

# Statewide Health Profile for Alaska Natives

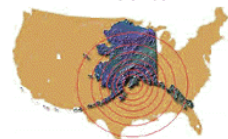


February 2004  
Alaska Native Epidemiology Center  
Alaska Native Health Board



Alaska Native Health Board

Alaska Native  
Epidemiology  
Center





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## Cover photo:

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## Acknowledgements

Data were provided by:

- Alaska Behavioral Risk Factor Surveillance System (BRFSS)
- Alaska Bureau of Vital Statistics, Division of Public Health, Department of Health and Social Services, State of Alaska
- Alaska Trauma Registry, Section of Community Health and Emergency Medical Services, Division of Public Health, Department of Health and Social Services, State of Alaska
- IHS National Patient Information and Resource System (NPIRS)
- Research and Analysis Section, Alaska State Department of Labor, State of Alaska
- Resource Patient Management System (RPMS) Reports
- Statewide Alaska Native Tribal Diabetes Registry, Alaska Native Medical Center
- US Census Bureau

Document layout developed by Vanessa Hiratsuka.



## Introduction

The Alaska Native Epidemiology Center developed the *Statewide Health Profile for Alaska Natives* to provide an overview of the health of Alaska Natives statewide. We hope this information will be useful as a baseline for grant proposals and in the implementation of prevention programs.

The *Statewide Health Profile for Alaska Natives* has been divided in to four main sections:

- Demographics
- Mortality
- Morbidity
- Prevention

Each of these sections has subsections targeted to specific topics. We have provided the most current data available on each topic. Technical information such as the underlying population estimate used to calculate rates is included with the corresponding topic.

**The denominators for various statistics are different depending on the source of the data (see Appendix A).** The source and denominator are specified in footnotes. References and sources for all data are provided at the end of this document.

### A Comment on Interpretation of Differences

In some charts, the bars representing the estimated prevalence of characteristics for Alaska Natives and non-Natives, or men and women may look different. However, unless they are described as statistically significantly different in the accompanying text, we must assume that the true prevalence is probably not different. This is because the potential error of the estimate may be very large, usually because of small numbers of respondents.

For some indicators, the potential error is reflected by the Confidence Interval (CI) line. The CI indicates that the true value of the prevalence falls within the range given with reasonable, but not absolute, certainty. We have used 95% CIs, indicating that the true value of the estimate lies within the range given with 95% probability. In comparing the prevalence of a characteristic for two groups, for example between men and women or between Alaska Natives and non-Natives, if the CI lines overlap, the estimated prevalences are not statistically significantly different, even if the bars representing the estimated prevalences are of different

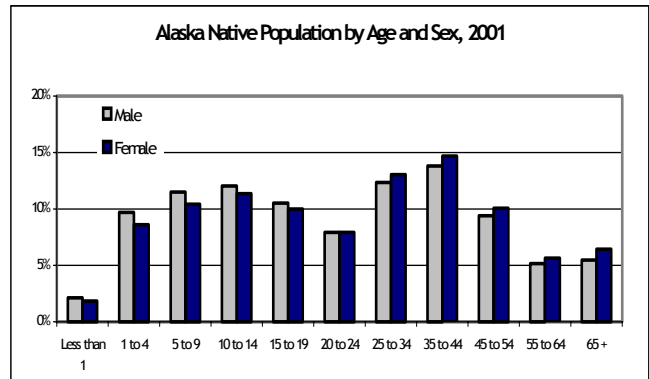
heights. If the CI lines do not overlap, the differences between two groups are said to be statistically significantly different with a probability of less than 5% ( $p < .05$ ) of being the same.

The length of the CI line relative to the height of the bar gives a visual impression of the reliability of the estimate -- if the CI line is long, the estimate is less reliable than if the CI line is short. If the 95% CI is more than one third as large as the estimated prevalence, we consider the estimate to be uncertain and we recommend using that estimate with caution. This is indicated by footnotes to the charts. A large CI may be the result of small numbers of people who gave the response tabulated.

# Demographic Information

## Indian Health Service (IHS) User Population

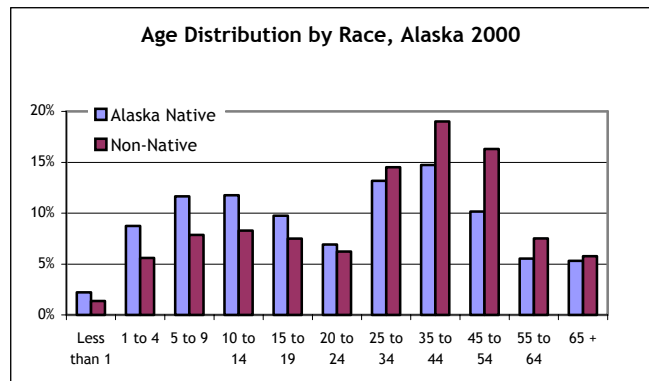
An IHS user is defined as an eligible American Indian/Alaska Native (AI/AN) who used a health facility that reports to the IHS national data system at least once in a three-year period (see Appendix A). The 2001 IHS total user population for Alaska was very close to the 2000 US Census estimate of the number of AI/AN statewide based on AI/AN alone or in combination with other races. The 2001 user population also had a similar distribution by age and sex. Among Alaska Natives, there was a slightly higher proportion of males than females under the age of 20; above age 25 there was a higher proportion of females than males.



Data Source: Indian Health Service (IHS) National Patient Information and Reporting System (NPIRS), Alaska Area User Population, 2001, FY 2001 (Based on Counts Finalized March 1, 2002)

## 2000 US Census

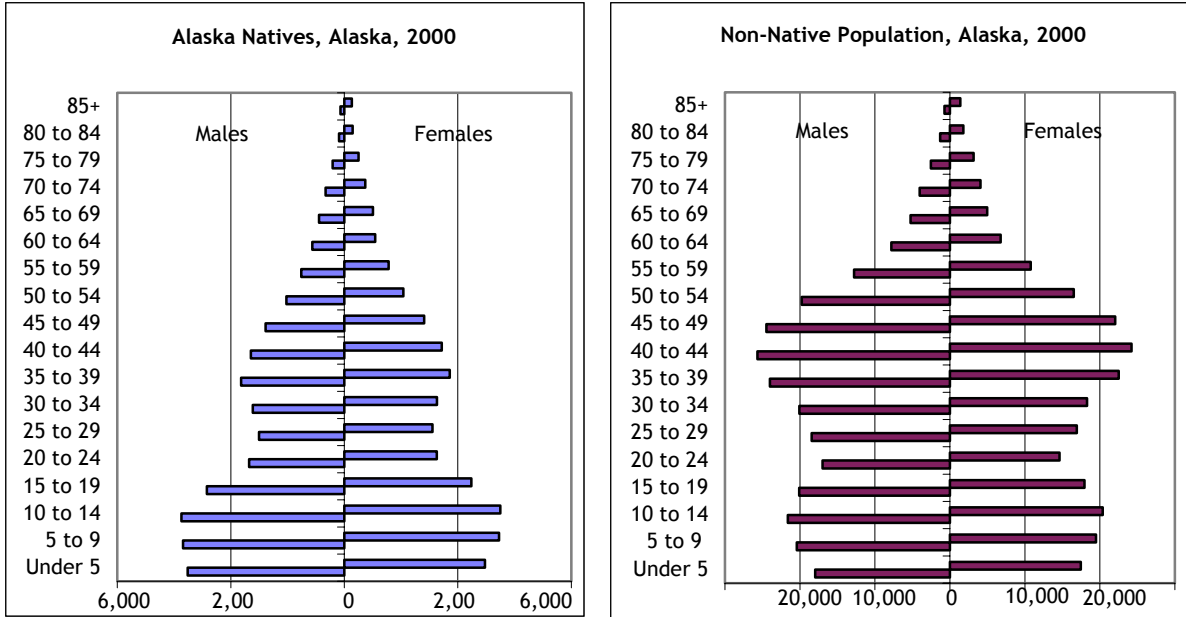
In the 2000 Census, respondents were asked to identify themselves as belonging to one or more races. Alaska Natives made up 19% of the total population of Alaska in 2000 based on AI/AN alone or in combination with other races. The Alaska Native population was 50% male, similar to the non-Native population which was 52% male. The Alaska Native population had a higher proportion of people aged 0-19 years and a lower proportion of people over age 25 years than the non-Native population.



Data Source: MARS estimates from Alaska State Department of Labor, based on the 2000 US Census

## Population Pyramids

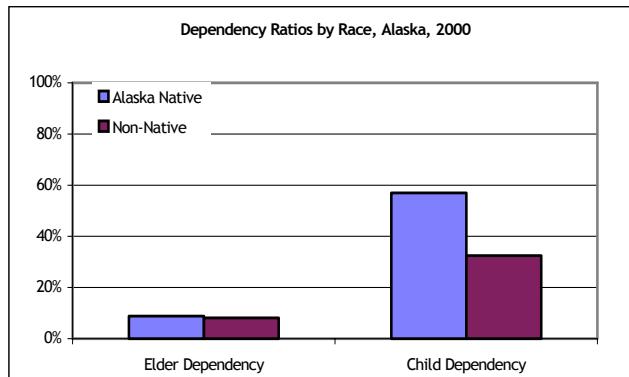
The Alaska Native population has a much greater proportion of people age 19 and under than the non-Native population.



Data Source: MARS estimates from the Alaska State Department of Labor, based on the 2000 US Census  
 Note: An explanation of the MARS estimates can be found at: <http://almis.labor.state.ak.us/default.asp?PAGEID=170>. Alaska Native defined as AI/AN alone or in combination with other races.

## Dependency Ratios

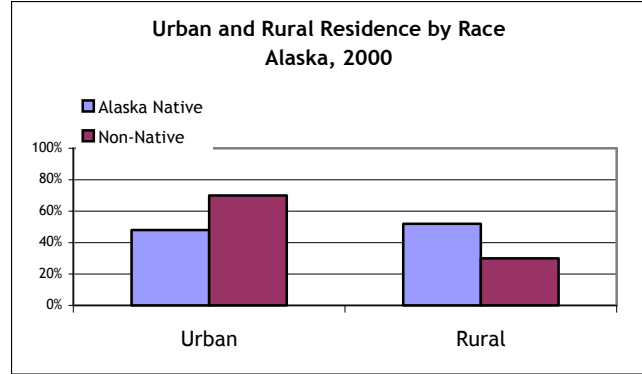
The dependency ratio (number of people under 15 or over 64 years of age divided by the number of people 15 to 64 years of age) is higher among Alaska Natives than among non-Natives, due almost entirely to greater child dependency among Alaska Natives. The dependency ratio is intended to measure the proportion of the population who are generally too young or too old to participate in the workforce. The denominator is the number of people of potentially working age, but is not adjusted for unemployment (see page 9). Among Alaska Natives and rural Alaskans, workforce participation may not be the only way that individuals contribute to household support.



