

# Overview

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*Healthy Alaskans 2010 Volume I: Targets for Improved Health*

## ***Overview of Alaska and the Health Status of the Population***

- ***The State and its Population***
- ***Births***
- ***Deaths – Leading Causes***
- ***Protective Factors and Risk Factors***
- ***Leading Health Indicators***
- ***The Challenge to Eliminate Health Disparities***

## The State and Its Population

Alaska is the largest state, encompassing an area about one fifth of the total landmass of the contiguous United States (Figure 1). There are huge variations in topography and climate from one part of the state to the other.

**Figure 1**



Alaska's name is derived from the Aleut word *Alyeska*, meaning "great land." In much of Alaska, the earth at variable depths beneath the surface remains frozen permanently. This permafrost defines most construction technology, including wells and sanitation systems for many rural residents.

The State of Alaska encompasses 571,951 square miles of land. It is 1,400 miles long and 2,700 miles wide, with over 47,000 miles of coastline. Of the 20 highest peaks in the United States, 17 are located in Alaska, including Mt. McKinley which is the highest point in North America. Glaciers cover 10 percent of the land. The state is comprised of both organized boroughs and census areas. As of July 1, 2001, there were 16 organized boroughs, which are equivalent to county governments in other states. The area not in an organized borough, the remainder of the land, is administered by the State, and is divided into 11 census areas for statistical purposes. Census areas and boroughs are considered county equivalents by the federal government for federal statistical and program purposes.<sup>1</sup> Although many of the census area boundaries tend to follow Native regional corporation boundaries, they are not all congruent. Native health corporations have service areas that are roughly overlapping with Native regional corporation areas, but the Native health corporations in fact serve populations, not geographically defined areas.

The 2000 census found Alaska's population to be 626,932 persons; Alaska ranked 48<sup>th</sup> in population in the United States with only Wyoming and Vermont having fewer people (Table 2).

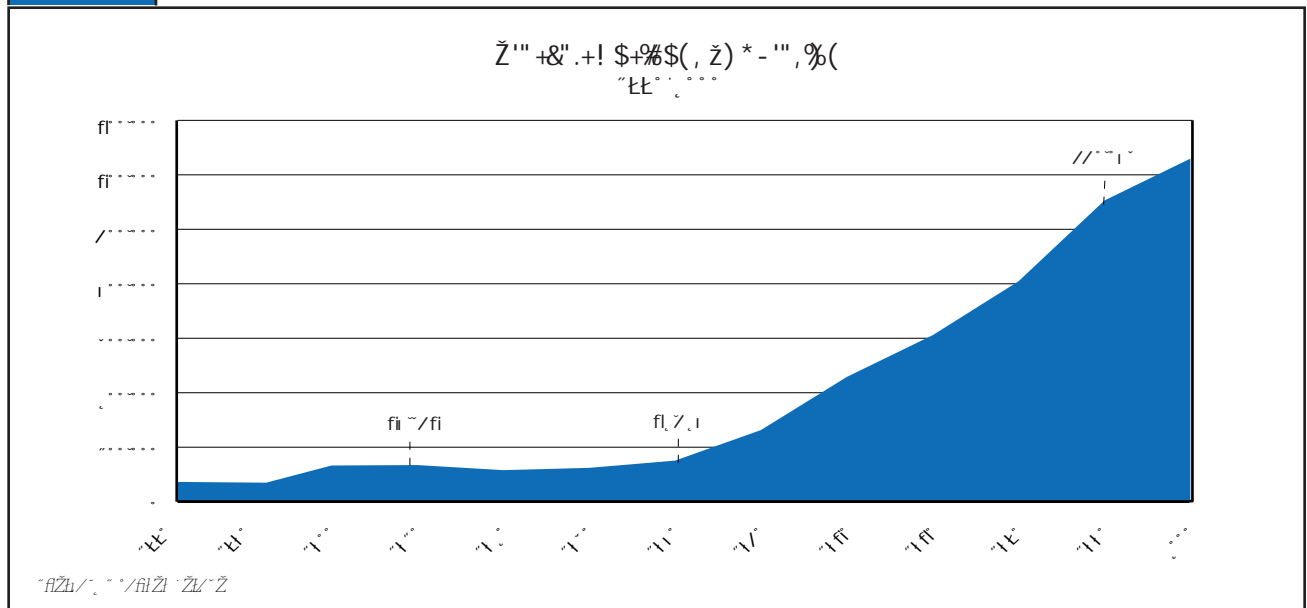
**Table 2**

Comparisons Between Alaska and the United States, 2000		
	Alaska	United States
Population	626,932	281,421,906
Population, percent, 1990 to 2000	14%	13%
Persons per household	2.74	2.59
Land area - square miles	571,951	3,537,441
Persons per square mile	1.1	79.6

The population in Alaska increased dramatically beginning in the 1940s when road construction and military operations began (Figure 2), and continued into the 1950s.<sup>2</sup> The rate of growth slowed in the 1990s, to a rate very slightly higher than growth throughout the United States. Although this document cannot provide in-depth history of the people of Alaska, or of the economic and natural history of the state, it is very important to consider the history, culture, geography and environment in order to reach a better understanding of past, current and future health status of Alaskans. Please see footnotes and reference lists for additional resources.

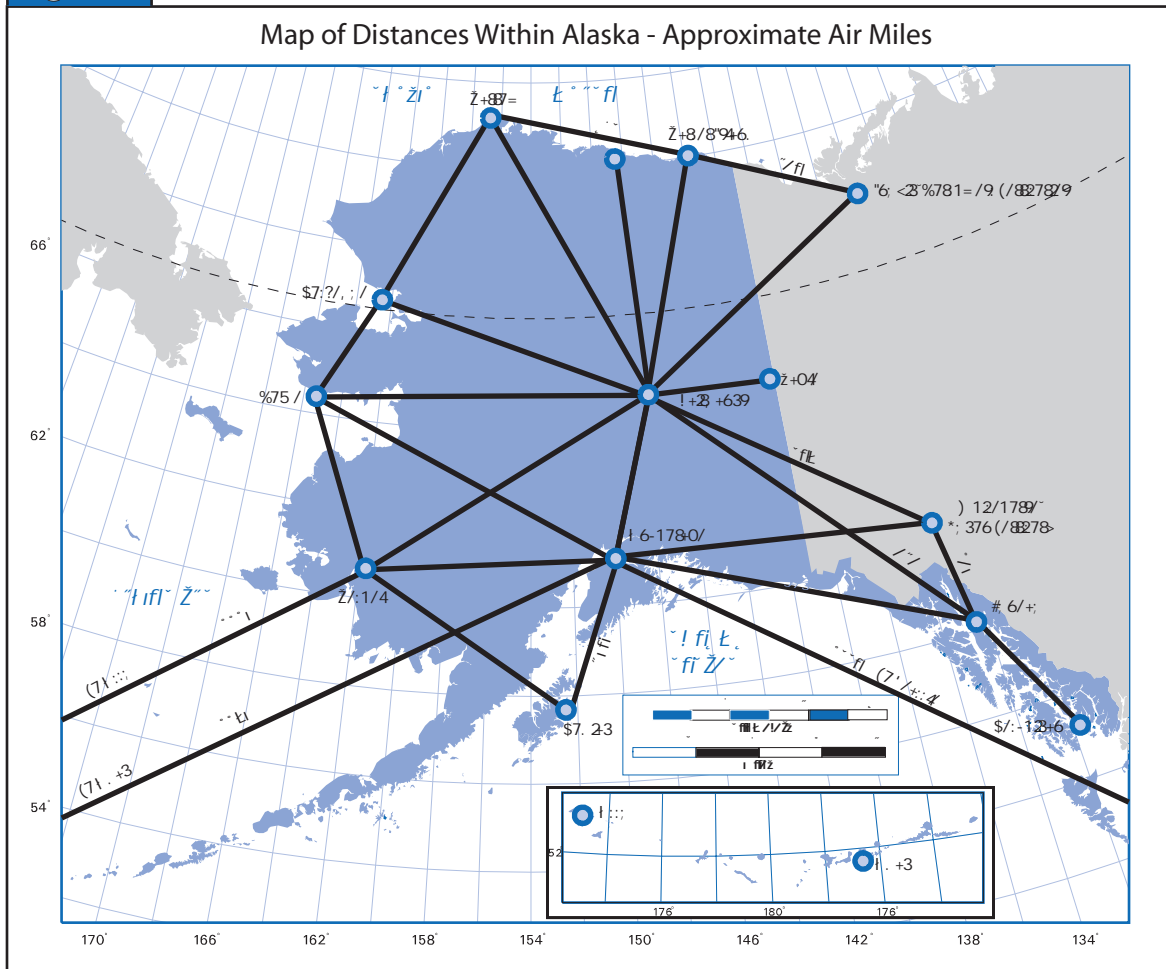
Despite Alaska’s low population density (1.1 people per square mile), more than 7 out of 10 persons live in places of 2,500 people or more (defined as urban places by the Census Bureau). Forty-one percent of the population resides in Anchorage, and 79 percent of the population resides in the six largest census areas: Anchorage, Fairbanks, the Kenai Peninsula, Ketchikan, the Matanuska-Susitna Borough, and Juneau.

