# Norton Sound
# Regional Health Data Profile


Map courtesy of
Norton Sound Health Corporation

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Alaska Native Tribal Health Consortium

- Alaska Area Diabetes Program Diabetes Registry
- Division of Environmental Health and Engineering
- Immunization Program
- Injury Prevention Program

Indian Health Service

- Alaska Area Indian Health Service

State of Alaska

- Alaska Trauma Registry
- Behavioral Risk Factor Surveillance System
- Bureau of Vital Statistics
- HIV/STD Program
- Youth Risk Behavior Survey

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## Introduction

*"Alaska Natives are the healthiest people in the world."*

Alaska Native people are continuing to make progress toward the Alaska Native Tribal Health Consortium vision. Monitoring health status helps us to know where the Alaska Native population is on the path to becoming the healthiest people and how far there is to go to reach this vision.

This report provides an overview of the health status of Alaska Native people in the Norton Sound region. By using data to monitor health status, significant improvements in health over time can be demonstrated. In addition, health areas which are a concern, or for which inequities exist, can be readily identified for improvement.

This report covers demographics, leading causes of mortality, adolescent and adult lifestyle risk factors, maternal and child health issues, cancer and cancer screening, immunizations, diabetes, infectious diseases, and environmental health. The health status topics found in this report were selected from the national Healthy People 2010 document. They were chosen based upon the health priorities of the Alaska Native Tribal Health System and by what data were available. Various data sources were accessed to compile this document. Each data source contains certain limitations which should be considered when using the data. Appendixes A and B explain these limitations as well as providing detailed information about the data sources.

Data is only part of the decision-making process. This document serves as a useful reference tool for all those interested in Norton Sound Alaska Native health issues and for those interested in contributing to achieving the vision of the Alaska Native population becoming the healthiest people in the world.

## How is the regional health profile organized?

This section outlines the regional health profile, provides a map of the region, and gives a description of the appendixes. It also includes the *Regional Health Profile Overview,* which is a table that provides an overview of the data presented in this document.

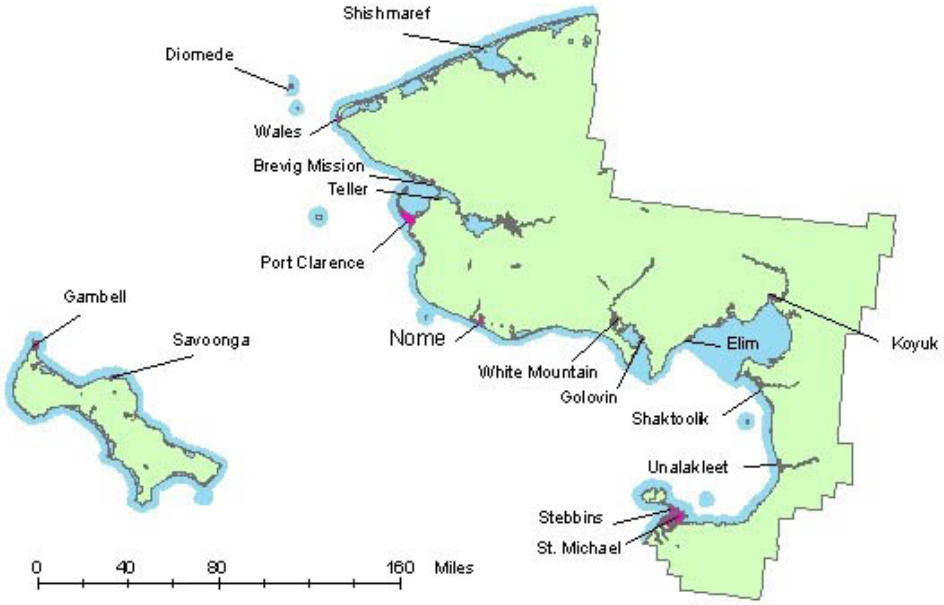
Health indicators are presented in the following five sections:

1. **Demographics** includes data for population estimates, user population, population change, educational attainment, unemployment, poverty status, and household income.
2. **Mortality** includes data about deaths including: leading causes, cancer, heart disease, unintentional injury, leading causes of injury, suicide, and infant.
3. **Health Behavior** includes adult and adolescent data on tobacco use, alcohol consumption, physical activity, obesity, sexual behavior, and substance use.
4. **Health Indicators** includes leading causes of inpatient and outpatient visits as well as information on injury-related hospitalizations. In addition this section covers leading cancers, diabetes, low birth weight, teen birth rate, and sexually transmitted infections.
5. **Preventive Services and Access to Health Care** includes data on cervical, breast, and colorectal cancer screening, influenza and pneumococcal vaccination for ages 65 and older, two-year old vaccinations, prenatal care, and water and sewer service.

These main sections are followed by the appendixes:

- *Appendix A* describes the data sources in detail including the strengths and limitations of the data;
- *Appendix B* includes a table of the race/ethnicity classifications used by each of the data sources;
- *Appendix C* provides detailed data, sample sizes, and confidence intervals for data provided throughout the document;
- *Appendix D* lists the titles of all figures and tables used throughout the document and may be used to find specific data quickly; and
- *Appendix E* lists a glossary of terms that are used throughout the regional health profile.

## Norton Sound Region Map




*Source: Alaska Department of Labor And Workforce Development, Research and Analysis and US Census Bureau, 2000 Tigerline files.*

## Regional Health Profile Overview

| Indicator | Healthy People 2010 Objective | Norton Sound Alaska Natives | Alaska Natives Statewide | U.S. Whites | Time Period |
|---|---|---|---|---|---|
| **Mortality & Morbidity** | | | | | |
| Leading causes of death | N/A | Cancer | Cancer | Heart Disease 2007 | 2004-2007 |
| Cancer death rate - per 100,000 | 159.9 | 234.6 | 226.3 | 193.4 (2004-2005) | 2004-2008 |
| Coronary heart disease death rate - per 100,000 | 166.0 | 149.9 | 172.7 | 209.5 (2004-2005) | 2004-2008 |
| Unintentional injury death rate - per 100,000 | 17.5 | 136.1 | 97.7 | 39.3 (2004-2005) | 2004-2008 |
| Leading causes of injury death | N/A | Suicide | Suicide | Motor Vehicle Accidents[1] | 1999-2005 |
| Suicide death rate - per 100,000 | 5.0 | 75.8 | 42.3 | 12.0 (2004-2005) | 2004-2008 |
| Infant mortality rate - per 1,000 | 4.5 | 14.0 | 9.3 | 5.8 | 2004-2008 |
| **Health Behavior** | | | | | |
| Percent of adults who currently smoke | 12.0% | 58.0% | 40.7% | 19.5% (2006) | 2005-2007 |
| Percent of adults who currently use smokeless tobacco | 0.4% | 9.0% | 10.4% | 4.3%[2] (2007) | 2005-2007 |
| Percent of adults who engage in binge drinking | 6.0% | 22.1% | 18.1% | 15.8% (2006) | 2005-2007 |
| Percent of adults who engage in regular, preferably daily, moderate physical activity | 30.0% | 40.1% | 55.4% | 49.1% | 2005 |
| Percent of obese adults | 15.0% | 21.6% | 31.1% | 25.1% | 2005-2007 |

[1] 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.
[2]Substance Abuse and Mental Health Services Administration. Results from the 2007 National Survey on Drug Use and Health: Detailed Tables. Rockville (MD): Substance Abuse and Mental Health Services Administration, Office of Applied Studies, 2007.
N/A Not Available
Note: Sources for data not listed here are provided in the appropriate section of this report.

## Regional Health Profile Overview

| Indicator | Healthy People 2010 Objective | Norton Sound Alaska Natives | Alaska Natives Statewide | U.S. Whites | Time Period |
|---|---|---|---|---|---|
| **Health Behavior** | | | | | |
| Percent of overweight adults | N/A | 32.5% | 38.1% | 36.5% (2006) | 2005-2007 |
| Percent of pregnant women who reported abstinence from cigarette smoking | N/A | 45.2% | 68.6% | 87.0%[1] (2006) | 2006-2008 |
| Percent of pregnant women who reported abstinence from alcohol use | N/A | 92.6% | 95.7% | N/A | 2006-2008 |
| Percent of overweight adolescents | 5.0% | † | 13.2% | 10.8% | 2007 |
| Percent of adolescents who engage in recommended levels of physical activity | 85.0% | † | 32.2% | 37.0% | 2007 |
| Percent of adolescents who reported cigarette smoking during the past month | 16.0% | † | 31.7% | 23.2% | 2007 |
| Percent of adolescents who reported spit tobacco use during the past month | 1.0% | † | 16.6% | 10.3% | 2007 |
| Percent of adolescents using alcohol during the past 30 days | N/A | † | 40.8% | 47.3% | 2007 |
| Percent of adolescents who have ever engaged in sexual intercourse | 25.0% | † | 49.4% | 43.7% | 2007 |
| Percent of adolescents who reported marijuana use in the past 30 days | 0.7% | † | 31.7% | 19.9% | 2007 |
| Percent of adolescents who reported using cocaine during the past 30 days | N/A | † | 7.3% | 7.4% | 2007 |

[1] National Center for Health Statistics, Health, United States, 2009: With Special Feature on Medical Technology. Hyattsville, MD. 2010.
N/A Not Available
† Numbers too small
Note: Sources for data not listed here are provided in the appropriate section of this report.

## Regional Health Profile Overview

| Indicator | Healthy People 2010 Objective | Norton Sound Alaska Natives | Alaska Natives Statewide | U.S. Whites | Time Period |
|---|---|---|---|---|---|
| **Health Indicators** | | | | | |
| Leading Causes of Inpatient Discharges | N/A | Normal pregnancy and/or delivery | Liveborn | Pregnancy[1] | FFY 2009 |
| Leading Causes of Outpatient Visits | N/A | Other upper respiratory infections | Admin/ social | Routine infant or child health check[2] | FFY 2009 |
| Leading Causes of Injury Hospitalizations | N/A | Falls | Suicide attempt | Falls[3] (1995-2000) | 1991-2003 |
| Unintentional injury | N/A | 110.7 | 99.8 | N/A | 1991-2003 |
| Fall hospitalization - per 10,000 | N/A | 38.4 | 38.7 | N/A | 1991-2003 |
| Suicide attempts hospitalization - per 10,000 | N/A | 34.2 | 20.4 | N/A | 1991-2003 |
| Assault hospitalization - per 10,000 | N/A | 15.2 | 18.5 | N/A | 1991-2003 |
| Leading Cancers | N/A | Lung | Colorectal | Breast[4] | 1998-2007 |
| Clinically diagnosed diabetes - per 1,000 | 25.0 | 29.0 | 40.0 | N/A | 2007 |
| Percent increase in diabetes prevalence | N/A | 201.0% | 117.0% | N/A | 1990-2007 |
| Low birth weight | 4.5% | 5.0% | 5.5% | 7.2%[3] | 2006-2008 |
| Pregnancies among 15-19 year old females - per 1,000 | 43.0 | 103.6 | 75.6 | 38.0 (2006) | 2004-2006 |

[1]Levit K (Thomson Reuters), Wier L (Thomson Reuters), Stranges E (Thomson Reuters), Ryan K (Thomson Reuters), Elixhauser A (AHRQ). HCUP Facts and Figures: Statistics on Hospital-based Care in the United States, 2007. Rockville, MD: Agency for Healthcare Research and Quality, 2009 (http://www.hcup.us-ahrq.gov/reports.jsp).
[2]Schappert SM, Rechtsteiner EA. Ambulatory medical care utilization estimates for 2006. National health statistics reports; number 8. Hyattsville, MD: National Center for Health Statistics, 2008.
[3]National Center for Health Statistics, Health, United States, 2009: With Special Feature on Medical Technology. Hyattsville, MD.2010.
[4]Altekruse SF, Kosary CL, Krapcho M, Neyman N, Aminou R, Waldron W, Ruhl J, Howlander N, Tatalovich Z, Cho H, Mariotto A, Eisner MP, Lewis DR, Cronin K, Chen HS, Feuer EJ, Stinchcomb DG, Edwards BK (eds). SEER Cancer Statistics Review, 1975-2007, National Cancer Institute. Bethesda, MD, http://seer.cancer.gov/csr/1975_2007/, based on November 2009 SEER data submission, posted to the SEER website, 2010.
FFY Federal Fiscal Year
N/A Not Available
Note: Sources for data not listed here are provided in the appropriate section of this report.

## Regional Health Profile Overview

| Indicator | Healthy People 2010 Objective | Norton Sound Alaska Natives | Alaska Natives Statewide | U.S. Whites | Time Period |
|---|---|---|---|---|---|
| **Health Indicators** | | | | | |
| Persons with Gonorrhea - per 100,000 | N/A | 599.7 | 305.5 | 114.6**[1] | 2005 |
| Persons with Chlamydia - per 100,000 | N/A | 1,582.2 | 2,052.3 | 329.4**[1] | 2005 |
| **Preventive Services and Access to Health Care** | | | | | |
| Percent of women aged 18 years and older who received a Pap test within the preceding three years | 90.0% | † | 89.0% | 84.9% (2006) | 2004 & 2006 |
| Percent of women aged 40 years and older who have received a mammogram within the preceding two years | 70.0% | † | 74.0% | 77.0% (2006) | 2004 & 2006 |
| Percent of adults aged 50 years and older who have ever received a sigmoidoscopy or colonoscopy | 50.0% | † | 52.8% | 59.1% (2006) | 2004 & 2006 |
| Percent of elderly adults immunized against influenza in the past 12 months | 90.0% | 70.8% | 48.9% | 69.0% (2008) | 2009-2010 |
| Percent of elderly adults who have ever been immunized against pneumococcal disease | 90.0% | 94.1% | 92.2% | 63.0% (2008) | 2010 |
| Percent of young children aged 19 to 35 months who have received the 4:3:1:3:3 | 80.0% | 86.7% | 82.4% | 78.0%**[1] (2007) | 2010 |
| Percent of women who receive adequate prenatal care | 90.0% | 46.6% | 41.8% | 70.2% (2006) | 2006-2008 |
| Percent of communities with access to safe water and proper sewage disposal | N/A | 64.0% | 76.0% | N/A | 2008 |

[1]National Center for Health Statistics, Health, United States, 2009: With Special Feature on Medical Technology, Hyattsville, MD: 2010.

** U.S. Total Population

N/A Not Available

† Numbers too small

Note: Sources for data not listed here are provided in the appropriate section of this report.

# Demographics

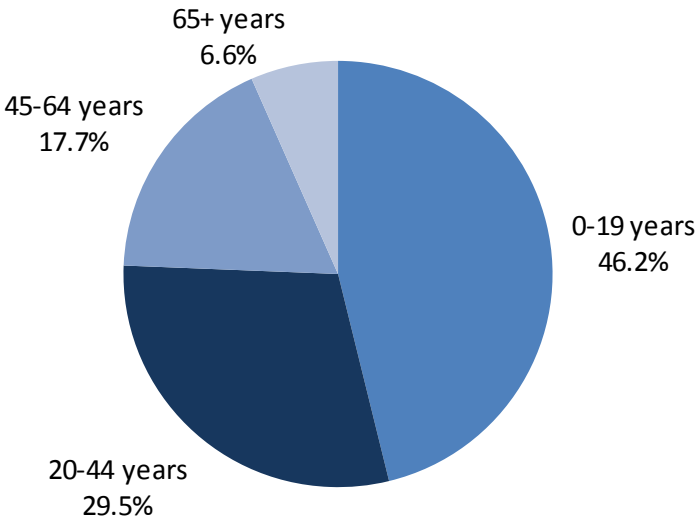
## Population Estimates

**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 and Workforce Development estimated that 7,247 Alaska Natives lived in Norton Sound in 2009. This represents 76.3% of Norton Sound's total population (9,500).
- Almost half (46.2%) of the Alaska Native population in Norton Sound was under the age of 20 in 2009.

**Figure 1. Population Estimates by Age Group, Alaska Natives, Norton Sound, 2009 (N=7,247)**
Data Source: Alaska Department of Labor and Workforce Development
Data Table C-1 in Appendix



## Population Pyramid

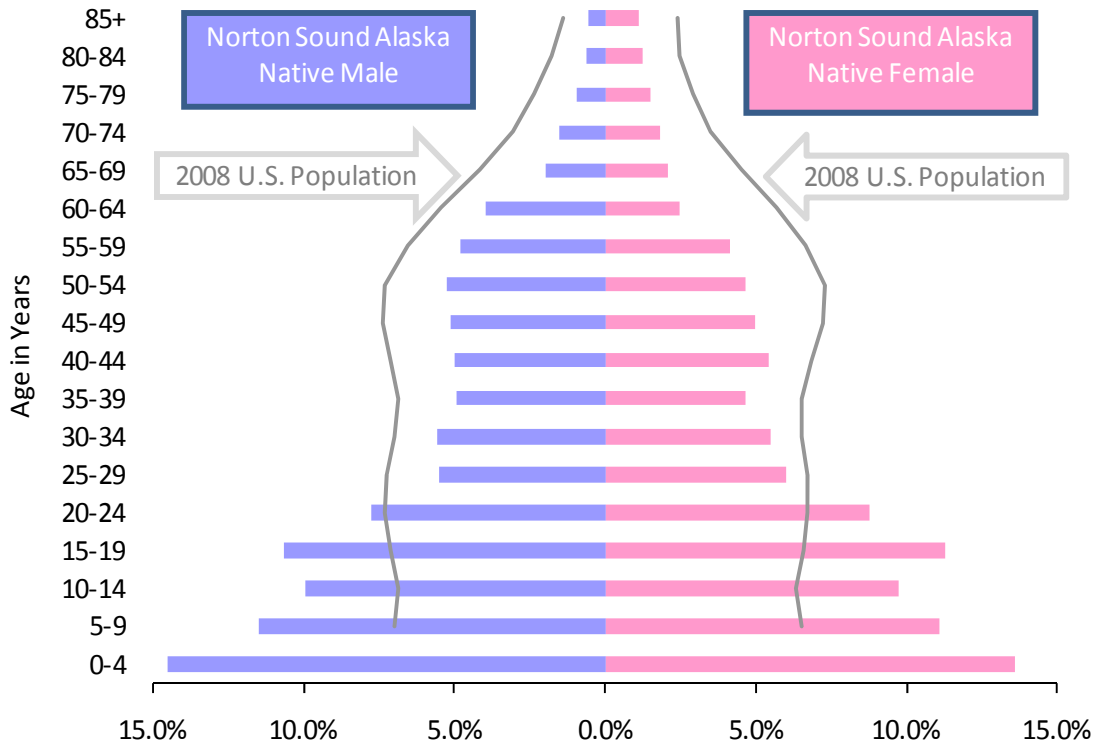
**Definition:** A **population pyramid** is a graphical representation of the age and sex distribution of a population. The proportion of the males and females in each age group are displayed as horizontal bars. The gray lines show the distribution of the 2008 U.S. total population.

**Summary**

- A larger proportion (46.2%) of the Norton Sound Alaska Native population was under the age of 20 compared to the U.S. population (27.2%).
- In 2009, men and women made up 52.3% and 47.7%, respectively, of the Alaska Native population in Norton Sound.

**Figure 2. Population Pyramid, Alaska Natives, Norton Sound, 2009**

Data Source: Alaska Department of Labor and Workforce Development
U.S. Data Source: U.S. Census



## User Population

**Definition:** The Indian Health Service defines the **user population** as an eligible American Indian/ Alaska Native person 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 Indian Health Service data system. Indian Health Service user population data are calculated by federal fiscal year. Federal Fiscal Year 2009 was from October 1, 2008 to September 30, 2009.

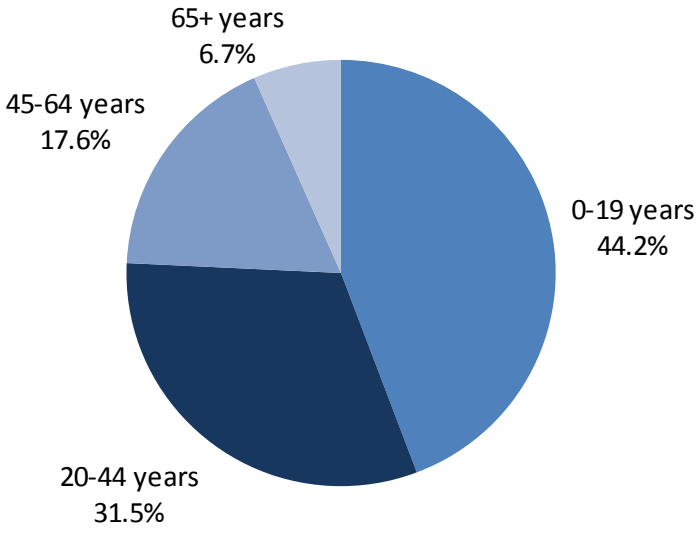
**Summary**

- 44.2% of the Norton Sound user population was under the age of 20 years in 2009.
- 6.7% percent of the Norton Sound user population was 65 years of age or older.

**Figure 3. User Population by Age Group, Norton Sound, Fiscal Year 2009 (N=8,269)**

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

Data Table C-2 in Appendix



## 1990-2000 Census Counts and Population Change by Norton Sound Community

**Summary**

- The overall Norton Sound Alaska Native population increased by 17.5% from 6,026 in 1990 to 7,082 in 2000.
- While the Alaska Native population of most communities in Norton Sound increased, the Alaska Native population of Council, Diomede (Inalik), Solomon, and Wales decreased between 1990 and 2000.

**Table 1. Census Counts by Norton Sound Community, 1990 and 2000 U.S. Census**
Data Source: Alaska Area Indian Health Service Census Data

| Community | Alaska Native Population 2000 Census | Total Population 2000 Census | Alaska Native Population 1990 Census | Total Population 1990 Census | % Change, AK Native Population 1990-2000 |
|---|---|---|---|---|---|
| Brevig | 254 | 276 | 183 | 198 | 38.8% |
| Council | 0 | 0 | 5 | 8 | -100.0% |
| Diomede (Inalik ) | 137 | 146 | 167 | 178 | -18.0% |
| Elim | 297 | 313 | 242 | 264 | 22.7% |
| Gambell | 622 | 649 | 505 | 525 | 23.2% |
| Golovin | 133 | 144 | 118 | 127 | 12.7% |
| Koyuk | 280 | 297 | 219 | 231 | 27.9% |
| Nome | 2,057 | 3,505 | 1,824 | 3,500 | 12.8% |
| Port Clarence | 0 | 21 | 0 | 26 | 0.0% |
| Savoonga | 614 | 643 | 494 | 519 | 24.3% |
| Shaktoolik | 218 | 230 | 168 | 178 | 29.8% |
| Shishmaref | 531 | 562 | 431 | 456 | 23.2% |
| Solomon | 0 | 0 | 6 | 6 | -100.0% |
| St. Michael | 343 | 368 | 269 | 295 | 27.5% |
| Stebbins | 518 | 547 | 379 | 400 | 36.7% |
| Teller | 248 | 268 | 131 | 151 | 89.3% |
| Unalakleet | 655 | 747 | 584 | 714 | 12.2% |
| Wales | 137 | 152 | 143 | 161 | - 4.2% |
| White Mountain | 175 | 203 | 158 | 180 | 10.8% |
| **Total** | **7,082** | **9,071** | **6,026** | **8,117** | **17.5%** |

## 2001 and 2009 Population Change - Females

**Summary**

- Between 2001 and 2009, the Norton Sound Alaska Native female population increased by 2.6% (3,373 to 3,460), while the total Norton Sound female population increased by 3.5% (4,373 to 4,524).
- Between 2001 and 2009, while the overall Alaska Native female population in Norton Sound increased, females between the ages of 5-14, 25-29, 35-44, and 85+ decreased.

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

Data Source: Alaska Department of Labor and Workforce Development

| | 2001 | | 2009 | | % Change in | % Change in |
|---|---|---|---|---|---|---|
| | Alaska Native Female | Total Female Population | Alaska Native Female | Total Female Population | Alaska Native Population | Total Population |
| 0-4 | 408 | 481 | 471 | 540 | 15.4% | 12.3% |
| 5-9 | 409 | 485 | 384 | 465 | - 6.1% | - 4.1% |
| 10-14 | 441 | 538 | 336 | 433 | -23.8% | -19.5% |
| 15-19 | 347 | 407 | 391 | 466 | 12.7% | 14.5% |
| 20-24 | 221 | 260 | 304 | 356 | 37.6% | 36.9% |
| 25-29 | 213 | 305 | 207 | 284 | - 2.8% | - 6.9% |
| 30-34 | 187 | 262 | 190 | 277 | 1.6% | 5.7% |
| 35-39 | 216 | 321 | 161 | 248 | -25.5% | -22.7% |
| 40-44 | 242 | 337 | 187 | 256 | -22.7% | -24.0% |
| 45-49 | 145 | 248 | 172 | 282 | 18.6% | 13.7% |
| 50-54 | 121 | 196 | 160 | 260 | 32.2% | 32.7% |
| 55-59 | 103 | 147 | 144 | 210 | 39.8% | 42.9% |
| 60-64 | 74 | 107 | 85 | 132 | 14.9% | 23.4% |
| 65-69 | 69 | 82 | 73 | 94 | 5.8% | 14.6% |
| 70-74 | 61 | 73 | 62 | 76 | 1.6% | 4.1% |
| 75-79 | 45 | 49 | 52 | 57 | 15.6% | 16.3% |
| 80-84 | 27 | 31 | 42 | 49 | 55.6% | 58.1% |
| 85+ | 44 | 44 | 39 | 39 | -11.4% | -11.4% |
| **Total** | **3,373** | **4,373** | **3,460** | **4,524** | **2.6%** | **3.5%** |

## 2001 and 2009 Population Change - Males

**Summary**

- Between 2001 and 2009, the Norton Sound Alaska Native male population increased by 2.6% (3,692 to 3,787) while the total Norton Sound male population increased by 1.7% (4,893 to 4,976).
- Between 2001 and 2009, while the overall Alaska Native male population in Norton Sound increased, males between the ages of 5-14, 25-49, 65-69, and 80-84 decreased.

