Health Risks in Alaska
Among Adults

Alaska Behavioral Risk Factor Survey

1997 Annual Report

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Introduction

In recent years, both health professionals and the general public have shown increased interest in how behavioral changes can reduce a person's risk for developing health problems. This interest results from growing evidence that lifestyle strongly influences health. Behaviors linked to health problems are referred to as behavioral risk factors, and they include such things as cigarette smoking, being overweight, alcohol use, having a sedentary lifestyle, poor diet and more.

Behavioral risk factors are associated with the ten leading causes of death in the United States and Alaska. Many chronic diseases (such as heart disease, cancer and diabetes) and premature deaths could be prevented through better control of these behavioral risk factors.

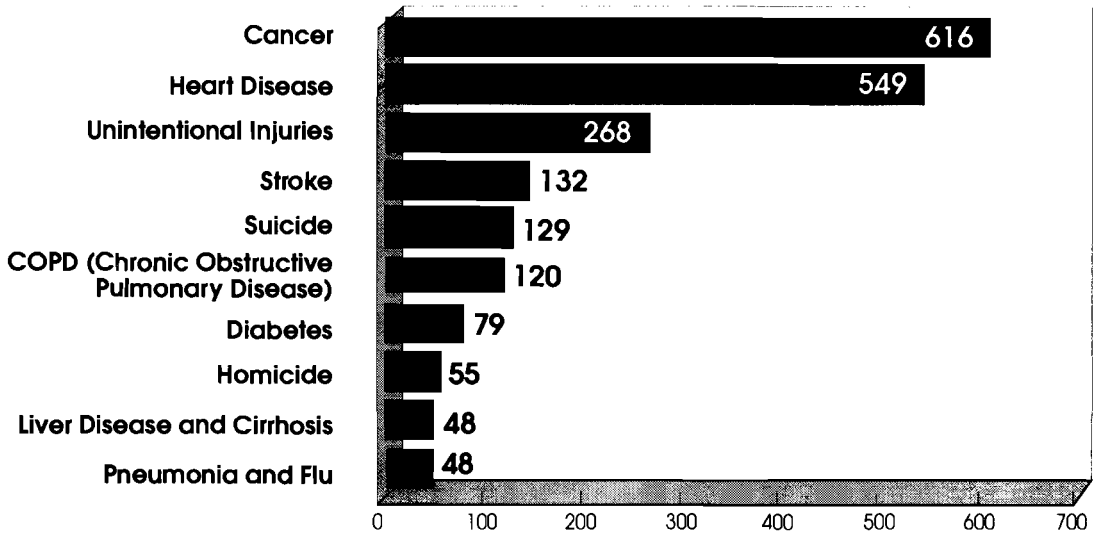
Data on behavioral risk factors are necessary for formulating intervention strategies, justifying resources to support these strategies, and proposing new policies or legislation. Surveillance of behavioral risk factors allows us to monitor trends in health behavior and particularly enables us to measure progress toward reaching the "Healthy People 2000, Health Promotion and Disease Prevention Objectives" for the nation. It can also provide the basis for launching and evaluating programs designed to reduce the prevalence of unhealthy behaviors and attain Year 2000 health goals.

Since 1981, the Centers for Disease Control and Prevention (CDC) has helped states survey adults about their health behaviors, by conducting one time telephone surveys. In 1984, CDC initiated the Behavioral Risk Factor Surveillance System (BRFSS), by which 17 states began collecting behavioral risk data through monthly telephone surveys.

The Behavioral Risk Factor Surveillance System was implemented in Alaska in the Fall of 1990, when a Point-in-Time Survey of 400 residents was conducted. In 1991, the Alaska Behavioral Risk Factor Surveillance System became part of an ongoing surveillance system, conducting telephone surveys monthly. Each month, approximately 128 adults, aged 18 and older are interviewed regarding their health and day to day living habits.

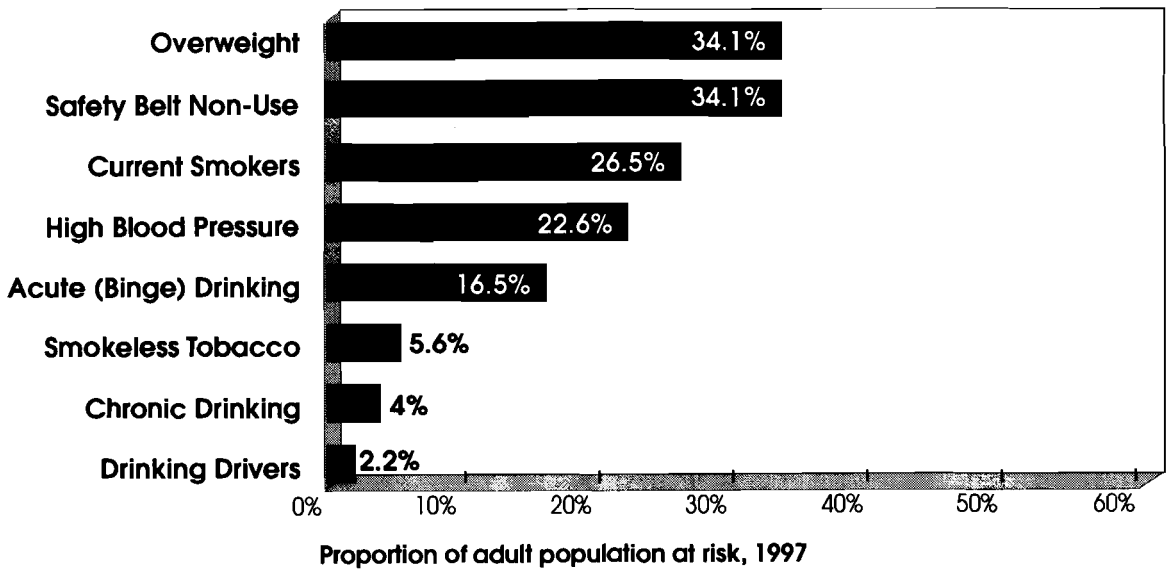
This report contains the 1997 survey results. These surveys were conducted from January through December 1997, for a total sample size of 1,545 interviews. The Division of Public Health, BRFSS continues to conduct monthly telephone surveys each year.

Leading Causes of Death in Alaska



Source: Alaska Bureau of Vital Statistics
1997 Annual Report

Behavioral Risk Factor Prevalence in Alaska



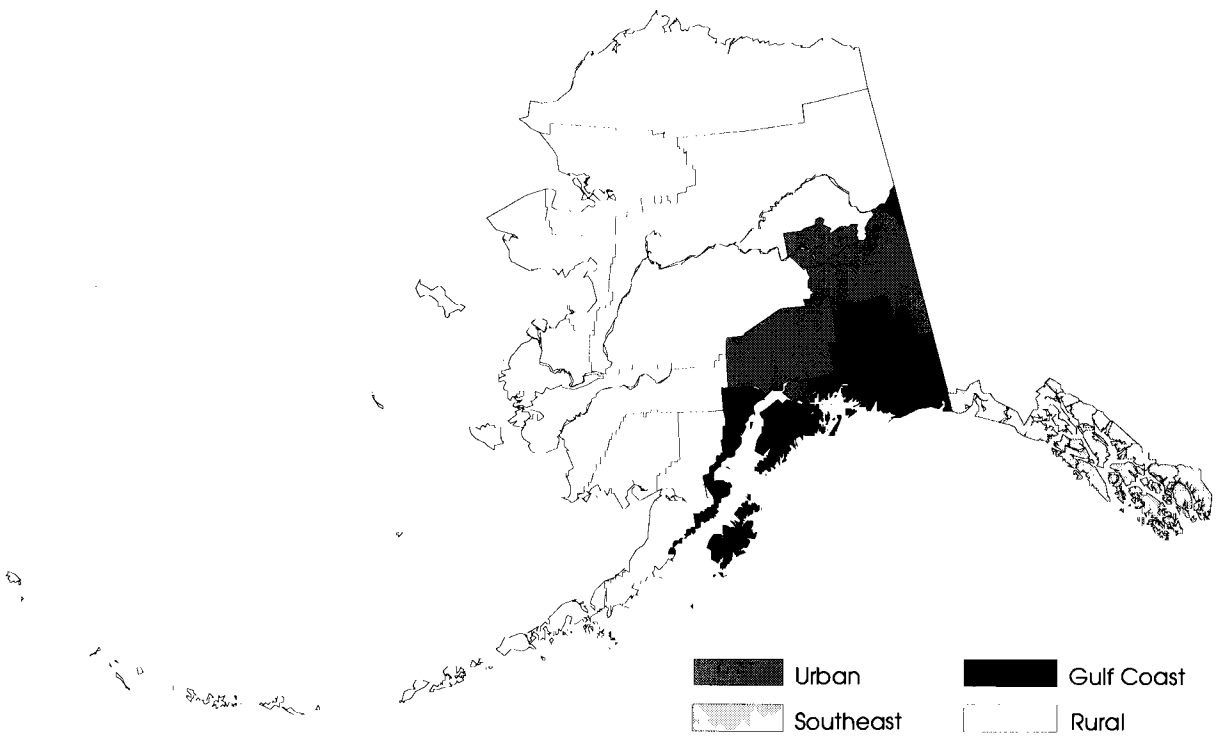
At Risk for Specific Risk Factors, 1997

Behavioral Risk Factor ◆	Proportion of Population at Risk (Prevalence)	Estimated Adults at Risk ◆◆
Overweight	34.1	144,583
Safety Belt Non-Use	34.1	144,583
Cigarette Smoking	26.5	112,359
High Blood Pressure	22.6	95,823
Acute	16.5	69,960
Smokeless Tobacco	5.6	23,744
Chronic Drinking	4.0	16,960
Drinking and Driving	2.2	9,328

◆ See Appendix A for Behavioral Risk Factor definitions.

◆◆ Based on 1997 intercensal population estimates of 423,997 adults 18 years and older in Alaska (Claritas).

1997 BRFSS Sampling Regions



The Alaska sample was stratified into four regions based on common demographics:

	Population 18 years and older ◆	Number of interviews expected
Urban (Region 1) Anchorage, Fairbanks & vicinity	277,053	384
Gulf Coast (Region 2) Kenai, Kodiak, Valdez, Cordova & vicinity	50,803	384
Southeast (Region 3) All of Southeast Alaska	52,547	384
Rural (Region 4) All other nonurban areas of Alaska	43,594	384
STATEWIDE TOTAL	**423,997**	**1,536**

◆ Claritas. 1997 Race by Age by Sex Report for All Counties Nationwide. Ithaca, New York.

Methodology

The Behavioral Risk Factor Surveillance System is conducted by the Alaska Division of Public Health in cooperation with the National Centers for Disease Control and Prevention (CDC). It is a monthly telephone survey that utilizes a standard protocol and interviewing methods developed by the CDC.

Sample Design

Although the main purpose of the BRFSS is to estimate the prevalence of behavioral risk factors in the general population, interviewing each person is not economically feasible. Thus, a probability (or random) sample is selected in which all persons have a known chance of selection. The BRFSS in Alaska uses a stratified random sampling design. The Alaska sample was stratified into four regions based on common demographics. An equal number of interviews are conducted from each region, which purposely oversamples the nonurban areas of Alaska. (See Appendix B)

Sample Size

Each month, approximately 128 Alaska residents aged 18 and older are interviewed over the telephone regarding their health practices and day to day living habits, to reach an annual sample size of 1,536 (384 per region). The data in this report were collected from January through December, 1997, and are based on a sample size of 1,545 interviews.

Sampling Process

Since 1990, the telephone sample has been generated by the University of Alaska Anchorage, Institute of Social and Economic Research (ISER). In 1997, the Institute of Social and Economic Research used a combination method of computer random generation (using the RANDY method) for large exchanges and random selection from a database of entered directory numbers for small exchanges. (See Appendix H)

Survey Instrument

The BRFSS instrument is a standardized questionnaire which consists of three sections;

- the core (which includes demographics),
- a set of optional modules and
- state specific questions.

The 1997 questionnaire covered the topics of Health Status, Health Care Access, Health Care Utilization, Hypertension Awareness, Cholesterol Awareness, Diabetes, Tobacco Use (including Smokeless Tobacco), Alcohol Use, Demographics, Women's Health, Colorectal Cancer Screening, Immunizations, HIV/AIDS Awareness, Health Care Coverage, Preventive Health Counseling Services, and Injury Control.

Participation is random, anonymous and confidential. Respondents are randomly selected from among the adult members of the household. Only those living in households are surveyed. Those living in institutions (i.e., nursing homes and dormitories) are not surveyed.

Data Collection

In 1997, interviews were conducted by trained college interns. The interviews were conducted primarily in the evenings and on weekends, during the two weeks of every month specified by the CDC for all states.

Data was collected via computer using Ci3 CATI (Computer Assisted Telephone Interviewing) software. Monthly data files were sent to the Centers for Disease Control and Prevention for editing.

Data Analysis

The Behavioral Risk Factor Surveillance System (BRFSS) data contains information on Alaskan adults only (aged 18 and above).

Data collected by BRFSS were edited using PCEdits software produced by the CDC. Edit reports were produced monthly and corrections made. Corrected data files and edit reports were sent to the CDC monthly. At the end of each survey year, data are compiled and weighted by CDC, and cross tabulations and prevalence reports are prepared.

Weighting: Unweighted data are the actual responses of each survey respondent. The data are weighted or adjusted to compensate for the overrepresentation or under-representation of persons in various subgroups. The data are further weighted to adjust the distribution of the sample data so that it reflects the total population of the sampled area. In 1997, survey results were weighted using 1997 intercensal population estimates for Alaska obtained from Claritas. (See Appendix J)

Reporting: This report provides standard tables describing survey results based on sex, race (Native and Non-native), state total, age, education, income, marital status and employment.

Prevalence estimates for the table containing sex, race and statewide total do not include those responses which were missing, unknown or refused. Tables for other subgroups (age, education, income, marital status, and employment) are based on the total number of respondents including those responses that are missing,unknown or refused for a total sample size of 1,545. The tables are reported differently because of a modification in data reporting made by the CDC.

Reporting on Health Care Coverage: Health care coverage results for this report were based on a special analysis produced by the Alaska Division of Public Health, Bureau of Vital Statistics. This analysis adjusted for survey respondents who first reported that they had no health care coverage and then in a follow-up question reported to be covered by a health care plan. This explains the reason that these prevalence estimates may not match the ones published by the CDC.

Comparisons

All prevalence comparisons made to the National BRFSS Ranges and the National BRFSS Median are comparisons made to the 50 states participating in the Behavioral Risk Factor Surveillance System in 1997.

Limitations

The BRFSS uses telephone interviewing for several reasons. Telephone interviews are faster and less expensive than face to face interviews. Calls are made from one central location (Juneau) and are monitored for quality control.

The one main limitation of any telephone survey is that those people without phones cannot be reached and are not represented. In Alaska, about 92% of households have phones (about 93% of all U.S. households have phones). The percentage of households with a telephone varies by region in Alaska (see Appendix G). In general, persons of low socioeconomic status are less likely than persons of higher socioeconomic status to have phones and are undersampled. However, national BRFSS results correspond well with findings from other surveys conducted in person.

Some inaccuracy is expected from any survey based on self reported information and the potential for bias must be kept in mind when interpreting results.

Survey response rates may also affect the potential for bias in the data. (See Appendix I)

The reliability of a prevalence estimate depends on the actual, unweighted number of respondents in a category or demographic subgroup (not a weighted number). Interpreting and reporting weighted numbers that are based on a small, unweighted number of respondents can be misleading. The degree of precision increases if the sample size is larger and decreases if the sample size is smaller. In this report, prevalence estimates are not reported for those categories in which there were less than 50 respondents and are rounded to the nearest whole percent when the denominator is less than 500. Confidence intervals are reported for the prevalence estimates for state totals, gender and race.

