Tobacco in the Great Land

A Portrait of Alaska's Leading Cause of Death

2012

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2012 Update

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Executive Summary

Since publication of the first *Tobacco in the Great Land* report in 2004, statewide partners in tobacco prevention and control have worked aggressively to reduce the burden of tobacco use on Alaska's people. The Behavioral Risk Factor Surveillance System (BRFSS) has been expanded to include more respondents and to routinely collect in-depth information on adult attitudes, knowledge, and behaviors around tobacco use. The enhanced data collection system has allowed for the publication of numerous specialized reports, including summaries of tobacco use within high-prevalence populations and compilations of data related to smoking cessation, smokeless tobacco use, and exposure to secondhand smoke. Data from the Youth Risk Behavior Survey (YRBS) have also been carefully examined, yielding valuable information about the trends and patterns of tobacco use among Alaska youth.

This update to Tobacco in the Great Land is designed to link program information and tobacco-related data. It contains a summary of the applied research and evaluation activities undertaken since 2005, key trends in tobacco use through 2008, and current tobacco use statistics among population subgroups. It summarizes program efforts to prevent tobacco use and eliminate exposure to secondhand smoke and indicates both areas of success and areas where challenges remain. The document can be used both as a reference and as a guide to program efforts to further reduce death and disease caused by tobacco use.

The Burden of Tobacco Use in Alaska

Tobacco use remains Alaska's leading preventable cause of disease and death. More Alaskans die as a result of tobacco use than from infectious diseases, alcohol, car accidents, illegal drugs, murders and suicides combined. Tobacco use exacts an enormous burden on the State of Alaska and its residents, causing premature death and millions of dollars of avoidable medical care expenditures. The single best thing that Alaskans who use tobacco can do to improve their health and the health of those around them is to quit using any tobacco products.

Tobacco costs Alaska:

- More than 500 deaths per year as a direct result of tobacco-related diseases, including cancers, heart disease, respiratory disease and harm to unborn children.
- Approximately $325 million per year in health-related costs, including hospitalization, clinical care, medications and nursing home care.
- Approximately $221 million per year in lost productivity, including the value of lost work time for people suffering from illnesses, families who support them, and lost wages due to premature death.

Alaska Tobacco Prevention and Control

The Alaska Tobacco Prevention and Control (TPC) Program, housed within the state Department of Health & Social Services, Division of Public Health, receives funding to implement evidence-based programs in tobacco prevention and control. Funding is available primarily as a result of a national legal settlement between states' Attorneys General and several tobacco companies. The program has four primary goals:

- Preventing young people from starting to use tobacco
- Helping tobacco users quit
- Reducing exposure to secondhand smoke
- Reducing tobacco-related disparities

The TPCP's main activities include state and community programs (such as grants to communities and schools), health communications interventions (such as a hard-hitting statewide media campaign), cessation interventions (including the statewide toll-free Quit Line that provides free medication and counseling to anyone in the state), and ongoing data collection and evaluation to improve effectiveness.

Additionally, since 1992, leadership has been provided by the diverse statewide partners in the Alaska Tobacco Control Alliance (ATCA). This statewide tobacco prevention and control coalition is made up of tribal and community-based organizations, health care organizations, schools, and other health advocates. ATCA has led successful campaigns to increase the price of tobacco, reduce youth access, and secure funding for ongoing work of the TPCP.

Applying Science to Program Design

Multiple data collection systems have been implemented in the state to provide better understanding about cigarette smoking, smokeless tobacco use, and secondhand smoke exposure. Several intensive evaluation studies or focused data reports have been completed to help with continuously improving tobacco control efforts in the state. Major findings have included:

- Alaskans are smoking less. Smoking prevalence for both adults and youth has declined during recent years, as the Alaska TPCP has accelerated population-based tobacco control activities. Declines are due to both decreases in initiation and increases in quitting. Different regions of the state have shown different levels of success.

- Alaska Native people and people of low socioeconomic status (low SES – typically, low income and/or education) are disproportionately affected by tobacco use and subsequent health consequences. Young adults are also a population of concern. Specialized focus of tobacco control activities to reach these groups is warranted.

- The Alaska Tobacco Quit Line has been an effective tool for many people to quit using tobacco. Nearly 40% of all tobacco users (both cigarette smokers and smokeless users) who called the Quit Line for help in quitting were tobacco-free three months later. Quit rates were somewhat lower for Alaska Native people, women and older smokers. More than 90% of callers were satisfied with their service overall and with specific components of the service.

- Among youth, a variety of risk factors were correlated with increased tobacco use, including alcohol, marijuana, and sexual activity. Connectedness with parents, teachers and other caring adults appeared to have a protective effect against tobacco use.

- In general, more Alaskans are protecting families from secondhand smoke by making their homes smoke-free. Alaska Native homes, and homes with children age 5 and under, were more likely to be smoke-free.

- Men, people younger than 45, people with less formal education and people living in non-urban areas are all more likely to use smokeless tobacco. Alaska Native people are more likely to use smokeless tobacco than non-Native people statewide, in large part due to use of Iq'mik – a unique smokeless tobacco product – in the Y-K Delta region.

The most current prevalence summaries of tobacco use and related factors are provided through Tobacco Facts, an annual report available at the Alaska TPCP website:

http://www.hss.state.ak.us/dph/chronic/tobacco/

Adult Tobacco Use

Information about adult tobacco use is available through the statewide Behavioral Risk Factor Surveillance System (BRFSS), an anonymous, random telephone survey of non-institutionalized adults. The BRFSS is a national survey sponsored by the Centers for Disease Control and Prevention, and is conducted in every state. It has been implemented in Alaska since the mid-1990s by the Alaska Division of Public Health.

Cigarette smoking is the most common form of tobacco use nationally and in Alaska. Current smokers are defined as those who have smoked at least 100 cigarettes in their lifetime and report that they now smoke every day or some days.

- Cigarette smoking and sales statewide have decreased significantly since 1996.

- About half of Alaska's adults have tried smoking. More than one of every five adults (22%) still smoke cigarettes in the state.

- Declines have been significant among adults age 30 and older, but not among younger adults.

- Declines have been significant for residents of Anchorage/Mat-Su, Gulf Coast, Southeast and Fairbanks North Star regions, but not significant for other areas of the state. Smoking rates are highest in the North/Northwest/Interior and Southwest regions.

- Alaska Native adults are still more than twice as likely as non-Native adults to smoke. Among non-Native adults, those of lower socio-economic status (SES) are twice as likely as those of higher SES to smoke. Smoking has not declined significantly in these populations.

- About three out of four smokers smoke every day. Among daily smokers, Alaska Native people, women and young adults smoke fewer cigarettes per day.

- Quitting has increased in recent years. About two-thirds of current smokers want to quit, and nearly the same percent tried to quit in the past year. Alaska Native adults have consistently tried to quit at a similar or higher rate than non-Native adults. About one in four current smokers has a plan to quit in the next month.

- About two-thirds of adult smokers who saw a doctor in the past year were advised to quit, but fewer smokers than non-smokers have health care coverage and had health care visits in the past year.

- About one in twenty adult tobacco users in Alaska have ever called the state Quit Line, which is similar to rates seen in other states.

Smokeless tobacco (SLT) includes commercial smokeless products (chew, spit, snuff), as well as the Alaska Native smokeless variant known as Iq'mik or Blackbull. Rates of SLT use among adults have been stable during recent years. Current adult SLT users are defined as those who report that they now use one or more forms of SLT every day or some days.

- Most (two out of three) SLT users are daily users, and most use only one type of SLT.
- Nearly half of Alaska Native SLT users use Iq'mik, but this use is primarily confined to the Southwest region of the state. In this region, about one in six Alaska Native adults uses Iq'mik, and prevalence does not differ between men and women.
- Alaska Native people have SLT use rates about three times higher than non-Native people. Males are nine times more likely than females to use smokeless tobacco in the general population. While Alaska Native women are less likely to use SLT than men overall, their rates are much higher than non-Native women and more similar to non-Native men.
- SLT tobacco use has increased slightly, but significantly, among current smokers during recent years. This could be associated with increasing restrictions on smoking in public places.
- SLT use (both commercial and Iq'mik) is higher in Alaska Native homes where children are present vs. when children are not present; for non-Native homes there is no difference in SLT use by presence of children.
- Among non-Natives SLT use is slightly higher in the Gulf Coast region than in other regions of the state. Among Alaska Native people, SLT use is highest in Southwest Alaska (fifteen times higher than in Anchorage/Mat-su), and also high in the North/Northwest/Interior region (three times higher than in Anchorage/Mat-su).
- Nearly two-thirds of SLT users want to quit.

Other types of tobacco that people smoke include cigars, pipes, bidis and clove cigarettes. Current adult users of these types of tobacco are defined as those who report that they smoked cigars pipes, bidis or clove cigarettes in the past month.

- Less than one in ten adults in Alaska currently uses some type of other smoked tobacco product.
- Use of any other smoked tobacco product is highest among men and young adults (18-29).
- Of these different tobacco types, cigars are the most popular.
- More than half of adults who use some other type of smoked tobacco product also smoke conventional cigarettes.

Youth Tobacco Use

Information about youth tobacco use is available through the Youth Risk Behavior Survey (YRBS). The YRBS is an anonymous written survey about health behaviors that is given to a sample of the state's high school youth during the spring of odd-numbered years. This survey is sponsored by the Centers for Disease Control and Prevention and implemented by the Alaska Department of Health and Social Services, Department of Education and Early Development.

A high school student is defined as a "current smoker" if he or she has smoked on any of the past 30 days. This is the nationally accepted definition for youth smoking.

- Current youth cigarette smoking has decreased significantly since 1995, including across high school age groups, for both boys and girls, and for both Alaska Native and non-Native youth.
- About one of every six Alaska high school youth (16%) currently smoke cigarettes.
- About half of high school youth have ever tried smoking cigarettes. About one in ten of all high school youth first tried a cigarette before age 13.
- About one in twenty Alaska high school youth smokes frequently (20 or more days in the past month). This is less than one-third of current youth smokers.
- Current smoking rates among Alaska Native youth are about double those among non-Native youth.
- Current smoking rates are similar among boys and girls overall. Alaska Native girls are more likely than Alaska Native boys to smoke. Alaska Native girls are more likely than any other group of boys or girls to be frequent smokers.
- Generally, smoking rates increase with age of the youth.
- Alaska Native youth are about twice as likely as non-Native youth to have tried smoking before age 13.
- More than half of all youth smokers tried to quit in the past year. Quitting attempts were similar for boys and girls, but slightly higher for Alaska Native youth smokers than non-Native youth.
- Current cigar smoking has increased somewhat among youth during recent years. More than half of youth who smoke cigars also smoke cigarettes.

A high school student is defined as a "current smokeless tobacco (SLT) user" if he or she has used SLT on any of the past 30 days. This is the nationally accepted definition for youth SLT use.

- Overall, current SLT use among youth has not changed significantly in recent years.
- Boys are about twice as likely as girls to use SLT.
- Overall, Alaska Native high school youth are about twice as likely as non-Native youth to use SLT overall, and Alaska Native girls use SLT at rates similar to non-Native boys.

About one in four youth uses some type of tobacco.

- About one-third of tobacco-using youth only smoke cigarettes.
- About one in five tobacco-using youth only use SLT.
- One in ten tobacco-using youth smoke cigars only.
- About one-third of tobacco-using youth use more than one tobacco product.
- Among tobacco-using girls, about half use only cigarettes. Among tobacco-using boys, one in five use only cigarettes.

A number of effective interventions exist to prevent youth tobacco use, and most adults support these interventions.

- Tobacco prevention policies that include comprehensive tobacco-free rules in schools are an important complement to education and intervention programs. About nine out of ten adults agree that tobacco use by adults should not be allowed on school grounds or at any school events – including more than eight out of ten current adult smokers. About one in ten youth report recently using tobacco on school property; rates of use on school property are twice as high among Alaska Native youth as non-Native youth.
- Age restrictions on the sale and distribution of tobacco products make tobacco more difficult for youth to get tobacco and become addicted to it.. In Alaska, undercover "compliance checks" that measure whether stores will sell tobacco to minors have shown dramatic improvement, and there has also been a dramatic decline in the number of youth smokers who say they usually get their cigarettes from a store. More than nine out of ten adults agree it is important to keep stores from selling tobacco to teenagers.
- Over two-thirds of youth who smoke indicate that they get their cigarettes with help from other people in their community. Additional efforts to foster smoke-free social norms can help keep youth from starting to use tobacco.

Pregnant Women and Tobacco Use

Information about prenatal care, maternal health risk behaviors and infant health is collected using the Pregnancy Risk Assessment Monitoring System (PRAMS). This ongoing, anonymous written survey is given to a sample of mothers with newborn infants about six weeks after delivery. PRAMS is sponsored by the Centers for Disease Control and Prevention, and administered in every state. Alaska's PRAMS is implemented by the Division of Public Health.

Since 1996, there has been an overall decline in the percentage of women who report smoking during the third month of their pregnancy.

- About one in six mothers overall smoke during the last three months of pregnancy.
- Two-thirds of mothers who smoked during their last three months of pregnancy smoked five or fewer cigarettes per day.
- Smoking during the last three months of pregnancy was about three times higher among Alaska Native mothers than non-Native mothers, and five times higher among women with less than a high school education vs. those with more than a high school education. Younger mothers are more likely to smoke during pregnancy than older mothers.

Since 1996, there has been a significant decline in the percentage of women who use smokeless tobacco (SLT) during pregnancy.

- Alaska Native women alone reported significant declines in use of any SLT during pregnancy since 1996. Nearly one in five Alaska Native women currently uses tobacco during pregnancy.
- Nearly one in five Alaska Native women uses Iq'mik during pregnancy, and there has been no significant decline in Iq'mik use during pregnancy since this information was first included in PRAMS (2004).
- At least half of Alaska Native women in Southwest Alaska reported using SLT or Iq'mik during pregnancy; in other regions fewer than one in ten Alaska Native women reported using SLT.

Secondhand Smoke Exposure

Information about secondhand smoke exposure is available from BRFSS for adults and YRBS for high school youth.

Secondhand smoke exposure in the home occurs when someone smokes cigarettes, cigars or other tobacco products inside the home.

- Since 1998, rates of exposure to secondhand smoke at home have been reduced by more than two-thirds among all adults. Similarly, more homes have smoking bans. Less than one in ten adults has been exposed to secondhand smoke at home during the past month.
- Declines in secondhand smoke exposure at home have occurred among both Alaska Native and non-Native homes. Exposure to secondhand smoke at home is lower among Alaska Native adults than non-Native adults.
- Declines in secondhand smoke exposure at home have been seen among both low SES and higher SES adults. About one in five low SES adults is exposed to secondhand smoke at home – more than twice the exposure for high SES adults.
- Overall, about one in four current smokers is exposed to secondhand smoke at home. Fewer than one in twenty non-smokers is exposed to secondhand smoke at home.
- Among homes with children, secondhand smoke exposure at home has been decreased by more than half since 2004. Less than one in ten homes with children had smoking in the home during the past month.
- Alaska Native homes with children are about half as likely as non-Native homes to have smoking in the home during the past month. Less than one in twenty Alaska Native homes with children had smoking in the home during the past month.
- Low SES homes with children are more than twice as likely as higher-SES homes to have smoking in the home. About one in ten low SES homes with children had smoking in the home during the past month.
- Adult smokers living in homes with children were more likely to report having smoking in the home during the past month than non-smokers.
- Secondhand smoke exposure in homes with children increases by the age of the child. While fewer than one in twenty homes with a child age 0-4 allowed smoking indoors, more than twice as many allowed smoking with children ages 5 to 17.
- Making rules against smoking in the home is effective. Homes with smoking bans were less likely to have smoking occur indoors than homes without smoking bans.

High school youth are asked about their exposure to secondhand smoke indoors (anywhere) during the past week.

- Since 2003, the percentage of youth who report being exposed to secondhand smoke indoors decreased. About two in every five high school-age youth report being exposed to secondhand smoke indoors during the past week.
- Reported exposure for high school-age youth was similar across groups: for boys and girls, Alaska Native and non-Native, and by grade.

Adults were also asked about their exposure to secondhand smoke in a variety of other settings.

- About one in four adults had been exposed to secondhand smoke in a car during the past month. Men, younger adults, low SES adults, and current smokers were more likely to be exposed.
- Nearly one-third of adults had been exposed to secondhand smoke at their indoor workplace during the past month. Exposure was higher among men, young adults, low SES adults and current smokers. Adults in Southwest Alaska were less likely than in other regions to be exposed to secondhand smoke at work.
- Overall, since 1998, more adults report that their workplace bans smoking. However, there has not been an increase in the percent of Alaska Native adults who report that there are smoking bans at their indoor workplace.

Most adults support rules that protect against exposure to secondhand smoke.

- More than eight out of ten adults agree that people should be protected from other people's cigarette smoke. Even among smokers, three out of four agree people should be protected from secondhand smoke.
- Support for rules that protect against secondhand smoke has increased since 1998.
- Support for smoke-free indoor workplace rules is higher among adults who are employed indoors, and higher among women than men.
- Support for smoke-free restaurants has increased since 1998, in all groups and regions of the state. Nearly eight in ten adults agree that smoking should not be allowed anywhere in restaurants. About three out of five current smokers support smoke-free restaurants.
- About nine out of ten adults say they would go the same or more often to bars if smoking was not allowed. Nearly three out of four adult smokers say they would go to bars the same or more often if smoking was not allowed.

Most adults know that breathing secondhand smoke is very harmful.

- About three out of five adults think that breathing secondhand smoke is very harmful. Alaska Native adults, women, young adults, and never- or non-smokers were more likely than other groups to know about the harm from secondhand smoke exposure.
- More than three in four adults know that breathing secondhand smoke causes lung cancer.
- About three out of five adults know that breathing secondhand smoke causes heart disease.
- Nearly nine out of ten adults know that breathing secondhand smoke causes breathing problems in children.
- Only about two in five adults know that breathing secondhand smoke causes sudden infant death syndrome (SIDS).

Conclusions

We know how to end the epidemic of tobacco use and the staggering toll it takes on our families and communities. Data show that many improvements in tobacco-related behaviors, exposure, and knowledge have occurred since implementation of a strong tobacco control program. Despite great progress, more work remains to be done, including in specific population groups. Using effective strategies such as policy-focused interventions, community and school programs, hard-hitting media campaigns and support to help people quit, Alaska can continue to achieve reductions in tobacco use and associated health damage among adults and youth statewide.

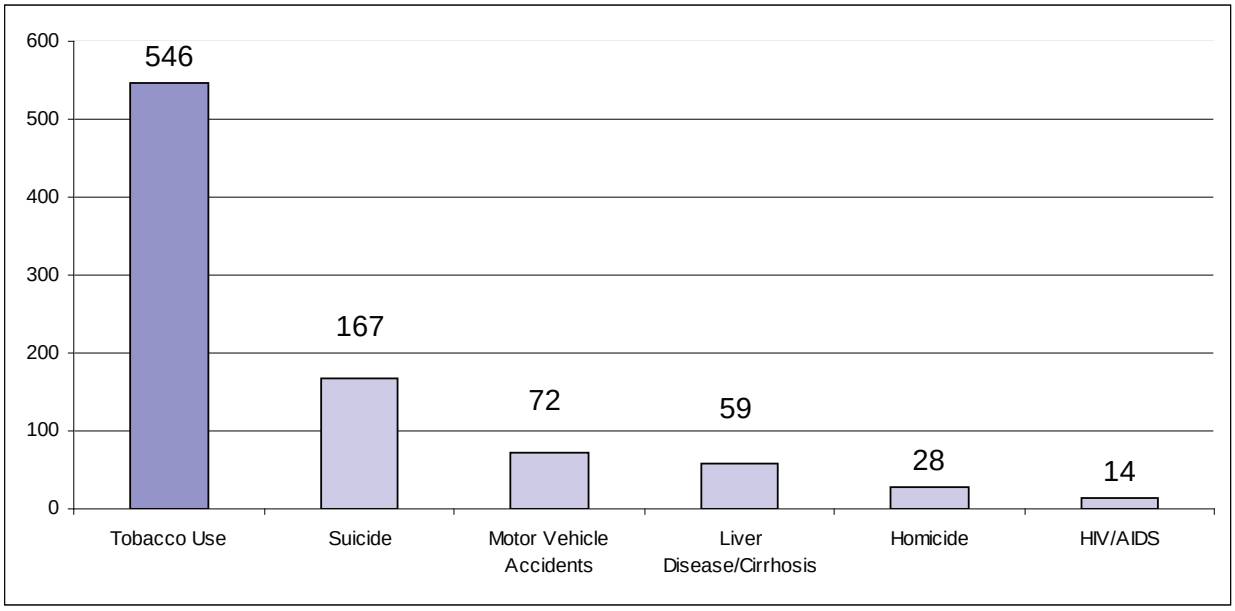
Part I - Burden of Tobacco Use in Alaska

Mortality and Cost

Introduction

Despite the many prior reports and the high level of public knowledge of the adverse effects of smoking in general, tobacco use remains the leading preventable cause of disease and death in Alaska, causing approximately 546 deaths each year and costing the State more than $500 million annually in direct medical expenditures and lost productivity due to tobacco-related deaths. Although the adult smoking rate in Alaska continues to decline, roughly 100,000 adults still smoked cigarettes in Alaska in 2008. More Alaskans die annually from the effects of tobacco use than from suicide, motor vehicle accidents, liver disease and cirrhosis, homicide, and HIV/AIDS combined. These tobacco-related deaths represent almost 17% of all deaths in Alaska in 2008.

Figure 1. Number of Deaths Due to Selected Causes, Alaska, 2008



Sources: Alaska Bureau of Vital Statistics (2008 deaths); CDC, Smoking Attributable Morbidity, Mortality, and Economic Costs (SAMMEC). See Appendix C for complete description of SAMMEC.

Mortality Associated with Tobacco Use

Tobacco is a highly toxic substance that causes a wide range of diseases. Alaska's 546 tobacco-related deaths are broken down by cause in Table 1. This table shows that four-fifths of lung cancer deaths, two-thirds of respiratory disease deaths, and almost one-fifth of heart disease deaths are due to smoking and could have been prevented if tobacco use were eliminated. See Appendix C for information on how smoking-attributable deaths were estimated.

