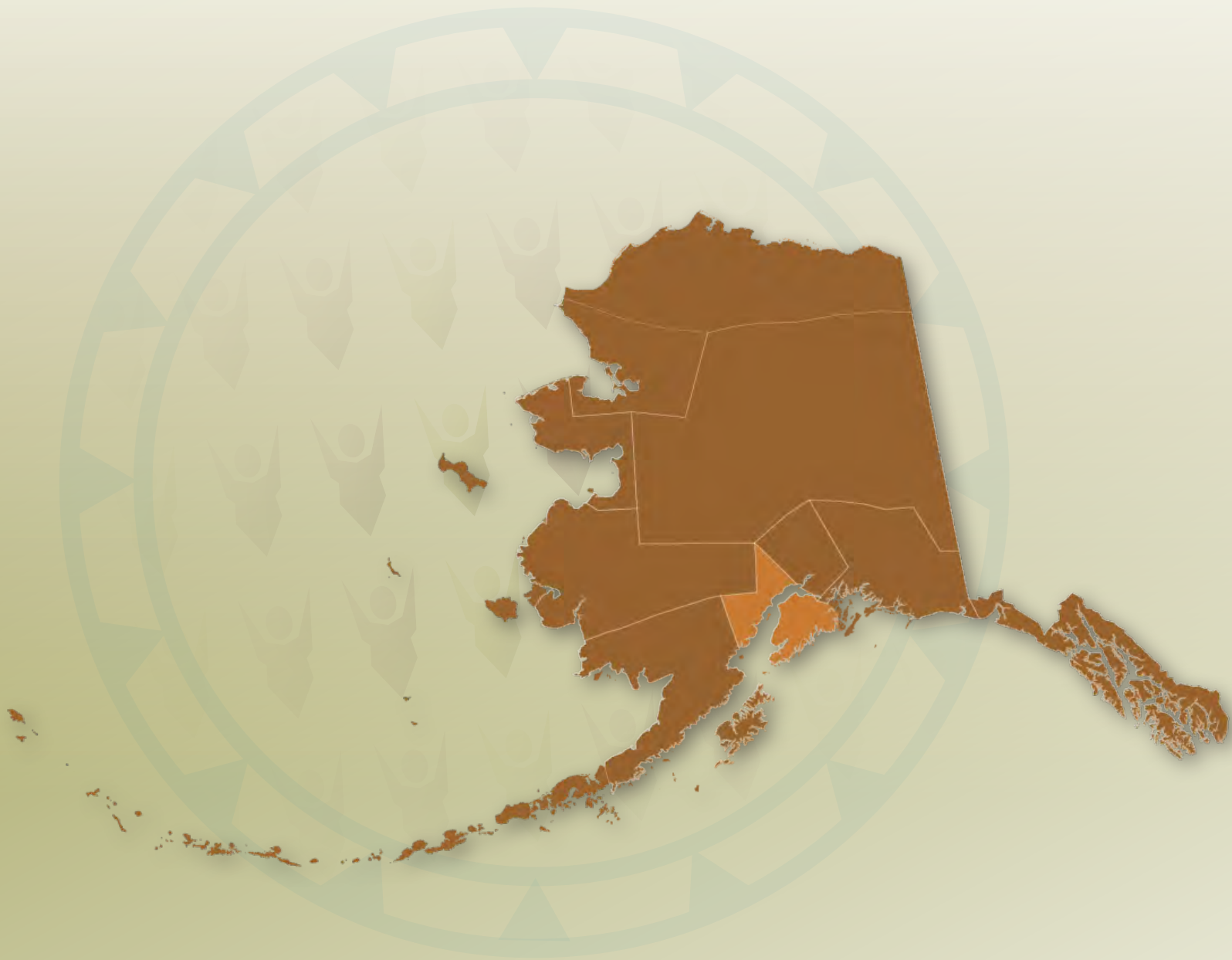


# Kenai Regional Health Profile



ALASKA NATIVE  
**EPIDEMIOLOGY**  
CENTER

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**February 2012**

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This regional health profile utilizes data from multiple tribal, state, and federal programs. We would like to thank these partners for providing data. Without their collaboration, this endeavor would not be possible.

Specifically, we would like to thank the following:

### Tribal - Alaska Native Tribal Health Consortium

- Alaska Native Diabetes Registry
- Immunization Program
- Injury Prevention Program

### State of Alaska

- Alaska Trauma Registry
- Behavioral Risk Factor Surveillance System (BRFSS)
- Bureau of Vital Statistics
- HIV/STD Program
- Pregnancy Risk Assessment Monitoring System (PRAMS)
- Youth Risk Behavior Survey (YRBS)

### Federal

- Alaska Area Indian Health Service

### Reference Recommendation:

Alaska Native Epidemiology Center. Kenai Regional Health Profile. Alaska Native Tribal Health Consortium. Anchorage, February 2012.

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## Table of Contents

Acknowledgements .....	i
Table of Contents .....	ii-iv
Introduction.....	1
Regional Health Profile Organization .....	2
Kenai Region Map .....	3
Anchorage Service Unit Communities.....	4
Regional Health Profile Overview .....	5-10

### Demographics

User Population .....	12
Population Estimates .....	13
Population Pyramid .....	14
2001 and 2009 Bridged Population Change - Male .....	15
2001 and 2009 Bridged Population Change - Female.....	16
Educational Attainment .....	17
Unemployment .....	18
Poverty Status - All Ages .....	19
Poverty Status - Under 18 Years of Age.....	20
Household Income .....	21

### Mortality

Leading Causes of Death.....	24
Life Expectancy - Male .....	25
Life Expectancy - Female.....	26
Years of Potential Life Lost.....	27
Cancer Deaths .....	28
Heart Disease Deaths.....	29
Unintentional Injury Deaths.....	30
Cerebrovascular Disease Deaths.....	31
Leading Causes of Injury Deaths .....	32

### Morbidity

Leading Causes of Outpatient Visits .....	34
Leading Causes of Injury Hospitalizations.....	35
Injury Hospitalizations - Unintentional Injuries and Falls .....	36

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---

**Table of Contents**

Injury Hospitalizations - Suicide Attempts and Assaults .....	37
Leading Cancers .....	38
Diabetes - Prevalence .....	39
Diabetes - Percent Increase .....	40

**Adult Health Behavior**

Tobacco Use - Current Smokers.....	42
Tobacco Use - Smokeless Tobacco Use .....	43
Alcohol Use - Binge Drinking.....	44
Physical Activity .....	45
Overweight .....	46
Obesity .....	47
Lifetime Intimate Partner Violence.....	48
Abstaining from Smoking during Pregnancy.....	49
Abstaining from Alcohol Consumption during Pregnancy.....	50

**Adolescent Health Behavior**

Tobacco Use - Smoking .....	52
Tobacco Use - Smokeless Tobacco .....	53
Alcohol Use - Current Drinking .....	54
Alcohol Use - Binge Drinking.....	55
Substance Use - Marijuana .....	56
Substance Use - Cocaine .....	57
Physical Activity .....	58
Overweight .....	59
Obese .....	60
Sexual Behavior.....	61
Sad or Hopeless Feelings .....	62
Suicide Attempts .....	63

**Additional Health Topics**

Low Birth Weight .....	66
Fertility Rate.....	67
Teen Birth Rate .....	68
Breastfeeding - Initiation .....	69

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---

**Table of Contents**

Breastfeeding - 8 Weeks Postpartum .....	70
Childhood Witness - Intimate Partner Violence .....	71
Sexually Transmitted Infections - Chlamydia .....	72

**Preventive Services and Access to Health Care**

Cervical Cancer Screening.....	74
Breast Cancer Screening .....	75
Colorectal Cancer Screening .....	76
Adequate Prenatal Care .....	77
Dental Visits .....	78

**Appendixes**

Appendix A. Description of Data Sources .....	80-88
Appendix B. Communities.....	89
Appendix C. Data Tables .....	90-106
Appendix D. Figures and Tables .....	107-111
Appendix E. Glossary of Terms .....	112

## Introduction

*“Alaska Natives are the healthiest people in the world.”*

Alaska Native Tribal Health Consortium’s Vision

Significant improvements in health can be demonstrated by using data to monitor a population’s health status over time. In addition, health areas which are a concern, or for which inequities exist, can be readily identified for improvement. Monitoring a population’s health status through reports such as this one helps us know where we are on the path to becoming the healthiest people in the world.

This report provides an overview of the health status of Alaska Native people living in the Kenai Region. It includes a wide range of health topics as well as socioeconomic factors affecting Alaska Native people’s health. The health indicators reported here were selected due to their relationship to key health issues within the Alaska Tribal Health System, and for which data were available.

The Alaska Native Epidemiology Center’s geographic regions are based upon the census areas, which allow for better population estimates. In general, the Kenai Region closely aligns with the service areas of the following regional tribal health organizations: Kenaitze Indian Tribe IRA, Ninilchik Traditional Council, Seldovia Village Tribe, and part of Chugachmiut. This region coincides with the Kenai Peninsula Borough, which allows for the use of readily available population numbers.

Most of the data presented in this report are for Alaska Native/American Indian people alone. The exceptions to this are listed in Appendix A. In this report, reference to Kenai Alaska Natives means Alaska Native/American Indian people residing in the Kenai Region at the time data were collected. The communities included in the Kenai Region are listed in Appendix F. Various data sources were accessed to compile this document. Each data source contains limitations which should be considered when using the data. Appendix A explains some of these limitations as well as provides detailed information about each of the data sources.

We recognize that data and the information gained from the interpretation of data are only part of the decision-making process. Nevertheless, data can guide advocacy, policy making, program planning, and program evaluation. We hope this document serves as a useful resource for those interested in Alaska Native health issues within the Kenai Region.

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## Regional Health Profile Organization

The Regional Health Profile Overview on pages 4-9 summarizes the most recent data presented on each indicator page. Details and citations for the data in the Regional Health Profile Overview may be found within the document.

The health indicators are presented in seven sections:

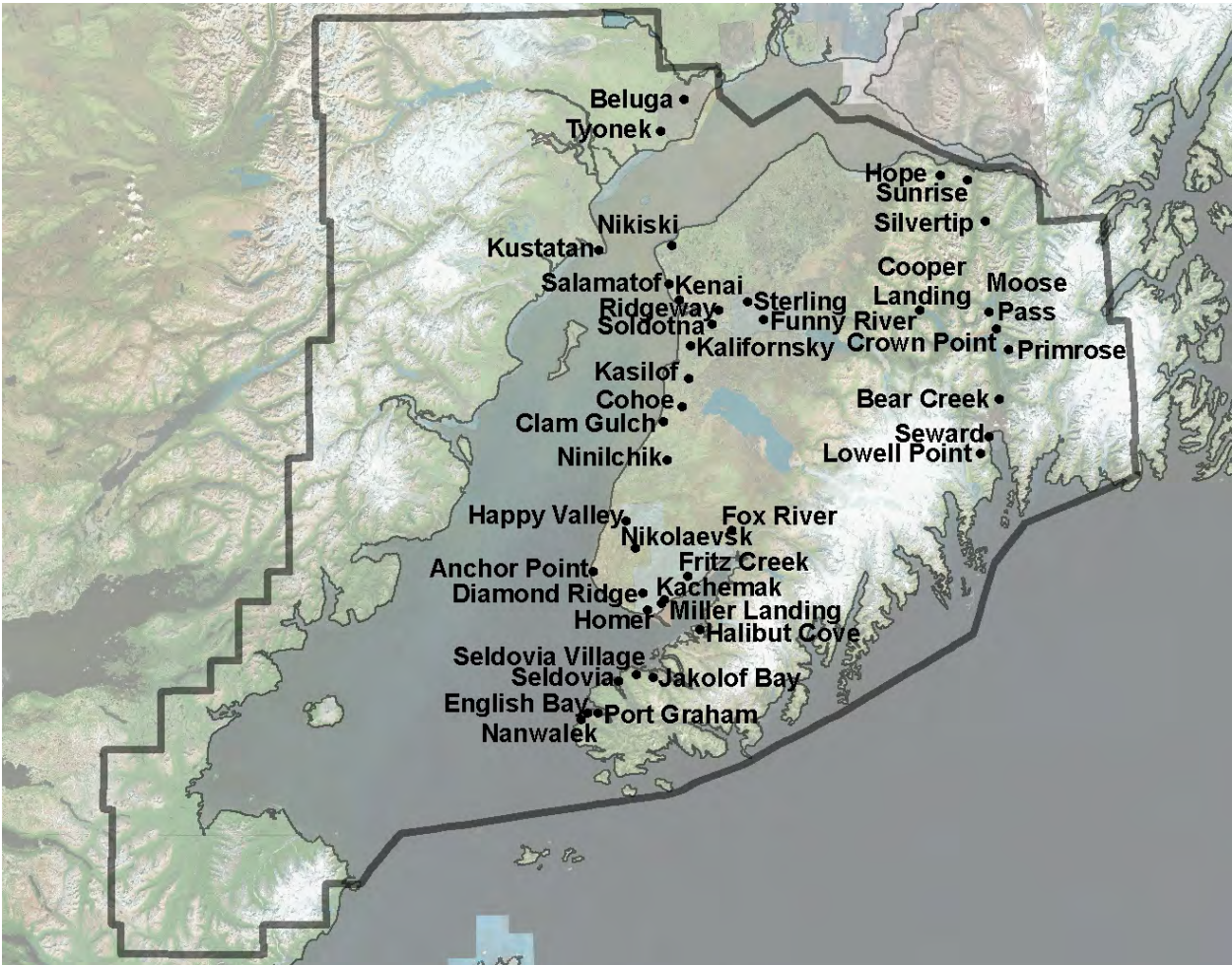
1. **Demographics** includes data on population estimates, user populations, population change, educational attainment, unemployment, poverty status, and household income.
2. **Mortality** includes data about deaths such as the leading causes, life expectancy, years of potential life lost, and trends over time for specific diseases.
3. **Morbidity** includes data on the leading causes of outpatient visits as well as information on injury-related hospitalizations. In addition, this section covers leading cancers and diabetes data.
4. **Health Behavior - Adult** includes data on tobacco use, alcohol consumption, physical activity, obesity, and intimate partner violence.
5. **Health Behavior - Adolescent** includes data on tobacco use, alcohol consumption, physical activity, obesity, sexual behavior, substance use, and mental health.
6. **Additional Health Topics** includes data on low birth weight, fertility rate, teen birth rate, and sexually transmitted infections.
7. **Preventive Services and Access to Health Care** includes data on cervical, breast, and colorectal cancer screenings as well as data on immunizations, prenatal care, and dental visits.

These main sections are followed by the following appendixes:

- **Appendix A.** Methods and Description of Data Sources. This appendix provides information about data sources and their limitations.
- **Appendix B.** Communities. This appendix lists the communities included in the data analysis for this region.
- **Appendix C.** Data Tables. This appendix provides detailed data, sample sizes, and confidence intervals for the data presented throughout this document.
- **Appendix D.** Figures and Tables. This appendix lists the titles of the figures and tables used throughout this document and may be used to find specific data quickly.
- **Appendix E.** Glossary of Terms. This appendix lists a glossary of terms that are used throughout this regional health profile.



Kenai Region Map



## Anchorage Service Unit Communities

**Note: Some Alaska Native data are not available for the Kenai region, but are included in the Anchorage Service Unit. The villages that are included in the Anchorage Service Unit are listed below.**

Adak	Eagle River	Lazy Mountain	Salamatof
Afognak	Eklutna	McCarthy	Sanak
Akhiok	Elmendorf AFB	McGrath	Sand Point
Akutan	Eska	Meadow Lake	Seldovia
Amchitka	False Pass	Medfra	Seward
Anchor Point	Ft. Richardson	Mendeltna	Shemya
Anchorage	Gakona	Mentasta	Skwentna
Atka	Girdwood	Montana Creek	Slana
Attu	Glennallen	Moose Pass	Soldotna
Bear Creek	Gold Creek	Nabesna	Squaw Harbor
Belkofski	Goose Bay	Nanwalek	St. George
Beluga	Gulkana	Nelson Lagoon	St. Paul
Big Lake	Halibut Cove	Newhalen	Sterling
Birchwood	Home	Nikiski	Susitna
Bird	Hope	Nikolaevsk	Sutton
Butte	Houston	Nikolai	Takotna
Cantwell	Iliamna	Nikolski	Talkeetna
Chase	Indian	Ninilchik	Tatitlek
Chenega	Johnson River (Sunrise)	Nondalton	Tazlina
Chickaloon Village	Kachemak	Old Harbor	Telida
Chiniak	Kaguyak	Ouzinkie	Tonsina
Chisana	Kanatak	Palmer	Trappers Creek
Chistochina	Karluk	Pauloff Harbor	Tyonek
Chitina	Kasilof	Paxson	Umnak
Chugiak	Kenai	Pedro Bay	Unalaska
Clam Gulch	Kenny Lake	Peters Creek	Unga
Cohoe	King Cove	Pile Bay	Valdez
Cold Bay	Knik	Port Alsworth	Wasilla
Cooper Landing	Kodiak	Port Graham	Whittier
Copper Center	Kodiak Naval Station	Port Lions	Wildwood
Copper Valley	Kokhonak	Port Moller	Willow
Cordova	Lake Clark	Portage	Zacher's Bay
Dutch Harbor	Larsen Bay	Ridgeway	

**Regional Health Profile Overview - Mortality**

<b>Indicator</b>	<b>Healthy People 2020 Objective</b>	<b>Kenai Region Alaska Natives</b>	<b>Alaska Natives Statewide</b>	<b>U.S. Whites</b>	<b>Time Period for Alaska Data</b>
Leading Cause of Death	N/A	Cancer	Cancer	Heart Disease <sup>1</sup>	2004-2008
Life Expectancy - Male	N/A	70.7	67.5	75.4	2000-2008
Life Expectancy - Female	N/A	71.5	73.5	80.4	2000-2008
Years of Potential Life Lost (Mean)	N/A	22.8	28.7	17.4 <sup>2</sup>	2004-2008
Cancer Deaths per 100,000	160.6	260.4	226.3	182.4	2004-2008
Coronary Heart Disease Deaths per 100,000	100.8	262.8	169.0	205.1	2004-2008
Unintentional Injury Deaths per 100,000	36.0	83.5	97.7	39.9	2004-2008
Cerebrovascular Disease Deaths per 100,000	33.8	87.6	56.7	44.5	2004-2008
Leading Cause of Injury Death	N/A	Motor Vehicle Accidents	Suicide	Motor Vehicle Accidents <sup>3</sup>	1999-2005

Note: Data sources not listed here can be found in the document

<sup>1</sup>Xu JQ, Kochanek KD, Murphy SL, Tejada-Vera B. Deaths: Final data for 2007. National Vital Statistics Reports; vol 58, no 19. Hyattsville, MD: National Center for Health Statistics. 2010; the data presented is for 2007.

<sup>2</sup>National Center for Health Statistics (NCHS) Vital Statistics System. Years of Potential Life Lost (YPLL) Before Age 75, 2004-2008.

<sup>3</sup>The Three Leading Causes of Injury Mortality in the United States, 1999-2005, Lois A. Fingerhut, Robert N. Anderson, National Center for Health Statistics, Health & Stats, <http://www.cdc.gov/nchs/data/hestat/injury99-05/injury99-05.pdf>.

N/A Not Available

## Regional Health Profile Overview - Morbidity

Indicator	Healthy People 2020 Objective	Kenai Region Alaska Natives	Alaska Natives Statewide	U.S. Whites	Time Period for Alaska Data
Leading Cause of Outpatient Visits	N/A	Other upper respiratory infections	Other upper respiratory infection	Progress visit, not otherwise specified <sup>1</sup>	FY 2010
Leading Cause of Injury Hospitalizations	N/A	Falls	Falls	N/A	1991-2003
Unintentional Injury Hospitalization per 10,000	N/A	86.8	99.8	N/A	1991-2003
Fall Hospitalization per 10,000	N/A	36.7	38.7	N/A	1991-2003
Suicide Attempt Hospitalization per 10,000	N/A	13.3	20.4	N/A	1991-2003
Assault Hospitalization per 10,000	N/A	9.4	18.5	N/A	1991-2003
Leading Cancers	N/A	Breast	Colorectal	Breast <sup>2</sup>	1999-2008
Diabetes per 1,000	N/A	45	41	53 <sup>3</sup>	FY 2009
Percent Increase in Diabetes Prevalence	N/A	88%	125%	N/A	FYs 1990 & 2009

Note: Data sources not listed here can be found in the document

<sup>1</sup> Hing E, Hall MJ, Ashman JJ, Xu J. National Hospital Ambulatory Medical Care Survey: 2007 Outpatient Department Summary. National health statistics reports; no 28. Hyattsville, MD: National Center for Health Statistics. 2010.

<sup>2</sup> Surveillance, Epidemiology and End Results Program; 2002-2006.

<sup>3</sup> Centers for Disease Control and Prevention, National Center for Health Statistics, Division of Health Interview Statistics, National Health Interview Survey. Statistical analysis by the Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Diabetes Translation.  
<http://www.cdc.gov/diabetes/statistics/prev/national/figbyrace.htm>

N/A Not Available

# KENAI REGIONAL HEALTH PROFILE

## Regional Health Profile Overview - Adult Health Behavior

Indicator	Healthy People 2020 Objective	Kenai Region Alaska Natives	Alaska Natives Statewide	U.S. Whites	Time Period for Alaska Data
Adults Who Currently Smoke	12.0%	41.9%	39.5%	17.9%	2007-2009
Percent of Adults Who Currently Use Smokeless Tobacco	0.3%	6.3%	10.9%	3.5%	2007-2009
Adults Who Binge Drink	24.3%	22.6%	19.2%	16.0%	2007-2009
Adults Who Engage in Recommended Physical Activity Levels	47.9%	59.5%	67.3%	51.8%	2007 & 2009
Overweight Adults	N/A	26.6%	37.3%	36.3%	2007-2009
Obese Adults	30.6%	44.0%	34.5%	25.4%	2007-2009
Adults Who Were A Victim of Intimate Partner Violence	N/A	29.6%	34.4%	N/A	2006 & 2009
Pregnant Women Who Abstained from Cigarette Smoking	98.6%	67.0%	68.6%	89.6%	2004-2008
Pregnant Women Who Abstained from Alcohol Use	98.3%	98.1%	95.8%	N/A	2004-2008

Note: Data sources not listed here can be found in the document  
N/A Not Available

### Regional Health Profile Overview - Adolescent Health Behavior

Indicator	Healthy People 2020 Objective	Alaska Non-Natives Statewide	Alaska Natives Statewide	U.S. Whites	Time Period for Alaska Data
Adolescents Who Reported Cigarette Smoking During the Past Month	16.0%	13.0%	24.2%	22.5%	2009
Adolescents Who Reported Spit Tobacco Use During the Past Month	6.9%	10.8%	22.1%	11.9%	2009
Adolescents Who Reported Using Alcohol During the Past 30 Days	16.5%	33.5%	32.3%	44.7%	2009
Adolescents Who Reported Binge Drinking During the Past Month	8.5%	22.5%	19.0%	27.8%	2009
Adolescents Who Reported Marijuana Use During the Past 30 Days	6.0%	20.6%	28.7%	20.7%	2009
Adolescents Who Reported Using Cocaine During Their Lifetime	N/A	8.6%	4.0%	6.3%	2009
Adolescents Who Reported Engaging in Recommended Levels of Physical Activity	N/A	44.9%	34.9%	39.9%	2009
Percent of Adolescents Who Are Overweight	N/A	13.6%	16.7%	13.6%	2009
Adolescents Who Are Obese	16.1%	11.8%	11.6%	10.3%	2009
Adolescents Who Have Ever Engaged in Sexual Intercourse	N/A	41.6%	49.4%	42.0%	2009
Adolescents Who Reported Sad or Hopeless Feelings During the Past Year	N/A	25.1%	25.6%	23.7%	2009
Adolescents Who Reported a Suicide Attempt in the Past Year	N/A	7.1%	12.5%	5.0%	2009

Note: Data sources not listed here can be found in the document  
N/A Not Available

## Regional Health Profile Overview - Additional Health Topics

Indicator	Healthy People 2020 Objective	Kenai Region Alaska Natives	Alaska Natives Statewide	U.S. Whites	Time Period for Alaska Data
Low Birth Weight	7.8%	5.2%	5.6%	7.2%	2004-2008
Fertility Rate per 1,000 Females aged 18-44 years	N/A	66.7	107.4	66.3	2004-2008
Teen Birth Rate per 1,000 Females aged 15-19 years	N/A	36.1	79.3	37.0	2004-2008
Breastfeeding Initiation	81.9%	90.0%	91.4%	74.0%**	2004-2008
Breastfeeding 8 Weeks Postpartum	N/A	64.3	65.7%	62.5%**	2004-2008
Childhood witness	N/A	‡	31.1%	N/A	2009
Chlamydia per 100,000	N/A	402.6	3,107.1	154.6	2009

Note: Data sources not listed here can be found in the document

\*\* U.S. Total Population

‡ Numbers too small

N/A Not Available

### Regional Health Profile Overview - Preventive Services and Access to Care

Indicator	Healthy People 2020 Objective	Kenai Region Alaska Natives	Alaska Natives Statewide	U.S. Whites	Time Period for Alaska Data
Cervical Cancer Screening Within the Preceding Three Years	93.0%	‡	86.2%	83.0%	2006 & 2008
Breast Cancer Screening Within the Preceding Two Years	81.1%	‡	71.6%	76.1%	2006 & 2008
Colorectal Cancer Screening Ever	70.5%	60.7%	54.1%	64.0%	2006 & 2008
Women Who Received Adequate Prenatal Care	77.6%	67.9%	43.5%	N/A	2004-2008
Adults Reporting a Dental Visit Within the Past Year	N/A	57.8%	56.2%	73.5%	2008

Note: Data sources not listed here can be found in the document

‡ Numbers too small

N/A Not Available



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# Demographics

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## User Population

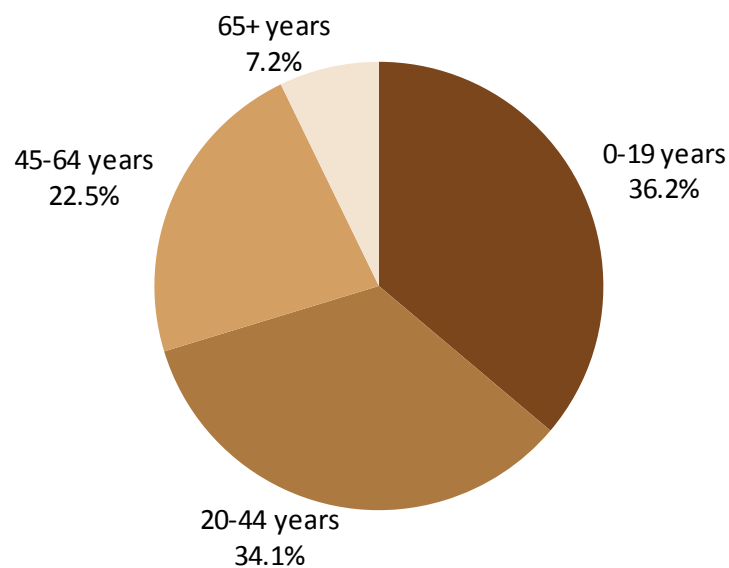
**Definition:** The Indian Health Service defines the **user population** as eligible American Indian/Alaska Native persons who used a tribal health facility at least once during the previous three year period. The facility must have been one that reported to the National Patient Information Reporting System. Indian Health Service user population data are calculated by federal fiscal year (FY). Federal Fiscal Year 2010 was from October 1, 2009 to September 30, 2010. Age was determined as of September 30, 2010.

### Summary

- Among Kenai Region Alaska Native people who used the Alaska Tribal Health System, seven out of ten were under 45 years of age in FY 2010. Of those under 45 years old, about half were 0-19 years old and the other half were 20-44 years old.
- 414 people or 7.2% of Kenai Region Alaska Native people who used the Alaska Tribal Health System were 65 years or older.

**Figure 1. User Population by Age Group, Alaska Natives, Kenai Region, FY 2010 (N=5,752)**

Data Source: National Patient Information Reporting System, Indian Health Service National Data Warehouse  
Data Table C-1 in Appendix



## Population Estimates

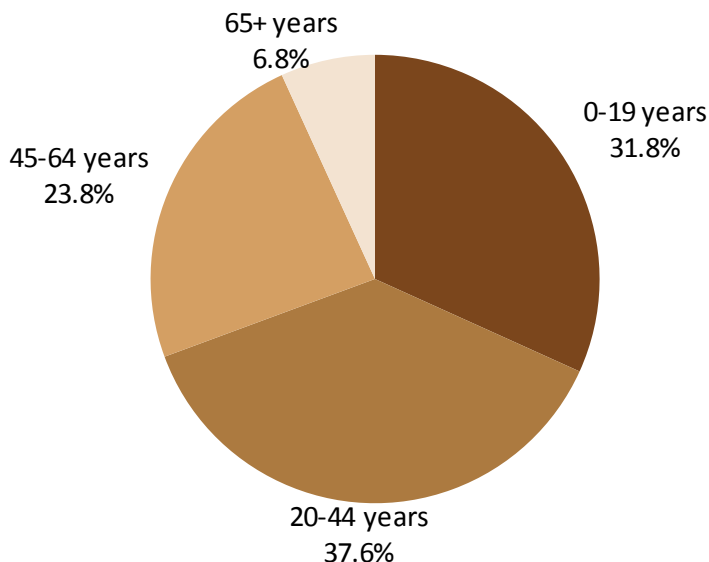
**Definition:** The State of Alaska Department of Labor and Workforce Development uses the U.S. Census, vital records and other data to calculate “bridged” **population estimates** between census years. “Bridged” refers to a method that makes multiple race and single race categories comparable over time since the 2000 U.S. Census allowed respondents to check multiple race categories for the first time.

### Summary

- The Alaska Department of Labor estimated that 5,434 Alaska Native people lived in the Kenai Region in 2009. This represented 10.1% of the Kenai Region's total population (N=53,578).
- Similar to the user population, 370 people or 6.8% of Kenai Region Alaska Native people were 65 years or older.

**Figure 2. Population Estimates by Age Group, Alaska Natives, Kenai Region, 2009 (N=5,434)**

Data Source: Alaska Department of Labor and Workforce Development  
Data Table C-2 in Appendix.



## Population Pyramid

**Definition:** A **population pyramid** is a graphical representation of the age and sex distribution of a population. The proportion of males and females in each age group are displayed as horizontal bars. The gray lines show the distribution of the 2009 U.S. total population.

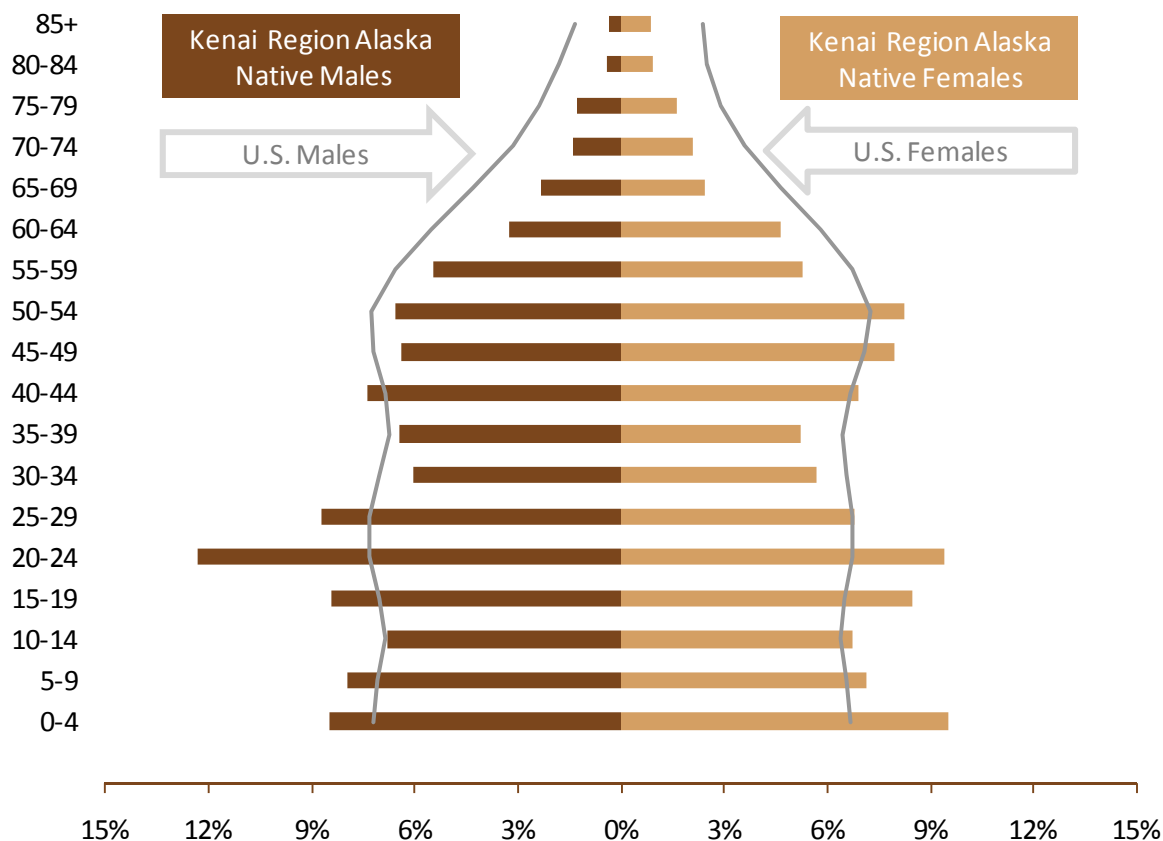
### Summary

- A higher proportion of the Kenai Region Alaska Native population was under the age of 29 (50.5%) compared to the U.S. total population (41.2%) in 2009.
- Adults aged 55 or older accounted for a lower proportion of the population (16.1%) compared to the U.S. total population (24.2%).