Table 1 on the following page describes the sample population and should be used as a basis for understanding the tables in this report. Due to rounding, the weighted numbers in this table may not add exactly to the 1997 population estimates cited in this report.

Table 1

Survey Population by Selected Demographics

Alaska BRFSS 1997

	n	%	Weighted N
Gender			
Male	717	52.3	221,868
Female	828	47.7	202,129
Age			
18-24	131	12.8	54,347
25-34	289	24.0	101,710
35-44	469	27.1	114,813
45-54	341	17.9	76,044
55-64	152	9.6	40,737
65+	151	8.1	34,204
Unknown/Refused	12	0.5	2,142
Education			
Never Attended School	4	0.1	460
Elementary	57	2.0	8,661
Some High School	96	6.5	27,383
High School Graduate or GED	504	34.6	146,555
Some College or Technical School	448	30.1	127,450
College Graduate	427	26.4	111,840
Unknown/Refused	9	0.4	1,648
Income			
<10,000	62	3.9	16,407
10,000-14,999	83	4.7	19,756
15,000-19,999	107	6.7	28,491
20,000-24,999	126	8.1	34,297
25,000-34,999	227	16.2	68,690
35,000-50,000	304	18.1	76,896
50,000-74,999	273	21.4	90,913
>75,000	235	12.8	54,417
Unknown/Refused	128	8.0	34,129

	n	%	Weighted N
Race			
Native	367	16.7	70,914
Non-Native	1,159	82.1	348,051
Unknown/Refused	19	1.2	5,032
Marital Status			
Married	871	60.3	255,614
Divorced	233	12.2	51,594
Widowed	81	3.0	12,647
Separated	43	2.4	10,095
Never Married	258	18.2	77,375
Unmarried Couple	49	3.5	14,640
Unknown/Refused	10	0.5	2,031
Employment			
Employed	927	60.8	257,737
Self employed	168	11.1	46,875
Out of work one year or longer	32	1.7	7,267
Out of work one year or less	69	4.5	18,907
Homemaker	94	6.3	26,523
Student	31	3.1	13,145
Retired or unable to work	215	12.3	51,942
Unknown	9	0.4	1600
TOTAL	**1,545**	**100**	**423,997**

n = Number of survey respondents in this demographic subgroup. Total sample size = 1,545.

% = This is a weighted (adjusted) percentage of the state population (adult) in this demographic subgroup, based on the survey data.

Weighted N = Weighted sample number, based on 1997 intercensal population estimates for Alaska (Claritas).

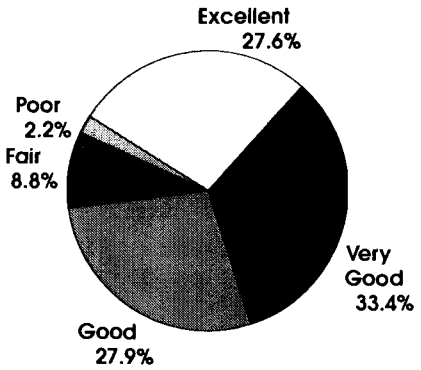
Quality of Life

A fundamental goal of the Year 2000 national health objectives is to increase the span of healthy life for all persons in the United States. Although the average life expectancy of Americans has increased to 75 years, for some persons, increased life expectancy includes periods of diminished health and functions (lowered health-related quality of life). In general, population based information on good health has been limited. In recent years, questions to assess the health related quality of life have been added to the BRFSS.

Self Reported Health Status of Alaskans

General Health Status: In 1997, 88.9% of Alaskan adults rated their own health as excellent or good. Only 11% of Alaskans rated their health as fair or poor. (National BRFSS Range 9.5 to 35.0%, National BRFSS Median 13.0%). Of those surveyed, 27.6% rated their health excellent, 33.4% as very good, 27.9% as good, 8.8% as fair and 2.2% as poor.

How Alaskans Rate Their Own Health



Recent Physical Health: Alaskan adults reported an average of 2.9 days out of the past 30 days when their physical health was not good (National BRFSS Range 1.1 to 4.1 days, National BRFSS Median 3.1 days). Alaskan males reported an average of 1.9 days during the past month when their physical health was not good. Alaskan females reported an average of 3.9 days during the past month when their physical health was not good.

Recent Mental Health: Alaskan adults reported an average of 3.2 days out of the past 30 days when their mental health was not good (National BRFSS Range 1.5 to 4.9 days, National BRFSS Median 2.9 days). Alaskan males reported an average of 2.4 days during the past month when their mental health was not good. Alaskan females reported an average of 4.0 days during the past month when their mental health was not good.

Recent Activity Limitations: Alaskan adults reported an average of 2.3 days during the past 30 days when their usual activities were limited due to their physical or mental health (National BRFSS Range 2.0 to 7.2 days, National BRFSS Median 3.6 days) Alaskan males reported an average of 2.0 days when their activities were limited during the past month and Alaskan females reported an average of 2.5 days when their activities were limited during the past month.

Year 2000 National Health Objective

Increase years of healthy life to at least 65 years. (Objective 8.1)

Risk Factors

Alcohol Use

Health Risk

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. From 1992-1994, alcohol accounted for 11.2% of the deaths in Alaska.

Medical problems due to alcohol dependence include alcohol withdrawal syndrome, psychosis, hepatitis, cirrhosis, pancreatitis, thiamine deficiency, neuropathy, dementia and cardiomyopathy.

Excessive alcohol use during pregnancy is a leading preventable cause of birth defects and mental retardation.

Alcohol Use in Alaska

Definitions used in this survey:

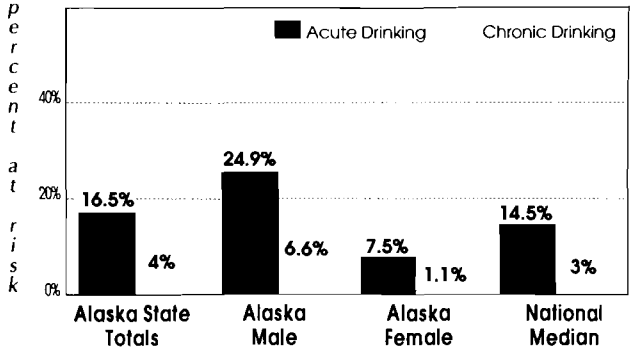
Acute (Binge) Drinking: *Respondents who report having five or more drinks on an occasion, one or more times in the past month.*

Chronic Drinking: *Respondents who report an average of 60 or more alcoholic drinks a month.*

Drinking and Driving: *Respondents who report having driven after having too much to drink, one or more times in the past month.*

In 1997, 55% of those surveyed, reported drinking alcohol in the past month. Among males, 61.5% reported drinking alcohol in the past month, and among females, 47.9% reported drinking alcohol in the past month.

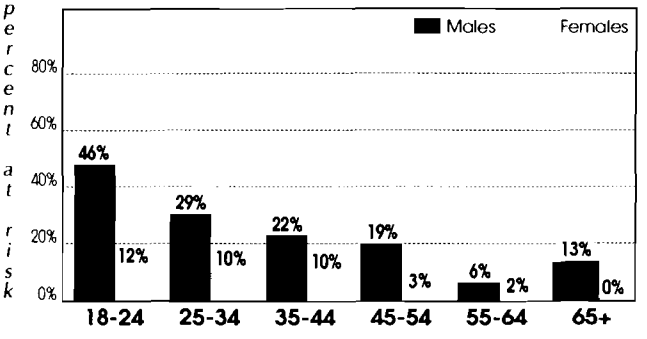
Comparison of Risk Prevalence for Alcohol Use



Acute - National BRFSS Range 6.3 - 23.3%, Median 14.5%
Chronic - National BRFSS Range 1.2 - 5.1%, Median 3.0%

At Risk for Acute Drinking in Alaska

By age and gender



An estimated 16.5% of Alaskan adults engaged in acute (binge) drinking (National BRFSS Range 6.3 to 23.3%, National BRFSS Median 14.5%). Of the males, 24.9% engaged in binge drinking and of the females 7.5% engaged in binge drinking. Men were more likely than women to engage in binge drinking in every age group over 18.

An estimated 4% of Alaskan adults were at risk for chronic drinking (National BRFSS Range 1.2 to 5.1%, National BRFSS Median 3.0%). Of males, 6.6% had more than 60 drinks during the past month and of females, 1.1% had more than 60 drinks during the past month.

An estimated 2.2% of Alaskan adults engaged in drinking and driving during the past month. Of men, 3.3% reported drinking and driving during the past month and of women, 0.9% reported the same thing.

Year 2000 National Health Objectives

The Year 2000 Health Objectives relate to health status, risk reduction, and service and protection to reduce alcohol and other drug problems. The health objectives do not relate to alcohol consumption as defined by the 1997 BRFSS.

Table 2

Prevalence of Acute (Binge) Drinking by Selected Demographics

Alaska BRFSS 1997

	n	%	N	95% CI
Sex				
Male	174	24.9	694	20.1 – 29.7%
Female	71	7.5	819	5.0 – 10.0%
Race				
Native	64	17	307	11.7 - 22.8%
Non-Native	180	17	1,182	13.3 - 19.8%
TOTAL	**245**	**16.5**	**1,513**	**13.6 – 19.3%**

	n	%	N
Age			
18-24	35	31	131
25-34	67	20	289
35-44	77	17	469
45-54	48	11	341
55-64	12	4	152
65+	6	6	151
Unknown or Refused	—	—	12
Education			
Never Attended School	—	—	4
Elementary	7	13	57
Some High School	17	20	96
High School Graduate or GED	114	25	504
Some College or Technical School	67	14	448
College Graduate	40	8	427
Unknown or Refused	—	—	9
Income			
< $10,000	8	19	62
$10,000-14,999	18	22	83
$15,000-19,999	18	12	107
$20,000-24,999	24	20	126
$25,000-34,999	45	23	227
$35,000-49,999	43	16	304
$50,000-74,999	39	11	273
> $75,000	39	17	235
Unknown or Refused	11	11	128
Marital Status			
Married	117	13	871
Divorced	42	19	233
Widowed	5	72	81
Separated	11	◆◆	43
Never Married	59	23	258
Unmarried Couple	10	◆◆	49
Unknown/Refused	1	◆◆	10
Employment			
Employed	117	19	927
Self employed	25	8	168
Out of work one year or longer	6	◆◆	32
Out of work one year or less	15	23	69
Homemaker	6	5	94
Student	5	◆◆	31
Retired or unable to work	13	7	215
Unknown	—	—	9

◆◆ = Not Reported

n = Number of respondents who have had five or more drinks on an occasion, one or more times in the past month.

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup.

95% CI = 95% Confidence Interval; the range of values within which the true value of a prevalence estimate would be expected to fall within, 95% of the time.

Table 3

Prevalence of Chronic Drinking by Selected Demographics

Alaska BRFSS 1997

	n	%	N	95% CI
Sex				
Male	48	6.6	680	3.8 – 9.5%
Female	11	1.1	813	0.0 – 2.3%
Race				
Native	4	1	295	0.0 - 1.8%
Non-Native	55	5	1,174	2.6 - 6.3%
TOTAL	**59**	**4.0**	**1,493**	**2.4 – 5.5%**

	n	%	N
Age			
18-24	6	7	131
25-34	15	6	289
35-44	18	3	469
45-54	11	2	341
55-64	6	2	152
65+	3	3	151
Unknown or Refused	—	—	12
Education			
Never Attended School	—	—	4
Elementary	1	1	57
Some High School	5	8	96
High School Graduate or GED	26	5	504
Some College or Technical School	17	4	448
College Graduate	10	1	427
Unknown or Refused	—	—	9
	n	**%**	**N**
Income			
< $10,000	3	6	62
$10,000-14,999	2	8	83
$15,000-19,999	3	2	107
$20,000-24,999	4	3	126
$25,000-34,999	15	5	227
$35,000-49,999	14	4	304
$50,000-74,999	8	3	273
> $75,000	8	4	235
Unknown or Refused	2	3	128
Marital Status			
Married	22	2	871
Divorced	14	9	233
Widowed	2	1	81
Separated	4	◆◆	43
Never Married	13	5	258
Unmarried Couple	3	◆◆	49
Unknown/Refused	1	◆◆	10
Employment			
Employed	38	4	927
Self employed	10	5	168
Out of work one year or longer	1	◆◆	32
Out of work one year or less	3	8	69
Homemaker	1	2	94
Student	2	◆◆	31
Retired or unable to work	3	1	215
Unknown	1	◆◆	9

◆◆ = Not Reported

n = Number of respondents who have had an average of 60 or more alcoholic drinks during the past month.

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup.

95% CI = 95% Confidence Interval; the range of values within which the true value of a prevalence estimate would be expected to fall within, 95% of the time.

Table 4

Prevalence of Drinking and Driving by Selected Demographics

Alaska BRFSS 1997

	n	%	N	95% CI
Sex				
Male	17	3.3	711	1.0 – 5.7%
Female	8	0.9	827	0.0 – 1.9%
Race				
Native	4	1	315	0.0 – 1.5%
Non-Native	20	2	1,197	0.9 – 3.9%
TOTAL	**25**	**2.2**	**1,538**	**0.9 – 3.5%**

	n	%	N
Age			
18-24	3	4	131
25-34	6	4	289
35-44	12	2	469
45-54	2	<1	341
55-64	2	1	152
65+	—	—	151
Unknown or Refused	—	—	12
Education			
Never Attended School	—	—	4
Elementary	1	3	57
Some High School	3	7	96
High School Graduate or GED	12	3	504
Some College or Technical School	6	2	448
College Graduate	3	1	427
Unknown or Refused	—	—	9
Income			
< $10,000	—	—	62
$10,000-14,999	1	5	83
$15,000-19,999	1	<1	107
$20,000-24,999	1	<1	126
$25,000-34,999	5	1	227
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> $75,000	3	3	235
Unknown or Refused	3	3	128
Marital Status			
Married	11	1	871
Divorced	5	3	233
Widowed	—	—	81
Separated	1	◆◆	43
Never Married	6	4	258
Unmarried Couple	2	◆◆	49
Unknown/Refused	—	—	10
Employment			
Employed	18	2	927
Self employed	2	1	168
Out of work one year or longer	1	◆◆	32
Out of work one year or less	1	1	69
Homemaker	1	1	94
Student	1	◆◆	31
Retired or unable to work	1	1	215
Unknown	—	—	9

◆◆ = Not Reported

n = Number of respondents who report having driven after having too much to drink, one or more times in the past month.

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup.

95% CI = 95% Confidence Interval; the range of values within which the true value of a prevalence estimate would be expected to fall within, 95% of the time.

Diabetes Awareness

Health Risk

Diabetes is a chronic and potentially disabling condition characterized by elevated blood glucose levels. Diabetes is classified into two main types: Type 1 and Type 2. The most common type is Type 2, which affects 90% of those with diabetes and usually appears after the age of 40. Type 1 diabetes affects less than 10% of those with diabetes. Although this type of diabetes can occur at any age, it most often appears in childhood or the teen years.

An estimated 14,000 adult Alaskans have been diagnosed with diabetes. In 1997, diabetes was the seventh leading cause of death in Alaska. Individuals with diabetes are at increased risk for

- heart disease
- blindness
- kidney failure, and
- lower extremity amputations.

Diabetes and its complications occur among Americans of all ages and racial and ethnic groups. The burden of this disease is heavier among elderly Americans and certain racial and ethnic populations, including African Americans, Hispanics/Latinos, and American Indians.