**Figure 2**



About 30 percent of the population live in “rural” places – less than 2,500 residents or outside any community. Approximately 72 percent of the state’s population lives in areas that are for the most part connected by the highway system to Canada and the lower 48. The remainder of the population live in so-called “roadless” areas where access to the major urban centers of Alaska or to the lower 48, including hospitals, is only by air, boat, or snow machine, making travel difficult, expensive, and hazardous. Many Alaskans travel 200 to 500 miles for healthcare (Figure 3).

**Figure 3**



The two largest racial groups in Alaska are White and Alaskan Native (Table 3).<sup>3</sup> The 2000 U.S. Census allowed individuals to report multiple races as well as ethnicity, making it difficult to compare the racial data for 1990 with racial data for 2000. Defining the term “race” has always been somewhat arbitrary. “The tendency today to define race by a people’s culture, history and way of life blurs the distinction between race and nationality or ethnicity.”<sup>4</sup> Because “race” is used by federal programs and by the federal Office of Civil Rights and by states, localities and programs to track service delivery to target populations and disparities in health status, it is necessary to develop comparable data.

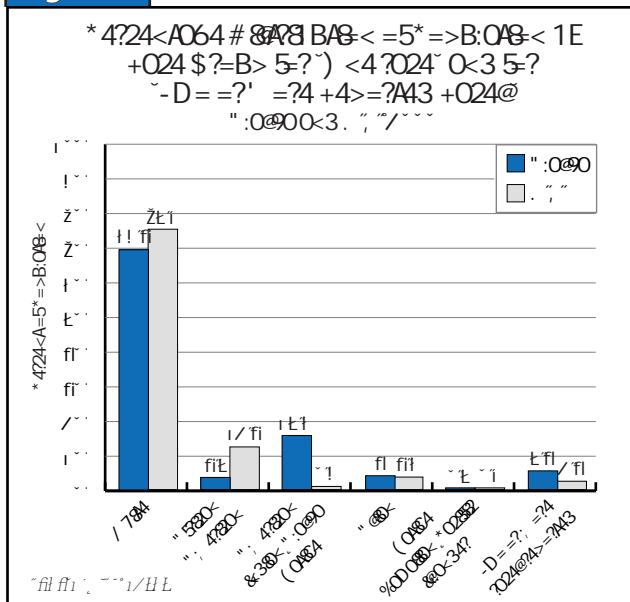
Comparing Alaska to the nation as a whole shows that twice the proportion of Alaskans reported more than one race (5.4% of Alaskans compared to 2.4% of all U.S. residents) (Figure 4). When the 34,146 respondents who answered that they were multi-racial or of “some other race” are distributed to the five major groupings using the equal proportion bridge series (see Appendix D for details on the method), the patterns of change for the various racial groups since 1990 can be observed.

Between 1990 and 2000 the share of the population that is American Indian and Alaska Native increased from 16 percent of the total to 18 percent of the total, and the share that is Asian or Native Hawaiian and Pacific Islander increased from 4 percent to 6 percent. Although the Black or African American population increased by 2,714 individuals, their proportion remained constant at 4 percent, and the proportion of the population that is White dropped from 77 percent to 73 percent.

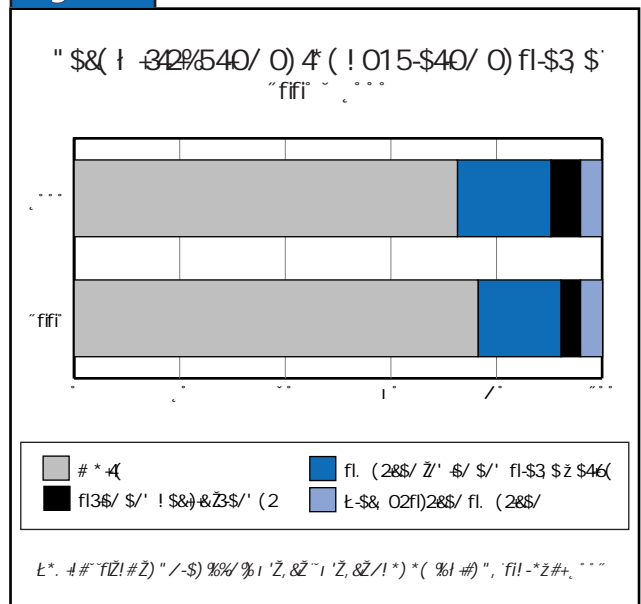
**Table 3**

Alaska Population by Race, 1990 and 2000				
	1990 Census MARS* Number	1990 Census MARS* Percent	2000 Census Equal Proportion "Bridge Series" MARS Estimate Number	2000 Census Equal Proportion "Bridge Series" MARS Estimate Number
Total Population	550,043	100%	626,932	100%
White	420,745	76%	455,284	73%
American Indian/Alaska Native	86,252	16%	111,091	18%
Black or African American	22,833	4%	25,547	4%
Asian or Pacific Islander	20,213	4%	35,010	6%
Asian			30,352	5%
Native Hawaiian or Pacific Islander			4,658	1%

**Figure 4**



**Figure 5**



The Hispanic population can be of any race. The proportion of the population responding that they are Hispanic or Latino is much smaller in Alaska than in the rest of the United States (Figure 6). In 1990, 3 percent of the population reported being of Hispanic origin (17,803 people), while in the 2000 census, 25,852 individuals or 4 percent of the population reported being Hispanic or Latino.

