

# Healthy Alaskans 2010

## Targets and Strategies for Improved Health

Volume I: Targets for Improved Health  
Executive Summary



Alaska Department of Health & Social Services  
Division of Public Health  
December 2001





# STATE OF ALASKA

## DEPT. OF HEALTH AND SOCIAL SERVICES

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December 1, 2001

Dear Alaskans:

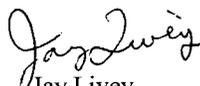
On behalf of the Alaska Department of Health and Social Services, the Division of Public Health is pleased to present *Healthy Alaskans 2010 Volume I: Targets for Improved Health – Executive Summary*. This first part of the Healthy Alaskans plan is the result of literally hundreds of hours of work by many individuals. Alaskans from rural and urban communities, Native organizations, state and federal agencies, and private businesses and organizations contributed their knowledge, experience and expertise to Healthy Alaskans 2010.

We are all aware that too many Alaskans are dying prematurely, suffering acute and extended illness and serious injuries, and living with long term disabilities. About half of these deaths and illnesses can be attributed to behavioral risk factors that can be changed. Healthy Alaskans 2010 is an important tool that can be used by organizations and communities to improve the health status of Alaskans, modify exposures to health risks, strengthen health care services, and reduce environmental and occupational hazards.

The Division of Public Health will use the Healthy Alaskans 2010 process to track changes in the health status of Alaskans over the next 10 years, serve as a framework for health policy development, identify the best indicators of health status, set ambitious but achievable targets, and ensure the information gained is shared with all partners.

We encourage you to use this plan and partner with us as we work toward improving the health of all Alaskans by the year 2010. Together we can achieve our goals of eliminating the health disparities that currently exist and ensuring that all Alaskans have reasonable access to quality care when needed.

Sincerely,

  
Jay Livey  
Commissioner

  
Karen Pearson  
Director of Public Health

## Acknowledgments

Karen Pearson, Director of the Division of Public Health, has championed the Healthy Alaskans 2010 effort from the start, providing vision, encouragement and personal attention. Commissioner Jay Livey, former Commissioner Karen Perdue, Administrative Services Director Janet Clarke, and former Director of Public Health Peter Nakamura have given constant support for a new “roadmap” to guide public health policies and programs for the first decade of the new century. Hundreds of individuals across the state in and out of state government have admonished, advised, and assisted. The staff thank you all.

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## ***Introduction***

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- What is *Healthy Alaskans 2010*
- Background
- Purpose and Use of this Document
- How to Use this Document
- *Healthy Alaskans 2010* as a Work in Progress
- How to Use *Healthy Alaskans 2010 Volume II: Strategies for Improved Health*

# Introduction

## What is Healthy Alaskans 2010?

*Healthy Alaskans 2010* is a framework for realizing a vision: healthy Alaskans in healthy communities. It is a plan that includes a set of targets for 2010 that, if achieved, would reflect improved health status since 2000. A planning process involving participants from across the state has produced the following set of goals, selected indicators and targets for those indicators. These provide a framework for action at the local and state level, and a way to address new problems with new measures.

This Executive Summary contains the introductory chapter and overview from Volume I of the full report, as well as highlights of the chapters addressing twenty-six health topics in *Volume I: Targets for Improved Health of Alaskans*.

*Volume II: Strategies for Improved Health* will provide models and strategies for realizing the targets identified in Volume I. The third step in the planning process will be to outline action steps and policy recommendations for state government efforts to assist in achieving the targets.

*Healthy Alaskans 2010* emerged from the Alaska Public Health Improvement Process, funded in part by the Robert Wood Johnson Turning Point grants. It is a state-focused adaptation of the national planning process called *Healthy People 2010*, sponsored by the United States Department of Health and Human Services.

The Alaska Department of Health and Social Services has reached out to develop partnerships for the review of needs and development of targets for improving health status and access to care. The Department requested that the Alaska Public Health Improvement Process Steering Committee guide the Healthy Alaskans 2010 planning process. With broader membership, the group is now established as the Healthy Alaskans Partnership Council. One of the Council's core principles is that broad community participation ensures local ownership. The community guides the process — collective thinking ultimately results in more sustainable solutions to complex problems and builds the experience for responding to emerging needs. Collaboration and partnership with communities, Native health organizations, and health care workers are considered essential to mobilizing the state for achieving goals for longer and healthier lives.

Engaging people and their communities to improve

health status means that all members of the community — individuals and organizations — are public health partners. Local governments in Alaska are not mandated to assume responsibilities for public health but may do so through local ordinance. At the present time (2001) only the North Slope Borough and the municipality of Anchorage have health powers and offer services similar to city and county governments elsewhere. Regional Native health corporations, community health centers, hospitals, emergency medical personnel, as well as non-profit organizations and care providers all do health promotion and prevention work in addition to providing treatment services. They are key partners for improving health of the population.

## Background

Alaska's people and communities cope daily with challenges to maintain health and well-being. Information about trends in health status suggests that Alaskans have been able to solve many of their health problems. For example, we have reduced injuries and illnesses related to weather, work settings, and geographical isolation of communities. But as a stronger health care and prevention system makes progress on old problems like tuberculosis, and as sanitation systems improve access to safe water and waste disposal, new challenges appear. Increases in obesity, diabetes, heart disease, "baby bottle tooth decay," and suicides point to a need for changes in how we eat, exercise, and care for one another. Many communities across the state are engaged in local efforts to improve their quality of life, the health of residents, and their economic base — they have demonstrated commitment to "healthy Alaskans in healthy communities."

Nationally, "healthy people in healthy communities" has become the theme of modern health planning, with an expectation that state and federal government efforts will support local initiatives for improving health. Public health, defined by the World Health Organization as "the science and organization of promoting health, preventing disease, and prolonging life through the organized efforts of society," works with community members and their leadership, health care professionals and organizations, employers, schools and universities, and others.

In the last decade, the Alaska Department of Health and Social Services (DHSS) developed state health objectives for the year 2000 based on *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*. *Healthy Alaskans 2000*, published in

1994, presented a plan to assess the health status of Alaskans and identify key actions to be taken to make progress on certain health indicators in *Healthy People 2000's* Priority Health Areas.<sup>1</sup> In 1998 and in 2000, DHSS published reports on measurable progress toward the objectives, in the document “*Health Status of Alaskans*.” (see [www.hss.state.ak.us/dph/deu/publications/publications.html](http://www.hss.state.ak.us/dph/deu/publications/publications.html))

Entering the new century, a national process set new health objectives for the nation. *Healthy People 2010: The National Health Promotion and Disease Prevention Initiative* provides an updated set of goals and new measures of health status. The new national document emphasizes links between individual health and community health. The physical and social environments in which people live, work, and play need to be taken into account. Beliefs, attitudes, and behaviors of everyone who lives in the community affect others and the community as a whole.

The national *Healthy People 2010*, like its predecessor, was developed through a broad consultation process, built on the best scientific knowledge and designed to measure trends over time. The two overarching goals of *Healthy People 2010* are:

- To help individuals of all ages increase life expectancy and improve their quality of life.
- To eliminate health disparities among different segments of the population.

Many states, including Alaska, have taken the opportunity to relate the national framework to their own issues. *Healthy Alaskans 2010 Volume I: Targets for Improved Health* will be used over the decade to track changes in health status of Alaskans. It serves as a framework for health policy development. It reflects Alaskans' priorities and objectives for improving health status, modifying exposures to health risks, strengthening health care services, and reducing environmental and occupational hazards. The twenty-six problem-specific chapters have been completed by the staff of DHSS, with assistance from other state agencies and from other health care organizations. The objectives and targets for each chapter were presented at a full-day workshop following the Alaska Public Health Association's December 2000 Health Summit.

The second volume, *Healthy Alaskans 2010 Volume II: Strategies for Improved Health*, identifies those strategies for action to achieve the goals and objectives for health set in *Volume I: Targets for Improved Health*.

*The Department of Health and Social Services Healthy Alaskans 2010 Action Plan* will include steps DHSS will take to implement the strategic plan and reach the targets set for this decade. The action plan in Volume II will serve as a roadmap to a healthier Alaska, providing guidance for state action and services and for partners in this endeavor.

## Purpose and Use of this Plan

*Healthy Alaskans 2010 Volume I* will:

- Serve as a framework for health policy development
- Identify best indicators of health status
- Provide a basis for tracking changes in health status of Alaskans over the next decade
- Set ambitious but achievable targets

The health status of a population can be tracked, analyzed, and improved through public health programs once a baseline point of reference is identified. The baseline may be the death rate, disease incidence or prevalence rate among a certain group of people. Trends in individual behaviors like smoking and binge drinking that can affect health in the short or long term can be measured through population-based sample surveys such as the Behavioral Risk Factor Surveillance Survey. Environmental conditions that are protective of good health or that pose threats to good health can also be tracked. The indicators recommended for tracking over the decade include all three types of measures: health status, behaviors that can affect health and wellness, and environmental factors. The indicators also include inventories of services, workforce, communications capabilities, and specific capacities of the public health infrastructure and the health services delivery system.

## How to Use this Document

Following the introduction, *Healthy Alaskans 2010 Volume I* is divided into four main sections:

- Health Promotion
- Health Protection
- Preventive Services and Access to Care
- Public Health Infrastructure

Within each of these broad cluster areas are chapters (or focus areas) on more specific topics related to sets of health conditions or risk or protective factors

# Introduction

(see Table 1). The groupings reflect important conceptual common themes, but many chapters could have been included in another section as well. Cross references are provided in the appendices to Volume I. For example, the “tobacco use” chapter is included in the health promotion section, because of the current focus on developing awareness, discouraging early smoking, and encouraging smoking cessation, although some of the strategies for prevention include non-smoking ordinances for public places, tobacco taxes, and other options for state or local regulations that fall into the category of “health protection.”

**Table 1. Healthy Alaskans 2010 Focus Areas**

<b>HEALTH PROMOTION</b>	
1. Physical Activity and Fitness	5. Mental Health
2. Nutrition and Overweight	6. Educational and Community-based Programs
3. Tobacco Use	7. Health Communication
4. Substance Abuse	
<b>HEALTH PROTECTION</b>	
8. Injury Prevention	12. Food Safety
9. Violence and Abuse Prevention	13. Oral Health
10. Occupational Safety and Health	14. Vision and Hearing
11. Environmental Health	
<b>PREVENTIVE SERVICES AND ACCESS TO CARE</b>	
15. Access to Quality Health Care	21. Heart Disease and Stroke
16. Maternal, Infant, and Child Health	22. Cancer
17. Family Planning	23. Diabetes
18. Immunizations and Infectious Diseases	24. Respiratory Diseases
19. HIV Infection and Sexually Transmitted Diseases	25. Disability and Secondary Conditions
20. Arthritis and Osteoporosis	
<b>PUBLIC HEALTH INFRASTRUCTURE</b>	
26. Public Health Infrastructure and Preparedness	• Public Health Workforce
• Information and Data Systems	• Organizational Capabilities

## Each chapter includes:

- **Health goal for the year 2010**
- **Health Indicators and Targets for the Year 2010 – Table**

Health indicators for 2010 are listed with the Alaska data source, the U.S. baseline data that corresponds to the Alaska data source, and the Alaska baseline and target for 2010. 1999 data is used as the baseline when available. In some cases, Alaska baselines for the indicators were not available at the time of this report. In those cases, efforts are needed to develop a system to collect baseline information, and the indicator is described as “developmental”. The national baselines, usually from *Healthy People 2010*, are meant to offer the reader a comparison of Alaska’s health status.

In some cases, we have calculated a national baseline from a source that provides a better comparison to the Alaska baseline than the *Healthy People 2010* data source for the national measure. For example, for the national process, surveys may be available that provide information for the nation as a whole, but may not be able to provide reliable estimates for individual states.

For each indicator, the target for the year 2010 is noted. Targets represent a consensus of opinion from people in the field of where we want to be in 2010. They are meant to be a focus for action and to allow a meaningful way to measure and evaluate progress on the specific indicator.

- **Chapter Narrative**

Chapter narratives include:

- o *Overview*—Basic information is presented on particular issues as well as national statistics and trends.
- o *Issues and Trends in Alaska* — The issue or disease is described as it pertains to the health of Alaskans. This includes information on the extent of the problems in Alaska, including differences in groups by age, sex, race, and socioeconomic status, and trends as they relate to these health problems. Regional differences are not emphasized in this document (although they are noted in some chapters); however, data on geographical subdivisions are expected to be tracked where feasible in subsequent documents such as the periodic report on health status in Alaska.
- o *Current Strategies and Resources* — This section describes programs and activities that deal with the health problems and diseases that are the focus of the chapter. Many of the programs described are state-funded or state-managed programs. Where community initiatives or Native Health Corporation programs were identified, they are summarized. However, the authors recognize that the list of current efforts for each chapter provides a partial overview rather than a comprehensive inventory of prevention, treatment, and rehabilitation activities.
- o *Data Issues and Needs* — Major data gaps exist which restrict our ability to assess and monitor progress toward health goals. The Alaska baselines are sometimes the “best data available” that have to serve in the place of the data actually needed. In some cases, there is no established data source and thus the indicator is considered “developmental.” This section discusses the most critical data needs for the specific health problem or behavior.
- o *Related Focus Areas* — This section acknowledges that most efforts to improve health status impact people’s lives in many ways—improvement in one area may well improve other areas of health. Some chapters such as Education and Community-based Programs, Access to Quality Care, and Health Communication have links with all the chapters in Healthy Alaskans 2010.

## ***Healthy Alaskans 2010 as a Work in Progress***

*Healthy Alaskans 2010* was developed through a participatory process. Numerous State of Alaska employees assisted by proposing health indicators and targets and by writing narratives. Some chapters had attention from a larger group of contributors than others because established governmental or public-private collaborative advisory committees already existed on certain health problems. The result is that many chapters focus on State of Alaska activities and strategies, rather than on non-governmental and community activities. A number of methods for soliciting advice and comment were used: Healthy Alaskans 2010 indicators and targets were posted on the internet for a year, chapter drafts were posted and circulated to key contacts, and presentations were made at numerous meetings.

## ***How to Use Healthy Alaskans 2010 Volume II: Strategies for Improved Health***

Volume II, to be published in 2002, will be a resource for examples of model programs, “best practice” guidelines, and tools or performance measures that have worked in Alaska settings or show promise for being useful to Alaskan communities, employers, health care providers, educational institutions, and program managers as they seek to improve the health of the population. Appendices will include summaries and contact information about disease-specific planning documents and organizational strategic plans from Alaska’s many partners working for improved health. Additional references to data, grant programs, and model programs and practices will be listed. An Action Plan for the DHSS will identify programmatic and policy initiatives identified by the review of strategic issues, options and targets.

# Introduction

<sup>1</sup> Efforts recommended and supported by the plan included passage of the tobacco excise tax (passed October 1, 1997), and introduction or continuation of several data collection efforts (behavior risk factor surveillance, pregnancy risk assessment monitoring, trauma registry, traumatic brain injury registry, cancer registry, birth defects registry, and updated and expanded disease reporting in immunization programs).

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Section of Community Health and Emergency Medical Services. Alaska trauma registry. (unpublished data). Alaska Department of Health and Social Services, Division of Public Health; 2001.

Unger, S. Seven generations: Addressing village environmental issues for the future generations of rural Alaskans. Alaska Department of Environmental Conservation; 1999.