Diabetes imposes a heavy economic burden upon the nation each year. In 1997, an estimated $98 billion in direct and indirect costs were spent on diabetes. In Alaska, the medical care costs related to diabetes treatment were estimated to be $141 million.

Much of the burden of diabetes can be prevented or delayed with early detection, improved delivery of care, and diabetes self-management education.

Diabetes in Alaska

Among Alaskan adults, 3.3% reported being told by a doctor that they had diabetes (National BRFSS Range 3.0 to 10.5%, National BRFSS Median 4.8%). Among men, 2.9% reported being told that they had diabetes and among women 3.8% reported being told that they had diabetes. Among women, 1.2% reported being told they had diabetes during pregnancy.

Table 5

Prevalence of Diabetes Awareness by Selected Demographics

Alaska BRFSS 1997

	n	%	N	95% CI
Sex				
Male	21	2.9	717	1.2 - 4.6%
Female	33	3.8	827	1.9 - 5.6%
Race				
Native	15	3	318	0.8 – 5.5%
Non-Native	39	3	1,199	1.9 - 4.8%)
TOTAL	**54**	**3.3**	**1,544**	**2.1 – 4.6%**

	n	%	N
Age			
18-24	1	<1	131
25-34	1	<1	289
35-44	13	4	469
45-54	12	3	341
55-64	12	9	152
65+	14	11	151
Unknown or Refused	1	◆◆	12
Education			
Never Attended School	—	—	4
Elementary	6	19	57
Some High School	2	4	96
High School Graduate or GED	16	3	504
Some College or Technical School	14	3	448
College Graduate	14	2	427
Unknown or Refused	2	◆◆	9
Income			
< $10,000	3	3	62
$10,000-14,999	6	7	83
$15,000-19,999	3	4	107
$20,000-24,999	5	2	126
$25,000-34,999	10	5	227
$35,000-49,999	9	2	304
$50,000-74,999	9	5	273
> $75,000	5	1	235
Unknown or Refused	4	2	128
Marital Status			
Married	34	4	871
Divorced	9	5	233
Widowed	2	1	81
Separated	1	◆◆	43
Never Married	7	2	258
Unmarried Couple	—	—	49
Unknown or Refused	1	◆◆	10
Employment			
Employed	23	2	927
Self employed	3	1	168
Out of work one year or longer	2	◆◆	32
Out of work one year or less	1	1	69
Homemaker	2	3	94
Student	—	—	31
Retired or unable to work	22	12	215
Unknown	1	◆◆	9

◆◆ = Not Reported

n = Number of respondents who report ever told by a doctor that they have diabetes

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup.

95% CI = 95% Confidence Interval; the range of values within which the true value of a prevalence estimate would be expected to fall within, 95% of the time.

High Blood Pressure

Health Risk

High blood pressure contributes substantially to the risks for coronary heart disease, stroke and other complications of atherosclerosis. It also causes brain, heart and kidney damage. High blood pressure not only increases risk of death from these conditions, it also increases risk of disability.

Clinical trials show that blood pressure reduction produces major reductions in morbidity and mortality, especially when introduced before target organ damage has occurred.

Approximately one in four adults in the United States have high blood pressure (blood pressure equal to or greater than 140mm Hg systolic and/or 90mm diastolic and/or taking antihypertensive medication). The prevalence of high blood pressure increases markedly with age in the United States, from approximately 4% at ages 18-24 to 65% at ages 80 and older.

High Blood Pressure in Alaska

Definition for hypertension used in this survey: Respondents who report that they have been told they are hypertensive (have high blood pressure).

An estimated 22.6% have ever been told by a doctor or other health professional that their blood pressure was high. (National BRFSS Range 16.3 to 34.4%, National BRFSS Median 23.0%). Of Alaskan males, 20.3% report having been told their blood pressure was high and of females, 25.1%.

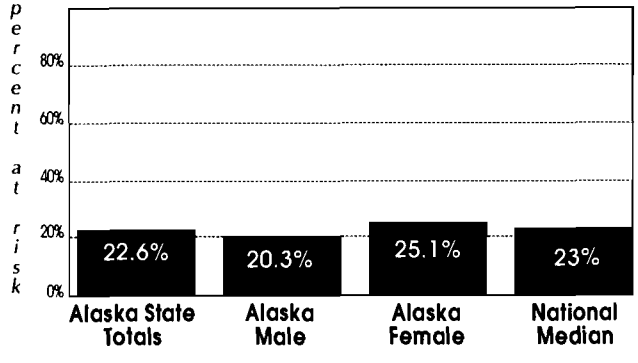
Of the persons who have been told that their blood pressure was high, 23.0% were told only once and 75.6% had been told more than once. Most (83.4%) adults had their blood pressure taken by a health professional within the past year.

Year 2000 National Health Objective

Increase to at least 90% the proportion of people with high blood pressure who are taking action to help control their blood pressure. (Objective 15.5)

(*Please note:* The BRFSS does not directly measure this objective. Actions to control high blood pressure include taking medication, dieting to lose weight, cutting down on salt and exercising.)

Comparison of Risk Prevalence for High Blood Pressure



National BRFSS Range 16.3 - 34.4%, Median 23.0%

Table 6

Prevalence of High Blood Pressure by Selected Demographics

Alaska BRFSS 1997

	n	%	N	95% CI
Sex				
Male	166	20.3	715	16.2- 24.4%
Female	192	25.1	824	20.6 - 29.6%
Race				
Native	92	26	317	19.2 - 33.7%
Non-Native	261	22	1,195	18.5 - 25.3%
TOTAL	**358**	**22.6**	**1,539**	**19.5 - 25.6%**

	n	%	N
Age			
18-24	14	7	130
25-34	31	9	289
35-44	88	23	467
45-54	93	27	341
55-64	53	42	152
65+	73	53	151
Unknown or Refused	6	◆◆	12
Education			
Never Attended School	1	◆◆	4
Elementary	20	36	57
Some High School	27	29	96
High School Graduate or GED	103	21	502
Some College or Technical School	114	23	448
College Graduate	88	21	426
Unknown or Refused	5	◆◆	9
	n	**%**	**N**

	n	%	N
Income			
<10,000	16	19	62
10,000-14,999	21	27	83
15,000-19,999	22	24	107
20,000-24,999	44	35	126
25,000-34,999	54	21	226
35,000-49,999	60	18	304
50,000-74,999	53	17	273
>75,000	52	24	235
Unknown or Refused	36	34	126
Marital Status			
Married	192	22	870
Divorced	59	30	233
Widowed	38	61	81
Separated	14	◆◆	43
Never Married	46	12	256
Unmarried Couple	6	◆◆	49
Unknown or Refused	3	◆◆	10
Employment			
Employed	184	18	924
Self employed	34	21	168
Out of work one year or longer	10	◆◆	32
Out of work one year or less	17	28	69
Homemaker	16	22	94
Student	1	◆◆	31
Retired or unable to work	95	49	215
Unknown	1	◆◆	9

◆◆ = Not Reported

n = Number of respondents who report having been told they have high blood pressure.

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup.

95% CI = 95% Confidence Interval; the range of values within which the true value of a prevalence estimate would be expected to fall within, 95% of the time.

Overweight

Health Risk

Overweight is associated with high blood cholesterol, high blood pressure, and diabetes and is an independent risk factor for heart disease. Overweight also increases the risk for gall bladder disease and certain types of cancers.

Studies reveal that reduction in body weight can lower blood pressure and improve blood cholesterol levels in overweight individuals and in individuals who have high blood pressure or blood cholesterol.

Overweight in Alaska

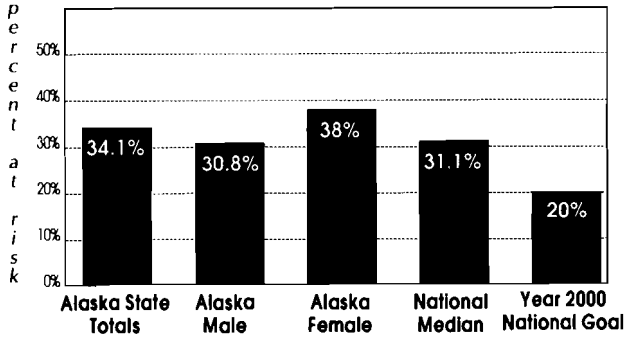
*Definition for overweight used in this survey: Females with body mass index [weight in kilograms divided by height in meters squared (w/h **2)]>=27.3 and males with body mass index >=27.8.*

According to this definition, based on body mass index, 34.1% of Alaskans were overweight (National BRFSS Range 25.1 to 36.3%, National BRFSS Median 31.1%). Among men, 30.8% were overweight and among women, 38% were overweight. This is higher than the Year 2000 goal of 20%.

Year 2000 National Health Objective

Reduce overweight to a prevalence of no more than 20% among people aged 20 and older, and no more than 15% among adolescents aged 12 to 19 (based on body mass index). (Objective 2.3)

Comparison of Risk Prevalence for Overweight



National BRFSS Range 25.1 - 36.3%, Median 31.1%

Table 7

Prevalence of Overweight by Selected Demographics

Alaska BRFSS 1997

	n	%	N	95% CI
Sex				
Male	247	30.8	708	25.9 – 35.8%
Female	301	38.0	775	32.9 – 43.0%
Race				
Native	151	39	297	31.5 – 46.9%
Non-Native	390	33	1,164	29.4 -37.3%
TOTAL	**548**	**34.1**	**1,483**	**30.6 – 37.7%**

	n	%	N
Age			
18-24	30	22	131
25-34	87	28	289
35-44	161	35	469
45-54	147	38	341
55-64	65	41	152
65+	55	40	151
Unknown or Refused	3	◆◆	12
Education			
Never Attended School	2	◆◆	4
Elementary	20	25	57
Some High School	42	42	96
High School Graduate or GED	180	35	504
Some College or Technical School	173	35	448
College Graduate	131	27	427
Unknown or Refused	—	—	9
	n	%	N
Income			
< $10,000	17	26	62
$10,000-14,999	29	38	83
$15,000-19,999	53	48	107
$20,000-24,999	39	35	126
$25,000-34,999	87	37	227
$35,000-49,999	106	27	304
$50,000-74,999	93	30	273
> $75,000	86	36	235
Unknown or Refused	38	29	128
Marital Status			
Married	317	34	871
Divorced	81	33	233
Widowed	32	41	81
Separated	14	◆◆	43
Never Married	84	31	258
Unmarried Couple	20	◆◆	49
Unknown or Refused	—	—	10
Employment			
Employed	332	32	927
Self employed	59	37	168
Out of work one year or longer	12	◆◆	32
Out of work one year or less	24	33	69
Homemaker	30	36	94
Student	8	◆◆	31
Retired or unable to work	79	41	215
Unknown	4	◆◆	9

◆◆ = Not Reported

n = Number of respondents who are overweight based on Body Mass Index (BMI).

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup.

95% CI = 95% Confidence Interval; the range of values within which the true value of a prevalence estimate would be expected to fall within, 95% of the time.

Safety Belt Non-Use

Health Risk

Unintentional injuries constitute the fifth leading cause of death in the United States and the third leading cause of death in Alaska. Motor vehicle injuries are the most common cause of unintentional injury death for all ages. (1997).

From 1975 through 1997, it is estimated that safety belts saved 100,998 lives, including 10,750 lives saved in 1997. According to the National Highway Traffic Safety Administration, if all passenger vehicle occupants over age 4 wore safety belts, an additional 9,601 could have been saved in 1997.

In 1997, 49 states and the District of Columbia had safety belt use laws in effect. Use rates vary widely from state to state, reflecting factors such as differences in public attitudes, enforcement practices, legal provisions, and public information and education programs.

Safety Belt Use in Alaska

Definition for safety belt used in this survey: Respondents reporting that they nearly always, sometimes, seldom or never wear seat belts (i.e. they do not always wear a safety belt).

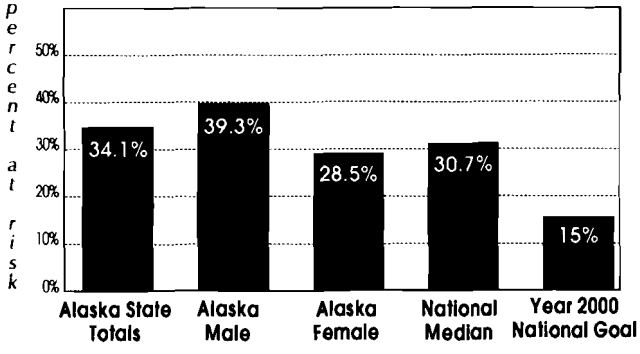
In 1997 in Alaska, 80.6% of adults reported wearing a safety belt always or nearly always when riding or driving in a car. Among women, 69.7% reported always wearing a safety belt, and 59.5% of the men reported always wearing a safety belt.

According to the definition used in this survey, 34.1% of Alaskans were at risk for not wearing a safety belt all of the time (National BRFSS Range 12.8 to 59.8%, National BRFSS Median 30.7%).

Year 2000 National Health Objective

Increase use of occupant protection systems, such as safety belts, inflatable safety restraints, and child safety seats, to at least 85% of motor vehicle occupants. (Objective 9.12)

Comparison of Risk Prevalence for Safety Belt Non-Use



National BRFSS Range 12.8 - 59.8%, Median 30.7%

Table 8

Prevalence of Safety Belt Non-Use by Selected Demographics

Alaska BRFSS 1997

	n	%	N	95% CI
Sex				
Male	309	39.3	717	34.0 - 44.6%
Female	285	28.5	826	24.1 - 32.8%
Race				
Native	150	38	319	30.2 - 45.0%
Non-Native	437	34	1,198	29.6 - 37.4%
TOTAL	**594**	**34.1**	**1,543**	**30.7 - 37.6%**

	n	%	N
Age			
18-24	67	46	131
25-34	105	34	289
35-44	181	29	469
45-54	140	38	341
55-64	48	27	152
65+	50	34	151
Unknown or Refused	3	◆◆	12
Education			
Never Attended School	1	◆◆	4
Elementary	15	27	57
Some High School	46	43	96
High School Graduate or GED	211	39	504
Some College or Technical School	173	33	448
College Graduate	143	27	427
Unknown or Refused	5	◆◆	9
	n	**%**	**N**
Income			
<10,000	21	47	62
10,000-14,999	36	46	83
15,000-19,999	39	33	107
20,000-24,999	46	31	126
25,000-34,999	85	34	227
35,000-49,999	111	29	304
50,000-74,999	115	36	273
>75,000	95	34	235
Unknown or Refused	46	32	128
Marital Status			
Married	311	31	871
Divorced	86	31	233
Widowed	26	36	81
Separated	16	◆◆	43
Never Married	123	43	258
Unmarried Couple	27	◆◆	49
Unknown or Refused	5	◆◆	10
Employment			
Employed	372	34	927
Self employed	73	40	168
Out of work one year or longer	13	◆◆	32
Out of work one year or less	27	39	69
Homemaker	27	24	94
Student	12	◆◆	31
Retired or unable to work	67	32	215
Unknown	3	◆◆	9

◆◆ = Not Reported

n = Number of respondents who do not always wear a safety belt.

% = This is a weighted percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup.

95% CI = 95% Confidence Interval; the range of values within which the true value of a prevalence estimate would be expected to fall within, 95% of the time.

Smoking

Health Risk

Tobacco use is the most important single preventable cause of death and disease in our society. Tobacco use is a major risk factor for diseases of the heart and blood vessels; chronic bronchitis and emphysema; cancers of the lung, larynx, pharynx, oral cavity, esophagus, pancreas, and bladder; and other problems such as respiratory infections and stomach ulcers. Cigarette smoking accounts for about 430,000 deaths in the United States each year. Smoking accounts for 21% of all coronary heart disease deaths, 87% of lung cancer deaths, and 82% of deaths from chronic obstructive pulmonary disease. Cigarette smoking during pregnancy accounts for 17-26% of low birth weight babies, up to 14% of preterm deliveries, and about 10% of all infant deaths.

