TRENDS OVER TIME

Highlights

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

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

Overview

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

Percentage change between the 1980 to 1983 time period and the 2009 to 2013 time period was calculated by subtracting the rate for the first time period from the rate for the most recent time period and dividing by the rate for the first time period. Rates over time were reported for both Alaska Native people and U. S. Whites.

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

TABLE 9.

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

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

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

[a] Age-adjusted to the US 2000 Standard population

[b] 1980-1983 time period contains only four years

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

[d] NS means that there was no significant difference at $p<0.05$

FIGURE 43.
Data Source: Table 9.

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

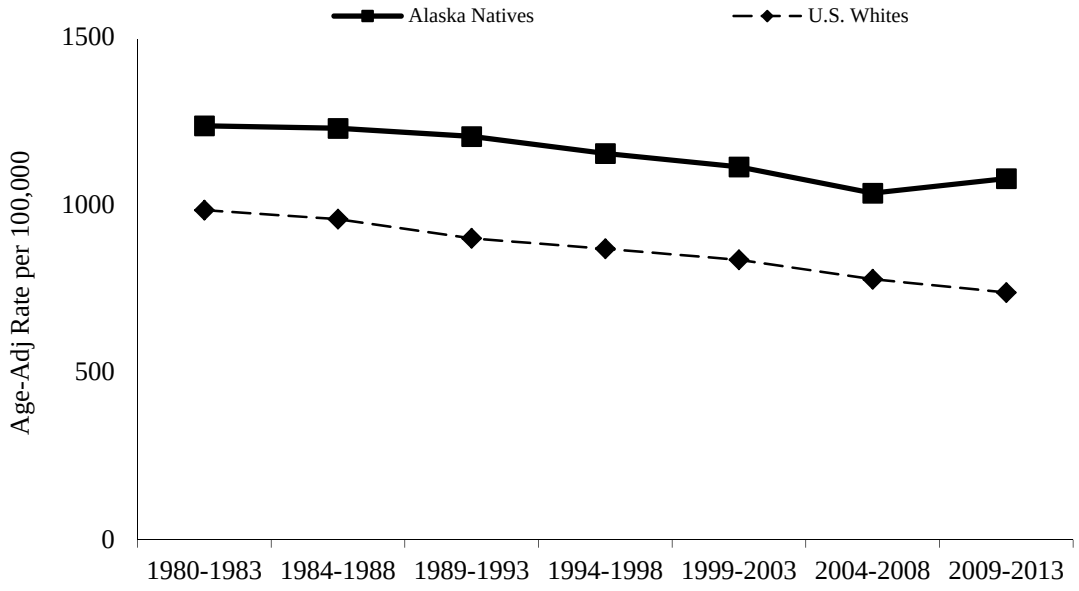


FIGURE 44.
Data Source: Table 9.

