

## Detailed Leading Causes of Death

### All-Cause Mortality

During the five-year period, 2014-2018, a total of 5,396 Alaska Native deaths were reported. The average annual age-adjusted mortality from all causes for Alaska Native people, both sexes combined, was 1120.7 compared to 728.3 per 100,000 population for U.S. all races. The rate ratio (RR) of 1.5 was statistically significant. The rates for Alaska Native females and males, separately, were also significantly higher than U.S. all races females and males respectively (RR = 1.5 for females, RR=1.6 for males) as shown in Table 40.

The three leading causes of death for Alaska Native people, cancer, heart disease, and unintentional injury, were responsible for 2,570 deaths, just under half (47.6%) of the total 5,396 deaths. The Alaska Native and U.S. all races populations shared eight of the ten leading causes of death, although in different rank order. Mortality rates for Alaska Native people, both sexes combined, were significantly higher than U.S. all races for all of the leading causes of death (cancer, heart disease, unintentional injury, suicide, COPD, chronic liver disease and cirrhosis, cerebrovascular disease, alcohol abuse, homicide, and influenza and pneumonia). Rate ratios of Alaska Native people compared to U.S. all races were highest for alcohol abuse (8.0), chronic liver disease and cirrhosis (3.1), suicide (3.0), homicide (2.8) and unintentional injury (2.5).

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

Age-specific mortality rates for all causes combined showed significantly higher mortality rates among Alaska Native people than among U.S. all races for all age categories except the 5-14 year old age group. Disparities between the two populations were highest among those 15-24 years old. Rate ratios progressively decrease in the 55+ age group, in both sexes combined as well as among Alaska Native females and Alaska Native males separately.

All-cause mortality rates were significantly higher for the Anchorage-MatSu service region as compared to all other service regions combined. All-cause rates were significantly lower for the Interior, Southeast, Kenai Peninsula, and Bristol Bay service regions than all other service regions combined.

The all-cause mortality rate for Alaska Native people declined significantly (9%) between 1980-1983 and 2014-2018. There was a significant 25% decline among U.S. all races during the same time period. The disparity in the all-cause mortality rate has increased (15.4%) since 1980.

## DETAILED LEADING CAUSES OF DEATH

**Table 17. All-Cause Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

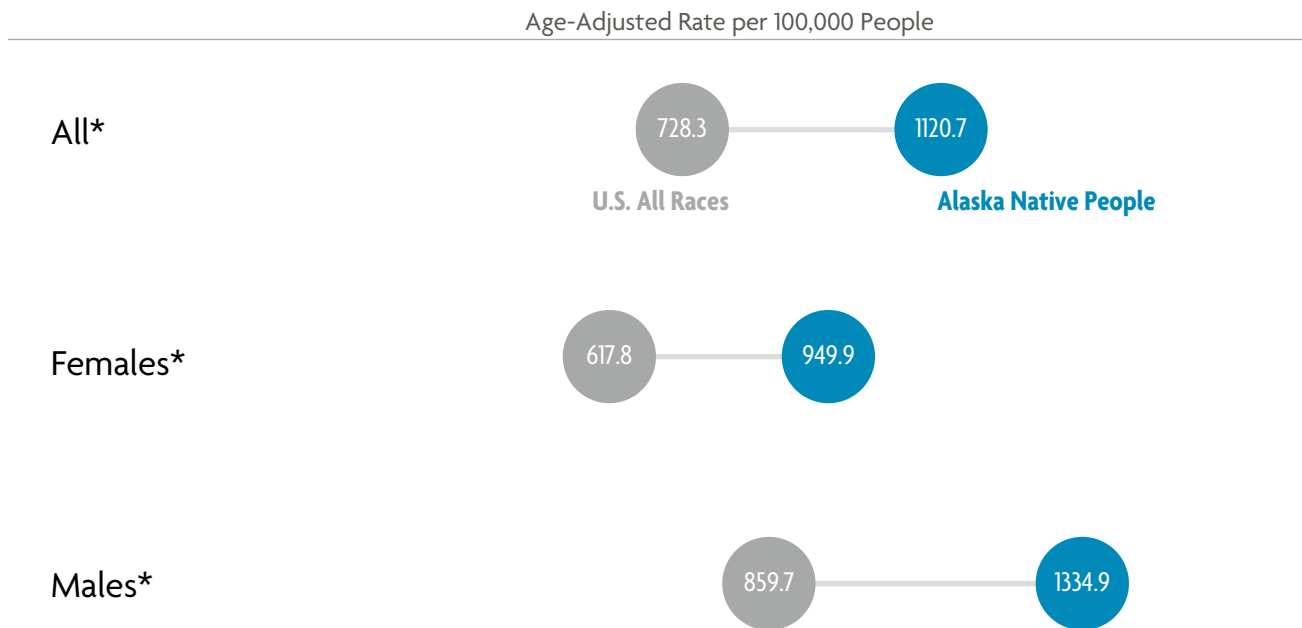
Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

	Alaska Native People			U.S. All Races			Rate Ratio	95% CI
	Count	% Total	Rate <sup>1</sup>	Count	% Total	Rate <sup>1</sup>		
<b>All</b>	<b>5,396</b>	<b>100.0%</b>	<b>1120.7</b>	<b>13,736,004</b>	<b>100.0%</b>	<b>728.3</b>	<b>1.5</b>	<b>1.50 - 1.58</b>
Female	2,421	100.0%	<b>949.9</b>	6,736,547	100.0%	<b>617.8</b>	<b>1.5</b>	1.48 - 1.60
Male	2,974	100.0%	<b>1334.9</b>	6,999,457	100.0%	<b>859.7</b>	<b>1.6</b>	1.50 - 1.61

<sup>1</sup>Age-adjusted mortality rate per 100,000 people, standardized to U.S. 2000 population

**Figure 137. All-Cause Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

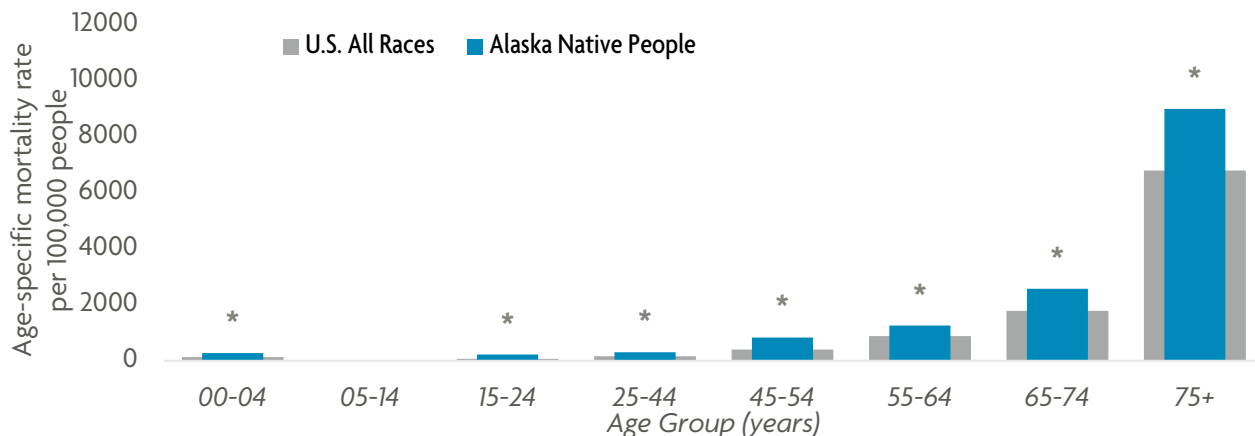


\*significant difference,  $p < 0.05$

### All-Cause Age-Specific Mortality Rates

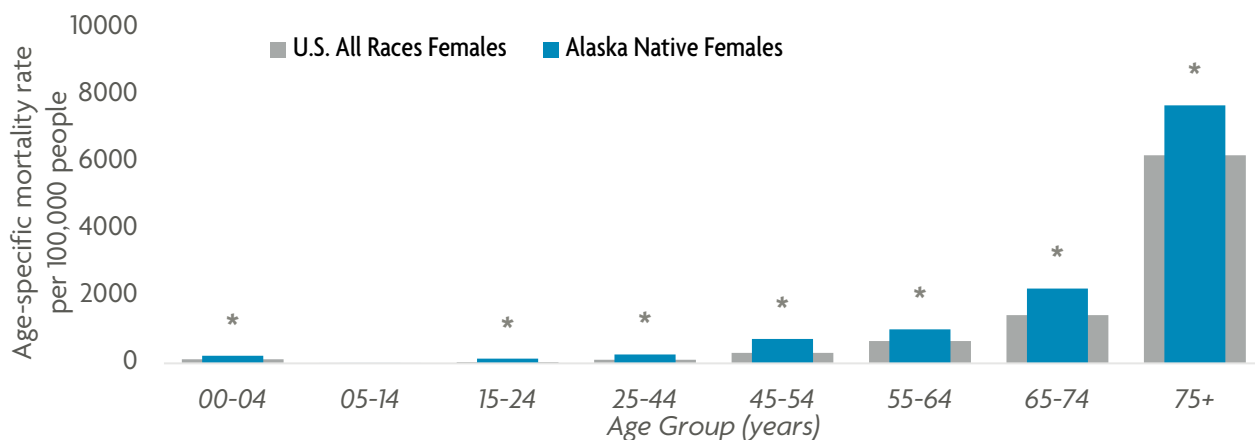
**Figure 138a. Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



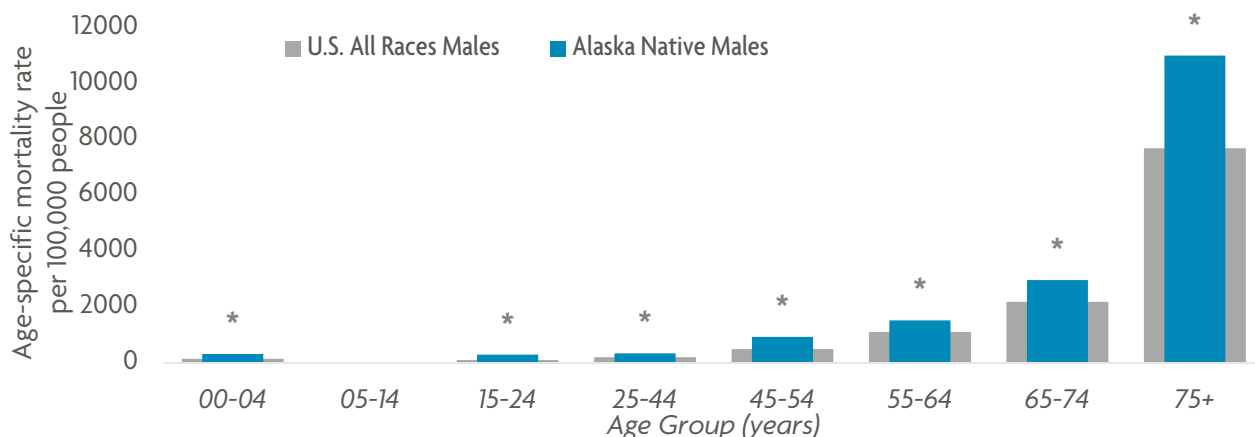
**Figure 138b. Alaska Native Females Compared to U.S. All Races Females, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 138c. Alaska Native Males Compared to U.S. All Races Males, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

**Table 18. Age-Specific All-Cause Mortality Rates among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

<b>All</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	276.0	14.8	221.2	305.9	830.5	1257.9	2577.7	9009.9
U.S. All Races	135.0	13.2	70.8	158.3	402.4	880.5	1789.1	6807.2
<b>Rate Ratio</b>	<b>2.0</b>	<b>1.1</b>	<b>3.1</b>	<b>1.9</b>	<b>2.1</b>	<b>1.4</b>	<b>1.4</b>	<b>1.3</b>
<b>Females</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	229.1	11.2	140.6	265.2	727.5	1012.1	2231.8	7692.1
U.S. All Races	121.8	11.3	38.7	109.8	311.6	667.4	1438.8	6202.9
<b>Rate Ratio</b>	<b>1.9</b>	<b>1.0</b>	<b>3.6</b>	<b>2.4</b>	<b>2.3</b>	<b>1.5</b>	<b>1.6</b>	<b>1.2</b>
<b>Males</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	321.2	18.2	297.5	346.0	933.1	1521.0	2967.0	10996.6
U.S. All Races	147.6	15.0	101.4	206.5	495.7	1109.2	2187.9	7682.3
<b>Rate Ratio</b>	<b>2.2</b>	<b>1.2</b>	<b>2.9</b>	<b>1.7</b>	<b>1.9</b>	<b>1.4</b>	<b>1.4</b>	<b>1.4</b>

**Table 19. Trends in All-Cause Mortality among Alaska Native People Compared to U.S. All Races, 1980-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

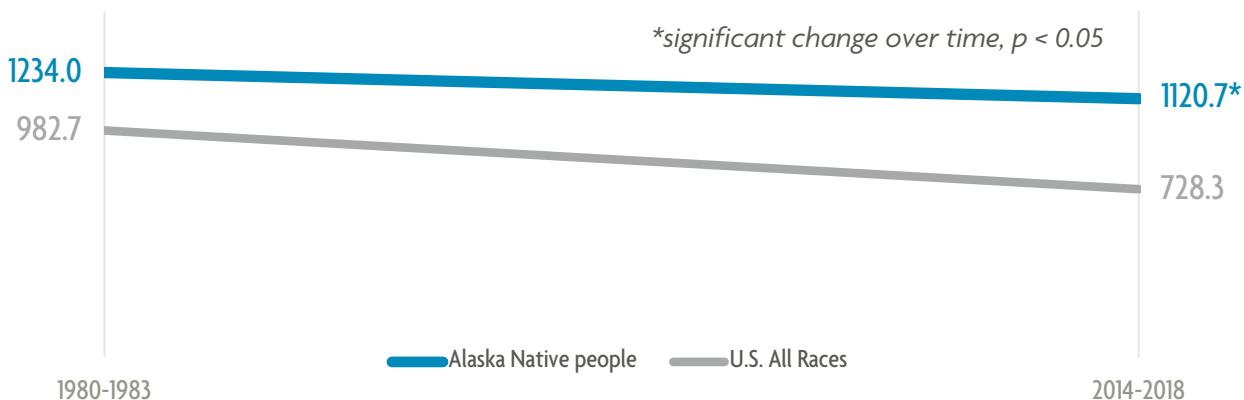
	<b>Alaska Native People</b>	<b>U.S. All Races</b>	<b>Rate Ratio</b>	
1980-1983	1234.0	982.7	<b>1.3</b>	*
1984-1988	1226.5	955.8	<b>1.3</b>	*
1989-1993	1202.1	898.6	<b>1.3</b>	*
1994-1998	1151.6	867.5	<b>1.3</b>	*
1999-2003	1111.6	860.3	<b>1.3</b>	*
2004-2008	1033.3	793.7	<b>1.3</b>	*
2009-2013	1076.7	740.3	<b>1.5</b>	*
2014-2018	1120.7	728.3	<b>1.5</b>	*
<b>% Change</b>	<b>-9.2%</b>	<b>-25.9%</b>		

\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

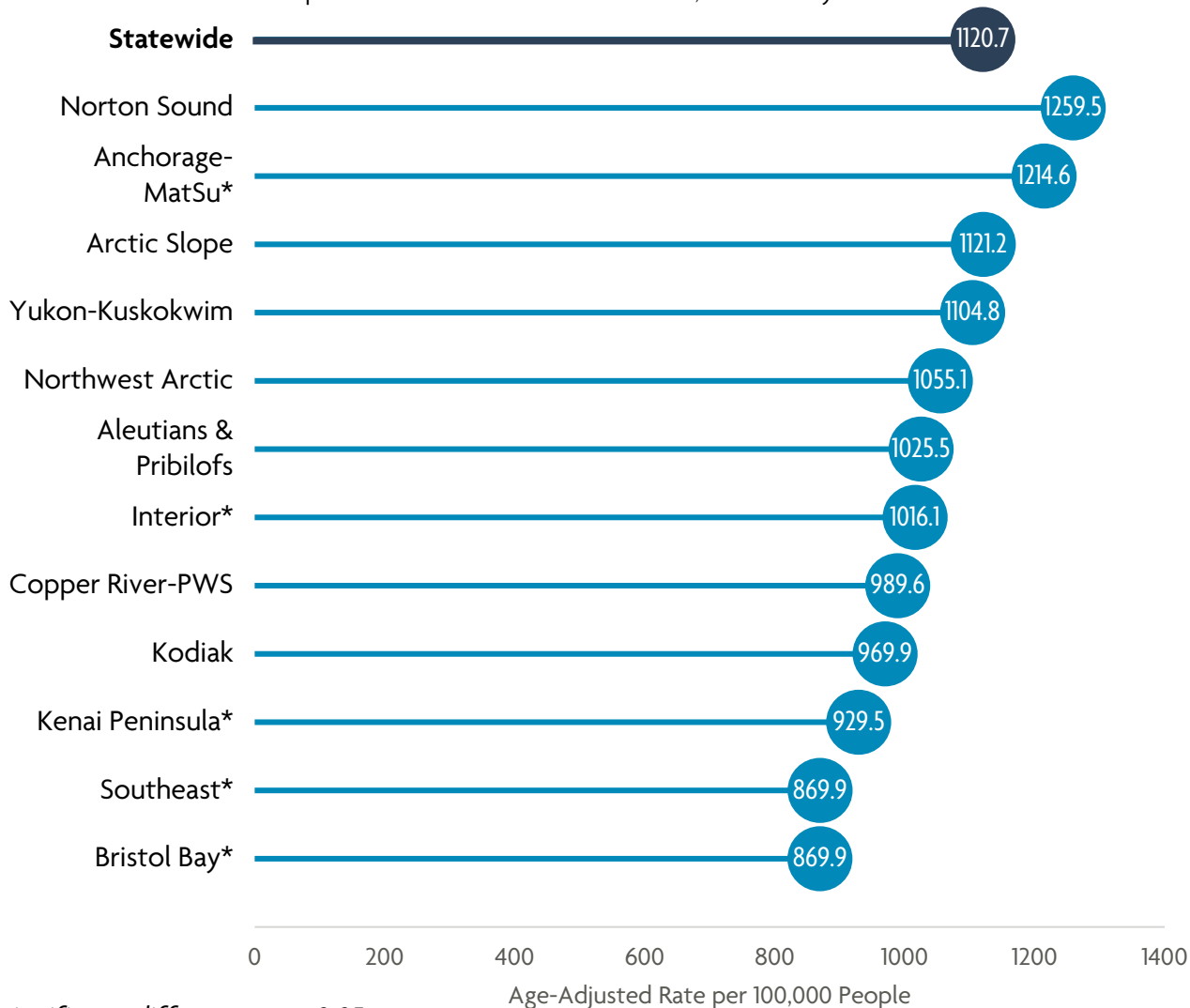
**Figure 139. Overall Change in All-Cause Mortality Rates, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 140. All-Cause Mortality Rates by Region, Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

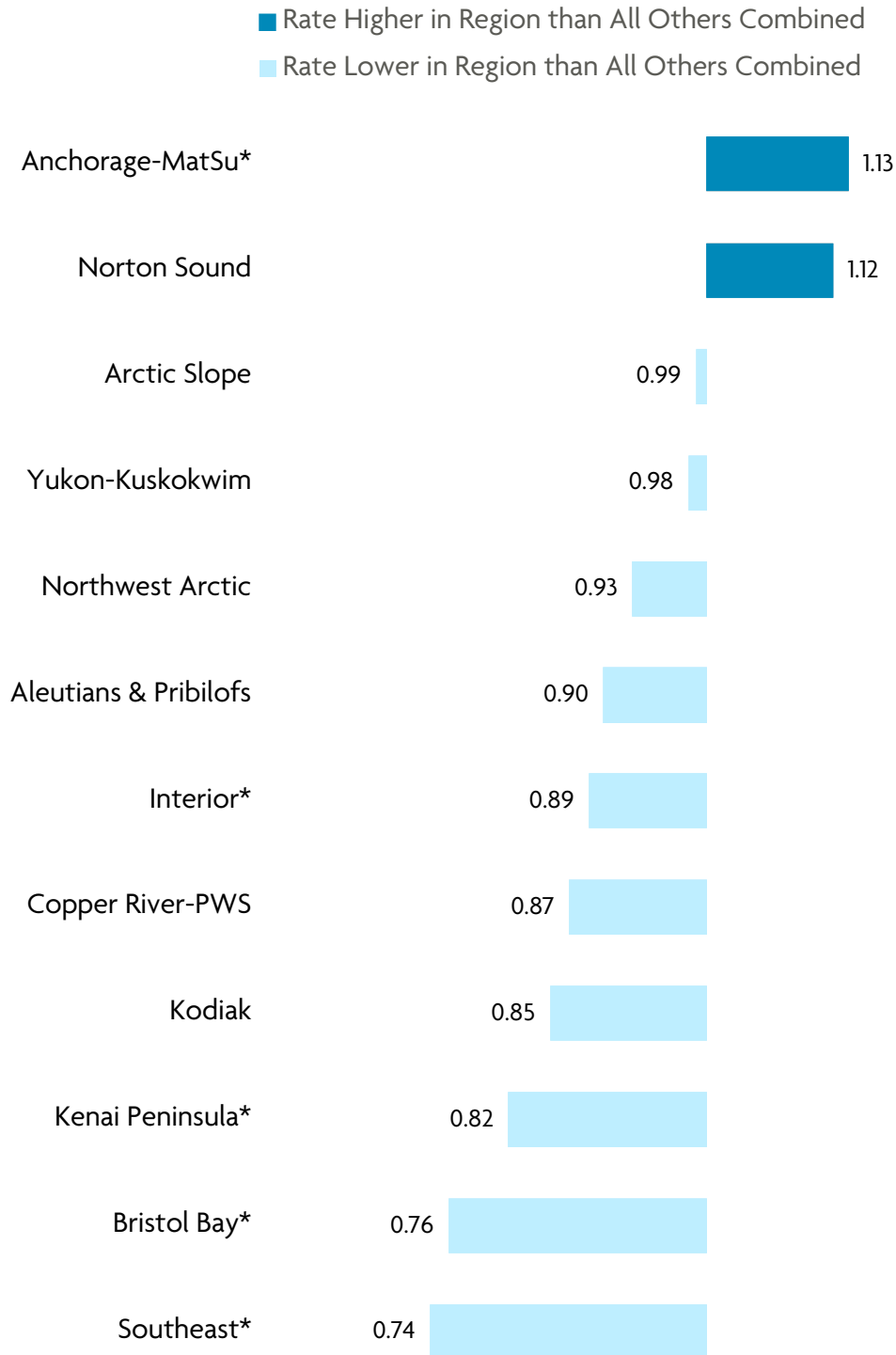


*\*significant difference, p < 0.05*

## DETAILED LEADING CAUSES OF DEATH

**Figure 141. All-Cause Mortality Rate Ratio Comparison between Regions among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$

## Detailed Leading Causes of Death

### 1. Cancer Mortality

Cancer was the leading cause of death among Alaska Native people, both sexes combined. It was the leading cause of death among Alaska Native females and the second leading cause of death among Alaska Native males. Cancer accounted for 18.1% (n=979) of all deaths. The cancer mortality rate for Alaska Native people, both sexes combined, was significantly higher than for U.S. all races (RR=1.3). Rates were significantly higher for Alaska Native females (RR=1.4) and Alaska Native males (RR=1.3) separately, compared to U.S. all races females and males, respectively.

Among Alaska Native people, both sexes combined, three types of cancers comprised half (50%) of all cancer deaths: cancer of the lung and bronchus 23%; colon and rectum 16%; and breast cancer 6%. Among Alaska Native females, the leading cancer deaths were lung and bronchus (22%), colon and rectum (17%), and breast cancers (12%). Among Alaska Native males, the leading cancer deaths were lung and bronchus (23%), colon and rectum (14%), and oral cancers (5%).

During 2014-2018, there were 276 excess deaths from cancer among Alaska Native people, both sexes combined. This comprised 12.2% of all excess deaths. Among Alaska Native females cancer accounted for 14.6% (n=150) of excess deaths, the second largest cause of excess female deaths. Among Alaska Native males, cancer accounted for 10.1% (n=123) of all excess deaths, the fourth largest cause of excess male deaths.

Age-specific cancer mortality rate ratios for Alaska Native people, both sexes combined, compared to U.S. all races, ranged from 1.0 to 1.3, and were highest in the 45 year and older age groups. Rates were significantly higher for Alaska Native females compared to U.S. all races females for all age groups 45 years and older. Among Alaska Native males, cancer mortality rates were significantly higher than U.S. all races male rates for the 45–54 years and 65 years and older age groups.

Among Alaska Native people, the Arctic Slope (RR=1.5) service region had a significantly higher cancer mortality rate than the rest of the state combined. The Southeast (RR=0.7) service region had a significantly lower cancer mortality rate than the rest of the state combined.

There was a significant decrease (8.2%) in Alaska Native cancer mortality rates between 1980-1983 and 2014-2018. U.S. all races rates also decreased significantly (23.8%) during the same time period.