From 1992 to 1994, smoking accounted for 19.8% of the deaths in Alaska.

Smoking In Alaska

Definition for current smoking used in this survey: Respondents who have smoked at least 100 cigarettes in their entire life and smoke now (regularly and irregularly).

Among Alaskan adults, 26.5% currently smoked cigarettes (National BRFSS Range 13.8 to 30.7%, National BRFSS Median 23.2%). The prevalence was higher among males (27.2%) than females (25.8%).

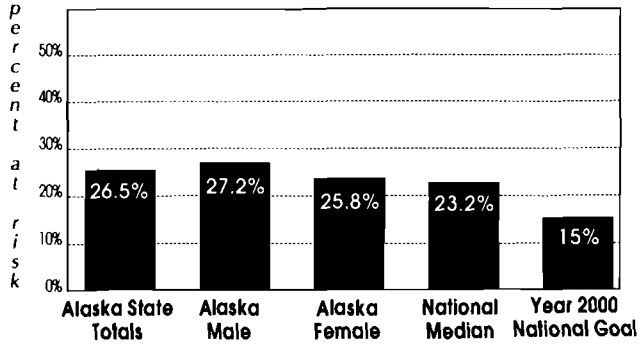
Over half of all the people surveyed (51.2%) had smoked at least 100 cigarettes in their lifetime. Of all the people who had smoked during their lifetime, nearly half (48.2%) had quit. Of former smokers, 25.6% quit within the past five years and 69.5% quit over five years ago. Half (55.6%) of the current smokers had quit smoking for one day or longer within the last year.

Year 2000 National Health Objectives

Reduce cigarette smoking to a prevalence of no more than 15% among people aged 20 and older. (Objective 3.4)

Increase to at least 50% the proportion of cigarette smokers aged 18 and older who stopped smoking cigarettes for at least one day during the preceding year. (Objective 3.6)

Comparison of Risk Prevalence for Cigarette Smoking



National BRFSS Range 13.8 - 30.7%, Median 23.2%

Table 9

Prevalence of Cigarette Smoking by Selected Demographics

Alaska BRFSS 1997

	n	%	N	95% CI
Sex				
Male	187	27.2	716	22.4 - 32.1%
Female	216	25.8	827	21.5 - 30.1%
Race				
Native	127	41	317	33.3 – 48.8%
Non-Native	271	24	1,199	20.7 – 27.9%
TOTAL	**403**	**26.5**	**1,543**	**23.3 – 29.8%**

	n	%	N
Age			
18-24	52	40	131
25-34	82	26	289
35-44	131	30	469
45-54	71	20	341
55-64	40	22	152
65+	26	16	151
Unknown or Refused	1	◆◆	12
Education			
Never Attended School	1	◆◆	4
Elementary	14	29	57
Some High School	41	40	96
High School Graduate or GED	183	34	504
Some College or Technical School	114	24	448
College Graduate	48	15	427
Unknown or Refused	2	◆◆	9
	n	**%**	**N**
Income			
< $10,000	29	56	62
$10,000-14,999	37	42	83
$15,000-19,999	48	42	107
$20,000-24,999	41	35	126
$25,000-34,999	61	29	227
$35,000-49,999	72	24	304
$50,000-74,999	50	17	273
> $75,000	35	16	235
Unknown or Refused	30	25	128
Marital Status			
Married	180	21	871
Divorced	84	43	233
Widowed	17	24	81
Separated	16	◆◆	43
Never Married	83	32	258
Unmarried Couple	20	◆◆	49
Unknown or Refused	3	◆◆	10
Employment			
Employed	231	25	927
Self employed	41	24	168
Out of work one year or longer	8	◆◆	32
Out of work one year or less	37	69	69
Homemaker	23	25	94
Student	5	◆◆	31
Retired or unable to work	54	24	215
Unknown	4	◆◆	9

◆◆ = Not Reported

n = Number of respondents who are current regular and irregular smokers.

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup.

95% CI = 95% Confidence Interval; the range of values within which the true value of a prevalence estimate would be expected to fall within, 95% of the time.

Smokeless Tobacco Use

Health Risk

Oral cancer has been shown to occur several times more frequently among smokeless tobacco users than among nonusers and may be 50 times as frequent among long-term snuff users.

Smokeless tobacco, especially moist snuff, contains high levels of potent carcinogens. About one third of users develop leukoplakia, a white wrinkled patch on the gums and inside the mouth, which is a premalignant condition.

All smokeless tobacco products contain substantial amounts of nicotine; their use causes nicotine dependence and may lead to cigarette use.

The consumption of smokeless tobacco in the United States increased 40% between 1970 and 1986. Most new users of smokeless tobacco products are adolescent males. In 1999, 20.9% of Alaska high school males had used some form of smokeless tobacco in the preceding month.

In rural Alaskan communities, smokeless tobacco use is not uncommon among five year olds. Nationally, the average age to start smokeless tobacco is twelve years.

Smokeless Tobacco Use in Alaska

Of all Alaskan adults, 26.0% reported to have ever used or tried chewing tobacco or snuff or both. Of men, 42.3% had used or tried such products, and 8.1% of women.

Among Alaskan adults, 5.6% were current smokeless tobacco users. The prevalence of smokeless tobacco use was higher among males (9.2%) than females (1.5%).

In 1997, among the 18 to 24 year old males, 13.1% currently used smokeless tobacco and among the 18 to 24 year old females, almost 3.4% used smokeless tobacco.

Year 2000 National Health Objective

Reduce smokeless tobacco use by males aged 12 to 24 to a prevalence of no more than 4%. (Objective 3.9)

Prevalence of Smokeless Tobacco Use

By age and gender

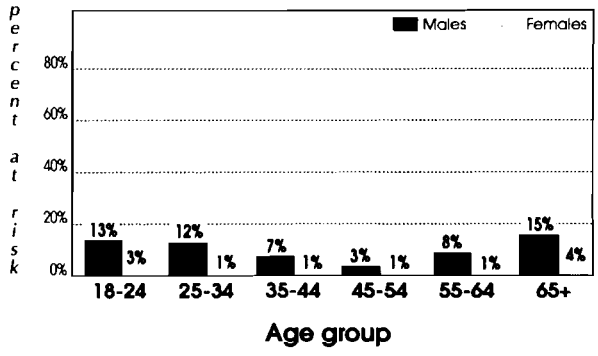


Table 10

Prevalence of Smokeless Tobacco Use by Selected Demographics

Alaska BRFSS 1997

	n	%	N
Sex			
Male	64	9.2	717
Female	16	1.5	828
TOTAL	**80**	**5.6**	**1,545**
Age			
18-24	10	8.8	131
25-34	21	7.1	289
35-44	24	4.3	469
45-54	11	2	341
55-64	6	4.6	152
65+	7	9.3	151
Unknown or Refused	1	◆◆	12
Education			
Never Attended School	1	◆◆	4
Elementary	6	15.5	57
Some High School	6	7.9	96
High School Graduate or GED	32	6.4	504
Some College or Technical School	22	5.9	448
College Graduate	12	2.6	427
Unknown or Refused	1	◆◆	9

	n	%	N
Income			
< $10,000	4	5.5	62
$10,000-14,999	7	10.6	83
$15,000-19,999	9	8.5	107
$20,000-24,999	9	10	126
$25,000-34,999	14	7.5	227
$35,000-49,999	14	6.6	304
$50,000-74,999	6	1.5	273
> $75,000	10	3.6	235
Unknown or Refused	7	3.2	128

◆◆ = Not Reported

n = Number of respondents who are current smokeless tobacco users.

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup.

Preventive Health Care Practices

Overview

The effectiveness of preventive services in reducing disease and premature death is now well documented. There have been dramatic declines for stroke mortality, cervical cancer mortality, and childhood infectious diseases because of the widespread application of such preventive services as high blood pressure detection and control, pap tests, and childhood immunizations. Other preventive services such as mammography have also been shown to be effective.

Many Americans lack access to an ongoing source of primary care, and therefore, to essential clinical preventive services as well as to other health care. Millions of Americans are without any form of health insurance and many more are underinsured. For a variety of reasons, in many areas, access to primary care is limited by an inadequate supply of primary care providers.

Even when access to primary care is not an issue, many preventive services are not offered by health care providers at regular intervals and few preventive services are covered under existing insurance plans despite their proven effectiveness in improving health.

Health Care Access and Preventive Health Care in Alaska

In 1997, it was estimated that 84.8% of Alaskan adults had some kind of health care plan. According to this survey, 15.2% of Alaskan adults did not.

In total, 13.7% of Alaskan adults reported needing to see a doctor in the last year, but could not due to the cost. Of Alaskan females, 16.3% reported not being able to see a doctor due to the cost compared to 11.4% of Alaskan males.

In total, 65.2% of Alaskan adults had visited a doctor within the last year for a routine checkup, even though they were feeling well and had not been sick. Of Alaskan males, 56.4% had visited a doctor for a routine checkup in the last year compared to 74.8% of females.

In 1997, 77.6% of Alaskan adults reported that they had one particular clinic, health center, doctor's office or other place to go to for health care. Some people (1.7 %) had more than one place to go, and 17.6% reported having no particular place to go for health care.

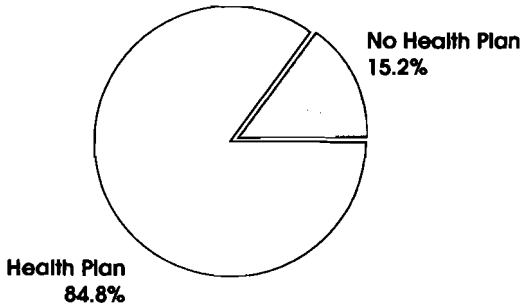
Among Alaskan adults, 40% reported usually going to a doctor's office or group practice, 13.8% reported usually going to a community clinic, 8.4% to a military facility, 5.7% to a public hospital or outpatient clinic, and 1.8% to a hospital emergency room when sick or needing health care.

Most adults received their health care from a physician, 8.6% from a mid-level practitioner, 3.1% from a community health aide, 1% from a public health nurse and 2.5% from another type of health care provider (including chiropractor, naturopath and other).

Year 2000 National Health Objective

Increase to at least 95 percent the proportion of people who have a specific source of ongoing primary care for coordination of their preventive and episodic health care. (Objective 21.3)

Alaskan Adults with No Health Care Plan



Comparison of Risk Prevalence for No Health Care Plan

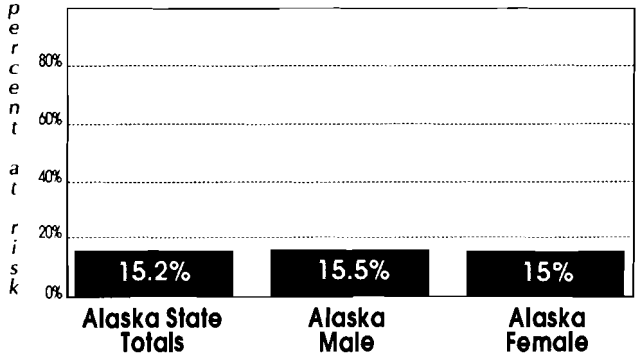


Table 11

Prevalence of No Health Care Plan by Selected Demographics

Alaska BRFSS 1997

	n	%	N	95% CI
Sex				
Male	102	15.5	713	11.5- 19.5%
Female	110	15.0	823	11.3 – 18.7%
Race				
Native	27	9	313	5.3 – 13.5%
Non-Native	179	16	1,196	12.7 – 18.9%
TOTAL	**212**	**15.2**	**1,536**	**12.5 – 17.9%**

	n	%	N
Age			
18-24	31	26	131
25-34	54	23	289
35-44	67	12	469
45-54	37	11	341
55-64	17	10	152
65+	5	2	151
Unknown or Refused	1	◆◆	12
Education			
Never Attended School	1	◆◆	4
Elementary	7	12	57
Some High School	21	29	96
High School Graduate or GED	96	21	504
Some College or Technical School	49	7	448
College Graduate	38	13	427
Unknown or Refused	—	—	9
	n	**%**	**N**
Income			
<10,000	23	48	62
10,000-14,999	19	33	83
15,000-19,999	27	30	107
20,000-24,999	31	19	126
25,000-34,999	39	15	227
35,000-49,999	32	13	304
50,000-74,999	13	4	273
>75,000	10	8	235
Unknown or Refused	18	18	128
Marital Status			
Married	100	11	871
Divorced	43	25	233
Widowed	8	10	81
Separated	4	◆◆	43
Never Married	48	25	258
Unmarried Couple	9	◆◆	49
Unknown or Refused	—	—	10
Employment			
Employed	93	12	927
Self employed	48	32	168
Out of work one year or longer	6	◆◆	32
Out of work one year or less	29	37	69
Homemaker	21	26	94
Student	2	◆◆	31
Retired or unable to work	13	5	215
Unknown	1	◆◆	9

◆◆ = Not Reported

n = Number of respondents who report having no kind of health care plan.

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup.

95% CI = 95% Confidence Interval; the range of values within which the true value of a prevalence estimate would be expected to fall within, 95% of the time.

Preventive Health Counseling Services

Has a doctor or other health professional ever talked with you about your diet or eating habits?

Yes, within the past 12 months	24.9%
Yes, within the past 3 years	8.7%
Yes, 3 or more years ago	6.5%
No	57.4%
Unknown/Refused	2.5%

Has a doctor or other health professional ever talked with you about physical activity or exercise?

Yes, within the past 12 months	30.9%
Yes, within the past 3 years	8.5%
Yes, 3 or more years ago	6.5%
No	51.3%
Unknown/Refused	2.7%

Has a doctor or other health professional ever talked with you about injury prevention, such as safety belt use, helmet, or smoke detectors?

Yes, within the past 12 months	15.5%
Yes, within the past 3 years	2.5%
Yes, 3 or more years ago	3.0%
No	75.9%
Unknown/Refused	3.1%

Has a doctor or other health professional ever talked with you about drug abuse?

Yes, within the past 12 months	8.2%
Yes, within the past 3 years	2.9%
Yes, 3 or more years ago	4.5%
No	81.9%
Unknown/Refused	2.5%

Has a doctor or other health professional ever talked with you about alcohol use?

Yes, within the past 12 months	12.0%
Yes, within the past 3 years	3.4%
Yes, 3 or more years ago	4.8%
No	77.1%
Unknown/Refused	2.5%

Has a doctor or other health professional ever advised you to quit smoking?

(of 403 respondents that currently smoke)

Yes, within the past 12 months	54.1%
Yes, within the past 3 years	12.7%
Yes, 3 or more years ago	9.4%
No	20.9%
Unknown/Refused	2.8%

Has a doctor or other health professional ever talked with you about your sexual practices?

(of 1,394 respondents that are 18-64)

Yes, within the past 12 months	15.4%
Yes, within the past 3 years	3.3%
Yes, 3 or more years ago	8.0%
No	70.2%
Unknown/Refused	3.0%

Blood Pressure Screening

Health Risk Implications

High blood pressure contributes substantially to the risks for coronary heart disease, stroke and other complications of atherosclerosis. It also causes brain, heart and kidney damage. High blood pressure not only increases risk of death from these conditions, it also increases risk of disability.

All adults should have their blood pressure checked at least every 2 years, and more frequently if measurements have been abnormal (systolic greater than 140 and/or diastolic greater than 90.) Criteria for high blood pressure among adults are an average diastolic pressure of 90 or more, or an average systolic pressure of 140 or more. Elevated readings should be confirmed by doing one or more readings on at least three separate visits.

