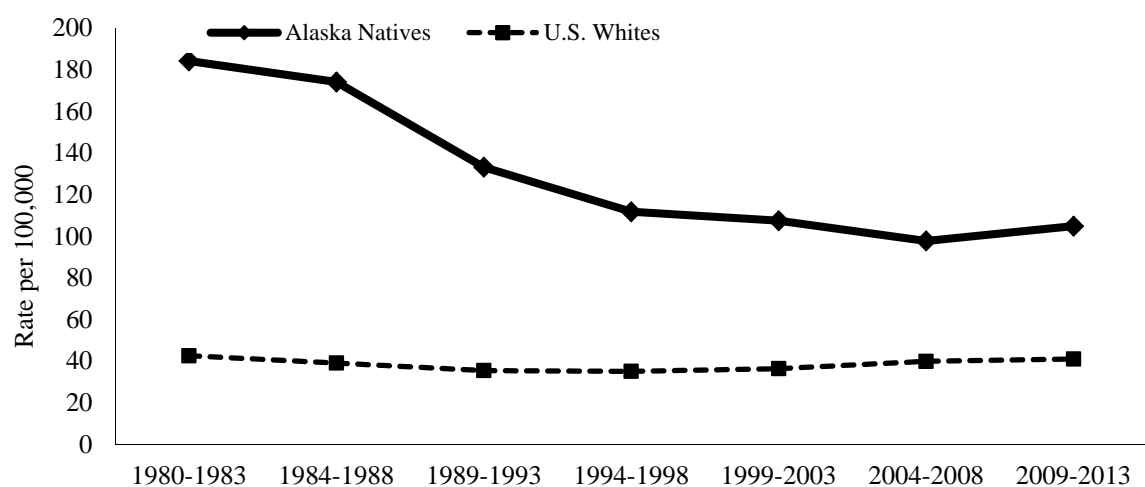


TABLE 41. **Age-Adjusted Mortality Rates for Unintentional Injury**
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders

	1980-1983 ^a	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013	% Change
Alaska Natives	184.1	174.0	133.1	111.7	107.4	97.7	104.8	-43%
U.S. Whites	42.6	39.1	35.5	35.1	36.4	39.9	41.0	-4%
Rate Ratio	4.3	4.5	3.7	3.2	3.0	2.4	2.6	

^a 1980-1983 time period contains only four years

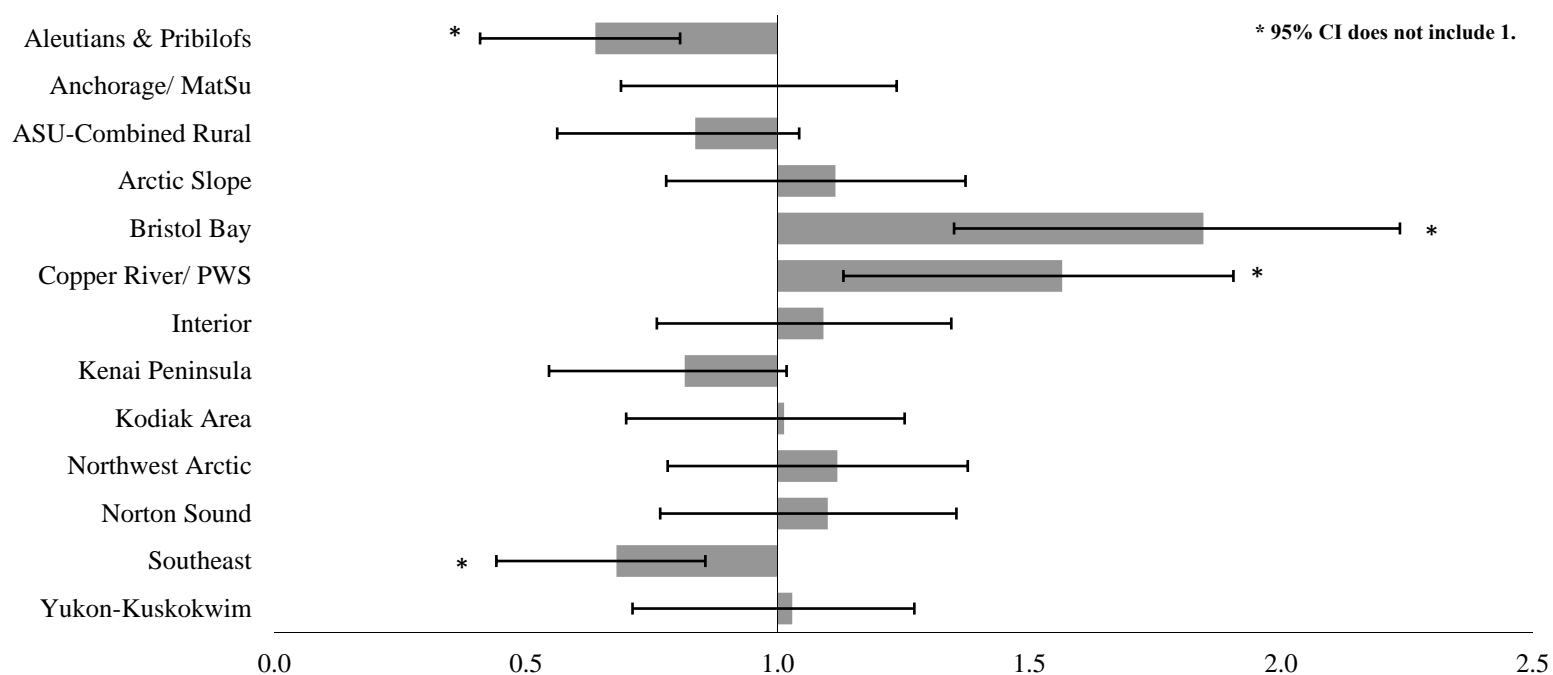
FIGURE 168. **Age-Adjusted Mortality Rates for Unintentional Injury**
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders



**TABLE 42. Age-Adjusted Mortality Rates for Unintentional Injury
Alaska Natives By Service Region (2009-2013), Both Genders**

	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Natives Statewide
Rate	↓66.8	104.7	87.6	116.8	↑193.4	↑164.0	114.3	85.4	106.1	117.2	115.2	↓71.2	107.8	104.8
RR	0.64	1.00	0.84	1.11	1.85	1.56	1.09	0.81	1.01	1.12	1.10	0.68	1.03	

**FIGURE 169. Unintentional Injury Mortality Rate Ratios
Each Service Region vs All Other Regions Combined, Alaska Natives (2009-2013), Both Genders**



FOURTH LEADING CAUSE OF DEATH SUICIDE

Suicide was the fourth leading cause of death among Alaska Native people, both genders combined. It ranked fourth among Alaska Native males and seventh among Alaska Native females. Among Alaska Native people, both genders combined, 5.8% (n=250) of all deaths were suicides. The suicide rate for Alaska Native people, both genders combined, was 2.9 times the U.S. White rates. The rate ratios were 2.9 for both Alaska Native males and females compared to U.S. White males and females.

The majority of suicides (58%) among Alaska Native people, both genders combined, involved firearms. In addition to firearm deaths, 35% of suicides among Alaska Native males involved hanging. For Alaska Native females, in addition to firearm deaths, 34% were due to hanging, and 8% of suicides were due to poisoning.

Suicide accounted for 11.3% of all excess deaths among Alaska Native

people, both genders combined (n=177). Among Alaska Native males (n=133), suicide accounted for 34.9% of excess deaths, the second largest cause of excess death among Alaska Native males. Suicide accounted for 4.8% of excess deaths among Alaska Native females (n=34).

Suicide was the second leading cause of years of potential life lost. This cause accounted for 13.5% (11,069 years) of all years of life lost before 75 for Alaska Native people, both genders, 18.5% (9,039 years) for Alaska Native males, and 6.0% (2,030 years) for Alaska Native females.

Alaska Native people, both genders combined, experienced 0.9 to 8.8 times the suicide rates of U.S. Whites across age groups. Alaska Native males experienced suicide rates 2.1 to 8.9 times the U.S. White male rate. Alaska Native females had significant rate ratios of 1.4 to 6.9 compared to U.S. White females. Comparing Alaska Native males to females, suicide was a significant 3.2 to 5.4 times more common among males than females for age groups 15 to 44 years.

Examining suicide rates by service region, showed the Norton Sound (RR=2.4) service region had significantly higher rates than the rest of the state. The Anchorage/Mat-Su (RR=0.7), ASU-Combined Rural (RR=0.6), Arctic Slope (RR = 0.7) and Southeast (RR=0.5) service regions had significantly lower rates.

There has been a significant decrease of 3% in suicide mortality rates among Alaska Native people between 1980-1983 and 2009-2013. U.S. Whites experienced a significant 5% increase between 1980-1983 and 2009-2013.

Fourth Leading Cause of Death Among Alaska Natives, 2009-2013 Suicide

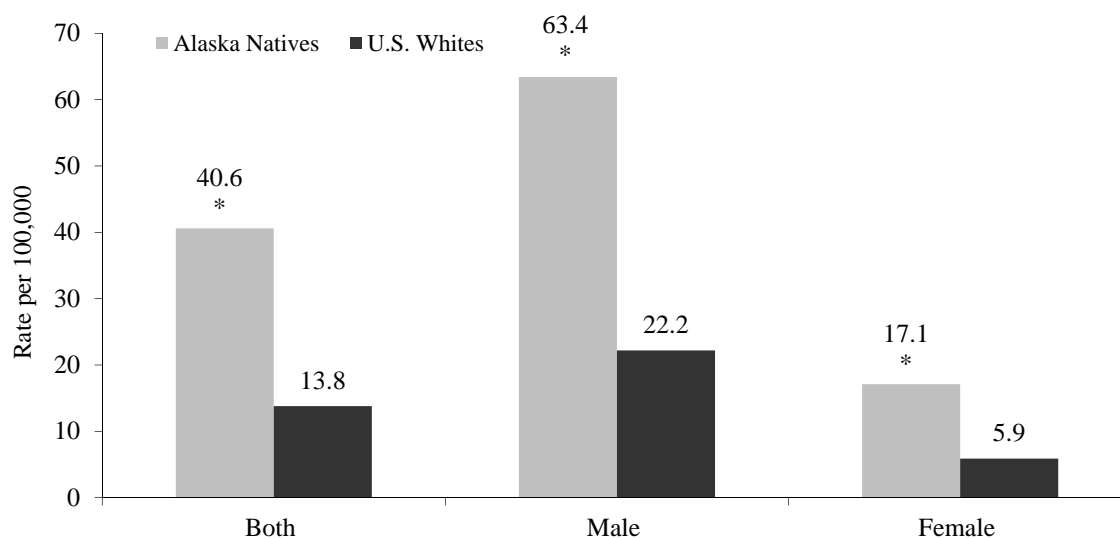
TABLE 43. Age-Adjusted[†] Suicide Mortality Rates
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

	Alaska Natives			U.S. Whites			Rate Ratio	95% CI
	#	%	Rate per 100,000	#	%	Rate per 100,000		
Both	250	5.8%	40.6	177,650	1.7%	13.8	*2.9	2.54-3.40
Male	200	8.6%	63.4	139,575	3.0%	22.2	*2.9	2.43-3.36
Female	50	2.5%	17.1	38,075	0.9%	5.9	*2.9	2.09-4.01

* 95% CI does not include 1.

[†] Age-adjusted to the US 2000 Standard population.

FIGURE 170. Age-Adjusted Suicide Mortality Rates
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

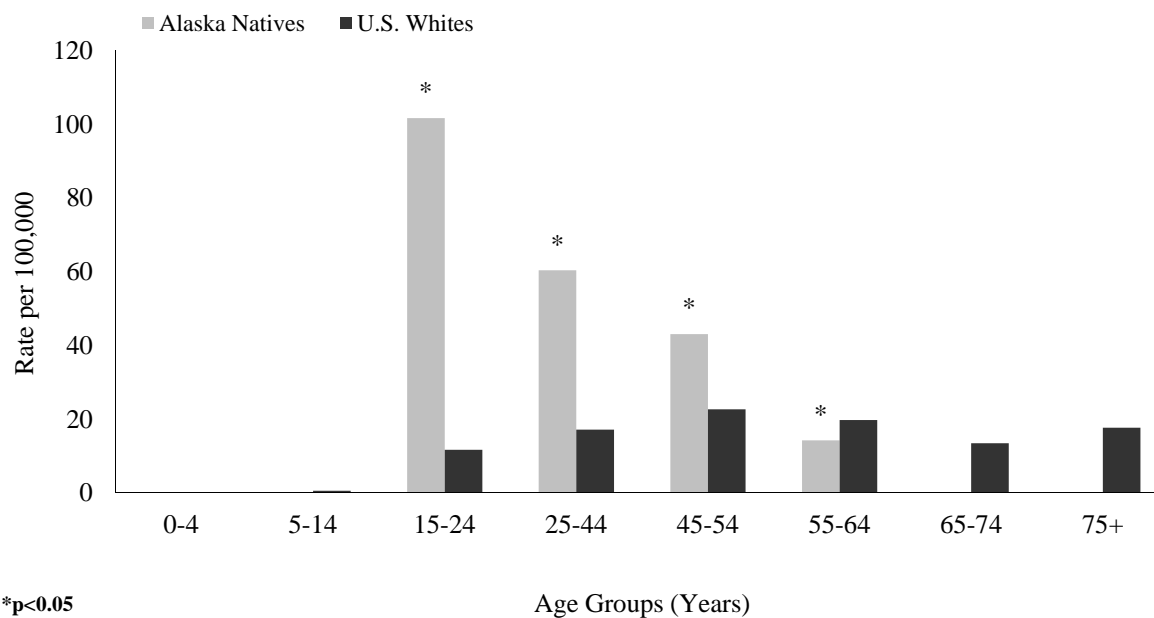


**TABLE 44a. Age-Specific Mortality Rates for Suicide
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	101.7	60.4	43.1	14.3	-	-
U.S. Whites	-	0.6	11.7	17.2	22.7	19.8	13.5	17.7
Rate Ratio	-	-	8.7	3.5	1.9	0.7	-	-

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 171a. Age-Specific Mortality Rates for Suicide
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

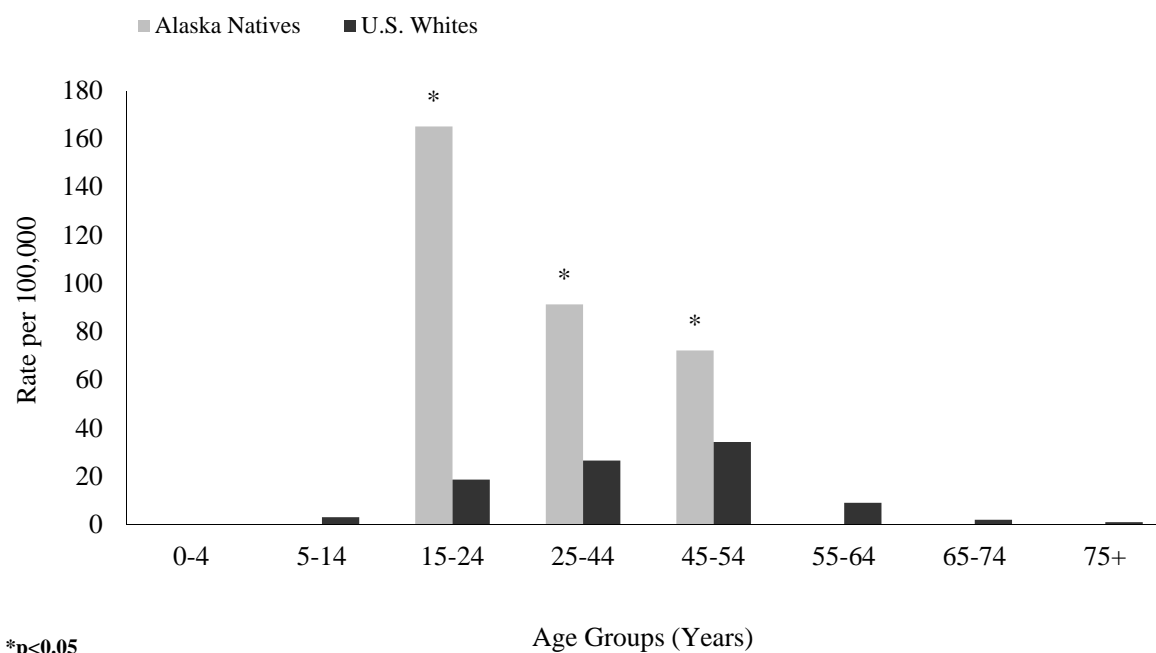


**TABLE 44b. Age-Specific Mortality Rates for Suicide
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	165.1	91.3	72.2	-	-	-
U.S. Whites	-	3.0	18.6	26.5	34.2	9.0	2.0	1.0
Rate Ratio	-	-	8.9	3.4	2.1	-	-	-

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 171b. Age-Specific Mortality Rates for Suicide
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

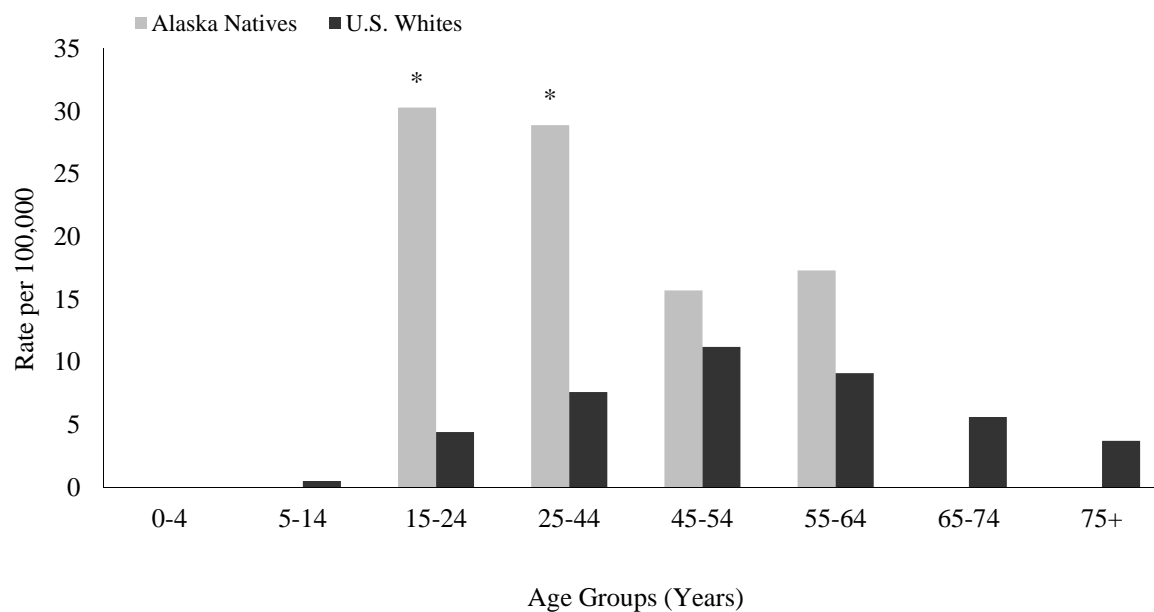


**TABLE 44c. Age-Specific Mortality Rates for Suicide
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	30.3	28.9	15.7	17.3	-	-
U.S. Whites	-	0.5	4.4	7.6	11.2	9.1	5.6	3.7
Rate Ratio	-	-	6.9	3.8	1.4	1.9	-	-

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 171c. Age-Specific Mortality Rates for Suicide
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**

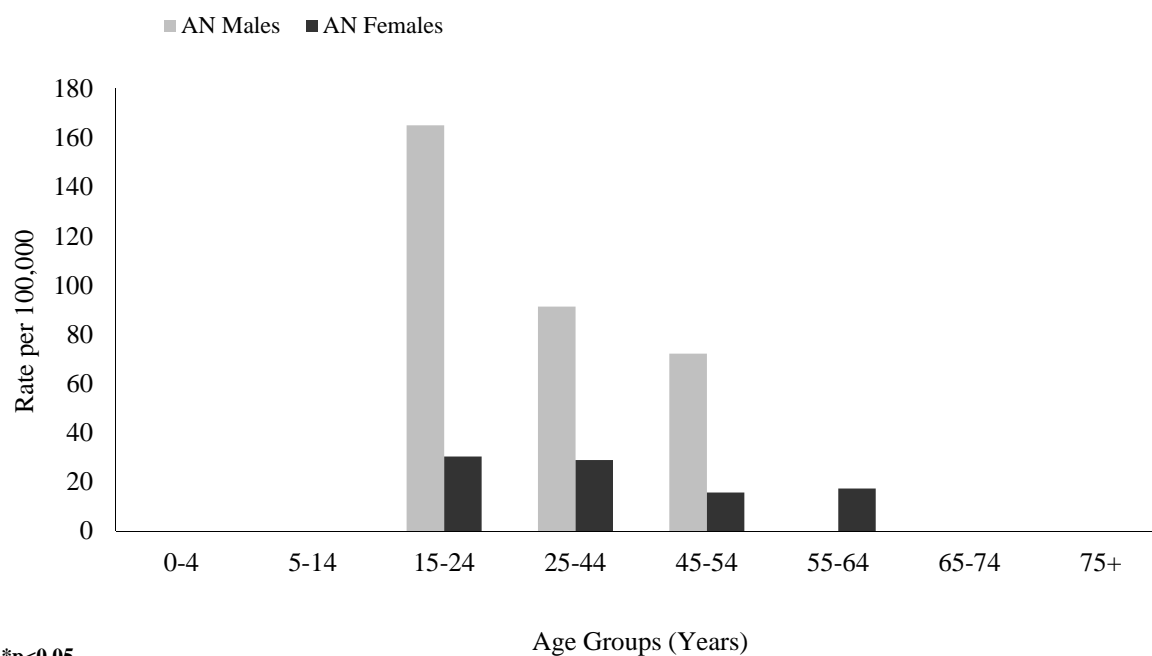


**TABLE 45. Age-Specific Mortality Rates for Suicide
Alaska Natives (2009-2013)
Males versus Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	-	-	165.1	91.3	72.2	-	-	-
AN Females	-	-	30.3	28.9	15.7	17.3	-	-
Rate Ratio	-	-	5.4	3.2	4.6	-	-	-

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 172. Age-Specific Mortality Rates for Suicide
Alaska Natives (2009-2013)
Males versus Females**



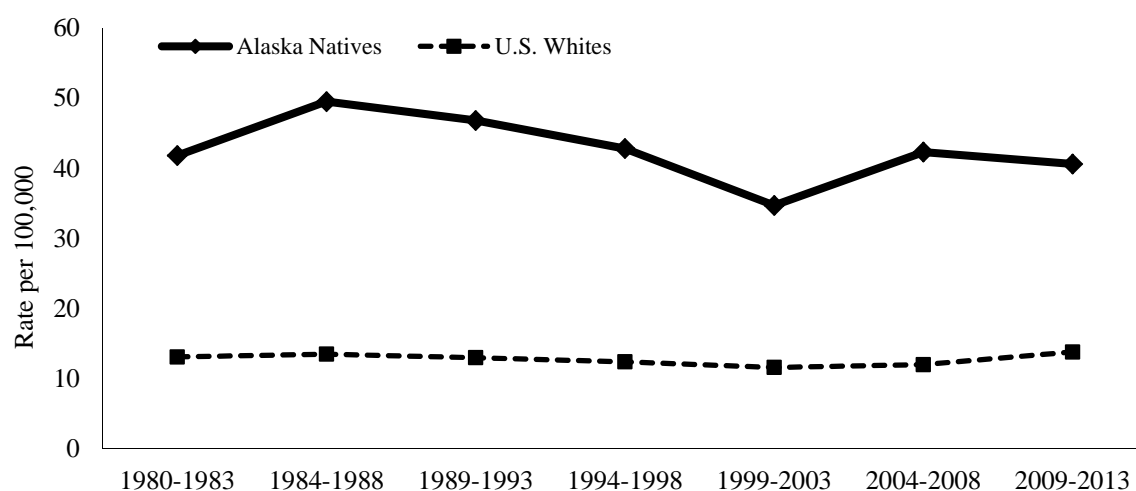
**TABLE 46. Age-Adjusted Mortality Rates for Suicide
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders**

	1980-1983 ^a	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013	% Change
Alaska Natives	41.8	49.5	46.8	42.8	34.7	42.3	40.6	-3%
U.S. Whites	13.1	13.5	13.0	12.4	11.6	12.0	13.8	5%
Rate Ratio	3.2	3.7	3.6	3.5	3.0	3.5	2.9	

