# **Mortality Rate Trends**

Caution should be used when interpreting trends among small and variable populations. In addition, death certificate categorizations including racial classification methodology have changed over time. Prior to the 2014-2018 time period, Alaska Native people with multiple races were not necessarily classified as Alaska Native people in census or other uses (the bridging methodology assigned a single race to multi-race individuals). The racial classification methodology used on Alaska death certificates since 2014 enables us to classify any individual with any mention of Alaska Native status as an Alaska Native person. Previous definitions of Alaska Native people were limited to bridge race estimates (1999-2013) and single race responses (1980-1998), shown in the continuous line in the figures in this chapter. These trends provide context to the rates of the most recent time period (2014-2018), and are represented by a single point in the figures. This new classification is not completely comparable to the old methodology, thus caution should be used when interpreting any trend.

Trend lines presented below assume that multi-race Alaska Native people prior to 1999, not categorized as Alaska Native using the single race categorization method (and not included in the statistics), are not substantially different from the Alaska Native people that were classified Alaska Native under the single race categorization. While the first time period presented here, 1980-1983, is only a four-year aggregate (compared to five-years for all other time periods), there is no reason to believe the inclusion of an additional year in the first time period would substantially change the overall trend calculation. We assume the risk of mortality in 1979 is not significantly different than the 1980-1983 time period.

In addition, the CDC's ICD coding guidance changes over time resulting in the frequency of codes becoming more or less likely to be used by medical examiners or other physicians. For more information, see details about death categorization in Methods, Appendix A.

All trends noted in the highlights are statistically significant, unless otherwise noted. All mortality rates are age-adjusted, standardized to U.S. 2000 population.

# **Statewide Trends**

## **Main Findings**

- Alaska Native all-cause mortality rates declined 9% between the 1980-1983 time period and the
  most recent five-year period, 2014-2018. A decline in all-cause mortality has occurred in every
  five-year period, except for the two most recent periods, 2009-2013 and 2014-2018. The greatest
  decline (7%) occurred during 1999-2003 and 2004-2008. U.S. all races all-cause mortality declined
  26% during 1980-1983 and 2014-2018.
- Alaska Native cancer mortality rates decreased 8% between 1980-1983 and 2014-2018. U.S. all races rates declined 24% between 1980-1983 and 2014-2018.
- Alaska Native heart disease mortality rates declined 24% between 1980-1983 and 2014-2018. U.S. all races rates declined 58% between 1980-1983 and 2014-2018.

- Alaska Native unintentional injury mortality rates declined 38% between 1980-1983 and 2014-2018.
   U.S. all races rates declined 4%, though this change was not statistically significant.
- Alaska Native suicide rates have decreased by 3% between 1980-1983 and 2014-2018. U.S. all races rates increased 4% between 1980-1983 and 2014-2018.
- Alaska Native chronic obstructive pulmonary disease (COPD) mortality rates increased 164% between 1980-1983 and 2014-2018. U.S. all races rates increased 33% between 1980-1983 and 2014-2018.
- Alaska Native cerebrovascular disease mortality rates decreased 20% between 1980-1983 and 2014-2018. U.S. all races rates declined 56% between 1980-1983 and 2014-2018.
- Alaska Native chronic liver disease mortality rates increased 19% between 1980-1983 and 2014-2018. U.S. all races rates declined 16% between 1980-1983 and 2014-2018.
- Alaska Native pneumonia and influenza mortality rates declined 47% between 1980-1983 and 2014-2018. U.S. all races rates declined 50% between 1980-1983 and 2014-2018.
- Alaska Native homicide mortality rates decreased 56% between 1980-1983 and 2014-2018. U.S. all races rates decreased 19% between 1980-1983 and 2008-2013.
- Alaska Native alcohol abuse mortality rates decreased 30% between 1980-1983 and 2014-2018. U.S. all races rates increased 25% between 1980-1983 and 2014-2018.

## Overview

This chapter lists changes in mortality rates over the thirty-nine year period, 1980-2018. Table 3 displays these changes among Alaska Native people, both sexes combined. Percent change refers to the 1980-1983 time period compared to the most recent time period, 2014-2018. Figures 22-32 compare rates of Alaska Native people and U.S. all races for specific causes over the period. Data for these figures are available in Table 3.

Table 3. Trends in Age-Adjusted Mortality Rates per 100,000 People among Alaska Native People Statewide, 1980-2018

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

Cause	1980- 1983	1984- 1988	1989- 1993	1994- 1998	1999- 2003	2004- 2008	2009- 2013	2014- 2018	% Chan	ge
Cancer	224.3	243.3	245.4	248.9	239.5	226.3	234.6	205.9	-8.2%	
Heart Disease	270.9	288.1	271.9	252	211.6	169	190.3	207.3	-23.5%	*
Unintentional Injury	184.1	174	133	111	107.4	97.7	104.8	114.7	-37.7%	*
Suicide	41.8	49.5	46.8	42.8	34.7	42.3	40.6	40.4	-3.3%	
COPD	26.2	44.5	58.4	68.3	63	57.3	65.7	69.1	163.8%	*
Chronic Liver Disease	28.1	20.4	26.8	18.3	19.4	18	24	33.5	19.3%	*
Cerebrovascular Disease	64.5	65.1	67.5	84.1	66.5	56.7	54.7	51.9	-19.5%	*
Alcohol Abuse	28.8	23.2	20.6	31.7	40.9	38.7	14.2	20.1	-30.3%	*
Homicide	36.8	22.6	18.7	16.1	16.8	11.2	11.2	16.3	-55.7%	*
Influenza/Pneumonia	52.2	60.5	56.2	39.6	35.8	25.5	26	27.7	-46.9%	*
All-Cause	1234.0	1226.5	1202.1	1151.6	1111.6	1033.3	1076.7	1120.7	-9.2%	*

<sup>\*</sup>significant difference, p < 0.05

Figure 22. Trend in All-Cause Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

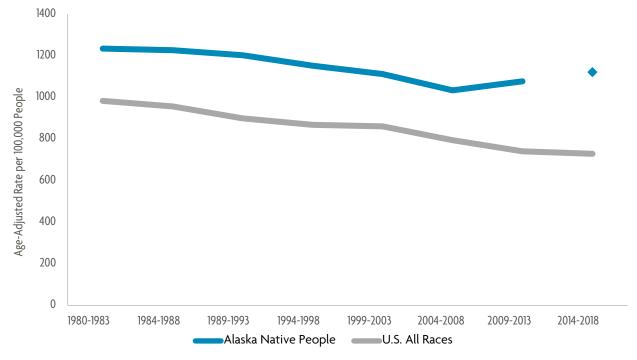


Figure 23. Trend in Cancer Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

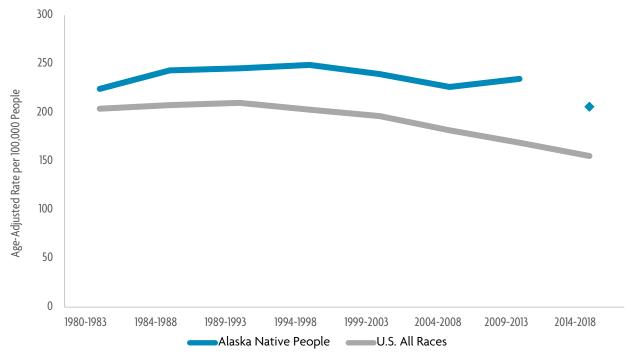


Figure 24. Trend in Heart Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

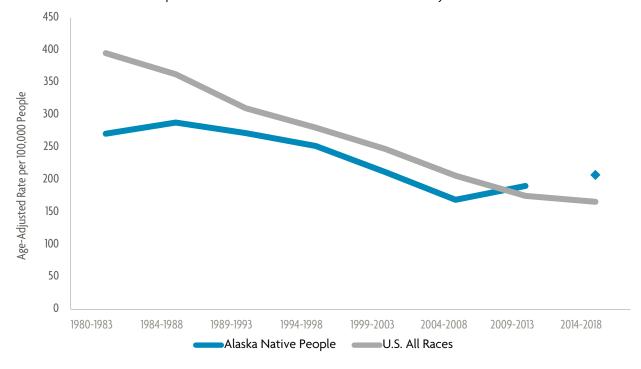


Figure 25. Trend in Unintentional Injury Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

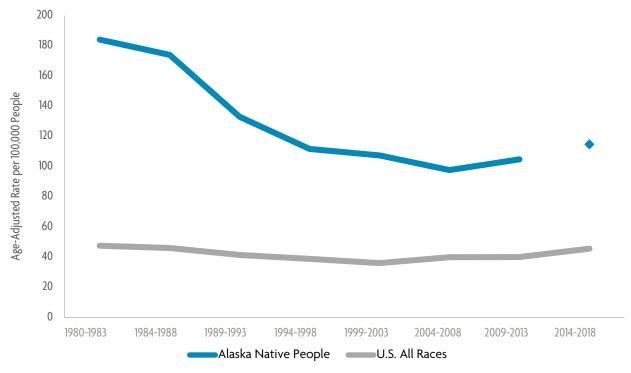


Figure 26. Trend in Suicide Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

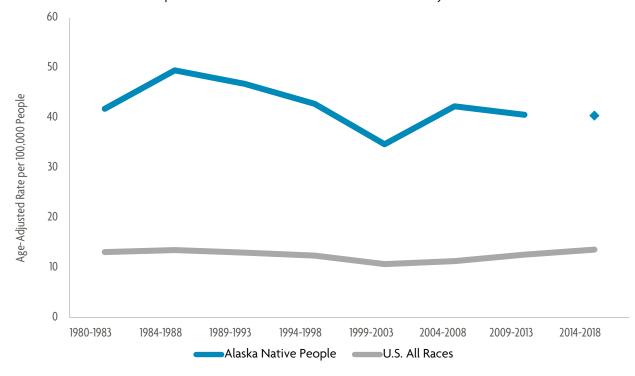


Figure 27. Trend in COPD Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

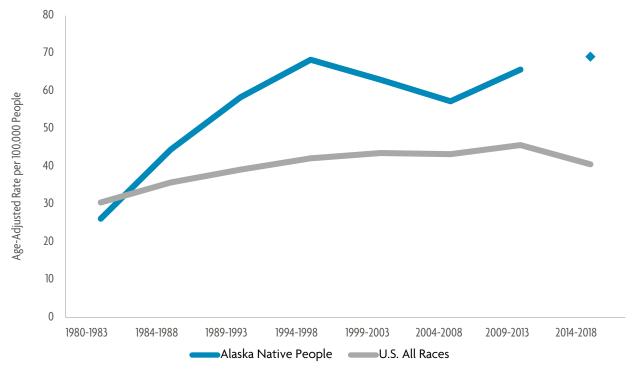


Figure 28. Trend in Chronic Liver Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

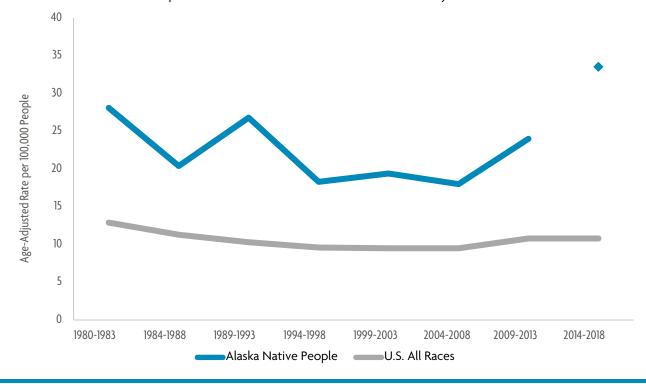


Figure 29. Trend in Cerebrovascular Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