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

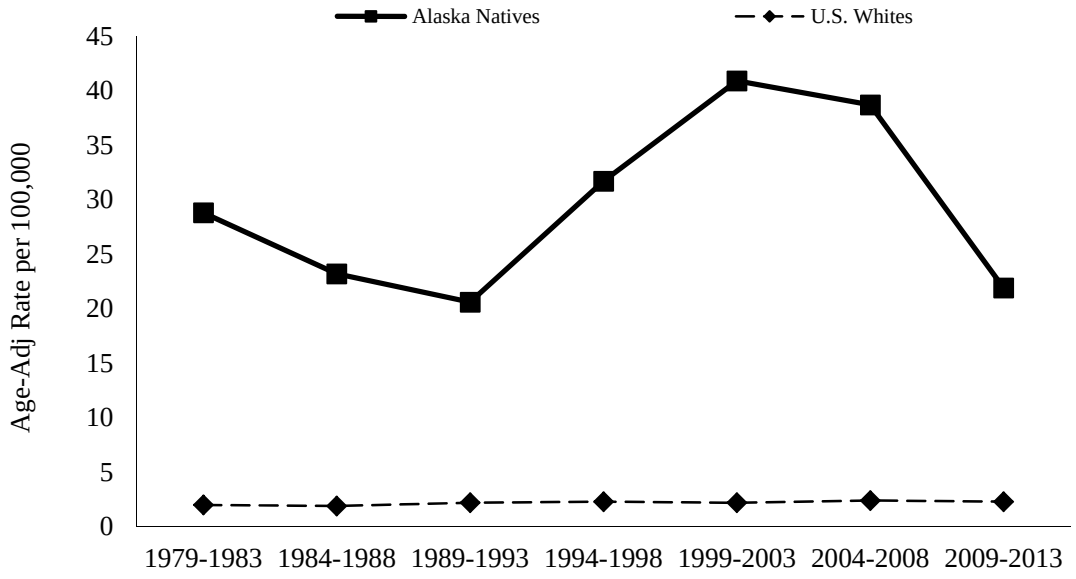


FIGURE 45.
Data Source: Table 9.

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

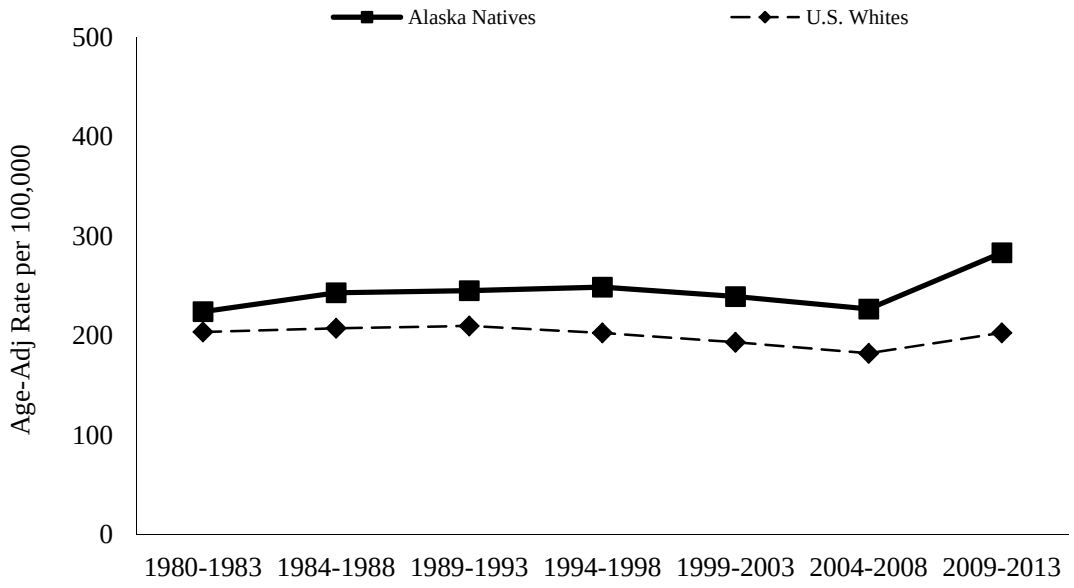


FIGURE 46.
Data Source: Table 9.