* NS means that there was no significant difference at $p < 0.05$

^a 1980-1983 time period contains only four years

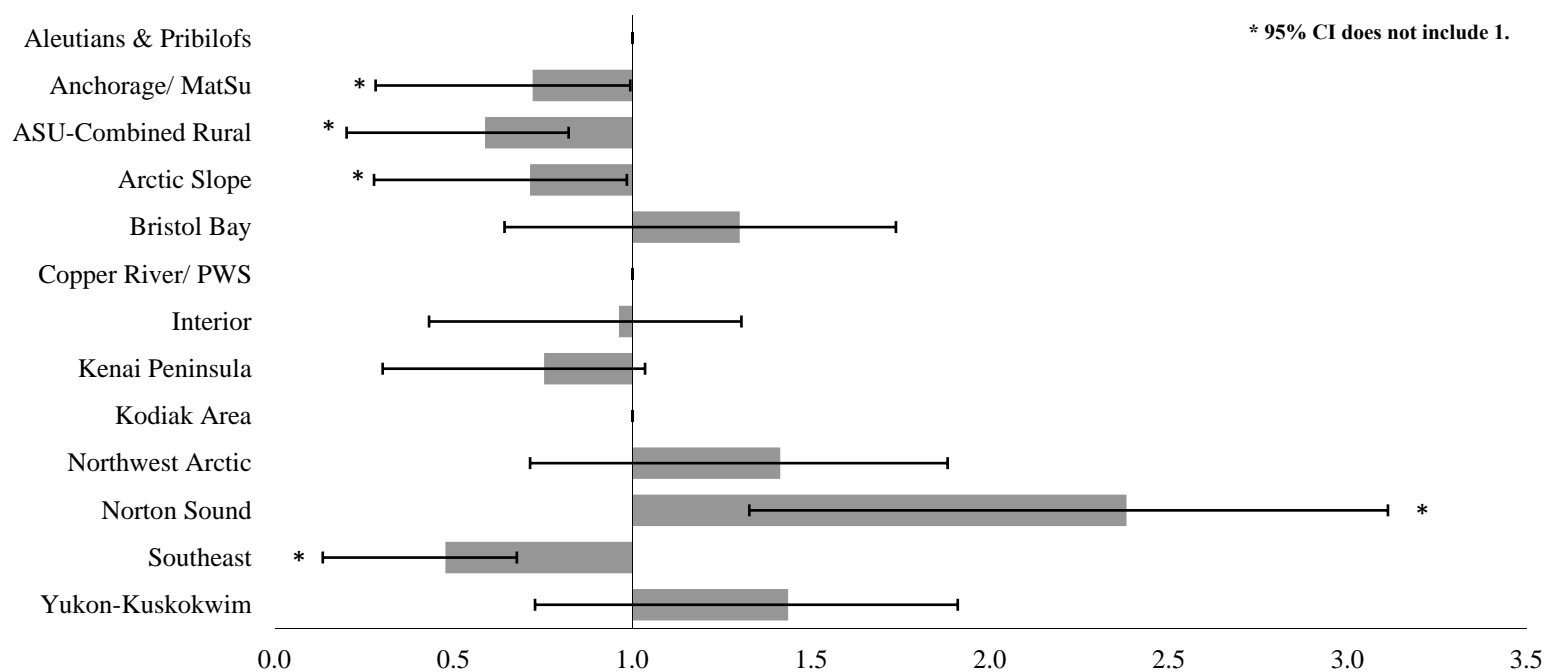
**FIGURE 173. Age-Adjusted Mortality Rates for Suicide
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders**



**TABLE 47. Age-Adjusted Mortality Rates for Suicide
Alaska Natives By Service Region (2009-2013), Both Genders**

	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Natives Statewide
Rate	-	↓29.3	↓23.9	↓29.0	52.8	-	39.1	30.6	-	57.4	↑96.7	↓19.4	58.3	40.6
RR	-	0.72	0.59	0.71	1.30	-	0.96	0.75	-	1.41	2.38	0.48	1.44	

**FIGURE 174. Suicide Mortality Rate Ratios
Each Service Region vs All Other Regions Combined, Alaska Natives (2009-2013), Both Genders**



FIFTH LEADING CAUSE OF DEATH
COPD

COPD was the fifth leading cause of death among Alaska Native people, both genders combined, and for each gender individually. Alaska Native people, both genders combined, experienced an COPD mortality rate 1.5 times the U.S. White rate. The mortality rate for Alaska Native males was 1.5 times the U.S. White male rate. The mortality rate for Alaska Native females was 1.4 times the U.S. White female rate.

COPD accounted for 4.3% of excess deaths among Alaska Native people, both genders combined (n=68). Among Alaska Native males (n=8), COPD accounted for 2.1% of excess deaths, whereas among Alaska Native females (n=24), COPD accounted for 3.4% of excess deaths.

Age-specific COPD mortality rates were a significant 1.2 to 3.0 times higher for Alaska Native people, both genders combined, compared to U.S. Whites.

Examining COPD mortality rates by service region, showed that the

Southeast (RR=0.6) service region had significantly lower rates than the rest of the state.

Alaska Native COPD mortality rates rose 150% between 1980-1983 and 2009-2013. COPD mortality rates increased 47% among U.S. Whites between 1980-1983 and 2009-2013.

Fifth Leading Cause of Death Among Alaska Natives, 2009-2013
Chronic Obstructive Pulmonary Diseases (COPD)

TABLE 48. Age-Adjusted[†] COPD Mortality Rates
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

	Alaska Natives			U.S. Whites			Rate Ratio	95% CI
	#	%	Rate per 100,000	#	%	Rate per 100,000		
Both	218	5.0%	65.6	653,868	6.1%	44.7	*1.5	1.26-1.72
Male	115	4.9%	75.5	305,813	6.6%	50.2	*1.5	1.21-1.86
Female	103	5.1%	57.7	348,055	6.5%	41.2	*1.4	1.12-1.76

* 95% CI does not include 1.

[†] Age-adjusted to the US 2000 Standard population.

FIGURE 175. Age-Adjusted COPD Mortality Rates
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

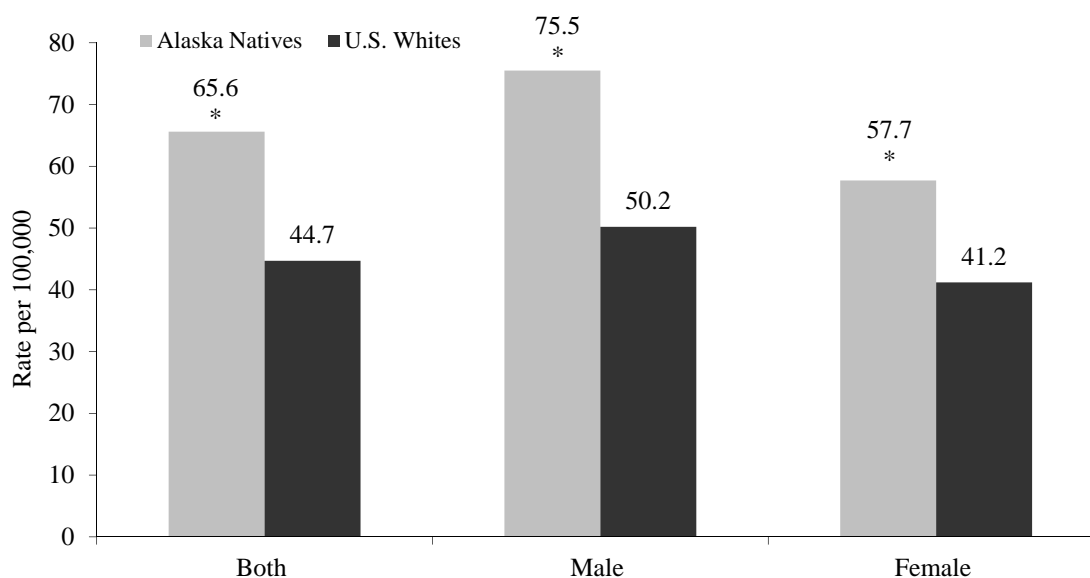


TABLE 49a. Age-Specific Mortality Rates for COPD
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	3.2	16.2	66.1	181.9	737.0
U.S. Whites	0.3	0.2	0.2	1.1	10.6	42.2	154.3	497.3
Rate Ratio	-	-	-	3.0	1.5	1.6	1.2	1.5

(-) Rate not calculated for fewer than 5 deaths.

FIGURE 176a. Age-Specific Mortality Rates for COPD
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders

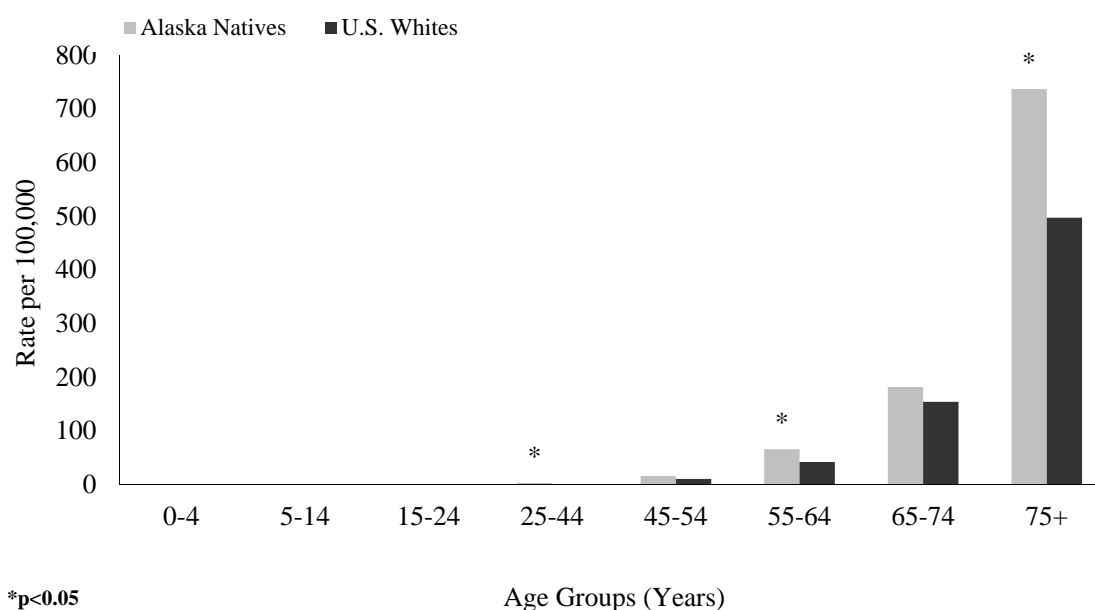


TABLE 49b. Age-Specific Mortality Rates for COPD
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	-	19.4	92.4	208.1	816.8
U.S. Whites	0.4	0.2	0.3	1.1	5.3	44.8	228.0	1001.8
Rate Ratio	-	-	-	-	3.7	2.1	0.9	0.8

(-) Rate not calculated for fewer than 5 deaths.

FIGURE 176b. Age-Specific Mortality Rates for COPD
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males

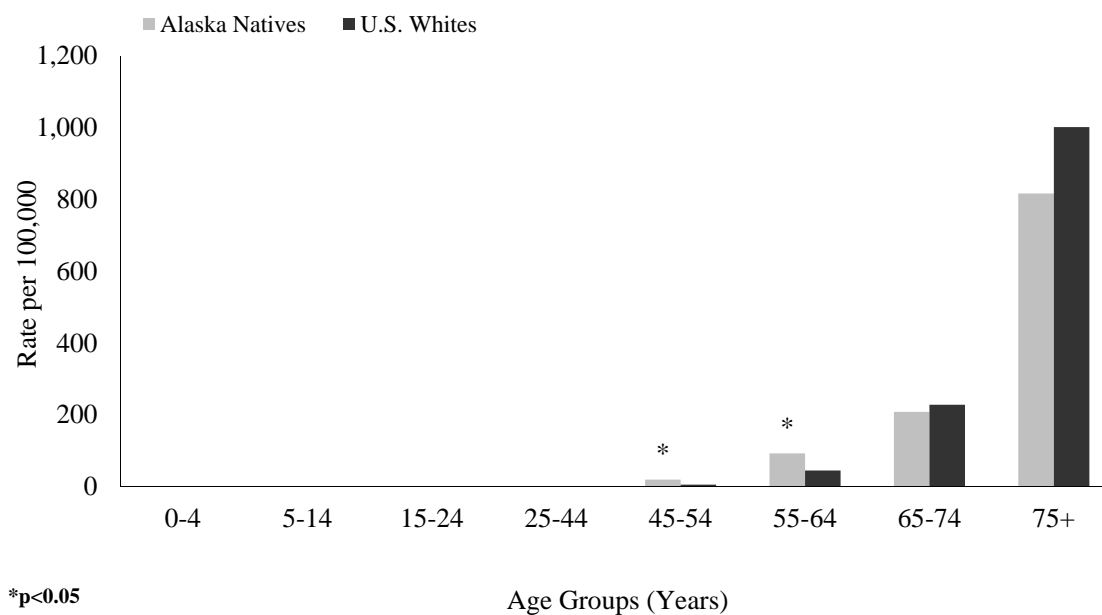
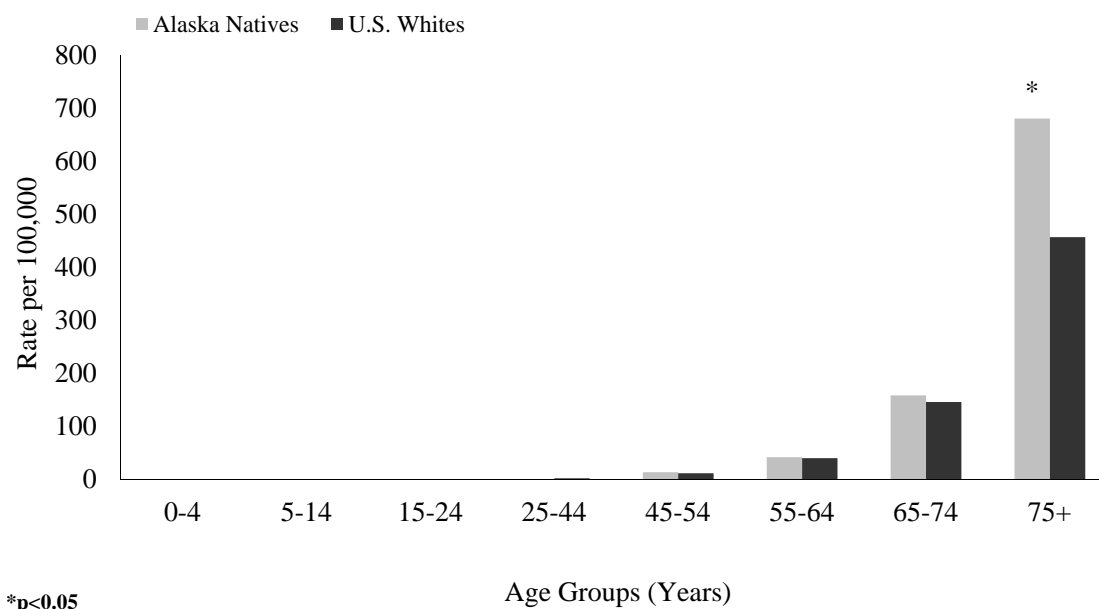


TABLE 49c. Age-Specific Mortality Rates for COPD
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	-	13.1	41.5	158.3	681.2
U.S. Whites	0.3	0.2	0.3	1.7	11.2	39.7	145.8	457.1
Rate Ratio	-	-	-	-	1.2	1.0	1.1	1.5

(-) Rate not calculated for fewer than 5 deaths.

FIGURE 176c. Age-Specific Mortality Rates for COPD
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females



**TABLE 50. Age-Specific Mortality Rates for COPD
Alaska Natives (2009-2013)
Males versus Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	-	-	-	-	19.4	92.4	208.1	816.8
AN Females	-	-	-	-	13.1	41.5	158.3	681.2
Rate Ratio	-	-	-	-	1.5	2.2	1.3	1.2

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 177. Age-Specific Mortality Rates for COPD
Alaska Natives (2009-2013)
Males versus Females**

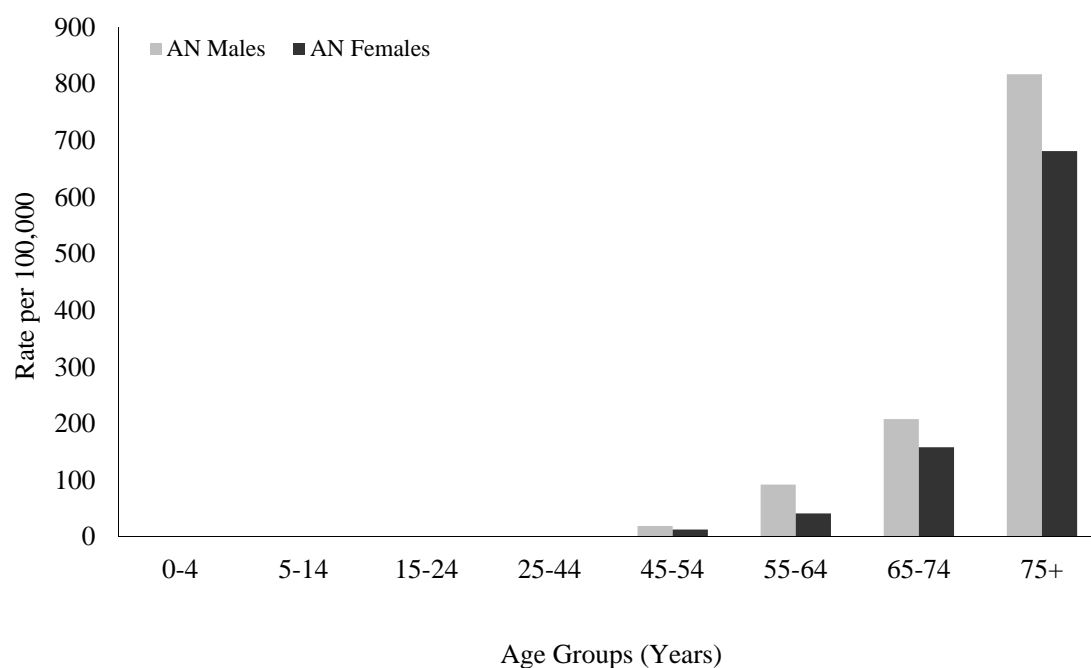
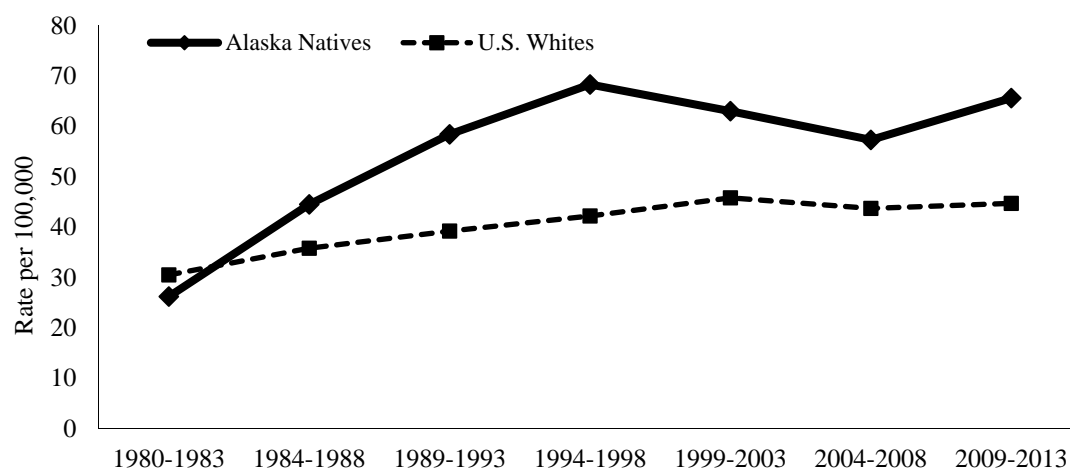


TABLE 51. Age-Adjusted Mortality Rates for COPD
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders

	1980-1983 ^a	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013	% Change
Alaska Natives	26.2	44.5	58.4	68.3	63.0	57.3	65.6	150%
U.S. Whites	30.5	35.8	39.2	42.2	45.8	43.7	44.7	47%
Rate Ratio	0.9	1.2	1.5	1.6	1.4	1.3	1.5	

^a 1980-1983 time period contains only four years

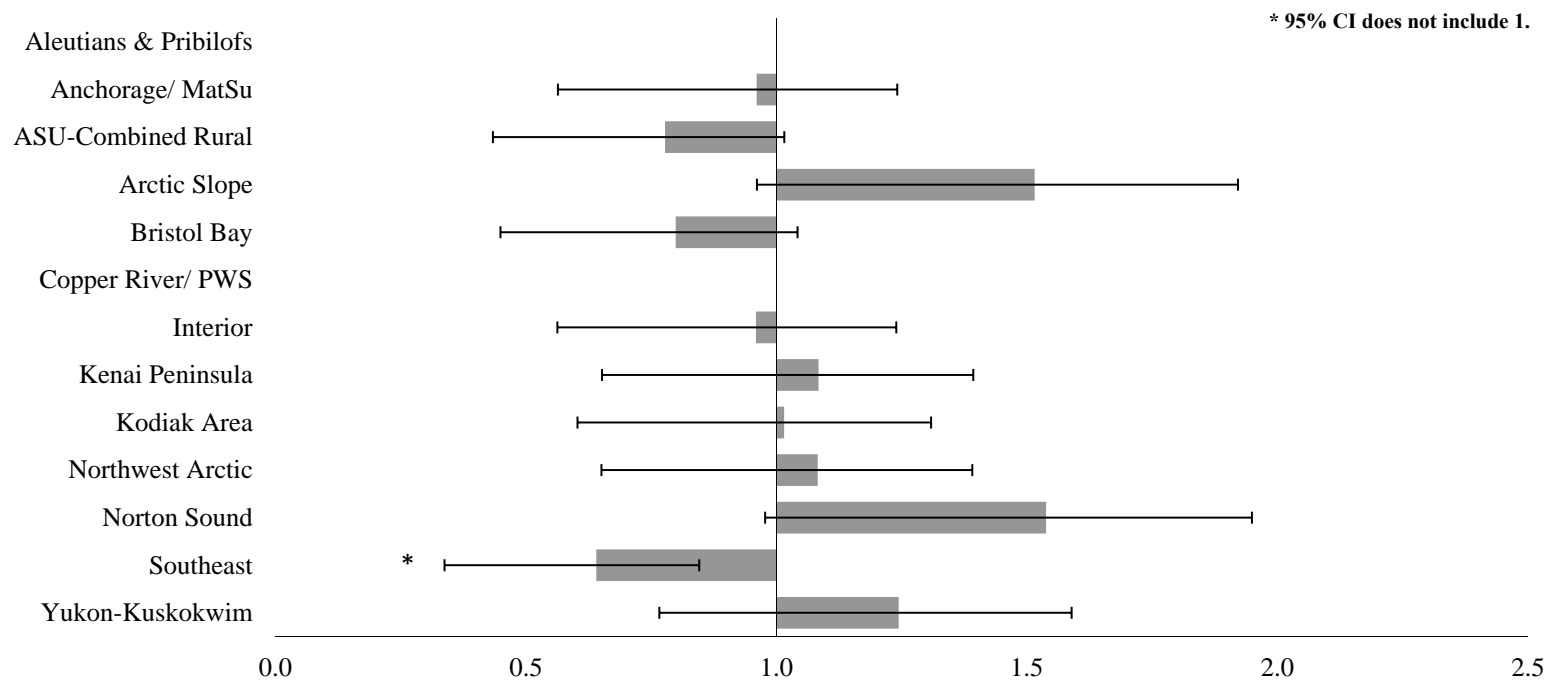
FIGURE 178. Age-Adjusted Mortality Rates for COPD
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders



**TABLE 52. Age-Adjusted Mortality Rates for COPD
Alaska Natives By Service Region (2009-2013), Both Genders**

	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Natives Statewide
Rate	-	63.0	51.0	99.4	52.4	-	62.9	71.1	66.6	71.0	100.9	↓42.0	81.6	65.6
RR	-	0.96	0.78	1.52	0.80	-	0.96	1.08	1.02	1.08	1.54	0.64	1.24	

**FIGURE 179. COPD Mortality Rate Ratios
Each Service Region vs All Other Regions Combined, Alaska Natives (2009-2013), Both Genders**



*SIXTH LEADING CAUSE OF DEATH***Cerebrovascular Disease**

Cerebrovascular disease was the sixth leading cause of death among Alaska Native people, both genders combined, and for Alaska Native males. It ranked fourth among Alaska Native females. Alaska Native people, both genders combined, experienced cerebrovascular disease mortality rates 1.5 times the U.S. White rate. The mortality rate for Alaska Native males was 1.3 times the U.S. White male rate, though the difference was not significant. The mortality rate for Alaska Native females was a significant 1.7 times the rate for U.S. White females.