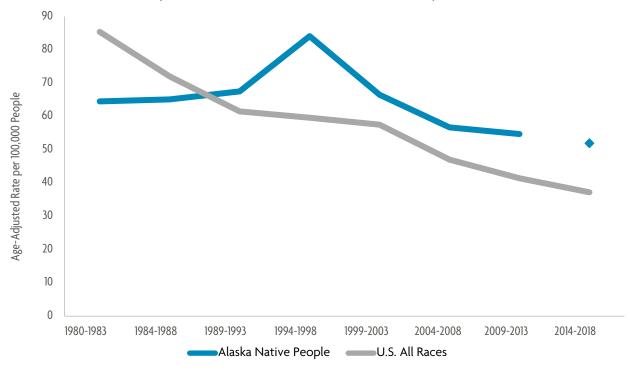


Figure 30. Trend in Alcohol Abuse Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

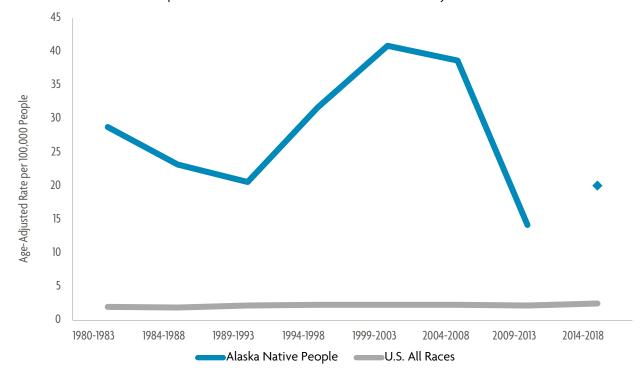


Figure 31. Trend in Homicide Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

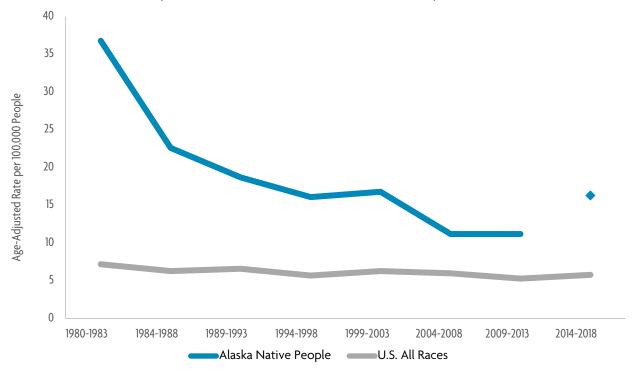
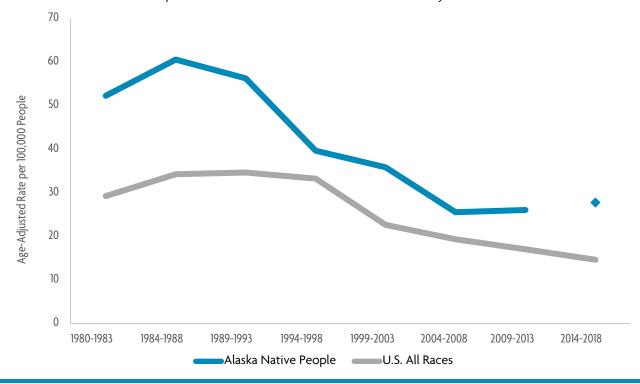


Figure 32. Trend in Influenza/Pneumonia Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018



# **Regional Trends**

# **Main Findings**

- Alaska Native people in the Aleutians & Pribilofs service region experienced a decline in unintentional injury (82%), heart disease (79%), and all-cause (53%) mortality rates between 1980-1983 and 2014-2018.
- Alaska Native people in the Anchorage-MatSu service region had a consistently lower rate of suicide mortality than the rate for the rest of the state over the period, 1980-1983 to 2014-2018. In addition, mortality rates declined due to pneumonia & influenza (83%), homicide (50%), and heart disease (29%) between 1980-1983 and 2014-2018.
- Alaska Native people in the Arctic Slope service region had a higher rate of cancer mortality than the rate for the rest of the state over the period, 1980-1983 to 2014-2018.
- Alaska Native people in the Bristol Bay service region historically has had a higher rate of unintentional injury mortality than the rate for the rest of the state, however this is no longer true for the 2014-2018 time period.
- Alaska Native people in the Copper River/Prince William Sound service region had a 75% decline in the unintentional injury mortality rate between 1980-1983 and 2014-2018.
- Alaska Native people in the Interior service region had a decline in mortality rates due to alcohol abuse (49%) and unintentional injury (49%) between 1980-1983 and 2014-2018.
- Alaska Native people in the Kenai Peninsula service region experienced a decline in the heart disease mortality rate (51%) between 1980-1983 and 2014-2018.
- Alaska Native people in the Kodiak Area service region had a decline in mortality rates due to heart disease (60%) and unintentional injury (51%). They had an increase in the mortality rate due to cancer (112%) between 1980-1983 and 2014-2018.
- Alaska Native people in the Northwest Arctic service region had a higher rate of suicide than the rate for the rest of the state but had a decline in suicide mortality rates (24%) between the 1980-1983 and 2014-2018 periods.
- Alaska Native people in the Norton Sound service region had a higher rate of suicide than the rates for the rest of the state but experienced a decline in suicide mortality rates (46%) between the 1980-1983 and 2014-2018 period. The mortality rate for cerebrovascular disease decreased (36%) between 1980-1983 and 2014-2018.
- Alaska Native people in the Southeast service region had lower mortality rates than the rest of the state from cancer, unintentional injuries, suicide, and COPD over the period, 1980-1983 to 2014-2018. Mortality rates declined for heart disease (55%), suicide (60%), and cerebrovascular disease (67%) between 1980-1983 and 2014-2018.
- Alaska Native people in the Yukon-Kuskokwim service region had a decline in the mortality rate for unintentional injury (39%) and an increase in the suicide rate (143%) between 1980-1983 and 2014-2018.

#### Overview

This section reports mortality rate trends by service region. Definitions for service regions are available in Appendix D. Tables 4-15 display this information for each region, both sexes combined, for the eight time periods between 1980 and 2018. The causes of death are listed in order based on the count ranking of leading cause statewide for the most recent time period, 2014-2018. Figures 33-113 compare rates in each service region to Alaska Native people statewide and to U.S. all races. Figures were only presented when it was possible to calculate rates for at least three consecutive time periods. Data for these figures are available in Tables 4-15. Counts for these rates are available in Appendix B – Tables 59-70.

Table 4. Trends in Age-Adjusted Mortality Rates per 100,000 People among Alaska Native People in the Aleutians & Pribilofs Region, 1980-2014

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

	1980-	1984-	1989-	1994-	1999-	2004-	2009-	2014-	% Change	
Cause	1983	1988	1993	1998	2003	2008	2013	2018	•	
Cancer	310.2	197.3	189.6	530.3	396.0	230.7	262.1	240.1	-22.6%	
Heart Disease	751.9	581.2	707.4	203.8	144.1	231.0	128.8	157.8	-79.0% *	
Unintentional Injury	387.5	227.9	64.0	301.3	84.9	102.2	66.8	71.7	-81.5% *	
All-Cause	2159.0	1425.7	2420.5	1492.5	1088.3	1057.3	859.7	1025.5	-52.5% *	

<sup>\*</sup>significant difference, p < 0.05

Figure 33. Aleutian & Pribilofs Trend in All-Cause Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

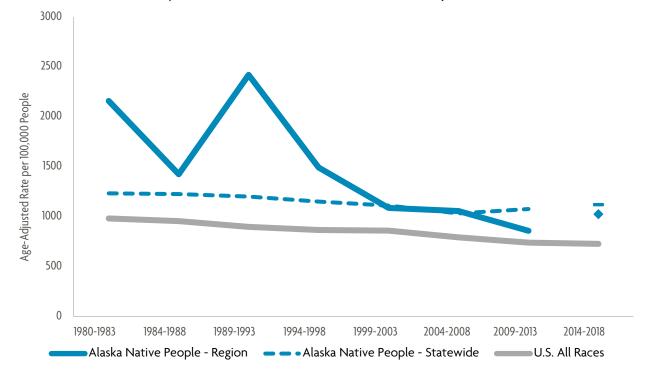


Figure 34. Aleutian & Pribilofs Trend in Cancer Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

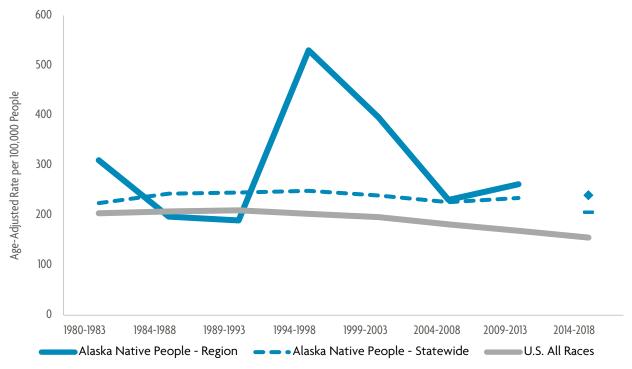


Figure 35. Aleutian & Pribilofs Trend in Heart Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

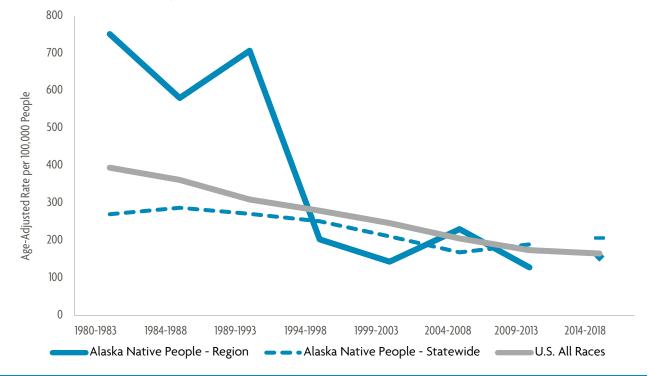


Figure 36. Aleutian & Pribilofs Trend in Unintentional Injury Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

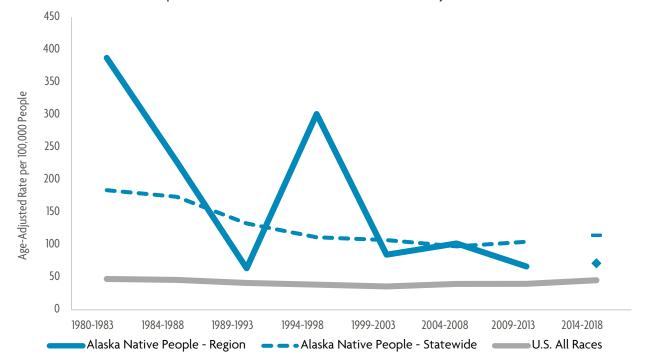


Table 5. Trends in Age-Adjusted Mortality Rates per 100,000 People among Alaska Native People in the Anchorage-MatSu Region, 1980-2014

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

Cause	1980- 1983	1984- 1988	1989- 1993	1994- 1998	1999- 2003	2004- 2008	2009- 2013	2014- 2018	% Chang	ge
Cancer	231.7	237.3	240.1	247.8	231.3	176.2	233.5	212.1	-8.5%	
Heart Disease	278.4	322.5	301.5	206.9	226.2	169.9	203.2	196.6	-29.4%	*
Unintentional Injury	99.7	114.4	100.8	87.7	96.3	82.3	104.7	117.6	18.0%	
Suicide	20.5	26.4	33.2	20.1	17.3	27.7	29.3	34.9	70.3%	*
COPD	73.1	85.9	73.8	78.1	66.3	48.2	63	68	-7.0%	
Chronic Liver Disease	48.3	36.9	51.7	22.7	27.9	33.1	46.4	68	40.7%	*
Cerebrovascular Disease	48.3	36.9	51.7	22.7	27.9	33.1	46.4	62.8	30.1%	*
Alcohol Abuse	37.1	25.7	25.9	26	45.3	44.7	20.8	25.4	-31.6%	
Homicide	35.3	18.7	18.5	25.9	16.7	9	17.8	17.8	-49.7%	*
Influenza/Pneumonia	181.5	116.8	39.2	20	20.1	18.3	29	31.6	-82.6%	*
All-Cause	1318.1	1363.3	1334.2	1271.3	1121.3	998.9	1189.8	1214.6	-7.9%	