## DETAILED LEADING CAUSES OF DEATH

**Table 20. Cancer Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

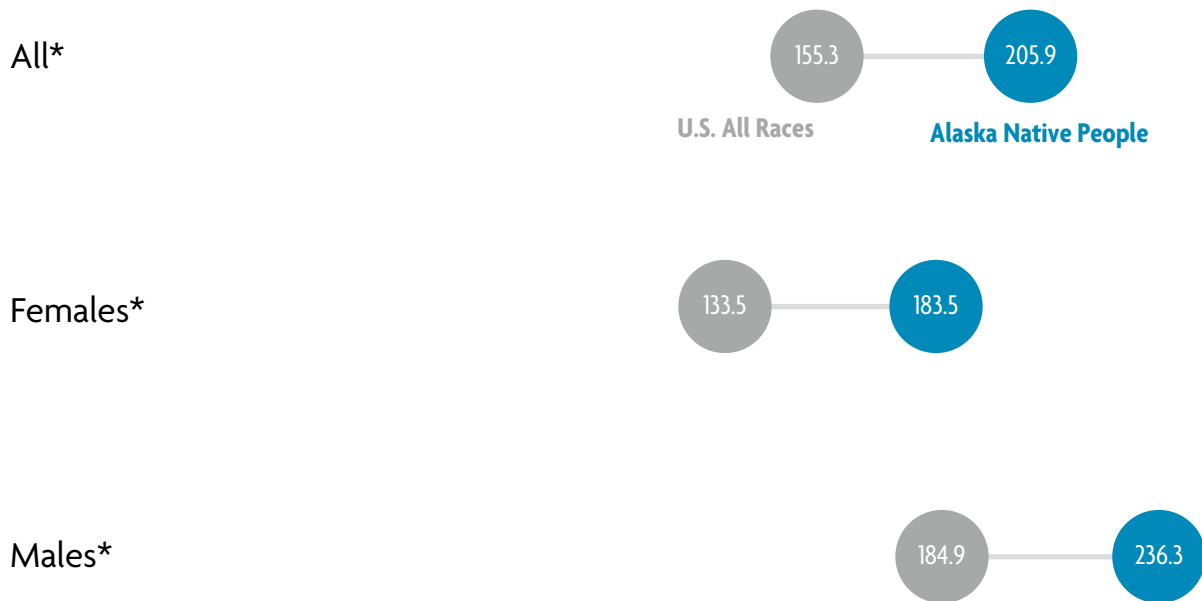
	Alaska Native People			U.S. All Races			Rate Ratio	95% CI
	Count	% Total	Rate <sup>1</sup>	Count	% Total	Rate <sup>1</sup>		
<b>All</b>	<b>979</b>	<b>18.1%</b>	<b>205.9</b>	<b>2,984,050</b>	<b>21.7%</b>	<b>155.3</b>	<b>1.3</b>	<b>1.25 - 1.58</b>
Female	478	19.7%	<b>183.5</b>	1,413,665	21.0%	<b>133.5</b>	<b>1.4</b>	1.26 - 1.50
Male	501	16.8%	<b>236.3</b>	1,570,385	22.5%	<b>184.9</b>	<b>1.3</b>	1.17 - 1.39

<sup>1</sup>Age-adjusted mortality rate per 100,000 people, standardized to U.S. 2000 population

**Figure 142. Cancer Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

Age-Adjusted Rate per 100,000 People



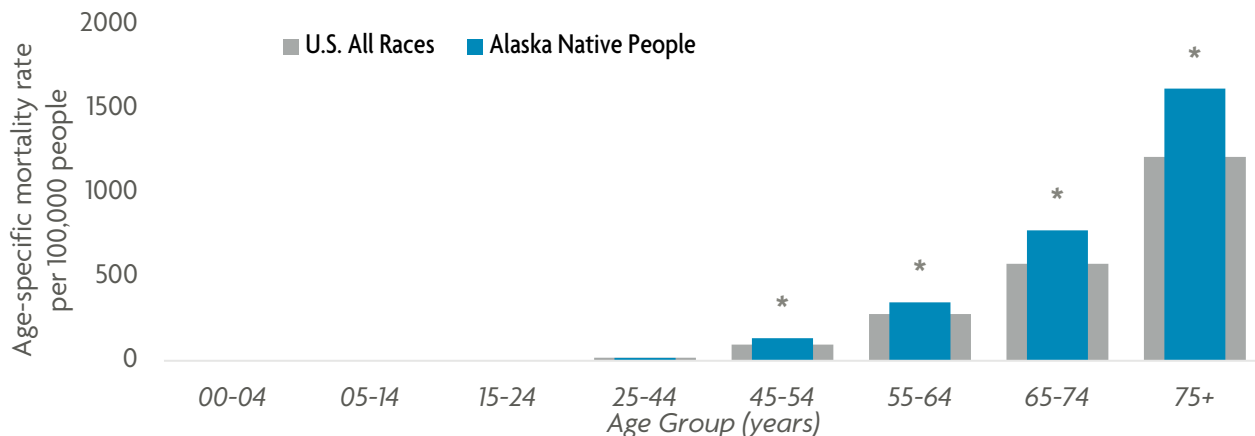
\* significant difference,  $p < 0.05$



### Cancer Age-Specific Mortality Rates

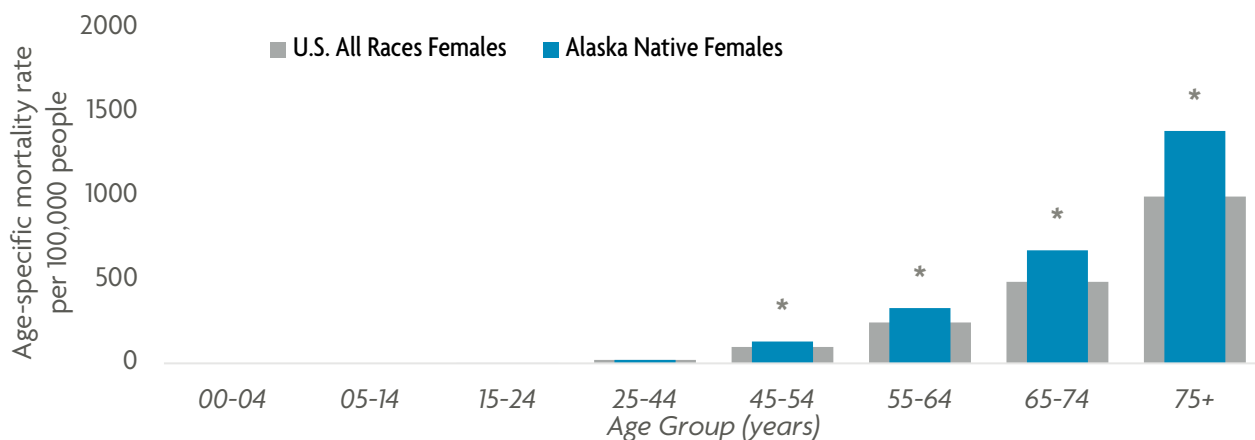
**Figure 143a. Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



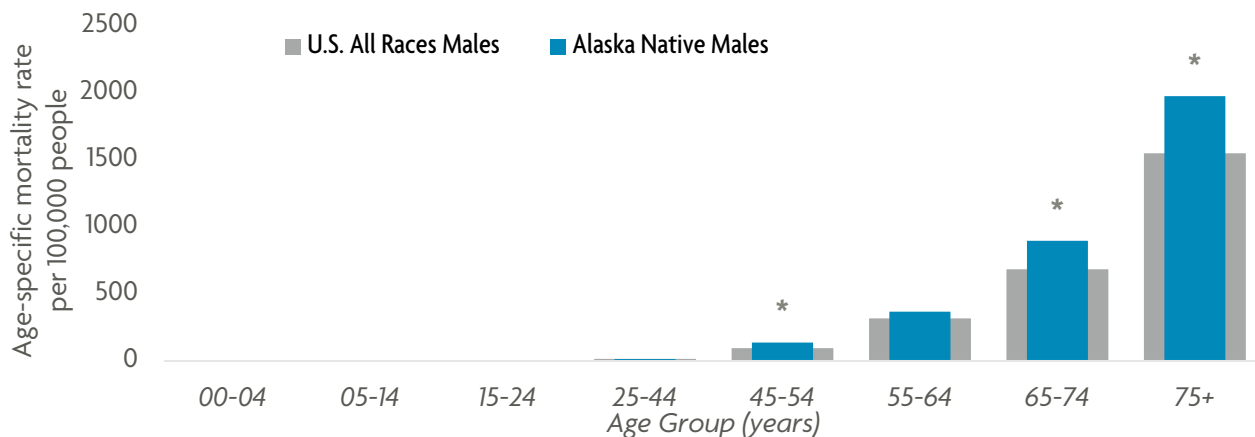
**Figure 143b. Alaska Native Females Compared to U.S. All Races Females, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 143c. Alaska Native Males Compared to U.S. All Races Males, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

**Table 21. Age-Specific Cancer Mortality Rates among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

<b>All</b>								
<b>Age Groups (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	-	2.0	-	17.5	134.1	348.0	777.7	1622.8
U.S. All Races	2.0	2.1	3.3	18.3	96.4	278.9	578.6	1215.6
<b>Rate Ratio</b>	-	<b>1.0</b>	-	<b>1.0</b>	<b>1.4</b>	<b>1.2</b>	<b>1.3</b>	<b>1.3</b>
<b>Females</b>								
<b>Age Groups (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	-	-	-	20.6	130.6	329.5	674.4	1385.8
U.S. All Races	1.8	1.9	2.6	20.6	97.8	243.5	486.4	995.1
<b>Rate Ratio</b>	-	-	-	<b>1.0</b>	<b>1.3</b>	<b>1.4</b>	<b>1.4</b>	<b>1.4</b>
<b>Males</b>								
<b>Age Groups (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	-	-	-	14.4	137.6	367.9	895.5	1973.3
U.S. All Races	2.1	2.2	4.0	16.1	95.0	317.0	683.7	1548.6
<b>Rate Ratio</b>	-	-	-	<b>0.9</b>	<b>1.4</b>	<b>1.2</b>	<b>1.3</b>	<b>1.3</b>

- Rate not reported for < 5 cases

**Table 22. Trends in Cancer Mortality among Alaska Native People Compared to U.S. All Races, 1980-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

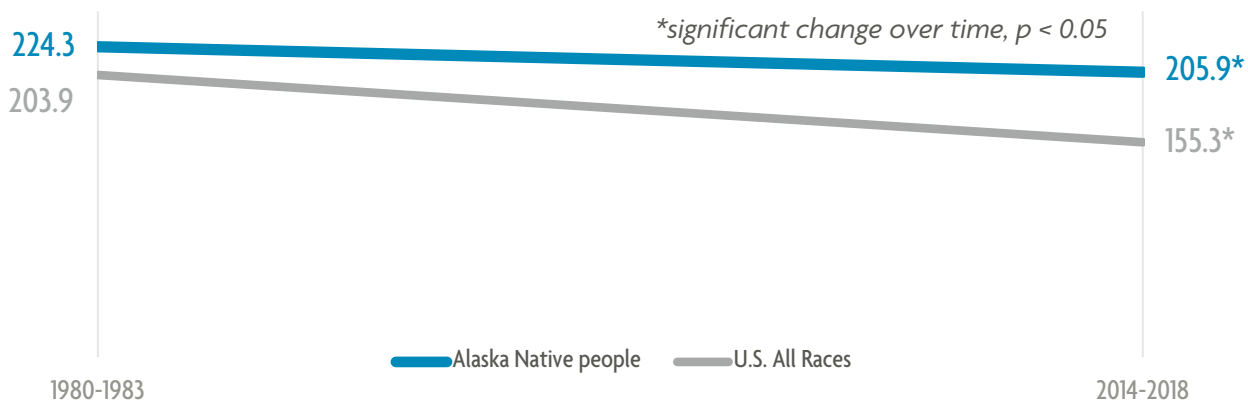
	<b>Alaska Native People</b>	<b>U.S. All Races</b>	<b>Rate Ratio</b>	
1980-1983	224.3	203.9	1.1	
1984-1988	243.3	207.6	1.2	*
1989-1993	245.4	209.9	1.2	*
1994-1998	248.9	202.9	1.2	*
1999-2003	239.5	196.3	1.2	*
2004-2008	226.3	181.7	1.2	*
2009-2013	234.6	168.9	1.4	*
2014-2018	205.9	155.3	1.3	*
<b>% Change</b>	<b>-8.2%</b>	<b>-23.8%</b>		

\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

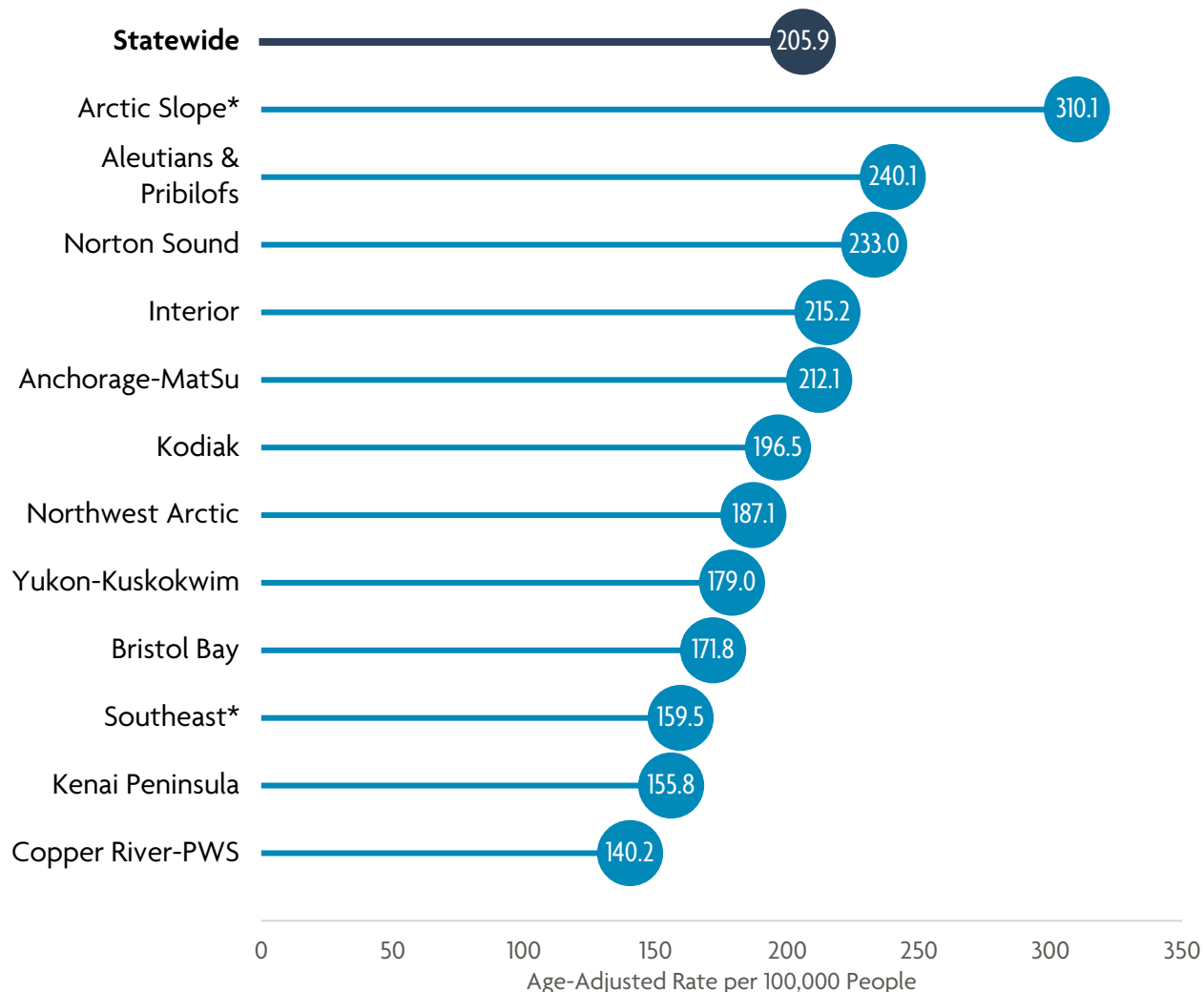
**Figure 144. Overall Change in Cancer Mortality Rates, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 145. Cancer Mortality Rates by Region, Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

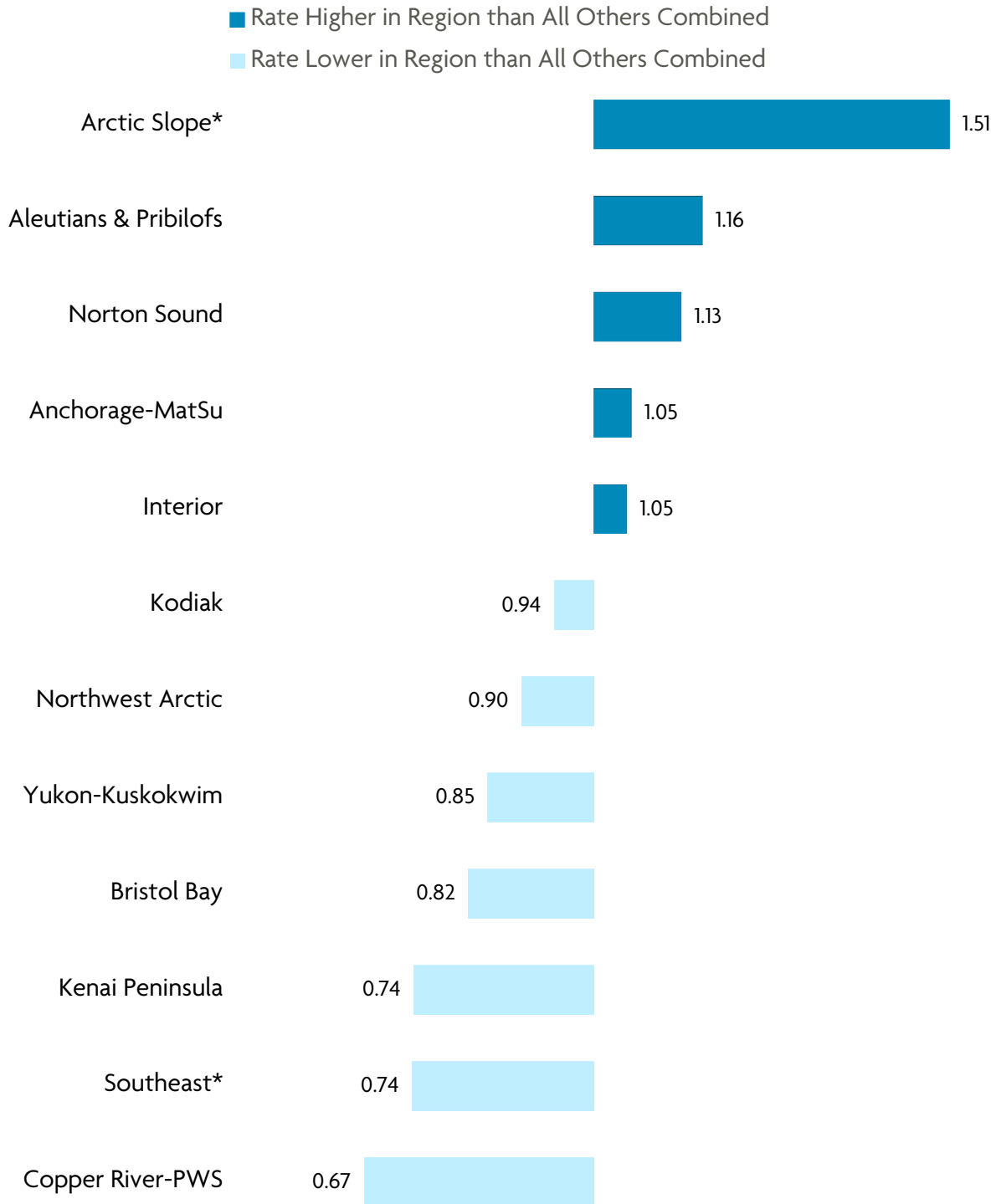


*\*significant difference, p < 0.05*

## DETAILED LEADING CAUSES OF DEATH

**Figure 146. Cancer Mortality Rate Ratio Comparison between Regions among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$

## Detailed Leading Causes of Death

### 2. Heart Disease Mortality

Heart disease was the second leading cause of death among Alaska Native people, both genders combined. It ranked second among Alaska Native females and first among Alaska Native males. Heart disease accounted for 16.5% (n=893) of all deaths among Alaska Native people. For the first time, Alaska Native females had a significantly higher heart disease mortality rate than U.S. all races females. The rates for Alaska Native males were significantly higher than those of U.S. all races males (RR=1.3).

Compared to U.S. all races, age-specific rates of heart disease mortality for Alaska Native people, both genders combined, ranged from 1.1 to 3.2. Rate ratios were significantly higher for Alaska Native people compared to U.S. all races for the 25 to 75+ year age groups. These trends were similar for Alaska Native males. Among Alaska Native females, the 25-44 year age group had significantly higher heart disease mortality rates compared to U.S. all races females.

Examining heart disease mortality rates by service region showed that no regions had significantly different heart disease mortality rates than the respective remainder of the state.

Heart disease mortality rates for Alaska Native people declined 23.5% between 1980-1983 and 2014-2018. Heart disease mortality for U.S. all races declined 58% during this time period.

## DETAILED LEADING CAUSES OF DEATH

**Table 23. Heart Disease Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

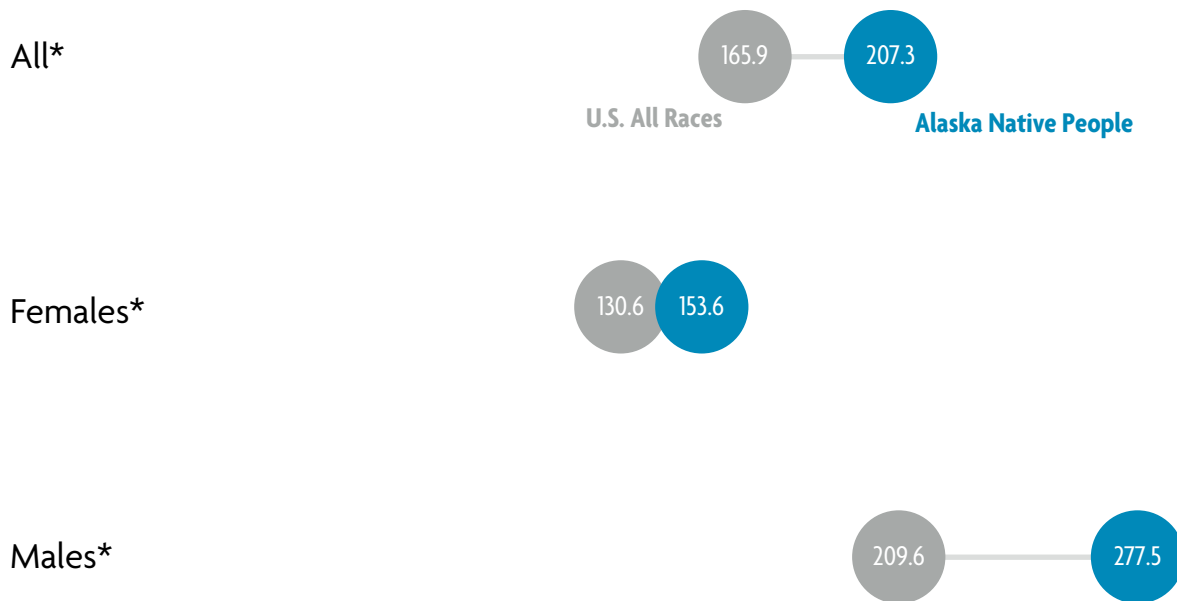
	Alaska Native People			U.S. All Races			Rate Ratio	95% CI
	Count	% Total	Rate <sup>1</sup>	Count	% Total	Rate <sup>1</sup>		
<b>All</b>	<b>893</b>	<b>16.5%</b>	<b>207.3</b>	<b>3,186,288</b>	<b>23.2%</b>	<b>165.9</b>	<b>1.2</b>	<b>1.17 - 1.33</b>
Female	352	14.5%	<b>153.6</b>	1,484,661	22.0%	<b>130.6</b>	<b>1.2</b>	1.06 - 1.31
Male	541	18.2%	<b>277.5</b>	1,702,627	24.2%	<b>209.6</b>	<b>1.3</b>	1.22- 1.44

<sup>1</sup>Age-adjusted mortality rate per 100,000 people, standardized to U.S. 2000 population

**Figure 147. Heart Disease Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

Age-Adjusted Rate per 100,000 People

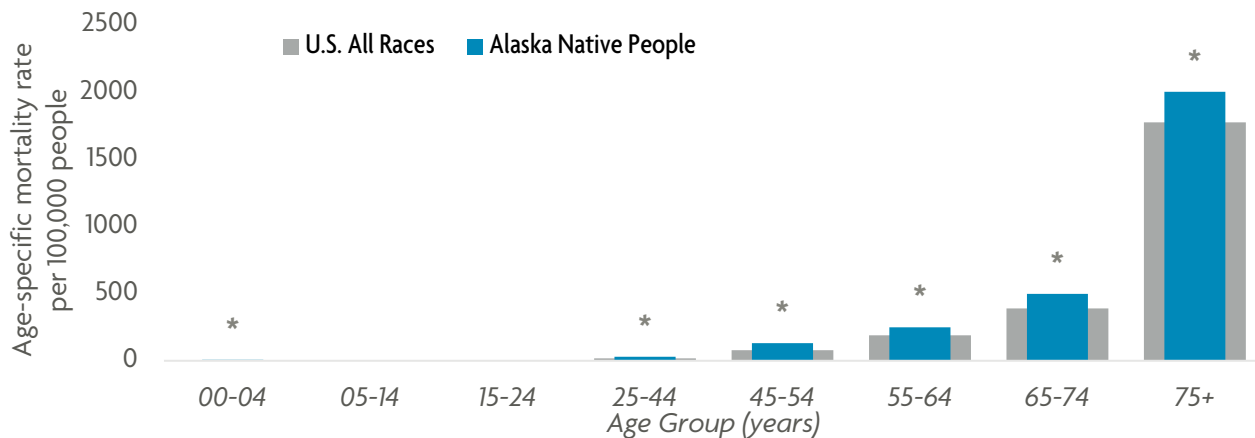


\*significant difference,  $p < 0.05$

### Heart Disease Age-Specific Mortality Rates

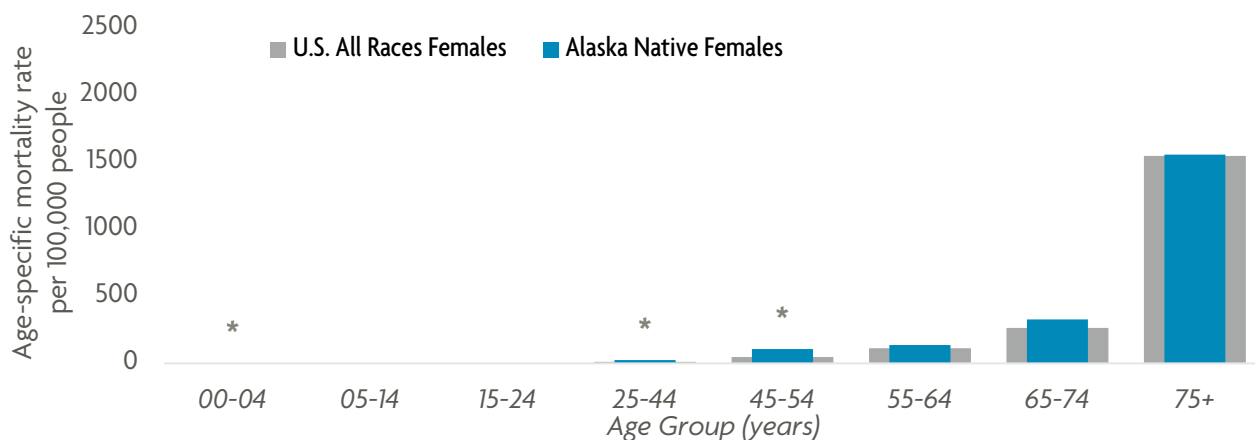
**Figure 148a. Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



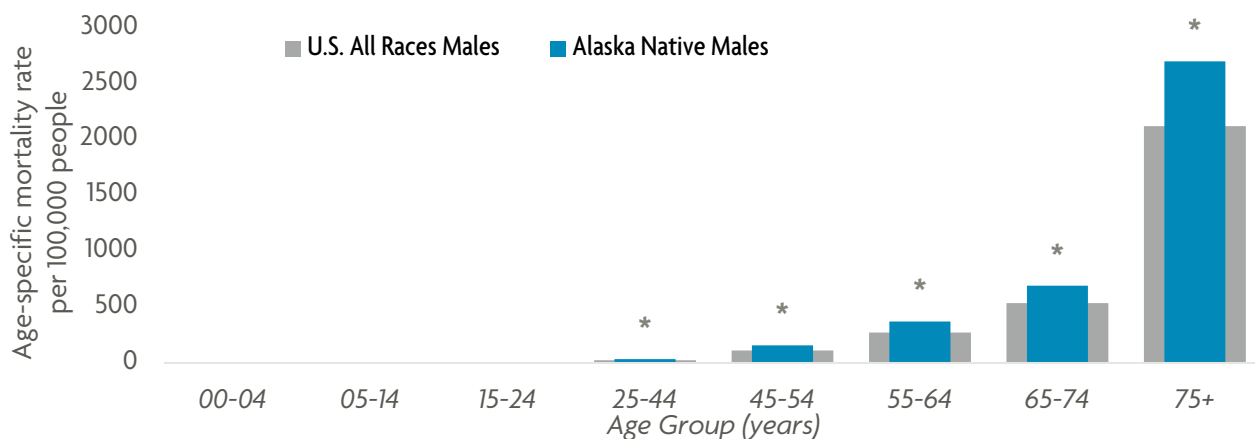
**Figure 148b. Alaska Native Females Compared to U.S. All Races Females, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 148c. Alaska Native Males Compared to U.S. All Races Males, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

**Table 24. Age-Specific Heart Disease Mortality Rates among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

<b>All</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	6.9	-	4.2	29.4	131.8	249.5	499.1	2005.0
U.S. All Races	2.2	0.5	2.2	17.6	78.7	189.2	390.6	1776.8
<b>Rate Ratio</b>	<b>3.2</b>	<b>-</b>	<b>1.9</b>	<b>1.7</b>	<b>1.7</b>	<b>1.3</b>	<b>1.3</b>	<b>1.1</b>
<b>Females</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	-	-	-	25.0	106.7	136.5	327.2	1555.7
U.S. All Races	2.1	0.4	1.5	11.2	46.8	112.4	264.1	1545.7
<b>Rate Ratio</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.2</b>	<b>2.3</b>	<b>1.2</b>	<b>1.2</b>	<b>1.0</b>
<b>Males</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	-	-	-	33.8	156.9	370.3	690.9	2697.1
U.S. All Races	2.2	0.5	2.8	23.8	111.5	271.7	534.7	2118.5
<b>Rate Ratio</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.4</b>	<b>1.4</b>	<b>1.4</b>	<b>1.3</b>	<b>1.3</b>

- Rate not reported for < 5 cases

**Table 25. Trends in Heart Disease Mortality among Alaska Native People Compared to U.S. All Races, 1980-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

	<b>Alaska Native People</b>	<b>U.S. All Races</b>	<b>Rate Ratio</b>	
1980-1983	270.9	395.1	<b>0.7</b>	*
1984-1988	288.1	362.5	<b>0.8</b>	*
1989-1993	271.9	310.2	<b>0.9</b>	*
1994-1998	252.0	280.2	<b>0.9</b>	*
1999-2003	211.6	247.2	<b>0.9</b>	*
2004-2008	169.0	206.1	<b>0.8</b>	*
2009-2013	190.3	175.0	<b>1.1</b>	*
2014-2018	207.3	165.9	<b>1.2</b>	*
<b>% Change</b>	<b>-23.5%</b>	<b>-58.0%</b>		