**Table 3. Population Change for Males by Age, Norton Sound, 2001 and 2009 Bridged Population Estimates**

Data Source: Alaska Department of Labor and Workforce Development

| | 2001 | | 2009 | | % Change in | % Change in |
|---|---|---|---|---|---|---|
| | Alaska Native Male | Total Male Population | Alaska Native Male | Total Male Population | Alaska Native Population | Total Population |
| 0-4 | 445 | 519 | 550 | 644 | 23.6% | 24.1% |
| 5-9 | 441 | 535 | 434 | 546 | - 1.6% | 2.1% |
| 10-14 | 448 | 533 | 376 | 458 | -16.1% | -14.1% |
| 15-19 | 359 | 428 | 403 | 485 | 12.3% | 13.3% |
| 20-24 | 250 | 287 | 293 | 326 | 17.2% | 13.6% |
| 25-29 | 219 | 306 | 208 | 274 | - 5.0% | -10.5% |
| 30-34 | 224 | 298 | 212 | 296 | - 5.4% | - 0.7% |
| 35-39 | 276 | 387 | 186 | 258 | -32.6% | -33.3% |
| 40-44 | 218 | 367 | 188 | 285 | -13.8% | -22.3% |
| 45-49 | 200 | 345 | 194 | 314 | - 3.0% | - 9.0% |
| 50-54 | 184 | 310 | 198 | 314 | 7.6% | 1.3% |
| 55-59 | 109 | 173 | 183 | 287 | 67.9% | 65.9% |
| 60-64 | 107 | 137 | 150 | 213 | 40.2% | 55.5% |
| 65-69 | 84 | 109 | 75 | 106 | -10.7% | - 2.8% |
| 70-74 | 55 | 68 | 58 | 75 | 5.5% | 10.3% |
| 75-79 | 35 | 45 | 36 | 44 | 2.9% | - 2.2% |
| 80-84 | 24 | 27 | 23 | 25 | - 4.2% | - 7.4% |
| 85+ | 14 | 19 | 20 | 26 | 42.9% | 36.8% |
| **Total** | **3,692** | **4,893** | **3,787** | **4,976** | **2.6%** | **1.7%** |

## Educational Attainment

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

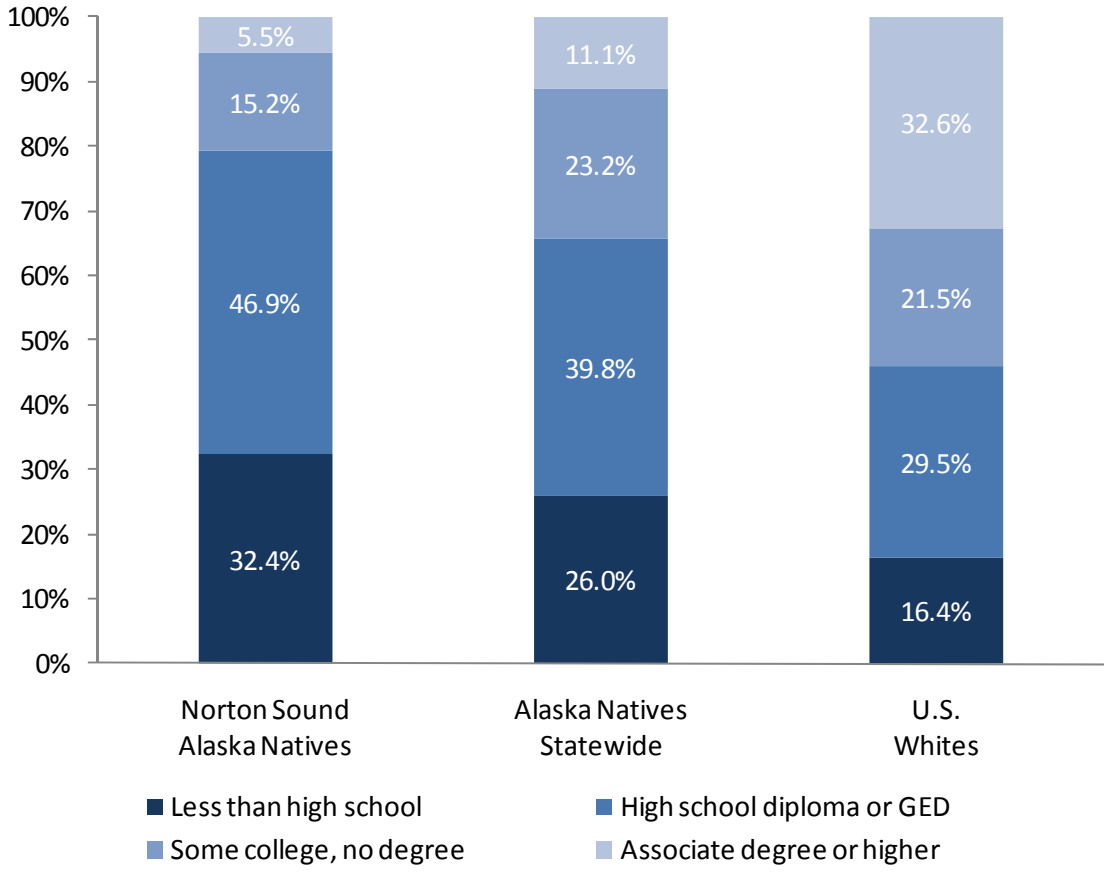
**Summary**

- In 2000, 5.5% of Norton Sound Alaska Natives highest level of educational attainment was an associate degree or higher, compared to 11.1% of Alaska Native people statewide.
- 67.6% of Norton Sound Alaska Native people had received a high school diploma or higher in 2000, compared to 74.0% of Alaska Native people statewide.
- 32.6% of U.S. Whites received an Associate degree or higher in 2000, which was almost six times that of Norton Sound Alaska Native people (5.5%).

**Figure 4. Highest Educational Attainment, 25 Years and Older, 2000**

Data Source: U.S. Census

Data Table C-3 in Appendix



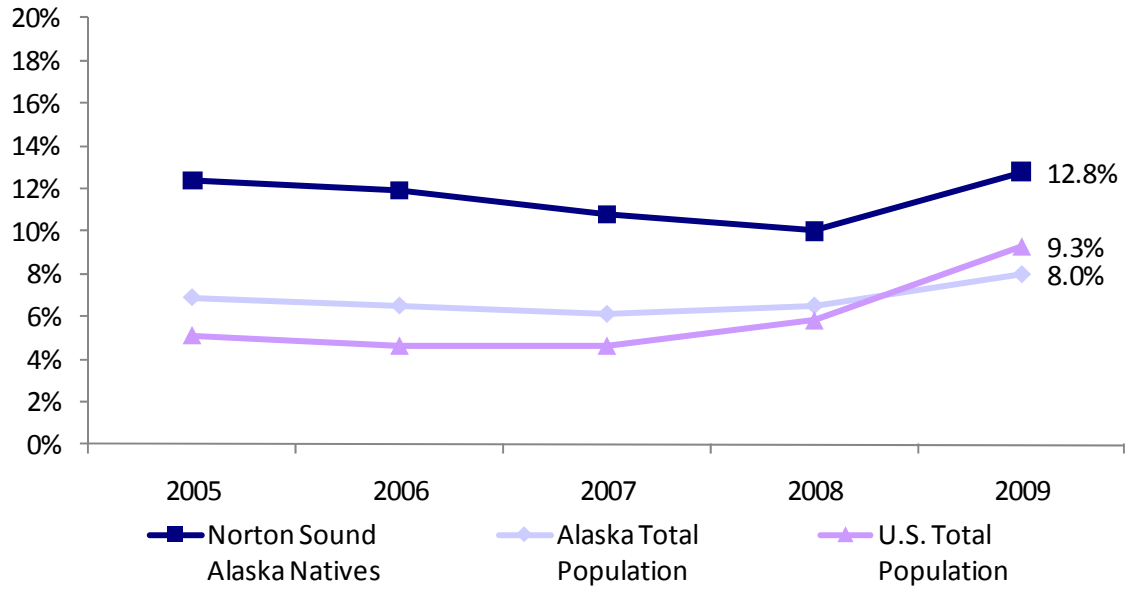
## Unemployment

**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 do not meet the official definition of unemployed because they are not conducting active job searches.

**Summary**

- The unemployment rate for the Norton Sound region has been higher than the statewide unemployment rate since 2005.
- The unemployment rate for Norton Sound decreased from 2005 (12.4%) to 2008 (10.0%), but increased in 2009 to 12.8%.

**Figure 5. Unemployment for Norton Sound, Alaska and U.S. Total Populations, 2005-2009**
Data Source: Alaska Department of Labor and Workforce Development
Data Table C-4 in Appendix



## Poverty Status

**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 that family and every individual in it is 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**

- 21.2% of Norton Sound Alaska Native people lived below the Federal Poverty Level.
- 22.6% of Norton Sound Alaska Native children lived below the Federal Poverty Level.

**Figure 6. Estimated Percent of Residents below the Federal Poverty Level, All Ages, 2000**

Data Source: U.S. Census

Data Table C-5 in Appendix

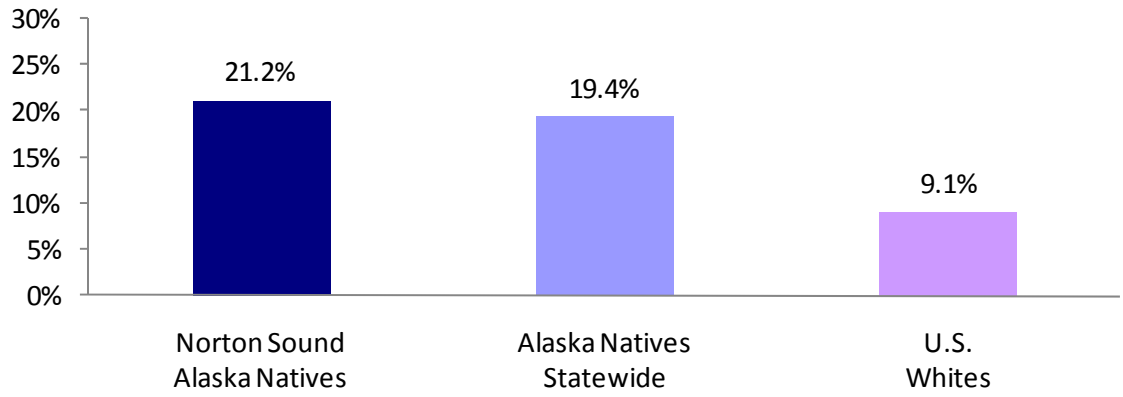
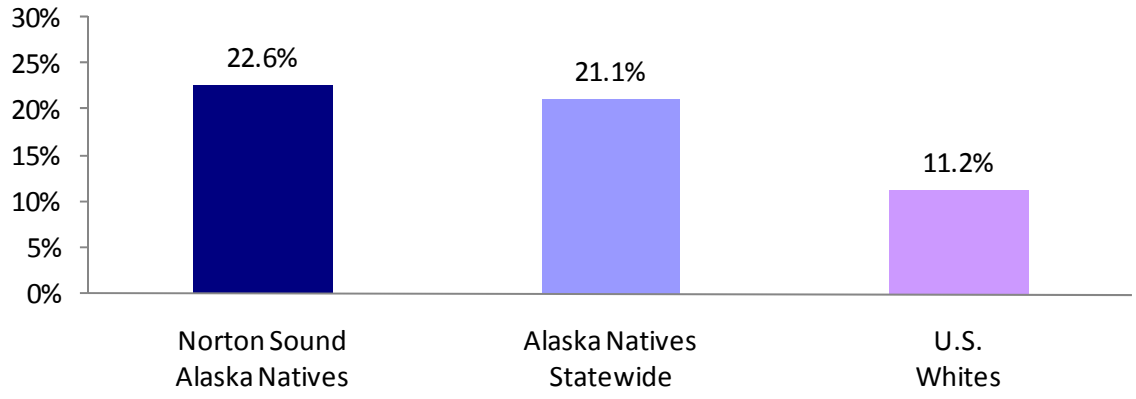



**Figure 7. Estimated Percent of Residents below the Federal Poverty Level, Under 18, 2000**

Data Source: U.S. Census

Data Table C-6 in Appendix



## Household Income

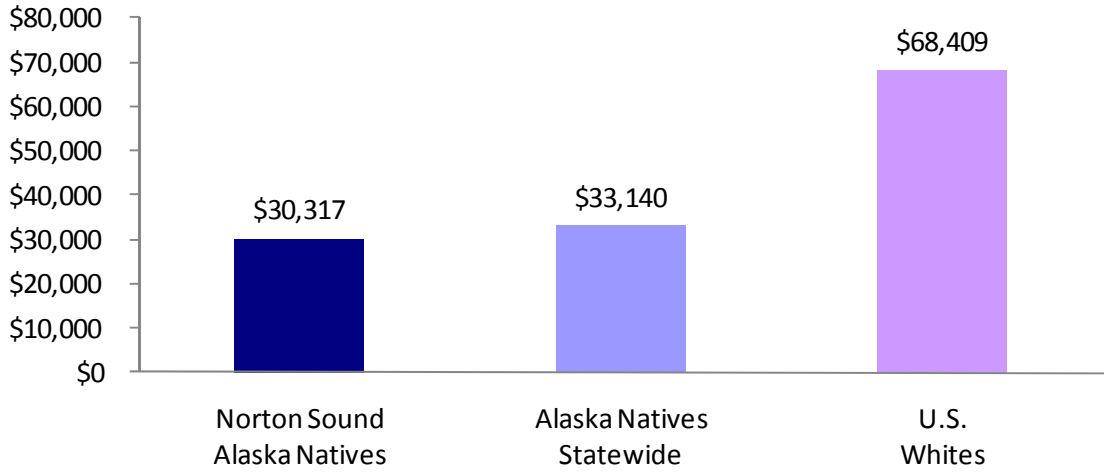
**Definition: Household income** is determined by the reported household income of the person who completed the U.S. Census. Income includes all monetary sources including wages, the Permanent Fund Dividend, corporation dividends and public assistance. Income does not include subsistence resources.

**Summary**

- The estimated median household income for Norton Sound Alaska Native people was $30,317.
- The median household income for Alaska Native people statewide ($33,140) was 1.1 times that of Norton Sound Alaska Natives, and the median household income for U.S. Whites ($68,409) was 2.3 times that of Norton Sound Alaska Natives.

**Figure 8. Estimated Median Household Income, 2000**

Data Source: U.S. Census



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# Mortality

## Leading Causes of Death

**Definition:** The **leading causes of death** is a list of the primary causes of death within a population. These lists are used frequently to measure the health status of a population when compared to the rank of causes of death among other populations.

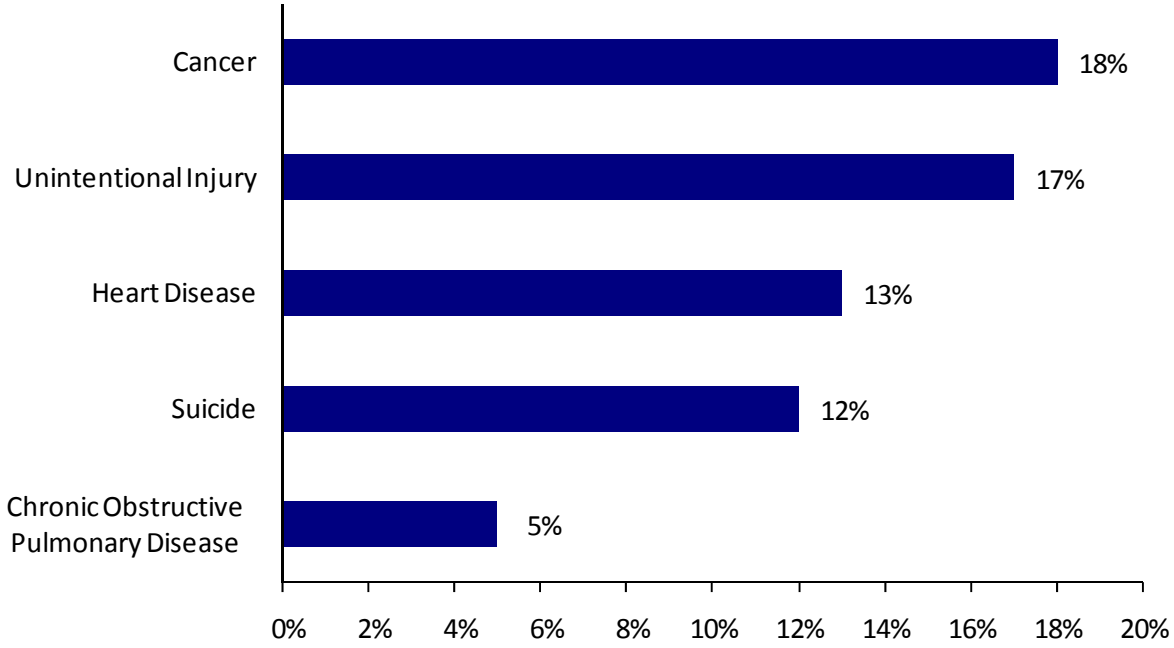
**Summary**

- Cancer was the leading cause of death among Norton Sound Alaska Native people, closely followed by unintentional injury.
- The top five leading causes of death among Alaska Natives in the Norton Sound Region accounted for 55% of all deaths.

**Figure 9. Leading Causes of Death, Norton Sound Alaska Natives, 2004-2007**

Data Source: Alaska Native Health Status Report, Alaska Native Epidemiology Center, Alaska Native Tribal Health Consortium, August, 2009

Data Table C-7 in Appendix



## Cancer Deaths

**Definition: Cancer deaths** are defined as the number of deaths due to all types of cancer per 100,000 population.

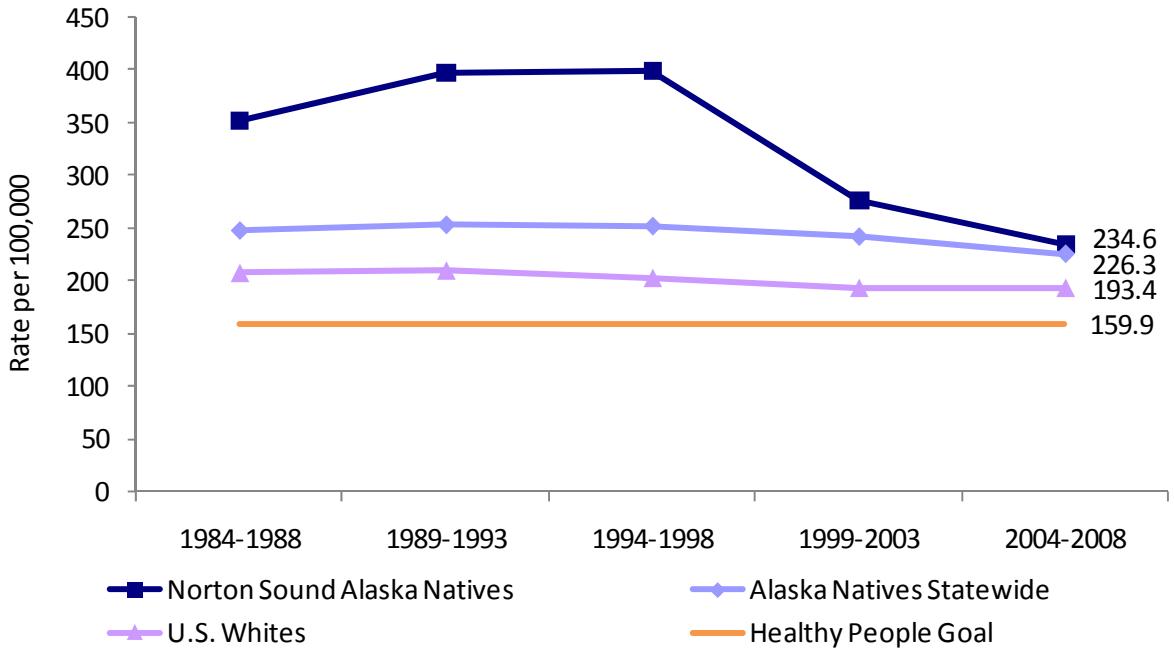
**Healthy People 2010, Goal 3.1:** Reduce the overall cancer death rate to 159.9 deaths per 100,000 of the population.

**Summary**

- Age-adjusted death rates due to cancer among Norton Sound Alaska Natives increased 13.4% (352.1 to 399.4 per 100,000 population) between 1984-1988 and 1994-1998, but decreased 41.3% (399.4 to 234.6 per 100,000 population) between 1994-1998 and 2004-2008.
- Norton Sound Alaska Native death rates due to cancer were higher than the Healthy People 2010 Goal from 1984-2008, but the gap to the Healthy People Goal appears to have decreased between 1994-1998 and 2004-2008.

**Figure 10. 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: 2004-2008 time period, U.S. rates are calculated only on 2004-2005 data.
Data Table C-8 in Appendix



## Heart Disease Deaths

**Definition: Heart disease deaths** are defined as the total number of deaths due to heart disease per 100,000 population.

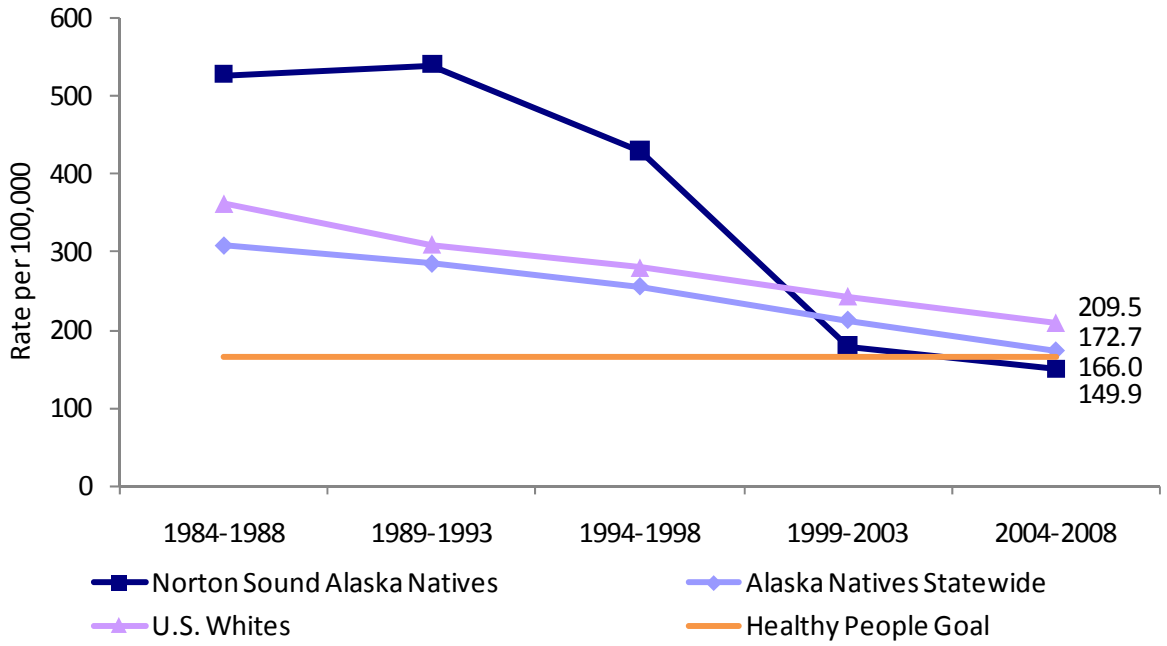
**Healthy People 2010, Goal 12.1:** Reduce coronary heart disease death rate to 166.0 per 100,000 of the population.

**Summary**

- Age-adjusted death rates due to heart disease decreased 71.6% (527.6 to 149.9 per 100,000 population) from 1984-1988 to 2004-2008 for Norton Sound Alaska Native people.
- The heart disease death rate of Norton Sound Alaska Native people was 149.9 per 100,000 population from 2004-2008, which met the Healthy People Goal.

**Figure 11. 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: 2004-2008 time period, U.S. rates are calculated only on 2004-2005 data.
Data Table C-9 in Appendix



## Unintentional Injury Deaths

**Definition: Unintentional injury deaths** are defined as the total number of deaths due to unintentional injuries per 100,000 population.

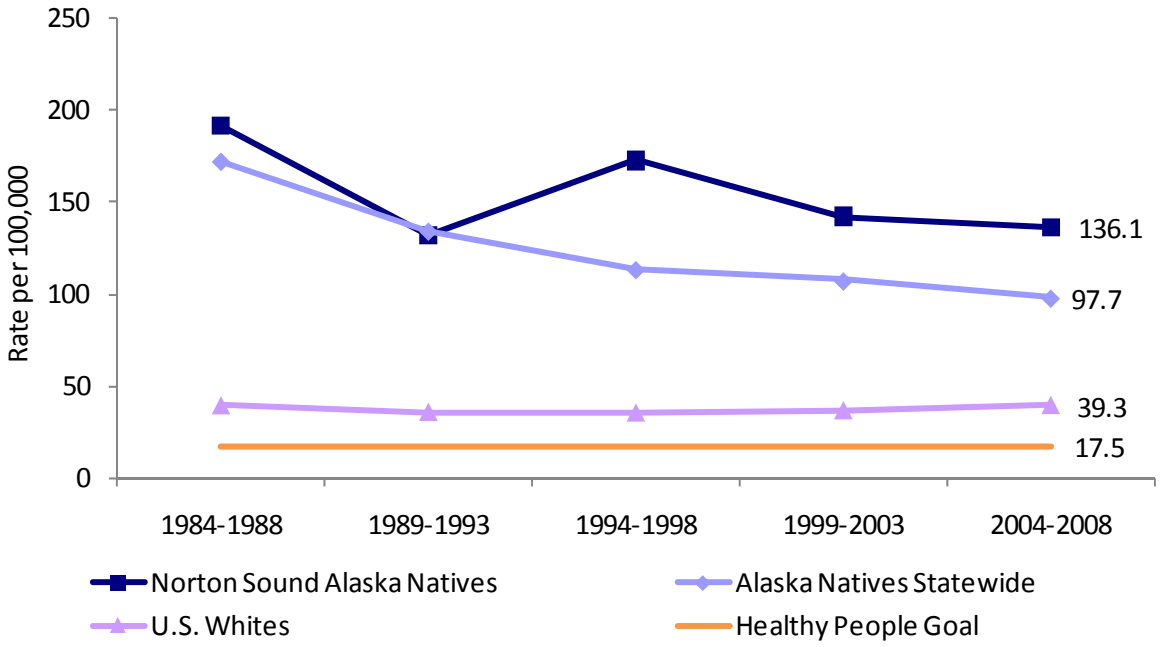
**Healthy People 2010, Goal 15.13:** Reduce unintentional injury death rate to 17.5 per 100,000 of the population.