<sup>\*</sup>significant difference, p < 0.05

Figure 37. Anchorage-MatSu Trend in All-Cause Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

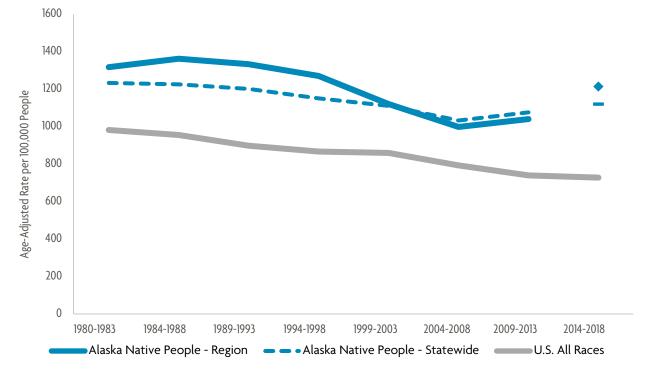


Figure 38. Anchorage-MatSu Trend in Cancer Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

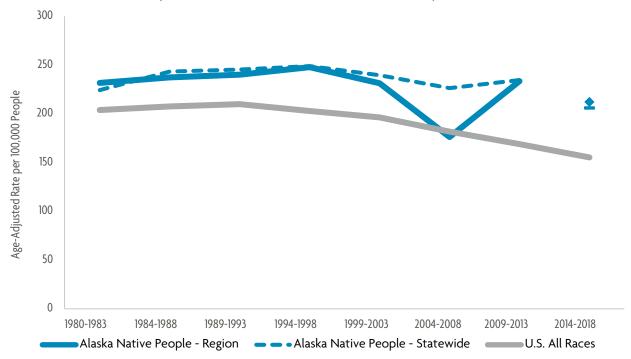


Figure 39. Anchorage-MatSu Trend in Heart Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

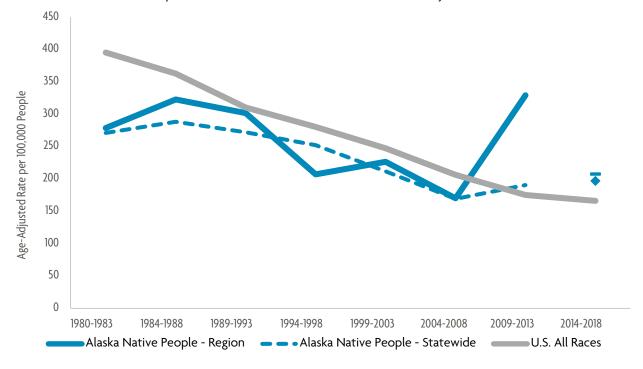


Figure 40. Anchorage-MatSu Trend in Unintentional Injury Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

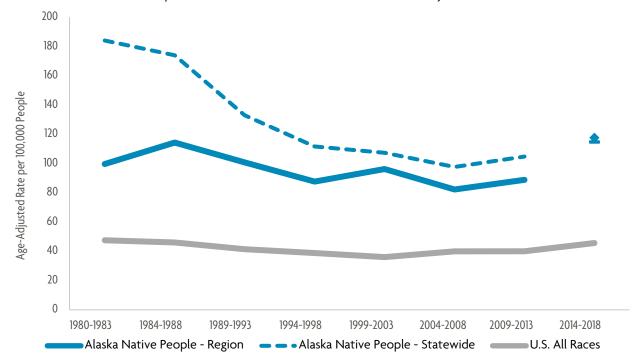


Figure 41. Anchorage-MatSu Trend in Suicide Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018



Figure 42. Anchorage-MatSu Trend in Chronic Liver Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

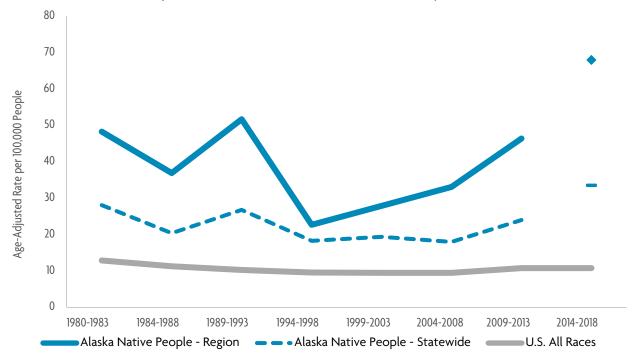


Figure 43. Anchorage-MatSu Trend in COPD Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

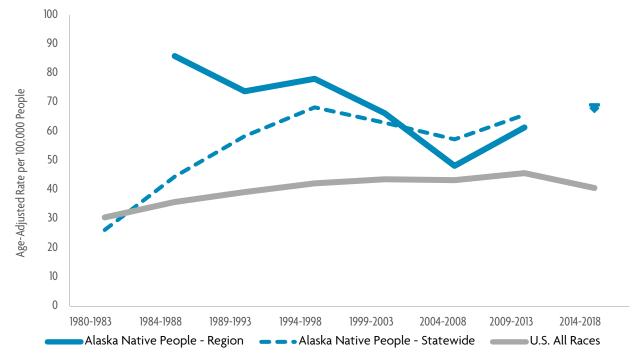


Figure 44. Anchorage-MatSu Trend in Cerebrovascular Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

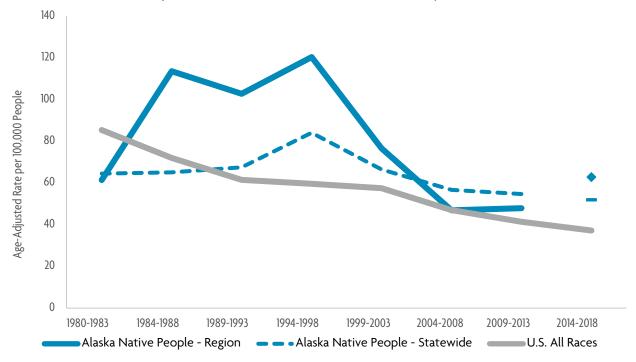


Figure 45. Anchorage-MatSu Trend in Alcohol Abuse Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

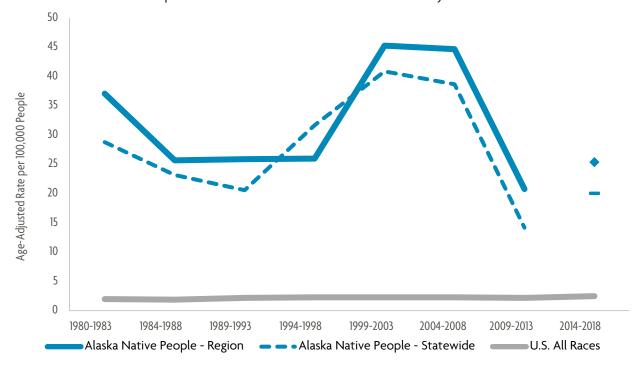


Figure 46. Anchorage-MatSu Trend in Homicide Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

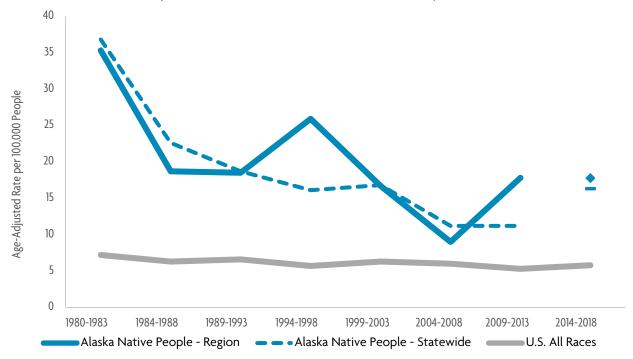


Figure 47. Anchorage-MatSu Trend in Influenza/Pneumonia Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

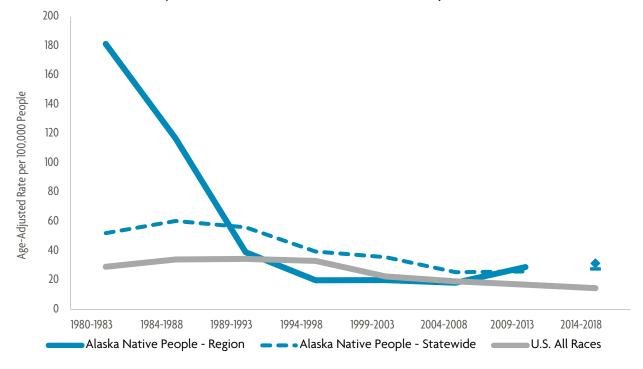


Table 6. Trends in Age-Adjusted Mortality Rates per 100,000 People among Alaska Native People in the Arctic Slope Region, 1980-2014

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

Cause	1980- 1983	1984- 1988	1989- 1993	1994- 1998	1999- 2003	2004- 2008	2009- 2013	2014- 2018	% Chang	e
Cancer	230.3	418.8	250.2	334	261	422.3	305.4	310.1	34.6%	
Heart Disease	519.1	198.1	493.8	284.9	218.4	321.1	131.3	206.4	-60.2%	*
Unintentional Injury	147.8	188.2	116.8	113.7	99.1	109.1	116.8	68	-54.0%	*
Suicide	43	32.5	50.4	52.5	30.4	69.1	29	33.4	-22.4%	
COPD	112.5	135.9	131.7	127.2	111.1	163.3	99.4	105.3	-6.4%	
Homicide	36.8	22.6	18.7	16.1	16.8	11.2	11.2	16.3	-55.7%	
All-Cause	1249.7	1436.5	1349.5	1339.8	1096.1	1591.2	1063.8	1121.2	-10.3%	

<sup>\*</sup>significant difference, p < 0.05

Figure 48. Arctic Slope Trend in All-Cause Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

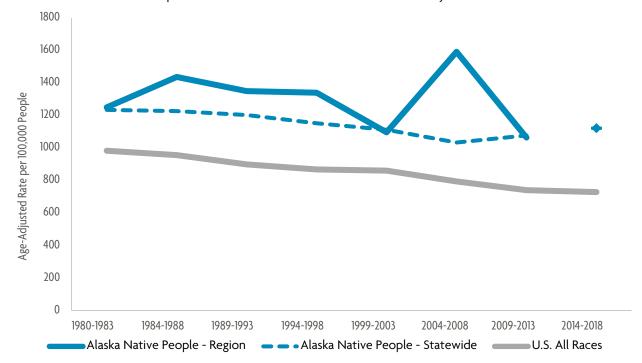


Figure 49. Arctic Slope Trend in Cancer Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

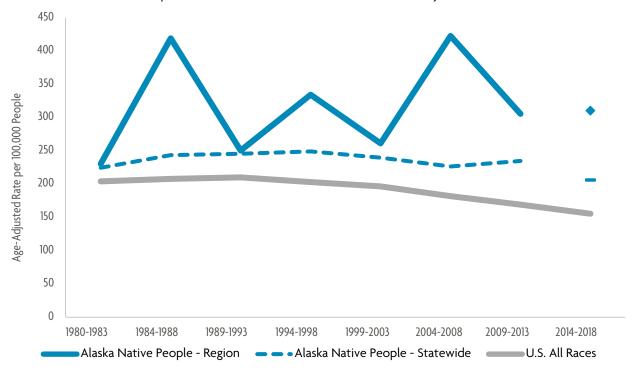


Figure 50. Arctic Slope Trend in Heart Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