Blood Pressure Screening In Alaska

Definition for blood pressure screening used in this survey: Respondents who report they have had their blood pressure checked within the past two years.

It is estimated that 91.8% of Alaskan adults have had their blood pressure checked by a health professional within the past two years. (National BRFSS Range 90.7 to 97.3%, National BRFSS Median 94.0%.) Of Alaskan females, 95.4% have had their blood pressure checked within the past two years and 88.5% of Alaskan males have had their blood pressure checked within the past two years.

Among Alaskan adults, 83.4% report having had their blood pressure checked within the past year. More Alaskan females (89.6%) have had their blood pressure checked within the last year than males (77.7%).

Year 2000 National Health Objectives

Increase to at least 90% the proportion of adults who have had their blood pressure measured within the preceding two years and can state whether their blood pressure was normal or high. (Objective 15.13)

Table 12

Prevalence of Blood Pressure Screening by Selected Demographics

Alaska BRFSS 1997

	n	%	N	95% CI
Sex				
Male	633	88.5	709	84.8- 92.3%
Female	790	95.4	822	93.2 – 97.6%
Race				
Native	346	97	311	95.0 – 99.2%
Non-Native	1,061	91	1,193	88.5 – 93.7%
TOTAL	**1,423**	**91.8**	**1,531**	**89.6-94.1%**

	n	%	N
Age			
18-24	122	88	131
25-34	262	90	289
35-44	429	91	469
45-54	313	89	341
55-64	142	97	152
65+	143	96	151
Unknown or Refused	12	◆◆	12
Education			
Never Attended School	4	◆◆	4
Elementary	53	92	57
Some High School	84	88	96
High School Graduate or GED	460	90	504
Some College or Technical School	408	91	448
College Graduate	406	93	427
Unknown or Refused	8	◆◆	9
Income			
<10,000	53	80	62
10,000-14,999	77	88	83
15,000-19,999	95	89	107
20,000-24,999	111	90	126
25,000-34,999	209	95	227
35,000-49,999	287	91	304
50,000-74,999	252	92	273
>75,000	223	92	235
Unknown or Refused	116	89	128
Marital Status			
Married	806	92	871
Divorced	212	93	233
Widowed	79	99	81
Separated	41	◆◆	43
Never Married	229	84	258
Unmarried Couple	46	◆◆	49
Unknown or Refused	10	◆◆	10
Employment			
Employed	852	91	927
Self employed	151	89	168
Out of work one year or longer	26	◆◆	32
Out of work one year or less	63	94	69
Homemaker	90	92	94
Student	29	◆◆	31
Retired or unable to work	204	98	215
Unknown	8	◆◆	9

◆◆ = Not Reported

n = Number of respondents who report having had their blood pressure checked within the past two years.

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup.

95% CI = 95% Confidence Interval; the range of values within which the true value of a prevalence estimate would be expected to fall within, 95% of the time.

Cholesterol Screening

Health Risk

The risk of coronary heart disease increases as the level of cholesterol increases.

The National Cholesterol Education Program recommends that blood cholesterol be measured in all adults 20 years of age and above at least once every five years and more often for patients diagnosed with high cholesterol. Measurements may be made in the non-fasting state, and high density lipoprotein (HDL) cholesterol should be measured at the same time if accurate results are available.

Further screening includes a fasting lipoprotein analysis for individuals who:

- have an HDL less than 35 mg/dl
- have a borderline total cholesterol (200-239) and an HDL of < 35 mg/dl or 2 (or more) risk factors for heart disease;
- have a total cholesterol of 240 or higher.

Cholesterol Screening in Alaska

Definition used in this survey: Respondents who report they have had their blood cholesterol checked within the past five years.

Only 62.4% of Alaskan adults reported having had their blood cholesterol checked within the past five years. (National BRFSS Range 54.9 to 79.4%, National BRFSS Median 69.1%.) It is estimated that 32.2% of Alaskan adults have never had their blood cholesterol checked. Of Alaskan adults, 27.7% of females and 36.3% of males had never had their blood cholesterol checked.

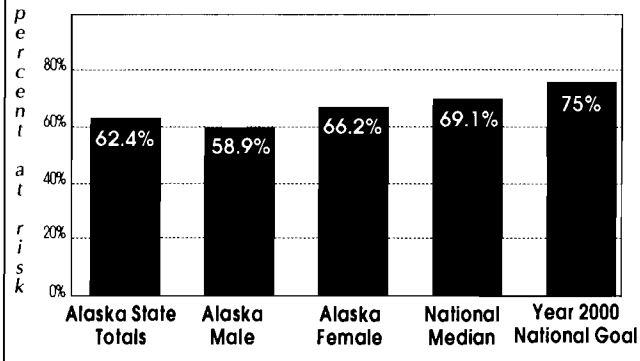
Of those persons that had ever had their blood cholesterol checked, 25.3% reported having been told their blood cholesterol was high.

Year 2000 National Health Objectives

Increase to at least 75% the proportion of adults who have ever had their blood cholesterol checked within the preceding five years. (Objective 15.14)

Increase to at least 60% the proportion of adults with high blood cholesterol who are aware of their condition and are taking action to reduce their blood cholesterol to recommended levels. (Objective 15.8)

Comparison of Risk Prevalence for Cholesterol Screening



National BRFSS Range 54.9 - 79.4%, Median 69.1%

Prevalence of Cholesterol Screening

By age and gender

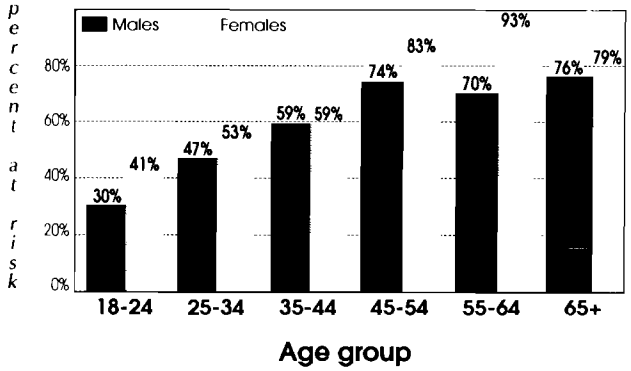


Table 13

Prevalence of Cholesterol Screening by Selected Demographics

Alaska BRFSS 1997

	n	%	N	95% CI
Sex				
Male	424	58.9	698	53.4- 64.3%
Female	537	66.2	811	61.4 - 71.1%
Race				
Native	202	51	306	43.0 – 59.0%
Non-Native	746	64	1,177	60.2 – 68.4%
TOTAL	**961**	**62.4**	**1,509**	**58.7 – 66.1%**

	n	%	N
Age			
18-24	45	35	131
25-34	136	50	289
35-44	278	59	469
45-54	256	79	341
55-64	121	81	152
65+	116	78	151
Unknown/Refused	9	◆◆	12
Education			
Never Attended School	2	◆◆	4
Elementary	31	47	57
Some High School	50	47	96
High School Graduate or GED	271	54	504
Some College or Technical School	296	66	448
College Graduate	305	70	427
Unknown/Refused	6	◆◆	9
Income			
<10,000	30	35	62
10,000-14,999	40	40	83
15,000-19,999	52	43	107
20,000-24,999	66	51	126
25,000-34,999	122	55	227
35,000-49,999	201	66	304
50,000-74,999	190	72	273
>75,000	181	72	235
Unknown/Refused	79	65	128
Marital Status			
Married	575	67	871
Divorced	153	63	233
Widowed	59	73	81
Separated	23	◆◆	43
Never Married	127	45	258
Unmarried Couple	17	◆◆	49
Unknown/Refused	7	◆◆	10
Employment			
Employed	585	62	927
Self employed	107	61	168
Out of work one year or longer	13	◆◆	32
Out of work one year or less	28	45	69
Homemaker	43	47	94
Student	19	◆◆	31
Retired or unable to work	159	74	215
Unknown	7	◆◆	9

◆◆ = Not Reported

n = Number of respondents who report having had their cholesterol checked within the past five years.

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup.

95% CI = 95% Confidence Interval; the range of values within which the true value of a prevalence estimate would be expected to fall within, 95% of the time.

Breast Cancer Screening

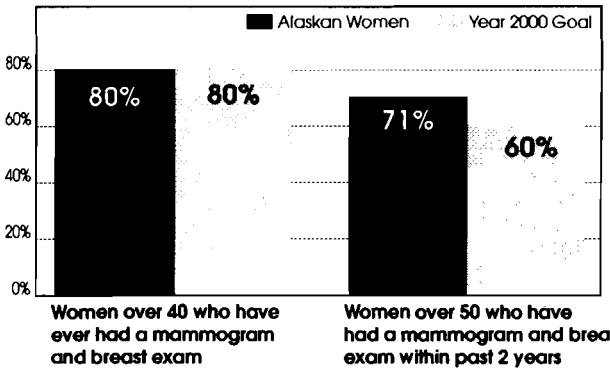
Health Risk

Breast cancer is the second leading cause of cancer death among Alaskan women and is the most commonly diagnosed cancer among Alaskan women. The risk of breast cancer increases with age.

There is general consensus among experts that routine screening every year with mammography and clinical breast examination can reduce breast cancer mortality by about one third for women ages 50 and older.

The Alaska Breast and Cervical Cancer Early Detection Program recommends that women ages 50 and older receive an annual mammogram; women aged 40-49 years should receive a mammogram every 1-2 years based on provider/patient counseling A clinical breast exam is recommended every 1-3 years for women aged 20-29, and annually for women aged 30 and older.

Mammography and Breast Exams



Breast Cancer Screening in Alaska

Definitions used in this survey:

Clinical Breast Exams: *A clinical breast exam is when the breast is felt for lumps by a doctor or other medical professional.* Of women aged 18 and older, 91% had ever had a clinical breast exam. Of those women who had ever had a breast exam, 81% had one within the past year and an additional 9% had one in the previous year.

Mammography: *A mammogram is an x-ray of the breast to look for cancer.* Of women aged 40 and older, 84.2% had ever had a mammogram (National BRFSS Range 74.4 to 89.3%, National BRFSS Median 84.4%).

Of all the women 18 and older, 50% had ever had a mammogram. Of those women 18 and older who ever had a mammogram, 90.0% reported their last one was done as part of a routine checkup, 9.3% reported it was done because of a breast problem and 0.7% because they had breast cancer.

In 1997, 80% of women 40 and older, had ever had both a mammogram and a breast exam (National BRFSS Range 67.7 to 86.3%, National BRFSS Median 79.6%). Of the women 50 and older, 71% had a mammogram and a breast exam in the past two years (National BRFSS Range 48.3 to 76.0%, National BRFSS Median 66.4%).

Year 2000 National Health Objective

Increase to at least 80% the proportion of women aged 40 and older who have ever received a clinical breast exam and a mammogram, and to at least 60% those aged 50 and older who have received them within the preceding one to two years. (Objective 16.11)

Cervical Cancer Screening

Health Risk

Cervical cancer now kills an estimated 4,800 women annually in the United States, and about 12,800 new cases of cervical cancer are expected in 1999. Cervical cancer is the fifth commonly diagnosed cancer among Alaskan women.

The incidence of invasive cervical cancer has steadily decreased over the years. Cervical carcinoma in situ, (a precancerous condition) is now more frequent than invasive cancer, especially in women under 50.

The pap test is highly effective in detecting early cancer of the uterine cervix and greatly reduces the risk of mortality from invasive cervical cancer.

The Alaska Breast and Cervical Cancer Early Detection Program recommends a pelvic examination with a pap test for all women every 1-3 years beginning at age 18 or at the onset of sexual activity.

Cervical Cancer Screening in Alaska

Definition used in this survey: Females with intact cervix-uteri who report they have had a pap smear within the past three years.

Of Alaskan females aged 18 and older (with intact cervix-uteri), 95.9% had ever had a pap test (National BRFSS Range 81.8 to 96.5%, National BRFSS Median 94.9%). According to this definition, 90.3% of women ages 18 and older (with intact cervix-uteri) had a pap test within the past three years (National BRFSS Range 71.8 to 92.3%, National BRFSS Median 84.7%).

Of the women aged 18 and older who had ever had a pap test, 79% were in the last year, 10.2% in the last one to two years, 5.4% within the past two to five years and 4.9% were more than five years ago.

Year 2000 National Health Objective

Increase to at least 95% the proportion of women aged 18 and older with uterine cervix who have ever received a pap test, and to at least 85% those who received a pap test within the preceding one to three years. (Objective 16.12)

Colorectal Cancer Screening

Health Risk

An estimated 56,600 Americans will die from cancers of the colon or rectum and 129,400 new cases will be diagnosed in 1999.

In Alaska, colorectal cancer is the second leading cause of cancer death and the third most commonly diagnosed cancer among men and women.

With early detection and treatment improvements, stage specific survival rates for cancers of the colon and rectum have been improving.

The American Cancer Society recommends a stool blood test every year beginning at age 50; and sigmoidoscopy is recommended every three to five years beginning at age 50.

Colorectal Cancer Screening In Alaska

Among Alaskan adults 40 years and older, 23.2% ever had a blood test using a home kit. Of adults 40 years and older that had a blood test using a home kit, 47.3% had it within the past year. Of adults 50 years and older, 24.3% had a blood stool test at home within the past two years.

A sigmoidoscopy or proctoscopy is when a tube is inserted in the rectum to view the bowel for signs of cancer and other health problems. Among Alaskan adults aged 40 and older,27.2% had ever had a sigmoidoscopy or proctoscopy. Of those aged 50 and older,41% had ever had a sigmoidoscopy or a proctoscopy (National BRFSS Range 22.3% to 51.6%, National BRFSS Median 40.8%).

Year 2000 National Health Objectives

Increase to at least 50% the proportion of people aged 50 and older who have received fecal occult blood testing within the preceding 1 to 2 years, and to at least 40 percent those who have ever received proctosigmoidoscopy. (Objective 16.13)

Pneumonia and Influenza Immunizations

Health Risk

Pneumococcal pneumonia infects the lungs, causes difficulty in breathing and can be fatal. Older persons are two to three times more likely to get this type of pneumonia than the general population. In Alaska, immunization is recommended for anyone age 55 and over and for those of any age with chronic illnesses. In Alaska, a routine 6 year booster is recommended.

Influenza (flu) can be dangerous to the elderly, those who are debilitated, and those with heart or lung disease because it lowers the person's resistance to other infections that may be fatal. The elderly are most likely to be seriously ill or to die from the flu or related complications. People over 65 years old and those with chronic illnesses should be vaccinated each year in the fall or early winter.

Immunizations in Alaska

Among Alaskan adults aged 65 and older, 58% had had a flu shot in the past twelve months (National BRFSS Range 41.5 to 74.4%, National BRFSS Median 65.9%). Among males (65 and older) 46% had one in the past twelve months and among females (65 and older) 70% had one in the past twelve months.

Among Alaskan adults aged 65 and older, 39% had ever had a pneumonia vaccination (National BRFSS Range 32.2 to 59.4%, National BRFSS Median 45.8%. Among males (65 and older) 37% had ever had a pneumonia vaccination and among females (65 and older) 42% had ever had one.

Year 2000 National Health Objectives

Increase pneumococcal pneumonia and influenza immunization among institutionalized chronically ill or older people: at least 80%. (Objective 20.11)

HIV/AIDS Beliefs and Opinions

Over 600,000 people in the United States have been diagnosed with acquired immunodeficiency syndrome (AIDS) since the disease was first recognized. It is estimated that 650,000 - 900,000 Americans are presently infected with human immunodeficiency virus (HIV, the virus that causes AIDS). In 1997, AIDS ranked as the 14th leading cause of death in the United States.