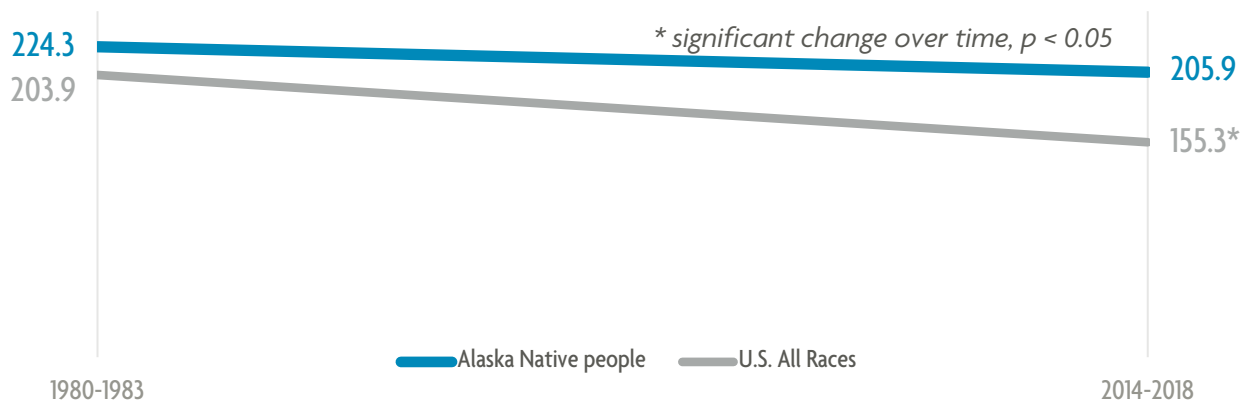
\*significant difference,  $p < 0.05$



## DETAILED LEADING CAUSES OF DEATH

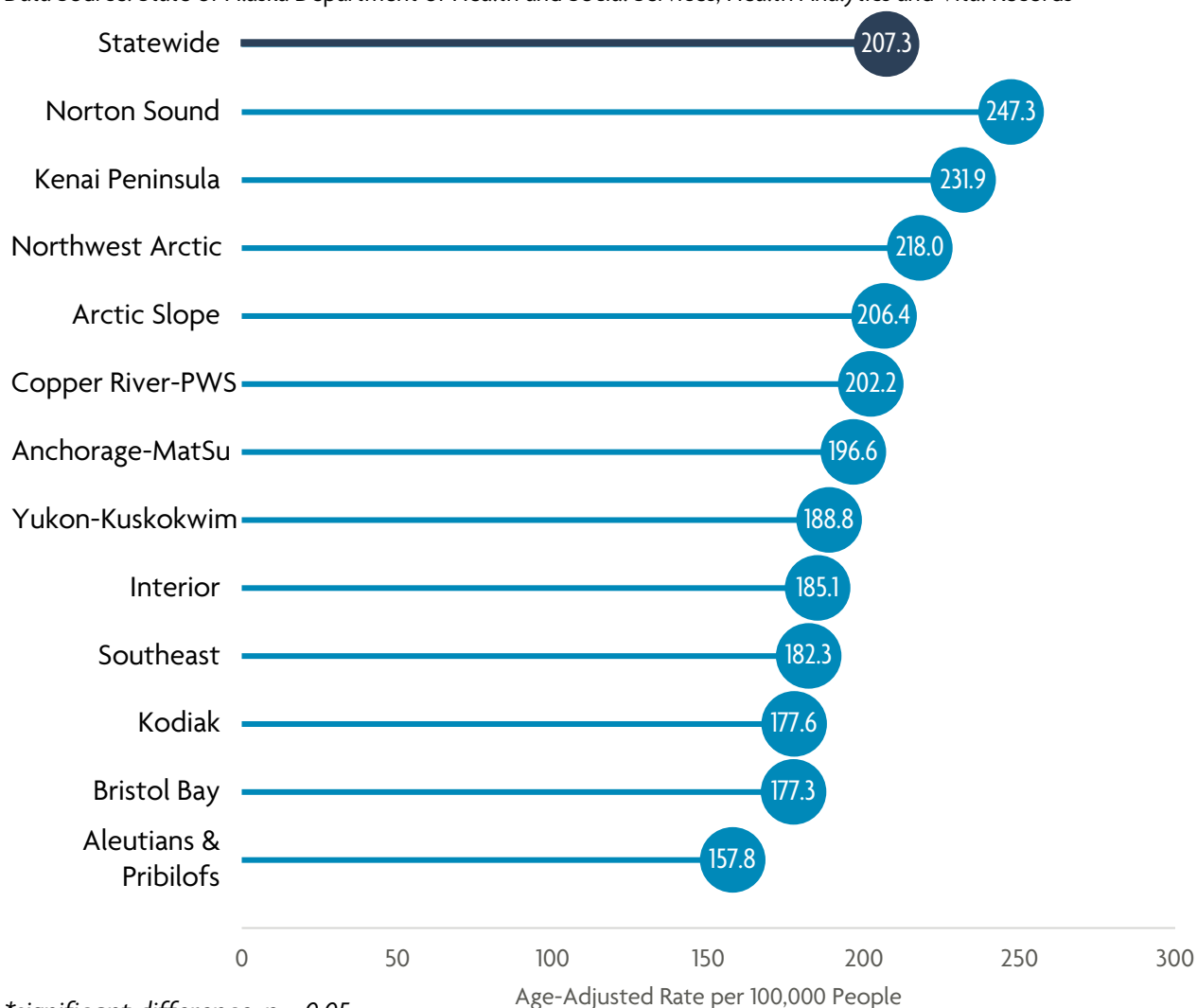
**Figure 149. Overall Change in Heart Disease Mortality Rates, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 150. Heart Disease Mortality Rates by Region, Alaska Native People, 2014-2018**

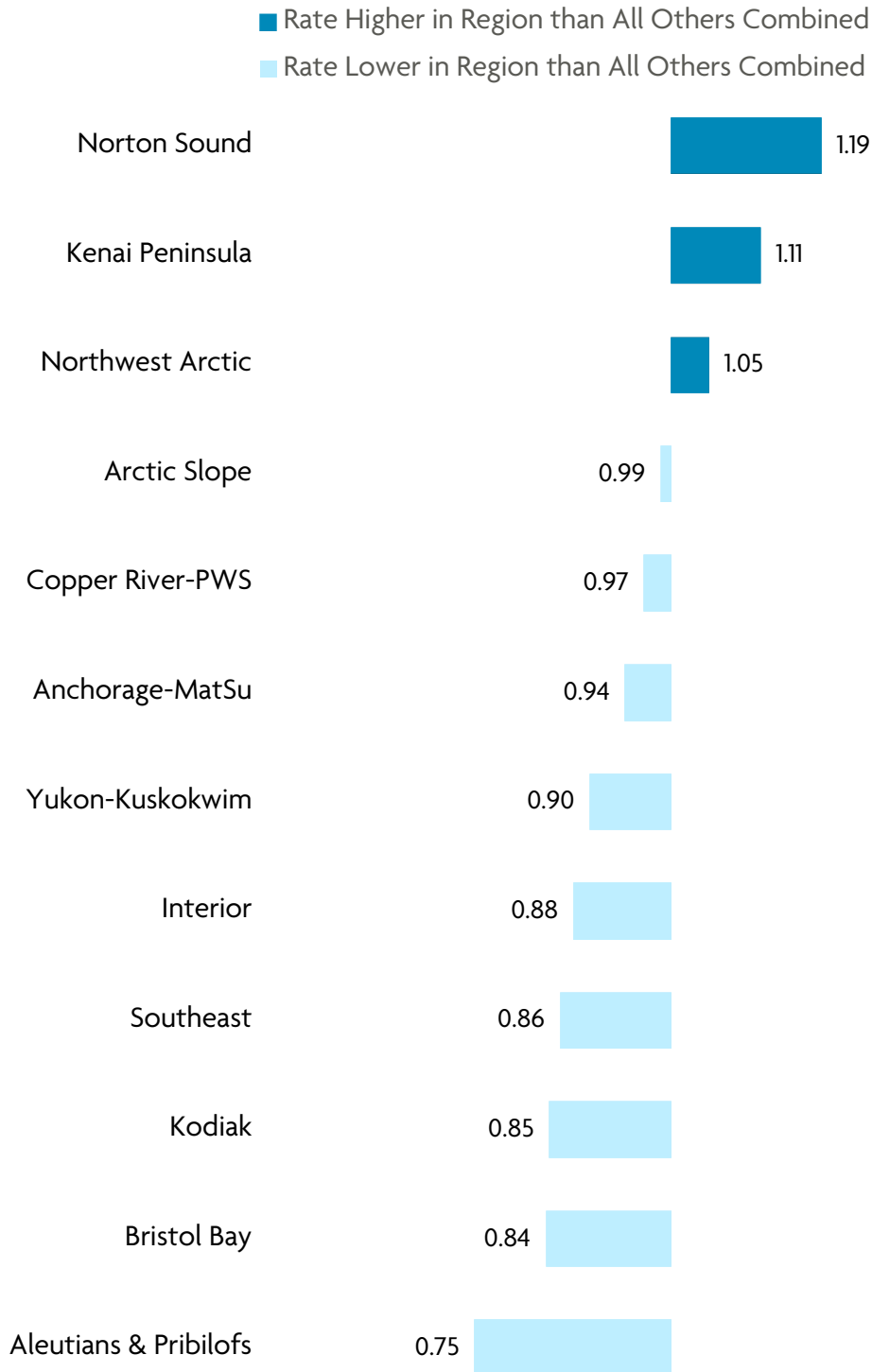
Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



## DETAILED LEADING CAUSES OF DEATH

**Figure 151. Heart Disease Mortality Rate Ratio Comparison between Regions among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



*\*significant difference,  $p < 0.05$*

## Detailed Leading Causes of Death

### 3. Unintentional Injury Mortality

Unintentional injury was the third leading cause of death for Alaska Native people, both sexes combined. It ranked third among causes of death for both Alaska Native females and males. Unintentional injury comprised 12.9% (n= 698) of all Alaska Native deaths. For Alaska Native people, both sexes combined, unintentional injury mortality rates were 2.5 times the U.S. all races rate. Rates for Alaska Native females were 2.8 times the U.S. all races female rate. Rates for Alaska Native males were 2.3 times those for U.S. all races males.

The top five causes of unintentional injury deaths among Alaska Native people, both sexes combined, accounted for 70% of all unintentional injury deaths. The leading causes were: poisoning (28%) – just more than half of which were overdoses of alcohol or drugs, motor vehicle traffic injuries (14%), drowning and watercraft injuries (11%), exposure to the elements (10%), and ATV injuries (7%). Firearm injuries comprised less than 1% of all unintentional injury mortality.

Unintentional injury was the number one cause of excess deaths among Alaska Native people, accounting for 19.7% (n=445) among both sexes combined. Unintentional injury comprised 16.7% (n=172) of all excess deaths among Alaska Native females and 22.2% (n=271) of excess deaths among Alaska Native males.

Unintentional injuries were the leading cause of years of potential life lost. This cause accounted for 23% (23,323 years) of all years of potential life lost before age 75 for Alaska Native people, both sexes combined; 20.3% (8,243 years) for Alaska Native females; and 24.9% (15,080 years) for Alaska Native males.

Unintentional injury mortality rates were significantly higher for every age group among Alaska Native people, both sexes combined, as compared to U.S. all races. Alaska Native females had significantly higher unintentional injury mortality rates for the 24-64 and the 75+ age groups as compared U.S. all races females. Unintentional injury mortality rates were significantly higher for all age groups, except for 5-14 year olds, among Alaska Native males as compared to U.S. all races males.

The Southeast (RR=0.7), Arctic Slope (RR=0.6), and Kenai Peninsula (RR=0.4) service regions had significantly lower mortality rates.

The unintentional injury mortality rate appears to have declined 37.7% for Alaska Native people, both sexes combined, between 1980-1983 and 2014-2018. U.S. all races experienced a 4% decline during this time period. Caution is warranted when interpreting the trend, as coding and policy changes have had an effect on the frequency that these ICD codes are used on death certificates within the state of Alaska. See further details in Appendix A - Methods.

## DETAILED LEADING CAUSES OF DEATH

**Table 26. Unintentional Injury Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

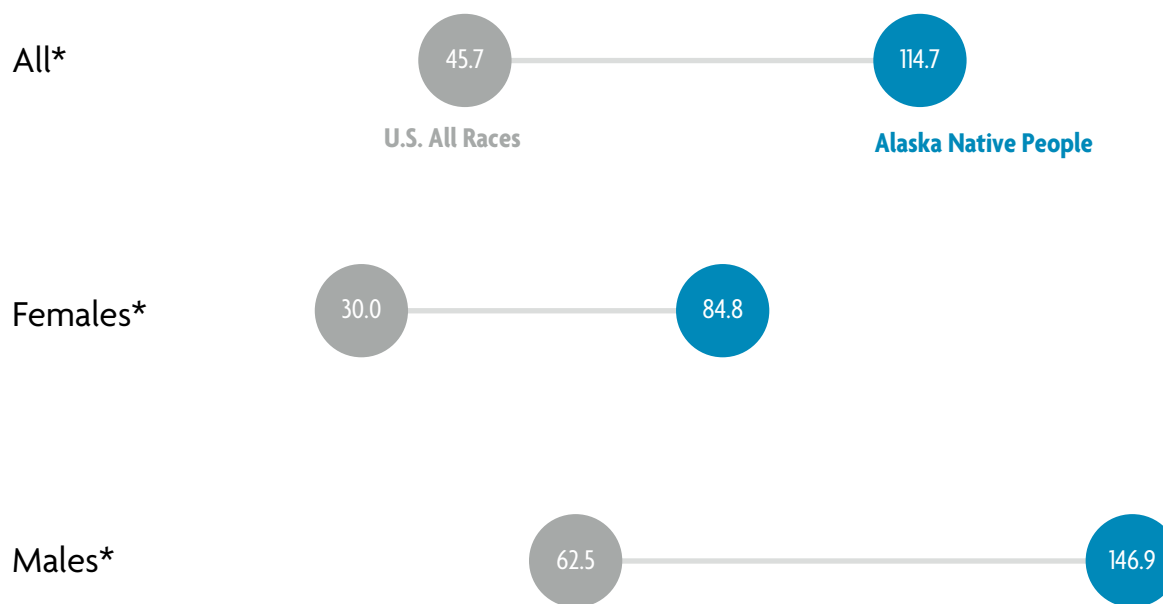
	Alaska Native People			U.S. All Races			Rate Ratio	95% CI
	Count	% Total	Rate <sup>1</sup>	Count	% Total	Rate <sup>1</sup>		
<b>All</b>	<b>698</b>	<b>12.9%</b>	<b>114.7</b>	<b>780,936</b>	<b>5.7%</b>	<b>45.7</b>	<b>2.5</b>	2.33 - 2.70
Female	254	10.5%	<b>84.8</b>	281,207	4.2%	<b>30.0</b>	<b>2.8</b>	2.50 - 3.20
Male	444	14.9%	<b>146.9</b>	499,729	7.4%	<b>62.5</b>	<b>2.3</b>	2.14 - 2.58

<sup>1</sup>Age-adjusted mortality rate per 100,000 people, standardized to U.S. 2000 population

**Figure 152. Unintentional Injury Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

Age-Adjusted Rate per 100,000 People

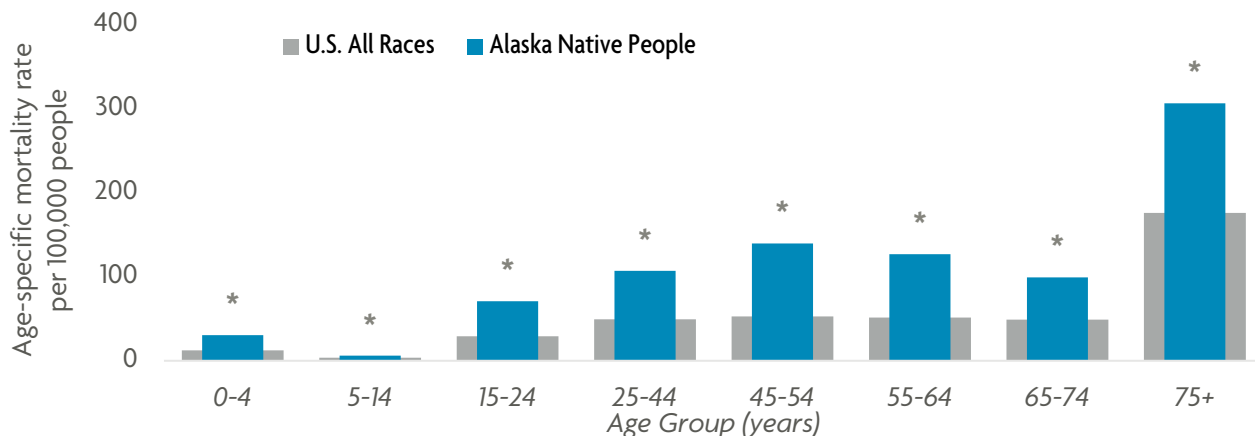


\*significant difference,  $p < 0.05$

## Unintentional Injury Age-Specific Mortality Rates

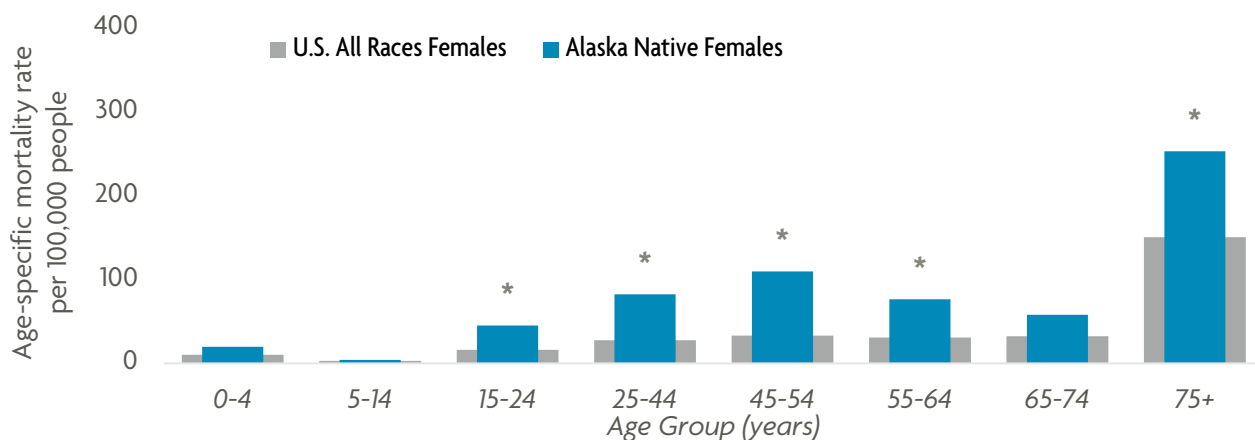
**Figure 153a. Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



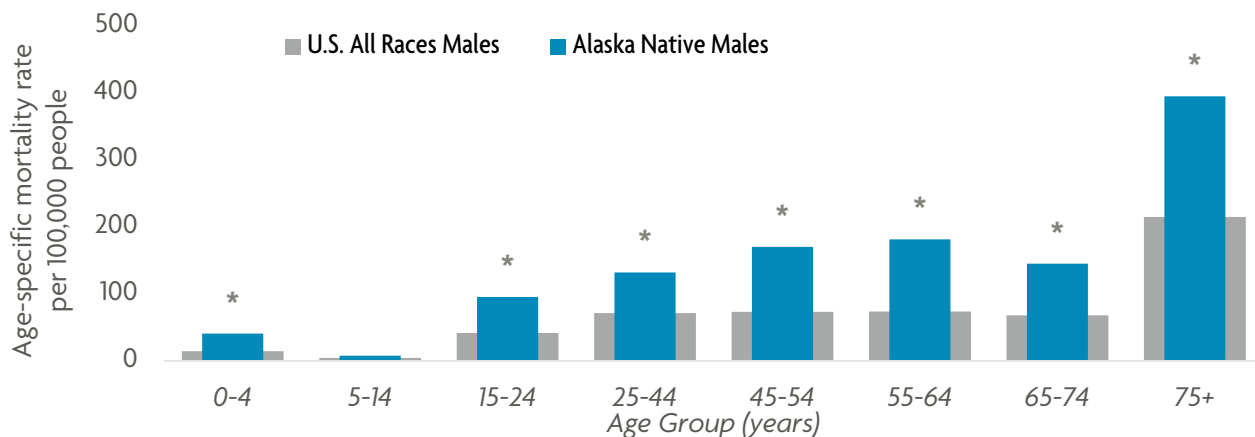
**Figure 153b. Alaska Native Females Compared to U.S. All Races Females, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 153c. Alaska Native Males Compared to U.S. All Races Males, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

**Table 27. Age-Specific Unintentional Injury Mortality Rates among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

<b>All</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	30.5	6.1	70.9	107.3	139.9	127.2	99.4	307.0
U.S. All Races	12.5	3.7	29.3	49.5	52.9	51.5	49.0	176.3
<b>Rate Ratio</b>	<b>2.4</b>	<b>1.6</b>	<b>2.4</b>	<b>2.2</b>	<b>2.6</b>	<b>2.5</b>	<b>2.0</b>	<b>1.7</b>
<b>Females</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	19.8	4.2	45.1	82.3	109.7	76.5	58.0	253.0
U.S. All Races	10.2	2.9	16.2	27.6	33.1	30.8	32.3	150.5
<b>Rate Ratio</b>	<b>1.9</b>	<b>1.5</b>	<b>2.8</b>	<b>3.0</b>	<b>3.3</b>	<b>2.5</b>	<b>1.8</b>	<b>1.7</b>
<b>Males</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	40.8	7.8	95.5	132.0	170.0	181.4	145.1	394.6
U.S. All Races	14.6	4.5	41.8	71.3	73.3	73.8	67.9	214.7
<b>Rate Ratio</b>	<b>2.8</b>	<b>1.7</b>	<b>2.3</b>	<b>1.9</b>	<b>2.3</b>	<b>2.5</b>	<b>2.1</b>	<b>1.8</b>

**Table 28. Trends in Unintentional Injury Mortality among Alaska Native People Compared to U.S. All Races, 1980-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

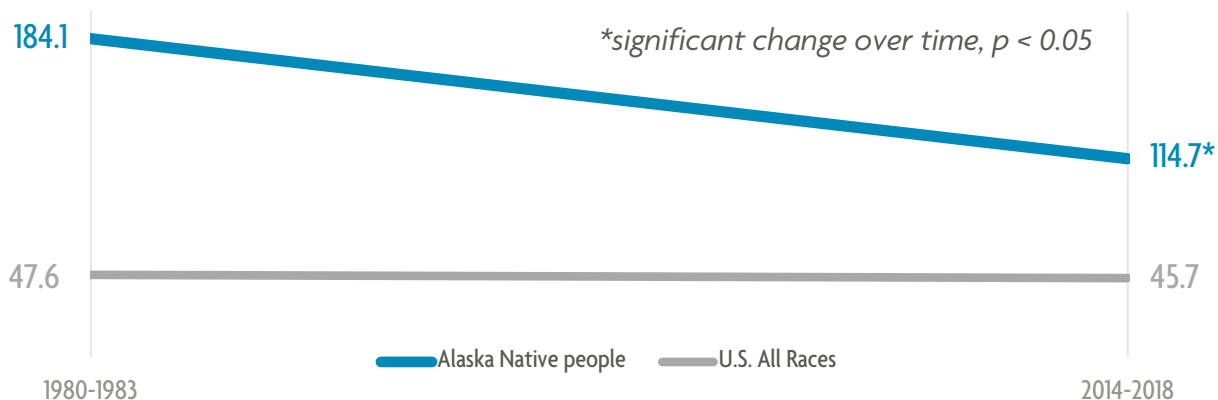
	<b>Alaska Native People</b>	<b>U.S. All Races</b>	<b>Rate Ratio</b>	
1980-1983	184.1	47.6	<b>3.9</b>	*
1984-1988	174.0	46.1	<b>3.8</b>	*
1989-1993	133.0	41.5	<b>3.2</b>	*
1994-1998	111.0	38.9	<b>2.9</b>	*
1999-2003	107.4	36.1	<b>3.0</b>	*
2004-2008	97.7	40.0	<b>2.4</b>	*
2009-2013	104.8	40.1	<b>2.6</b>	*
2014-2018	114.7	45.7	<b>2.5</b>	*
<b>% Change</b>	<b>-37.7%</b>	<b>-4.0%</b>		

\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

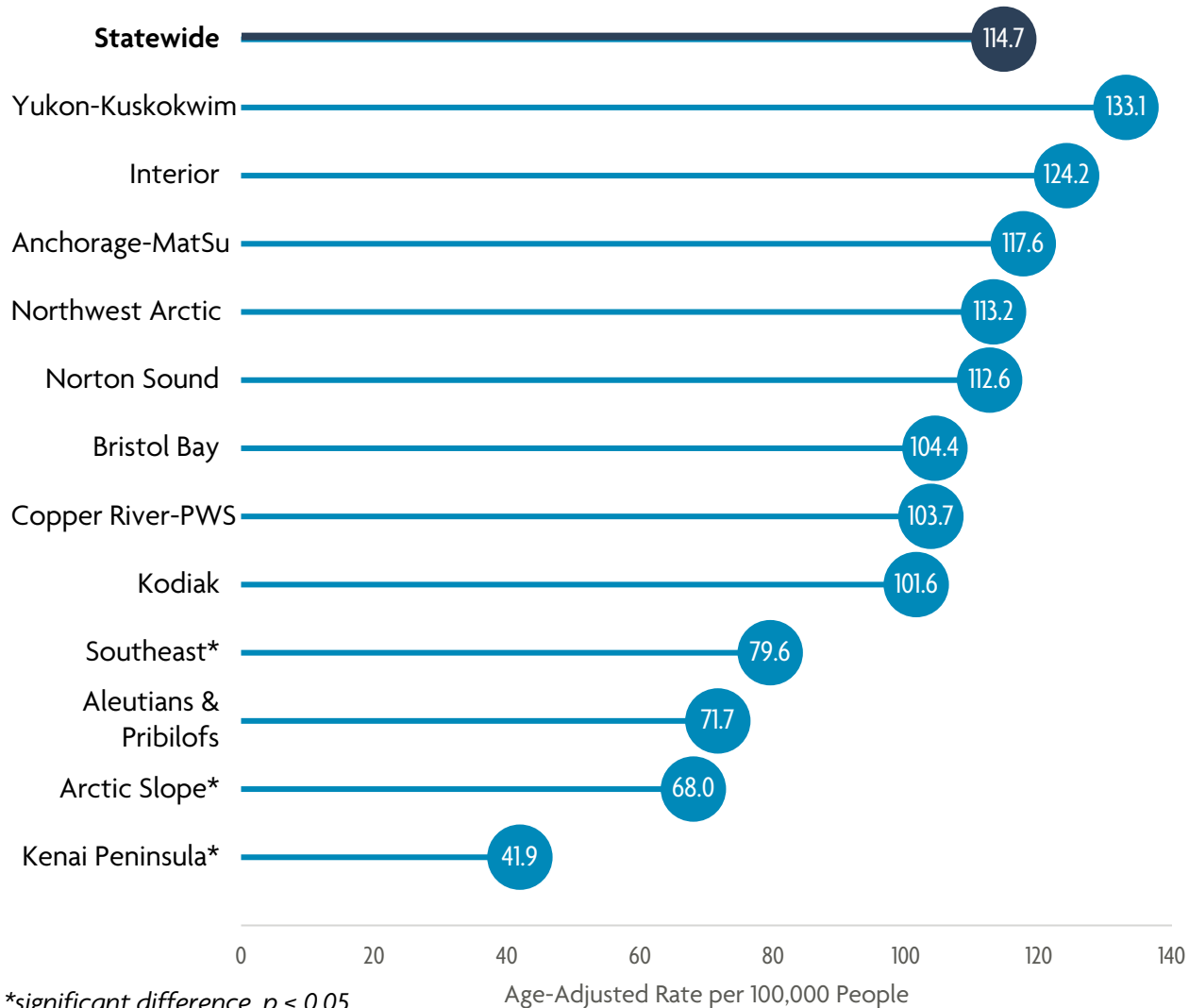
**Figure 154. Overall Change in Unintentional Injury Mortality Rates, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 155. Unintentional Injury Mortality Rates by Region, Alaska Native People, 2014-2018**

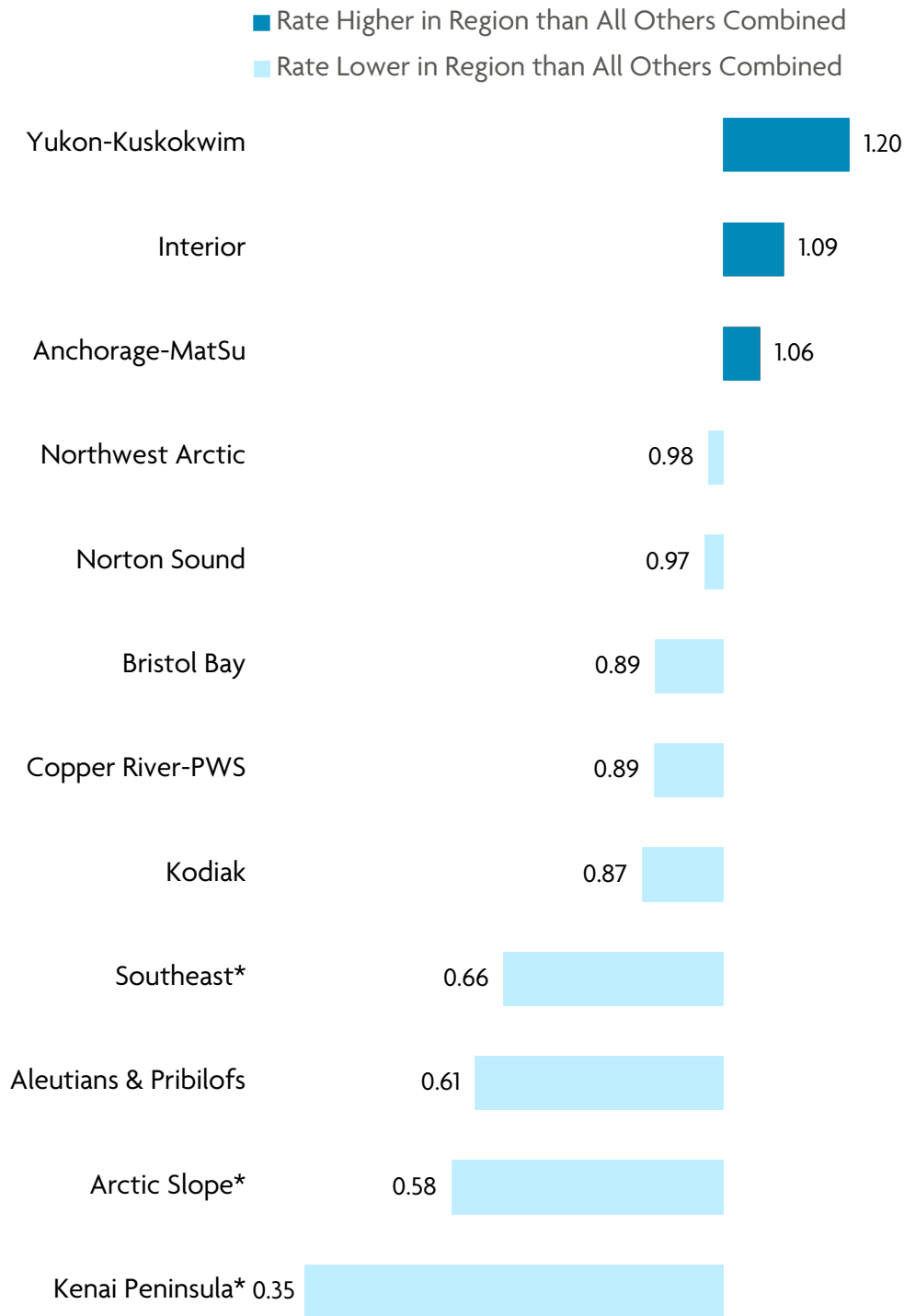
Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



## DETAILED LEADING CAUSES OF DEATH

**Figure 156. Unintentional Injury Mortality Rate Ratio Comparison between Regions among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$



## Detailed Leading Causes of Death

### 4. Suicide Mortality

Suicide was the fourth leading cause of death among Alaska Native people, both sexes combined. It ranked fourth among Alaska Native males and seventh among Alaska Native females. among Alaska Native people, both sexes combined, suicide accounted for 5.6% (n=302) of all death. The suicide mortality rate for Alaska Native people, both sexes combined, was 3.0 times the U.S. all races rates. The rate ratios were 3.5 for Alaska Native females and 2.7 for Alaska Native males compared to U.S. all races females and males respectively.