Age-specific cerebrovascular disease mortality rates were significantly higher for Alaska Native people, both genders combined, compared to U.S. Whites among those 75 years of age or older. Mortality rates due to cerebrovascular disease were lower for Alaska Native males compared to U.S. White males across all age groups, though not significantly. Alaska Native females had higher cerebrovascular disease mortality rates as compared to U.S. White females

for the age groups 55 years and older, though these differences were not significant. Comparing Alaska Native males to females, there were no significant differences in rate by age group.

Examining cerebrovascular disease mortality rates by service region, showed that the Norton Sound (RR=2.0) service region had significantly higher rates than the rest of the state. The ASU-Combined Rural (RR=0.5), Northwest Arctic (RR=0.7), and Southeast (RR=0.5) service regions had significantly lower mortality rates due to cerebrovascular disease when compared to the rest of the state.

Alaska Native cerebrovascular disease mortality rates decreased 15% between the 1980-1983 and 2009-2013. Cerebrovascular disease mortality rates decreased 57% among U.S. Whites between 1980-1983 and 2009-2013.

Sixth Leading Cause of Death Among Alaska Natives, 2009-2013 Cerebrovascular Disease

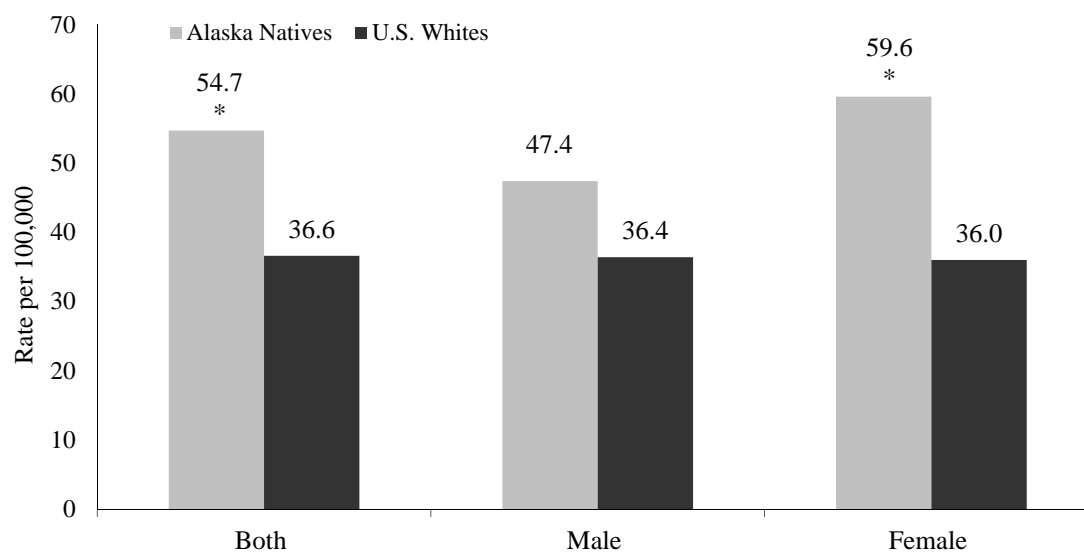
TABLE 53. Age-Adjusted[†] Cerebrovascular Disease Mortality Rates
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

	Alaska Natives			U.S. Whites			Rate Ratio	95% CI
	#	%	Rate per 100,000	#	%	Rate per 100,000		
Both	173	4.0%	54.7	542,298	5.0%	36.6	*1.5	1.25-1.78
Male	70	3.0%	47.4	217,516	4.7%	36.4	1.3	0.99-1.71
Female	103	5.1%	59.6	324,782	6.0%	36.0	*1.7	1.32-2.08

* 95% CI does not include 1.

[†] Age-adjusted to the US 2000 Standard population.

FIGURE 180. Age-Adjusted Cerebrovascular Disease Mortality Rates
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

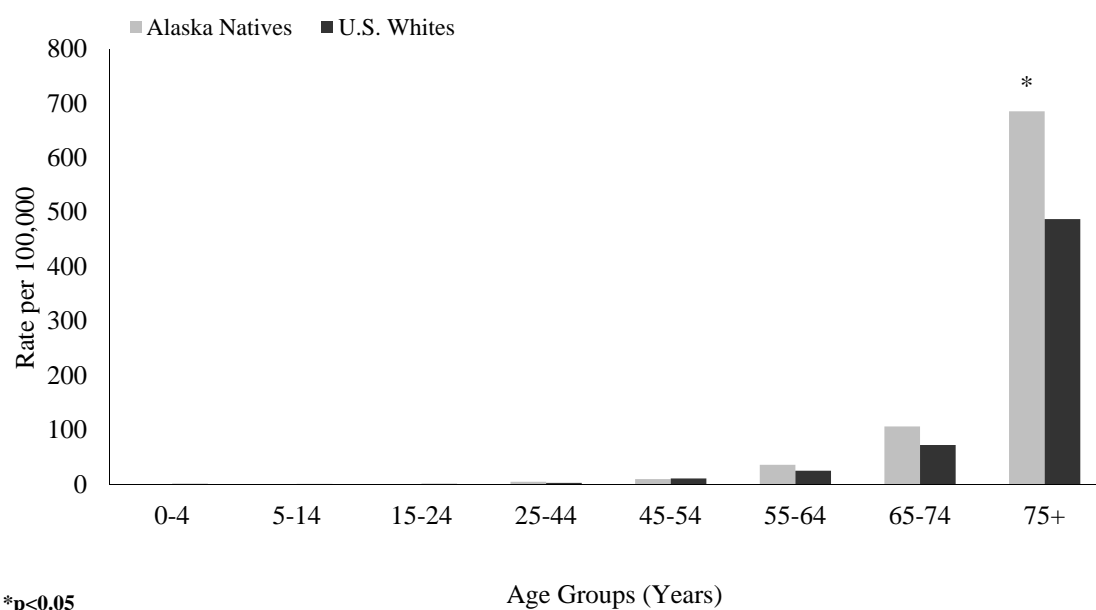


**TABLE 54a. Age-Specific Mortality Rates for Cerebrovascular Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	4.5	9.4	35.7	106.1	685.3
U.S. Whites	0.7	0.5	0.7	2.4	10.6	24.8	72.0	487.2
Rate Ratio	-	-	-	1.9	0.9	1.4	1.5	1.4

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 181a. Age-Specific Mortality Rates for Cerebrovascular Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

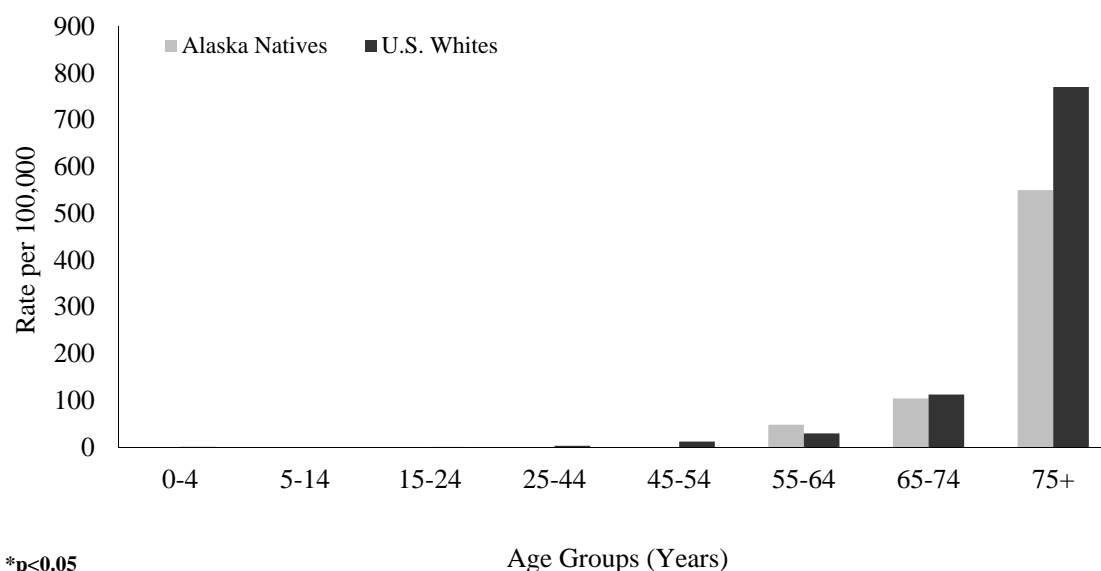


**TABLE 54b. Age-Specific Mortality Rates for Cerebrovascular Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	-	-	48.0	104.1	549.8
U.S. Whites	0.6	0.2	0.4	2.9	11.9	29.4	112.5	770.3
Rate Ratio	-	-	-	-	-	1.6	0.9	0.7

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 181b. Age-Specific Mortality Rates for Cerebrovascular Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

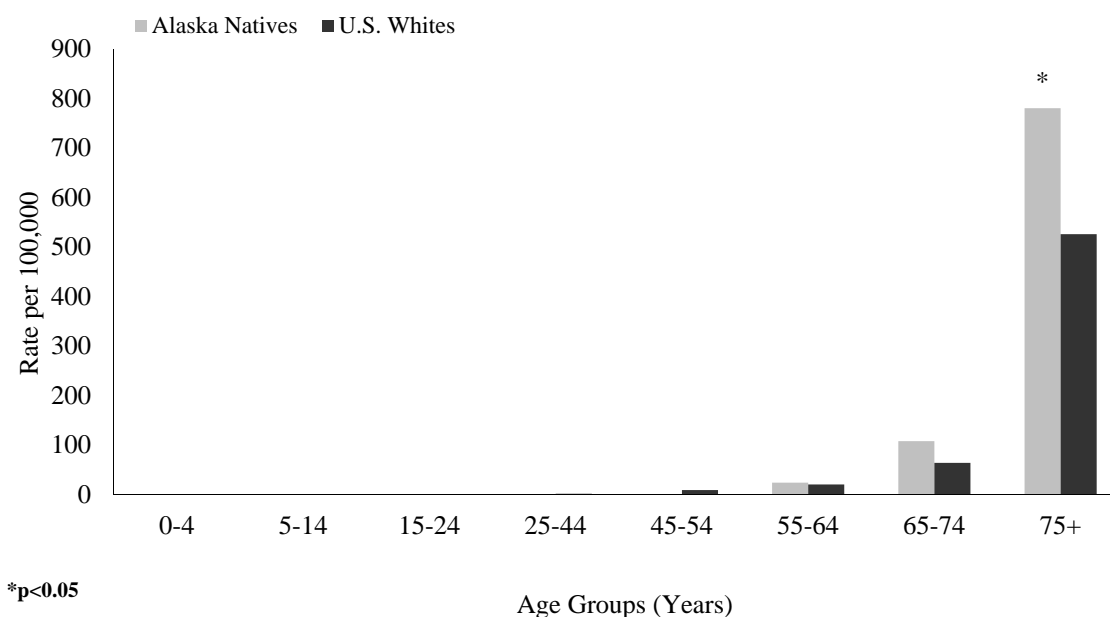


**TABLE 54c. Age-Specific Mortality Rates for Cerebrovascular Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	-	-	24.2	107.9	780.0
U.S. Whites	0.7	0.2	0.3	1.8	9.2	20.5	64.1	525.8
Rate Ratio	-	-	-	-	-	1.2	1.7	1.5

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 181c. Age-Specific Mortality Rates for Cerebrovascular Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**

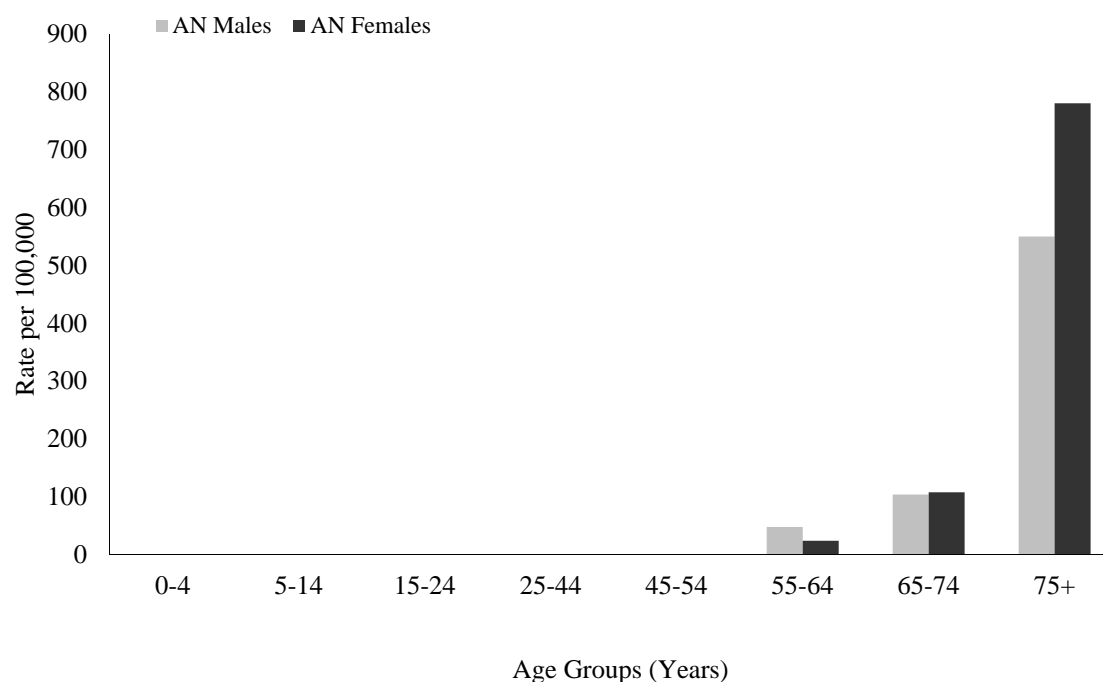


**TABLE 55. Age-Specific Mortality Rates for Cerebrovascular Disease
Alaska Natives (2009-2013)
Males versus Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	-	-	-	-	-	48.0	104.1	549.8
AN Females	-	-	-	-	-	24.2	107.9	780.0
Rate Ratio	-	-	-	-	-	2.0	1.0	0.7

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 182. Age-Specific Mortality Rates for Cerebrovascular Disease
Alaska Natives (2009-2013)
Males versus Females**

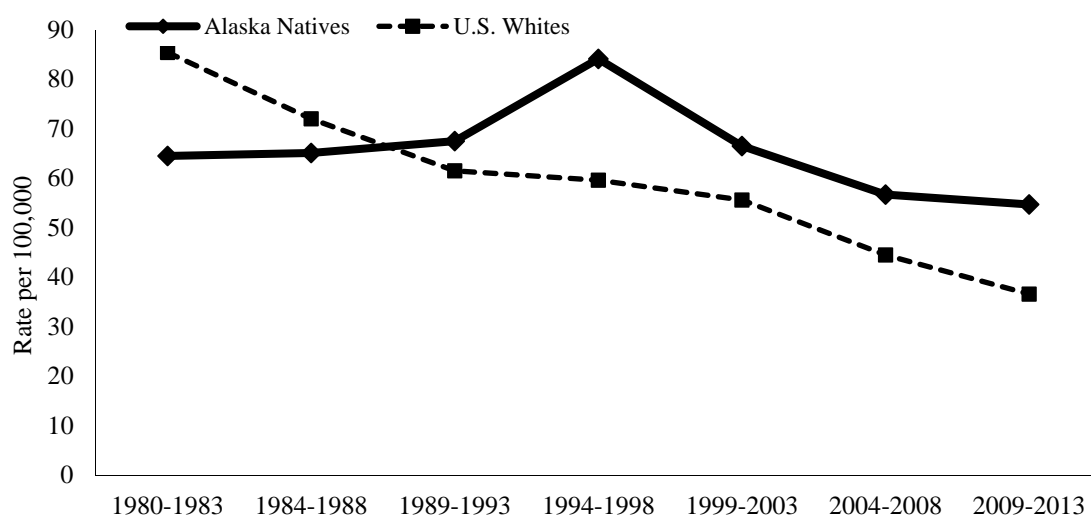


**TABLE 56. Age-Adjusted Mortality Rates for Cerebrovascular Disease
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders**

	1980-1983 ^a	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013	% Change
Alaska Natives	64.5	65.1	67.5	84.1	66.5	56.7	54.7	-15%
U.S. Whites	85.4	72.0	61.5	59.6	55.6	44.5	36.6	-57%
Rate Ratio	0.8	0.9	1.1	1.4	1.2	1.3	1.5	

^a 1980-1983 time period contains only four years

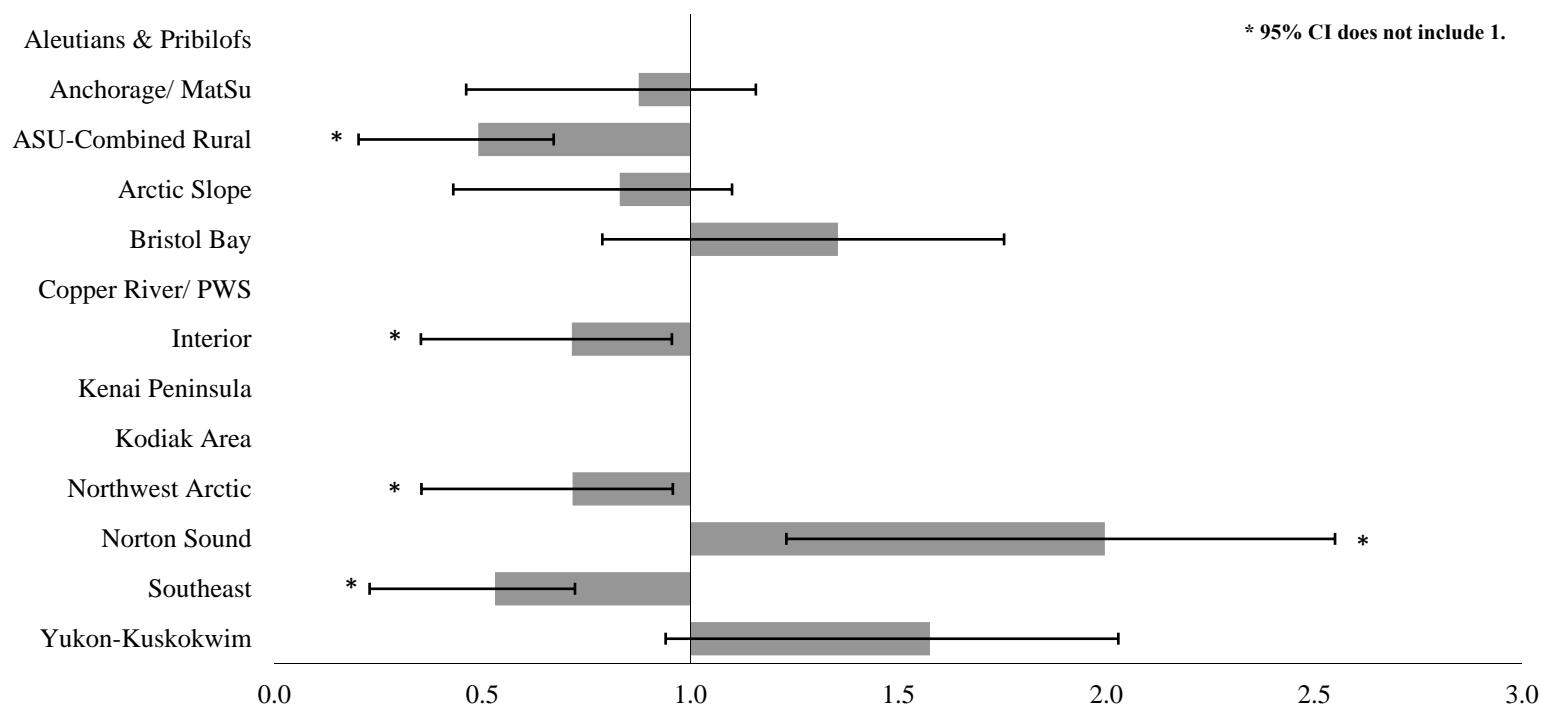
**FIGURE 183. Age-Adjusted Mortality Rates for Cerebrovascular Disease
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders**



**TABLE 57. Age-Adjusted Mortality Rates for Cerebrovascular Disease
Alaska Natives By Service Region (2009-2013), Both Genders**

	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Natives Statewide
Rate	-	47.9	↓26.8	45.4	74.1	-	↓39.1	-	-	↓39.2	↑109.2	↓29.0	86.2	54.7
RR	-	0.88	0.49	0.83	1.35	-	0.71	-	-	0.72	2.00	0.53	1.58	

**FIGURE 184. Cerebrovascular Disease Mortality Rate Ratios
Each Service Region vs All Other Regions Combined, Alaska Natives (2009-2013), Both Genders**



SEVENTH LEADING CAUSE OF DEATH

CHRONIC LIVER DISEASE AND CIRRHOSIS

Chronic liver disease and cirrhosis was the seventh leading cause of death among Alaska Native people, both genders combined. It ranked eighth among Alaska Native males and sixth among Alaska Native females. Chronic liver disease accounted for 2.8% of all deaths among Alaska Native people (n=121) during 2009-2013. The chronic liver disease and cirrhosis mortality rate for Alaska Native people, both genders combined, was a significant 2.4 times the U.S. White rate. Rates for Alaska Native males were a significant 1.5 times the U.S. White male rate, and Alaska Native females were a significant 4.1 times the U.S. White female rate.

Chronic liver disease accounted for 3.6% of excess deaths among Alaska Native people, both genders combined (n=57). Among Alaska Native males 2.9% of all excess deaths (n=11) and 7.9% among Alaska Native females (n=56) were from chronic liver disease and cirrhosis.

Among Alaska Native people, both genders combined, rates were significantly higher than U.S. White rates only for ages 25 through 54. Rate ratios between the two populations decreased with increasing age, becoming non-significant for the 55 and older age groups. Alaska Native males had a significantly higher rate only for the 25 to 44 age group. Alaska Native females had significantly higher rates for age groups between 25 to 64 years. Comparing Alaska Native males to females, showed no significant differences in rates.

Examining chronic liver disease and cirrhosis mortality rates by service region showed that the Yukon-Kuskokwim service region (RR=0.4) had a significantly lower rate ratio than the remainder of the state.

Chronic liver disease and cirrhosis mortality rates for Alaska Native people declined significantly (15%) between 1980-1983 and 2009-2013. Rates declined 21% among U.S. Whites between 1980-1983 and 2009-2013.

Seventh Leading Cause of Death Among Alaska Natives, 2009-2013
Chronic Liver Disease and Cirrhosis

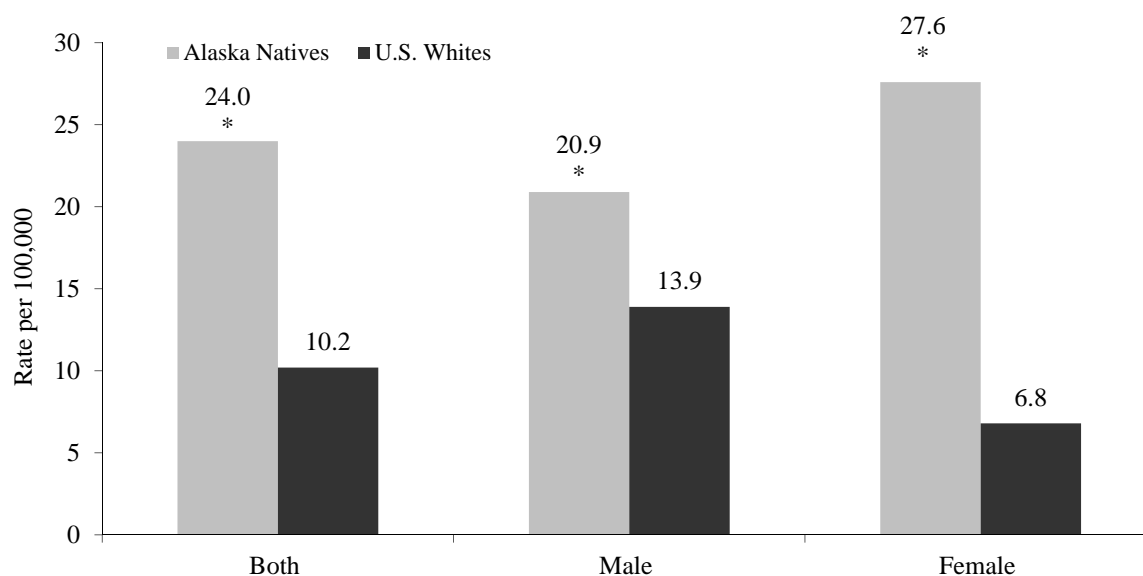
TABLE 58. **Age-Adjusted[†] Chronic Liver Disease Mortality Rates**
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

	Alaska Natives			U.S. Whites			Rate Ratio	95% CI
	#	%	Rate per 100,000	#	%	Rate per 100,000		
Both	121	2.8%	24.0	28,693	0.3%	10.2	*2.4	1.91-2.90
Male	46	2.0%	20.9	95,751	2.1%	13.9	*1.5	1.07-2.11
Female	75	3.7%	27.6	51,208	0.9%	6.8	*4.1	3.11-5.30

* 95% CI does not include 1.