Table 1. Number and Percent of Deaths Attributable to Tobacco Use, by Cause, Alaska Residents, 2008

Cause of Death	Total Deaths	Number Tobacco-Related	Percent Tobacco-Related
Malignant Neoplasms	**437**	**262**	**60%**
Trachea, Bronchus, and Lung	257	208	81%
Esophagus	25	17	68%
Pancreas	62	14	23%
Lip, Oral Cavity, and Pharynx	11	6	55%
Urinary Bladder	19	6	32%
Larynx	4	4	100%
Kidney and Renal Pelvis	19	4	21%
Stomach	18	3	17%
Cervix, Uteri	11	0	0%
Acute Myeloid Leukemia	11	0	0%
Cardiovascular Disease	**769**	**135**	**18%**
Ischemic Heart Disease	365	76	21%
Other Heart Disease	213	27	13%
Cerebrovascular Disease	166	24	14%
Aortic Aneurysm	10	8	80%
Atherosclerosis	5	0	0%
Other Arterial Disease	10	0	0%
Respiratory Diseases	**221**	**147**	**67%**
Chronic Airways Obstruction	149	118	79%
Bronchitis, Emphysema	27	24	89%
Pneumonia, Influenza	45	5	11%
Perinatal Conditions	**18**	**2**	**11%**

Sources: Alaska Bureau of Vital Statistics (2008 deaths); CDC, Smoking Attributable Morbidity, Mortality, and Economic Costs (SAMMEC).

Mortality Associated with Exposure to Secondhand Smoke

Scientific evidence has also established that secondhand smoke causes premature death and disease in children and adults who do not smoke. People are exposed to secondhand smoke at home, in the workplace, and in other public places such as bars, restaurants, and recreation venues. It is harmful and hazardous to the health of the general public and particularly dangerous to children. Children exposed to secondhand smoke are at an increased risk for sudden infant death syndrome (SIDS), acute respiratory infections, ear problems, and more severe asthma. The exposure of adults to secondhand smoke has immediate adverse effects on the cardiovascular system and causes coronary heart disease and lung cancer.[1] Premature deaths caused by secondhand smoke are not included in the estimate of annual smoking-attributable deaths in Alaska, as presented in Table 1. Nationally, based on estimates developed in 2005, exposure to secondhand smoke kills more than 3,000 adult non-smokers from lung cancer, approximately 46,000 from coronary heart disease, and an estimated 430 newborns from sudden infant death syndrome.[1]

Economic Burden of Tobacco Use

In addition to causing a substantial number of deaths, tobacco use creates a large economic burden within Alaska. In 2008, tobacco use cost Alaskans an estimated $325 million annually in direct medical expenditures and an additional $221 million in lost productivity due to tobacco-related deaths.

Table 2. Tobacco-Related Economic Costs, 2008

Direct Medical Expenditures	$
Hospital	193,050,000
Ambulatory	56,160,000
Prescription Drugs	35,100,000
Nursing Home	7,020,000
Other	33,930,000
Total	**325,260,000**

Source: SAMMEC 2004 smoking-attributable expenditures updated with 2008 medical consumer price index (CPI).

This sums to an economic cost of $546 million in 2008, yet it underestimates total costs. Lost productivity from tobacco-related illness and costs due to secondhand smoke exposure-related illness or death are not included.

Summary

Forty years after the first Surgeon General's report in 1964, the list of diseases and other adverse effects known to be caused by smoking continues to expand. Tobacco use exacts an enormous burden on the State of Alaska and its residents, causing premature death and millions of dollars of avoidable medical care expenditures. Yet the evidence is clear: the substantial risks of smoking can be reduced by successfully quitting at any age.[2]

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Part II - Alaska Tobacco Prevention and Control Program

The State of Alaska Tobacco Prevention and Control Program (TPCP) is located within the Department of Health & Social Services, Division of Public Health, in the Section of Chronic Disease Prevention and Health Promotion (CDPHP). The work of the TPCP is complemented by initiatives undertaken by many other organizations, including non-profits, tribal health organizations, state and local governments, schools, community groups, and the Alaska Tobacco Control Alliance (ATCA), the statewide tobacco prevention and control coalition.

ATCA organized as a statewide volunteer coalition in 1992 with the goal of reducing the morbidity and mortality associated with tobacco use in Alaska. The early work of ATCA laid the groundwork for the development of a comprehensive tobacco prevention and cessation program in Alaska. Early ATCA initiatives included successful campaigns to raise the statewide tax on tobacco products, reduce minors' access to tobacco products in vending machines, and secure funding for tobacco prevention and control efforts.

In 1998 the State of Alaska joined 45 other states in the national multi-state Master Settlement Agreement (MSA) with the tobacco industry. Under the settlement the state is entitled to receive approximately $816 million over the first 25 years of the settlement. The settlement funds to states are intended to offset the costs of tobacco-related illness by supporting tobacco prevention and cessation programs, although the terms of the agreement do not mandate that funds be used for tobacco prevention efforts. Representatives from Alaskans for Tobacco Free Kids (ATFK), the advocacy arm of ATCA, were instrumental in ensuring that a portion of MSA funds were used to support tobacco prevention and cessation initiatives.

The first significant appropriation of state funds for tobacco prevention and cessation efforts occurred in fiscal year 2000, when $1.6 million was authorized for prevention and treatment programming. In 2001 the Alaska State Legislature established the Tobacco Use Education and Cessation Fund (TUECF) under AS 37.05.580 to provide a source to finance a comprehensive education, tobacco use prevention, and tobacco control program authorized by AS 44.29.020(A)(15). Each year, 20 percent of MSA funds and a portion of cigarette tax revenues are to be placed into the fund and are available for appropriation to tobacco prevention and control efforts.

The Centers for Disease Control and Prevention (CDC) has issued recommendations on the financial resources needed in each state to counter the aggressive marketing of tobacco products. The CDC recommends that Alaska invest approximately $16 per person annually in tobacco prevention and control efforts, or $16 million for a fully funded program.[1] Since 2000, Alaska's funding appropriations have grown to levels at or near the CDC recommendations, with approximately $9.2 million authorized in FY10. Since 2001, funds have been administered by the Alaska TPCP.

The goals and structure of the TPCP are based largely on the CDC's *Best Practices for Comprehensive Tobacco Prevention and Control Programs,* a document describing strategies that have been shown to reduce tobacco use when employed in a sustained and comprehensive manner. The comprehensive program model combines educational, clinical, regulatory, economic, and social strategies to change tobacco-related knowledge, attitudes, behaviors, and social norms. Specifically, the model uses a combination of population-based efforts, such as mass media counter marketing, community programs, school programs, and cessation interventions, that work synergistically to achieve four primary goals:

1. Prevent the initiation of tobacco use among young people.

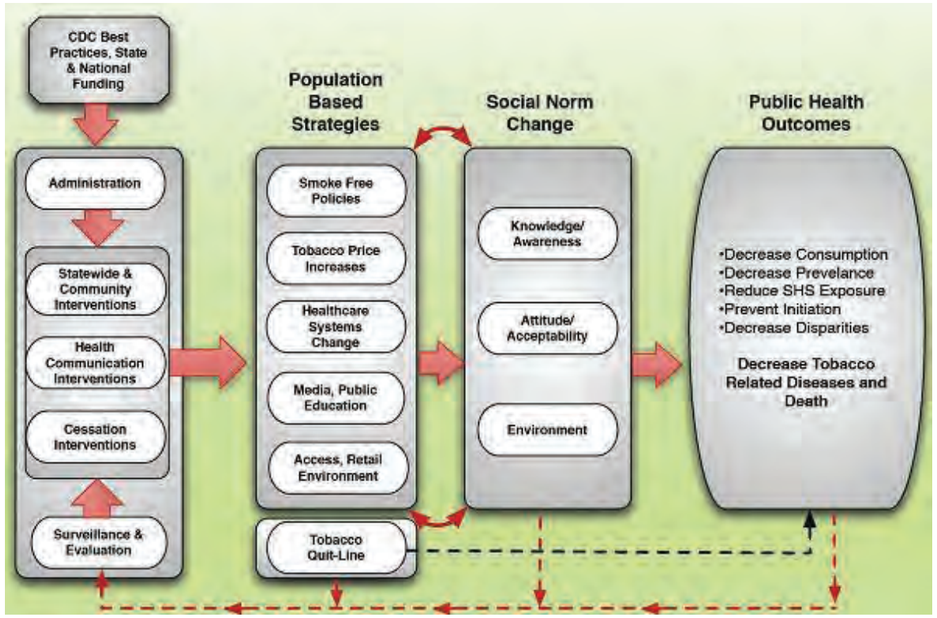
2. Promote tobacco cessation among adults and young people.

3. Eliminate exposure to secondhand smoke.

4. Identify and eliminate tobacco-related disparities in specific populations.

Figure 2 illustrates how Alaska TPCP's program components follow the CDC-recommended model and how they link to the desired public health outcomes the program is working to achieve.

Figure 2. The Alaska TPCP Logic Model



As indicated in Figure 2, the CDC tobacco prevention and control model includes five overarching categories: 1. State and Community Programs, 2. Health Communications, 3. Cessation Interventions, 4. Surveillance and Evaluation, and5. Administration and Management. A description of each category and State of Alaska TPCP activities in each is given below.

1. Statewide and Community Interventions

The overarching Statewide and Community Interventions component is broken up into five subcategories, including: Statewide Programs, Community Programs, Tobacco-Related Disparities, Youth Programs, and Chronic Disease Programs. The Alaska TPCP has initiatives in each of these areas.

Statewide Programs

Statewide programs provide resources and information that support coordinated and effective tobacco prevention and control activities in a state. They increase the capacity of local organizations through the provision of technical assistance and work to develop and implement statewide tobacco prevention and control initiatives.

The Alaska TPCP currently has the following statewide programs:

- Technical assistance to community programs (State grantees) on action planning, coalition development, local policy change, and media advocacy
- General support, training, and development to the statewide tobacco coalition, the Alaska Tobacco Control Alliance (ATCA),
- Implementation of a statewide strategic plan in conjunction with ATCA

Community Programs

Community programs are designed to reduce secondhand smoke (SHS) exposure and promote individual behavior change by altering the way tobacco is promoted, sold and used. Community programs also work to change social norms around tobacco use by targeting tobacco-related knowledge, attitudes and practices.

The Alaska TPCP provides grants to local organizations around the state for staff, operating expenses, resource materials, education, training, and media. The TPCP currently funds 21 organizations around the state to provide education around the effects of tobacco use and exposure to secondhand smoke (SHS). Grantees promote evidence-based strategies that discourage youth initiation, provide support for tobacco users to quit, and protect residents from SHS exposure. Grantees also act as a resource to community leaders and organizations interested in reducing the impact of tobacco use on their communities.

Many communities in Alaska have implemented strong policies that protect residents from exposure to secondhand smoke and encourage the non-use of tobacco. In July 2007 Anchorage passed a comprehensive clean indoor air ordinance that restricts smoking in workplaces, including bars. In January of 2008 Juneau strengthened its existing workplace clean indoor air law to prohibit smoking in bars and clubs. The comprehensive policies in these two communities protect nearly half of the state's workers from secondhand smoke. In addition to these comprehensive policies, many other Alaskan communities have passed ordinances or resolutions that restrict smoking in some workplaces and public places.

Tobacco-Related Disparities

Tobacco-related disparities have been defined as "differences in patterns, prevention, and treatment in tobacco use; differences in the risk, incidence, morbidity, mortality, and burden of tobacco-related illness that exist among specific population groups in the United States; and related differences in capacity and infrastructure, access to resources, and environmental tobacco smoke exposure."[2] The CDC recommends that state program strategic plans include strategies to identify and eliminate tobacco-related disparities.

Alaska TPCP efforts to identify and eliminate tobacco-related disparities were formalized in FY06, when Alaska was chosen as one of 11 states funded by the CDC to participate in a strategic planning process around disparities. The TPCP convened a planning team, the Leadership for Eliminating Alaskan Disparities (LEAD) workgroup, which published a strategic plan to eliminate disparities in tobacco use due to race, region of residence, or socioeconomic status. The TPCP created a position to oversee the disparities component of the program in the 2008, and hired a contractor to revise and update the disparities plan in March 2010. An updated plan was published in 2011 that included detailed strategies and action steps for each of the program goals and priority populations. LEAD workgroup members are actively working on implementing the strategies outlined in the plan, which can be found at
http://www.hss.state.ak.us/dph/chronic/tobacco/TobaccoDisparities.pdf

Ongoing collection and analysis of data is also an important part of work to address tobacco-related disparities. The TPCP uses routine surveillance to identify population groups with disproportionately high tobacco use rates. In addition, the TPCP has conducted several in-depth data analysis projects to gather more information about tobacco knowledge and behavior among identified disparate groups. Two examples include the report *"What State Surveys Tell Us About Tobacco Use Among Alaska Natives: Implications for Program Planning"*, published in 2007, and a report on tobacco use among adults of low socioeconomic status.

Youth Prevention

Because most people who start smoking are younger than age 18, programs that prevent the onset of smoking among young people are a recommended component of a comprehensive tobacco control program. Local and state level policies that increase the unit price of tobacco products, create smoke-free environments, and restrict minors' access to tobacco products are all important elements of youth prevention efforts. These initiatives should be implemented in conjunction with other elements of the comprehensive program model, such as tobacco counter-marketing campaigns and school-based interventions.

Several key policies that support youth prevention have been implemented in Alaska. In 1997 the tax on cigarettes was raised by $.71, bringing the tax to $1.00 per pack, and the tax rate on other tobacco products was raised from 25% to 75% of wholesale price. In 2005 the Alaska legislature implemented a second $1.00 per pack cigarette tax that was implemented progressively over several years. The tax increased by $.60 a pack in January 2005, with subsequent $.20 increases in July 2006 and July 2007. Many local government agencies also levy an additional tax on cigarettes and other tobacco products.

State and local policy change efforts in Alaska have been accompanied by statewide counter-marketing efforts and in 2007 the Alaska TPCP initiated a school-based tobacco prevention grant program. Currently the grant program funds seven school districts to develop comprehensive school tobacco prevention programs that include tobacco free campus policies, outreach to communities, and prevention curricula. To promote synergy between school-based and community efforts, all funded school programs are located in regions which also participate in the community grant program.

Additionally, in 2011 the TPCP worked the Association of Alaska School Boards to develop a model tobacco free campus policy. Through a contractor, the TPCP is working to assess current tobacco policies in each district of the state and to encourage districts to adopt the model policy.

School and community programs to reduce youth tobacco use are supported and reinforced by statewide efforts to reduce youth access to tobacco. Through the Division of Behavioral Health, Alaska conducts a statewide enforcement program to comply with the Federal Synar Amendment to (1) have and enforce State-level minors' access laws to decrease the rate of sales to persons under the age of 18 to less than 20 percent, (2) conduct annual statewide inspection surveys that accurately measure the effectiveness of their enforcement efforts, and (3) report annually to the Secretary of Health and Human Services. Since 2003, Alaska has successfully met federal requirements that illegal vendor sales not exceed 20 percent.

Chronic Disease Programs

Tobacco use is a risk factor for many chronic diseases, including numerous types of cancers, heart disease, stroke, and respiratory illness. Programs that focus on reducing or preventing chronic disease also focus on the other risk factors that contribute to those illnesses, including diabetes, physical inactivity, and poor nutrition.

The TPCP is located in the Section of Chronic Disease Prevention and Health Promotion (CDPHP) within the Alaska Division of Public Health. TPCP staff currently collaborate with other CDPHP Programs on a worksite health promotion initiative. The initiative aims to help organizations develop or enhance employee health by creating a healthy workplace environment. Features of a healthy environment include policies and practices that support employees in developing and maintaining healthy lifestyle habits, following good preventive practices, and being informed health consumers.

TPCP staff are also working to link cessation resources available through the Alaska Tobacco Quit Line with information on other chronic conditions. The TPCP has developed inserts on the treatment of chronic conditions to distribute with Quit Line provider materials, and information is also distributed to Quit Line callers.

2. Health Communication Interventions

Health communication interventions make an important contribution to social norm change around tobacco use. Effective media messages and campaigns can build public support for tobacco prevention and control policies, increase knowledge of the harms of tobacco use and the dangers of secondhand smoke, and contribute to decreases in youth and adult tobacco use rates.

TPCP Health Communication Interventions consist of a wide range of efforts, including paid television, radio, and print media. The TPCP currently has a counter-marketing contract for the development, acquisition, and placement of paid media. The television, radio, and print materials are designed to motivate current tobacco users to quit and to educate Alaskans about the health harms of exposure to secondhand smoke. The media contractor and the TPCP media coordinator also provide assistance to TPCP grantees in the development, production, and placement of media that supports their local tobacco prevention and cessation efforts.

3. Cessation Interventions

Programs that assist tobacco users in quitting can produce significant health and economic benefits. Evidence-based clinical practice guidelines describe a variety of effective cessation strategies, including brief advice by medical providers to quit using tobacco, FDA approved pharmacotherapy (e.g., nicotine replacement therapy, NRT) and population based cessation helplines or quit lines.

To assist tobacco users in quitting, the TPCP funds a statewide, toll-free quit line that includes the provision of NRT. The Program also funds ten health care centers across Alaska to build comprehensive, sustainable health care systems that identify and treat tobacco users. A key component of this program is training staff in Alaska's hospitals and clinics to screen patients for tobacco use and exposure to secondhand smoke, and to refer them to cessation services. In 2011 the TPCP launched "Mission 100", a program developed to expand the number of health care organizations and providers that routinely screen patients for tobacco use and refer them to appropriate treatment. Mission 100 provides outreach and technical assistance on implementing the U.S. Public Health Service Clinical Guidelines for Treating Tobacco Use and Dependence to health care organizations statewide.

4. Surveillance and Evaluation

Surveillance and evaluation systems are used to monitor progress in reducing tobacco use and to document program accountability. Surveillance efforts focus on regular monitoring of tobacco-related knowledge, attitudes and behaviors, while evaluation efforts use data to assess program implementation and effectiveness.

The Alaska TPCP collects tobacco-related data annually through a variety of adult and youth surveys, which are described in detail in Appendix C. Key tobacco indicators are published annually in *Alaska Tobacco Facts,* an online report. In addition, the TPCP has completed specialized data analysis projects on tobacco use among priority populations and specific tobacco topics, including reports on youth, Alaska Natives, economically disadvantaged adults, secondhand smoke, and smokeless tobacco.

Routine program evaluation efforts include monitoring grantee and contractor progress reports as well as detailed assessments of specific TPCP components. Recent component-specific evaluation efforts include a survey of quit rates and satisfaction among Alaska Tobacco Quit Line participants and media recall and receptivity surveys.

5. Administration and Management

An effective tobacco control program requires a strong management structure that can oversee the implementation of program components and coordinate efforts with partner agencies.

The TPCP administers numerous grants and contracts to implement the activities of the comprehensive program. The Program also partners with other state agencies, ATCA, non-profit organizations, the CDC, tribal health organizations, local governments, schools, and community groups. The administrative structure of the TPCP includes two full-time positions: a Program Manager and a Deputy Manager. Several administrative staff positions in the CDPHP Section also include TPCP administrative functions.

References

1. Centers for Disease Control and Prevention. Best practices for comprehensive tobacco control programs—2007. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; October 2007.

2. Fagan P, King G, Lawrence D, Petrucci SA, Robinson RG, Banks D, et al. Eliminating tobacco-related health disparities: directions for future research. American Journal of Public Health 2004;94:211-217.

Part III - Applying Science to Program Design

Introduction

Since the publication of the first edition of Tobacco in the Great Land in 2004, the Alaska Tobacco Prevention and Control Program (TPCP) has invested in applied research and evaluation to ensure progress toward program goals and to identify areas where more program focus may be needed.

In this chapter, we present summaries of reports produced between 2004 and 2009. They are organized by the four major program goal areas: reduction of disparities in priority populations, cessation, prevention, and elimination of secondhand smoke exposure. In addition, we include compilation documents that provide information on all program goal areas.

A brief summary of the key findings from each report is provided, followed by a description of the implications of the findings for the Tobacco Prevention and Control Program.

Data Sources

The collection and analysis of population-based data on tobacco used in these reports and publications come from numerous sources, including:

THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS) – an anonymous telephone survey conducted by the Alaska Division of Public Health in cooperation with the CDC that provides estimates of the prevalence of behavioral risk factors in the general population that are known to be associated with the leading causes of morbidity and mortality in adults.

THE YOUTH RISK BEHAVIOR SURVEY (YRBS) – a systematic survey of high school students investigating behaviors related to the leading causes of mortality, morbidity and social problems among youth. The CDC sponsors national and state surveys every two years.

THE PREGNANCY RISK ASSESSMENT MONITORING SYSTEM (PRAMS) – a population-based survey of Alaska women who have recently delivered a live-born infant. It gathers information on the health risk behaviors and circumstances of pregnant and postpartum women.

THE U.S. CENSUS – the Population Division website provides Alaska and U.S. population estimates by age used in calculating U.S. tobacco consumption.

THE ALASKA DEPARTMENT OF WORKFORCE DEVELOPMENT – provides Alaska population estimates by age, sex and race/ethnicity used in calculating the number of tobacco users and Alaska tobacco consumption.

THE ALASKA DEPARTMENT OF REVENUE – provides data on cigarette sales in Alaska. In Alaska, a tobacco tax is levied on cigarettes and other tobacco products that are sold, imported, or transferred into the state.

THE SMOKING-ATTRIBUTABLE MORTALITY, MORBIDITY, AND ECONOMIC COSTS (SAMMEC) SYSTEM – an online application developed under the auspices of the CDC that applies age- and sex-specific smoking-attributable fractions to mortality data for each smoking-related disease in the population under study, taking into consideration the smoking prevalence for the population.

THE SYNAR COMPLIANCE DATA SYSTEM – The Center for Substance Abuse Prevention (CSAP) oversees implementation of the Synar Amendment, which requires states to have laws in place prohibiting the sale and distribution of tobacco products to persons under age 18. States, including Alaska, are required to collect data on vendor compliance with underage sales laws.