U.S. Department of Health and Social Services. Healthy People 2010 (Conference Edition, in two volumes). Washington DC; 2000.

Williams, G. Alaska population overview: 1999 estimates. Alaska Department of Labor and Workforce Development; 2000.

## Key Websites for Reference and Data

2000 Census Data for Alaska [www.labor.state.ak.us/research/cgin/cen2000.htm](http://www.labor.state.ak.us/research/cgin/cen2000.htm)

AK Info [www.ak.org](http://www.ak.org)

Alaska Native Health Board [www.anhb.org](http://www.anhb.org)

Alaska Native Tribal Health Consortium [www.anthc.org](http://www.anthc.org)

Centers for Disease Control [www.cdc.gov](http://www.cdc.gov)

MAPP/Mobilizing for Action through Planning and Partnerships [www.naccho.org/tools.cfm](http://www.naccho.org/tools.cfm)

Medline Plus, National Library of Medicine [www.nlm.nih.gov/medlineplus/healthtopics.html](http://www.nlm.nih.gov/medlineplus/healthtopics.html)

Municipality of Anchorage Department of Health and Human Services [www.ci.anchorage.ak.us/Health](http://www.ci.anchorage.ak.us/Health)

State of Alaska [www.state.ak.us](http://www.state.ak.us)

State of Alaska Department of Health and Social Services [www.hss.state.ak.us](http://www.hss.state.ak.us)

Turning Point Alaska [www.turningpointprogram.org/Pages/ak.html](http://www.turningpointprogram.org/Pages/ak.html)

U.S. Census Bureau [www.census.gov](http://www.census.gov)

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

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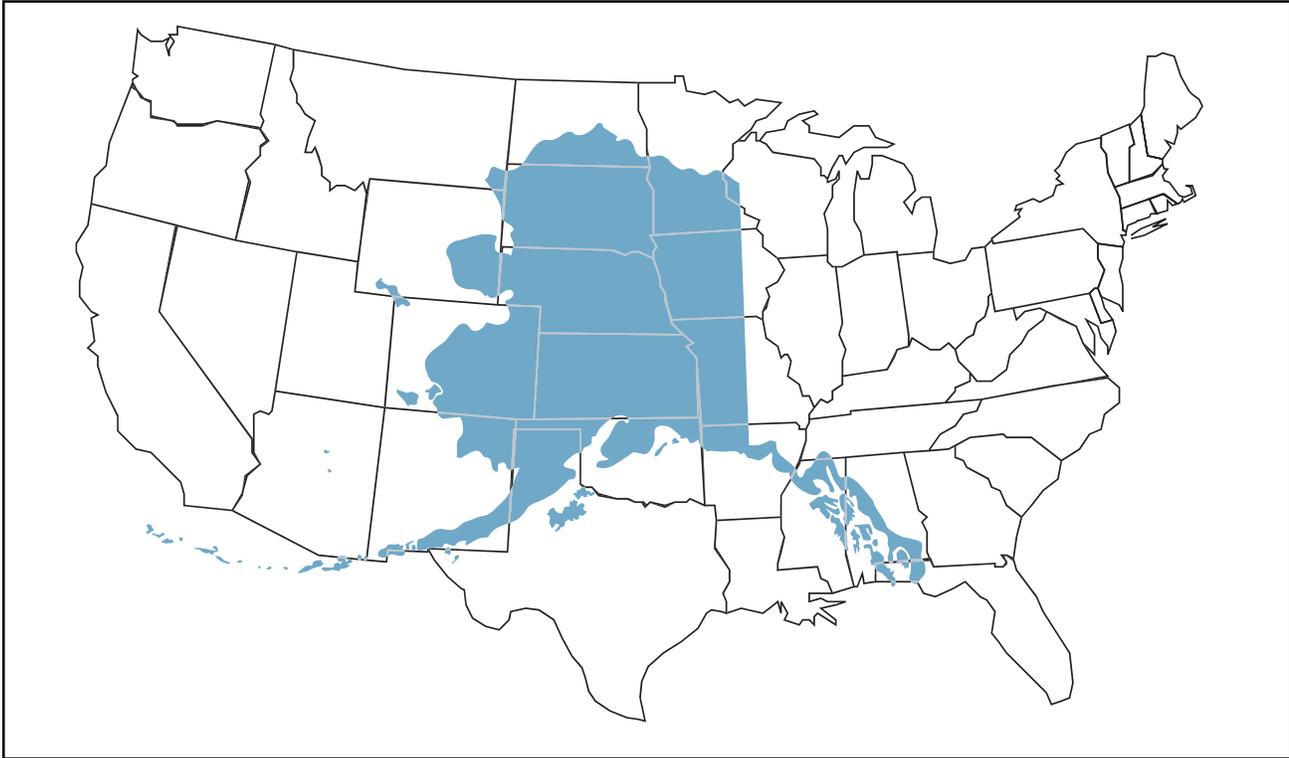
- The State and its Population
- Births, Deaths- Leading Causes
- Protective Factors and Risk Factors
- Leading Health Indicators
- The Challenge to Eliminate Health Disparities

# Overview of Alaska and the Health Status of the Population

## 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. 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 & Figure 2).

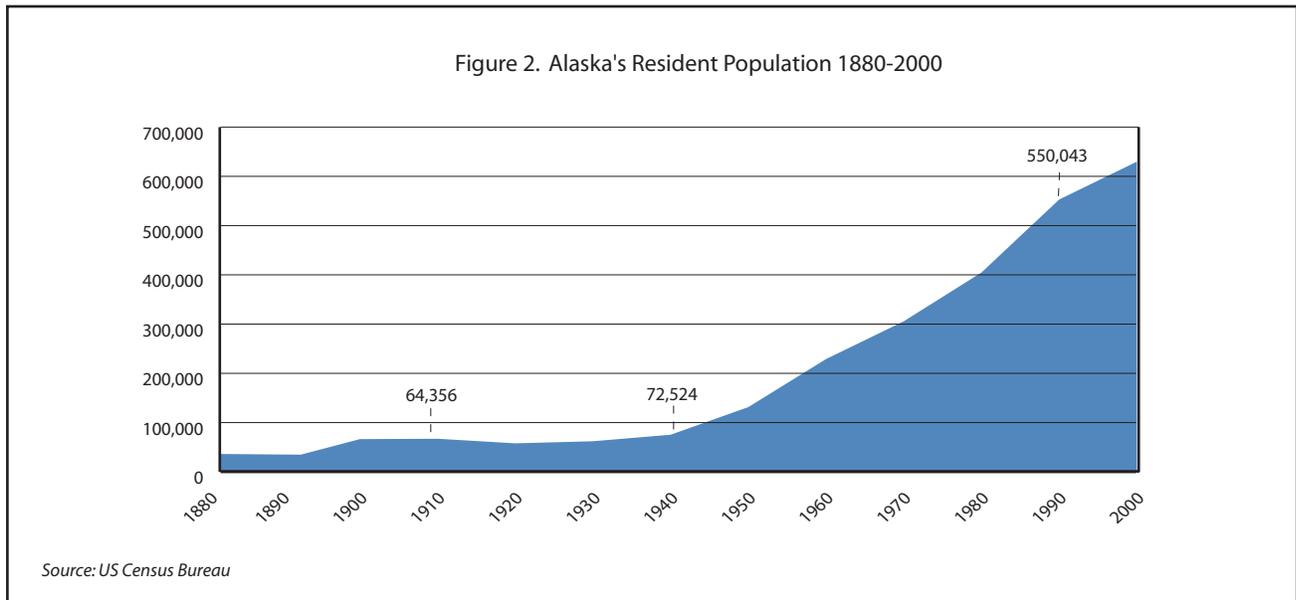
# Overview of Alaska and the Health Status of the Population

Table 2. Healthy Alaskans Comparisonss between Alaska and the United States, 2000

	Alaska	United States
Population	629,932	281,421,906
Population, percent change, 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

Data Source: US Census

The population in Alaska increased dramatically beginning in the 1940s when the 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.

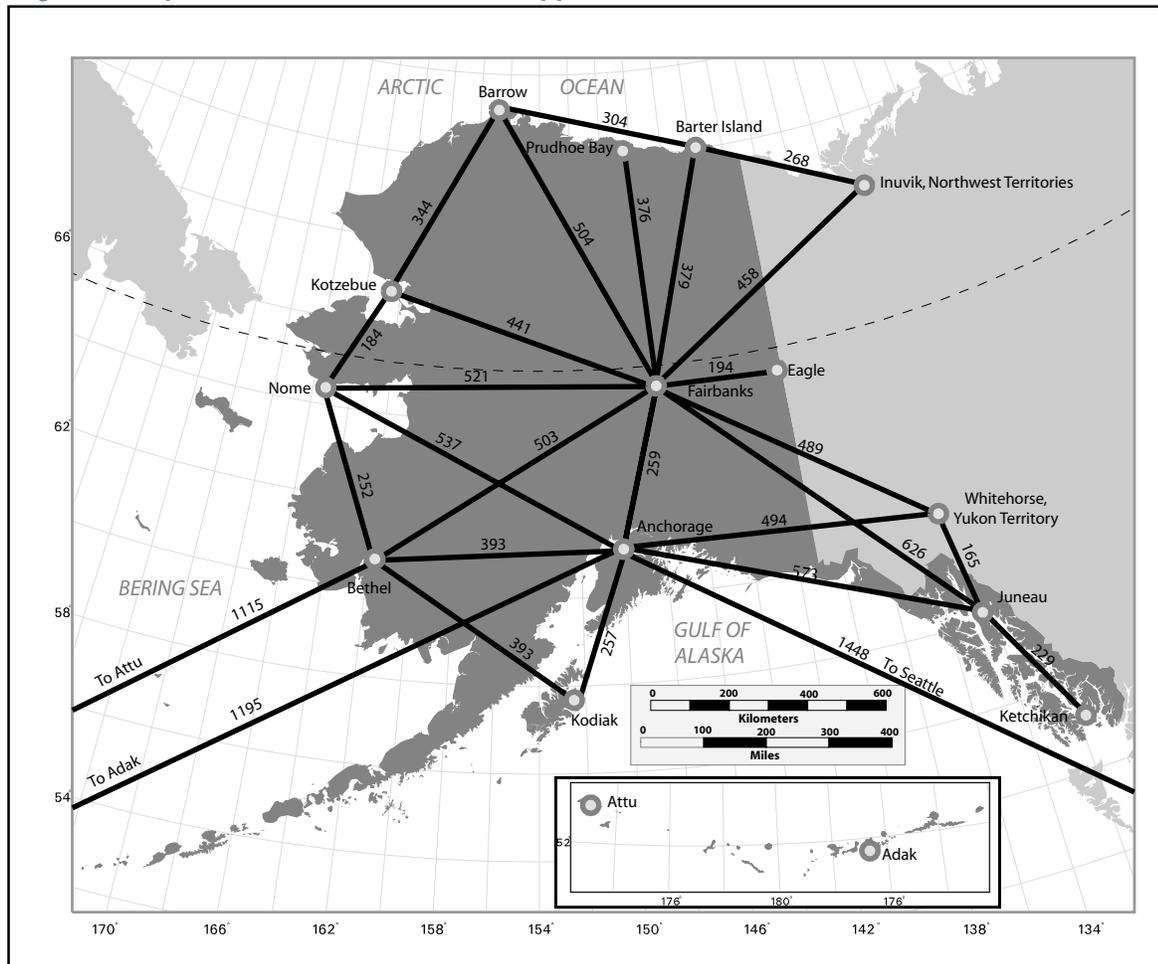


Despite Alaska's low population density (1.1 people per square mile), more than 7 out of 10 persons live in places of 2,500 people or more (defined as urban places by the Census Bureau). Forty-one percent of the population resides in Anchorage, and 79% of the population resides in the six largest census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

About 30% of the population live in "rural" places – less than 2,500 residents or outside any community. Approximately 72% 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. In order to receive primary, preventive, or emergency health care, many rural Alaskans must wait for clear weather to schedule a trip to an urban center, if they are able to pay for transportation. (See Figure 3, Map of Distances within Alaska.)

# Overview of Alaska and the Health Status of the Population

Figure 3. Map of Distances within Alaska Approximate Air Miles



The two largest racial groups in Alaska are White and Alaskan Native (Figures 4 and 5).<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), as shown in 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.

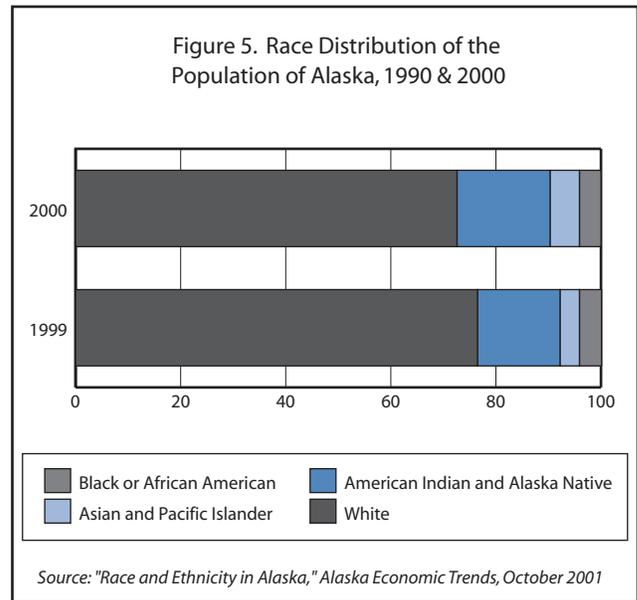
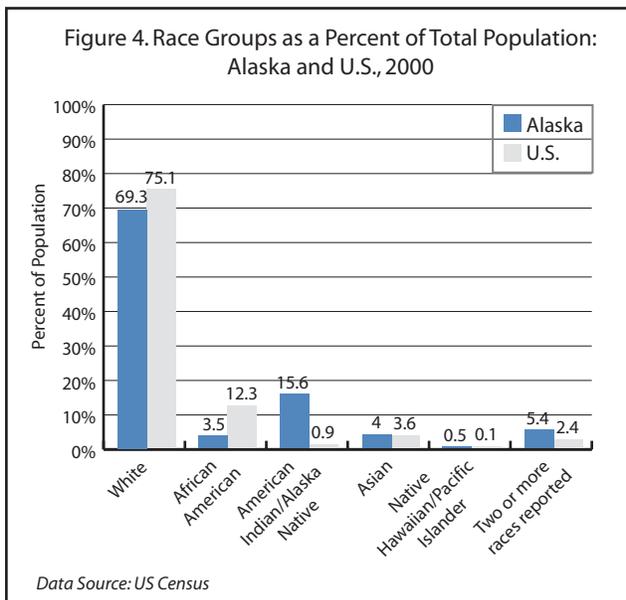
As shown in Figure 5, between 1990 and 2000 the share of the population that is American Indian and Alaska Native increased from 15.7% of the total to 17.7% of the total, and the share that is Asian or Native Hawaiian and Pacific Islander increased from 3.7% to 5.6%. Although the Black or African American population increased by 2,714 individuals, the share decreased from 4.2% to 4.1%, and the proportion of the population that is White dropped from 76.5% to 72.6%.