Data Source: MARS estimates from the Alaska State Department of Labor, based on the 2000 US Census

## Population by Rural and Urban Residence

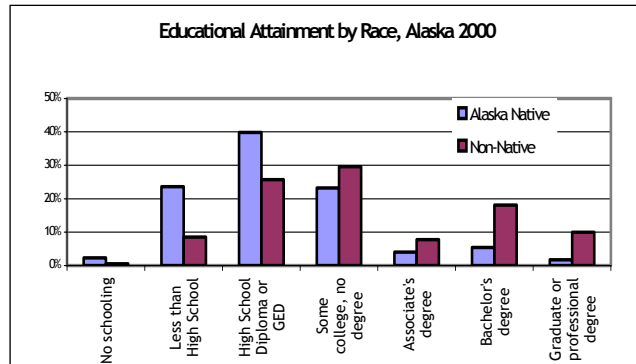
Nearly half of Alaska Natives lived in rural areas in 2000 compared to 30% of non-Natives. According to the 2000 US Census, urban is defined as all territory, population, and housing units located within urbanized areas (UA) and urban clusters (UC). UAs contain at least 50,000 people and UCs have at least 2,500 people but less than 50,000. Rural areas are all territory, population, and housing units located outside of UAs and UCs (Census 2000 Summary File 4 Technical Documentation, 2003).



Data Source: 2000 US Census, Summary File 4

## Education by Race

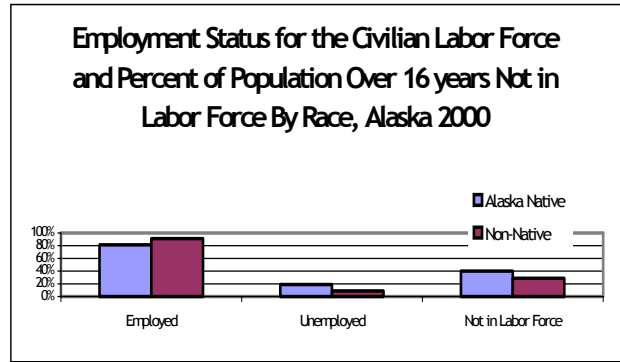
In 2000, fewer Alaska Natives over 25 years than non-Natives have received a high school diploma. A similar proportion of Alaska Natives and non-Natives have attended college, but a greater proportion of non-Natives have completed a college degree program.



Data Source: 2000 US Census, Summary File 4

## Employment by Race

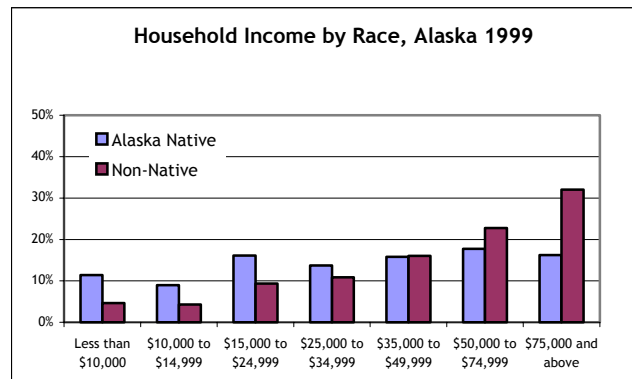
The 2000 US Census defined persons 16 years and over who were looking for work in the last 4 weeks and who were available to start a job as unemployed (US Census 2000 Summary File 4 Technical Documentation, 2003). Among the civilian labor force, the percentage of Alaska Natives that were unemployed in 2000 was about twice that of non-Natives. Alaska Natives also had a greater proportion of people not in the labor force than non-Natives. "Not in labor force" includes students, individuals taking care of family, and seasonal workers in the off-season not looking for work (US Census 2000 Summary File 4 Technical Documentation, 2003). It also includes individuals who have given up looking for work.



Data Source: 2000 US Census, Summary File 4

## Household Income by Race

Household income was reported by the Head of Household completing the Census form. Income includes all monetary sources of income including wages, Permanent Fund Dividend, Corporation Dividends, and Public Assistance (Census 2000 Summary File 4 Technical Documentation, 2003). Income does not include the value of subsistence resources that contribute to household economy.



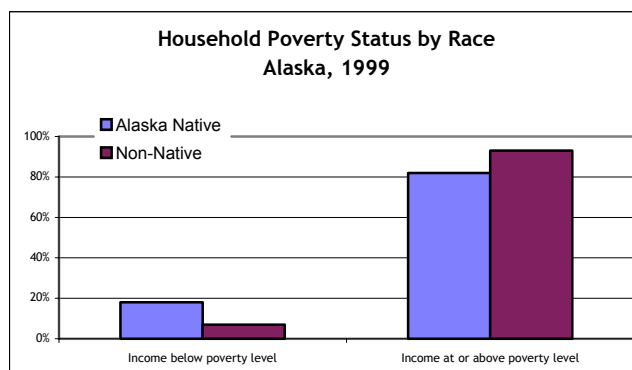
Data Source: 2000 US Census, Summary File 4

## Poverty Status

The US Census defines poverty in a complex way that does not take into account the higher cost of living in Alaska. The Federal Department of Health and Human Services (DHHS) adjusts poverty guidelines for entitlement programs for Women, Infants and Children (WIC), Temporary Assistance for Needy Families (TANF), etc. for local factors. The poverty guidelines are higher than the US Census levels for Alaska. For a single person the 1999 DHHS poverty level for Alaska for one person was \$10,320 and for a four-person household it was \$20,880 (Federal Register 1999).

## Households

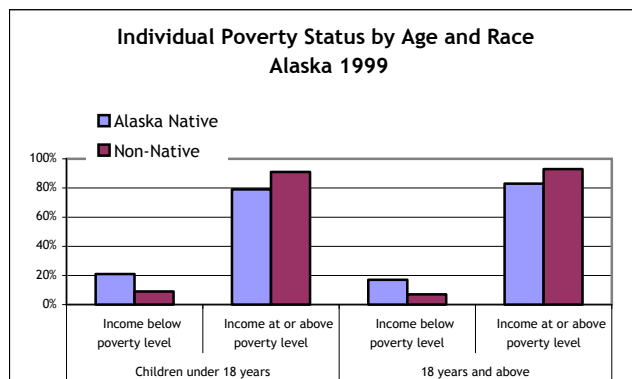
Alaska Natives had three times as many households with income below the poverty level in 1999 as non-Natives.



Data Source: 2000 US Census, Summary File 4

## Individuals

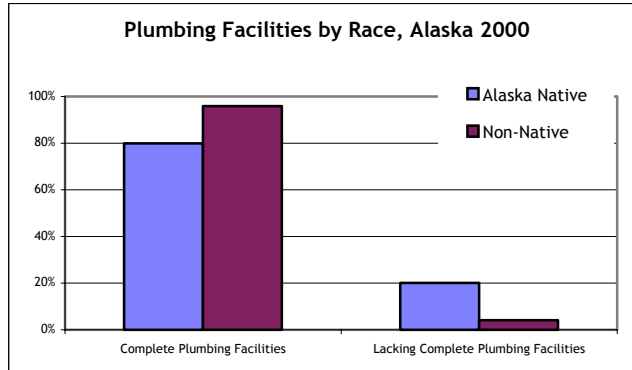
21% of Alaska Native children under the age of 18 were living in poverty. Overall, 19% of Alaska Natives had income below the poverty level compared to 7% of non-Natives.



Data Source: 2000 US Census, Summary File 4

## Plumbing

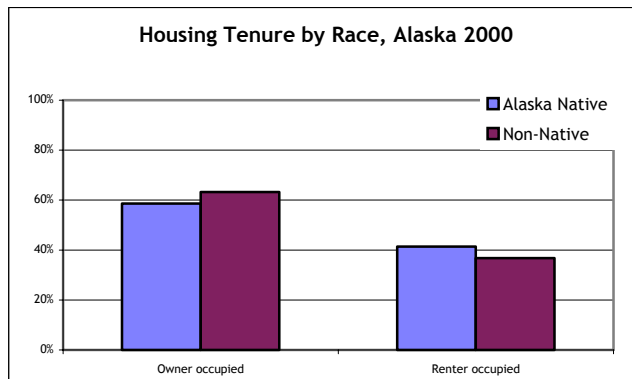
The US Census defines "complete plumbing facilities" as having hot and cold running water, a flush toilet and a bathtub or shower. Overall, 80% of Alaska Native households reported complete plumbing facilities in 2000, compared to 96% of non-Native households.



Data Source: 2000 US Census, Summary File 4

## Housing Tenure

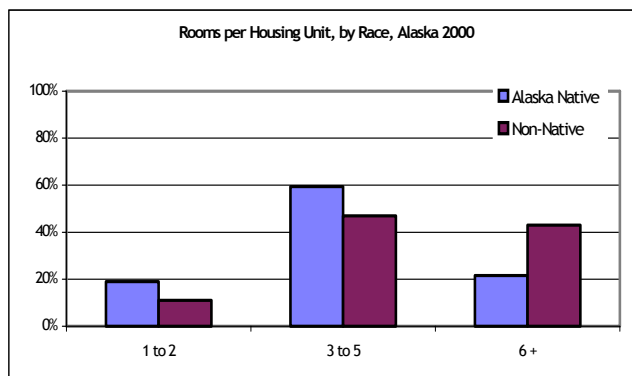
Slightly more non-Natives owned their residences in 2000 than Alaska Natives.



Data Source: 2000 US Census, Summary File 4

## Rooms per Housing Unit

Alaska Natives had fewer rooms in their residence in 2000 than non-Natives.



Data Source: 2000 US Census, Summary File 4

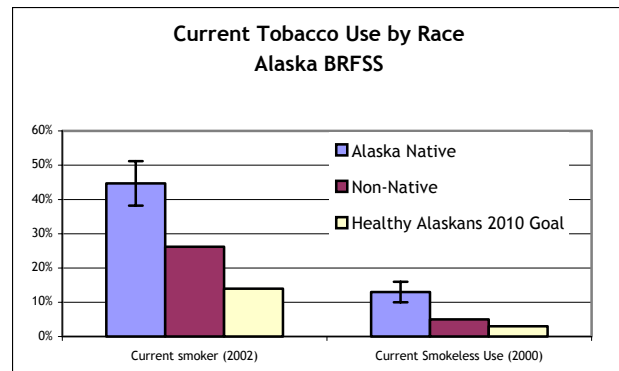
# Morbidity

## Chronic Disease Risk Factors

Participants in the Alaska Behavioral Risk Factor Surveillance System (BRFSS) were asked a number of questions on chronic disease risk factors (see Appendix B). For the purposes of this report we looked at current tobacco use (smoking and smokeless tobacco), blood pressure, cholesterol, overweight and obesity.

### Tobacco Use

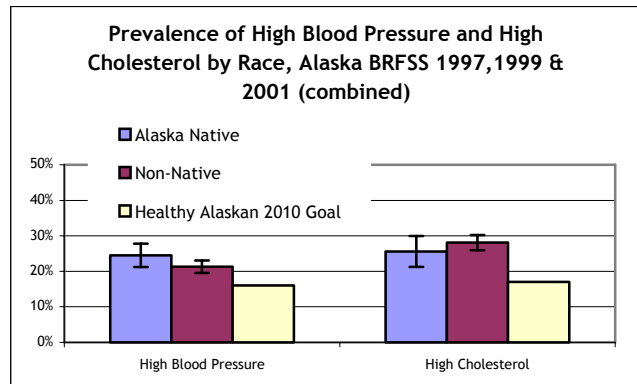
Alaska Natives have a significantly higher prevalence of current smoking than non-Natives. They also have a higher prevalence of current smokeless tobacco use. Both groups have a prevalence of current smoking and current smokeless tobacco use above the Healthy Alaskans 2010 goals (Healthy Alaskans 2010 Vol. 1).