**Figure 3. Population Pyramid, Kenai Region Alaska Natives versus U.S. Total Population, 2009**

Alaska Data Source: Alaska Department of Labor and Workforce Development

U.S. Data Source: U.S. Census Bureau, Population Estimates Program



## 2001 and 2009 Bridged Population Change - Male

### Summary

- The Kenai Region Alaska Native male population increased (21.3%), and was nearly 4 times that of the Kenai Region total male population (5.5%) between 2001 and 2009.
- The highest population increases were among Alaska Native men aged 55 years or older (75.5%).

**Table 1. Population Change for Males by Age, Kenai Region, 2001 and 2009 Bridged Population Estimates**

Data Source: Alaska Department of Labor and Workforce Development

	2001		2009		% Change in Alaska Native Male Population	% Change in Total Male Population
	Alaska Native Males	Total Male Population	Alaska Native Males	Total Male Population		
0-4	192	1,661	240	1,866	25.0%	12.3%
5-9	231	1,928	224	1,957	-3.0%	1.5%
10-14	220	2,299	192	1,971	-12.7%	-14.3%
15-19	236	2,388	237	2,203	0.4%	-7.7%
20-24	226	1,500	347	1,498	53.5%	-0.1%
25-29	154	1,346	246	1,381	59.7%	2.6%
30-34	171	1,535	170	1,552	-0.6%	1.1%
35-39	180	1,869	182	1,611	1.1%	-13.8%
40-44	198	2,426	208	1,718	5.1%	-29.2%
45-49	159	2,596	180	2,203	13.2%	-15.1%
50-54	125	2,189	186	2,429	48.8%	11.0%
55-59	75	1,442	154	2,479	105.3%	71.9%
60-64	60	973	92	1,783	53.3%	83.2%
65-69	39	706	65	1,281	66.7%	81.4%
70-74	28	524	40	682	42.9%	30.2%
75-79	23	379	36	430	56.5%	13.5%
80-84	6	155	12	225	100.0%	45.2%
85+	2	76	10	144	400.0%	89.5%
<b>Total</b>	<b>2,325</b>	<b>25,992</b>	<b>2,821</b>	<b>27,413</b>	<b>21.3%</b>	<b>5.5%</b>

## 2001 and 2009 Bridged Population Change - Female

### Summary

- The Kenai Region Alaska Native female population increase was nearly double (15.8%) that of the total female population (8.6%) between 2001 and 2009.
- While the overall Alaska Native female population in the Kenai Region increased, females between the ages of 5-14 and 30-44 decreased.

**Table 2. Population Change for Females by Age, Kenai Region, 2001 and 2009 Bridged Population Estimates**

Data Source: Alaska Department of Labor and Workforce Development

	2001		2009		% Change in Alaska Native Female Population	% Change in Total Female Population
	Alaska Native Female	Total Female Population	Alaska Native Female	Total Female Population		
0-4	185	1,587	249	1,646	34.6%	3.7%
5-9	192	1,814	186	1,719	-3.1%	-5.2%
10-14	239	2,285	176	1,854	-26.4%	-18.9%
15-19	220	2,126	222	2,024	0.9%	-4.8%
20-24	165	1,174	246	1,520	49.1%	29.5%
25-29	124	1,210	178	1,326	43.5%	9.6%
30-34	153	1,508	149	1,430	-2.6%	-5.2%
35-39	159	1,841	137	1,593	-13.8%	-13.5%
40-44	200	2,362	180	1,736	-10.0%	-26.5%
45-49	184	2,415	208	2,143	13.0%	-11.3%
50-54	144	1,803	215	2,439	49.3%	35.3%
55-59	77	1,239	138	2,143	79.2%	73.0%
60-64	70	802	122	1,532	74.3%	91.0%
65-69	46	638	64	1,124	39.1%	76.2%
70-74	44	519	54	677	22.7%	30.4%
75-79	24	380	42	484	75.0%	27.4%
80-84	15	225	24	383	60.0%	70.2%
85+	15	162	23	392	53.3%	142.0%
<b>Total</b>	<b>2,256</b>	<b>24,090</b>	<b>2,613</b>	<b>26,165</b>	<b>15.8%</b>	<b>8.6%</b>

## Educational Attainment

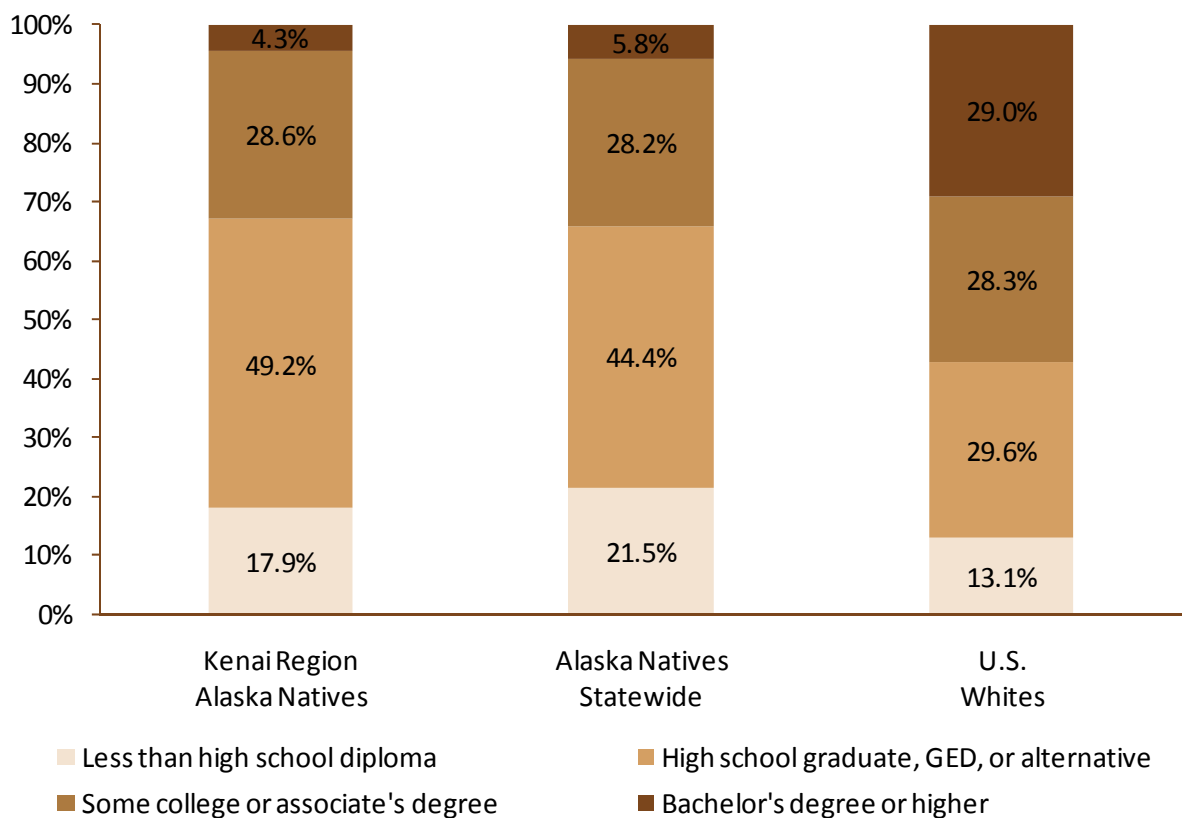
**Definition: Educational Attainment** is the highest level of school that a person completed.

### Summary

- 82.1% of Kenai Region Alaska Native people had received a high school diploma or higher, which appeared to be higher than Alaska Native people statewide (78.5%) during 2005-2009.
- About 1 in 25 Kenai Region Alaska Native people received a Bachelor's degree or higher compared to about 1 in 3 among U.S. Whites.

**Figure 4. Highest Educational Attainment, 25 Years and Older, 2005-2009**

Data Source: U.S. Census Bureau, American Community Survey - 5-Year Estimates  
Data Table C-3 in Appendix



## Unemployment

**Definition: Unemployment** includes anyone who has made an active attempt to find work in the four week period up to and including the week that includes the 12th of the referenced month. Due to the scarcity of employment opportunities in rural Alaska, many individuals did not meet the official definition of unemployed because they were not conducting active job searches.

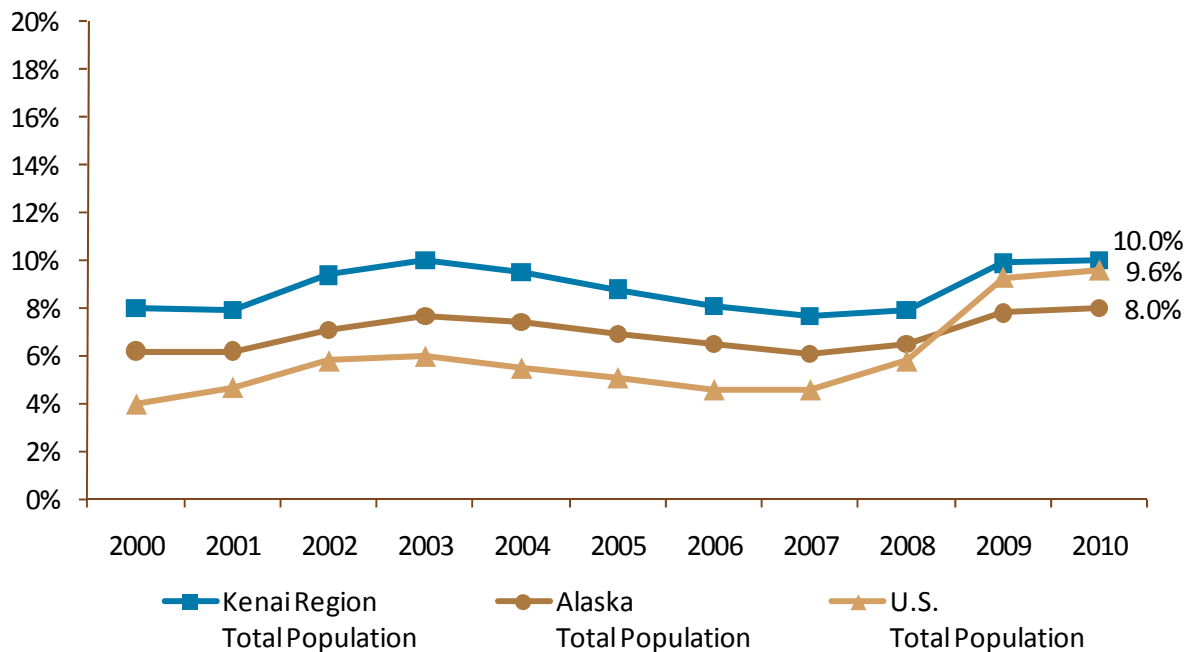
### Summary

- 10.0% of the Kenai Region's total population were unemployed in 2010.
- Although there was some fluctuation, unemployment increased from 8.0% to 10.0% between 2000 and 2010 in the Kenai Region.
- Historically, the Kenai Region has had higher unemployment rates than the U.S. However, the 2009 and 2010 rates were similar between the Kenai Region and the U.S.

**Figure 5. Unemployment, Kenai Peninsula Borough, Alaska and U.S. Total Population, 2000-2010**

Data Source: Alaska Department of Labor and Workforce Development

Data Table C-4 in Appendix





## Poverty Status - All Ages

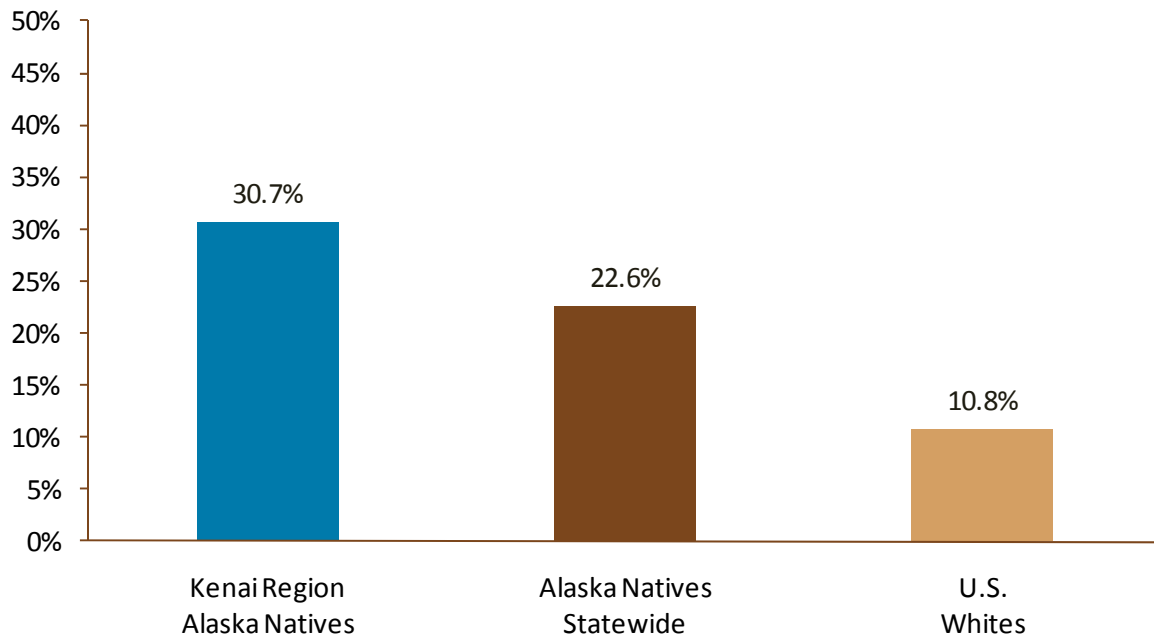
**Definition:** The U.S. Census Bureau uses a set of income thresholds that vary by family size and composition to determine who is in **poverty**. If a family's total income is less than the threshold, then the family members are considered to be in poverty. The official poverty thresholds are updated for inflation using the Consumer Price Index, but they do not vary geographically. The official poverty definition uses money income before taxes and does not include capital gains or non-cash benefits (such as public housing, Medicaid, and food stamps).

### Summary

- 30.7% of Kenai Region Alaska Native people lived below the Federal Poverty Level during 2005-2009, which appeared to be higher than Alaska Native people statewide.
- The percentage of Kenai Region Alaska Native people living below the Federal Poverty Level (30.7%) was about 2.8 times that of U.S. Whites (10.8%).

**Figure 6. Estimated Residents below the Poverty Level, All Ages, 2005-2009**

Data Source: U.S. Census Bureau, American Community Survey - 5-Year Estimates  
Data Table C-5 in Appendix



## Poverty Status - Under 18 Years of Age

**Definition:** The U.S. Census Bureau uses a set of income thresholds that vary by family size and composition to determine who is in **poverty**. If a family's total income is less than the threshold, then the family members are considered to be in poverty. The official poverty thresholds are updated for inflation using the Consumer Price Index, but they do not vary geographically. The official poverty definition uses money income before taxes and does not include capital gains or non-cash benefits (such as public housing, Medicaid, and food stamps). **Poverty status under 18 years of age** includes children under the age of 18 in families determined to be in poverty.

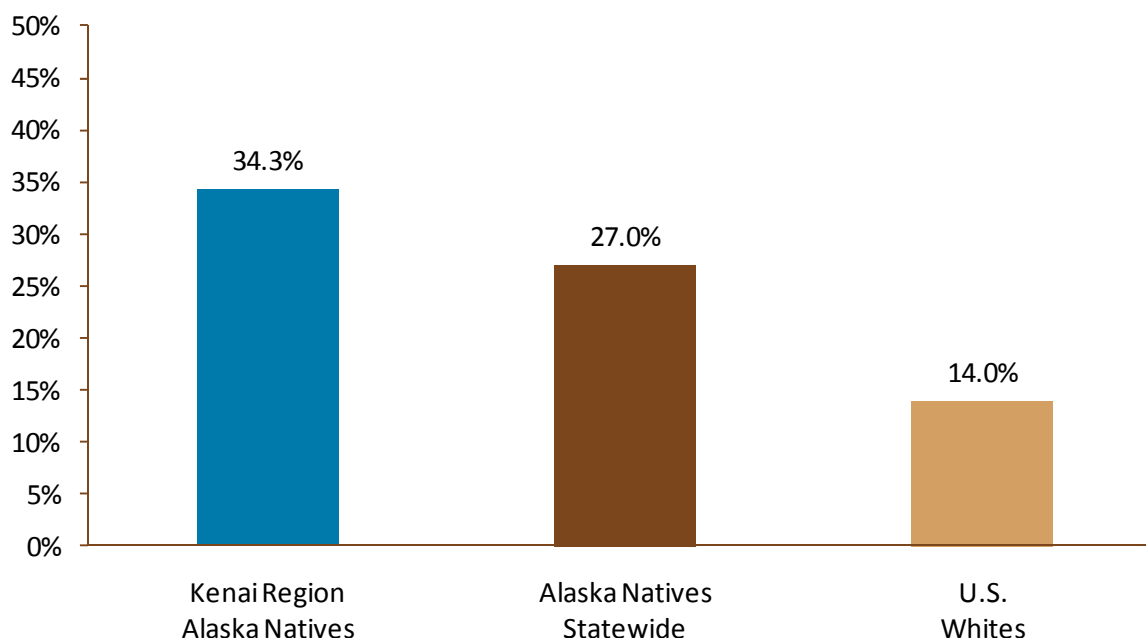
### Summary

- 34.3% of Kenai Region Alaska Native children lived below the Federal Poverty Level during 2005-2009, which appeared to be slightly higher than Alaska Native people statewide (27.0%).
- The percentage of Kenai Region Alaska Native children living below the Federal Poverty Level (34.3%) was about 2.5 times that of U.S. Whites (14.0%).

**Figure 7. Estimated Residents below the Poverty Level, Under 18 Years of Age, 2005-2009**

Data Source: U.S. Census Bureau, American Community Survey - 5-Year Estimates

Data Table C-6 in Appendix



## Household Income

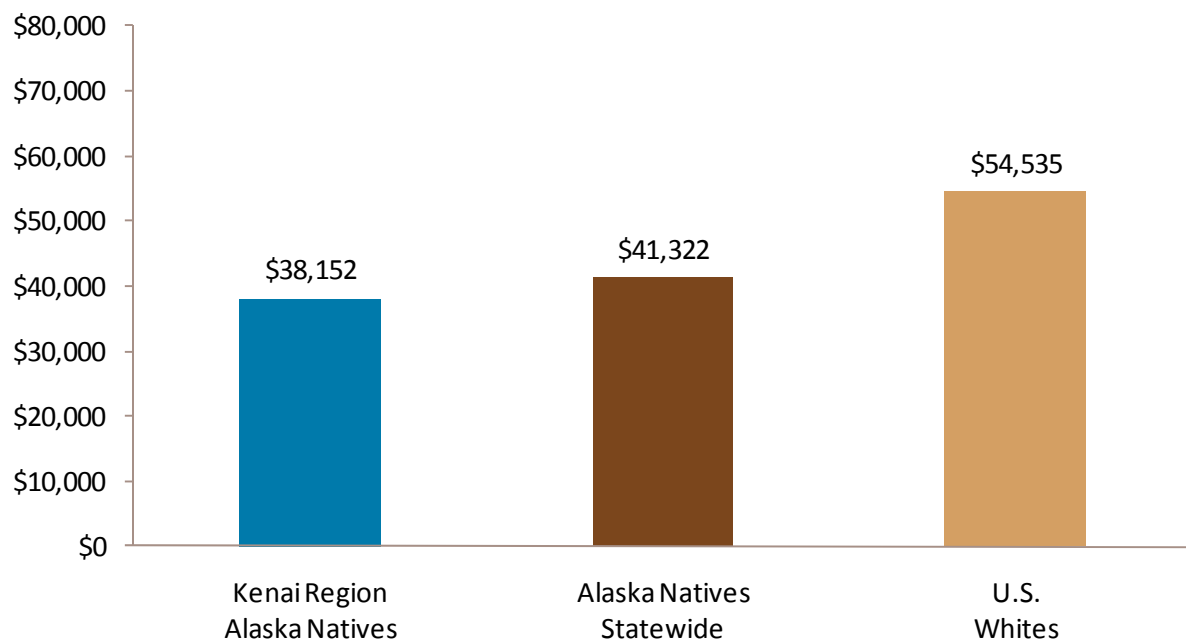
**Definition: Household income** is determined by the reported household income of the persons who completed the American Community Survey. Income includes all monetary sources including wages, the Permanent Fund Dividend, corporation dividends and public assistance. Income does not include subsistence resources.

### Summary

- The median household income for Kenai Region Alaska Native people was \$38,152 during 2005-2009, which appeared to be slightly lower than Alaska Native people statewide (\$41,322)
- The median household income for Kenai Region Alaska Native people (\$38,152) and Alaska Native people statewide (\$41,322) appeared to be lower than U.S. Whites (\$54,535).

**Figure 8. Estimated Median Household Income, 2005-2009**

Data Source: U.S. Census Bureau, American Community Survey - 5-Year Estimates



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# Mortality

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## Leading Causes of Death

**Definition:** The **leading causes of death** is a list of the top causes of death within a population.

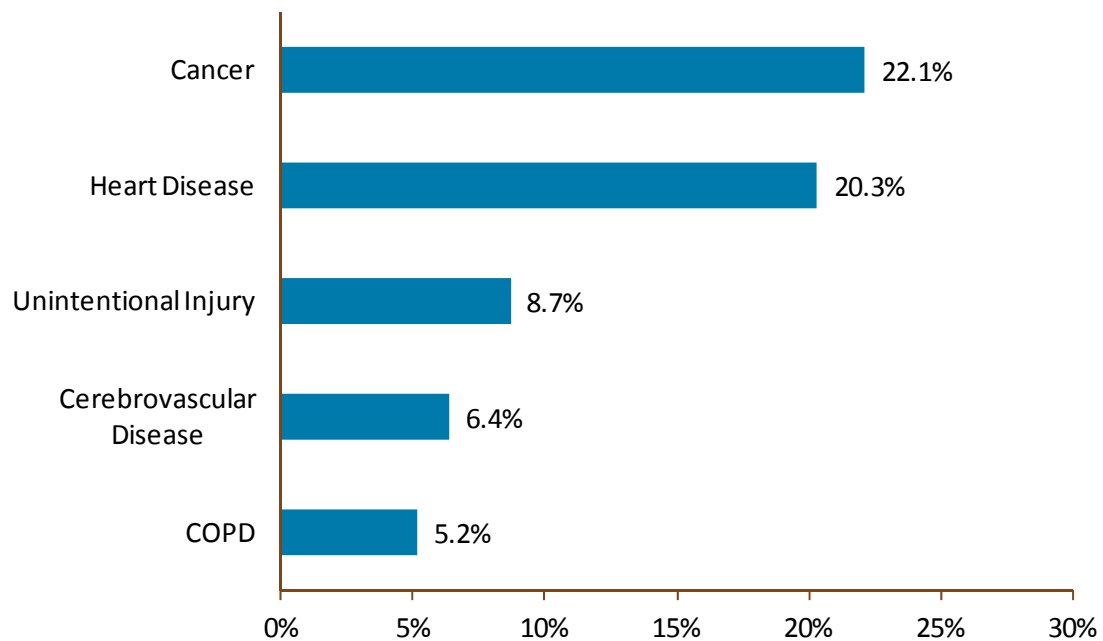
### Summary

- Cancer was the leading cause of death among Kenai Region Alaska Native people during 2004-2008.
- The top three leading causes of death among Kenai Region Alaska Native people were the same as those for Alaska Native people statewide (cancer, heart disease, and unintentional injury).

**Figure 9. Leading Causes of Death, Alaska Natives, Kenai Region, 2004-2008**

Data Source: Alaska Bureau of Vital Statistics

Data Table C-7 in Appendix



## Life Expectancy - Male

**Definition:** Life expectancy at birth is the average number of years a person is expected to live from birth based on the year in which they were born.

### Summary

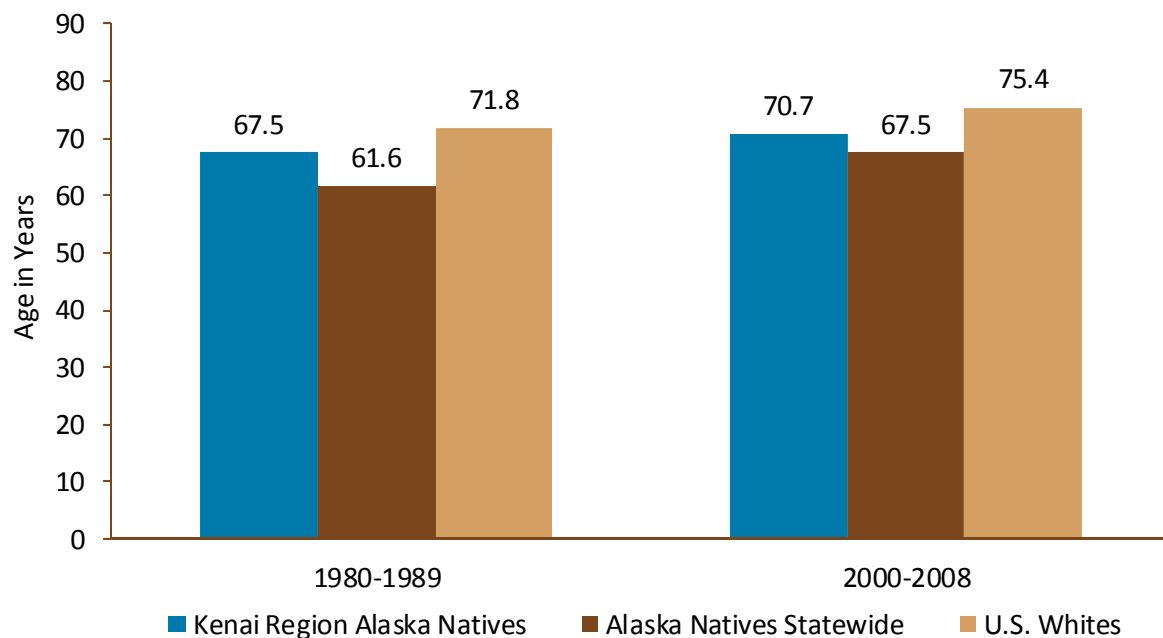
- The life expectancy among Kenai Region Alaska Native males increased 3.2 years between 1980-1989 and 2000-2008.
- The life expectancy among Kenai Region Alaska Native males was higher than Alaska Native males statewide in both time periods.

**Figure 10. Estimated Life Expectancy, Males, Years from Birth, 1980-1989 versus 2000-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: Arias E. United States Life Tables, 2006. National Vital Statistics Reports; Vol 58 no 21. Hyattsville, MD: National Center for Health Statistics, 2010.

Note: U.S. White data are for 1985 and 2005.



## Life Expectancy - Female

**Definition:** Life expectancy at birth is the average number of years a person is expected to live from birth based on the year in which they were born.

### Summary

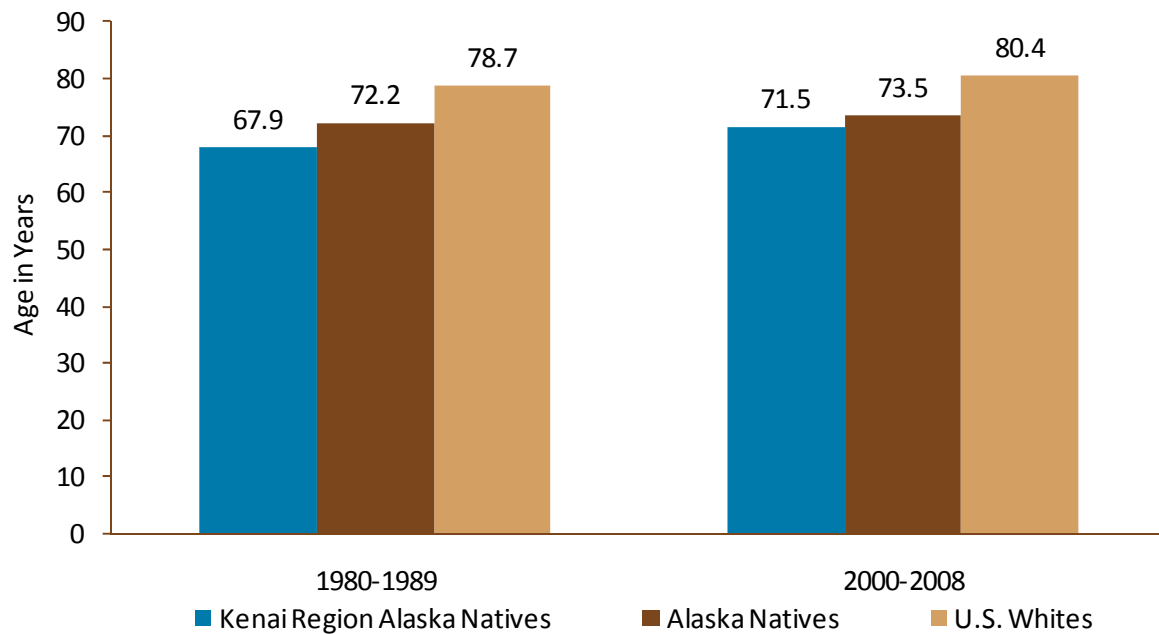
- The life expectancy among Kenai Region Alaska Native females increased 3.6 years between 1980-1989 to 2000-2008.
- The life expectancy among Kenai Region Alaska Native females was lower than Alaska Native and U.S. White females in both time periods.

**Figure 11. Estimated Life Expectancy, Females, Years from Birth, 1980-1989 versus 2000-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: Arias E. United States Life Tables, 2006. National Vital Statistics Reports; Vol 58 no 21. Hyattsville, MD: National Center for Health Statistics, 2010.

Note: U.S. White data are from 1985 and 2005.





## Years of Potential Life Lost

**Definition: Years of potential life lost** measures premature mortality. It is an estimate based on the average number of years a person would have lived if he or she had not died before the age of 75. For example, if a person died at the age of 25, they would account for 50 years of potential life lost.

### Summary

- Unintentional injuries accounted for nearly one out of every five years of potential life lost during 2004-2008.
- The average number of years of potential life lost for all causes of death before the age of 75 for Kenai Region Alaska Native people was 22.8 years.

**Table 3. Leading Causes of Total Years of Potential Life Lost: Deaths Among Those Aged 1-74, Alaska Natives, Kenai Region, 2004-2008**

Data Source: Alaska Bureau of Vital Statistics

Note 1: This includes persons  $\geq 1$  and the reference age is 75.

Note 2: 15.7% of the deaths were due to unknown causes.

Leading Causes of Death	Total Deaths	Years of Potential Life Lost		
	n	Total	%	Mean
Unintentional Injuries	13	497	17.4%	38.2
Malignant Neoplasms	27	402	14.1%	14.9
Heart Disease	22	349	12.2%	15.9
Suicide	6	240	8.4%	40.0
Cerebrovascular	7	87	3.1%	12.4
Bronchitis, emphysema, asthma	5	60	2.1%	12.0
All Others	45	1,214	42.6%	27.0
<b>All Causes</b>	<b>125</b>	<b>2,849</b>	<b>100.0%</b>	<b>22.8</b>

## Cancer Deaths

**Definition: Cancer mortality** is the number of deaths due to all types of cancer per 100,000 persons. The ICD-9 and ICD-10 codes for cancer are listed in Table A-2 in Appendix A.

**Healthy People 2020, Goal C-1:** Reduce the overall cancer death rate to 160.6 deaths per 100,000 persons.

### Summary

- Kenai Region Alaska Native deaths due to cancer were 260.4 per 100,000 persons during 2004-2008.
- Deaths due to cancer decreased by nearly half between 1984-1988 and 2004-2008 (459.9 to 260.4) for Kenai Region Alaska Native people.
- The Kenai Region Alaska Native cancer death rate per 100,000 (260.4) during 2004-2008 was nearly 1.5 times higher than for U.S. Whites (182.4).

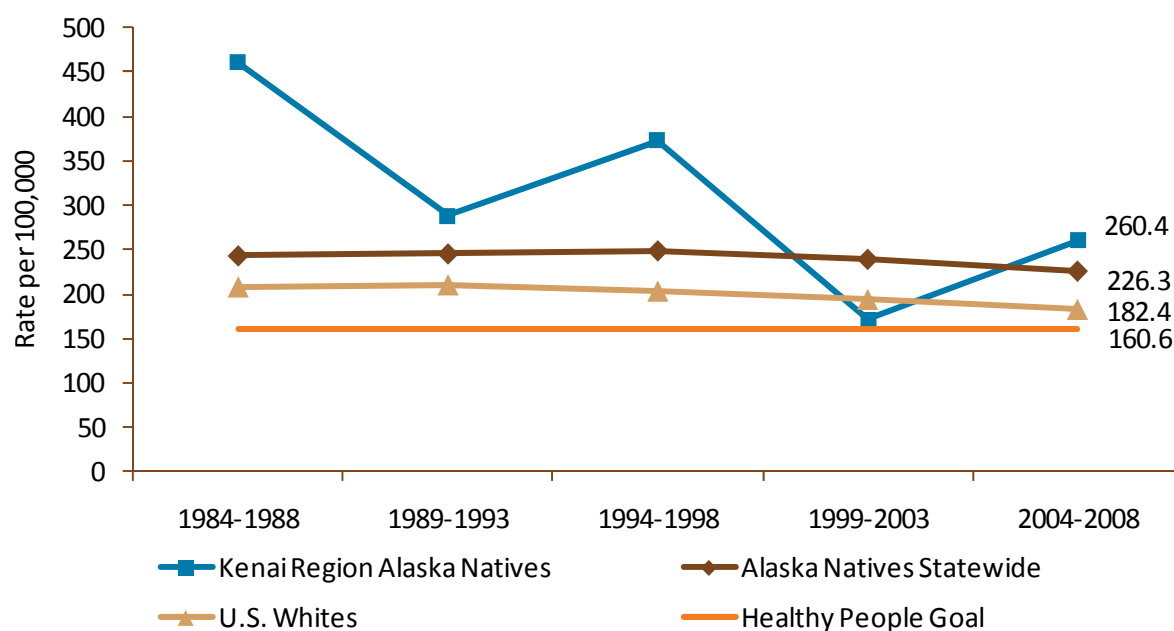
**Figure 13. Age-Adjusted Cancer Death Rates per 100,000, 1984-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: Surveillance, Epidemiology, and End Results Program

Note for the final time period: U.S. rates are for 2004-2006.