THE HELLENTHAL AND ASSOCIATES MEDIA AWARENESS SURVEY – an Alaskan survey that asks questions about recall of and reaction to tobacco prevention advertisements placed for the Alaska TPCP, tobacco use, attitudes and beliefs about tobacco, media consumption habits, and demographics.

THE ALASKA TOBACCO QUIT LINE AND QUIT LINE SATISFACTION SURVEY – contact information from the Alaska Tobacco Quit Line (QL) vendor is used to provide information for recontacting Alaskans who have called the QL. Information includes QL caller name, phone number, date of initial call to the QL, race, and tobacco use status. A 3-month follow-up telephone survey included questions about participants' satisfaction with the QL, their quit behavior, and other tobacco-related issues.

SECTION 1: Reports Addressing Priority Populations

What State Surveys Tell Us About Tobacco Use Among Alaska Natives: Implications for Program Planning

Suggested citation: Alaska Department of Health and Social Services. *What State Surveys Tell Us About Tobacco Use Among Alaska Natives: Implications for Program Planning.* Anchorage, AK: Section of Chronic Disease Prevention and Health Promotion, Division of Public Health, Alaska Department of Health and Social Services; March 2007. Accessed at:

http://www.hss.state.ak.us/dph/chronic/tobacco/PDF/AKNativeTobaccoReport.pdf

Summary

This report was completed in 2007 and presents data for the period 1991 – 2005.

The purpose of the report is to help people working to support the health of Alaska Natives and Alaskan communities. The report presents information from research about tobacco use among Alaska Natives, and also analyzes existing Alaska datasets to specifically describe tobacco risks for Alaska Native people. Findings are translated into meaningful recommendations to inform community leaders planning tobacco control programs for Alaska Natives.

Tobacco Use

- Tobacco use is harming Alaska Native people – currently Alaska Natives have greater risk than Whites for some tobacco-related diseases that were not historically prevalent among Alaska Natives (including lung cancer and oral cancer), and the occurrence of these diseases has increased dramatically in recent years.

Alaska Native Adults

- Smoking prevalence is highest, and number of smokers is greatest, among Alaska Natives younger than age 55 and those with high school or less education.

- Smokeless tobacco use is highest among younger adults and those with children in the home; it is highest for men but also high for women.

- Iq'mik (a smokeless tobacco variant that is unique to Alaska Native culture) is less prevalent than cigarettes or general smokeless tobacco use in the overall adult population, but may be of particular concern in certain areas of rural Alaska – prevalence of Iq'mik use is highest among younger people and adults with children in the home.

Alaska Native Youth

- More than eight in ten high school youth have already tried smoking - our data suggest that once youth start smoking regularly they are not very likely to stop.

- A large proportion of youth who smoke are also sexually active, using alcohol and/or marijuana, and/or are depressed.

- About one-third of youth smokers smoke cigarettes every day, but most smoke less frequently; most youth smoke five or fewer cigarettes per day on days they do smoke.

- Younger students were more likely than older students to use smokeless tobacco; males were more likely than females to use, but female use was also high and has increased in recent years.

Pregnant Alaska Native Women

- Younger and less formally educated women are those most likely to smoke cigarettes during pregnancy.
- Women who are older and also less formally educated are those most likely to use smokeless tobacco during pregnancy.

Cessation among Alaska Natives

- Recent data suggest that adult Alaska Natives are beginning to increase their quit attempts, especially younger adults.
- Alaska Native adults with higher education or income may be quitting more successfully than those with less education or income.
- Adults do not report strong belief in the benefits of quitting long-term smoking. Our literature review also indicated that there may be a lack of knowledge about the long-term harms of tobacco use.
- Nicotine cravings are a leading reported quitting barrier, and nicotine replacement therapy is the leading desired support tool for quitting.
- There is limited information about quitting among smokeless tobacco users for adults and youth; information from Alaska Native women suggests that quitting smokeless tobacco is at least as hard, if not more difficult, than quitting cigarettes.

Secondhand Smoke Exposure among Alaska Natives

- Among adults, more exposure was reported in vehicles than in homes; among youth, vehicle exposure was similar to that of adults, but indoor exposure was higher.
- Most adults report knowledge that secondhand smoke exposure causes respiratory problems in children and lung cancer, but fewer report knowledge that secondhand smoke exposure causes heart disease and less than half knew that exposure causes sudden infant death syndrome (SIDS).
- Most adults – especially younger adults – believe that secondhand smoke exposure is harmful and even more (86%) believe that people should be protected from exposure.

Smoking Behavior and Beliefs Among Non-Native Alaskans of Low Socioeconomic Status: Implications for Program Planning

Suggested citation: Alaska Department of Health and Social Services. *Smoking Behavior and Beliefs Among Non-Native Alaskans of Low Socio-Economic Status: Implications for Program Planning*. Anchorage, AK: Section of Chronic Disease Prevention and Health Promotion, Division of Public Health, Alaska Department of Health and Social Services; June 2007. Accessed at:

http://www.hss.state.ak.us/dph/chronic/tobacco/PDF/LoSES_fact_sheet.pdf

Summary

This report was completed in 2007 and presents data for the period 1996 – 2006.

Consistent with both local and national studies, the results of this study illustrate the disparity in smoking prevalence, exposure, cessation, and smoking-related mortality between low socioeconomic (SES) non-Natives and higher SES non-Natives in Alaska, as well as the magnitude of the smoking related problem for those of low SES. Analyses primarily utilized BRFSS data and focused on adults aged 25 to 64 because the measure of SES was based on income and education. These factors might not accurately reflect SES among younger adults who may still be completing their education and among older adults who are more likely to be retired. The study was also restricted to non-Native Alaska adults because there was a prior comprehensive report about tobacco use among Alaska Natives, and because of cultural and geographic differences between Alaska Natives and non-Natives that should be considered when designing program interventions.

In terms of the disparity between persons of low SES and higher SES, the report found that the low SES population is:

- Different demographically (i.e., more likely to be female, younger, with children in the home, divorced or unmarried and less likely to be employed).
- More likely to start smoking, and twice as likely to currently smoke.
- More likely to be exposed to secondhand smoke at home, in their car, and at their indoor workplace and less likely to have a smoking ban in any of these places.
- Slightly more motivated to quit smoking and more likely to make a quit attempt in the past year (among current smokers), but not as successful in quitting in the long term. This, combined with higher rates of initiation, resulted in higher smoking prevalence for this population.
- Dying in greater proportions from tobacco-related disease.

In terms of quantifying the magnitude of the smoking-related problem among those of low SES, the report found that:

- A large proportion of low SES persons (37%) currently smoke cigarettes.
- There was high interest in quitting smoking among most low SES smokers: four out of five reported that they would like to quit smoking, two in five planned to quit within the next month, and three in five actually made a quit attempt in the past year. In addition, one out of four low SES persons who smoked in the last 5 years successfully quit.

• Low SES smokers were less likely to be asked about smoking or advised to quit by a doctor or nurse mainly because almost one in three did not have a health care visit in the past year. Of those who did receive care in the past year, four out of five low SES smokers were asked about smoking or advised to quit. Among low SES current smokers who made a quit attempt, only three in ten used NRT, and only about half were aware of the Alaska Tobacco Quit Line.

• Approximately two out of ten low SES persons were exposed to smoke in their homes, three in ten were exposed to smoke in their indoor workplaces, and four in ten were exposed to smoke in their cars. Most low SES persons had a policy prohibiting secondhand smoke at home and at work (79%), but only 65% had a no smoking policy in their cars. There is some evidence that smoke free work policies may not be very well enforced since 79% of those who work primarily indoors report having a smoke free work policy but 34% report being exposed to smoke at work.

• Approximately one in five low SES people did not realize the benefit of quitting smoking even after smoking for more than 20 years.

• Overall, nine out of ten low SES persons knew that exposure to secondhand smoke was harmful and at least four out of five knew that secondhand smoke exposure causes respiratory diseases in children (92%) and lung cancer (82%). Fewer (65%) were aware that breathing smoke from other peoples' cigarettes causes heart disease and fewer still (35%) knew that exposure to secondhand smoke is related to SIDS in infants.

• Nine out of ten persons of low SES believed in the harm of exposure to secondhand smoke, and four out of five agreed that people should be protected from other people's cigarettes. When specifically asked whether they agreed with having smoking bans in restaurants, bars, or indoor workplaces, those of low SES were more likely to be supportive of bans in workplaces (71%) and restaurants (64%) than bars (26%). However, most indicated that they would still patronize restaurants (91%) and bars (84%) even if smoking was not allowed.

Analysis of Media Survey Data Focusing on Alaska Native & Low SES Non-Native Respondents

Suggested citation: Alaska Department of Health and Social Services. Analysis of Media Survey Data Focusing on Alaska Native & Low SES Non-Alaska Native Respondents. Section of Chronic Disease Prevention and Health Promotion, Division of Public Health, Alaska Department of Health and Social Services; June 2009.

Summary

This report was completed in 2009 and presents data for the period 2005 – 2008.

The purpose of an analysis of media survey data is to gain knowledge that might help in designing communications, including media campaigns, to reach Alaska Native and low SES populations. Data were obtained from the Alaska Public Opinion Research Survey conducted by Hellenthal and Associates. The survey asks questions about recall of and reaction to tobacco prevention advertisements placed for the Alaska Tobacco Prevention and Control Program (TPCP), including tobacco use, attitudes and beliefs about tobacco, media consumption habits, and demographics.

Demographics

• Alaska Natives are more likely to smoke than non-Natives, and low SES respondents were more likely to smoke than non-low SES respondents. Smokers in these two high-risk groups, Alaska Native and low SES, are more likely to be younger and less educated than the comparison populations. Over 70% of Alaska Native smokers live in rural areas compared to 22% of non-Alaska Native smokers.

Media channels

• Generally, the top five preferred communication methods are health care providers, word-of-mouth, TV, newspaper/newsletter, and posters/brochures, although low SES smokers rank direct mail in the top five. For many modes of communication, Alaska Native smokers show greater preference for receiving information.

• About 70%-80% of smokers listen to some radio. TV watching is more prevalence, with about 90% watching some TV. About 70% of respondents subscribe to cable TV. About 20% receive Alaska Rural Communication Service (ARCS), though almost 40% of Alaska Native smokers receive ARCS. Almost 50% of Alaska Native and low SES smokers do not use the Internet, significantly higher than the comparison groups. About two in three smokers are aware of the Alaska Tobacco Quit Line.

Attitudes

• Alaska Native smokers are more likely than non-Native smokers to agree to a number of anti-tobacco statements, such as "My local community should do more to discourage the use of tobacco," "I prefer to socialize where people do not smoke," and "A pregnant woman can harm her unborn baby if she is exposed to secondhand smoke." Low SES smokers are also more likely to agree to "My local community should do more to discourage the use of tobacco" and "A pregnant woman can harm her unborn baby if she is exposed to secondhand smoke."

Reaction to ads

• For Alaska Native smokers, the two best ads for giving reasons not to smoke are Refrigerator and Crayon Book. Both of these ads are from a child's perspective, talking about the harm of secondhand smoke from their parents smoking. Low SES smokers have a similar reaction to these ads, and also think the ad featuring Heather Crow give them good reasons not to smoke. Heather Crow is a real person who worked as a waitress for 40 years and never smoked. In the ad, she tells her story and describes being told she will die from lung cancer caused by secondhand smoke exposure at her job.

SECTION 2: Reports Addressing Cessation

Alaskans and Quitting Tobacco: Population-Based Tobacco Cessation Data and Strategies

Suggested Citation: Alaska Department of Health and Social Services. Alaskans and Quitting Tobacco: Population-Based Tobacco Cessation Data and Strategies. Anchorage, AK: Section of Chronic Disease Prevention and Health Promotion, Division of Public Health, Alaska Department of Health and Social Services; July 2008.

Summary

This report was completed in 2008 and presents data for the period 2001 – 2007.

The purpose of this report is to both provide a review of the most current literature and knowledge on best practices for population-based cessation strategies, and to examine Alaskan surveillance data on smoking, quit intentions and quit behavior among Alaska adult tobacco smokers. The report tracks changes over time among subpopulations, including three priority populations: Alaska Natives, non-Natives of low SES, and younger adults (age 18-39). This report presents a set of findings that can inform Alaska Tobacco Prevention and Control Program goals related to supporting cessation grantee work and helping current smokers to quit.

Alaskans are smoking less. Smoking prevalence for both adults and youth has declined over the past several years, as the Alaska TPCP has accelerated its population-based tobacco control activities.

The declines in smoking in the population are due to both decreases in smoking initiation and increases in smoking cessation. Decreased initiation may be partially related to declining smoking among youth. As these young people who never initiated smoking move into the adult population, the proportion of adults reporting never smoking begins to increase. But there has also been great success in increasing quit behavior as well, as can be demonstrated by looking at the quit ratio—all former smokers as a percentage of all current and former smokers. Although the proportion of former smokers has remained relatively flat in the overall population (including never smokers), the quit ratio has increased overall, in several regions of Alaska, and among non-Natives of low SES, a priority population.

Overall, there has been a decrease in smoking prevalence among men and women, youth and adults of all ages, and residents of three regions of Alaska (Anchorage/Mat-Su, Gulf Coast, and Southeast). These prevalence declines have been due partially to decreased initiation among both men and women, as well as adults aged 18 to 59, and residents of Anchorage/Mat-Su and the Gulf Coast. However, the decline in smoking is also due to increased quitting among women, low SES non-Natives, and residents of the Gulf Coast and Southeast Alaska. Among past year smokers, there was an increase in *long-term* quitting (having been quit for 3 or more months) among all adults, low SES non-Natives, and young people aged 18-39 ($p = .06$).

These results represent significant success in lowering the risk of tobacco-related morbidity and mortality for the Alaskan population. Especially significant is the increase in the proportion of long-term quitters among past year smokers, and the fact that this has occurred among non-Natives of low SES as well as those of higher SES. Relapse rates are generally high for those who succeed in quitting in the short term, but by the time quitters have abstained three months, their chances of a long-term quit are vastly improved, and their chances of developing tobacco-related disease are markedly reduced.

Interestingly, the prevalence of quit attempts measured among all respondents who smoked within the past year remains roughly stable, while quit ratios and long-term successful quits rose. So, while smokers are continuing to try to quit at the same rates, more are succeeding. This is true in the population as a whole, among non-Native persons of low SES, and among young adults.

Some strategies utilized by comprehensive tobacco programs, such as the promotion of smoke-free environments, the promotion of increased tobacco taxes, funding community and school programs, establishment of quit lines (especially those that provide nicotine replacement therapy in addition to telephone counseling) assist smokers to move from quit attempts to successful cessation. Other strategies or factors such as physician advice to quit and mass media campaigns are more highly related to making the initial quit attempt than to long-term success. This information should be considered when planning strategies to reach populations showing less long-term success, such as Alaska Natives and older persons.

The regions of Anchorage/Mat-Su, the Gulf Coast, and Southeast Alaska have generally shown positive changes. Decreased prevalence overall (in all three regions), decreased initiation (Anchorage/Mat-Su and Gulf Coast), and increased quit ratios (Gulf Coast and Southeast) are encouraging. Two other regions remain of particular concern—Southwest Alaska (including the Y-K Delta, Bristol Bay and the Aleutians) and the Interior/Norton Sound/Arctic region have demonstrated very high prevalence and little change over the period studied. Although Fairbanks North Star has not shown declines, prevalence there remained low and is roughly equal to the other more urban regions in Alaska.

The success of the Alaska TPCP over the last seven years is laudable. Declining trends in prevalence and initiation show that the program is reaching all sectors of the population. In addition, the fact that long-term successful quits are increasing is particularly encouraging as it is much easier for smokers to attempt to quit than to remain quit. Also, it is these long-term quitters who will reap the greatest health benefits in terms of decreased smoking-related morbidity and mortality.

A concern often mentioned as population prevalence declines is that remaining smokers become “hardened”. As more quitting occurs, those left behind may be more refractory to the cessation process. In that case, we would see declining attempts among current quitters, increasing proportions of daily smoking relative to non-daily smoking, and perhaps decreasing proportions of smokers in preparation. We have not observed this in the Alaska population, indicating that the population of smokers does not appear to be undergoing this hardening process.

The Alaska TPCP should continue to employ the comprehensive tobacco prevention model it has been using. Its challenges lie in reaching young adults, the Alaska Native population, unemployed and disabled persons, and smokers who do not want to quit. Nevertheless movement is occurring on many fronts, and as a whole, the population is making clear progress toward a reduced burden of tobacco-related disease.

Evaluation of the Alaska Tobacco Quit Line

Suggested Citation: Alaska Department of Health and Social Services. Evaluation of the Alaska Quit Line. Anchorage, AK: Section of Chronic Disease Prevention and Health Promotion, Division of Public Health, Alaska Department of Health and Social Services; July 2008. Accessed at:

http://www.hss.state.ak.us/dph/chronic/tobacco/PDF/QuitlineReport.pdf

Summary

This report was completed in 2007 and presents data for the period 2005 – January 2007.

The purpose of this study was to review Alaska Tobacco Quit Line (QL) data and follow-up survey information to evaluate satisfaction with and effectiveness of the QL for Alaska tobacco users who called. The Alaska QL was effective and well received by callers from various specific populations. Among all the participants combined, 38.9% had quit smoking at the three-month follow-up and 39.4% had quit smokeless tobacco. In addition, level of satisfaction was high based on the several measures examined. Specifically, 91% of participants were satisfied overall with the QL program, 98% indicated that they would suggest the QL to others if they wanted help in quitting smoking, 97% felt the registration process was fine, 94% were satisfied with the QL nurse, and 94% of those who reported receiving the quit kit thought that the information was useful. In addition, 97% of participants agreed that they were always treated respectfully during their interactions with QL staff.

Three-month smoking quit rates were significantly lower for Alaska Natives, female smokers, those with less than high school education, and smokers 45 years and older, simultaneously controlling for other demographic factors in the model. Participants with household income at or below $25,000 and participants living in rural areas had lower quit rates, but these factors were not statistically significant in the multivariate model when all variables were considered together.

Quit rates of smokeless tobacco and most satisfaction measures did not vary significantly by race/ethnicity, education, gender, age, region or income, but there were a few exceptions:

- Although the vast majority of participants with less than high school education were satisfied with the QL nurse (90%), this percentage was smaller than those for the participants with at least a high school education.

- Although the vast majority of participants in rural areas (91%) felt the registration process was fine, and 90% were satisfied with the QL nurse, these percentages were significantly smaller than those for the participants in urban areas.

The vast majority of Alaska Natives who answered the Alaska Native-only questions on the survey indicated that the QL was appropriate for Alaska Natives. Although 15% of Alaska Natives had a preference for having an Alaska Native nurse on the QL, there did not appear to be a problem with the personal nature of the questions or the pace at which they were asked.

Following the evaluation of the QL, findings were also shared in an article published in the International Journal of Circumpolar Health (Boles M, Rohde K, He H, Maher JE, Stark MJ, Fenaughty A, O'Conner T. Effectiveness of a tobacco quitline in an indigenous population: a comparison between Alaska Native people and other first-time quitline callers who set a quit date. International Journal of Circumpolar Health. 2009 Apr;68(2):170-81).

The objective of the article was to present a descriptive, comparative study of the acceptability and effectiveness of a tobacco cessation quitline among Alaska Native people and non-Native people. From January 2006 to January 2007, we conducted telephone surveys of first-time Alaska QL callers who set a quit date. We attempted to reach them by phone about 3 months after their call to the QL. Analyses compared 7-day point prevalence quit rates, satisfaction measures, experiences and general perceptions of QLs by Alaska Native and non-Alaska Native callers.

Of the 1,941 adult tobacco users we attempted to contact, we surveyed 39.8% (n = 772). The 7-day point prevalence quit rate among Alaska Native survey participants at the 3-month follow-up was 22.2% (CI: 14.8% - 32.0%), compared to 40.7% (CI: 36.7% - 44.9%) for non-Native survey participants. Eighty-three percent (CI: 74.6% - 89.3%) were somewhat/very satisfied overall with the QL program compared to 90.3% (CI: 87.6% - 92.4%) for non-Native participants.

Although the QL was less effective for Alaska Native callers than non-Native callers, quit rates and satisfaction among Alaska Native callers were still quite good. Despite this, the study indicates that additional effort should be made to address specific Alaska Native values as well as social and cultural barriers to quitting tobacco.

SECTION 3: Reports Addressing Prevention

Assessment of Factors Related to Youth Tobacco Use in Alaska

Suggested Citation: Alaska Department of Health and Social Services. Assessment of factors related to youth tobacco use in Alaska. Anchorage, AK: Section of Chronic Disease Prevention and Health Promotion, Division of Public Health, Alaska Department of Health and Social Services; March 2008.

Summary

This report was completed in 2008 and presents data for the period 2003 – 2007.

The purpose of this report was to review and analyze the tobacco-related data from the Alaska Youth Risk Behavior Survey (YRBS) to assist the Alaska Tobacco Prevention and Control Program in program planning. Youth who engage in multiple problem behaviors generally have more serious levels of each problem and are less likely to improve; they need particular help in finding a new path for their lives. It is important to consider the co-occurrence of problem behaviors when planning interventions, in order to target prevention appropriately and help all youth live better lives.

This study examined the associations of a large number of potential health risk or protective behavior factors with tobacco use in Alaska high school youth. Individual items on the YRBS survey from domains of unintentional injury, illegal drug use, sexual behavior, diet, physical activity, and connectedness all showed high associations with tobacco use, as did demographic factors and exposures to second hand smoke. The presence of these associations across multiple domains lends strong support to the notion that youth in Alaska who use tobacco exhibit a variety of other health compromising behaviors. This suggests that tobacco use prevention and cessation in youth may not best be considered, or treated, as an isolated activity. Indeed, based on the data observed here, an integrated comprehensive approach to youth health compromising behaviors may serve the needs of many chronic disease prevention programs.

Injury, Violence and Victimization Measures and Tobacco Use

- Within safety related questions, not using seat belts, driving or riding while drinking, and fighting appeared independently associated with tobacco use behaviors, with the other items in that set providing relatively redundant associative information. The direct link between these rather aggressive behaviors and tobacco use is somewhat unclear, although these behaviors do suggest elements of risk taking and/or sensation seeking, which have been repeatedly shown to be associated with tobacco and other drug use.