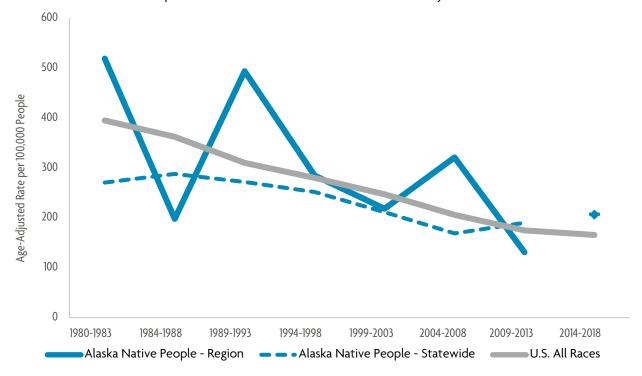


Figure 51. Arctic Slope Trend in Unintentional Injury Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

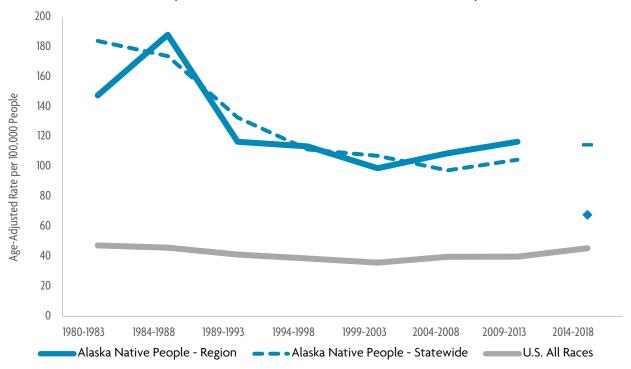


Figure 52. Arctic Slope Trend in Suicide Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018



Figure 53. Arctic Slope Trend in COPD Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

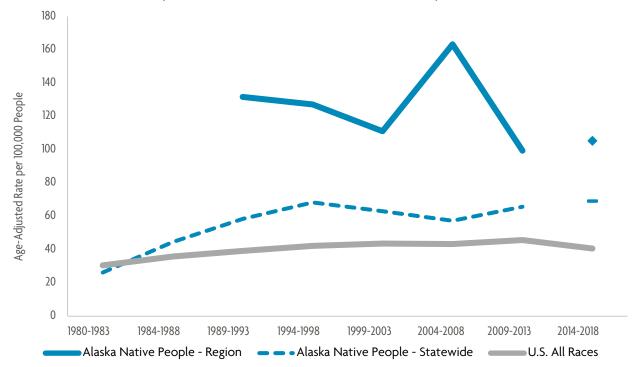


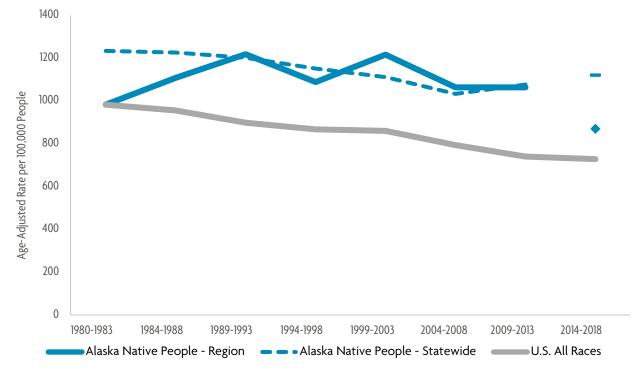
Table 7. Trends in Age-Adjusted Mortality Rates per 100,000 People among Alaska Native People in the Bristol Bay Region, 1980-2014

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

	1980-	1984-	1989-	1994-	1999-	2004-	2009-	2014-	% Chan	~~
Cause	1983	1988	1993	1998	2003	2008	2013	2018	% Change	
Cancer	177.3	233.5	263.2	205.8	251.6	241.1	240.9	171.8	-3.1%	
Heart Disease	118.1	335.3	271.1	172.1	207	173.9	218.5	177.3	50.2%	
Unintentional Injury	318.2	278.4	168.6	132.6	179.9	171.6	193.4	104.4	-67.2%	*
Suicide	51.9	29.4	46.5	37.6	24.2	22.3	52.8	20.8	-60.0%	*
COPD	-	-	117.4	93.7	74.8	65.6	52.4	64.9	-44.7%	*
All-Cause	983.1	1108.1	1218.6	1088.5	1216.6	1063.9	1166.7	869.9	-11.5%	*

<sup>\*</sup>significant difference, p < 0.05

Figure 54. Bristol Bay Trend in All-Cause Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018



<sup>-</sup> Rate not reportable

Figure 55. Bristol Bay Trend in Cancer Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

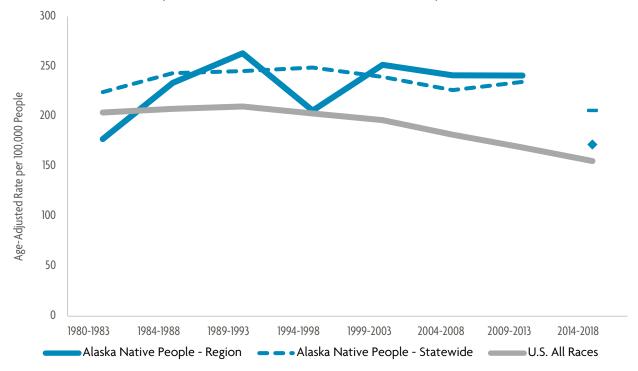


Figure 56. Bristol Bay Trend in Heart Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

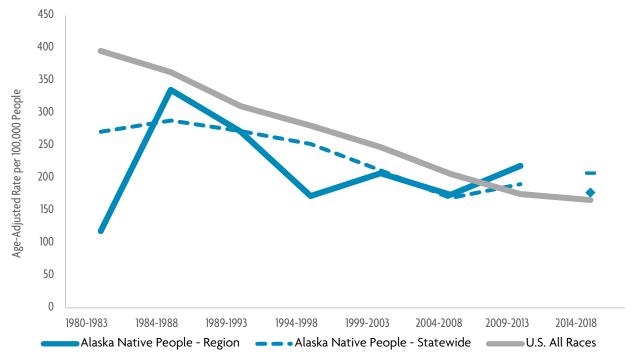


Figure 57. Bristol Bay Trend in Unintentional Injury Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

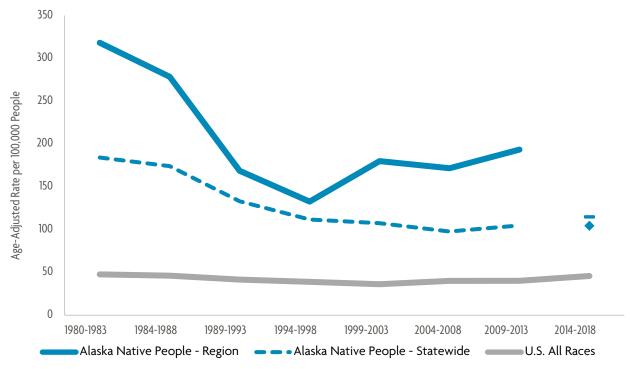


Figure 58. Bristol Bay Trend in Suicide Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

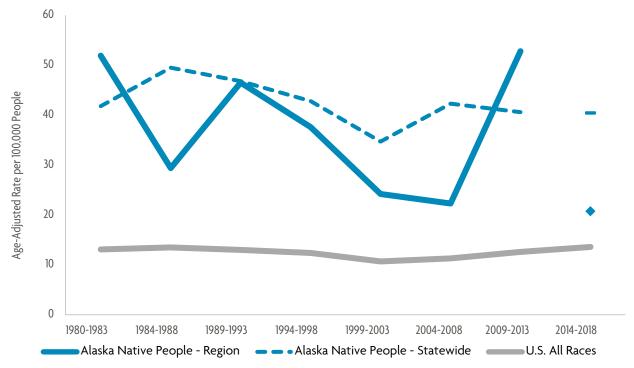


Figure 59. Bristol Bay Trend in COPD Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018 (Rate not reportable prior to 1989)

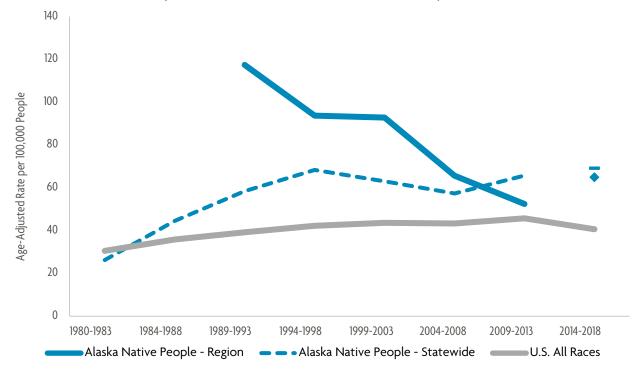


Table 8. Trends in Age-Adjusted Mortality Rates per 100,000 People among Alaska Native People in the Copper River-PWS Region, 1980-2014

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

	1980-	1984-	1989-	1994-	1999-	2004-	2009-	2014-	% Change
Cause	1983	1988	1993	1998	2003	2008	2013	2018	∕₀ Change
Cancer	171.6	296.0	268.7	122.1	337.1	251.2	335.5	140.2	-18.3%
Heart Disease	287.0	257.4	225.5	180.5	170.3	160.9	174.5	202.2	-29.6%
Unintentional Injury	427.1	183.7	145.9	222.3	119.7	89.5	164.0	103.7	-75.7% *
All-Cause	1621.4	1203.9	1069.5	1024.9	1208.6	1055.5	1007.9	989.6	-39.0% *

<sup>\*</sup>significant difference, p < 0.05

Figure 60. Copper River-PWS Trend in All-Cause Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

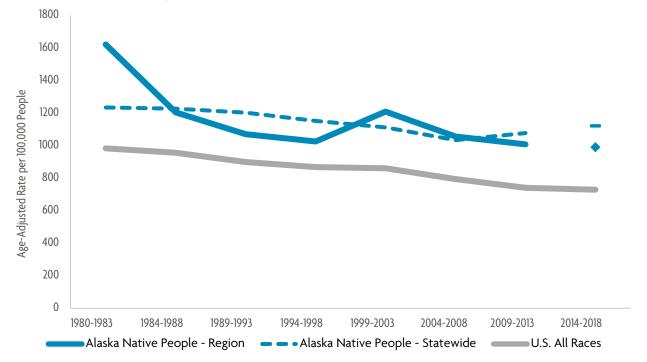


Figure 61. Copper River-PWS Trend in Cancer Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

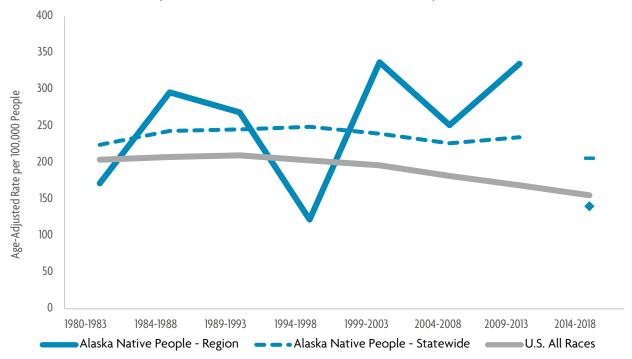


Figure 62. Copper River-PWS Trend in Heart Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