# Overview of Alaska and the Health Status of the Population

**Table 3. Alaska Population by Race, 1990 and 2000**

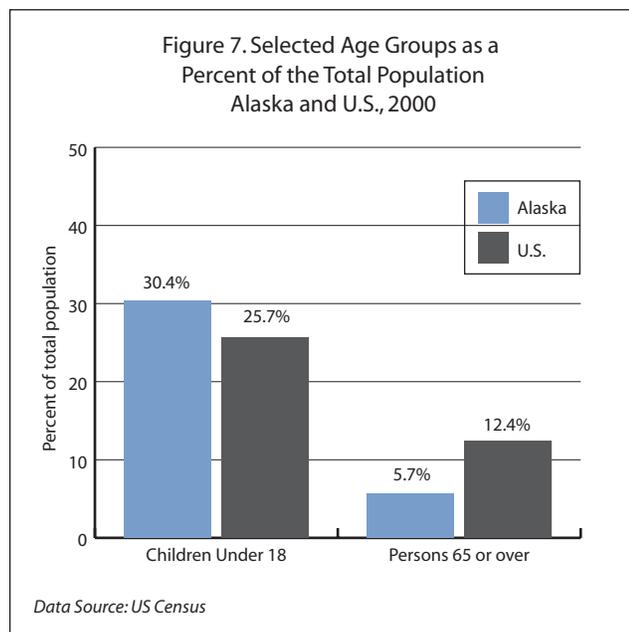
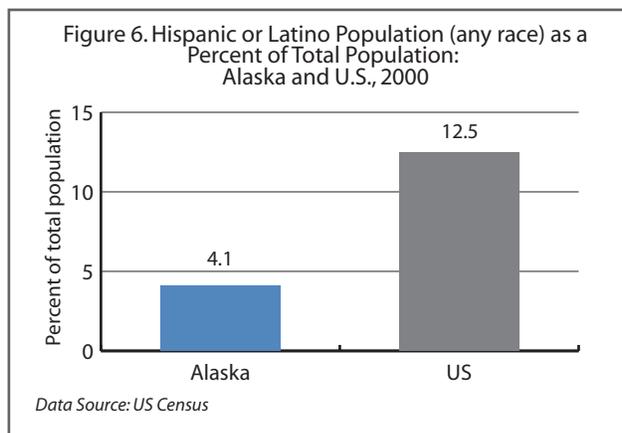
	1990 Census MARS* Number	Census Equal Proportion "BridgeSeries" MARS Estimate Number
Total Population	550,043	626,932
White	420,745	455,284
American Indian and Alaska Native	86,252	111,091
Black or African American	22,833	25,547
Asian and Pacific Islander	20,213	35,010
Asian —	—	30,352
Native Hawaiian and Pacific Islander	—	4,658

\*Modified Age Race Sex file data from the US Bureau of the Census; used as the basis for population estimates and projections.  
Source: Greg Williams, "Race and Ethnicity in Alaska," Alaska Economic Trends, Oct. 2001.



# Overview of Alaska and the Health Status of the Population

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, 3.2% of the population reported being of Hispanic origin (17,803 people), while in the 2000 census, 25,852 individuals or 4.1% of the population reported being Hispanic or Latino.



Alaska's population is younger than that of the United States (Figure 7). Although 30.4% of the population is children under 18, compared with 25.7 percent of the U.S. as a whole, in 1990 31.4% 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 4.0% to 5.7%).

In 2000, the median age in the U.S. was 35.6 years, while the median age for Alaska was 32.4 years. The gap between Alaska and the U.S. is narrowing. Alaska's median age increased from 29.3 years in 1990 to 32.4 years 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).

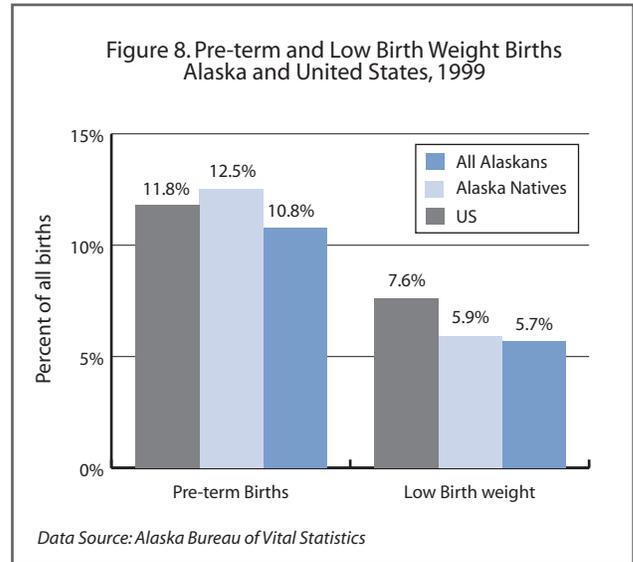
Table 4. 1999 Births, Alaska and U.S.

	Alaska	US
Teen birth rate (15-19)	47.8	49.6
Fertility rate (births per 1000 women 15-44)	72.5	65.9
Adequate prenatal care (APNCU Index)	67.1%	74.7%
Pre-term births	10.8%	11.8%
Low birth weight (less than 2500g)	5.7%	7.6%

# Overview of Alaska and the Health Status of the Population

Overall, birth outcomes in Alaska compare favorably with U.S. 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 6).



**Table 6. 1999 Births, All Alaskans and Alaska Natives 1999 Births in Alaska**

	All Alaskans	Alaskan Natives
Total births	9,959	2,461
Teen birth rate (15-19)	47.8	85.8
Fertility rate (15-44)	72.5	106
Adequate prenatal care	67.1%	47.2
Pre-term births	10.8%	12.5
Low birth weight	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% of all deaths in Alaska in 1999. Table 7 shows the leading causes with corresponding rank for the specific causes in the U.S. Leading causes of death in Alaska differ in rank order from the U.S. list. Four of the causes in Alaska’s top 15 did not even make the U.S. list. Other important differences include:

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

# Overview of Alaska and the Health Status of the Population

**Table 7. 10 Leading Causes of Death in Alaska, 1999** (cause of death codes using ICD-10)

	Alaska Rank <sup>1</sup>	U.S. Rank	Alaska Total Deaths	Alaska Percent of Total Deaths	Alaska Age Adjusted Death Rate <sup>2</sup>
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 Diseases (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>			2087	77.5	669.7
<b>Total, All Causes</b>			2698	100.0	869.8

<sup>1</sup>Rank is based on the number of deaths rather than rate

<sup>2</sup>Deaths per 100,000, age adjusted to the 2000 standard population

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

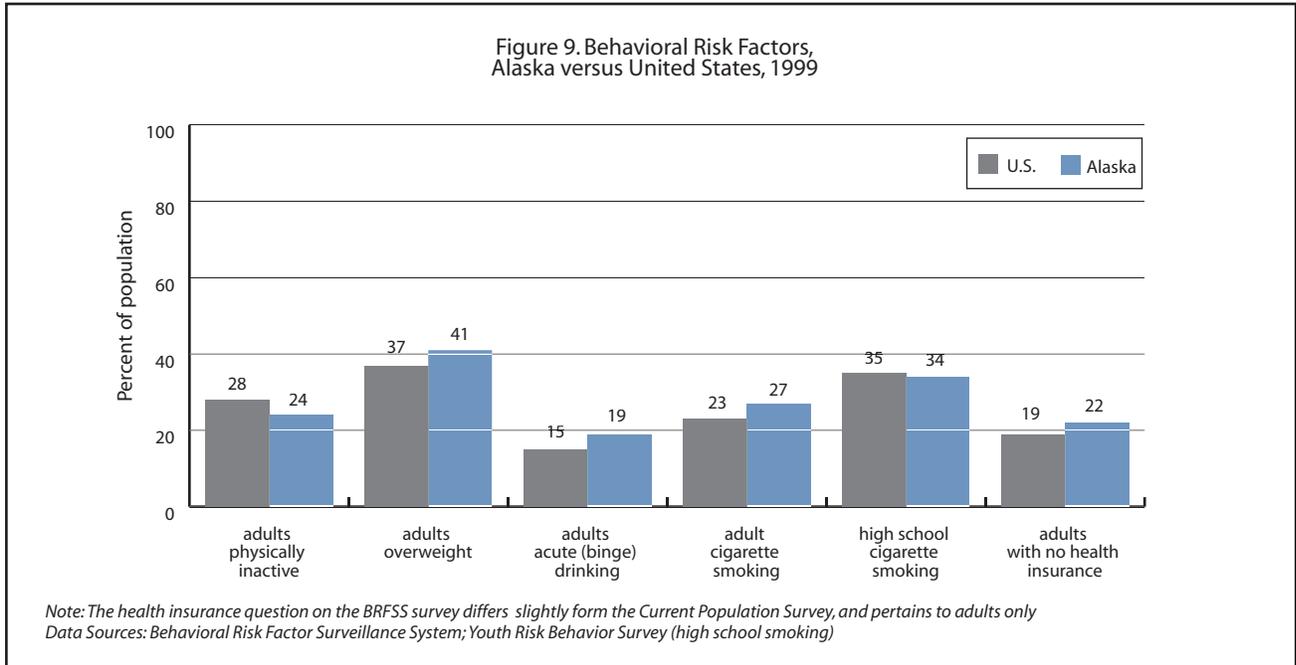
In Alaska the Youth Risk Behavior Survey (YRBS) and the Behavioral Risk Factor Surveillance System (BRFSS) are conducted in partnership with the federal Centers for Disease Control and Prevention to determine various risk factors for poor health outcomes. Risky lifestyle behaviors are often associated 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 U.S. population (24% respond they are inactive as opposed to 28% for the U.S.); however, when looking at reports of inactivity and irregular activity for Alaskans, this percent increases to 52%. 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 U.S. (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 1000 cigarettes in their entire life and smoke

# Overview of Alaska and the Health Status of the Population



now. Tobacco and alcohol use are the most important risk factors for premature death and disease in the U.S. 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 8. Alaska high school students have smoking rates similar to those of high school students throughout the U.S.

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

# Overview of Alaska and the Health Status of the Population

## 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. See Figure 10 for the focus areas covered.

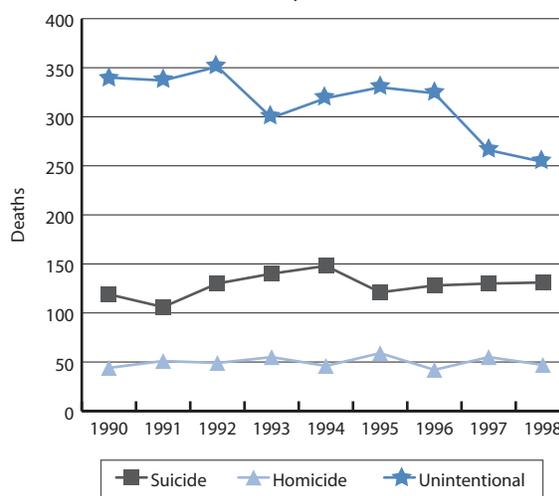
Figure 10. Healthy Alaskans 2010 Leading Health Indicators Focus Areas

- Physical Activity
- Overweight and Obesity
- Tobacco Use
- Substance Abuse
- Mental Health
- Injury Prevention
- Violence Prevention
- Immunization
- Environmental Quality
- Access to Health Care
- 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 U.S. 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.

Figure 11. Alaska Deaths due to Unintentional Injuries, Suicides and Homicides by Year, 1990-1998



Data Source: Alaska Bureau of Vital Statistics

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 U.S. 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

# Overview of Alaska and the Health Status of the Population

the states with the greatest problem. For both, the rates for Alaska Natives are high (see Table 8, Leading Health Indicators). These are priority areas for reducing premature death and for reducing disparities.

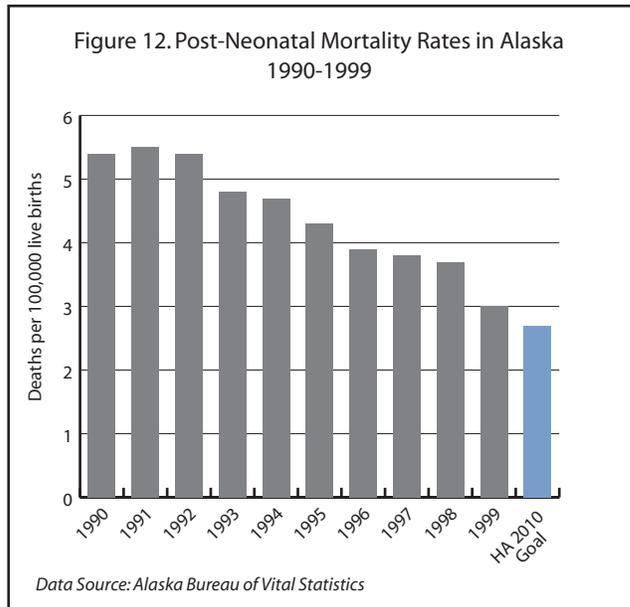
Post-neonatal mortality rate (deaths of infants between 28 days old and one year per 1000 live births) is a more sensitive indicator of well-being of infants than the overall infant mortality rate. The neonatal mortality rate (deaths in the first 28 days of life per 1000 live births), reflecting the 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 U.S. average, yet the post-neonatal mortality rate has remained higher than the U.S. rate (2.4 in 1998), 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 U.S. 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 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 pro-

vide 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.

# Overview of Alaska and the Health Status of the Population

**Table 8**

## Healthy Alaskans 2010 Leading Health Indicators

Indicator	Alaska Data Source	US 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)	17.2 (1999) 32.6 (AK Native 1999)	10.6
<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)	10.0

# Overview of Alaska and the Health Status of the Population

## Healthy Alaskans 2010 Leading Health Indicators

Indicator	Alaska Data Source	US Baseline	Alaska Baseline	Alaska Target Year 2010
<b>Immunization</b>				
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)
<b>Environmental Quality</b>				
16 Increase 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	
<b>Access to Health Care</b>				
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%
<b>Maternal and Child Health</b>				
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
<b>Responsible Sexual Behavior</b>				
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%)	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 US BRFSS data are age-adjusted to the 2000 population; the Alaska BRFSS data have not been age adjusted, so direct comparisons are not advised. See Technical Notes.

**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

**DFYS** - 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, See Appendix Technical Notes

# Overview of Alaska and the Health Status of the Population

## **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 U.S. 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 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>

## **Race and Ethnicity**

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 socio-

economic 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% 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 vast 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 because of 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 Pa-

# Overview of Alaska and the Health Status of the Population

cific Islander populations in non-urban Alaska; nearly 3000 resided on Kodiak Island and another approximately 3000 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% from 1990 to 2000, compared to an overall population growth of 14%. 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% 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% 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 in-

come, educational status and occupation. Recent research 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 U.S. has found that social cohesion is inversely correlated with mortality rates.<sup>18</sup>

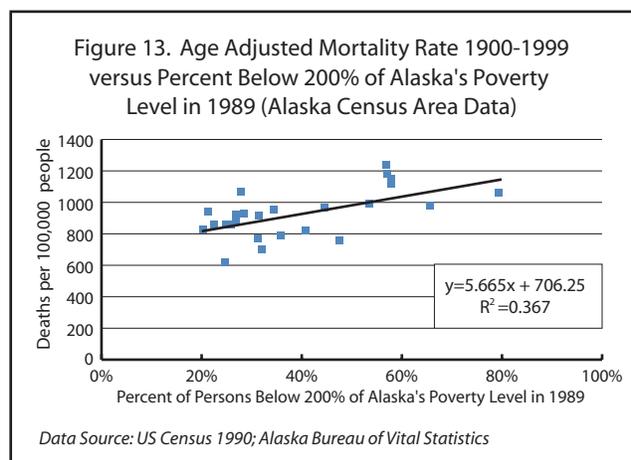
In Alaska, the overall mortality rates in each census area are directly correlated to the percent of individuals in each census area who were living below the federal poverty level in 1990 (Figure 13).