Nearly half (49%) of suicides among Alaska Native people, both sexes combined, involved firearms. among Alaska Native females, 33% of suicides involved firearms. among Alaska Native males, 54% of suicides involved firearms.

Suicide accounted for 9.7% of all excess deaths among Alaska Native people, both sexes combined (n=220). among Alaska Native females, suicide accounted for 5.6% (n=58) of excess deaths. Suicide accounted for 13.2% (n=161) of excess deaths among Alaska Native males and was the second leading cause of excess deaths for Alaska Native males.

Suicide was the second leading cause of years of potential life lost. Suicide accounted for 13.4% (13,591 years) of all years of potential life lost before age 75 for Alaska Native people, both sexes combined. Suicide accounted for 8.4% (3,409 years) of all years of potential life lost before age 75 for Alaska Native females, and 16.8% (10,182 years) of all years of potential life lost before age 75 for Alaska Native males.

Alaska Native people, both sexes combined, experienced 0.9 to 7.4 times the suicide rates of U.S. all races across age groups. Alaska Native females and Alaska Native males separately had significantly higher suicide mortality rates across age groups from 15 – 54 years. Alaska Native females had suicide rates 2.4 to 9.3 times the U.S. all races female rate. Alaska Native males had rate ratios of 0.8 to 6.9 compared to U.S. all races males.

The Northwest Arctic (RR=1.8) and Yukon-Kuskokwim (RR=1.5) service regions had significantly higher suicide mortality rates than the rest of the state combined. The Bristol Bay (RR=0.50) and Southeast (RR=0.3) service regions had significantly lower suicide mortality rates than the rest of the state combined.

There has been a decrease of 3.3% in the suicide mortality rate among Alaska Native people between 1980-1983 and 2014-2018, but this change was statistically insignificant. U.S. all races had a 3.8% increase, which was also statistically insignificant during this same time period.

## DETAILED LEADING CAUSES OF DEATH

**Table 29. Suicide Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

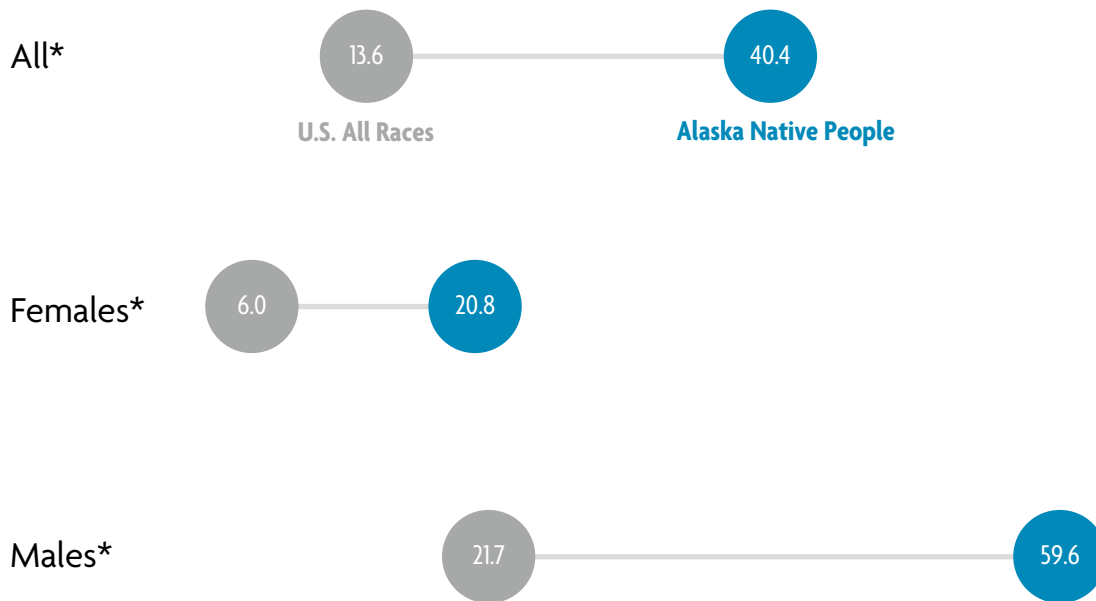
	Alaska Native People			U.S. All Races			Rate Ratio	95% CI
	Count	% Total	Rate <sup>1</sup>	Count	% Total	Rate <sup>1</sup>		
<b>All</b>	<b>302</b>	<b>5.6%</b>	<b>40.4</b>	<b>227,501</b>	<b>1.7%</b>	<b>13.6</b>	<b>3.0</b>	<b>2.66 - 3.33</b>
Female	77	3.2%	20.8	51,075	0.8%	6.0	3.5	2.78 - 4.34
Male	225	7.6%	59.6	176,426	2.5%	21.7	2.7	2.41 - 3.13

<sup>1</sup>Age-adjusted mortality rate per 100,000 people, standardized to U.S. 2000 population

**Figure 157. Suicide Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

Age-Adjusted Rate per 100,000 People

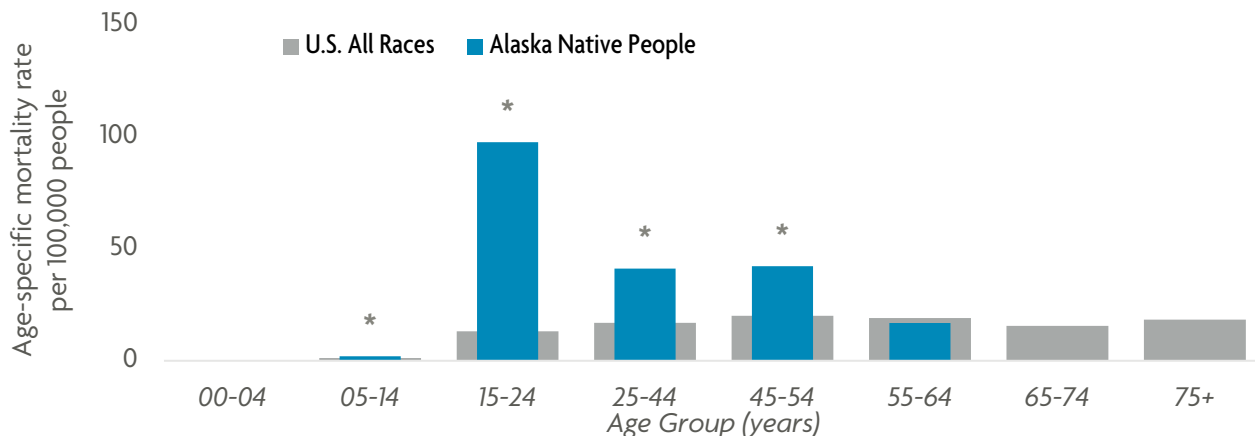


\*significant difference,  $p < 0.05$

### Suicide Age-Specific Mortality Rates

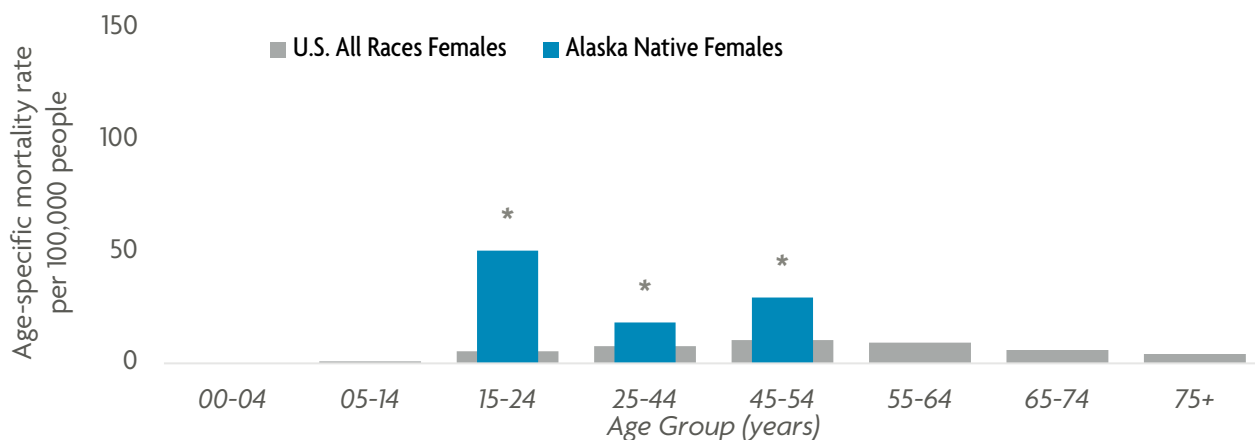
**Figure 158a. Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



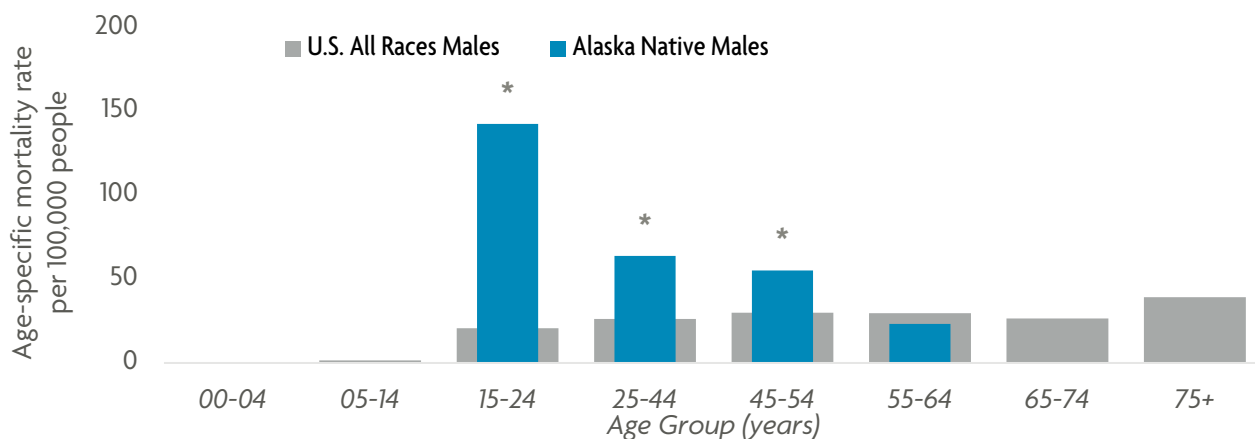
**Figure 158b. Alaska Native Females Compared to U.S. All Races Females, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 158c. Alaska Native Males Compared to U.S. All Races Males, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

**Table 30. Age-Specific Suicide Mortality Rates among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

<b>All</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	-	2.0	97.8	41.3	42.3	16.9	-	-
U.S. All Races	-	1.2	13.2	17.0	20.1	19.1	15.6	18.4
<b>Rate Ratio</b>	-	<b>1.7</b>	<b>7.4</b>	<b>2.4</b>	<b>2.1</b>	<b>0.9</b>	-	-
<b>Females</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	-	-	50.4	18.3	29.4	-	-	-
U.S. All Races	-	0.9	5.4	7.7	10.4	9.3	6.0	4.2
<b>Rate Ratio</b>	-	-	<b>9.3</b>	<b>2.4</b>	<b>2.8</b>	-	-	-
<b>Males</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	-	-	142.5	63.8	55.1	23.3	-	-
U.S. All Races	-	1.5	20.7	26.2	30.0	29.7	26.5	39.2
<b>Rate Ratio</b>	-	-	<b>6.9</b>	<b>2.4</b>	<b>1.8</b>	<b>0.8</b>	-	-

- Rate not reported for < 5 cases

**Table 31. Trends in Suicide Mortality among Alaska Native People Compared to U.S. All Races, 1980-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

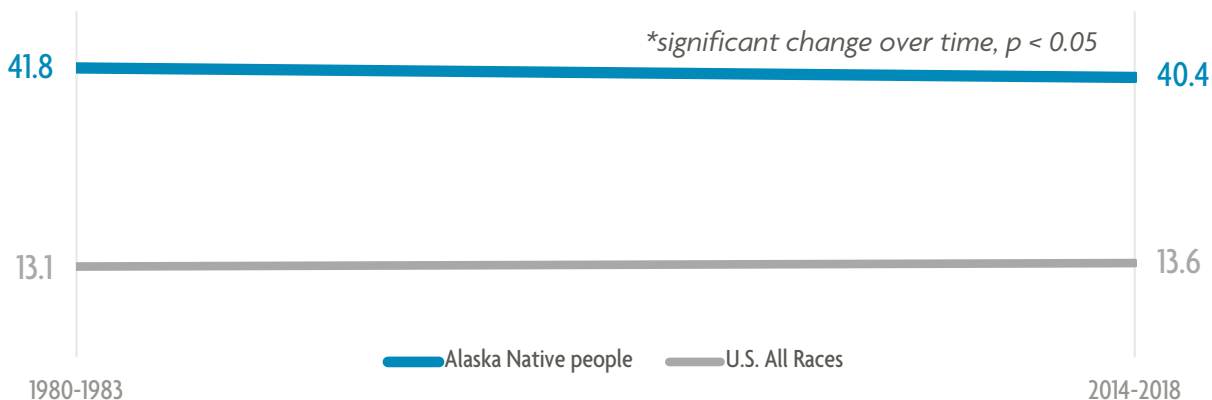
	<b>Alaska Native People</b>	<b>U.S. All Races</b>	<b>Rate Ratio</b>	
1980-1983	41.8	13.1	<b>3.2</b>	*
1984-1988	49.5	13.5	<b>3.7</b>	*
1989-1993	46.8	13.0	<b>3.6</b>	*
1994-1998	42.8	12.4	<b>3.5</b>	*
1999-2003	34.7	10.7	<b>3.2</b>	*
2004-2008	42.3	11.3	<b>3.7</b>	*
2009-2013	40.6	12.6	<b>3.2</b>	*
2014-2018	40.4	13.6	<b>3.0</b>	*
<b>% Change</b>	<b>-3.3%</b>	<b>3.8%</b>		

\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

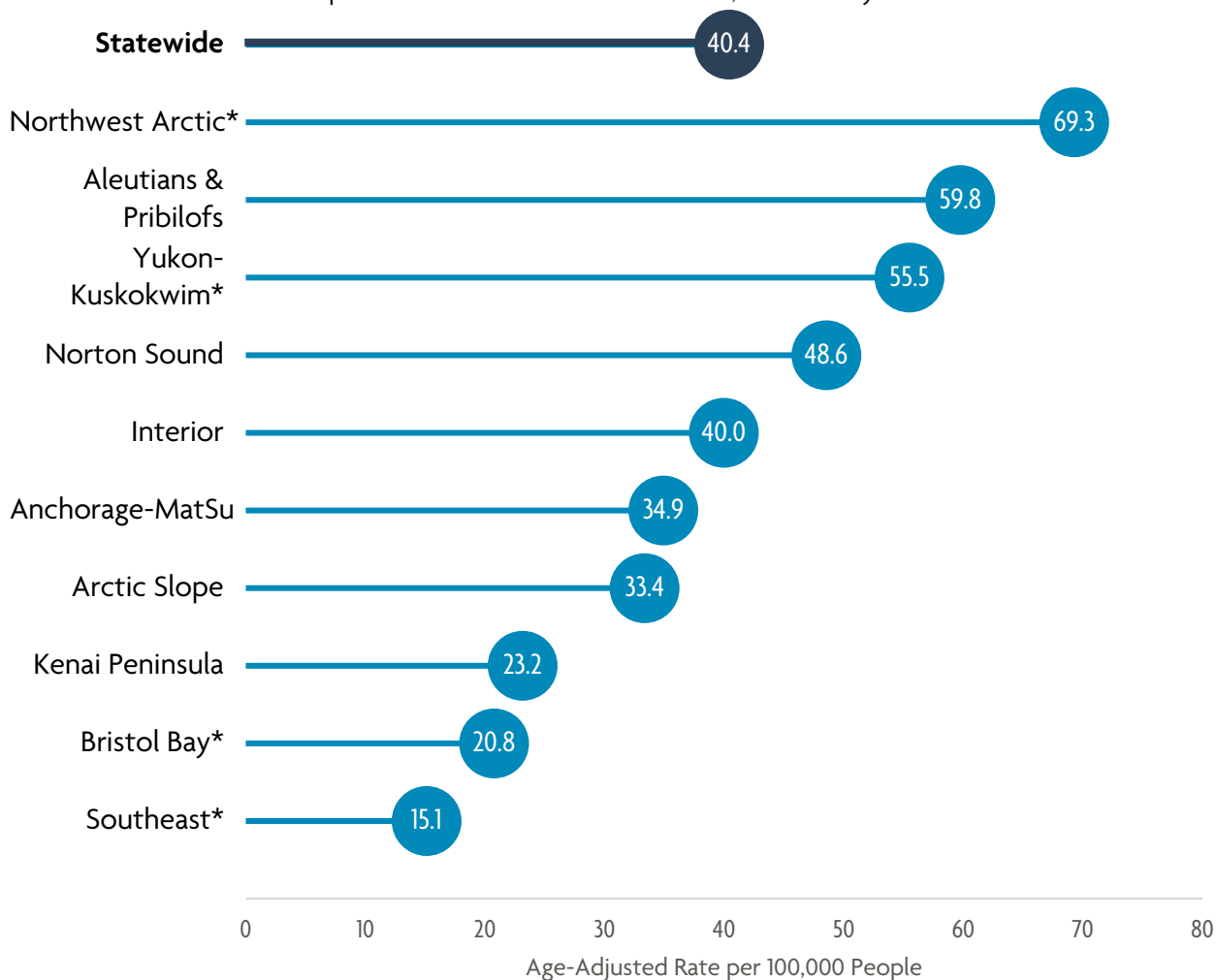
**Figure 159. Overall Change in Suicide Mortality Rates, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 160. Suicide Mortality Rates by Region, Alaska Native People, 2014-2018**

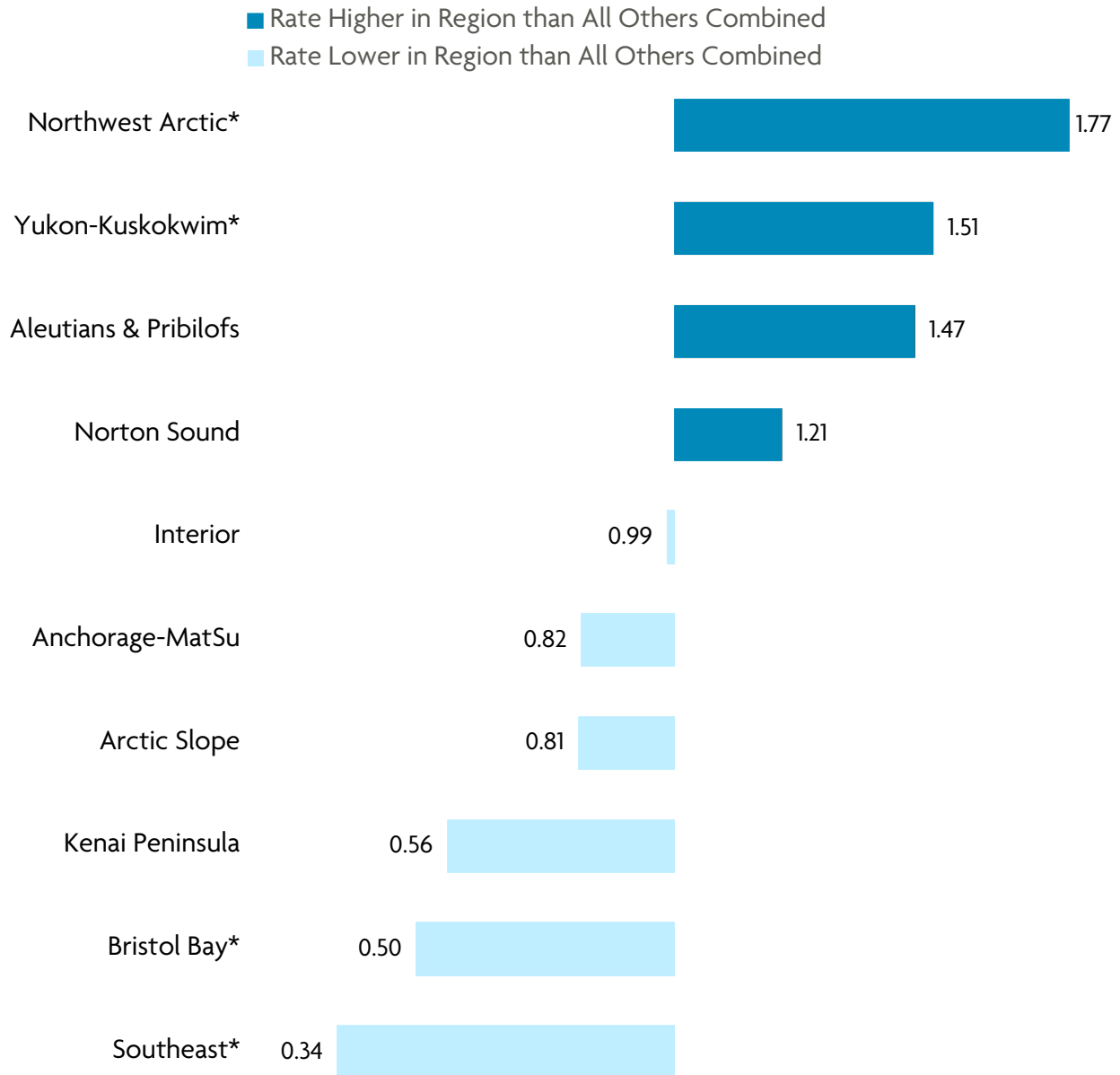
Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



## DETAILED LEADING CAUSES OF DEATH

**Figure 161. Suicide Mortality Rate Ratio Comparison between Regions among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$

## Detailed Leading Causes of Death

### 5. Chronic Obstructive Pulmonary Disease (COPD) Mortality

COPD was the fifth leading cause of death among Alaska Native people, both sexes combined, and for each sex separately. COPD accounted for 5.1% (n=277) of all deaths. Alaska Native people, both sexes combined, had a COPD mortality rate 1.7 times the U.S. all races rate. The mortality rate for Alaska Native females was 1.5 times the U.S. all races female rate. The mortality rate for Alaska Native males was 1.9 times the U.S. all races male rate.

COPD accounted for 5.2% (n=177) of excess deaths among Alaska Native people, both sexes combined. Among Alaska Native females, COPD accounted for 4.6% (n=47) of excess female deaths whereas among Alaska Native males, COPD accounted for 5.6% (n=69) of excess male deaths.

Age-specific COPD mortality rates were a significant 1.5 to 1.7 times higher for Alaska Native people, both sexes combined, compared to U.S. all races.

The Norton Sound (RR=1.8) service region had significantly higher rates than the rest of the state. The Southeast (RR=0.7) service region had significantly lower rates than the rest of the state.

Alaska Native COPD mortality rates rose 163.8% between 1980-1983 and 2014-2018. COPD mortality rates increased 33.1% among U.S. all races during this same time period.