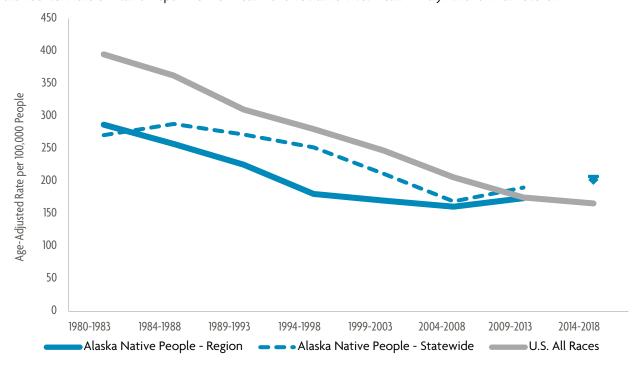


Figure 63. Copper River-PWS Trend in Unintentional Injury Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

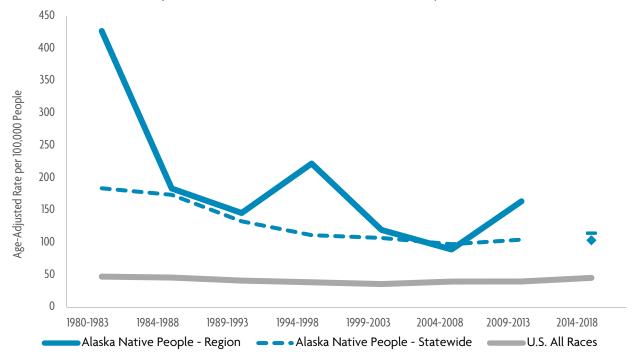


Table 9. Trends in Age-Adjusted Mortality Rates per 100,000 People among Alaska Native People in the Interior Region, 1980-2014

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

Cause	1980- 1983	1984- 1988	1989- 1993	1994- 1998	1999- 2003	2004- 2008	2009- 2013	2014- 2018	% Chang	e
Cancer	237.4	225.1	250.1	233.6	205.2	228.7	212.1	215.2	-9.3%	
Heart Disease	264.1	351.1	272.0	258.8	170.4	124.8	182.6	185.1	-29.9%	*
Unintentional Injury	242.9	248.2	132.7	127.4	118.9	110.7	114.3	124.2	-48.9%	*
Suicide	59.8	51.2	73.4	55.3	49.5	41.1	39.1	40.0	-33.1%	*
COPD	69.8	56.8	20.6	48.8	65.4	44.3	62.9	58.1	-16.8%	
Chronic Liver Disease	24.5	27.8	22.4	24.8	25.0	16.8	27.7	45.7	86.4%	*
Cerebrovascular Disease	68.5	96.3	48.2	78.3	55.9	48.1	39.1	31.4	-54.1%	*
Alcohol Abuse	48.7	33.6	23.4	42.7	72.8	74.0	15.8	24.9	-48.8%	
Influenza/Pneumonia	72.2	94.2	52.7	34.3	22.2	30.9	39.1	15.2	-79.0%	*
All-Cause	1511.9	1465.7	1192.7	1153.5	1021.8	1000.1	962.3	1016.1	-32.8%	*

<sup>\*</sup>significant difference, p < 0.05

Figure 64. Interior Trend in All-Cause Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

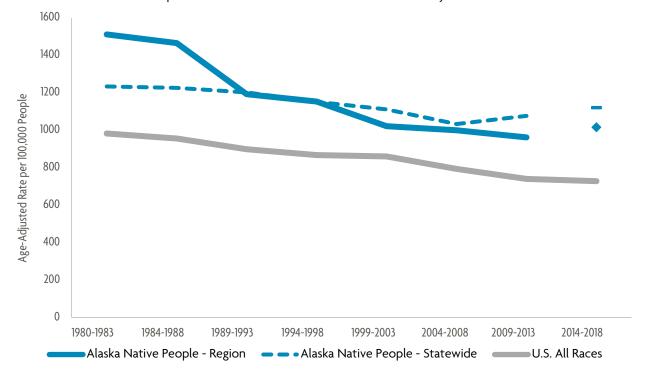


Figure 65. Interior Trend in Cancer Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

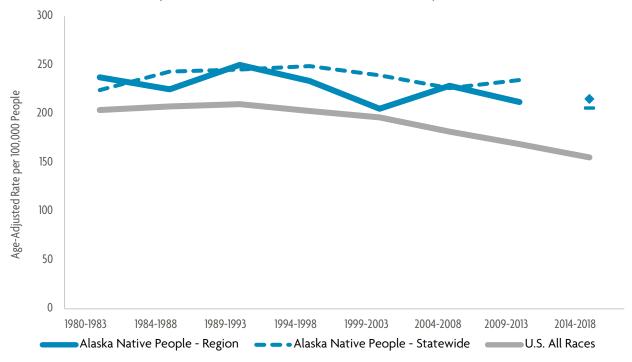


Figure 66. Interior Trend in Heart Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018



Figure 67. Interior Trend in Unintentional Injury Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

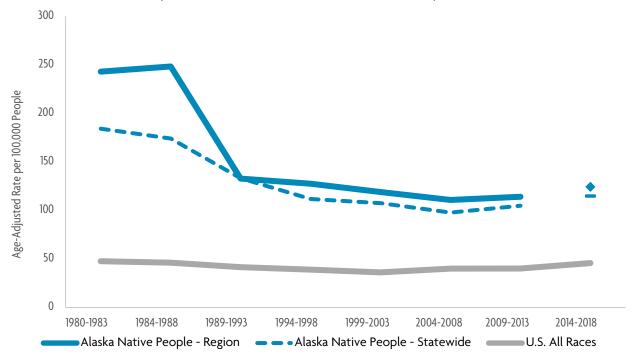


Figure 68. Interior Trend in Suicide Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

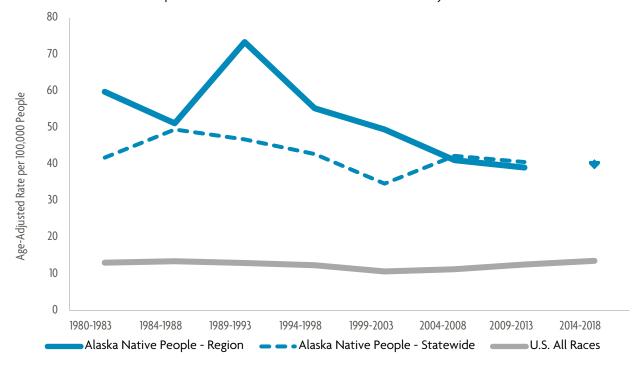


Figure 69. Interior Trend in COPD Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

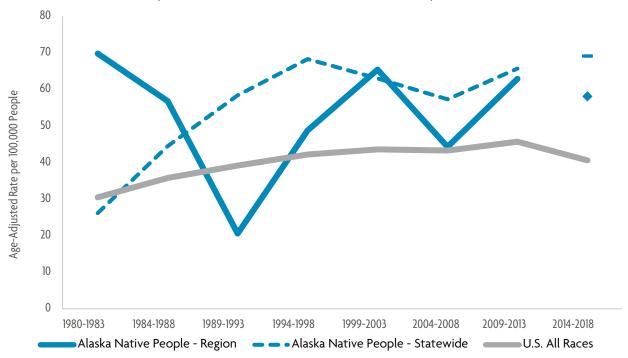


Figure 70. Interior Trend in Chronic Liver Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

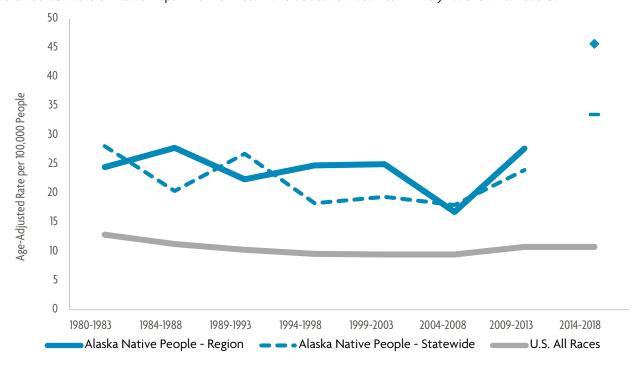


Figure 71. Interior Trend in Cerebrovascular Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018



Figure 72. Interior Trend in Alcohol Abuse Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

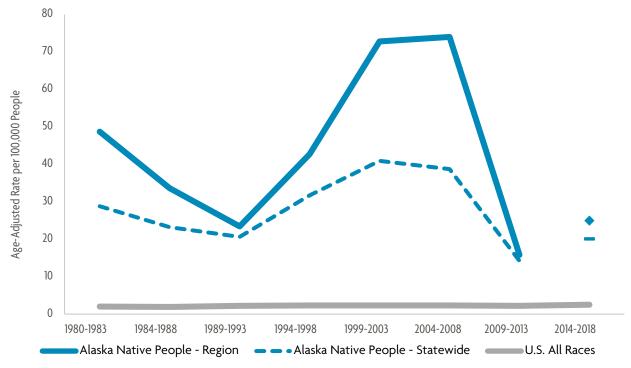


Figure 73. Interior Trend in Influenza/Pneumonia Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

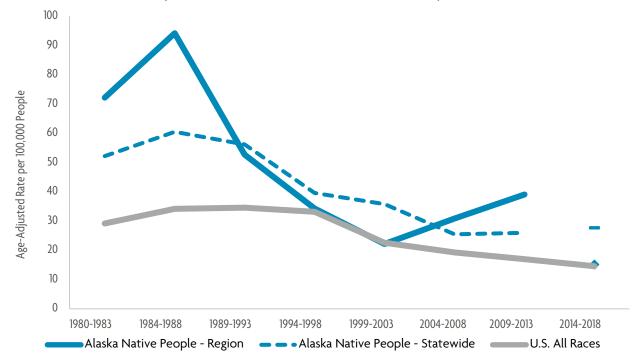


Table 10. Trends in Age-Adjusted Mortality Rates per 100,000 People among Alaska Native People in the Kenai Peninsula Region, 1980-2014

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

Cause	1980- 1983	1984- 1988	1989- 1993	1994- 1998	1999- 2003	2004- 2008	2009- 2013	2014- 2018	% Change	
Cancer	340.8	459.9	287.9	372.1	171.7	260.4	256.6	155.8	-54.3% *	
Heart Disease	475.5	340.9	198.4	292.1	245.2	262.8	192.6	231.9	-51.2% *	
Unintentional Injury	73.8	112.4	122.6	68.2	70.9	83.5	85.4	41.9	-43.2%	
All-Cause	1440.4	1359.0	1057.8	1149.9	1075.3	1150.4	1119.0	929.5	-35.5% *	

<sup>\*</sup>significant difference, p < 0.05

Figure 74. Kenai Peninsula Trend in All-Cause Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

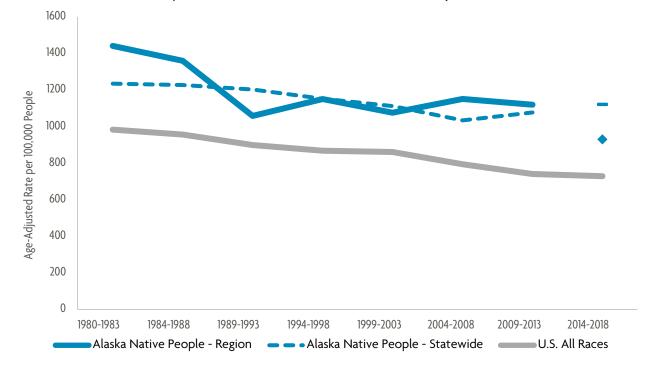


Figure 75. Kenai Peninsula Trend in Cancer Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

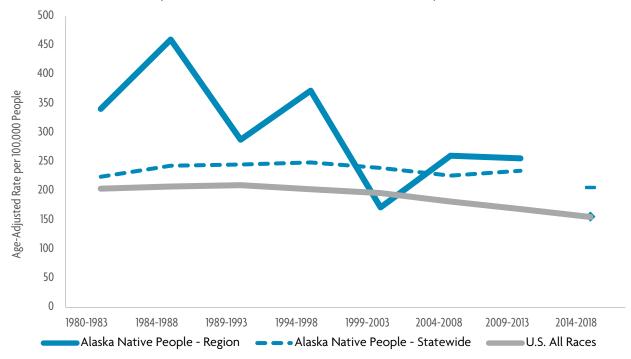


Figure 76. Kenai Peninsula Trend in Heart Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