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% are current smokers, but among those with less than a high school education, 47% 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.



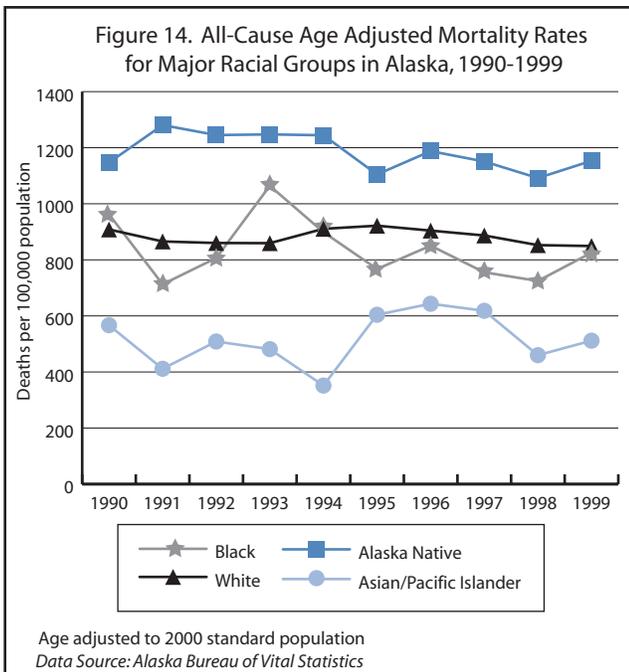
# Overview of Alaska and the Health Status of the Population

## Disability

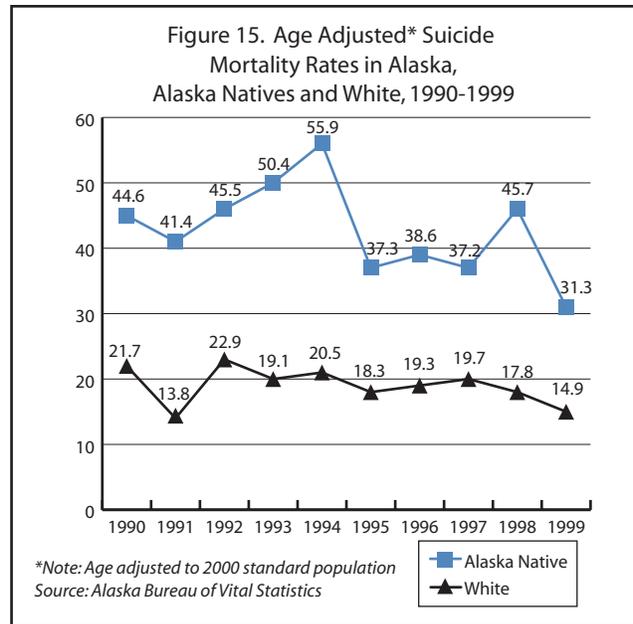
Alaska does not currently have a systematic approach to monitoring health status among individuals with disability. *Healthy Alaskans 2010* identifies several data indicators that the state hopes to be able to monitor by the end of the decade.

## 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 notably 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.



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 as shown in Figure 15), with rates that are more than twice as high as the rate for Whites (14.9 in 1999) throughout the time period. Lower rates for both Alaska Native and White racial groups in 1999 offer hope of a downward trend for both groups. To reach the target of 10.6 for 2010 (which is 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.

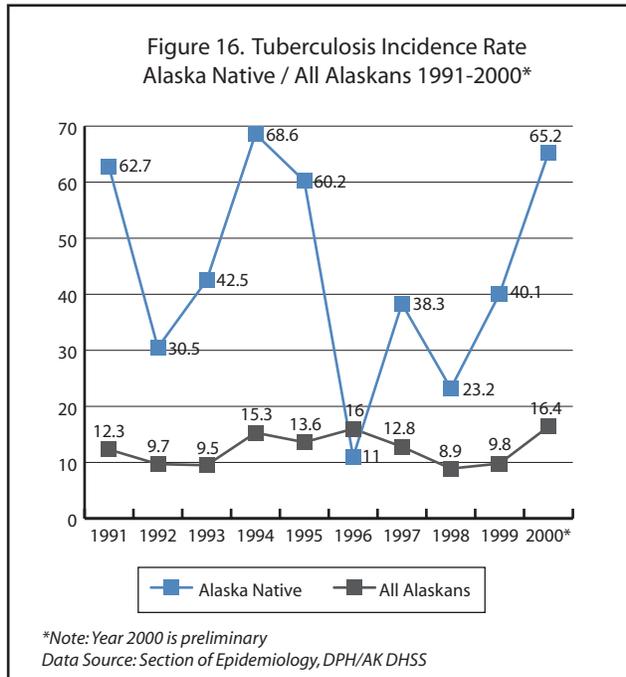
For both unintentional injuries and intentional injuries (suicide and homicide) the disparities in mortality rates persist between Alaska Natives and other racial groups of the population. At least for unintentional injuries the rates have been dropping quite steadily, and for Alaska Native these rates 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.

# Overview of Alaska and the Health Status of the Population

Several isolated but serious outbreaks of new Tuberculosis cases in the last decade affected Native communities and the Asian and Pacific Islander population. In 1998, the incidence rate resulting from an outbreak among Asian and Pacific Islanders was 38 cases per 100,000.

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.



## 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*

# Overview of Alaska and the Health Status of the Population

## Endnotes

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- <sup>15</sup> *Ibid.*
- <sup>16</sup> Kaplan GA, Lynch JW. Editorial: Whither studies on the socioeconomic foundations of public health? *Am J Pub Health* 1997;87:1409-1411.
- <sup>17</sup> Kawachi I, Kennedy BP, Prothrow-Stith D. Social capital, income inequality and mortality. *Am J Pub Health* 1997;87:1491-98.
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# ***Highlights of Health Topics Chapters***

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

- *Health Promotion*
- *Health Protection*
- *Preventive Services and Access to Care*
- *Public Health Infrastructure*

# Highlights of Health Topics Chapters

## Health Promotion

Health promotion includes health education and the fostering of healthy individual behavior and healthy lifestyles. Improving knowledge and understanding of hygiene, nutrition, exercise, human life cycle and aging, proper food handling, the effects of dangerous substances like alcohol, tobacco smoke and inhalants, and the risks of contaminants in water, air or food, are all part of health promotion. School curricula and instruction for new parents and for caregivers for people of all ages can assist in promoting good health, as can public media and community programs, both formal and informal. Educational and community-based programs and health communication can change behavior to improve health. Lessons learned over decades of effort to improve the effectiveness of health education suggest that individuals need knowledge, means and motivation to change behavior.

Health promotion materials provided by health care providers, public health agencies or voluntary programs usually aim to help people individually or at a community level identify needs and health priorities, obtain resources and information, and take action in their households, schools, places of work, and communities. The chapters of *Healthy Alaskans Volume I: Targets for Improved Health* in the Health Promotion cluster specify opportunities for measurable improvements in wellness and healthy, longer lives for Alaskans. These chapters spell out targets for reaching the general population and groups at special risk with information and services, and for achieving measurable change in individual behavior and related health outcomes.

### 1. Physical Activity and Fitness

*Goal: Improve health, fitness, and quality of life through daily physical activity.*

In Alaska over 50% of the population exercises on an irregular basis, or not at all.

Adolescents in Alaska report more vigorous physical activity than their peers throughout the U.S., as well as more time being active in their school physical education classes. However, a lower percentage of students report daily participation in their physical education classes in Alaska than in the U.S.

The State of Alaska spends more funds per capita on bicycle and pedestrian facilities (sidewalks, urban trails,

bike lanes) than other states, primarily through its Trails and Recreational Areas in Alaska (TRAAK) grants. Trails serve multiple purposes and now are seen as an asset for individuals, communities, and tourism.

### 2. Nutrition and Overweight

*Goal: Promote health and reduce chronic disease associated with diet and weight.*

Diet and nutrition play an important role in the development or prevention of four of the top ten leading causes of death in Alaska and the U.S.: cancer, coronary heart disease (CHD), stroke, and type 2 diabetes.

Overweight and obesity affect a large proportion of the Alaska population. According to Alaska Behavior Risk Factor Surveillance Survey (BRFSS) data over the last decade, the percent of overweight adults (body mass index greater than 25 and less than 30) age 18 and older has increased from 35% in 1991 to 40% in 1999. Obesity (body mass index greater than 30) increased from 13% to 20% in the same interval.

Several state programs aim to provide better nutrition for selected populations, for example, promotion of breastfeeding to maintain Alaska's current high rates; the Alaska WIC Program, an effort to improve nutrition among pregnant and new mothers and their infants; and the Alaska Food Stamp Program which helps low-income families maintain adequate nutrition by providing economic supports.

### 3. Tobacco Use

*Goal: Reduce illness, disability, and death related to tobacco use and exposure to secondhand smoke.*

More than one out of four Alaskans are addicted to tobacco. Nearly one-half of these people will die prematurely as a result of their addiction. Non-smokers, including many children, are exposed to the hazards of secondary smoke.

Alaska has one of the highest smoking rates in the United States, similar to the rates of the tobacco growing states. Alaska Natives have smoking rates almost double those of other Alaskans. Smokeless tobacco use is also common in Alaska.

Since passage of a \$0.71 per pack cigarette tax increase in 1997, there has been a 16% decrease in taxable cigarette consumption, which has persisted for three years. Sales of other tobacco products have also declined and

tax revenue to the state from the sale of cigarettes and other tobacco products has tripled.

#### **4. Substance Abuse**

*Goal: Reduce substance abuse to protect the health, safety, and quality of life for all, especially children.*

Alcohol is the Alaskan's drug of choice. The Alaska Division of Alcoholism and Drug Abuse estimates that 14% of the Alaska population abuses alcohol or is dependent on alcohol, compared to 7% of the U.S. population. The social cost of alcohol abuse is seen in rates of related injuries, chronic disease, and deaths. Substance abuse is implicated in more than 75% of all cases of child abuse and neglect and in more than 80% of all adult crimes. According to data gathered between 1991-93, compared with other states, Alaska ranked first in the number of deaths with alcohol involvement and second in the percentage of chronic drinkers. Alaska ranks highest in the rate of Fetal Alcohol Syndrome, a entirely preventable birth defect.

Inhalant abuse by children and adolescents is a serious health and social issue in Alaska. The first treatment facility for inhalant abuse opened in Bethel in 2001.

Environmental strategies can limit consumption of alcohol. For example, when communities regulate the importation, possession and sale of alcoholic beverages under the local option provision of Alaska law, they have reduced the prevalence of binge drinking and reduced injuries (particularly vehicle injury, homicide, and hypothermia). Increases in taxation levels are a strategy to reduce alcohol consumption by youth. Coordinated prevention efforts can also have marked impacts on drug and alcohol use rates among adolescents.

#### **5. Mental Health**

*Goal: Improve mental health and ensure access to appropriate, quality mental health services.*

The population with mental illness in Alaska is estimated using a national formula which counts only individuals whose mental illness causes significant functional impairments in daily living. Estimates project about 10% of Alaska's children age 5 to 18 have severe emotional disturbances, and 6.2% of Alaska's adult population under age 55 suffer from severe mental illness. Only a small proportion of these individuals receive mental health treatment.

Alaskans commit suicide at a greater rate than Americans as a whole. Suicide is a symptom of major depressive disorders and is more common among people with co-occurring mental health and substance abuse disorders. The suicide mortality rate, which is twice the national rate, has not declined during the 1990s. Rates are highest among young men and among Alaska Natives. Between 1990 and 1998, more than 180 Alaskan communities were impacted by suicide, leaving families, friends and communities suffering from the trauma. Suicide attempts, like completed suicides, reflect the poor mental health of individuals and communities.

The Community Based Suicide Prevention Program, a nationally recognized prevention effort, was initiated in 1988. It issues grants to small community projects to reduce self-destructive behavior and suicide and to increase individual and community wellness.

Limited access to treatment is a major mental health care issue. In rural Alaska at least 175 villages have no local mental health services other than the occasional itinerant provider and many other communities have only part-time workers helping with mental health needs.

#### **6. Education and Community Based Programs**

*Goal: Increase the quality, availability, and effectiveness of educational and community-based programs designed to prevent disease and improve health and quality of life.*

School health programs can include on-site health services, school nurses and counselors, and peer education or mentorship programs, all of which support students' health and well-being. Only 10 of Alaska's 56 school districts employ school-based nurses, and only one Alaskan school includes an on-site health clinic. The Alaska Department of Education and Early Development has developed content standards for health education entitled *Skills for a Healthy Life*. The Anchorage School District participates in the Coordinated School Health Programs. Its philosophy is that integrated efforts of schools, families, health professionals, and community agencies have "complementary if not synergistic effects" in protecting and improving the well-being of children and youth.

The Alaska Native Tribal Health Consortium's 2000-2005 Strategic Plan includes the goal of increasing emphasis on health promotion and disease prevention. The approach emphasizes traditional Native healing and Native approaches to supporting community and individual wellness.

# Highlights of Health Topics Chapters

The Division of Public Health was awarded a national public health improvement planning grant (Robert Wood Johnson Foundation) that was paralleled by three local public health improvement planning grants across the state ("Turning Point" community grants funded by the Kellogg Foundation). This process resulted in a statewide health assessment, assessment of the public health system in Alaska, and prioritized strategies for public health in the 21<sup>st</sup> century in Alaska. This effort led to the development of the Healthy Alaskans 2010 planning process. Local grantees, while participating in the state process, also worked on priority public health needs in their communities. These projects currently are ongoing in Kenai, Sitka, and Fairbanks. Information on the Turning Point communities is available at [www.hss.state.ak.us/dph/APHIP/HOME.HTM](http://www.hss.state.ak.us/dph/APHIP/HOME.HTM).

The Youth Developmental Assets framework, a strengths-based model for working with youth, focuses on increasing protective factors for children and youth. In Alaska, a partnership initiative between the Association of Alaska School Boards and the Department of Health and Social Services has promoted the Assets approach through educational workshops, conferences and technical assistance statewide. In 1998 the book, *Helping Kids Succeed ~ Alaskan Style* was published based on the 3000 asset ideas contributed from Alaskans across the state.

## 7. Health Communication

*Goal: Use communication strategically to improve and protect health.*

Health communication is the art and technique of informing, influencing, and motivating individual, institutional, and public audiences about important health issues.

Public education campaigns in Alaska include nutrition and physical activity messages contained in the *5 a Day for Better Health* (and *5 a Day the Alaskan Way*) and the *30 Active Minutes Every Day*. The Alaska Native Tribal Health Consortium's *Stop the Pop* campaign focuses on the contribution of highly sugared soft drinks to dental caries, obesity, and diabetes, and *Inform and Inspire 2000* promoted personal health and wellness for Alaska Natives.

Health care provider organizations, the telecommunications industry, and the Alaska Telehealth Advisory Council are working to improve telecommunications

infrastructure for the health care system and for the general population.

The Division of Public Health participates in the *Consumer Health Information Advisory Committee* of the National Network of Libraries of Medicine, Pacific Northwest Region, an effort to reach minorities, senior citizens and low income families to improve their access to electronic consumer health information.