**Summary**

- Age-adjusted death rates due to unintentional injuries decreased 28.9% (191.5 to 136.1 per 100,000 population) between 1984-1988 and 2004-2008.
- The death rate for unintentional injury among Norton Sound Alaska Native people (136.1) was more than 3 times that of U.S. Whites (39.3).

**Figure 12. 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: 2004-2008 time period, U.S. rates are calculated only on 2004-2005 data.
Data Table C-10 in Appendix



## Leading Causes of Injury Death

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

**Summary**

- Suicide was the leading cause of injury-related death among Norton Sound Alaska Native people during 1999-2005.
- Norton Sound Alaska Native people were 2.4 times more likely to die from suicide than Alaska Native people statewide.

**Table 4. Leading Causes of Injury Death, Norton Sound Alaska Natives, 1999-2005**

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

| Causes of Injury Death by Rank | N | % | Age-Adjusted Rate per 100,000 | Rate Ratio[1]: Norton Sound vs. Alaska Natives Statewide |
|---|---|---|---|---|
| Suicide | 49 | 41% | 92.9 | 2.4* |
| Unintentional Poisoning | 11 | 9% | 33.0[2] | 1.9 |
| Motor Vehicle | 10 | 8% | 26.0[2] | 1.4 |
| Drowning | 9 | 8% | † | † |
| Off Road Vehicle | 9 | 8% | † | † |
| Excessive Natural Cold | 8 | 4% | † | † |
| Homicide | 7 | 6% | † | † |
| Suffocation | 6 | 5% | † | † |
| Other | 10 | 12% | | |
| **Total Injury** | **119** | | **263.1** | **1.7*** |
| **Total Unintentional** | **63** | **53%** | **152.1** | **1.5*** |

[1] 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.

[2] Rate is based on 10-19 deaths and should be interpreted with caution.

* Statistically significant difference at the p<0.05 level

† Numbers too small

## Suicide Deaths

**Definition: Suicide deaths** are defined as the total number of deaths that were caused by intentional self-harm per 100,000 population.

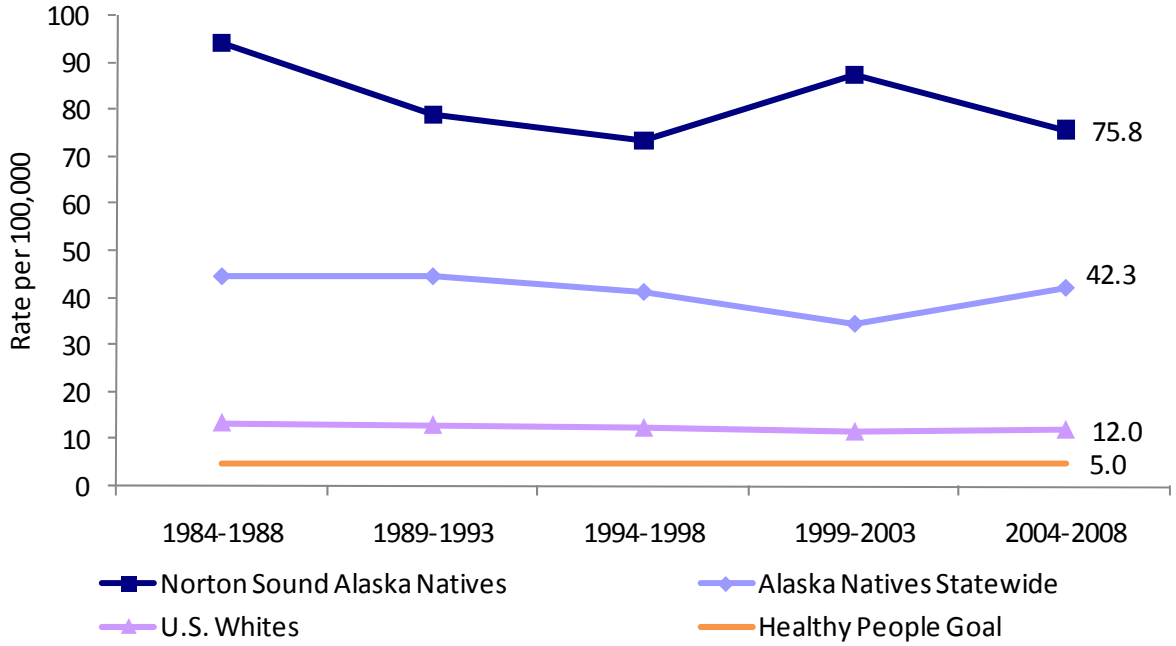
**Healthy People 2010, Goal 15.13:** Reduce suicide death rates to 5.0 per 100,000 of the population.

**Summary**

- The age-adjusted suicide rate for Norton Sound Alaska Natives was 75.8 per 100,000 during 2004-2008, which was above the Healthy People 2010 goal of 5.0 per 100,000 population.
- The age-adjusted death rate for suicides per 100,000 population among Norton Sound Alaska Native people (75.8) was more than six times that of U.S. Whites (12.0) during 2004-2008.
- Age-adjusted suicide rates among Norton Sound Alaska Native people dropped 19.6% (94.3 to 75.8 per 100,000 population) between 1984-1988 and 2004-2008.

**Figure 13. Age-Adjusted Suicide 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: 2004-2008 time period, U.S. rates are calculated only on 2004-2005 data.
Data Table C-11 in Appendix



## Infant Mortality Rate

**Definition: Infant mortality** is defined as the number of deaths within the first year of life per 1,000 live births.

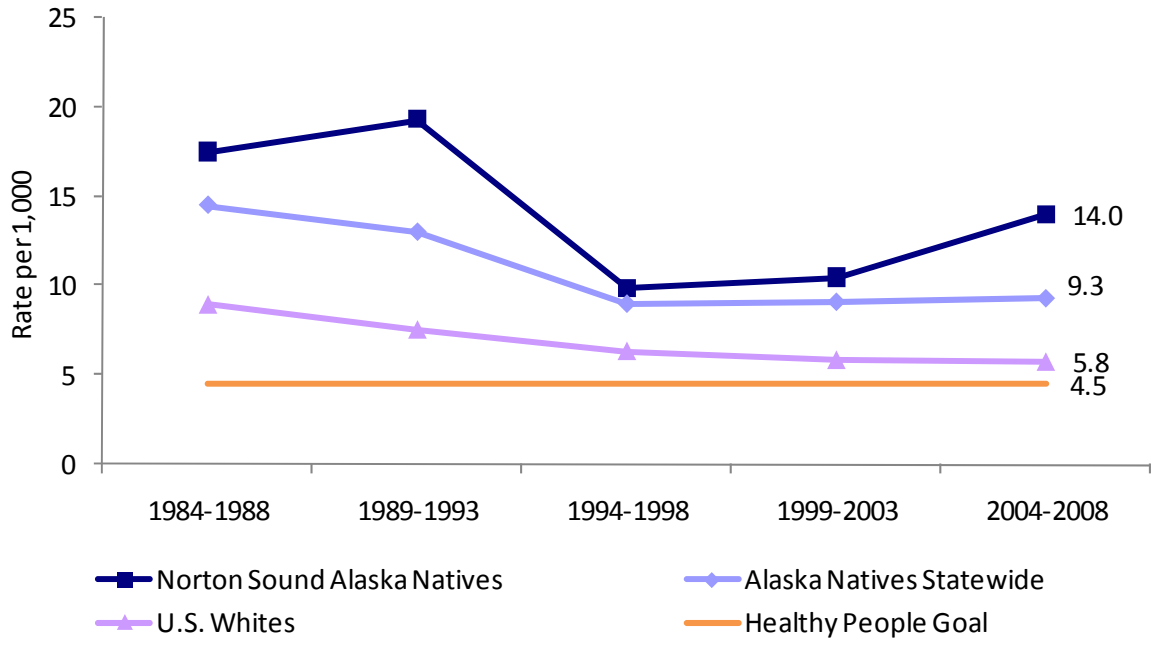
**Healthy People 2010, Goal 16.1c:** Reduce infant mortality rate to 4.5 per 1,000 live births.

**Summary**

- Infant mortality rates among Norton Sound Alaska Natives decreased 20.0% (17.5 to 14.0 per 1,000 live births) between 1984-1988 and 2004-2008 for Norton Sound Alaska Natives.
- The Norton Sound Alaska Native infant mortality rate (14.0) was more than double the U.S. White rate (5.8) during 2004-2008.

**Figure 14. Infant Mortality Rates per 1,000 Live Births, 1984-2008**

Alaska Data Source: Alaska Bureau of Vital Statistics
U.S. Data Source: Surveillance, Epidemiology, and End Results Program
Note: 2004-2008 time period, U.S. rates are calculated only on 2004-2005 data.
Data Table C-12 in Appendix



# Health Behavior

## Tobacco Use - Smoking - Adults

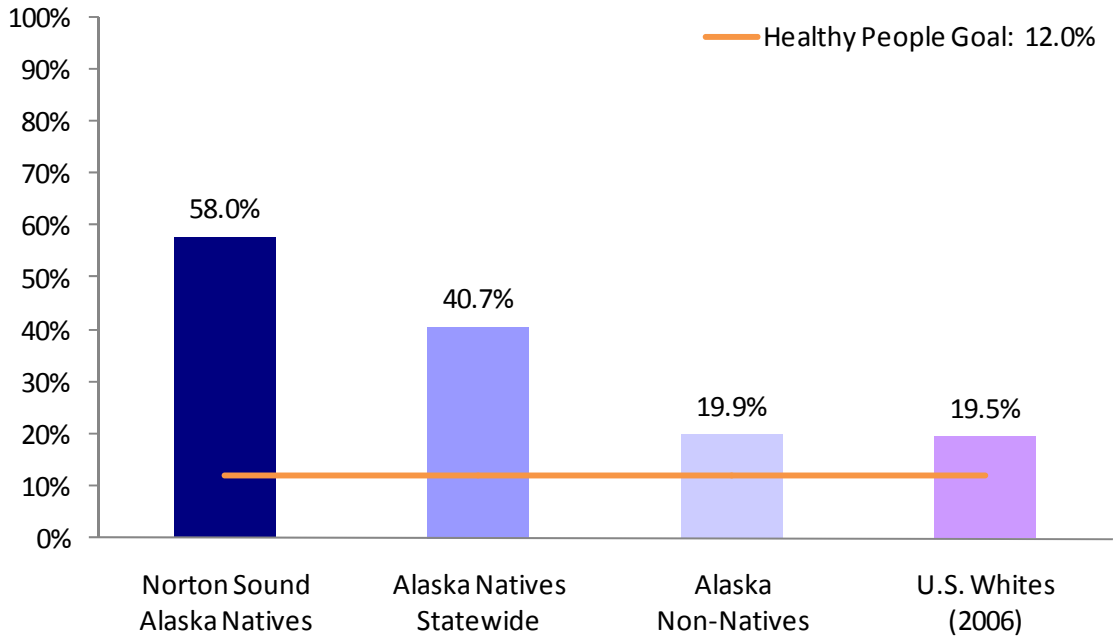
**Definition: Current smokers** are adults who smoked at least 100 cigarettes during their lifetime and currently smoke some days or everyday.

**Healthy People 2010, Goal 27.1a:** Reduce tobacco use by adults to 12.0%.

**Summary**

- Norton Sound Alaska Native people reported a current smoking prevalence of 58.0%.
- The prevalence of current smoking among Norton Sound Alaska Native people (58.0%) was significantly higher than the prevalence among Alaska Natives statewide (40.7%). This prevelance was nearly three times greater than Alaska Non-Natives (19.9%) or U.S. Whites (19.5%).

**Figure 15. Adults who are Current Smokers, 2005-2007**
Data Source: Behavioral Risk Factor Surveillance System
Data Table C-13 in Appendix



## Tobacco Use - Smokeless Tobacco - Adults

**Definition: Smokeless tobacco use** is defined as 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 2010, Goal 27.1b:** Reduce spit tobacco use by adults to 0.4%.

**Summary**

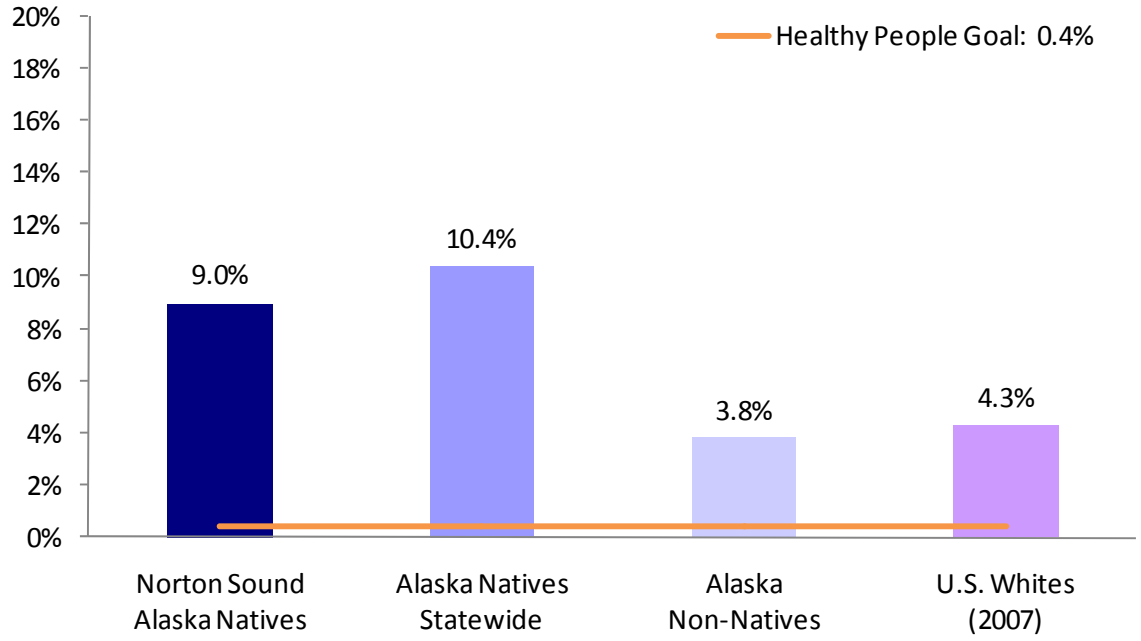
- 9.0% of Norton Sound Alaska Native people were current smokeless tobacco users.
- Norton Sound Alaska Native people were not significantly different in their prevalence of smokeless tobacco use compared to Alaska Native people statewide; however they were significantly different than Alaska Non-Natives.

**Figure 16. Current Smokeless Tobacco Users, 18 years and Older, 2005-2007**

Data Source: Behavioral Risk Factor Surveillance System

U.S. Data Source: Substance Abuse and Mental Health Services Administration. Results from the 2007 National Survey on Drug Use and Health: Detailed Tables. Rockville (MD): Substance Abuse and Mental Health Services Administration, Office of Applied Studies, 2007

Data Table C-14 in Appendix



## Alcohol Use - Binge Drinking - Adults

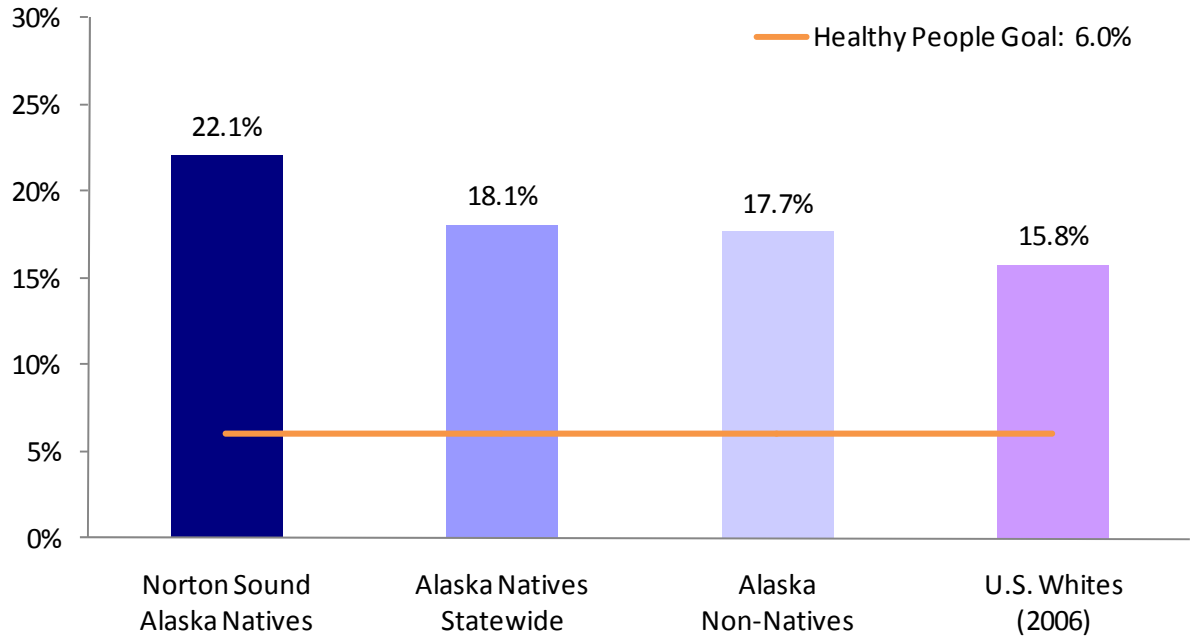
**Definition: Binge drinking** is defined as having 5 or more drinks for men or 4 or more drinks for women on one or more occasion in the past 30 days.

**Healthy People 2010, Goal 26.11c:** Reduce the percentage of adults who engage in binge drinking during past month to 6.0%.

**Summary**

- 22.1% of Norton Sound Alaska Native people reported binge drinking.
- Although it appears that Norton Sound Alaska Native people over the age of 18 reported higher rates of binge drinking than Alaska Natives statewide (18.1%), Alaska Non-Natives (17.7%), and U.S. Whites (15.8%), these differences were not statistically significant.

**Figure 17. Binge Drinking, 18 Years and Older, 2005-2007**
Data Source: Behavioral Risk Factor Surveillance System
Data Table C-15 in Appendix



## Physical Activity - Adults

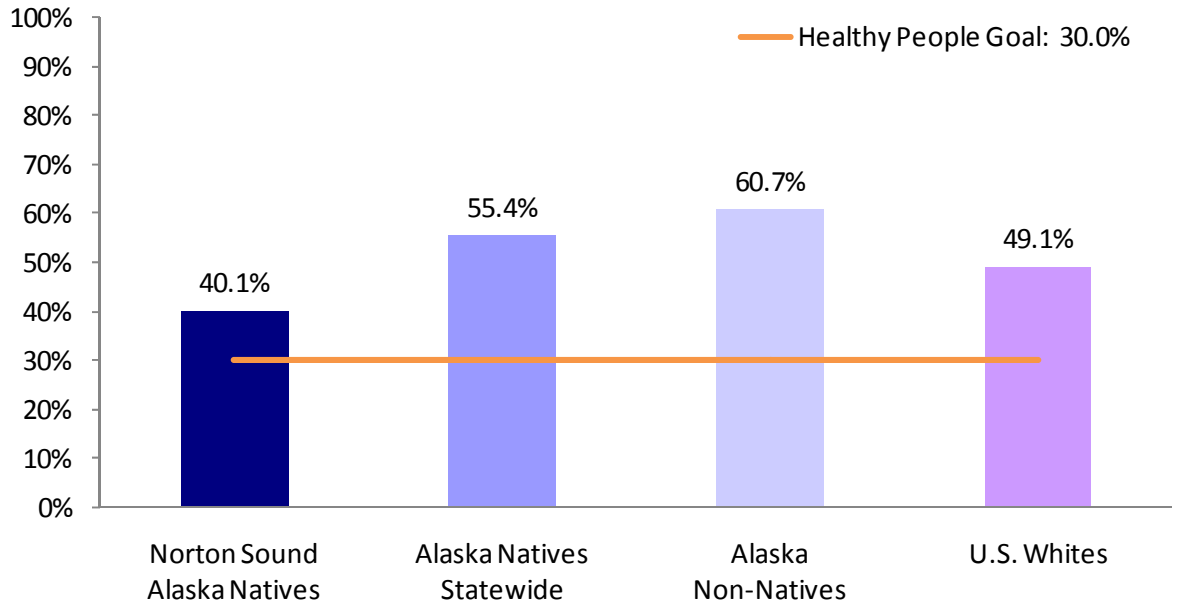
**Definition:** The recommended physical activity for adults is **moderate physical activity** which includes 30 or more minutes of physical activity on 5 or more days per week and/or vigorous physical activity which includes 20 or more minutes of vigorous physical activity on 3 or more days per week.

**Healthy People 2010, Goal 22.2:** Increase the proportion of adults who engage in regular, preferably daily, moderate physical activity to 30%.

**Summary**

- Norton Sound Alaska Native people exceeded the Healthy People 2010 goal for physical activity during 2005.
- 40.1% of Norton Sound Alaska Native people participated in moderate or vigorous physical activity in 2005. Although this appears lower than the rate of moderate or vigorous physical activity among Alaska Natives statewide (55.4%), Alaska Non-Natives (60.7%), and U.S. Whites (49.1%), these differences were not statistically significant.

**Figure 18. Adults who Meet Moderate and/or Vigorous Physical Activity Recommendations, 2005**
Data Source: Behavioral Risk Factor Surveillance System
Data Table C-16 in Appendix



## Obesity - Adults

**Definition: Obesity** is defined as having a body mass index (BMI) of 30.0 or greater.

**Healthy People 2010, Goal 19.1 and 19.2:** Increase proportion of adults who are at a healthy weight (18.5 ≤BMI< 25) to 60.0%. Reduce the proportion of adults who are obese to 15.0%.

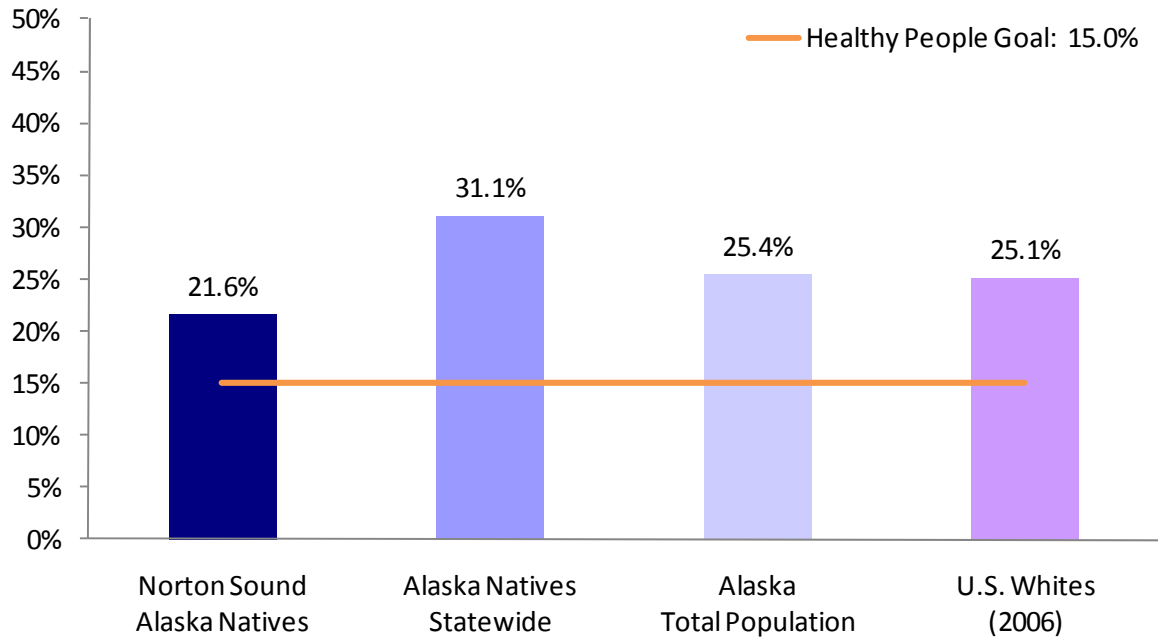
**Summary**

- One out of every five (21.6%) Norton Sound Alaska Native people reported a BMI ≥ 30.0.
- Norton Sound Alaska Native people had a significantly lower prevalence of obesity than Alaska Natives statewide (31.1%) ($p<0.05$).