Data Source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2000, 2002

### Blood Pressure and Cholesterol

In two separate questions, BRFSS participants were asked whether they had ever been told by a health professional that they have high blood pressure or high cholesterol. There was no significant difference between Alaska Natives and non-Natives in the reported prevalence of high blood pressure or cholesterol. Both groups had prevalences of high blood pressure and cholesterol above the Healthy Alaskans 2010 goals (Healthy Alaskans 2010 Vol. 1).

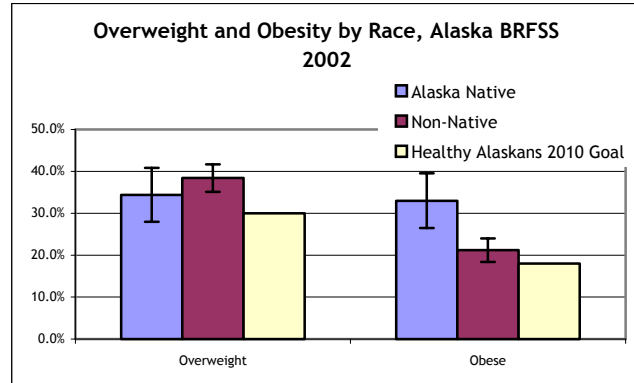


Data Source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System, 1997, 1999 and 2001

## Overweight and Obesity

For the BRFSS, Body Mass Index (BMI) was calculated based on self-reported height and weight. A person with a BMI greater than or equal to 25.00 but less than 30.00 was considered overweight. A person with a BMI greater than or equal to 30.00 was considered obese.

There was no difference in the prevalence of overweight between Alaska Natives and non-Natives. Alaska Natives had a significantly higher prevalence of obesity than non-Natives. Both groups have a prevalence of overweight and obesity above the Healthy Alaskans 2010 goals (Healthy Alaskans 2010 Vol. 1).



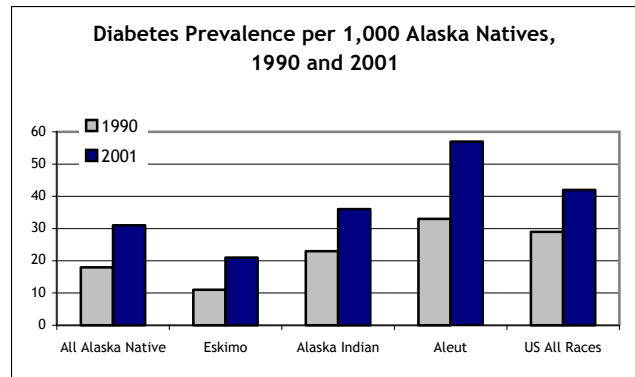
Data Source: Data Source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2002

Note: The 95% CI for obesity among Alaska Natives is greater than one third of the estimate.

## Diabetes

### Statewide Alaska Native Tribal Diabetes Registry

The prevalence of diabetes has increased from 1990 to 2001 among all Alaska Native groups and in the US as a whole. Aleuts have the highest prevalence of diabetes, but the greatest increase in prevalence has occurred among Eskimos. The prevalence of diabetes among all Alaska Natives has increased at a greater rate than among the US all races population (Statewide Alaska Native Tribal Diabetes Registry, 2003).

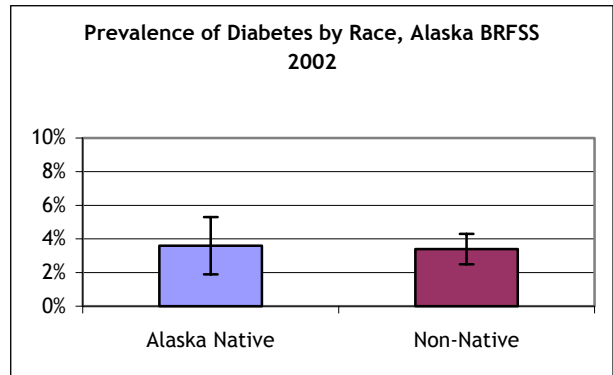


Data Source: Statewide Alaska Native Tribal Diabetes Registry, Alaska Native Medical Center

Note: Age adjusted to the 2000 US standard population.

### Behavioral Risk Factor Surveillance System (BRFSS)

BRFSS participants were asked whether they have ever been told by a health professional that they have diabetes. Women diagnosed with gestational diabetes (diabetes diagnosed during pregnancy that resolved after delivery) were excluded. There was no difference between Alaska Natives and non-Natives in the prevalence of diabetes.

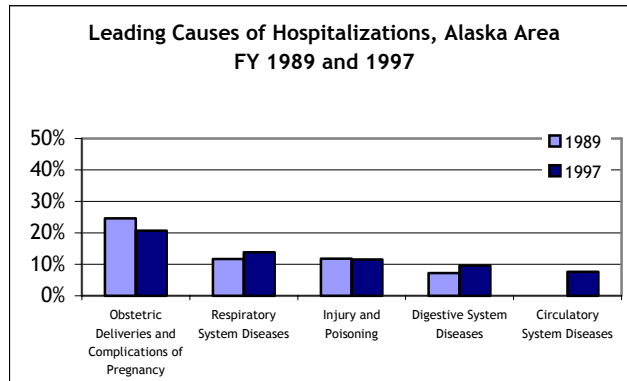


Data Source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2002

Editor's Note: These data are from two different data sources. The BRFSS is based on self-report and only includes adults age 18 and older. The Diabetes Registry is based on medical records from the Alaska Native health system and includes patients of all ages. The denominators for the estimates are significantly different. The denominator for the Alaska Native Medical Center (ANMC) estimates are Indian Health Service (IHS) user population (see Appendix A) while the BRFSS denominator is a stratified sample of adults age 18 years and older interviewed by telephone (see Appendix B). Because of these differences it is difficult to directly compare the prevalence of diabetes between the two data sources.

## Leading Causes of Hospitalization

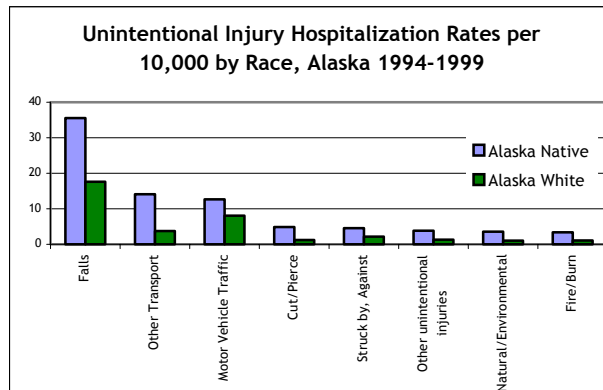
The leading cause of hospitalization among Alaska Natives in FY1989 and FY1997 were obstetric deliveries and complications of pregnancy. Between FY 1989 and FY1997, circulatory system diseases have become a leading cause of hospitalization.



Data Source: US DHHS, IHS. Regional Differences in Indian Health, 1991 and 1998-1999.

## Non-Fatal Unintentional Injury Hospitalizations

Counts of non-fatal injury hospitalizations among Alaska Native and Alaska White residents from 1994 to 1999 were provided by the Alaska Trauma Registry, Division of Public Health, Department of Health and Social Services, State of Alaska. The denominator used to calculate rates of injury hospitalization were IHS User populations (see Appendix A) for Alaska Natives and intercensal estimates projected from the 1990 US Census for White residents (Alaska Department of Labor 2000).



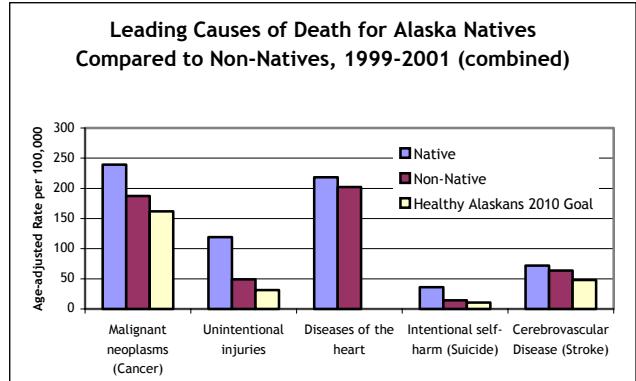
Data Source: Alaska Trauma Registry, Division of Public Health, Department of Health and Social Services, State of Alaska

Overall, Alaska Natives have nearly three times the injury hospitalization rates of Alaska Whites. The biggest disparities for injury hospitalizations between Alaska Natives and Alaska Whites are in the categories of: “Other Transport”, which includes 4-wheel all terrain vehicles and snowmachines, “Natural/Environmental” which includes excessive cold and “Cut/Pierce” (see Appendix D).

# Mortality

## Rates of Leading Causes of Death to Alaska Natives Compared to Alaska Non-Native and US

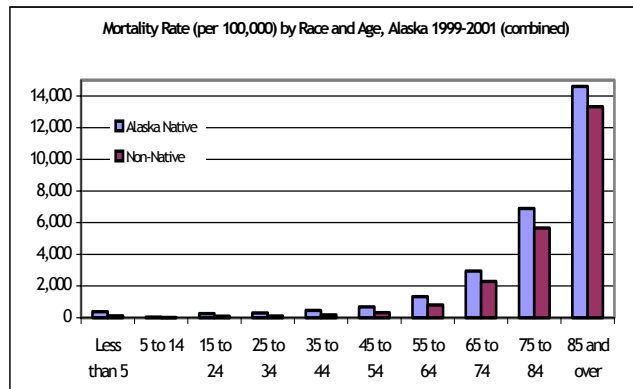
The biggest disparities in mortality rates between Alaska Natives and non-Native residents were for intentional self-harm (suicide) and unintentional injuries for the period 1999 to 2001 (inclusive). For all leading causes of death, both Alaska Native and non-Native residents have mortality rates higher than the Healthy Alaskans 2010 goals (HA 2010 Vol. 1).



Data Source: Alaska Bureau of Vital Statistics, Department of Public Health, Division of Public Health, Department of Health and Social Services, State of Alaska  
 Note: Age adjusted to the 2000 US standard population

## Mortality Rates by Race and Age

Alaska Natives had a higher rate of death in all age groups than non-Natives during the period 1999 to 2001 (inclusive). The biggest disparities between Alaska Native and non-Natives were in the “less than 5 years” and “5 to 14 years” age groups. Disparities in mortality rates decrease with increasing age.

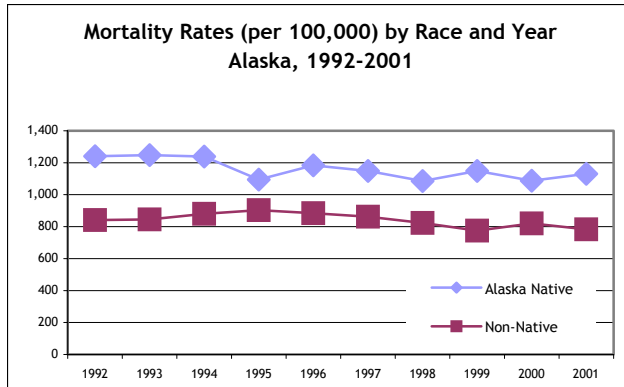


Data Source: Alaska Bureau of Vital Statistics, Department of Public Health, Division of Public Health, Department of Health and Social Services, State of Alaska

## Trends

### Mortality Rates by Race and Year

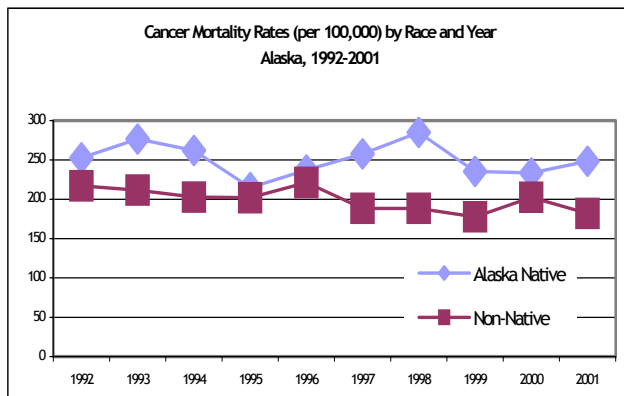
Alaska Natives consistently had a higher all cause mortality rate than non-Natives during the ten-year period from 1992 to 2001. In both groups, the all cause mortality rate has stayed relatively level during the ten-year period.