- Items tapping victimization and serious depression were also associated with tobacco use. Although the items in this domain later appeared to be somewhat redundant with those in other domains, it is nevertheless important to note that those youth with these problems also tend to use tobacco, perhaps as means of self medication or self destruction.

Alcohol, Marijuana and Other Drug Use Measures and Tobacco Use

- As expected, the use of other drugs was highly associated with tobacco use. The association between the use of marijuana and tobacco was particularly strong, perhaps because of the common means of drug delivery (both are primarily smoked).

Sexual Activity Measures and Tobacco Use

- Ever having sex and having unsafe sex were independently associated with tobacco use. This relationship may be due in part to underlying factors of inappropriate early adoption of adult behaviors, risk taking and sensation seeking, or poor decision making skills.

Diet, Exercise and Body Weight Measures and Tobacco Use

- There was a notable lack of associations of weight, physical activity, and nutrition measures with tobacco use. One might expect a 'healthy' (or unhealthy) lifestyle to carry over into this domain. Exceptions were the independent associations of regular soda consumption and long hours of TV viewing.

Social Connectedness Measures and Tobacco Use

- Connectedness to parents, teachers and school generally had independent associations in a direction suggesting a protective effect of these conditions against tobacco use. The role of parents and caring adults appears to be an important one for youth with regard to communicating expectations around health compromising behaviors. It is also likely that parents and adults who encourage connectedness with youth possess a host of other parenting skills, such as monitoring, norm and boundary setting that inhibits the development of health-compromising behavior.

Association Patterns Over Time (2003-2007)

- Generally, we found that the patterns remained stable, with the exception that Alaska Native race decreased its association with tobacco use, indicating that tobacco use prevalence among Alaska Natives decreased at a faster rate than other races. This is a positive sign, especially given recent programmatic efforts directed at reducing disparities in tobacco use and other health-related behaviors.

We also found that the association of tobacco with other drug use increased somewhat between the years, strengthening the notion that drug prevention and treatment programs need to address tobacco use in addition to other addictions and problems.

SECTION 4: Reports Addressing Environmental Tobacco Smoke

Assessment of Factors Related to Secondhand Smoke Exposure among Alaska Households with a Smoker and Children at Home

Suggested Citation: Alaska Department of Health and Social Services. Assessment of factors related to secondhand smoke exposure among Alaska households with a smoker and children at home. Anchorage, AK: Section of Chronic Disease Prevention and Health Promotion, Division of Public Health, Alaska Department of Health and Social Services; June 2007.

Summary

This report was completed in 2007 and presents data for the period 2004 – 2006.

The purpose of this study is to inform program strategies in reducing secondhand smoke (SHS) exposure in the home, particularly among households with children. As documented in a recent surgeon general's report, SHS causes premature death and disease in children and non-smoking adults. The social acceptability of smoking in the home is declining in Alaska, as evidenced by an increasing proportion of the general population having rules against smoking in their homes. While having children in the home greatly increases the likelihood of having smoking restrictions in the home, earlier studies have shown that smokers with children do not necessarily have home restrictions at the level of the general population, and certainly not as commonly as non-smokers with children.

Respondent and child's age are associated with SHS exposure in the home, with older respondents or homes with children over 5 being at risk. Blacks have extraordinarily high exposure risk, while Alaska Natives and Hispanics have a lower risk of SHS exposure in their homes. The subpopulation of 'unattached' adults is about 2.5 times more likely to report exposure than adults who are married or part of a couple. Heavier smoking and possibly poor mental health are also risk factors for exposure. Having a full no-smoking rule, be it in the home or in the car greatly lowers the risk of SHS exposure in the home.

Several factors found to be related to SHS exposure in the general populations of other states were unrelated to reported SHS exposure in this subpopulation: SES (education and poverty level), gender and number of adults in the home, quit attempts and intentions, SHS knowledge and beliefs, and physical health status.

Rurality (geographic region) is actually contrary to findings in other states, with rural areas in Alaska having lower rather than higher reported SHS exposure. This result is partially explained by the lower home exposures among Alaska Natives.

SECTION 5: Comprehensive Compilation Reports

Tobacco in the Great Land (1st edition)

Suggested citation: Peterson E, Fenaughty A, Eberhart-Phillips JE, Tobacco in the Great Land, A Portrait of Alaska's Leading Cause of Death. Anchorage, AK: Section of Epidemiology, Division of Public Health, Alaska Department of Health and Social Services, 2004. Accessed at:

http://www.epi.hss.state.ak.us/pubs/tobaccofeb04.pdf

Summary

This report was completed in 2004 and presents data for the period 1991 – 2003.

The purpose of this monograph is to provide a comprehensive review of available data related to tobacco use and its consequences in Alaska. Tobacco use is Alaska's number-one public health problem. In terms of deaths, chronic illness and disability, no other underlying cause comes close. Tobacco cuts short the lives of more Alaskans than all infectious diseases combined. It leads to more deaths than all environmental toxins combined, more deaths than all other drug and alcohol use, and more deaths than all injuries – intentional or non-intentional – combined. The single best thing that Alaskans who use tobacco can do to improve their health is to quit smoking or chewing tobacco products. The single best thing that young people can do to improve their odds for a long and healthy life is never to use tobacco.

On-going surveys have added significantly to our understanding of tobacco use in Alaska, as well as who is exposed involuntarily to tobacco smoke, and who is ready to accept and act on anti-tobacco public health messages. These surveys include:

- The Adult Tobacco Survey (ATS) of approximately 2,500 randomly selected Alaska adults aged 18 and older (2003)
- The YRBS, a survey of approximately 1,500 randomly selected Alaska high school students (1995 & 2003)
- The BRFSS, an annual survey of approximately 2,500 randomly selected Alaska adults (1991-2002)
- The Pregnancy Risk Assessment Monitoring System (PRAMS), an annual survey of approximately 1,900 randomly selected Alaska women who recently gave birth (1991-2000)
- Health Care Provider Survey of 384 Alaska clinicians, who shared how they approach patients on reducing tobacco use (2003).

Data from these and other sources were pooled and arranged into three large groupings: adult data, youth data and environmental tobacco smoke (or SHS exposure) data. Results are presented graphically, along with insightful interpretations that put the numbers into perspective and take into account possible sources of bias and confounding factors.

Important findings emerging from this monograph are numerous, and cannot all be listed here. This monograph highlights the health and economic burden of tobacco use in Alaska, including the following:

- Tobacco is the single largest killer of Alaskans, claiming nearly 500 lives per year directly, and an additional 120 lives through secondhand smoke.
- Tobacco-related deaths in Alaska exceed the combined total from motor vehicle crashes, suicides, homicides and air transport accidents.
- The impact of tobacco on mortality in Alaska is more than double that of alcohol.
- The annual economic cost of tobacco-related mortality exceeds $260 million in Alaska. This is more than 50 times the amount the state spends on tobacco control and prevention activities.

Other key findings from this monograph are arranged here in the same groupings that comprise the main chapters: youth, adult and secondhand smoke. Taken all together, the numerous charts and tables document the scope of the tobacco problem in Alaska, establish baselines for measuring future progress and identify areas to target new public health approaches.

Alaska Tobacco Facts 2009 Update

Suggested citation: Alaska Tobacco Facts. Anchorage, AK: Section of Chronic Disease Prevention and Health Promotion, Division of Public Health, Alaska Department of Health and Social Services. June 2009. Accessed at:

http://www.hss.state.ak.us/DPH/chronic/tobacco/alaska_tobacco_facts.pdf

Summary

This report was completed in 2009 and presents data for the period 1996 – 2008.

In 2004, the Alaska Division of Public Health produced *Tobacco in the Great Land,* a monograph intended to provide the reader with a comprehensive review of data related to tobacco use and its consequences in Alaska. Alaska Tobacco Facts is designed to be a brief, annual update to *Tobacco in the Great Land* that can be used to educate Alaskans about the toll that tobacco continues to take on the health and well-being of our citizens.

Trends in tobacco use are measured from the baseline year of 1996, prior to two early events in tobacco prevention and control in Alaska: the tobacco tax increase in 1997 and Alaska's decision to join in the national multi-state Tobacco Master Settlement Agreement in 1998. Differences are noted where there is statistical significance ($p < .05$). The following are highlights from *Alaska Tobacco Facts, 2009* Update:

- Per adult cigarette consumption declined 48% from State Fiscal Year (SFY) 1996 to SFY 2008; 405 million fewer cigarettes were sold in 2008 compared to 1996.
- In 2007, tobacco use cost Alaskans $314 million in direct medical expenditures and an additional $177 million in lost productivity due to tobacco-related deaths.
- The percentage of adult smokers in Alaska has declined by one-fifth since 1996 to 21.5 % in 2007, a statistically significant decrease.
- Alaska Native adults are twice as likely to smoke as non-Native adults.
- Alaskans with less education, with lower incomes, and who live in rural areas of the state also smoke more than their peers.
- The majority of Alaska adults who currently smoke want to quit; three out of five tried to quit in the last 12 months.
- Smoking among high school students has dropped from 36.5% in 1995 to 17.8% in 2007.
- Although they are still more than twice as likely to smoke as students of other racial backgrounds, Alaska Native high school students were also the only group to show a decrease in smoking between 2003 (44.2%) and 2007 (31.7%).
- Eight out of ten smokers believe that secondhand smoke is harmful and nearly as many agree that people should be protected from secondhand smoke.

Regional Data Summaries

Suggested Citation: Alaska Department of Health and Social Services. Regional data summaries. Anchorage, AK: Section of Chronic Disease Prevention and Health Promotion, Division of Public Health, Alaska Department of Health and Social Services; March 2008.

http://www.hss.state.ak.us/dph/chronic/tobacco/regional.htm

Summary

These data summaries were completed in 2009 and present data for the period 1995 – 2007.

For each borough and census area, 2-page data summaries provide information on tobacco use and exposure, community indicators, number of people affected by tobacco use, statewide summary of youth tobacco use and exposure, and a list of local policies and activities for tobacco prevention and control.

Data summaries are provided for:

Aleutians East Borough & Aleutians West Census Area

Anchorage Borough

Bethel Census Area

Bristol Bay & Lake and Peninsula Boroughs

Denali Borough

Dillingham Census Area

Fairbanks North Star Borough

Juneau Borough

Kenai Peninsula Borough

Ketchikan Gateway Borough

Kodiak Island Borough

Matanuska-Susitna Borough

Nome Census Area

North Slope Borough

Northwest Arctic Borough

Prince of Wales-Outer Ketchikan Census Area

Sitka Borough

Skagway-Hoonah-Angoon Census Area & Haines Borough

Southeast Fairbanks Census Area

Valdez-Cordova Census Area & Yakutat Borough

Wade Hampton Census Area

Wrangell-Petersburg Census Area

Yukon-Koyukuk Census Area

Assessment of Factors Related To Smokeless Tobacco Use in Alaska

Suggested Citation: Alaska Department of Health and Social Services. Assessment of Factors Related to Smokeless Tobacco Use in Alaska. Anchorage, AK: Section of Chronic Disease Prevention and Health Promotion, Division of Public Health, Alaska Department of Health and Social Services; June 2008.

Summary

This report was completed in 2009 and presents data for the period 1991 – 2007.

This report addresses three focus areas regarding smokeless tobacco (SLT) use in Alaska:

- What are the current combinations of smokeless, and smoked, tobacco products being used? Have the combination proportions changed over time? Of particular interest is whether or not SLT use has increased among former smokers.
- What risk factors, as measured in the BRFSS, are related to smokeless tobacco use in Alaska?
- Do risk factor associations vary by demographic factors of age, gender and race?

Overall, smokeless tobacco use prevalence has remained constant at about 5% since 1991, and appears little affected by the state taxes imposed in 1997. Smokeless tobacco users currently make up about 20% of the tobacco users in Alaska. Dual use of cigarettes and SLT has increased six fold in smokers over the last decade. Exclusive use of SLT has declined 2-3 percentage points. Over half of all SLT users report using chewing tobacco and one quarter report using moist snuff. Nearly one in six SLT users (16%) report exclusive use of Iq'mik. While moist snuff use is increasing elsewhere in the US, these patterns have remained fairly constant in Alaska.

The second section of the report focuses on the associations between current smokeless tobacco use and measures of factors assessed by the AK BRFSS that are likely to influence that behavior. Independent characteristics considered include: a) smoking status; b) demographic factors such as gender, age, race, SES, employment, presence of children in the home, and region; c) the presence of smoking bans at home or at work; d) attitudes about secondhand smoke; and e) general and specific chronic health conditions.

Findings:

- Males make up the vast majority of SLT users, with an 8 to 1 ratio in the general Alaska adult population.
- Younger age (<45), living in non-urban areas, and not having attained education beyond high school define independent subpopulations for SLT use.
- Persons of Alaska Native race use SLT at higher rates, however this is mitigated somewhat by the other demographic factors. The use of Iq'mik in the Yukon-Kuskokwim (Y-K) region accounts for a large proportion of the Alaska Native use of SLT.
- Being of low income, uninsured, and having children were observed to be associated with SLT use, but those factors did not appear to be related once demographic factors such as age were controlled for.
- General health status, being married, knowledge and attitudes toward secondhand smoke, personal smoking bans in the home or car, and most chronic conditions were not found to be related to SLT use.

The third section of the report re-examines SLT use in sub-groups of persons known to have vastly different rates of SLT use.

Sub-group findings:

- Multivariate association models reveal important differences in the factors related to SLT within sub-populations.
- SLT use among Alaska women is largely restricted to Alaska Native never-smokers, for whom younger age, living in the Y-K region, and education are also predictive of use.
- Younger men, employed and living outside of an urban area (Anchorage) show an increased rate of SLT use.
- Men who are former smokers are also at increased risk.
- Among Alaska Native men, SLT use is high regardless of age.

Part IV - Adult Tobacco Use

CHAPTER 1 - Cigarette Smoking and Quitting Smoking

Introduction

In 2008, 22% of Alaska adults, about one out of every five, were current smokers. Approximately one-third of that number—over 35,000 people—will eventually die a premature death from a smoking-related disease if they continue to smoke.

Although the percentage of adult smokers in Alaska has declined by one-fifth since 1996, Alaska Native adults are twice as likely to smoke as non-Native adults. Non-Natives of lower SES also smoke more than their higher SES counterparts.

This chapter provides detailed information about trends in adult smoking from 1996 to 2008 with a focus on the priority populations, Alaska Natives and adults of lower socioeconomic status. This chapter also includes data on differences in smoking and related behavior by selected demographics, including age groups, gender, and geographical regions. In most cases, we combine recent years of survey data (2006-2008) in order to report disparity information. This chapter also presents data on trends in adults who have never been smokers, trends in cigarette consumption, demographic characteristics of adults who do smoke, as well as extensive data on quitting smoking.

Part III of *Tobacco in the Great Land* provides additional information about the efforts of the Alaska Tobacco Control Program to address the disproportionately high tobacco use among priority populations. Appendix C provides additional information on how these priority populations are defined in BRFSS data.

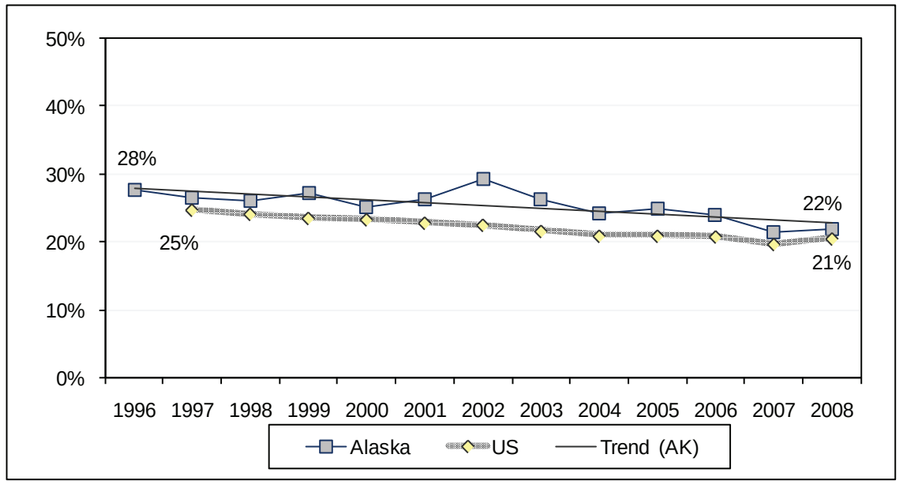
Data Sources

Data on adult smoking and quitting come primarily from the Behavioral Risk Factor Surveillance System (BRFSS). Those who have smoked at least 100 cigarettes in their life and report that they now smoke on some days or every day are considered to be current smokers. Data on tobacco sales taxes, used to measure average per capita consumption, are provided by the Alaska Department of Revenue. Further information about these data sources is listed in Appendix C.

Trends in Cigarette Smoking

In Alaska, smoking has decreased significantly between 1996 and 2008 (see Figure 3, below). For all adults, prevalence has declined from 27.7% in 1996 to 21.9% in 2008, a statistically significant decline of 21% overall (p-value for trend <0.001). Alaska's adult smoking prevalence trends first showed a significant decrease in 2007. The annual prevalence of current smoking among U.S. adults generally declined from 24.7% in 1997 to 20.5% in 2008.[1]

Figure 3. Percent of Adults Who Smoke, by Year, Alaska and US, 1996-2008

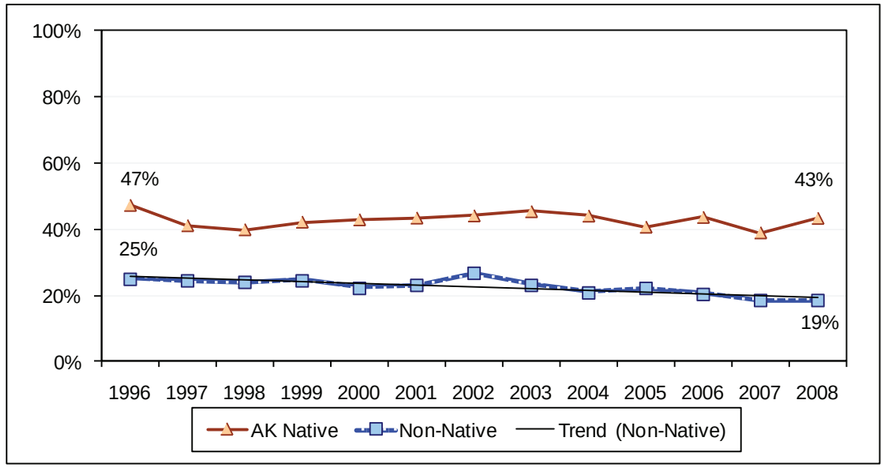


Sources: Alaska Behavioral Risk Factor Surveillance System, National Health Interview Survey

Trends by Priority Populations

Among Alaska Natives, smoking prevalence has remained high. Over two out of five Alaska Native adults (43.3%) still smoke cigarettes (see Figure 4).

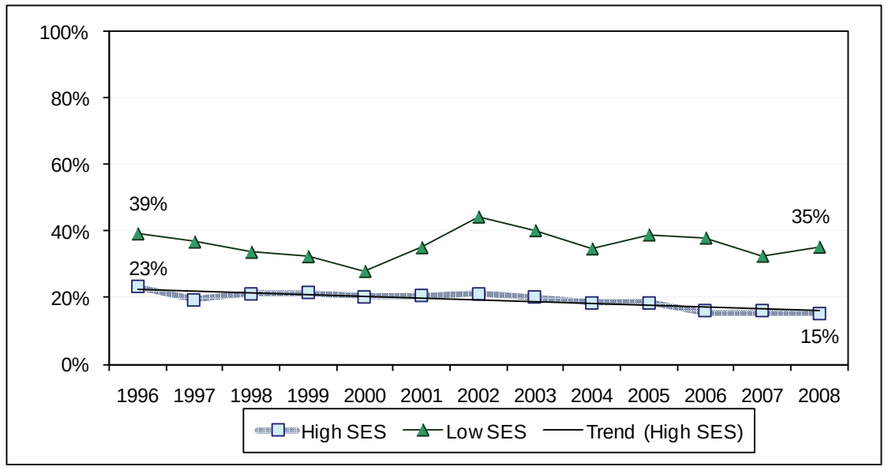
Figure 4. Percent of Alaska Adults Who Smoke, by Year, Alaska Native and Non-Native, 1996-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Among lower SES, non-Native adults, smoking prevalence has also remained high, with 35.3% reporting as smokers in 2008 (see Figure 5, below).

Figure 5. Percent of Alaska Adults Who Smoke, by Year, Non-Natives Aged 25-64, by Socioeconomic Status, 1996-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Trends by Gender, Age and Region

Between 1996 and 2008, smoking prevalence significantly decreased among:

- Women (24.2% in 1996 to 19.5% in 2008)
- Men (30.8% in 1996 to 24.1% in 2008)

Adults aged 30 and older

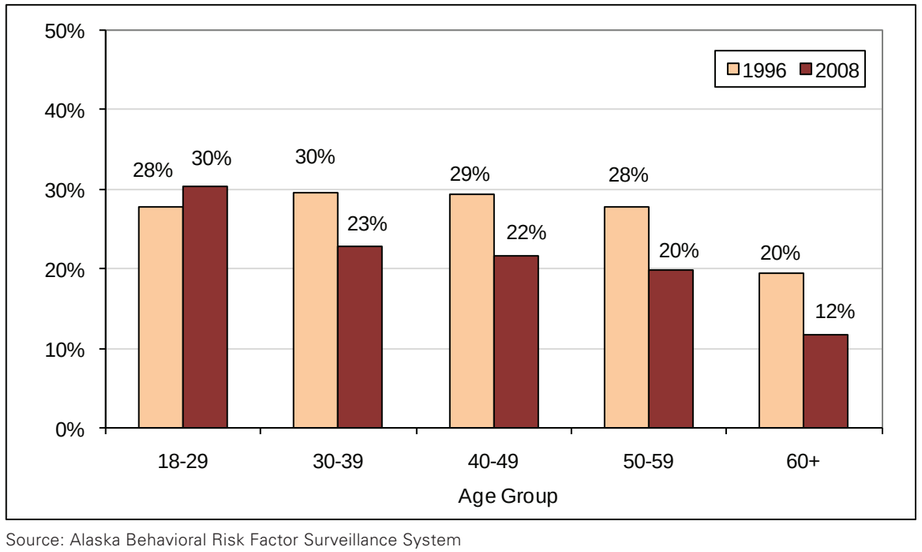
- Adults aged 30-54 (29.6% in 1996 to 22.1% in 2008)
- Adults aged 55 and older (21.4% in 1996 to 13.9% in 2008)

Residents of Anchorage/Mat-Su, Gulf Coast, Southeast Alaska, and Fairbanks

- Anchorage/Mat-Su (23.7% in 1998 to 19.1% in 2008)
- Gulf Coast (29.8% in 1998 to 23.4% in 2008)
- Southeast Alaska (24.4% in 1998 to 22.4% in 2008)
- Fairbanks North Star (27.5% in 1998 to 18.5% in 2008)

Reducing smoking remains a challenge among residents of rural Alaska and among young adults aged 18-29 (see Figure 6).