Data Table C-8 in Appendix



## Heart Disease Deaths

**Definition: Heart disease mortality** is the total number of deaths due to heart disease per 100,000 persons. The ICD-9 and ICD-10 codes for heart disease are listed in Table A-2 in Appendix A.

**Healthy People 2020, Goal HDS-2:** Reduce the heart disease death rate to 100.8 per 100,000 persons.

### Summary

- Kenai Region Alaska Native deaths due to heart disease were 262.8 per 100,000 persons during 2004-2008.
- Deaths due to heart disease decreased 22.9% between 1984-1988 and 2004-2008 (340.9 to 262.8) for Kenai Region Alaska Native people.
- The Kenai Region Alaska Native heart disease death rate per 100,000 (262.8) during 2004-2008 was 1.5 times higher than Alaska Natives statewide (169.0) and 1.3 times higher than U.S. Whites (205.1).

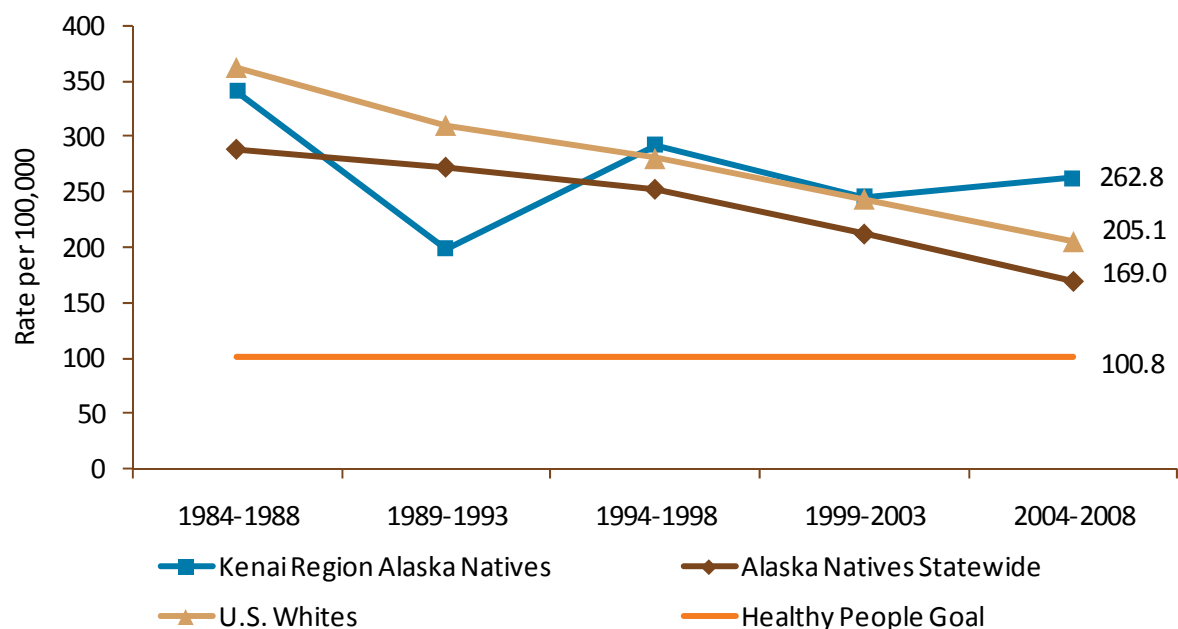
**Figure 14. Age-Adjusted Heart Disease Death Rates per 100,000, 1984-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: Surveillance, Epidemiology, and End Results Program

Note for the final time period: U.S. rates are for 2004-2006.

Data Table C-9 in Appendix



## Unintentional Injury Deaths

**Definition: Unintentional injury mortality** is the total number of deaths due to unintentional injuries per 100,000 persons. The unintentional injury ICD-9 and ICD-10 codes are listed in Table A-2 Appendix A.

**Healthy People 2020, Goal IVP-11:** Reduce the unintentional injury death rate to 36.0 per 100,000 persons.

### Summary

- Deaths due to unintentional injuries among Kenai Region Alaska Natives were 83.5 per 100,000 persons during 2004-2008.
- Deaths due to unintentional injuries among Kenai Region Alaska Native people decreased 25.7% between 1984-1988 (112.4) and 2004-2008 (83.5).
- The Kenai Region Alaska Native unintentional injury death rate per 100,000 (83.5) was 1.2 times lower than Alaska Natives statewide (97.7), however it was more than twice as high as the rate for U.S. Whites (39.9) during 2004-2008.

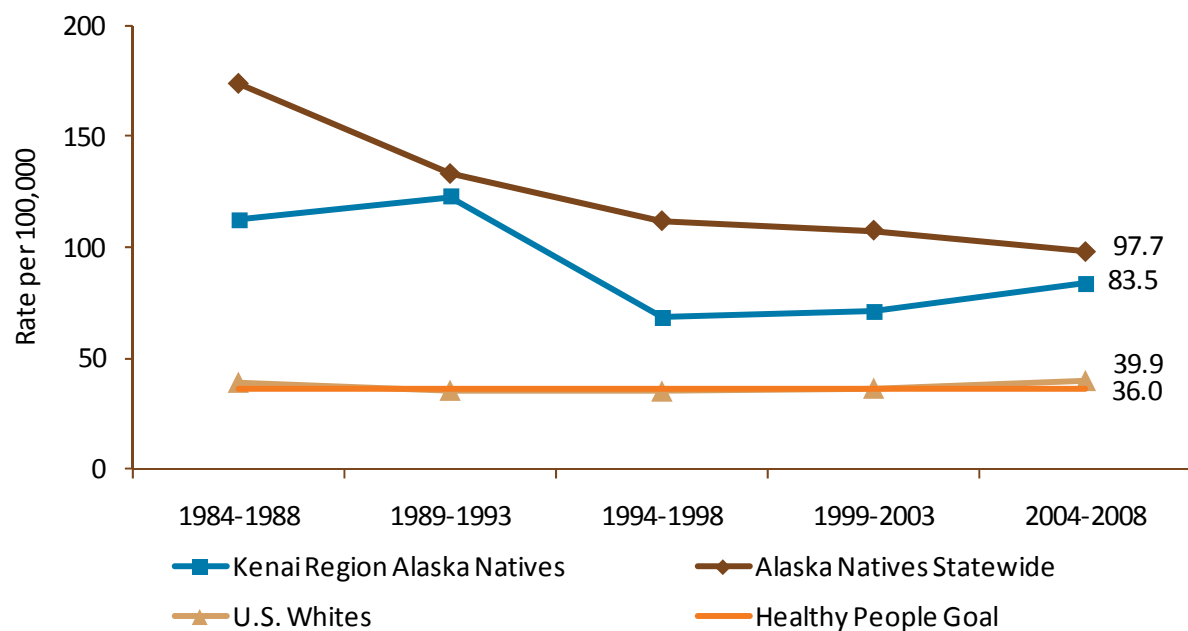
**Figure 15. Age-Adjusted Unintentional Injury Death Rates per 100,000, 1984-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: Surveillance, Epidemiology, and End Results Program

Note for the final time period: U.S. rates are for 2004-2006.

Data Table C-10 in Appendix



## Cerebrovascular Disease Deaths

**Definition: Cerebrovascular disease (stroke) mortality** is the total number of deaths due to cerebrovascular disease per 100,000 persons. The ICD-9 and ICD-10 codes for cerebrovascular disease are listed in Table A-2 in Appendix A.

**Healthy People 2020, Goal HDS-3:** Reduce the cerebrovascular disease (stroke) death rate to 33.8 per 100,000 persons.

### Summary

- The cerebrovascular disease death rate for Kenai Region Alaska Native people was 87.6 per 100,000 persons during 2004-2008.
- Deaths from cerebrovascular disease nearly doubled between 1999-2003 (44.8) and 2004-2008 (87.6) for Kenai Region Alaska Native people.
- The Kenai Region Alaska Native cerebrovascular disease death rate per 100,000 (87.6) was 1.5 times higher than Alaska Natives statewide (56.7) and nearly twice as high as U.S. Whites (44.5) during 2004-2008.

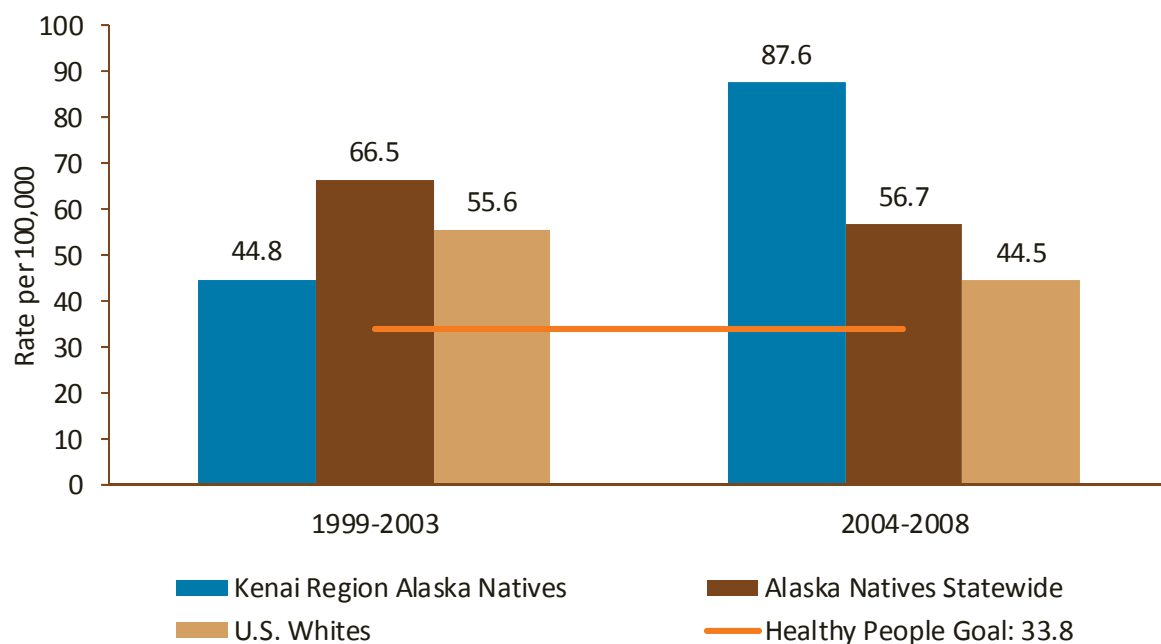
**Figure 16. Age-Adjusted Cerebrovascular Disease Death Rates per 100,000, 1999-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: Surveillance, Epidemiology, and End Results Program

Note for the final time period: U.S. rates are for 2004-2006.

Data Table C-11 in Appendix



## Leading Causes of Injury Deaths

**Definition:** The **leading causes of injury death** ranks the injury-related deaths.

### Summary

- Motor vehicle crashes were the leading cause of injury-related death among Kenai Region Alaska Native people during 1999-2005.
- Kenai Region Alaska Native people are two times more likely to die from a motor vehicle crash than Alaska Native people statewide.

**Table 4. Leading Causes of Injury Death, Kenai Region Alaska Natives, 1999-2005**

Data Source: Alaska Bureau of Vital Statistics

Causes of Injury Death By Rank	n	% Total	Rate per 100,000	Rate Ratio <sup>2</sup> : Kenai Region Alaska Natives vs. Alaska Natives Statewide
Motor Vehicle	14	42%	36.9 <sup>1</sup>	2.0*
Suicide	5	15%	-	-
Other	14	42%	-	-
<b>Total Unintentional</b>	<b>21</b>	<b>64%</b>	<b>45.6</b>	<b>0.7</b>
<b>Total Injury</b>	<b>33</b>	<b>100%</b>	<b>105.0</b>	<b>0.7</b>

(-) Rate and rate ratio not calculated due to the small number of deaths (<10).

\* Statistically significant difference at the p<0.05 probability level

<sup>1</sup> Rate is based on 10-19 deaths and should be interpreted with caution.

<sup>2</sup> Rate Ratio: A rate ratio less than 1 means that the rate in the population of interest is lower than that of the comparison population. Conversely, a rate ratio greater than 1 means that the rate in the population of interest is higher than in the comparison population.

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# Morbidity

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## Leading Causes of Outpatient Visits

**Definition:** An **outpatient visit** is based on the primary International Classification of Diseases - 9 diagnoses as reported to the Indian Health Service's National Patient Information Reporting System for the federal fiscal year.

### Summary

- The top three outpatient visits in the Kenai Region during FY 2010 were: other upper respiratory infections, medical examination/evaluation, and administrative/social admission.
- The top 15 causes of outpatient visits accounted for 48.4% of the workload in FY 2010.

**Table 5. Leading Causes of Outpatient Visits, Kenai Region Alaska Natives, Fiscal Year 2010**

Data Source: National Patient Information Reporting System - Indian Health Service National Data Warehouse

<b>Top 15 Outpatient Visits by Clinical Classification Categories</b>	<b>n</b>	<b>%</b>
1. Other upper respiratory infections†	1,629	7.7%
2. Medical examination/evaluation	968	4.6%
3. Administrative/social admission	929	4.4%
4. Immunizations and screening for infectious disease	783	3.7%
5. Spondylosis; intervertebral disc disorders; other back problems	773	3.7%
6. Other non-traumatic joint disorders	706	3.3%
7. Essential hypertension	699	3.3%
8. Otitis media and related conditions	570	2.7%
9. Maternal Visits	536	2.5%
10. Viral infection	511	2.4%
11. Other skin disorders	458	2.2%
12. Diabetes mellitus without complication	455	2.2%
13. Other connective tissue disease	407	1.9%
14. Other lower respiratory disease	403	1.9%
15. Skin and subcutaneous tissue infections	394	1.9%
<b>Top 15 Outpatient Visits</b>	<b>10,221</b>	<b>48.4%</b>
<b>All Other Causes</b>	<b>10,918</b>	<b>51.6%</b>
<b>Total</b>	<b>21,139</b>	<b>100.0%</b>

†Other upper respiratory infections include: acute upper respiratory infections of multiple or unspecified sites, chronic sinusitis, croup, and other and unspecified upper respiratory infections.

Note: Data includes outpatient visits from the following clinics: Kenai, Nanwalek, Ninilchik, North Star Health Clinic, Port Graham, and Seldovia.



## Leading Causes of Injury Hospitalizations

**Definition:** An **injury hospitalization** includes injuries severe enough to require an inpatient admission or transfer to another acute care facility.

### Summary

- Falls were the leading cause of injury-related hospitalizations for Kenai Region Alaska Native people.
- Kenai Region Alaska Native people were 1.5 times more likely to be hospitalized for motor vehicle crashes than Alaska Native people statewide ( $p<0.05$ ).
- Kenai Region Alaska Native people were less likely to be hospitalized for suicide attempts, assaults, and overall injuries than Alaska Native people statewide ( $p<0.05$ ).

**Table 6. Leading Causes of Injury Hospitalizations, Kenai Region Alaska Natives, 1991-2003**

Data Source: Alaska Native Injury Atlas, 2008, Alaska Native Epidemiology Center

Leading Causes by Rank	n	% Total	Age- Adjusted Rate per 10,000	Rate Ratio <sup>1</sup> : Kenai Alaska Natives vs. Alaska Natives Statewide
Falls	149	33%	36.7	1.0
Motor Vehicle	85	19%	21.0	1.5*
Suicide Attempt	54	12%	13.3 <sup>1</sup>	0.7*
Assault	38	9%	9.4 <sup>1</sup>	0.5*
ATV	13	3%	-	-
Snowmachine	6	1%	-	-
Other	103	23%	-	-
<b>Total Unintentional</b>	<b>352</b>	<b>79%</b>	<b>86.8</b>	<b>0.9</b>
<b>Total Injury</b>	<b>448</b>	<b>100%</b>	<b>110.5</b>	<b>0.8*</b>

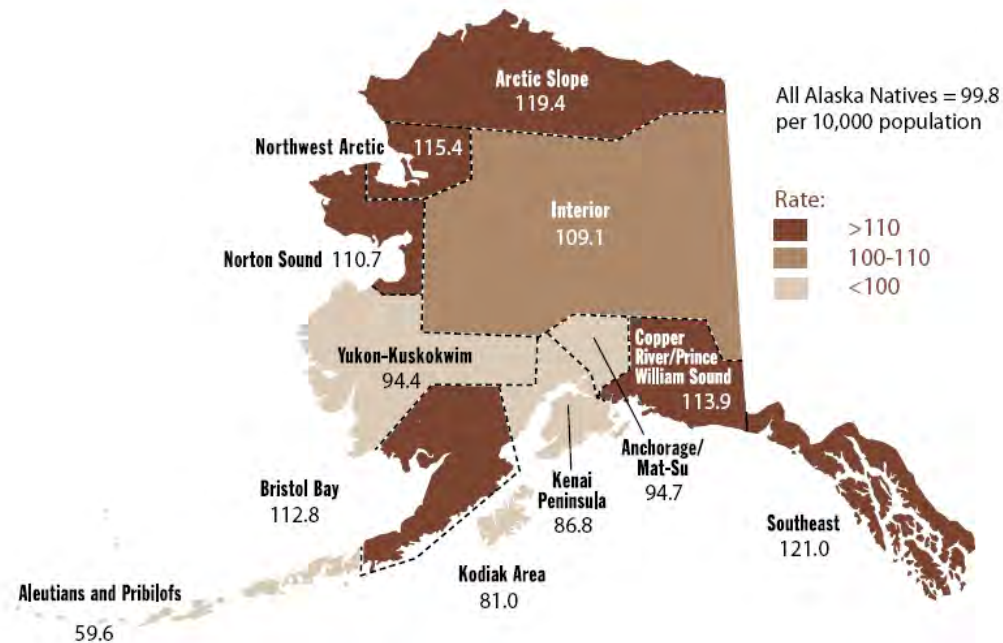
<sup>1</sup> Rate Ratio: A rate ratio less than 1 means that the rate in the population of interest is lower than that of the comparison population. Conversely, a rate ratio greater than 1 means that the rate in the population of interest is higher than in the comparison population.

\* Statistically significant difference at the  $p<0.05$  probability level.

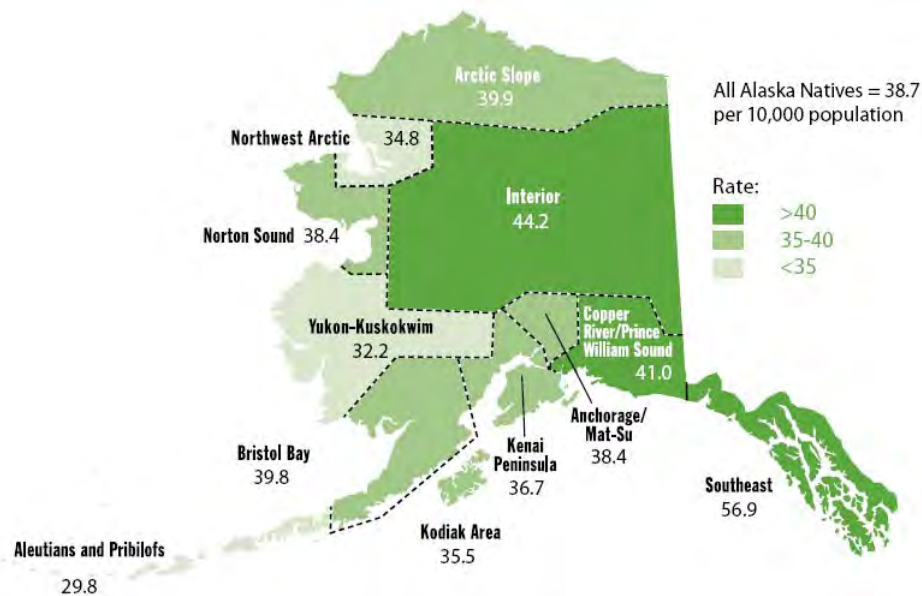
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**Injury Hospitalizations - Unintentional Injuries and Falls****Figure 17. Unintentional Injury Hospitalization Rate by Region, Alaska Natives, Rate per 10,000, 1991-2003**

Data Source: Alaska Trauma Registry

**Figure 18. Fall Hospitalization Rate by Region, Alaska Natives, Rate per 10,000, 1991-2003**

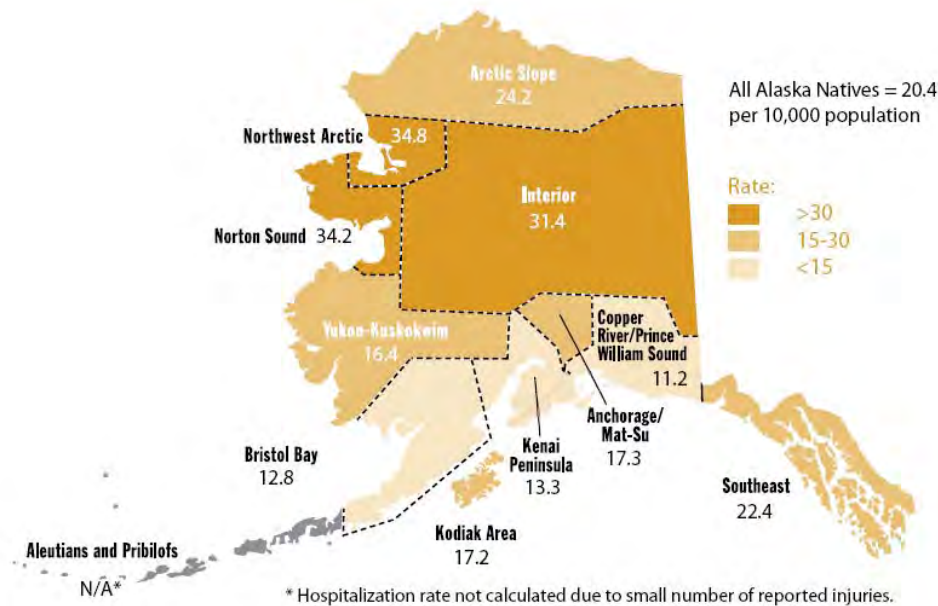
Data Source: Alaska Trauma Registry



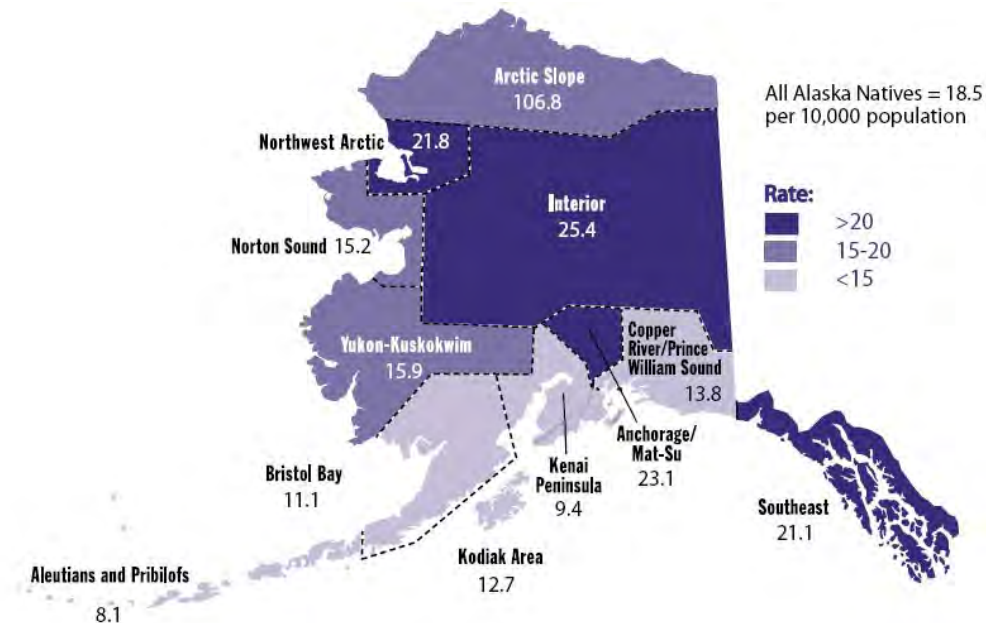
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**Injury Hospitalizations - Suicide Attempts and Assaults****Figure 19. Hospitalization Rate for Suicide Attempts by Region, Alaska Natives, Rate per 10,000, 1991-2003**

Data Source: Alaska Trauma Registry

**Figure 20. Hospitalization Rate for Assault Injuries by Region, Alaska Natives, Rate per 10,000, 1991-2003**

Data Source: Alaska Trauma Registry



## Leading Cancers

**Definition:** **Leading Cancers** is a count of the top ten new cases of cancer reported to the Alaska Native Tumor Registry.

### Summary

- The three most frequently diagnosed cancers for Kenai Region Alaska Native people were breast (18.2%), lung and bronchus (16.9%), and colon and rectum (11.0%) during 1999-2008.
- The top three cancers accounted for 46.1% of all cancer for Kenai Region Alaska Native people.

**Table 7. Leading Cancers†, Kenai Region Alaska Natives, 1998-2008**

Data Source: SEER Alaska Native Tumor Registry

Site of Cancer	n	%
1 Breast	28	18.2%
2 Lung and Bronchus	26	16.9%
3 Colon and Rectum	17	11.0%
4 Prostate	12	7.8%
5 Kidney and Renal Pelvis	10	6.5%
6 Non-Hodgkin Lymphoma	6	3.9%
7 Corpus Uterus	6	3.9%
8 Oral	5	3.2%
9 Thyroid	5	3.2%
10 Stomach	4	2.6%
<b>All Other Causes</b>	<b>35</b>	<b>22.7%</b>
<b>Total</b>	<b>154</b>	<b>100.0%</b>

† Excludes in situ cancers

## Diabetes - Prevalence

**Definition:** Diabetes is a metabolic disease characterized by high blood sugar levels, which result from defects in insulin secretion, insulin action, or both. **Diabetes prevalence** measures the number of people who currently have diabetes.

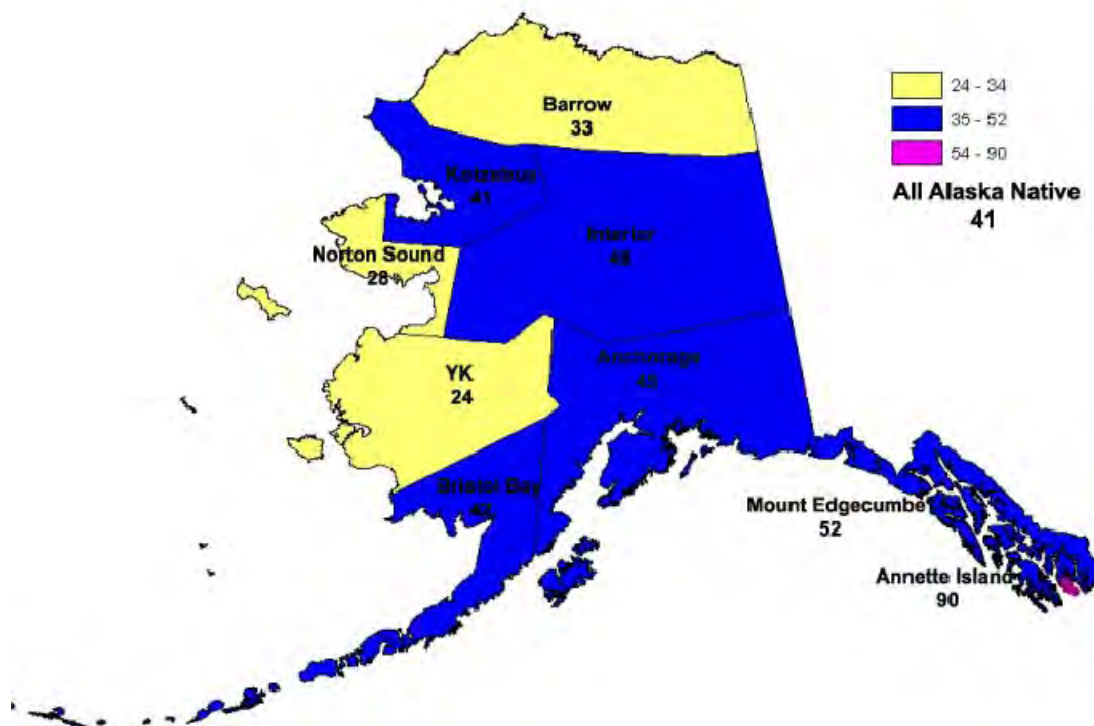
### Summary

- The age-adjusted prevalence of diabetes among Anchorage Service Unit Alaska Native people was 45 per 1,000 people in 2009.
- The diabetes rate per 1,000 among Anchorage Service Unit Alaska Native people (45) appeared to be higher than Alaska Native people statewide (41), and lower than the rate for the U.S. Total Population (62).

**Figure 21. Diabetes Prevalence, Alaska Natives, Rate per 1,000, 2009**

Data Source: Alaska Native Diabetes Registry

Note: The Indian Health Service user population is the denominator and the data were age-adjusted to the Standard U.S. 2000 Population.



## Diabetes - Percent Increase

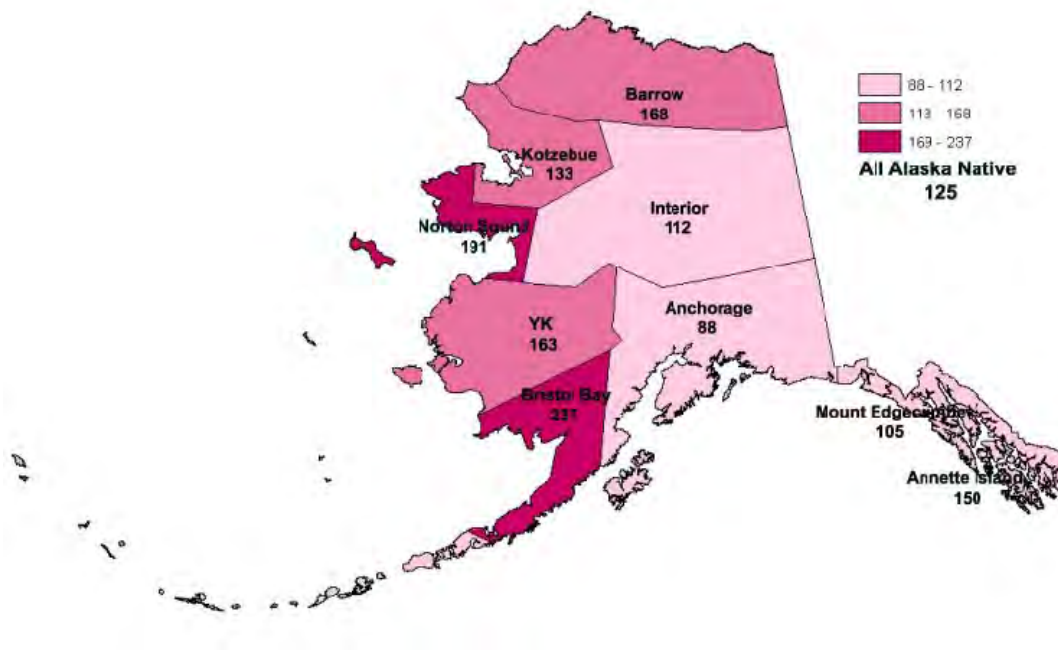
**Definition:** Diabetes is a metabolic disease characterized by high blood sugar levels, which results from defects in insulin secretion, insulin action, or both. **Diabetes percent increase** compares prevalence between 1990 and 2009.

### Summary

- The prevalence of diabetes increased 88% between 1990 and 2009 among Alaska Native people in the Anchorage Service Unit.
- The prevalence of diabetes more than doubled among Alaska Native People statewide (125%) and among U.S. Total Population (113%) between 1990 and 2009.

**Figure 22. Percent Increase in Diabetes Prevalence, Alaska Natives, 1990 to 2009**

Data Source: Alaska Native Diabetes Registry



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# **Adult Health Behavior**

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## Tobacco Use - Current Smokers

**Definition:** Current smokers are adults who smoked at least 100 cigarettes during their lifetime and currently smoke some days or everyday.

**Healthy People 2020, Goal TU-1.1:** Reduce tobacco use by adults to 12.0%.

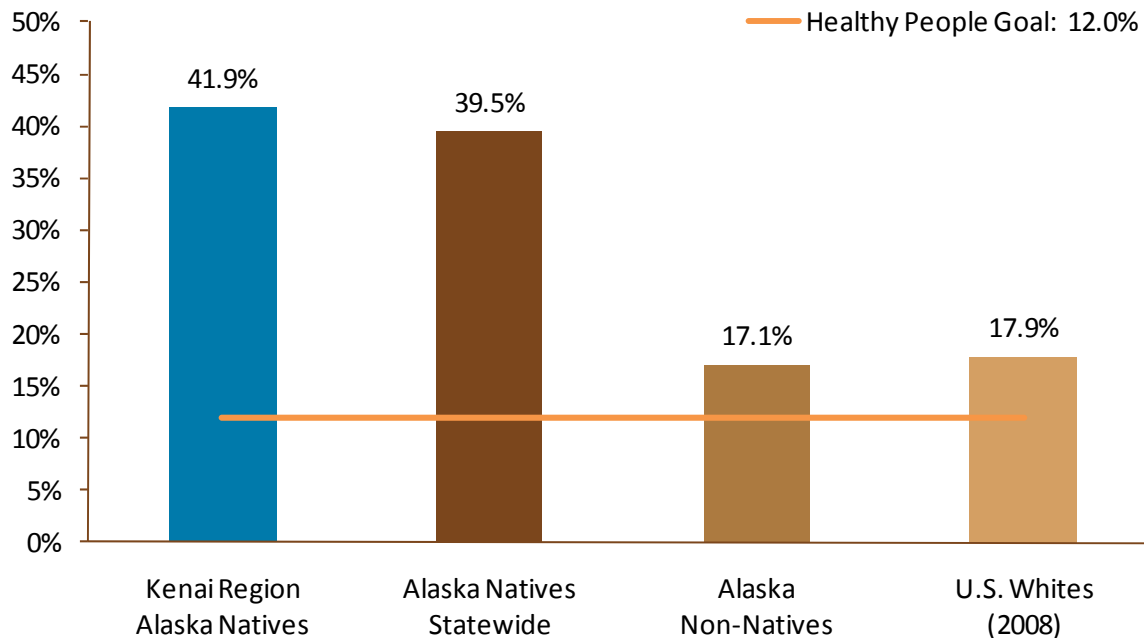
### Summary

- 41.9% of Kenai Region Alaska Native people reported smoking cigarettes during 2007-2009.
- Kenai Region Alaska Native people reported a current smoking prevalence (41.9%) similar to Alaska Natives Statewide and higher than Alaska Non-Natives (17.1%) ( $p < 0.05$ ) from the same region.