**Figure 19. Obesity (BMI≥30), 18 Years and Older, 2005-2007**

Data Source: Behavioral Risk Factor Surveillance System

Data Table C-17 in Appendix



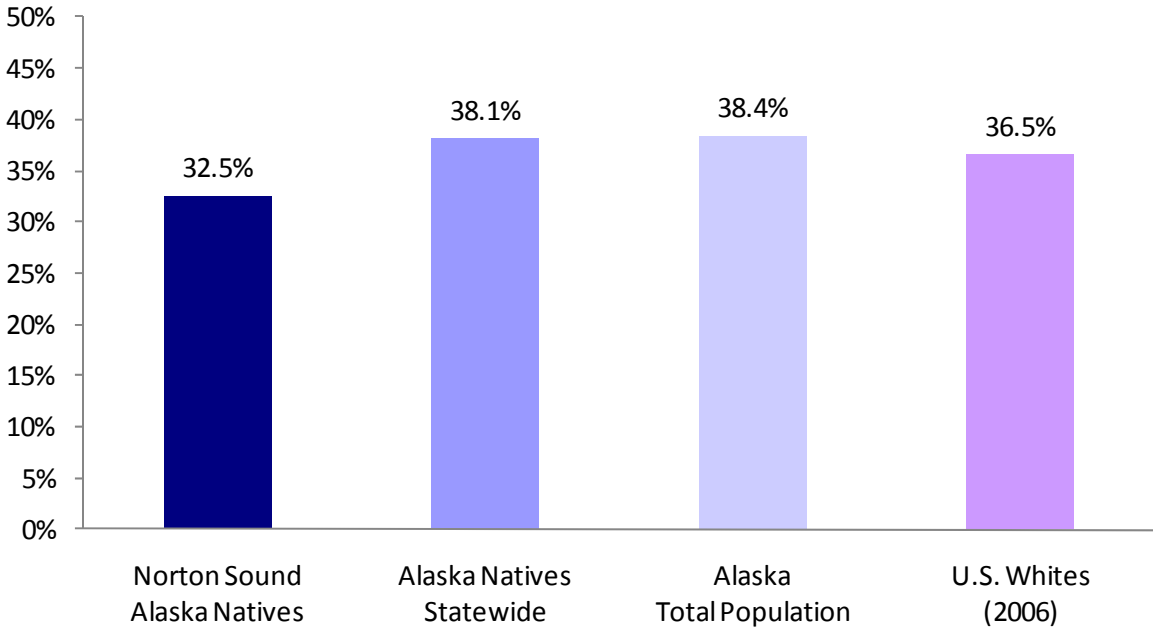
## Overweight - Adults

**Definition: Overweight** is defined as having a body mass index (BMI) from 25.0 to 29.9.

**Summary**

- 32.5% of Norton Sound Alaska Native people reported a BMI between 25.0 to 29.9.
- One out of every three (32.5%) Norton Sound Alaska Native people reported being overweight.
- The prevalence of overweight adults in Norton Sound Alaska Natives did not differ significantly from the prevalence in the other three groups.

**Figure 20. Overweight (25 ≤ BMI ≤ 29.9), 18 Years and Older, 2005-2007**
Data Source: Behavioral Risk Factor Surveillance System
Data Table C-18 in Appendix



## Abstaining from Smoking during Pregnancy

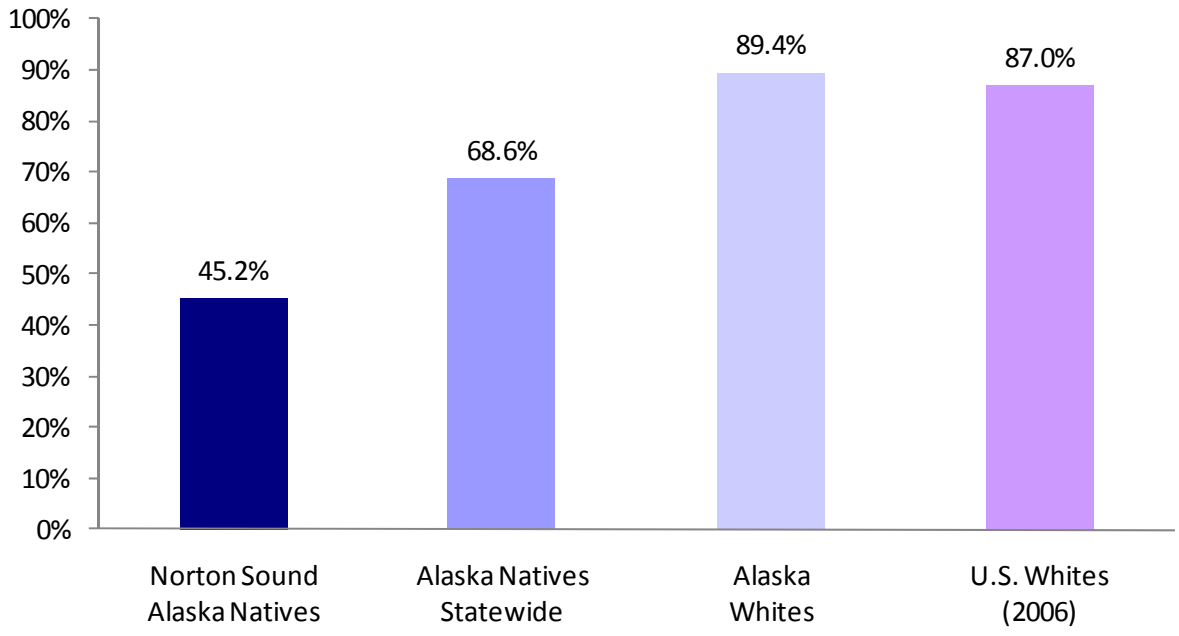
**Definition: Abstaining from smoking during pregnancy** is defined as women who reported that they did not smoke anytime during their pregnancy as documented on the birth certificate.

**Summary**

- Among Norton Sound Alaska Native mothers, 45.2% abstained from smoking during pregnancy.
- 68.6% of Alaska Native mothers, 89.4% of Alaska White mothers and 87.0% of U.S. White mothers abstained from tobacco use during pregnancy.
- The percent of Norton Sound Alaska Native mothers abstaining from smoking during pregnancy appears to be significantly different than Alaska Natives statewide, Alaska Whites or U.S. Whites.

**Figure 21. Percent of Women Reporting Abstinence from Tobacco Use During Pregnancy, 2006-2008**

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. 2010.
Data Table C-19 in Appendix



## Abstaining from Alcohol Consumption during Pregnancy

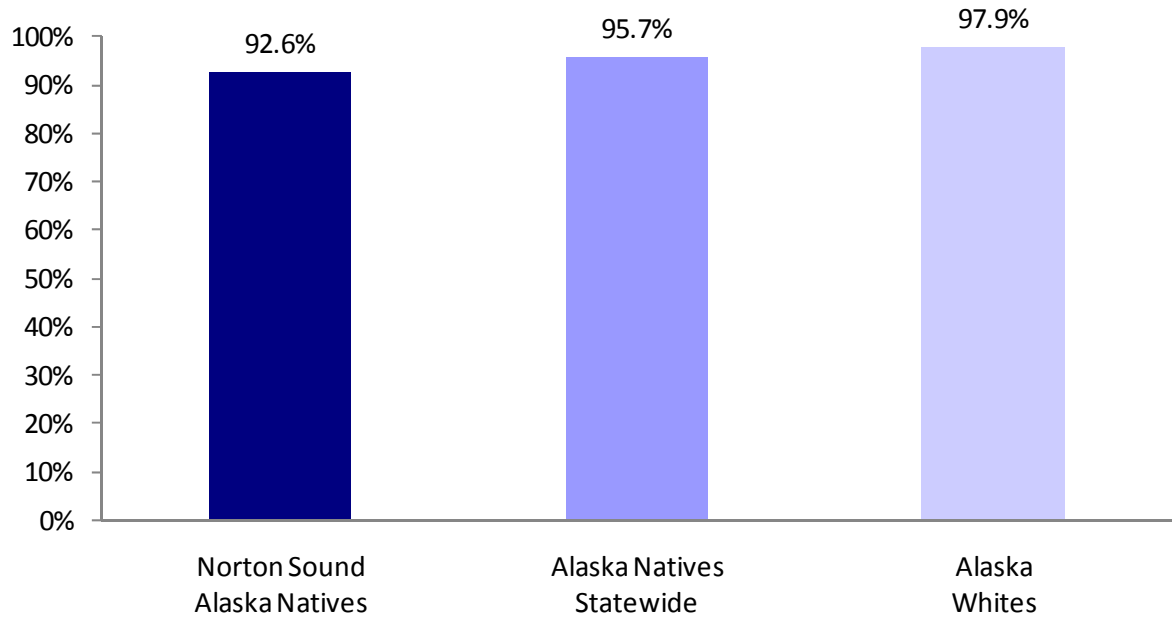
**Definition**: **Abstaining from alcohol consumption during pregnancy** is defined as women who reported that they did not drink alcohol anytime during their pregnancy as documented on the birth certificate.

**Summary**

- 92.6% of Norton Sound Alaska Native mothers abstained from alcohol during pregnancy.
- 95.7% of Alaska Native mothers and 97.9% of Alaska White mothers abstained from alcohol consumption during pregnancy.

**Figure 22. Percent of Women Reporting Abstinence from Alcohol Use During Pregnancy, 2006-2008**

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



## Overweight – Adolescents

**Definition:** In children and adolescents, **overweight** is defined as having a body mass index (BMI) greater than or equal to the 95th percentile of the CDC growth charts.

**Healthy People 2010, Goal 19.3c:** Reduce the proportion of children and adolescents who are overweight to 5.0%.

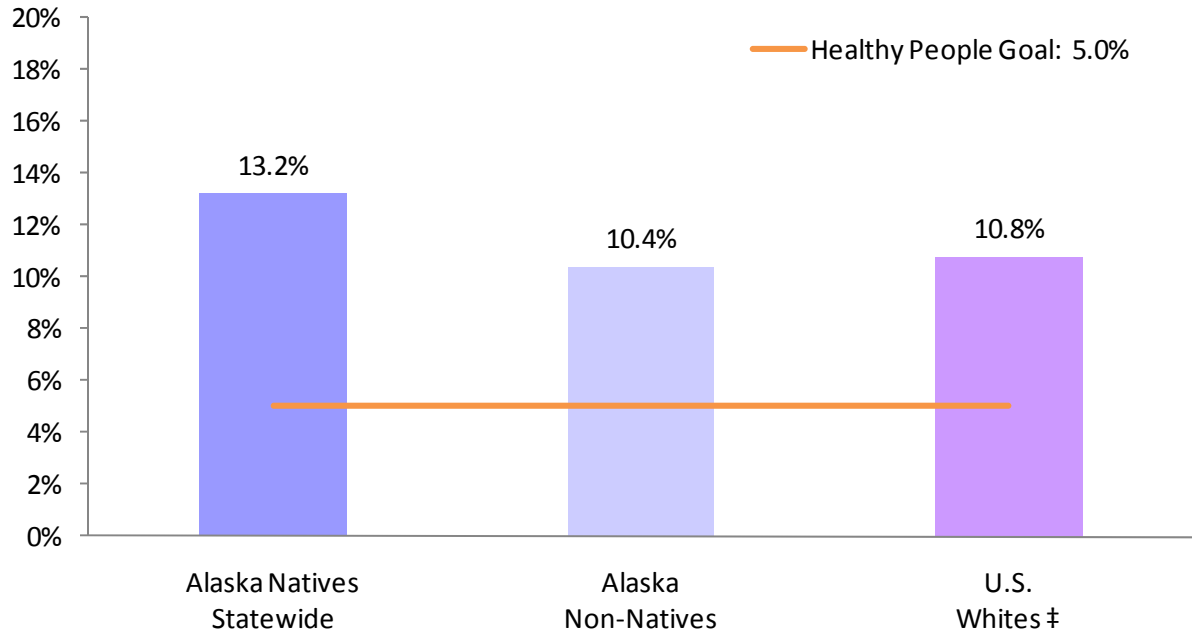
**Summary**

- 13.2% of Alaska Native high school students reported a BMI greater than or equal to the 95th percentile.
- Alaska Native youth, Alaska White youth, and U.S. White youth did not differ significantly and had not achieved the Healthy People 2010 Goal.

**Figure 23. Percent of High School Students Who are Overweight, 2007**

Data Source: Youth Risk Behavior Surveillance System

Data Table C-21 in Appendix




‡ Non-Hispanic

## Physical Activity – Adolescents

**Definition:** Recommended levels of **physical activity** for adolescents is defined as students who were physically active for a total of at least sixty minutes per day on five or more of the past seven days.

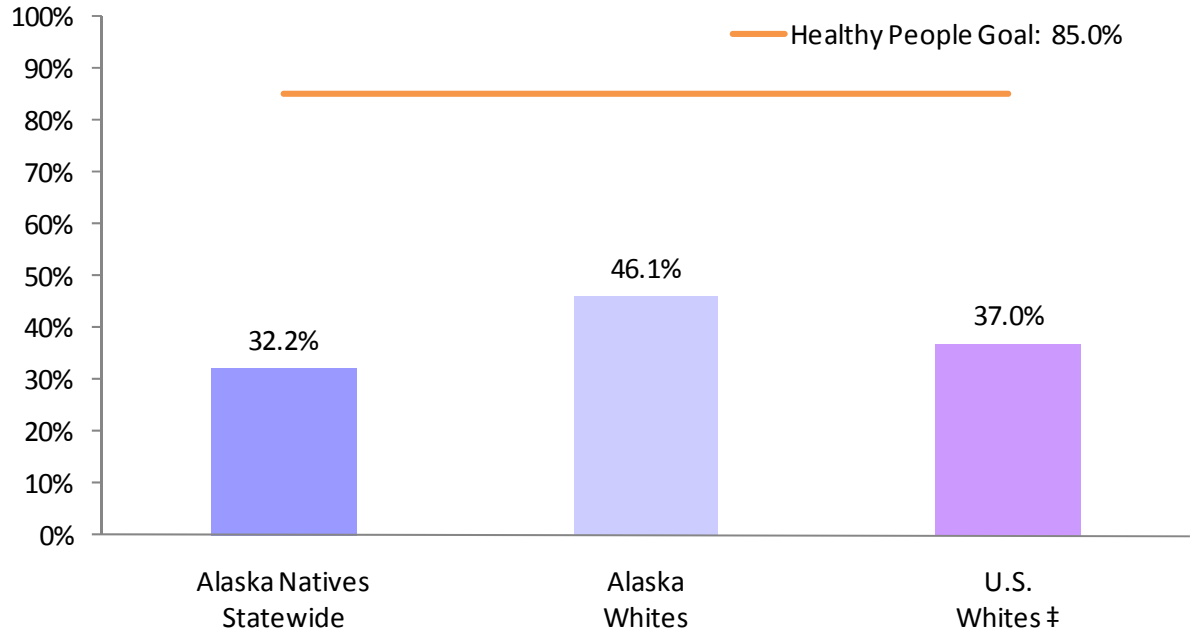
**Healthy People 2010, Goal 22.7:** Increase the proportion of adolescents who engage in recommended levels of physical activity to 85.0%.

**Summary**

- 32.2% of Alaska Native high school students engaged in recommended levels of physical activity.
- Alaska Native high school students participated in physical activity significantly less than Alaska White students (46.1%).

**Figure 24. Percent of High School Students Who are Engage in Recommended Levels of Physical Activity, 2007**

Data Source: Youth Risk Behavior Surveillance System
Data Table C-22 in Appendix




‡ Non-Hispanic

## Tobacco Use - Smoking - Adolescents

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

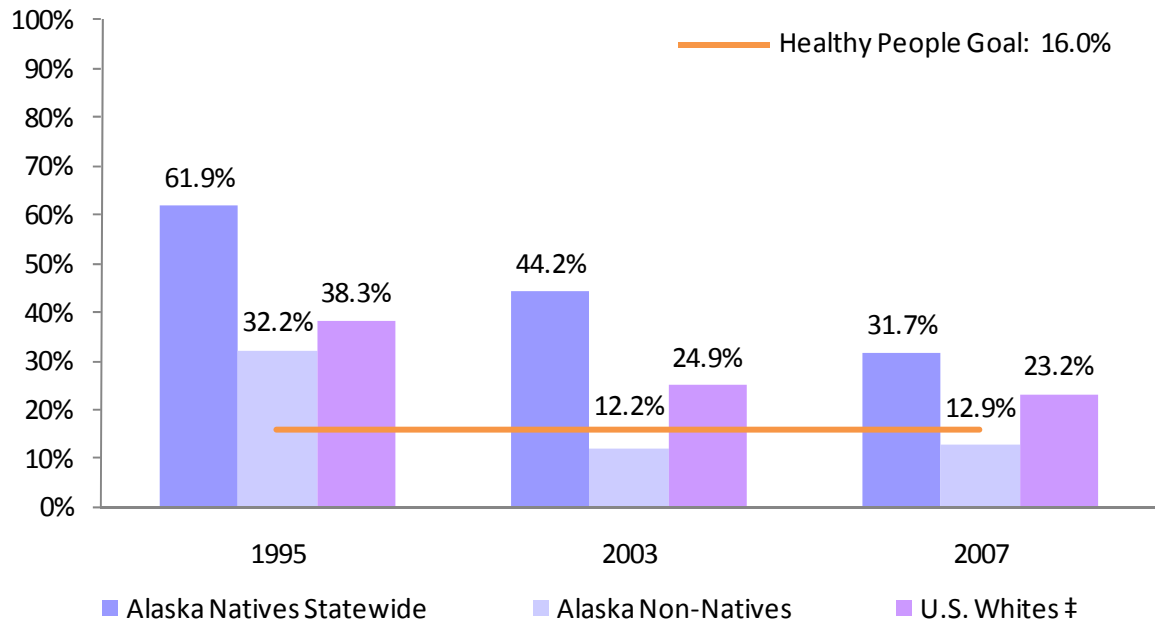
**Healthy People 2010, Goal 27.2b:** Reduce cigarette smoking by adolescents in the past month to 16.0%.

**Summary**

- Alaska Native youth reported a significantly higher prevalence of smoking (31.7%) than Alaska Non-Native (12.9%) youth in 2007 ($p<0.05$).
- Current smoking decreased among Alaska Native youth (-30.2%), Alaska Non-Native youth (-19.3%), and U.S. Whites (-15.1%) from 1995 to 2007.

**Figure 25. Percent of High School Students Who Smoked Cigarettes on One or More of the Past 30 days, 1995, 2003 and 2007**

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




‡ Non-Hispanic

## Tobacco Use - Smokeless - Adolescents

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

**Healthy People 2010, Goal 27.2c:** Reduce spit tobacco use by adolescents in the past month to 1.0%.

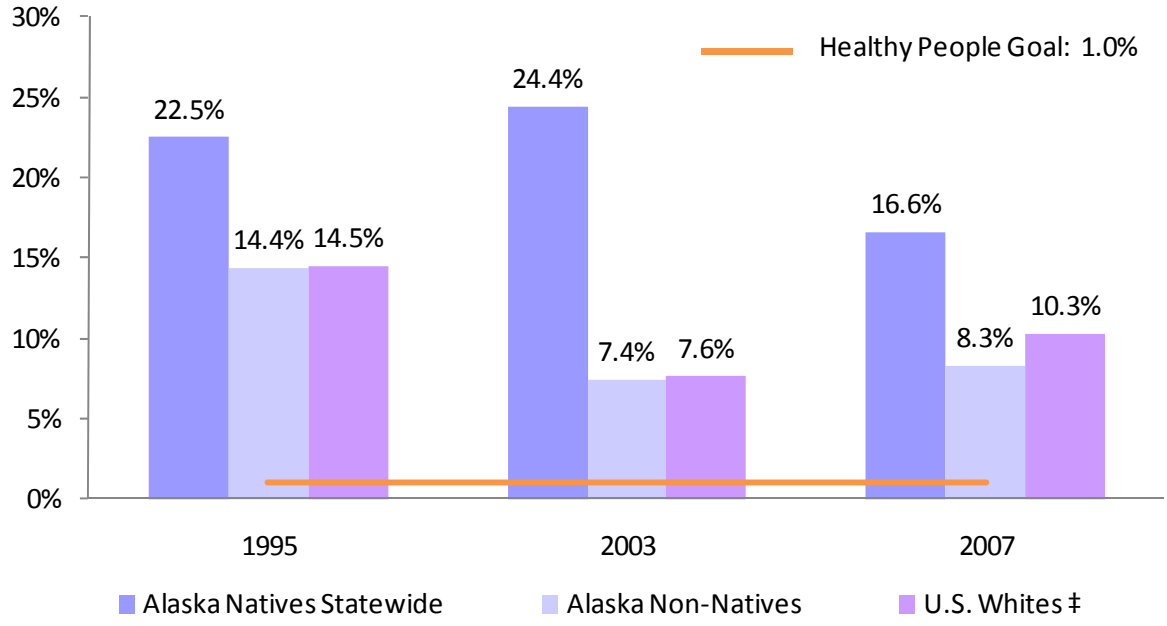
**Summary**

- The prevalence of smokeless tobacco use among Alaska Natives Statewide, Alaska Non-Natives, and U.S. White youth were all above the Healthy People Goal of 1.0% in 1995, 2003 and 2007, however, they all decreased the gap to the Healthy People Goal between 1995 and 2007.
- Current smokeless tobacco use decreased among Alaska Native youth (-5.9%), Alaska Non-Native youth (-6.1%), and U.S. Whites (-4.2%) from 1995 to 2007.

**Figure 26. Percent of High School Students Who Used Chewing Tobacco or Snuff on One or More of the Past 30 days, 1995, 2003 and 2007**

Data Source: Youth Risk Behavior Surveillance System

Data Table C-24 in Appendix




‡ Non-Hispanic

## Alcohol Use - Adolescents

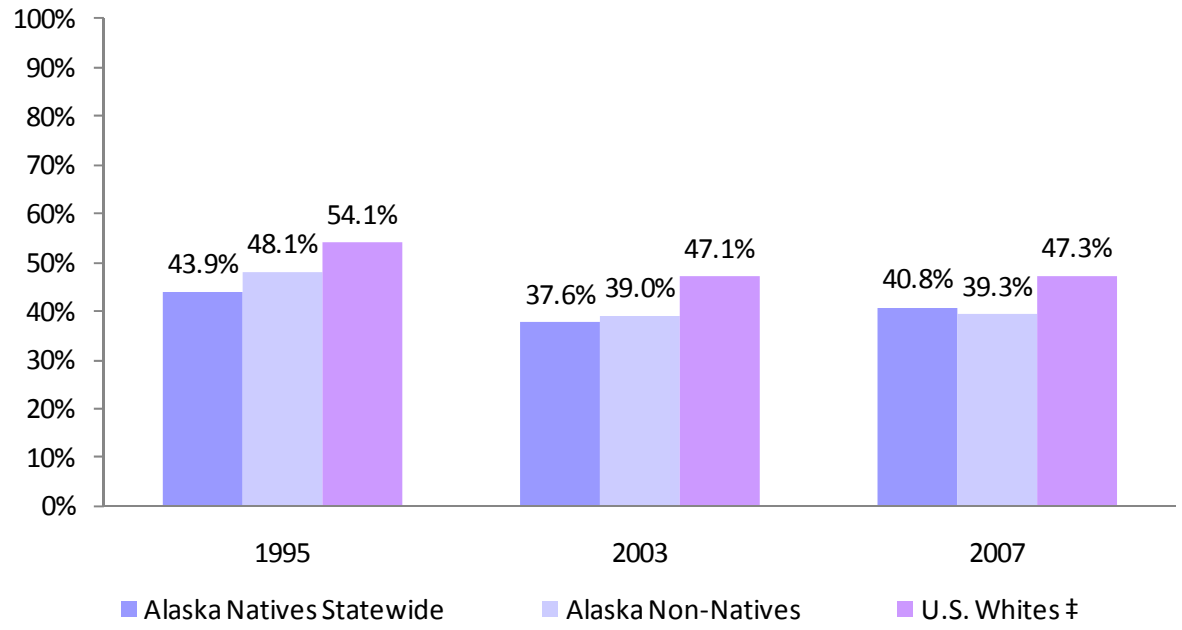
**Definition: Adolescent alcohol use** is the percent of high school students, grades 9-12, who consumed alcohol in the past 30 days.

**Summary**

- 40.8% of Alaska Native, 39.3% of Alaska Non-Native, and 47.3% of U.S. White high school students reported drinking in the past thirty days in 2007.
- The prevalence of current drinking among high school students decreased 3.1% for Alaska Natives, 8.8% for Alaska Non-Natives, and 6.8% for U.S. Whites from 1995 to 2007.

**Figure 27. Percent of High School Students Who Had at Least One Drink of Alcohol on One or More of the Past 30 days, 1995, 2003 and 2007**

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




‡ Non-Hispanic

## Responsible Sexual Behavior - Adolescents

**Definition: Responsible sexual behavior** of adolescents, grades 9-12, is defined as having ever engaged in sexual intercourse.

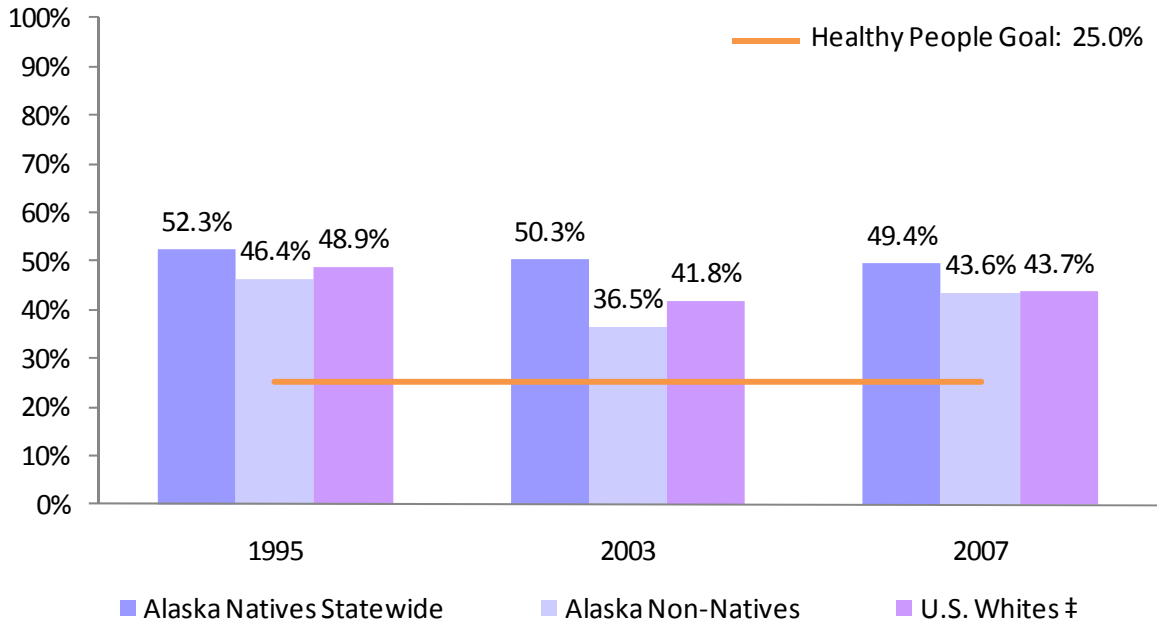
**Healthy People 2010, Goal 25.11:** Decrease the proportion of adolescents who engage in sexual intercourse to below 25%.