Data Source: Alaska Bureau of Vital Statistics, Department of Public Health, Division of Public Health, Department of Health and Social Services, State of Alaska

### Cancer Mortality Rates by Race and Year

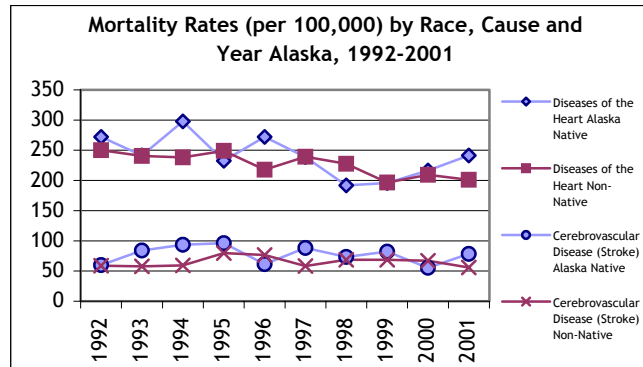
Alaska Natives had a cancer mortality rate higher than non-Natives during the ten-year period from 1992 to 2001. The cancer mortality rates in both groups have varied somewhat from year to year but have not had an apparent trend in either direction.



Data Source: Alaska Bureau of Vital Statistics, Department of Public Health, Division of Public Health, Department of Health and Social Services, State of Alaska

## Diseases of the Heart and Cerebrovascular Disease Mortality Rates by Race and Year

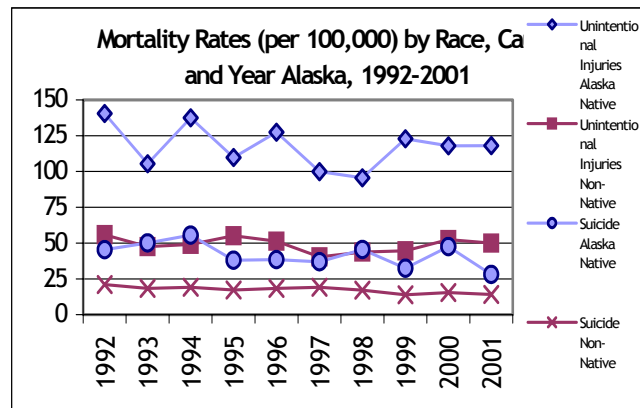
Mortality rates for “Cerebrovascular Disease”, have stayed fairly steady from 1992 to 2001, in both Alaska Natives and non-Natives. The trend lines for “Diseases of the Heart” and “Cerebrovascular Disease” mortality rates for Alaska Natives and non-Natives cross each other over time, so there is no real difference in the rates between the two groups. There is a suggestion of a decreasing trend over time for mortality due to “Diseases of the Heart” among non-Natives.



Data Source: Alaska Bureau of Vital Statistics, Department of Public Health, Division of Public Health, Department of Health and Social Services, State of Alaska

## Unintentional Injury and Suicide Mortality Rates by Race and Year

There has been no real change from 1992 and 2001 in the rate of Unintentional Injuries for either Alaska Natives or non-Natives. For the ten-year period, Alaska Natives have consistently had a rate of “Unintentional Injury” mortality between 2 and 3 times that of non-Natives and a rate of “Suicide” mortality approximately twice that of non-Natives. For both groups there is the suggestion of a decrease in “Suicide” mortality rates from 1992 to 2001.



Data Source: Alaska Bureau of Vital Statistics, Department of Public Health, Division of Public Health, Department of Health and Social Services, State of Alaska



# Prevention

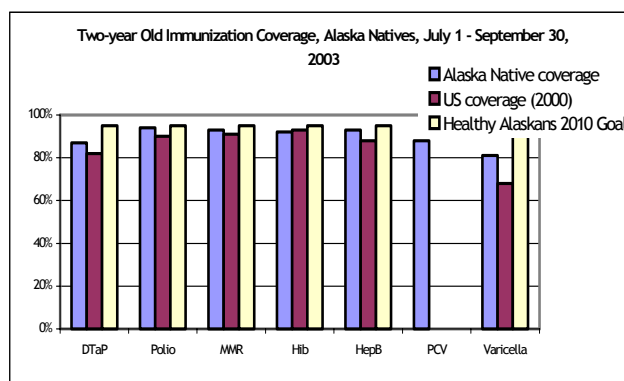
## Immunizations

The following vaccines are recommended for all children\*:

- Diphtheria/tetanus/whooping cough (DTaP)
- Polio
- *Haemophilus influenzae* type b (Hib)
- Hepatitis B
- Pneumococcal conjugate (PCV)
- Measles/mump/rubella (MMR)
- Chickenpox (varicella)
- Hepatitis A

\*The MMR, varicella, DTaP, polio, Hib, hepatitis A and B vaccines are required by the State of Alaska for daycare. The MMR, polio, DTaP, hepatitis A and hepatitis B vaccines are required for school attendance.

The immunization coverage for 2-year-old Alaska Native children is very close to the Healthy Alaskans 2010 goal for polio, MMR, Hib and Hepatitis B vaccines. The coverage for Varicella vaccine falls below the Healthy Alaskans 2010 goal, but is well above the coverage for the US as a whole in 2000. The vaccine coverage for Alaska Native 2-year-olds is above that of the US as a whole in 2000 for DTaP, polio, MMR, Hepatitis B and Varicella vaccines.



Data Source: Resource Patient Management System Reports from 9 Tribal Health Corporations compiled by the Alaska Native Tribal Health Consortium (ANTHC). Provided by Rosalyn Singleton, Immunization Coordinator, ANTHC

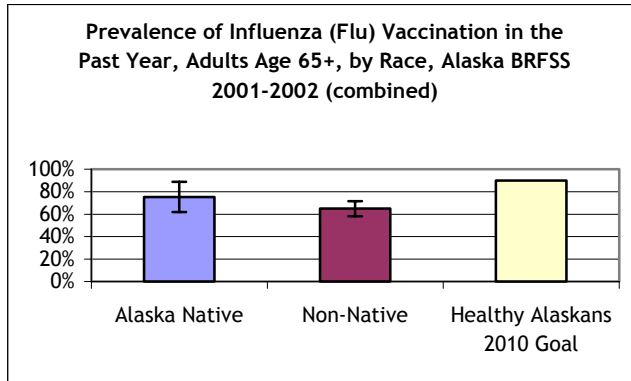
Editor's note: Two-year-old is defined as children 24-35 months of age. Healthy Alaskans 2010 goals are for children 19-35 months of age (Healthy Alaskans 2010 Vol. 1).

The following disease prevention and screening data are from the Alaska Behavioral Risk Factor Surveillance System (BRFSS) (see Appendix B).

### Influenza (Flu) Vaccinations for Adults age 65 and Older

Healthy Alaskans 2010 sets the goal that 90% of adults age 65 and over are vaccinated annually for flu.

There was no difference between Alaska Natives and non-Natives in the prevalence of adults age 65 and over who report they had received a flu vaccination in the past year and both groups are below the Healthy Alaskans 2010 goal for flu vaccinations (Healthy Alaskans 2010 Vol. 1).

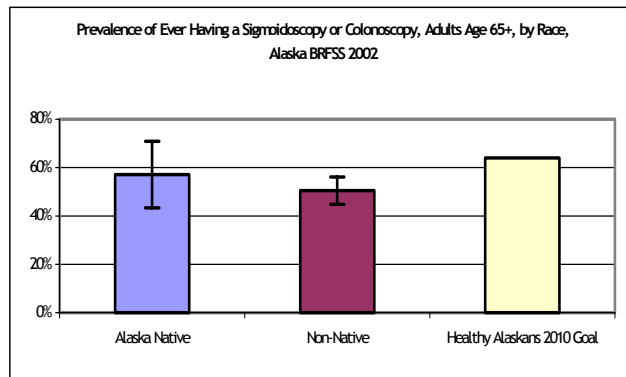


Data Source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2001, 2002; Healthy Alaskans 2010 Vol. 1  
 Note: The 95% CI for Alaska Natives is greater than one third of the estimate.

### Screening

#### Colon Cancer Screening

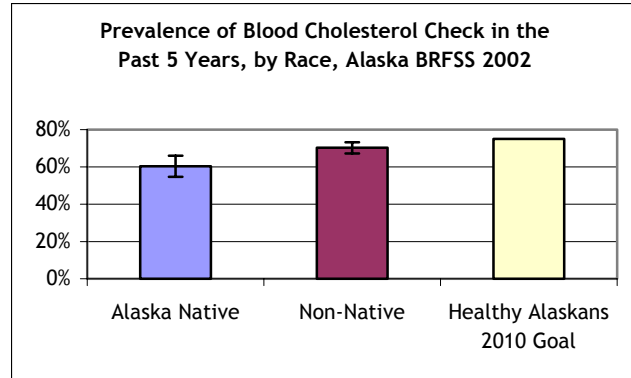
According to the American Cancer Society, both men and women should have either a flexible sigmoidoscopy every 5 years, or colonoscopy every 10 years, beginning at age 50 ([www.cancer.org](http://www.cancer.org)). Healthy Alaskans 2010 sets the goal that 64% of adults age 50 and over have received a sigmoidoscopy or colonoscopy. There was no difference between Alaska Native and non-Native adults age 65 and over who report ever having a sigmoidoscopy or colonoscopy; both groups are below the Healthy Alaskans 2010 goal for colon cancer screening (Healthy Alaskans 2010 Vol. 1).



Data Source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2002; Healthy Alaskans 2010 Vol. 1  
 Note: The 95% CI for Alaska Natives is greater than one third of the estimate.

## Cholesterol Screening

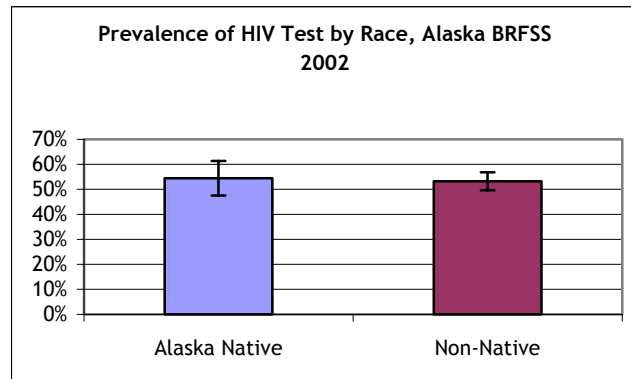
Significantly more non-Natives have had a blood cholesterol check in the last 5 years than Alaska Natives. However, both groups are below the Healthy Alaskans 2010 goal for cholesterol screening (Healthy Alaskans 2010 Vol. 1).



Data Source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2002; Healthy Alaskans 2010 Vol. 1

## HIV Testing

There was no difference between Alaska Natives and non-Natives in who reported ever having had an HIV test. HIV tests during blood donation were excluded.