**Figure 23. Current Smokers, 18 Years and Older, 2007-2009**

Data Source: Behavioral Risk Factor Surveillance System

Data Table C-12 in Appendix





## Tobacco Use - Smokeless Tobacco Use

**Definition: Smokeless tobacco use** includes adults who currently use smokeless tobacco products including chewing tobacco, snuff, Iq'mik, or Blackbull. Iq'mik is a mixture of ash and leaf tobacco.

**Healthy People 2020, Goal TU-1.2:** Reduce spit tobacco use by adults to 0.3%.

### Summary

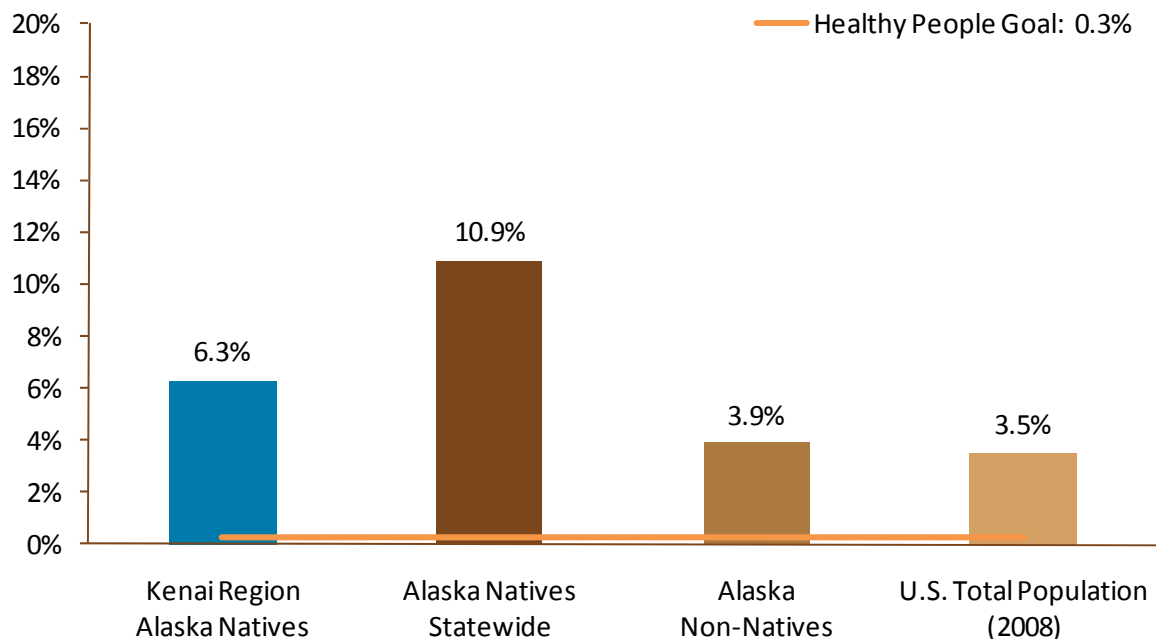
- 6.3% of Kenai Region Alaska Native people were current smokeless tobacco users during 2007-2009.
- The percent of Kenai Region Alaska Native people using smokeless tobacco (6.3%) appeared to be 1.7 times lower than Alaska Native people statewide (10.9%) and 1.6 times higher than Alaska Non-Natives (3.9%) from the same region.

**Figure 24. Current Smokeless Tobacco Users, 18 Years and Older, 2007-2009**

Alaska Data Source: Behavioral Risk Factor Surveillance System

U.S. Data Source: Substance Abuse and Mental Health Services Administration. Results from the 2008 National Survey on Drug Use and Health: Detailed Tables. Rockville (MD): Substance Abuse and Mental Health Services Administration, Office of Applied Studies, 2009.

Data Table C-13 in Appendix



## Alcohol Use - Binge Drinking

**Definition:** Binge drinking is having five or more drinks for men or four or more drinks for women on one or more occasion in the past 30 days.

**Healthy People 2020, Goal SA-14.3:** Reduce the percentage of adults who engage in binge drinking during the past month to 24.3%.

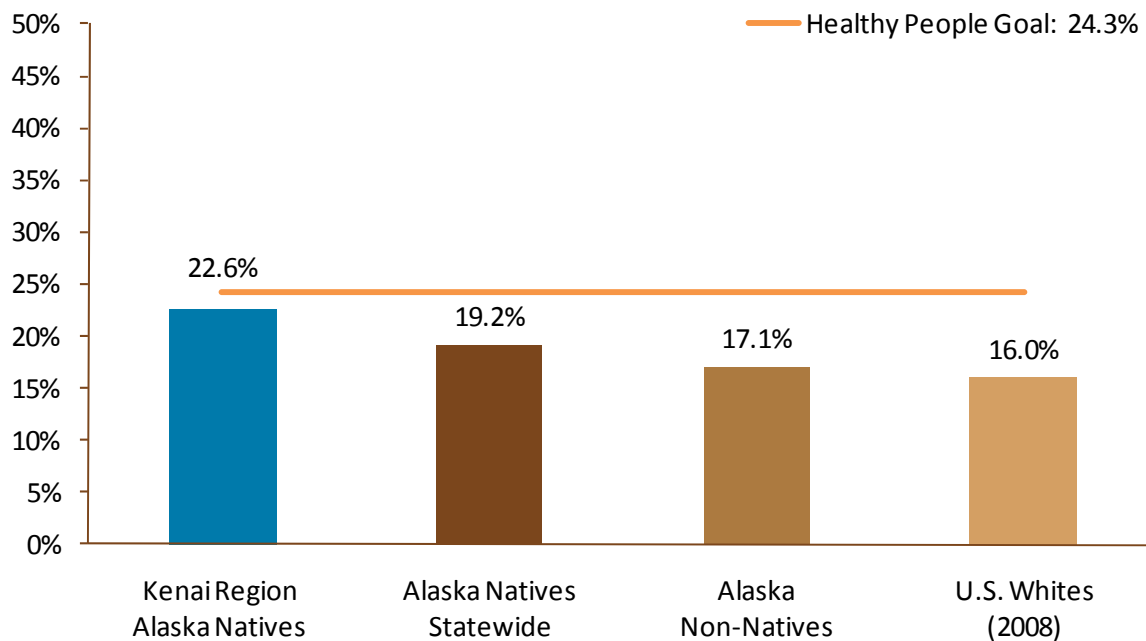
### Summary

- 22.6% of Kenai Region Alaska Native people reported binge drinking during 2007-2009.
- All groups achieved the Healthy People Goal of less than 24.3%.

**Figure 25. Binge Drinking, 18 Years and Older, 2007-2009**

Data Source: Behavioral Risk Factor Surveillance System

Data Table C-14 in Appendix



## Physical Activity

**Definition:** The recommended **physical activity** for adults is 150 or more total minutes per week of moderate exercise or vigorous exercise (where each minute of vigorous exercise contributes two minutes to the total).

**Healthy People 2020, Goal PA-2.1:** Increase the proportion of adults who engage in regular, preferably daily, moderate physical activity for at least 30 minutes per day to 47.9%.

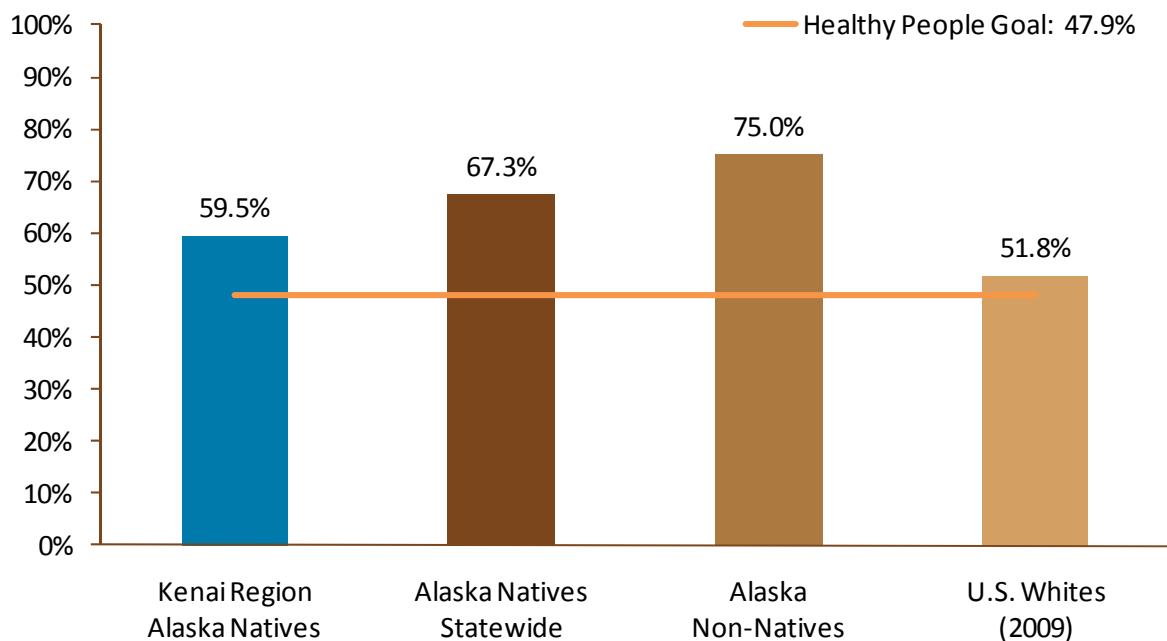
### Summary

- 59.5% of Kenai Region Alaska Native people participated in moderate and/or vigorous physical activity in 2007 and 2009.
- All groups exceeded the Healthy People Goal for physical activity.

**Figure 26. Meets Moderate and/or Vigorous Physical Activity, 18 Years and Older, 2007 and 2009**

Data Source: Behavioral Risk Factor Surveillance System

Data Table C-15 in Appendix



## Overweight

**Definition: Overweight** is a body mass index (BMI) from 25.0 to 29.9. BMI is calculated using the standard formula (weight (kg)/ height (m<sup>2</sup>)).

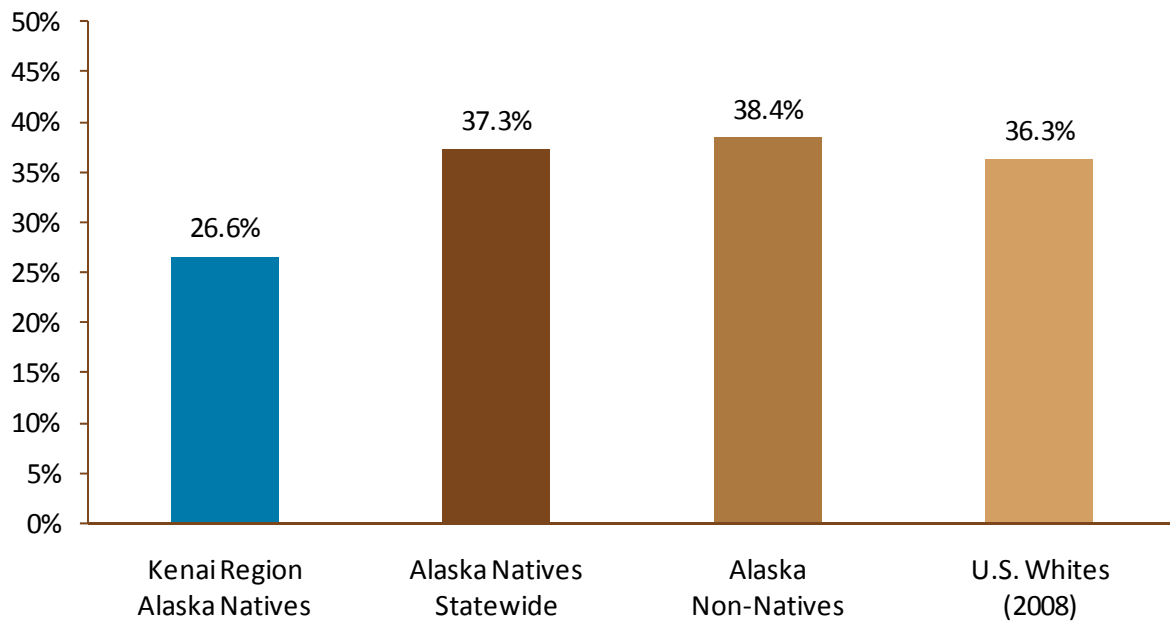
### Summary

- 26.6% of Kenai Region Alaska Native adults reported a height and weight that indicated they were overweight during 2007-2009.
- Kenai Region Alaska Native adults reported a lower prevalence of overweight persons (26.6%) than Alaska Non-Native adults (38.4%) ( $p < 0.05$ ) and U.S. Whites (36.3%).

**Figure 27. Overweight ( $25 \leq \text{BMI} \leq 29.9$ ), 18 Years and Older, 2007-2009**

Data Source: Behavioral Risk Factor Surveillance System

Data Table C-16 in Appendix



## Obesity

**Definition:** **Obesity** is a body mass index (BMI) of 30.0 or greater. BMI is calculated using the standard formula (weight (kg)/ height (m<sup>2</sup>)).

**Healthy People 2020, Goal NWS-9:** Reduce the proportion of adults who are obese to 30.6%.

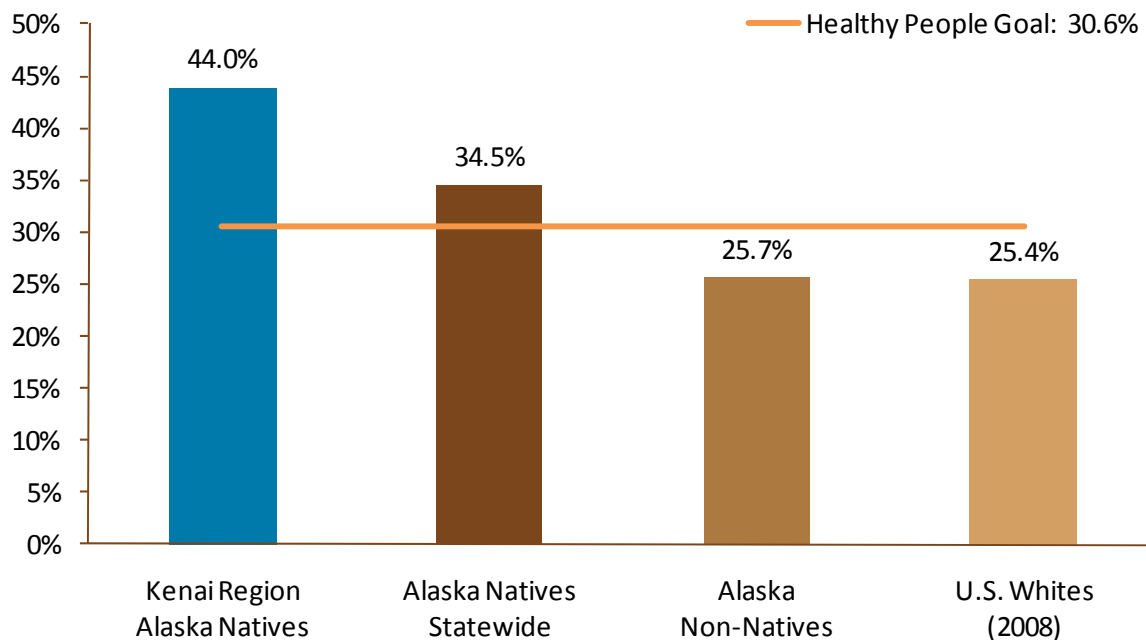
### Summary

- About two out of five (44.0%) Kenai Region Alaska Native adults were obese during 2007-2009.
- Kenai Region Alaska Native people (44.0%) and Alaska Natives statewide (34.5%) had a significantly higher prevalence of obesity than Alaska Non-Natives (25.7%) ( $p < 0.05$ ).

**Figure 28. Obesity (BMI  $\geq$  30), 18 Years and Older, 2007-2009**

Data Source: Behavioral Risk Factor Surveillance System

Data Table C-17 in Appendix



## Lifetime Intimate Partner Violence

**Definition: Lifetime Intimate Partner Violence** includes adults that have had an intimate partner hit, slap, punch, shove, kick, choke, hurt, or threaten them ever.

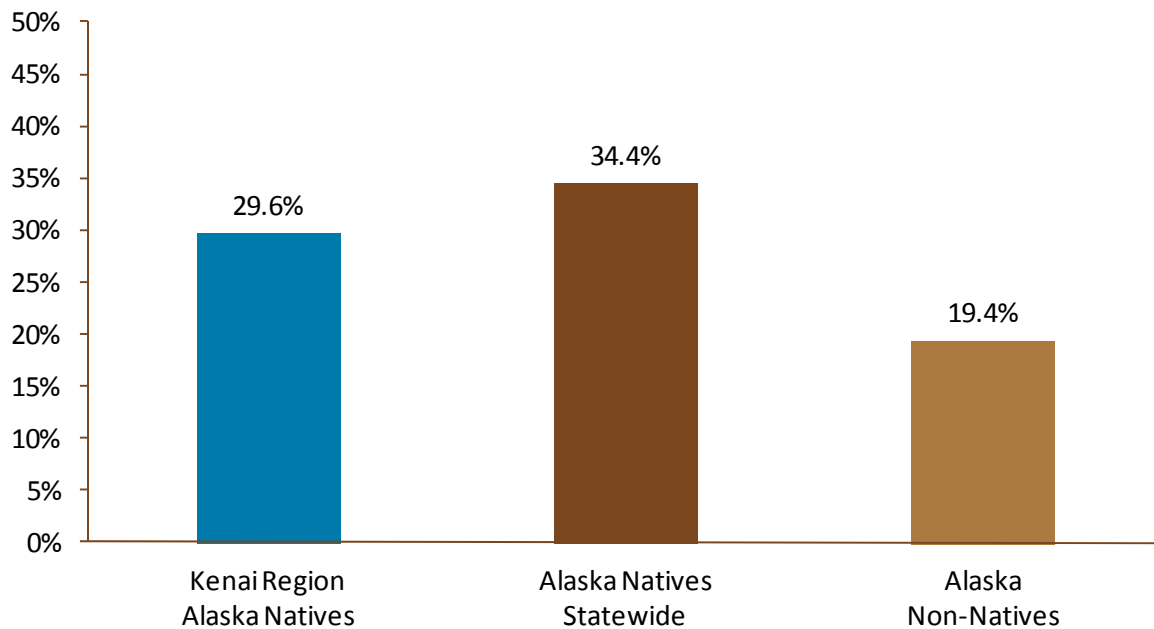
### Summary

- One out of three (29.6%) Kenai Region Alaska Native people reported having ever experienced intimate partner violence during their lifetime in 2006 and 2009.
- Alaska Natives statewide (34.4%) had a significantly higher prevalence of lifetime intimate partner violence than Alaska Non-Natives (19.4%) ( $p < 0.05$ ).

**Figure 29. Lifetime Intimate Partner Violence, 18 Years and Older, 2006 and 2009**

Data Source: Behavioral Risk Factor Surveillance System

Data Table C-18 in Appendix



## Abstaining from Smoking during Pregnancy

**Definition:** Abstaining from smoking during pregnancy includes women who reported that they did not smoke anytime during their pregnancy as documented on the birth certificate.

**Healthy People 2020, Goal MICH-11.3:** Increase abstinence from cigarettes among pregnant women to 98.6%.

### Summary

- 67.0% of Kenai Region Alaska Native mothers abstained from smoking during pregnancy during 2004-2008.
- The prevalence of Kenai Region Alaska Native mothers that abstained from smoking during pregnancy appears to have increased 15.9% between 1989-1993 (57.8%) and 2004-2008 (67.0%).
- Although the number of Kenai Region Alaska Native mothers abstaining from smoking during pregnancy had been increasing, 25.2% less Kenai Region Alaska Native mothers abstained from smoking during pregnancy than U.S. White mothers during 2004-2008.

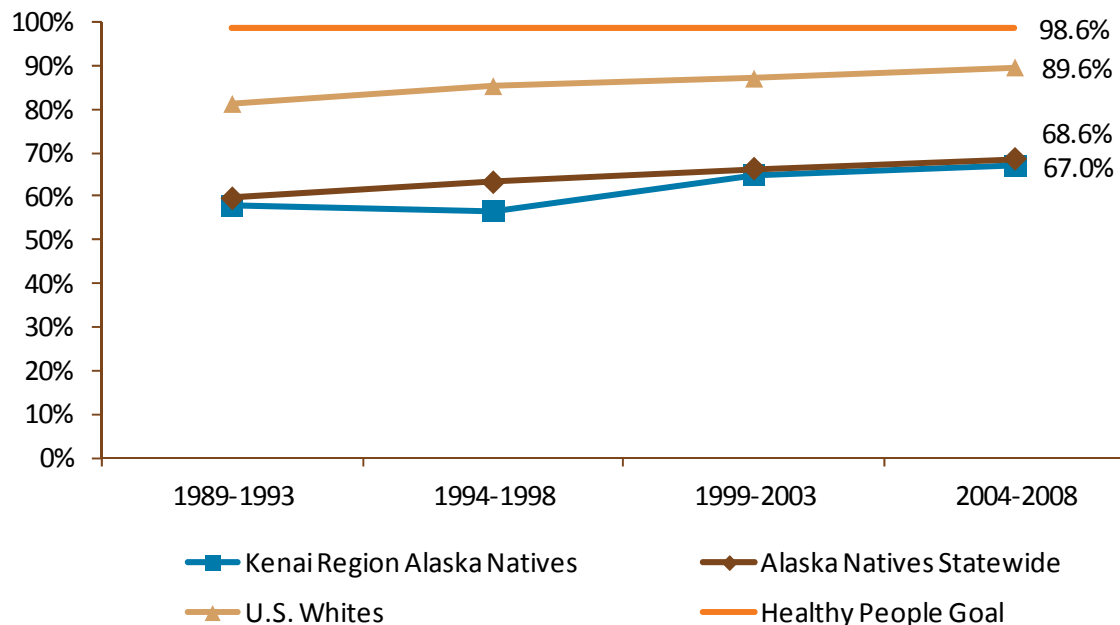
**Figure 30. Abstinence from Tobacco Use During Pregnancy, Pregnant Women, 1989-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: National Center for Health Statistics. Health, United States, 2009: With Special Feature on Medical Technology. Hyattsville, MD. 2009.

Note: The years presented for the U.S. Whites are 1991, 1996, 2001 and 2006.

Data Table C-19 in Appendix



## Abstaining from Alcohol Consumption during Pregnancy

**Definition:** Abstaining from alcohol consumption during pregnancy includes women who reported that they did not drink alcohol anytime during their pregnancy as documented on the birth certificate.

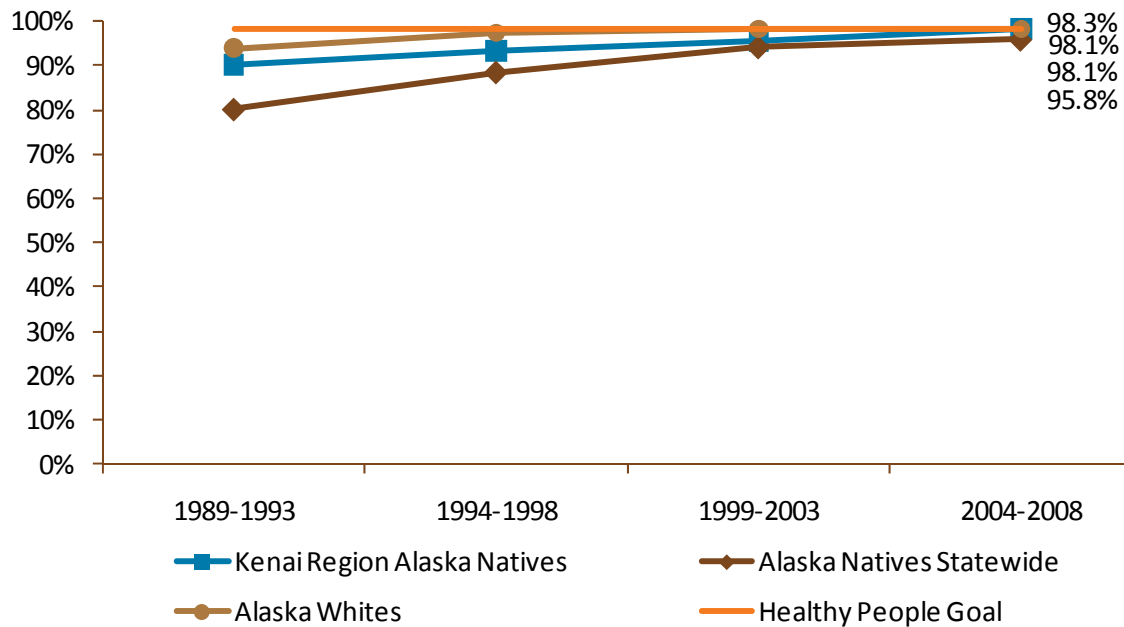
**Healthy People 2020, Goal MICH-11.1:** Increase abstinence from alcohol among pregnant women to 98.3%.

### Summary

- 98.1% of Kenai Region Alaska Native mothers abstained from alcohol during pregnancy during 2004-2008.
- The prevalence of Kenai Region Alaska Native mothers that abstained from alcohol during pregnancy appears to have increased 8.8% between 1989-1993 (90.2%) and 2004-2008 (98.1%).
- All groups reported a similar prevalence of abstaining from alcohol use during pregnancy at or approaching the Healthy People Goal.

**Figure 31. Abstinence from Alcohol Use During Pregnancy, Pregnant Women, 1989-2008**

Data Source: Alaska Bureau of Vital Statistics  
Data Table C-20 in Appendix





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# **Adolescent Health Behavior**

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## Tobacco Use - Smoking

**Definition:** Current **tobacco use** is the percent of high school students in grades 9-12 who have smoked cigarettes on one or more of the past 30 days.

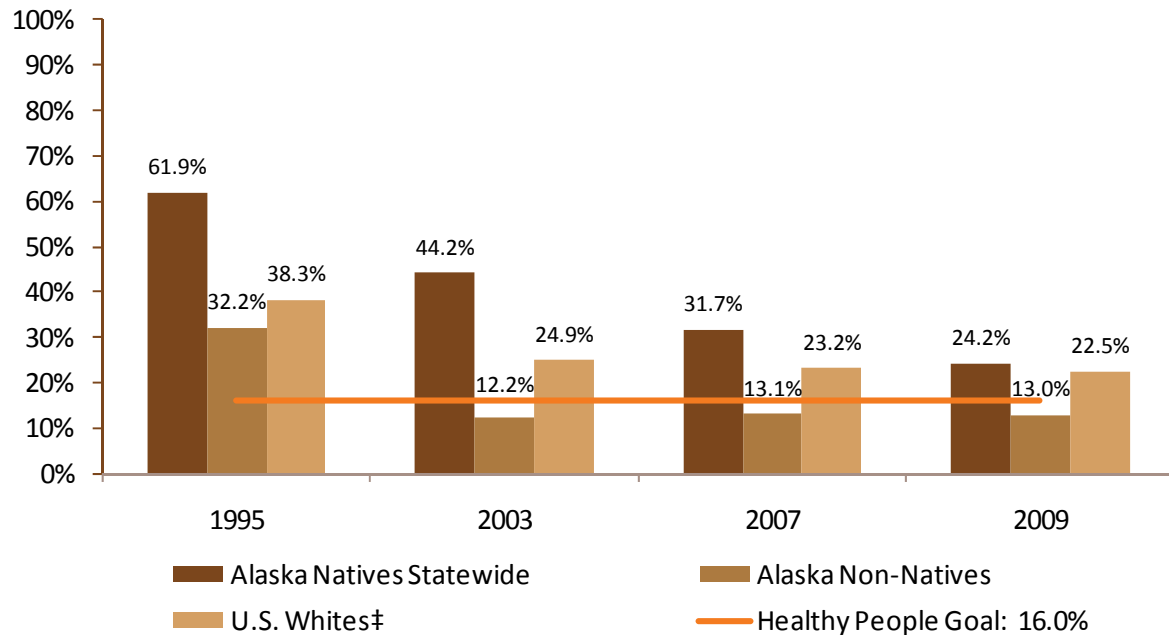
**Healthy People 2020, Goal TU-2.2:** Reduce cigarette smoking by adolescents in grades 9-12 during the past month to 16.0%.

### Summary

- 24.2% of Alaska Native high school students currently smoked cigarettes in 2009, similar to U.S. White high school students.
- Current smoking decreased by almost two thirds (-60.9%) among Alaska Native high school students between 1995 and 2009 ( $p < 0.05$ ).
- Alaska Native high school students had a higher percent of smoking than U.S. White students in 1995 and 2003 ( $p < 0.05$ ), but had decreased to a similar percent of smoking to U.S. White students in 2007 and 2009.

**Figure 32. High School Students Who Smoked Cigarettes on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System  
Data Table C-21 in Appendix



† Non Hispanic

## Tobacco Use - Smokeless Tobacco

**Definition:** Current **smokeless tobacco use** is the percent of high school students in grades 9-12 who used chewing tobacco, snuff, or dip on one or more of the past 30 days.

**Healthy People 2020, Goal TU-2.3:** Reduce spit tobacco use by adolescents in grades 9-12 during the past month to 6.9%.

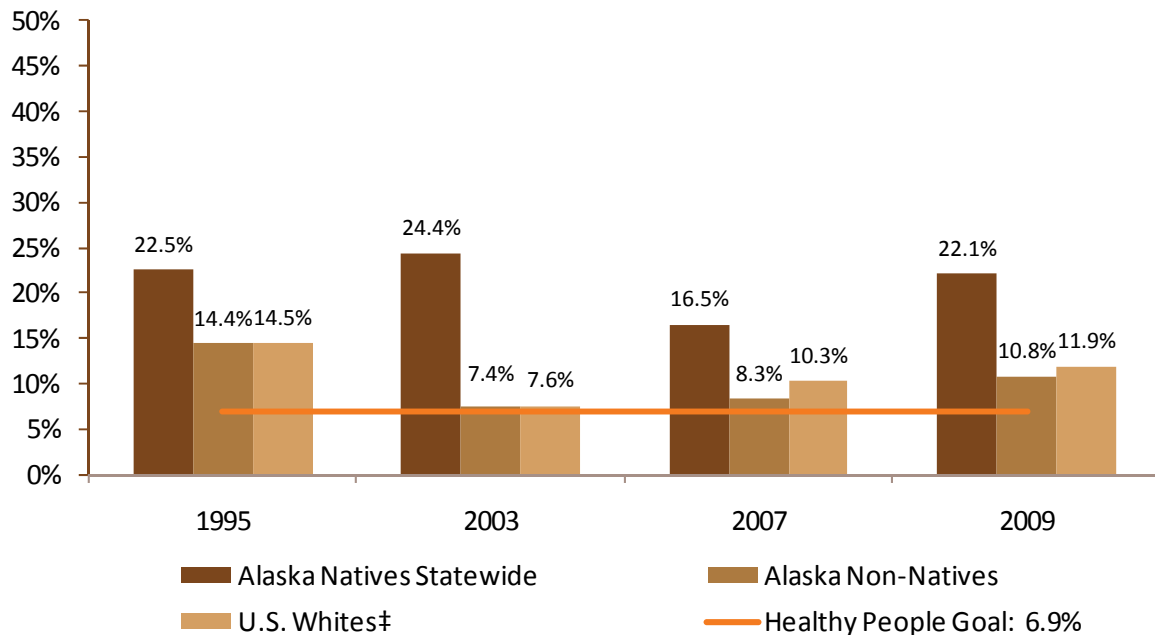
### Summary

- 22.1% of Alaska Native high school students used smokeless tobacco in 2009.
- In 2009, smokeless tobacco use prevalence for Alaska Native high school students was about two times that of Alaska Non-Native (10.8%) and U.S. White (11.9%) high school students.

**Figure 33. High School Students Who Chewed Tobacco or Snuff on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System

Data Table C-22 in Appendix



† Non Hispanic

## Alcohol Use - Current Drinking

**Definition:** Adolescent **alcohol use** is the percent of high school students, grades 9-12, who consumed alcohol in the past 30 days.

**Healthy People 2020, Goal SA-13.1:** Reduce the proportion of adolescents reporting use of alcohol or any illicit drugs during the past 30 days to 16.5%.

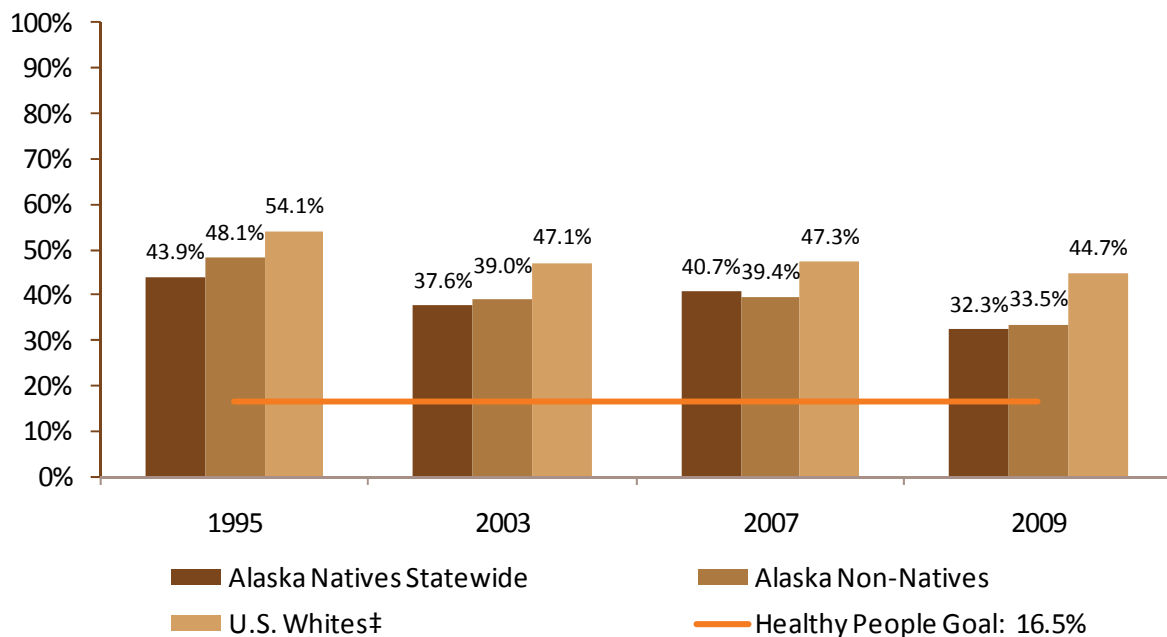
Note: Data presented are for alcohol consumption only. The Healthy People 2020 Goal is to reduce alcohol or any illicit drug use.