**Summary**

- One-half of Alaska Native high school students are sexually active.
- Alaska Native youth, Alaska Non-Native youth and U.S. White youth did not reach the Healthy People Goal.

**Figure 28. Percent of High School Students Who Have Ever Engaged in Sexual Intercourse, 1995, 2003 and 2007**

Data Source: Youth Risk Behavior Surveillance System
Data Table C-26 in Appendix




‡ Non-Hispanic

## Substance Use - Marijuana - Adolescents

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

**Healthy People 2010, Goal 26.10b:** Reduce the proportion of adolescents reporting the use of marijuana during the past 30 days to 0.7%.

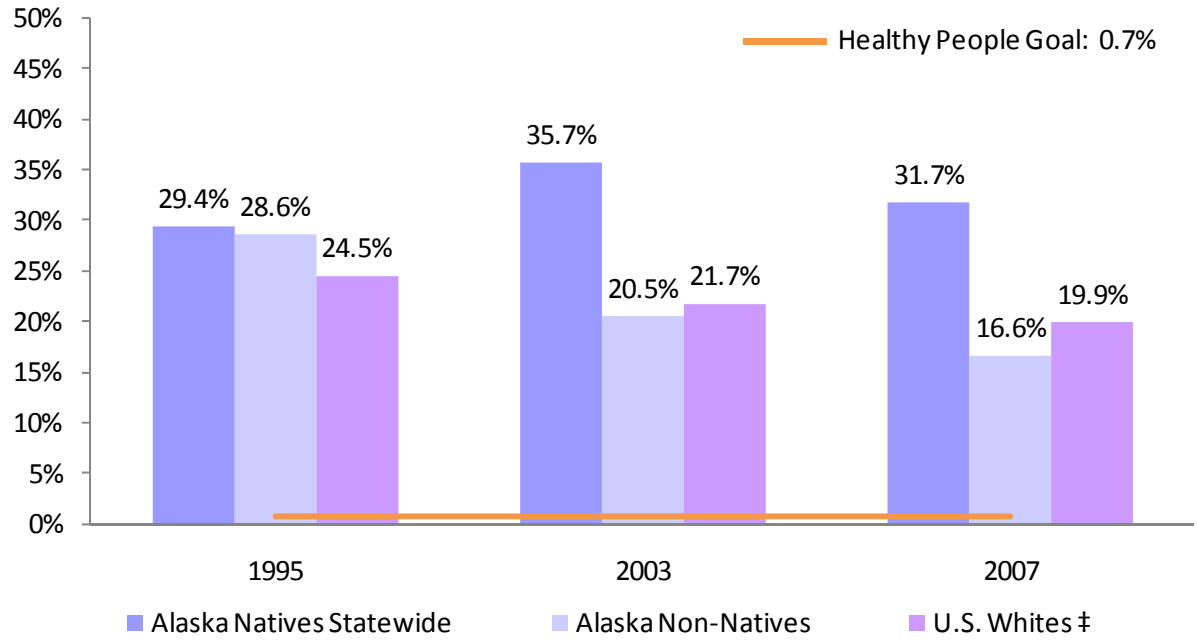
**Summary**

- Alaska Native students (31.7%) reported a significantly higher percent of using marijuana in the past 30 days than Alaska Non-Native (16.6%) and U.S. White (19.9%) students ($p<0.05$).
- The prevalence of marijuana use among Alaska Native high school students increased 2.3% between 1995 and 2007, while it decreased among Alaska Non-Native (-12.0%) and U.S. White (-4.6%) high school students during the same period.

**Figure 29. Percent of High School Students Who Used Marijuana on One or More of the Past 30 days, 1995, 2003 and 2007**

Data Source: Youth Risk Behavior Surveillance System

Data Table C-27 in Appendix




‡ Non-Hispanic

## Substance Use - Cocaine - Adolescents

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

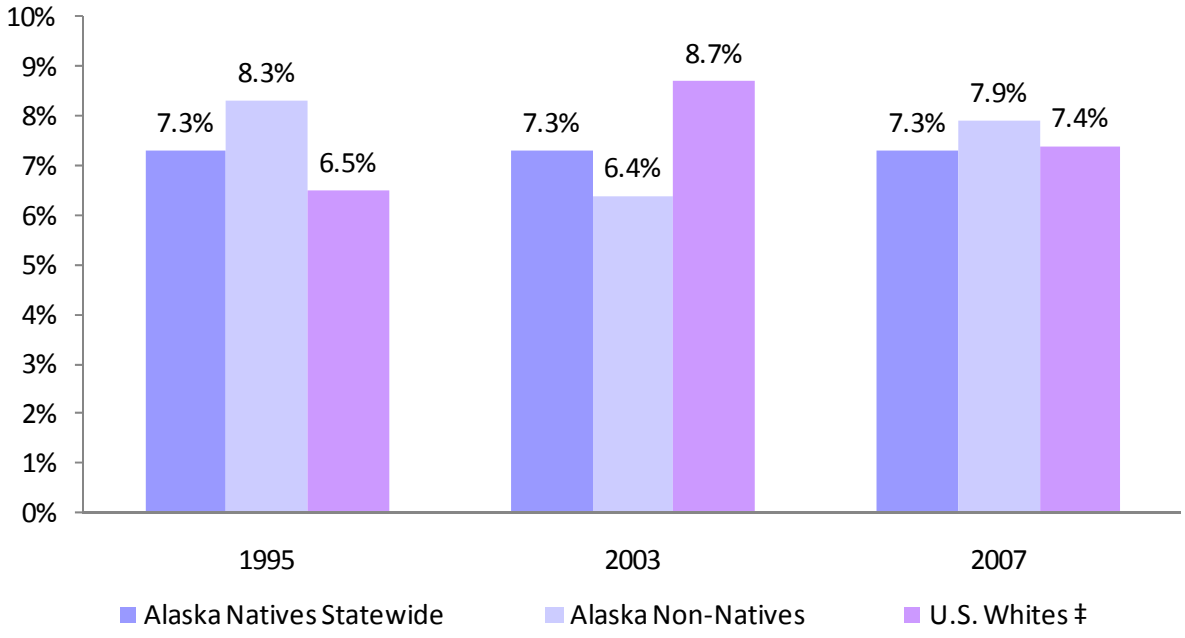
**Summary**

- Alaska Native students (7.3%), Alaska Non-Native (7.9%), and U.S. White students (7.4%) reported a similar prevalence of cocaine use.
- The prevalence of cocaine use among Alaska Natives statewide, Alaska Non-Native and U.S. White high school students did not change significantly between 1995 and 2007.

**Figure 30. Percent of High School Students Who Used Any Form of Cocaine, Including Powder, Crack or Freebase During their Lifetime, 1995, 2003 and 2007**

Data Source: Youth Risk Behavior Surveillance System

Data Table C-28 in Appendix




‡ Non-Hispanic

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# Health Indicators

## Leading Causes of Hospital Inpatient Discharges

**Definition:** A **hospital discharge** is represented by the primary International Classification of Disease discharge diagnosis for inpatient visits as reported to the Indian Health Service's National Patient Information Reporting System for the federal fiscal year.

**Summary**

- Normal pregnancy and delivery of newborn infants accounted for the top cause of hospitalizations in Norton Sound (20.0%) in FY 2009.
- The top 10 discharge diagnoses accounted for 63.6% of the hospitalizations in Norton Sound.
- The average length of hospitalization stay in Norton Sound was 3.7 days.

**Table 5. Leading Causes of Hospital Discharges, Norton Sound, Federal Fiscal Year 2009**
Data Source: National Patient Information Reporting System - Indian Health Service National Data Warehouse

| Primary Discharge Diagnosis Clinical Classification Group by Rank | N | % | Total Days | Average Length of Stay |
|---|---|---|---|---|
| 1. Normal pregnancy and/or delivery | 157 | 20.0% | 979 | 6.2 |
| 2. Liveborn | 88 | 11.2% | 138 | 1.6 |
| 3. Pneumonia‡ | 66 | 8.4% | 301 | 4.6 |
| 4. Alcohol-related disorders | 53 | 6.8% | 174 | 3.3 |
| 5. Poisoning by other medications and drugs | 30 | 3.8% | 69 | 2.3 |
| 6. Other complications of birth; puerperium affecting management of mother | 25 | 3.2% | 101 | 4.0 |
| 7. Other complications of pregnancy | 24 | 3.1% | 44 | 1.8 |
| 8. Acute bronchitis | 22 | 2.8% | 55 | 2.5 |
| 9. Mood disorders | 19 | 2.4% | 71 | 3.7 |
| 10. Chronic obstructive pulmonary disease and bronchiectasis | 15 | 1.9% | 57 | 3.8 |
| **All Other Causes** | **270** | **34.4%** | **819** | **3.0** |
| **Total** | **784** | **100.0%** | **2,866** | **3.7** |

‡Does not include discharges for pneumonia associated with tuberculosis or sexually transmitted diseases.

## Leading Causes of Outpatient Visits

**Definition:** An **outpatient visit** is represented by the primary International Classification of Disease diagnosis for ambulatory care 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 Norton Sound during Federal Fiscal Year 2009 were: other upper respiratory infections, otitis media, and alcohol-related disorders.
- The top 15 causes of outpatient visits accounted for 50.1% of the workload.

**Table 6. Leading Causes of Outpatient Visits, Norton Sound, Federal Fiscal Year 2009**

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

| Outpatient Visits in Clinical Classification Categories by Rank | N | % |
|---|---|---|
| 1. Other upper respiratory infections | 5,213 | 8.4% |
| 2. Otitis media and related conditions | 2,925 | 4.7% |
| 3. Alcohol-related disorders | 2,640 | 4.3% |
| 4. Blindness and vision defects | 2,385 | 3.9% |
| 5. Other ear and sense organ disorders | 2,343 | 3.8% |
| 6. Administrative/social | 2,209 | 3.6% |
| 7. Immunizations and screening for infectious disease | 1,912 | 3.1% |
| 8. Other aftercare | 1,862 | 3.0% |
| 9. Medical examination/evaluation | 1,549 | 2.5% |
| 10. Spondylosis; intervertebral disc disorders; other back problems | 1,419 | 2.3% |
| 11. Other non-traumatic joint disorders | 1,411 | 2.3% |
| 12. Normal pregnancy and/or delivery | 1,386 | 2.2% |
| 13. Other screening for suspected conditions (not mental disorders or infectious disease) | 1,337 | 2.2% |
| 14. Abdominal pain | 1,220 | 2.0% |
| 15. Skin and subcutaneous tissue infections | 1,096 | 1.8% |
| **All Other Causes** | **30,826** | **49.9%** |
| **Total** | **617,433** | **100.0%** |

Note: Data includes outpatient visits from the following clinics: Brevig, Elim, Gambell, Golovin, Koyuk, Little Diomede, Norton Sound Hospital, Savoonga, Shaktoolik, Shishmaref, St. Michael, Stebbins, Teller, Unalakleet, Wales, and White Mountain.

## Leading Causes of Injury Hospitalizations

**Definition:** An **injury hospitalization** is defined as having sustained an injury that results in either an inpatient admission or transfer to an acute care facility.

**Summary**

- Falls were the leading causes of injury hospitalizations from 1991-2003 among Norton Sound Alaska Natives. The rate of fall hospitalizations was similar to that of Alaska Natives Statewide.
- The motor vehicle accident hospitalization rate for Norton Sound Alaska Natives (0.7) was significantly lower than that for Alaska Natives statewide ($p<0.05$).
- Norton Sound Alaska Native people were 1.7 times more likely to be hospitalized for suicide attempts, 2.4 times more likely to be hospitalized for ATV injuries, and 1.8 times more likely to be hospitalized for snowmachine injuries than Alaska Natives Statewide ($p<0.05$) .
- Norton Sound Alaska Native people had a total injury hospitalization rate of 162.2 per 10,000, which was significantly higher than Alaska Natives Statewide ($p<0.05$).

**Table 7. Leading Causes of Injury Hospitalizations, Norton Sound Alaska Natives, 1991-2003**

Primary Data Source: Alaska Trauma Registry

Secondary Data Source: Alaska Native Injury Atlas of Mortality and Morbidity, The Injury Prevention Program and the Alaska Native Epidemiology Center, January 2008

| Leading Causes | N | % | Age-Adjusted Rate per 10,000 | Rate Ratio[1]: Norton Sound vs. Alaska Natives Statewide |
|---|---|---|---|---|
| Falls | 328 | 24% | 38.4 | 1.0 |
| Suicide Attempt | 292 | 21% | 34.2 | 1.7* |
| Assault | 130 | 9% | 15.2 | 0.8 |
| ATV | 125 | 9% | 14.6 | 2.4* |
| Snowmachine | 116 | 8% | 13.6 | 1.8* |
| Motor Vehicle | 78 | 6% | 9.1 | 0.7* |
| Other | 316 | 23% | | |
| **Total Injury** | **1,385** | **100%** | **162.2** | **1.2*** |
| **Total Unintentional** | **945** | **68%** | **110.7** | **1.1** |

[1] 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 $p<0.05$ level

## Injury Hospitalizations - Unintentional Injuries and Falls

**Figure 31. Unintentional Injury Hospitalization Rate by Region, Alaska Natives, Rate per 10,000, 1991-2003**

Primary Data Source: Alaska Trauma Registry

Secondary Data Source: Alaska Native Injury Atlas of Mortality and Morbidity, The Injury Prevention Program and the Alaska Native Epidemiology Center, January 2008

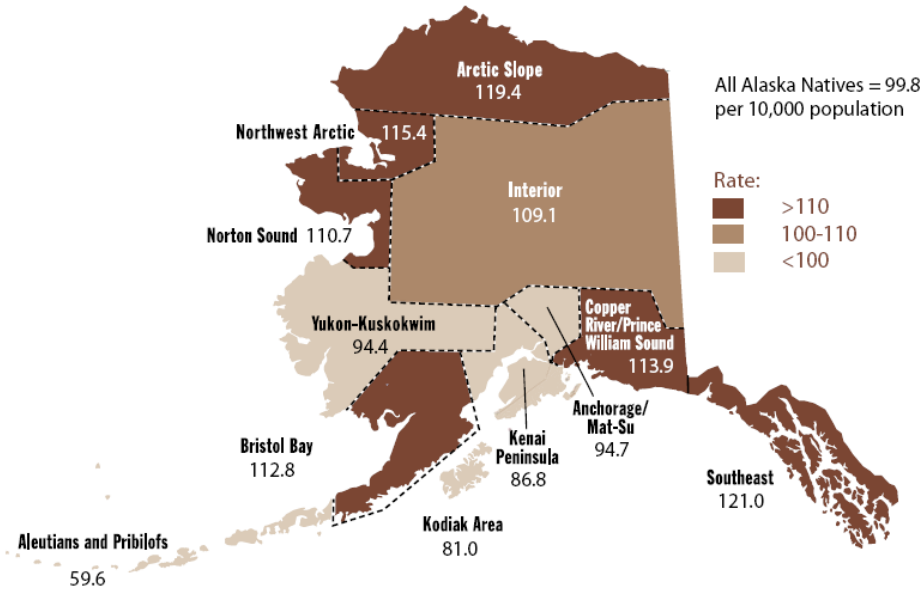
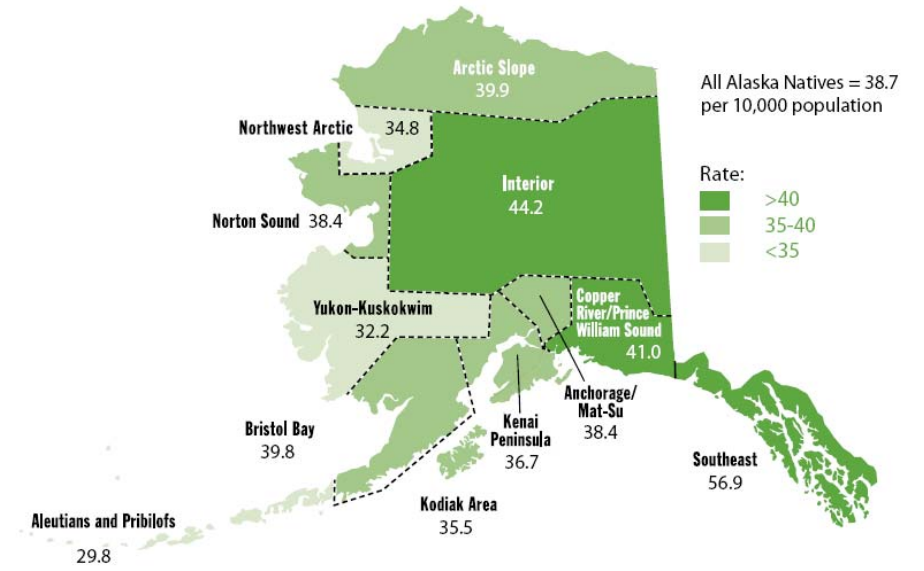



**Figure 32. Fall Hospitalization Rate by Region, Alaska Natives, Rate per 10,000, 1991-2003**

Primary Data Source: Alaska Trauma Registry

Secondary Data Source: Alaska Native Injury Atlas of Mortality and Morbidity, The Injury Prevention Program and the Alaska Native Epidemiology Center, January 2008



## Injury Hospitalizations - Suicide Attempts and Assaults

**Figure 33. Hospitalization Rate for Suicide Attempts by Region, Alaska Natives, Rate per 10,000, 1991-2003**

Primary Data Source: Alaska Trauma Registry

Secondary Data Source: Alaska Native Injury Atlas of Mortality and Morbidity, The Injury Prevention Program and the Alaska Native Epidemiology Center, January 2008

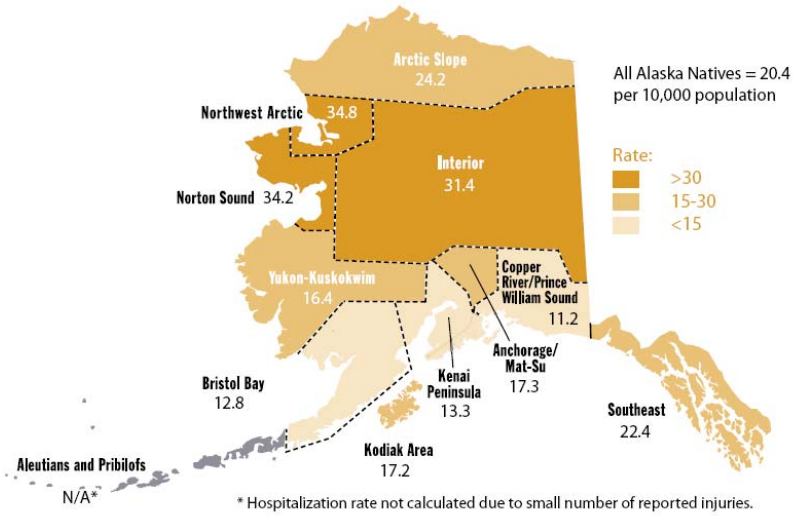
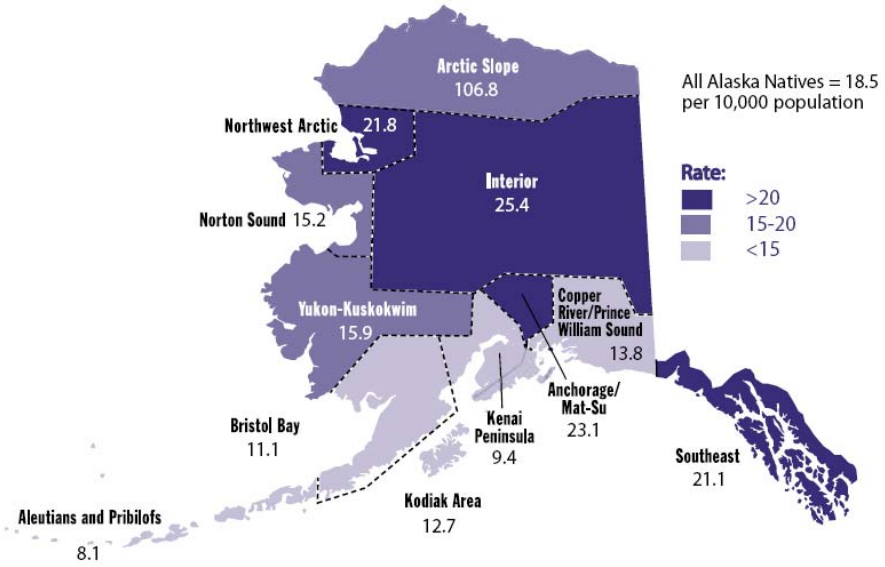



**Figure 34. Hospitalization Rate for Assault Injuries by Region, Alaska Natives, Rate per 10,000, 1991-2003**

Primary Data Source: Alaska Trauma Registry

Secondary Data Source: Alaska Native Injury Atlas of Mortality and Morbidity, The Injury Prevention Program and the Alaska Native Epidemiology Center, January 2008



## Leading Cancers

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

**Summary**

- The most frequently diagnosed cancers for Norton Sound Alaska Natives during 1998-2007 were Lung (24.1%), Colorectal (23.6%), and Breast (9.9%).
- The top three cancers accounted for over half (57.5%) of all cancer for Norton Sound Alaska Natives.

**Table 8. Leading Cancers, Norton Sound Alaska Natives, 1998-2007**
Data Source: Surveillance, Epidemiology, and End Results Programs

| Site of Cancer by Rank | N | % |
|---|---|---|
| 1. Lung | 51 | 24.1% |
| 2. Colorectal | 50 | 23.6% |
| 3. Breast | 21 | 9.9% |
| 4. Stomach | 17 | 8.0% |
| 5. Oral Cancers | 7 | 3.3% |
| 6. Esophageal | 5 | 2.4% |
| 7. Liver | 5 | 2.4% |
| 8. Pancreas | 5 | 2.4% |
| **All Other Cancers** | **51** | **24.1%** |
| **Total** | **212** | **100.0%** |

## Diabetes

**Definition: Diabetes** is a metabolic disease characterized by high blood sugar levels, which result from defects in insulin secretion, insulin action, or both. The measures for diabetes include diabetes prevalence, and the percent increase of diabetes prevalence.

**Healthy People 2010, Goal 5.3:** Reduce the overall cases of diabetes that are clinically diagnosed to 25 per 1,000 population.

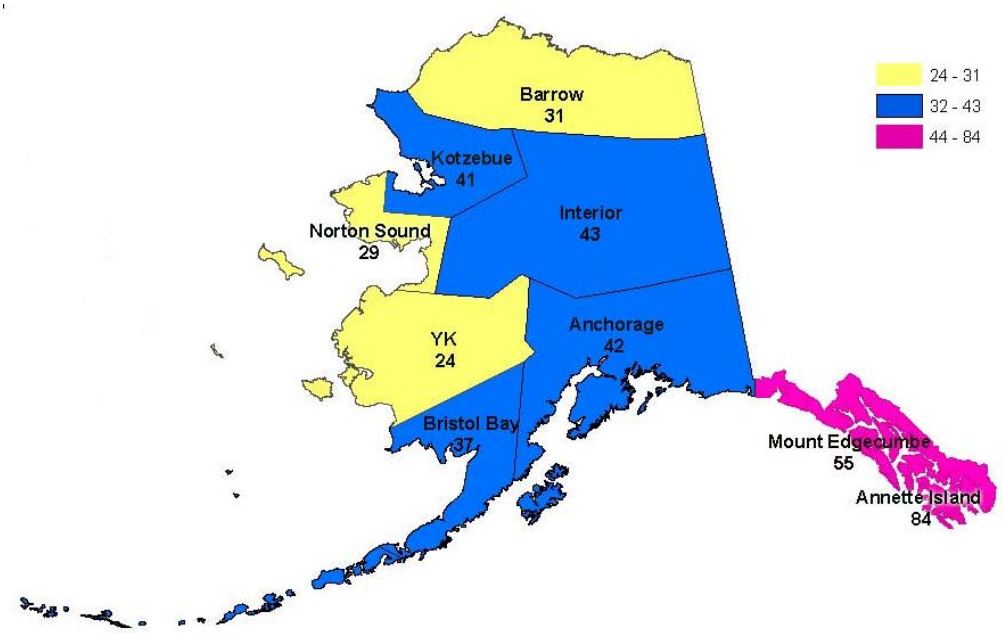
**Summary**

- The 2007 age-adjusted prevalence of diabetes among Norton Sound Alaska Native people was 29 per 1,000 people. This is lower than the prevalence of diabetes among Alaska Native people statewide (40 per 1,000 people).
- The prevalence of diabetes increased 201% from 1990 to 2007 among Norton Sound Alaska Native people. The Alaska Native statewide diabetes prevalence increase was 117% for the same time period.

**Figure 35. Diabetes Prevalence among Alaska Natives, Rate per 1,000, 2007**

Data Source: Alaska Area Diabetes Registry

*The I.H.S. user population is the denominator and the data was age-adjusted to the Standard U.S. 2000 Population.