## DETAILED LEADING CAUSES OF DEATH

**Table 32. COPD Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

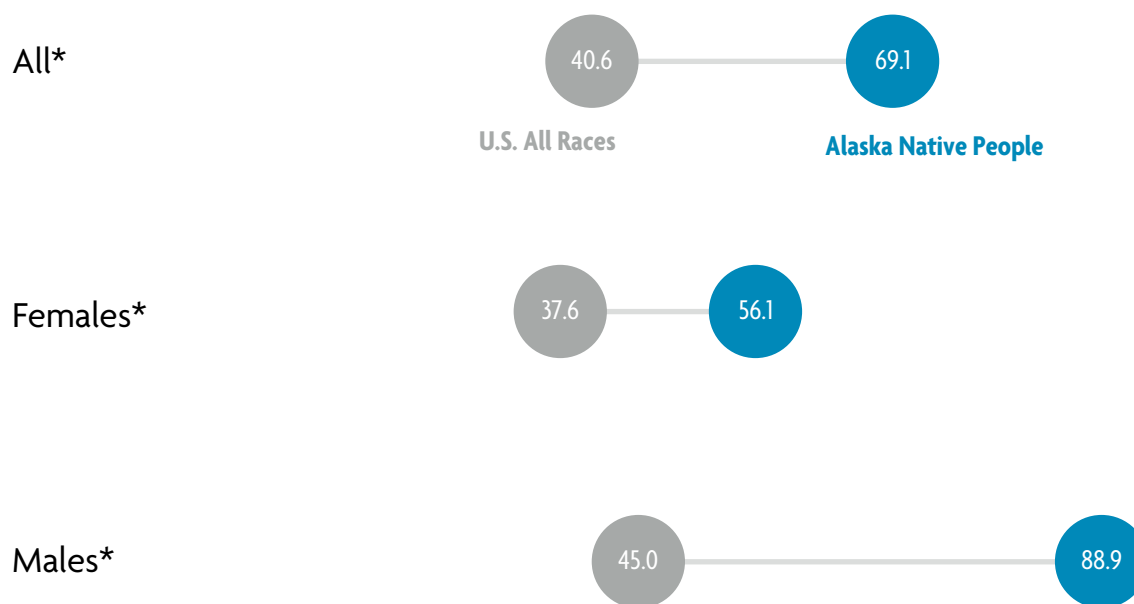
	Alaska Native People			U.S. All Races			Rate Ratio	95% CI
	Count	% Total	Rate <sup>1</sup>	Count	% Total	Rate <sup>1</sup>		
<b>All</b>	<b>277</b>	<b>5.1%</b>	<b>69.1</b>	<b>776,425</b>	<b>5.7%</b>	<b>40.6</b>	<b>1.7</b>	<b>1.51 - 1.92</b>
Female	129	5.3%	<b>56.1</b>	411,171	6.1%	<b>37.6</b>	<b>1.5</b>	1.26 - 1.77
Male	148	5.0%	<b>88.9</b>	365,254	5.2%	<b>45.0</b>	<b>2.0</b>	1.68 - 2.32

<sup>1</sup>Age-adjusted mortality rate per 100,000 people, standardized to U.S. 2000 population

**Figure 162. COPD Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

Age-Adjusted Rate per 100,000 People



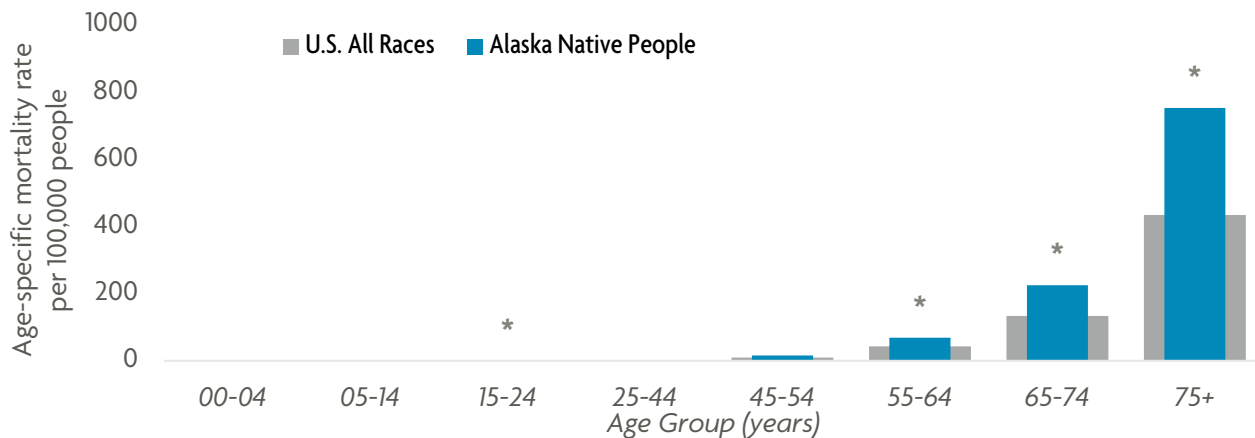
\*significant difference,  $p < 0.05$



### COPD Age-Specific Mortality Rates

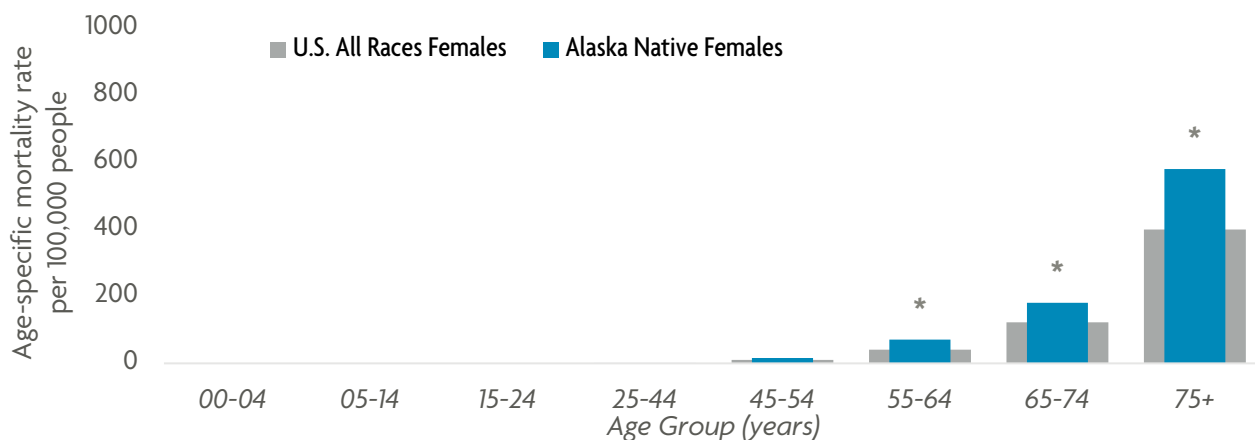
**Figure 163a. Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



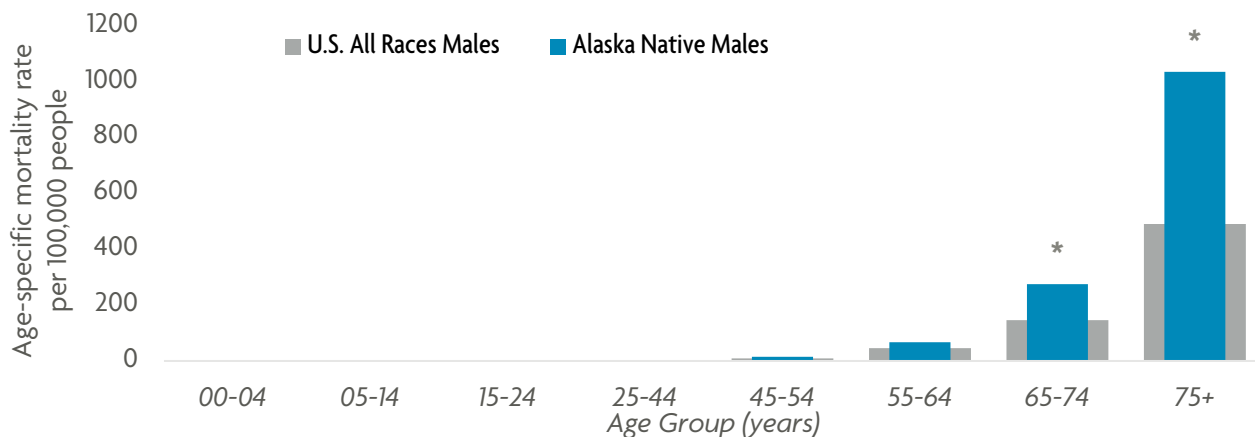
**Figure 163b. Alaska Native Females Compared to U.S. All Races Females, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 163c. Alaska Native Males Compared to U.S. All Races Males, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

**Table 33. Age-Specific COPD Mortality Rates among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

<b>All</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	-	-	-	-	15.6	68.9	225.0	753.6
U.S. All Races	0.3	0.4	0.4	1.2	9.8	43.2	133.5	434.6
<b>Rate Ratio</b>	-	-	-	-	<b>1.6</b>	<b>1.6</b>	<b>1.7</b>	<b>1.7</b>
<b>Females</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	-	-	-	-	16.0	70.7	180.5	579.5
U.S. All Races	0.2	0.3	0.3	1.3	10.4	40.7	122.5	398.9
<b>Rate Ratio</b>	-	-	-	-	<b>1.5</b>	<b>1.7</b>	<b>1.5</b>	<b>1.5</b>
<b>Males</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	-	-	-	-	15.2	67.0	274.7	1034.2
U.S. All Races	0.4	0.4	0.5	1.3	9.1	45.8	146.1	490.2
<b>Rate Ratio</b>	-	-	-	-	<b>1.7</b>	<b>1.5</b>	<b>1.9</b>	<b>2.1</b>

- Rate not reported for < 5 cases

**Table 34. Trends in COPD Mortality among Alaska Native People Compared to U.S. All Races, 1980-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

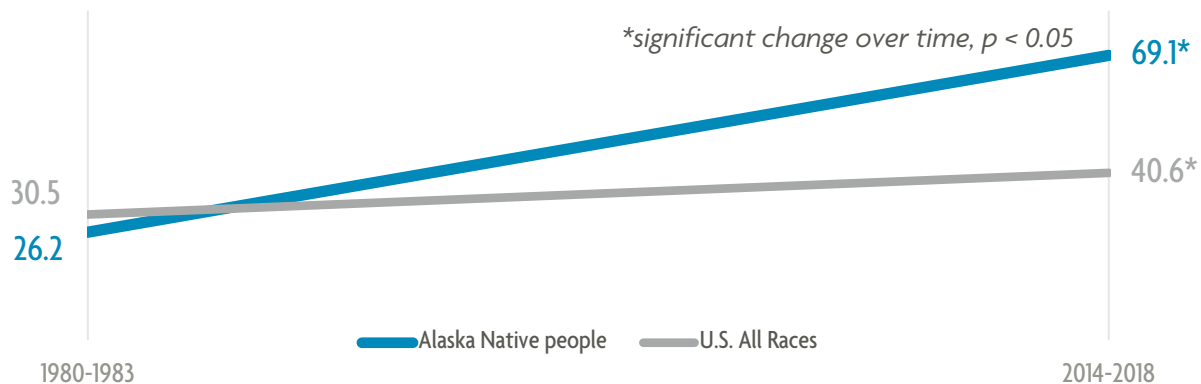
	<b>Alaska Native People</b>	<b>U.S. All Races</b>	<b>Rate Ratio</b>	
1980-1983	26.2	30.5	<b>0.9</b>	
1984-1988	44.5	35.8	<b>1.2</b>	*
1989-1993	58.4	39.2	<b>1.5</b>	*
1994-1998	68.3	42.2	<b>1.6</b>	*
1999-2003	63.0	43.6	<b>1.4</b>	*
2004-2008	57.3	43.3	<b>1.3</b>	*
2009-2013	65.7	45.7	<b>1.4</b>	*
2014-2018	69.1	40.6	<b>1.7</b>	*
<b>% Change</b>	<b>163.8%</b>	<b>33.1%</b>		

\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

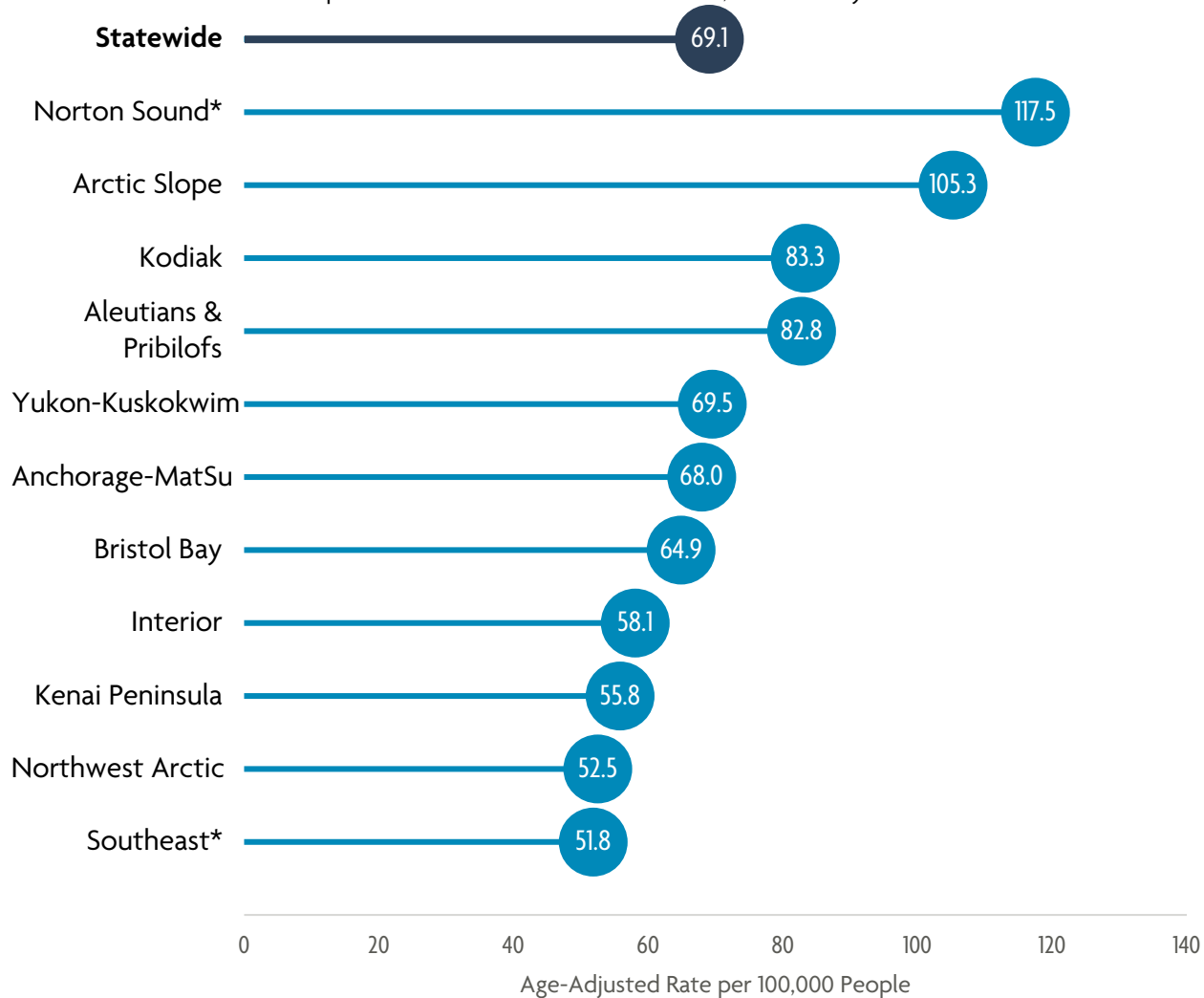
**Figure 164. Overall Change in COPD Mortality Rates, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 165. COPD Mortality Rates by Region, Alaska Native People, 2014 -2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

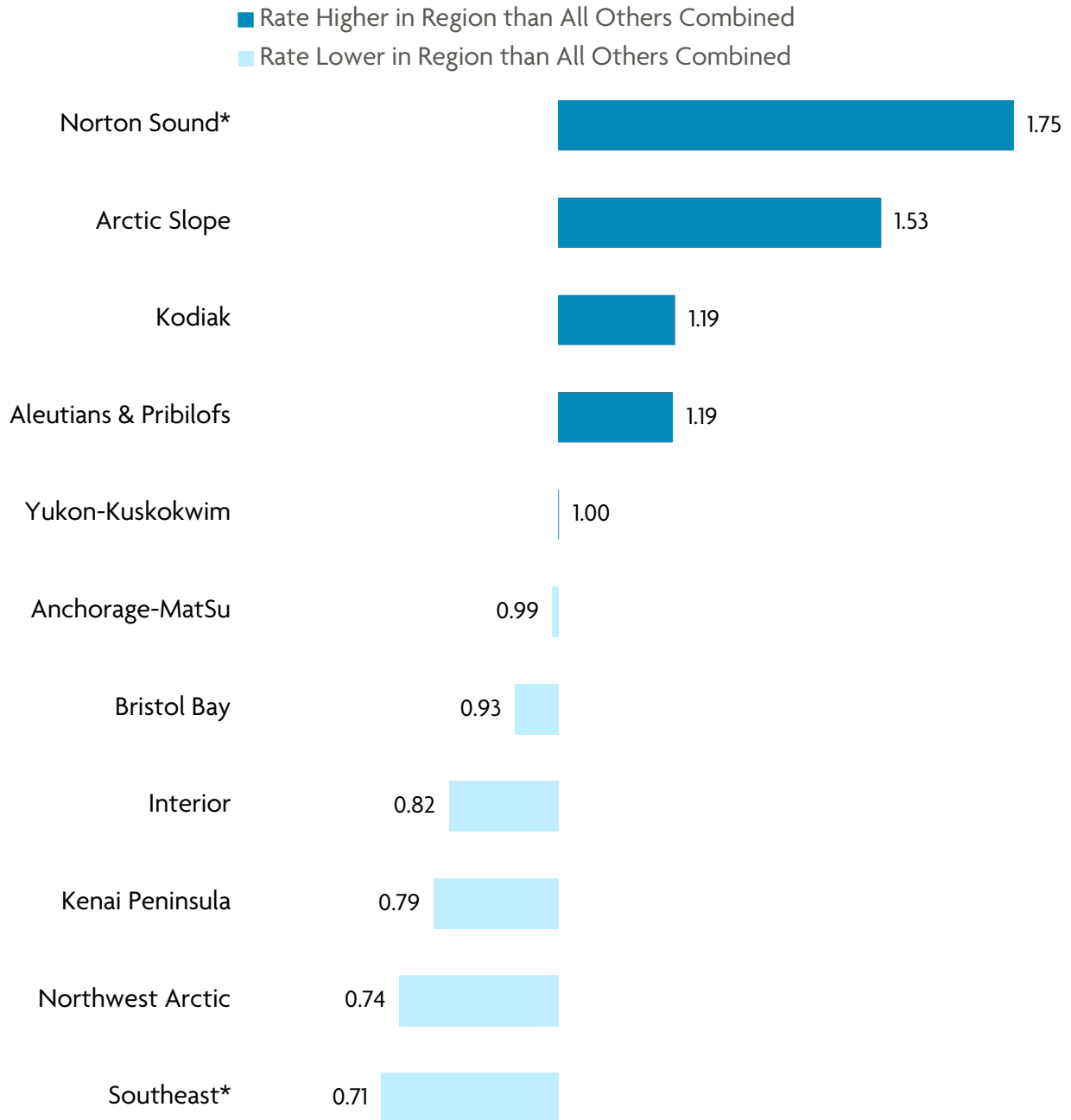


\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

**Figure 166. COPD Mortality Rate Ratio Comparison between Regions among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$

## Detailed Leading Causes of Death

### 6. Chronic Liver Disease Mortality

Chronic liver disease (includes cirrhosis) was the sixth leading cause of death among Alaska Native people, both sexes combined. It ranked fourth among Alaska Native females and ninth among Alaska Native males. Chronic liver disease accounted for 3.8% (n=203) of all deaths among Alaska Native people during 2014-2018. The chronic liver disease mortality rate for Alaska Native people, both sexes combined, was a significant 3.1 times the U.S. all races rate. The chronic liver disease mortality rate for Alaska Native females was a significant 6.1 times the U.S. all races female rate, and for Alaska Native males was a significant 1.5 times the U.S. all races male rate.

Chronic liver disease accounted for 6.3% (n=143) of excess deaths among Alaska Native people, both sexes combined. Among Alaska Native females, 11.6% (n=119) of all excess deaths and 2% (n=24) among Alaska Native males were attributed to chronic liver disease.

Among Alaska Native people, both sexes combined, rates were significantly higher than U.S. all races rates for ages 25 through 74. Rate ratios between the two populations decreased with increasing age, becoming non-significant for the 75 and older age groups. Alaska Native females had significantly higher rates for age groups between 25 to 74 years. Alaska Native males had a significantly higher rate only for the 25 to 54 age group.

The Anchorage-MatSu (RR=1.8) service region had significantly higher chronic liver disease mortality rate than the rest of the state combined. The Yukon-Kuskokwim (RR=0.4) service region had a significantly lower chronic liver disease mortality rate than the rest of the state combined.

Chronic liver disease mortality rates for Alaska Native people increased significantly (19.3%) between 1980-1983 and 2014-2018. Rates declined 16.3% among U.S. all races during this same time period. Caution is warranted when interpreting the trend, as coding and policy changes have had an effect on the frequency that these ICD codes are used on death certificates within the state of Alaska. See further details in Appendix A - Methods.

Only deaths with an underlying cause of chronic liver disease are included in this analysis. In other words, deaths with a contributing cause of chronic liver disease are not included here.

## DETAILED LEADING CAUSES OF DEATH

**Table 35. Chronic Liver Disease Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

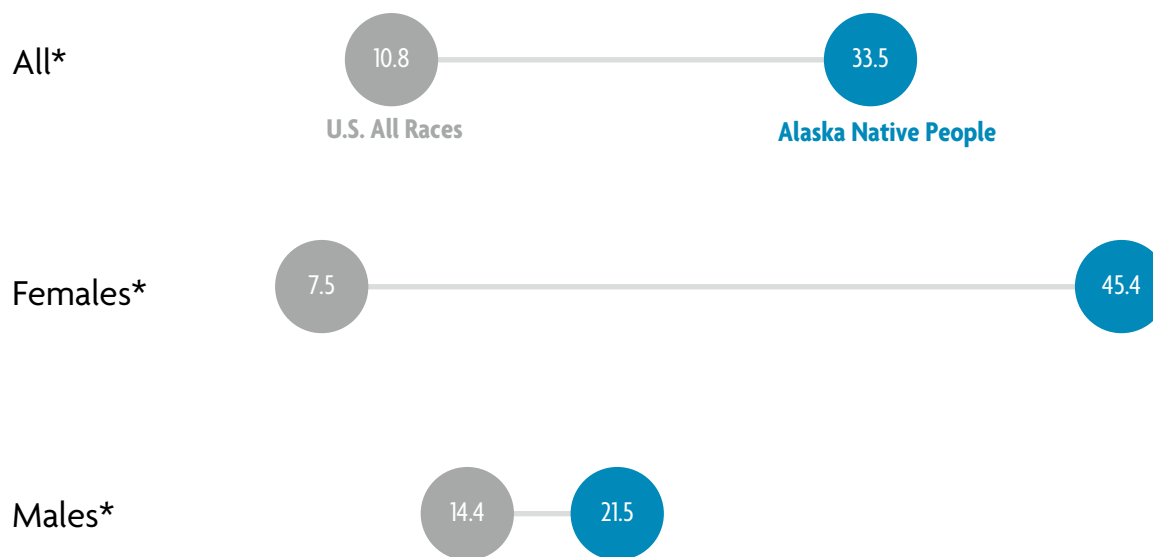
	Alaska Native People			U.S. All Races			Rate Ratio	95% CI
	Count	% Total	Rate <sup>1</sup>	Count	% Total	Rate <sup>1</sup>		
<b>All</b>	<b>203</b>	<b>3.8%</b>	<b>33.5</b>	<b>203,622</b>	<b>1.5%</b>	<b>10.8</b>	<b>3.1</b>	<b>2.71 - 3.56</b>
Female	140	5.8%	<b>45.4</b>	73,876	1.1%	<b>7.5</b>	<b>6.1</b>	5.13 - 7.14
Male	63	2.1%	<b>21.5</b>	129,746	1.8%	<b>14.4</b>	<b>1.5</b>	1.16 - 1.91

<sup>1</sup>Age-adjusted mortality rate per 100,000 people, standardized to U.S. 2000 population

**Figure 167. Chronic Liver Disease Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

Age-Adjusted Rate per 100,000 People

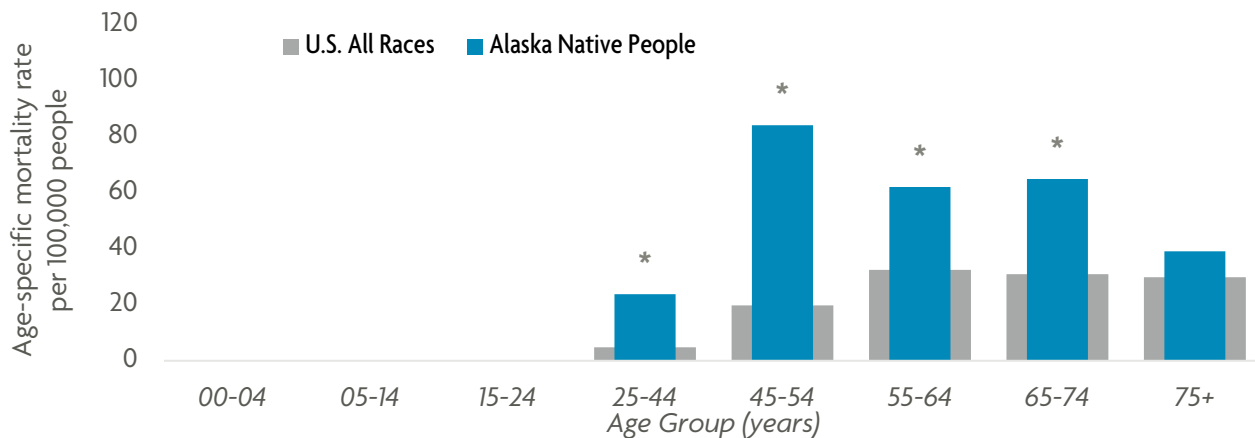


\*significant difference,  $p < 0.05$

### Chronic Liver Disease Age-Specific Mortality Rates

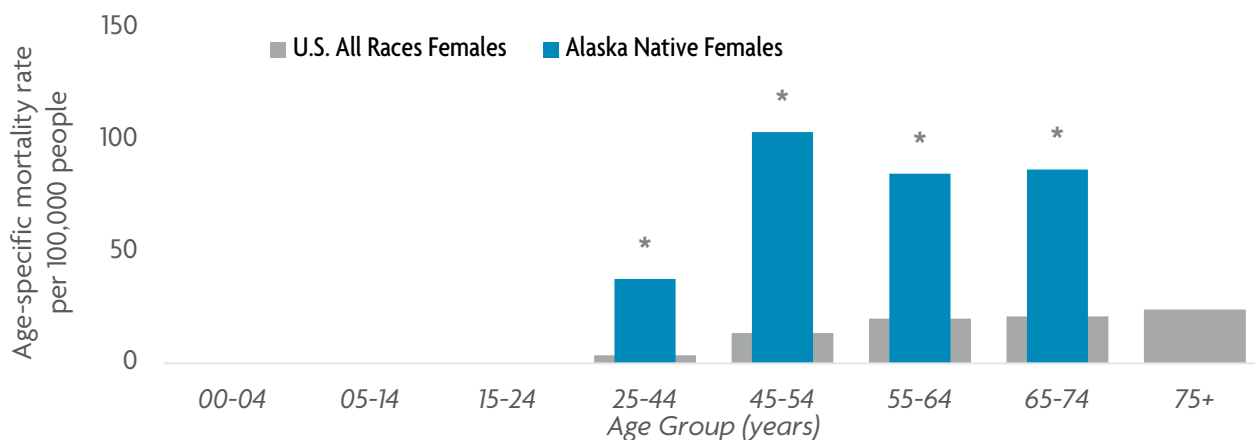
**Figure 168a. Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



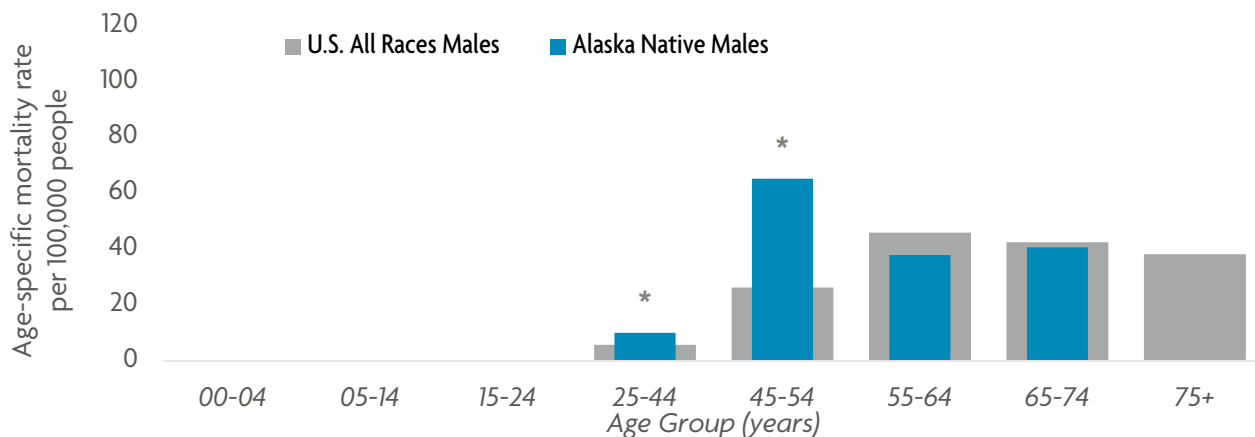
**Figure 168b. Alaska Native Females Compared to U.S. All Races Females, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 168c. Alaska Native Males Compared to U.S. All Races Males, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

**Table 36. Age-Specific Chronic Liver Disease Mortality Rates among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

All								
Age Group (years)	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Native people	-	-	-	23.8	84.3	62.2	65.1	39.2
U.S. All Races	-	-	0.1	4.8	19.8	32.5	31.0	29.9
<b>Rate Ratio</b>	-	-	-	<b>5.0</b>	<b>4.3</b>	<b>1.9</b>	<b>2.1</b>	<b>1.3</b>
Females								
Age Group (years)	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Native people	-	-	-	37.8	103.5	84.8	86.7	-
U.S. All Races	-	-	0.1	3.6	13.6	20.0	21.0	24.1
<b>Rate Ratio</b>	-	-	-	<b>10.5</b>	<b>7.6</b>	<b>4.2</b>	<b>4.1</b>	-
Males								
Age Group (years)	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Native people	-	-	-	10.1	65.2	37.9	40.6	-
U.S. All Races	-	-	0.1	5.8	26.3	45.9	42.5	38.2
<b>Rate Ratio</b>	-	-	-	<b>1.7</b>	<b>2.5</b>	<b>0.8</b>	<b>1.0</b>	-

- Rate not reported for < 5 cases

**Table 37. Trends in Chronic Liver Disease Mortality among Alaska Native People Compared to U.S. All Races, 1980-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

	Alaska Native People	U.S. All Races	Rate Ratio	
1980-1983	28.1	12.9	2.2	*
1984-1988	20.4	11.3	1.8	*
1989-1993	26.8	10.3	2.6	*
1994-1998	18.3	9.6	1.9	*
1999-2003	19.4	9.5	2.0	*
2004-2008	18.0	9.5	1.9	*
2009-2013	24.0	10.8	2.2	*
2014-2018	33.5	10.8	3.1	*
<b>% Change</b>	<b>19.3%</b>	<b>-16.3%</b>		