## Health Protection

Health protection refers to the activities that assure the safety of food, water, air, drugs and appliances. Making sure that clinics, hospital laboratories, and blood banks are reliable, and that health care professionals are qualified to serve, are shared responsibilities between state and local governments and professional organizations.

Setting standards, adopting regulations and implementing and enforcing them may happen at the local, state or federal level depending on the scope of authority to deal with the specific issue, the nature of the problem, and the level of consensus. For example, in some states, helmet laws for children riding bicycles have been adopted at the state level, while in other states, individual communities have adopted local regulations. Some immunization regulations and disease reporting requirements are national, while others are state-specific.

Environmental and public health agencies share responsibility for safety of schools and restaurants, water supplies, and waste disposal. In Alaska they share the implementation of tobacco control enforcement. Injury prevention and child abuse prevention efforts are shared among a variety of governmental, non-profit and other organizations. For some problems, like designating land or funds for neighborhood exercise trails, or starting a recycling program to reduce waste, community action can muster resources or provide the forum for change. Communities can set standards or organize needed services (including public clinics or coordinated emergency services), in instances where individuals on their own cannot solve the problem.

### 8. Injury Prevention

*Goal:* Reduce injuries, disabilities, and deaths due to unintentional injuries.

Alaska has the highest injury rates in the nation. Both the intrinsic hazards of the Alaska environment and low rates of protective behavior contribute to injuries and injury deaths.

Unintentional injury death rates in Alaska declined 36% from 1989 to 1999, but when age-adjusted were still 57% higher than the U.S. rate in 1999. Firearm death rates in Alaska are almost twice the national rate, and for Alaska Natives more than four times the national rate. Residential fire death rates in Alaska are three times the national rate. The drowning rate in Alaska is over five times the national rate.

The Alaska Injury Prevention Center is a statewide, non-profit corporation which develops plans for prevention of home and leisure injuries, workplace injuries, and intentional injuries. Elders' safety and children's safety plans will also be developed.

The Alaska Native Tribal Health Consortium (ANTHC) identified injury prevention as a priority area in its 2000-2005 Strategic Plan. ANTHC participates in the national Indian Health Service Injury Control Initiative, the Alaska Boating Safety Advisory Council, and the Alaska Injury Prevention Center. ANTHC's Department of Environmental Health and Engineering advises tribal health organizations on the development of injury prevention programs.

### 9. Violence and Abuse Prevention

*Goal:* Reduce injuries, disabilities, and deaths due to violence.

Between 1995 and 1997, the Alaska violent crime index decreased 15%. However, Alaska's rates for all violent crimes except robbery exceed the national average. In 1998, Alaska had the highest rate among 50 states for forcible rape, and its rates of aggravated assault and murder were 9<sup>th</sup> and 19<sup>th</sup> highest, respectively.

Seventy percent of Alaskan homicide victims are male. Alaska Natives are more likely than other Alaskans to be victims, accounting for 31% of homicide deaths, though they are only 18% of the population.

There were more than 17,500 incidents of domestic violence serious enough to require refuge in one of Alaska's domestic violence shelters in fiscal year 2000. A new data system developed in 2001 by the Council on Domestic Violence and Sexual Assault indicates that between 7,500 and 8,000 Alaskans were victims of domestic violence.

In fiscal year 2000, programs funded through the Council served 9,882 clients who were victims of domestic violence and 1,301 clients who had experienced sexual assault. The Council is an administrative, policy-making unit of the Department of Public Safety. The Alaska Network on Domestic Violence and Sexual Assault is a statewide coalition of 21 domestic violence and sexual assault programs.

# Highlights of Health Topics Chapters

The Alaska Family Violence Prevention Project, part of the Section of Maternal, Child, and Family Health, has developed and delivered training to hundreds of health and social service professionals throughout the state, provides technical assistance for policy development, and maintains a clearinghouse of resource and training materials.

The Anchorage Social Services Division's SAFE City Program develops community prevention and intervention programs for domestic violence, child abuse, and sexual assault.

## 10. Occupational Safety and Health

*Goal: Reduce the number of work-related injuries and deaths in Alaska.*

Alaska has the highest worker death rate in the nation. In 1998 and 1999, the annual fatality rates for Alaska workers were approximately 3 times the national average rate.

Work related deaths are decreasing in Alaska. Rates declined 55% from 30 per 100,000 workers in 1990 to 13 per 100,000 workers in 1999. The total number of fatalities decreased 49% from 82 in 1990 to 42 in 1999.

A multiple-source traumatic occupational fatality surveillance system was established in 1992 by the Division of Public Health. The Division of Public Health also administers the state-based Fatality Assessment and Control Evaluation program under a cooperative agreement with National Institute for Occupational Safety and Health. The Alaska Department of Labor and Workforce Development maintains a database on occupational injuries.

## 11. Environmental Health

*Goal: To ensure all Alaskans have access to safe water and food and live in healthy communities.*

The percentage of rural households with access to running water and sewer systems increased from 56% in 1996 to 69% in 2000.

The Alaska Native Tribal Health Consortium's Department of Environmental Health and Engineering constructs water, wastewater, and solid waste disposal systems in more than 109 Native communities.

The Municipality of Anchorage's Environmental Services Division (within the Department of Health and Human Services) focuses on air and water quality and public facility sanitation. The Customer Service Section, Air Quality Program, I/M Vehicle Inspection Program, and the Environmental Sanitation Program all provide public health education and as well as code enforcement.

The Division of Environmental Health of the Alaska Department of Environmental Conservation (DEC) developed a community action manual for village environmental issues in partnership with Chugachmiut. *Seven Generations* was published in 1999. The manual helps village residents identify and prioritize environmental issues within their own community.

The Governor's Council on Rural Sanitation was established in 1995 to develop a comprehensive plan for safe water and adequate sewage disposal for rural Alaskans, the *Rural Sanitation 2005 Action Plan*.

Air pollution has been linked to a variety of health problems, including the respiratory diseases described in Chapter 24. Particulate matter can cause or exacerbate diseases such as emphysema, bronchitis, and asthma. Coarse particles (10 microns in diameter - PM10) and fine particles (2.5 microns in diameter - PM2.5) are currently regulated. In Alaska, PM10 typically comes from windblown dust (glacial silt), volcanoes, and dirt roads. PM2.5 is man made and comes from wood burning stoves, open burning, home heating, and diesel and gas vehicles. Three areas in Alaska historically have problems with particulates: Juneau's Mendenhall Valley, Eagle River in the Municipality of Anchorage, and the Matanuska-Susitna Valley.

Alaska's cold climate contributes to air pollution problems, especially carbon monoxide levels. Approximately 80% of the winter carbon monoxide in cities is from vehicle emissions.

The Division of Environmental Health (DEC) ensures that sites contaminated by toxic chemicals are evaluated and cleaned up in priority order, based upon risk to human health and the environment. Currently there are over 2,000 sites considered contaminated. Over 500 of these are identified as "high priority" sites.

## 12. Food Safety

*Goal: Reduce food borne illnesses.*

The Division of Environmental Health in the Department of Environmental Conservation is responsible for the safety of Alaska's commercial food supplies. A variety of food products are processed in Alaska, including fish, meat, milk, syrups, candies, and bottled water. Alaska has 10 milk producers, 2 milk processors, and the only permitted reindeer slaughter facility in the U.S. In 2000, Alaska had 2,967 food service establishments, 778 food markets, 125 food processors, 368 school kitchens, and 500 temporary food vendors. The Municipality of Anchorage administers food service permits and inspections for more than 1500 food facilities in Anchorage.

Tribal health organizations are actively involved in a variety of programs to identify and assess contaminants in traditional subsistence foods. Botulism prevention is another area of interest. The Bristol Bay Health Corporation, for example, developed "Helping Hands," a web site and video to teach safer methods of food fermentation.

## 13. Oral Health

*Goal: Prevent and control oral and craniofacial diseases, conditions, and injuries and improve access to related services.*

Oral diseases are among the most prevalent health problems in the United States, especially among low-income children and the elderly, populations with limited access to routine dental care through private pay or health insurance.

Preliminary data from the 1999 Indian Health Service Oral Health Survey indicates the Alaska Native dental clinic user population has more than twice as many decayed or filled teeth as non-Natives.

The Head Start Program provided dental screening services to 2,186 of the 3,351 children enrolled in the program in FY99. Of the 2,186 children screened 734 (34%) needed dental follow up for untreated dental disease.

Cleft lip with or without cleft palate is one of the most common birth defects, occurring at a rate of 1-2 cases out of 1,000 births. A high rate of cleft lip/palate is found in American Indian/Alaska Native populations, where as many as 1 infant in every 350 live births is affected. The Department of Health and Social Services sponsors pediatric Cleft Lip and Palate Clinics to serve Alaska residents.

Information collected in 2000 indicates approximately 43% of the total Alaskan population is served by a fluoridated community water system. Fluoridation is the single most effective and efficient means of preventing dental cavities in children and adults.

## 14. Vision and Hearing

*Goal: Improve the visual and hearing health of Alaskans through prevention, early detection, treatment, and rehabilitation.*

The U.S. Census Bureau estimates that of those Alaskans 16 and older, about 10,000 are visually impaired and another 1,300 are severely visually impaired.

Four hospitals in Alaska now perform routine hearing screening of newborns. Forty-six percent of the babies born in Alaska in 2000 were screened. With approximately 10,000 births annually, 20 to 30 infants would be expected to have congenital hearing impairments.

Many Alaskans have permanent, irreversible hearing loss from noise or trauma. Chainsaws, small aircraft, outboards, snow machines, guns, and all-terrain vehicles are common sources of high-decibel sound which can create hearing loss.

Otitis media (ear infections) are common health problems, especially among rural Alaska Native children. The Alaska Federal Health Care Access Network Telemedicine Project for videotoscopy screening in underserved areas of the State will help to ensure that children with otitis are treated appropriately.

The Infant Learning Program provides services to visually or hearing impaired children under three years of age. Special education services may be available from age three to 22 through local school districts. Alaska Vocational Rehabilitation serves older children and adults whose ability to work is impaired by visual or hearing disabilities.

# Highlights of Health Topics Chapters

## Preventive Services and Access to Care

Preventive services include counseling, screening, immunization, and medical interventions offered to individuals in clinical settings. Alaska's size and geography make access to physical and behavioral health care a crucial issue, especially for rural residents. Low income and lack of adequate health insurance further limit access to needed treatment. Access to preventive and treatment services for mental health and for alcohol and other substance abuse is addressed in the relevant chapters in the "health promotion" cluster. However, many of the same barriers related to cost, transportation, and acceptability of services apply to these services as well as to the services addressed in the cluster of chapters on "preventive services and access to care."

### 15. Access to Quality Health Care

*Goal:* Improve access to comprehensive, high-quality health care services.

Alaska experiences many health and health care delivery challenges that are different from those of the rest of the United States. With 226 federally recognized tribes, 162 local governments, numerous federal and state supported health associations, five community health centers, and many privately run clinics, Alaska is unique. Tribal health care facilities are the only providers in most rural areas.

Approximately 75% of Alaskan communities are not connected by road to a community with a hospital. Air travel within Alaska is expensive, and many rural residents have little cash income. The geography of the state, therefore, contributes to the high cost of health care.

The State Children's Health Insurance Program, Denali KidCare in Alaska, implemented in 1999, provides a mechanism for increasing the proportion of children with an ongoing source of health care. Due to policy changes that expanded enrollment to 200% of the poverty level and to aggressive outreach efforts, over 16,000 children became eligible for health insurance. As of December 2000, a total of 53,140 children are covered through Denali KidCare and Medicaid.

Alaska is first in the nation in the proportional growth of our senior population – with a 50% increase in people aged 65 years and older between 1990-1999. An increase in the number of elderly and adults with disabilities in Alaska means a dramatic increase in the number of people needing long-term care services. The Long-Term Care Implementation Team was organized in 1996 as a method for policy makers in the Departments of Administration and Health and Social Services to identify a comprehensive long range strategy to guide long-term care development in the state.

### 16. Maternal, Infant, and Child Health

*Goal:* Improve the health and well-being of women, infants, children, and families.

The infant mortality rate is made up of two components: neonatal mortality (death in the first 28 days of life) and postnatal mortality (death after the first month but within the first year). The leading causes of neonatal death include birth defects, disorders related to short gestation and low birth weight, and pregnancy complications. Alaska's 1999 neonatal death rate, at 3.6 per 1,000, is lower than the U.S. rate of 4.7 per 1,000 for the same year.

In 1999, Alaska's post neonatal death rate was 3.0 per 1,000, compared to a U.S. rate of 2.3 per 1,000. The leading cause of postneonatal death in Alaska is Sudden Infant Death Syndrome (SIDS) and other unexplained asphyxial death. Alaska Natives have over twice the risk of infant death due to SIDS.

Parent education will play an important role in reducing SIDS deaths in Alaska. Despite the common occurrence of physiological abnormalities and parental drug use (both known risk factors for SIDS) among infants who die of SIDS in Alaska, deaths rarely occur in the absence of mechanical risk factors such as prone sleeping, sleeping with another person or sleeping outside of a standard infant crib. Educational intervention includes teaching caregivers to use a firm surface under the infant and to remove all soft or loose items from the sleep environment.

The Alaska Maternal and Infant Mortality Review Committee reviews all infant deaths to assess risk factors and prevention opportunities. The Committee estimates that about 34% of infant deaths in Alaska are preventable.

About 80% of Alaska women seek prenatal care dur-

ing the first trimester of pregnancy. The proportion of mothers who received adequate prenatal care during pregnancy has decreased since 1994. Sixty-seven per cent of women who delivered live births in 1999 received adequate care during the prenatal period compared to 71% in 1990 and 74% in 1995. Only 47% of Alaska Native mothers received adequate care in 1999.

Many Alaskan women face significant barriers to obtaining adequate prenatal care. Even when reimbursement is assured through tribal health associations or Medicaid, pregnant women may have to travel great distances for care and face long waiting periods in busy clinics or hospitals. Those living in remote villages may have to leave families and jobs for three days or more to make a single prenatal visit.

Approximately one in five women who deliver a live birth in Alaska smokes cigarettes during the last three months of pregnancy, one in 25 drinks alcohol, one in 25 uses marijuana and one in every 500 women who deliver a live birth uses cocaine during pregnancy.

The Alaska Fetal Alcohol Syndrome Prevention Project found the prevalence of fetal alcohol syndrome in Alaskan children born during 1977-1992 to be 0.8 per 1,000 births. The study also found that fetal alcohol syndrome occurred disproportionately in Alaska Native children born during those same years at 3.0 per 1,000 births.

Adequate consumption of the vitamin folic acid prior to conception and early in pregnancy reduces the risk for neural tube defects, serious birth defects that may cause death or disability. The Alaska Folic Acid Committee seeks to increase the number of Alaskan women of child-bearing age who consume adequate amounts of folic acid. The Committee, formed in 1999, provides educational programs and conducts promotional activities.

Breast-feeding is one of the best ways to improve infant health. Breast-feeding initiation rates in Alaska are excellent and the trend has been increasing over the years — from 84% in 1993 to 86% in 1997.

Alaskan children aged 1-4 have up to 1.5 times the risk of death as other American children. Most of the deaths occurring during childhood are preventable. In Alaska and in the U.S., the leading cause of death for children of all ages is injury. Four of the top five causes of childhood death in Alaska are a result of fatal injuries: motor vehicles, drowning, burns and firearms.