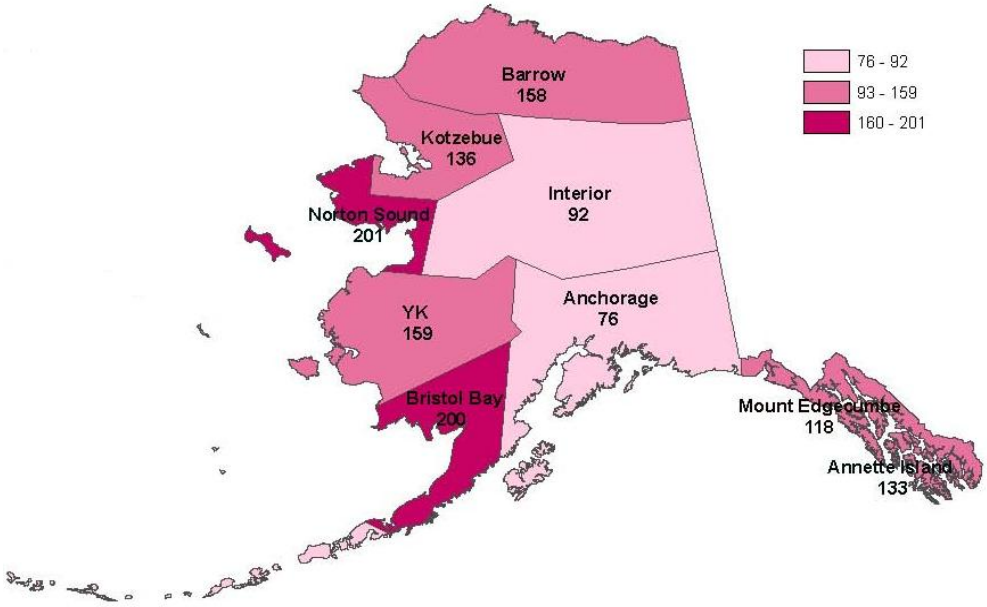


## Diabetes

**Figure 36. Percent Increase in Diabetes Prevalence among Alaska Natives, 1990-2007**

Data Source: Alaska Area Diabetes Registry

*The I.H.S. user population is the denominator and the data was age-adjusted to the Standard U.S. 2000 Population.



## Low Birth Weight

**Definition: Low birth weight** is defined as a birth weight of less than 2,500 grams.

**Healthy People 2010, Goal 16.10a**: Reduce low birth weight to at most 4.5% of live births.

**Summary**

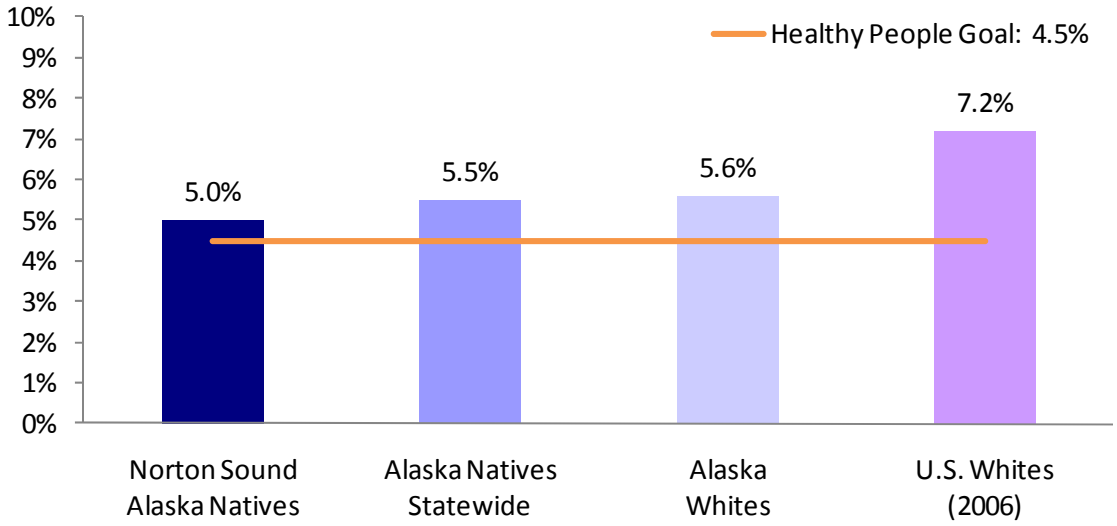
- 5.0% of Alaska Native live births in the Norton Sound region were born with low birth weight. This is very close to the Healthy People 2010 Goal.

**Figure 37. Percentage of Live Births with Low Birth Weight, 2006-2008**

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. 2010.

Data Table C-29 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.

**Healthy People 2010, Goal 16.2:** Reduce pregnancies among adolescent females to 43.0 per 1,000 females (15 to 17 years).

**NOTE:** Data presented are for teen births aged 15-19 years. The Healthy People 2010 Goals are to reduce teen births aged 15-17 years.

**Summary**

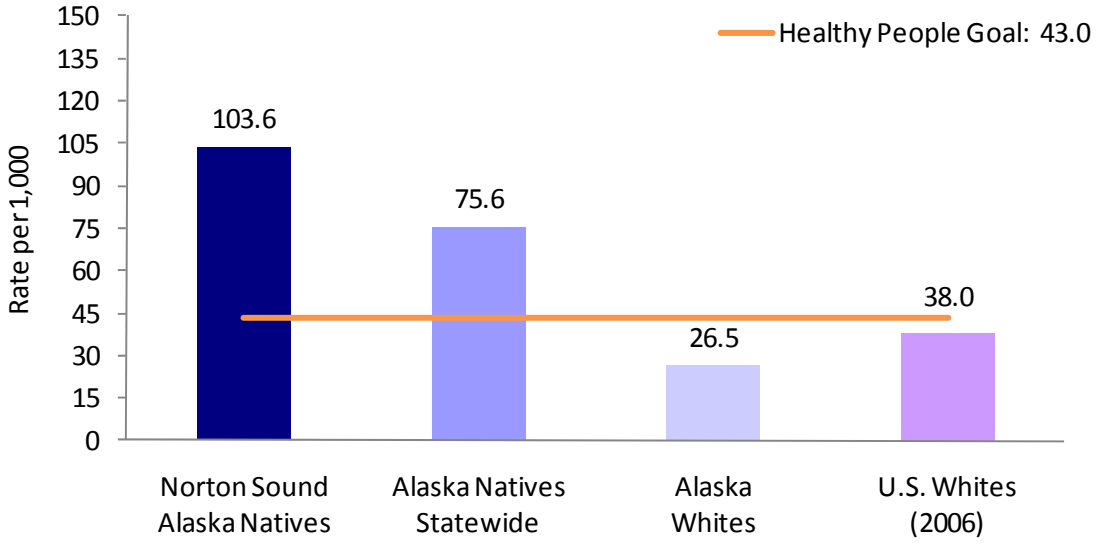
- The teen birth rate among Norton Sound Alaska Native teens was 103.6, and among Alaska Natives statewide it was 75.6 per 1,000 live births.
- The teen birth rate for Norton Sound Alaska Native teens was 1.4 times the teen birth rate of Alaska Natives statewide (75.6) and 2.7 times the rate of U.S. Whites (38.0), respectively.

**Figure 38. Teen Birth Rate per 1,000 Live Births, Females 15-19 Years, 2004-2006**

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: Martin TA, Hamilton BE, Sutton PD, Ventura ST, Menacker F, Kirmeyer S, Mathews TJ. Births: Final data for 2006. National Vital Statistics Reports 2009; 57(7).

Data Table C-30 in Appendix



## Sexually Transmitted Infections - Gonorrhea

Definition: **Gonorrhea** is a sexually transmitted infection caused by the bacterium *Neisseria gonorrhea*.

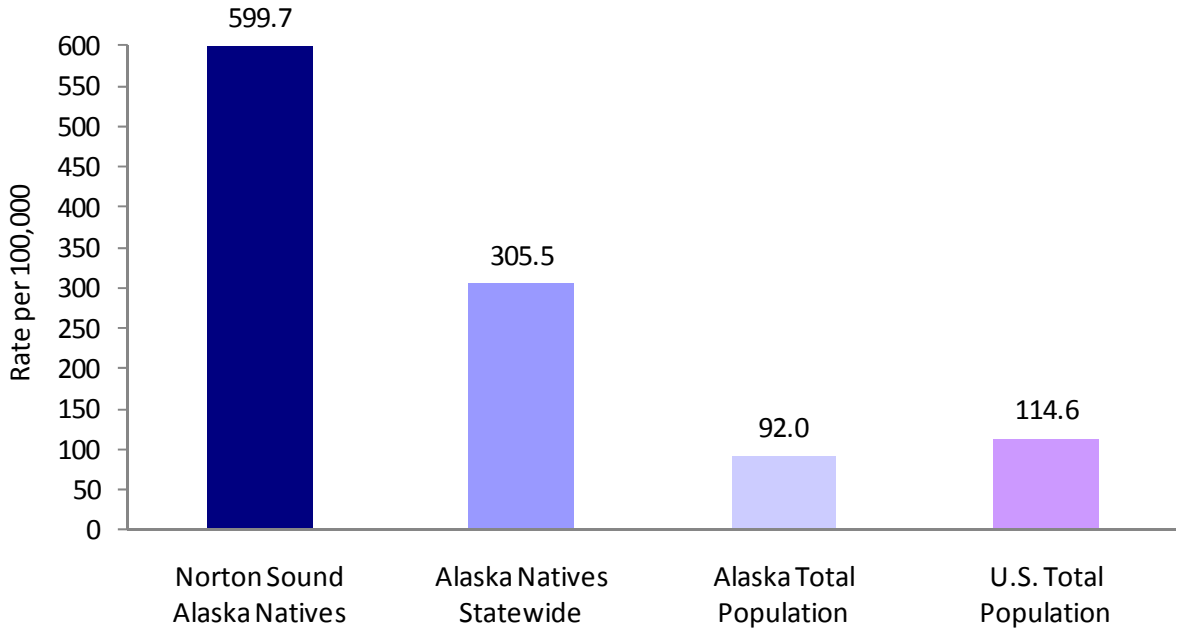
**Summary**

- The gonorrhea rate for Norton Sound Alaska Natives (599.7) was 2.0 times the rate of gonorrhea for Alaska Natives statewide (305.5), and over five times that of the Alaska total population and the U.S. total population.
- The gonorrhea rate for Alaska Natives statewide (305.5) was 2.7 times the rate of gonorrhea for the U.S. total population (114.6).

**Figure 39. Gonorrhea Rate for Alaska Native People Statewide per 100,000 population, 2005**

Alaska Data Source: State of Alaska Epidemiology - HIV/STD Program and Center for Disease Control and Prevention Division of Sexually Transmitted Disease Prevention

U.S. Data Source: National Center for Health Statistics. Health, United States, 2009: With Special Feature on Medical Technology. Hyattsville, MD. 2010.



## Sexually Transmitted Infections - Chlamydia

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

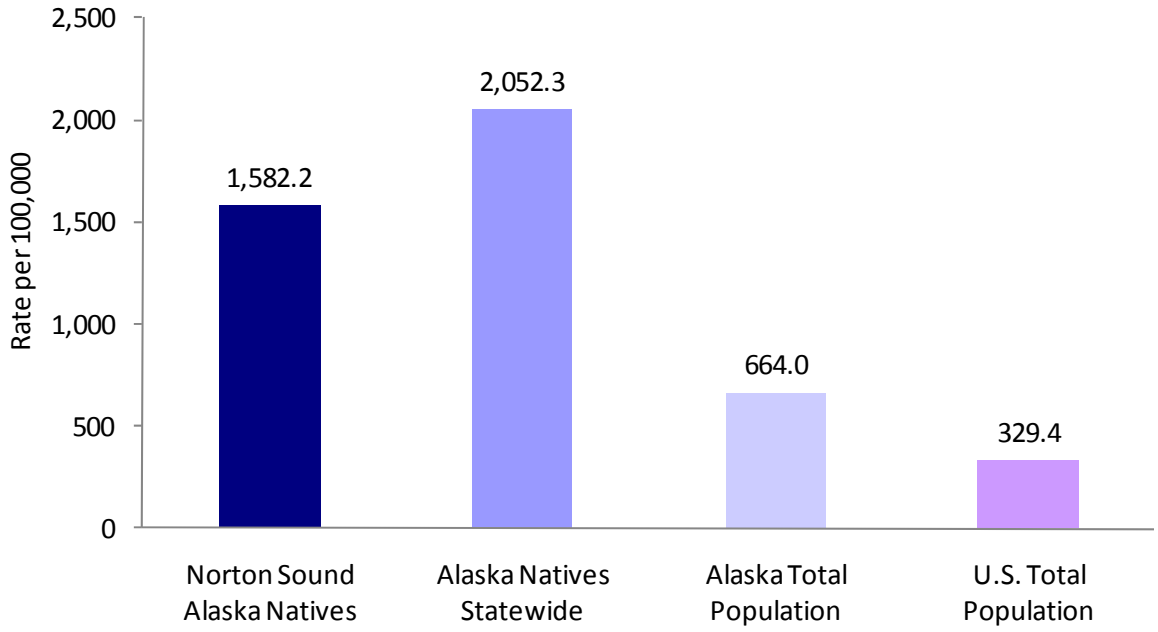
**Summary**

- The Chlamydia rate for Norton Sound Alaska Natives (1,582.2) was less than that of Alaska Natives statewide (2,052.3).
- The Chlamydia rate for Norton Sound Alaska Natives (1,582.2) was 2.4 times the rate for the Alaska total population (664.0) and nearly five times the rate for the U.S. total population (329.4).

**Figure 40. Chlamydia Rate for Alaska Native People Statewide per 100,000 population, 2005**

Alaska Data Source: State of Alaska Epidemiology - HIV/STD Program and Center for Disease Control and Prevention Division of Sexually Transmitted Disease Prevention

U.S. Data Source: National Center for Health Statistics. Health, United States, 2009: With Special Feature on Medical Technology. Hyattsville, MD. 2010.



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# Preventive Services and Access to Health Care

## Cervical Cancer Screening

**Definition: Cervical cancer screening** is defined as females aged 18 and older who report at least one Pap test within the last three years.

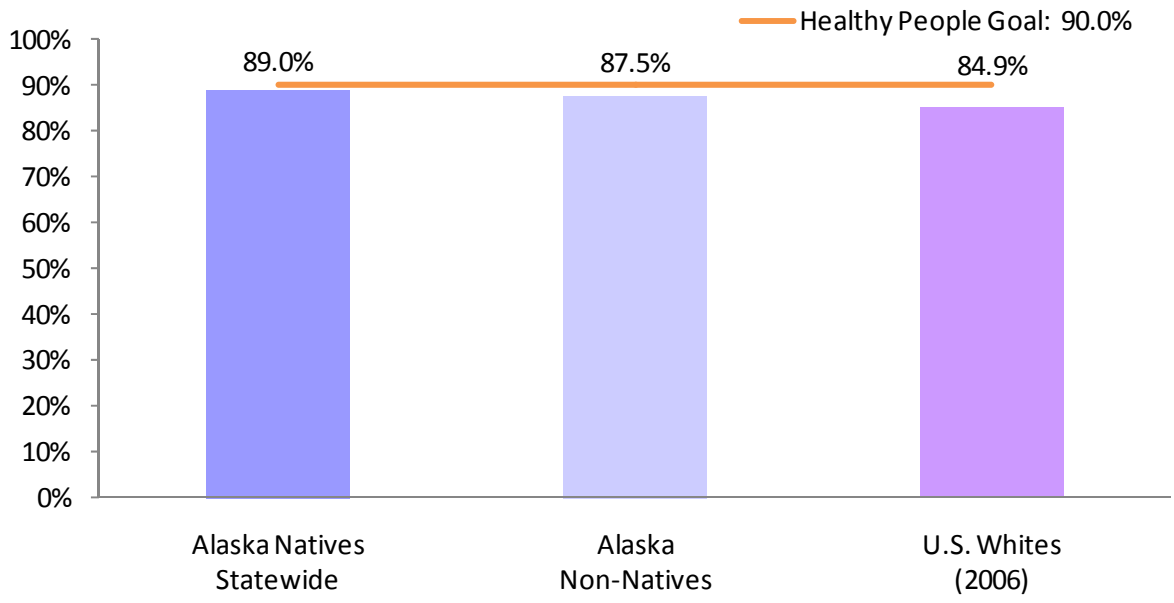
**Healthy People 2010, Goal 3.13:** Increase the proportion of women aged 18 years and older who received a Pap test within preceding 3 years to 90.0%.

**Summary**

- Alaska Native women nearly met the Healthy People 2010 goal of 90.0% for cervical cancer screening with 89.0% receiving a Pap test within the last 3 years.
- 87.5% of Alaska Non-Native people and 84.9% of U.S. Whites were screened for cervical cancer.

**Figure 41. Percent of Women with a Pap Test within the Past Three Years, 18 Years and Older, 2004 and 2006**

Data Source: Behavioral Risk Factor Surveillance System
Data Table C-31 in Appendix



## Breast Cancer Screening

**Definition: Breast cancer screening** is defined as females aged 40 and older who report a mammogram within the last 2 years.

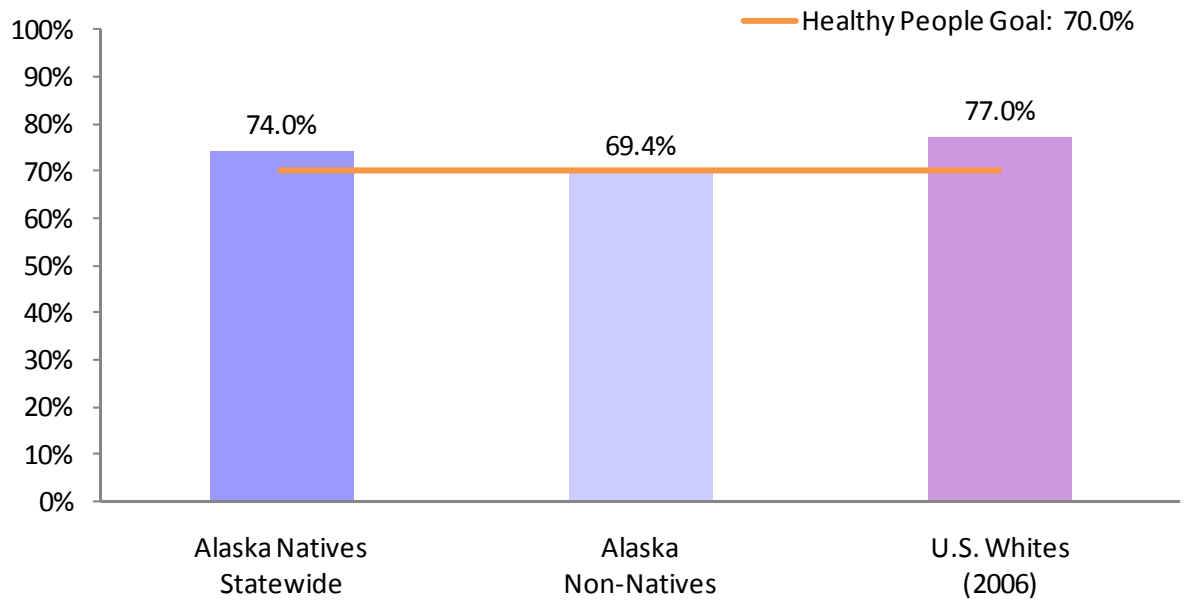
**Healthy People 2010, Goal 3.13:** Increase the proportion of women aged 40 years and older who have received a mammogram within the preceding 2 years to 70%.

**Summary**

- Alaska Native women (74.0%) exceeded the Healthy People Goal of 70% for having a mammogram within the past two years.
- 69.4% of Alaska Non-Natives and 77.0% of U.S. Whites received a mammogram within the preceding two years.

**Figure 42. Percent of Women with Mammogram in the Last Two Years, 40 Years and Older, 2004 and 2006**

Data Source: Behavioral Risk Factor Surveillance System
Data Table C-32 in Appendix



## Colorectal Cancer Screening

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

**Healthy People 2010, Goal 3.12b:** Increase the proportion of adults aged 50 years and older who have ever received a sigmoidoscopy to 50%.

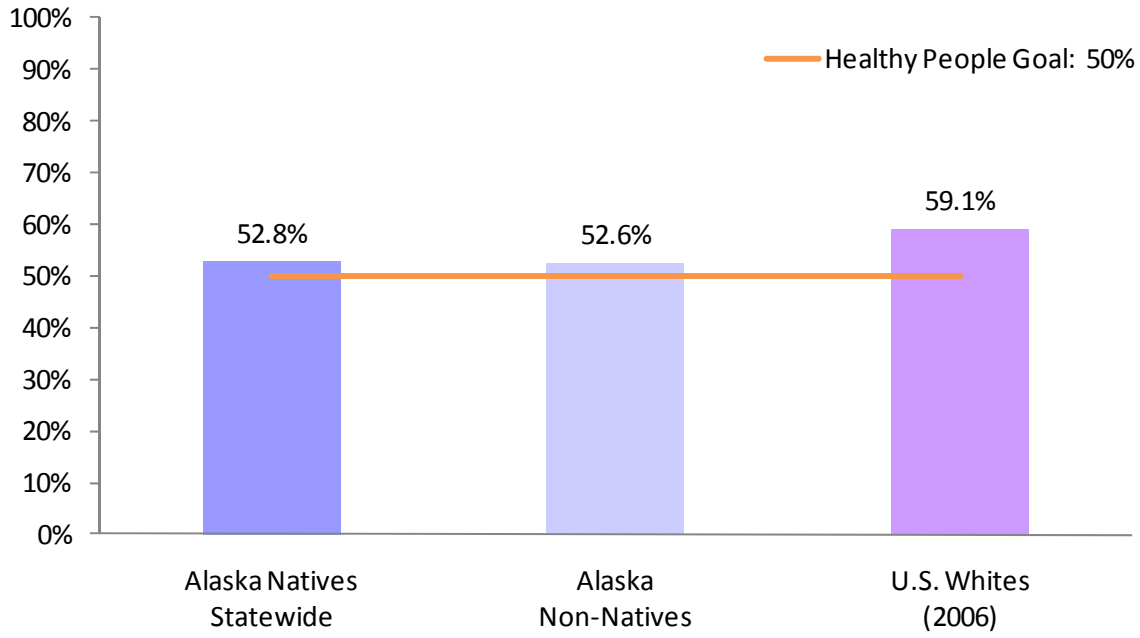
**Summary**

- 52.8% of Alaska Native people aged 50 years and older reported ever having a flexible sigmoidoscopy or colonoscopy; achieving the Healthy People Goal of 50%.
- Alaska Non-Natives (52.6%) and U.S. Whites (59.1%) also achieved the Healthy People Goal.

**Figure 43. Percent Who Have Had a Flexible Sigmoidoscopy or Colonoscopy Ever, 50 Years and Older, 2004 and 2006**

Data Source: Behavioral Risk Factor Surveillance System

Data Table C-33 in Appendix



## Immunizations - Influenza Vaccine ages 65 and older

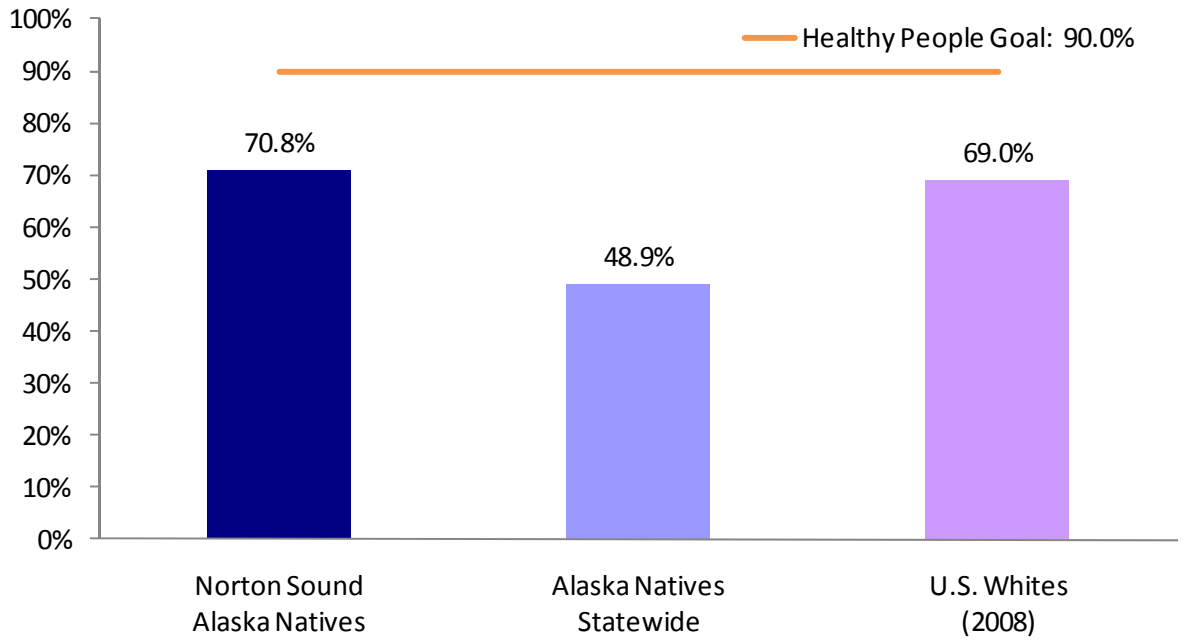
**Definition: Influenza vaccine** is defined as adults aged 65 and older who received the influenza vaccine or flu nasal spray in the prior twelve months.

**Healthy People 2010, Goal 14.29a:** Increase the proportion of elderly adults (65 years and older) immunized against influenza disease to 90%.