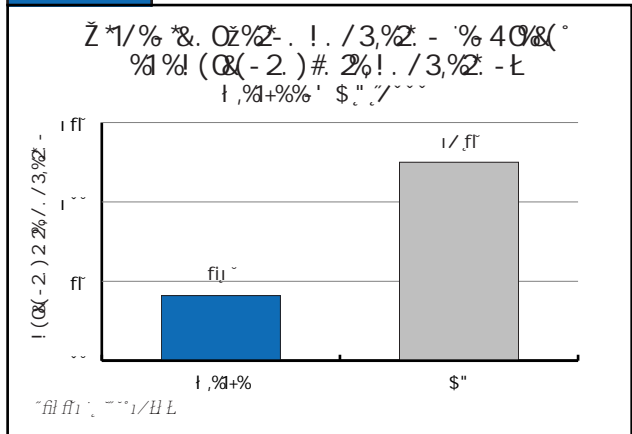
Alaska's population is younger than that of the United States (Figure 7). Although 30 percent of the population is children under 18, compared with 26 percent of the United States as a whole, in 1990 31 percent of the population was under 18. The population is "aging" as fertility rates are declining, and mortality rates continue to decline. The population aged 65 and over has increased from 22,095 to 35,699 (an increase from 4% to 6%).

In 2000, the median age in the United States was 35.6 years, while the median age for Alaska was 32.4 years. The gap between Alaska and the United States is narrowing. Alaska's median age increased from 29.3 years in 1990 to 32.4 years in 2000. Alaska includes the nation's youngest census area, Wade-Hampton, where the median age is 20.0. Historically, the reason for Alaska's young population is a large "bulge" in the working age population of ages 30-54, and a corresponding increase in children of this working group. The ages 55-64 years have traditionally been the ages at which many Alaskans begin to move south.<sup>6</sup>

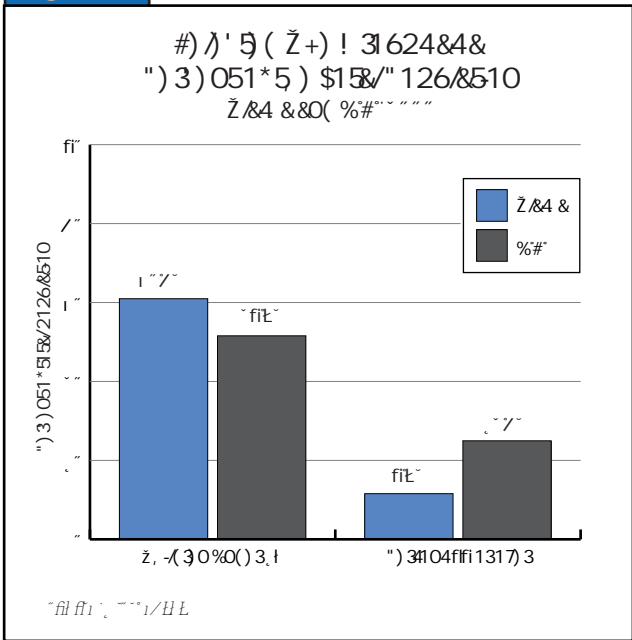
## Births

There are close to 10,000 births each year in Alaska. Alaska's fertility rate (the number of live births per 1,000 women aged 15 to 44) is higher than the national average (Table 4).

**Figure 6**



**Figure 7**



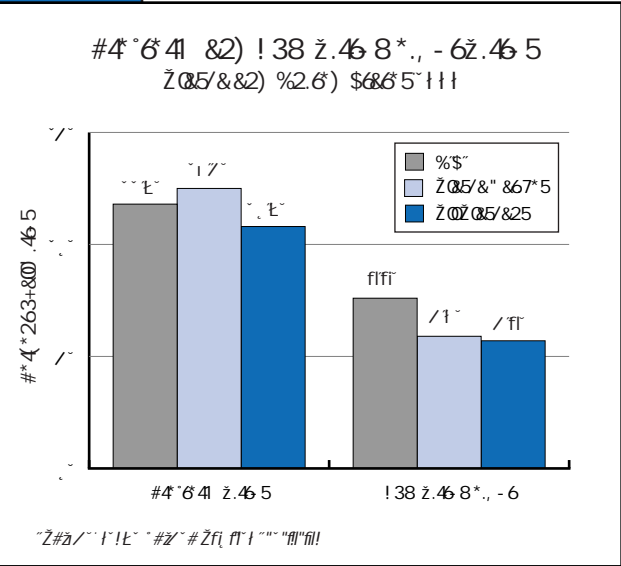
**Table 4**

Alaska and United States Births, 1999		
	Alaska	United States
Teen Birth Rate (births per 1,000 women ages 15 to 19)	47.8	49.6
Fertility Rate (births per 1,000 women age 15-44)	72.5	65.9
Adequate Prenatal Care (APNCU Index* greater than or equal to 80)	67.1%	74.7%
Pre-term Births (less than 37 weeks)	10.8%	11.8%
Low Birth Weight (less than 2500 grams)	5.7%	7.6%

Overall, birth outcomes in Alaska compare favorably with United States statistics (Figure 8). The pre-term birth rate and low birth weight rate are both lower than national rates. In recent years, Alaska has had one of the lowest rates of low birth weight deliveries in the nation.

Significant statistical differences between Alaska Natives and all Alaskans continue. Alaska Native women have higher fertility rates, higher teen birth rates, and lower rates of adequate prenatal care (Table 5).

**Figure 8**



**Table 5**

Births, All Alaskans and Alaska Natives, 1999		
	All Alaskans	Alaska Natives
Total Births	9,959	2,461
Teen Birth Rate (births per 1,000 women ages 15 to 19)	47.8	85.8
Fertility Rate (births per 1,000 women age 15 to 44)	72.5	106.0
Adequate Prenatal Care (APNCU Index* greater than or equal to 80)	67.1%	47.2%
Pre-term Births (less than 37 weeks)	10.8%	12.5%
Low Birth Weight (less than 2500 grams)	5.7%	5.9%

## Deaths – Leading Causes

Mortality patterns provide insight into changes in the health and well being of Alaska’s population. Wherever possible in this document, 1999 is considered the baseline from which change is measured. Future tracking through the decade will help identify segments of the population at increased risk of death from specific diseases and injuries. Changes and trends within the leading causes of death can highlight disparities in death rates among demographic groups, including racial and ethnic groups, which reflect group differences in factors such as socioeconomic status, access to medical care, and prevalence of risk behaviors specific to a particular population.

The ten leading causes of death accounted for about 78 percent of all deaths in Alaska in 1999 (Table 6). Leading causes of death in Alaska differ in rank order from the United States list. Four of the causes in Alaska’s top 15 did not even make the United States list. Other important differences include:

- Unintentional Injuries ranked 3<sup>rd</sup> in Alaska and 5<sup>th</sup> in the United States,
- Suicide ranked 6<sup>th</sup> in Alaska and 11<sup>th</sup> in the United States, and
- Homicide ranked 8<sup>th</sup> in Alaska and 14<sup>th</sup> in the United States.

**Table 6**

Ten Leading Causes of Death in Alaska, 1999					
	Alaska Rank	U.S. Rank	Alaska Total Deaths	Alaska Percent of Total Deaths	Alaska Age-Adjusted* Death Rate
Malignant Neoplasms - Cancer (C00-C97)	1	2	623	23.1%	192.7
Diseases of the Heart (I00-I09, I11, I13, I20-I51)	2	1	560	20.8%	206.6
Unintentional Injuries (V01-X59, Y85-Y86)	3	5	289	10.7%	56.1
Cerebrovascular Disease (stroke) (I60-I69)	4	3	172	6.4%	75.4
Chronic Lower Respiratory Diseases (J40-J47)	5	4	145	5.4%	58.6
Suicide (X60-X84, Y870)	6	11	95	3.5%	17.2
Diabetes Mellitus (E10-E14)	7	6	66	2.4%	24.8
Homicide (X85-Y09, Y871)	8	14	50	1.9%	8.1
Influenza and Pneumonia (J10-J18)	9	7	45	1.7%	21.2
Chronic Liver Disease and Cirrhosis (K70, K73-K74)	10	12	42	1.6%	9.1
<b>Total, Ten Leading Causes</b>			<b>2,087</b>	<b>77.5%</b>	<b>669.7</b>
<b>Total, All Causes</b>			<b>2,698</b>	<b>100.0%</b>	<b>869.8</b>

Cause of death uses ICD-10 codes. Rank is based on number of deaths rather than rate.  
 \* Deaths per 100,000 population, age adjusted to U.S. 2000 standard population.