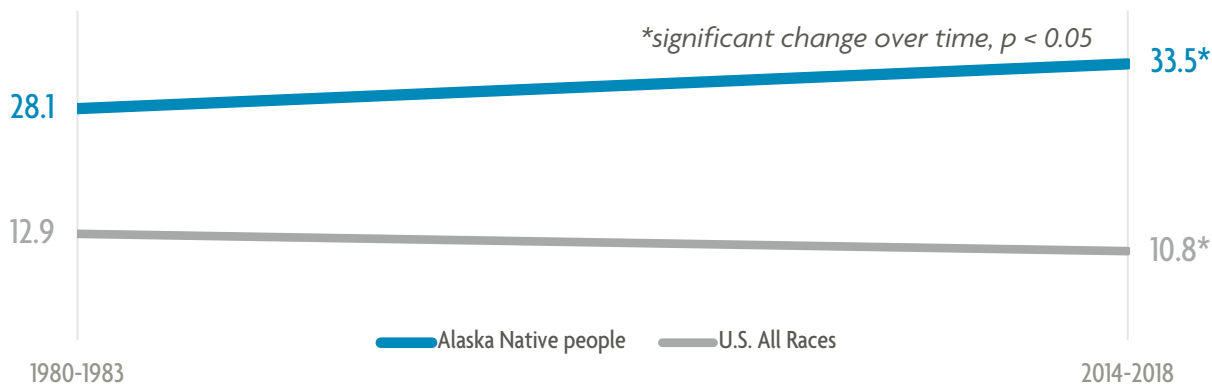
\*significant difference,  $p < 0.05$



## DETAILED LEADING CAUSES OF DEATH

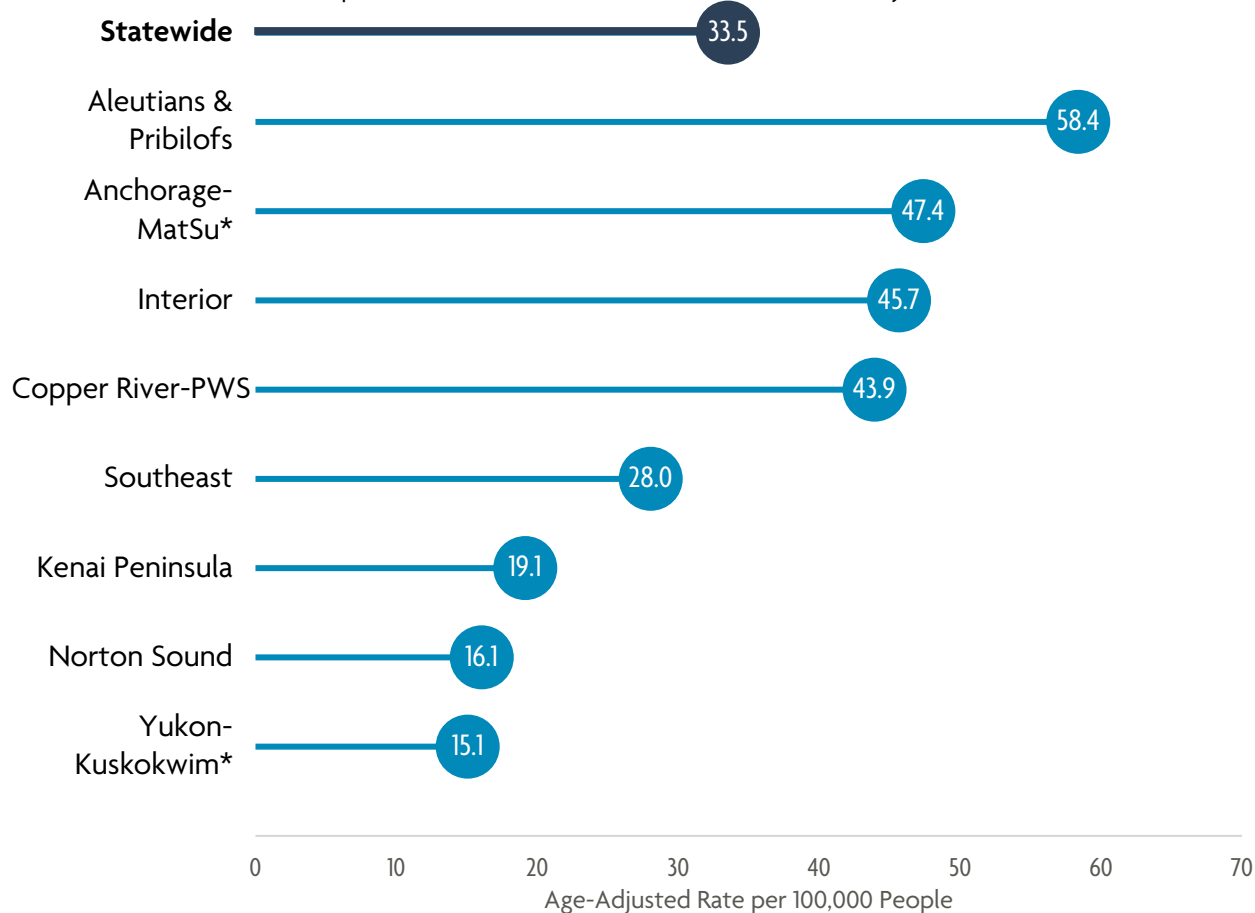
**Figure 169. Overall Change in Chronic Liver Disease Mortality Rates, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 170. Chronic Liver Disease Mortality Rates by Region, Alaska Native People, 2014 - 2018**

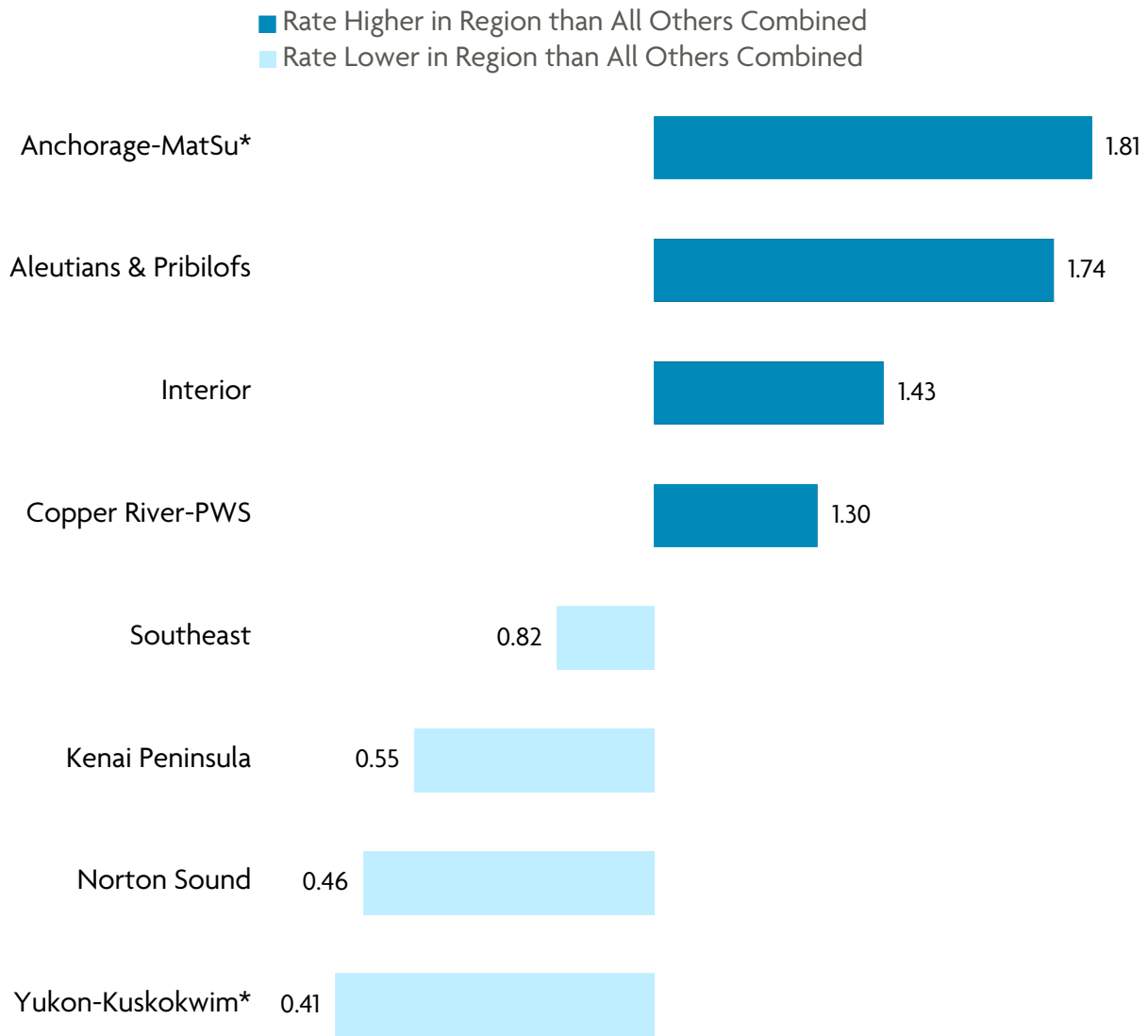
Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



## DETAILED LEADING CAUSES OF DEATH

**Figure 171. Chronic Liver Disease Mortality Rate Ratio Comparison between Regions among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



*\*significant difference,  $p < 0.05$*

## Detailed Leading Causes of Death

### 7. Cerebrovascular Disease Mortality

Cerebrovascular disease was the seventh leading cause of death among Alaska Native people, both sexes combined. Cerebrovascular disease mortality ranked sixth among Alaska Native females and Alaska Native males respectively. Cerebrovascular disease accounted for 3.7% (n=200) of all deaths. Alaska Native people, both sexes combined, had a cerebrovascular disease mortality rate 1.4 times the U.S. all races rate. The mortality rate for Alaska Native females was a significant 1.4 times the rate for U.S. all races females. The mortality rate for Alaska Native males was 1.3 times the U.S. all races male rate.

Age-specific cerebrovascular disease mortality rates were significantly higher for Alaska Native people, both sexes combined, compared to U.S. all races among those 45-54 and 65 years of age or older. Alaska Native females had significantly higher cerebrovascular disease mortality rates as compared to U.S. all races females for the age groups 45-54 years and 75 and older. Mortality rates due to cerebrovascular disease were significantly higher for Alaska Native males compared to U.S. all races males in the 65–74 year old age group.

The Yukon-Kuskokwim (RR=1.5) service region had a significantly higher cerebrovascular disease mortality rate than the rest of the state combined. The Southeast (RR=0.6) and the Interior (RR=0.6) service regions had significantly lower mortality rates when compared to the rest of the state.

Alaska Native cerebrovascular disease mortality rates decreased 19.5% between the 1980-1983 and 2014-2018. Cerebrovascular disease mortality rates decreased 56.4% among U.S. all races during this same time period.

## DETAILED LEADING CAUSES OF DEATH

**Table 38. Cerebrovascular Disease Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

	Alaska Native People			U.S. All Races			Rate Ratio	95% CI
	Count	% Total	Rate <sup>1</sup>	Count	% Total	Rate <sup>1</sup>		
<b>All</b>	<b>200</b>	<b>3.7%</b>	<b>51.9</b>	<b>709,761</b>	<b>5.2%</b>	<b>37.2</b>	<b>1.4</b>	<b>1.22 - 1.60</b>
Female	110	4.5%	51.5	412,158	6.1%	36.3	1.4	1.18 - 1.71
Male	90	3.0%	50.7	297,603	4.2%	37.6	1.3	1.10 - 1.66

<sup>1</sup>Age-adjusted mortality rate per 100,000 people, standardized to U.S. 2000 population

**Figure 172. Cerebrovascular Disease Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

Age-Adjusted Rate per 100,000 People

All\*



Females\*



Males\*

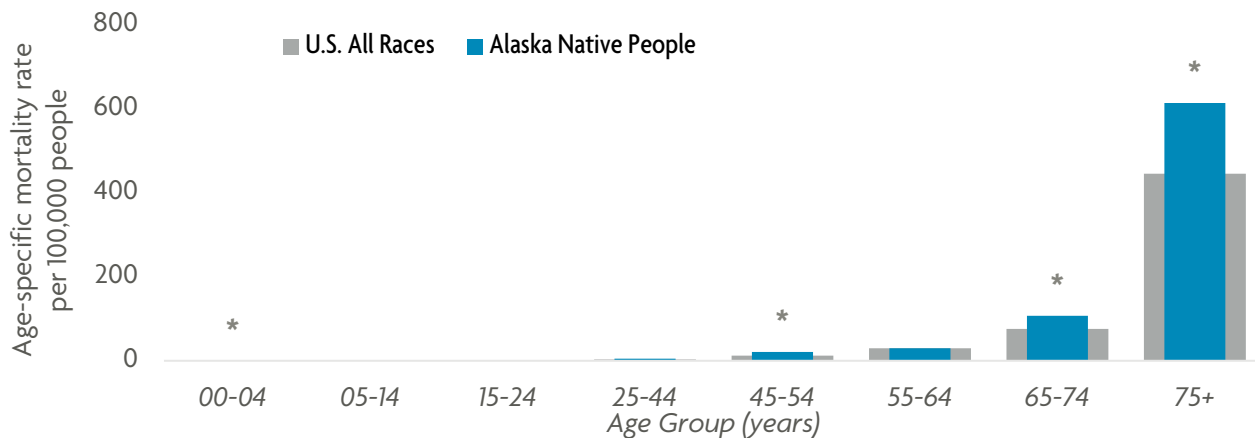


\*significant difference,  $p < 0.05$

### Cerebrovascular Disease Age-Specific Mortality Rates

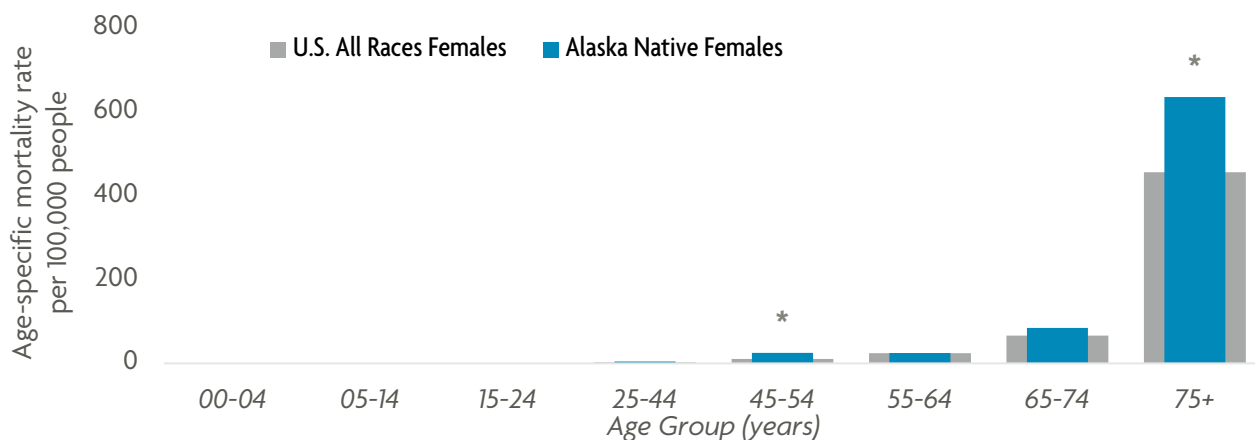
**Figure 173a. Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



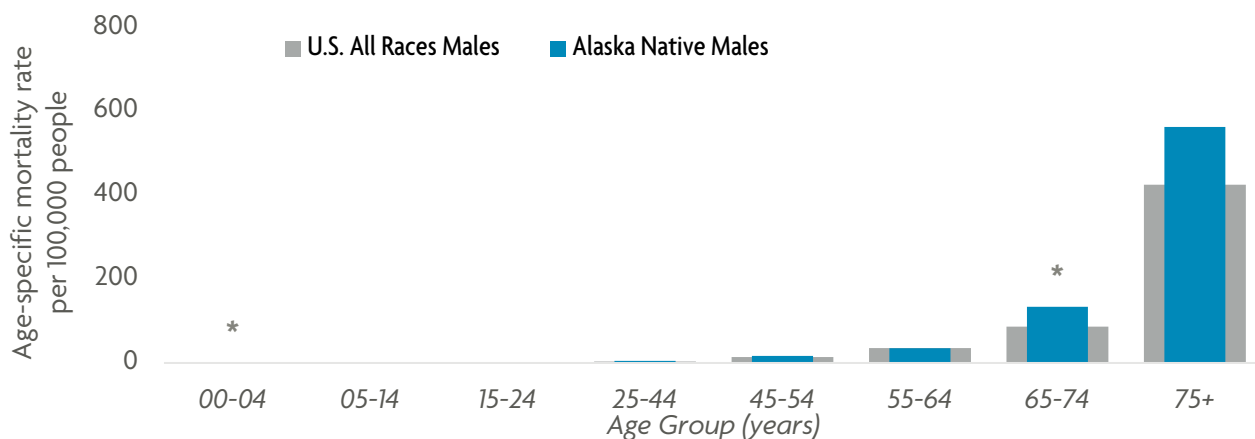
**Figure 173b. Alaska Native Females Compared to U.S. All Races Females, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 173c. Alaska Native Males Compared to U.S. All Races Males, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

**Table 39. Age-Specific Cerebrovascular Disease Mortality Rates among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

All								
Age Group (years)	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Native people	-	-	-	4.8	20.9	29.7	107.3	615.0
U.S. All Races	0.8	0.2	0.4	3.0	12.3	29.8	75.9	446.2
<b>Rate Ratio</b>	-	-	-	<b>1.6</b>	<b>1.7</b>	<b>1.0</b>	<b>1.4</b>	<b>1.4</b>
Females								
Age Group (years)	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Native people	-	-	-	4.5	25.0	24.6	84.7	635.4
U.S. All Races	0.7	0.2	0.3	2.6	10.6	24.3	66.4	455.7
<b>Rate Ratio</b>	-	-	-	<b>1.7</b>	<b>2.4</b>	<b>1.0</b>	<b>1.3</b>	<b>1.4</b>
Males								
Age Group (years)	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Native people	-	-	-	5.1	16.8	35.2	133.9	563.0
U.S. All Races	0.8	0.2	0.4	3.4	14.1	35.7	86.7	425.2
<b>Rate Ratio</b>	-	-	-	<b>1.5</b>	<b>1.2</b>	<b>1.0</b>	<b>1.5</b>	<b>1.3</b>

- Rate not reported for < 5 cases

**Table 40. Trends in Cerebrovascular Disease Mortality among Alaska Native People Compared to U.S. All Races, 1980-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

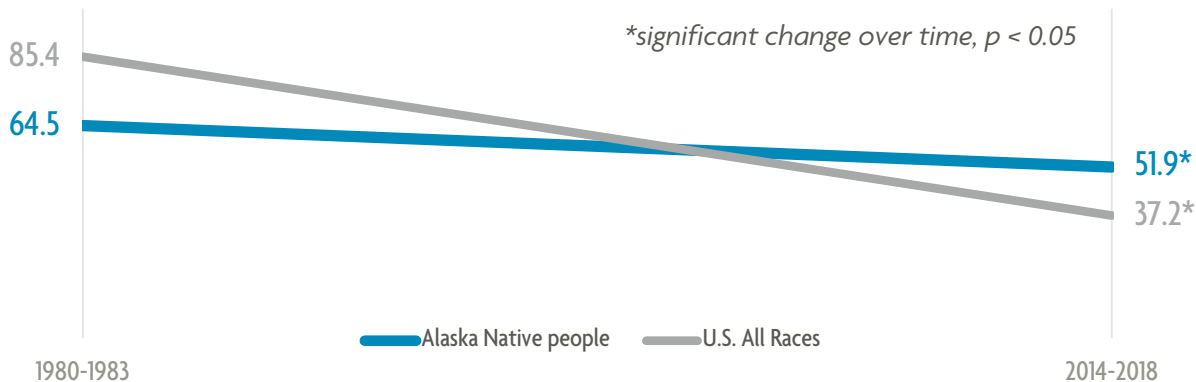
	Alaska Native People	U.S. All Races	Rate Ratio	
1980-1983	64.5	85.4	<b>0.8</b>	*
1984-1988	65.1	72.0	<b>0.9</b>	
1989-1993	67.5	61.5	<b>1.1</b>	
1994-1998	84.1	59.6	<b>1.4</b>	*
1999-2003	66.5	57.5	<b>1.2</b>	*
2004-2008	56.7	47.0	<b>1.2</b>	*
2009-2013	54.7	41.4	<b>1.3</b>	*
2014-2018	51.9	37.2	<b>1.4</b>	*
<b>% Change</b>	<b>-19.5%</b>	<b>-56.4%</b>		

\*significant difference,  $p < 0.05$

DETAILED LEADING CAUSES OF DEATH

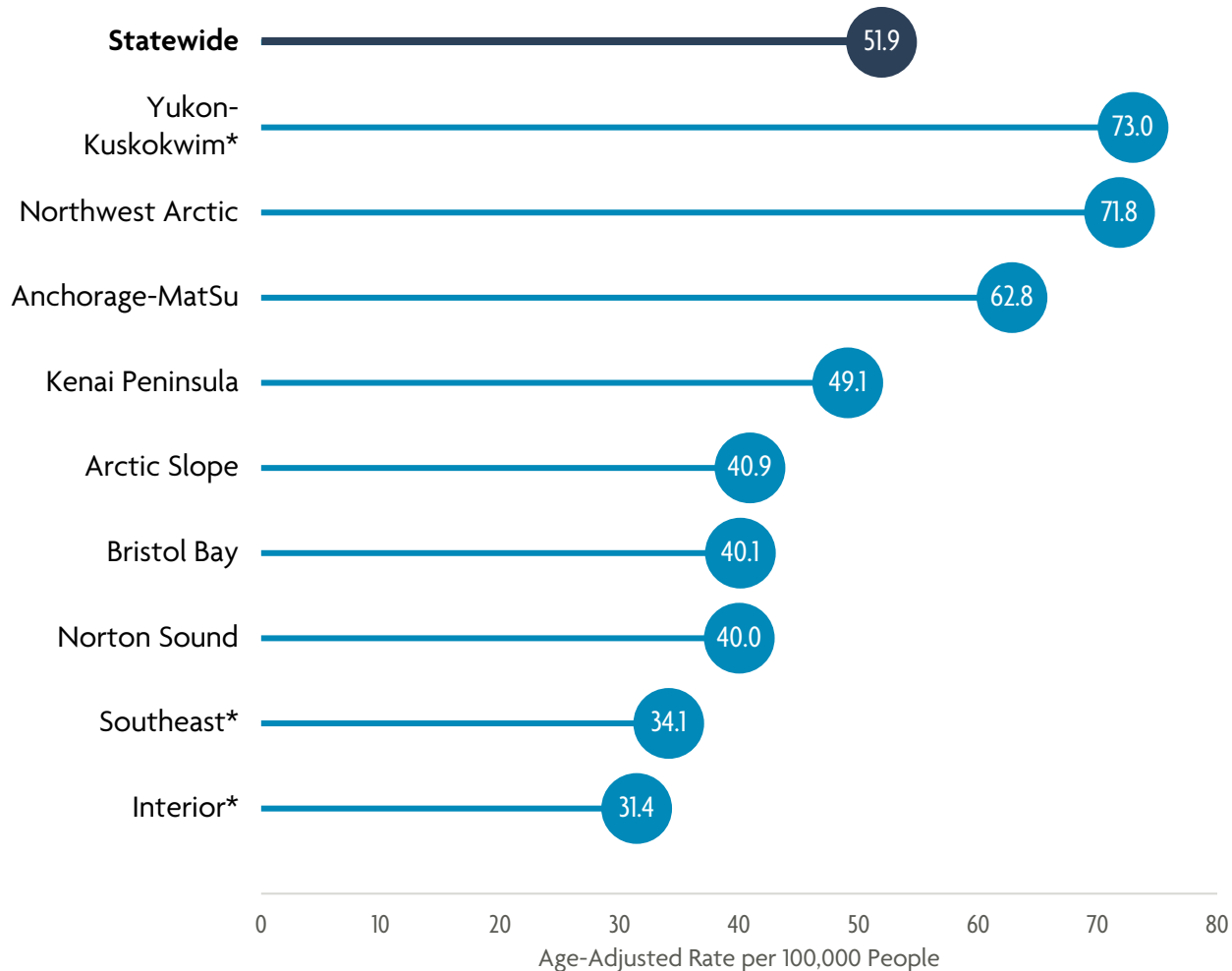
**Figure 174. Overall Change in Cerebrovascular Disease Mortality Rates, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 175. Cerebrovascular Disease Mortality Rates by Region, Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

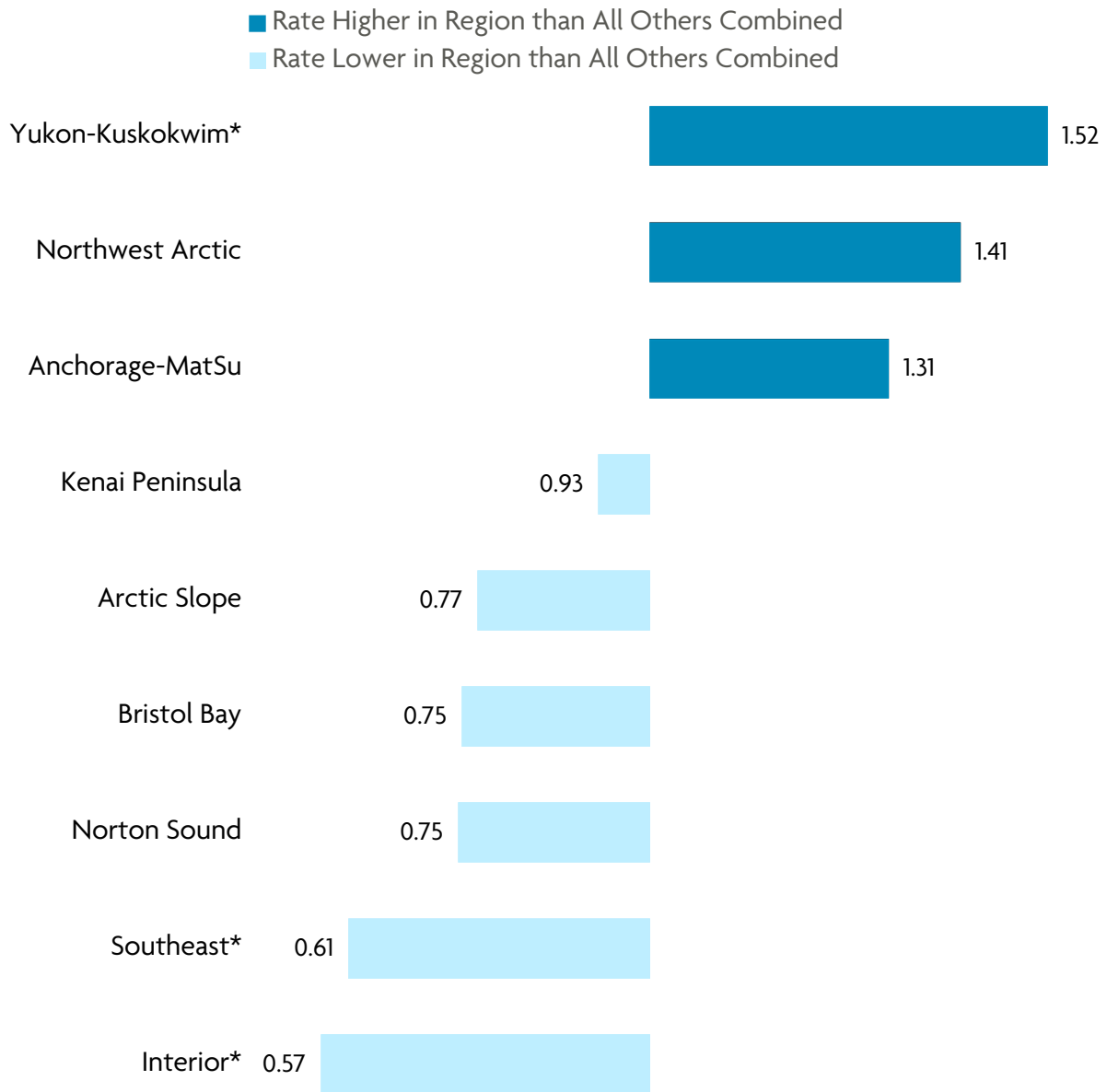


\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

**Figure 176. Cerebrovascular Disease Mortality Rate Ratio Comparison between Regions among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$



## Detailed Leading Causes of Death

### 8. Alcohol Abuse Mortality

Alcohol abuse was the eighth leading cause of death among Alaska Native people, both sexes combined. It ranked ninth among Alaska Native females and seventh among Alaska Native males. During the 2014-2018 time period, alcohol abuse accounted for 2.3% (n=73) of all Alaska Native deaths. The alcohol abuse mortality rate for Alaska Native people, both sexes combined, was 8.0 times the U.S. all races rate. Alaska Native females had an alcohol abuse mortality rate 12.5 times the U.S. all races female rate. Alaska Native males had an alcohol abuse mortality rate 6.4 times the rate for U.S. all races males.

Alcohol abuse accounted for 4.9% (n=111) of all excess deaths among Alaska Native people, both sexes combined. Among Alaska Native females, alcohol abuse accounted for 4.4% (n=45) of all excess deaths. Among Alaska Native males, alcohol abuse accounted for 5.5% (n=67) of excess deaths.