**Summary**

- Between June 30, 2009 and June 30, 2010, 70.8% of Alaska Native people aged 65 years and older in the Norton Sound region were vaccinated against influenza in the past year, while 48.9% of Alaska Native people statewide had received the influenza vaccine.
- Norton Sound Alaska Natives, Alaska Natives Statewide and U.S. Whites all did not reach the Healthy People Goal of 90% being vaccinated for influenza in the prior twelve months.

**Figure 44. Influenza Vaccination Rates, Adults 65 Years and Older, June 30, 2009 to June 30, 2010**
Alaska Data Source: Alaska Native Tribal Health Consortium Immunization Registry
U.S. Data Source: Center for Disease Control and Prevention Wonder, Healthy People
Data Table C-34 in Appendix



## Immunizations - Pneumococcal Vaccine ages 65 and older

**Definition: Pneumococcal vaccine** is defined as adults 65 and older who ever received pneumococcal vaccine.

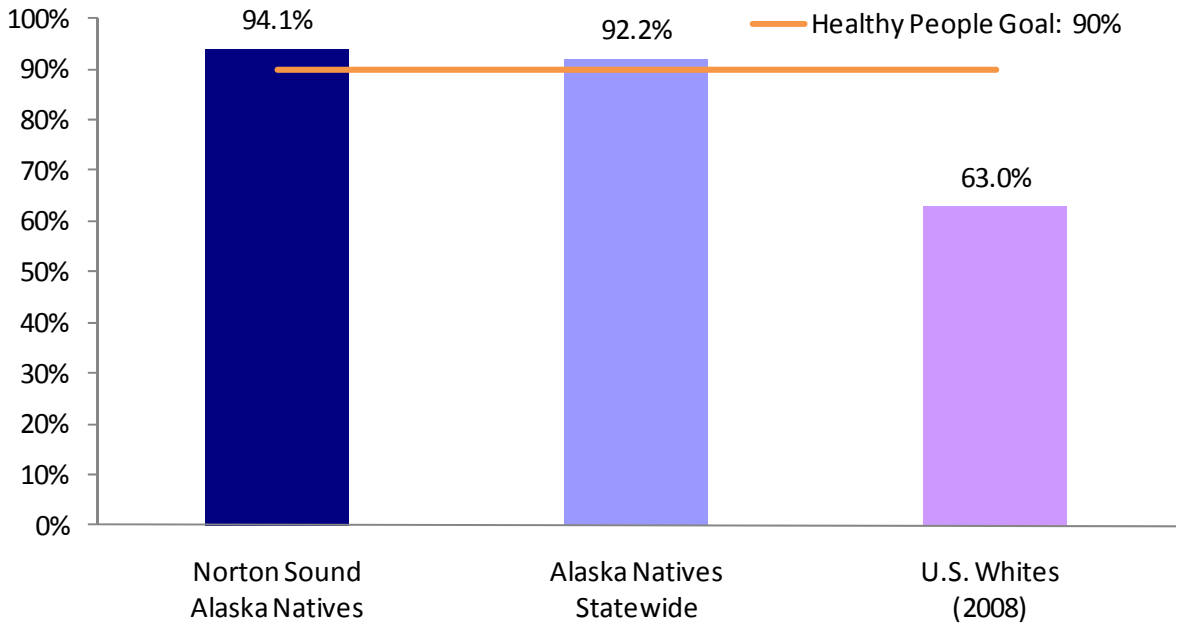
**Healthy People 2010, Goal 14.29b:** Increase the proportion of elderly adults (65 years and older) immunized against pneumococcal disease to 90%.

**Summary**

- As of June 2010, 94.1% of Alaska Native people aged 65 years and older in the Norton Sound region and 92.2% of Alaska Native statewide received a pneumococcal vaccine in their lifetime achieving the Healthy People Goal of 90%.
- Norton Sound Alaska Native and Alaska Native people statewide aged 65 and older had higher rates of ever receiving pneumococcal vaccine than U.S. adults aged 65 and older as of June 30, 2010.

**Figure 45. Pneumococcal Vaccination Rates Adults 65 Years and Older, June 30, 2009 to June 30, 2010**

Alaska Data Source: Alaska Native Tribal Health Consortium Immunization Registry
U.S. Data Source: Center for Disease Control and Prevention Wonder, Healthy People
Data Table C-35 in Appendix



## Immunizations - 4:3:1:3:3

**Definition:** By two years of age, it is recommended that all children should have received 4 doses of diphtheria-tetanus-pertussis (DTaP), 3 doses of polio, 1 dose of measles-mumps-rubella (MMR), 3 doses of Hepatitis B, and 3 doses of Haemophilis Influenza type B (Hib) vaccines. This recommendation is referred to in shorthand as **4:3:1:3:3**.

**Healthy People 2010, Goal 14.24a:** Increase the proportion of young children aged 19-35 months who have received the 4:3:1:3:3 series to 80%.

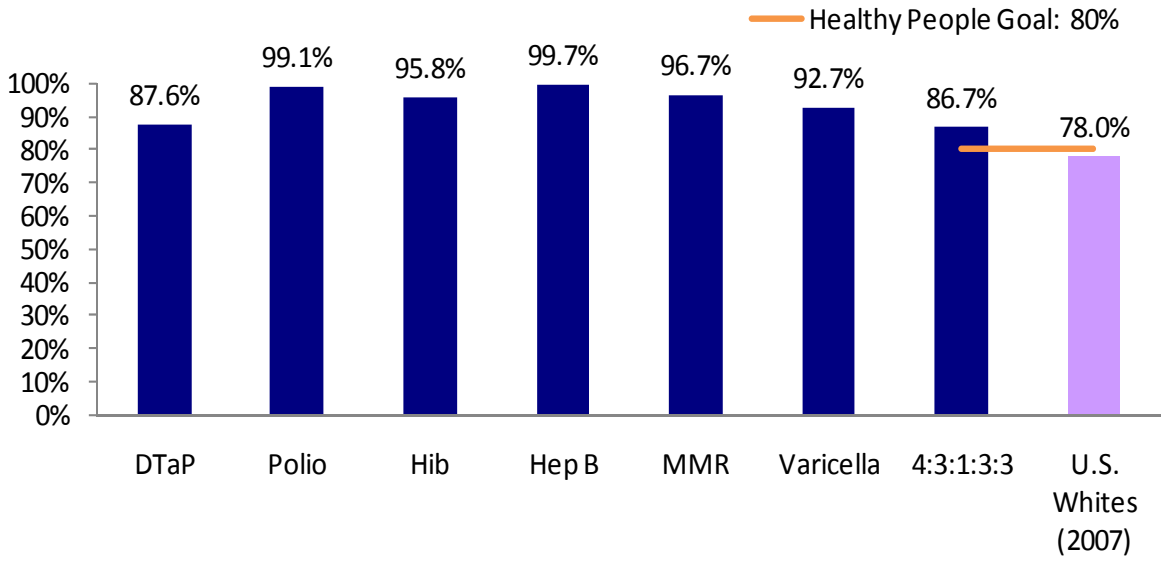
**NOTE:** Data presented are for two-year old vaccination rates. The Healthy People 2010 Goal is to increase immunization rates among children aged 19-35 months.

**Summary**

- As of June 2010, the Norton Sound Region had met the Healthy People goal by achieving 86.7% immunization coverage (4:3:1:3:3) for Alaska Native two-year olds.
- Norton Sound achieved over 90% two-year old vaccination coverage for diphtheria-tetanus-pertussis, polio, Haemophilus Influenza type b, Hepatitis B, and measles-mumps-rubella vaccination rates.

**Figure 46. Two-Year Old Vaccination Coverage, Norton Sound Alaska Native Two Year Olds, as of June 30, 2010**

Data Source: Alaska Native Tribal Health Consortium Immunization Registry
U.S. Data Source: National Center for Health Statistics, Health, United States, 2009: With Special Feature on Medical Technology. Hyattsville, MD. 2010.
Data Table C-35 in Appendix



## Adequate Prenatal Care

**Definition:** The **Adequate Prenatal Care Utilization Index** combines the initiation of prenatal care and the number of prenatal visits reported on the birth certificate. A ratio of actual to recommended visits is calculated. When the ratio is 110.0% or greater, care is considered "adequate plus" prenatal care. If the ratio is greater than 80.0% but less than 110.0%, care is considered "adequate". A ratio between 50.0% and 79.0% is considered "intermediate" and a ratio of less than 50.0% is considered "inadequate."

**Healthy People 2010, Goal 16.6b:** Increase the proportion of women who receive at least adequate prenatal care to 90%.

**Summary**

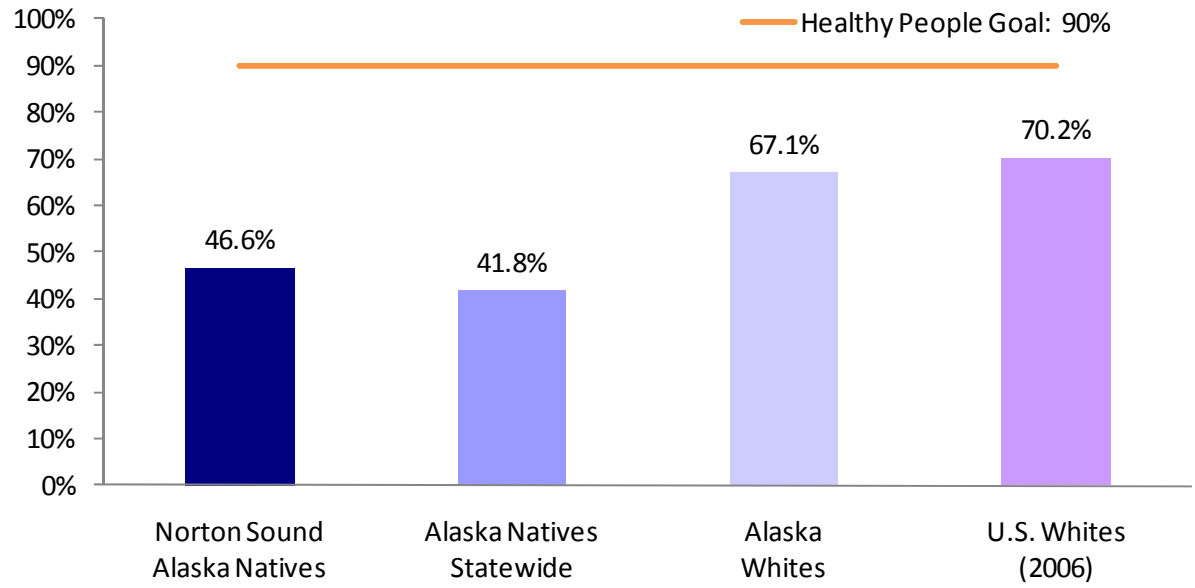
- According to documentation, it appears that 46.6% of Norton Sound Alaska Native pregnant women and 41.8% of Alaska Natives statewide received adequate prenatal care.
- Documentation of adequate prenatal care among Norton Sound Alaska Natives and Alaska Natives Statewide appears to differ from Alaska Whites and U.S. Whites.

**Figure 47. Percent of Births Where the Mother Received Adequate or Adequate Plus Prenatal Care, 2006-2008**

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. 2010.

Data Table C-36 in Appendix



## Environmental Health – Water and Sewer Service

**Definition: Water and sewer service** is defined as a housing unit with water/sewer pipes or closed haul services. Housing units which have received funding for pipes or closed haul services but have not yet been connected are not included in the percent of housing units with served water and sewer.

**Summary**

- As of 2008, 64.2% of the communities in the Norton Sound region had water and sewer service.
- The percentage of housing units served with water and sewer in Norton Sound was one of the lowest among regions throughout the state in 2008.

**Table 9. Water and Sewer Rates by Major Rural Regional Health Corporation, Alaska 2008**
Data Source: Alaska Native Tribal Health Consortium, Department of Environmental Health and Engineering

| Major Rural Regional Health Corporation | 2008 Housing Units with Flush Toilets & Pressurized Water | 2008 Total Housing Units | % Served |
|---|---|---|---|
| Southeast Alaska Regional Health Consortium | 2,288 | 2,329 | 98.2% |
| Kodiak Area Native Association | 349 | 356 | 98.0% |
| Bristol Bay Area Health Corporation | 1,364 | 1,572 | 86.8% |
| Maniilaq Association | 865 | 1,140 | 75.9% |
| **Norton Sound Health Corporation** | **970** | **1,509** | **64.2%** |
| Tanana Chiefs Conference | 1,150 | 1,930 | 59.6% |
| Yukon - Kuskokwim Health Corporation | 2,753 | 4,760 | 57.8% |

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# Appendixes

## Appendix A. Description of Data Sources

**General Note:** Calculations for percentages are rounded to one decimal place, therefore total percentages may not add up to 100.0%

**Statistical Significance**

Throughout the document, differences were considered statistically significant if they were different at the 95% level ($p<0.05$). Statistical significance was denoted by the use of the word "significant" in the summary boxes. Differences between rates and percentages were considered to be significantly different if the 95% confidence intervals did not overlap. Rate ratios were considered to be statistically significant if the 95% confidence interval of the rate ratio did not contain one.

**Alaska Area Diabetes Registry**

The Alaska Area Diabetes Registry is a clinical and epidemiologic resource for tribal health care facilities throughout Alaska. The registry is used to track patients diagnosed with diabetes and to ensure that care is provided based on national standards. It is also used to highlight the prevalence of diabetes and its complications in the Alaska Native population.

The aggregated diabetes data presented in this document were provided by the Alaska Area Diabetes Registry. The data are aggregated by the former Indian Health Service Units. More information about the data may be found at http://www.anmc.org/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 136,065 Alaska Natives. The Alaska Area Indian Health Service's Division of Planning and Evaluation and Health Statistics provided the user population data and the village population estimates for 1990 and 2000. More information about the Alaska Area Indian Health Service may be found at: http://www.ihs.gov/facilitiesservices/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 Alaska Native Epidemiology Center analyzed the data; the analyses are described below. More information about the Alaska Bureau of Vital Statistics may be obtained at: http://www.hss.state.ak.us/DPH/bvs/data/default.htm.

<u>Mortality Trends and Injury Death</u>

Mortality data for Norton Sound Alaska Native people and Alaska Native people statewide was from 1984 to 2008. Rates are age-adjusted to the U.S. Standard Population. "Bridged" population estimates from the National Center for Health Statistics were used as the denominator to calculate the mortality rates. Bridged estimates were necessary to adjust for the option in the Census 2000 to choose multiple races, rather than one race. The rates were calculated for those causes that had at least five deaths during the designated time period. To calculate the rates, five years of population

## Appendix A. Description of Data Sources

data were summed for each interval (1984-1988 to 2004-2008). The number of deaths for each five-year age group (0-4 up to 85+ years) was divided by the total population for that age group during that five-year interval. Those crude rates were multiplied by the standard population rate and summed to get the overall age-adjusted rates. Data for U.S. Whites were available through the National Cancer Institute's Surveillance Epidemiology and End Results Program.

For leading causes of injury death, we calculated rate ratios with confidence intervals to compare Norton Sound Alaska Native people to U.S. Whites. We considered the rates statistically different if the 95% confidence interval did not contain a value of one. We used the on-line SEERStat software to calculate mortality rates.

Infant Mortality

The infant mortality rates were grouped into five-year intervals, except for the last time period which was four years, from 1984-2007. The U.S. White data were from the Surveillance Epidemiology and End Results program and calculated using the SEERStat software.

Low Birthweight, Adequate Prenatal Care, Smoking and Alcohol Consumption during Pregnancy

These data were based upon data reported on birth certificates to the state of Alaska. They were obtained from the Bureau of Vital Statistics. 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 population estimates presented in this report are produced in the years between the censuses and are based on the census as a baseline. The estimates use administrative records as indicators of change in a population and use these to adjust the population numbers. Examples of such records are birth and death records, income tax returns, Permanent Fund applications, school enrollment and driver's licenses. More information about the Alaska Department of Labor and Workforce Development population statistics may be found at http://labor.alaska.gov/

The unemployment statistics exclude anyone who has not made an active attempt to find work in the four-week period up to and including the week that includes the last day of the reference month. Many individuals in rural Alaska do not meet the definition because they have not conducted an active job search due to the scarcity of employment opportunities. More information about unemployment statistics may be found at http://labor.alaska.gov/.

**Alaska Native Tribal Health Consortium's Department of Environmental Health and Engineering**

The Alaska Native Tribal Health Consortium's Division of Environmental Health and Engineering provides planning, design, construction and operations support of public health infrastructure in

## Appendix A. Description of Data Sources

Native communities throughout the state of Alaska. As part of the Alaska Tribal Health System, the Division of Environmental Health and Engineering is focused on the delivery of sustainable public health solutions.

The data provided in this regional health profile are for areas off the road system and provided by the Division of Environmental Health and Engineering. More information regarding the program and services may be found at http://www.anthc.org/cs/dehe/.

**Alaska Native Tribal Health Consortium's Immunization Registry**

The Alaska Native Tribal Health Consortium's Immunization Program works to coordinate tribal immunization programs, educate tribal staff on immunization recommendations and vaccine-preventable diseases, and advocate with outside agencies for the needs of tribal programs.

The goal of the Alaska Native Tribal Health Consortium's Immunization Program is to eliminate disparities in vaccine-preventable diseases in Alaska Native people through immunization.

The data provided in this regional health profile was provided by the Alaska Native Tribal Health Consortium Immunization Registry. More information about the program may be found at: http://www.anthc.org/cs/chs/immunization/.

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

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

**Alaska Trauma Registry**

Alaska Trauma Registry data was from 1991-2003. The Alaska Trauma Registry is an information system of the most seriously injured patients in Alaska, and the treatment that they have received. Since 1991, the trauma registry has collected data from all 24 of Alaska's acute care hospitals.

The purpose of the registry is to evaluate the quality of trauma patient care and to plan and evaluate injury prevention programs. The criteria for inclusion in the trauma registry are patients with injuries who are 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. Injuries include trauma, poisoning, suffocation, and the effects of reduced temperature.

Trauma Registry data is confidential and protected under Alaska Statute 18.23.010-070. All trauma registry personnel and those requesting trauma registry data are required to sign a confidentiality

## Appendix A. Description of Data Sources

statement. The trauma registry does not include patient, physician, hospital, clinic, or ambulance service identifiers.

Trauma registry information is also used by a variety of agencies and individuals in the planning and evaluation of injury prevention programs, for research and public education, for Emergency Medical Service training, and in developing public policy.
(Description from: http://www.hss.state.ak.us/dph/ipems/injury_prevention/trauma.htm)

The data were analyzed by the Alaska Native Epidemiology Center in collaboration with the Alaska Native Tribal Health Consortium's Injury Prevention Program. More information about the program may be found at: http://www.anthc.org/chs/wp/injprev/index.cfm.

**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 Centers for Disease Control and Prevention provides funding and technical assistance to all 50 states, Washington D.C., and 3 territories to conduct the survey annually. 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 on their own. The entire interview takes less than 30 minutes to complete. Interviews are conducted during every month of the year. Approximately 2,500 Alaskans are interviewed each year, 500 of which are Alaska Natives.

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.

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. Alaska uses an additional sampling procedure to take into account differences in telephone coverage by geographic and economic factors.

The analyses of Behavioral Risk Factor Surveillance System data require complex statistical procedures to take into account 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

## Appendix A. Description of Data Sources

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.

The State of Alaska Bureau of Chronic Disease Prevention and Health Promotion BRFSS Health Survey Lab provided state data. The Behavioral Risk Factor Surveillance System respondents from the Norton Sound Region and statewide were analyzed by the Alaska Native Epidemiology Center. The Norton Sound Region includes all respondents residing in communities served by the Norton Sound Alaska Regional Health Corporation. In order to achieve a meaningful sample size, multiple (three) years of data were combined for the analyses. More information about the Alaska BRFSS data may be obtained at: http://www.hss.state.ak.us/dph/chronic/hsl/brfss/regions.htm.

The U.S. Results were from the Center for Disease Control and Prevention's Behavioral Risk Factor Surveillance System interactive tool located at: http://apps.nccd.cdc.gov/brfss/.

The Behavioral Risk Factor Surveillance System survey contains slightly varied questions yearly depending on the health topics that are of interest for that particular year. Due to this variation, years presented in this report may vary between indicators.

Readers should use these estimates with caution since the number of respondents who are Alaska Native people from each region is relatively small. Differences between age groups, gender, and time cannot be determined to be statistically significant due to a small sample. Behavioral Risk Factor Surveillance System data are not age-adjusted to account for the different age distributions between the comparison populations. 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 2010**

The Healthy People 2010 measures reported in this document were taken from the following document and may be found online at: http://www.healthypeople.gov/Publications/.

U.S. Department of Health and Human Services. *Healthy People 2010.* 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office, November 2000.

**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 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.

## Appendix A. Description of Data Sources

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

**Surveillance Epidemiology and End Results Program**

The Surveillance Epidemiology and End Results Program (SEER) is part of the National Cancer Institute. The SEER Program's primary purpose is to collect information on the incidence, survival, and prevalence of cancer, as well as the survival 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 were analyzed by Alaska Native Epidemiology Center staff using the SEER database with SEERStat (a computer program provided by the SEER Program). More information about SEER may be found at: http://seer.cancer.gov/index.html.

**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. HIV/STD Program staff apply the best available scientific information, public health program experience, and epidemiologic methods to help guide statewide disease control strategies, policies, and activities. The data presented in this report were provided by the State of Alaska Epidemiology - HIV/STD Program. More information may be found at: http://www.epi.hss.state.ak.us/hivstd/default.stm.

**U.S. Census**

The U.S. Census has provided data about the U.S. population and the economy. The data used in this report were from the 2000 decennial census or the American Community Survey using the American Factfinder, an on-line tool on the U.S. Census website. More information about the U.S. Census may be found at: http://factfinder.census.gov/home/saff/main.html?_lang=en.

**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. The Youth Risk Behavior Surveillance System survey is a school-based survey of high school students administered in cooperation with the Department of Education and Early Development. This anonymous survey examines a minimum of six categories of adolescent behavior:

## Appendix A. Description of Data Sources

- 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 six times, 1995, 1999 (excluding Anchorage), 2001, 2003, 2005, and 2007. Weighted (representative) data were collected in 1995, 1999, 2003, and 2007 resulting in published reports statewide. We excluded 1999 in this report since it did not include Anchorage, and 2001 and 2005, because weighted (representative) data were not collected.