Figure 6. Percent of Alaska Adults Who Smoke, by Age, 1996 and 2008

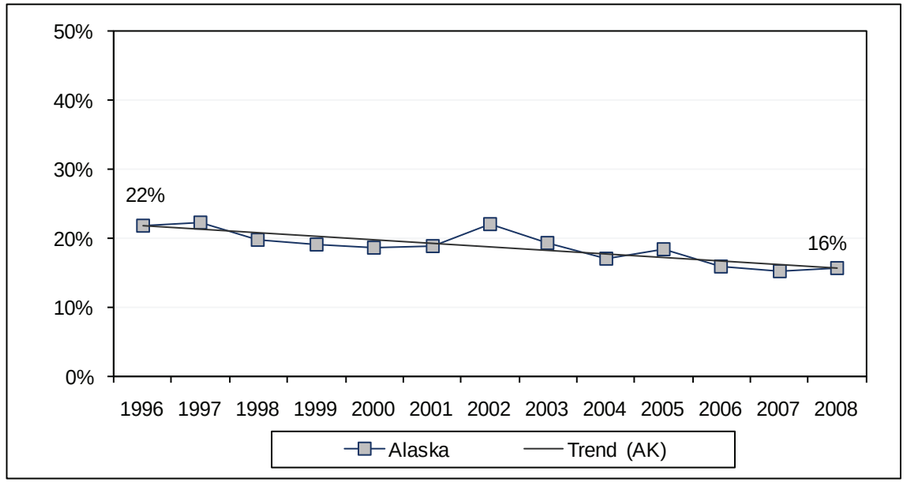


Source: Alaska Behavioral Risk Factor Surveillance System

Current Daily Smokers: Trends

Smoking prevalence includes those who smoke on a daily basis as well as those who smoke less frequently. Reducing the number of cigarettes one smokes and switching from daily smoking to less frequent smoking are strategies than can help people eventually quit smoking for good. About three out of four smokers in Alaska smoke cigarettes daily; however, there has been a significant decrease in the percentage of Alaska adults who smoke daily, from 21.7% in 1996 to 15.6% in 2008 (p-value for trend <0.001). The prevalence of daily smoking has decreased in a pattern similar to overall smoking prevalence among Alaska adults (see Figure 7).

Figure 7. Percent of Alaska Adults Who Smoke Daily, 1996-2008

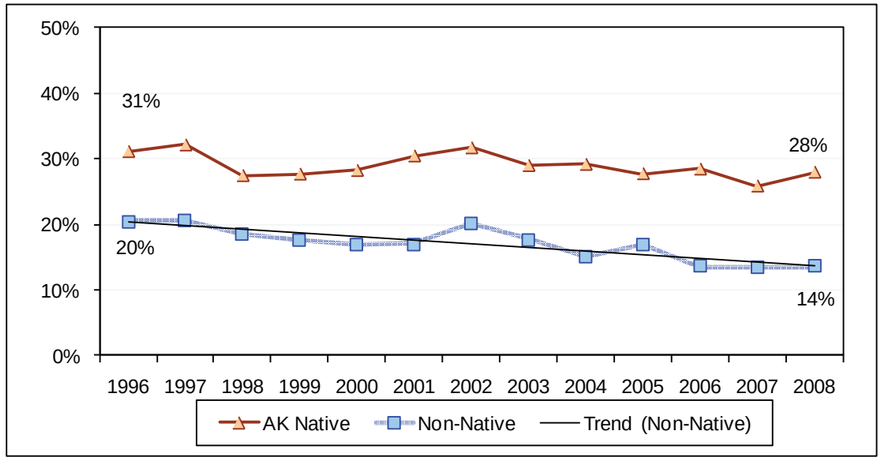


Source: Alaska Behavioral Risk Factor Surveillance System

Trends by Priority Populations

Although there was a significant decrease in daily smoking among non-Natives, the prevalence of daily smoking remained stable among Alaska Natives (see Figure 8, below).

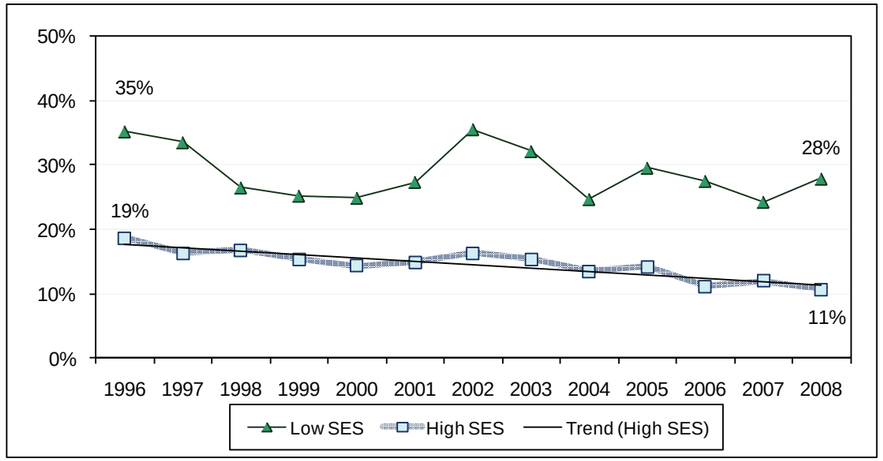
Figure 8. Percent of Alaska Adult Daily Smokers, by Year, Alaska Native and Non-Native, 1996-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Among non-Natives aged 25-64, daily smoking decreased significantly among those of higher SES, but not among those of lower SES (see Figure 9).

Figure 9. Percent of Alaska Adult Daily Smokers, by Year, Non-Natives Aged 25-64, by Socioeconomic Status, 1996-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Trends by Gender, Age and Region

Between 1996 and 2008, the prevalence of daily smoking significantly decreased among:

- Women (20.8% in 1996 to 13.5% in 2008)
- Men (22.6% in 1996 to 17.6% in 2008)

Adults aged 30 and older

- Adults aged 30-54 (23.8% in 1996 to 15.6% in 2008)
- Adults aged 55 and older (16.4% in 1996 to 10.8% in 2008)

Residents of Anchorage/Mat-Su, Gulf Coast, Southeast Alaska, and Fairbanks

- Anchorage/Mat-Su (18.4% in 1998 to 13.9% in 2008)
- Gulf Coast (21.7% in 1998 to 17.7% in 2008)
- Southeast Alaska (17.4% in 1998 to 15.1% in 2008)
- Fairbanks North Star (21.7% in 1998 to 13.2% in 2008)

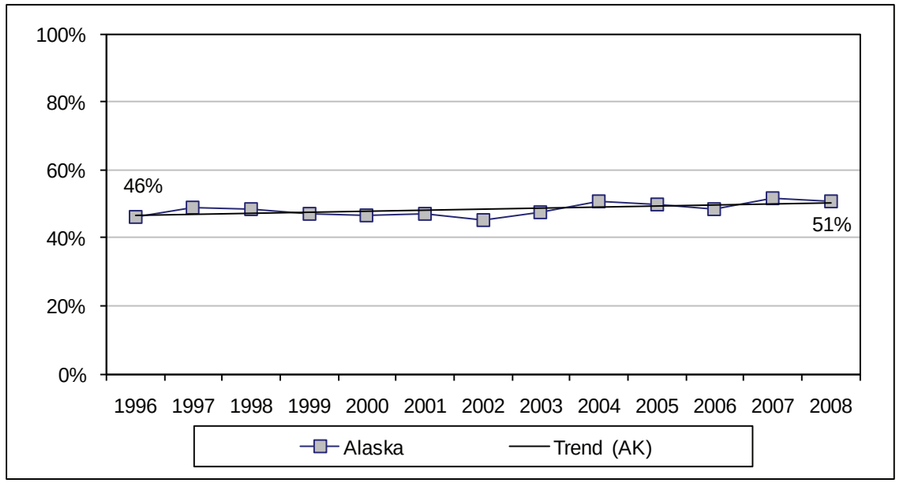
Decreasing daily smoking prevalence remains a challenge among young adults (20.8%) and in rural Alaska. In Southwest Alaska, 24.4% of the population smokes daily, and in North/Northwest/Interior Alaska, 25.3% smoke daily.

Never Smokers: Trends

Two methods exist to reduce death and disease caused by smoking. One is to prevent people from starting, and the other is to help smokers to quit. Preventing youth and young adults from starting to smoke will have a long lasting impact on the health of those young people and the community in general.

One way to measure prevention of the initiation of smoking is to review trends in the proportion of adults who have never been smokers (defined as those who have not smoked at least 100 cigarettes in their lives). In Alaska, the proportion of "never smokers" increased from 46.3% in 1996 to 50.8% in 2008 (p-value for trend = 0.003; see Figure 10). Nationally, the proportion of "never smoker" adults is 58.2%.[1]

Figure 10. Percent of Alaska Adults Who Have Never Been Smokers, 1996-2008

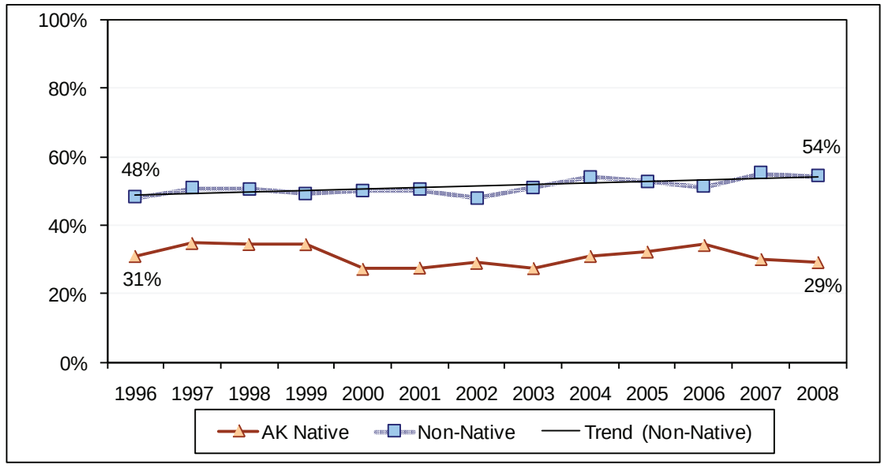


Source: Alaska Behavioral Risk Factor Surveillance System

Trends by Priority Populations

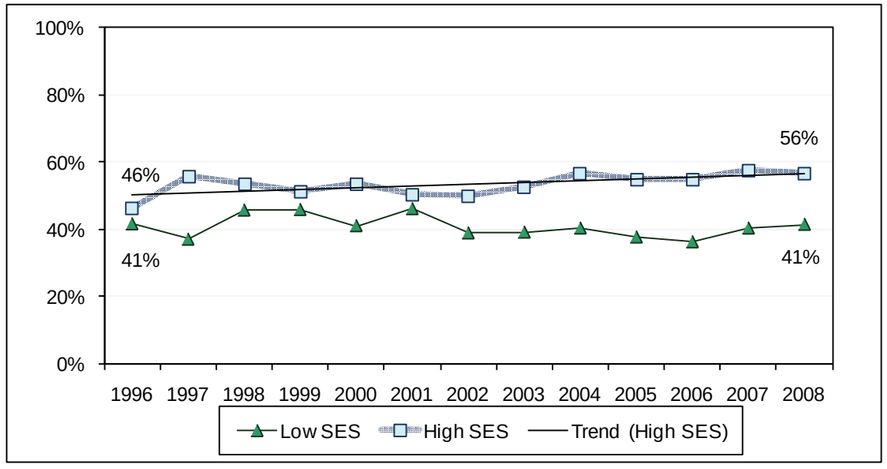
The proportion of adults who have never been smokers increased significantly among non-Natives of higher SES, but remained flat for Alaska Natives and non-Natives of low SES (see Figures 11 and 12, below).

Figure 11. Percent of Alaska Adults Who Have Never been Smokers, by Year, Alaska Native and Non-Native, 1996-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Figure 12. Percent of Alaska Adults Who Have Never been Smokers, by Year, Non-Natives Aged 25-64, by SES, 1996-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Trends by Gender, Age and Region

Between 1996 and 2008, the proportion of adults who have never been regular smokers significantly increased among:

- Women (51.5% in 1996 to 55.0% in 2008)

Adults age 30 and older

- Adults aged 30-54 (43.6% in 1996 to 53.0% in 2008)
- Adults aged 55 and older (36.8% in 1996 to 43.2% in 2008)

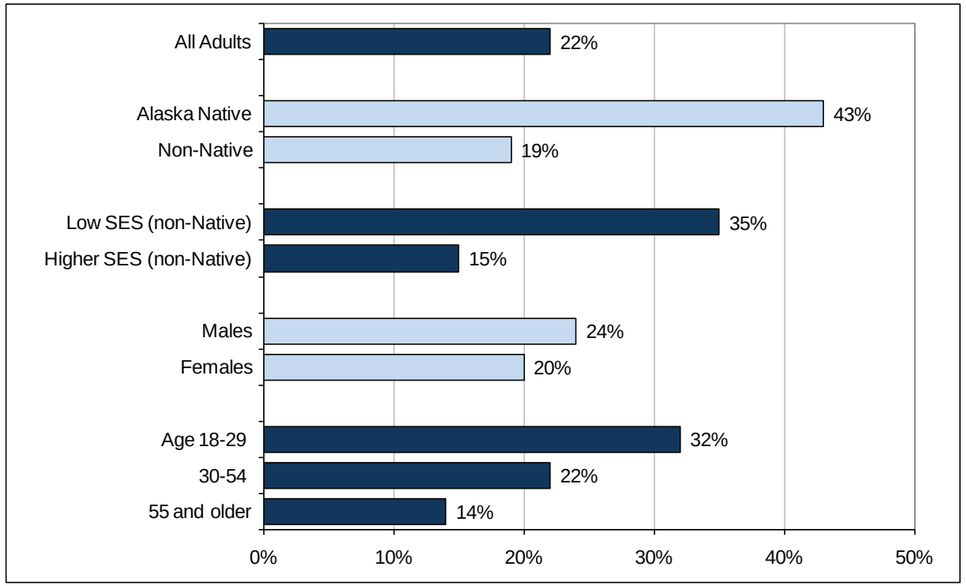
Residents of Anchorage/Mat-Su and Fairbanks

- Anchorage/Mat-Su (50.6% in 1998 to 53.7% in 2008)
- Fairbanks North Star (46.0% in 1998 to 54.2% in 2008)

Who Is Most Likely To Be A Smoker?

In this section, we review disparities in smoking prevalence. As indicated earlier, smoking prevalence is disproportionally higher among Alaska Natives, low-SES non-Natives, men, and younger adults.

Figure 13. Percent of Alaska Adults Who Currently Smoke, 2008



Source: Alaska Behavioral Risk Factor Surveillance System

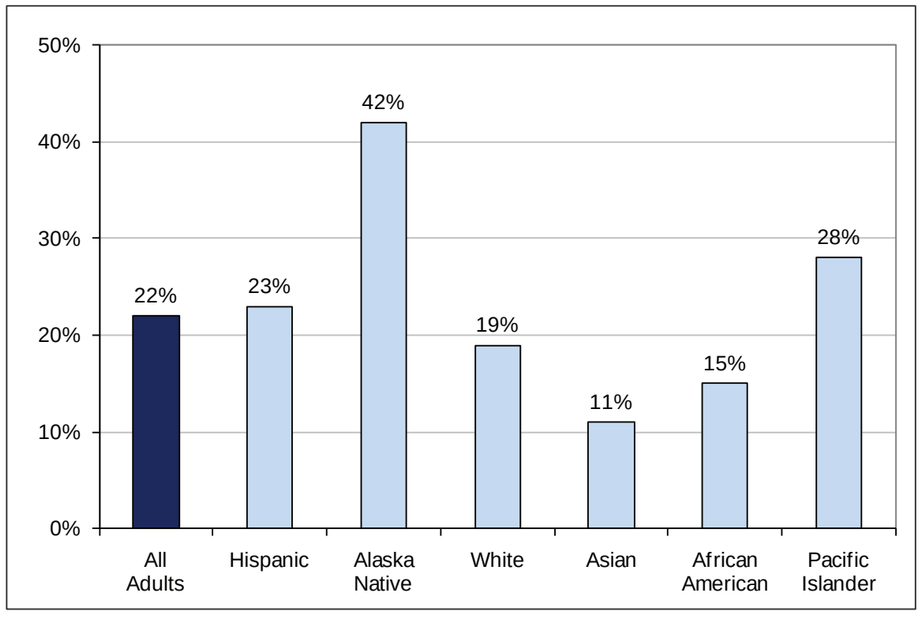
In order to examine differences in smoking and related behavior among a wider variety of subpopulations, we combined the three most recent years of survey data to report the information below. Please note that the estimates may appear lower than those listed above, which are from the 2008 data.

Disparities in Smoking by Race and Ethnicity – Six Categories

According to the 2010 U.S. Census, approximately 5% of Alaska adults identify as Hispanic or Latino. Of those who are non-Hispanic, 13% identify as Alaska Native alone, 68% are White, 5% are Asian, 3% are African American, and 1% are Hawaiian/Other Pacific Islander. The remaining 4 to 5% identify with either some other race group or multiple race groups—about 3% identify as Alaska Native in addition to another race group.

In order to examine differences in smoking and related behavior among race groups other than Alaska Natives versus non-Natives, we combined the 2006-2008 Alaska BRFSS survey data to report the information below. However, because the number of respondents in the sample is still quite low for the Pacific Islander (non-Hispanic) group, prevalence estimates reported for this group may be less stable or precise than those for other groups, and will be less likely to show statistical significance.

Figure 14. Percent of Adults Who Smoke, by Race and Ethnicity, Alaska, 2006-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Note: The race categories of Alaska Native, White, Asian, African American, and Pacific Islander, do not include respondents of Hispanic ethnicity. The prevalence for Pacific Islanders has a high coefficient of variation.

In Alaska, Asian and African American adults are significantly less likely to be smokers than those in any other race and ethnicity groups. Alaska Native adults are more likely to be smokers than Hispanic, White, African American, or Asian adults.

Disparities for the Alaska Native Priority Group by Other Factors

Although Alaska Natives as a group have a higher smoking prevalence than non-Natives, there are also disparities in smoking within the Alaska Native population. Alaska Natives of lower SES are significantly more likely to smoke than Alaska Natives of higher SES (who have a high school degree or more education, and a household income above 185% of Alaska Poverty Level Guidelines). The same pattern can be found among non-Natives (see Table 3 below; note that this table reports information for all adults by SES, and is not age-restricted as is the priority group of "lower SES non-Native, age 25-64").

Table 3. Percent of Alaska Adults Who Smoke, by Socioeconomic Status and Race Group, 2006-2008

SES Status	Alaska Natives	Non-Native Alaskans	Total
Lower	50%	33%	38%
Higher	32%	15%	17%
All Adults	**42%**	**19%**	**22%**

Source: Alaska Behavioral Risk Factor Surveillance System

Table 4 below shows that education level is highly correlated with likelihood of being an adult smoker. In general, the more education adults have completed, the less likely they are to be smokers. This is true among Alaska Native adults as well as among non-Native Alaska adults. Among Alaska Natives, however, smoking prevalence does not significantly differ for those with less than high school (48.5%) and those who finished high school or a GED (45.0%). Smoking prevalence disparities between Alaska Natives and non-Natives disappear at the lowest level of education.

Table 4. Percent of Alaska Adults Who Smoke, by Education and Race Group, 2006-2008

Education Level	Alaska Natives	Non-Natives	Total
Less than high school graduate	49%	46%	47%
High school graduate or GED	45%	26%	30%
Some college	38%	21%	22%
College graduate	25%	8%	9%
All Adults	**42%**	**19%**	**22%**

Source: Alaska Behavioral Risk Factor Surveillance System

With regard to employment status, those who are unemployed and those who are unable to work are more than twice as likely to smoke as those who are employed (see Table 5, below). Among the unemployed and unable to work, there was no significant difference in smoking prevalence between Alaska Natives and non-Natives. Those who are not in the workforce include retired people, homemakers, and students; this group is significantly less likely to smoke than the other three groups.

Table 5. Percent of Alaska Adults Who Smoke, by Employment Status, 2006-2008

Employment Status	Alaska Natives	Non-Natives	Total
Employed or self-employed	41%	18%	21%
Unemployed	54%	44%	48%
Not in the Workforce	31%	14%	16%
Unable to Work	48%	46%	46%
All Adults	**42%**	**19%**	**22%**

Source: Alaska Behavioral Risk Factor Surveillance System

Among both Alaska Natives and non-Natives, men are more likely than women to be smokers (see Table 6). Regardless of gender, Alaska Natives are roughly twice as likely to be smokers as are Non-Natives.

Table 6. Percent of Alaska Adults Who Smoke, by Gender and Race Group, 2006-2008

Gender	Alaska Natives	Non-Natives	Total
Men	47%	21%	25%
Women	37%	17%	20%
All Adults	**42%**	**19%**	**22%**

Source: Alaska Behavioral Risk Factor Surveillance System

Among both Alaska Natives and non-Natives, smoking differs significantly by age; prevalence decreases at each level (see Table 7). Younger adults aged 18-29 are most likely to smoke in each group.