[†] Age-adjusted to the US 2000 Standard population.

FIGURE 185. **Age-Adjusted Chronic Liver Disease Mortality Rates**
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

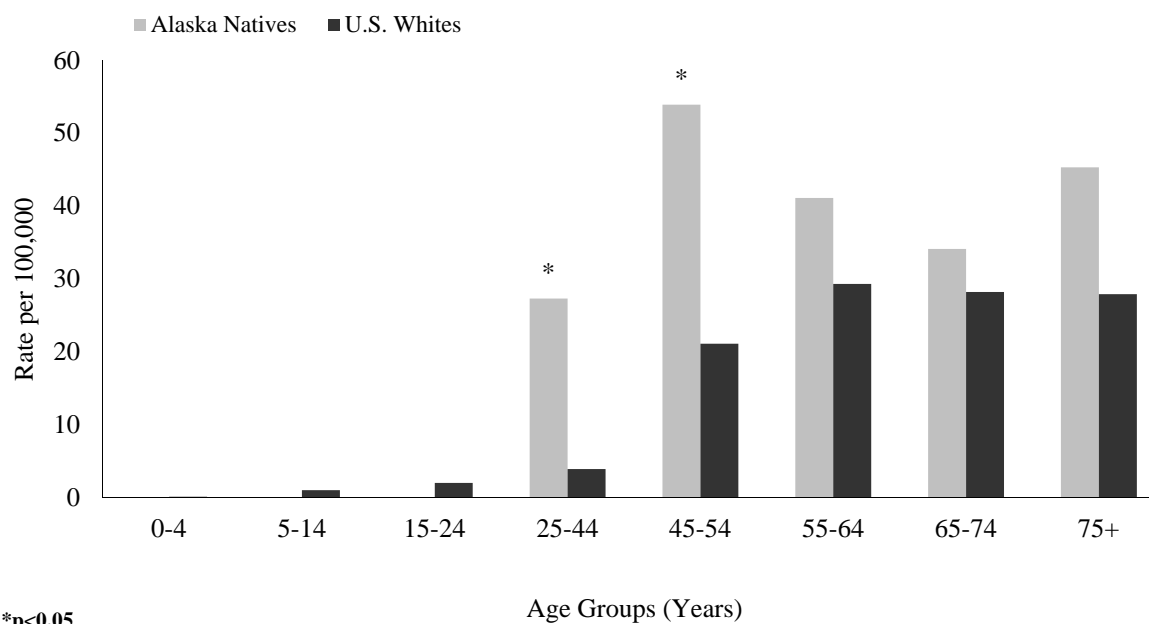


**TABLE 59a. Age-Specific Mortality Rates for Chronic Liver Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	27.3	53.9	41.1	34.1	45.3
U.S. Whites	0.1	1.0	2.0	3.9	21.1	29.3	28.2	27.9
Rate Ratio	-	-	-	7.0	2.6	1.4	1.2	1.6

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 186a. Age-Specific Mortality Rates for Chronic Liver Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

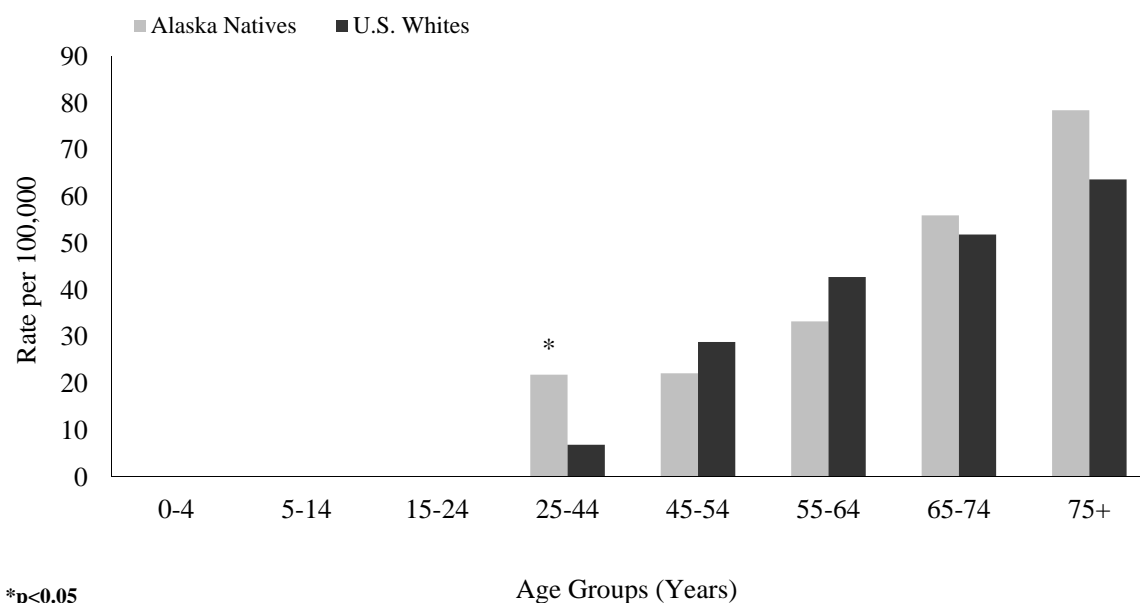


**TABLE 59b. Age-Specific Mortality Rates for Chronic Liver Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	21.9	22.2	33.3	56.0	78.5
U.S. Whites	-	-	-	6.9	28.9	42.8	51.9	63.7
Rate Ratio	-	-	-	3.2	0.8	0.8	1.1	1.2

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 186b. Age-Specific Mortality Rates for Chronic Liver Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**



**TABLE 59c. Age-Specific Mortality Rates for Chronic Liver Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	32.8	83.8	48.4	-	-
U.S. Whites	-	-	0.5	2.7	13.3	16.5	20.0	47.0
Rate Ratio ^a	-	-	-	12.4	6.3	2.9	-	-

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 186c. Age-Specific Mortality Rates for Chronic Liver Disease
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**

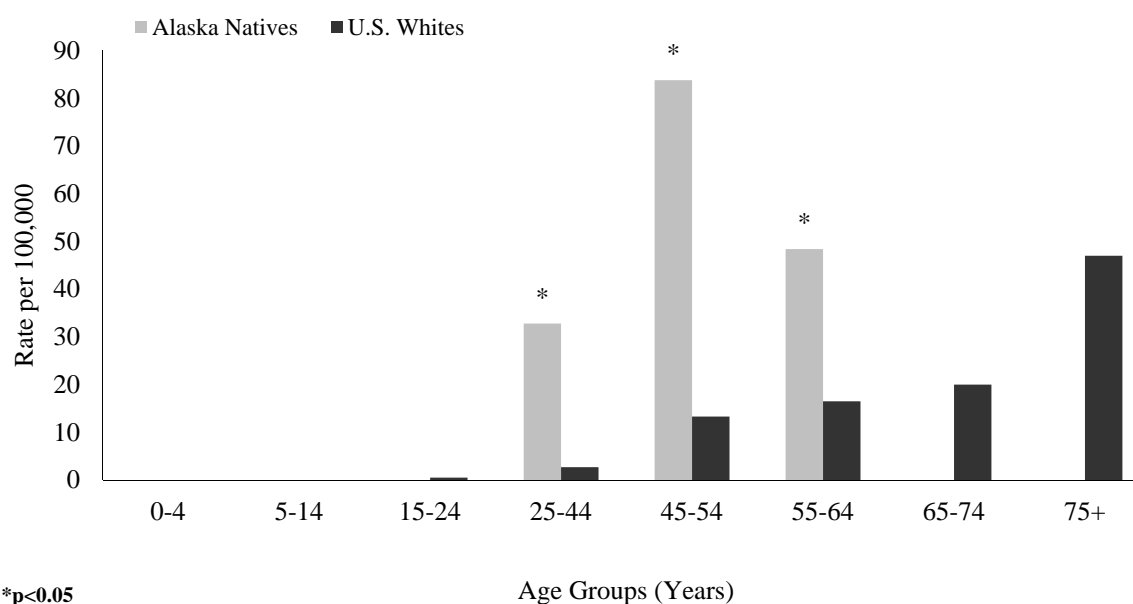


TABLE 60. **Age-Specific Mortality Rates for Chronic Liver Disease**
Alaska Natives (2009-2013)
Males versus Females

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	-	-	-	21.9	22.2	33.3	56.0	78.5
AN Females	-	-	-	32.8	83.8	48.4	-	-
Rate Ratio	-	-	-	0.7	0.3	0.7	-	-

(-) Rate not calculated for fewer than 5 deaths.

FIGURE 187. **Age-Specific Mortality Rates for Chronic Liver Disease**
Alaska Natives (2009-2013)
Males versus Females

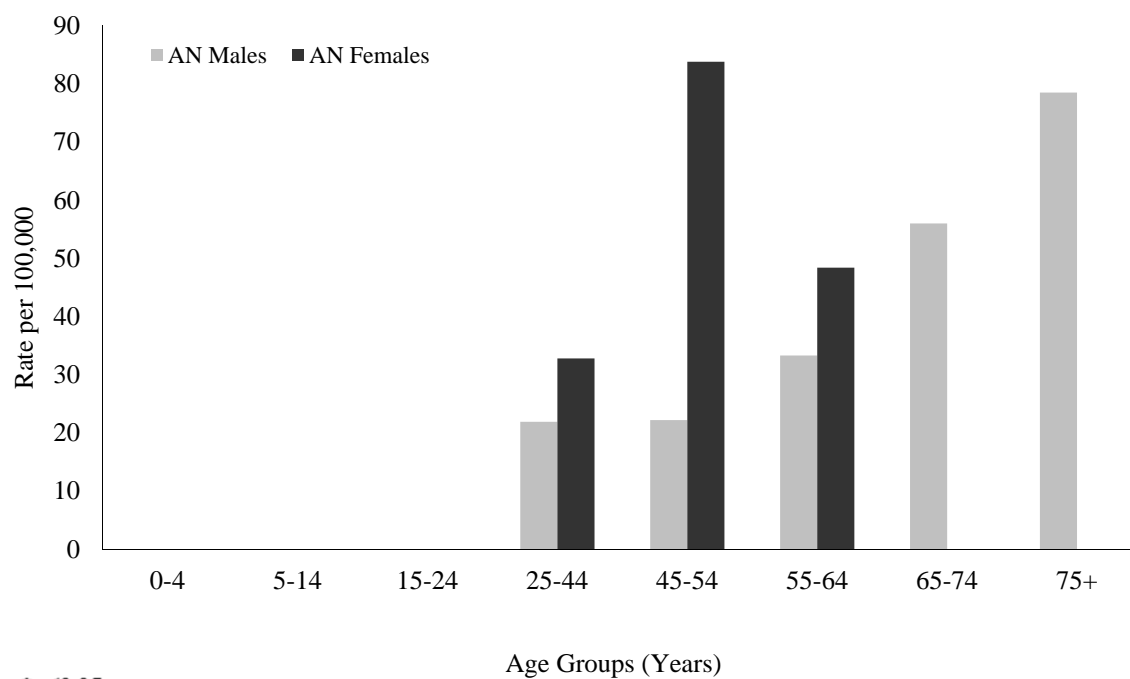


TABLE 61. **Age-Adjusted Mortality Rates for Chronic Liver Disease**
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders

	1980-1983 ^a	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013	% Change
Alaska Natives	28.1	20.4	26.8	18.3	19.4	18.0	24.0	-15%
U.S. Whites	12.9	11.3	10.3	9.6	9.6	9.2	10.2	-21%
Rate Ratio	2.2	1.8	2.6	1.9	2.0	2.0	2.4	

^a 1980-1983 time period contains only four years

FIGURE 188. **Age-Adjusted Mortality Rates for Chronic Liver Disease**
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders

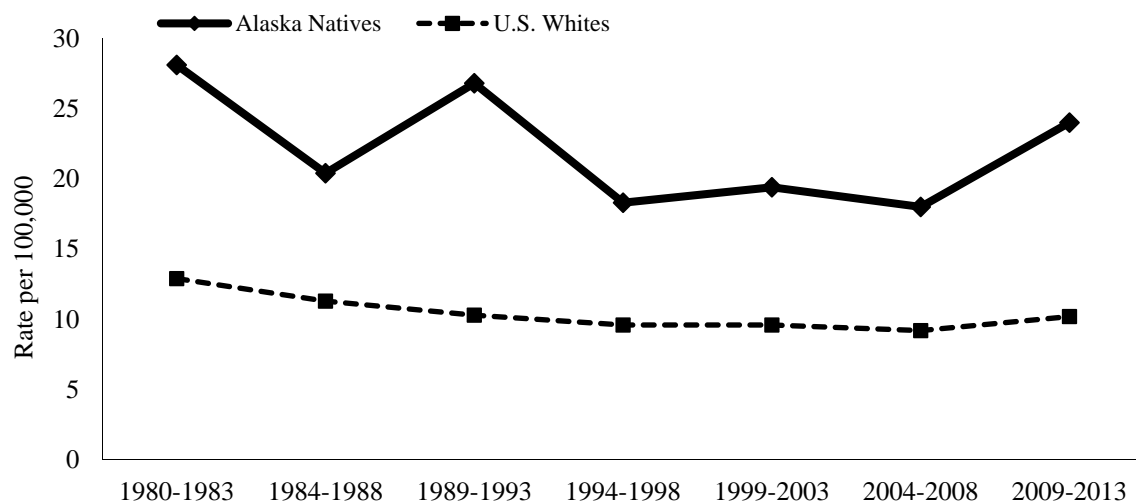
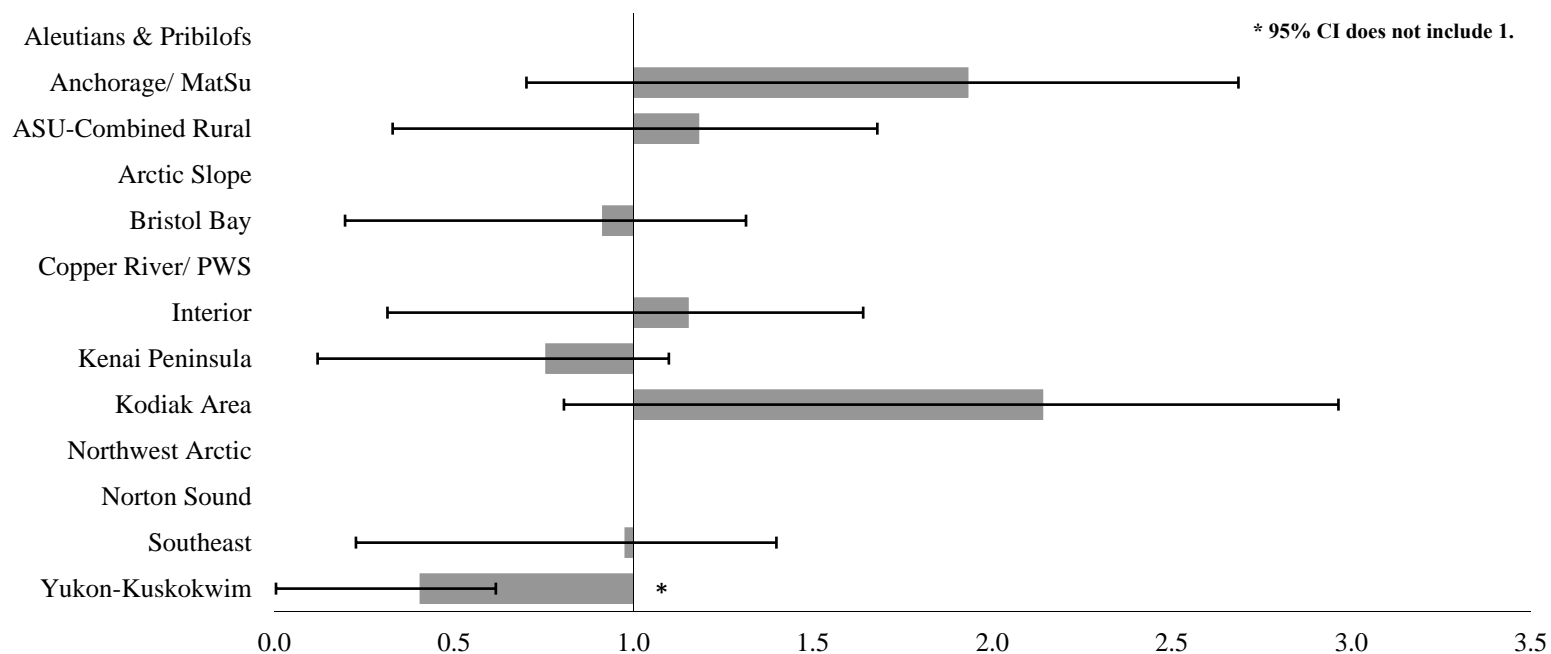


TABLE 62. Age-Adjusted Mortality Rates for Chronic Liver Disease
Alaska Natives By Service Region (2009-2013), Both Genders

	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Natives Statewide
Rate	-	46.4	28.4	-	21.9	-	27.7	18.1	51.4	-	-	23.4	↓9.7	24.0
RR	-	1.93	1.18	-	0.91	-	1.15	0.75	2.14	-	-	0.98	0.40	

FIGURE 189. Chronic Liver Disease Mortality Rate Ratios
Each Service Region vs All Other Regions Combined, Alaska Natives (2009-2013), Both Genders



EIGHTH LEADING CAUSE OF DEATH

PNEUMONIA AND INFLUENZA

Pneumonia and influenza was the eighth leading cause of death among Alaska Native people, both genders combined. It ranked ninth among Alaska Native males and eighth among Alaska Native females. Pneumonia and influenza (n=95) accounted for 2.2% of all deaths. Mortality rates for Alaska Native people, both genders combined, were 1.7 times the U.S. White rate. Rates for Alaska Native males were 1.4 times those for U.S. White males. Rates for Alaska Native females, however, were 1.9 times the U.S. White female rate.

Pneumonia and influenza accounted for 2.7% of all excess deaths among Alaska Native people, both genders combined (n=43). Among Alaska Native males, pneumonia and influenza accounted for eight more deaths than would have been expected if Alaska Native males had the same pneumonia and influenza mortality rate as U.S. White males. Among Alaska Native females (n=20), pneumonia and influenza accounted for 2.8% of all

excess deaths, the eighth leading cause of excess death.

Examining age-specific pneumonia and influenza mortality rates for Alaska Native people, both genders combined, rates were a significant 7.6 times the U.S. White rate for age group 0 through 4 years. Rates were also significantly higher for 25 to 64 year old age groups, both genders combined. Among Alaska Native males, there were significant differences in pneumonia and influenza mortality rates only for the 45 to 54 year age group. Among Alaska Native females, pneumonia and influenza mortality rates were 1.5 to 5.3 times the rate for U.S. White females, with significant differences in the 25 to 44 year old age group (RR=5.3) and 45 to 54 year old age group (RR=3.8).

There was a 50% decline in pneumonia and influenza mortality rates for Alaska Native people, both genders combined, between 1980-1983 and 2009-2013. U.S. Whites experienced a significant 47% decline between 1980-1983 and 2009-2013.

Eighth Leading Cause of Death Among Alaska Natives, 2009-2013 Pneumonia and Influenza

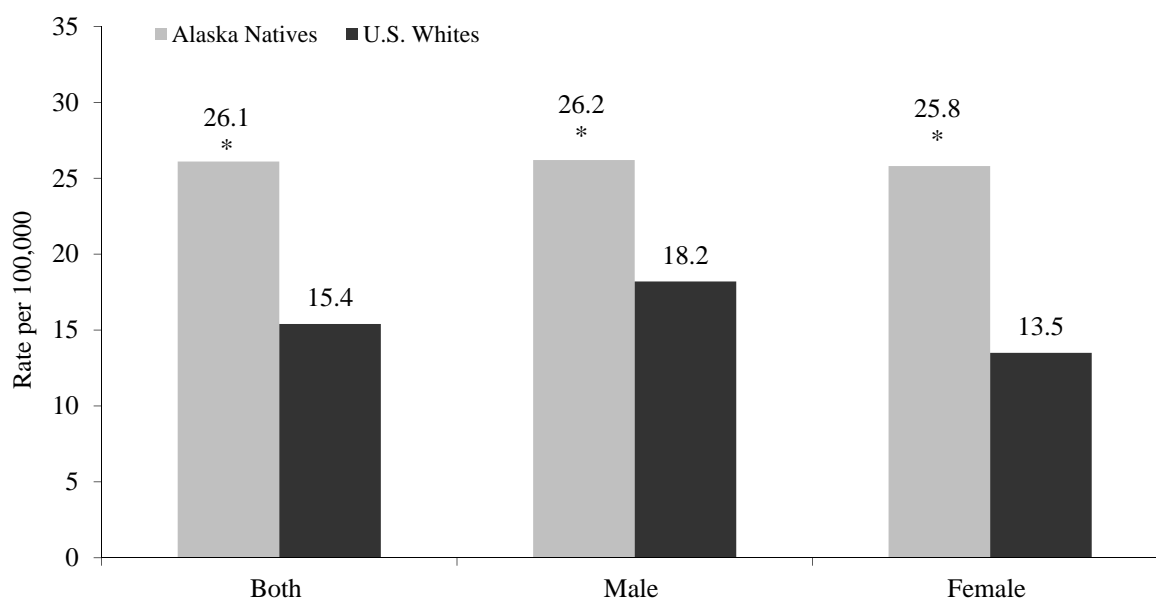
TABLE 63. **Age-Adjusted[†] Pneumonia & Influenza Mortality Rates**
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

	Alaska Natives			U.S. Whites			Rate Ratio	95% CI
	#	%	Rate per 100,000	#	%	Rate per 100,000		
Both	95	2.2%	26.1	228,984	2.1%	15.4	*1.7	1.34-2.15
Male	45	1.9%	26.2	107,287	2.3%	18.2	*1.4	1.02-2.03
Female	50	2.5%	25.8	121,697	2.8%	13.5	*1.9	1.38-2.65

* 95% CI does not include 1.

[†] Age-adjusted to the US 2000 Standard population.