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. 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 following sources listed respectively by the following years 1995, 2003 and 2007 :
Centers for Disease Control and Prevention. *CDC Surveillance Summaries*, September 27, 1996 MMWR; 45(No.SS-4);
Centers for Disease Control and Prevention. *Surveillance Summaries,* May 21, 2004. MMWR 2004: 53(No. SS-2); and
Centers for Disease Control and Prevention. *Health Risk Behaviors by Race/Ethnicity National YRBS: 2007.* http://www.cdc.gov/HealthyYouth/yrbs/pdf/yrbs07_us_disparity_race.pdf

## Appendix B. Race/Ethnicity Classification by Data Source

| Data Source | Racial Classification |
|---|---|
| Alaska Area Diabetes Registry | Alaska Native and American Indian persons who visited Indian Health Services or a tribal health facility in the past three years |
| Alaska Area Indian Health Service - Census Data | One tribe alone, or in combination with one other tribe, or in combination with any other race group in addition to Alaska Native and American Indian |
| Alaska Bureau of Vital Statistics | Alaska Native and American Indian |
| Alaska Department of Labor & Workforce Development | Alaska Native and American Indian |
| Alaska Native Tribal Health Consortium Immunization Registry | Alaska Native and American Indian person who uses the Alaska Tribal Health System |
| Alaska Native Tumor Registry | Alaska Native and American Indian persons living in Alaska at the time of a cancer diagnosis |
| Alaska Trauma Registry | Any mention of Alaska Native and American Indian |
| American Community Survey | Alaska Native and American Indian alone |
| Behavioral Risk Factor Surveillance System | Any mention of Alaska Native and American Indian |
| National Patient Information Reporting System - Indian Health Service National Data Warehouse | Alaska Native and American Indian persons who used Indian Health Service or a tribal facility that reports data through the Indian Health Service data |
| State of Alaska Epidemiology HIV/STD Program | Alaska Native and American Indian |
| Surveillance, Epidemiology and End Results Program | Alaska Native and American Indian |
| U.S. Census | Alaska Native and American Indian alone |
| Youth Risk Factor Surveillance System | Any mention of Alaska Native and American Indian |

# Appendix C. Data Tables

**Table C-1. Population Estimates by Age Group, Alaska Natives, Norton Sound, 2009**

Data Source: Alaska Department of Labor and Workforce Development

| | Male | | Female | | Total | |
|---|---|---|---|---|---|---|
| Age (years) | Number | % of Total | Number | % of Total | Number | % of Total |
| 0-4 | 550 | 14.5% | 471 | 13.6% | 1,021 | 14.1% |
| 5-9 | 434 | 11.5% | 384 | 11.1% | 818 | 11.3% |
| 10-14 | 376 | 9.9% | 336 | 9.7% | 712 | 9.8% |
| 15-19 | 403 | 10.6% | 391 | 11.3% | 794 | 11.0% |
| 20-24 | 293 | 7.7% | 304 | 8.8% | 597 | 8.2% |
| 25-34 | 420 | 11.1% | 397 | 11.5% | 817 | 11.3% |
| 35-44 | 374 | 9.9% | 348 | 10.1% | 722 | 10.0% |
| 45-54 | 392 | 10.4% | 332 | 9.6% | 724 | 10.0% |
| 55-64 | 333 | 8.8% | 229 | 6.6% | 562 | 7.8% |
| 65+ | 212 | 5.6% | 268 | 7.7% | 480 | 6.6% |
| **Total** | **3,787** | **100.0%** | **3,460** | **100.0%** | **7,247** | **100.0%** |

**Table C-2. User Population by Age Group, Norton Sound, Fiscal Year 2009**

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

| | Male | | Female | | Total | |
|---|---|---|---|---|---|---|
| Age (years) | Number | % of Total | Number | % of Total | Number | % of Total |
| 0-4 | 586 | 13.5% | 538 | 13.7% | 1,124 | 13.6% |
| 5-9 | 453 | 10.4% | 428 | 10.9% | 881 | 10.7% |
| 10-14 | 423 | 9.8% | 378 | 9.6% | 801 | 9.7% |
| 15-19 | 427 | 9.8% | 424 | 10.8% | 851 | 10.3% |
| 20-24 | 390 | 9.0% | 347 | 8.8% | 737 | 8.9% |
| 25-34 | 580 | 13.4% | 474 | 12.1% | 1,054 | 12.7% |
| 35-44 | 429 | 9.9% | 386 | 9.8% | 815 | 9.9% |
| 45-54 | 451 | 10.4% | 419 | 10.7% | 870 | 10.5% |
| 55-64 | 329 | 7.6% | 257 | 6.5% | 586 | 7.1% |
| 65+ | 270 | 6.2% | 280 | 7.1% | 550 | 6.7% |
| **Total** | **4,338** | **100.0%** | **3,931** | **100.0%** | **8,269** | **100.0%** |

# Appendix C. Data Tables

**Table C-3. Highest Educational Attainment, 25 Years and Older, 2000**
Data Source: U.S. Census Bureau

| | Norton Sound Alaska Natives | | Alaska Natives Statewide | | U.S. Whites | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| Less than high school | 1,133 | 32.4% | 15,239 | 26.0% | 23,498,237 | 16.4% |
| High school diploma or GED | 1,641 | 46.9% | 23,347 | 39.8% | 42,216,532 | 29.5% |
| Some college, no degree | 531 | 15.2% | 13,615 | 23.2% | 30,763,729 | 21.5% |
| Associate degree or higher | 194 | 5.5% | 6,507 | 11.1% | 46,607,161 | 32.6% |
| **Total** | **3,499** | **100.0%** | **58,708** | **100.0%** | **143,085,659** | **100.0%** |

**Table C-4. Unemployment for Norton Sound, Alaska and U.S. Total Population, 2005-2009**
Data Source: Alaska Department of Labor and Workforce Development

| | Norton Sound Alaska Natives | | Alaska Total Population | | U.S. Total Population | |
|---|---|---|---|---|---|---|
| Year | Annual Average | % | Annual Average | % | Annual Average | % |
| 2005 | 493 | 12.4% | 23,715 | 6.9% | N/A | 5.1% |
| 2006 | 465 | 11.9% | 22,950 | 6.5% | N/A | 4.6% |
| 2007 | 411 | 10.8% | 21,416 | 6.1% | N/A | 4.6% |
| 2008 | 401 | 10.0% | 23,059 | 6.5% | N/A | 5.8% |
| 2009 | 512 | 12.8% | 28,751 | 8.0% | N/A | 9.3% |

**N/A** Not Available

**Table C-5. Estimated Percent of Residents below the Poverty Level, All Ages, 2000**
Data Source: U.S. Census Bureau

| | N | % |
|---|---|---|
| Norton Sound Alaska Natives | 1,493 | 21.2% |
| Alaska Natives Statewide | 20,195 | 19.4% |
| U.S. Whites | 18,847,674 | 9.1% |

## Appendix C. Data Tables

**Table C-6. Estimated Percent of Residents below the Poverty Level, Under 18, 2000**

Data Source: U.S. Census Bureau

| | N | % |
|---|---|---|
| Norton Sound Alaska Natives | 668 | 22.6% |
| Alaska Natives Statewide | 9,072 | 21.1% |
| U.S. Whites | 5,469,560 | 11.2% |

**Table C-7. Leading Causes of Death, Norton Sound Alaska Natives, 2004-2007**

Data Source: Surveillance, Epidemiology, and End Results Program

| Norton Sound Alaska Natives by Rank | N | % Deaths | Rate per 100,000 | Rate Ratio: Norton Sound vs. Alaska Natives |
|---|---|---|---|---|
| 1 - Cancer | 36 | 18% | 219.7 | 0.9 |
| 2 - Unintentional Injury | 33 | 17% | 129.7 | 1.4 |
| 3 - Heart Disease | 25 | 13% | 144.5 | 0.8 |
| 4 - Suicide | 23 | 12% | 77.5 | 1.9* |
| 5 - Chronic obstructive pulmonary disease | 9 | 5% | 61.8 | 1.1 |
| **Total - All Causes of Death** | **199** | **100%** | **1,019.7** | **0.9** |

* Statistically significant difference at the p<0.05 level

**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 only on 2004-2005 data.

| | | Norton Sound Alaska Natives | Alaska Natives Statewide | U.S. Whites |
|---|---|---|---|---|
| 1984-1988 | N | 40 | 433 | 2,060,372 |
| | Rate | 352.1 | 248 | 207.6 |
| 1989-1993 | N | 40 | 480 | 2,241,802 |
| | Rate | 397.3 | 253.3 | 209.9 |
| 1994-1998 | N | 51 | 586 | 2,342,924 |
| | Rate | 399.4 | 252.1 | 202.9 |
| 1999-2003 | N | 55 | 664 | 2,400,907 |
| | Rate | 276.1 | 242.3 | 193.4 |
| 2004-2008 | N | 48 | 772 | 960,225 |
| | Rate | 234.6 | 226.3 | 193.4 |

# Appendix C. Data Tables

**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 only on 2004-2005 data.

| | | Norton Sound Alaska Natives | Alaska Natives Statewide | U.S. Whites |
|---|---|---|---|---|
| 1984-1988 | N | 44 | 436 | 3,407,551 |
| | Rate | 527.6 | 307.2 | 362.5 |
| 1989-1993 | N | 45 | 477 | 3,211,591 |
| | Rate | 539.3 | 284.1 | 310.2 |
| 1994-1998 | N | 44 | 515 | 3,215,181 |
| | Rate | 428.8 | 255.1 | 280.2 |
| 1999-2003 | N | 36 | 515 | 3,069,015 |
| | Rate | 178.7 | 212.0 | 243.6 |
| 2004-2008 | N | 33 | 549 | 1,130,448 |
| | Rate | 149.9 | 172.7 | 209.5 |

**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 only on 2004-2005 data.

| | | Norton Sound Alaska Natives | Alaska Natives Statewide | U.S. Whites |
|---|---|---|---|---|
| 1984-1988 | N | 39 | 573 | 398,916 |
| | Rate | 191.5 | 171.5 | 39.1 |
| 1989-1993 | N | 37 | 541 | 377,602 |
| | Rate | 132.2 | 134.0 | 35.5 |
| 1994-1998 | N | 42 | 483 | 394,689 |
| | Rate | 172.7 | 113.1 | 35.1 |
| 1999-2003 | N | 41 | 499 | 434,629 |
| | Rate | 142.4 | 107.0 | 36.4 |
| 2004-2008 | N | 43 | 491 | 196,165 |
| | Rate | 136.1 | 97.7 | 39.3 |

# Appendix C. Data Tables

**Table C-11. Age-Adjusted Suicide 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 only on 2004-2005 data.

| | | Norton Sound Alaska Natives | Alaska Natives Statewide | U.S. Whites |
|---|---|---|---|---|
| 1984-1988 | N | 26 | 201 | 138,479 |
| | Rate | 94.3 | 44.8 | 13.5 |
| 1989-1993 | N | 27 | 225 | 139,088 |
| | Rate | 78.9 | 44.8 | 13.0 |
| 1994-1998 | N | 26 | 219 | 139,109 |
| | Rate | 73.5 | 41.4 | 12.4 |
| 1999-2003 | N | 34 | 198 | 137,651 |
| | Rate | 87.4 | 34.5 | 11.6 |
| 2004-2008 | N | 29 | 243 | 58,761 |
| | Rate | 75.8 | 42.3 | 12.0 |

**Table C-12. Infant Mortality Rates per 1,000 live births, 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 only on 2004-2005 data.

| | | Norton Sound Alaska Natives | Alaska Natives Statewide | U.S. Whites |
|---|---|---|---|---|
| 1984-1988 | N | 18 | 202 | N/A |
| | Rate | 17.5 | 14.5 | 9.0 |
| 1989-1993 | N | 21 | 194 | N/A |
| | Rate | 19.3 | 13.0 | 7.6 |
| 1994-1998 | N | 9 | 120 | N/A |
| | Rate | 9.9 | 9.0 | 6.4 |
| 1999-2003 | N | 10 | 126 | N/A |
| | Rate | 10.5 | 9.1 | 5.9 |
| 2004-2008 | N | 15 | 142 | N/A |
| | Rate | 14.0 | 9.3 | 5.8 |

N/A Not Available

# Appendix C. Data Tables

**Table C-13. Adults Who are Current Smokers, 2005-2007**

Data Source: Behavioral Risk Factor Surveillance System

| | N | % | Confidence Interval |
|---|---|---|---|
| Norton Sound Alaska Natives | 148 | 58.0% | (50.9%-64.8%) |
| Alaska Natives Statewide | 1,281 | 40.7% | (38.0%-43.5%) |
| Alaska Non-Natives | 2,277 | 19.9% | (18.8%-21.0%) |
| U.S. Whites (2006) | N/A | 19.5% | (16.4%-22.2%) |

N/A Not Available

**Table C-14. Current Smokeless Tobacco Users, 18 Years and Older, 2005-2007**

Data Source: Behavioral Risk Factor Surveillance System

| | N | % | Confidence Interval |
|---|---|---|---|
| Norton Sound Alaska Natives | 465 | 9.0% | (5.7% - 14.0%) |
| Alaska Natives Statewide | 349 | 10.4% | (9.1% - 12.0%) |
| Alaska Non-Natives | 389 | 3.8% | (3.3% - 4.4%) |
| U.S. Whites (2007) | 6,589 | 4.3% | N/A |

N/A Not Available

**Table C-15. Binge Drinking, 18 Years and Older, 2005-2007**

Data Source: Behavioral Risk Factor Surveillance System

| | N | % | Confidence Interval |
|---|---|---|---|
| Norton Sound Alaska Natives | 27 | 22.1% | (14.9%-31.5%) |
| Alaska Natives Statewide | 352 | 18.1% | (15.3%-21.2%) |
| Alaska Non-Natives | 1,222 | 17.7% | (16.2%-19.4%) |
| U.S. Whites (2006) | N/A | 15.8% | N/A |

N/A Not Available

**Table C-16. Adults Who Meet Moderate and/or Vigorous Physical Activity Recommendations, 2005**

Data Source: Behavioral Risk Factor Surveillance System

| | N | % | Confidence Interval |
|---|---|---|---|
| Norton Sound Alaska Natives | 32 | 40.1% | (28.8%-52.7%) |
| Alaska Natives Statewide | 517 | 55.4% | (50.2%-60.4%) |
| Alaska Non-Natives | 2,316 | 60.7% | (58.3%-63.0%) |
| U.S. Whites | N/A | 49.1% | N/A |

N/A Not Available

# Appendix C. Data Tables

**Table C-17. Obesity (BMI ≥ 30), 18 Years and Older, 2005-2007**

Data Source: Behavioral Risk Factor Surveillance System

| | N | % | Confidence Interval |
|---|---|---|---|
| Norton Sound Alaska Natives | 65 | 21.6% | (16.6%-27.5%) |
| Alaska Natives Statewide | 1,033 | 31.1% | (28.6%-33.6%) |
| Alaska Non-Natives | 2,970 | 25.4% | (24.3%-26.6%) |
| U.S. Whites (2006) | N/A | 25.1% | N/A |

N/A Not Available

**Table C-18. Overweight (25 ≤ BMI ≤ 29.9), 18 Years and Older, 2005-2007**

Data Source: Behavioral Risk Factor Surveillance System

| | N | % | Confidence Interval |
|---|---|---|---|
| Norton Sound Alaska Natives | 81 | 32.5% | (26.3%-39.5%) |
| Alaska Natives Statewide | 3,082 | 38.1% | (35.3%-40.9%) |
| Alaska Non-Natives | 11,327 | 38.4% | (37.1%-39.7%) |
| U.S. Whites (2006) | N/A | 36.5% | N/A |

N/A Not Available

**Table C-19. Percent of Women Reporting Abstinence from Tobacco Use during Pregnancy, 2006-2008**

Primary 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. 2010.

| | N | % |
|---|---|---|
| Norton Sound Alaska Natives | 274 | 45.2% |
| Alaska Natives Statewide | 5,740 | 68.6% |
| Alaska Whites | 18,404 | 89.4% |
| U.S. Whites (2006) | N/A | 87.0% |

N/A Not Available

# Appendix C. Data Tables

**Table C-20. Percent of Women Reporting Abstinence from Alcohol Use during Pregnancy, 2006-2008**

Primary Data Source: Alaska Bureau of Vital Statistics

| | N | % |
|---|---|---|
| Norton Sound Alaska Natives | 561 | 92.6% |
| Alaska Natives Statewide | 8,003 | 95.7% |
| Alaska Whites | 20,159 | 97.9% |

**Table C-21. Percent of High School Students Who are Overweight, 2007**

Data Source: Youth Risk Behavior Surveillance System

| | N | % | Confidence Interval |
|---|---|---|---|
| Alaska Natives Statewide | 32 | 13.2% | (8.5% - 20.0%) |
| Alaska Non-Natives | 112 | 10.4% | (8.4% - 12.7%) |
| U.S. Whites‡ | 5,483 | 10.8% | (9.3% - 12.4%) |

‡ Non-Hispanic

**Table C-22. Percent of High School Students Who Engage in Recommended Levels of Physical Activity, 2007**

Data Source: Youth Risk Behavior Surveillance System

| | N | % | Confidence Interval |
|---|---|---|---|
| Alaska Natives Statewide | 88 | 32.2% | (24.2% - 41.4%) |
| Alaska Whites | 477 | 46.1% | (42.4% - 50.0%) |
| U.S. Whites‡ | 5,729 | 37.0% | (33.9% - 40.3%) |

‡ Non-Hispanic

## Appendix C. Data Tables

**Table C-23. Percent of High School Students Who Smoked Cigarettes on One or More of the Past 30 Days, 1995, 2003, 2007**

Data Source: Youth Risk Behavior Surveillance System

| | | Alaska Natives Statewide | Alaska Non-Natives | U.S. Whites‡ |
|---|---|---|---|---|
| 1995 | N | 103 | 458 | 4,327 |
| | % | 61.9% | 32.2% | 38.3% |
| | Confidence Interval | (52.6% - 70.4%) | (29.3% - 35.1%) | (35.6% - 41.1%) |
| 2003 | N | 117 | 135 | 6,330 |
| | % | 44.2% | 12.2% | 24.9% |
| | Confidence Interval | (38.6% - 50.0%) | (10.2% - 14.6%) | (22.4% - 27.5%) |
| 2007 | N | 65 | 120 | 5,574 |
| | % | 31.7% | 12.9% | 23.2% |
| | Confidence Interval | (24.7% - 39.6%) | (10.8% - 15.5%) | (20.4% - 26.2%) |

‡ Non-Hispanic

**Table C-24. Percent of High School Students Who Used Chewing Tobacco or Snuff on One or More of the Past 30 Days, 1995, 2003, 2007**

Data Source: Youth Risk Behavior Surveillance System

| | | Alaska Natives Statewide | Alaska Non-Natives | U.S. Whites‡ |
|---|---|---|---|---|
| 1995 | N | 40 | 205 | 4,390 |
| | % | 22.5% | 14.4% | 14.5% |
| | Confidence Interval | (16.0% - 30.6%) | (11.7% - 17.5%) | (13.1% - 16.1%) |
| 2003 | N | 66 | 89 | 6,286 |
| | % | 24.4% | 7.4% | 7.6% |
| | Confidence Interval | (15.3% - 36.7%) | (5.7% - 9.6%) | (5.8% - 9.8%) |
| 2007 | N | 43 | 88 | 5,587 |
| | % | 16.6% | 8.3% | 10.3% |
| | Confidence Interval | (8.2% - 30.5%) | (6.5% - 10.5%) | (8.2% - 12.9%) |

‡ Non-Hispanic

## Appendix C. Data Tables

**Table C-25. Percent of High School Students Who Had at Least One Drink of Alcohol on One or More of the Past 30 Days, 1995, 2003, 2007**

Data Source: Youth Risk Behavior Surveillance System

| | | Alaska Natives Statewide | Alaska Non-Natives | U.S. Whites‡ |
|---|---|---|---|---|
| 1995 | N | 75 | 673 | 4,321 |
| | % | 43.9% | 48.1% | 54.1% |
| | Confidence Interval | (36.5% - 51.6%) | (43.6% - 52.7%) | (50.5% - 57.6%) |
| 2003 | N | 102 | 434 | 6,196 |
| | % | 37.6% | 39.0% | 47.1% |
| | Confidence Interval | (27.3% - 49.2%) | (35.0% - 43.1%) | (44.1% - 50.2%) |
| 2007 | N | 95 | 374 | 5,440 |
| | % | 40.8% | 39.3% | 47.3% |
| | Confidence Interval | (30.0% - 52.6%) | (35.7% - 43.2%) | (43.9% - 50.7%) |

‡ Non-Hispanic

**Table C-26. Percent of High School Students Who Have Ever Engaged in Sexual Intercourse, 1995, 2003, 2007**

Data Source: Youth Risk Behavior Surveillance System

| | | Alaska Natives Statewide | Alaska Non-Natives | U.S. Whites‡ |
|---|---|---|---|---|
| 1995 | N | 92 | 646 | 4,278 |
| | Rate | 52.3% | 46.4% | 48.9% |
| | Confidence Interval | (40.2%-64.2%) | (42.4%-50.4%) | (43.8%-54.1%) |
| 2003 | N | 132 | 385 | 5,711 |
| | Rate | 50.3% | 36.5% | 41.8% |
| | Confidence Interval | (40.4%-60.2%) | (32.0%-41.2%) | (39.0%-44.5%) |
| 2007 | N | 120 | 408 | 5,434 |
| | Rate | 49.4% | 43.6% | 43.7% |
| | Confidence Interval | (43.9%-54.8%) | (39.1%-48.1%) | (40.5%-47.0%) |

‡ Non-Hispanic

## Appendix C. Data Tables

**Table C-27. Percent of High School Students Who Used Marijuana on One or More of the Past 30 Days, 1995, 2003, 2007**

Data Source: Youth Risk Behavior Surveillance System

| | | Alaska Natives Statewide | Alaska Non-Natives | U.S. Whites‡ |
|---|---|---|---|---|
| 1995 | N | 57 | 413 | 4,395 |
| | % | 29.4% | 28.6% | 24.5% |
| | Confidence Interval | (22.3% - 37.5%) | (26.0% - 31.4%) | (22.0% - 27.3%) |
| 2003 | N | 100 | 236 | 6,458 |
| | % | 35.7% | 20.5% | 21.7% |
| | Confidence Interval | (30.2% - 41.7%) | (17.9% - 23.4%) | (19.4% - 24.2%) |
| 2007 | N | 76 | 170 | 5,713 |
| | % | 31.7% | 16.6% | 19.9% |
| | Confidence Interval | (23.4% - 41.4%) | (14.1% - 19.4%) | (17.4% - 22.6%) |

‡ Non-Hispanic

**Table C-28. Percent of High School Students Who Used Any Form of Cocaine, Including Powder, Crack or Freebase During their Lifetime, 1995, 2003, 2007**

Data Source: Youth Risk Behavior Surveillance System

| | | Alaska Natives Statewide | Alaska Non-Natives | U.S. Whites‡ |
|---|---|---|---|---|
| 1995 | N | 13 | 118 | 4,384 |
| | % | 7.3% | 8.3% | 6.5% |
| | Confidence Interval | (3.0%-16.8%) | (6.9%-10.1%) | (5.4%-7.9%) |
| 2003 | N | 21 | 77 | 6,349 |
| | % | 7.3% | 6.4% | 8.7% |
| | Confidence Interval | (4.4%-12.0%) | (5.1%-8.0%) | (7.4%-10.2%) |
| 2007 | N | 23 | 85 | 5,741 |
| | % | 7.3% | 7.9% | 7.4% |
| | Confidence Interval | (4.2%-12.5%) | (6.0%-10.5%) | (6.3%-8.7%) |

‡ Non-Hispanic

# Appendix C. Data Tables

### Table C-29. Percent of Live Births with Low Birth Weight, 2006-2008

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. 2010.

| | N | % |
|---|---|---|
| Norton Sound Alaska Natives | 30 | 5.0% |
| Alaska Natives Statewide | 458 | 5.5% |
| Alaska Whites | 1,154 | 5.6% |
| U.S. Whites (2006) | N/A | 7.2% |

N/A Not Available

### Table C-30. Teen Birth Rate per 1,000 Live Births, Females 15-19 Years, 2004-2006

Alaska Data Source: Alaska Bureau of Vital Statistics

U.S. Data Source: Martin TA, Hamilton BE, Sutton PD, Ventura ST, Menacker F, Kirmeyer S, Mathews TJ. Births: Final data for 2006. National Vital Statistics Reports 2009; 57(7).

| | N | Rate per 1,000 live births |
|---|---|---|
| Norton Sound Alaska Natives | 124 | 103.6 |
| Alaska Natives Statewide | 1,347 | 75.6 |
| Alaska Whites | 1,428 | 26.5 |
| U.S. Whites (2006) | N/A | 38.0 |

N/A Not Available

### Table C-31. Percent of Women with Pap Test within Past Three Years, 18 Years and Older, 2004 and 2006

Data Source: Behavioral Risk Factor Surveillance System

| | N | % | Confidence Interval |
|---|---|---|---|
| Alaska Natives Statewide | 416 | 89.0% | (84.5 - 92.2) |
| Alaska Non-Natives | 1,338 | 87.5% | (84.6 - 89.9) |
| U.S. Whites (2006) | N/A | 84.9% | N/A |

N/A Not Available

# Appendix C. Data Tables

**Table C-32. Percent of Women with Mammogram in Last Two Years, 40 Years and Older, 2004 and 2006**

Data Source: Behavioral Risk Factor Surveillance System

| | N | % | Confidence Interval |
|---|---|---|---|
| Alaska Natives Statewide | 224 | 74.0% | (66.4 - 80.5) |
| Alaska Non-Natives | 870 | 69.4% | (65.8 - 72.7) |
| U.S. Whites (2006) | N/A | 77.0% | N/A |

N/A Not Available

**Table C-33. Percent Who Have Had a Flexible Sigmoidoscopy or Colonoscopy Ever, 50 Years and Older, 2004 and 2006**

Data Source: Behavioral Risk Factor Surveillance System

| | N | % | Confidence Interval |
|---|---|---|---|
| Alaska Natives Statewide | 182 | 52.8% | (45.3 - 60.1) |
| Alaska Non-Natives | 776 | 52.6% | (49.0 - 56.1) |
| U.S. Whites (2006) | N/A | 59.1% | N/A |

N/A Not Available

**Table C-34. Influenza Vaccination Rates, Adults 65 Years and Older, June 30, 2009 to June 30, 2010**

Alaska Data Source: Alaska Native Tribal Health Consortium Immunization Registry
U.S. Data Source: Center for Disease Control and Prevention Wonder, Healthy People

| | N | % |
|---|---|---|
| Norton Sound Alaska Natives | 286 | 70.8% |
| Alaska Natives Statewide | 3,169 | 48.9% |
| U.S. Whites (2008) | N/A | 69.0% |

N/A Not Available

**Table C-35. Pneumococcal Vaccination Rates, Adults 65 Years and Older, June 30, 2009 to June 30, 2010**

Alaska Data Source: Alaska Native Tribal Health Consortium Immunization Registry
U.S. Data Source: Center for Disease Control and Prevention Wonder, Healthy People

| | N | % |
|---|---|---|
| Norton Sound Alaska Natives | 380 | 94.1% |
| Alaska Natives Statewide | 5,982 | 92.2% |
| U.S. Whites (2008) | N/A | 63.0% |

N/A Not Available

# Appendix C. Data Tables

**Table C-36. Two-Year Old Vaccination Coverage, Norton Sound Alaska Native Two-Year Olds, as of June 30, 2010**

Data Source: Alaska Native Tribal Health Consortium Immunization Registry

U.S. Data Source: National Center for Health Statistics, Health, United States, 2009: With Special Feature on Medical Technology. Hyattsville, MD. 2010.

| | N | % |
|---|---|---|
| DTaP | 289 | 87.6% |
| Polio | 327 | 99.1% |
| Hib | 316 | 95.8% |
| Hep B | 329 | 99.7% |
| MMR | 319 | 96.7% |
| Varicella | 306 | 92.7% |
| 4:3:1:3:3 | 286 | 86.7% |

**Table C-37. Percent of Births Where the Mother Received Adequate or Adequate Plus Prenatal Care, 2006-2008**

Data Source: Alaska Bureau of Vital Statistics and National Center for Health Statistics

U.S. Data Source: National Center for Health Statistics, Health, United States, 2009: With Special Feature on Medical Technology. Hyattsville, MD. 2010.

| | N | % |
|---|---|---|
| Norton Sound Alaska Natives | 278 | 46.6% |
| Alaska Natives Statewide | 3,389 | 41.8% |
| Alaska Whites | 12,711 | 67.1% |
| U.S. Whites (2006) | N/A | 70.2% |

N/A Not Available

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## 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 $kg/m^2$ | Overweight ..... 25 ≤ BMI < 30 $kg/m^2$ |
| Normal Weight ..... 18.5 ≤ BMI < 25 $kg/m^2$ | Obese..... BMI ≥ 30 $kg/m^2$ |

**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.

**Healthy People Goal** - Healthy People 2010 national goals sets health targets to be achieved by the year 2010. Healthy People 2010 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 Code) -** An international system designed to classify diseases and other health problems in 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, person-time rates, or mortality rates.

**Weighted percent** - The resulting percent after responses of persons in various subgroups (e.g. region, age, sex) are adjusted to compensate for the over-representation or under-representation of these persons in a sample.