## Protective Factors and Risk Factors for Death, Disease, and Disability

In Alaska the Youth Risk Behavior Survey (YRBS) and the Behavioral Risk Factor Surveillance System (BRFSS) are conducted in partnership with the federal Centers for Disease Control and Prevention to determine various risk factors for poor health outcomes. Risky lifestyle behaviors are often associated with premature morbidity and mortality. The BRFSS estimates the prevalence of behavioral risk factors in the general population by conducting a random sampling by telephone in five regions based on common demographics, with over-sampling from the non-urban areas of Alaska, in order to have a sufficient sample for the less populated regions. The five regions are Anchorage and vicinity, Gulf Coast, Southeast, Rural, and Fairbanks and vicinity.

The BRFSS covers questions on alcohol use, tobacco use, nutrition, physical activity, health care access, family planning, and a variety of other topics. Figure 9 lists results for adults 18 years and older from the 1999 BRFSS for selected questions. “Adults who are physically inactive” refers to those who report no leisure time activity in the past 30 days. Alaska adults are more active than the overall United States population (24% respond they are inactive as opposed to 28% for the United States); however, when looking at reports of inactivity and irregular activity for Alaskans, this percent increases to 52 percent. Regular physical activity reduces premature death and greatly reduces the risk of dying from heart disease, the second leading cause of death in Alaska.

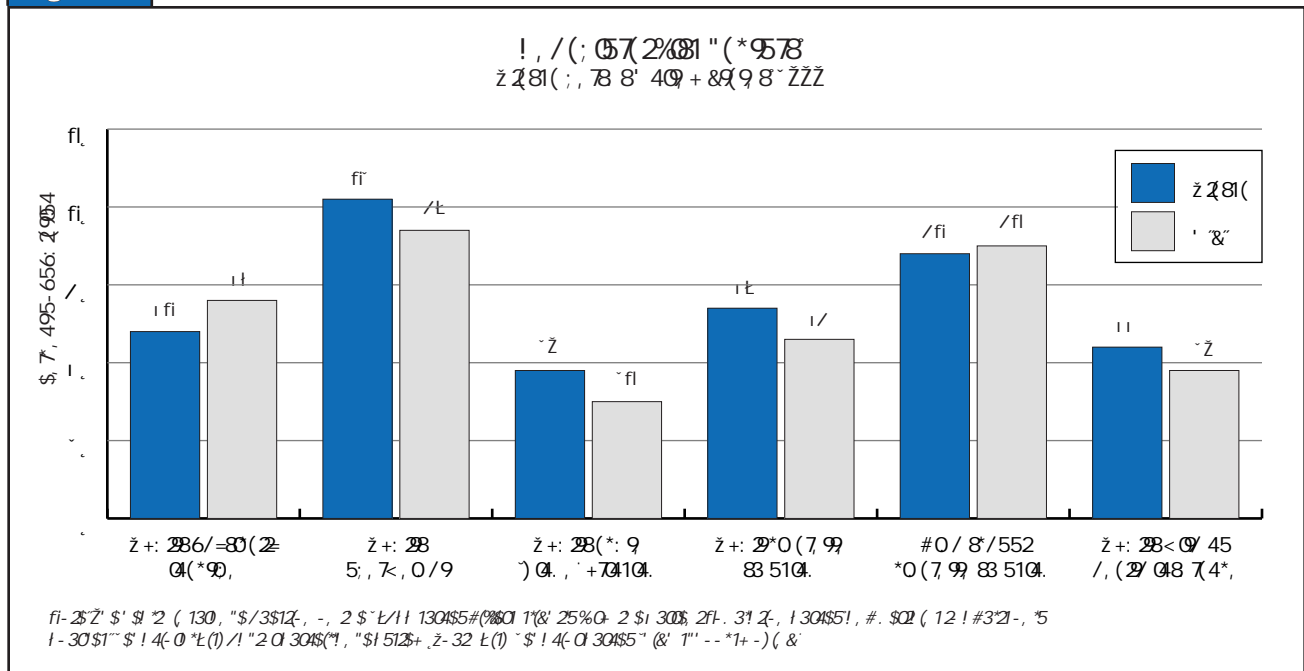
Adults who meet criteria for “overweight” are those with a body mass index of 25.0 - 29.9 kg/m<sup>2</sup>. In Alaska, we have a slightly more overweight population than in the United States (Figure 9).

Alaska has a higher proportion of adults who binge drink and smoke cigarettes (Figure 9). “Binge or acute drinking” is defined as consuming five or more drinks on one occasion within the past 30 day period, and “cigarette smoking” is defined as those who have smoked at least 100 cigarettes in their entire life and smoke now. Tobacco and alcohol use are the most important risk factors for premature death and disease in the United States. Alcohol is implicated in nearly half of all deaths caused by motor vehicle crashes and a substantial portion of deaths from fires, drowning, homicide, and suicide. Tobacco is a major risk factor for diseases of the heart and blood vessels, chronic bronchitis and emphysema, and cancers of the lung, larynx, pharynx, oral cavity, esophagus, pancreas, and bladder.

The YRBS investigated behaviors related to the leading causes of mortality, morbidity, and social problems among youth in the United States. Examples of high-risk behaviors include carrying a weapon, physical fighting, suicide attempts, drinking and using drugs, and unprotected sexual intercourse. The survey is conducted in schools around Alaska, first in 1995 and then again in 1999. The percentage of high school students who have smoked cigarettes on one or more of the past 30 days is shown in Figure 9. Alaska high school students have smoking rates similar to those of high school students throughout the United States.

Additional detail about all the risk factors can be found in the problem-specific chapters of *Healthy Alaskans 2010*.

**Figure 9**



## Leading Health Indicators

The leading health indicators reflect major public health concerns. They relate not only to leading causes of death, but to causes of illness and physical or mental limitations, and to the protective factors that can help assure that healthy people are living in healthy communities. They are meant to be good indicators of Alaskans “living longer, healthier lives.”

The Healthy Alaska Partnership Council approved selection of Alaska’s leading health indicators from the national list in *Healthy People 2010*, with additions and substitutions to reflect Alaska’s priorities. Sixteen of the 23 specific leading health indicators on the Healthy Alaskans 2010 list are the same as those in the national document; three are substitutes for similar indicators but reflect different data sources, and four have been added because of their importance in Alaska. The added indicators measure:

- unintentional injury deaths
- child maltreatment
- post-neonatal mortality
- community access to safe water and proper sewage disposal.

Following the example of *Healthy People 2010*, Alaska’s leading health indicators illuminate individual behaviors, physical and social environmental factors, and important health system issues that affect the health of individuals and communities (Table 7).