### Summary

- 32.3% of Alaska Native high school students reported current drinking in 2009, similar to Alaska Non-Native high school students.
- The percentage of current drinking appears to have decreased by 26.4% for Alaska Native high school students between 1995 and 2009.
- In 2009, Alaska Native high school students (32.3%) had lower percentages of drinking than U.S. Whites (44.7%) ( $p < 0.05$ ).

**Figure 34. High School Students Who Had at Least One Drink of Alcohol on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System  
Data Table C-23 in Appendix



† Non Hispanic

## Alcohol Use - Binge Drinking

**Definition:** Binge drinking is the percent of high school students in grades 9-12 who had five or more drinks of alcohol in a row, within a couple of hours, on one or more of the past 30 days.

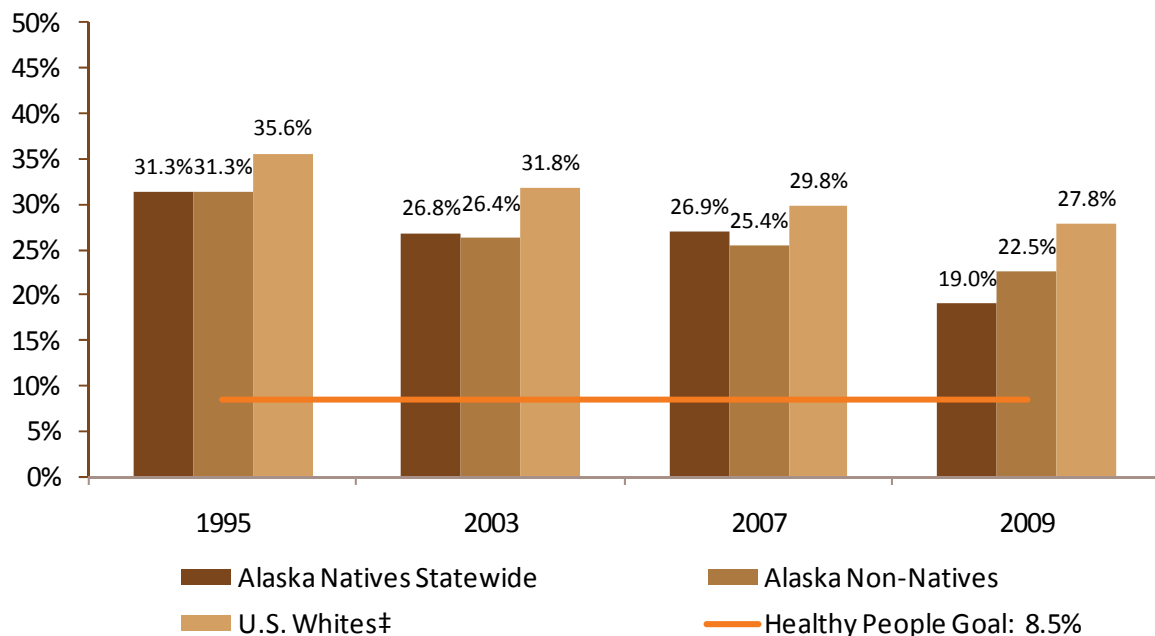
**Healthy People 2020, Goal SA-14.4:** Reduce the percentage of adolescents (12 to 17 years) who engaged in binge drinking during the past month to 8.5%.

### Summary

- 19.0% of Alaska Native high school students reported binge drinking in 2009.
- Binge drinking among Alaska Native high school students decreased significantly (-39.3%) between 1995 and 2009 ( $p < 0.05$ ).
- In 2009, Alaska Native high school students (19.0%) had lower rates of binge drinking than U.S. White students (27.8%) ( $p < 0.05$ ).

**Figure 35. High School Students Reporting Binge Drinking on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System  
Data Table C-24 in Appendix



† Non Hispanic

## Substance Use - Marijuana

**Definition:** Marijuana use among high school students, grades 9-12, is defined as having used marijuana in the past 30 days.

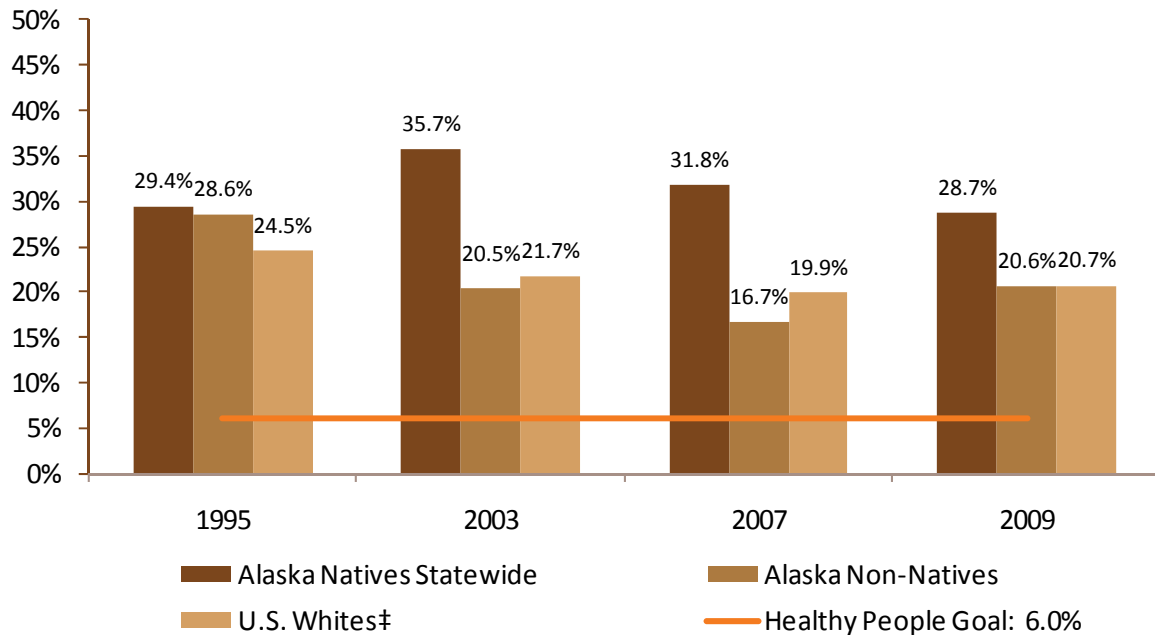
**Healthy People 2020, Goal SA-13.2:** Reduce the proportion of adolescents (12 to 17 years) reporting the use of marijuana during the past 30 days to 6.0%.

### Summary

- 28.7% of Alaska Native high school students currently used marijuana in 2009.
- Marijuana use appears to have increased between 1995 and 2003, but appears to have decreased among Alaska Native (-19.6%) high school students between 2003 and 2009.
- In 2003 and 2007, Alaska Native high school students (35.7%) had a significantly higher percent of marijuana use than Alaska Non-Native (20.5%) and U.S. White (21.7%) high school students, however in 2009 marijuana use did not differ significantly between Alaska Native (28.7%), Alaska Non-Native (20.6%) and U.S. White (20.7%) high school students.

**Figure 36. High School Students Who Used Marijuana on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System  
Data Table C-25 in Appendix



† Non Hispanic

## Substance Use - Cocaine

**Definition: Substance use - Cocaine** among high school students, grades 9-12, is defined as having used cocaine ever during their lifetime.

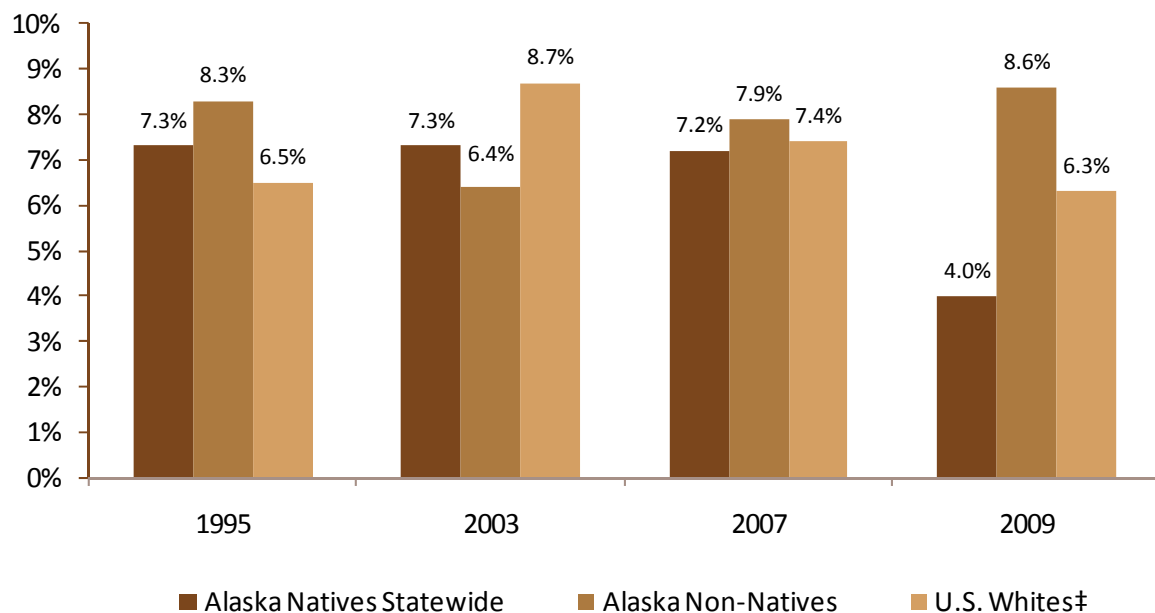
### Summary

- 4.0% of Alaska Native high school students had ever used cocaine in 2009.
- Lifetime cocaine use among Alaska Native high school students appeared to have decreased 45.2% between 1995 and 2009.
- Lifetime cocaine use appeared to be lower for Alaska Native high school students (4.0%) than for Alaska Non-Native (8.6%) and U.S. White high school students (6.3%) in 2009.

**Figure 37. High School Students Who Used Any Form of Cocaine, Including Powder, Crack or Freebase During Their Lifetime, 1995, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System

Data Table C-26 in Appendix



† Non Hispanic

## Physical Activity

**Definition:** Recommended levels of **physical activity** includes high school students, grades 9-12, who were physically active for a total of at least sixty minutes per day on five or more of the past seven days.

### Summary

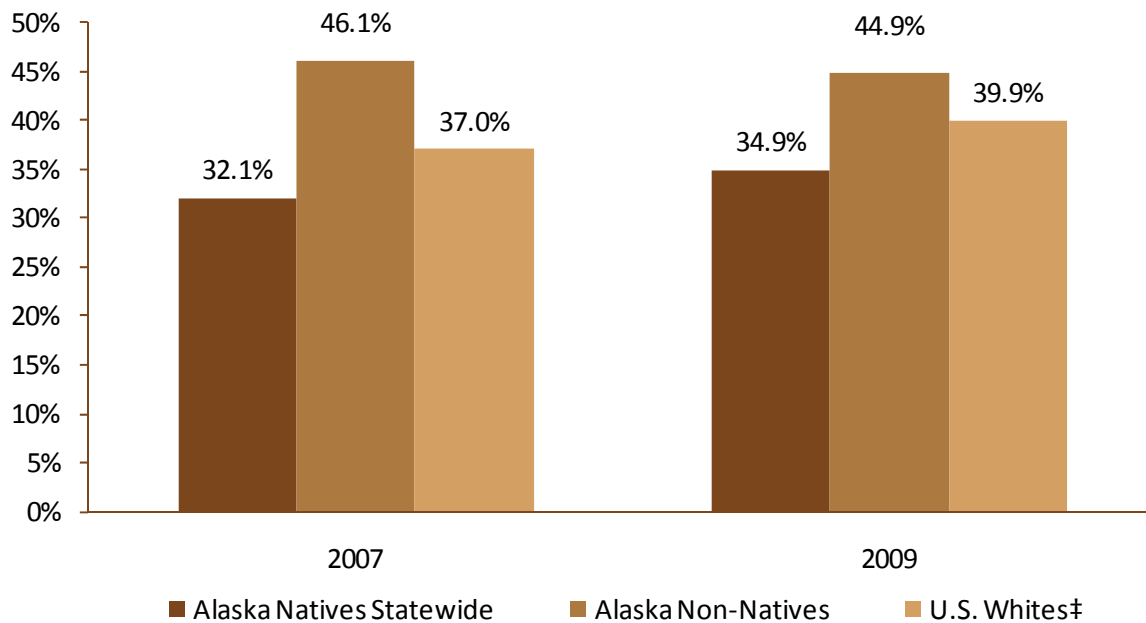
- 34.9% of Alaska Native high school students engaged in the recommended levels of physical activity in 2009.
- Alaska Native high school student's physical activity levels increased by 8.7% between 2007 and 2009.
- Alaska Native high school student's physical activity levels appeared to be lower than Alaska Non-Native and U.S. White levels in 2007 and 2009.

**Figure 38. High School Students Who Engage in Recommended Levels of Physical Activity, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System

Note: Data are not available for 1995 and 2003.

Data Table C-27 in Appendix



† Non Hispanic



## Overweight

**Definition:** Among high school students, grades 9-12, **overweight** includes those who are at the 85th percentile and up to the 95th percentile of body mass index, adjusted for age and gender.

### Summary

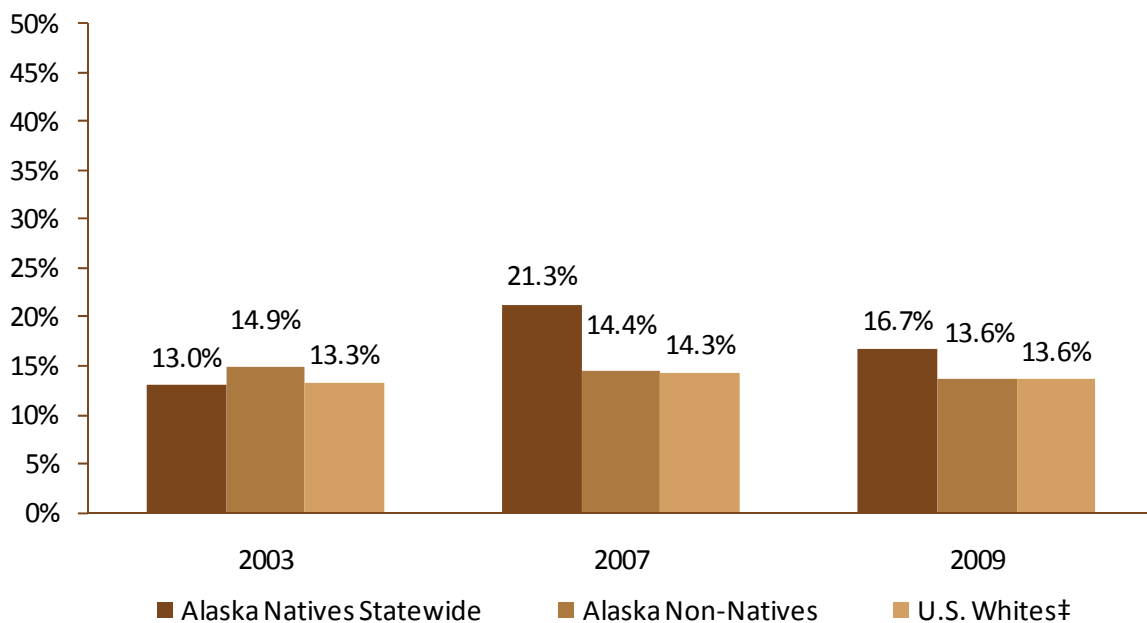
- 16.7% of Alaska Native high school students were overweight in 2009.
- Overweight among Alaska Native high school students appears to have increased 28.5% between 2003 and 2009.
- Alaska Native high school students had similar prevalence of being overweight in 2009 as Alaska Non-Native and U.S. White high school students.

**Figure 39. High School Students Who are Overweight, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System

Note: Data are not available for 1995.

Data Table C-28 in Appendix



† Non Hispanic

## Obese

**Definition:** In children and adolescents, **obesity** includes those that have a body mass index greater than or equal to the 95th percentile when adjusted for age and sex.

**Healthy People 2020, Goal NWS-10.3:** Reduce the proportion of adolescents aged 12 to 19 who are obese to 16.1%.

### Summary

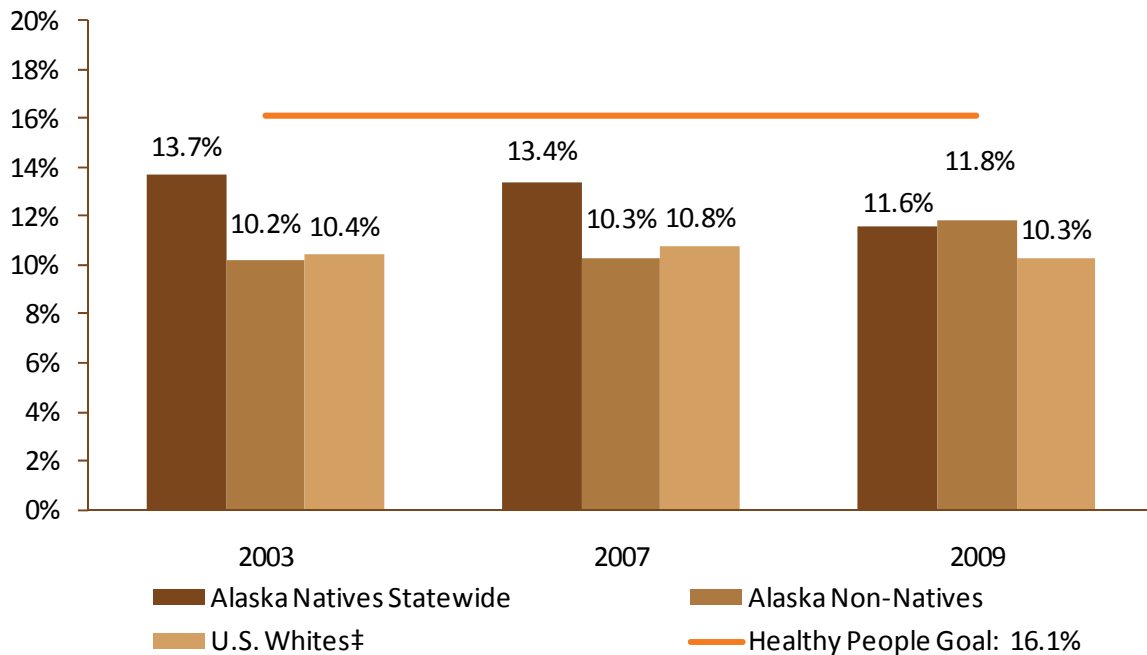
- About 1 in 8 (11.6%) Alaska Native high school students were considered obese in 2009.
- Obesity among Alaska Native high school students appears to have decreased 15.3% between 2003 and 2009.
- Alaska Native, Alaska Non-Native, and U.S. White students reported a similar prevalence of obesity in 2009.

**Figure 40. High School Students Who are Obese, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System

Note: Data are not available for 1995.

Data Table C-29 in Appendix



## Sexual Behavior

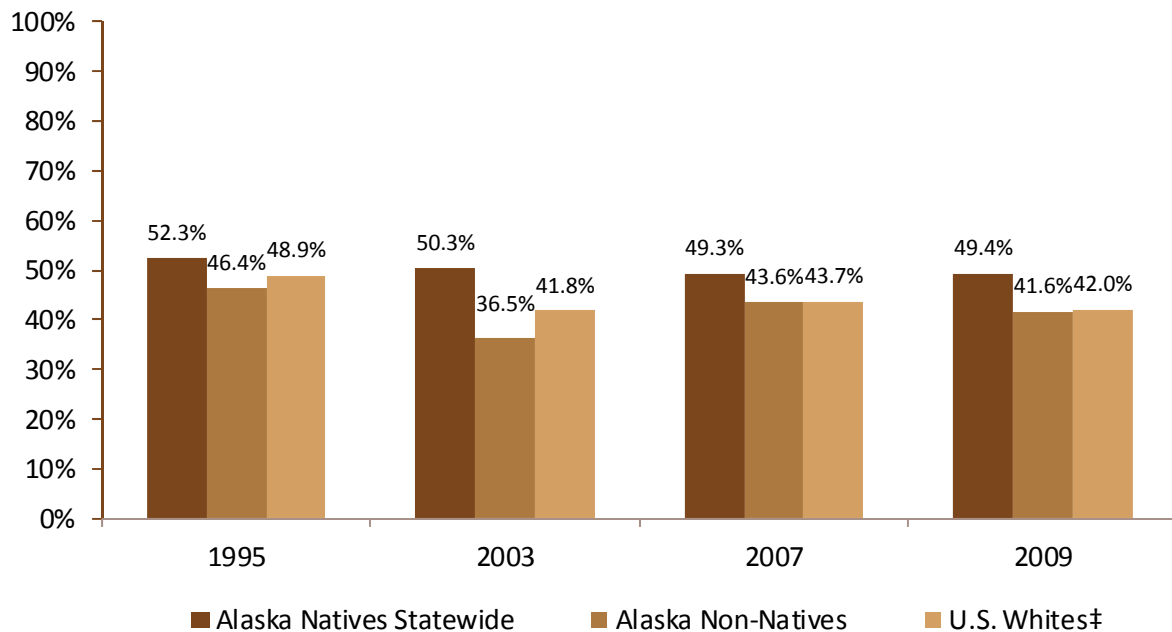
**Definition:** Sexual behavior of high school students, grades 9-12, includes those who have ever engaged in sexual intercourse.

### Summary

- 49.4% of Alaska Native high school students had ever engaged in sexual intercourse in 2009.
- Alaska Native high school students who had ever engaged in sexual intercourse remained unchanged (52.3% to 49.4%) between 1995 and 2009.
- In 2009, Alaska Native high school students reporting having ever engaged in sexual intercourse appeared to be similar to Alaska Non-Natives and U.S. Whites.

**Figure 41. High School Students Who Have Ever Engaged in Sexual Intercourse, 1995, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System  
Data Table C-30 in Appendix.



† Non Hispanic

## Sad or Hopeless Feelings

**Definition:** Among high school students in grades 9-12, **sad or hopeless feelings** includes those who have ever felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities during the past 12 months.

### Summary

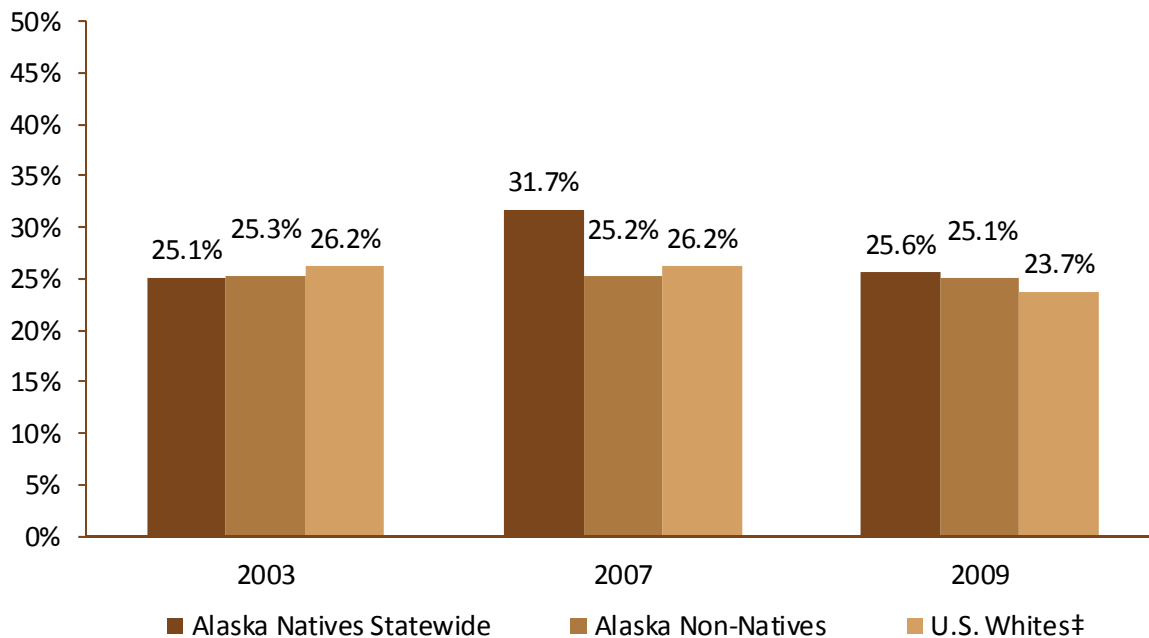
- 25.6% of Alaska Native high school students reported sad or hopeless feelings affecting their usual activities in 2009.
- The percentage of Alaska Native high school students reporting sad or hopeless feelings did not change between 2003 and 2009.
- Alaska Native, Alaska Non-Native, and U.S. White high school students reported a similar prevalence of sad or hopeless feelings affecting their usual activities in 2009.

**Figure 42. High School Students Reporting Sad or Hopeless Feelings That Caused Them to Stop Doing Some Usual Activities During the Past 12 Months, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System

Note: Data are not available for 1995.

Data Table C-31 in Appendix



† Non Hispanic

## Suicide Attempts

**Definition:** Among high school students in grades 9-12, a **suicide attempt** is when a person tries, unsuccessfully, to intentionally take their own life.

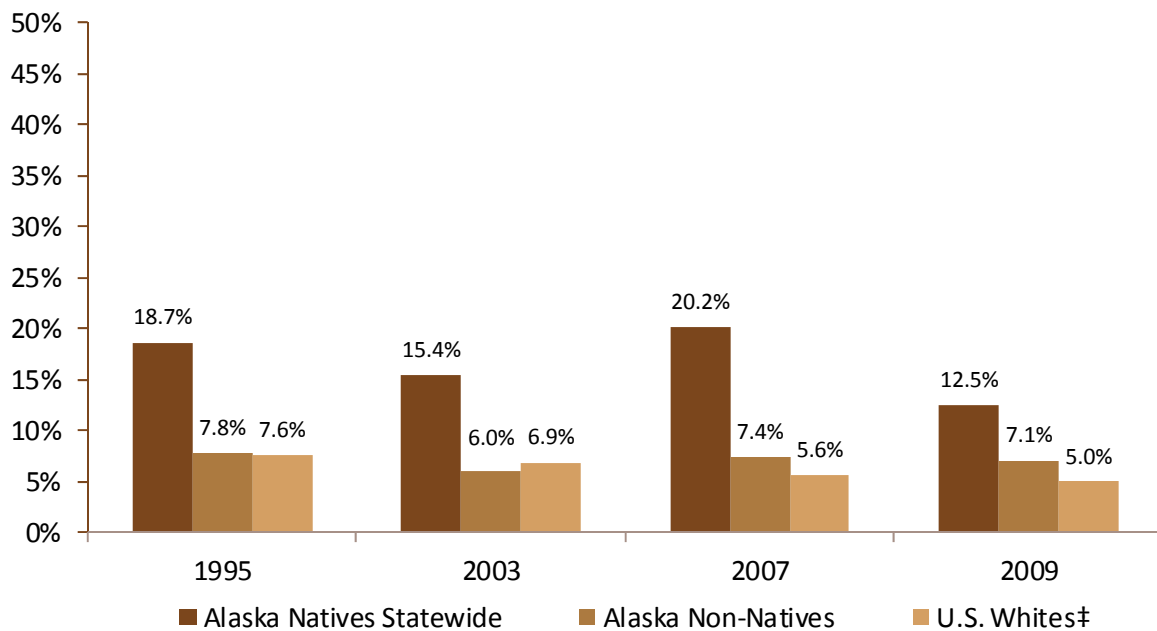
### Summary

- Alaska Native high school students having one or more suicide attempt(s) during the previous 12 months appeared to have decreased between 2003 (15.4%) and 2009 (12.5%).
- Alaska Native high school students had a significantly higher percent of suicide attempts than U.S. White high school students in 2003, 2007, and 2009 ( $p < 0.05$ ).

**Figure 43. High School Students Who Attempted Suicide One or More Times During the Past 12 Months, 1995, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System

Data Table C-32 in Appendix



† Non Hispanic

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# **Additional Health Topics**

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## Low Birth Weight

**Definition:** Low birth weight includes infants with a birth weight of less than 2,500 grams.

**Healthy People 2020, Goal MICH-8.1:** Reduce low birth weight to 7.8%.

### Summary

- 5.2% of Kenai Region Alaska Native infants were born with low birth weight during 2004-2008.
- A lower percent of low birth weight births occurred among Kenai Region Alaska Native people (5.2%) compared to U.S. Whites (7.2%) during 2004-2008.
- All groups achieved the Healthy People Goal of 7.8% for all time periods reported.

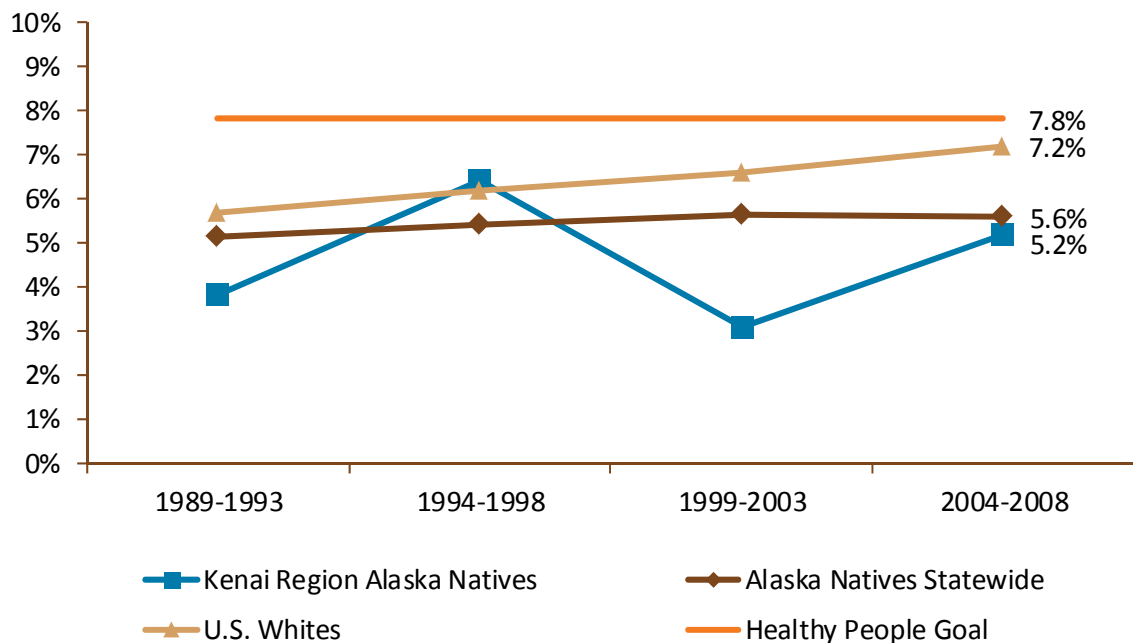
**Figure 44. Live Births with Low Birth Weight, 1989-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: National Center for Health Statistics. Health, United States, 2010: With Special Feature on Death and Dying. Hyattsville, MD. 2011.

Note: The U.S. data were available for: 1990, 1995, 2000, and 2005.

Data Table C-33 in Appendix C





## Fertility Rate

**Definition:** **Fertility Rate** is the total number of live births per 1,000 women aged 15 to 44 years.

### Summary

- The Kenai Region Alaska Native fertility rate per 1,000 females aged 15-44 years decreased 41.9% between 1984-1988 (114.8) and 2004-2008 (66.7).
- The Kenai Region Alaska Native fertility rate was 66.7 per 1,000 females during 2004-2008, similar to U.S. Whites.(66.3 per 1,000 females) and 38% lower than Alaska Natives Statewide (107.4 per 1,000 females).

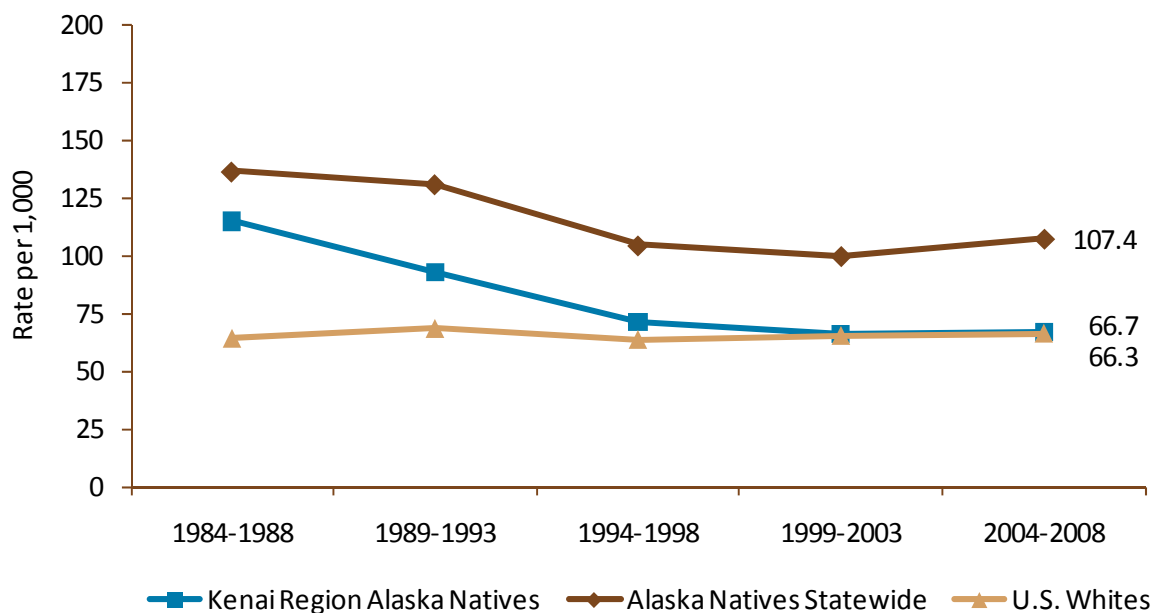
**Figure 45. Fertility Rate per 1,000 Females, Ages 15-44 Years, 1984-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: National Center for Health Statistics. Health, United States, 2009: With Special Feature on Medical Technology. Hyattsville, MD. 2009.