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

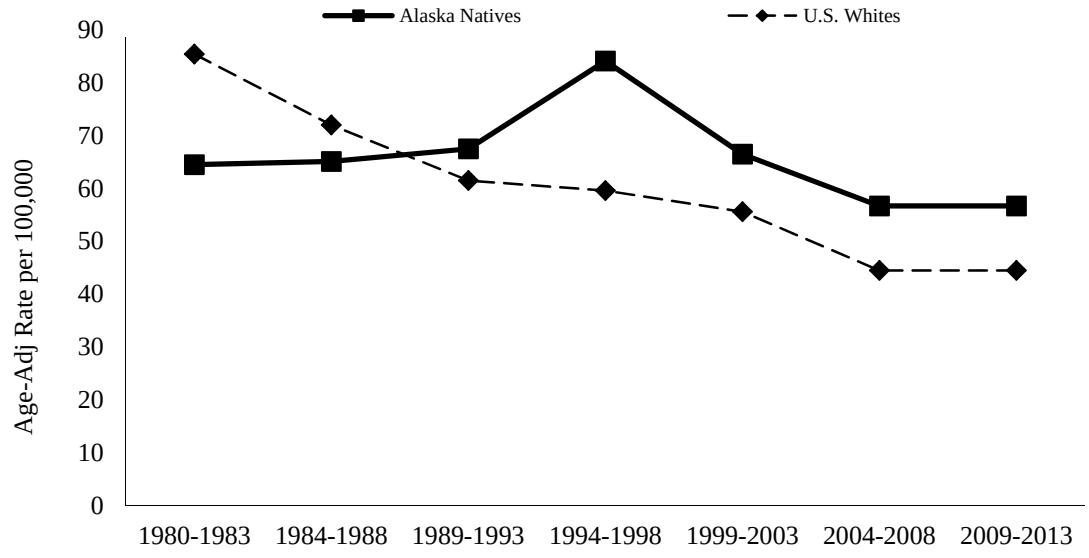


FIGURE 47.
Data Source: Table 9.

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

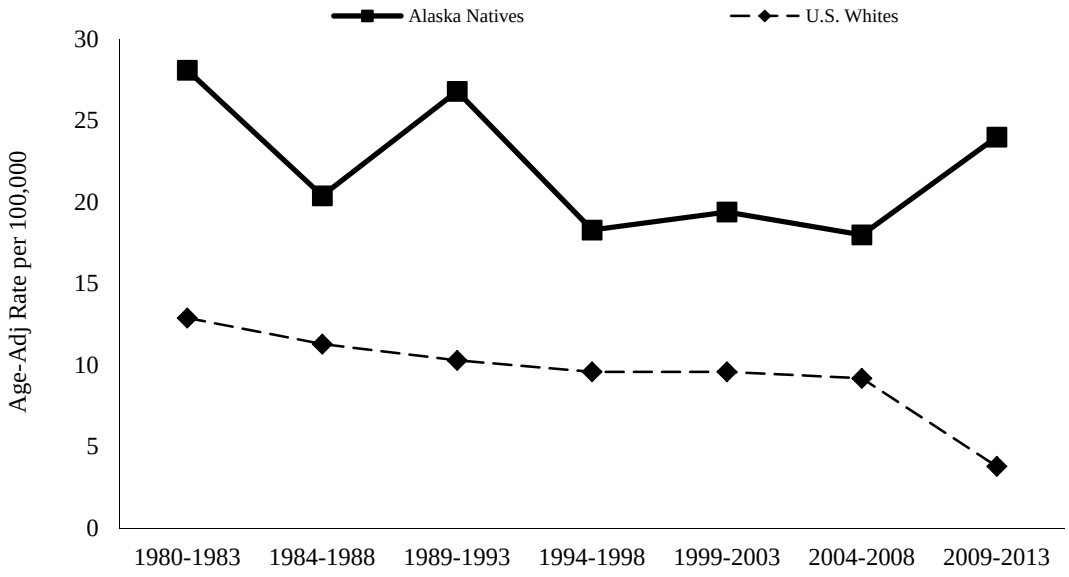


FIGURE 48.
Data Source: Table 9.