**Table 7**

Healthy Alaskans 2010  
Leading Health Indicators Focus Areas

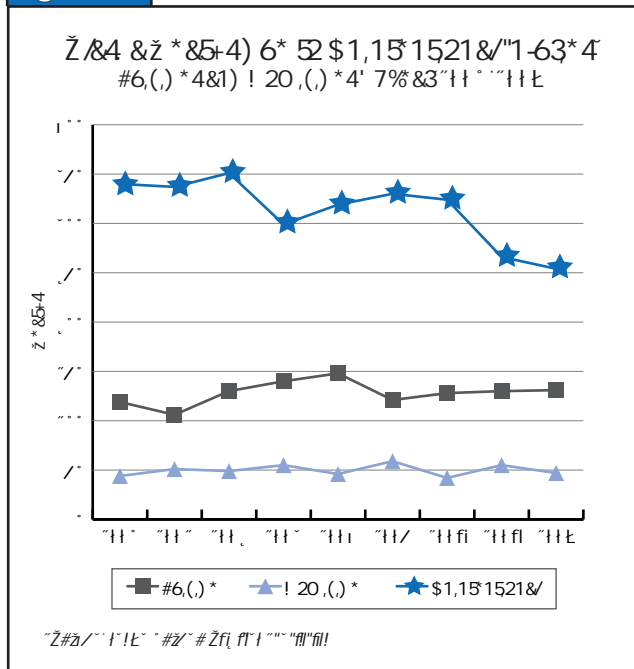
- Physical Activity
- Overweight and Obesity
- Tobacco Use
- Substance Abuse
- Mental Health
- Injury Prevention
- Immunization
- Environmental Quality
- Access to Healthcare
- Maternal and Child Health
- Responsible Sexual Behavior

Five of the specific leading health indicators count deaths that should be preventable in almost every instance: suicides, homicides, unintentional injuries, motor vehicle deaths (a sub-set of unintentional injury deaths), and post-neonatal deaths (deaths of infants between one month and a year old).

Suicide is a cause for great concern in the state, as Alaska’s rate is about twice that for the United States population as a whole, and as the rate for Alaska Natives increased over the past decade, reaching a level three times the national rate. The drop in the number and rate in 1999 holds hope for a turnaround after increases earlier in the decade. In the chapters on mental health and substance abuse, contributing causes and related measures of indicators, such as suicide attempts, are discussed in greater detail.

Unintentional injury deaths have been decreasing in number. However, the unintentional injury mortality rate for Alaska Natives (119.9 per 100,000) is still twice as high as the rate for all Alaskans (56.1 per 100,000), and more than three times the United States rate (35.7). Tracking the overall indicator, its cause-specific components, and related Trauma Registry data will help inform policies and programs aimed at reducing injury incidence and reducing injury deaths. The targets for 2010 are to reduce by half the rates of homicide deaths and motor vehicle injury deaths, even though these are not areas where Alaska ranks among the states with the greatest problem. For both, the rates for Alaska Natives are high (Table 8). These are priority areas for reducing premature death and for reducing disparities.

**Figure 10**

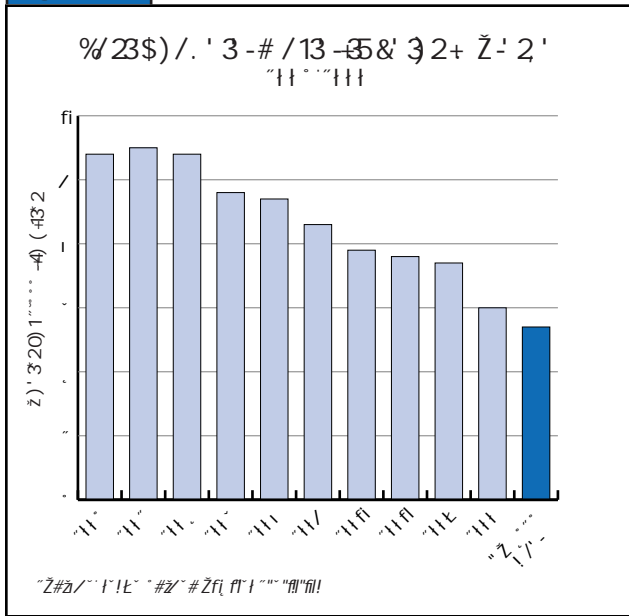


Post-neonatal mortality rate (deaths of infants between 28 days old and one year per 1000 live births) is a more sensitive indicator of well-being of infants than the overall infant mortality rate. The neonatal mortality rate (deaths in the first 28 days of life per 1000 live births), reflecting the health of the mother and the adequacy of the health services provided, is now very low in Alaska – a public health and health care delivery success story. Post-neonatal deaths usually occur because of problems with care or with the environment.

Alaska’s overall infant mortality rate is below the United States average, yet the post-neonatal mortality rate has remained higher than the United States rate (2.4 post-neonatal deaths per 1,000 live births), and should be amenable to dramatic improvement. “Sudden infant death syndrome” (SIDS) and “injuries” (suffocation, drowning, fire and motor vehicle injuries) account for most of the post-neonatal deaths. The SIDS rate in Alaska is over twice the United States SIDS rate. Alaska Natives have over twice the risk of infant death due to SIDS and other asphyxia as Whites. A reduction in SIDS deaths, particularly among Alaska Natives, would make a large contribution toward reducing the post neonatal mortality rate for Alaska.

Communities across Alaska have been working to change expectations and behavior that may have major impact on many of the leading health indicators

Figure 11



and result in better health status, including longer and healthier lives. Local initiatives and statewide efforts early in the decade include “Trampling Tobacco (ANHB),” “Take Heart Alaska” (statewide coalition to reduce heart disease by educating people about good diet and physical activity benefits), “Eat Smart,” “Five-a-Day” to encourage more vegetables and fruits in the diet, “Walk your child to school” days, worksite wellness resources development, “Stop the Pop (ANTHC and Native Health Corporations),” “Breath Free (YKHC),” the Alaska Health Fairs, and others.

Illness, disability and early deaths from heart disease and cancer will decrease if people are more physically active, eat better and smoke less. Less alcohol use could help reduce unintentional and intentional injuries, infant deaths and child maltreatment, and could either reflect or facilitate improved mental health of the population. It is hoped that measuring progress or problems with the leading health indicators will provide warnings about how the state is doing with respect to the goal of Alaskans living longer and healthier lives. If progress is made on all these indicators over the decade, premature deaths should be reduced, as well as the burden of illness and disability in the state.

In summary, the leading health indicators are related to underlying social, economic and environmental conditions. Many of the underlying conditions, including income and education levels, health-related lifestyle habits, and water and air quality are likely to have improved as well if the leading health indicators

improve. Indeed, the indicators were selected partly on the basis of their sensitivity to changes in known contributing causes. The detailed focus area chapters in *Healthy Alaskans 2010 Volume I: Targets for Improved Health* contain dozens of additional indicators of health status, outcomes, risk factors and protective factors, as well as measures of access to care and services, and availability and capacity of health care and public health systems. These more specific and detailed indicators and targets relate to policies and programs for each of the areas of concern.

## The Challenge to Eliminate Health Disparities

The national Healthy People 2010 sets as a goal the elimination of health disparities. These are defined as “differences in health status that occur by gender, race or ethnicity, education or income, disability, living in rural localities or sexual orientation.”<sup>1</sup> Although some differences in health status between groups are biologically determined (such as cervical cancer and prostate cancer) other differences are related to more complex interactions of biology and behavior. For example, men (in Alaska and in the United States as a whole) are more likely to die of heart disease, suicide and injuries than are women.<sup>2</sup> However, women are more likely to attempt suicide and are at greater risk for depression and Alzheimer’s disease.<sup>3,4</sup>

The most dramatic and pervasive group differences in health status in Alaska are those between Alaska Natives and the majority white population of the state. Public health and tribal health efforts over decades have led to dramatic improvement in the health status of Alaska Natives in the areas of infant mortality, injuries, and infectious disease, but disparities persist, and appear to be increasing in some areas (notably suicide and homicide rates).