Note: The U.S. data were available for: 1985, 1990, 1995, 2000, and 2005.

Data Table C-34 in Appendix



## Teen Birth Rate

**Definition:** The **teen birth rate** is the number of births to girls 15-19 years of age per 1,000 females in this age group in the population per year.

### Summary

- The teen birth rate among Kenai Region Alaska Native teens decreased 68.1% between 1984-1998 and 2004-2008.
- The Kenai Region Alaska Native teen birth rate per 1,000 females aged 15-19 years (36.1) was similar to U.S. White teens (37.0) and about half that of Alaska Native teens statewide (79.3) during 2004-2008.

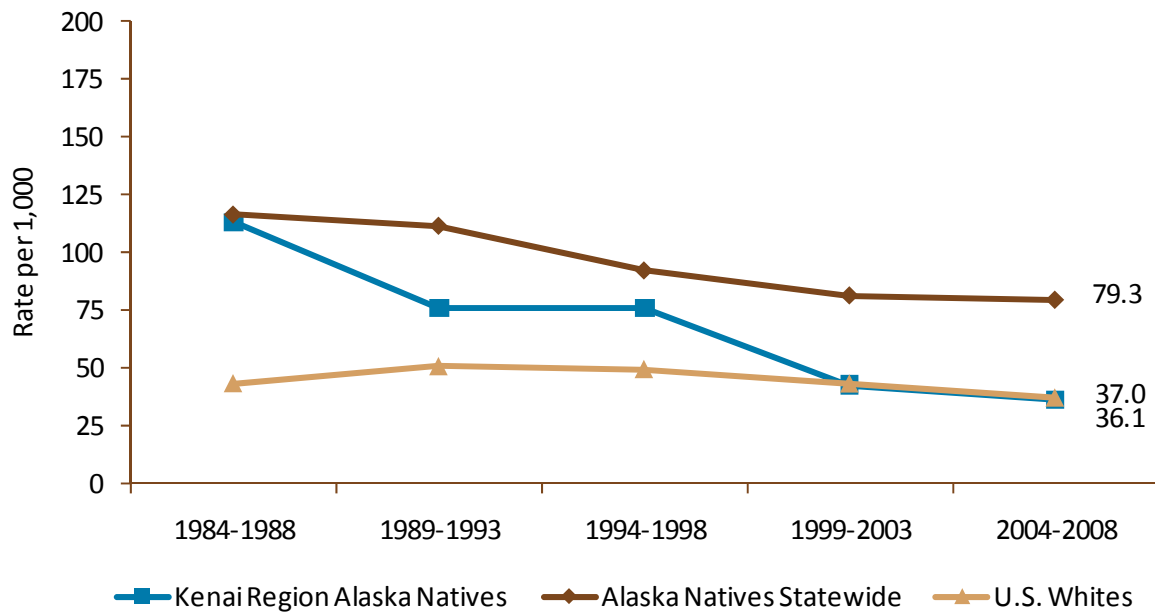
**Figure 46. Teen Birth Rate per 1,000 Females, Ages 15-19 Years, 1984-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: National Center for Health Statistics. Health, United States, 2009: With Special Feature on Medical Technology. Hyattsville, MD. 2009.

Note: The U.S. data were available for: 1985, 1990, 1995, 2000, and 2005.

Data Table C-35 in Appendix



## Breastfeeding - Initiation

**Definition: Breastfeeding initiation** indicates whether a mother initiated breastfeeding with her child.

**Healthy People 2020, Goal MICH-21.1:** Increase the percent of mothers who ever initiated breastfeeding to 81.9%.

### Summary

- 90.0% of Alaska Native mothers living in the Anchorage Service Unit, which includes the Kenai Region, initiated breastfeeding during 2004-2008. This exceeded the Healthy People Goal of 81.9%.
- Breastfeeding initiation was higher among Anchorage Service Unit Alaska Native mothers (90.0%) than the U.S. total population (74.0%) ( $p < 0.05$ ).

### Figure 47. Breastfeeding Initiation, 2004-2008

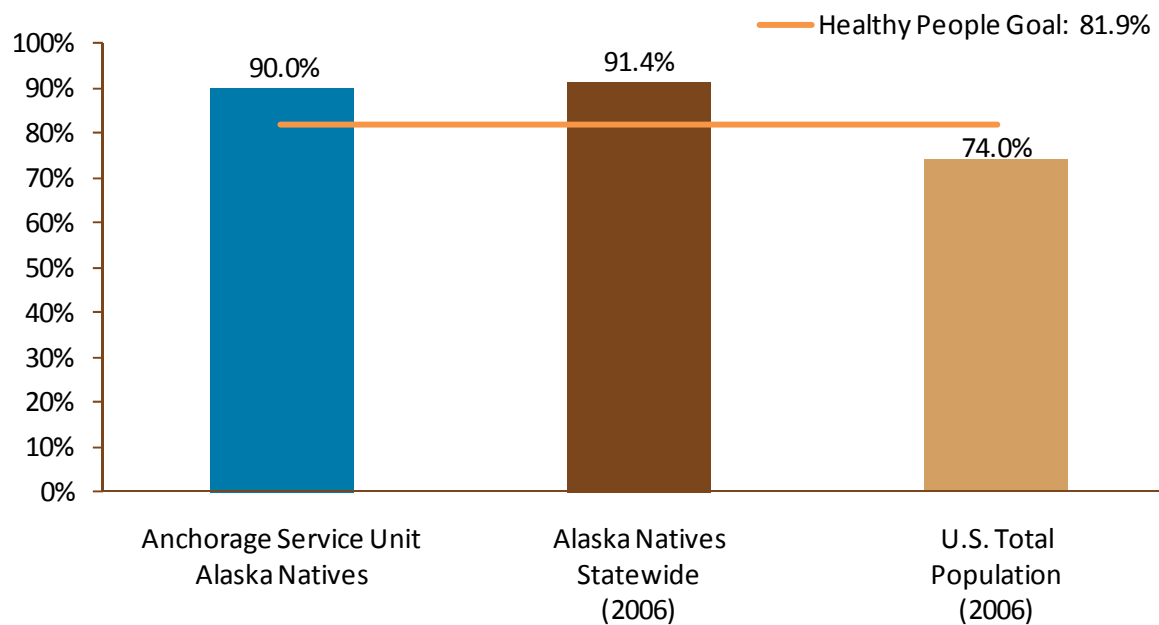
Alaska Data Source: Alaska Pregnancy Risk Assessment Monitoring System

U.S. Data Source: Breastfeeding Among U.S. Children Born 1999-2007, CDC National Immunization Survey.

[http://www.cdc.gov/breastfeeding/data/NIS\\_data/index.htm](http://www.cdc.gov/breastfeeding/data/NIS_data/index.htm)

Note: The U.S. data uses a slightly different definition for measuring breastfeeding. Breastfeeding initiation in the Pregnancy, Risk and Assessment Monitoring System roughly corresponds to the National Immunization Survey's breastfeeding ever data.

Data Table C-36 in Appendix



## Breastfeeding - 8 Weeks Postpartum

**Definition: Breastfeeding 8 Weeks Postpartum** indicates that a mother was still breastfeeding at eight weeks postpartum.

### Summary

- 64.3% of Alaska Native mothers living in the Anchorage Service Unit breastfed at eight weeks postpartum during 2004-2008.
- Alaska Native mothers living in the Anchorage Service Unit had similar eight week postpartum breastfeeding rates (64.3%) as Alaska Native mothers statewide (65.7%) and U.S. all races (62.5%).

### Figure 48. Breastfeeding 8 weeks Postpartum, 2004-2008

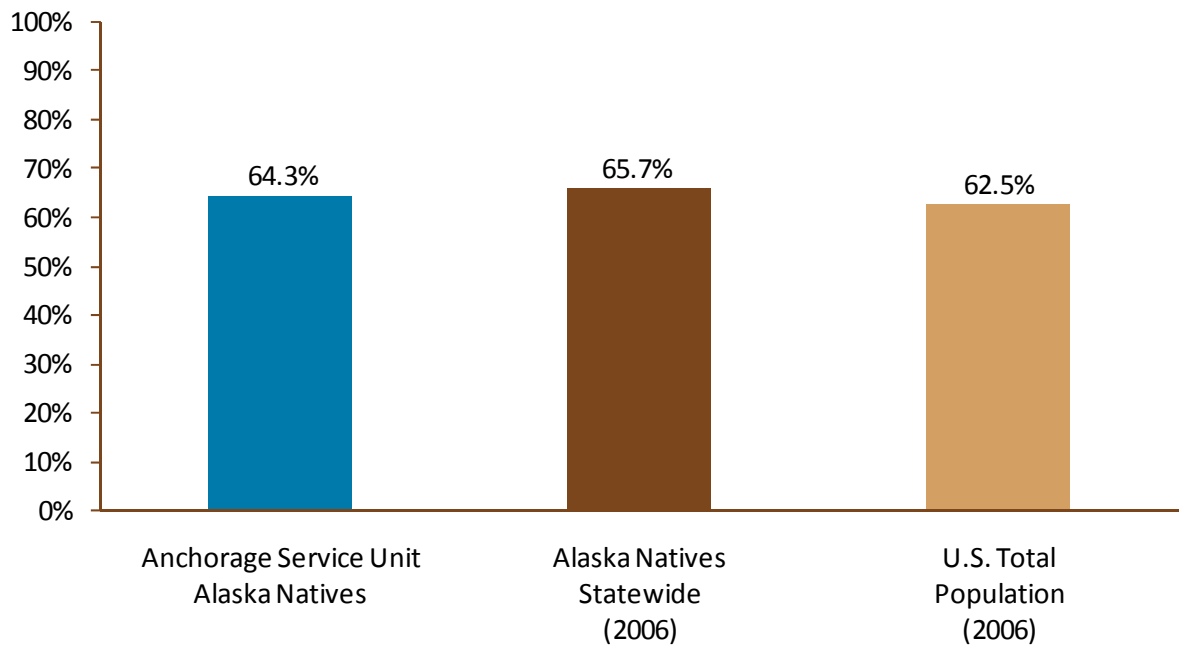
Alaska Data Source: Alaska Pregnancy Risk Assessment Monitoring System

U.S. Data Source: Breastfeeding Among U.S. Children Born 1999-2007, CDC National Immunization Survey.

[http://www.cdc.gov/breastfeeding/data/NIS\\_data/index.htm](http://www.cdc.gov/breastfeeding/data/NIS_data/index.htm)

Note: The U.S. data uses a slightly different definition for measuring breastfeeding. Breastfeeding at eight weeks postpartum in the Pregnancy, Risk and Assessment Monitoring System roughly corresponds to the National Immunization Survey's breastfeeding at two months.

Data Table C-37 in Appendix



## Childhood Witness - Intimate Partner Violence

**Definition: Childhood Witness** includes adults who report that, as a child, they saw or heard a parent or guardian being hit, slapped, punched, shoved, kicked, or otherwise physically hurt by their spouse or partner.

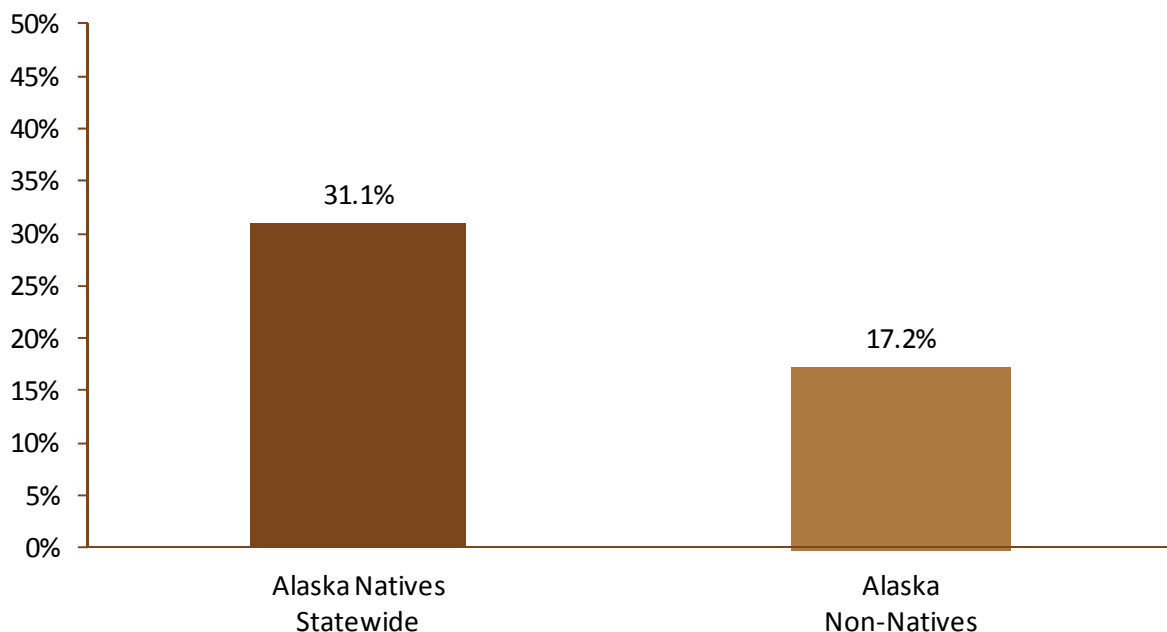
### Summary

- 31.1% of Alaska Native adults and 17.2% of Non-Native adults witnessed domestic violence as a child in 2009.
- Alaska Native adults (31.1%) witnessed domestic violence at a significantly higher rate (1.8 times) than Alaska Non-Native adults (17.2%) ( $p < 0.05$ ).

**Figure 49. Childhood Witness - Intimate Partner Violence, 18 Years and Older, 2009**

Data Source: Behavioral Risk Factor Surveillance System

Data Table C-38 in Appendix



## Sexually Transmitted Infections - Chlamydia

**Definition:** **Chlamydia** is a common sexually transmitted infection caused by the bacterium *Chlamydia trachomatis*.

### Summary

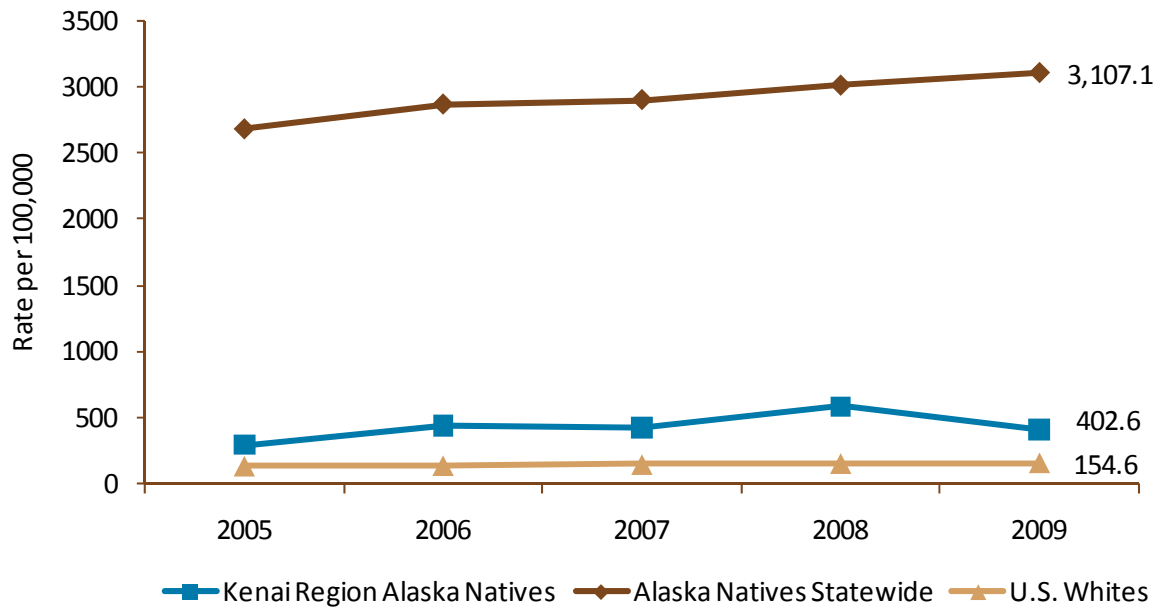
- The Kenai Region Chlamydia rate for Alaska Native people was 402.6 per 100,000 persons in 2009.
- The Kenai Region Chlamydia rate for Alaska Native people increased 38.6% between 2005 and 2009.
- The Kenai Region Alaska Native Chlamydia rate was nearly eight times less than the rate among Alaska Native people statewide in 2009.

**Figure 50. Age-Adjusted Chlamydia Rates per 100,000 population, 2005-2009**

Kenai Region Data Source: Instant Atlas - <http://www.epi.hss.state.ak.us/hivstd/std2010/atlas.html>

Alaska Statewide & U.S. Data Source: CDC Wonder. <http://www.cdc.gov/std/stats/>

Data Table C-39 in Appendix



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# **Preventive Services and Access to Health Care**

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## Cervical Cancer Screening

**Definition:** Cervical cancer screening includes females aged 18 or older who reported at least one Pap test within the last three years.

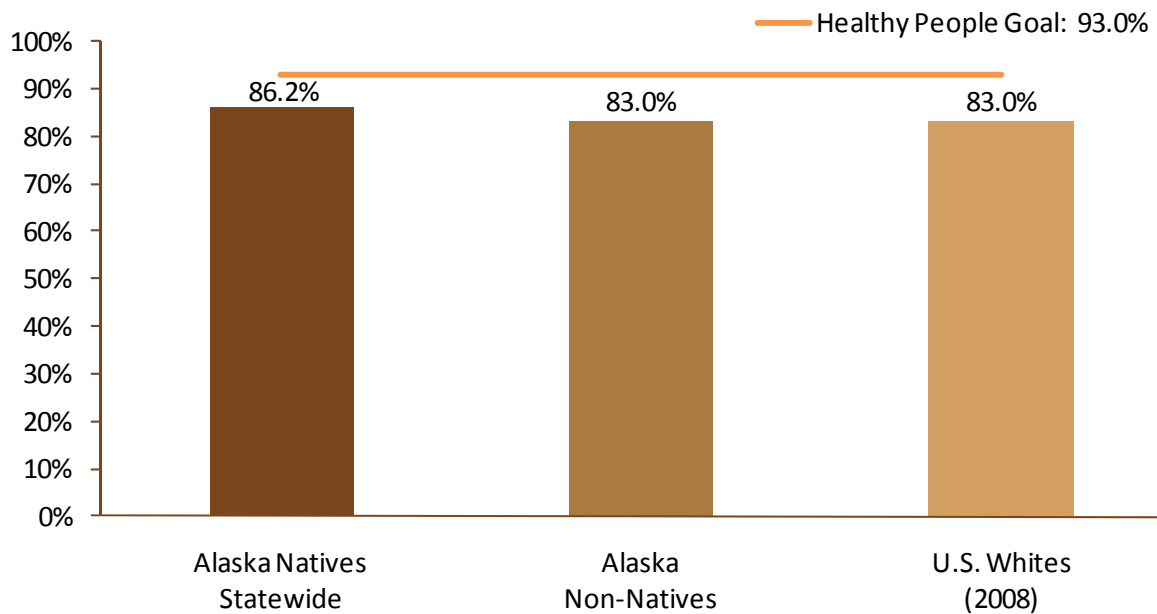
**Healthy People 2020, Goal C-15:** Increase the proportion of women aged 18 years or older who received a Pap test within the preceding three years to 93.0%.

### Summary

- 86.2% of Alaska Native women reported cervical cancer screening during the previous three years in 2006 and 2008.
- Alaska Native (86.2%), Alaska Non-Native (83.0%), and U.S. White (83.0%) women reported similar rates of cervical cancer screening.

**Figure 51. Pap Test within the Past Three Years, Women, 18 Years and Older, 2006 and 2008**

Data Source: Behavioral Risk Factor Surveillance System  
Data Table C-40 in Appendix





## Breast Cancer Screening

**Definition: Breast cancer screening** includes females aged 40 or older who reported a mammogram within the last two years.

**Healthy People 2020, Goal C-17:** Increase the proportion of women aged 40 years or older who have received a mammogram within the preceding two years to 81.1%.

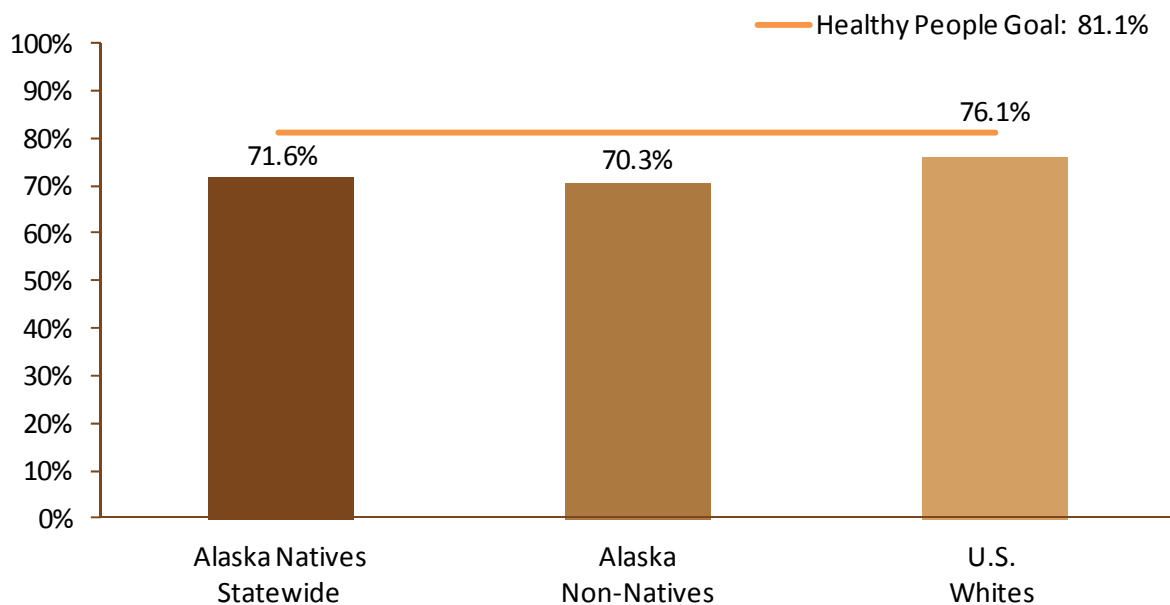
### Summary

- About seven out of ten Alaska Native women reported breast cancer screening during the previous two years in 2006 and 2008.
- Alaska Native (71.6%), Alaska Non-Native (70.3%), and U.S. White women (76.1%) did not meet the Healthy People Goal of 81.1% for having a breast cancer screening within the past two years.

**Figure 52. Mammogram in the Last Two Years, Women, 40 Years and Older, 2006 and 2008**

Data Source: Behavioral Risk Factor Surveillance System

Data Table C-41 in Appendix



## Colorectal Cancer Screening

**Definition:** Colorectal cancer screening includes adults aged 50 or older who report ever having a flexible sigmoidoscopy or colonoscopy.

**Healthy People 2020, Goal C-16:** Increase the proportion of adults aged 50 years or older who receive a colorectal cancer screening based on the most recent guidelines (fecal occult blood test in the previous year, flexible sigmoidoscopy in the previous five years, or colonoscopy in the previous 10 years for average risk adults) to 70.5%.

Note: Data presented are flexible sigmoidoscopy or colonoscopy ever.

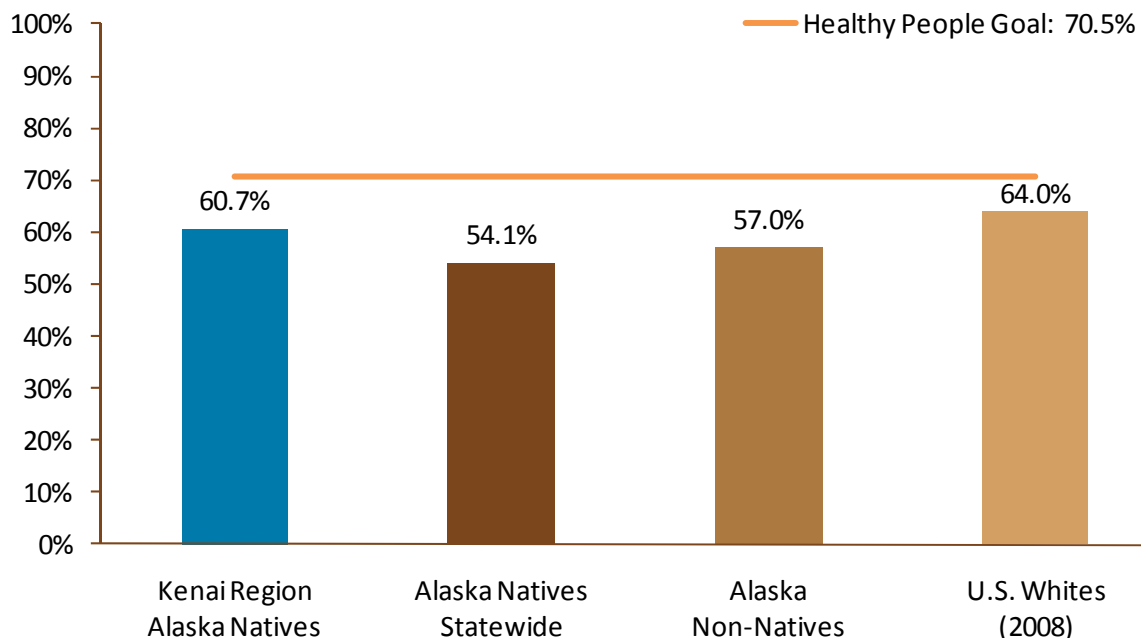
### Summary

- 60.7% of eligible Kenai Region Alaska Native people reported a colorectal cancer screening ever in 2006 and 2008. This appeared to be lower than U.S. Whites (64.0%), but higher than Alaska Native people statewide (54.1%).
- All groups have not achieved the Healthy People Goal of 70.5%.

**Figure 53. Flexible Sigmoidoscopy or Colonoscopy Ever, Adults, 50 Years and Older, 2006 and 2008**

Data Source: Behavioral Risk Factor Surveillance System

Data Table C-42 in Appendix



## Adequate Prenatal Care

**Definition:** The Kessner Index of Care is a method to evaluate **adequacy of prenatal care**. It is based on the month of the pregnancy when the prenatal care started, the number of visits, and the gestation length. This index adjusts for the fact that women with short gestations have less time in which to make prenatal care visits. The Kessner Index assigns three levels of care - adequate, intermediate, and inadequate. **Adequate prenatal care** is defined as care that begins in the first trimester and includes nine visits throughout the pregnancy. **Intermediate prenatal care** is defined as care that begins during the first or second trimester and includes five to eight visits. **Inadequate prenatal care** is defined as beginning in the third trimester and includes no more than four visits.

**Healthy People 2020, Goal MICH-10.2:** Increase the proportion of women who receive adequate prenatal care to 77.6%.

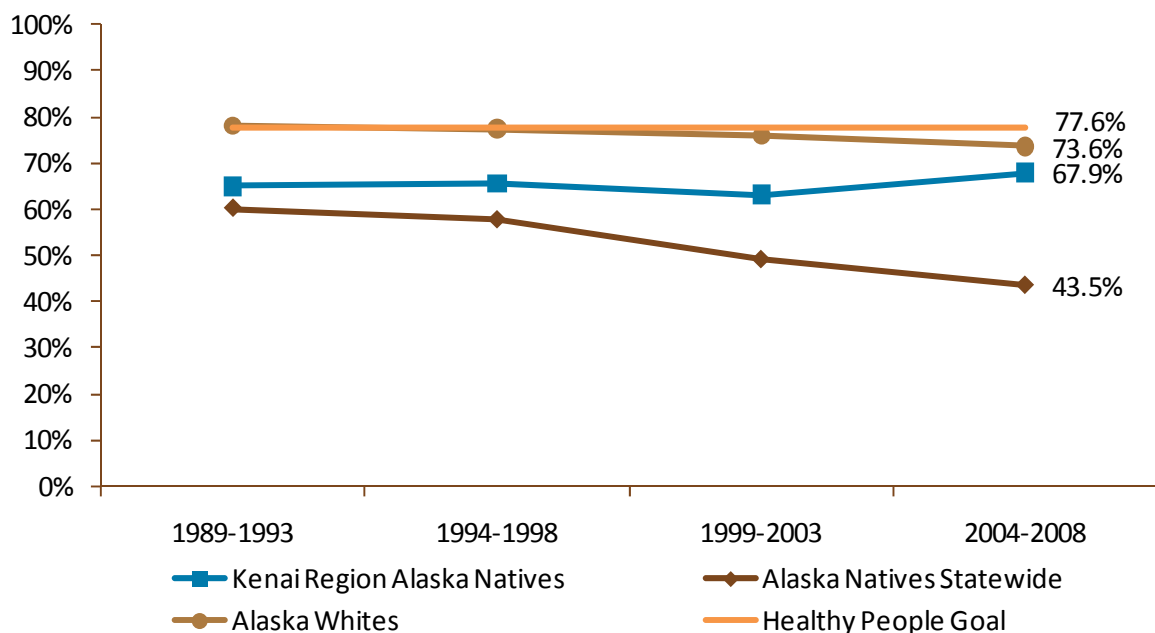
### Summary

- 67.9% of Kenai Region Alaska Native pregnant women received adequate prenatal care based on birth certificate documentation during 2004-2008.
- The percentage of pregnant women receiving adequate prenatal care increased slightly for Kenai Region Alaska Native people (4.5%) between 1989-1993 and 2004-2008.

**Figure 54. Adequate Prenatal Care, Pregnant Women, 1989-2008**

Data Source: Alaska Bureau of Vital Statistics

Data Table C-43 in Appendix



## Dental Visits

**Definition:** A **dental visit** is counted if a person has visited the dentist or dental clinic within the past year for any reason.

**Healthy People 2020, Goal OH-7:** Increase the proportion of children, adolescents, and adults who used the oral health care system in the past year to 49.0%.

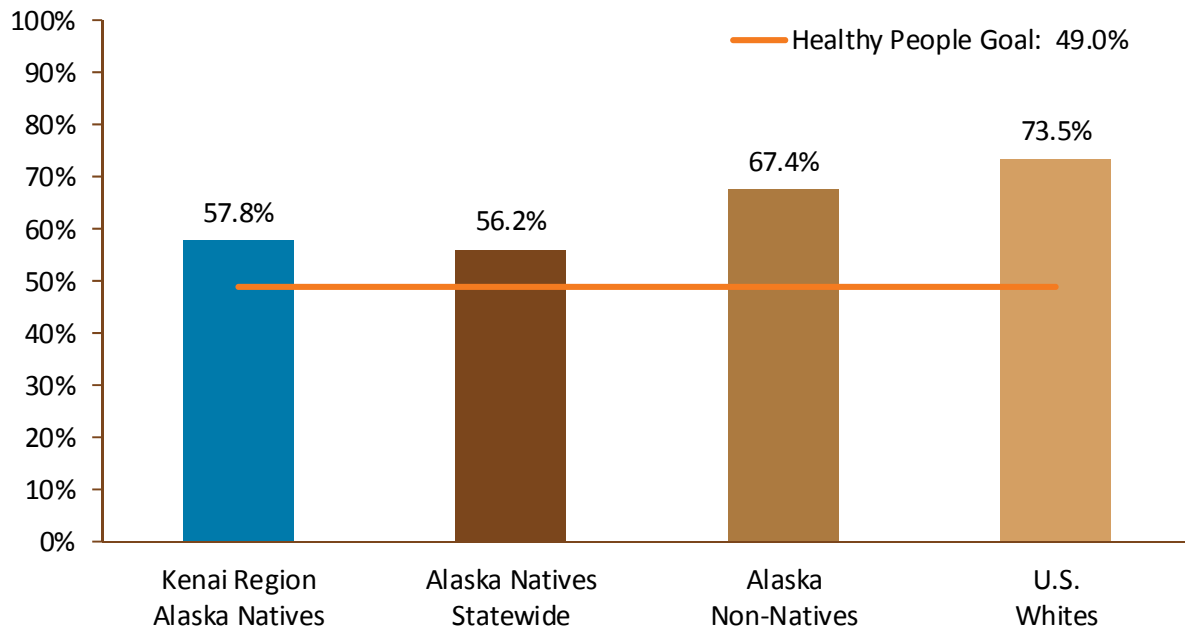
Note: Data presented are for adults aged 18 and older.

### Summary

- 57.8% of Kenai Region Alaska Native adults reported having a dental visit within the last year in 2008.
- The percentage of Kenai Region Alaska Native adults (57.8%) reporting a dental visit did not differ significantly from Alaska Natives statewide (56.2%) or Alaska Non-Natives (67.4%).