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

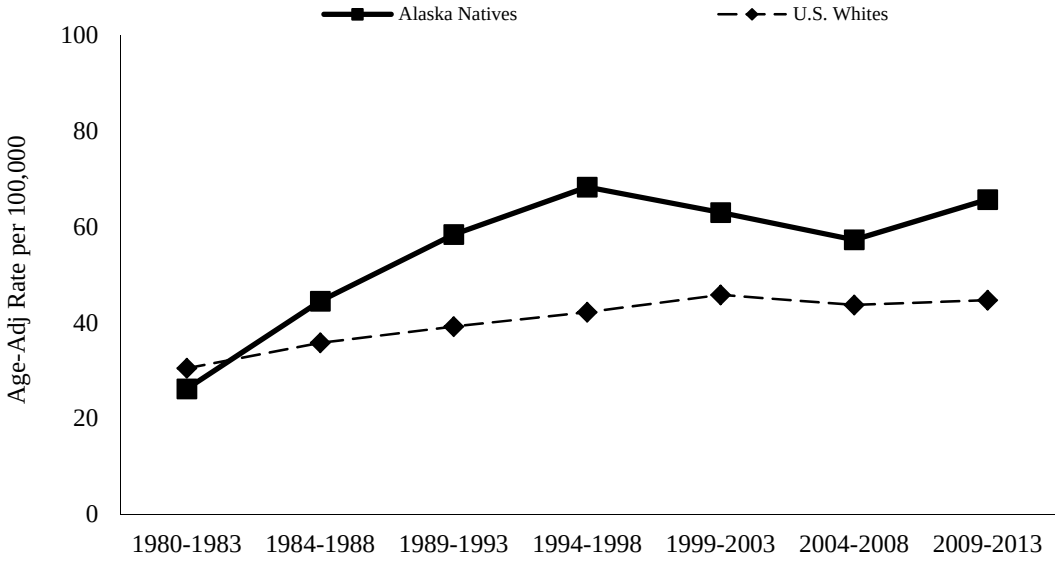


FIGURE 49.
Data Source: Table 9.

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

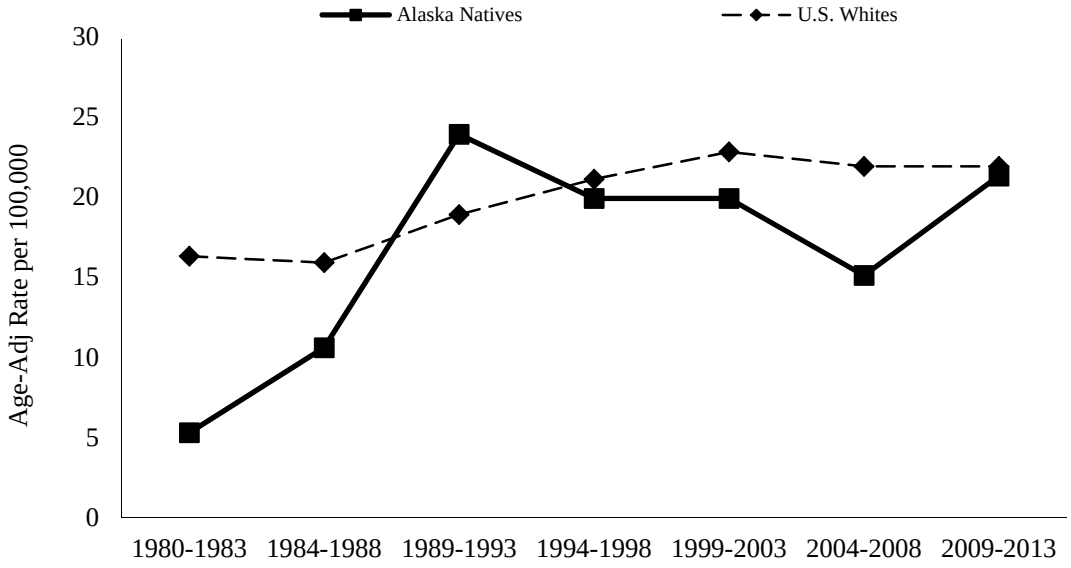


FIGURE 50.
Data Source: Table 9.