## 17. Family Planning

*Goal: Improve pregnancy planning, birth spacing and prevent unintended pregnancy.*

In Alaska, the Pregnancy Risk Assessment Monitoring Survey measures the intendedness of live births by asking a woman, who has delivered within the past three months, whether she became pregnant when she *wanted to be* pregnant. It is difficult to measure an unintended pregnancy in Alaska, due to a lack of data on pregnancy terminations and spontaneous abortion. There has been no decline in the proportion of live births that occur as a result of unintended pregnancy in Alaska since 1990. In 1998, 43% of live births were unintended.

Alaska has the second highest fertility rate among the 50 states. While the total fertility rate for Alaska (71.4 per 1,000) remains considerably higher than the national average (65.4 per 1,000), the teen birth rate in Alaska (47.8 per 1,000 females age 15-19 in 1999) declined substantially over the last decade. Between 1990 and 1999, the birth rate for Alaska females age 15 to 19 declined by 30% and is now slightly lower than the national teen birth rate of 51 births per 1,000 females.

Family planning services in Alaska are funded through the Maternal, Child, and Family Health program by the allocation of federal funds and resources and state funds. Collaborative agreements with private non-profit agencies such as Community Health Centers and Planned Parenthood complete the service delivery network. Women receiving Medicaid benefits can also access family planning services through private medical providers who accept Medicaid. Family planning services are also available through tribal health organizations, private providers, and Planned Parenthood of Alaska clinics in Anchorage, Sitka, and Soldotna.

# Highlights of Health Topics Chapters

## 18. Immunizations and Infectious Diseases

**Goal:** Prevent disease, disability, and death from infectious disease, including vaccine-preventable diseases.

The reduction in the incidence of and mortality from infectious diseases has been a significant public health achievement in Alaska during the past 50 years. Despite the progress that has been made, infectious diseases remain a significant cause of illness and death in Alaska. Alaska continues to have the highest rate of invasive *Haemophilus influenzae* group B (Hib) in the nation. *Streptococcus pneumoniae*, a leading cause of pneumonia, ear infections, and meningitis, is now increasingly resistant to antibiotics. Other common infections in Alaska include Hepatitis C, *Helicobacter pylori*, and respiratory syncytial virus (RSV).

Alaska Natives continue to suffer from higher rates of tuberculosis and invasive *H. influenzae* and *S. pneumoniae* disease. Alaskan Natives with chronic Hepatitis B infection experience high rates of liver disease and liver cancer. Severe RSV disease in Alaska Native infants results in high rates of hospitalization and chronic lung disease. Community-acquired methicillin resistant *Staphylococcus aureus* (MRSA) is now endemic in some rural Alaska Native communities.

Changes in the state immunization schedule should decrease the incidence of several additional common communicable diseases. Varicella and pneumococcal conjugate vaccines have been added to the routine childhood immunization schedule. School immunization requirements now include Hepatitis A and B immunization, and child care facilities now require Hib and varicella vaccines as well as Hepatitis A and B.

Tuberculosis remains a major public health issue in Alaska. In 1946, 43% of all death certificates of Alaska Natives listed tuberculosis as the cause of death. Cases of tuberculosis have declined greatly, but significant village and family outbreaks continue to occur. Alaska had the highest rate of tuberculosis in the nation in 2000.

The Section of Epidemiology of the State of Alaska Division of Public Health is responsible for the surveillance, investigation, and control of infectious diseases. The Public Health Laboratory in Anchorage provides reference and diagnostic services in serology, parasitology, bacteriology, and mycology. The Fairbanks Public Health Laboratory provides the only virology services in the state, and participates in the international surveillance of influenza isolates.

The Alaska Native Epicenter conducts epidemiological research for the Alaska Tribal Health Consortium. The Viral Hepatitis Program at the Alaska Native Medical Center researches the natural history of viral hepatitis and prevention and treatment of liver disease among Alaska Natives.

The Centers for Disease Control's Arctic Investigations Program in Anchorage provides support for infectious disease prevention. Current research projects include antimicrobial resistance, *Haemophilus influenzae*, *Helicobacter pylori*, respiratory syncytial virus, *Streptococcus pneumoniae*, viral hepatitis, and an arbovirus serosurvey.

## 19. HIV Infection and Sexually Transmitted Diseases

**Goal:** Prevent sexually transmitted diseases (STDs) and Human Immunodeficiency Virus (HIV) infection and treat infections to reduce their impact on health.

Gonorrhea infection rates in Alaska have declined significantly in all populations since 1990. A total of 362 cases of gonorrhea were reported in Alaska in 2000. A total of 6 cases of syphilis were reported in Alaska in 2000, and none of these were currently infectious syphilis. No cases of congenital syphilis have been reported in Alaska since 1979.

Chlamydia infection was the most frequently reported disease in Alaska in 2000, with 2,570 cases reported. In 2000, Alaska was ranked second highest in the U.S. in its chlamydia case rate. The increased number of cases most likely results from better case finding due to the introduction of targeted chlamydia screening, use of new urine screening technologies, and increased partner notification activities in 2000 rather than from an actual increase in the amount of disease.

A cumulative total of 781 cases of HIV infection were reported to the Division of Public Health through December 31, 2000. Of these 781 cases, 544 were reported with AIDS and 237 with HIV infection without AIDS. From 1996-2000, an average of 38 newly diagnosed cases of HIV infection (with or without AIDS) per year were reported in Alaska. The mean annual incidence rate of reported AIDS cases in Alaska residents diagnosed from 1996-2000 was 4.4 cases per 100,000 population. (Because there are small numbers of cases diagnosed from year to year in Alaska, the mean annual rate is used to give a more reliable estimate of the AIDS incidence rate over that time period). This rate

compares to an annual incidence rate for AIDS cases reported in the U.S. from July 1999 through June 2000 of 15.7 cases per 100,000 population.

A number of health care providers in the public and private sectors around the state offer screening services and clinical treatment for STD and HIV disease. Screening and diagnostic laboratory services for STD and HIV are offered through the State Public Health Laboratory as well as through many private laboratories.

Tribal health organizations provide culturally appropriate STD and HIV prevention and treatment services. The Alaska Native Health Board (ANHB) established the HIV/AIDS Awareness program in 1988. Training, technical assistance, and informational materials are distributed through ANHB membership organizations.

## **20. Arthritis and Osteoporosis**

*Goal: Prevent ill health and disability related to arthritis, other rheumatic conditions, and osteoporosis.*

The Arthritis Foundation, Washington/Alaska Chapter has a growing presence in Alaska. The Arthritis Foundation has established five exercise/support group programs in the state and recently received a grant from their national organization to build 20 self-help programs throughout the state.

The Alaska Department of Health and Social Services established an arthritis program in 1999, and an advisory group was formed in 2000 to develop a coordinated arthritis prevention and management plan for Alaska.

Alaska does not yet have a uniform hospital discharge data reporting system. Hospital discharge data on hip and vertebral fractures related to osteoporosis could be used to establish baselines and to monitor progress.

## **21. Heart Disease and Stroke**

*Goal: Improve cardiovascular health and quality of life through the prevention, detection, and treatment of risk factors; early identification and treatment of heart attacks and strokes; and the prevention of recurrent cardiovascular events.*

Heart disease is the second leading cause of death in Alaska, and cerebrovascular disease (most commonly referred to as stroke) is the fourth leading cause of death in Alaska. In Alaska the age-adjusted death rate for heart disease has been consistently lower than the U.S. rate.

Many Alaskans are currently at risk for developing cardiovascular disease due to risk factors such as smoking, overweight, poor diet, sedentary lifestyle, high blood pressure and cholesterol, and lack of preventive health screening.

The Division of Public Health, with the American Heart Association, Alaska Affiliate, the Alaska Health Fair Inc. and many individuals and representatives from many other agencies and organizations, completed the statewide Cardiovascular Disease Prevention Plan 1998.

Prompt response to heart attacks prevents death and severe impairment. The Division of Public Health, Section of Community Health and Emergency Medical Services oversees training and certification of Emergency Trauma Technicians and Medical Technicians. One of the goals of the state is to increase the proportion of persons who have access to rapidly responding pre-hospital emergency medical services by developing early defibrillation programs in all communities that meet the American Heart Association's criteria.

## **22. Cancer**

*Goal: Reduce the number of new cancer cases, as well as the illness, disability, and death caused by cancer.*

Cancer was rarely seen in Alaska during the 1950s, but in the 1990s cancer was the leading cause of death in Alaska. In 1999, an estimated 1,930 persons in Alaska were diagnosed with cancer and 623 died from cancer. Lung cancer is the most common cause of cancer death among both males and females in Alaska, and in 1999 accounted for 30% of all cancer deaths. Cigarette smoking is the most important risk factor for lung cancer. Smoking cessation and 10 years of abstinence decreases the risk of lung cancer to 30% to 50% of that of continuing smokers.

The mortality rate for cancer (overall) was higher for Alaska Natives than for all Alaskans during 1991-1998.

The Alaska Cancer Registry was established in 1996. The Registry collects data on all newly diagnosed cancer cases and receives mortality data from the Bureau of Vital Statistics.

# Highlights of Health Topics Chapters

## 23. Diabetes

*Goal: Reduce the physical, emotional, and economic burden of diabetes and improve the quality of life of all persons who have or are at risk for diabetes.*

The prevalence of diabetes in Alaska is measured among adults using the Behavioral Risk Factor Surveillance System. Approximately 14,000 adults, 3.5% of the adult population, have been diagnosed with diabetes. An estimated 3,600 (11%) of Alaskans over 65 have diabetes.

The highest prevalence of diabetes in Alaska is found among African Americans (4.6%) and Hispanics (4.4%). American Indians and Alaska Natives are also at increased risk for diabetes, but prevalence varies significantly among tribes. Alaskan tribes had the lowest prevalence rate among tribes surveyed by the Indian Health Service in 1997. Among Alaska Native groups, diabetes prevalence is highest among Aleuts and lowest among groups in the northwest.

The State of Alaska Diabetes Control Plan details state and community strategies for diabetes prevention and the reduction of complications associated with diabetes. The Alaska Area Diabetes Model Program maintains a diabetes registry and actively monitors care and preventive practices among Alaska Natives. Such surveillance is much more difficult to accomplish among the remaining 82% of the population. Full surveillance of diabetes in Alaska will require the use of a hospital discharge data system.

## 24. Respiratory Diseases

*Goal: Promote respiratory health through better prevention, detection, treatment, and education efforts.*

The National Health Interview Survey estimated self-reported asthma prevalence at 6.7% for Alaska in 1998, essentially identical to the national average.

Respiratory syncytial virus (RSV) associated disease is the major cause of hospitalization for Alaska Native infants, with babies in the Yukon-Kuskokwim Delta at highest risk. Hospitalization rates as high as 249 per 1,000 have been reported for infants in western Alaska, in contrast to rates of 1 to 20 per 1,000 in the U.S.

Chronic obstructive pulmonary disease (COPD) is the sixth leading cause of death in Alaska. The COPD death rate among Alaska Natives, 30 per 100,000, is almost double the rate for whites. Since Alaskans 65 and over accounted for 78% of all COPD deaths, more cases will

be expected as the population continues to age.

Smoking prevention and cessation and protection from second-hand smoke are the foundations of respiratory disease prevention. The increase in state tobacco tax, which has led to reductions in the sales of taxable products, and restrictions on smoking in public areas, such as those recently enacted in Bethel and Anchorage, are currently the most effective strategies for reducing COPD, asthma, and RSV.

Hospital discharge data are the most effective ways of tracking COPD, asthma, and RSV disease. If the Division of Public Health initiates review of hospital discharge diagnoses, baseline information on rates of these serious respiratory diseases can be established.

## 25. Disability and Secondary Conditions

*Goal: Promote the health of people with disabilities, prevent secondary conditions, and eliminate disparities between people with and without disabilities in the U.S. population.*

More and more Alaskans with severe disabilities are living in their own homes or with their families. Alaska is the first state in the country to eliminate public and private institutions for people with developmental disabilities. However, many individuals with disabilities must still live in nursing homes to get the services and supports they need.

Several studies have demonstrated that health promotion programs focused on improving functioning across a spectrum of diagnoses and a range of age groups are effective in reducing secondary conditions and outpatient physician visits among people with disabilities. For example, a focus on improving muscle tone, flexibility, and strength can benefit people who use wheelchairs and people with arthritis.

For people with disabilities to have the opportunity for healthy lives, both physically and emotionally, programs and facilities that offer wellness and treatment services must be fully accessible. Effective enforcement of the American with Disabilities Act can improve services and help prevent secondary disabilities.

The call for statistics on people with disabilities is longstanding. To remedy these gaps, survey questions have been developed and tested to identify individuals with varying degrees of disability in terms of activity limitations. These survey questions are now included as a rotating core of the BRFSS System

## Public Health Infrastructure

The Public Health Infrastructure chapter is addressed in a separate, stand-alone section of *Healthy Alaskans 2010* because it addresses issues that affect needs described in every other chapter.

The public health infrastructure supports the planning, delivery, and evaluation of public health activities and practices. This infrastructure makes it possible to respond to public health emergencies, as well as to perform on-going essential public health services. Workforce, information and data systems, and effective organizations are the elements that comprise the infrastructure, providing the capacity to deliver the programs and services that protect and promote the health of Alaskans. These elements are interrelated. Weaknesses in any one element affect the other two.

The mission of the public health system is to fulfill society's interest in assuring conditions in which persons can be healthy. The public health system is a network of public and private organizations and individuals involved in accomplishing this mission. The framework for what the public health system strives to accomplish and the method of doing so is captured in the statement "Public Health in America" (Figure 17), developed by the national Public Health Functions Task Force in 1994. As with the elements of the public health infrastructure, the various partners in the public health system are also interrelated. A deficiency in one sector or jurisdiction affects the entire system.

**Figure 17**

**Public Health in America**  
*Vision: Healthy People in Healthy Communities*  
*Mission: Promote Physical and Mental Health and Prevent Disease, Injury, and Disability*

**Public Health**

- Prevents epidemics and the spread of disease
- Protects against environmental hazards
- Prevents injuries
- Promotes and encourages healthy behaviors
- Responds to disasters and assists communities in recovery
- Assures the quality and accessibility of health services

**Essential Public Health Services**

- Monitor health status to identify community health problems
- Diagnose and investigate health problems and health hazards in the community
- Inform, educate, and empower people about health issues
- Mobilize community partnerships to identify and solve health problems
- Develop policies and plans that support individual and community health efforts
- Enforce laws and regulations that protect health and ensure safety
- Link people to needed personal health services and assure the provision of health care when otherwise unavailable
- Assure a competent public health and personal health care workforce
- Evaluate effectiveness, accessibility, and quality of personal and population-based health services
- Research for new insights and innovative solutions to health problems

Adopted: Fall 1994, Source: Public Health Functions Steering Committee, Members (July 1995): American Public Health Association-Association of Schools of Public Health-Association of State and Territorial Health Officials-Environmental Council of the States-National Association of County and City Health Officials-National Association of State Alcohol and Drug Abuse Directors-National Association of State Mental Health Program Directors-Public Health Foundation-U.S. Public Health Service—Agency for Health Care Policy and Research-Centers for Disease Control and Prevention-Food and Drug Administration-Health Resources and Services Administration-Indian Health Service-National Institutes of Health-Office of the Assistant Secretary for Health-Substance Abuse and Mental Health Services Administration

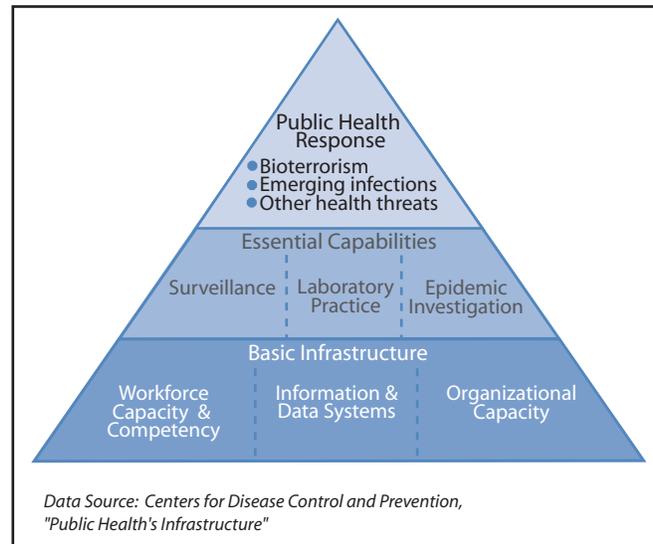
# Highlights of Health Topics Chapters

## 26. Public Health Infrastructure

**Goal:** Ensure that state, local, and tribal health agencies have the infrastructure to provide essential public health services effectively.