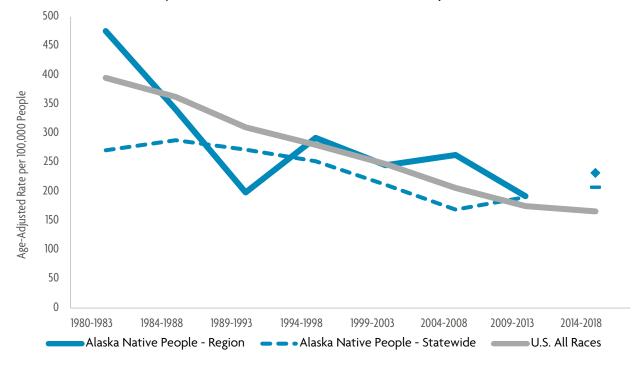


Figure 77. Kenai Peninsula Trend in Unintentional Injury Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

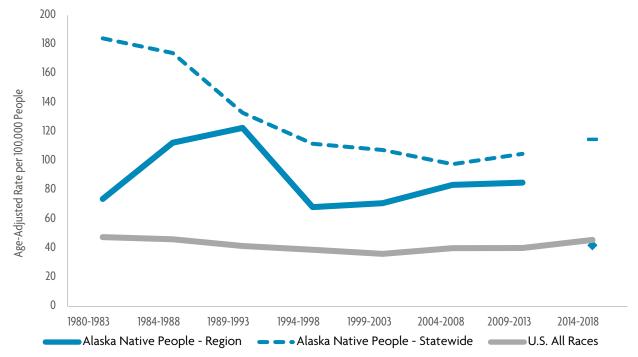


Table 11. Trends in Age-Adjusted Mortality Rates per 100,000 People among Alaska Native People in the Kodiak Region, 1980-2014

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

Cause	1980- 1983	1984- 1988	1989- 1993	1994- 1998	1999- 2003	2004- 2008	2009- 2013	2014- 2018	% Change	
Cancer	92.6	382.7	331.9	323.6	240.8	251.2	247.8	196.5	112.2%	_
Heart Disease	444.0	407.9	395.4	423.1	295.4	112.8	263.2	177.6	-60.0% *	
Unintentional Injury	208.8	182.1	94.4	87.9	97.1	54.0	106.1	101.6	-51.4% *	,
All-Cause	1307.0	1447.6	1413.8	1368.1	1037.8	991.9	1173.3	969.9	-25.8% *	,

<sup>\*</sup>significant difference, p < 0.05

Figure 78. Kodiak Trend in All-Cause Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

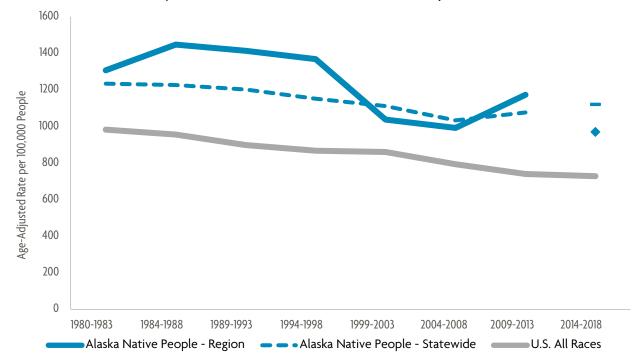


Figure 79. Kodiak Trend in Cancer Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

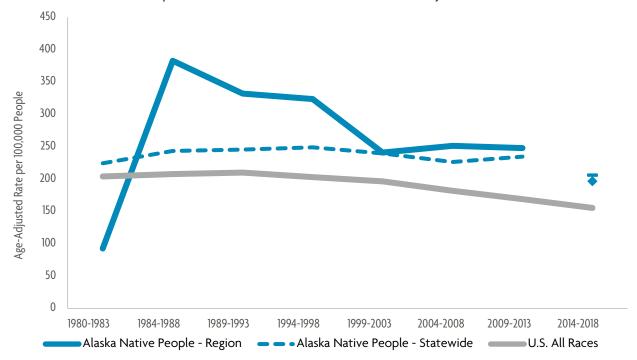


Figure 80. Kodiak Trend in Heart Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

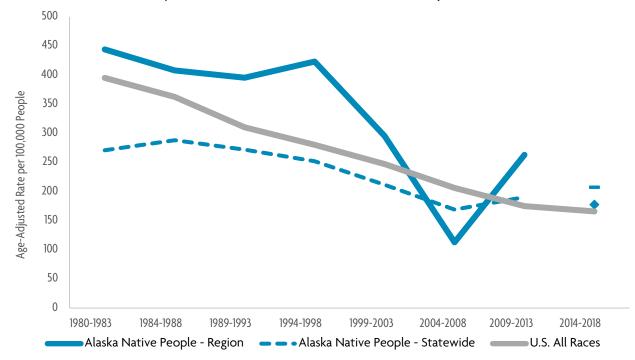


Figure 81. Kodiak Trend in Unintentional Injury Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

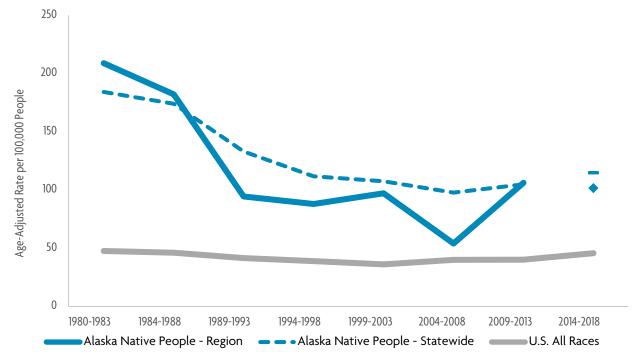


Table 12. Trends in Age-Adjusted Mortality Rates per 100,000 People among Alaska Native People in the Northwest Arctic Region, 1980-2014

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

Cause	1980- 1983	1984- 1988	1989- 1993	1994- 1998	1999- 2003	2004- 2008	2009- 2013	2014- 2018	% Change	2
Cancer	181.9	307	214.5	262.8	260.9	282	246.7	187.1	2.9%	
Heart Disease	243.8	250.3	265.5	273.5	219.7	207.5	204.7	218	-10.6%	
Unintentional Injury	197.3	174.1	227.6	87.8	132	151.3	117.2	113.2	-42.6%	*
Suicide	92	78.3	70.7	75.8	83.8	79.6	57.4	69.3	-24.7%	*
COPD	68	65.3	63.2	61.9	55.6	70	71	52.5	-22.8%	*
Cerebrovascular Disease	68.7	72.2	74.6	77.5	101.2	39.6	39.2	71.8	4.6%	
All-Cause	1158.3	1361.8	1238.5	1174.8	1260.8	1076.8	1090.1	1055.1	-8.9%	

<sup>\*</sup>significant difference, p < 0.05

Figure 82. Northwest Arctic Trend in All-Cause Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

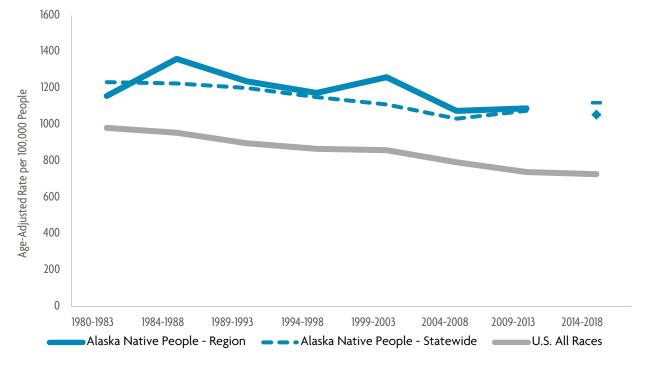


Figure 83. Northwest Arctic Trend in Cancer Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

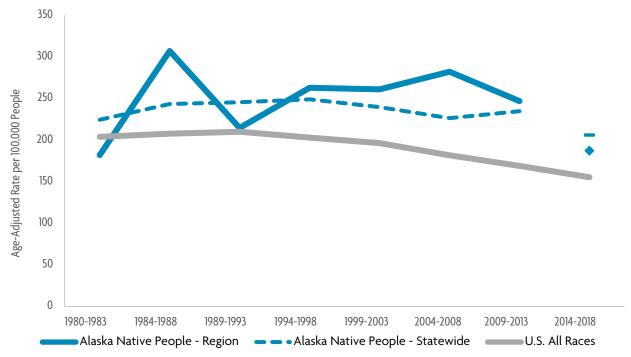


Figure 84. Northwest Arctic Trend in Heart Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

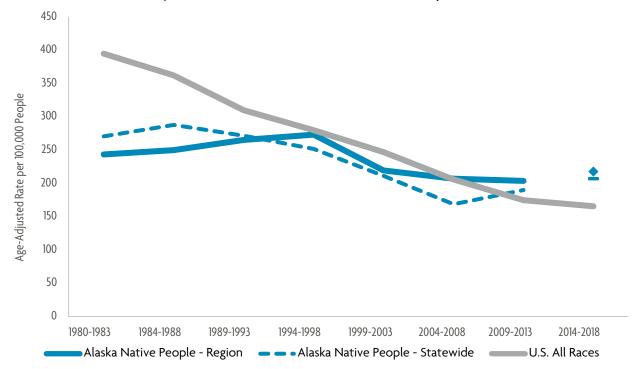


Figure 85. Northwest Arctic Trend in Unintentional Injury Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

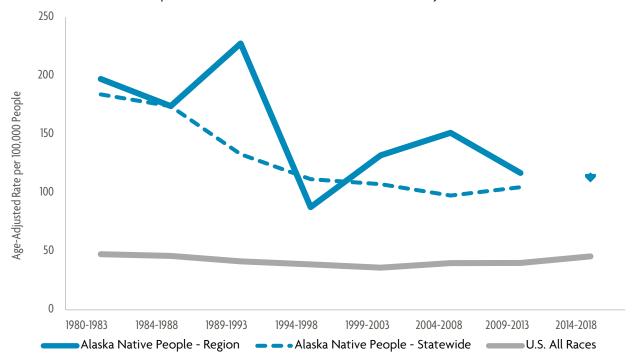


Figure 86. Northwest Arctic Trend in Suicide Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

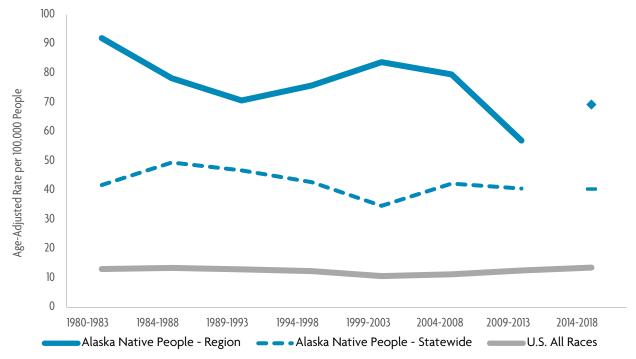


Figure 87. Northwest Arctic Trend in COPD Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

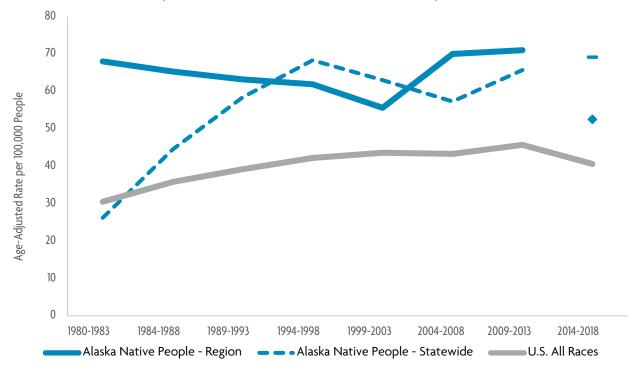


Figure 88. Northwest Arctic Trend in Cerebrovascular Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