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

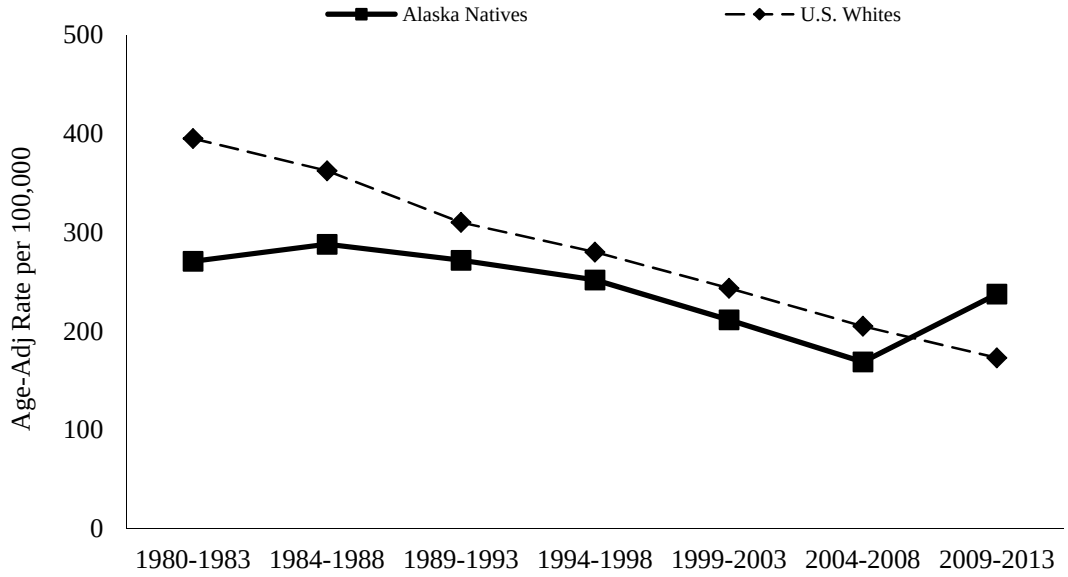


FIGURE 51.
Data Source: Table 9.

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

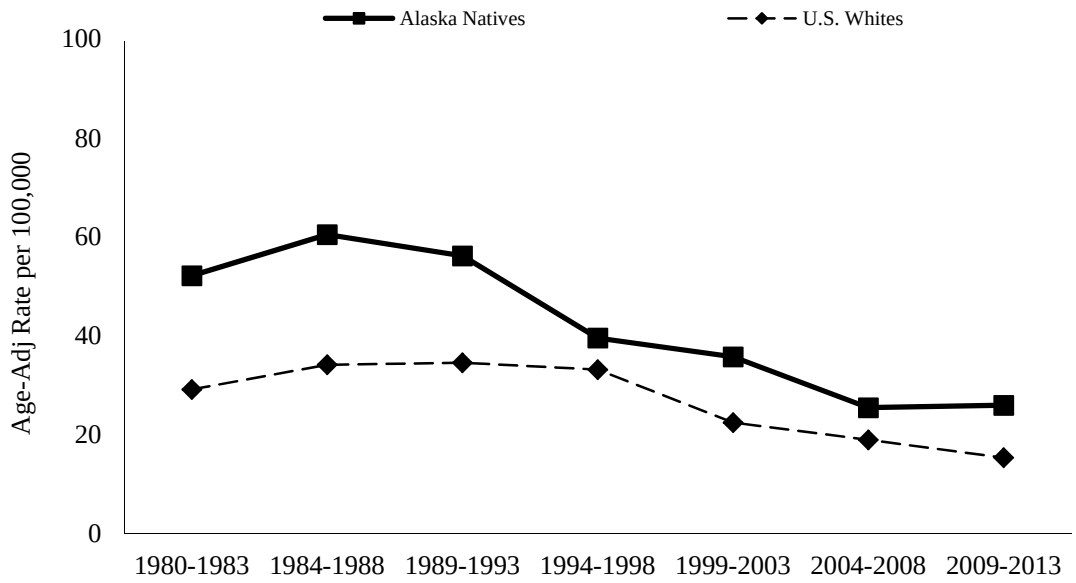


FIGURE 52.
Data Source: Table 9.