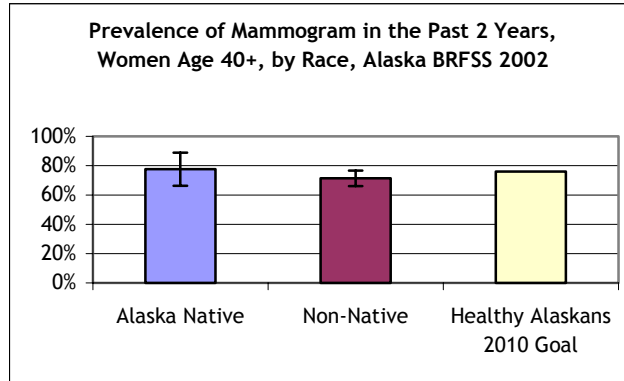


Data Source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2002

## Women's Health

### Breast Cancer Screening - Mammograms

The American Cancer Society recommends women over age 40 have a mammogram every year ([www.cancer.org](http://www.cancer.org)). Healthy Alaskans 2010 sets the goal that 76% of women age 40 and over have received a mammogram in the last 2 years.



Approximately three quarters of Alaskan women age 40 and over have had a mammogram in the past 2 years.

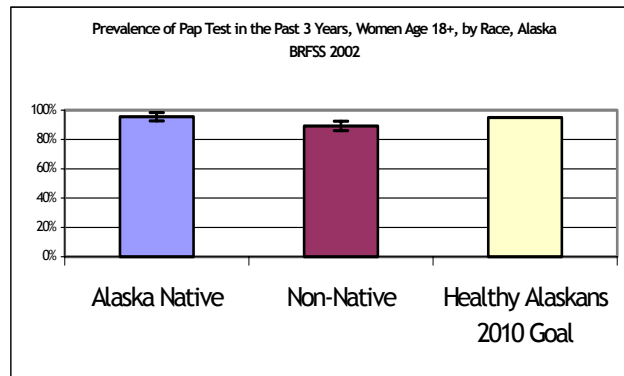
There was no difference between

Alaska Native and non-Native women and both groups are very close to the Healthy Alaskans 2010 goal for mammograms (Healthy Alaskans 2010 Vol. 1).

Data Source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2002; Healthy Alaskans 2010 Vol. 1

### Cervical Cancer Screening

The American Cancer Society recommends women begin to receive Pap tests for cervical cancer screening about 3 years after they become sexually active, but no later than age 21 ([www.cancer.org](http://www.cancer.org)). Healthy Alaskans 2010 sets the goal that 95% of women age 18 and over have had a Pap test within the last 3 years (Healthy Alaskans 2010 Vol. 1).



Significantly more Alaska Native women reported having had a Pap test in the last 3 years than non-Native women. The prevalence of Alaska Native women receiving Pap tests has reached the Healthy Alaskans 2010 goal. The prevalence for non-Native women is below the Healthy Alaskans 2010 goal (Healthy Alaskans 2010 Vol. 1).

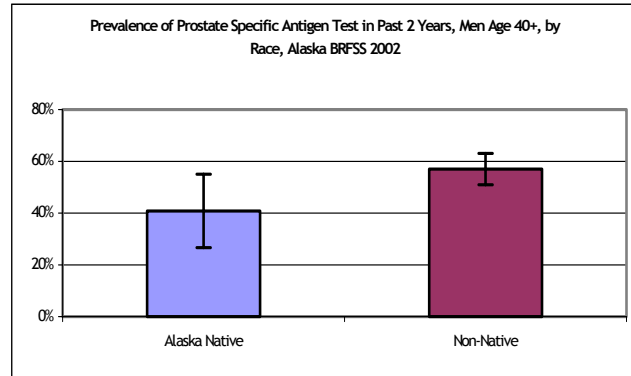
Data Source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2002; Healthy Alaskans 2010 Vol. 1

## Men's Health

### Prostate Cancer Screening

The American Cancer Society recommends that health care professionals offer the prostate-specific antigen (PSA) blood test yearly to men age 50 and over ([www.cancer.org](http://www.cancer.org)).

There was no difference in the prevalence of Alaska Native and non-Native men age 40 and over who report having had a PSA test in the last 2 years.



Data Source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2002

Note: The 95% CI for Alaska Natives is greater than one third of the estimate.



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# Appendix A

## How Many Alaska Natives Are There?

Carol Ballew, PhD

Director

Alaska Native Epidemiology Center

### Birth and Death Certificates

The Alaska Bureau of Vital Statistics (and all other states) assigns race on Birth Certificates. Usually the mother or another family member provides information for the Birth Certificate describing family demographics. Until 2001, the baby was assigned the race listed for the mother, *regardless of the father's race*. A child of an Alaska Native mother was classified as an Alaska Native, but a child of a non-Native mother and an Alaska Native father was *not* even though the family and community may considered the child an Alaska Native and the child might have identified himself or herself as an Alaska Native.

Death Certificates are usually filled out by a Funeral Director or other official who may not know the person who died and may determine race by observation. This can result in misclassification. White or Black people are misclassified least often; other minorities such as Alaska Natives are misclassified more often. Since 1989, the Alaska Bureau of Vital Statistics has tried to match each resident's Death Certificate with their Birth Certificate, to ensure that the race on the Death Certificate is the same as the race on the Birth Certificate.

Some people who think of themselves as Alaska Natives, who live as Alaska Natives, and who use Alaska Native Tribal Health services are not counted as Alaska Natives on Birth and Death Certificates and in statistical reporting systems that are based on Birth and Death Certificates. Statistics based on these systems include birth rates, death rates, and infant mortality rates.

### The Census and Other Official US Data Systems

The Census and many other data collection systems maintained by the federal government ask respondents to declare their own race. There can be differences between the race people are assigned on their Birth and Death Certificates and how they identify themselves on the Census and other surveys. Therefore, different sources of information about numbers of people by race in a population can give different results.

The Census is conducted every 10 years. Between Censuses, the federal and state governments keep track of annual changes in the population by making intercensal estimates, adjusting the previous Census figures using Birth and Death records. Intercensal estimates are fairly accurate for tracking the

population as a whole. However, for Alaska Natives, there is a tendency to accumulate errors in the intercensal estimates because the estimated annual changes are based on race assigned on Birth and Death Certificates rather than on the self-identification of race used in the Census.

### **The Indian Health Service (IHS) User Population**

IHS user populations are defined as the count of eligible American Indian or Alaska Native (AI/AN) beneficiaries who used a facility that reports into the IHS national data system at least once in a three-year period. For 2001, the user population is a count of AI/AN that used a facility at least once between October 1st, 1999 and September 30, 2001. They are calculated every year for all IHS areas and the IHS system as a whole.

Both the 2000 US Census counts and 2001 IHS User populations are presented in the Demographics section of this document.

### **The New Multiple Race Option**

Until 1997, federal data collection systems allowed people to identify themselves as belonging to only one race. In 1997, the federal government directed that all federal systems allow people the option of identifying themselves as belonging to more than one race. All federal systems were directed to implement multiple race classification by January 2003. The 2000 Census used the multiple race option, but the BRFSS did not convert until the 2001 interview cycle. The State of Alaska Vital Statistics system is in the process of transition to multiple race recording.

In the 2000 Census for Alaska, based on people who identified themselves American Indian or Alaska Native only, there were 98,043 Alaska Natives or 15.6% of the total population of the state. Based on people who identified themselves as American Indian or Alaska Native only or in combination with one or more other races (sometimes called "any mention"), there were 119,241 Alaska Natives or 19.0% of the total population (2000 US Census, Summary File 2).

The number of Alaska Natives in the state is used as the denominator to calculate statistics that are tracked across multiple years such as morbidity and mortality rates and many others. Beginning with data collected in 2000, the change in options for racial classification may result in discontinuities with previous years that will be difficult to interpret.

### **Implications**

Many federal and state funding programs for public health, education, and rural development consider the number of people to be helped by a program or the burden of a health or economic condition on a community. To determine the number of people to be helped or the burden of a condition, we need accurate information on both the number of people affected (numerator) and the total number of people in the group (denominator). For example, we use this information to

calculate the prevalence of disease (number of people with the disease divided by the total number of people at risk of getting the disease) or the mortality rate from a disease (the number of deaths from a disease divided by the total number of people). Health disparities are assessed by comparing morbidity and mortality rates between two or more groups in the population.

Using American Indian or Alaska Native only for the 2000 denominator of a calculation for mortality rate, for example, will result in estimates that are higher than expected. Using American Indian or Alaska Native only or in combination with one or more other races will result in estimates that are lower than expected. It might appear that something dramatic happened in the Alaska Native population between the previous Census or intercensal estimate and 2000, but this might be a result of using a different denominator, not because of any real change in health status.

If a number of Alaska Natives are classified as non-Natives on Death Certificates, the apparent burden of mortality for Alaska Natives will be underestimated. If many people classify themselves as Alaska Natives, regardless of the designation on their Birth and Death Certificates, the denominator for computing mortality rates (usually obtained from the most recent census or intercensal estimate) will be relatively large. In the worst case scenario, an inappropriately low number of deaths divided by the largest potential denominator will result in an inaccurately low mortality rate. This would have the effect of underestimating the burden of disease and death in Alaska Natives relative to the rest of the population.

It is important to consider the denominator carefully because there was no option for American Indian or Alaska Native only in combination with one or more other races before 2000. If you want to compare to published rates for previous years, pay careful attention to how the populations were defined in the publications and use the population definition that is most similar to the one used in the reference population.



## Appendix B

### Description of the Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing national survey supported by the Centers for Disease Control and Prevention (CDC). Alaska began participating in the BRFSS in 1990. The CDC now provides funding and technical assistance to all 50 states, Washington DC, 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 BRFSS 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 alternate years. In addition, there are a number of Optional Modules that states may or may not choose to use and states may add questions of their own. The entire interview takes less than 30 minutes to complete. Interviews are conducted during every month of the year. Approximately 200 adults are interviewed each month in Alaska.

Respondents are adults 18 years and older living in households. Individuals 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 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. It is estimated that 97% of the households in the state as a whole have telephones (US Census 2000 Summary File 3), but the percentage is substantially lower in some geographic areas and among groups of low socioeconomic status.

The analysis of BRFSS data requires 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 analysis assigns a probability to each respondent which reflects their likelihood of being contacted. In addition, each person interviewed is treated as a representative for other, similar persons. The probability factor and assumption of representativeness are used to calculate a statistical weighting factor to be used in analysis to draw inferences about the overall population.