Table 7. Percent of Alaska Adults Who Smoke, by Age and Race Group, 2006-2008

Age	Alaska Natives	Non-Natives	Total
18-29	52%	26%	31%
30-54	42%	19%	22%
55 and older	29%	13%	15%
All Adults	**42%**	**19%**	**22%**

Source: Alaska Behavioral Risk Factor Surveillance System

In Alaska, nearly half of all adults surveyed (46.6%) have children also living in the household. Adults with children living in their home represent 51.2% of adult smokers. Overall and among Alaska Natives, those with children in the home are significantly more likely to smoke than those with no children in the home (see Table 8).[a] This finding is also likely to be associated with age differences between younger adults with children and older adults without children. Among non-Natives there was no significant difference.

Table 8. Percent of Alaska Adults Who Smoke, by Children in Home and Race Group, 2006-2008

Children in Home	Alaska Natives	Non-Native Alaskans	Total
Yes	45%	20%	25%
No	37%	19%	21%
All Adults	**42%**	**19%**	**22%**

Source: Alaska Behavioral Risk Factor Surveillance System

As noted earlier, smoking prevalence is highest in North/Northwest/Interior and Southwest Alaska (see Table 9). Among non-Native adults, however, smoking prevalence does not significantly differ by region. Among Alaska Native adults, smoking is significantly higher in North/Northwest/Interior than any other region. Smoking is higher among Alaska Natives in Southwest Alaska and Gulf Coast than among those in Fairbanks, but there are no significant differences in Alaska Native adult smoking prevalence among Southwest, Anchorage/Mat-Su, Gulf Coast and Southeast Alaska.

Table 9. Percent of Alaska Adults Who Smoke, by Geographic Region and Race Group, 2006-2008

Geographic Region	Alaska Natives	Non-Natives	Total
North/NW/Interior	54%	19%	38%
Southwest Alaska	44%	22%	37%
Gulf Coast	42%	21%	23%
Anchorage/Mat-Su	36%	19%	20%
Fairbanks North Star	32%	20%	21%
Southeast Alaska	39%	18%	21%
All Adults	**42%**	**19%**	**22%**

Source: Alaska Behavioral Risk Factor Surveillance System

[a] These data reflect any smoking, not necessarily smoking inside the home, which is discussed in Chapter 12 of this report.

Disparities for the Low SES Non-Native (age 25-64) Priority Group by Other Factors

Although low SES non-Native adults have a higher smoking prevalence than higher SES non-Natives, there are also disparities in smoking within the low SES non-Native population. As noted earlier, education level is highly correlated with likelihood of being an adult smoker. Although education level forms part of the definition for SES (e.g., all of those with less than a high school education are categorized as low SES), we can still see significant differences in smoking prevalence by educational achievement, among Alaskans of low SES.

Non-Natives of low SES with less than a high school education are significantly more likely to be smokers than those with a high school/GED or college degree (see Table 10, below). However, smoking prevalence for non-Natives of low SES with a high school education (33.0%) was not significantly different from prevalence among those with some college or a college degree (35.6% and 26.3%, respectively). And there was no statistical difference in smoking prevalence by SES for adults with a high school education (33.0% for low SES versus 27.9% for higher SES).

Table 10. Percent of Non-Native Adults (Age 25-64) Who Smoke, by Education and Socioeconomic Status, Alaska, 2006-2008

Education Level	Low SES Non-Natives	Higher SES Non-Natives	All Adults*
Less than high school graduate	48%	NA	47%
High school graduate or GED	33%	28%	30%
Some college	36%	20%	22%
College graduate	26%	7%	9%
All Adults	**35%**	**16%**	**22%**

Source: Alaska Behavioral Risk Factor Surveillance System

Note that for all of the tables by SES priority group (and its counterpart), the marginal comparator is "All Adults," which includes the other age groups and Alaska Natives.

As noted earlier, among all adults, those not in the workforce were significantly less likely to smoke than any other group by employment status. However, because of the age limit in the SES priority group definition, non-Native adults aged 25-64 not in the workforce probably include far fewer retirees or students.

Regardless of SES status, non-Natives aged 25-64 who are unemployed or unable to work are more than twice as likely to smoke as those who are employed (see Table 11). Among the unemployed and unable to work, those of low SES were more likely to be smokers than those of higher SES. Among non-Native adults aged 25-64 of both low and higher SES, those not in the workforce were not significantly less likely to smoke than those who are employed, within SES group.

Table 11. Percent of Non-Native Adults (Age 25-64) Who Smoke, by Employment Status and Socioeconomic Status, Alaska, 2006-2008

Employment Status	Low SES Non-Natives	Higher SES Non-Natives	All Adults
Employed or self-employed	32%	15%	21%
Unemployed	48%	33%	48%
Not in the Workforce	26%	14%	16%
Unable to Work	54%	37%	46%
All Adults	**35%**	**16%**	**22%**

Source: Alaska Behavioral Risk Factor Surveillance System

Note: Those not in the workforce include retired persons, students, and homemakers.

Among non-Natives of higher SES, men are more likely to smoke than women, but there is no significant difference by gender in smoking prevalence for those of low SES (see Table 12).

Table 12. Percent of Non-Native Adults (Age 25-64) Who Smoke, by Gender and Socioeconomic Status, Alaska, 2006-2008

Gender	Low SES Non-Natives	Higher SES Non-Natives	All Adults
Men	39%	17%	25%
Women	32%	14%	20%
All Adults	**35%**	**16%**	**22%**

Source: Alaska Behavioral Risk Factor Surveillance System

Among non-Natives of higher SES, smoking is significantly different by each age group (see Table 13). Among non-Natives of low SES, older adults (age 55-64) were less likely to smoke than those in the other two age groups, but there was no difference between young adults (age 25-29) and the middle age group (age 30-54).

Table 13. Percent of Non-Native Adults (Age 25-64) Who Smoke, by Age and Socioeconomic Status, Alaska, 2006-2008

Age	Low SES Non-Natives	Higher SES Non-Natives	All Adults
25-29	38%	25%	31%
30-54	37%	16%	22%
55-64	26%	13%	15%
All Adults	**35%**	**16%**	**22%**

Source: Alaska Behavioral Risk Factor Surveillance System

Among non-Natives of low SES, smoking prevalence is higher for those without children in the home (39.9%) than for those with children (32.5%; see Table 14, below). Among non-Natives of higher SES there was no significant difference. The finding for non-Natives of low SES is opposite the pattern for all adults and for Alaska Natives, for whom those with children in the home were more likely to smoke. It should be noted that the age limit in the SES priority group definition plays a part in the differences between these groups.

Table 14. Percent of Non-Native Adults (Age 25-64) Who Smoke, by Children in Home and Socioeconomic Status, Alaska, 2006-2008

Children in Home	Low SES Non-Natives	Higher SES Non-Natives	All Adults
Yes	33%	15%	25%
No	40%	17%	21%
All Adults	**35%**	**16%**	**22%**

Source: Alaska Behavioral Risk Factor Surveillance System

Among all adults, smoking prevalence is highest in rural Alaska (including North/Northwest/Interior and Southwest Alaska). Among non-Native Alaska adults of low SES, however, smoking prevalence does not significantly differ by region (see Table 15). Among non-Native Alaska adults of higher SES, smoking is only significantly different between Anchorage/Mat-Su (14.8%) and Gulf Coast (18.8%).

Table 15. Percent of Non-Native Adults (Age 25-64) Who Smoke, by Geographic Region and Socioeconomic Status, Alaska, 2006-2008

Geographic Region	Low SES Non-Natives	Higher SES Non-Natives	All Adults
Rural (N, NW, Interior and Southwest Alaska)	34%	18%	39%
Gulf Coast	32%	19%	23%
Anchorage/Mat-Su	36%	15%	20%
Fairbanks and Vicinity	37%	17%	21%
Southeast Alaska	35%	16%	21%
All Adults	**35%**	**16%**	**22%**

Source: Alaska Behavioral Risk Factor Surveillance System

Trends in Cigarette Consumption and Purchasing

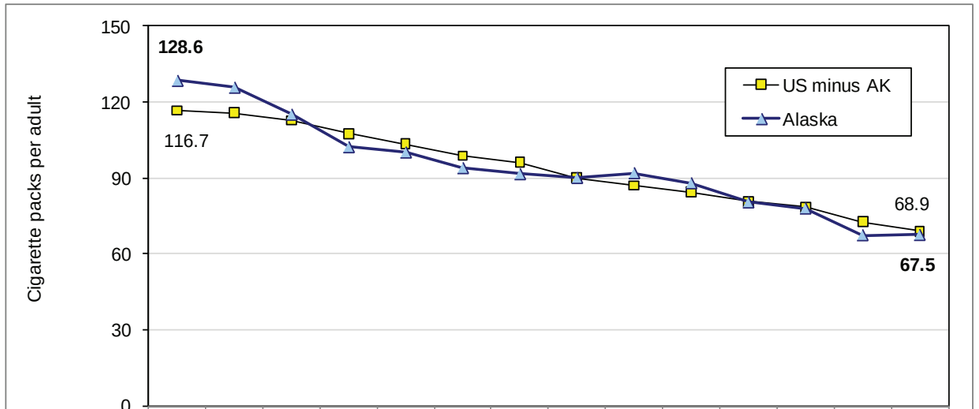
Consumption of cigarettes is measured in two ways, using Alaska Department of Revenue sales data and asking Alaska adults how much they smoke.

Trends in Sales of Cigarettes

Data from the Alaska Department of Revenue show a decreasing trend in the sales of cigarettes. Per adult cigarette sales, described in Figure 15 as the number of packs per adult, have been declining since 1996, somewhat more dramatically than sales in the rest of the US. According to *CDC Best Practices for Comprehensive Tobacco Control Programs,*[2] increasing excise taxes on cigarettes reduces tobacco consumption rates. In 1997, a $0.71 per pack cigarette tax increase was implemented in Alaska, raising the tax to $1.00 per pack. In 2005, the legislature implemented a progressive increase in the cigarette tax from $1.00 per pack to $2.00 per pack ($.60 in 2005 and $.20 each in 2006 and 2007). As of December 31st, 2009, Alaska was among 15 states with a state cigarette excise tax per pack of $2.00 or more.[3]

Between state fiscal years 1996 and 2009, the number of cigarette packs per adult sold in Alaska dropped 47.5%, from 128.6 packs per adult to 67.5 packs per adult (see Figure 15). Sales per adult are now slightly lower in Alaska than in the rest of the U.S. This drop in cigarette sales translates to 402 million fewer cigarettes sold in Alaska in 2009 compared to 1996.

Figure 15. Annual Sales of Cigarette Packs Per Adult, By Fiscal Year, Alaska and US (minus Alaska), 1996-2009



Fiscal Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
US minus AK	116.7	115.7	112.8	107.5	103.4	98.8	96.2	89.9	86.9	84.4	80.7	78.4	72.7	68.9
Alaska	128.6	125.9	115.2	102.3	100.2	94.0	91.6	90.1	92.0	88.0	80.4	78.0	67.4	67.5

Sources: Alaska Department of Revenue, Tax Division FY09 Reports; Orzechowski & Walker, The Tax Burden on Tobacco, 2010.

Where Alaskans Purchase Cigarettes

Survey data indicate that nearly all Alaska smokers purchase their cigarettes within Alaska, meaning that total cigarette consumption is well reflected in the tax data. The majority of Alaska smokers buy their cigarettes in their own communities. Smokers in rural areas of Alaska, including North, Northwest, Interior, and Southwest Alaska, are more likely than those in non-rural areas to buy outside of their own community. However, those who do so are primarily buying cigarettes in another community within Alaska.

Only 1.1% of Alaska smokers usually purchase their cigarettes over the Internet, by mail-order, or by 800 number (see Table 16). Rural residents are significantly more likely to use this method; 3.3% ordered their cigarettes by Internet, mail or 800 number.

Table 16. Where Smokers Usually Purchase their Cigarettes, Alaska 2006-2008

Region	Own Community	Other AK Community	Community Outside AK	Internet/Mail/ 800 number
Rural	88.9%	7.1%	0.7%	3.3%
Non-Rural	96.7%	1.8%	0.8%	0.7%
Total	**95.4%**	**2.6%**	**0.8%**	**1.1%**

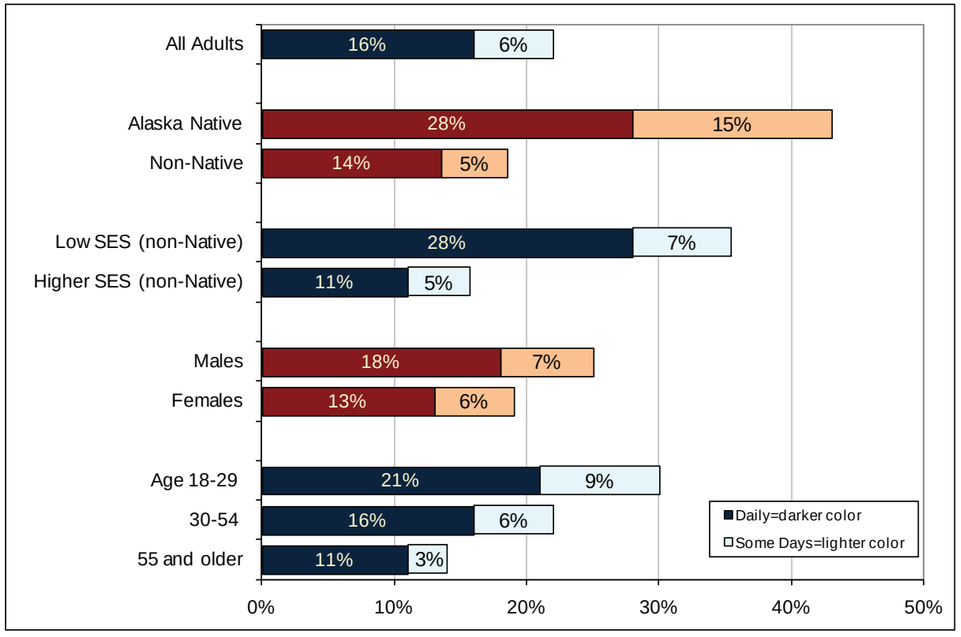
Source: Alaska Behavioral Risk Factor Surveillance System

In addition, survey respondents who smoked were asked if they had ever purchased cigarettes using the Internet or mail-order at some point in the past year (in the Alaska BRFSS survey in 2007 and 2008). When combined with those who usually purchase via Internet, mail or 800 number, the total shows that only about one out of 40 Alaska adult smokers (2.6%) has purchased cigarettes in this way one or more times in the past 12 months.

Indicators of Personal Cigarette Consumption

Indicators for personal cigarette consumption include: (1) smoking daily or only some days, and (2) average number of cigarettes smoked per day. As noted previously, the prevalence of daily smoking has decreased in a pattern similar to overall smoking prevalence among Alaska adults. Yet, there are disparities by group (see Figure 16). Many of the disparities in proportion of daily smokers show similar patterns to disparities in smoking overall. Daily smoking is disproportionally higher among Alaska Natives, low-SES non-Natives, men, and younger adults. In most groups, about 20-25% of smokers do not smoke on a daily basis (5-7% of adults overall in these groups). However, roughly one in three Alaska Native smokers (15.4% of all Alaska Native adults) do not smoke daily. Alaska Natives are more likely than non-Natives to be non-daily smokers, but this is partly because they have a higher smoking prevalence in general. Similarly, younger adults aged 18-29 are significantly more likely than adults aged 30-54 and adults aged 55 and older to be non-daily smokers (9.5% versus 6.4% and 3.1% respectively).

Figure 16. Prevalence of Daily and Some Days Smoking by Alaska Adults, 2008



Source: Alaska Behavioral Risk Factor Surveillance System

Average Number of Cigarettes Smoked per Day

The overall average daily cigarette consumption among daily and non-daily smokers combined is lower for Alaska Natives than non-Natives (9 versus 12 cigarettes) because of two factors: (1) a higher proportion of Alaska Natives are non-daily smokers and (2) Alaska Native daily smokers smoke fewer cigarettes per day. In addition, the average number of cigarettes consumed among daily and non-daily smokers is significantly different among age groups. Smokers aged 18 to 29 smoke an average of 9 cigarettes per day, compared to 12 cigarettes per day among those aged 30 to 54 and 14 cigarettes among those aged 55 and older.

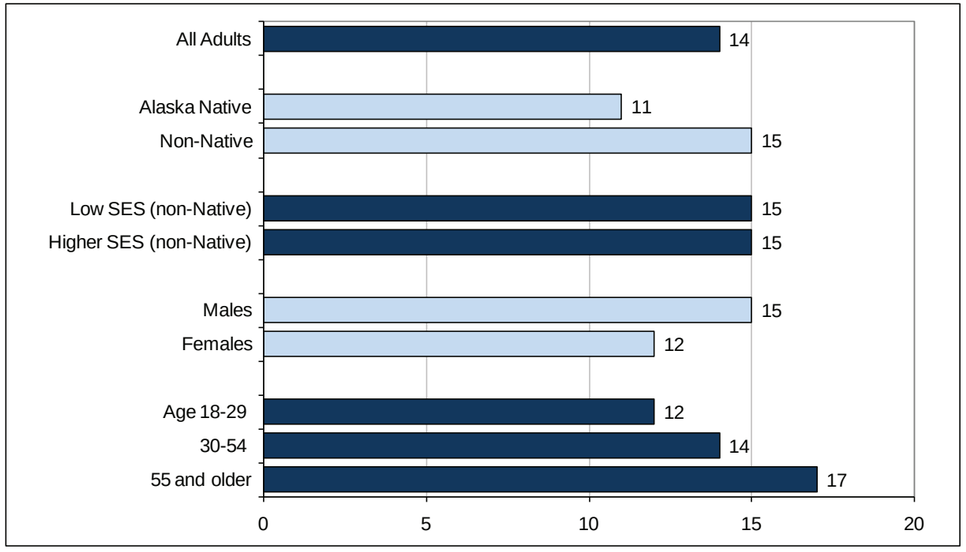
Non-daily Smokers

Among non-daily smokers, the average number of cigarettes smoked on days they did smoke is between 4 and 6 per day, or about one-quarter of a pack of cigarettes. This average is about the same across all groups.

Daily Smokers

Figure 17 shows that the average per day cigarette consumption among daily smokers is 14, or nearly three-quarters of a pack of cigarettes per day. Alaska Native daily smokers smoke fewer cigarettes on average than non-Natives. There are also differences by gender and age. Female daily smokers smoke fewer cigarettes on average than males, and average daily cigarette consumption increases significantly in each successively older age group.

Figure 17. Average Daily Number of Cigarettes Smoked, by Alaska Adult Daily Smokers, 2006-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Trends in Quitting Smoking

Quitting smoking has an immediate health impact on an individual. For smokers who quit prior to age 44, essentially all smoking-related death is preventable. Even for those over 65, one quarter of these premature deaths can be prevented.[4]

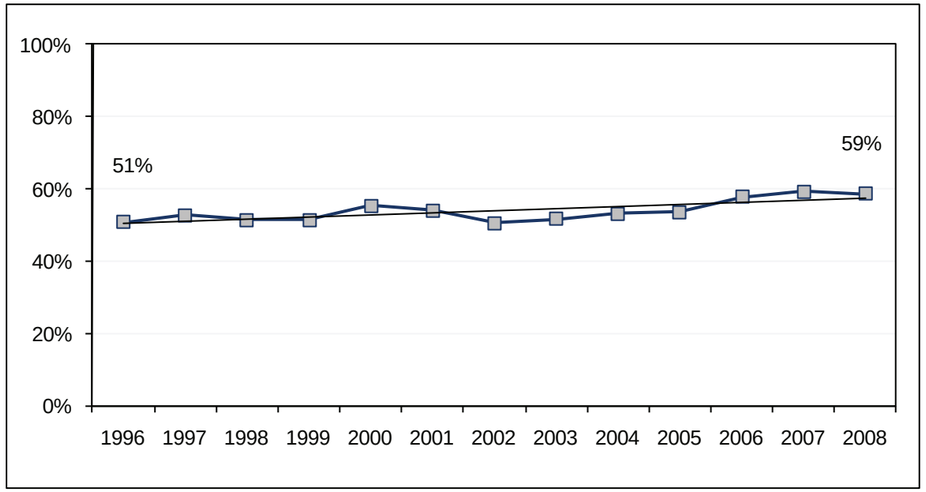
Quit Ratio: A Measure of Successful Quitting

Changes in quitting can be assessed through the quit ratio—the proportion of former smokers among those who have ever been smokers. For this measure, we limited the analysis to adults aged 25 and older because quitting trends are less likely to be affected by changes in initiation in this slightly older group. The majority of smokers initiate smoking before they turn 25; in 2007, 95% of Alaskan smokers reported starting smoking before age 25.

Trends in the Quit Ratio

In 1996, just over half of Alaskans aged 25 and older who were ever smokers had quit smoking (see Figure 18). The quit ratio among adults aged 25 and older has increased from 50.8% in 1996 to 58.6% in 2008 ($p < 0.001$). By 2008, nearly three of every five Alaska adults who were ever smokers had quit smoking.