A number of factors are straining the public health system and necessitating now, as never before, a strong public health infrastructure. These factors include new public health threats; a growing and changing population; and rapidly developing medical, information, and communication technologies.

- **New Public Health Threats:** As we enter this millennium we face threats to the public's health not imagined a century ago. The use of microbial agents as weapons against our citizens has elevated the visibility of the role the public health system plays in detection and control of communicable diseases, and is spreading the surveillance, laboratory, epidemiological investigation, and emergency response capacities dangerously thin. This is occurring at a time when other natural and manmade threats, such as a recent resurgence of TB in Alaska, increasing diagnoses of hepatitis C, groundwater pollution and hazardous waste management are competing for limited public resources.



- **Changing Demographics:** Births in Alaska continue to outnumber deaths each year, sustaining the upward trend in Alaska's population size. At the same time there is an upward trend in the proportion of elderly Alaskans and in the proportion of some minorities. Increased total numbers of people coupled with even greater increases in vulnerable populations puts pressure on the public health system as it struggles to keep up with the growing demand for services with limited resources.

- **New Technologies:** New medical technologies, such as vaccines developed in recent years to fight varicella and hepatitis A, are valuable weapons for continuing the battle against communicable diseases. As these new tools become available, however, they require resources for purchase and administration. New data and communication technologies provide opportunities for strengthening information-based decision making and public health surveillance, but also require additional or redirected resources and the development and implementation of new strategies.

### Elements of the public health infrastructure requiring reinforcement include:

- **Workforce:** A qualified, competent public health workforce is essential to the effective delivery of public health programs and services. Issues facing the maintenance of skilled employees and adequate staffing levels include: 1) an aging workforce (just as an example, 32% of health professionals in the Alaska Department of Health and Social Services will be eligible for retirement during the first half of this decade); 2) increased competition for a decreasing supply of public health workers nationwide (compensation must be high enough to recruit and retain qualified staff); and 3) a need for increased access to public health training and continuing education opportunities.

- **Data and Information Systems:** Timely access to accurate data and information are essential to the planning, development, implementation, and evaluation of public health programs and services. Related issues include: 1) a need to assure that all public health workers have electronic access to up-to-date public health information and emergency health alerts; 2) a need for increased access to public health information by the public and policy makers; 3) data gaps identified throughout this report that must be addressed to provide a complete picture of the health of Alaskans and to understand health trends in our communities; and 4) new privacy protection standards, such as those required under the 1996 Health Insurance Portability and

## Highlights of Health Topics Chapters

Accountability Act, that are affecting the handling of public health data sets and systems.

- **Organizational Capacities:** Elements of an effective public health organization include: 1) an ability to meet basic performance and accountability standards (for example, standards for laboratory testing capacity, disease surveillance, and emergency response), 2) maintenance of sufficient legal authorities for governmental public health agencies; 3) capacity for planning and policy development at the state and local levels; and 4) the capability to provide leadership and to collaborate with public health system partners.

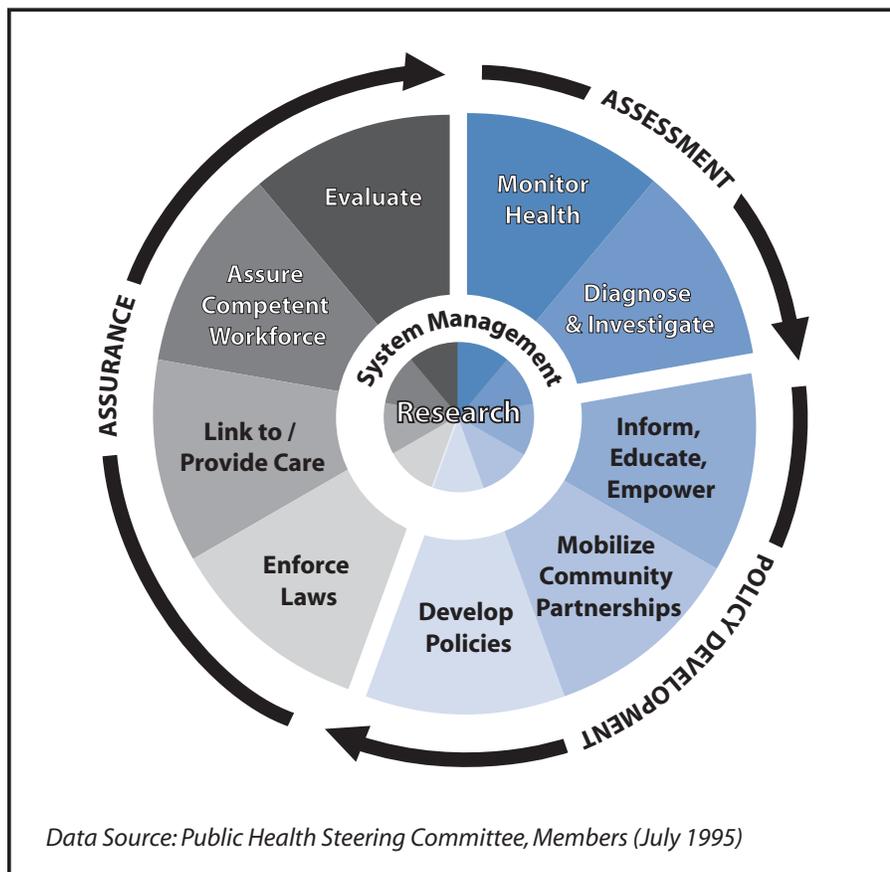
While the public health infrastructure in Alaska is under serious pressure, there are a number of strategies targeted at strengthening it and building the capacity of our public health system to respond to public health emergencies and other health threats. Current strategies and resources include:

- Increased awareness of and support for the state's public health infrastructure by the executive and legislative branches of Alaska's state government in recent years. Specific examples include: 1) funding for a new state-of-the-art public health laboratory in Anchorage with Biosafety Level III capacity (opened January 2001); 2) development by Governor Knowles and partial funding by the legislature in 2001 of the Back-to-Basics Initiative, which provides new state resources for fundamental disease surveillance and control efforts in Alaska; and 3) dedication by the state legislature of 20% of the tobacco settlement revenue for public health tobacco use prevention and cessation efforts.
- A growing focus by the federal government on support for state and local public health infrastructure, evidenced through such initiatives as: 1) the Public Health Preparedness and Response for Bioterrorism grant, awarded to Alaska in 1999, to build capacity for training, emergency alert communication, and disaster planning and response; and 2) the inclusion of a new section in Healthy People 2010 devoted to public health infrastructure issues.
- Continuing attention to the importance of public health by Alaska's tribal health system. As one example, the Alaska Native Tribal Health Consortium included as the first goal in their 2000-2005 Strategic Plan to "Increase emphasis on health promotion and disease prevention."
- Interest and commitment to strengthening the nation's public health system by private, philanthropic organizations such as the Robert Wood Johnson and W.K. Kellogg Foundations. These two foundations partnered on the Turning Point initiative, which began in 1996 and is continuing through the first half of the new decade. Alaska and three of our communities, Fairbanks, Sitka, and Central Kenai Peninsula, received grants under this program. Goals identified by Alaska's Turning Point project, the Alaska Public Health Improvement Process, are listed in Figure 18. Current activities to address these goals include public health information system development, leadership of a national effort to create a model state public health law, and participation in a collaborative project on public health performance management.
- Other important public health partners working to address health workforce, data and communication issues include the Municipality of Anchorage Department of Health & Human Services, the University of Alaska, the Alaska Mental Health Trust Authority, the Alaska State Hospital and Nursing Home Association, and the Alaska State Medical Association.

# Highlights of Health Topics Chapters

Figure 18. Alaska Public Health Improvement Plan Goals

- Goals Adopted by the  
Alaska Public Health Improvement Process Steering Committee  
1999**
1. Assure access to public health information for communities, policy makers, and the general public
  2. Assure a well-trained, competent public health workforce
  3. Develop a strong legal framework for Alaska's public health system
  4. Assure accountability for the public's health
  5. Assure sufficient, stable funding for public health action
  6. Assure effective communication capabilities in the public health system
  7. Increase public input in statewide policy decisions
  8. Engage communities to solve local health problems
  9. Increase personal responsibility for individual health
  10. Improve interagency communication, coordination, and collaboration between state public health, mental health, substance abuse and environmental health agencies



## ***Appendices***

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- Appendix A** Healthy Alaskans Partnership  
Council Members
- Appendix B** Chapters and Main Authors
- Appendix C** Abbreviations
- Appendix D** Technical Notes

# Appendices

## **Appendix A: Healthy Alaskans Partnership Council Members and Alternates, and the Organizations or Communities they are representing on the Council:**

Bill Allen	Cordova Center
Donna Bacon,	US Air Force, 3AMDS/SGPM
Mike Conway, Kristin Ryan*, Bill Stokes*	Alaska Department of Environmental Conservation
Kathy Craft, Jean Becker*, Cecile Lardon	Fairbanks Turning Point Partnership
Kathryn Davey	Alaska Health Education Consortium
Laraine Derr	Alaska State Hospital & Nursing Home Association
Traci Davis, Robert Ruffner*, Stan Steadman*	Central Kenai Peninsula Turning Point Partnership
Joan Domnick (through July 2001)	Alaska Native Tribal Health Directors
Fred Dyson, Johnny Ellis	Alaska State Legislature
Charlie Fautin (through July 2001)	Maniilaq Health Services Turning Point Project
Mark Hamilton, Denny DeGross*	University of Alaska
Lisa Sadleir-Hart, Auriella Hughes*,	
Cindy Baldwin-Kitka*, Laura Wertz-Stein*	Sitka Turning Point Partnership
Jeff Jessee, Delisa Culpepper*, Mary Elizabeth Rider*	Alaska Mental Health Trust Authority
Walter Majoros	Division of Mental Health & Developmental Disabilities, Alaska DHSS
	Municipality of Anchorage, Health & Human Services Technical Advisor on Alaska Health Issues and Systems
Jewel Jones, Nancy Merriman*	Alaska State Medical Association
Peter Nakamura, MD	Interior Neighborhood Health Clinic
	Hispanic Organized Leaders of Alaska
James Jordan	Alaska Area Native Health Service
Cheryl Kilgore	Charter North, Residential Treatment Center
Carmen Rosa D.C. Mallipudi	Alaska Native Health Board
Christopher Mandregan	Anchorage Health & Human Services Commission
Bonnie McMahan, Diane MacMillan*	Division of Public Health, Alaska DHSS
Cynthia Navarrette	Alaska Department of Health & Social Services
Brenda Norton	Division of Administrative Services, Alaska DHSS
Karen Pearson	Alaska Mental Health Board
Jay Livey	Alaska Public Health Association
Janet Clarke	North Slope Borough Dept. of Health and Social Services
Richard Rainery	Association of Alaska School Boards
Rhonda Richtsmeier	University of Alaska, Anchorage,
Susan Rinker	Institute for Circumpolar Health Studies
	Alaska Native Tribal Health Consortium
Carl Rose, Derek Peterson*	Division of Alcoholism and Drug Abuse, Alaska DHSS
Brian Saylor, Ph.D.	Alaska Inter - Tribal Council
	Alaska Environmental Health Association
Paul Sherry, Tom Lefebvre*	Governor's Advisory Board on Alcoholism & Drug Abuse
Ernie Turner Susan Soule*	
Deborah Vo	
Peter Wallis	
Pam Watts	

## Appendix B. Chapters and Main Authors

Healthy Alaskan Chapter	Main Author	State of Alaska Affiliation (see Appendix C for Abbreviations)
<b>1. Physical Activity and Fitness</b>	Garry Lowry	DHSS, DPH, CHEMS
<b>2. Nutrition and Overweight</b>	Diane Peck	DHSS, DPH, MCFH
<b>3. Tobacco Use</b>	Wayne Coolidge	DHSS, DPH, CHEMS
<b>4. Substance Abuse</b>	Pam Watts Marilee Fletcher Lynn Hutton	DHSS, Governor's Advisory Board on Alcoholism and Drug Abuse DHSS, DMHDD
<b>5. Mental Health</b>	Kathryn Cohen	DHSS, DAS, Facilities and Planning
<b>6. Educational and Community-based Programs</b>	Jayne Andreen Delisa Culpepper	DHSS, DPH, CHEMS Department of Revenue, Mental Health Trust Authority
<b>7. Health Communication</b>	Patty Owen	DHSS, DPH, CHEMS
<b>8. Injury Prevention</b>	Martha Moore	DHSS, DPH, CHEMS
<b>9. Violence and Abuse Prevention</b>	Martha Moore Susan Keady	DPH, CHEMS, DHSS, DPH, Data and Evaluation Unit
<b>10. Occupational Safety and Health</b>	Deborah Choromanski	DHSS, DPH, Epidemiology
<b>11. Environmental Health</b>	Kristin Ryan Sandy Smith	DEC, Environmental Health, DEC, Statewide Public Service DEC, State wide Public Service
<b>12. Food Safety</b>	Kristin Ryan Sandy Smith	DEC, Environmental Health, DEC, Statewide Public Service
<b>13. Oral Health</b>	Brad Whistler	DHSS, DPH, Directors Office
<b>14. Vision and Hearing</b>	Barb Sylvester-Pellet Diane DeMay	DHSS, DPH, Nursing
<b>15. Access to Quality Health Care</b>	Pat Carr Anthony Zenk Shelley Owens Kay Branch	DHSS, DPH, CHEMS
<b>16. Maternal, Infant and Child Health</b>	Janine Schoellhorn	DHSS, DPH, MCFH
<b>17. Immunizations and Infectious Diseases</b>	Beth Funk	DHSS, DPH, Epidemiology
<b>18. Family Planning</b>	Janine Schoellhorn Mary Diven	DHSS, DPH, MCFH