From January 1, 1982 through August 31, 1999, a cumulative total of 692 cases of HIV infection were reported among individuals in Alaska. Of the 692 cases of HIV infection, 500 individuals had AIDS and 238 are known to have died.

AIDS information and education programs have increased public knowledge and influenced attitudes about HIV and AIDS, although some misinformation about HIV transmission persists. Identification of newly infected persons is important to understanding disease transmission and to targeting prevention activities.

A critical step in reducing new HIV infections is for people to understand and use information about how HIV is transmitted to assess their own risks for exposure. When people recognize their risks, they can learn ways to change their behaviors to reduce their risk of becoming infected. Individuals at high risk should seek HIV counseling and testing. Infected individuals may seek medical care to preserve their health, and may alter those behaviors likely to transmit HIV infection to others.

Behavioral Risk Factor Survey

In 1997, survey respondents aged 18-64 were asked the HIV and AIDS questions (1,394 respondents).

Many (64.1%) Alaskan adults believed their chance of getting infected with HIV were none, 27.6% thought their chances were low, 3.7% thought their chances were medium and 1.9% thought their chances were high. Among Alaskan adults 8.6% reported having changed their sexual behavior in the last 12 months, due to their knowledge of HIV. Of those who changed their sexual behavior, 80.7% reported decreasing their number of sex partners or becoming abstinent, 77.7% reported having sexual intercourse with the same partner, and 42.9% reported always using condoms for protection.

Among Alaskan adults, 51.9% had been tested for HIV. The most common reasons for being tested were to see if infected, due to pregnancy, as part of a routine check up and for military service. The most common places of HIV testing were private doctor, military site and hospital or emergency room.

Among Alaska adults, 63.8% reported that if they had a child in school, AIDS education should begin in school between first and the sixth grade. Most (86.6%) adults said that if they had a sexually active teenager, they would encourage him or her to use a condom.

In 1997, respondents aged 18-49 were asked additional questions related to sexual behavior and their risk for sexually transmitted disease.

Of the 1,097 respondents (aged 18-49), 11.3% reported having no sexual intercourse during the past year, 74.2% reported having had sexual intercourse with one partner during the past year, and 9.2% reported having sexual intercourse with more than one partner.

Among those respondents who were sexually active, 20.7% reported using a condom during the last sexual intercourse. Among those who used a condom, 49% used a condom to prevent both disease and pregnancy, 5% used a condom to prevent disease and 37% used a condom to prevent pregnancy.

Respondents who were sexually active were asked how effective they thought a properly used condom was to keep from getting HIV through sexual activity. Forty two percent (42.5%) thought it was very effective, 43.9% thought it was somewhat effective and 3.9% thought it was not at all effective. Others were not sure or refused.

Among respondents who were sexually active, 11% reported having 1 new sex partner, 4.1% reported having 2 - 3 new partners and 1.8% reported having more than 4 new sex partners within the last 12 months. The majority (76.3%) reported having no new sex partners within the last 12 months.

Among respondents who were sexually active, 3.7% percent reported being treated for a sexually transmitted disease in the past five years. Among respondents who were sexually active, 90.4% estimated that they were not at risk and 4% estimated that they were at risk for getting infected with HIV.

Alaskan Beliefs and Opinions About AIDS ◆

What are your chances of getting the AIDS virus?

High	1.9%
Medium	3.7%
Low	27.6%
None	64.1%
Unknown/Refused	2.7%

Have you ever had your blood tested for the AIDS virus infection?

Yes	51.9%
No	44.2%
Unknown/Refused	3.8%

What was the main reason you had your last AIDS blood test?

(of 636 respondents tested)

To see if infected	22.6%
Routine checkup	16.7%
Military	13.2%
Pregnancy test	11.7%
Life Insurance	8.3%
Employment	3.7%
Blood donation process	3.6%
Hospitalization	3.4%
Occupational exposure	3.3%
Health Insurance	2.2%
Illness	1.9%
Marriage license	1.7%
Referred by Doctor	1.6%
Immigration	0.6%
Referred by sex partner	0.3%
Other	3.7%
Unknown/Refused	1.4%

Where did you have your last blood test for the HIV virus?

(of 636 respondents tested)

Private doctor	22.4%
Military site	19.4%
Hospital or emergency room	18.7%
Community health clinic	8.2%
Insurance company clinic	3.7%
Family planning or prenatal clinic	2.9%
Health Department or public clinic	2.4%
At home/health worker	2.4%
Company clinic/Industry	1.8%
Blood bank	1.5%
AIDS or STD clinic (test site)	0.7%
In jail or prison	0.1%
Other	3.4%
Unknown/Refused	5.2%

When was your last test?

(of 636 respondents tested)

1980 - 1984	0.2%
1985 - 1988	3.0%
1989 - 1992	15.8%
1993 - 1996	75.3%
Unknown/Refused	5.7%

Did you receive the results of your last HIV test?

(of 636 respondents tested)

Yes	79.5%
No	15.7%
Unknown/Refused	4.8%

◆ *Denominator equals 1,394 respondents aged 18-64.*

Did you receive counseling after getting the results of your last test?
(of 522 respondents who were tested and received their results)

Yes	24.8%
No	74.0%
Unknown/Refused	1.3%

If you had a child in school, in what grade do you think he or she should begin AIDS education?

Kindergarten	7.0%
1st - 3rd grade	20.8%
4th - 6th grade	43.0%
7th - 9th grade	12.5%
10th - 12th grade	2.0%
Never	3.2%
Don't know or refused	11.6%

If you had a sexually active teenager, would you encourage him or her to use a condom?

Yes	86.6%
No	2.2%
Would give other advice	7.5%
Unknown/Refused	3.6%

Due to what you know about HIV, have you changed your sexual behavior in the last 12 months?

Yes	8.6%
No	86.9%
Unknown/Refused	4.5%

Unintentional Injuries and Child Safety

In 1997, unintentional injuries constituted the fifth leading cause of death in the United States and the third leading cause of death in Alaska. Unintentional injuries was the leading cause of death among Alaskan children aged 1-17. Motor vehicle injuries was the leading cause of death among children in Alaska. Other causes of unintentional injury deaths among children include firearms, air transport, drowning, fires/ burns and other.

In 1997, it is estimated that 312 children (nationwide) under age 5 were saved as a result of child restraint use. An estimated 3,894 lives were saved by child restraints from 1975 through 1997.

When riding in a car, how often does the oldest child (5 through 15 years of age) use a safety belt?

(denominator = 587)

Always	77.3%
Nearly always	10.8%
Sometimes	3.9%
Seldom or never	4.7%
Never ride in car	2.6%
Unknown/Refused	0.8%

When riding in a car, how often does the oldest child (4 years or younger) use a car safety seat?

(denominator = 112)

Always	90.1%
Nearly always	2.9%
Sometimes	2.0%
Seldom or never	2.1%
Never rides in a car	0.3%
Unknown/Refused	2.7%

When riding on a bicycle, how often does the oldest child (5 through 15 years of age) use a helmet?

(denominator = 587)

Always	30.5%
Nearly always	12.2%
Sometimes	9.2%
Seldom or never	36.6%
Never rides a bicycle	10.6%
Unknown/Refused	0.9%

When was the last time the smoke detectors in your home were tested?

(denominator = 1,545)

Within the past month	36.0%
Within the past 1-6 months	36.0%
Within the past 6-12 months	7.2%
Over one year	7.5%
Never	8.1%
No smoke detectors	1.4%
Unknown/Refused	3.7%

Risks by Region

This section provides summary tables of the prevalence of behavioral health risks for each of the four BRFSS regions in Alaska (see Appendix B). This section also provides a comparison of risk factors by region.

Please note the following:

- Prevalence estimates for each region are weighted to the 18 and older population of the respective region. (See Appendix D)
- Prevalence estimates are based on denominators of less than 500 (approximately 384) and are therefore rounded to the nearest whole percent.
- It is important to consider the confidence intervals when comparing prevalence estimates. Generally speaking, the smaller the sample size, the wider the range of values within which the true prevalence is believed to be.

Definitions for Tables 14 – 24

n = Number of respondents at risk.

% = This is a weighted (adjusted) percentage of the population at risk in this region, in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup, in this region.

95% C.I. = 95% Confidence Interval. The range of values within which the true value of a prevalence estimate would be expected to fall within, 95% of the time.

1997 BRFSS Sampling Regions

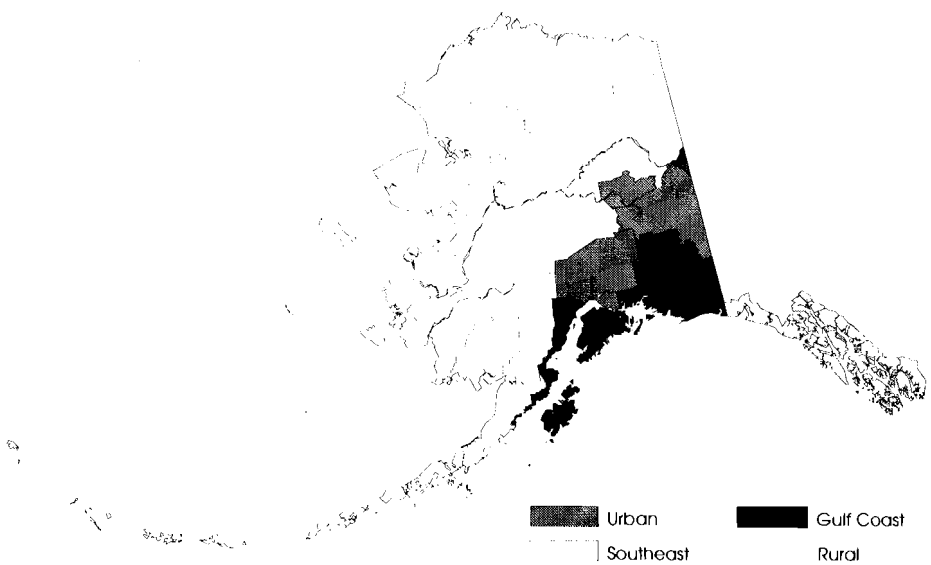


Table 14

Regional Summary
Prevalence of Select Risk Factors
Urban (Region 1)

Risk Factor	n	%	N	95% C.I.
Acute (Binge) Drinking				
Male	40	24	180	16.8 – 30.8
Female	15	7	213	3.1 – 10.1
Total	55	15	393	11.3 – 19.4
Chronic Drinking				
Male	11	7	173	2.3 – 10.7
Female	2	1	212	0.0 – 3.0
Total	13	4	385	1.6 – 6.2
Overweight				
Male	47	28	181	20.3 –34.7
Female	77	39	204	31.4 – 45.9
Total	124	33	385	27.7 – 38.0
High Blood Pressure				
Male	40	19	181	13.4 – 25.4
Female	59	28	213	21.4 – 34.5
Total	99	24	394	19.1 – 28.0
Safety Belt Non-Use				
Male	58	35	182	27.1 - 42.6
Female	56	25	213	18.8 - 31.2
Total	114	30	395	25.0 - 35.1
Current Smoking				
Male	44	26	182	19.1 - 33.3
Female	58	25	213	19.3 - 31.6
Total	102	26	395	21.1 - 30.6
No Health Care Plan				
Male	26	15	182	9.3 – 21.0
Female	27	15	212	9.2 – 19.8
Total	53	15	394	10.9 – 18.8

Table 15

Regional Summary
Prevalence of Select Risk Factors
Gulf Coast (Region 2)

Risk Factor	n	%	N	95% C.I.
Acute (Binge) Drinking				
Male	47	30	167	22.2 – 38.0
Female	17	9	204	4.2 – 13.6
Total	64	20	371	15.3 – 25.2
Chronic Drinking				
Male	11	6	167	1.9 – 9.3
Female	3	1	204	0.0 – 1.7
Total	14	3	371	1.3 – 5.4
Overweight				
Male	60	35	170	26.7 – 42.5
Female	68	33	193	25.7 – 40.0
Total	128	34	363	28.4 – 39.2
High Blood Pressure				
Male	40	21	173	14.6 – 27.8
Female	42	20	207	13.6 – 25.7
Total	82	21	380	16.0 – 25.0
Safety Belt Non-Use				
Male	73	43	173	34.8 – 51.3
Female	63	31	208	23.5 – 37.8
Total	136	37	381	31.7 – 42.9
Current Smoking				
Male	56	31	173	23.7 – 38.7
Female	56	29	208	21.6 – 35.5
Total	112	30	381	24.8 – 35.1
No Health Care Plan				
Male	34	22	173	15.0 – 29.0
Female	41	23	208	16.5 – 30.0
Total	75	23	381	17.7 – 27.4

Table 16

Regional Summary
Prevalence of Select Risk Factors
Southeast (Region 3)

Risk Factor	n	%	N	95% C.I.
Acute (Binge) Drinking				
Male	42	26	183	18.7 – 33.8
Female	14	7	196	2.7 - 11.2
Total	56	17	379	12.4 – 21.6
Chronic Drinking				
Male	19	11	184	5.8 - 16.9
Female	4	2	196	0.0 - 3.0
Total	23	7	380	3.6 - 9.7
Overweight				
Male	63	36	186	28.5 - 44.0
Female	76	38	185	30.7 - 46.1
Total	139	37	371	31.7 - 42.7
High Blood Pressure				
Male	43	23	185	16.5 – 29.9
Female	36	16	198	10.7 – 21.2
Total	79	20	383	15.4 - 24.1
Safety Belt Non-Use				
Male	79	42	186	34.1 – 49.8
Female	67	33	199	25.5 – 39.7
Total	146	38	385	32.1 – 42.8
Current Smoking				
Male	36	21	186	14.2 – 27.4
Female	42	21	199	14.8 – 27.4
Total	78	21	385	16.3 – 25.5
No Health Care Plan				
Male	22	10	185	5.5 – 15.3
Female	18	9	199	4.6 – 13.2
Total	40	10	384	6.4 – 12.9

Table 17

Regional Summary
Prevalence of Select Risk Factors
Rural (Region 4)

Risk Factor	n	%	N	95% C.I.
Acute (Binge) Drinking				
Male	45	24	164	16.4 – 31.7
Female	25	13	206	7.0 – 18.8
Total	70	19	370	13.9 – 23.7
Chronic Drinking				
Male	7	3	156	0.5 – 5.2
Female	2	<1	201	0.0 – 0.9
Total	9	2	357	0.4 – 3.0
Overweight				
Male	77	40	171	31.1 – 49.5
Female	80	38	193	30.1 – 46.6
Total	157	39	364	33.2 – 45.7
High Blood Pressure				
Male	43	21	176	14.4 – 28.0
Female	55	23	206	16.6 – 30.0
Total	98	22	382	17.3 – 27.0
Safety Belt Non-Use				
Male	99	58	176	48.9 – 67.3
Female	99	45	206	36.7 - 53.1
Total	198	52	382	45.8 - 58.7
Current Smoking				
Male	51	36	175	26.0 – 45.6
Female	60	31	207	23.2 - 39.0
Total	111	34	382	27.2 – 40.2
No Health Care Plan				
Male	20	16	173	7.5 – 23.5
Female	24	16	204	9.1 – 22.9
Total	44	16	377	10.3 – 21.1

Table 18

Acute (Binge) Drinking by Region

Region	n	%	N	95% C.I.
Urban (Region 1)				
Male	40	24	180	16.8 – 30.8
Female	15	7	213	3.1 – 10.1
Total	55	15	393	11.3 – 19.4
Gulf Coast (Region 2)				
Male	47	30	167	22.2 – 38.0
Female	17	9	204	4.2 – 13.6
Total	64	20	371	15.3 - 25.2
Southeast (Region 3)				
Male	42	26	183	18.7 - 33.8
Female	14	7	196	2.7 - 11.2
Total	56	17	379	12.4 – 21.6
Rural (Region 4)				
Male	45	24	164	16.4 – 31.7
Female	25	13	206	7.0 – 18.8
Total	70	19	370	13.9 – 23.7