Figure 18. Percent of Alaska Adults aged 25 and Older Who No Longer Smoke, Among Ever Smokers, 1996-2008



Source: Alaska Behavioral Risk Factor Surveillance System

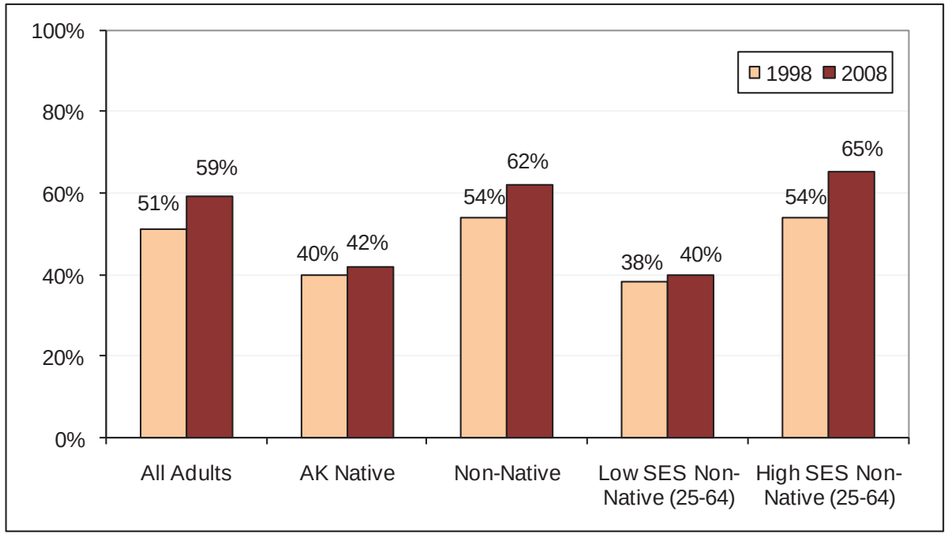
Trends by Priority Populations

Between 1998 and 2008, the quit ratio among adults aged 25 and older increased significantly among:

- Non-Natives (53.5% in 1998 to 62.2% in 2008)
- Non-Natives of higher SES aged 25-64 (56.8% in 1998 to 64.7% in 2008)

However, increasing the quit ratio remains a challenge among the priority populations of Alaska Natives and non-Natives of low SES aged 25-64 (see Figure 19).

Figure 19. Percent of Alaska Adults aged 25 and Older Who No Longer Smoke, Among Ever Smokers by Priority Populations and Comparison Groups, 1998* and 2008



Source: Alaska Behavioral Risk Factor Surveillance System
*The graph shows changes by priority populations and their counterparts from 1998 to 2008 and excludes 1996 and 1997 because of higher variability in the data for some subpopulations in those years.

Trends by Gender, Age and Region

The increase in quit ratio among current smokers was statistically significant among:

- Women (51.2% in 1996 to 58.0% in 2008)

Residents of Anchorage/Mat-Su, Gulf Coast, and Southeast Alaska

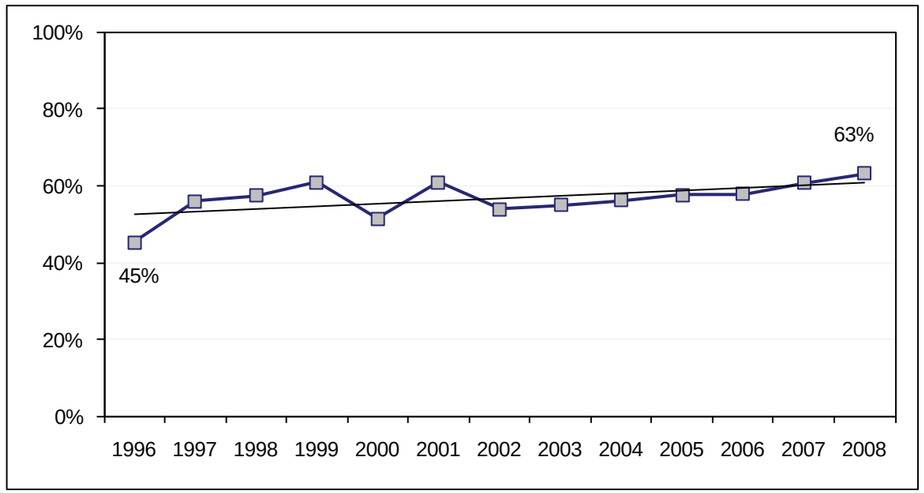
- Anchorage/Mat-Su (52.4% in 1998 to 61.8% in 2008)
- Gulf Coast (48.5% in 1998 to 57.1% in 2008)
- Southeast Alaska (52.8% in 1998 to 59.4% in 2008)

The quit ratio shows some signs of improving among men as well, although the apparent increase did not reach statistical significance. Improving the quit ratio remains a challenge among younger adults and much of rural Alaska.

Trends in Quit Attempts among Current Smokers

Among adults who report being current smokers, the proportion who made a quit attempt in the past year increased from 45.3% in 1996 to 63.1% in 2008 (p-value = 0.003; see Figure 20, below). In the context of declining smoking and an increasing quit ratio, the increase in these not-yet-successful quit attempts may be a good indicator of increased interest and effort in quitting among Alaska smokers, which may translate into further increases in successful quitting in the next few years.

Figure 20. Percent of Alaska Adult Current Smokers Who Made a Quit Attempt in the Past 12 Months, 1996-2008

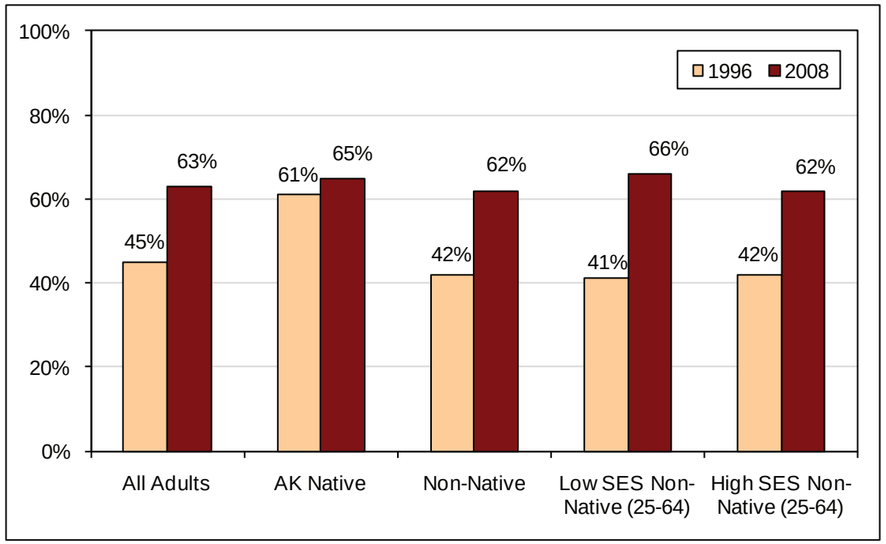


Source: Alaska Behavioral Risk Factor Surveillance System

Trends by Priority Populations

Although there were no significant trends in current smoker quit attempts among Alaska Natives, the proportion has remained relatively high, and in many years it has been significantly higher than quit attempts among non-Natives. From 1996 to 2008 there were significant increases in current smoker quit attempts among non-Natives, and both the low SES non-Native priority group and its higher SES counterpart (see Figure 21). In 2008, among all groups, nearly two of every three current smokers made an attempt to quit in the past year.

Figure 21. Percent of Alaska Adult Current Smokers Who Made a Quit Attempt in the Past 12 Months, by Priority Populations and Comparison Groups, 1996 and 2008



Source: Alaska Behavioral Risk Factor Surveillance System

Trends by Gender, Age and Region

The increase in quit attempts among current smokers was statistically significant among:

- Women (50.8% in 1996 to 64.9% in 2008)
- Men (40.7% in 1996 to 61.7% in 2008)
- Adults aged 30-54 (42.7% in 1996 to 61.2% in 2008)

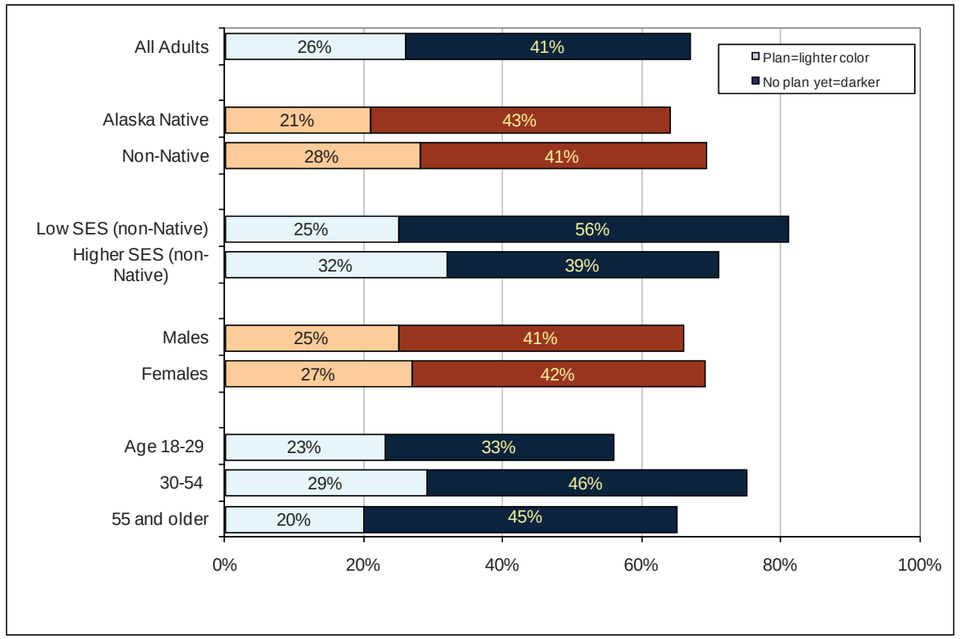
Although there were no significant trends for young adults or by region, in 2008 the proportion of current smokers who made an attempt to quit in the past 12 months was as high for young adults (70.2%) as it was for adults in other age groups. Prevalence of quit attempts among current smokers was relatively high in rural Alaska (69.6%), similar to the proportion in Fairbanks and vicinity (71.8%) and Anchorage/ Mat-Su (64.0%). Both Fairbanks and rural Alaska reported higher prevalence of quit attempts by current smokers than the Gulf Coast region (52.9%) and Southeast Alaska (50.4%).

Other Quit-related Indicators

Most smokers would like to kick the habit. Over 60% of adult smokers report wanting to quit, in all groups except 18-29 year olds. Reporting having a plan to quit in the next 30 days is an indicator that the smoker is farther along the cycle of quitting than those who report wanting to quit, but do not yet have a plan to do so soon.

Among all smokers, about one in four (25.7%) have a plan to quit within the next 30 days. There are no significant differences by SES or among other groups in the proportion that plan to quit (see Figure 22).

Figure 22. Percent of Current Smokers Planning to Quit in Next 30 Days, and Percent who Want to Quit but Do Not Yet Have a Plan, Alaska 2006-2008



Source: Alaska Behavioral Risk Factor Surveillance System

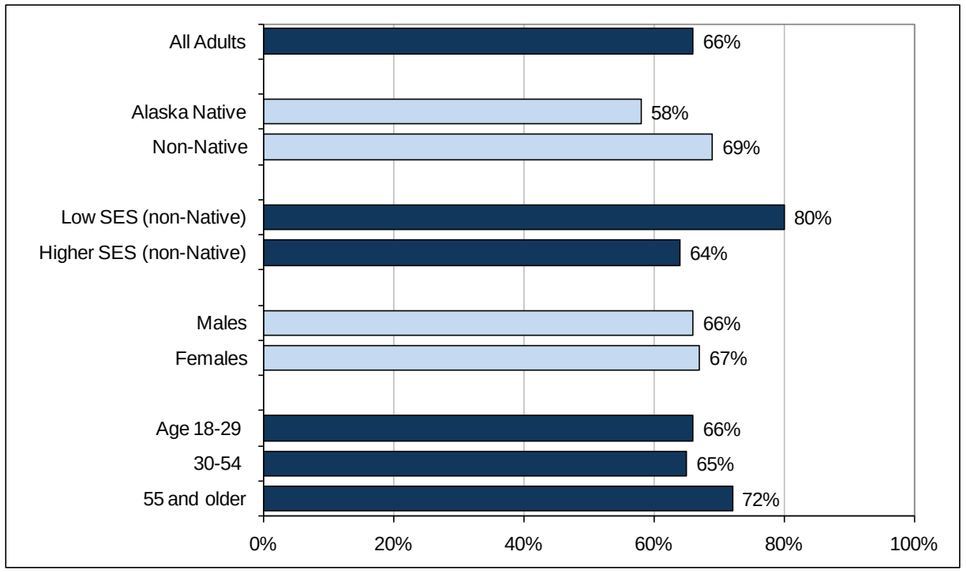
Health Care Provider Advice to Quit

Many studies have shown that having a health care provider give advice to quit can positively affect a smoker's chance of quitting.[5] This effect can be enhanced by the provision of smoking cessation medications help to move smokers toward long-term success in quitting.

Although two out of three smokers (66.1%) who saw a health care provider in the past year report having received advice to quit at their last health visit, many smokers did not see a health care provider in the past year. Smokers are less likely to have had a health care visit than non-smokers (60.7% vs. 76.4%, $p<0.001$).

In Figure 23 below, we see that roughly two-thirds of current smokers who had a health care visit in the past year do receive advice to quit. Significantly more non-Natives of low SES receive advice to quit at their health care visit than non-Natives of higher SES (79.7% vs. 63.8%, $p=0.01$). Among Alaska Native and non-Native smokers who had a past year health care visit, the difference in advice to quit does not quite reach statistical significance ($p=0.06$).

Figure 23. Percent of Current Smokers with a Past Year Health Care Visit Who Received Advice to Quit, Alaska 2007-2008



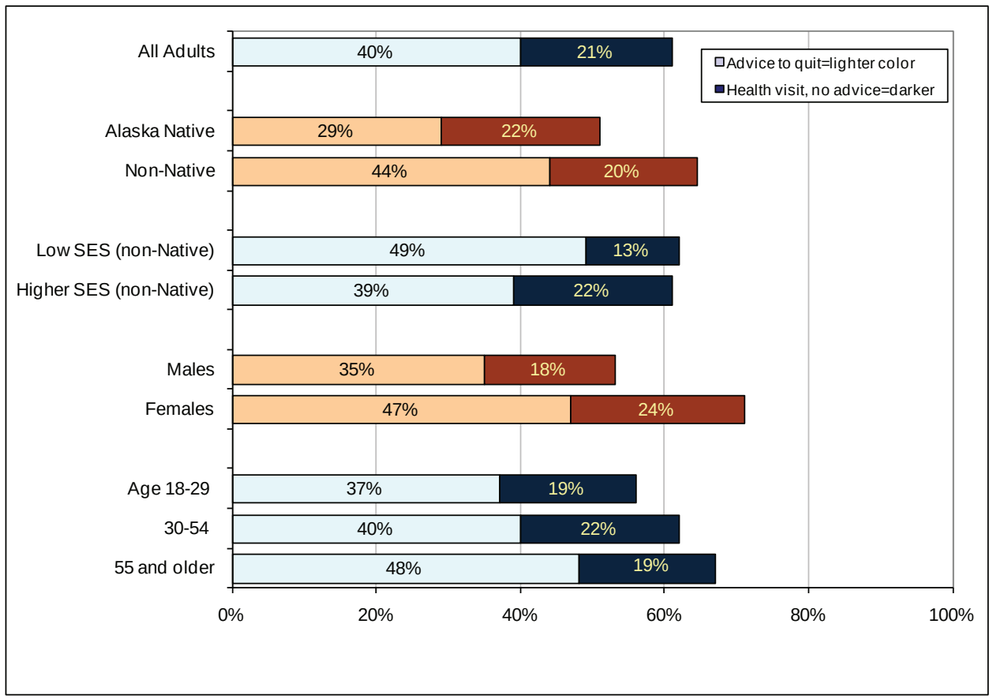
Source: Alaska Behavioral Risk Factor Surveillance System

Among all smokers, about two in five (40%) receive advice to quit and one in five (21%) do not receive advice when they see a clinician. However, two in five smokers (39%) did not have a recent opportunity to receive advice to quit because they did not have a past year health care visit (see Figure 24, below).

Among smokers, women are significantly more likely than men to have had a health care visit (71.2% vs. 52.8%) and therefore are more likely to receive advice to quit (47.4% vs. 34.7%). Alaska Natives are significantly less likely than non-Natives to have had a visit (50.8% vs. 64.4%) and are less likely to receive advice to quit (29.4% vs. 44.7%). Geography is likely a partial factor in whether Alaska Natives have yearly health care visits and receive a clinician's advice to quit. Although numbers are too small to review the data by both race group and region, we did examine health care visits by region (see Table 1-11 in Appendix B). The proportion of Alaska smokers who have had a past year health visit is lowest in the most rural parts of the state, Southwest Alaska (33.7%) and North/NW/Interior (51.2%), compared to other regions, where 60% or more saw a health provider in the past year. Nearly half of all Alaska Native adults (46%) live in the more rural regions, and Alaska Natives comprise the majority of BRFSS respondents from Southwest Alaska (69%) and the North/NW/Interior region (51%).

In contrast, non-Native, low SES and higher SES smokers (age 25-64) are equally as likely to have had a health care visit, and more likely than higher SES smokers to receive advice to quit.

Figure 24. Percent of Current Smokers Overall Who Received Health Care Provider Advice to Quit, and Percent Who Did Not Receive Advice to Quit at their Health Care Visit in the Past 12 Months, Alaska 2007-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Awareness of the Alaska Tobacco Quit Line as a Cessation Resource

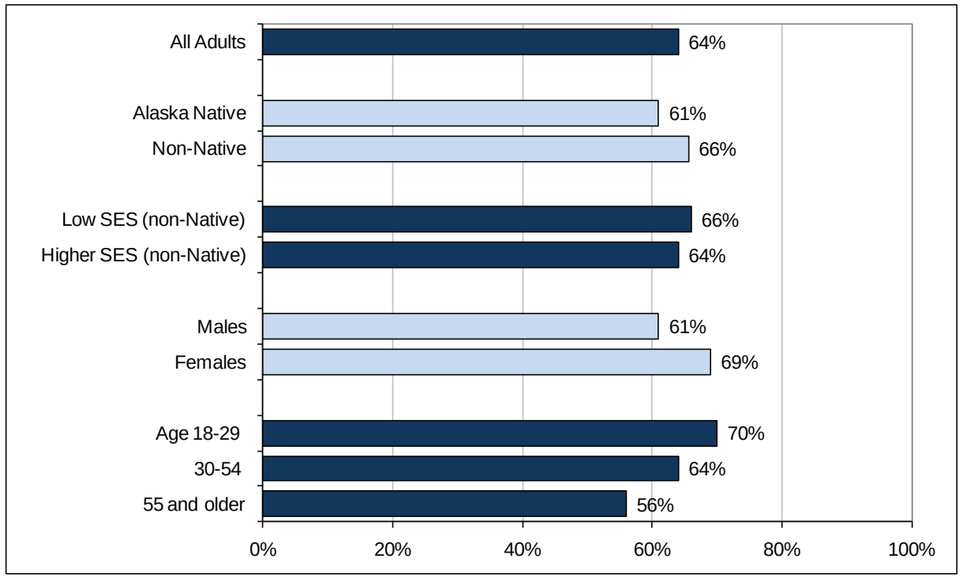
Telephone quit lines provide behavioral counseling to smokers by trained counselors over the telephone, and often provide medication like nicotine replacement therapy (NRT). Both telephone quit lines and NRT have been shown to increase smokers' long-term success in quitting. [3, 6]

Although quit lines are highly effective in improving quit outcomes, they generally are used by a relatively small proportion of smokers, and therefore work best in tandem with other components of a comprehensive program. Rates in North American have ranged from <1% to 4% across different states and provinces. [7] Between 2008 and 2010, the annual call rate for the Alaska Tobacco Quit Line (QL) was about 2.4% of adult cigarette or smokeless tobacco users.[8] In 2006, 6% of current and former smokers in Alaska report ever having called the QL, and 31.9% of current smokers indicated that they would consider calling and using this resource to get help in quitting tobacco.

Since 2004, survey respondents have been asked if they are aware of the Alaska Tobacco Quit Line as a telephone service that can help people quit smoking or using smokeless tobacco. Awareness of the QL increased among all adults, from 29.5% in 2004 to 55.1% in 2008 ($p<0.001$). Among current smokers, awareness increased from 44.3% in 2004 to 67.5% in 2008 ($p<0.001$).

For comparison by subgroups, we combine data from 2006-2008 (see Figure 25). Women are more likely to be aware of the QL than men (69.2% vs. 60.8%, $p=0.03$). Younger smokers aged 18-29 are more likely to be aware of this resource than smokers aged 55 and older (70.3% vs. 55.5%, $p=0.02$).

Figure 25. Percent of Alaska Current Smokers Aware of the Alaska Tobacco Quit Line, 2006-2008



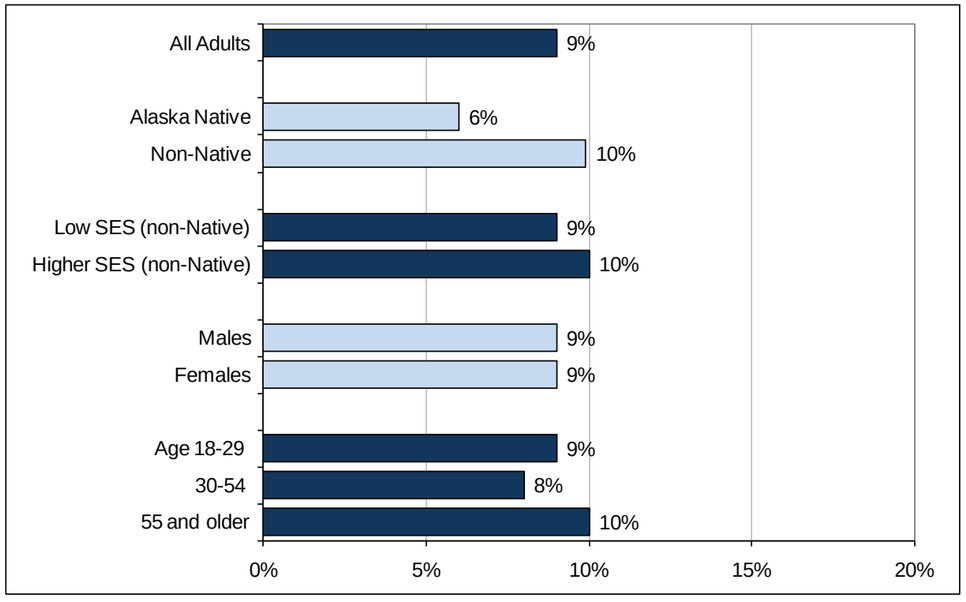
Source: Alaska Behavioral Risk Factor Surveillance System

Longer Term Quits among Past Year Smokers

Smokers usually need to make multiple quit attempts before finally becoming successful because relapse rates in the first few weeks after quitting are extremely high.[9] However, among those who have been quit for at least 3 months, relapse (into smoking) is very low. For this reason, one useful indicator of long-term success in quitting is to look at the number of past year smokers who report having quit and not smoked for 3 or more months at the time they were surveyed.