Alcohol abuse mortality was the seventh leading cause of years of potential life lost before 75 years (2,635) for Alaska Native people, both sexes combined. Alcohol abuse mortality was the seventh leading cause of years of potential life lost before 75 years for Alaska Native females.

Among Alaska Native people, both sexes combined, age-specific alcohol abuse mortality rates were a significant 4.8 to 14.6 times the U.S. all races rate for age groups 25 to 75+ years old. Alaska Native females had a significant 9.1 to 13.3 times the U.S. all races female mortality rate in the 25 to 74 year age groups. Rate ratios for Alaska Native males were a significant 3.0 to 9.6 times the U.S. all races male rate in the 25 to 75+ year age groups.

The Anchorage-MatSu (RR=1.4) service region had significantly higher alcohol abuse mortality rate than the rest of the state.

Alaska Native alcohol abuse rates declined 30.3% between 1980-1983 and 2014-2018. U.S. all races did not change significantly between 1980-1983 and 2014-2018. Caution is warranted when interpreting the trend, as coding and policy changes have had an effect on the frequency that these ICD codes are used on death certificates within the state of Alaska. See further details in Appendix A - Methods.

Only deaths with an underlying cause of alcohol abuse (F10) are included in this analysis. In other words, deaths with a contributing cause of alcohol abuse are not included in this analysis. A special analysis based on the CDC's Alcohol Related Disease Impact (ARDI) coding framework is included in the chapter Alcohol-Related Mortality.

## DETAILED LEADING CAUSES OF DEATH

**Table 41. Alcohol Abuse Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

	Alaska Native People			U.S. All Races			Rate Ratio	95% CI
	Count	% Total	Rate <sup>1</sup>	Count	% Total	Rate <sup>1</sup>		
<b>All</b>	<b>126</b>	<b>2.3%</b>	<b>20.1</b>	<b>46,566</b>	<b>0.3%</b>	<b>2.5</b>	<b>8.0</b>	<b>6.74 - 9.56</b>
Female	48	2.0%	<b>15.0</b>	10,933	0.2%	<b>1.2</b>	<b>12.5</b>	9.39- 16.56
Male	78	2.6%	<b>25.6</b>	36,633	0.5%	<b>4.0</b>	<b>6.4</b>	5.12 - 7.98

<sup>1</sup>Age-adjusted mortality rate per 100,000 people, standardized to U.S. 2000 population

**Figure 177. Alcohol Abuse Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

Age-Adjusted Rate per 100,000 People

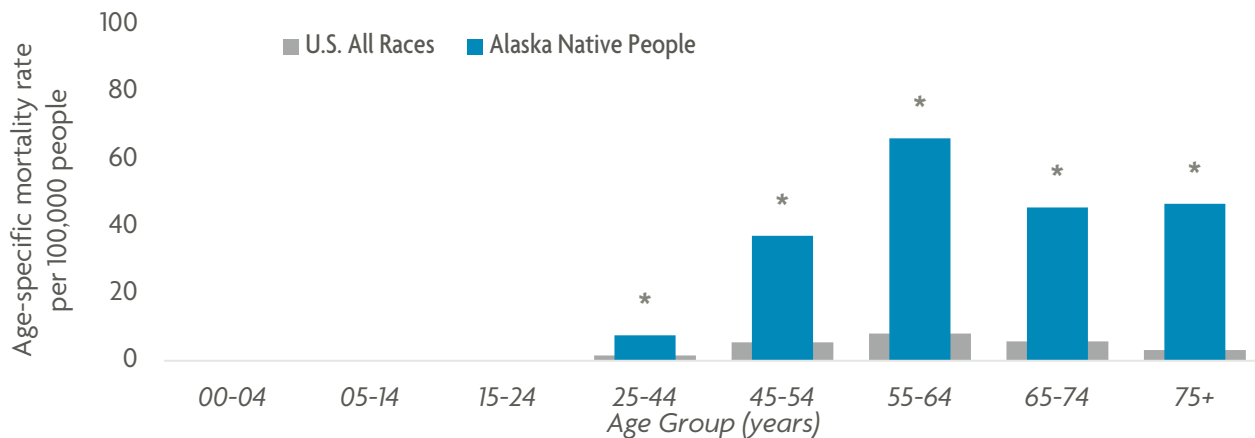


\*significant difference,  $p < 0.05$

### Alcohol Abuse Age-Specific Mortality Rates

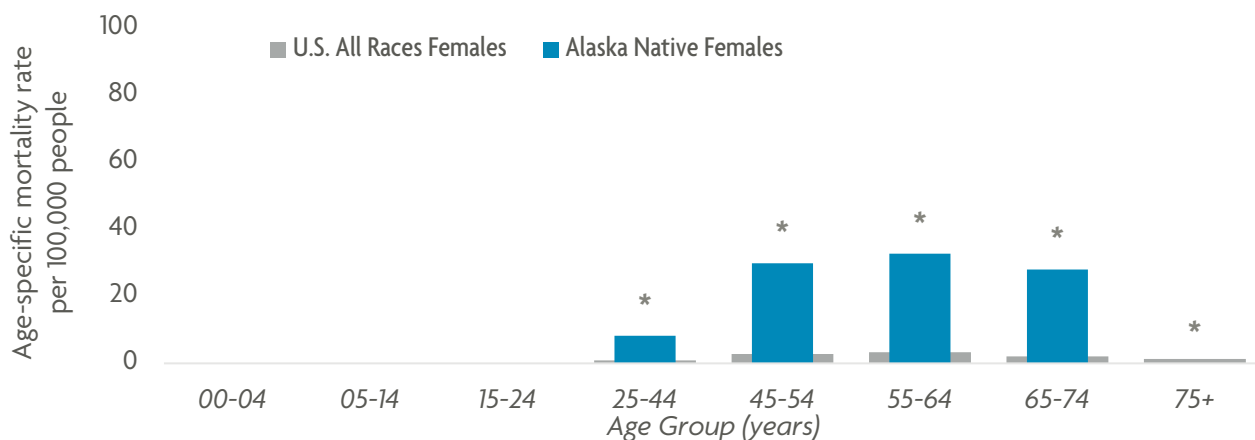
**Figure 178a. Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



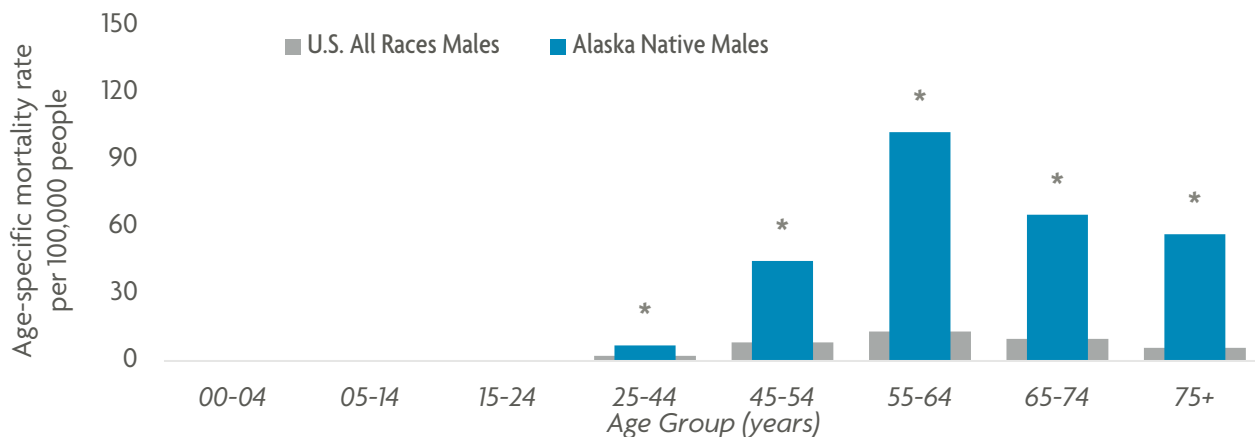
**Figure 178b. Alaska Native Females Compared to U.S. All Races Females, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 178c. Alaska Native Males Compared to U.S. All Races Males, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

**Table 42. Age-Specific Alcohol Abuse Mortality Rates among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

<b>All</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	-	-	-	7.6	37.3	66.3	45.7	46.8
U.S. All Races	-	-	-	1.6	5.5	8.1	5.8	3.2
<b>Rate Ratio</b>	-	-	-	<b>4.7</b>	<b>6.8</b>	<b>8.2</b>	<b>7.9</b>	<b>14.6</b>
<b>Females</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	-	-	-	8.2	29.8	32.7	28.0	-
U.S. All Races	-	-	-	0.9	2.8	3.3	2.1	1.3
<b>Rate Ratio</b>	-	-	-	<b>9.1</b>	<b>10.7</b>	<b>9.9</b>	<b>13.3</b>	-
<b>Males</b>								
<b>Age Group (years)</b>	<b>0-4</b>	<b>5-14</b>	<b>15-24</b>	<b>25-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
Alaska Native people	-	-	-	6.9	44.7	102.3	65.4	56.7
U.S. All Races	-	-	-	2.3	8.3	13.2	9.9	5.9
<b>Rate Ratio</b>	-	-	-	<b>3.0</b>	<b>5.4</b>	<b>7.8</b>	<b>6.6</b>	<b>9.6</b>

**Table 43. Trends in Alcohol Abuse Mortality among Alaska Native People Compared to U.S. All Races, 1980-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

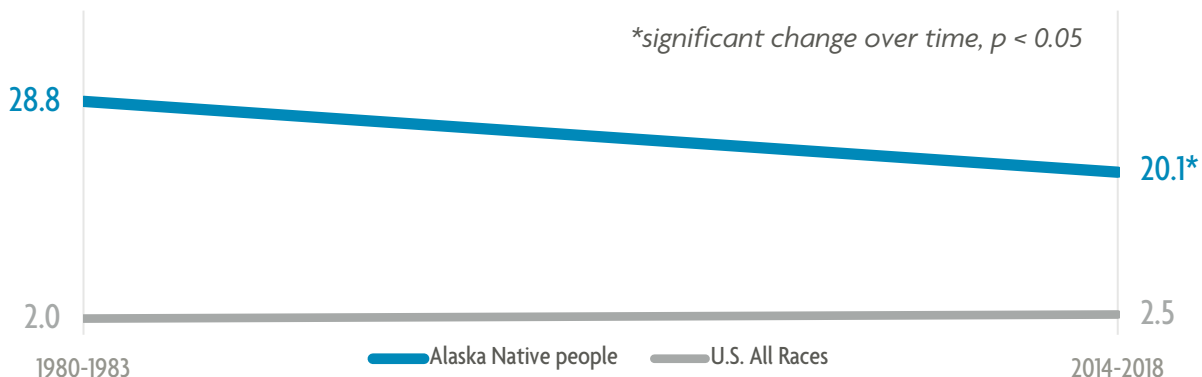
	<b>Alaska Native People</b>	<b>U.S. All Races</b>	<b>Rate Ratio</b>	
1980-1983	28.8	2.0	<b>14.4</b>	*
1984-1988	23.2	1.9	<b>12.2</b>	*
1989-1993	20.6	2.2	<b>9.4</b>	*
1994-1998	31.7	2.3	<b>13.8</b>	*
1999-2003	40.9	2.3	<b>17.8</b>	*
2004-2008	38.7	2.3	<b>16.8</b>	*
2009-2013	14.2	2.2	<b>6.5</b>	*
2014-2018	20.1	2.5	<b>8.0</b>	*
<b>% Change</b>	<b>-30.3%</b>	<b>25.0%</b>		

\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

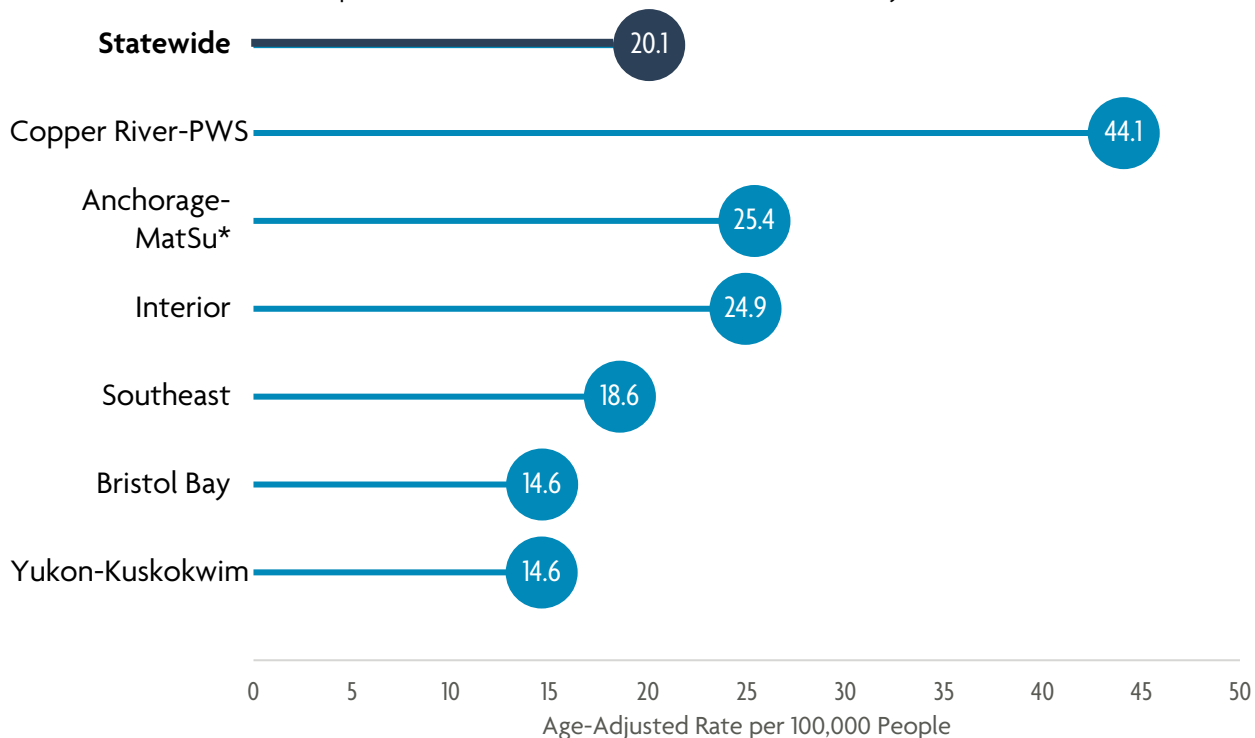
**Figure 179. Overall Change in Alcohol Abuse Mortality Rates, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 180. Alcohol Abuse Mortality Rates by Region, Alaska Native People, 2014 -2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

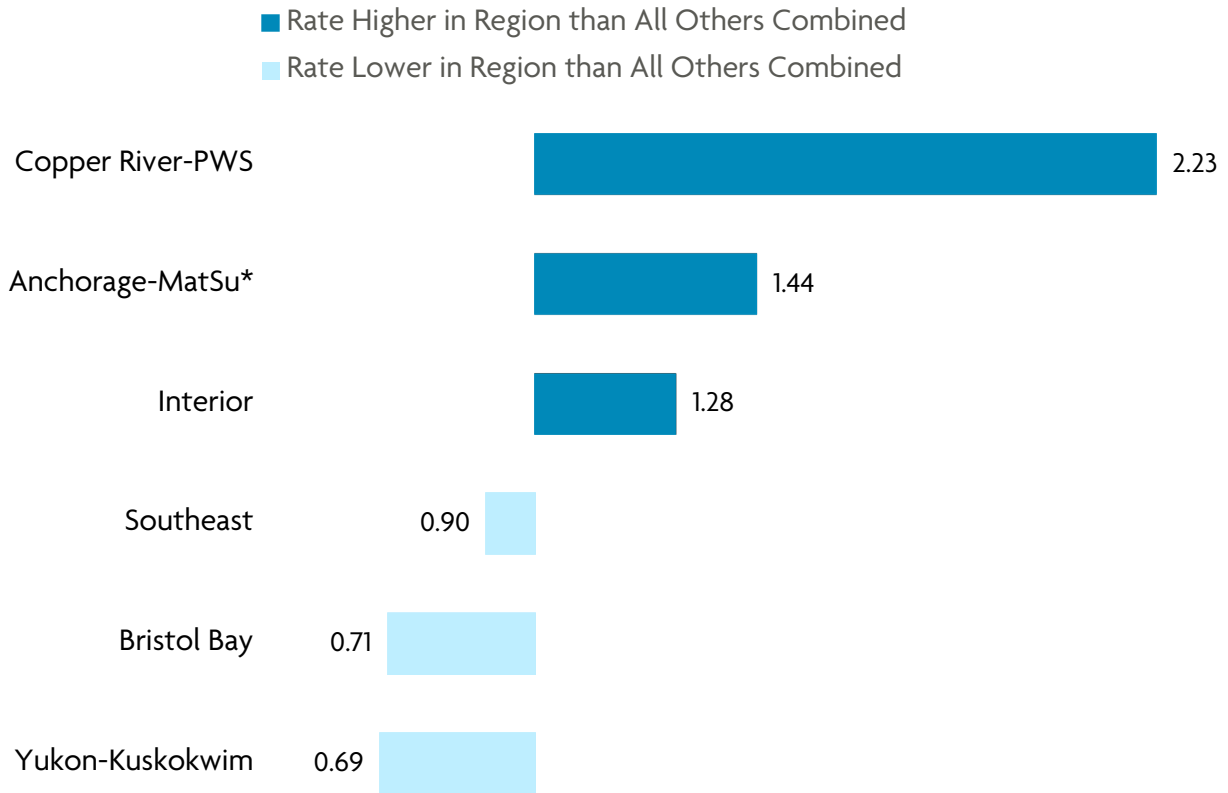


*\*significant difference,  $p < 0.05$*

## DETAILED LEADING CAUSES OF DEATH

**Figure 181. Alcohol Abuse Mortality Rate Ratio Comparison between Regions among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$

## Detailed Leading Causes of Death

### 9. Homicide Mortality

Homicide was the ninth leading cause of death among Alaska Native people, both sexes combined. It ranked twelfth for Alaska Native females and eighth for Alaska Native males. Homicide mortality accounted for 12.1% (n=115) of all deaths. The homicide mortality rate among Alaska Native people, both sexes combined, was 2.8 times the U.S. all races rate. Alaska Native females had a homicide mortality rate 1.4 times the rate for U.S. all races females. Alaska Native males had a homicide mortality rate 8.2 times the rate for U.S. all races males.

Among Alaska Native people, both sexes combined, homicide accounted for 3.4% (n=77) of all excess deaths. Among Alaska Native females it accounted for 2.9% (n=30) of excess female deaths, while among males it accounted for 3.8% (n=46) of excess male deaths.

Examining homicide mortality rates by age group showed that rates were significantly higher among Alaska Native people, both sexes combined, for age groups 15-64. Among Alaska Native females, the homicide mortality rate was significantly higher than U.S. all races rate for age groups 15-54. Rate ratios between Alaska Native males and U.S. all races males were significantly different for age groups 25-64.

The Interior (RR=1.8) service region had a significantly higher homicide mortality rate than the rest of the state. The Southeast (RR=0.5) service region had a significantly lower homicide mortality rate.

Alaska Native people had a significant 56% decrease in homicide mortality rates between 1980-1983 and 2014-2018. Among U.S. all races, there was a 19.4% decrease during the same time period.

## DETAILED LEADING CAUSES OF DEATH

**Table 44. Homicide Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

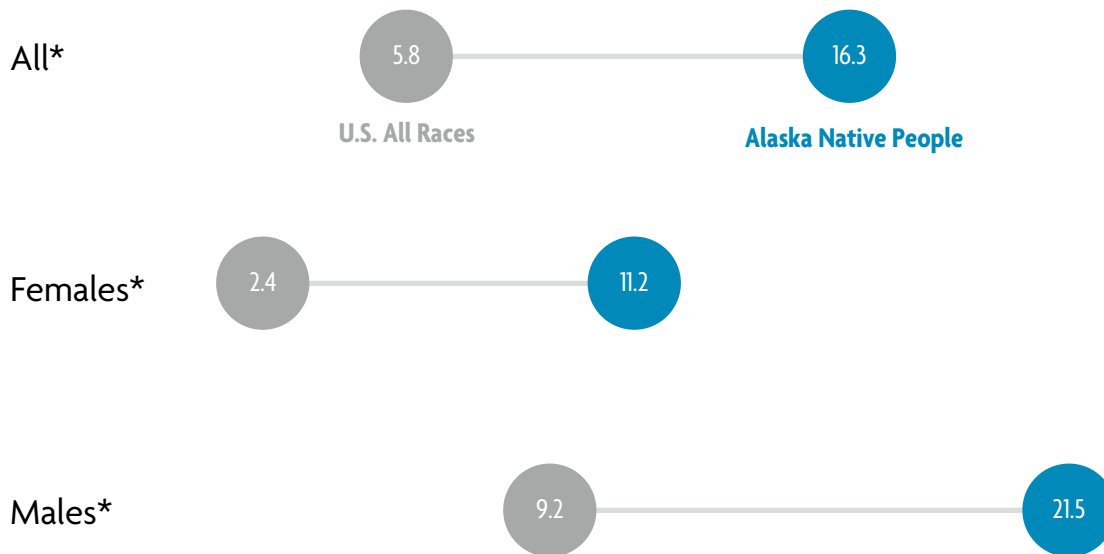
	Alaska Native People			U.S. All Races			Rate Ratio	95% CI
	Count	% Total	Rate <sup>1</sup>	Count	% Total	Rate <sup>1</sup>		
<b>All</b>	<b>115</b>	<b>2.1%</b>	<b>16.3</b>	<b>91,367</b>	<b>0.7%</b>	<b>5.8</b>	<b>2.8</b>	<b>2.34 - 3.37</b>
Female	38	1.6%	11.2	18,731	0.3%	2.4	4.6	3.38 - 6.39
Male	77	2.6%	21.5	762,636	1.1%	9.2	2.3	1.87 - 2.92

<sup>1</sup>Age-adjusted mortality rate per 100,000 people, standardized to U.S. 2000 population

**Figure 182. Homicide Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

Age-Adjusted Rate per 100,000 People



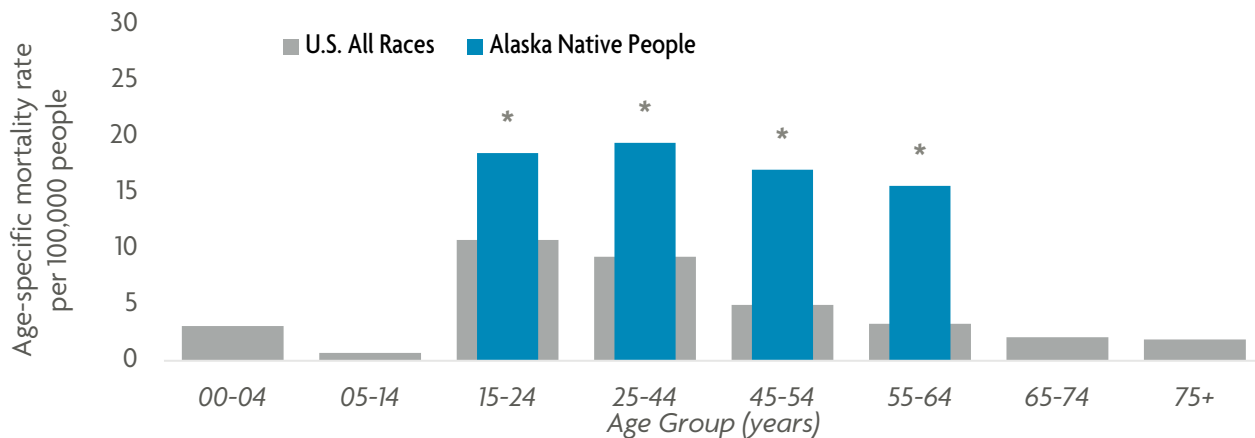
\*significant difference,  $p < 0.05$



### Homicide Age-Specific Mortality Rates

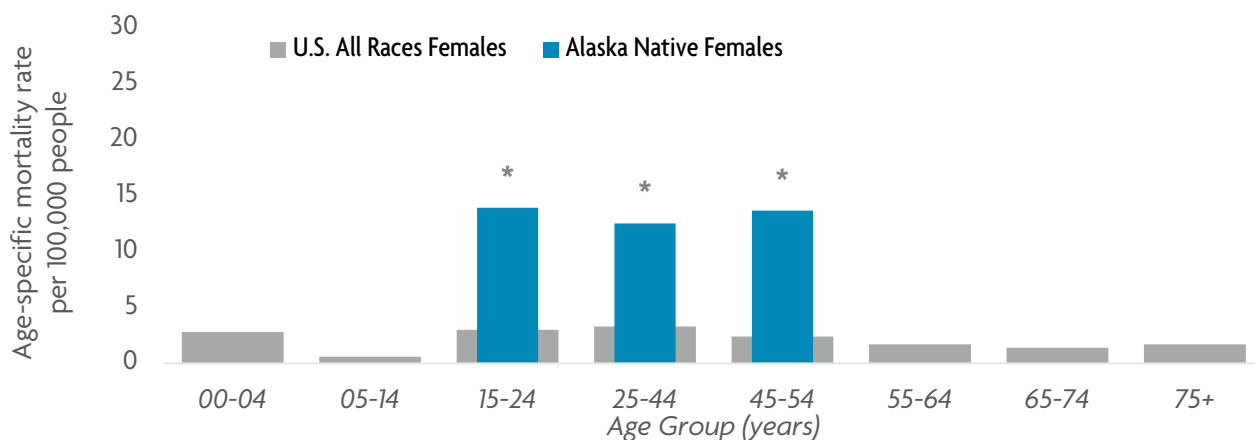
**Figure 183a. Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



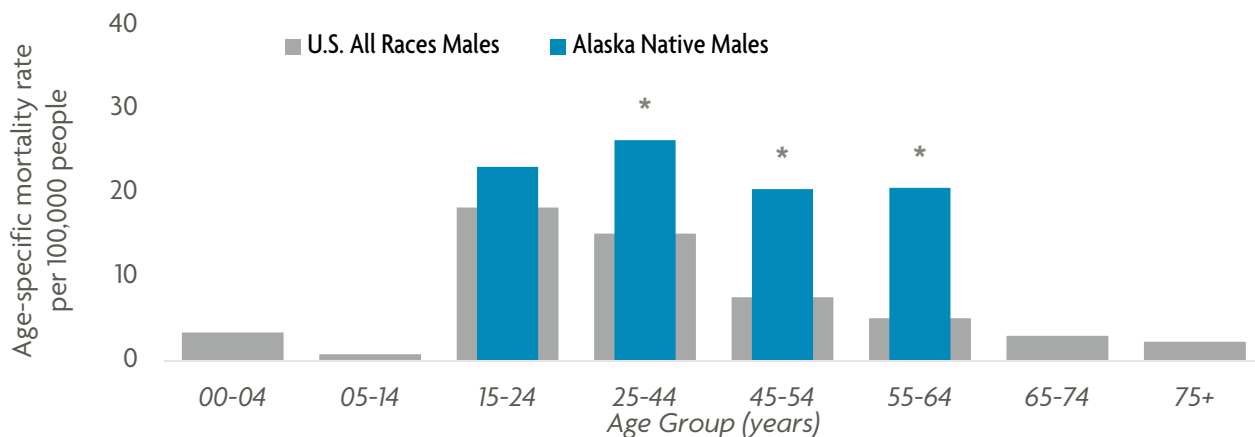
**Figure 183b. Alaska Native Females Compared to U.S. All Races Females, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 183c. Alaska Native Males Compared to U.S. All Races Males, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

**Table 45. Age-Specific Homicide Mortality Rates among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

All								
Age Group (years)	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Native people	-	-	18.6	19.5	17.1	15.6	-	-
U.S. All Races	3.1	0.7	10.8	9.3	5.0	3.3	2.1	1.9
<b>Rate Ratio</b>	-	-	<b>1.7</b>	<b>2.1</b>	<b>3.4</b>	<b>4.7</b>	-	-
Females								
Age Group (years)	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Native people	-	-	13.9	12.5	13.7	-	-	-
U.S. All Races	2.8	0.6	3.0	3.3	2.4	1.7	1.4	1.7
<b>Rate Ratio</b>	-	-	<b>4.6</b>	<b>3.8</b>	<b>5.7</b>	-	-	-
Males								
Age Group (years)	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Native people	-	-	23.2	26.3	20.5	20.6	-	-
U.S. All Races	3.4	0.8	18.3	15.2	7.6	5.1	3.0	2.3
<b>Rate Ratio</b>	-	-	<b>1.3</b>	<b>1.7</b>	<b>2.7</b>	<b>4.0</b>	-	-

- Rate not reported for < 5 cases

**Table 46. Trends in Homicide Mortality among Alaska Native People Compared to U.S. All Races, 1980-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