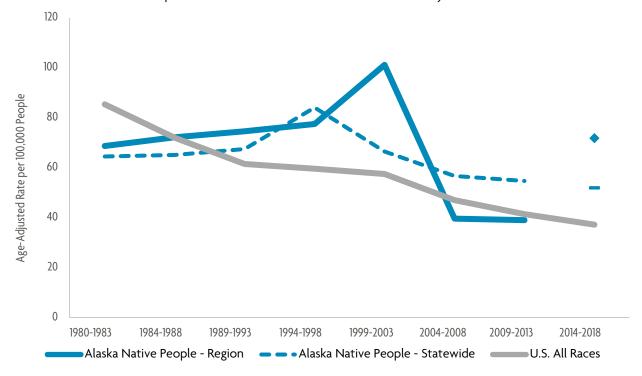


Table 13. Trends in Age-Adjusted Mortality Rates per 100,000 People among Alaska Native People in the Norton Sound Region, 1980-2014

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

Cause	1980- 1983	1984- 1988	1989- 1993	1994- 1998	1999- 2003	2004- 2008	2009- 2013	2014- 2018	% Chang	ţe
Cancer	315.2	259.8	257.1	278	282.7	234.6	316.8	233	-26.1%	*
Heart Disease	301.6	324	303.1	252.1	179	149.9	290.4	247.3	-18.0%	
Unintentional Injury	141.4	156	122.6	175.8	143	136.1	115.2	112.6	-20.4%	
Suicide	90.3	93.5	79.5	72.9	87.8	75.8	96.7	48.6	-46.2%	*
COPD	35.9	46.1	62.1	107.7	71.4	58.3	100.9	117.5	227.4%	*
Cerebrovascular Disease	62.1	46.6	78.9	79.9	60	47.3	109.2	40	-35.6%	*
All-Cause	1372.7	1137.6	1360.7	1296.6	1243.0	1047.5	1356.1	1259.5	-8.2%	

<sup>\*</sup>significant difference, p < 0.05

Figure 89. Norton Sound Trend in All-Cause Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

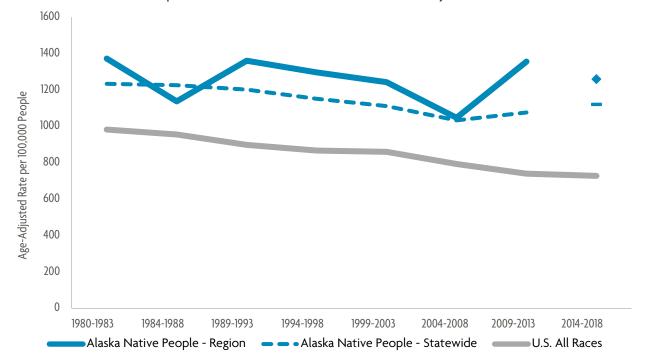


Figure 90. Norton Sound Trend in Cancer Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

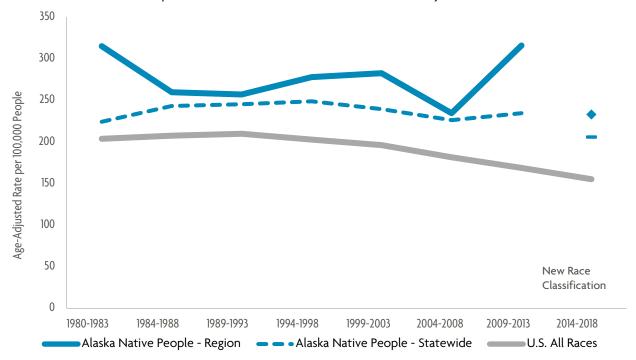


Figure 91. Norton Sound Trend in Heart Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

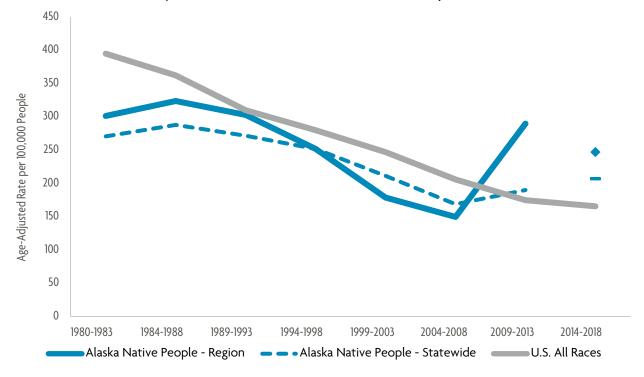


Figure 92. Norton Sound Trend in Unintentional Injury Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

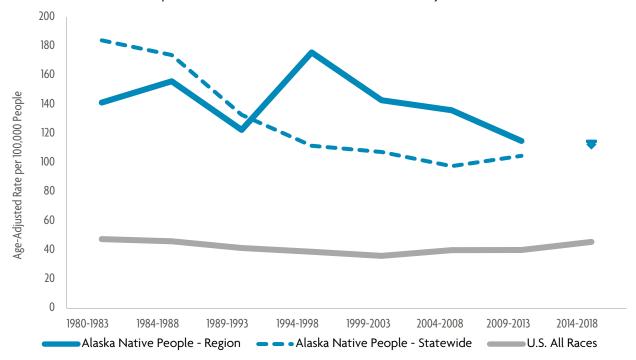


Figure 93. Norton Sound Trend in Suicide Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

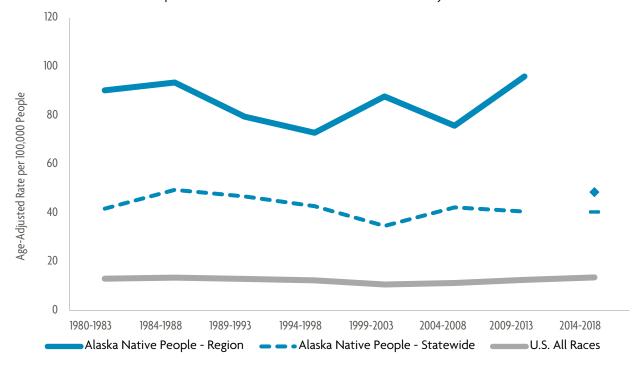


Figure 94. Norton Sound Trend in COPD Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

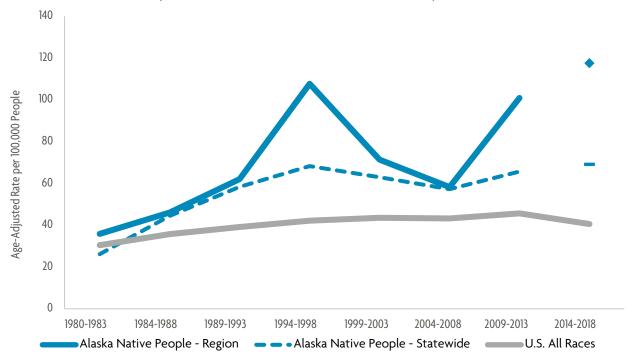


Figure 95. Norton Sound Trend in Cerebrovascular Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

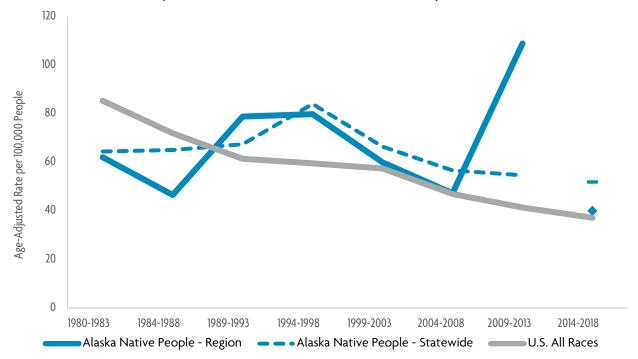


Table 14. Trends in Age-Adjusted Mortality Rates per 100,000 People among Alaska Native People in the Southeast Region, 1980-2014

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

Cause	1980- 1983	1984- 1988	1989- 1993	1994- 1998	1999- 2003	2004- 2008	2009- 2013	2014- 2018	% Chang	ge
Cancer	195.5	135.2	203.8	177.4	189.9	191.1	184.3	159.5	-18.4%	
Heart Disease	404.9	280	270.8	296.4	210.6	147.1	162.3	182.3	-55.0%	*
Unintentional Injury	125	110.1	100.1	81.2	51.2	74	71.2	79.6	-36.3%	*
Suicide	37.8	32.1	28.8	26.5	9.2	17.9	19.4	15.1	-60.0%	*
COPD	22.4	25	45.7	40.9	33.7	47.4	42	51.8	131.4%	*
Chronic Liver Disease	17.7	14.8	28.8	19.8	17.7	15.3	23.4	28	58.4%	*
Cerebrovascular Disease	104.2	73.7	65.8	51.4	55.5	51.1	29	34.1	-67.3%	*
All-Cause	1391.1	1042.3	1062.0	968.9	874.8	881.0	866.6	869.9	-37.5%	*

<sup>\*</sup>significant difference, p < 0.05

Figure 96. Southeast Trend in All-Cause Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

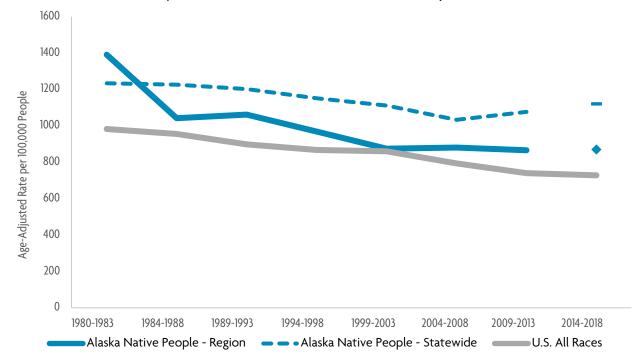


Figure 97. Southeast Trend in Cancer Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

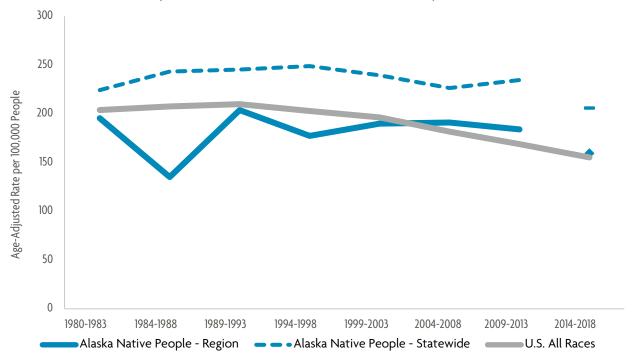


Figure 98. Southeast Trend in Heart Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

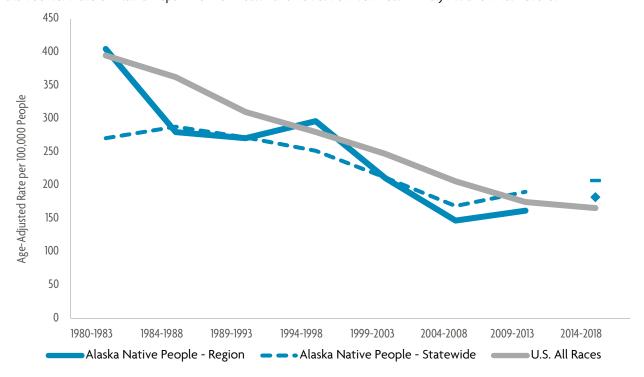


Figure 99. Southeast Trend in Unintentional Injury Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