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

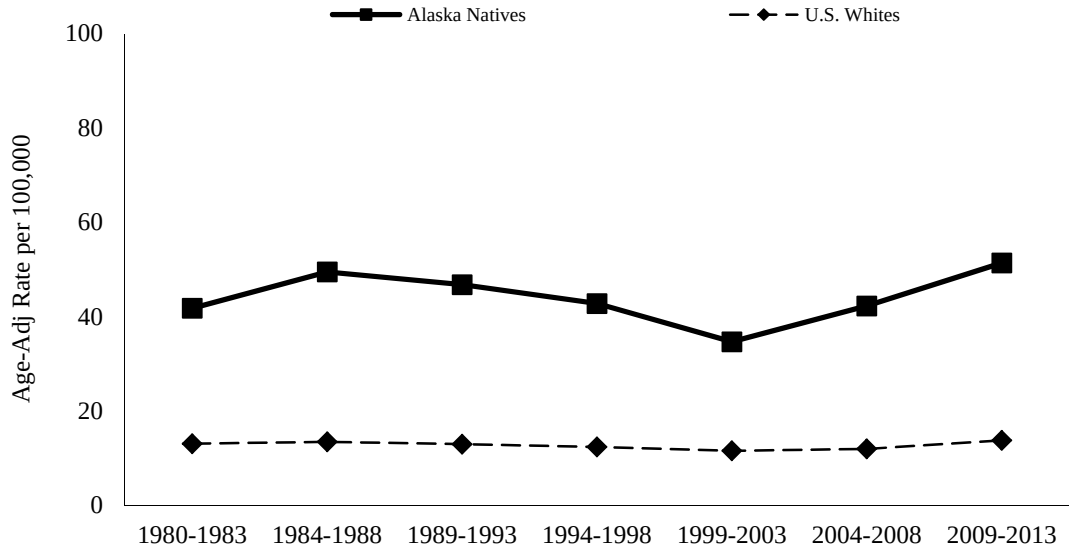
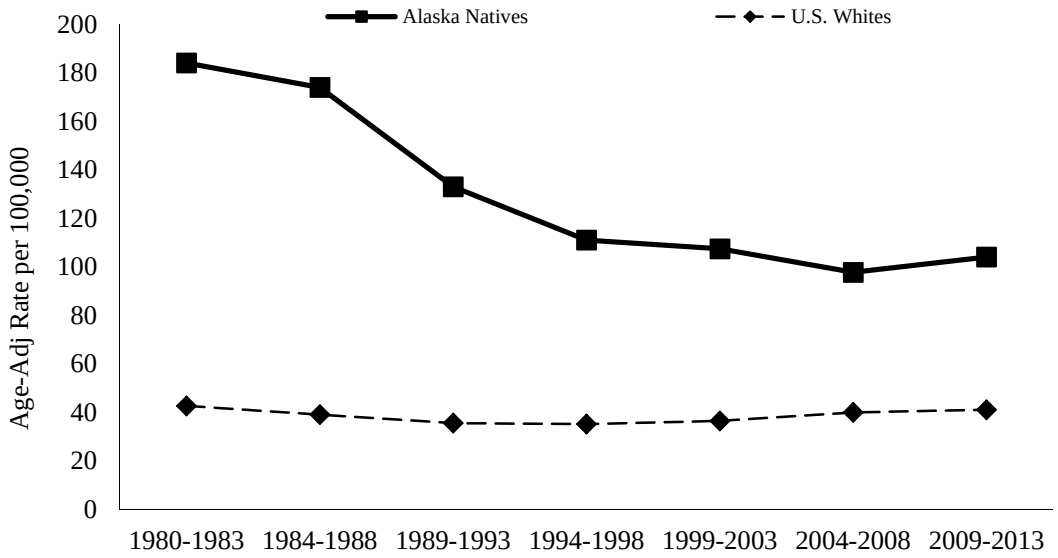


FIGURE 53.
Data Source: Table 9.

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