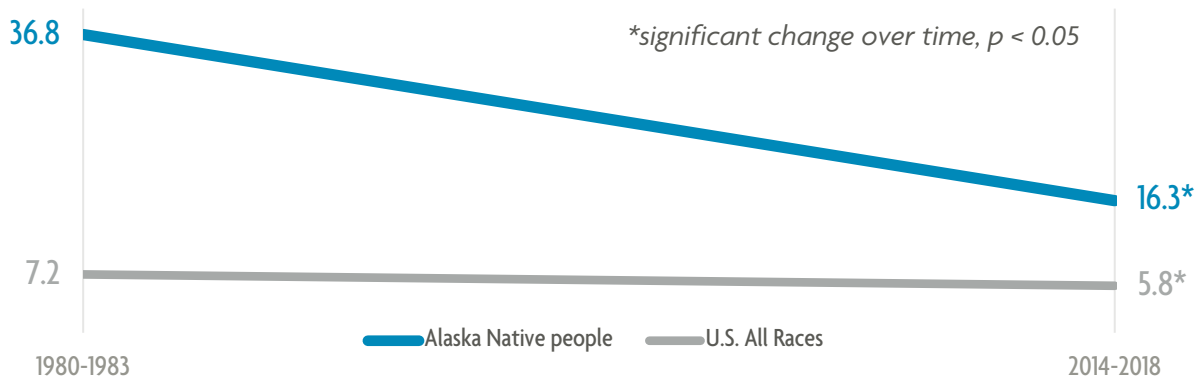
	Alaska Native People	U.S. All Races	Rate Ratio	
1980-1983	36.8	7.2	5.1	*
1984-1988	22.6	6.3	3.6	*
1989-1993	18.7	6.6	2.8	*
1994-1998	16.1	5.7	2.8	*
1999-2003	16.8	6.3	2.7	*
2004-2008	11.2	6.0	1.9	*
2009-2013	11.2	5.3	2.1	*
2014-2018	16.3	5.8	2.8	*
<b>% Change</b>	<b>-55.7%</b>	<b>-19.4%</b>		

\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

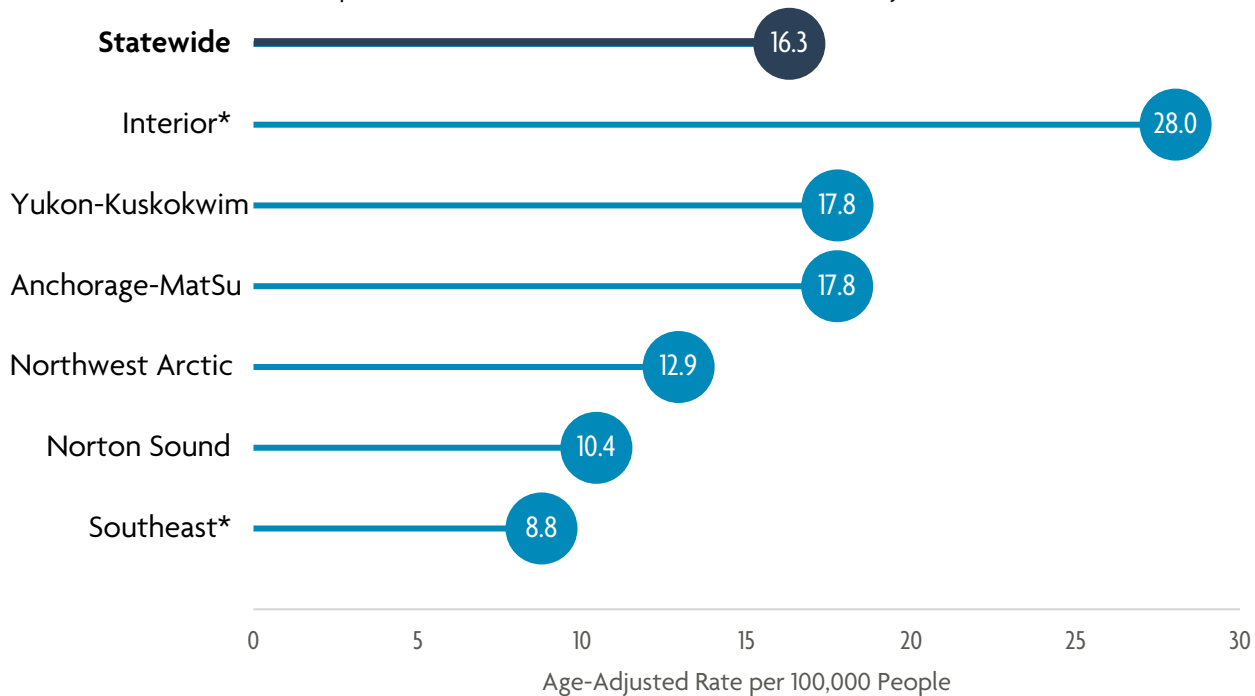
**Figure 184. Overall Change in Homicide Mortality Rates, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 185. Homicide Mortality Rates by Region, Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

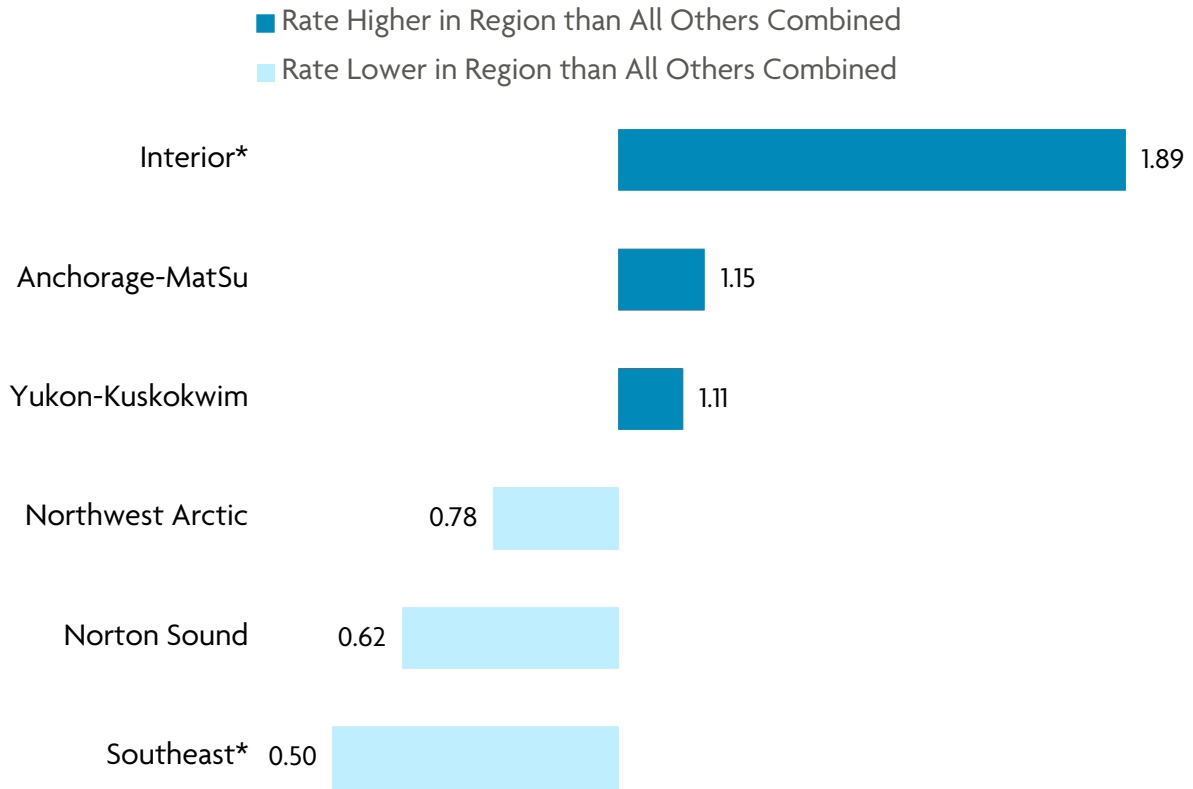


\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

**Figure 186. Homicide Mortality Rate Ratio Comparison between Regions among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$

## Detailed Leading Causes of Death

### 10. Influenza and Pneumonia Mortality

Influenza and pneumonia was the tenth leading cause of death among Alaska Native people, both sexes combined. It ranked eighth among Alaska Native females and eleventh among Alaska Native males. Influenza and pneumonia accounted for 1.9% (n=104) of all deaths. The mortality rate for Alaska Native people, both sexes combined, was 1.9 times the U.S. all races rate. The rate for Alaska Native females was 1.8 times those for U.S. all races females. The rate for Alaska Native males was 1.6 times the U.S. all races male rate.

Influenza and pneumonia accounted for 2.1% (n=48) of all excess deaths among Alaska Native people, both sexes combined. among Alaska Native females, influenza and pneumonia accounted for 2.1% (n=22) of all excess female deaths. among Alaska Native males, influenza and pneumonia accounted for 2.1% (n=26) of all excess male deaths.

Examining age-specific influenza and pneumonia mortality rates for Alaska Native people, both sexes combined, the rate was 2.2 times the U.S. all races rate for the age group 25 through 44 years. Rates were also significantly higher for 65 and older age groups, both sexes combined. among Alaska Native females, influenza and pneumonia mortality rates were 1.6 to 3.1 times the U.S. all races female rates, with significant differences in the 25 to 44 year old age group (RR=3.1) and 75+ year old age group (RR=1.9). among Alaska Native males, influenza and pneumonia mortality rates were 1.4 to 2.0 times the rate for U.S. all races males, with significant differences in the 65 to 74 year old age group (RR=1.9) and 75+year old age group (RR=2.0).

The Yukon-Kuskokwim (RR=2.4) service region had a significantly higher influenza and pneumonia mortality rate than the rest of the state. The Southeast (RR=0.5) and the Interior (RR=0.5) service regions had significantly lower influenza and pneumonia mortality rates.

There was a significant 46.9% decline in the influenza and pneumonia mortality rate for Alaska Native people, both sexes combined, between 1980-1983 and 2014-2018. U.S. all races had a significant 50% decline during this same time period.

## DETAILED LEADING CAUSES OF DEATH

**Table 47. Influenza/Pneumonia Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

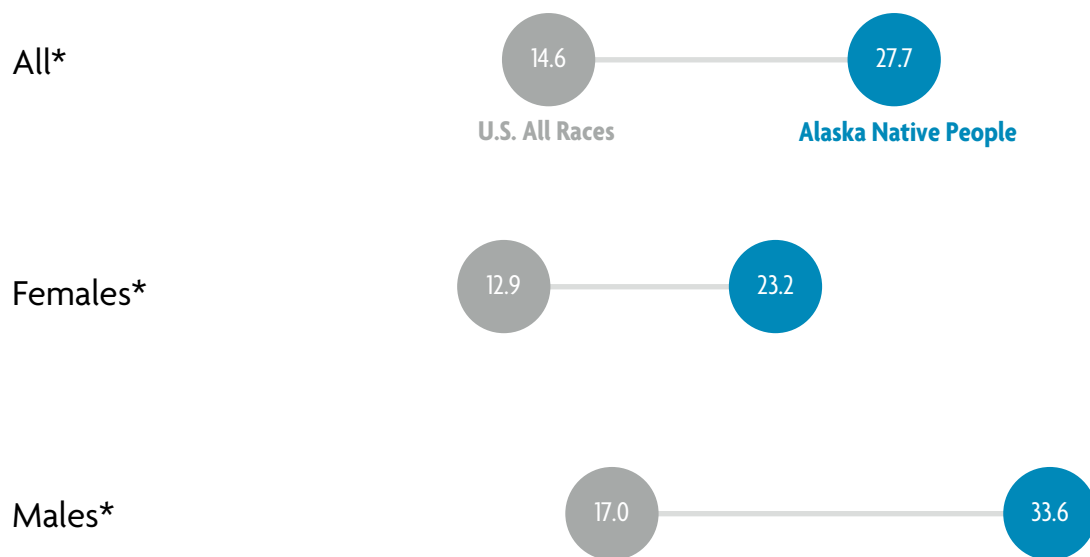
	Alaska Native People			U.S. All Races			Rate Ratio	95% CI
	Count	% Total	Rate <sup>1</sup>	Count	% Total	Rate <sup>1</sup>		
<b>All</b>	<b>104</b>	<b>1.9%</b>	<b>27.7</b>	<b>278,618</b>	<b>2.0%</b>	<b>14.6</b>	<b>1.9</b>	<b>1.57 - 2.30</b>
Female	49	2.0%	23.2	144,877	2.2%	12.9	1.8	1.36 - 2.38
Male	55	1.8%	33.6	133,741	1.9%	17.0	1.6	1.52 - 2.57

<sup>1</sup>Age-adjusted mortality rate per 100,000 people, standardized to U.S. 2000 population

**Figure 187. Influenza/Pneumonia Mortality among Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

Age-Adjusted Rate per 100,000 People

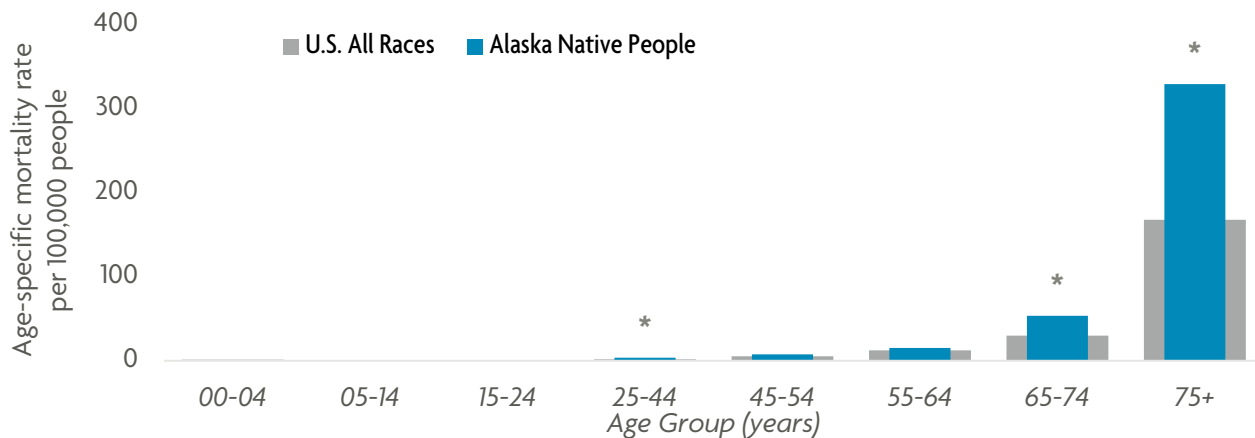


\*significant difference,  $p < 0.05$

### Influenza/Pneumonia Age-Specific Mortality Rates

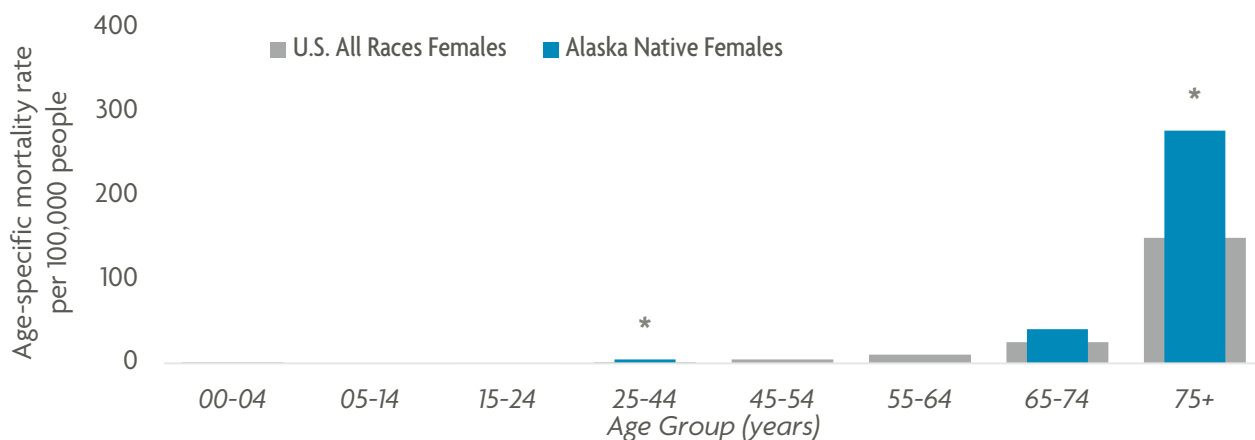
**Figure 188a. Alaska Native People Compared to U.S. All Races, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



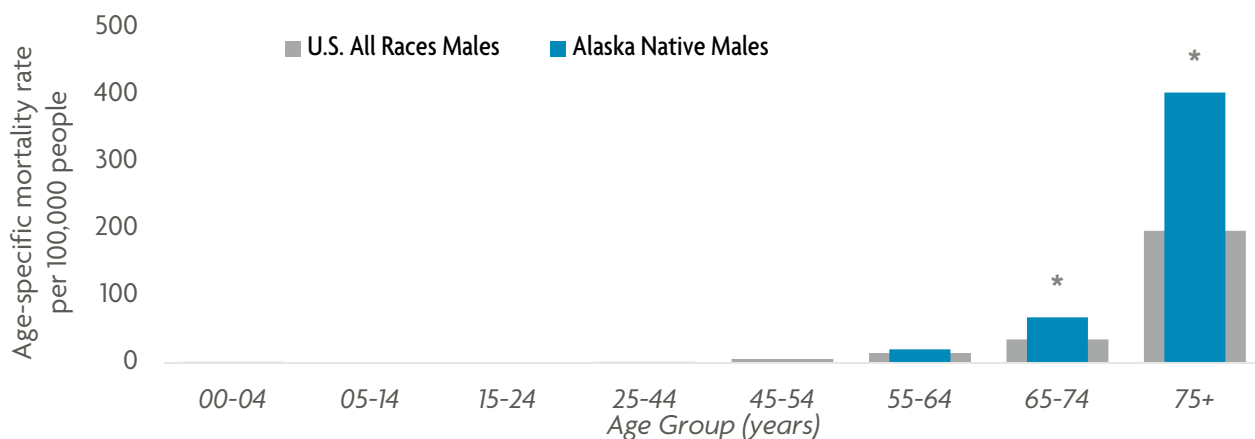
**Figure 188b. Alaska Native Females Compared to U.S. All Races Females, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 188c. Alaska Native Males Compared to U.S. All Races Males, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

**Table 48. Age-Specific Influenza/Pneumonia Mortality Rates among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

All								
Age Group (years)	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Native people	-	-	-	3.7	7.6	15.4	53.7	329.9
U.S. All Races	1.4	0.2	0.4	1.7	5.3	12.5	29.9	168.1
<b>Rate Ratio</b>	-	-	-	<b>2.2</b>	<b>1.4</b>	<b>1.2</b>	<b>1.8</b>	<b>2.0</b>
Females								
Age Group (years)	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Native people	-	-	-	4.6	-	-	40.8	277.6
U.S. All Races	1.2	0.3	0.4	1.5	4.7	10.5	25.3	149.7
<b>Rate Ratio</b>	-	-	-	<b>3.1</b>	-	-	<b>1.6</b>	<b>1.9</b>
Males								
Age Group (years)	0-4	5-14	15-24	25-44	45-54	55-64	65-74	75+
Alaska Native people	-	-	-	-	-	20.2	68.0	403.2
U.S. All Races	1.6	0.2	0.5	1.8	5.9	14.7	35.1	197.0
<b>Rate Ratio</b>	-	-	-	-	-	<b>1.4</b>	<b>1.9</b>	<b>2.0</b>

- Rate not reported for < 5 cases

**Table 49. Trends in Influenza/Pneumonia Mortality among Alaska Native People Compared to U.S. All Races, 1980-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

	Alaska Native People	U.S. All Races	Rate Ratio	
1980-1983	52.2	29.2	<b>1.8</b>	*
1984-1988	60.5	34.2	<b>1.8</b>	*
1989-1993	56.2	34.6	<b>1.6</b>	*
1994-1998	39.6	33.2	<b>1.2</b>	*
1999-2003	35.8	22.6	<b>1.6</b>	*
2004-2008	25.5	19.3	<b>1.3</b>	*
2009-2013	26.0	17.0	<b>1.5</b>	*
2014-2018	27.7	14.6	<b>1.9</b>	*
<b>% Change</b>	<b>-46.9%</b>	<b>-50.0%</b>		

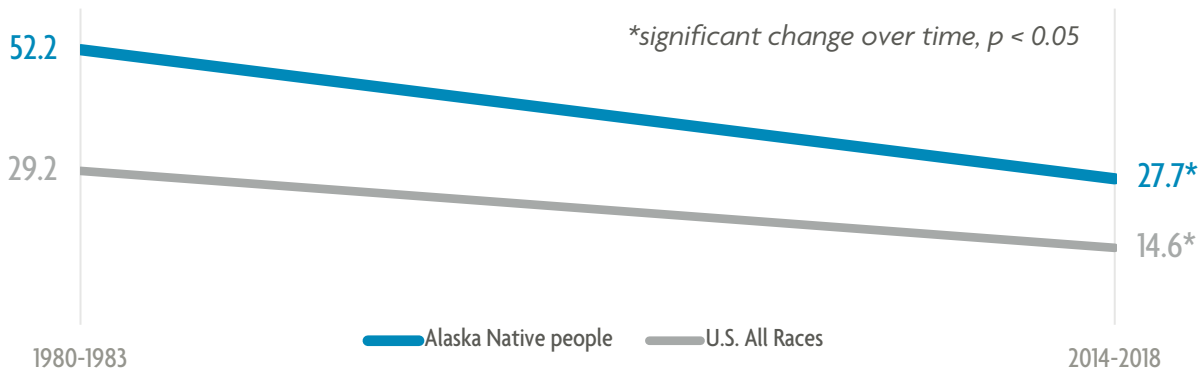
\*significant difference,  $p < 0.05$



DETAILED LEADING CAUSES OF DEATH

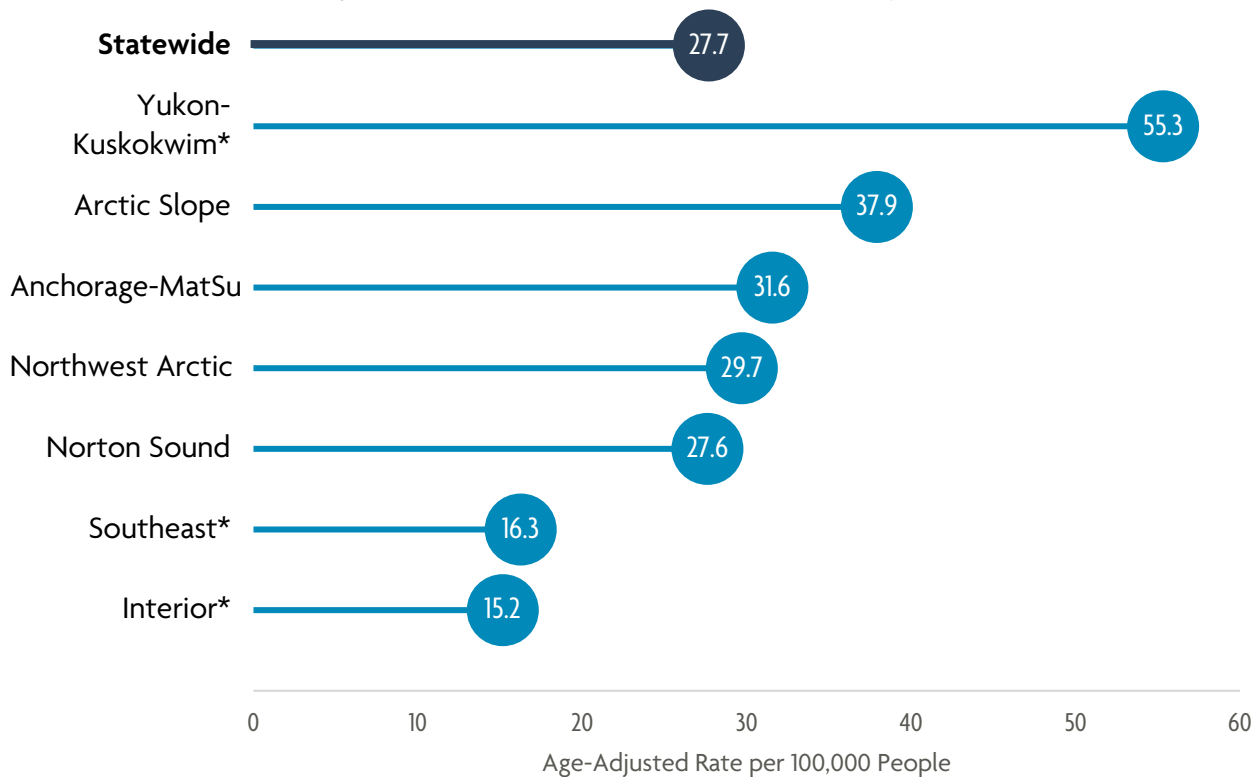
**Figure 189. Overall Change in Influenza/Pneumonia Mortality Rates, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



**Figure 190. Influenza/Pneumonia Mortality Rates by Region, Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records

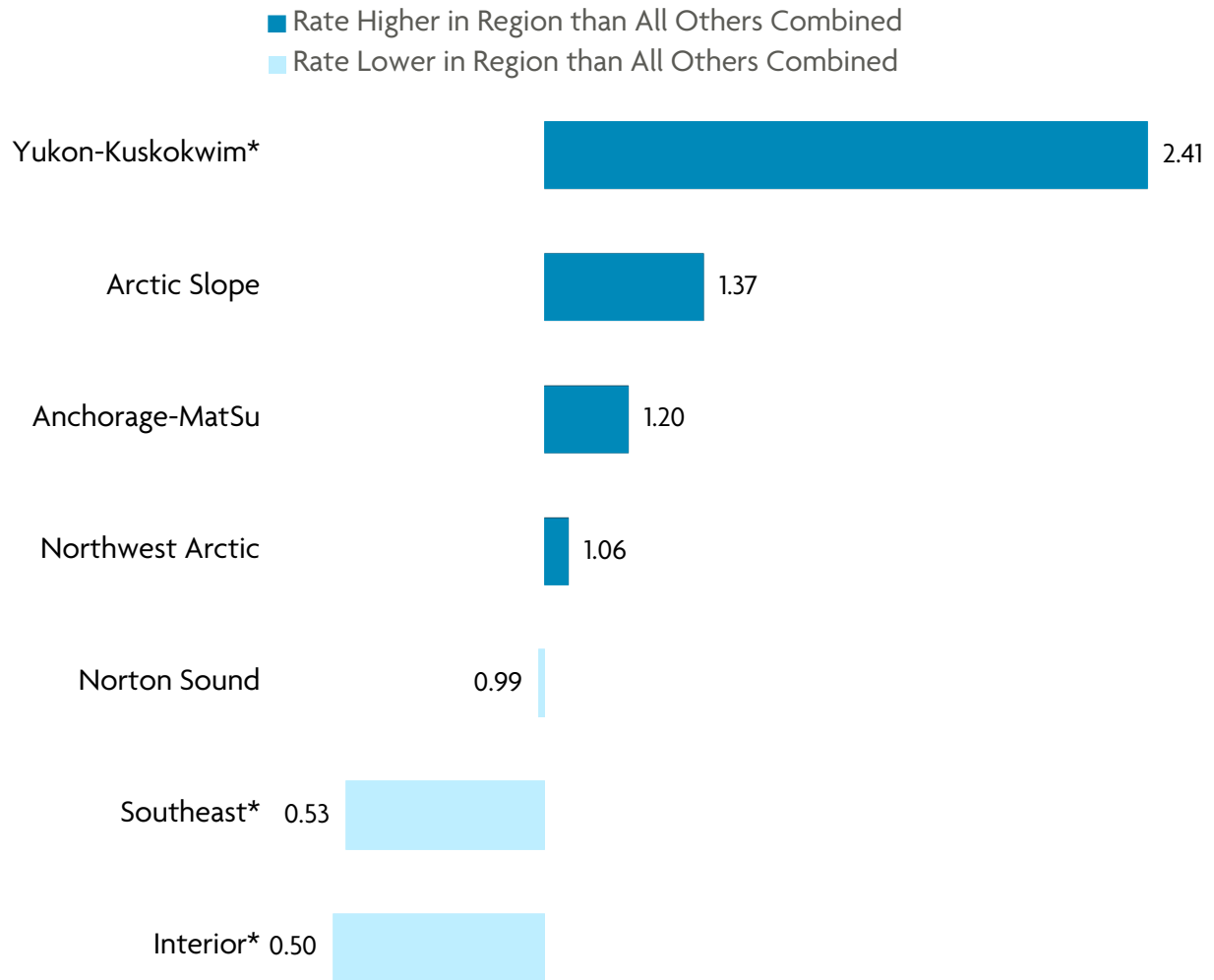


\*significant difference,  $p < 0.05$

## DETAILED LEADING CAUSES OF DEATH

**Figure 191. Influenza/Pneumonia Mortality Rate Ratio Comparison between Regions among Alaska Native People, 2014-2018**

Data Source: State of Alaska Department of Health and Social Services, Health Analytics and Vital Records



\*significant difference,  $p < 0.05$