FIGURE 190. **Age-Adjusted Pneumonia & Influenza Mortality Rates**
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

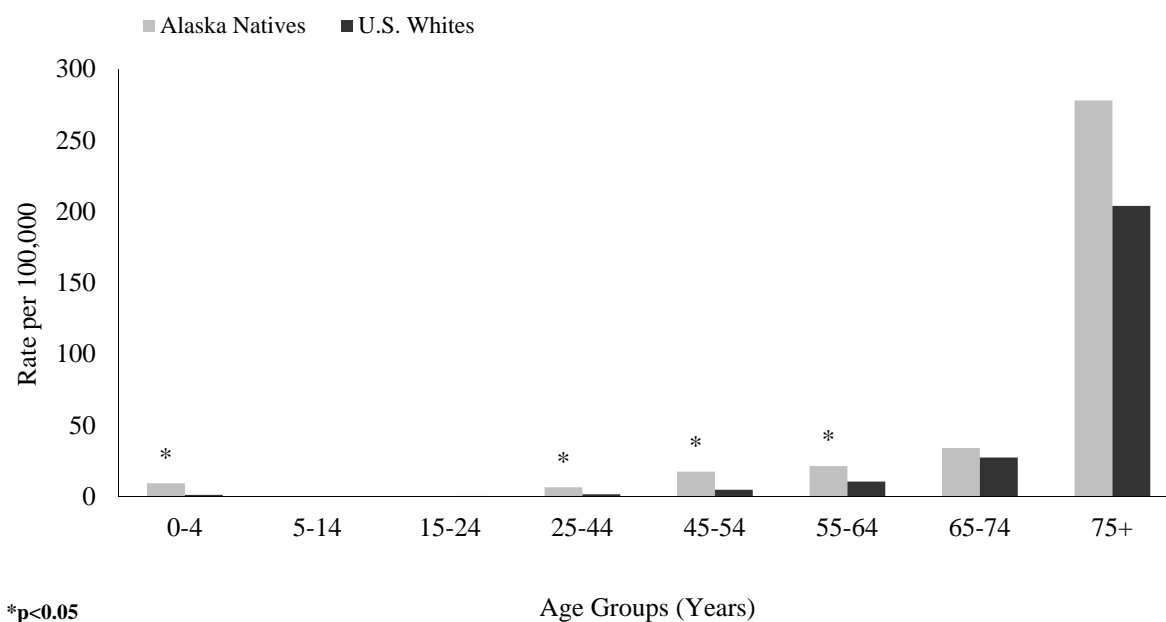


**TABLE 64a. Age-Specific Mortality Rates for Pneumonia & Influenza
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	9.3	-	-	6.5	17.5	21.4	34.1	278.0
U.S. Whites	1.2	0.2	0.4	1.6	4.8	10.5	27.4	204.0
Rate Ratio	7.8	-	-	4.0	3.6	2.0	1.2	1.4

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 191a. Age-Specific Mortality Rates for Pneumonia & Influenza
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

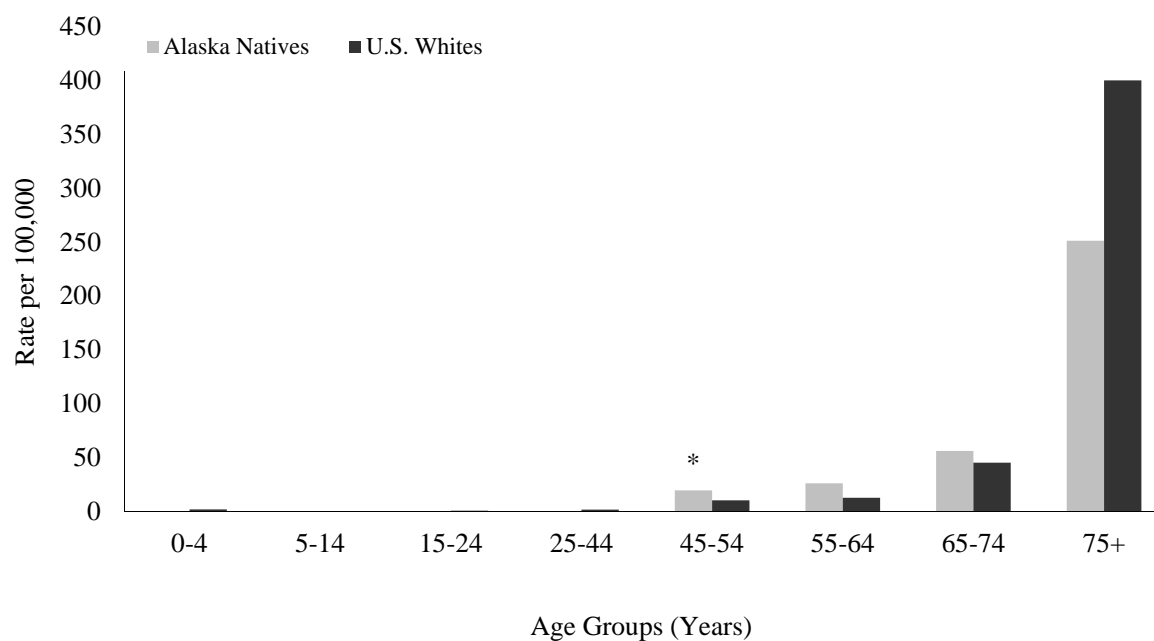


**TABLE 64b. Age-Specific Mortality Rates for Pneumonia & Influenza
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	-	19.4	25.9	56.0	251.3
U.S. Whites	1.7	0.2	0.5	1.5	10.1	12.5	45.1	400.3
Rate Ratio	-	-	-	-	1.9	2.1	1.2	0.6

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 191b. Age-Specific Mortality Rates for Pneumonia & Influenza
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

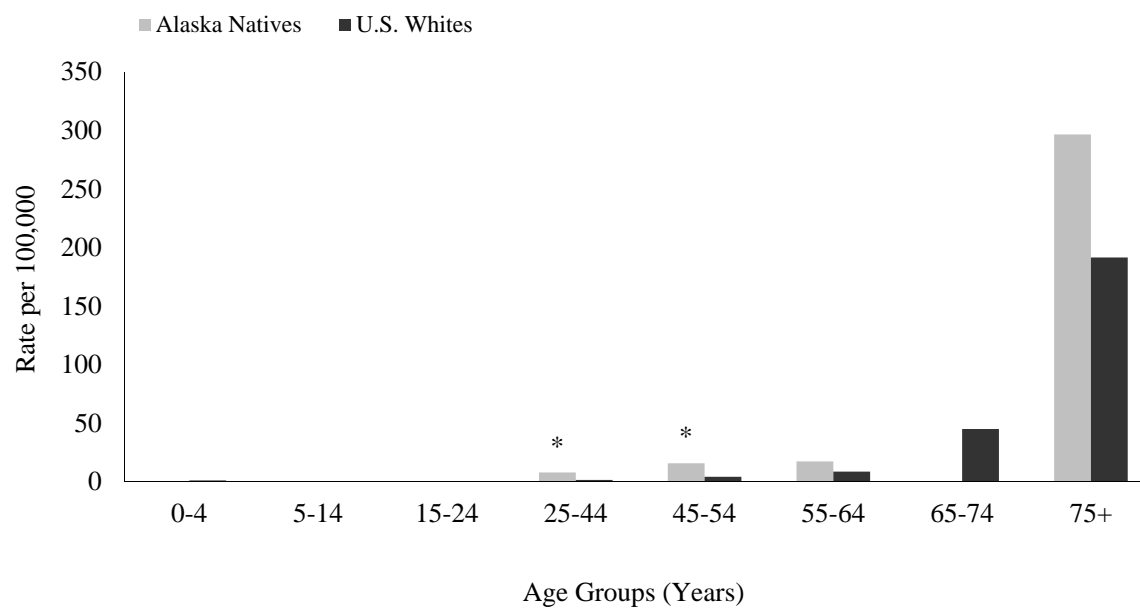


**TABLE 64c. Age-Specific Mortality Rates for Pneumonia & Influenza
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	7.9	15.7	17.3	-	296.6
U.S. Whites	1.1	0.2	0.5	1.5	4.2	8.6	45.0	191.5
Rate Ratio	-	-	-	5.3	3.8	2.0	-	1.5

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 191c. Age-Specific Mortality Rates for Pneumonia & Influenza
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**



**TABLE 65. Age-Specific Mortality Rates for Pneumonia & Influenza
Alaska Natives (2009-2013)
Males versus Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	-	-	-	-	19.4	25.9	56.0	251.3
AN Females	-	-	-	7.9	15.7	17.3	-	296.6
Rate Ratio	-	-	-	-	1.2	1.5	-	0.8

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 192. Age-Specific Mortality Rates for Pneumonia & Influenza
Alaska Natives (2009-2013)
Males versus Females**

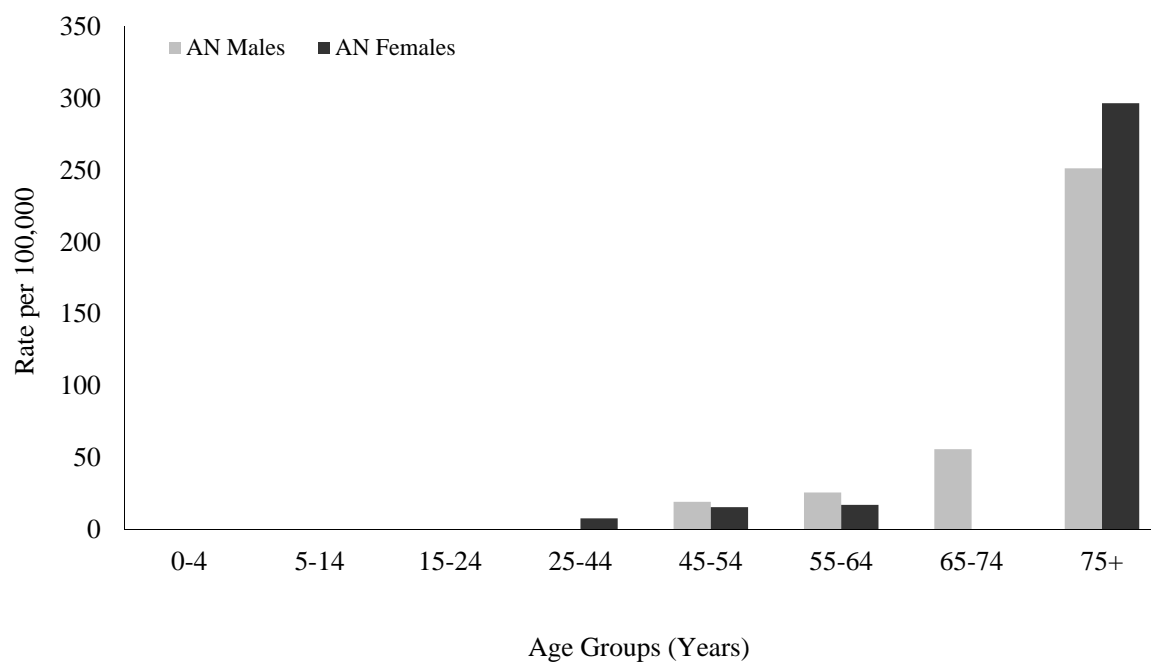
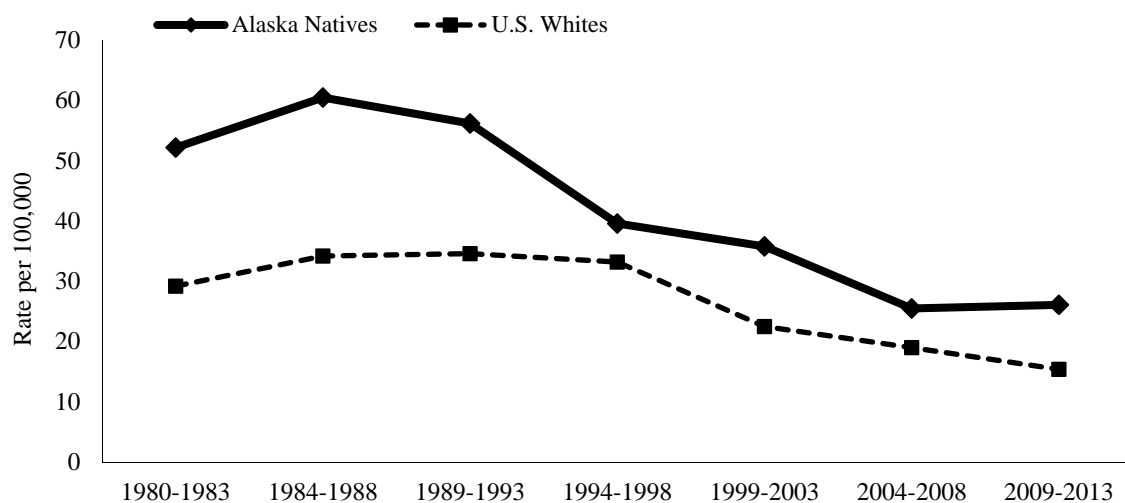


TABLE 66. **Age-Adjusted Mortality Rates for Pneumonia & Influenza**
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders

	1980-1983 ^a	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013	% Change
Alaska Natives	52.2	60.5	56.2	39.6	35.8	25.5	26.1	-50%
U.S. Whites	29.2	34.2	34.6	33.2	22.5	19.0	15.4	-47%
Rate Ratio	1.8	1.8	1.6	1.2	1.6	1.3	1.7	

^a 1980-1983 time period contains only four years

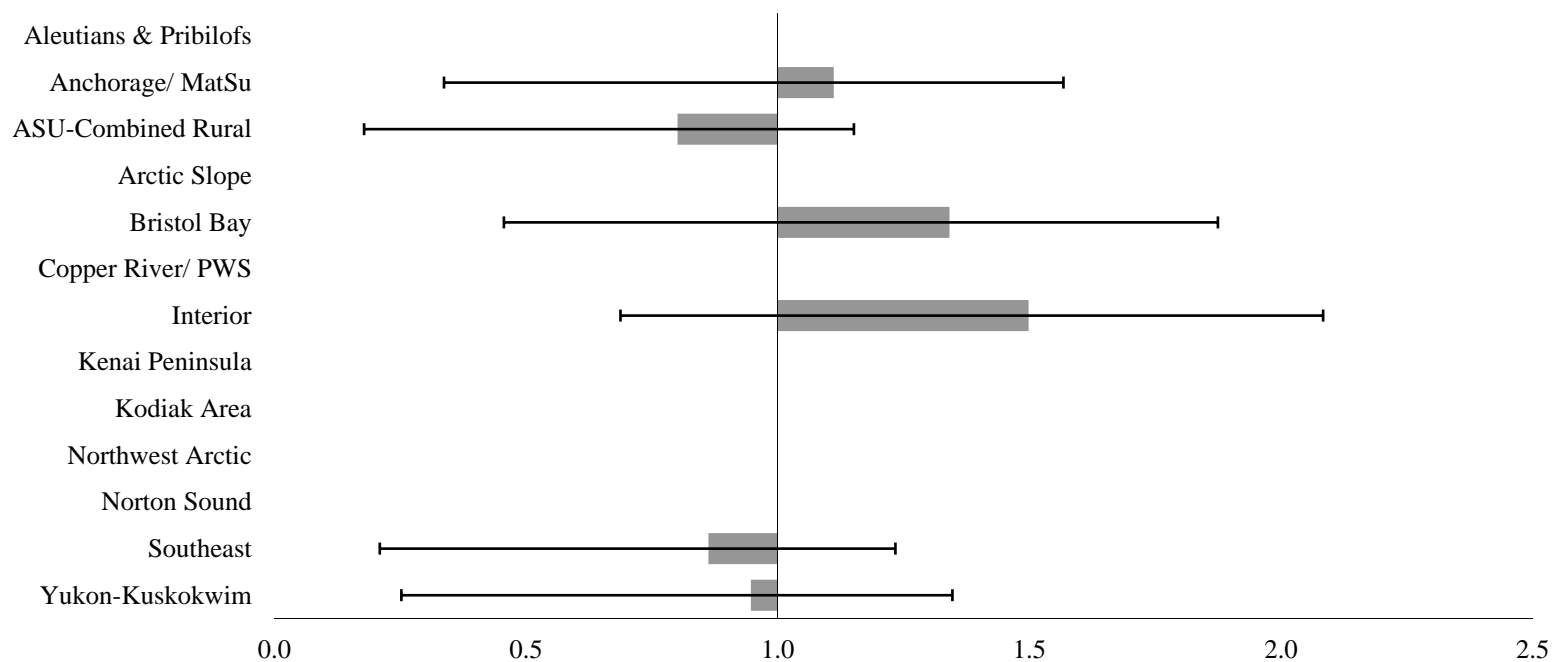
FIGURE 193. **Age-Adjusted Mortality Rates for Pneumonia & Influenza**
Alaska Natives (1980-2008) vs U.S. Whites (1980-2006)
By 5-Year Intervals
Both Genders



**TABLE 67. Age-Adjusted Mortality Rates for Pneumonia & Influenza
Alaska Natives By Service Region (2009-2013), Both Genders**

	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Natives Statewide
Rate	-	29.0	20.9	-	35.0	-	39.1	-	-	-	-	22.5	24.7	26.1
RR	-	1.11	0.80	-	1.34	-	1.50	-	-	-	-	0.86	0.95	

**FIGURE 194. Pneumonia & Influenza Mortality Rate Ratios
Each Service Region vs All Other Regions Combined, Alaska Natives (2009-2013), Both Genders**



NINTH LEADING CAUSE OF DEATH
DIABETES MELLITUS

Diabetes mellitus was the ninth leading cause of death among Alaska Native people, both genders combined. This is the first time period where diabetes is in the top ten leading causes of death among Alaska Native people. It ranked tenth for Alaska Native males and ninth for Alaska Native females. It accounted for 1.8% (n=78) of all deaths. Diabetes mellitus mortality rates among Alaska Native people, both genders combined, were 1.1 times the U.S. White rate, though this difference was not significant. Alaska Native males compared to U.S. White males had 10% lower mortality rates, and Alaska Native females compared to U.S. White females had 30% higher rates.

Examining diabetes mortality rates by age group showed that rates were not significantly different between Alaska Native people, both genders combined, for any age group. Age-specific rate ratios for Alaska Native males compared to U.S. White males were significantly lower for the 75+ year age group (RR=0.4). Rate ratios between Alaska

Native females and U.S. White females were not significantly different.

Examining diabetes mortality rates by service region showed that the Yukon Kuskokwim service region had a significantly lower rate (RR=0.5) than the rest of the state combined.

Alaska Native people experienced a 302% increase in diabetes mortality rates between 1980-1983 and 2009-2013. Among U.S. Whites there was a 3% increase between 1980-1983 and 2009-2013.

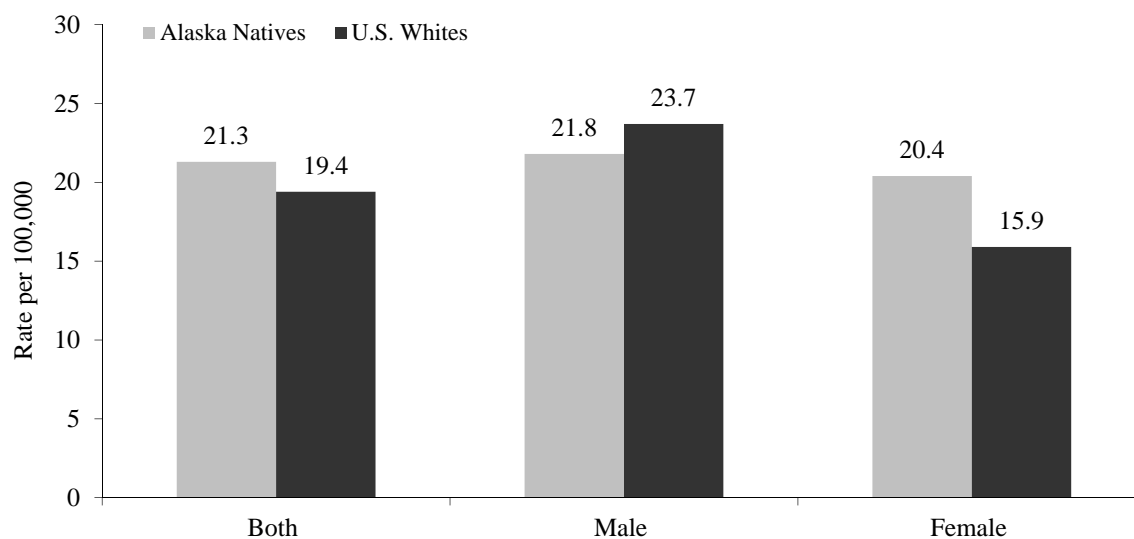
Ninth leading Cause of Death Among Alaska Natives, 2009-2013 Diabetes Mellitus

TABLE 73. Age-Adjusted[†] Diabetes Mellitus Mortality Rates
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

	Alaska Natives			U.S. Whites			Rate Ratio	95% CI
	#	%	Rate per 100,000	#	%	Rate per 100,000		
Both	78	1.8%	21.3	283,068	2.6%	19.4	1.1	0.85-1.43
Male	38	1.6%	21.8	150,051	2.8%	23.7	0.9	0.63-1.34
Female	40	2.0%	20.4	133,017	2.5%	15.9	1.3	0.89-1.85

[†] Age-adjusted to the US 2000 Standard population.

FIGURE 221. Age-Adjusted Diabetes Mellitus Mortality Rates
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

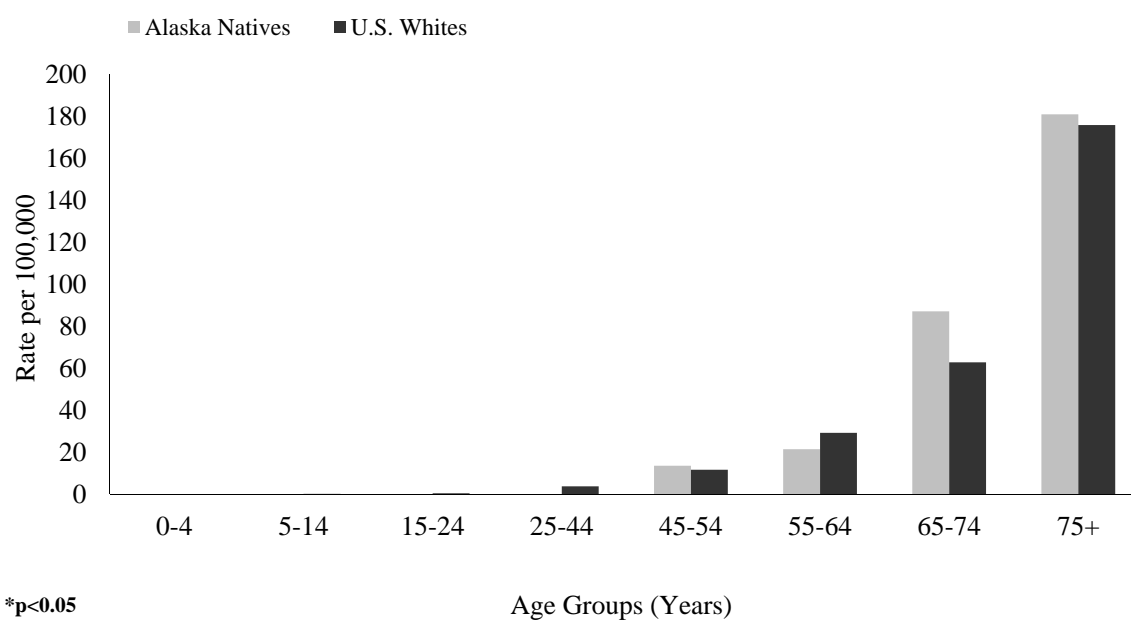


**TABLE 69a. Age-Specific Mortality Rates for Diabetes Mellitus
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	-	13.5	21.4	87.1	181.0
U.S. Whites	-	0.1	0.4	3.7	11.6	29.2	62.8	175.9
Rate Ratio	-	-	-	-	1.2	0.7	1.4	1.0

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 196a. Age-Specific Mortality Rates for Diabetes Mellitus
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

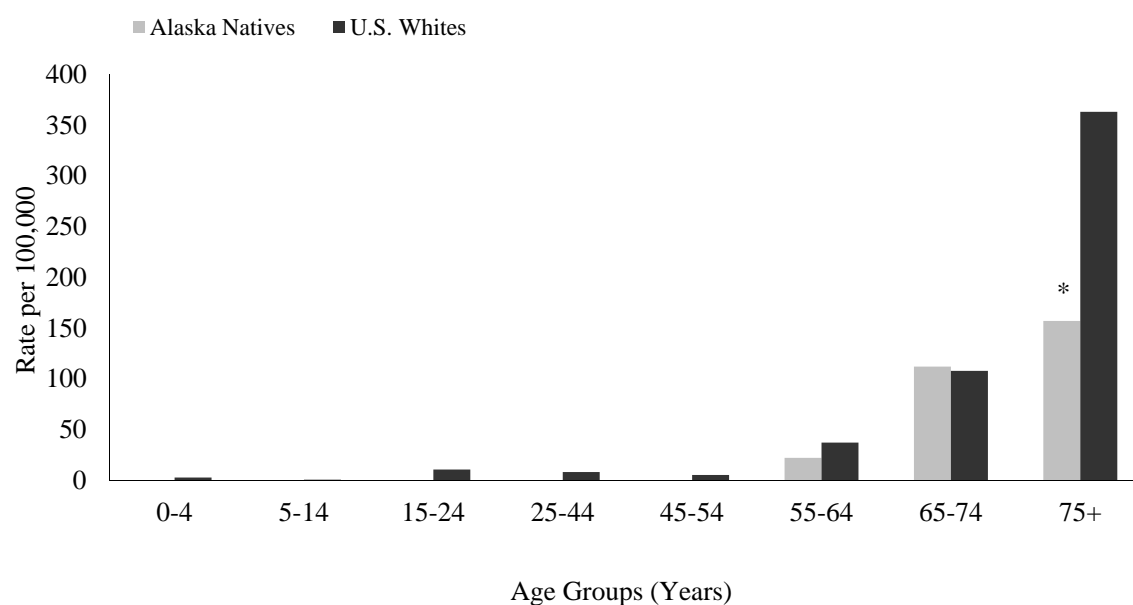


**TABLE 69b. Age-Specific Mortality Rates for Diabetes Mellitus
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	-	-	22.2	112.1	157.1
U.S. Whites	2.8	0.7	10.7	8.2	5.3	37.2	107.9	363.2
Rate Ratio	-	-	-	-	-	0.6	1.0	0.4

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 196b. Age-Specific Mortality Rates for Diabetes Mellitus
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