*Healthy Alaskans 2010* has set a single target for every health status indicator for all racial and ethnic groups, with the intention of developing strategies to improve health status for all, and to focus on reduction of the disparities by promoting health and preventing disease and by ensuring access to appropriate care. Efforts are planned to track progress for all groups for whom it is feasible to measure such progress over the decade. Comparisons will be made between specific racial and ethnic groups and between males and females where this is informative about risk factors, effectiveness of programs, or need for services.<sup>5</sup>

**Table 8**

<b>Healthy Alaskans 2010 Leading Health Indicators</b>					
	Indicator	Alaska Data Source	U.S. Baseline	Alaska Baseline	Alaska Target Year 2010
<b>Physical Activity</b>					
1	Increase the proportion of adolescents who engage in vigorous physical activity (percent of high school students grades 9-12 who exercise or participate in sports activities for at least 20 minutes that cause sweating and heavy breathing on 3 or more of the past 7 days)	YRBS	65% (1999)	72% (1999) 59% (AK Native 1999)	85%
2	Increase the proportion of adults who engage in regular, preferably daily, moderate physical activity. (percent of people aged 18 years and older who engage in physical activity five or more sessions per week for 30 or more minutes per session, regardless of intensity)	BRFSS	20% (1998)	25% (1998) 17% (AK Native 1998)	40%
<b>Overweight and Obesity</b>					
3	Reduce the proportion of adolescents who are overweight. (percent of high school students grades 9-12 with body mass index greater than or equal to the 95th percentile, based on age-sex specific NHANES 1)	YRBS	10% (1999)	7% (1999) 9% (AK Native 1999)	5%
4	Reduce the proportion of adults who are obese. (percent of persons aged 18 years and older with body mass index greater than or equal to 30kg/m <sup>2</sup> )	BRFSS	20% (1999)	20% (1999) 30% (AK Native 1999)	18%
<b>Tobacco Use</b>					
5	Reduce cigarette smoking by adolescents. (percent of high school students grade 9-12 who have smoked cigarettes on one or more of the past 30 days)	YRBS	35% (1999)	34% (1999) 55% (AK Native 1999)	17%
6	Reduce cigarette smoking by adults. (percent of adults aged 18 years and older who smoked more than 100 cigarettes in their lifetime and smoked on some or all days in the past month)	BRFSS	23% (1999)	27% (1999) 42% (AK Native 1999)	14%
<b>Substance Abuse</b>					
7	Increase the proportion of adolescents not using alcohol or illicit drugs during the past 30 days. (percent of high school students grades 9-12 who have not used alcohol, marijuana, or cocaine in past 30 days)	YRBS	46% (1999)	49% (1999)	60%
8	Reduce binge drinking among adults. (percent of persons aged 18 years or older who consumed five or more drinks on one occasion within the past 30 day period)	BRFSS	15% (1999)	19% (1999) 27% (AK Native 1999)	13%
<b>Mental Health</b>					
9	Reduce the suicide rate. (deaths per 100,000 population)	ABVS	10.6 (1999) preliminary	17.2 (1999) 32.6 (AK Native 1999)	15.0
<b>Injury Prevention</b>					
10	Reduce deaths caused by unintentional injury. (deaths per 100,000 population)	ABVS	35.7 (1999)	56.1 (1999) 119.9 (AK Native 1999)	31.4
11	Reduce deaths caused by motor vehicle crashes. (deaths per 100,000 population)	ABVS	15.5 (1999)	14.7 (1999) 27.6 (AK Native 1999)	7.0
<b>Violence Prevention</b>					
12	Reduce deaths from homicides. (deaths per 100,000 population)	ABVS	6.1 (1999)	8.1 (1999) 29.4 (AK Native 1999)	4.0
13	Reduce child maltreatment. (rate of substantiated reports of child maltreatment per 1,000)	DHSS/DPH, DFYS; state fiscal years	11.8 (1999)	16.5 (1995-1999) 20.6 (1997-2001)	10.0

Immunization					
14	Increase the proportion of young children who have received all vaccines recommended for universal administration. (percent of children aged 19 to 35 months who have received recommended doses of DTaP, polio, MMR, Hib, and Hep B vaccines, the 4:3:1:3:3 series).	National Immunization Survey	73% (2000)	71% (2000)	90%
15	Increase the proportion of elderly adults immunized against influenza and pneumococcal disease (percent of adults aged 65 years and older who have received an influenza vaccine in the past year; percent of adults aged 65 and older who have ever received a pneumococcal vaccine).	DHSS/DPH, Epidemiology	64% (influenza) 46%(pneumococcal) (1998)	60%(influenza) 60% (AK Native) 43% (pneumococcal) 53% (AK Native) (1999)	90% influenza 90% pneumococcal
Environmental Quality					
16	Increase number of communities with access to safe water and proper sewage disposal.	DEC		88% (2000)	98%
17	Reduce the proportion of nonsmokers exposed to environmental tobacco smoke.	BRFSS	65% of non-smokers (1988-1994 NHANES)	Developmental	
Access to Health Care					
18	Decrease the percent of Alaskans without health insurance coverage throughout the year.	CPS	14.0% (2000)	19.3% (2000)	5%
19	Increase the proportion of adults aged 18 or older with a usual place to go for care if sick or needing advice about health.	BRFSS	84% (1997) NHIS	79.3% (1997)	100%
Maternal and Child Health					
20	Increase the proportion of pregnant women receiving adequate prenatal care. (percent of live births with APNCU Index greater than or equal to 80)	ABVS	75% (1999)	67.1% (1999) 47.2% (AK Native 1999)	90%
21	Reduce postneonatal death rate. (deaths between 28 days and 1 year per 1,000 live births)	ABVS	2.3 (1999)	3.0 (1999) 6.1 (AK Native 1999)	2.7
Responsible Sexual Behavior					
22a	Increase the proportion of adolescents who abstain from sexual intercourse. (percent of high school students grades 9-12 who have never had sexual intercourse) <sup>1</sup>	YRBS	50% (1999)	57% (1999) 46% (AK Native 1999)	65%
22b	Increase the proportion of sexually active adolescents who use condoms. (percent of high school students grade 9-12 who had intercourse in past 30 days who used condom at last intercourse)	YRBS	58% (1999)	56% (1999)	75%
23	Increase the proportion of sexually active persons who reported condom use at last intercourse (percent of sexually active unmarried women (divorced, widowed, separated, never married, or member of an unmarried couple) aged 18-44 years who reported condom use at last intercourse). The comparable proportion for Alaska males was 45 percent.	BRFSS	23% (1995)	33% (1997)	50%

<sup>1</sup>The National Leading Health Indicator combines 22a and 22b.  
 YRBS - Alaska Youth Risk Behavior Survey. Alaska sample for 1999 did not include Anchorage. High school data for 1999 are weighted and representative of the state student population excluding Anchorage.  
 BRFSS - Alaska Behavioral Risk Factor Surveillance System. All U.S. BRFSS data are age-adjusted to the 2000 population; the Alaska BRFSS data have not been age adjusted, so direct comparisons are not advised. Please refer to Appendix Technical Notes for additional information  
 NHANES - National Health and Nutrition Evaluation Survey  
 ABVS - Alaska Bureau of Vital Statistics, All mortality rates age-adjusted to US 2000 standard population  
 DHSS/DPH -Alaska Department of Health and Social Services/Alaska Division of Public Health  
 DHSS/DFYS -Alaska Department of Health and Social Services Division of Family and Youth Services  
 DEC - Alaska Department of Environmental Conservation  
 CPS - Current Population Survey, U.S. Bureau of the Census  
 APNCU - Adequacy of Prenatal Care Utilization Index, refer to Appendix Technical Notes for additional information