**Figure 55. Dentist or Dental Clinic Visit Within the Past Year for Any Reason, 18 Years and Older, 2008**

Data Source: Behavioral Risk Factor Surveillance System  
Data Table C-44 in Appendix



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# Appendixes

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## Appendix A. Methods and Description of Data Sources

### General Notes:

#### Statistical Significance

Throughout the document, differences are considered statistically significant at the 95% confidence level ( $p < 0.05$ ). Differences between rates and percentages are considered significantly different if the 95% confidence intervals did not overlap. Rate ratios are considered statistically significant if the 95% confidence interval of the rate ratio did not contain one.

#### Rounding

Calculations for percentages are rounded to one decimal place, where the data source allowed, therefore total percentages may not add up to 100.0%.

#### Alaska Area Diabetes Registry

The Alaska Area Diabetes Registry provided the diabetes data aggregated by the former Indian Health Service Units. The Alaska Area Diabetes Registry is a clinical and epidemiologic resource for tribal health care facilities throughout Alaska. The registry tracks patients diagnosed with diabetes and ensures that their care meets national standards. Alaska Natives are classified as Alaska Native and/or American Indian persons who visited Indian Health Services or tribal health facility in the past three years. More information about the data may be found at <http://www.anthc.org/anmc/services/diabetes/epidemiology/>.

#### Alaska Area Indian Health Service

The Alaska Area Indian Health Service works in conjunction with Alaska Native Tribes and Tribal Health Organizations to provide comprehensive health services to approximately 139,107 Alaska Native people. The Alaska Area Indian Health Service's Division of Planning and Evaluation and Health Statistics provided the user population data. Alaska Natives are classified as Alaska Native and/or American Indian persons who visited Indian Health Services or tribal health facility in the past three years. More information about the Alaska Area Indian Health Service may be found at <http://www.ihs.gov/facilitieservices/areaoffices/alaska/index.asp>.

#### Alaska Bureau of Vital Statistics

The State of Alaska Bureau of Vital Statistics provided the birth and death certificate data. The birth and death data contains in state events only. The Alaska Native Epidemiology Center analyzed the data.

The mortality data for Kenai Region Alaska Native people and Alaska Native people statewide are from 1984 to 2008. Rates are age-adjusted to the U.S. standard population. "Bridged" population estimates from the National Center for Health Statistics are used as the denominator to calculate the mortality rates. Bridged estimates are necessary to adjust for the option in the 2000 Census which allowed for the selection of multiple races, rather than one race. The rates are calculated for

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**Appendix A. Methods and Description of Data Sources (continued)**

those causes that had at least five deaths during the designated time period. Deaths were assigned to the service region in which the person was resident, regardless of place of occurrence in Alaska. This report does not include deaths of residents who died outside of Alaska. Five years of the population data are summed for each time period to calculate the rates. The number of deaths for each five-year age group (0-4 up to 85+ years) are divided by the total population for that age group during that five-year interval. Those crude rates are multiplied by the standard population rate for that age group and then summed to get the overall age-adjusted rates. The low birthweight, adequate prenatal care, and smoking and alcohol consumption during pregnancy data are based upon data reported on birth certificates to the State of Alaska. Alaska Natives are classified as those having any mention of Alaska Native and/or American Indian in their records. More information about the Alaska Bureau of Vital Statistics may be obtained at <http://www.hss.state.ak.us/DPH/bvs/data/default.htm>.

**Alaska Department of Labor and Workforce Development**

The Alaska Department of Labor and Workforce Development produces statistics about population, wages, employment, industry information, occupational information, and cost of living.

The Alaska Department of Labor and Workforce Development produced the population estimates presented in this report. These population estimates used the 2000 decennial census data as a baseline. The Alaska Department of Labor and Workforce Development adjusts the numbers yearly based upon administrative records including birth certificates, death certificates, income tax returns, Permanent Fund applications, school enrollment and driver's licenses. Alaska Natives are classified as those reporting Alaska Native alone or in combination with one or more race. More information about the Alaska Department of Labor and Workforce Development's population statistics may be found at <http://labor.alaska.gov/>.

The Alaska Department of Labor and Workforce Development calculates the unemployment statistics presented in this document. More information about the unemployment statistics may be found at: <http://labor.alaska.gov>.

**Alaska Native Tribal Health Consortium Alaska Native Tumor Registry**

The Alaska Native Tumor Registry provided the leading cancers data. The Alaska Native Tumor Registry is a statewide population-based registry of all cancers diagnosed among Alaska Native people. The registry includes Alaska Native patients living in Alaska at the time of diagnosis who met eligibility requirements for Indian Health Service benefits. It is part of the National Cancer Institute's Surveillance Epidemiology and End Results Program.

**Alaska Trauma Registry**

The Alaska Trauma Registry collects data on the most seriously injured patients in Alaska and the treatment they received. The Alaska Trauma Registry collects data from all 24 of Alaska's acute care

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## Appendix A. Methods and Description of Data Sources (continued)

hospitals. The criteria for inclusion in the registry are patients with injuries who are either admitted to an Alaska hospital, held for observation, transferred to another acute care hospital, declared dead in the emergency department, and for whom contact with the health care system occurred within 30 days of the injury.

The Alaska Statute 18.23.010-070 protects the confidentiality of the data. All trauma registry personnel and those requesting trauma registry data are required to sign a confidentiality statement. The Alaska Native Epidemiology Center in collaboration with the Alaska Native Tribal Health Consortium Injury Prevention Program analyzed the data presented in this document. Alaska Natives are classified in the Alaska Trauma Registry as those having any mention of Alaska Native and/or American Indian in their records.

More information about the Alaska Trauma Registry may be found at: [http://www.hss.state.ak.us/dph/ipems/injury\\_prevention/trauma.htm](http://www.hss.state.ak.us/dph/ipems/injury_prevention/trauma.htm) and more information about the Injury Prevention Program may be found at <http://www.anthc.org/chs/wp/injprev/>.

### **Behavioral Risk Factor Surveillance System**

The Behavioral Risk Factor Surveillance System is an on-going national telephone-based survey supported by the Centers for Disease Control and Prevention. Alaska began participating in the Behavioral Risk Factor Surveillance System in 1990. The survey includes questions about health status and perceptions, preventive health practices, and risky behaviors that influence the prevalence of chronic disease, injury and preventable infectious diseases.

The Behavioral Risk Factor Surveillance System is a standardized telephone interview conducted with a computer-assisted script. There is a fixed core of questions asked by all states every year and a rotating core asked by all states in alternating years. In addition, there are a number of optional modules that states may or may not choose to use and states may add questions of their own. The entire interview takes less than 30 minutes to complete. Interviews are conducted during every month of the year. The State of Alaska interviews a minimum of 2,500 Alaskans each year. This includes 500 individuals from each of five BRFSS regions.

Respondents are adults 18 years and older living in households. Individuals living in military barracks, dormitories, nursing homes, and other group-living situations are excluded. Apart from that exclusion, each state's sample is designed to be representative of the state's population. In order to achieve a representative sample, the State of Alaska "oversamples" rural regions. Oversampling of rural regions helps to get a more representative sample of Alaska Native people, since there are more Alaska Native people living in rural Alaska .

Respondents are contacted by telephone using a selection process based on area codes and prefixes that are highly likely to be associated with residential listings.



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## Appendix A. Methods and Description of Data Sources (continued)

The analyses of Behavioral Risk Factor Surveillance System accounts for the fact that not every adult resident of the state has an equal chance of being contacted for an interview. The analyses assign a probability to each respondent which reflects their likelihood of being contacted. In addition, each person interviewed is treated as a representative for other, similar persons. The probability factor and assumption of representation are used to calculate a statistical weighting factor to be used in analyses to draw inferences about the overall population. Alaska Natives are classified as those having any mention of Alaska Native and/or American Indian in their survey.

The State of Alaska Section of Chronic Disease Prevention and Health Promotion Health Survey Lab provided the raw data presented in this report. The Alaska Native Epidemiology Center staff analyzed the regional and statewide data. Within the regional and statewide data, multiple years are combined to achieve a meaningful sample size where possible. The U.S. results are obtained from the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System interactive tool located at <http://apps.nccd.cdc.gov/brfss>.

Readers should use these estimates with caution since the number of respondents who are Alaska Native people from each region is relatively small. In addition, not all Alaskans, especially those in rural regions have land line telephone service which leads to a lower probably of representative samples from the rural regions. Differences between age groups, gender, and time cannot be determined to be statistically significant due to a small sample unless noted on the indicator page. Behavioral Risk Factor Surveillance System data were not age-adjusted to account for the different age distributions between the comparison populations in this document. Since the Alaska Native population is younger than the general Alaska and U.S. populations, comparisons between these populations should be interpreted with caution.

### Healthy People 2020

The Healthy People 2020 measures reported in this document may be found at <http://www.healthypeople.gov/2020/default.aspx>

### National Patient Information Reporting System - Indian Health Service National Data Warehouse

The Indian Health Service's National Patient Information Reporting System and the National Data Warehouse aggregate the Resource and Patient Management System and other systems data in order to track clinical practice patterns and episodes of care, provide measures of quality of care and clinical outcomes, perform epidemiologic studies, report on patient demographics and health care utilization patterns and provide data from which health care costs can be estimated.

The *Leading Causes of Outpatient Visits* are calculated by the Alaska Native Epidemiology Center using the National Patient Information Reporting System data. The data are calculated based on the primary diagnosis and categorized using the Agency for Healthcare Research and Quality's Clinical Classification Software (CCS). This software groups the outpatient ICD-9 codes into clinically

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**Appendix A. Methods and Description of Data Sources (continued)**

meaningful categories that have the potential for comparisons across different health systems. In addition, the CCS categories for pregnancy, childbirth, and newborn infants were grouped further into the following two categories: infant and maternal discharges. Table A-1 displays the detailed definition for the Infant and Maternal categories because these two categories combine multiple CCS Categories. More information about the Agency for Healthcare Research and Quality's Clinical Classification Software may be found at <http://www.hcup-us.ahrq.gov/toolssoftware/ccs/CCSUsersGuide.pdf>.

Alaska Natives are classified as Alaska Native and/or American Indian persons who visited Indian Health Services or a tribal health facility that reports data to the Indian Health Service data system. More information about the National Patient Information Reporting System and the National Data Warehouse may be found at <http://www.ihs.gov/CIO/DataQuality/warehouse/>.

## Appendix A. Methods and Description of Data Sources (continued)

**Table A-1. Infant and Maternal Discharge Category Definitions - Clinical Classification Software (CCS) Diagnosis Codes**

CCS	Diagnosis Description
<b>Infant Discharges</b>	
218	Liveborn infant
219	Short gestation, low birth weight, and fetal growth retardation
220	Intrauterine hypoxia and birth asphyxia
221	Respiratory distress syndrome
222	Hemolytic jaundice and perinatal jaundice
223	Birth trauma
224	Other perinatal conditions
<b>Maternal Discharges</b>	
176	Contraceptive and procreative management
177	Spontaneous abortion
178	Induced abortion
179	Post abortion complications
180	Ectopic pregnancy
181	Other complications of pregnancy
182	Hemorrhage during pregnancy, abruptio placenta, placenta previa
183	Hypertension complications pregnancy; childbirth and the puerperium
184	Early or threatened labor
185	Prolonged pregnancy
186	Diabetes or abnormal glucose tolerance complication pregnancy; childbirth; or the puerperium
187	Malposition; malpresentation
188	Fetopelvic disproportion; obstruction
189	Previous C-section
190	Fetal distress and abnormal forces of labor
191	Polyhydramnios and other problems of amniotic cavity
192	Umbilical cord complication
193	OB-related trauma to perineum and vulva
194	Forceps delivery
195	Other complications of birth; puerperium affecting management of mother
196	Normal pregnancy and/or delivery

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**Appendix A. Methods and Description of Data Sources (continued)****Pregnancy Risk Assessment Monitoring System**

The Alaska Pregnancy Risk Assessment Monitoring System (PRAMS) is a mail survey of mothers of newborn infants developed by the Centers for Disease Control and Prevention Division of Reproductive Health to collect information on the health risk behaviors and circumstances of pregnant and postpartum women. Phone interviews are attempted for women who do not respond by mail. It was initiated in the state of Alaska in 1990 by the State of Alaska Division of Public Health, Section of Maternal, Child, and Family Health. The PRAMS has a core set of questions that each participating state asks, and a limited number of state-specific questions. Topics covered include family planning; prenatal care; use of tobacco, alcohol, and drugs; participation in the Women, Infants, and Children's (WIC) nutrition program and Medicaid; payment for care; family income; breast-feeding; physical abuse; and life stressors such as illness, job loss, debt, divorce; plus other topics.

To be included in the Alaska PRAMS survey, women must be Alaska residents who have delivered a live birth in or out of state. The surveys are administered two to six months after the date of birth. Mothers of infants that die are included in the survey and grief letters are mailed out to the mothers in these situations. If births are multiple, only one infant is randomly selected. Pending adoptions are also included as long as the biological mother is included on the birth record.

Since PRAMS data are self reported potential under reporting bias are possible. Data are not routinely collected on abortions or still births thus data do not represent all women who become pregnant during a given time period, only those who delivered a live, viable infant. Recall bias may be possible since women are asked to remember events or behaviors up to 12 months before they got pregnant. Alaska's survey response rates are favorable however, they may affect the potential for bias in the data. Reliability of prevalence estimates depends on the number of respondents in a category. Interpreting and reporting weighted numbers that are based on small, unweighted numbers of respondents can be misleading. The degree of precision increases if the sample size is larger and decreases if the sample size is smaller.

More information about the Alaska Pregnancy Risk Assessment Monitoring System may be found at <http://www.epi.hss.state.ak.us/mchept/PRAMS/default.stm>

**Surveillance Epidemiology and End Results Program**

The Surveillance Epidemiology and End Results Program (SEER) is part of the National Cancer Institute. The SEER Program collects information on the incidence, survival, and prevalence of persons with cancer. In addition, the SEER Program collects standard population data, U.S. mortality data, and U.S. population data. The non-cancer death data presented in this report are analyzed by Alaska Native Epidemiology Center staff using the SEER database with SEER\*Stat (a computer program provided by the SEER Program). Table A-2 displays the ICD-9 and ICD-10 codes for each cause of death. More information about SEER may be found at <http://seer.cancer.gov/index.html>.

## Appendix A. Methods and Description of Data Sources (continued)

**Table A-2. SEER Cause of Death Recode**

Data source: Surveillance, Epidemiology, and End Results Program

Causes of Death	ICD-9 (1979-1998)	ICD-10 (1999+)	Recode
All Malignant Cancers	140-208, 238.6	C00-C97	--
Diseases of Heart	390-398, 402, 404, 410-429	I00-I09, I11, I13, I20-I51	50060
Cerebrovascular Disease	430-438	I60-I69	50080

### State of Alaska Epidemiology - HIV/STD Program

The HIV/STD Program addresses public health issues and activities with the goal of preventing sexually transmitted diseases and HIV infection and their impact on health in Alaska. The data presented in this report are provided by the State of Alaska Epidemiology - HIV/STD Program. Alaska Natives are classified as those having any mention of Alaska Native and/or American Indian in their records. More information may be found at <http://www.epi.hss.state.ak.us/hivstd/default.stm>.

### U.S. Census

The U.S. Census and the American Community Survey has provided data about the U.S. population. The data used in this report are obtained from American Factfinder, an on-line tool from the U.S. Census. More information about the U.S. Census and American Community Survey may be found at <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

### Youth Risk Behavior Surveillance System

The Youth Risk Behavior Surveillance System was established in 1988 by the Centers for Disease Control and Prevention, and first implemented in Alaska in 1995. The Youth Risk Behavior Survey monitors the prevalence of behaviors that put Alaskan youth at risk for the most significant health and social problems, in order to assist in prevention and intervention planning and evaluation. This is a school-based survey of high school students administered in cooperation with the Department of Education and Early Development and Department of Health and Social Services.

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## Appendix A. Methods and Description of Data Sources (continued)

This anonymous survey examines a minimum of six categories of adolescent behavior:

- Behaviors that result in unintentional and intentional injuries
- Tobacco use
- Alcohol and other drug use
- Sexual behaviors that can result in HIV infection, other sexually transmitted diseases and unintended pregnancies
- Dietary behaviors
- Physical activity

The Youth Risk Behavior Surveillance System has been administered in Alaska seven times: 1995, 1999 (excluding Anchorage), 2001, 2003, 2005, 2007, and 2009. Weighted (representative) data were collected in 1995, 1999, 2003, 2007, and 2009 resulting in published reports statewide. Data for the years 1995, 2003, 2007, and 2009 were included in this report.

The Alaska data presented in this report were provided to the Alaska Native Epidemiology Center by the State of Alaska's Youth Risk Behavior Surveillance System program. Alaska Natives are classified as those having any mention of Alaska Native and/or American Indian in their survey. More information about the state-level data may be found at:  
<http://www.hss.state.ak.us/dph/chronic/school/YRBS.htm>.

The U.S. White data were obtained from the *Youth Online: High School YRBS* data system located at: <http://apps.nccd.cdc.gov/youthonline/App/Default.aspx>.

YRBS data can only be generalized to the population that is defined in the sample: public school students in grades 9-12. Students who were enrolled in English as a second language classes, special education classes, correspondence schools, group home schools, and correctional schools are not represented. Also, youth who dropped out of school are not included. YRBS is based on self-report of behaviors, so bias may exist. Finally, the YRBS survey answers the what, where, and when about self reported behaviors, but cannot answer the why and how of the behaviors.

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**Appendix B. Communities****Kenai Region**

Anchor Point	Lowell Point
Bear Creek	Miller Landing
Beluga	Moose Pass
Clam Gulch	Nanwalek
Cohoe	Nikiski
Cooper Landing	Nikolaevsk
Crown Point	Ninilchik
Diamond Ridge	Port Graham
Fox River	Ridgeway
Fritz Creek	Salamatof
Funny River	Seldovia
Halibut Cove	Seldovia Village
Happy Valley	Seward
Homer	Silvertip
Hope	Soldotna
Kachemak	Sterling
Kalifornsky	Sunrise
Kasilof	Tyonek
Kenai	

## Appendix C. Data Tables

**Table C-1. User Population by Sex and Age Group, Alaska Natives, Kenai Region, 2010**

Data Source: National Patient Information Reporting System, Indian Health Service National Data Warehouse

Note: Age is determined from the end date of fiscal year 2010

Age (years)	Male		Female		Total	
	n	%	n	%	n	%
0-4	238	8.8%	232	7.6%	470	8.2%
5-9	246	9.1%	276	9.1%	522	9.1%
10-14	260	9.6%	253	8.3%	513	8.9%
15-19	297	11.0%	278	9.1%	575	10.0%
20-24	245	9.0%	284	9.3%	529	9.2%
25-34	373	13.8%	389	12.8%	762	13.2%
35-44	309	11.4%	363	11.9%	672	11.7%
45-54	315	11.6%	392	12.9%	707	12.3%
55-64	256	9.4%	332	10.9%	588	10.2%
65+	173	6.4%	241	7.9%	414	7.2%
<b>Total</b>	<b>2,712</b>	<b>100.0%</b>	<b>3,040</b>	<b>100.0%</b>	<b>5,752</b>	<b>100.0%</b>

**Table C-2. Population Estimates by Sex and Age Group, Alaska Natives, Kenai Region, 2009**

Data Source: Alaska Department of Labor and Workforce Development

Age (years)	Male		Female		Total	
	n	%	n	%	n	%
0-4	240	8.5%	249	9.5%	489	9.0%
5-9	224	7.9%	186	7.1%	410	7.5%
10-14	192	6.8%	176	6.7%	368	6.8%
15-19	237	8.4%	222	8.5%	459	8.4%
20-24	347	12.3%	246	9.4%	593	10.9%
25-34	416	14.7%	327	12.5%	743	13.7%
35-44	390	13.8%	317	12.1%	707	13.0%
45-54	366	13.0%	423	16.2%	789	14.5%
55-64	246	8.7%	260	10.0%	506	9.3%
65+	163	5.8%	207	7.9%	370	6.8%
<b>Total</b>	<b>2,821</b>	<b>100.0%</b>	<b>2,613</b>	<b>100.0%</b>	<b>5,434</b>	<b>100.0%</b>



## Appendix C. Data Tables

**Table C -3. Highest Educational Attainment, 25 Years and Older, 2005-2009**

Data Source: U.S. Census Bureau, American Community Survey - 5-Year Estimates

	Kenai Region		Alaska Natives		Alaska Natives		U.S. Whites	
	Alaska Natives		Statewide					
	n	%	n	%	n	%	n	%
Less than high school	354	17.9%	10,755	21.5%	19,960,118	13.1%		
High school diploma, GED or alternative	972	49.2%	22,183	44.4%	45,253,222	29.6%		
Some college or associate's degree	566	28.6%	14,099	28.2%	43,152,529	28.3%		
Bachelor's degree or higher	84	4.3%	2,914	5.8%	44,345,249	29.0%		
<b>Total</b>	<b>1,976</b>	<b>100.0%</b>	<b>49,951</b>	<b>100.0%</b>	<b>152,711,118</b>	<b>100.0%</b>		

**Table C-4. Unemployment, Kenai Peninsula Borough, Alaska and U.S. Total Population, 2000-2010**

Data Source: Alaska Department of Labor and Workforce Development

	Kenai Region		Alaska		United States	
	Annual Average	%	Annual Average	%	Annual Average	%
2010	2,728	10.0%	28,928	8.0%	N/A	9.6%
2009	2,649	9.9%	27,932	7.8%	N/A	9.3%
2008	2,084	7.9%	23,059	6.5%	N/A	5.8%
2007	1,974	7.7%	21,416	6.1%	N/A	4.6%
2006	2,058	8.1%	22,810	6.5%	N/A	4.6%
2005	2,213	8.8%	23,715	6.9%	N/A	5.1%
2004	2,429	9.5%	25,106	7.4%	N/A	5.5%
2003	2,547	10.0%	25,787	7.7%	N/A	6.0%
2002	2,333	9.4%	23,273	7.1%	N/A	5.8%
2001	1,933	7.9%	19,790	6.2%	N/A	4.7%
2000	1,963	8.0%	19,678	6.2%	N/A	4.0%

## Appendix C. Data Tables

**Table C-5. Estimated Residents below the Poverty Level, All Ages, 2005-2009**

Data Source: U.S. Census Bureau, American Community Survey - 5-Year Estimates

	<b>n</b>	<b>Total Population</b>	<b>%</b>
Kenai Region Alaska Natives	1,007	3,276	30.7%
Alaska Natives Statewide	20,117	88,847	22.6%
U.S. Whites	23,620,700	219,117,490	10.8%

**Table C-6. Estimated Residents below the Poverty Level, Under 18 Years of Age, 2005-2009**

Data Source: U.S. Census Bureau, American Community Survey - 5-Year Estimates

	<b>n</b>	<b>Total Population</b>	<b>%</b>
Kenai Region Alaska Natives	401	1,168	34.3%
Alaska Natives Statewide	7,816	28,923	27.0%
U.S. Whites	6,990,869	49,929,023	14.0%

**Table C-7. Leading Causes of Death, 2004-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: National Center for Health Statistics (NCHS), National Vital Statistics System (2004-2007)

<b>Kenai Region Alaska Natives by Rank</b>	<b>n</b>	<b>% Deaths</b>	<b>Rate per 100,000</b>	<b>U.S. Whites by Rank</b>	<b>Alaska Natives Statewide by Rank</b>
1. Cancer	38	22.1%	260.4	2	1
2. Heart Disease	35	20.3%	262.8	1	2
3. Unintentional Injury	15	8.7%	83.5	5	3
4. Cerebrovascular Disease	11	6.4%	87.6	3	7
5. COPD	9	5.2%	74.9	4	6
<b>Total- All Causes</b>	<b>172</b>	<b>100.0%</b>	<b>1,150.4</b>		

## Appendix C. Data Tables

**Table C-8. Age-Adjusted Cancer Death Rates per 100,000, 1984-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: Surveillance, Epidemiology, and End Results Program

Note: For the 2004-2008 time period, U.S. rates are calculated for 2004-2006.

	Kenai Region Alaska Natives		Alaska Natives Statewide		U.S. Whites	
	n	Rate	n	Rate	n	Rate
1984-1988	23	459.9	433	243.3	2,060,372	207.6
1989-1993	19	287.9	480	245.4	2,241,802	209.9
1994-1998	27	372.1	586	248.9	2,342,924	202.9
1999-2003	22	171.7	660	239.5	2,400,904	193.5
2004-2008	38	260.4	772	226.3	1,442,824	182.4

**Table C-9. Age-Adjusted Heart Disease Death Rates per 100,000, 1984-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: Surveillance, Epidemiology, and End Results Program

Note: For the 2004-2008 time period, U.S. rates are calculated for 2004-2006.

	Kenai Region Alaska Natives		Alaska Natives Statewide		U.S. Whites	
	n	Rate	n	Rate	n	Rate
1984-1988	17	340.9	436	288.1	3,407,551	362.5
1989-1993	11	198.4	475	271.9	3,211,591	310.2
1994-1998	27	292.1	516	252.0	3,215,181	280.2
1999-2003	26	245.2	517	211.6	3,069,015	243.6
2004-2008	35	262.8	549	169.0	1,676,390	205.1

**Table C-10. Age-Adjusted Unintentional Injury Death Rates per 100,000, 1984-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: Surveillance, Epidemiology, and End Results Program

Note: For the 2004-2008 time period, U.S. rates are calculated for 2004-2006.

	Kenai Region Alaska Natives		Alaska Natives Statewide		U.S. Whites	
	n	Rate	n	Rate	n	Rate
1984-1988	10	112.4	573	174.0	398,916	39.1
1989-1993	16	122.6	541	133.1	377,602	35.5
1994-1998	13	68.2	484	111.7	394,689	35.1
1999-2003	15	70.9	499	107.4	434,629	36.4
2004-2008	15	83.5	491	97.7	299,968	39.9

## Appendix C. Data Tables

**Table C-11. Age-Adjusted Cerebrovascular Disease Death Rates per 100,000, 1984-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: Surveillance, Epidemiology, and End Results Program

Note: For the 2004-2008 time period, U.S. rates are calculated for 2004-2006.

	Kenai Region Alaska Natives		Alaska Natives Statewide		U.S. Whites	
	n	Rate	n	Rate	n	Rate
1984-1988	<5	N/A	101	65.1	657,451	72.0
1989-1993	<5	N/A	113	67.5	628,088	61.5
1994-1998	<5	N/A	150	84.1	682,431	59.6
1999-2003	5	44.8	158	66.5	704,290	55.6
2004-2008	11	87.6	164	56.7	365,596	44.5

**Table C-12. Current Smokers, 18 Years and Older, 2007-2009**

Data Source: Behavioral Risk Factor Surveillance System

	n	%	Confidence Interval
Kenai Region Alaska Natives	56	41.9%	(32.9%-51.4%)
Alaska Natives Statewide	1,169	39.5%	(36.8%-42.4%)
Alaska Non-Natives	1,994	17.1%	(16.1%-18.3%)
U.S. Whites (2008)	N/A	17.9%	N/A

N/A Not Available

**Table C-13. Current Smokeless Tobacco Users, 18 Years and Older, 2007-2009**

Alaska Data Source: Behavioral Risk Factor Surveillance System

U.S. Data Source: Substance Abuse and Mental Health Services Administration. Results from the 2008 National Survey on Drug Use and Health: Detailed Tables. Rockville (MD): Substance Abuse and Mental Health Services Administration, Office of Applied Studies, 2009.

	n	%	Confidence Interval
Kenai Region Alaska Natives	9	6.3%	(3.2%-12.0%)
Alaska Natives Statewide	341	10.9%	(9.5%-12.5%)
Alaska Non-Natives	398	3.9%	(3.4%-4.5%)
U.S. Total Population (2008)	N/A	3.5%	N/A

N/A Not Available

## Appendix C. Data Tables

**Table C-14. Binge Drinking, 18 Years and Older, 2007-2009**

Data Source: Behavioral Risk Factor Surveillance System

	n	%	Confidence Interval
Kenai Region Alaska Natives	22	22.6%	(14.5%-33.3%)
Alaska Natives Statewide	381	19.2%	(16.6%-22.1%)
Alaska Non-Natives	1,225	17.1%	(15.8%-18.5%)
U.S. Whites (2008)	N/A	16.0%	N/A

N/A Not Available

**Table C-15. Meets Moderate and/or Vigorous Physical Activity, 18 years and Older, 2007 and 2009**

Data Source: Behavioral Risk Factor Surveillance System

	n	%	Confidence Interval
Kenai Region Alaska Natives	28	59.5%	(40.8%-75.8%) <sup>‡</sup>
Alaska Natives Statewide	567	67.3%	(62.2%-72.0%)
Alaska Non-Natives	2,579	75.0%	(72.9%-77.0%)
U.S. Whites (2009)	N/A	51.8%	N/A

N/A Not Available

<sup>‡</sup> Data may not be statistically reliable with a large confidence interval.

**Table C-16. Overweight (25 ≤ BMI ≤ 29.9), 18 Years and Older, 2007-2009**

Data Source: Behavioral Risk Factor Surveillance System

	n	%	Confidence Interval
Kenai Region Alaska Natives	48	26.6%	(19.8%-34.8%)
Alaska Natives Statewide	1,032	37.3%	(34.5%-40.2%)
Alaska Non-Natives	4,282	38.4%	(37.0%-39.8%)
U.S. Whites (2008)	N/A	36.3%	N/A

N/A Not Available

**Table C-17. Obesity (BMI ≥ 30), 18 Years and Older, 2007-2009**

Data Source: Behavioral Risk Factor Surveillance System

	n	%	Confidence Interval
Kenai Region Alaska Natives	67	44.0%	(35.0%-53.3%)
Alaska Natives Statewide	1,069	34.5%	(31.9%-37.2%)
Alaska Non-Natives	3,047	25.7%	(24.5%-26.9%)
U.S. Whites (2008)	N/A	25.4%	N/A

N/A Not Available

## Appendix C. Data Tables

**Table C-18. Lifetime Intimate Partner Violence, 18 Years and Older, 2006 and 2009**

Data Source: Behavioral Risk Factor Surveillance System

	n	%	Confidence Interval
Kenai Region Alaska Natives	17	29.6%	(17.3%-45.8%) <sup>‡</sup>
Alaska Natives Statewide	273	34.4%	(29.5%-39.7%)
Alaska Non-Natives	711	19.4%	(17.6%-21.4%)

<sup>‡</sup> Data may not be statistically reliable with a large confidence interval.

**Table C-19. Abstinence from Tobacco Use During Pregnancy, Pregnant Women, 1989-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: National Center for Health Statistics. Health, United States, 2009: With Special Feature on Medical Technology. Hyattsville, MD. 2009.

Note: The years presented for the U.S. Whites are 1991, 1996, 2001 and 2006.

	Kenai Region Alaska Natives		Alaska Natives Statewide		U.S. Whites	
	n	%	n	%	n	%
1989-1993	182	57.8%	7,948	59.5%	N/A	81.2%
1994-1998	160	56.5%	7,448	63.2%	N/A	85.3%
1999-2003	193	65.0%	8,044	66.4%	N/A	87.0%
2004-2008	215	67.0%	9,288	68.6%	N/A	89.6%

**Table C-20. Abstinence from Alcohol Use During Pregnancy, Pregnant Women, 1989-2008**

Data Source: Alaska Bureau of Vital Statistics

	Kenai Region Alaska Natives		Alaska Natives Statewide		Alaska Whites	
	n	%	n	%	n	%
1989-1993	284	90.2%	10,681	80.1%	36,179	93.9%
1994-1998	264	93.3%	10,415	88.4%	32,441	97.3%
1999-2003	283	95.6%	11,372	94.1%	30,438	98.2%
2004-2008	315	98.1%	12,957	95.8%	32,248	98.1%

## Appendix C. Data Tables

**Table C-21. High School Students Who Smoked Cigarettes on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System

		<b>Alaska Natives Statewide</b>	<b>Alaska Non-Natives</b>	<b>U.S. Whites‡</b>
<b>1995</b>	n	103	458	4,327
	%	<b>61.9%</b>	<b>32.2%</b>	<b>38.3%</b>
	Confidence Interval	(52.6%-70.4%)	(29.3%-35.1%)	(35.6%-41.1%)
<b>2003</b>	n	117	135	6,330
	%	<b>44.2%</b>	<b>12.2%</b>	<b>24.9%</b>
	Confidence Interval	(38.6%-50.0%)	(10.2%-14.6%)	(22.4%-27.5%)
<b>2007</b>	n	63	122	5,574
	%	<b>31.7%</b>	<b>13.1%</b>	<b>23.2%</b>
	Confidence Interval	(24.3%-40.2%)	(10.8%-15.7%)	(20.4%-26.2%)
<b>2009</b>	n	64	122	6,698
	%	<b>24.2%</b>	<b>13.0%</b>	<b>22.5%</b>
	Confidence Interval	(17.0%-33.2%)	(10.5%-15.9%)	(20.5%-25.2%)

‡ Non Hispanic

**Table C-22. High School Students Who Chewed Tobacco or Snuff on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System

		<b>Alaska Native People Statewide</b>	<b>Alaska Non-Native People</b>	<b>U.S. Whites‡</b>
<b>1995</b>	n	40	205	4,390
	%	<b>22.5%</b>	<b>14.4%</b>	<b>14.5%</b>
	Confidence Interval	(16.0%-30.6%)	(11.7%-17.5%)	(13.1%-16.1%)
<b>2003</b>	n	66	89	6,289
	%	<b>24.4%</b>	<b>7.4%</b>	<b>7.6%</b>
	Confidence Interval	(15.2%-36.7%) <sup>¥</sup>	(5.7%-9.6%)	(5.8%-9.8%)
<b>2007</b>	n	41	90	5,587
	%	<b>16.5%</b>	<b>8.3%</b>	<b>10.3%</b>
	Confidence Interval	(8.0%-31.1%) <sup>¥</sup>	(6.6%-10.5%)	(8.2%-12.9%)
<b>2009</b>	n	60	99	6,775
	%	<b>22.1%</b>	<b>10.8%</b>	<b>11.9%</b>
	Confidence Interval	(14.6%-32.1%)	(7.9%-14.7%)	(9.5%-14.6%)

‡ Non Hispanic

¥ Data may not be statistically reliable with a large confidence interval.