Comparison of Risk Prevalence for Acute (Binge) Drinking by Region

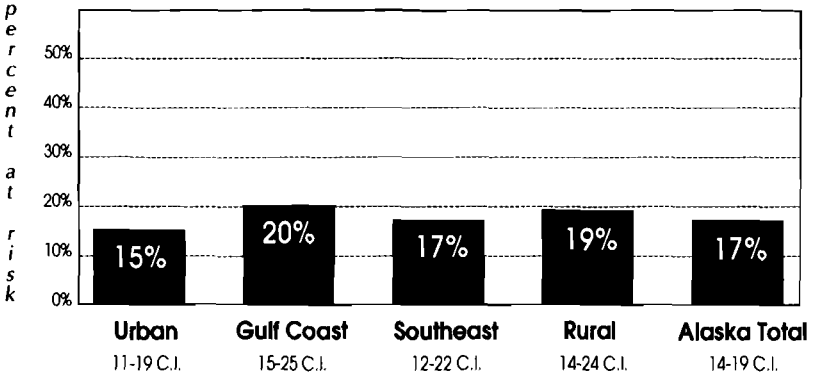


Table 19

Chronic Drinking by Region

Region	n	%	N	95% C.I.
Urban (Region 1)				
Male	11	7	173	2.3 – 10.7
Female	2	1	212	0.0 – 3.0
Total	13	4	385	1.6 – 6.2
Gulf Coast (Region 2)				
Male	11	6	167	1.9 – 9.3
Female	3	1	204	0.0 – 1.7
Total	14	3	371	1.3 – 5.4
Southeast (Region 3)				
Male	19	11	184	5.8 – 16.9
Female	4	2	196	0.0 – 3.0
Total	23	7	380	3.6 – 9.7
Rural (Region 4)				
Male	7	3	156	0.5 – 5.2
Female	2	<1	201	0.0 – 0.9
Total	9	2	357	0.4 – 3.0

Comparison of Risk Prevalence for Chronic Drinking

by Region

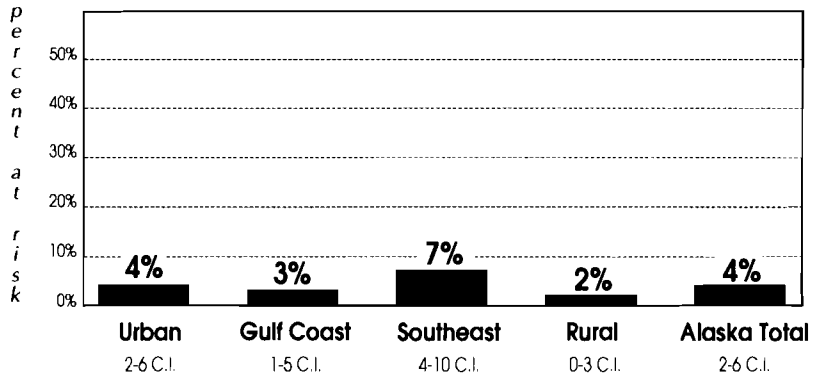


Table 20

High Blood Pressure by Region

Region	n	%	N	95% C.I.
Urban (Region 1)				
Male	40	19	181	13.4 – 25.4
Female	59	28	213	21.4 – 34.5
Total	99	24	394	19.1 – 28.0
Gulf Coast (Region 2)				
Male	40	21	173	14.6 – 27.8
Female	42	20	207	13.6 – 25.7
Total	82	21	380	16.0 – 25.0
Southeast (Region 3)				
Male	43	23	185	16.5 - 29.9
Female	36	16	198	10.7 – 21.2
Total	79	20	383	15.4 – 24.1
Rural (Region 4)				
Male	43	21	176	14.4 – 28.0
Female	55	23	206	16.6 – 30.0
Total	98	22	382	17.3 – 27.0

Comparison of Risk Prevalence for High Blood Pressure by Region

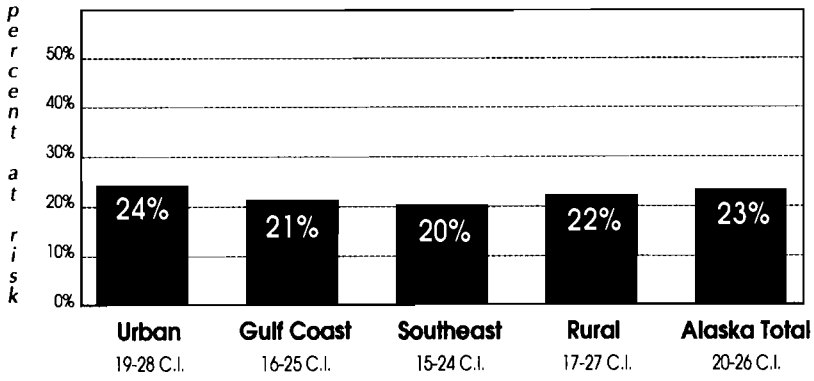


Table 21

Overweight by Region

Region	n	%	N	95% C.I.
Urban (Region 1)				
Male	47	28	181	20.3 – 34.7
Female	77	39	204	31.4 – 45.9
Total	124	33	385	27.7 – 38.0
Gulf Coast (Region 2)				
Male	60	35	170	26.7 – 42.5
Female	68	33	193	25.7 – 40.0
Total	128	34	363	28.4 – 39.2
Southeast (Region 3)				
Male	63	36	186	28.5 –44.0
Female	76	38	185	30.7 – 46.1
Total	139	37	371	31.7 – 42.7
Rural (Region 4)				
Male	77	40	171	31.1 – 49.5
Female	80	38	193	30.1 – 46.6
Total	157	39	364	33.2 – 45.7

Comparison of Risk Prevalence for Overweight

by Region

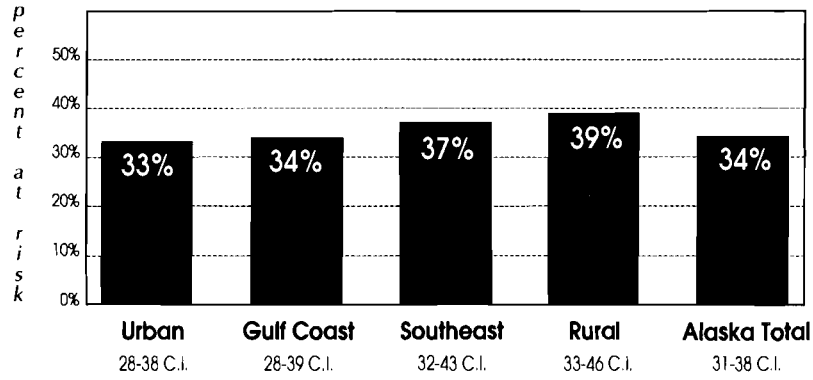


Table 22

Lack of Safety Belt Non-Use by Region

Region	n	%	N	95% C.I.
Urban (Region 1)				
Male	58	35	182	27.1 – 42.6
Female	56	25	213	18.8 – 31.2
Total	114	30	395	25.0 – 35.1
Gulf Coast (Region 2)				
Male	73	43	173	34.8 - 51.3
Female	63	31	208	23.5 - 37.8
Total	136	37	381	31.7 - 42.9
Southeast (Region 3)				
Male	79	42	186	34.1 – 49.8
Female	67	33	199	25.5 – 39.7
Total	146	38	385	32.1 – 42.8
Rural (Region 4)				
Male	99	58	176	48.9 - 67.3
Female	99	45	206	36.7 - 53.1
Total	198	52	382	45.8 – 58.7

Comparison of Risk Prevalence for Safety Belt Non-Use by Region

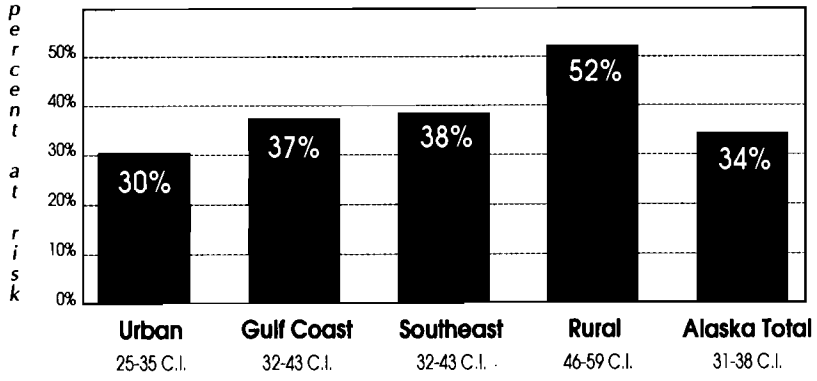


Table 23

Current Smoking by Region

Region	n	%	N	95% C.I.
Urban (Region 1)				
Male	44	26	182	19.1 – 33.3
Female	58	25	213	19.3 – 31.6
Total	102	26	395	21.1 - 30.6
Gulf Coast (Region 2)				
Male	56	31	173	23.7 - 38.7
Female	56	29	208	21.6 - 35.5
Total	112	30	381	24.8 – 35.1
Southeast (Region 3)				
Male	36	21	186	14.2 – 27.4
Female	42	21	199	14.8 – 27.4
Total	78	21	385	16.3 – 25.5
Rural (Region 4)				
Male	51	36	175	26.0 - 45.6
Female	60	31	207	23.2 - 39.0
Total	111	34	382	27.2 - 40.2

Comparison of Risk Prevalence for Current Smoking

by Region

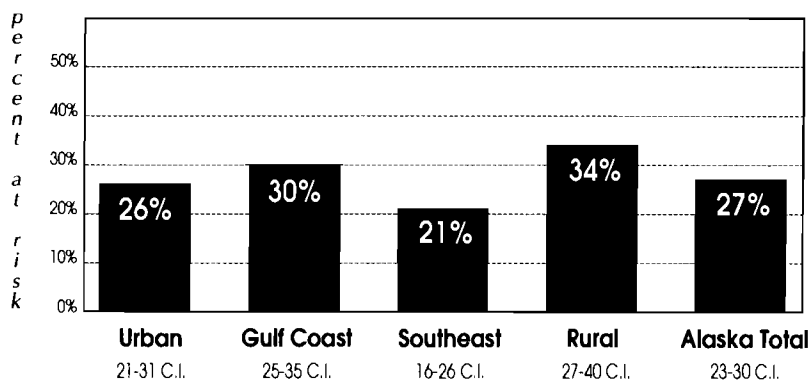


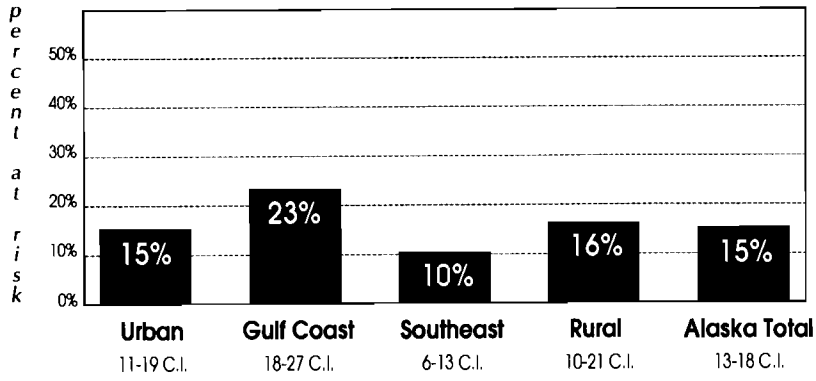
Table 24

No Health Care Plan by Region

Region	n	%	N	95% C.I.
Urban (Region 1)				
Male	26	15	182	9.3 – 21.0
Female	27	15	212	9.2 – 19.8
Total	53	15	394	10.9 – 18.8
Gulf Coast (Region 2)				
Male	34	22	173	15.0 – 29.0
Female	41	23	208	16.5 – 30.0
Total	75	23	381	17.7 – 27.4
Southeast (Region 3)				
Male	22	10	185	5.5 – 15.3
Female	18	9	199	4.6 – 13.2
Total	40	10	384	6.4 – 12.9
Rural (Region 4)				
Male	20	16	173	7.5 – 23.5
Female	24	16	204	9.1 – 22.9
Total	44	16	377	10.3 – 21.1

Comparison of Risk Prevalence for No Health Care

by Region



Appendix A: BRFSS Definitions

Acute (Binge) Drinking Respondents who report having five or more drinks on an occasion, one or more times in the past month.

Blood Pressure Respondents who report they have had their blood pressure checked within the past two years.

Cholesterol Respondents who report they have had their blood cholesterol checked within the past five years.

Chronic Drinking Respondents who report an average of 60 or more alcoholic drinks a month.

Current Smoking Respondents who report ever smoking 100 cigarettes and smoke now (regularly and irregularly).

Diabetes Awareness Respondents who report they were told by a doctor that they have diabetes.

Drinking and Driving Respondents who report having driven after having too much to drink, one or more times in the past month.

High Blood Pressure Respondents who report they have ever been told they have hypertension (high blood pressure).

Mammogram Females 40 and older who report they ever had a mammogram.

Mammogram (2) Females 50 and older who report they have had a mammogram within the past two years.

Mammogram and Clinical Breast Exam Females 40 and older who report that they have ever had a mammogram and a breast exam.

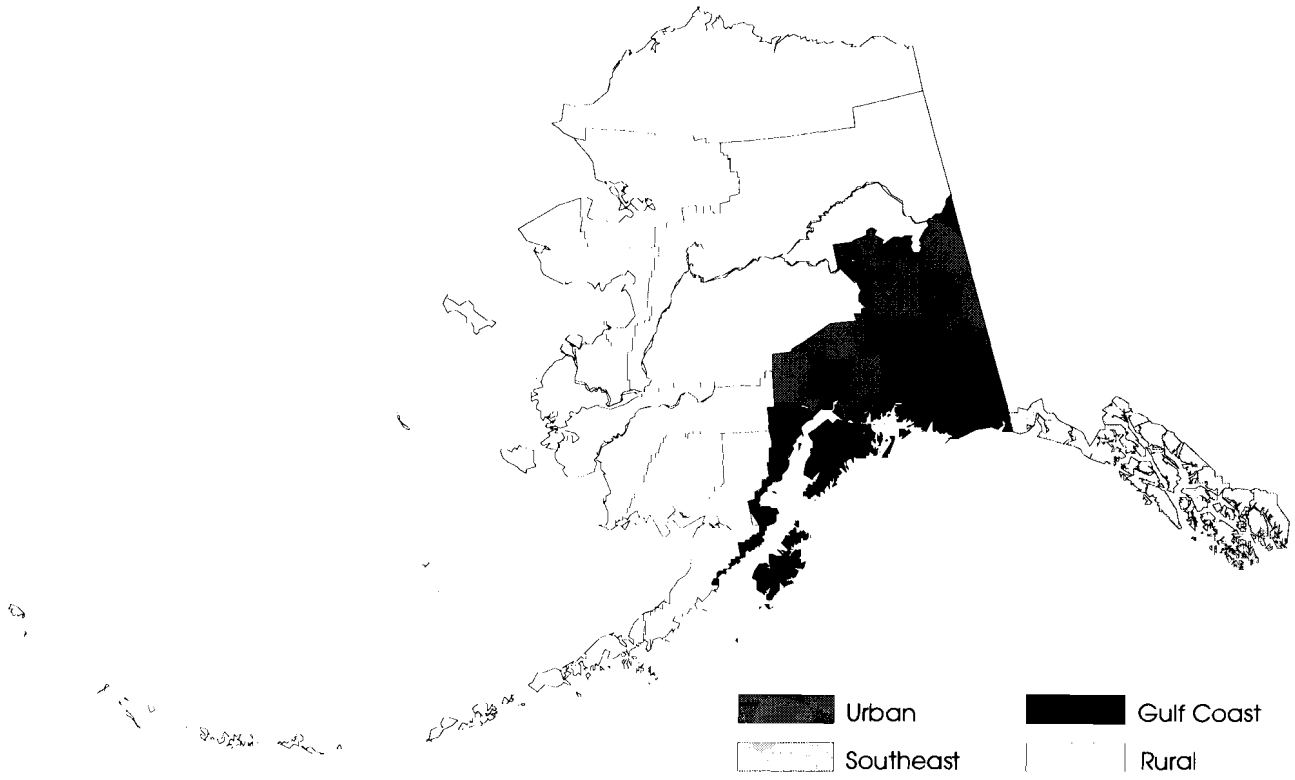
Mammogram and Clinical Breast Exam (2) Females 50 and older who report they have had a mammogram and a breast exam in the past two years.