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Differences in socioeconomic status account for much, but not all, of the observed variation in health status among racial and ethnic groups. The fact that racial groups typically differ by socioeconomic status reflects one aspect of the profound effect race may have on a person's life. Many authors have pointed out that race represents more of a cultural grouping than a biologic one.<sup>6,7,8,9</sup> However, monitoring health disparities by race is important for several reasons. Historically, racial categories have been used as proxies for socioeconomic characteristics. As an important social category, racial distinctions have consequences for many aspects of life. Biological differences, to a large extent, do not exist between racial groups. The variation in health status by race and ethnicity reflects complex interactions of biological, cultural, socioeconomic, political and legal factors, as well as racism.<sup>10</sup>

Measuring health status in minority populations can be difficult because of small populations, inaccurate denominators and misclassification of racial status.<sup>11,12</sup> Small populations in Alaska pose the largest difficulty in ascertaining health status for African-Americans, Asian/Pacific Islanders and persons of Hispanic origin. Several years of data are usually needed to obtain enough events to validly measure health status. Annual trends are extremely difficult to document. Commonly, data in Alaska is stratified by Alaska Native/Non-Native, which may obscure other racial and ethnic disparities. Finally, the changes in the definitions of race in the 2000 census will further complicate the monitoring of health status by race and ethnicity.

As noted, Alaska Natives comprise the largest minority population in Alaska. The majority reside in over 200 largely remote and rural communities delineated as Alaska Native Villages; only 39 percent live in the six largest census areas. The median age of the Alaska Native population, 23.3 years in 2000, is younger than that for the overall Alaska population. The life expectancy at birth for Alaska Natives is 69.4 years, compared to 75.7 for whites.<sup>13</sup> Although a great deal of progress was made during the 1990s to decrease health disparities between Alaska Natives and non-Natives (for example, infant mortality decreased, injury mortality decreased, and homicide mortality decreased), significant disparities persist.<sup>14</sup>

In 2000, 25,547 African-Americans resided in Alaska. The majority (92%) of African-Americans live in either Anchorage or Fairbanks. The median age of the

African-American population in Alaska is 27.0, lower than the white median age of 35.4. In general, the health status of Alaska's African-American population tends to be similar to or better than that of the overall state, possibly due to the young age of the population. However, disparities exist. For example, African-Americans have twice the infant mortality rate of whites, and the highest race-specific rates of low birth weight, very low birth weight and pre-term birth.

About two thirds of Asians, Native Hawaiians and Pacific Islanders reside in either Anchorage or Fairbanks. There are also sizable Asian, Native Hawaiian and Pacific Islander populations in non-urban Alaska; nearly 3,000 resided on Kodiak Island and another approximately 3,000 resided in the Southwest region in 2000. The median age was 34.5 for the Asian group in 2000, and 22.4 for Native Hawaiians and Pacific Islanders. The Asian/Pacific Islander population grew by 73 percent from 1990 to 2000, compared to an overall population growth of 14 percent. For many health status indicators, persons of Asian/Pacific Islander descent appear to have better health status than the overall population (one exception is tuberculosis incidence).<sup>15</sup> However, studies need to be done to validate these findings, especially in view of the rapid increase in that population.

As reported in the 2000 census, 25,852 persons of Hispanic origin live in Alaska. Of these, 71 percent live in Anchorage or Fairbanks. There are also sizable Hispanic populations in non-urban Alaska; 848 live on Kodiak Island and 1214 in the Southwest region. The median age of the Hispanic population in 2000 was 23.8 years. The Hispanic population increased by about 45 percent between 1990 and 2000. Because of the rapidly changing population, and the difficulty in ensuring reliable recording of Hispanic ethnicity on birth and death certificates and in surveys consistent with the self-reports on the decennial census forms, it has been difficult to obtain accurate information for many health status indicators.

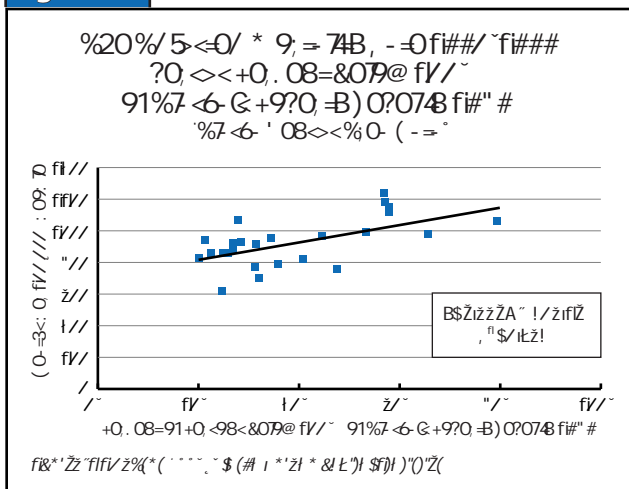
## Socioeconomic Status

Socioeconomic status has a profound influence on health. Differences in health status by socioeconomic status have been documented for centuries. Nonetheless, we do not have a clear idea about how and why health status is so profoundly affected by socioeconomic status.<sup>16</sup> Many different indicators have been used to measure socioeconomic status, including income, educational status and occupation. Recent re-

search has found that the degree of discrepancy in health status by income is directly correlated with the degree of income disparity in the society. In other words, it is not the degree of income, but one's relative income within the society.<sup>17</sup> Research in the United States has found that social cohesion is inversely correlated with mortality rates.<sup>18</sup>

In Alaska, the overall mortality rates in each census area are directly correlated to the percent of individuals in each census area who were living below the federal poverty level in 1990 (Figure 12).

**Figure 12**



Another example of the dramatic effect of socioeconomic status on health is the relationship between educational attainment and current smoking. Among college graduates in Alaska, only 12 percent are current smokers, but among those with less than a high school education, 47 percent currently smoke.<sup>19</sup>

## Geographic Location

Monitoring health status by geographic location is important because it provides local information and identifies issues that may be most pertinent for that region. For example, rates of unintentional injury morbidity and mortality are much higher in rural Alaska.<sup>20</sup> However, for small communities or even large areas with relatively small populations, presentation of health status information is complicated by the fact that presence or absence of uncommon events can cause sudden jumps or drops in disease or death rates that are not very informative about the health of the community. Survey-based data on health risks is informative about regional differences (for example, in smoking prevalence, prevalence of overweight, and access to

primary care services). Over the decade, such surveys will be very informative to citizens, community planners and state policy-makers.

Another important issue for Alaska is the difficulty of providing health care to rural areas. Residents in rural Alaska face challenges in obtaining access to quality health care. Nearly one-fourth of the state's population lives in areas accessible only by boat or aircraft. Transportation to and from hospitals and clinics is expensive, and sometimes even impossible because of poor weather. In addition, rural areas often lack qualified health professionals. Rural residents often lack access to other services that promote good health, such as facilities for obtaining regular exercise, healthful foods in the grocery stores and smoking cessation programs.