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<b>19. HIV Infection and Sexually Transmitted Diseases</b>	Wendy Craytor	DHSS, DPH, Epidemiology
<b>20. Arthritis and Osteoporosis</b>	Paige Lucas	DHSS, DPH, Epidemiology
<b>21. Heart Disease and Stroke</b>	Patty Owen	DHSS, DPH, CHEMS
<b>22. Cancer</b>	Jeanne Roche	DHSS, DPH, Epidemiology
<b>23. Diabetes</b>	Judy Sberna	DHSS, DPH, Epidemiology
<b>24. Respiratory Diseases</b>	Susan Keady	DHSS, DPH, Data and Evaluation Unit
<b>25. Disability and Secondary Conditions</b>	Millie Ryan	DHSS, Governor's Council on Disabilities Special Education
<b>26. Public Health Infrastructure</b>	Deb Erickson	DHSS, DPH, Directors Office

\* Alternates; meetings are open meetings

## *Appendix C. Abbreviations used in Healthy Alaskans 2010*

**ABVS** - Alaska Bureau of Vital Statistics  
**ACoA** - Alaska Commission on Aging  
**ACR** - Alaska Cancer Registry  
**ADA** - Alaska Division of Alcoholism and Drug Abuse  
**AFHCAN** - Alaska Federal Health Care Access Network  
**AIPC** - Alaska Injury Prevention Center Observation Study  
**AKPCA** - Alaska Primary Care Association  
**AMHB** - Alaska Mental Health Board  
**AMIMR** - Alaska Maternal Infant Mortality Review  
**ANHB** - Alaska Native Health Board  
**ANTHC** - Alaska Native Tribal Health Consortium  
**ARORA** - Mental health database obtained from mental health direct service providers  
**ASHNHA** - Alaska State Hospital and Nursing Home Association  
**ASMA** - Alaska State Medical Association  
**ASOII** - Annual Survey of Occupational Injuries and Illnesses, DOL  
**ASSE** - American Society of Safety Engineers  
**ATR** - Alaska Trauma Registry  
**BMI** - Body Mass Index= $\text{weight (kg)} / (\text{height (meters)})^2$   
**BRFSS** - Alaska Behavioral Risk Factor Surveillance System  
**CDC** - Centers for Disease Control and Prevention  
**CHEMS** - Community Health and Emergency Medical Services  
**DCED** - Alaska Department of Community and Economic Development  
**DEC** - Alaska Department of Environmental Conservation  
**DEED** - Alaska Department of Education and Early Development  
**DFYS** - Alaska Division of Family and Youth Services  
**DHSS** - Alaska Department of Health and Social Services  
**DJJ** - Alaska Division of Juvenile Justice  
**DMA** - Division of Medical Assistance  
**DMHDD** - Alaska Division of Mental Health and Developmental Disabilities  
**DOC** - Alaska Department of Corrections  
**DOL** - Alaska Department of Labor and Workforce Development  
**DOT&PF** - Alaska Department of Transportation and Public Facilities  
**DOT&PF** - Department of Transportation and Public Facilities  
**DOT, NHTSA** - Department of Transportation, National Highway Traffic Safety Administration  
**DPH** - Alaska Division of Public Health  
**EH** - Environmental Health

## *Appendices*

**EHDI** - State-based Early Hearing Detection and Intervention Program Network, CDC

**EMS** - Emergency Medical Services

**EMT** - Emergency Medical Technician

**EPA** - Environmental Protection Agency

**EPSDT** - Early and Periodic Screening, Diagnosis and Treatment

**FANR** - Food Assistance and Nutrition Research

**FARS** - Fatality Analysis Reporting System

**FAS** - Fetal Alcohol Syndrome

**HCUP** - Healthcare Cost Utilization Project

**HRSA** - Health Resources and Services Administration

**ISER** - Institute for Social and Economic Development Observation Study

**ICD 9 and ICD 10** – International Classification of Diseases, Version 9 and Version 10

**LTC** - Long Term Care

**MEPS** - Medical Expenditure Panel Survey

**MHSIP** - Mental Health Statistics Improvement Program

**MCH** - Bureau of Maternal Child Health (HRSA)

**MCFH** - Section of Maternal, Child and Family Health (DPH)

**MOA** - Municipality of Anchorage

**NCHS** - National Center for Health Statistics

**NHANES** - National Health and Nutrition Examination Survey

**NHDS** - National Hospital Discharge Survey

**NHIS** - National Health Interview Survey

**NHSDA** - National Survey on Drug Abuse

**NIOSH** - National Institute of Occupational Safety and Health

**NSB** - North Slope Borough

**NSFG** - National Survey of Family Growth

**NTIA** - National Telecommunications and Information Administration

**NVSS** - National Vital Statistics System

**PedNSS** - Pediatric Nutrition Surveillance System

**PNSS** - Pregnancy Nutrition Surveillance System

**PRAMS** - Alaska Pregnancy Risk Assessment Monitoring System

**RPMS** - Resource Patient Management System

**RSV** - Respiratory Syncytial Virus

**SAMHSA** - Substance Abuse and Mental Health Services Administration

**SDWA** - Safe Drinking Water Act

**SNF** - Skilled Nursing Facility

**SPAPECD** - Survey of Physicians' Attitudes and Practices in Early Cancer Detection

**UAA** - University of Alaska, Anchorage

**UAF** - University of Alaska, Fairbanks

**UCR** - Uniform Crime Report, Federal Bureau of Investigation

**USDA** - United States Department of Agriculture

**USDOL/BLS** - United States Department of Labor, Bureau of Labor Statistics

**WIC** - Women, Infants and Children

**YRBS** - Alaska Youth Risk Behavior Survey

# Appendices

## Appendix D. Technical Notes

### Age Adjustment

In Healthy Alaskans 2010 all vital statistics data is age adjusted to the standard United States (million) 2000 population. Age-adjusted rates are calculated so comparisons can be made between populations that have different age distributions. For example, since Alaska has a lower proportion of people over 65 than the United States, it will experience a lower crude death rate. Many chronic disease indicators, such as cancer and diabetes, are strongly associated with age, and accurate comparisons can be made only with age adjustment.

### Behavioral Risk Factor Surveillance System (BRFSS)

Many Healthy Alaskans 2010 indicators are tracked through the Behavioral Risk Factor Surveillance System (BRFSS) system. This data collection process was implemented in Alaska as an ongoing surveillance system in 1991. Alaska adults, age 18 years old and older, are interviewed regarding their health and day-to-day living habits. Households with a telephone are selected by a scientifically designed and conducted random telephone survey. The survey is designed to report population prevalence at a region or state level. Alaska's BRFSS (1998 or later) supports five geographic regions generally described as Anchorage and vicinity, Gulf Coast, Southeast, Rural, and Fairbanks and vicinity. The U.S. baseline values represent the national median using the number of States collecting the same information through their BRFSS systems, and are age-adjusted to the standard million population. Furthermore, Alaska BRFSS data is not age-adjusted to the US standard million because of the added complexity of this step for within-state analysis. Trends can be observed between the national and state data without age adjustment.

### Youth Risk Behavior Survey (YRBS)

Many Healthy Alaskans 2010 indicators are tracked by questions asked in the Youth Risk Behavior Survey (YRBS). Results from the YRBS are intended to help detect changes in youth risk behaviors over time. The results can identify differences among ages, grades, and gender. Alaska first implemented its YRBS in 1995 using all school districts within the State. A second YRBS was conducted in 1999 and included all school district with the notable exception of the Anchorage school district. The shown prevalence percents are the

best available estimate of risk behaviors in the school age population.

High school (grades 9 – 12) results are weighted and provide estimates of the prevalence of risk behaviors in students enrolled in eligible schools. Eligible schools are those outside the Anchorage school district excluding correspondence, home study, alternative, and correctional schools. Also, youth who dropped out of school are not included.

Middle school (grades 7 and 8) results are not weighted to the general student population because of a low overall participation rate. However, these results are useful in determining the prevalence of risk behaviors in a large number of Alaska's seventh and eighth grade students in 1999 and will give users insight into the needs and behaviors of students in this age group.

Age adjusting the YRBS rates is unnecessary because Alaska's high school students are generally the same age as students in other parts of the Nation.

### Vital Statistics Cause of Death Coding

Causes of death are classified by the Tenth Revision International Classification of Disease (ICD-10). The Tenth Revision replaced the Ninth Revision (ICD-9) that had been in use for 20 years in 1999. The change from ICD-9 to ICD-10 results in discontinuities between selected causes of death by introducing new causes of death titles and their corresponding cause of death codes.

Caution is necessary in comparing mortality rates before 1999 with current rates. Nationally, only 7 of the 15 leading causes of death titles using ICD-9 remain the same under ICD-10 coding. The break in comparability results from changes in category titles, changes in structure and content of the classification, and from changes in the coding rules used to select the underlying cause of death. Mortality statistics are generally based on underlying cause of death, which is defined as "the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury." The process for identifying the leading causes of death is published in the [NCHS Instruction Manual, Part 9, ICD-10 Cause of Death Lists for Tabulating Mortality Statistics, Effective 1999](#).

Ratios of comparability between ICD-9 and ICD-10 have been studied by the dual classification of mortality records at the national level. A comparability ratio of 1.00 indicates that the same number of deaths was

assigned to a particular cause or combination of causes whether ICD-9 or ICD-10 was used. This does not necessarily indicate that the cause was unaffected by changes in classification and coding procedures but merely that there was no net change in the number assigned. A ratio less than 1.00 indicates that fewer deaths are assigned to the cause of death under ICD-10 than with ICD-9. A ratio greater than 1.00 results from an increase in deaths assigned to a cause in ICD-10 compared with the comparable ICD-9 cause. Technical reports for the National Vital Statistics system are available at [www.cdc.gov/nchs/products/pubs/pubd/nvsr/nvsr.htm](http://www.cdc.gov/nchs/products/pubs/pubd/nvsr/nvsr.htm). The National Vital Statistics Report Volume 49, No. 2, May 18, 2001 (Comparability of Cause of Death Between ICD-9 and ICD-10: Preliminary Estimates) provided an initial estimate of comparability.

The change to ICD-10 increases the number of deaths attributed to Alzheimer's Disease, septicemia, unintentional injuries, Sudden Infant Death Syndrome (SIDS), and several other common causes of death. The number of deaths attributed to heart disease, asthma, pneumonia, and congenital anomalies decreases under ICD-10.

Whenever possible, *Healthy Alaskans 2010* uses 1999 mortality rates to set baselines. Since the 1999 rates are coded with ICD-10, changes can be tracked across the decade.

### Issues of small numbers

Many health indicators for Alaska are based on a small number of events. The 15 leading causes of death in Alaska in 1998, for example, included seven deaths from hypertension, 11 from atherosclerosis, and 12 from kidney disease. When health events are subdivided by borough/census area, race, sex, or age, the number that results lacks statistical significance and may inadvertently identify an individual.

Confidentiality issues are likely to arise with small denominators, small numerators, or rare events. Confidentiality is protected by withholding events with counts less than four, or by aggregating data over time or over larger geographical areas to produce a larger cell size.

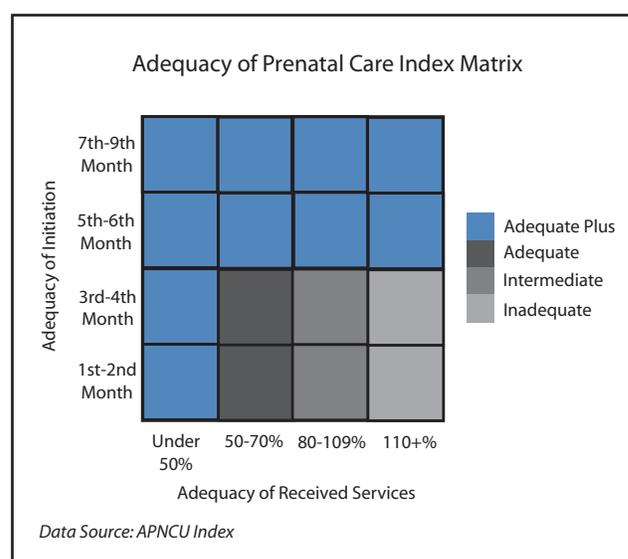
Concerns about the reliability and stability of the data arise with small numerators that represent rare or infrequent events. Twenty events is the usual threshold for reliability for estimating age adjusted rates. Rates based on fewer than 20 events have relative standard errors of 23 percent or more. Throughout *Healthy Alaskans 2010* we have attempted to increase numerator size by combining multiple years of data, collapsing

data categories, and/or expanding the geographic area under consideration. When rates are calculated for numerators less than 20, a footnote is added: "Rates calculated from < 20 cases may be unreliable." Rates are not calculated for counts under five.

### Measuring Prenatal Care: The Adequacy of Prenatal Care Utilization (APNCU) Index

The APNCU index, also called the Kotelchuck Index, uses two crucial elements obtained from birth certificate data—when prenatal care began (initiation) and the number of prenatal visits from when prenatal care began until delivery (received services). The APNCU index classifies the adequacy of initiation as follows: pregnancy months 1 and 2, months 3 and 4, months 5 and 6, and months 7 to 9. To classify the adequacy of received services, the number of prenatal visits is compared to the expected number of visits for the period between when care began and the delivery date. The expected number of visits is based on the American College of Obstetricians and Gynecologists prenatal care standards for uncomplicated pregnancies and is adjusted for the gestational when care began and for the gestational age at delivery.

A ratio of observed to expected visits is calculated and grouped into four categories—Inadequate (received less than 50% of expected visits), Intermediate (50%-79%), Adequate (80%-109%), and Adequate Plus (110%). The final APNCU index measure combines these two dimensions into a single summary score. The chart below summarizes the two dimensions of



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*Healthy Alaskans 2010* defines adequate prenatal care as a score of 80% or greater on the APNCU Index, or the sum of the Adequate and Adequate Plus categories.

The APNCU Index does not measure the quality of prenatal care. It also depends on the accuracy of the patient or health care provider's recall of the timing of the first visit and the number of subsequent visits. The APNCU Index uses recommendations for low-risk pregnancies, and may not measure the adequacy of care for high-risk women. The APNCU Index is preferable to other indices because it includes a category for women who receive more than the recommended amount of care (adequate plus, or intensive utilization).

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## Explanation of the Bridge Series for Census 2000 Comparable Race Categories to 1990 Major Groups

Excerpted and adapted from Greg Williams, Race and Ethnicity in Alaska, Alaska Economic Trends, October 2001

The Census Bureau followed the guidelines of the U.S. Office of Management and Budget (OMB) in conducting the 2000 census. All race and ethnicity was self-reported by the respondent and represented each individual's interpretation of the choices presented. In addition to the race and ethnic categories recognized by OMB, the census allowed people to define themselves as "some other race" and to write in their race. The Census Bureau has so far provided race and ethnicity tabulations in the following forms for 2000 data:

1. One race alone or two or more races.
2. Race alone or in combination.
3. 63 race categories.

A National Academy of Sciences panel studied a series of possible ways to combine the 2000 race data to produce race data comparable to the 1990 and earlier definitions of race. These tabulations are referred to as "bridge" estimates, because they allow comparison of two sets of incompatible data. Of the possible ways of combining the new race data to create tabulations that are comparable to earlier data, the method easiest to understand is what is generally referred to as the "equal proportion or equal fractions." The principle of "equal proportion" involves weighting the multi-race responses on the assumption that they are equal shares of each race. For example, the category of "Alaska Native and White" would be weighted 0.5 Alaska Native and 0.5 White. After all the multi-races are proportionately weighted, the race fractions are summed and rounded to the nearest whole person to obtain the estimated number of persons equivalent to the single race responses of earlier censuses. This procedure has been used at the "place" level (small geographic areas) so that the aggregate figures for census areas or boroughs, or the state as a whole, will be consistent with the place-specific figures.