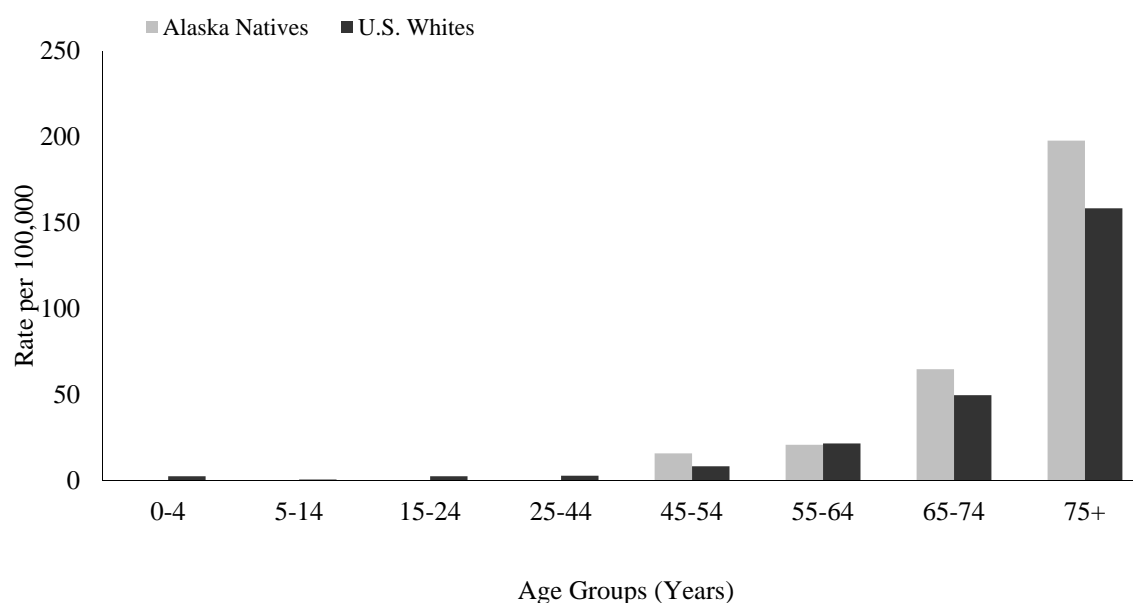


**TABLE 69c. Age-Specific Mortality Rates for Diabetes Mellitus
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	-	15.7	20.7	64.7	197.8
U.S. Whites	2.4	0.5	2.4	2.7	8.2	21.5	49.6	158.4
Rate Ratio	-	-	-	-	1.9	1.0	1.3	1.2

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 196c. Age-Specific Mortality Rates for Diabetes Mellitus
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**



**TABLE 70. Age-Specific Mortality Rates for Diabetes Mellitus
Alaska Natives (2009-2013)
Males versus Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	-	-	-	-	-	22.2	112.1	157.1
AN Females	-	-	-	-	15.7	20.7	64.7	197.8
Rate Ratio	-	-	-	-	-	1.1	1.7	0.8

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 197. Age-Specific Mortality Rates for Diabetes Mellitus
Alaska Natives (2009-2013)
Males versus Females**

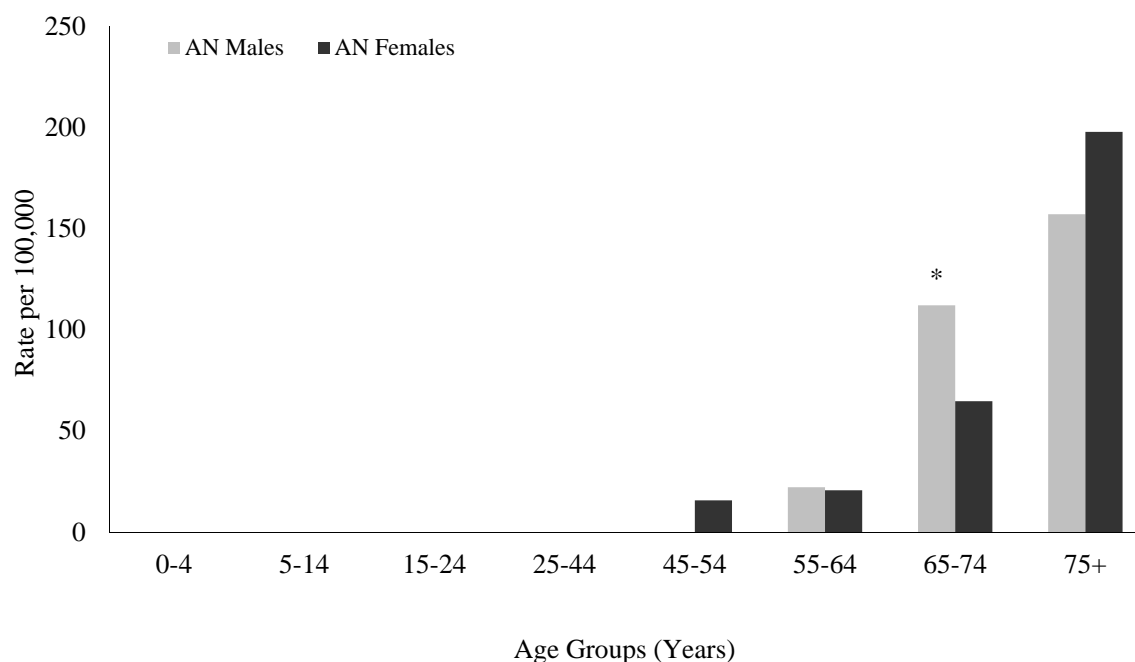
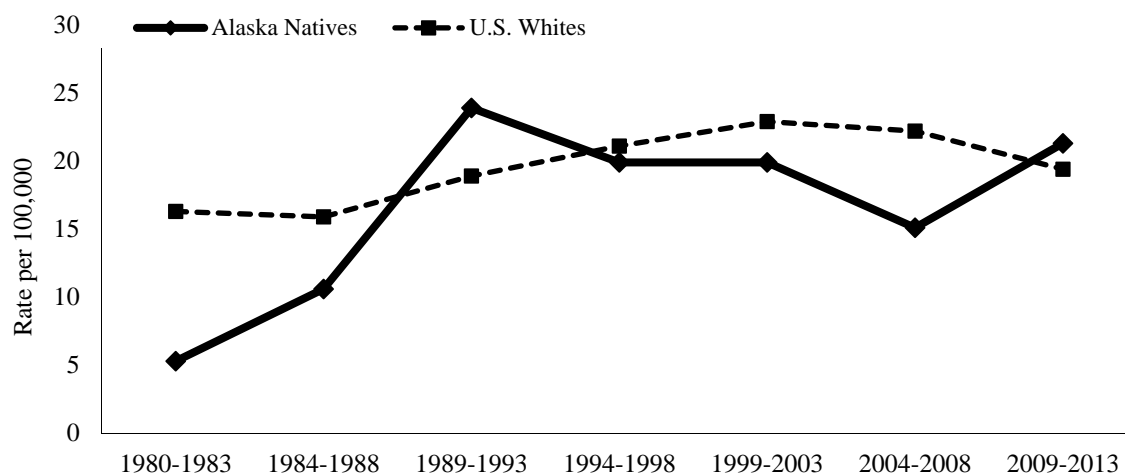


TABLE 71. **Age-Adjusted Mortality Rates for Diabetes Mellitus**
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders

	1980-1983 ^a	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013	% Change
Alaska Natives	5.3	10.6	23.9	19.9	19.9	15.1	21.3	302%
U.S. Whites	16.3	15.9	18.9	21.1	22.9	22.2	19.4	19%
Rate Ratio	0.3	0.7	1.3	0.9	0.9	0.7	1.1	

^a 1980-1983 time period contains only four years

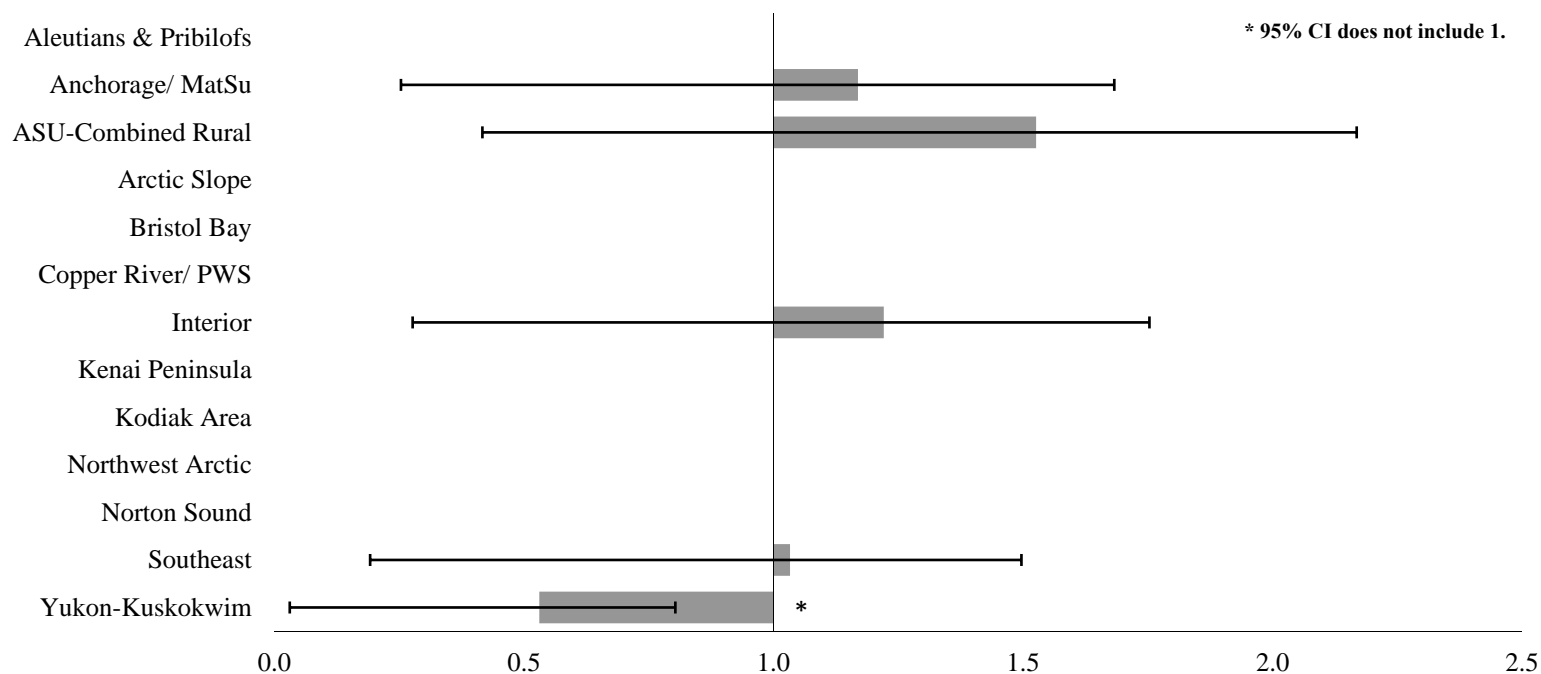
FIGURE 198. **Age-Adjusted Mortality Rates for Diabetes Mellitus**
Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders



**TABLE 72. Age-Adjusted Mortality Rates for Diabetes Mellitus
Alaska Natives By Service Region (2009-2013), Both Genders**

	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Natives Statewide
Rate	-	24.9	32.5	-	-	-	26.0	-	-	-	-	22.0	↓11.3	21.3
RR	-	1.17	1.53	-	-	-	1.22	-	-	-	-	1.03	0.53	

**FIGURE 199. Diabetes Mellitus Mortality Rate Ratios
Each Service Region vs All Other Regions Combined, Alaska Natives (2009-2013), Both Genders**



TENTH LEADING CAUSE OF DEATH
MENTAL AND BEHAVIORAL
DISORDERS DUE TO ALCOHOL
ABUSE

Alcohol abuse was the tenth leading cause of death among Alaska Native people, both genders combined. It ranked eleventh among Alaska Native males and tenth among Alaska Native females. Alcohol abuse accounted for 1.7% of all Alaska Native (n=73) deaths. Alcohol abuse mortality rates for Alaska Native people, both genders combined, were 7.1 times the U.S. White rate. Alaska Native males had rates 4.7 times the U.S. White male rate. Rates for Alaska Native females were 15.7 times the rate for U.S. White females.

Alcohol abuse accounted for 3.8% of all excess deaths among Alaska Native people, both genders combined (n=60). Among Alaska Native males (n=27), alcohol abuse accounted for 7.1% of excess deaths. Among Alaska Native females (n=32), alcohol abuse accounted for 4.5% of all excess deaths.

Alcohol abuse was the seventh leading cause of years of potential life lost

before 75 years (1,679) for Alaska Native people, both genders combined. Alcohol was the sixth leading cause of years of potential life lost before 75 years for Alaska Native females.

Among Alaska Native people, both genders combined, age-specific alcohol abuse mortality rates were a significant 5.1 to 9.5 times the U.S. White rate for age groups 25 to 74 years old. Rate ratios for Alaska Native males were a significant 3.2 to 10.2 times the U.S. White male rate in the 45 to 74 year age groups. Alaska Native females had a significant 12.6 to 19.0 times the U.S. White female mortality rate in the 25 to 64 year age groups.

Alcohol abuse mortality rates were not significantly different for any service region as compared to the remainder of the state.

Alaska Native alcohol abuse rates declined 51% between 1980-1983 and 2009-2013. U.S. Whites did not change significantly between 1980-1983 and 2009-2013.

Tenth Leading Cause of Death Among Alaska Natives, 2009-2013

Alcohol Abuse

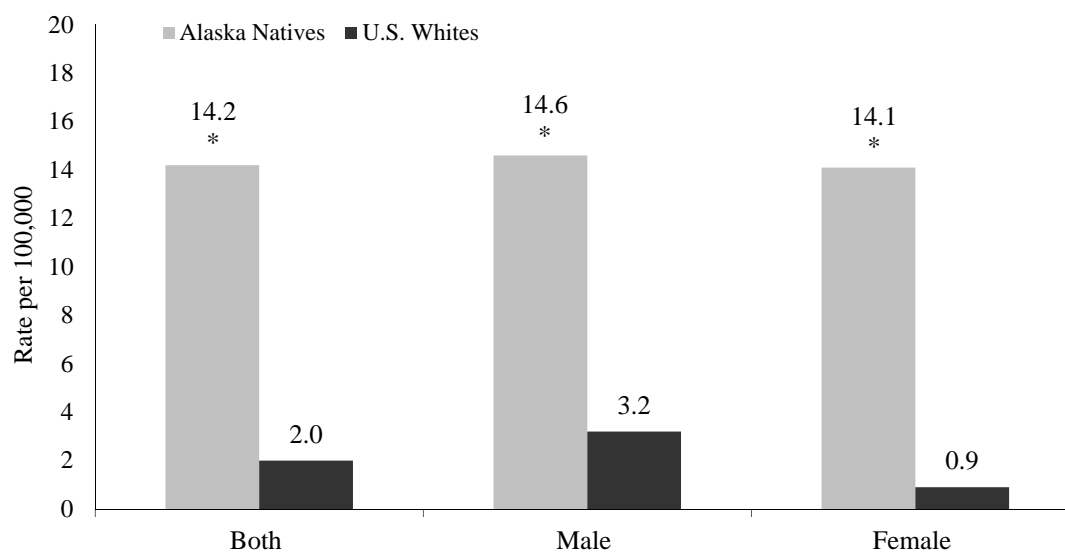
TABLE 73. Age-Adjusted† Alcohol Abuse Mortality Rates
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

	Alaska Natives			U.S. Whites			Rate Ratio	95% CI
	#	%	Rate per 100,000	#	%	Rate per 100,000		
Both	73	1.7%	14.2	27,053	0.4%	2.0	*7.1	2.85-4.89
Male	35	1.5%	14.6	17,839	4.6%	3.2	*4.6	3.20-6.98
Female	38	1.9%	14.1	9,214	0.2%	0.9	*15.7	1.26-1.40

* 95% CI does not include 1.

† Age-adjusted to the US 2000 Standard population.

FIGURE 200. Age-Adjusted Alcohol Abuse Mortality Rates
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)

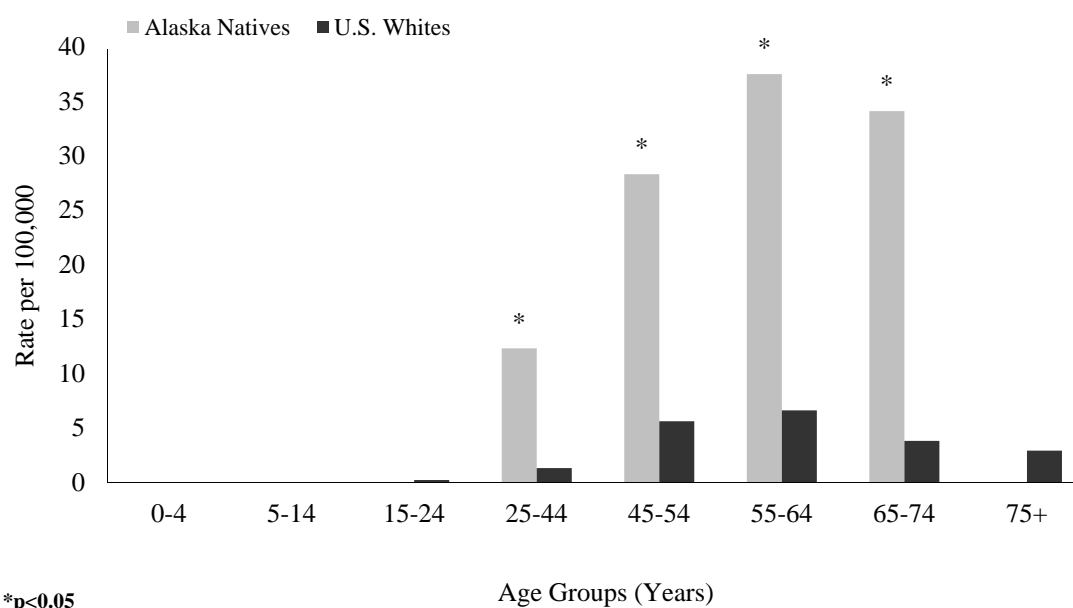


**TABLE 74a. Age-Specific Mortality Rates for Alcohol Abuse
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	12.3	28.3	37.5	34.1	-
U.S. Whites	-	-	0.2	1.3	5.6	6.6	3.8	2.9
Rate Ratio	-	-	-	9.5	5.1	5.7	8.9	-

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 201a. Age-Specific Mortality Rates for Alcohol Abuse
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Both Genders**

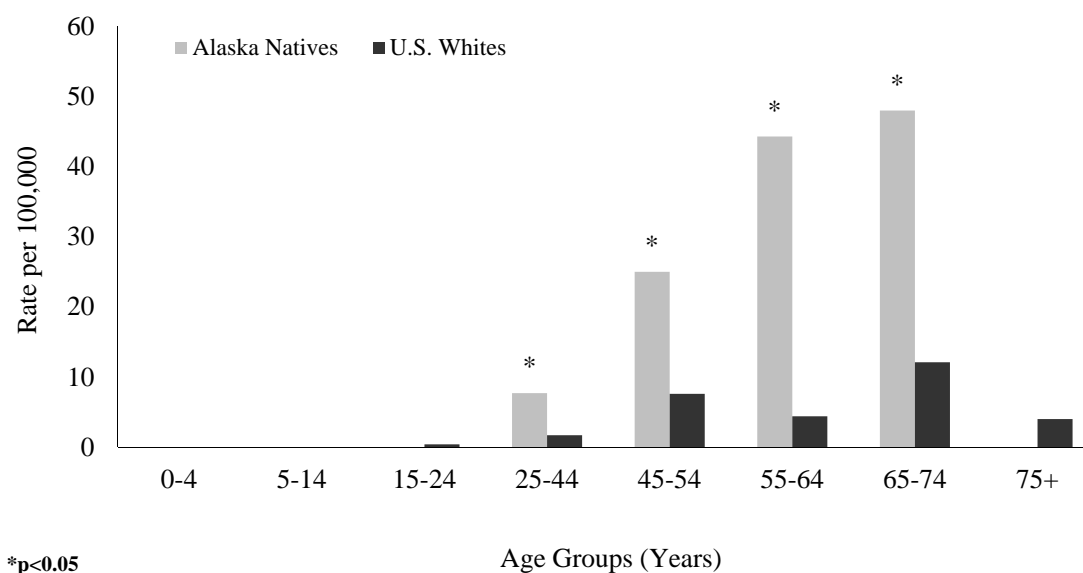


**TABLE 74b. Age-Specific Mortality Rates for Alcohol Abuse
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	7.7	25.0	44.3	48.0	-
U.S. Whites	-	-	0.4	1.7	7.6	4.4	12.1	4.0
Rate Ratio	-	-	-	4.5	3.3	10.2	4.0	-

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 201b. Age-Specific Mortality Rates for Alcohol Abuse
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Males**

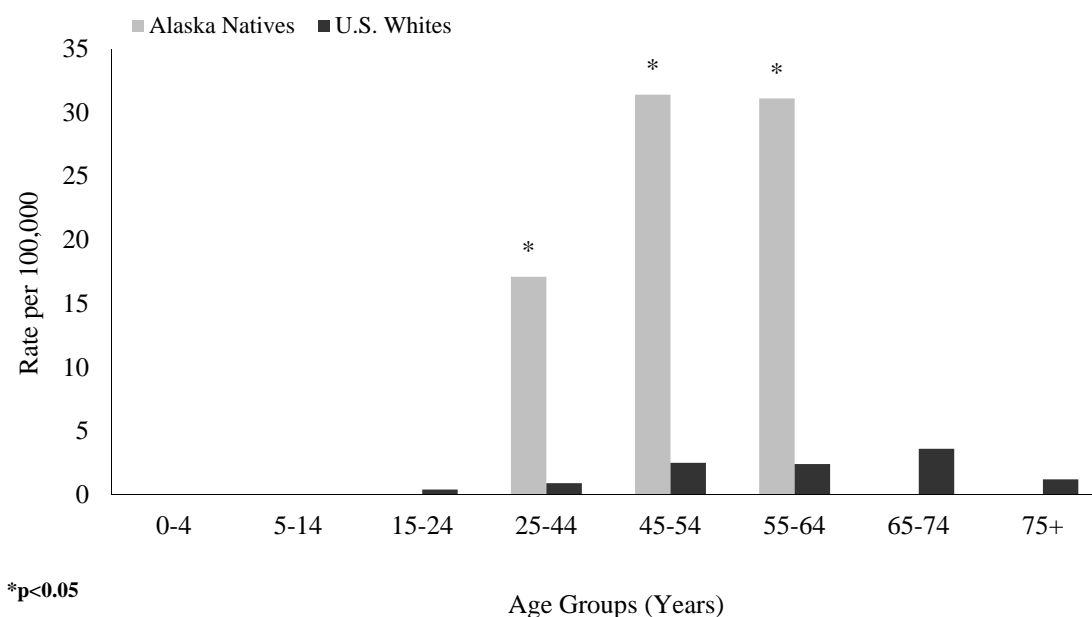


**TABLE 74c. Age-Specific Mortality Rates for Alcohol Abuse
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Natives	-	-	-	17.1	31.4	31.1	-	-
U.S. Whites	-	-	0.4	0.9	2.5	2.4	3.6	1.2
Rate Ratio	-	-	-	19.0	12.6	13.0	-	-

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 201c. Age-Specific Mortality Rates for Alcohol Abuse
Alaska Natives (2009-2013) vs U.S. Whites (2009-2013)
Females**

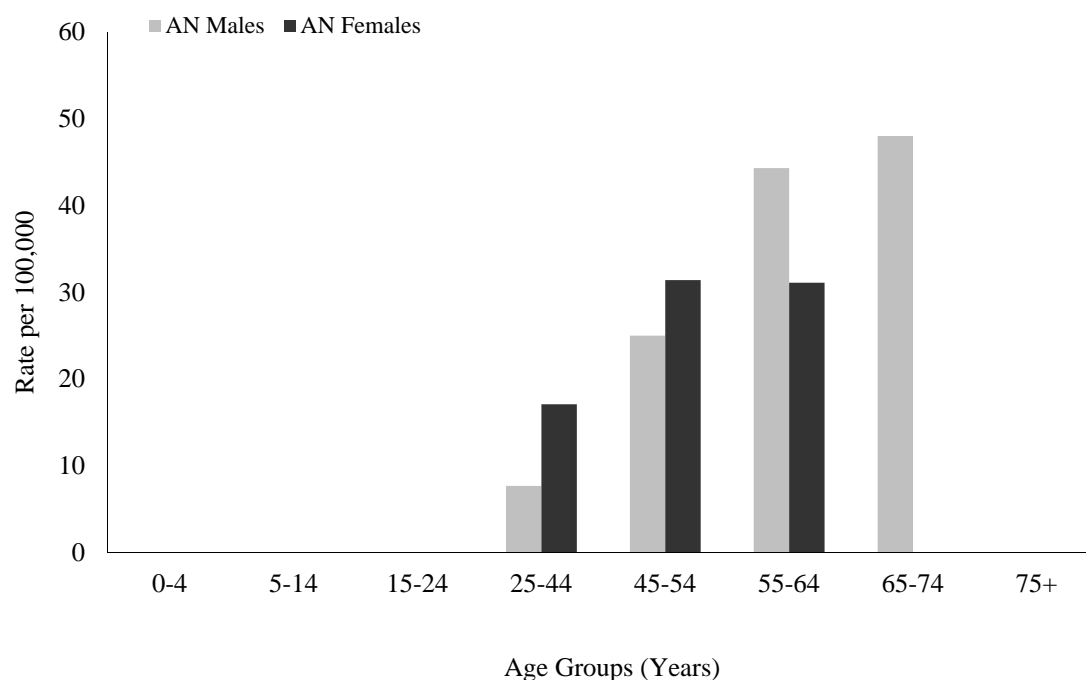


**TABLE 75. Age-Specific Mortality Rates for Alcohol Abuse
Alaska Natives (2009-2013)
Males versus Females**

Age Groups	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
AN Males	-	-	-	7.7	25.0	44.3	48.0	-
AN Females	-	-	-	17.1	31.4	31.1	-	-
Rate Ratio	-	-	-	0.5	0.8	1.4	-	-

(-) Rate not calculated for fewer than 5 deaths.