## Appendix C

### Demographic Data Tables

#### IHS User Population, 2001

| Age (years)  | Alaska Native |               |               |               |                |               |
|--------------|---------------|---------------|---------------|---------------|----------------|---------------|
|              | Males         |               | Females       |               | Total          |               |
|              | Number        | %             | Number        | %             | Number         | %             |
| Less than 1  | 1,229         | 2.1%          | 1,120         | 1.8%          | 2,349          | 2.0%          |
| 1 to 4       | 5,619         | 9.7%          | 5,229         | 8.6%          | 10,848         | 9.1%          |
| 5 to 9       | 6,660         | 11.5%         | 6,328         | 10.4%         | 12,988         | 10.9%         |
| 10 to 14     | 6,971         | 12.0%         | 6,892         | 11.3%         | 13,863         | 11.7%         |
| 15 to 19     | 6,092         | 10.5%         | 6,072         | 10.0%         | 12,164         | 10.3%         |
| 20 to 24     | 4,586         | 7.9%          | 4,822         | 7.9%          | 9,408          | 7.9%          |
| 25 to 34     | 7,151         | 12.4%         | 7,927         | 13.0%         | 15,078         | 12.7%         |
| 35 to 44     | 7,991         | 13.8%         | 8,920         | 14.7%         | 16,911         | 14.3%         |
| 45 to 54     | 5,447         | 9.4%          | 6,108         | 10.1%         | 11,555         | 9.7%          |
| 55 to 64     | 2,984         | 5.2%          | 3,423         | 5.6%          | 6,407          | 5.4%          |
| 65 +         | 3,168         | 5.5%          | 3,903         | 6.4%          | 7,071          | 6.0%          |
| Unknown      | 0             | 0.0%          | 6             | 0.0%          | 6              | 0.0%          |
| <b>Total</b> | <b>57,898</b> | <b>100.0%</b> | <b>60,750</b> | <b>100.0%</b> | <b>118,648</b> | <b>100.0%</b> |

Data Source: Indian Health Service (IHS) National Patient Information and Reporting System (NPIRS), Alaska Area User Population, 2001, FY 2001 (Based on Counts Finalized March 1, 2002)

## Alaska Population by Race, Age and Sex, 2000

| Age (years)  | Alaska Native |             |               |             |                |             | Non-Native     |             |                |             |                |             |
|--------------|---------------|-------------|---------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|
|              | Males         |             | Females       |             | Total          |             | Males          |             | Females        |             | Total          |             |
|              | Num-ber       | %           | Num-ber       | %           | Number         | %           | Number         | %           | Number         | %           | Number         | %           |
| Less than 1  | 1,420         | 2.4%        | 1,235         | 2.1%        | 2,655          | 2.2%        | 3,606          | 1.4%        | 3,364          | 1.4%        | 6,970          | 1.4%        |
| 1 to 4       | 5,483         | 9.1%        | 4,961         | 8.3%        | 10,444         | 8.7%        | 14,378         | 5.4%        | 14,078         | 5.8%        | 28,456         | 5.6%        |
| 5 to 9       | 7,104         | 11.8%       | 6,817         | 11.5%       | 13,921         | 11.6%       | 20,411         | 7.7%        | 19,490         | 8.0%        | 39,901         | 7.9%        |
| 10 to 14     | 7,176         | 11.9%       | 6,874         | 11.6%       | 14,050         | 11.8%       | 21,627         | 8.2%        | 20,384         | 8.4%        | 42,011         | 8.3%        |
| 15 to 19     | 6,058         | 10.1%       | 5,598         | 9.4%        | 11,656         | 9.8%        | 20,105         | 7.6%        | 17,948         | 7.4%        | 38,053         | 7.5%        |
| 20 to 24     | 4,196         | 7.0%        | 4,076         | 6.9%        | 8,272          | 6.9%        | 16,996         | 6.4%        | 14,624         | 6.0%        | 31,620         | 6.2%        |
| 25 to 34     | 7,796         | 13.0%       | 7,963         | 13.4%       | 15,759         | 13.2%       | 38,511         | 14.6%       | 35,203         | 14.5%       | 73,714         | 14.5%       |
| 35 to 44     | 8,666         | 14.4%       | 8,944         | 15.1%       | 17,610         | 14.7%       | 49,688         | 18.8%       | 46,751         | 19.2%       | 96,439         | 19.0%       |
| 45 to 54     | 6,020         | 10.0%       | 6,118         | 10.3%       | 12,138         | 10.2%       | 44,241         | 16.8%       | 38,573         | 15.8%       | 82,814         | 16.3%       |
| 55 to 64     | 3,314         | 5.5%        | 3,319         | 5.6%        | 6,633          | 5.6%        | 20,592         | 7.8%        | 17,525         | 7.2%        | 38,117         | 7.5%        |
| 65 +         | 2,839         | 4.7%        | 3,522         | 5.9%        | 6,361          | 5.3%        | 13,885         | 5.3%        | 15,453         | 6.3%        | 29,338         | 5.8%        |
| <b>Total</b> | <b>60,072</b> | <b>100%</b> | <b>59,427</b> | <b>100%</b> | <b>119,499</b> | <b>100%</b> | <b>264,040</b> | <b>100%</b> | <b>243,393</b> | <b>100%</b> | <b>507,433</b> | <b>100%</b> |

Source: MARS estimates from Alaska State Department of Labor, based on the 2000 US Census

## Alaska Native Population by Sex and Age, Alaska, 2000

| Age            | No. Male      | No. Female    |
|----------------|---------------|---------------|
| Under 5        | 6,903         | 6,196         |
| 5 to 9 years   | 7,104         | 6,817         |
| 10 to 14 years | 7,176         | 6,874         |
| 15 to 19 years | 6,058         | 5,598         |
| 20 to 24 years | 4,196         | 4,076         |
| 25 to 29 years | 3,761         | 3,883         |
| 30 to 34 years | 4,035         | 4,080         |
| 35 to 39 years | 4,545         | 4,649         |
| 40 to 44 years | 4,121         | 4,295         |
| 45 to 49 years | 3,469         | 3,518         |
| 50 to 54 years | 2,551         | 2,600         |
| 55 to 59 years | 1,902         | 1,957         |
| 60 to 64 years | 1,412         | 1,362         |
| 65 to 69 years | 1,110         | 1,263         |
| 70 to 74 years | 822           | 925           |
| 75 to 79 years | 511           | 629           |
| 80 to 84 years | 227           | 368           |
| 85+            | 169           | 337           |
| <b>Total</b>   | <b>60,072</b> | <b>59,427</b> |

Data source: MARS estimates from the Alaska State Department of Labor, based on the 2000 US Census

An explanation of the MARS estimates can be found at: <http://almis.labor.state.ak.us/default.asp?PAGEID=170>

## Non-Native Population by Sex and Age, Alaska, 2000

| Age               | No. Male       | No. Female     |
|-------------------|----------------|----------------|
| Under 5 years     | 17,984         | 17,442         |
| 5 to 9 years      | 20,411         | 19,490         |
| 10 to 14 years    | 21,627         | 20,384         |
| 15 to 19 years    | 20,105         | 17,948         |
| 20 to 24 years    | 16,996         | 14,624         |
| 25 to 29 years    | 18,425         | 16,918         |
| 30 to 34 years    | 20,086         | 18,285         |
| 35 to 39 years    | 24,010         | 22,519         |
| 40 to 44 years    | 25,678         | 24,232         |
| 45 to 49 years    | 24,481         | 22,047         |
| 50 to 54 years    | 19,760         | 16,526         |
| 55 to 59 years    | 12,796         | 10,768         |
| 60 to 64 years    | 7,796          | 6,757          |
| 65 to 69 years    | 5,261          | 4,992          |
| 70 to 74 years    | 4,040          | 4,094          |
| 75 to 79 years    | 2,555          | 3,168          |
| 80 to 84 years    | 1,295          | 1,805          |
| 85 years and over | 734            | 1,394          |
| <b>Total</b>      | <b>264,040</b> | <b>243,393</b> |

Data source: MARS estimates from the Alaska State Department of Labor, based on the 2000 US Census

An explanation of the MARS estimates can be found at: <http://almis.labor.state.ak.us/default.asp?PAGEID=170>

## Dependency Ratios by Race, Alaska, 2000

|               | Elder Dependency | Child Dependency |
|---------------|------------------|------------------|
| Alaska Native | 8.8%             | 57%              |
| Non-Native    | 8.1%             | 32.5%            |

Data source: MARS estimates from the Alaska State Department of Labor, based on the 2000 US Census

## Urban and Rural Residence by Race, Alaska, 2000

| Residence    | Alaska Native  |             | Non-Native     |             |
|--------------|----------------|-------------|----------------|-------------|
|              | Number         | %           | Number         | %           |
| Urban        | 56,793         | 47.6%       | 355,162        | 70.0%       |
| Rural        | 62,538         | 52.4%       | 152,439        | 30.0%       |
| <b>Total</b> | <b>119,331</b> | <b>100%</b> | <b>507,601</b> | <b>100%</b> |

Source: 2000 US Census, Summary File 4

## Educational Attainment by Race for the Population Over 25 Years, Alaska, 2000

| Educational Attainment          | Alaska Native | Non-Native |
|---------------------------------|---------------|------------|
| No schooling                    | 2.3%          | 0.5%       |
| Less than High School           | 23.6%         | 8.5%       |
| High School Diploma or GED      | 39.8%         | 25.7%      |
| Some college, no degree         | 23.2%         | 29.6%      |
| Associate's degree              | 4.0%          | 7.7%       |
| Bachelor's degree               | 5.4%          | 18.1%      |
| Graduate or professional degree | 1.7%          | 9.9%       |

Source: 2000 US Census, Summary File 4

## Employment Status by Sex and Race for the Population 16 Years and Older, Alaska, 2000

| Employment Status  | Alaska Native |             |               |             |               |             | Non-Native     |             |                |             |                |             |
|--------------------|---------------|-------------|---------------|-------------|---------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|
|                    | Males         |             | Females       |             | Total         |             | Males          |             | Females        |             | Total          |             |
|                    | Number        | %           | Number        | %           | Number        | %           | Number         | %           | Number         | %           | Number         | %           |
| In labor force     | 23,271        | 61.7%       | 22,463        | 58.2%       | 45,734        | 60.0%       | 181,174        | 76.3%       | 145,422        | 65.9%       | 326,596        | 71.3%       |
| Armed Forces       | 311           | 1.3%        | 63            | 0.3%        | 374           | 0.8%        | 14,579         | 8.0%        | 2,532          | 1.7%        | 17,111         | 5.2%        |
| Civilian           | 22,960        | 98.7%       | 22,400        | 99.7%       | 45,360        | 99.2%       | 166,595        | 92.0%       | 142,890        | 98.3%       | 309,485        | 94.8%       |
| Employed           | 17,748        | 77.3%       | 19,109        | 85.3%       | 36,857        | 81.3%       | 149,034        | 89.5%       | 132,498        | 92.7%       | 281,532        | 91.0%       |
| Unemployed         | 5,212         | 22.7%       | 3,291         | 14.7%       | 8,503         | 18.7%       | 17,561         | 10.5%       | 10,392         | 7.3%        | 27,953         | 9.0%        |
| Not in labor force | 14,428        | 38.3%       | 16,119        | 41.8%       | 30,547        | 40.0%       | 56,186         | 23.7%       | 75,272         | 34.1%       | 131,458        | 28.7%       |
| <b>Total</b>       | <b>37,699</b> | <b>100%</b> | <b>38,582</b> | <b>100%</b> | <b>76,281</b> | <b>100%</b> | <b>237,360</b> | <b>100%</b> | <b>220,694</b> | <b>100%</b> | <b>458,054</b> | <b>100%</b> |

Source: 2000 US Census, Summary File 4

## Household Income by Race, Alaska, 1999

| Income               | Alaska Native |             | Non-Native     |             |
|----------------------|---------------|-------------|----------------|-------------|
|                      | Number        | %           | Number         | %           |
| Less than \$10,000   | 3,661         | 11.4%       | 8,797          | 4.6%        |
| \$10,000 to \$14,999 | 2,875         | 9.0%        | 8,120          | 4.3%        |
| \$15,000 to \$24,999 | 5,178         | 16.1%       | 17,739         | 9.4%        |
| \$25,000 to \$34,999 | 4,403         | 13.7%       | 20,622         | 10.9%       |
| \$35,000 to \$49,999 | 5,074         | 15.8%       | 30,445         | 16.0%       |
| \$50,000 to \$74,999 | 5,697         | 17.8%       | 43,215         | 22.8%       |
| \$75,000 and above   | 5,207         | 16.2%       | 60,771         | 32.0%       |
| <b>Total</b>         | <b>32,095</b> | <b>100%</b> | <b>189,709</b> | <b>100%</b> |