## Disability

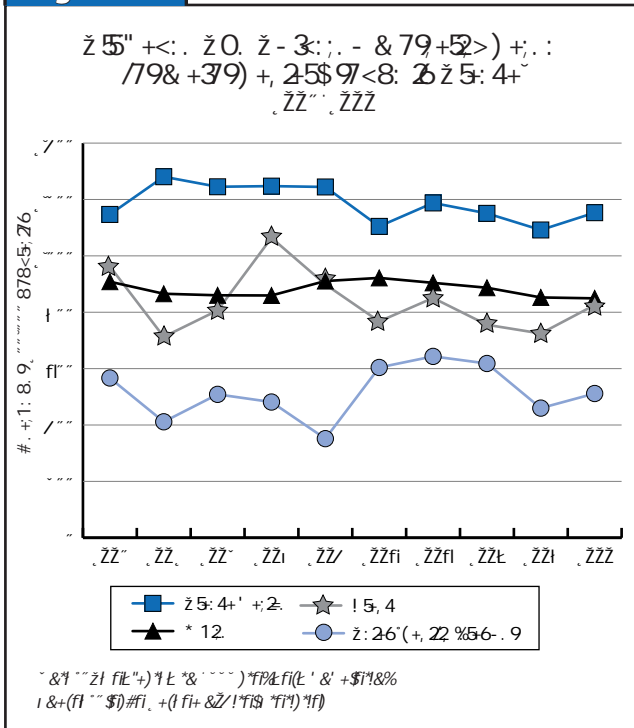
Alaska does not currently have a systematic approach to monitoring health status among individuals with disabilities. *Healthy Alaskans 2010* identifies several data indicators that the state hopes to be able to monitor by the end of the decade.

## Selected Measures of Disparities in Health Status and in Risks

Major health status disparities between racial groups that are reflected in mortality and reportable diseases include unintentional injuries, suicide and homicide. Vital statistics indicate that in Alaska, mortality rates for African Americans and for Asians and Pacific Islanders are lower than for the White population, but overall mortality rates for Alaska Natives are persistently higher than those for all other racial groups (Figure 13).

Suicide has accounted for about 130 deaths of Alaskans each year of the past decade. Suicide rates are highest among Alaska Natives (31.3 per 100,000 in 1999), with rates that are more than twice as high as the rate for Whites (14.9 in 1999) throughout the time period (Figure 14). To reach the target of 10.6 for 2010 (which is based on the 1999 United States suicide mortality rate), Alaska Native suicides annually will be only one fourth of the current number - fewer than twelve per year rather than the recent average of 43 per year.

**Figure 13**

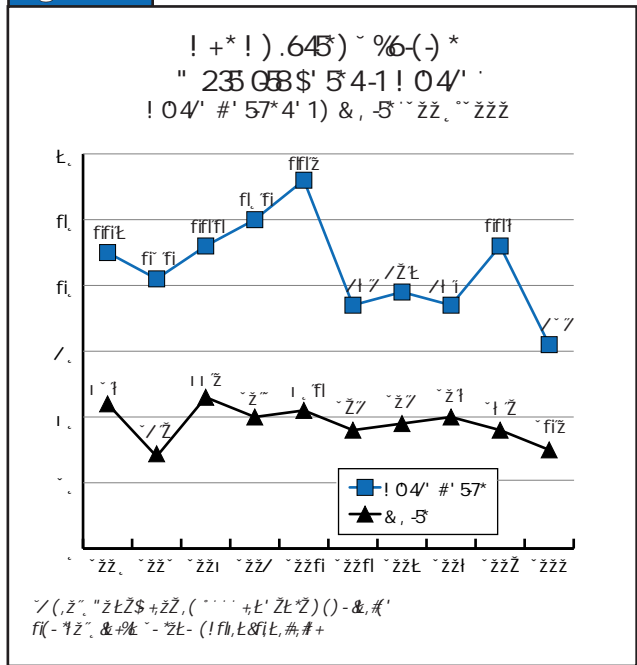


For both unintentional injuries and intentional injuries (suicide and homicide) the disparities in mortality rates persist between Alaska Natives and other racial groups of the population. For unintentional injuries the rates have been dropping quite steadily, and for Alaska Native these rates have improved more dramatically than for the population as a whole. The most common causes of injury deaths in Alaska, including both unintentional and intentional (homicide and suicide) are firearms (26%), motor vehicles (17%), drowning (12%), poisoning (5%), strangulation (5%) and fire/burns (4%).

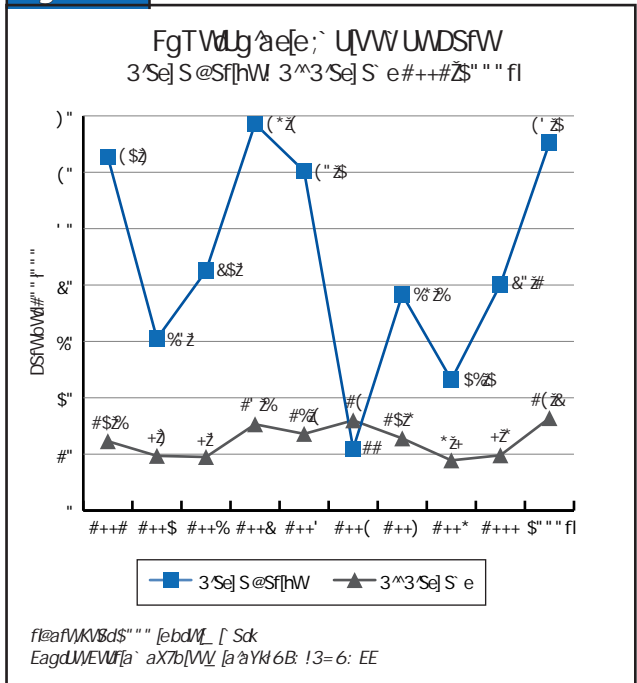
The successes of prevention programs like “Kids Don’t Float” and boater safety education, and worker safety efforts that have reduced work-related deaths, exemplify the potential for bringing injury deaths down. Improved access to mental health services at the community level, and opportunities for success for youth and people of all ages, may help to reduce the risks and risky behaviors that lead to disabling and fatal injuries.

Several outbreaks of new tuberculosis cases in the last decade affected Native communities and the Asian and Pacific Islander population. In 1998, the incidence rate among Asian and Pacific Islanders was 38 cases per 100,000 (Figure 15).

**Figure 14**



**Figure 15**



**Summary**

Data on risks and health status suggests that the largest disparities are between Alaska Natives and the other racial groups. Differences between men and women are of concern where lifestyle or exposure to environmental risks differ, or where insurance coverage or access to care differs.

Age related risks (for example, for children, adolescents, elderly) need attention particularly in the organization of services. Having emergency medical equipment that is suitable for the care of small children and having home and community based services that allow elders and people with special needs to remain in their communities are assets that contribute to community wellness. More complete data systems may, over the decade, be able to inform people better at the community and state level about risk and protective factors, about non-fatal outcomes like emergency calls and hospitalizations, and about services available and likely to be needed in the future. Alaska made progress during the 1990s in limited areas to reduce health disparities. *Healthy Alaskans 2010* will support work over the decade to monitor disparities in both health status and in access to services, and to evaluate the efforts of community, state and national organizations to eliminate them.

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## Endnotes

- <sup>1</sup> U.S. Department of Health and Social Services. *Healthy People 2010* (Conference Edition, in two volumes). Washington DC; 2000. page 11-16.
- <sup>2</sup> Alaska Bureau of Vital Statistics. 1998 Annual report.
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- <sup>15</sup> *Ibid.*
- <sup>16</sup> Kaplan G.A., Lynch J.W. Editorial: Whither studies on the socioeconomic foundations of public health? *Am J Pub Health* 1997;87:1409-1411.
- <sup>17</sup> Kawachi I., Kennedy B.P., Prothrow-Stith D. Social capital, income inequality and mortality. *Am J Pub Health* 1997;87:1491-98.
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- <sup>19</sup> Section of Community Health and Emergency Medical Services. Alaska behavioral risk factor surveillance system (unpublished data) Alaska Department of Health and Social Services, Division of Public Health; 1998.
- <sup>20</sup> See annual Alaska vital statistics reports and *Health Status in Alaska: 2000 Edition*.

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