**FIGURE 202. Age-Specific Mortality Rates for Alcohol Abuse
Alaska Natives (2009-2013)
Males versus Females**



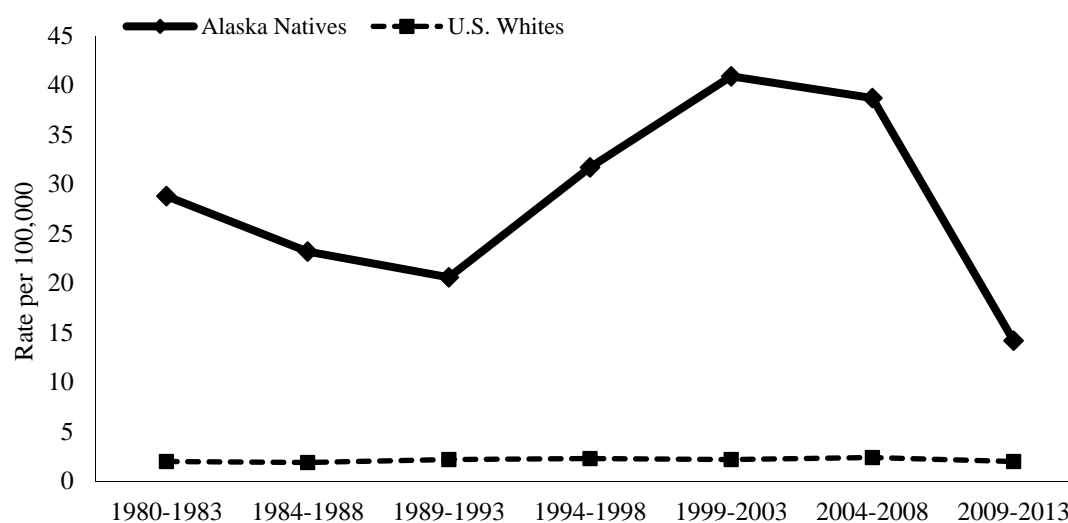
**TABLE 76. Age-Adjusted Mortality Rates for Alcohol Abuse
Alaska Natives (1980-2008) vs U.S. Whites (1980-2006)
By 5-Year Intervals
Both Genders**

	1980-1983 ^a	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013	% Change
Alaska Natives	28.8	23.2	20.6	31.7	40.9	38.7	14.2	-51%
U.S. Whites	2.0	1.9	2.2	2.3	2.2	2.4	2.0	*NS
Rate Ratio	14.4	12.2	9.4	13.8	18.6	16.1	7.1	

*NS means that there was no significant difference at $p < 0.05$

^a 1980-1983 time period contains only four years

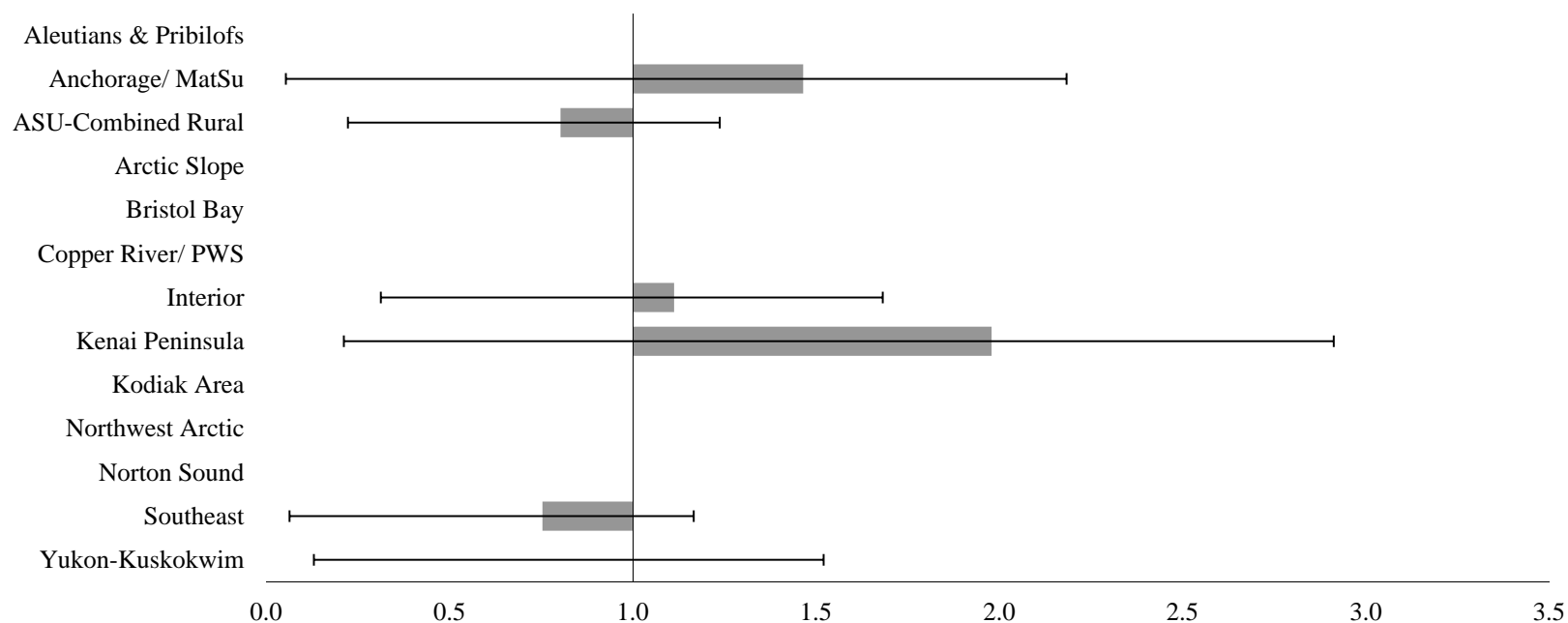
**FIGURE 203. Age-Adjusted Mortality Rates for Alcohol Abuse
Alaska Natives (1980-2008) vs U.S. Whites (1980-2006)
By 5-Year Intervals
Both Genders**



**TABLE 77. Age-Adjusted Mortality Rates for Alcohol Abuse
Alaska Natives By Service Region (2009-2013), Both Genders**

	Aleutians & Pribilofs	Anchorage/ MatSu	ASU-Combined Rural	Arctic Slope	Bristol Bay	Copper River/ PWS	Interior	Kenai Peninsula	Kodiak Area	Northwest Arctic	Norton Sound	Southeast	Yukon-Kuskokwim	Alaska Natives Statewide
Rate	-	20.8	11.4	-	-	-	15.8	28.1	-	-	-	10.7	14.2	14.2
RR	-	1.46	0.80	-	-	-	1.11	1.98	-	-	-	0.75	1.00	

**FIGURE 204. Alcohol Abuse Mortality Rate Ratios
Each Service Region vs All Other Regions Combined, Alaska Natives (2009-2013), Both Genders**



LIFE EXPECTANCY AT BIRTH

Life expectancy at birth is the average number of years a person is expected to live from birth, based on the year in which they were born. Life expectancy tables report the number of years a person can expect to live if they have survived to a given age. Reported life expectancy in this section is calculated via a traditional life-table method.^a

Life expectancy for Alaska Native people born between 2009-2013 is estimated to be 70.7 years. This assumes the age-specific mortality rates of the 2009-2013 period. For Alaska Native people, both genders combined, life expectancy was 8.4 years shorter than U.S. Whites. In males, Alaska Native life expectancy was 68.5 years (8.2 years shorter than U.S. White males) and in females, life expectancy was 72.9 years (8.5 years shorter than U.S. White females).

Regionally, the Norton Sound region has the lowest life expectancy at 69.3 years. The region with the highest life expectancy for Alaska Native people was the Southeast region at 73.8. All regions have had increases in life expectancy since 1980 ranging from 3% to 24%.

Alaska Native life expectancy increased 8% between 1980-1983 and 2009-2013. U.S. Whites experienced a 6% increase between 1980-1983 and 2009-2013.

^a For more information, see “WHO methods for life expectancy and healthy life expectancy,” http://www.who.int/healthinfo/statistics/LT_method.pdf

TABLE 78a. Life Expectancy Tables Alaska Natives (2009-2013) and U.S. Whites (2013) Both Genders

Age Group	Alaska Native Life Expectancy	U.S. White Life Expectancy	Difference
<1	70.7	79.1	-8.4
1-4	70.2	78.5	-8.3
5-9	66.4	74.5	-8.1
10-14	61.5	69.0	-7.5
15-19	56.6	69.6	-13.0
20-24	52.1	57.5	-5.4
25-29	47.9	52.8	-4.9
30-34	43.6	48.1	-4.5
35-39	39.4	43.5	-4.1
40-44	35.1	38.8	-3.7
45-49	31.0	34.3	-3.3
50-54	27.0	29.9	-2.9
55-59	23.2	25.7	-2.5
60-64	19.4	21.7	-2.3
65-69	15.7	18.0	-2.3
70-74	12.3	14.4	-2.1
75-79	9.0	11.1	-2.1
80-84	6.3	8.3	-2.0
85+	3.2	6.5	-3.3
Life Expectancy	70.7	79.1	-8.4

FIGURE 205a. Life Expectancy at a Given Age Alaska Natives (2009-2013) and U.S. Whites (2013) Both Genders

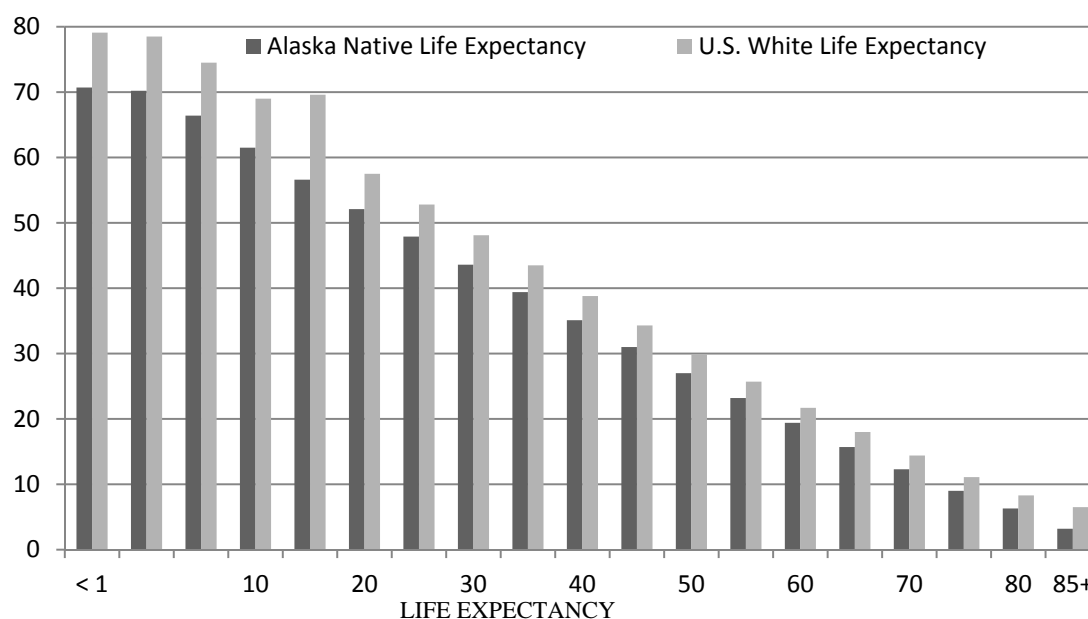


TABLE 78b. Life Expectancy Tables Alaska Natives (2009-2013) and U.S. Whites (2013)
Males

Age Group	Alaska Native Life Expectancy	U.S. White Life Expectancy	Difference
<1	68.5	76.7	-8.2
1-4	68.2	76.1	-7.9
5-9	64.3	72.2	-7.9
10-14	59.5	67.3	-7.8
15-19	54.6	62.3	-7.7
20-24	50.2	57.5	-7.3
25-29	46.2	52.8	-6.6
30-34	42.1	48.1	-6.0
35-39	37.9	43.5	-5.6
40-44	33.7	38.8	-5.1
45-49	29.7	34.3	-4.6
50-54	25.8	29.9	-4.1
55-59	22.0	25.7	-3.7
60-64	18.4	21.7	-3.3
65-69	14.7	18.0	-3.3
70-74	11.6	14.4	-2.8
75-79	8.5	11.1	-2.6
80-84	6.0	8.3	-2.3
85+	3.2	5.9	-2.7
Life Expectancy	68.5	76.7	-8.2

FIGURE 205a. Life Expectancy at a Given Age
Alaska Natives (2009-2013) and U.S. Whites (2013)
Males

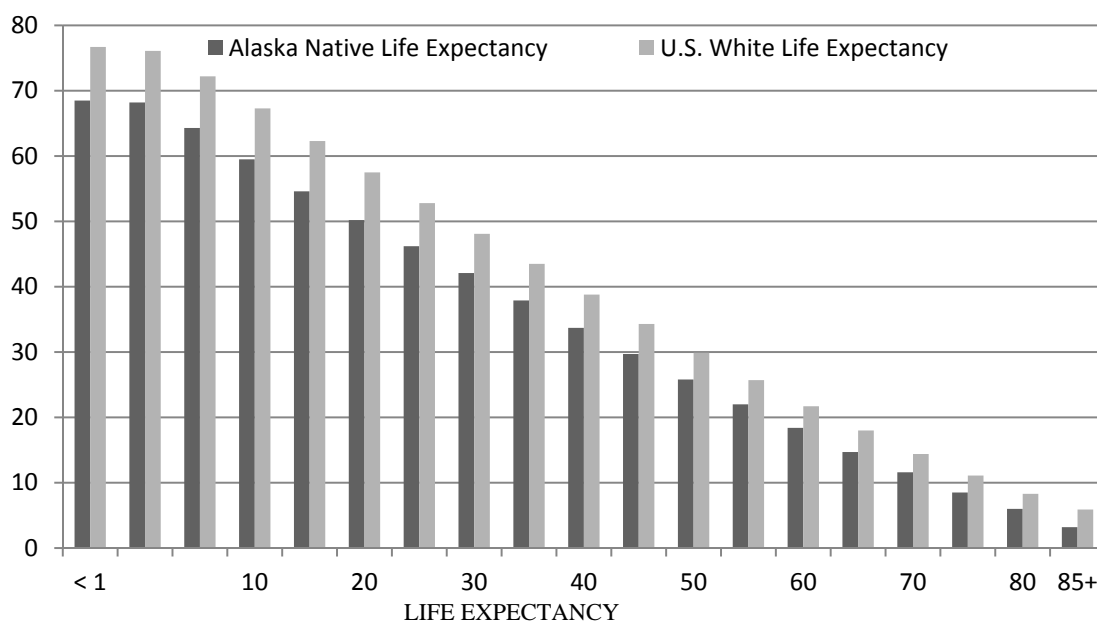


TABLE 78c. Life Expectancy Tables Alaska Natives (2009-2013) and U.S. White Rates (2013)
Females

Age Group	Alaska Native Life Expectancy	U.S. White Life Expectancy	Difference
<1	72.9	81.4	-8.5
1-4	72.4	80.7	-8.3
5-9	68.6	76.8	-8.2
10-14	63.7	71.8	-8.1
15-19	58.8	66.9	-8.1
20-24	54.1	62.0	-7.9
25-29	49.5	57.1	-7.6
30-34	45.1	52.2	-7.1
35-39	40.8	47.4	-6.6
40-44	36.5	42.6	-6.1
45-49	32.2	37.9	-5.7
50-54	28.2	33.4	-5.2
55-59	24.3	28.9	-4.6
60-64	20.4	24.6	-4.2
65-69	16.5	20.5	-4.0
70-74	12.9	16.5	-3.6
75-79	9.5	12.9	-3.4
80-84	6.5	9.7	-3.2
85+	3.2	6.9	-3.7
Life Expectancy	72.9	81.4	-8.5

FIGURE 205c. Life Expectancy at a Given Age
Alaska Natives (2009-2013) and U.S. Whites (2013)
Females

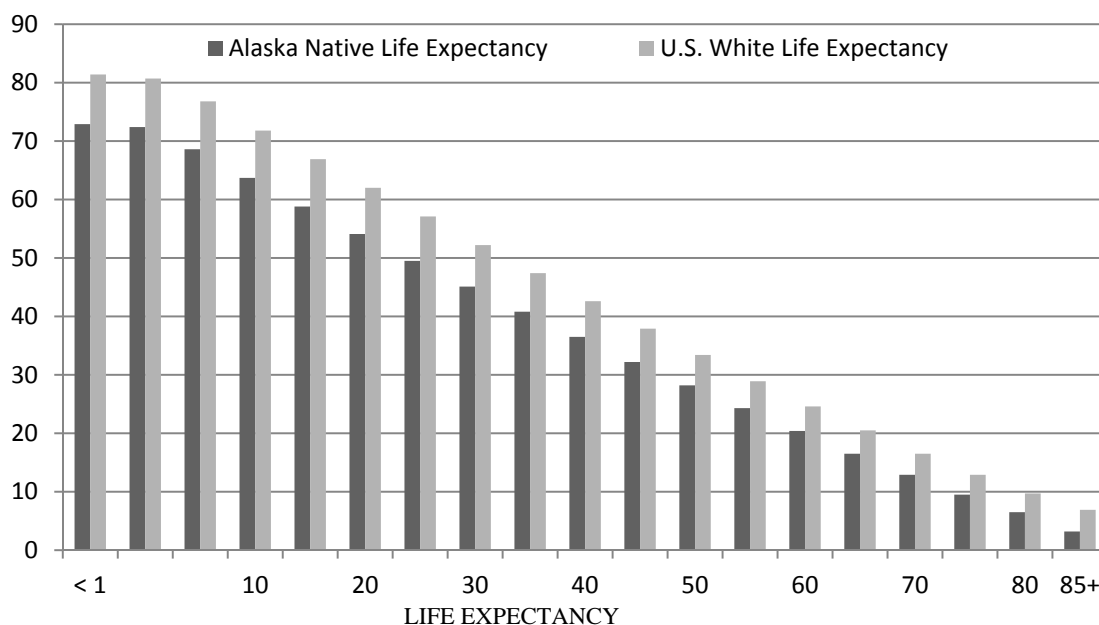
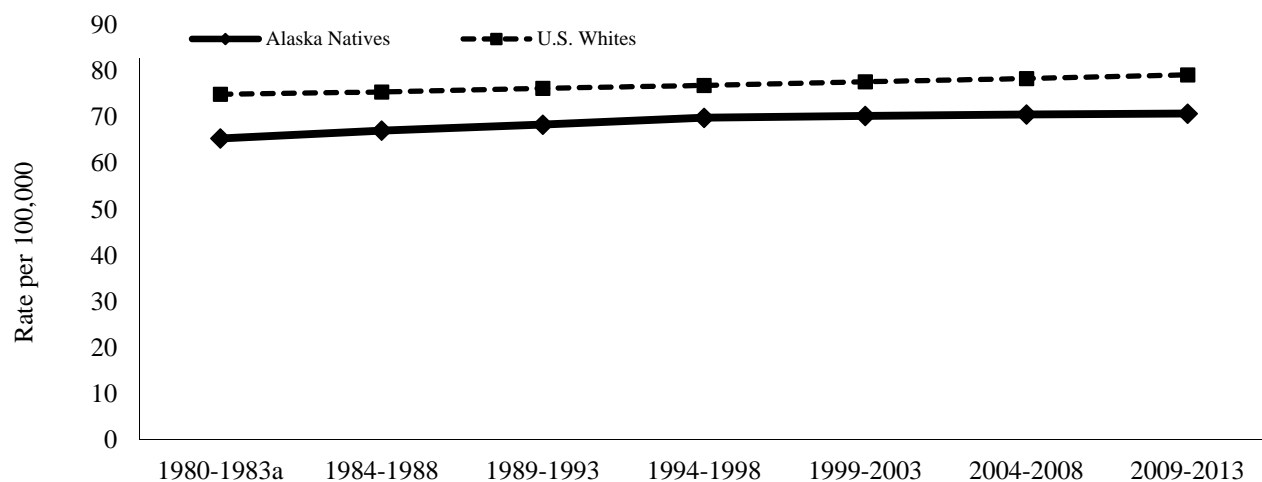


TABLE 79. Life Expectancy Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders

	1980-1983 ^a	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013	% Change
Alaska Natives	65.3	67.0	68.3	69.8	70.2	70.5	70.7	8%
U.S. Whites	74.9	75.4	76.2	76.8	77.6	78.3	79.1	6%
Difference	-9.6	-8.4	-7.9	-7.0	-7.4	-7.8	-8.4	

^a 1980-1983 time period contains only four years

FIGURE 206. Life Expectancy Alaska Natives (1980-2013) vs U.S. Whites (1980-2013)
By 5-Year Intervals
Both Genders



^a 1980-1983 time period contains only four years

TABLE 80.