Source: 2000 US Census, Summary File 4

## Poverty Status for Households by Race, Alaska, 1999

| Poverty Status                   | Alaska Native |             | Non-Native     |             |
|----------------------------------|---------------|-------------|----------------|-------------|
|                                  | Number        | %           | Number         | %           |
| Income below poverty level       | 5,910         | 18.4%       | 12,525         | 6.6%        |
| Income at or above poverty level | 26,185        | 81.6%       | 177,184        | 93.4%       |
| <b>Total</b>                     | <b>32,095</b> | <b>100%</b> | <b>189,709</b> | <b>100%</b> |

Source: 2000 US Census, Summary File 4

## Individual Poverty Status by Age and Race, Alaska, 1999

| Age and Poverty Status           | Alaska Native  |             | Non-Native     |             |
|----------------------------------|----------------|-------------|----------------|-------------|
|                                  | Number         | %           | Number         | %           |
| Children under 18 years          | 46,739         | 40.5%       | 140,054        | 28.2%       |
| Income below poverty level       | 9,631          | 20.6%       | 12,410         | 8.9%        |
| Income at or above poverty level | 37,108         | 79.4%       | 127,644        | 91.1%       |
| 18 years and above               | 68,748         | 59.5%       | 357,420        | 71.8%       |
| Income below poverty level       | 11,954         | 17.4%       | 23,607         | 6.6%        |
| Income at or above poverty level | 56,794         | 82.6%       | 333,813        | 93.4%       |
| <b>Total</b>                     | <b>115,487</b> | <b>100%</b> | <b>497,474</b> | <b>100%</b> |

Source: 2000 US Census, Summary File 4

## Housing Tenure by Plumbing Facilities by Race, 2000

| Tenure                               | Alaska Native |             | Non-Native     |             |
|--------------------------------------|---------------|-------------|----------------|-------------|
|                                      | Number        | %           | Number         | %           |
| Owner occupied                       | 18,817        | 58.6%       | 119,686        | 63.2%       |
| Complete plumbing facilities         | 13,988        | 74.3%       | 114,893        | 96.0%       |
| Lacking complete plumbing facilities | 4,829         | 25.7%       | 4,793          | 4.0%        |
| Renter occupied                      | 13,276        | 41.4%       | 69,821         | 36.8%       |
| Complete plumbing facilities         | 11,686        | 88.0%       | 67,030         | 96.0%       |
| Lacking complete plumbing facilities | 1,590         | 12.0%       | 2,791          | 4.0%        |
| <b>Total</b>                         | <b>32,093</b> | <b>100%</b> | <b>189,507</b> | <b>100%</b> |

Source: 2000 US Census, Summary File 4

## Rooms per Housing Unit, by Race, Alaska, 2000

| Number of Rooms | Alaska Native |             | Non-Native     |             |
|-----------------|---------------|-------------|----------------|-------------|
|                 | Number        | %           | Number         | %           |
| 1 to 2          | 6,095         | 19%         | 19,953         | 11%         |
| 3 to 5          | 19,066        | 59%         | 88,770         | 47%         |
| 6 +             | 6,932         | 22%         | 80,784         | 43%         |
| <b>Total</b>    | <b>32,093</b> | <b>100%</b> | <b>189,507</b> | <b>100%</b> |

Data Source: 2000 US Census, Summary File 4

## Appendix D

### Morbidity Data Tables

#### Current Tobacco Use by Race\*, Alaska BRFSS 2000, 2002

|                            | Current Smoker<br>(2002) | 95% CI      | Current Smokeless<br>Use (2000) |
|----------------------------|--------------------------|-------------|---------------------------------|
| Alaska Native              | 44.7%                    | 38.2 - 51.3 | 13%                             |
| Non-Native                 | 26.2%                    | 23.2 - 29.2 | 5%                              |
| Healthy Alaskans 2010 Goal | 14.0%                    |             | 3%                              |

Note: Current smokers are those that have smoked at least 100 cigarettes in their life-time and currently smoke (either some days or every day). Current smokeless tobacco users are those that use a smokeless tobacco product either some days or every day.

\*Alaska Native was defined as Alaska Native alone or in combination with any other races.

Data source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2000, 2002

#### Prevalence of High Blood Pressure and High Cholesterol, Alaska BRFSS, 1997, 1999 and 2001\* combined

|                     | Alaska<br>Native | 95% CI      | Non-<br>Native | 95% CI      | Healthy Alaskans<br>2010 Goal |
|---------------------|------------------|-------------|----------------|-------------|-------------------------------|
| High Blood Pressure | 25.0%            | 21.7 - 28.3 | 21.3%          | 19.6 - 23.0 | 16%                           |
| High Cholesterol    | 25.6%            | 21.2 - 29.9 | 28.1%          | 26.0 - 30.3 | 17%                           |

\*Alaska Native was defined as Alaska Native alone or in combination with any other races in 2001.

Data source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 1997, 1999, 2001

## Overweight and Obesity by Race\*, Alaska BRFSS 2002

|                   | Alaska Native | 95% CI      | Non-Native | 95% CI      | Healthy Alaskans 2010 Goal |
|-------------------|---------------|-------------|------------|-------------|----------------------------|
| <b>Overweight</b> | 34.4%         | 27.9 - 40.8 | 38.4%      | 35.1 - 41.6 | 30%                        |
| <b>Obese</b>      | 33.0%         | 26.5 - 39.5 | 21.2%      | 18.4 - 24.0 | 18%                        |

Note: Overweight is defined as having a BMI greater than or equal to 25.00 but less than 30.00. Obese was defined as having a BMI greater than or equal to 30.00.

\*Alaska Native was defined as Alaska Native alone or in combination with any other races.

Data source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2002

## Diabetes Prevalence, Alaska Natives, 1990 and 2001

|                          | Rate per 1,000 <sup>1, 2</sup> |      | % Increase |
|--------------------------|--------------------------------|------|------------|
|                          | 1990                           | 2001 |            |
| <b>All Alaska Native</b> | 18                             | 31   | 72         |
| <b>Eskimo</b>            | 11                             | 21   | 91         |
| <b>Alaska Indian</b>     | 23                             | 36   | 57         |
| <b>Aleut</b>             | 33                             | 57   | 73         |
| <b>US All Races</b>      | 29                             | 42   | 45         |

Source: Statewide Alaska Native Tribal Diabetes Registry

<sup>1</sup>Age-adjusted to the US 2000 standard population.

<sup>2</sup>Alaska denominators are IHS User Populations.

## Prevalence of Diabetes\* by Race, Alaska BRFSS 2002

|                      | Prevalence | 95 % CI   |
|----------------------|------------|-----------|
| <b>Alaska Native</b> | 3.6%       | 1.9 - 5.3 |
| <b>Non-Native</b>    | 3.4%       | 2.5 - 4.3 |

\*Excludes women diagnosed with diabetes during pregnancy

Source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2002

## Leading Causes of Hospitalizations, Fiscal Year 1989 and 1997

| Cause   | 1989 | 1997 |
|---|------|------|
| Obstetric Deliveries and Complications of Pregnancy | 25%  | 21%  |
| Respiratory System Diseases                         | 12%  | 14%  |
| Injury and Poisoning                                | 12%  | 12%  |
| Digestive System Diseases                           | 7%   | 10%  |
| Circulatory System Diseases                         |      | 8%   |

Source: US DHHS, IHS. Regional Differences in Indian Health, 1989 and 1998-99.

## Unintentional Injury Hospitalization Rates by Race and Mechanism, Alaska, 1994-1999

| Mechanism             | Alaska Native | Alaska White | Rate Ratio | 95% Confidence Interval |
|-----------------------|---------------|--------------|------------|-------------------------|
| Falls                 | 355.4         | 176.1        | 2.0        | 1.92 - 2.12             |
| Other Transport       | 140.8         | 37.4         | 3.8        | 3.44 - 4.12             |
| Off-road m/v          | 117.7         | 20.9         | 5.6        | 5.06 - 6.30             |
| Motor Vehicle Traffic | 126.6         | 80.5         | 1.6        | 1.45 - 1.71             |
| Occupant              | 87.8          | 60.0         | 1.5        | 1.33 - 1.61             |
| Pedestrian            | 23.9          | 5.4          | 4.4        | 3.51 - 5.54             |
| Cut/Pierce            | 48.7          | 12.3         | 4.0        | 3.40 - 4.64             |
| Struck by, Against    | 45.6          | 21.6         | 2.1        | 1.83 - 2.44             |
| Other                 | 38.1          | 13.1         | 2.9        | 2.46 - 3.42             |
| Natural/Environmental | 35.4          | 10.3         | 3.4        | 2.89 - 4.12             |
| Excessive cold        | 22.0          | 3.9          | 5.6        | 4.32 - 7.17             |
| Dog bite              | 9.2           | 2.8          | 3.3        | 2.33 - 4.63             |
| Fire/Burn             | 33.9          | 11.0         | 3.1        | 2.58 - 3.67             |
| Total                 | 1350.7        | 484.2        | 2.8        | 2.71 - 2.87             |

Source: Section of Community Health and Emergency Medicine Services, Division of Public Health, DHSS, State of Alaska, Alaska Trauma Registry



## Appendix E

### Mortality Data Tables

#### Age-adjusted Rates of Leading Causes of Death for Alaska Natives Compared to Non-Native Residents and Healthy Alaskans 2010 Goals, Alaska, 1999-2001 (combined)

| Cause of Death                      | Alaska Native <sup>1</sup> |             |                   | Non-Natives <sup>1</sup> |             |                   | Healthy Alaskans 2010 Goal <sup>3</sup> |
|-------------------------------------|----------------------------|-------------|-------------------|--------------------------|-------------|-------------------|---|
|                                     | Number                     | %           | Rate <sup>2</sup> | Number                   | %           | Rate <sup>2</sup> |   |
| Malignant Neoplasms (Cancer)        | 386                        | 19.1%       | 239.2             | 1621                     | 24.6%       | 187.4             | 162.0                                   |
| Unintentional Injuries              | 323                        | 16.0%       | 119.3             | 659                      | 10.0%       | 49.0              | 31.4                                    |
| Diseases of the Heart               | 309                        | 15.3%       | 218.3             | 1521                     | 23.1%       | 202.3             | NA                                      |
| Intentional Self-Harm (Suicide)     | 119                        | 5.9%        | 36.1              | 214                      | 3.2%        | 14.4              | 10.6                                    |
| Cerebrovascular Disease (Stroke)    | 98                         | 4.9%        | 71.9              | 404                      | 6.1%        | 63.6              | 48.0                                    |
| Chronic Lower Respiratory Diseases  | 92                         | 4.6%        | 67.0              | 334                      | 5.1%        | 48.2              | 21.7                                    |
| Assault (Homicide)                  | 60                         | 3.0%        | 20.2              | 68                       | 1.0%        | 4.2               | 4.0                                     |
| Chronic Liver Disease and Cirrhosis | 45                         | 2.2%        | 20.7              | 99                       | 1.5%        | 8.1               | 6.0                                     |
| Influenza and Pneumonia             | 45                         | 2.2%        | 30.3              | 83                       | 1.3%        | 13.3              | NA                                      |
| Diabetes                            | 29                         | 1.4%        | 20.0              | 205                      | 3.1%        | 25.1              | NA                                      |
| All Other Causes                    | 513                        | 25.4%       | 279.4             | 1,381                    | 21.0%       | 176.9             | NA                                      |
| <b>Total</b>                        | <b>2019</b>                | <b>100%</b> | <b>1,122.4</b>    | <b>6,589</b>             | <b>100%</b> | <b>792.6</b>      | <b>NA</b>                               |

NA = Data not available.