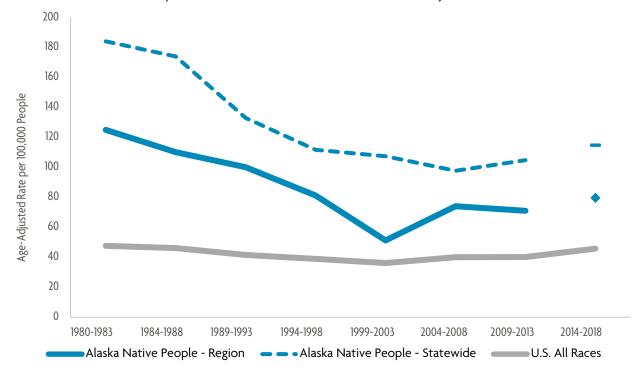


Figure 100. Southeast Trend in Suicide Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

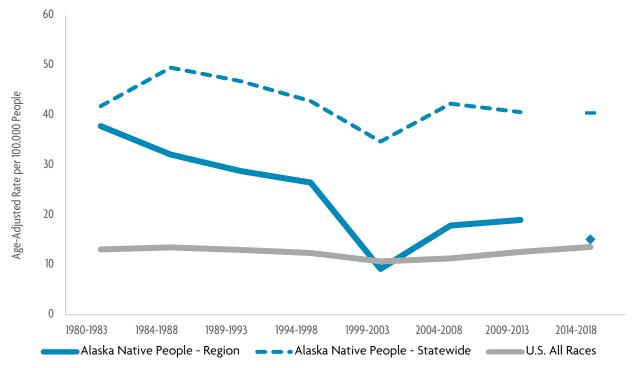


Figure 101. Southeast Trend in COPD Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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



Figure 102. Southeast Trend in Chronic Liver Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

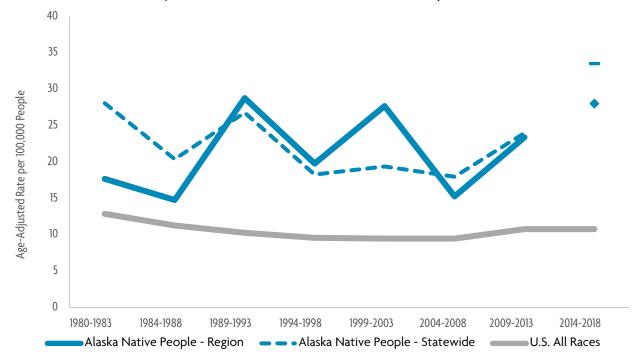


Figure 103. Southeast Trend in Cerebrovascular Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018



Table 15. Trends in Age-Adjusted Mortality Rates per 100,000 People among Alaska Native People in the Yukon-Kuskokwim Region, 1980-2014

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

Cause	1980- 1983	1984- 1988	1989- 1993	1994- 1998	1999- 2003	2004- 2008	2009- 2013	2014- 2018	% Change	
Cancer	217.4	256.6	250.5	260.6	249	273.1	234.8	179	-17.7%	
Heart Disease	111.3	212.8	187.6	226.7	209.2	175.4	166.2	188.8	69.6%	*
Unintentional Injury	218.4	203.9	166.2	125	130.7	96	107.8	133.1	-39.1%	*
Suicide	22.8	55.6	47.6	64.4	43.7	64.3	58.3	55.5	143.4%	*
COPD	34.1	37.3	66.8	70.3	63.1	63.5	81.6	69.5	103.9%	*
Cerebrovascular Disease	39.3	46.1	69.3	62.7	56.6	77.7	86.2	73	85.6%	*
Alcohol Abuse	18.8	24.4	22.1	24.6	25.6	25.7	14.2	14.6	-22.3%	
Homicide	28.2	22.6	24.3	6.6	20.7	18.8	18.4	17.8	-37.0%	*
Influenza/Pneumonia	33.8	41.8	85.2	40.4	59.9	47	24.7	55.3	63.7%	*
All-Cause	898.3	1159.6	1148.6	1115.3	1130.0	1153.8	1063.8	1104.8	23.0%	*

<sup>\*</sup>significant difference, p < 0.05

Figure 104. Yukon-Kuskokwim Trend in All-Cause Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

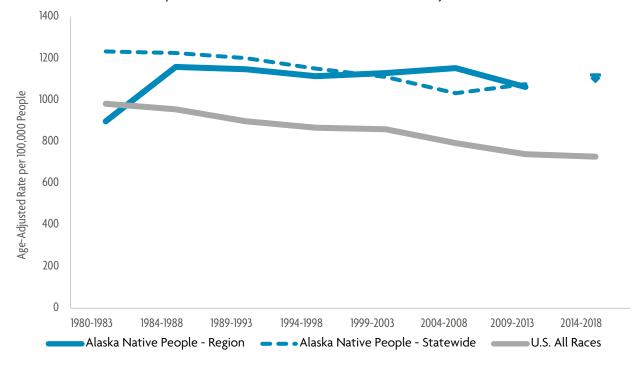


Figure 105. Yukon-Kuskokwim Trend in Cancer Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

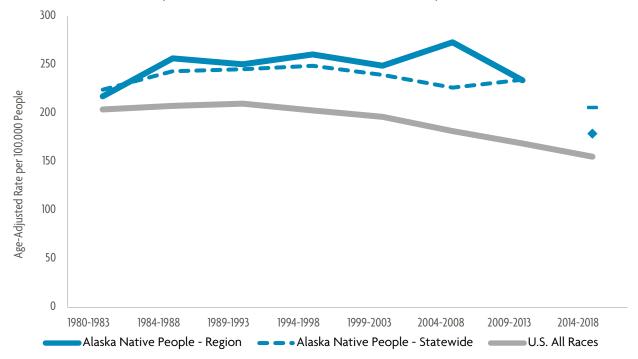


Figure 106. Yukon-Kuskokwim Trend in Heart Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

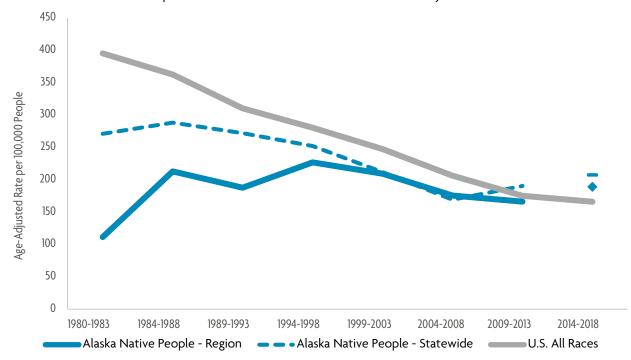


Figure 107. Yukon-Kuskokwim Trend in Unintentional Injury Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

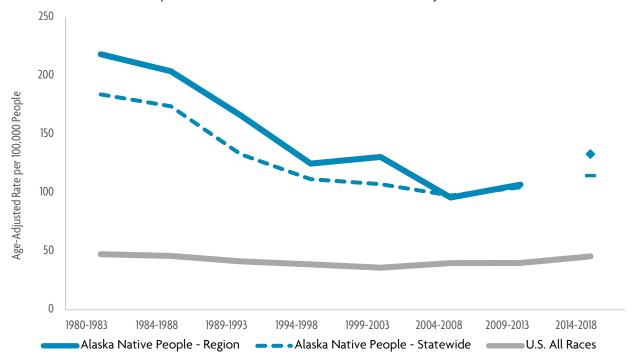


Figure 108. Yukon-Kuskokwim Trend in Suicide Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

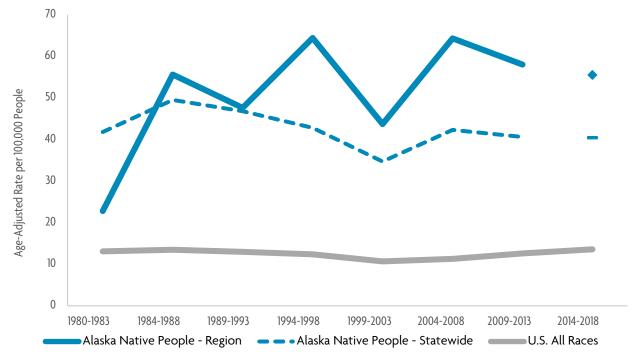


Figure 109. Yukon-Kuskokwim Trend in COPD Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

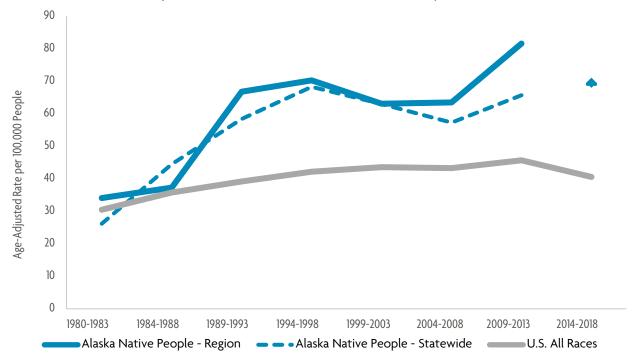


Figure 110. Yukon-Kuskokwim Trend in Cerebrovascular Disease Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

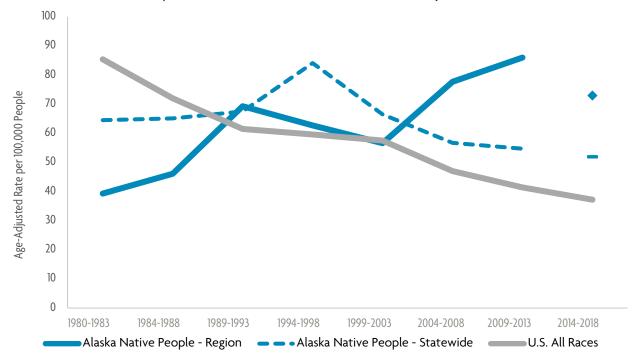


Figure 111. Yukon-Kuskokwim Trend in Alcohol Abuse Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

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

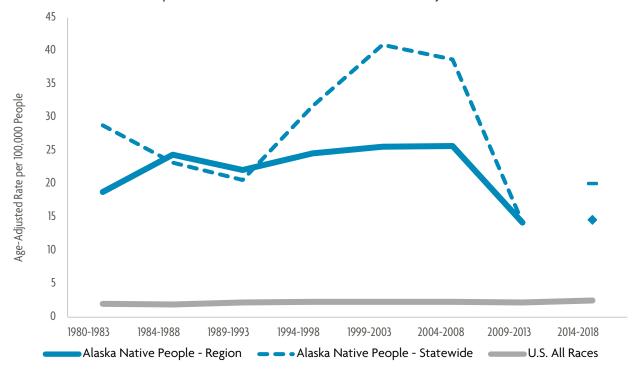


Figure 112. Yukon-Kuskokwim Trend in Homicide Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

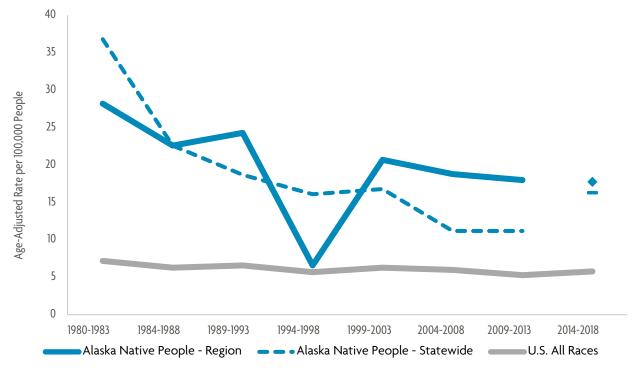


Figure 113. Yukon-Kuskokwim Trend in Influenza/Pneumonia Age-Adjusted Mortality Rate per 100,000 People, Alaska Native People Compared to U.S. All Races, 1980-1983 to 2014-2018