Overweight Females with body mass index [weight in kilograms divided by height in meters squared (W/H**2)]>=27.3 and males with body mass index >= 27.8.

Pap Test Females with intact cervix-uteri who report they have ever had a pap smear test.

Safety Belt Non-Use Respondents who report that they nearly always, sometimes, seldom or never wear seat belts (i.e. they do not always wear a safety belt).

Appendix B: 1997 BRFSS Sampling Regions



The Alaska sample was stratified into four regions based on common demographics:

	Population 18 years and older ◆	Number of interviews conducted
Urban (Region 1) Anchorage, Fairbanks & vicinity	277,053	395
Gulf Coast (Region 2) Kenai, Kodiak, Valdez, Cordova & vicinity	50,803	381
Southeast (Region 3) All of Southeast Alaska	52,547	385
Rural (Region 4) All other nonurban areas of Alaska	43,594	384
STATEWIDE TOTAL	**423,997**	**1,545**

◆ Claritas. 1997 Race by Age by Sex Report for All Counties Nationwide. Ithaca, New York.

Appendix C: Alaska BRFSS Sample Design ◆

	18 years and older
Urban (Region 1)	
Anchorage Borough	178,695
Fairbanks-Northstar	58,843
Matanuska-Susitna	35,742
Southeast Fairbanks	3,773
TOTAL	**277,053**
Gulf Coast (Region 2)	
Kenai Peninsula	32,803
Kodiak Island	10,595
Valdez Cordova	7,405
TOTAL	**50,803**
Southeast (Region 3)	
Haines Borough	1,584
Juneau Borough	21,505
Ketchikan Gateway	10,365
Prince of Wales	4,990
Sitka	5,947
Skagway, Angoon, Yakutat	3,295
Wrangell, Petersburg	4,861
TOTAL	**52,547**
Rural (Region 4)	
Aleutians East	1,745
Aleutian Islands	4,040
Bethel Census	9,902
Bristol Bay Borough	914
Dillingham	2,802
Lake and Peninsula Borough	1,063
Nome	5,661
North Slope Borough	4,550
Northwest Arctic	3,845
Wade Hampton	3,834
Yukon-Koyukuk	5,238
TOTAL	**43,594**
STATEWIDE TOTAL	**423,997**

◆ Claritas. 1997 Race by Age by Sex Report for All Counties Nationwide. Ithaca, New York.

Appendix D: Alaska BRFSS Region Description ◆

Age	Total Population	Male	Female
Urban (Region 1)			
18-24	35,780	19,643	16,137
25-34	67,839	34,655	33,184
35-44	76,178	39,576	36,602
45-54	50,118	25,517	24,601
55-64	26,358	13,609	12,749
65+	20,780	9,750	11,030
TOTAL	**277,053**	**142,750**	**134,303**
Gulf Coast (Region 2)			
18-24	5,741	3,200	2,541
25-34	11,013	5,939	5,074
35-44	14,758	8,045	6,713
45-54	9,658	5,054	4,604
55-64	5,104	2,759	2,345
65+	4,529	2,279	2,250
TOTAL	**50,803**	**27,267**	**23,527**
Southeast (Region 3)			
18-24	5,673	3,074	2,599
25-34	11,424	6,006	5,418
35-44	14,780	7,782	6,998
45-54	10,078	5,368	4,710
55-64	5,367	2,821	2,546
65+	5,225	2,441	2,784
TOTAL	**52,547**	**27,492**	**25,055**
Rural (Region 4)			
18-24	7,153	4,067	3,086
25-34	11,434	6,558	4,876
35-44	10,908	6,110	4,798
45-54	6,521	3,656	2,865
55-64	3,908	2,112	1,796
65+	3,670	1,847	1,823
TOTAL	**43,594**	**24,350**	**19,244**

◆ Claritas. 1997 Race by Age by Sex Report for All Counties Nationwide. Ithaca, New York.

Appendix E: Alaska BRFSS 1997 Survey Population

by Age and Gender

Age	Male	Female	Total Population
Urban (Region 1)			
18-24	19	30	49
25-34	38	44	82
35-44	51	56	107
45-54	39	43	82
55-64	18	21	39
65+	14	19	33
Unknown	3	0	3
TOTAL	**182**	**213**	**395**
Gulf Coast (Region 2)			
18-24	13	14	27
25-34	27	44	71
35-44	54	68	122
45-54	35	44	79
55-64	26	15	41
65+	15	23	38
Unknown	3	0	3
TOTAL	**173**	**208**	**381**
Southeast (Region 3)			
18-24	16	13	29
25-34	38	34	72
35-44	51	63	114
45-54	43	44	87
55-64	15	18	33
65+	22	25	47
Unknown	1	2	3
TOTAL	**186**	**199**	**385**
Rural (Region 4)			
18-24	11	15	26
25-34	26	38	64
35-44	62	64	126
45-54	39	54	93
55-64	20	19	39
65+	17	16	33
Unknown	1	2	3
TOTAL	**176**	**208**	**384**

Appendix F: Alaska BRFSS 1997 Survey Population

by Age and Race

Age	Native	Non-Native	Unknown	Total
Urban (Region 1)				
18-24	4	44	1	49
25-34	5	75	2	82
35-44	12	94	1	107
45-54	3	78	1	82
55-64	2	37	0	39
65+	2	31	0	33
Unknown	0	3	0	3
TOTAL	**28**	**362**	**5**	**395**
Gulf Coast (Region 2)				
18-24	3	23	1	27
25-34	8	63	0	71
35-44	6	114	2	122
45-54	10	67	2	79
55-64	5	35	1	41
65+	6	32	0	38
Unknown	0	2	1	3
TOTAL	**38**	**336**	**7**	**381**
Southeast (Region 3)				
18-24	11	17	1	29
25-34	9	61	2	72
35-44	13	99	2	114
45-54	4	82	1	87
55-64	6	27	0	33
65+	5	42	0	47
Unknown	0	2	1	3
TOTAL	**48**	**330**	**7**	**385**
Rural (Region 4)				
18-24	18	7	1	26
25-34	39	24	1	64
35-44	58	66	2	126
45-54	42	50	1	93
55-64	26	12	1	39
65+	21	12	0	33
Unknown	1	0	2	3
TOTAL	**205**	**171**	**8**	**384**

Appendix G: Telephone Coverage in Alaska ◆

	Occupied Housing	Number with Phones	Percent Total
Urban (Region 1)			
Anchorage Borough	82,702	79,890	96.59
Fairbanks-Northstar	26,693	24,960	93.50
Matanuska-Susitna	13,394	12,357	92.25
Southeast Fairbanks	1,909	1,521	79.67
TOTAL	**124,698**	**118,728**	**95.21**
Gulf Coast (Region 2)			
Kenai Peninsula	14,250	12,858	90.23
Kodiak Island	4,083	3,752	91.89
Valdez Cordova	3,425	2,834	82.74
TOTAL	**21,758**	**19,444**	**89.36**
Southeast (Region 3)			
Haines Borough	791	589	74.46
Juneau Borough	9,902	9,422	95.15
Ketchikan Gateway	5,030	4,720	93.83
Prince of Wales	2,061	1,404	68.12
Sitka	2,939	2,720	92.54
Skagway, Yakutat, Angoon	1,422	1,117	78.55
Wrangell, Petersburg	2,514	2,172	86.39
TOTAL	**24,659**	**22,144**	**89.80**
Rural (Region 4)			
Aleutians East	533	469	87.99
Aleutian Islands	1,845	1,674	90.73
Bethel Census	3,605	2,507	69.54
Bristol Bay Borough	407	366	89.92
Dillingham	1,215	1,006	82.79
Lake and Peninsula Borough	509	342	67.19
Nome	2,371	1,727	72.83
North Slope Borough	1,673	1,342	80.21
Northwest Arctic	1,526	1,031	67.56
Wade Hampton	1,368	722	52.77
Yukon-Koyukuk	2,748	1,683	61.24
TOTAL	**17,800**	**12,869**	**72.30**
STATEWIDE TOTAL	**188,915**	**173,185**	**91.67**

◆ Census of Population and Housing, 1990: Summary Tape File 2 (Alaska).

Appendix H: Alaska BRFSS Telephone Sample Generation

The statewide sample was stratified into four regions for the study. Within each region's sample, the proportion of interviews in each prefix is the same as the proportion of active residential lines in that prefix relative to all the active residential lines in the region.

The Institute of Social and Economic Research, University of Alaska Anchorage (ISER) generates the statewide random telephone number sample using two different techniques:

- for large telephone exchanges and
- for small telephone exchanges.

For large exchanges (more than 2,000 residential lines in most cases) a random digit dial sample is generated by random telephone number generation program (RANDY) developed by Jim Kerr for Professor Jack Kruse. For small exchanges, all residential numbers listed in the relevant telephone book are entered and numbers are randomly selected from this pool.

Generated Numbers from RANDY – Large Exchanges

The advantage of randomly generated numbers is that:

- unlisted as well as listed numbers are included in the sample;
- it is relatively inexpensive.

Information is collected from the telephone utilities on the number of active residential lines in each prefix, and this information is used to determine the proportion of each prefix in the total sample.

To improve the "hit rate" (working residential numbers as a proportion of all numbers generated) information is also collected on blocks of numbers assigned to businesses, to pay phones, or not assigned, so as to exclude these numbers. In recent years, advances in telephone switching equipment have meant that more and more telephone companies assign all their numbers at random, so there is less and less information available on numbers to exclude.

The data collected is read into the program, which calculates the proportion of working residential lines in each prefix to working residential lines in the region. Each proportion is expressed as a decimal between 0 and 1.

RANDY then begins the iterative process of generating the sample. Each iteration involves the following steps:

- A prefix is selected at random;
- RANDY selects a random number between 0 and 1, and compares it to the proportion calculated above for the selected prefix;
- If the random number is less than or equal to the prefix's proportion, the prefix is selected;
- If the random number is greater than the prefix's proportion, the prefix is dropped and the iteration starts over;
- Once a prefix is selected, RANDY generates random 4-digit suffixes, filtering out those that are known not to work, until it has generated 96 suffixes;
- The process is repeated until the desired sample is generated.

After RANDY has generated all the needed numbers, it uses a heap sort algorithm to index all the 7-digit telephone numbers, compare the numbers to each other and the second and subsequent occurrences of any repeating numbers. These deleted numbers are not replaced.

RANDY finally truncates each list of <prefix plus 96 or fewer suffixes> to <prefix plus exactly 48 suffixes>.

Each line of prefix-plus 48 suffixes represents one interview. Generating 48 non-duplicated suffixes assures that even in the smallest prefixes, the line contains at least one working, residential number with residents willing to be interviewed.

Randomly Selected Numbers from Entered Sample - Small Exchanges

Entered numbers are used for Alaska's smaller exchanges because the small number of active residential lines in many prefixes would drives the hit rate of a random digit dial sample below a practical level. In many prefixes, there are fewer than 100 residential phones, sometimes fewer than ten. Since for every telephone prefix there are 10,000 possible phone numbers, unless large blocks of numbers can be excluded, random digit dial would produce only one in 100 (or even one in 1,000) working numbers. Interviewers would spend all their time dialing non-working numbers rather than interviewing.

In this sample, 2,000 active residential lines is the cutoff point for using random number generation, For smaller exchanges, (identified using utility data), all residential numbers listed in the most recent available telephone books and CD ROM telephone number databases are entered as a list.

For each region, then, the lists from each prefix are combined to form a file of all the listed residential telephone numbers in that region. Numbers are chosen randomly the file randomly and printed out in a list that is slightly larger than the desired sample size. Enough extra numbers are included in the list to provide replacements for households that refuse, have recently moved, disconnected, or are otherwise unavailable to be interviewed.

Because the file contains the entire universe of listed numbers, a sample randomly drawn from it is self-weighting; no adjustment is needed to provide the correct proportion from each prefix.

Appendix I: 1997 BRFSS Response Rates

Indicator	BRFSS Objective	BRFSS Median	Alaska Achieved
CASRO Response Rate	≥ 75	62.1	59.5
Upper Bound Rate	≥ 90	76.5	74.4
Percent Refusals	≤ 10	8.1	8.6

Response Rates

The response rate measures the extent to which interviews were completed from among the telephone numbers selected for the sample. The higher the response rate, the lower the potential will be for bias in the data. The two estimates that are used for BRFSS provide a combination of monitoring information that is useful for program management. The formulas are described as follows:

CASRO Response Rate

The response rate developed by the Council of American Survey Research Organizations (CASRO), apportions dispositions with unknown eligibility status (ring no answer and busy) to dispositions representing eligible respondents in the same proportion as exists among calls of known status (all other BRFSS call dispositions). The resulting estimate reflects telephone sampling efficiency and the degree of cooperation among eligibles contacted.

Upper Bound Response Rate

The most liberal of response rates formulas, the upper bound calculation includes only refusals, terminations and completed interviews. The resulting estimates reflect the cooperation of eligibles contacted and is not affected by differences in telephone sampling efficiency.

Refusals

The percentage of refusals of total dispositions in a given interviewing period is an indicator of both interviewer performance and degree of potential bias in the survey data. Ten percent or less is a generally acceptable standard.

Appendix J: Weighting

By weighting the data, the responses of persons in various subgroups are adjusted to compensate for the over-representation or underrepresentation of these persons in the survey sample. Factors that are adjusted for include the following:

- The number of telephone numbers per household;
- The number of adults in a household;
- The geographic distribution of the sample; and
- The demographic distribution of the sample.

The first three factors address the problem of unequal selection probability, which could result in a biased sample that doesn't really represent the population. For example, an interviewee in a one-adult household has four times the chance of being selected for an interview as does an adult in a four-adult household. A household with two telephone numbers has twice the chance of being dialed as a household with one telephone number. The first two factors are combined to compute a raw (or unadjusted) weight. The third factor then adjusts for the differential sampling of telephone numbers in different geographic regions of the state.

Data are then further weighted. Poststratification is the method used to adjust the distribution of the sample data so that it reflects the total population of the sampled area. The poststratification factor is calculated by computing the ratio of the age, race, and sex distribution of the state population divided by that of the survey sample. This procedure is repeated for each of four regions of Alaska.

The poststratification factor is then multiplied by the raw weight to compute an adjusted, or final-weight, variable. Data from all regions are combined to form the total state's data for Alaska.

Thus, this weighting adjusts not only for variation in selection and sampling probability, but also for demographic characteristics in each region of the state. If the data were not weighted, projections could not be made from the sample to the region or to the general population.

In 1997, survey results were weighted using population estimates obtained from Claritas, 1997 Race by Age by Sex Report for All Counties Nationwide, Ithaca, New York.

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