<sup>1</sup>Source: Alaska Bureau of Vital Statistics

<sup>2</sup>Rate per 100,000 age-adjusted to the US Year 2000 standard population.

<sup>3</sup>Source: DHHS, Healthy Alaskans 2010, Vol 1., 2002

## Mortality Rate by Race and Age, Alaska, 1999-2001 (combined)

| Age (years)  | Alaska Native <sup>1</sup> |             |                   | Non-Native <sup>1</sup> |             |                   |
|--------------|----------------------------|-------------|-------------------|-------------------------|-------------|-------------------|
|              | Number                     | %           | Rate <sup>2</sup> | Number                  | %           | Rate <sup>2</sup> |
| Less than 5  | 124                        | 6.1%        | 372.4             | 140                     | 2.1%        | 120.1             |
| 5 to 14      | 33                         | 1.6%        | 43.4              | 42                      | 0.6%        | 16.4              |
| 15 to 24     | 146                        | 7.2%        | 261.3             | 185                     | 2.8%        | 88.4              |
| 25 to 34     | 127                        | 6.3%        | 297.5             | 244                     | 3.7%        | 111.1             |
| 35 to 44     | 218                        | 10.8%       | 452.9             | 513                     | 7.8%        | 173.0             |
| 45 to 54     | 227                        | 11.2%       | 687.3             | 840                     | 12.7%       | 328.2             |
| 55 to 64     | 243                        | 12.0%       | 1,338.4           | 948                     | 14.4%       | 802.5             |
| 65 to 74     | 335                        | 16.6%       | 2,955.5           | 1282                    | 19.5%       | 2,290.2           |
| 75 to 84     | 347                        | 17.2%       | 6,889.0           | 1521                    | 23.1%       | 5,670.1           |
| 85 and over  | 219                        | 10.8%       | 14,609.7          | 874                     | 13.3%       | 13,331.3          |
| <b>Total</b> | <b>2019</b>                | <b>100%</b> | <b>620.9</b>      | <b>6589</b>             | <b>100%</b> | <b>422.0</b>      |

<sup>1</sup>Source: Alaska Bureau of Vital Statistics

<sup>2</sup>Age-specific Rate per 100,000 population

## Mortality Rates by Race and Year, Alaska, 1992-2001

| Year | Alaska Native <sup>1</sup> |                   | Non-Native <sup>1</sup> |                   |
|------|----------------------------|-------------------|-------------------------|-------------------|
|      | Number                     | Rate <sup>2</sup> | Number                  | Rate <sup>2</sup> |
| 1992 | 608                        | 1,240.6           | 1,712                   | 841.7             |
| 1993 | 609                        | 1,247.7           | 1,790                   | 845.3             |
| 1994 | 628                        | 1,238.6           | 1,837                   | 879.9             |
| 1995 | 569                        | 1,094.7           | 2,001                   | 903.2             |
| 1996 | 618                        | 1,183.7           | 2,007                   | 884.0             |
| 1997 | 618                        | 1,148.3           | 1,969                   | 862.6             |
| 1998 | 606                        | 1,086.0           | 1,982                   | 822.9             |
| 1999 | 650                        | 1,149.0           | 2,048                   | 774.9             |
| 2000 | 663                        | 1,087.8           | 2,259                   | 819.8             |
| 2001 | 706                        | 1,130.9           | 2,282                   | 783.6             |

<sup>1</sup>Source: Alaska Bureau of Vital Statistics

<sup>2</sup>Rate per 100,000 age-adjusted to the US Year 2000 standard population.

## Mortality Rates by Race<sup>1,2</sup>, Cause and Year, Alaska 1992-2001

| Year | Malignant Neoplasms (Cancer) |            | Diseases of the Heart |            | Unintentional Injuries |            | Suicide       |            | Cerebrovascular Disease (Stroke) |            |
|------|------------------------------|------------|-----------------------|------------|------------------------|------------|---------------|------------|----------------------------------|------------|
|      | Alaska Native                | Non-Native | Alaska Native         | Non-Native | Alaska Native          | Non-Native | Alaska Native | Non-Native | Alaska Native                    | Non-Native |
| 1992 | 252.5                        | 217.0      | 272.0                 | 250.2      | 140.5                  | 55.8       | 45.4          | 21.0       | 60.0                             | 58.9       |
| 1993 | 276.5                        | 211.7      | 241.3                 | 240.5      | 105.4                  | 47.5       | 50.2          | 18.3       | 84.0                             | 57.7       |
| 1994 | 262.0                        | 202.8      | 297.8                 | 238.2      | 137.5                  | 49.0       | 55.6          | 19.1       | 93.6                             | 59.4       |
| 1995 | 214.9                        | 202.0      | 232.6                 | 249.1      | 109.8                  | 55.1       | 38.0          | 17.3       | 96.3                             | 79.7       |
| 1996 | 237.3                        | 221.2      | 272.1                 | 217.7      | 127.5                  | 51.4       | 38.4          | 18.3       | 61.5                             | 76.5       |
| 1997 | 257.7                        | 188.3      | 238.6                 | 239.3      | 99.8                   | 40.4       | 37.0          | 19.1       | 88.2                             | 58.3       |
| 1998 | 285.0                        | 188.5      | 191.7                 | 227.5      | 95.5                   | 43.7       | 45.5          | 17.1       | 73.3                             | 68.5       |
| 1999 | 235.4                        | 177.6      | 195.7                 | 196.5      | 122.8                  | 44.5       | 32.5          | 13.8       | 82.2                             | 68.6       |
| 2000 | 233.3                        | 202.5      | 216.5                 | 209.2      | 117.9                  | 52.4       | 47.6          | 15.5       | 55.4                             | 67.0       |
| 2001 | 248.3                        | 182.0      | 241.5                 | 201.1      | 118.1                  | 50.0       | 28.1          | 14.1       | 78.3                             | 55.8       |

<sup>1</sup>Source: Alaska Bureau of Vital Statistics

<sup>2</sup>Rate per 100,000 age-adjusted to the US Year 2000 standard population.



## Appendix F

### Prevention Data Tables

#### Two-year Old<sup>1</sup> Immunization Coverage, Alaska Natives, Quarter Ending 30 June 2003

| Vaccine   | Alaska Natives Immunized <sup>2</sup> | US Baseline (2000) <sup>3</sup> | Healthy Alaskans 2010 Goal <sup>3,4</sup> |
|-----------|---------------------------------------|---------------------------------|---|
| DTaP      | 87%                                   | 82%                             | 95%                                       |
| Polio     | 94%                                   | 90%                             | 95%                                       |
| MMR       | 93%                                   | 91%                             | 95%                                       |
| Hib       | 92%                                   | 93%                             | 95%                                       |
| HepB      | 93%                                   | 88%                             | 95%                                       |
| PCV       | 88%                                   | NA                              | NA  |
| Varicella | 81%                                   | 68%                             | 95%                                       |

<sup>1</sup>Two year old refers to children 24-35 months.

<sup>2</sup> Source: Resource Patient Management System Reports from 9 Tribal Health Corporations compiled by the Alaska Native Tribal Health Consortium (ANTHC). Provided by Rosalyn Singleton, Immunization Coordinator, ANTHC

<sup>3</sup>Source: Healthy Alaskans Vol. 1

<sup>4</sup>Healthy Alaskans 2010 goals are for children 19-35 months.

#### Prevalence of Flu Shot in Past Year, Adults Age 65+, by Race, Alaska BRFSS 2001-2002 (combined)

|                            | Percent | 95% CI      |
|----------------------------|---------|-------------|
| Alaska Native              | 75.30%  | 61.8 - 88.9 |
| Non-Native                 | 64.90%  | 58.3 - 71.6 |
| Healthy Alaskans 2010 Goal | 90%     |             |

Note: Alaska Native was defined as Alaska Native alone or in combination with any other races.

Data source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2001, 2002

## Prevalence of Sigmoidoscopy or Colonoscopy, Adults Age 50+, by Race, Alaska BRFSS 2002

|                            | Percent | 95% CI      |
|----------------------------|---------|-------------|
| Alaska Native              | 57.1%   | 43.3 - 70.9 |
| Non-Native                 | 50.5%   | 44.8 - 56.1 |
| Healthy Alaskans 2010 Goal | 64.0%   |             |

Note: Alaska Native was defined as Alaska Native alone or in combination with any other races.

Data source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2002

## Prevalence of Blood Cholesterol Check in Past 5 Years, by Race, Alaska BRFSS 2002

|                            | Percent | 95% CI      |
|----------------------------|---------|-------------|
| Alaska Native              | 60.3%   | 54.6 - 66.0 |
| Non-Native                 | 70.2%   | 67.2 - 73.3 |
| Healthy Alaskans 2010 Goal | 75.0%   |             |

Note: Alaska Native was defined as Alaska Native alone or in combination with any other races.

Data source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2002

## Prevalence of HIV Test (Other than Blood Donation), by Race, Alaska BRFSS 2002

|               | Percent | 95% CI      |
|---------------|---------|-------------|
| Alaska Native | 54.4%   | 47.5 - 61.3 |
| Non-Native    | 53.2%   | 46.9 - 56.8 |

Note: Alaska Native was defined as Alaska Native alone or in combination with any other races.

Data source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2002

## Prevalence of Mammogram in the Past 2 Years, Women Age 40+, by Race, Alaska BRFSS 2002

|                            | Percent | 95% CI      |
|----------------------------|---------|-------------|
| Alaska Native              | 77.6%   | 66.3 - 88.8 |
| Non-Native                 | 71.4%   | 66.2 - 76.7 |
| Healthy Alaskans 2010 Goal | 76.0%   |             |

Note: Alaska Native was defined as Alaska Native alone or in combination with any other races.

Data source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2002

## Prevalence of Pap Test in the Past 3 Years, Women Age 18+, by Race, Alaska BRFSS 2002

|                            | Percent | 95% CI      |
|----------------------------|---------|-------------|
| Alaska Native              | 95.6%   | 92.8 - 98.4 |
| Non-Native                 | 89.2%   | 85.9 - 92.4 |
| Healthy Alaskans 2010 Goal | 95.0%   |             |

Notes:

Includes only women age 18 and over with an intact cervix.

Alaska Native was defined as Alaska Native alone or in combination with any other races.

Data source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2002

## Prevalence of Prostate Specific Antigen Test in the Past 2 Years, Men Age 40+, by Race, Alaska BRFSS 2002

|               | Percent | 95% CI      |
|---------------|---------|-------------|
| Alaska Native | 40.8%   | 26.7 - 55.0 |
| Non-Native    | 57.0%   | 51.0 - 63.1 |

Note: Alaska Native was defined as Alaska Native alone or in combination with any other races.

Data source: Department of Health and Social Services, Division of Public Health, Section of Epidemiology, Alaska Behavioral Risk Factor Surveillance System 2002