## Appendix C. Data Tables

**Table C-23. High School Students Who Had at Least One Drink of Alcohol on One or More of the Past 30 days, 1995, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System

		<b>Alaska Native People Statewide</b>	<b>Alaska Non-Native People</b>	<b>U.S. Whites‡</b>
<b>1995</b>	n	75	673	4,321
	%	<b>43.9%</b>	<b>48.1%</b>	<b>54.1%</b>
	Confidence Interval	(36.5%-56.1%)	(43.6%-52.7%)	(50.5%-57.6%)
<b>2003</b>	n	102	434	6,196
	%	<b>37.6%</b>	<b>39.0%</b>	<b>47.1%</b>
	Confidence Interval	(27.3%-49.1%) <sup>¥</sup>	(35.0%-43.1%)	(44.1%-50.2%)
<b>2007</b>	n	93	376	5,440
	%	<b>40.7%</b>	<b>39.4%</b>	<b>47.3%</b>
	Confidence Interval	(30.0%-52.4%) <sup>¥</sup>	(35.7%-43.2%)	(43.9%-50.7%)
<b>2009</b>	n	84	317	6,429
	%	<b>32.3%</b>	<b>33.5%</b>	<b>44.7%</b>
	Confidence Interval	(27.5%-37.5%)	(29.6%-37.6%)	(42.4%-47.1%)

‡ Non Hispanic

¥ Data may not be statistically reliable with a large confidence interval.

**Table C-24. High School Students Reporting Binge Drinking on One or More of the Past 30 Days, 1995, 2003, 2007, 2009**

Data Source: Youth Risk Behavior Surveillance System

		<b>Alaska Native People Statewide</b>	<b>Alaska Non-Native People</b>	<b>U.S. Whites‡</b>
<b>1995</b>	n	57	450	4,369
	%	<b>31.3%</b>	<b>31.3%</b>	<b>35.6%</b>
	Confidence Interval	(24.9%-38.6%)	(28.0%-34.8%)	(31.0%-40.4%)
<b>2003</b>	n	78	302	6,383
	%	<b>26.8%</b>	<b>26.4%</b>	<b>31.8%</b>
	Confidence Interval	(17.0%-39.7%) <sup>¥</sup>	(22.7%-30.5%)	(29.8%-33.9%)
<b>2007</b>	n	66	250	5,683
	%	<b>26.9%</b>	<b>25.4%</b>	<b>29.8%</b>
	Confidence Interval	(18.3%-37.6%)	(22.1%-29.0%)	(27.4%-32.4%)
<b>2009</b>	n	49	226	6,778
	%	<b>19.0%</b>	<b>22.5%</b>	<b>27.8%</b>
	Confidence Interval	(14.3%-24.8%)	(19.4%-26.1%)	(25.7%-29.9%)

‡ Non Hispanic

¥ Data may not be statistically reliable with a large confidence interval.



## Appendix C. Data Tables

**Table C-25. High School Students Who Used Marijuana on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System

		<b>Alaska Natives Statewide</b>	<b>Alaska Non-Natives</b>	<b>U.S. Whites‡</b>
<b>1995</b>	n	57	413	4,395
	%	<b>29.4%</b>	<b>28.6%</b>	<b>24.5%</b>
	Confidence Interval	(22.3%-37.5%)	(26.0%-31.4%)	(22.0%-27.3%)
<b>2003</b>	n	100	236	6,548
	%	<b>35.7%</b>	<b>20.5%</b>	<b>21.7%</b>
	Confidence Interval	(30.1%-41.8%)	(17.9%-23.4%)	(19.4%-24.2%)
<b>2007</b>	n	74	172	5,713
	%	<b>31.8%</b>	<b>16.7%</b>	<b>19.9%</b>
	Confidence Interval	(23.3%-41.6%)	(14.1%-19.6%)	(17.4%-22.6%)
<b>2009</b>	n	79	208	6,824
	%	<b>28.7%</b>	<b>20.6%</b>	<b>20.7%</b>
	Confidence Interval	(21.0%-37.9%)	(17.7%-24.0%)	(18.9%-22.6%)

‡ Non Hispanic

**Table C-26. High School Students Who Used Any Form of Cocaine, Including Powder, Crack or Freebase During Their Lifetime, 1995, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System

		<b>Alaska Natives Statewide</b>	<b>Alaska Non-Natives</b>	<b>U.S. Whites‡</b>
<b>1995</b>	n	13	118	4,384
	%	<b>7.3%</b>	<b>8.3%</b>	<b>6.5%</b>
	Confidence Interval	(3.0%-16.8%)	(6.9%-10.1%)	(5.4%-7.9%)
<b>2003</b>	n	21	77	6,349
	%	<b>7.3%</b>	<b>6.4%</b>	<b>8.7%</b>
	Confidence Interval	(4.4%-12.0%)	(5.1%-8.0%)	(7.4%-10.2%)
<b>2007</b>	n	22	86	5,741
	%	<b>7.2%</b>	<b>7.9%</b>	<b>7.4%</b>
	Confidence Interval	(4.0%-12.7%)	(6.0%-10.5%)	(6.3%-8.7%)
<b>2009</b>	n	15	89	6,846
	%	<b>4.0%</b>	<b>8.6%</b>	<b>6.3%</b>
	Confidence Interval	(2.0%-7.6%)	(6.8%-10.7%)	(5.3%-7.4%)

‡ Non Hispanic

## Appendix C. Data Tables

**Table C-27. High School Students Who Engage in Recommended Levels of Physical Activity, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System

Note: Data are not available for 1995 and 2003.

		<b>Alaska Native People Statewide</b>	<b>Alaska Non-Native People Statewide</b>	<b>U.S. Whites‡</b>
<b>2007</b>	n	86	479	5,729
	%	<b>32.1%</b>	<b>46.1%</b>	<b>37.0%</b>
	Confidence Interval	(24.2%-41.3%)	(42.3%-49.9%)	(33.9%-40.3%)
<b>2009</b>	n	106	465	6,818
	%	<b>34.9%</b>	<b>44.9%</b>	<b>39.9%</b>
	Confidence Interval	(26.9%-43.7%)	(41.2%-48.5%)	(37.6%-42.1%)

‡ Non Hispanic

**Table C-28. High School Students Who are Overweight, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System

Note: Data are not available for 1995.

		<b>Alaska Natives Statewide</b>	<b>Alaska Non-Natives</b>	<b>U.S. Whites‡</b>
<b>2003</b>	n	37	173	6,052
	%	<b>13.0%</b>	<b>14.9%</b>	<b>13.3%</b>
	Confidence Interval	(9.3%-18.0%)	(12.6%-17.4%)	(12.1%-14.5%)
<b>2007</b>	n	54	149	5,483
	%	<b>21.3%</b>	<b>14.4%</b>	<b>14.3%</b>
	Confidence Interval	(15.6%-28.5%)	(12.2%-17.0%)	(12.9%-15.7%)
<b>2009</b>	n	49	144	6,549
	%	<b>16.7%</b>	<b>13.6%</b>	<b>13.6%</b>
	Confidence Interval	(12.3%-22.3%)	(11.4%-16.1%)	(12.0%-15.4%)

‡ Non Hispanic

## Appendix C. Data Tables

**Table C-29. High School Students Who are Obese, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System

Note: Data are not available for 1995.

		<b>Alaska Natives Statewide</b>	<b>Alaska Non-Natives</b>	<b>U.S. Whites‡</b>
<b>2003</b>	n	37	111	6,052
	%	<b>13.7%</b>	<b>10.2%</b>	<b>10.4%</b>
	Confidence Interval	(8.3%-21.6%)	(8.2%-12.7%)	(8.6%-12.4%)
<b>2007</b>	n	32	112	5,483
	%	<b>13.4%</b>	<b>10.3%</b>	<b>10.8%</b>
	Confidence Interval	(8.6%-20.3%)	(8.4%-12.6%)	(9.3%-12.4%)
<b>2009</b>	n	31	117	6,549
	%	<b>11.6%</b>	<b>11.8%</b>	<b>10.3%</b>
	Confidence Interval	(9.0%-14.8%)	(9.6%-14.6%)	(8.8%-12.0%)

‡ Non Hispanic

**Table C-30. High School Students Who Have Ever Engaged in Sexual Intercourse, 1995, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System

		<b>Alaska Natives Statewide</b>	<b>Alaska Non-Natives</b>	<b>U.S. Whites‡</b>
<b>1995</b>	n	92	646	4,278
	%	<b>52.3%</b>	<b>46.4%</b>	<b>48.9%</b>
	Confidence Interval	(40.2%-64.2%) <sup>¥</sup>	(42.4%-50.4%)	(43.8%-54.1%)
<b>2003</b>	n	132	385	5,711
	%	<b>50.3%</b>	<b>36.5%</b>	<b>41.8%</b>
	Confidence Interval	(40.4%-60.2%)	(32.0%-41.2%)	(39.0%-44.5%)
<b>2007</b>	n	117	411	5,434
	%	<b>49.3%</b>	<b>43.6%</b>	<b>43.7%</b>
	Confidence Interval	(43.6%-55.1%)	(39.2%-48.1%)	(40.5%-47.0%)
<b>2009</b>	n	124	402	6,541
	%	<b>49.4%</b>	<b>41.6%</b>	<b>42.0%</b>
	Confidence Interval	(42.4%-56.5%)	(37.0%-46.3%)	(37.9%-46.3%)

‡ Non Hispanic

¥ Data may not be statistically reliable with a large confidence interval.

## Appendix C. Data Tables

**Table C-31. High School Students Reporting Sad or Hopeless Feelings That Caused Them to Stop Doing Some Usual Activities During the Past 12 Months, 2003, 2007 and 2009**

Data Source: Youth Risk Behavior Surveillance System

Note: Data are not available for 1995.

		<b>Alaska Natives Statewide</b>	<b>Alaska Non-Natives</b>	<b>U.S. Whites‡</b>
<b>2003</b>	n	77	300	6,369
	%	<b>25.1%</b>	<b>25.3%</b>	<b>26.2%</b>
	Confidence Interval	(19.2%-32.1%)	(22.5%-28.4%)	(24.1%-28.4%)
<b>2007</b>	n	90	274	5,737
	%	<b>31.7%</b>	<b>25.2%</b>	<b>26.2%</b>
	Confidence Interval	(26.6%-37.3%)	(22.0%-28.7%)	(24.5%-28.0%)
<b>2009</b>	n	84	280	6,801
	%	<b>25.6%</b>	<b>25.1%</b>	<b>23.7%</b>
	Confidence Interval	(20.0%-32.2%)	(22.0%-28.5%)	(22.1%-25.3%)

‡ Non Hispanic

**Table C-32. High School Students Who Attempted Suicide One or More Times During the Past 12 Months, 1995, 2003, 2007, 2009**

Data Source: Youth Risk Behavior Surveillance System

		<b>Alaska Natives Statewide</b>	<b>Alaska Non-Natives</b>	<b>U.S. Whites‡</b>
<b>1995</b>	n	29	110	4,239
	%	<b>18.7%</b>	<b>7.8%</b>	<b>7.6%</b>
	Confidence Interval	(11.5%-29.0%)	(6.3%-9.6%)	(6.6%-8.9%)
<b>2003</b>	n	39	68	6,135
	%	<b>15.4%</b>	<b>6.0%</b>	<b>6.9%</b>
	Confidence Interval	(10.3%-22.4%)	(4.6%-7.8%)	(5.9%-8.0%)
<b>2007</b>	n	43	70	5,463
	%	<b>20.2%</b>	<b>7.4%</b>	<b>5.6%</b>
	Confidence Interval	(13.5%-29.1%)	(5.9%-9.3%)	(5.0%-6.3%)
<b>2009</b>	n	29	71	6,459
	%	<b>12.5%</b>	<b>7.1%</b>	<b>5.0%</b>
	Confidence Interval	(6.1%-24.0%)	(5.4%-9.4%)	(4.4%-5.7%)

‡ Non Hispanic

## Appendix C. Data Tables

**Table C-33. Live Births with Low Birth Weight, 1989-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: National Center for Health Statistics. Health, United States, 2010: With Special Feature on Death and Dying. Hyattsville, MD. 2011.

Note: The U.S. data were available for: 1990, 1995, 2000, and 2005.

	Kenai Region Alaska Natives		Alaska Natives Statewide		U.S. Whites	
	n	%	n	%	n	%
1989-1993	16	3.8%	770	5.2%	N/A	5.7%
1994-1998	25	6.4%	717	5.4%	N/A	6.2%
1999-2003	13	3.1%	780	5.6%	N/A	6.6%
2004-2008	24	5.2%	854	5.6%	N/A	7.2%

N/A Not Available

**Table C-34. Fertility Rate per 1,000 Females, Ages 15-44 Years, 1984-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: National Center for Health Statistics. Health, United States, 2009: With Special Feature on Medical Technology. Hyattsville, MD. 2009.

Note: The U.S. data were available for: 1985, 1990, 1995, 2000, and 2005.

	Kenai Region Alaska Natives		Alaska Natives Statewide		U.S. Whites	
	n	Rate	n	Rate	n	Rate
1984-1988	305	114.8	12,114	136.5	N/A	64.1
1989-1993	315	92.5	13,419	131.0	N/A	68.3
1994-1998	283	71.2	11,743	104.5	N/A	63.6
1999-2003	296	66.2	12,153	99.9	N/A	65.3
2004-2008	321	66.7	13,553	107.4	N/A	66.3

N/A - Not Available

## Appendix C. Data Tables

**Table C-35. Teen Birth Rate per 1,000 Females, Ages 15-19 Years, 1984-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: National Center for Health Statistics. Health, United States, 2009: With Special Feature on Medical Technology. Hyattsville, MD. 2009.

Note: The U.S. data were available for: 1985, 1990, 1995, 2000, and 2005.

	Kenai Region		Alaska Natives		U.S.	
	Alaska Natives		Statewide		Whites	
	n	Rate	n	Rate	n	Rate
1984-1988	53	113.0	1,829	116.5	N/A	43.3
1989-1993	45	75.6	2,010	111.6	N/A	50.8
1994-1998	56	76.0	1,966	92.1	N/A	49.5
1999-2003	41	42.5	2,144	81.2	N/A	43.2
2004-2008	42	36.1	2,295	79.3	N/A	37.0

N/A Not Available

**Table C-36. Breastfeeding Initiation, 2004-2008**

Alaska Data Source: Alaska Pregnancy Risk Assessment Monitoring System

U.S. Data Source: Breastfeeding Among U.S. Children Born 1999-2007, CDC National Immunization Survey.

[http://www.cdc.gov/breastfeeding/data/NIS\\_data/index.htm](http://www.cdc.gov/breastfeeding/data/NIS_data/index.htm)

Note: The U.S. data uses a slightly different definition for measuring breastfeeding. Breastfeeding initiation in the Pregnancy, Risk and Assessment Monitoring System roughly corresponds to the National Immunization Survey's breastfeeding ever data.

	n	%	Confidence Interval
Anchorage Service Unit Alaska Natives	1,153	90.0%	(88.3%-91.4%)
Alaska Natives Statewide (2006)	N/A	91.4%	N/A
U.S. Total Population (2006)	24,866	74.0%	(73.1%-74.9%)

N/A Not Available

**Table C-37. Breastfeeding 8 Weeks Postpartum, 2004-2008**

Alaska Data Source: Alaska Pregnancy Risk Assessment Monitoring System

U.S. Data Source: Breastfeeding Among U.S. Children Born 1999-2007, CDC National Immunization Survey.

[http://www.cdc.gov/breastfeeding/data/NIS\\_data/index.htm](http://www.cdc.gov/breastfeeding/data/NIS_data/index.htm)

Note: The U.S. data uses a slightly different definition for measuring breastfeeding. Breastfeeding at eight weeks postpartum in the Pregnancy, Risk and Assessment Monitoring System roughly corresponds to the National Immunization Survey's breastfeeding at two months.

	n	%	Confidence Interval
Anchorage Service Unit Alaska Natives	785	64.3%	(61.7%-66.8%)
Alaska Natives Statewide (2006)	N/A	65.7%	N/A
U.S. Total Population (2006)	N/A	62.5%	(61.5%-63.5%)

N/A Not Available

## Appendix C. Data Tables

**Table C-38. Childhood Witness - Intimate Partner Violence, 18 Years and Older, 2009**

Data Source: Behavioral Risk Factor Surveillance System

	n	%	Confidence Interval
Alaska Natives Statewide	134	31.1%	(24.8%-38.0%)
Alaska Non-Natives	295	17.2%	(14.7%-20.1%)

**Table C-39. Age-Adjusted Chlamydia Rates per 100,000 population, 2005-2009**

Kenai Region Data Source: Instant Atlas - <http://www.epi.hss.state.ak.us/hivstd/std2010/atlas.html>

Alaska Statewide & U.S. Data Source: CDC Wonder. <http://www.cdc.gov/std/stats/>

	Kenai Region Alaska Natives		Alaska Natives Statewide		U.S. Whites	
	n	Rate	n	Rate	n	Rate
2005	N/A	290.5	2,079	2,684.0	219,883	129.3
2006	N/A	438.0	2,264	2,870.2	219,457	132.6
2007	N/A	416.4	2,350	2,903.9	235,056	141.5
2008	N/A	580.7	2,438	3,012.6	249,544	149.5
2009	N/A	402.6	2,569	3,107.1	258,842	154.6

N/A Not Available

**Table C-40. Pap Test within the Past Three Years, Women, 18 Years and Older, 2006 and 2008**

Data Source: Behavioral Risk Factor Surveillance System

	n	%	Confidence Interval
Alaska Natives Statewide	224	86.2%	(78.7%-91.3%)
Alaska Non-Natives	689	83.0%	(77.7%-87.2%)
U.S. Total Population (2008)	N/A	83.0%	N/A

N/A Not Available

**Table C-41. Mammogram in Last Two Years, Women, 40 Years and Older, 2006 and 2008**

Data Source: Behavioral Risk Factor Surveillance System

	n	%	Confidence Interval
Alaska Natives Statewide	241	71.6%	(64.6%-77.7%)
Alaska Non-Natives	932	70.3%	(66.8%-73.6%)
U.S. Whites	N/A	76.1%	N/A

N/A Not Available

## Appendix C. Data Tables

**Table C-42. Flexible Sigmoidoscopy or Colonoscopy Ever, Adults, 50 Years and Older, 2006 and 2008**

Data Source: Behavioral Risk Factor Surveillance System

	n	%	Confidence Interval
Kenai Region Alaska Natives	16	60.7%	(41.5%-77.0%) <sup>¥</sup>
Alaska Natives Statewide	210	54.1%	(47.0%-61.0%)
Alaska Non-Natives	958	57.0%	(53.6%-60.5%)
U.S. Whites (2008)	N/A	64.0%	N/A

N/A Not Available

¥ Data may not be statistically reliable with a large confidence interval.

**Table C-43. Adequate Prenatal Care, Pregnant Women, 1989-2008**

Data Source: Alaska Bureau of Vital Statistics

	Kenai Region Alaska Natives		Alaska Natives Statewide		Alaska Whites	
	n	%	n	%	n	%
1989-1993	204	65.0%	7,933	60.1%	29,854	78.1%
1994-1998	181	65.6%	6,678	57.6%	25,609	77.4%
1999-2003	180	63.2%	5,730	49.0%	21,944	75.8%
2004-2008	216	67.9%	5,724	43.5%	22,251	73.6%

**Table C-44. Dentist or Dental Clinic Visit Within the Past Year for Any Reason, 18 Years and Older, 2008**

Data Source: Behavioral Risk Factor Surveillance System

	n	%	Confidence Interval
Kenai Region Alaska Natives	23	57.8%	(39.6%-74.1%) <sup>¥</sup>
Alaska Natives Statewide	306	56.2%	(49.5%-62.7%)
Alaska Non-Natives	1,368	67.4%	(64.1%-70.6%)
U.S. Whites	N/A	73.5%	N/A

N/A Not Available

¥ Data may not be statistically reliable with a large confidence interval.



## Appendix D. Figures and Tables

### FIGURES

Figure 1.	User Population by Age Group, Alaska Natives, Kenai Region, 2010 (N=5,752) .....	12
Figure 2.	Population Estimates by Age Group, Alaska Natives, Kenai Region, 2009 (N=5,434) .....	13
Figure 3.	Population Pyramid, Kenai Region Alaska Natives versus U.S. Total Population, 2009 .....	14
Figure 4.	Highest Educational Attainment, 25 Years and Older, 2005-2009 .....	17
Figure 5.	Unemployment, Kenai Peninsula Borough, Alaska and U.S. Total Populations, 2000-2010 .....	18
Figure 6.	Estimated Residents below the Poverty Level, All Ages, 2005-2009 .....	19
Figure 7.	Estimated Residents below the Poverty Level, Under 18 Years of Age, 2005-2009 .....	20
Figure 8.	Estimated Median Household Income, 2005-2009 .....	21
Figure 9.	Leading Causes of Death, Alaska Natives, Kenai Region, 2004-2008 .....	24
Figure 10.	Estimated Life Expectancy, Males, Years from Birth, 1980-1989 versus 2000-2008 .....	25
Figure 11.	Estimated Life Expectancy, Females, Years from Birth, 1980-1989 versus 2000-2008 .....	26
Figure 13.	Age-Adjusted Cancer Death Rates per 100,000, 1984-2008 .....	28
Figure 14.	Age-Adjusted Heart Disease Death Rates per 100,000, 1984-2008 .....	29
Figure 15.	Age-Adjusted Unintentional Injury Death Rates per 100,000, 1984-2008....	30
Figure 16.	Age-Adjusted Cerebrovascular Disease Death Rates per 100,000, 1999-2008....	31
Figure 17.	Unintentional Injury Hospitalizations Rate by Region, Alaska Natives, Rate per 10,000, 1991-2003 .....	36
Figure 18.	Fall Hospitalization Rate by Region, Alaska Natives, Rate per 10,000, 1991-2003 .....	36
Figure 19.	Hospitalization Rate for Suicide Attempts by Region, Alaska Natives, Rate per 10,000, 1991-2003 .....	37
Figure 20.	Hospitalization Rate for Assault Injuries by Region, Alaska Natives, Rate per 10,000, 1991-2003 .....	37
Figure 21.	Diabetes Prevalence, Alaska Natives, Rate per 1,000, 2009 .....	39
Figure 22.	Percent Increase in Diabetes Prevalence, Alaska Natives, 1990-2009 .....	40
Figure 23.	Current Smokers, 18 Years and Older, 2007-2009 .....	42
Figure 24.	Current Smokeless Tobacco Users, 18 Years and Older, 2007-2009 .....	43
Figure 25.	Binge Drinking, 18 Years and Older, 2007-2009 .....	44
Figure 26.	Meets Moderate and/or Vigorous Physical Activity, 18 Years and Older, 2007 and 2009 .....	45
Figure 27.	Overweight ( $25 \leq \text{BMI} \leq 29.9$ ), 18 Years and Older, 2007-2009 .....	46
Figure 28.	Obesity ( $\text{BMI} \geq 30$ ), 18 Years and Older, 2007-2009 .....	47
Figure 29.	Lifetime Intimate Partner Violence, 18 Years and Older, 2006 and 2009 .....	48
Figure 30.	Abstinence from Tobacco Use During Pregnancy, Pregnant Women, 1989-2008.....	49

---

**Appendix D. Figures and Tables continued**

Figure 31.	Abstinence from Alcohol Use During Pregnancy, Pregnant Women, 1989-2008 .....	50
Figure 32.	High School Students Who Smoked Cigarettes on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009 .....	52
Figure 33.	High School Students Who Chewed Tobacco or Snuff on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009 .....	53
Figure 34.	High School Students Who Had at Least One Drink of Alcohol on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009 .....	54
Figure 35.	High School Students Reporting Binge Drinking on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009 .....	55
Figure 36.	High School Students Who Used Marijuana on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009 .....	56
Figure 37.	High School Students Who Used Any Form of Cocaine, Including Powder, Crack or Freebase During Their Lifetime, 1995, 2003, 2007 and 2009 .....	57
Figure 38.	High School Students Who Engage in Recommended Levels of Physical Activity, 2007 and 2009 .....	58
Figure 39.	High School Students Who Are Overweight, 2003, 2007 and 2009 .....	59
Figure 40.	High School Students Who are Obese, 2003, 2007 and 2009 .....	60
Figure 41.	High School Students Who Have Ever Engaged in Sexual Intercourse, 1995, 2003, 2007 and 2009 .....	61
Figure 42.	High School Students Reporting Sad or Hopeless Feelings That Caused Them to Stop Doing Some Usual Activities During the Past 12 Months, 2003, 2007 and 2009 .....	62
Figure 43.	High School Students Who Attempted Suicide One or More Times During the Past 12 Months, 1995, 2003, 2007 and 2009 .....	63
Figure 44.	Live Births with Low Birth Weight, 1989-2008 .....	66
Figure 45.	Fertility Rate per 1,000 Females, Ages 15-44 Years, 1984-2008 .....	67
Figure 46.	Teen Birth Rate per 1,000 Females, Ages 15-19 Years, 1984-2008.....	68
Figure 47.	Breastfeeding Initiation, 2004-2008 .....	69
Figure 48.	Breastfeeding 8 weeks Postpartum, 2004-2008.....	70
Figure 49.	Childhood Witness - Intimate Partner Violence , 18 Years and Older, 2009.....	71
Figure 50.	Age-Adjusted Chlamydia Rates per 100,000 population, 2005-2009.....	72
Figure 51.	Pap Test within the Past Three Years, Women, 18 Years and Older, 2006 and 2008 .....	74
Figure 52.	Mammogram in Last Two Years, Women, 40 Years and Older, 2006 and 2008 .....	75
Figure 53.	Flexible Sigmoidoscopy or Colonoscopy Ever, Adults, 50 Years and Older, 2006 and 2008 .....	76
Figure 54.	Adequate Prenatal Care, Pregnant Women, 1989-2008 .....	77

---

---

**Appendix D. Figures and Tables continued**

Figure 55. Dentist or Dental Clinic Visit Within the Past Year for Any Reason, 18 Years and Older, 2008 .....	78
---	----

**TABLES**

Table 1. Population Change for Males by Age, Kenai Region, 2001 and 2009 Bridged Population Estimates .....	15
Table 2. Population Change for Females by Age, Kenai Region, 2001 and 2009 Bridged Population Estimates .....	16
Table 3. Leading Causes of Total Years of Potential Life Lost: Deaths Among Those Aged 1-74, Alaska Natives, Kenai Region, 2004-2008.....	27
Table 4. Leading Causes of Injury Death, Kenai Region Alaska Natives, 1999-2005 .....	32
Table 5. Leading Causes of Outpatient Visits, Kenai Region Alaska Natives, Fiscal Year 2010 .....	34
Table 6. Leading Causes of Injury Hospitalizations, Kenai Region Alaska Natives, 1991-2003 .....	35
Table 7. Leading Cancers, Kenai Region Alaska Natives, 1998-2008.....	38
Table A-1. Infant and Maternal Discharge Category Definitions - Clinical Classification Software (CCS) Diagnosis Codes.....	85
Table A-2. SEER Cause of Death Recode .....	87
Table C-1. User Population by Sex and Age Group, Alaska Natives, Kenai Region, 2010.....	90
Table C-2. Population Estimates by Sex and Age Group, Alaska Natives, Kenai Region, 2009.....	90
Table C-3. Highest Educational Attainment, 25 Years and Older, 2005-2009 .....	91
Table C-4. Unemployment, Kenai Peninsula Borough, Alaska and U.S. Total Population, 2000-2010.....	91
Table C-5. Estimated Residents below the Poverty Level, All Ages, 2005-2009.....	92
Table C-6. Estimated Residents below the Poverty Level, Under 18 Years of Age, 2005-2009 .....	92
Table C-7. Leading Causes of Death, 2004-2008 .....	92
Table C-8. Age-Adjusted Cancer Death Rates per 100,000, 1984-2008 .....	93
Table C-9. Age-Adjusted Heart Disease Death Rates per 100,000, 1984-2008 .....	93
Table C-10. Age-Adjusted Unintentional Injury Death Rates per 100,000, 1984-2008.....	93
Table C-11. Age-Adjusted Cerebrovascular Disease Death Rates per 100,000, 1984-2008.....	94
Table C-12. Current Smokers, 18 Years and Older, 2007-2009 .....	94
Table C-13. Current Smokeless Tobacco Users, 18 Years and Older, 2007-2009.....	94
Table C-14. Binge Drinking, 18 Years and Older, 2007-2009 .....	95
Table C-15. Meets Moderate and/or Vigorous Physical Activity, 18 Years and Older, 2007 and 2009 .....	95

---

**Appendix D. Figures and Tables continued**

Table C-16. Overweight ( $25 \leq \text{BMI} \leq 29.9$ ), 18 Years and Older, 2007-2009 .....	95
Table C-17. Obesity ( $\text{BMI} \geq 30$ ), 18 Years and Older, 2007-2009 .....	95
Table C-18. Lifetime Intimate Partner Violence, 18 Years and Older, 2006 and 2009 .....	96
Table C-19. Abstinence from Tobacco Use During Pregnancy, Pregnant Women, 1989-2008.....	96
Table C-20. Abstinence from Alcohol Use During Pregnancy, Pregnant Women, 1989-2008 .....	96
Table C-21. High School Students Who Smoked Cigarettes on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009 .....	97
Table C-22. High School Students Who Chewed Tobacco or Snuff on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009 .....	97
Table C-23. High School Students Who Had at Least One Drink of Alcohol on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009 .....	98
Table C-24. High School Students Reporting Binge Drinking on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009 .....	98
Table C-25. High School Students Who Used Marijuana on One or More of the Past 30 Days, 1995, 2003, 2007 and 2009 .....	99
Table C-26. High School Students Who Used Any Form of Cocaine, Including Powder, Crack, or Freebase During Their Lifetime, 1995, 2003, 2007 and 2009.....	99
Table C-27. High School Students Who Engage in Recommended Levels of Physical Activity, 2007 and 2009 .....	100
Table C-28. High School Students Who are Overweight, 2003, 2007 and 2009 .....	100
Table C-29. High School Students Who are Obese, 2003, 2007 and 2009 .....	101
Table C-30. High School Students Who Have Ever Engaged in Sexual Intercourse, 1995, 2003, 2007 and 2009 .....	101
Table C-31. High School Students Reporting Sad or Hopeless Feelings That Caused Them to Stop Doing Some Usual Activities During the Past 12 Months, 2003, 2007 and 2009 ....	102
Table C-32. High School Students Who Attempted Suicide One or More Times During the Past 12 Months, 1995, 2003, 2007 and 2009 .....	102
Table C-33. Live Births with Low Birth Weight, 1989-2008 .....	103
Table C-34. Fertility Rate per 1,000 Females, Ages 15-44 Years, 1984-2008 .....	103
Table C-35. Teen Birth Rate per 1,000 Females, Ages 15-19 Years, 1984-2008.....	104
Table C-36. Breastfeeding Initiation, 2004-2008 .....	104
Table C-37. Breastfeeding 8 Weeks Postpartum, 2004-2008.....	104
Table C-38. Childhood Witness - Intimate Partner Violence, 18 Years and Older, 2009.....	105
Table C-39. Age-Adjusted Chlamydia Rates per 100,000 population, 2005-2009.....	105
Table C-40. Pap Test within the Past Three Years, Women, 18 Years and Older, 2006 and 2008 .....	105

---

---

**Appendix D. Figures and Tables continued**

Table C-41. Mammogram in Last Two Years, Women, 40 Years and Older, 2006 and 2008 .....	105
Table C-42. Flexible Sigmoidoscopy or Colonoscopy Ever, Adults, 50 Years and Older, 2006 and 2008 .....	106
Table C-43. Adequate Prenatal Care, Pregnant Women, 1989-2008 .....	106
Table C-44. Dentist or Dental Clinic Visits Within the Past Year for Any Reason, 18 Years and Older, 2008 .....	106

## Appendix E. Glossary of Terms

**Age-Adjusted Rate** - Rates have been mathematically weighted to allow comparisons of populations with different age distributions. Adjustment is usually made to a standard population. This report adjusted to the 2000 U.S. Standard Population.

**Body Mass Index** - A weight by height measure; defined as weight in kilograms divided by the square of height in meters. This measure correlates closely with body density and skin fold thickness.

Underweight..... BMI < 18.5 kg/m <sup>2</sup>	Normal Weight ..... 18.5 ≤ BMI < 25 kg/m <sup>2</sup>
Overweight ..... 25 ≤ BMI < 30 kg/m <sup>2</sup>	Obese..... BMI ≥ 30 kg/m <sup>2</sup>
Youth Overweight ..... 85 <sup>th</sup> ≤ BMI < 95 <sup>th</sup> percentile	Youth Obese ..... BMI ≥ 95 <sup>th</sup> percentile

**Crude Rate** - The proportion of a population that experiences the event of interest (e.g. injury hospitalization rate) during a specified period. It is calculated by dividing the number of observations by the appropriate population and then multiplied by 100,000 or other appropriate multiplier. When interpreting crude rates, be aware that the rates may be affected by differences in the age distribution between the comparison populations.

**Federal Fiscal Year** - Federal Fiscal Year is defined as October 1 to September 30.

**Healthy People Goal** - Healthy People 2020 national goals sets health targets to be achieved by the year 2020. Healthy People 2020 provides a framework for health promotion and disease prevention.

**Infant Mortality Rate** - A rate calculated by dividing the number of infant deaths during a given time period by the number of live births reported in the same time period. It is expressed as the number of infant deaths per 1,000 live births. Infant is defined as age from birth up to one year.

**International Classification of Diseases (ICD)** - An international system designed to standardize the classification of symptoms, injuries, diseases and other health issues for medical records. The ICD is developed collaboratively between the World Health Organization and ten international centers.

**Mortality Rate** - Also referred to as death rate, it is the proportion of a population that dies during a specified period. It is calculated by dividing the number of deaths during a given time period by the appropriate population for that time period. It is generally reported as the number of deaths per 100,000.

**Prevalence** - The number of cases of illness or other condition in a population at a point in time divided by the total number of persons in that population.

**Rate Ratio** - A comparison of two groups in terms of incidence rates, mortality rates, or other event of interest.