**Life Expectancy by Region
Alaska Natives (1980-2013) By 5-Year Intervals
Both Genders**

Region	1980-1983^a	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013	% Increase from 1980
Aleutians & Pribilofs	56.1	64.0	67.9	68.8	71.3	68.1	72.5	23%
Anchorage/MatSu	66.9	68.3	67.3	69.6	69.4	70.7	71.6	7%
Arctic Slope	66.1	65.7	68.8	68.4	71.4	67.6	69.8	5%
Bristol Bay	65.0	66.8	67.2	70.5	67.8	71.2	71.4	9%
Copper River/PWS	55.0	63.6	69.3	67.9	68.5	70.0	71.9	24%
Interior	62.7	65.7	67.3	69.3	70.2	70.4	70.5	11%
Kenai Peninsula	66.3	68.5	72.0	71.3	72.1	70.1	71.6	7%
Kodiak Area	63.9	63.9	67.2	68.8	71.9	70.8	72.1	11%
Northwest Arctic	63.2	64.3	67.0	69.2	68.9	69.6	70.4	10%
Norton Sound	62.7	66.2	65.5	66.1	66.7	69.0	69.3	9%
Southeast	66.7	71.2	71.9	73.6	74.4	72.6	73.8	10%
Yukon-Kuskokwim	68.6	65.9	68.2	69.7	70.3	70.0	70.9	3%
Statewide	65.3	67.0	68.3	69.8	70.2	70.5	70.7	8%

^a 1980-1983 time period contains only four years

ALASKA NATIVE MORTALITY UPDATE: 2009-2013 APPENDICES

Appendix A: 1980-2013 Alaska Native People Regional Population Tables

Appendix B: Leading Causes of Death – ICD-9 and ICD-10 Codes

Appendix C: Service Regions, Tribal Health Organizations, and Communities

Appendix D: Number of Alaska Native Deaths for Leading Causes by Time Period

APPENDIX A
1980-2013 ALASKA NATIVE PEOPLE REGIONAL POPULATION TABLES

Data Source: See Methods Footnote b

Aleutians & Pribilofs

Both Genders

Age	1980-1983	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013
0-4 years	982	1,276	1,471	1,033	630	495	579
5-14 years	1,715	2,228	2,590	2,212	1,638	1,124	1,192
15-24 years	1,187	1,542	1,692	1,633	1,723	1,499	1,277
25-44 years	2,808	3,648	4,350	3,945	3,271	2,841	3,193
45-54 years	677	880	1,065	1,200	1,431	1,476	1,345
55-64 years	513	667	814	770	819	1,082	933
65-74 years	283	367	402	574	426	393	585
75+ years	97	126	124	134	243	284	323
TOTAL	8,262	10,734	12,508	11,501	10,181	9,194	9,427

Anchorage/MatSu

Both Genders

Age	1980-1983	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013
0-4 years	5,517	9,046	11,386	11,978	12,500	15,074	18,565
5-14 years	8,521	13,972	17,962	23,219	27,181	25,722	32,568
15-24 years	7,565	12,403	14,529	16,761	23,676	27,820	33,276
25-44 years	14,764	24,206	31,375	37,030	41,568	44,283	48,985
45-54 years	3,442	5,644	7,363	10,315	15,150	17,815	19,833
55-64 years	1,891	3,101	4,066	5,455	7,822	9,668	13,280
65-74 years	859	1,408	1,839	2,789	4,528	5,736	6,950
75+ years	408	669	847	1,138	2,070	3,342	3,247
TOTAL	42,967	70,449	89,367	108,685	134,495	149,460	176,704

Arctic Slope

Both Genders

Age	1980-1983	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013
0-4 years	1,885	2,699	3,001	2,671	2,278	2,584	3,193
5-14 years	2,724	3,901	4,531	5,360	5,156	3,951	5,150
15-24 years	1,631	2,336	2,566	3,199	4,054	4,088	4,665
25-44 years	3,337	4,780	5,622	6,178	5,553	4,707	6,590
45-54 years	818	1,171	1,377	1,794	2,184	2,526	3,345
55-64 years	608	872	1,015	1,117	1,147	1,364	2,348
65-74 years	293	419	483	565	714	586	975
75+ years	166	237	272	298	411	407	568
TOTAL	11,462	16,415	18,867	21,182	21,497	20,213	26,834

Bristol Bay		Both Genders					
Age	1980-1983	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013
0-4 years	2,613	3,538	3,822	3,294	2,555	2,443	2,963
5-14 years	3,801	5,147	5,793	7,029	7,213	5,437	3,645
15-24 years	2,353	3,185	3,294	3,752	4,775	5,502	4,530
25-44 years	5,059	6,850	7,667	8,057	7,273	6,344	5,108
45-54 years	1,333	1,805	2,050	2,586	3,230	3,931	5,528
55-64 years	954	1,292	1,498	1,755	1,900	2,209	2,950
65-74 years	621	842	921	1,079	1,177	1,110	1,378
75+ years	351	474	512	555	659	818	848
TOTAL	17,085	23,133	25,557	28,107	28,782	27,794	26,950

Copper River/PWS		Both Genders					
Age	1980-1983	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013
0-4 years	485	713	790	711	629	649	710
5-14 years	779	1,146	1,372	1,702	1,803	1,326	1,716
15-24 years	519	763	831	936	1,357	1,612	1,200
25-44 years	1,251	1,840	2,136	2,142	2,161	1,982	1,833
45-54 years	343	506	615	827	1,062	1,142	1,168
55-64 years	278	410	489	510	557	756	885
65-74 years	169	248	281	317	357	421	400
75+ years	131	193	218	226	263	327	275
TOTAL	3,955	5,819	6,732	7,371	8,189	8,215	8,187

Interior		Both Genders					
Age	1980-1983	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013
0-4 years	3,790	5,860	6,782	5,938	5,081	5,255	6,482
5-14 years	6,626	10,244	12,112	13,187	12,810	10,329	11,762
15-24 years	4,729	7,312	8,395	9,371	11,500	12,938	11,392
25-44 years	9,048	13,988	16,766	17,084	16,617	17,163	17,795
45-54 years	2,089	3,229	3,983	5,372	7,310	8,468	7,752
55-64 years	1,515	2,343	2,851	3,145	3,653	5,182	7,216
65-74 years	851	1,315	1,759	2,062	2,254	2,584	3,070
75+ years	608	939	1,185	1,185	1,368	1,867	1,937
TOTAL	29,256	45,230	53,833	57,344	60,593	63,786	67,406

Kenai Peninsula		Both Genders					
Age	1980-1983	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013
0-4 years	713	1,244	1,614	1,756	1,652	1,543	2,295
5-14 years	1,428	2,493	3,220	4,019	4,396	3,847	4,518
15-24 years	1,067	1,862	2,259	2,693	3,657	4,404	4,798
25-44 years	2,367	4,132	5,363	6,268	6,639	6,746	6,713
45-54 years	583	1,017	1,351	1,952	2,824	3,157	3,378
55-64 years	386	674	867	1,071	1,380	1,776	2,855
65-74 years	224	391	509	651	826	977	1,260
75+ years	93	164	208	288	410	610	490
TOTAL	6,861	11,977	15,391	18,698	21,784	23,060	26,307

Kodiak		Both Genders					
Age	1980-1983	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013
0-4 years	928	1,291	1,437	1,398	1,081	743	1,193
5-14 years	1,436	1,999	2,235	2,472	2,394	2,000	2,005
15-24 years	1,152	1,603	1,629	1,567	1,727	1,815	1,950
25-44 years	2,176	3,028	3,401	3,395	2,883	2,604	2,645
45-54 years	634	882	999	1,176	1,396	1,494	1,342
55-64 years	439	611	696	747	821	984	993
65-74 years	260	363	396	450	516	569	610
75+ years	132	184	199	203	281	397	375
TOTAL	7,157	9,961	10,992	11,408	11,099	10,606	11,113

Northwest Arctic		Both Genders					
Age	1980-1983	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013
0-4 years	3,309	4,632	5,052	4,359	3,801	4,017	4,053
5-14 years	4,592	6,427	7,251	8,500	8,688	7,305	7,235
15-24 years	3,113	4,357	4,576	5,133	6,504	7,080	6,098
25-44 years	5,079	7,107	8,162	8,876	8,691	8,778	7,741
45-54 years	1,029	1,441	1,678	2,257	3,010	3,520	3,575
55-64 years	1,015	1,421	1,571	1,539	1,512	2,003	2,358
65-74 years	529	740	847	1,055	1,186	1,143	1,231
75+ years	420	588	630	584	619	792	913
TOTAL	19,086	26,713	29,767	32,303	34,011	34,638	33,204

Norton Sound		Both Genders					
Age	1980-1983	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013
0-4 years	3,182	4,273	4,501	3,905	3,656	4,223	4,760
5-14 years	4,880	6,553	7,183	8,492	8,186	7,025	7,845
15-24 years	3,470	4,659	4,763	5,353	6,485	6,925	6,845
25-44 years	6,275	8,428	9,319	9,931	9,284	9,315	9,155
45-54 years	1,583	2,124	2,340	2,902	3,608	4,001	4,103
55-64 years	1,162	1,559	1,730	1,982	2,139	2,553	3,185
65-74 years	709	952	1,013	1,180	1,282	1,185	1,655
75+ years	569	764	793	817	1,021	1,049	878
TOTAL	21,830	29,312	31,642	34,562	35,661	36,276	38,426

Southeast		Both Genders					
Age	1980-1983	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013
0-4 years	5,462	7,660	8,244	7,083	5,798	5,185	6,458
5-14 years	9,126	12,798	14,094	15,178	14,119	11,396	11,380
15-24 years	6,772	9,497	9,772	10,054	11,722	12,579	11,300
25-44 years	12,779	17,922	20,286	21,296	19,807	18,674	18,080
45-54 years	3,479	4,879	5,581	7,029	8,971	9,976	10,058
55-64 years	2,383	3,342	3,856	4,562	5,218	6,293	9,303
65-74 years	1,369	1,919	2,262	2,822	3,561	3,988	3,895
75+ years	848	1,190	1,372	1,548	2,115	2,741	2,878
TOTAL	42,218	59,207	65,467	69,572	71,311	70,832	73,352

Yukon-Kuskokwim

		Both Genders					
Age	1980-1983	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013
0-4 years	9,508	12,792	13,635	12,156	11,188	13,590	13,561
5-14 years	13,602	18,300	20,419	25,080	26,626	23,241	24,283
15-24 years	10,330	13,899	14,090	15,281	18,637	21,037	21,771
25-44 years	16,492	22,188	24,757	27,172	26,845	26,666	26,053
45-54 years	4,015	5,402	5,924	7,311	9,032	11,059	12,761
55-64 years	3,086	4,152	4,561	4,958	5,235	6,401	9,705
65-74 years	2,011	2,706	2,865	3,032	3,538	3,507	4,383
75+ years	1,103	1,485	1,594	1,736	2,167	2,188	2,736
TOTAL	60,147	80,924	87,845	96,726	103,268	107,689	115,253

All Alaska Natives

		Both Genders					
Age	1980-1983	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013
0-4 years	38,373	55,023	61,736	56,282	50,937	55,763	64,812
5-14 years	59,228	85,205	98,764	116,449	120,881	102,482	113,299
15-24 years	43,887	63,418	68,397	75,733	94,579	107,252	109,102
25-44 years	81,434	118,118	139,204	151,373	150,662	150,012	153,891
45-54 years	20,025	28,981	34,325	44,720	58,201	68,642	74,188
55-64 years	14,230	20,441	24,015	27,610	31,644	40,307	56,011
65-74 years	8,177	11,671	13,579	16,579	20,036	22,175	26,392
75+ years	4,928	7,013	7,952	8,713	11,325	14,810	15,468
TOTAL	270,282	389,870	447,972	497,459	538,265	561,443	613,163

APPENDIX B

LEADING CAUSES OF DEATH – ICD-9 AND ICD-10 CODES

	Cause of Death	ICD-9 Codes	ICD-10 Codes
1	Salmonella infections	002-003	A01-A02
2	Shigellosis and amebiasis	004, 006	A03, A06
3	Tuberculosis	010-018	A16-A19
4	Whooping cough	33	A37
5	Scarlet fever and erysipelas	034.1 - 035	A38, A46
6	Meningococcal infection	36	A39
7	Septicemia	38	A40-A41
8	Syphilis	090-097	A50-A53
9	Acute poliomyelitis	45	A80
10	Arthropod-borne viral encephalitis	062-064	A83-A84, A85.2
11	Measles	55	B05
12	Viral hepatitis	70	B15-B19
13	Human immunodeficiency virus (HIV) disease	042-044	B20-B24
14	Malaria	84	B50-B54
15	Malignant neoplasms	140-208	C00-C97
16	In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior	210-239	D00-D48
17	Anemias	280-285	D50-D64

	Cause of Death	ICD-9 Codes	ICD-10 Codes
18	Diabetes mellitus	250	E10-E14
19	Nutritional deficiencies	260-269	E40-E64
	*Alcohol Abuse	291, 303, 305.0	F10
20	Meningitis	320-322	G00, G03
21	Parkinson's disease	332	G20-G21
22	Alzheimer's disease	331	G30
23	Diseases of heart	390-398, 402, 404, 410-429	I00-I09, I11, I13, I20-I51
	*Coronary Heart Disease	402, 410-414, 429.2	I11, I20-I25
24	Essential (primary) hypertension and hypertensive renal disease	401, 403	I10, I12
25	Cerebrovascular diseases	430-434, 436-438	I60-I69
26	Atherosclerosis	440	I70
27	Aortic aneurysm and dissection	441	I71
28	Influenza and pneumonia	480-487	J10-J18
29	Acute bronchitis and bronchiolitis	466	J20-J21
30	Chronic lower respiratory diseases	490-494, 496	J40-J47
31	Pneumoconioses and chemical effects	500-506	J60-J66, J68
32	Pneumonitis due to solids and liquids	507	J69
33	Peptic ulcer	531-534	K25-K28

	Cause of Death	ICD-9 Codes	ICD-10 Codes
34	Diseases of appendix	540-543	K35-K38
35	Hernia	550-553	K40-K46
36	Chronic liver disease and cirrhosis	571	K70, K73-K74
37	Cholelithiasis and other disorders of gallbladder	574-575	K80-K82
38	Nephritis, nephrotic syndrome and nephrosis	580-589	N00-N07, N17-N19, N25-N27
39	Infections of kidney	590	N10-N12, N13.6, N15.1
40	Hyperplasia of prostate	600	N40
41	Inflammatory diseases of female pelvic organs	614-616	N70-N76
42	Pregnancy, childbirth and the puerperium	630-676	O00-O99
43	Certain conditions originating in the perinatal period	760-771.2, 771.4-779	P00-P96
44	Congenital malformations, deformations and chromosomal abnormalities	740-759	Q00-Q99
45	Unintentional injuries	E800-E869, E880-E929	V01-X59, Y85-Y86
46	Intentional self-harm (suicide)	E950-E959	X60-X84, Y87.0, *U03
47	Assault (homicide)	E960-E969, E979, E999	X85-Y09, Y87.1, *U01-*U02
48	Legal intervention	E970-E978	Y35, Y89.0
49	Operations of war and their sequelae	E990-E998	Y36, Y89.1
50	Complications of medical and surgical care	E870-E879, E930-E949	Y40-Y84, Y88

* These groupings are not on the NCHS list of 50 Leading Causes of Death

APPENDIX C

SERVICE REGIONS, TRIBAL HEALTH ORGANIZATIONS, AND COMMUNITIES

Service Region	Service Unit	Title I and V THOs in Region	Community List <small>Data Source: Alaska Department of Labor and Workforce Development Research and Analysis and U.S. Census Bureau</small>
Aleutians and Pribilofs	sub-region of Anchorage Service Unit	Aleutian Pribilof Islands Association, Eastern Aleutian Tribes Inc., St. George Traditional Council	Adak, Akutan, Atka, Amchitka, Attu Station, Belkofski, Cold Bay, Dutch Harbor, False Pass, King Cove, Nelson Lagoon, Nikolski, St. George, St. Paul, Sand Point, Shemya, Umnak, Unalaska
Anchorage/Mat-Su	sub-region of Anchorage Service Unit	Southcentral Foundation, Chickaloon Village, Native Village of Eklutna, Knik Tribal Council	Municipality of Anchorage, Big Lake, Birchwood, Bird, Buffalo Soapstone, Butte, Chase, Chickaloon, Chugiak, Eagle River, Elmendorf AFB, Eska, Farm Loop, Fishhook, Ft. Richardson, Girdwood, Gold Creek, Gateway, Glacier View, Houston, Indian, Knik River, Knik-Fairview, Lakes, Lake Louise, Lazy Mountain, Meadow Lakes, Medfra, Palmer, Peters Creek, Petersville, Point MacKenzie, Portage, Skwentna, Susitna, Sutton-Alpine, Talkeetna, Tanaina, Trapper Creek, Wasilla, Willow
ASU-Combined Rural	sub-region of Anchorage Service Unit	Aleutian Pribilof Islands Association, Eastern Aleutian Tribes Inc., St. George Traditional Council, Chugachmiut Inc, Chitina Traditional Council, Copper River Native Association, Mt. Sanford Tribal Consortium, Valdez Native Tribe, Chugachmiut (part)*, Kenaitze Indian Tribe IRA, Ninilchik Traditional Council, Seldovia Village Tribe, Kodiak Area Native Association, Native Village of Karluk	Adak, Afognak, Akhiok, Akutan, Aleneva, Atka, Amchitka, Anchor Point, Attu Station, Bear Creek, Belkofski, Beluga, Cantwell, Chenega, Chiniak, Chisana, Chistochina, Chitina, Clam Gulch, Cohoe, Cold Bay, Cooper Landing, Copper Center, Copper Valley, Copperville, Cordova, Crown Point, Diamond Ridge, Dutch Harbor, False Pass, Fox River, Fritz Creek, Funny River, Gakona, Glennallen, Gulkana, Halibut Cove, Happy Valley, Homer, Hope, Kasilof, Kachemak, Kaguyak, Kalifornsky, Karluk, Kenai, Kenny Lake, King Cove, Kodiak, Kodiak Station, Larsen Bay, Lowell Point, McCarthy, Mendeltna, Mentasta Lake, Miller Landing, Moose Pass, Nabesna, Nanwalek, Nelchina, Nelson Lagoon, Nikiski, Nikolaevsk, Nikolski, Ninilchik, Old Harbor, Ouzinkie, Paxson, Port Graham, Port Lions, Ridgeway, St. George, St. Paul, Salamatof, Sand Point, Seldovia, Seldovia Village, Seward, Shemya, Silver Springs, Slana, Soldotna, Sterling, Sunrise, Tatitlek, Tazlina, Tolsona, Tonsina, Tyonek, Umnak, Unalaska, Valdez, Whittier, Wildwood, Willow Creek, Women's Bay, Zacher's Bay
Arctic Slope	Barrow	Arctic Slope Native Association, Ukeagvik Inupiat Corporation	Alaktak, Alpine, Atkasuk, Barrow, Barter Island, Cape Halkett, Cape Lisburne, Coleville, Kaktovik, Mead River, Nuiqsut, Point Lay, Prudhoe Bay, Wainwright

Service Region	Service Unit	Title I and V THOs in Region	Community List Data Source: Alaska Department of Labor and Workforce Development Research and Analysis and U.S. Census Bureau
Bristol Bay	Bristol Bay	Bristol Bay Area Health Corporation	Aleknagik, Chignik, Chignik Lagoon, Chignik Lake, Clark's Point, Dillingham, Egegik, Ekuk, Ekwo, Goodnews Bay, Igiugig, Igushik, Iliamna, Ivanof Bay, King Salmon, Kokhanok, Koliganek, Koggiung, Kulukak, Kvichak, Levelok, Manokotak, Naknek, New Stuyahok, Newhalen, Nondalton, Nushagak, Nuyakak River, Pedro Bay, Perryville, Pilot Point, Portage Creek, Platinum, Pope-Vannoy Landing, Port Alsworth, Port Heiden, South Naknek, Togiak, Twin Hills, Ugashik
Copper River/Prince William Sound	sub-region of Anchorage Service Unit	Chugachmiut Inc.(part)*, Chitina Traditional Council, Copper River Native Association, Mt. Sanford Tribal Consortium, Valdez Native Tribe	Cantwell, Chenega, Chisana, Chistochina, Chitina, Copper Center, Copper Valley, Copperville, Cordova, Gakona, Glennallen, Gulkana, Kenny Lake, McCarthy, Mendeltna, Mentasta Lake, Nabesna, Nelchina, Paxson, Silver Springs, Slana, Tatitlek, Tazlina, Tolsona, Tonsina, Valdez, Whittier, Willow Creek
Interior	Interior	Tanana Chiefs Conference, Council of Athabascan Tribal Governments, Fairbanks Native Assoc., Tanana IRA Native Council	Allakaket, Alatna, Alcan Border, Anaktuvak Pass, Anderson, Arctic Village, Beaver, Bettles, Big Delta, Birch Creek, Birch Lake, Canyon Village, Central, Chalkyitsik, Chatanika, Chicken, Christian, Circle, Circle Hot Springs, Clear, Coldfoot, College, Delta Junction, Deltana, Dot Lake, Dot Lake Village, Dry Creek, Eagle, Eagle Village, Eielson AFB, Ester, Evansville, Fairbanks, Ferry, Flat, Fort Greely, Fort Yukon, Fort Wainwright, Four Mile Road, Fox, Galena, Harding Lake, Harding-Birch, Healy, Healy Lake, Hughes, Huslia, Indian River, Kaltag, Kokrines, Koyukuk, Lake Minchumina, Livengood, Manly Hot Springs, McGrath, McKinley Park, Minto, Moose Creek, Nikolai, Nenana, New Allakaket, North Pole, Northway, Northway Village, Northway Junction, Nulato, Pleasant Valley, Rampart, Richardson, Ruby, Salcha, Stevens Village, Takotna, Tanacross, Tanana, Telida, Tetlin, Tok, Toklat, Tolovana, Two Rivers, Venetie, Wiseman, Wood River
Kenai Peninsula	sub-region of Anchorage Service Unit	Chugachmiut (part)*, Kenaitze Indian Tribe IRA, Ninilchik Traditional Council, Seldovia Village Tribe	Anchor Point, Bear Creek, Beluga, Clam Gulch, Cohoe, Cooper Landing, Crown Point, Diamond Ridge, Fox River, Fritz Creek, Funny River, Halibut Cove, Happy Valley, Homer, Hope, Kasilof, Kachemak, Kalifornsky, Kenai, Lowell Point, Miller Landing, Moose Pass, Nanwalek, Nikiski, Nikolaevsk, Ninilchik, Port Graham, Ridgeway, Seldovof, Seldovia, Seldovia Village, Seward, Soldotna, Sterling, Sunrise, Tyonek, Wildwood

Service Region	Service Unit	Title I and V THOs in Region	Community List Data Source: Alaska Department of Labor and Workforce Development Research and Analysis and U.S. Census Bureau
Kodiak Area	sub-region of Anchorage Service Unit	Kodiak Area Native Association, Native Village of Karluk	Afognak, Akhiok, Aleneva, Chiniak, Kaguyak, Karluk, Kodiak, Kodiak Station, Larsen Bay, Old Harbor, Ouzinkie, Port Lions, Women's Bay, Zacher's Bay
Northwest Arctic	Kotzebue	Maniilaq Association.	Ambler, Bornite, Buckland, Candle, Deering, Elephant Point, Kiana, Kivalina, Kobuk, Kotzebue, Noatak, Noorvik, Point Hope, Red Dog Mine, Selawik, Shungnak
Norton Sound	Norton Sound	Norton Sound Health Corporation, Native Village of Diomedes	Big Hurrah, Brevig Mission, Council, Diomedes, Elim, Gambell, Golovin, Kingeggan, Kougarok, Koyuk, Moses Point, Nome, St. Michael, Port Clarence, Saint Lawrence, Savoonga, Shaktoolik, Shishmaref, Solomon, Stebbins, Teller, Unalakleet, Wales, White Mountain
Southeast	Mount Edgecumbe, Annette Island	Southeast Area Regional Health Corporation, Hoonah Indian Association, Ketchikan Indian Corporation, Metlakatla Indian Community, Yakutat Tlingit Tribe	Angoon, Auke Bay, Coffman Cove, Craig, Cube Cove, Covenant Life, Douglas, Dora Bay, Edna Bay, Elfin Cove, Excursion Inlet, False Island, Freshwater Bay, Funter Bay, Game Creek, Gildersleeve Log, Gustavus, Haines, Hobart Bay, Hollis, Hoonah, Hydaburg, Hyder, Juneau, Juneau Valley, Kake, Kasaan, Ketchikan, Ketchikan Suburbs, Klawock, Klukwan, Kupreanof, Lutak, Metlakatla, Meyers Chuck, Mosquito Lake, Mount Edgecumbe, Mud Bay, Naukati Bay, Pelican, Petersburg, Point Baker, Port Alice, Port Alexander, Port Higgins, Port Protection, Rowan Bay, Saxman, Sitka, Skagway, Smith Cove, Tenakee Springs, Thomas Basin, Thoms Place, Thorne Bay, Ward Cove, Waterfall, Whale Pass, Whitestone Logging Camp, Wrangell, Yakutat

Service Region	Service Unit	Title I and V THOs in Region	Community List Data Source: Alaska Department of Labor and Workforce Development Research and Analysis and U.S. Census Bureau
Yukon-Kuskokwim	Yukon-Kuskokwim	Akiachak Native Community, Native Village of Quinhagak, Yukon-Kuskokwim Health Corporation	Anderafski, Aniak, Akiak, Akiachak, Alakanuk, Anvik, Atmautluak, Bethel, Bill Moore's Slough, Cheforak, Chevak, Chickloonawick, Chuathbaluk, Crooked Creek, Eek, Emmonak, Fortuna Ledge, Georgetown, Grayling, Hamilton, Holitna River, Holy Cross, Hooper Bay, Kasigluk, Kinak, Kipnuk, Kongiganak, Kotlik, Kwethluk, Kwigillingok, Lower Kalskag, Lime Village, Marshall, Mekoryuk, Mt. Village, Napakiak, Napaimute, Napaskiak, Newtok, Nightmute, Nunapitchuk, Nunivak Isle, Ohogamute, Oscarville, Pilot Station, Pitka's Point, Quinhagak, Red Devil, Russian Mission, St Marys, Scammon Bay, Shageluk, Sheldon Point (Nunam Iqua), Sleetmute, Stony River, Stuyahok, Toksook Bay, Tuluksak, Tuntutuliak, Tununak, Umkumuit, Upper Kalskag

* Chugachmiut is separated into 2 regions: Chenega Bay, Tatitlek, Valdez and Cordova are included in Copper River/Prince William Sound; Port Graham, Nanwalek, Seward are included in Kenai Peninsula

APPENDIX D

NUMBERS OF ALASKA NATIVE DEATHS FOR LEADING CAUSES BY TIME PERIODS, 1980-2013

Data Source: State of Alaska Bureau of Vital Statistics, Rec. December 15, 2014

	1980-1983	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	2009-2013
Alcohol Abuse	55	67	68	109	176	180	74
Alzheimer's Disease	5	8	7	10	22	40	40
Cancer	275	433	480	586	662	772	909
Cerebrovascular Disease	69	100	114	150	158	164	173
Chronic Liver Disease	42	49	78	63	74	82	138
Congenital Abnormalities	26	39	39	34	37	38	27
COPD	29	67	100	133	151	172	218
Diabetes Mellitus	6	16	42	42	50	56	78
Heart Disease	291	436	477	515	517	540	722
Hypertension	1	2	2	3	5	22	68
Homicide	101	88	91	71	89	59	33
Nephritis	22	21	16	21	36	32	58
Parkinson's Disease	4	3	8	11	18	20	23
Perinatal Conditions	58	67	52	33	25	33	21
Pneumonia & Influenza	70	92	103	77	88	77	93
Septicemia	7	11	14	21	40	44	53
Suicide	118	201	225	219	198	252	252
Unintentional Injury	461	573	537	481	499	493	548
All-Cause	1,978	2,640	2,878	2,975	3,391	3,789	4,345