Among those who were smokers within the past year, 8.9% report having been quit for at least three months. This proportion did not differ significantly by subpopulations, even though it appears Alaska Native recent smokers are less likely than non-Natives to have long-term quit success (see Figure 26).

Figure 26. Percent of Alaska Recent (Past Year) Smokers Who Have Been Quit For 3 or More Months, 2006-2008



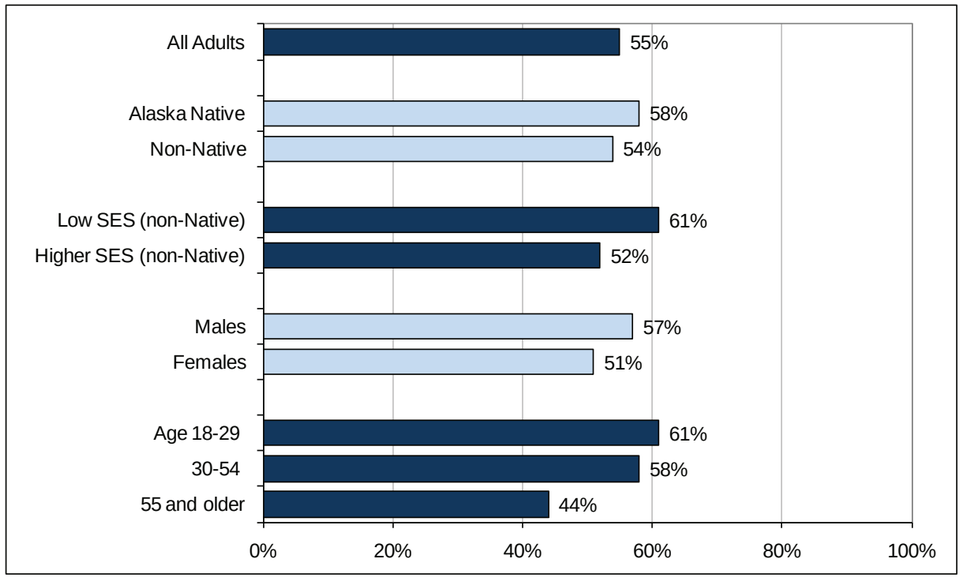
Source: Alaska Behavioral Risk Factor Surveillance System

Age at Initiation of Smoking

Starting smoking at an early age increases the likelihood that a person will continue smoking, and it increases the likelihood of disease and death from tobacco-related causes.

Figure 27 shows the proportion of adult smokers, both current and former, who started smoking before age 18. Men are more likely than women to have started smoking by age 18 (57.3% vs. 51.0%, p=0.04). In addition, non-Natives of low SES (age 25-64) are more likely than those of higher SES to have started smoking by age 18 (61.1% vs. 52.1%, p=0.05). There were also significant differences by each age group, but that may be due to a more complex set of factors; older smokers who started smoking as teens may also have died earlier from tobacco-related causes than older smokers who started smoking later in life.

Figure 27. Percent of Alaska Current and Former Smokers Who Began to Smoke Regularly Before Age 18, 2007-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Summary and Next Steps Since 1996 adult smoking prevalence in Alaska has fallen by approximately 20% and tobacco consumption is lower than in the nation as a whole. The declines in adult smoking prevalence result from both decreases in smoking initiation and in increased quitting, as measured by the quit ratio, or percentage of former smokers among those who have ever smoked. Smoking prevalence has decreased among both men and women, among adults aged 30 and older, and in several regions of the state (Anchorage/Mat-Su, Gulf Coast, Southeast, and Fairbanks). These decreases are encouraging, yet smoking prevalence remains high and unchanged among Alaska Native adults, non-Native adults of low socioeconomic status, and adults younger than age 30. Program efforts should target these three groups and should also consider other populations with relatively high smoking rates, including adults who are unemployed and have lower levels of educational attainment. Program interventions should be tailored to each population group and can be informed by the data on tobacco-related knowledge, attitudes, and behaviors in each group. A description of the program implications for each priority population follows.

Alaska Native Adults

Efforts to reduce Alaska Native adult smoking prevalence should be broad-based, as Alaska Native adults are over twice as likely to smoke as non-Native adults. Smoking rates among all Alaska Native population subgroups exceed the state average; within the Alaska Native population smoking rates are highest among adults with lower incomes and lower levels of education, men, and adults ages 18-29. Adults with children in the home are also more likely to be smokers than those who do not have children in the home. Alaska Native smoking prevalence is higher in the North/NW/Interior region of the state than any other region of the state, though rates are elevated in all regions.

Within the Alaska Native population, the proportion of adults who report that they have never been smokers has not increased and the quit ratio (proportion of adult ever smokers who do not smoke currently) has not decreased, indicating that tobacco prevention and control efforts should focus on both preventing initiation and supporting cessation. Strategies that support social norm change, such as increasing the price of tobacco products, instituting clean indoor air policies, restricting tobacco advertising, promoting tobacco-free schools and public places, and mass media counter-marketing and education are effective, in combination, in preventing initiation and supporting cessation. These strategies should be implemented throughout the state, with adaptations made for local circumstances. Small villages with few public buildings, for example, may want to focus on clean indoor air policies that include public buildings but also prohibit smoking at events where large segments of the population gather.

Data indicate that almost two-thirds (64%) of Alaska Native adult smokers would like to quit smoking and as many (65%) have made a quit attempt in the past year. Alaska Native adults have consistently been as or more likely to try to quit than non-Native adults but have also been consistently less likely to quit successfully. Program efforts should build on the high interest in quitting and high percentage of quit attempts and should focus on supporting successful quit attempts. Because smokers often need to make multiple quit attempts before they permanently stop smoking, strategies to normalize relapse should be included in cessation efforts.[9]

Health care provider advice to quit has been shown to be effective in helping smokers quit,[5] particularly as part of a health-systems-level approach that combines provider advice and referral with cessation benefits covered by health insurance.[10] In an effort to increase provider advice around cessation, the Alaska TPCP currently funds 9 health care organizations to implement the *Clinical Practice Guidelines for Treating Tobacco Use and Dependence*. Seven of these organizations are regional health corporations or serve primarily Alaska Native clientele. It is true that Alaska Native adults are not as likely to see a health care provider as non-Native adults; only half of all Alaska Native smokers report having seen a health care provider in the past year, compared to almost two-thirds of non-Native smokers (64.4%). Among those who have seen a health care provider, there appears to be a possible disparity in receiving advice to quit, between Alaska Native and non-Native adult smokers (58% versus 69%) even though it is not quite a statistically significant difference (p=0.06). These findings indicate that there needs to be a focus both on increasing health care provider advice to quit and on ensuring that additional program cessation strategies are available to help smokers who have limited contact with the health care system.

In addition to grants to health care systems, the TPCP also supports the Alaska Tobacco Quit Line (QL), a service providing behavioral counseling and nicotine replacement therapy to tobacco users. While Alaska Native adults are as likely to be aware of the QL as non-Native adults, the proportion of Alaska Native adult tobacco users who call the QL is lower than that of adults overall. Recent QL data from 2008-2010 indicate that although about 2.4% of all adult cigarette and/or smokeless tobacco users call the QL annually, the rate for Alaska Native adult tobacco users is about 0.8%. As noted earlier, the Quit Line study indicated that quit rates were still reasonably good for Alaska Natives who did call, even though they were lower than quit rates among non-Natives. Therefore the QL can be an effective tool for Alaska Natives as well as non-Natives who want to quit tobacco. The TPCP has taken several steps to make the QL more useful and acceptable to Alaska Native tobacco users. Measures to improve QL utilization among Alaska Natives include the development of cultural competency training modules for quit coaches and an outreach campaign designed to increase familiarity with what to expect when calling the QL. Even with improved utilization, however, quit lines are likely to be used by a relatively small proportion of the population. Efforts to increase the utilization of the Quit Line should be used in conjunction with other population-based strategies that promote cessation.

Low SES adults

As is the case with Alaska Native adults, efforts to reduce smoking rates among adults of lower socioeconomic status should be broad based as prevalence within most low SES population subgroups exceeds the state average. Among low SES adults, smoking prevalence is highest among those who are unemployed or unable to work. Women of low socioeconomic status are as likely to smoke as men and middle aged adults are as likely to smoke as younger adults; patterns not seen in other population subgroups. Among adults with low incomes, those who do not finish high school are more likely to smoke than those who are educated at or above the high school or GED level.

Both initiation and cessation are unchanged among adults of lower socioeconomic status, indicating that tobacco prevention and control efforts should continue to focus both on prevention and on cessation. As lower SES adults are more likely to report that they started smoking before age 18 than higher SES adults, strategies designed to prevent initiation may have particular impact on smoking rates within the low SES population.

The majority (81%) of non-Native low SES smokers would like to quit smoking and two-thirds report making a quit attempt in the past year. While the percentage of non-Native low SES smokers who would like to quit smoking has increased over time, the percentage who quit successfully is unchanged. As is the case with Alaska Native adults, cessation efforts should build on the high interest in quitting and high number of quit attempts within the low SES population.

Nearly two-thirds (62%) of non-Natives of low SES report visiting a health care provider in the past year, a percentage that is comparable to the state average and to visit rates among higher SES smokers. The majority (80%) of non-Native lower SES smokers who saw a health care provider were advised to quit, indicating that providers are addressing tobacco use at health care visits. As is the case with Alaska Native adults, however, tobacco prevention and control efforts need to incorporate strategies to reach lower SES smokers who do not utilize the health care system, and ensure that those who do access health care can benefit from an integrated approach to advice, referral and cessation benefits that are covered as part of their health care. The TPCP has been working with partners to develop cessation coverage through programs such as Medicaid.

Two-thirds (66%) of non-Native lower SES smokers report being aware of the Alaska Tobacco Quit Line (QL), a percentage that is comparable to the statewide average and rates among most other population subgroups. Although information about callers' education was not collected prior to 2008 (and income was added in 2010), more recent information from the QL for 2008-2010 indicates that Alaska's tobacco users with lower education levels are almost as likely as those with more education to call the QL. A little over half (52%) of callers report a formal education level of high school or less, and this group represents 58% of Alaska adults who smoke or use SLT. In addition, 35% of callers report having some college or technical school education, representing 29% of adult tobacco users.

Young adults

To date, young adults have not been a priority population for the Alaska TPCP. Data in this report indicate that programmatic efforts should also target younger adults (18-29).

As is the case with Alaska Native and low SES smokers, smoking prevalence among young adults has not changed over time and remains higher than the statewide prevalence. The percentage of young adults who have never smoked has not increased over time, nor has the percentage of young adults who have successfully quit, indicating that both prevention and cessation efforts are needed. Young adults are more likely to be daily smokers than older adults but tend to smoke fewer cigarettes per day than those who are older.

Although a majority of young adults (56%) report that they would like to quit, this is significantly lower than for the middle age category; 75% of those aged 30 to 54 report wanting to quit. Quit attempts haven't increased among young adults, but 70%made a quit attempt in the past year. Of those who made at least one attempt in the past year, younger adults aged 18-29 are as likely as those in the older age groups to be successful in quitting. In all groups, almost one in ten past year smokers who tried to quit (9%) have remained quit for 3 months or longer. However, since young adults are considerably more likely to be smokers (32% versus 22% of those aged 30-54 and 14% of those aged 55 or older), it is imperative that more young smokers are ready to quit. Program efforts to reach this group may need to focus on building a desire or impetus to quit in addition to supporting efforts to quit successfully.

Young adults who smoke are more likely to be aware of the Alaska Tobacco Quit Line than older adults. Young adults aged 18 to 30 comprise 34% of cigarette and smokeless tobacco users in Alaska and 27.5% of QL callers, indicating that they are only slightly less likely than those aged 31 to 60 to call the QL. Young adult smokers (age 18 to 29) who see a health care provider are as likely to receive advice to quit during their visit as smokers in older age groups. However, young adults are less likely to have an opportunity to receive that advice from a health care provider; only 56% of young adult current smokers report having seen a health care provider in the last year.

Next Steps

The data on adult smoking rates indicate that while substantial progress has been made in reducing smoking more work needs to be done overall and within population subgroups with high smoking rates, including Alaska Native adults, adults of lower socioeconomic status, and young adults. Prevention and cessation efforts are needed for all three groups, with cessation efforts that reach adults who do not utilize the health care system or quit line, as well as those who do.

As is the case nationally, social and economic factors contribute to elevated smoking rates and have implications for tobacco prevention and control.[11] In Alaska, smoking rates are highly correlated with educational attainment across population groups, with the highest rates of use among adults with less than a high school education. Smoking rates among adults who are unemployed are also high across population groups and adults with lower levels of income and or education also smoke at elevated rates.

In order to prevent initiation of smoking and help all people to quit, those working in tobacco control and prevention will need to find ways to address these social determinants that are related to smoking and so many health risk behaviors. Work in California suggests that both policy and collaboration can be tools in developing a more holistic approach.[12] Opportunities include working collaboratively with agencies that serve the poor and may not traditionally be involved in tobacco control such as: community based organizations and their staff that already serve the low SES population; health care providers/clinics; social service agencies/providers; substance abuse prevention programs/agencies; religious organizations/ churches; maternal and child health programs; prenatal programs; veterans groups; places of incarceration; homeless shelters; tribal or ethnic-specific agencies; migrant camps; ESL classes; vocational/trade schools; immigration lawyers; and parents involved in their neighborhood schools.

As noted earlier, the goals and structure of the Alaska TPCP are based largely on the Centers for Disease Control and Prevention's (CDC) *Best Practices for Comprehensive Tobacco Prevention and Control Programs,* a document describing strategies that have been shown to reduce tobacco use when employed in a sustained and comprehensive manner. The comprehensive program approach already includes strategies that can be particularly effective among young adults and people of low SES, such as increasing the price of tobacco, tobacco-free/clean air policies, and systems-level approaches to increase access and reduce barriers to getting cessation support and NRT. While there is still work to be done to fully implement comprehensive program strategies, additional efforts should further address broader barriers arising from the social disadvantages to which recipients are exposed.[13] Policies that level up opportunities and living standards across the lifespan have an important role to play in reducing socioeconomic differentials in smoking. Those who are developing tobacco policies must actively engage in the context of the people they are trying to reach, and find ways to better link with housing, child care, training, and economic policies and programs.

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Part IV - Adult Tobacco Use

CHAPTER 2 - Smokeless Tobacco

Introduction

In 2008, 5% of Alaska adults, or almost 26,200 people, are currently using smokeless tobacco (also referred to as SLT). Smokeless tobacco (SLT) has been found by the U.S. Surgeon General, the American Cancer Society and the International Agency for Research on Cancer to be a cause of oral cancer and pancreatic cancer (IARC, 2007).[1] It is also linked to periodontitis and tooth loss.

In addition to traditional commercial smokeless tobacco products such as chew and snuff, in Alaska there is a smokeless tobacco variant called "Iq'mik" (ick-mick) or "Blackbull" that is unique to Alaska Native culture. Iq'mik is prepared by burning a woody fungus *(Phellinus igniarius)* from birch trees, and mixing the ash with leaf tobacco. The ash is mixed with tobacco leaves, pre-chewed in the mouth or mixed with water, and saved in containers to use later. Iq'mik is frequently shared among families, and children may be introduced to Iq'mik use early, including as a teething remedy during infancy. [2, 3]

This chapter provides information about trends in adult SLT use from 1996 to 2008 overall, among priority populations (Alaska Natives and Low SES Non-Natives aged 25-64), as well as by smoking status, gender, age, and region. This chapter also includes information about disparities in SLT use among subpopulations of Alaska Natives, including data regarding Iq'mik versus commercial types of SLT.

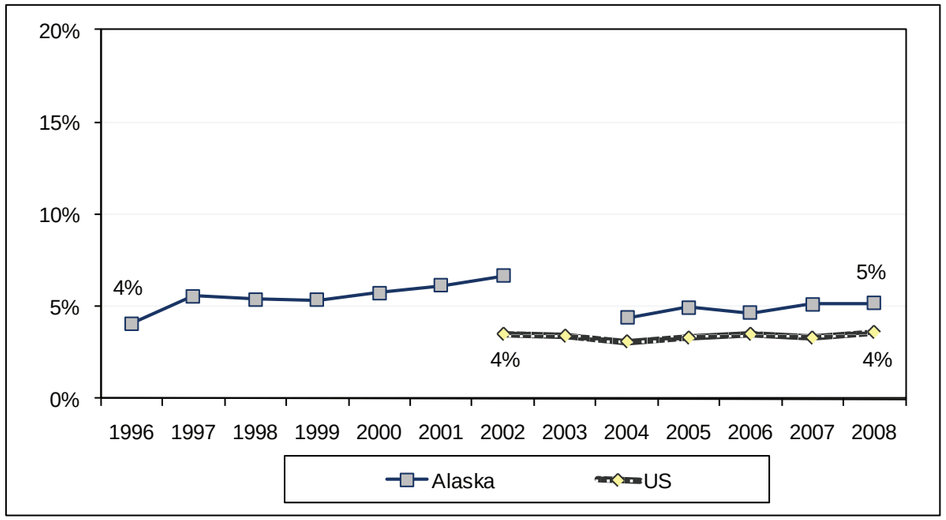
Data Sources

Data on adult smokeless use come primarily from the Behavioral Risk Factor Surveillance System (BRFSS). Respondents who said that they currently used any smokeless tobacco products, including chewing tobacco, snuff, Iq'mik or Blackbull were classified as current SLT users. The question about SLT use was not included in the 2003 survey; therefore trend graphs and tables do not show any information for 2003. Further information about the data source is listed in Appendix C.

Trends in Smokeless Tobacco Use

In Alaska, adult prevalence of SLT use has remained stable between 1996 and 2008 (see Figure 28). Nationally, SLT prevalence has also not changed, at least for the past 7 years in which this information has been collected by the Substance Abuse and Mental Health Services Administration (SAMHSA). In 2008, 3.6% of Americans aged 18 and older report use of smokeless tobacco (5.4% among 18 to 25 year olds and 3.3% among those aged 26 and older).[4]

Figure 28. Percent of Adults Who Use Smokeless Tobacco, by Year Alaska and US, 1996-2008

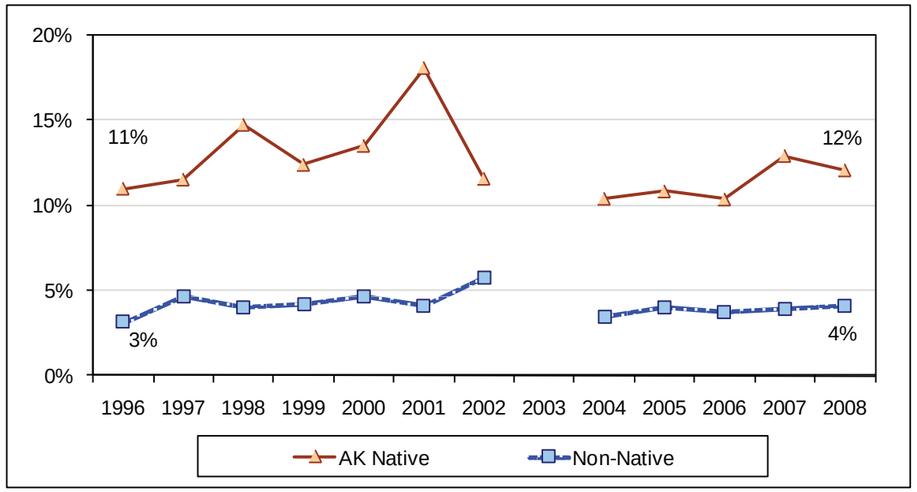


Sources: Alaska Behavioral Risk Factor Surveillance System, National Survey on Drug Use and Health
Note: No data on SLT use was collected in 2003.

Trends by Priority Populations

Among the priority populations and their comparison groups, there were no significant changes in the proportion of those using SLT between 1996 and 2008, although Alaska Natives are significantly more likely than non-Natives to use smokeless tobacco (see Figure 29).

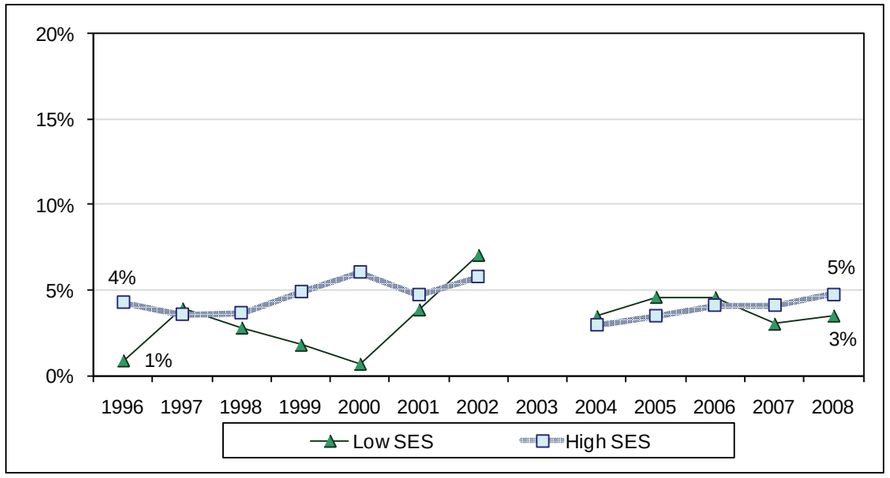
Figure 29. Percent of Alaska Adults Who Use Smokeless Tobacco, by Year, Alaska Native and Non-Native, 1996-2008



Source: Alaska Behavioral Risk Factor Surveillance System
Note: No data on SLT use was collected in 2003.

Although the pattern of SLT use appears to vary over time particularly among non-Natives aged 25-64 of lower SES, there are no significant differences in SLT use by SES among non-Natives aged 25-64 (see Figure 30).

Figure 30. Percent of Alaska Adults Who Use Smokeless Tobacco, by Year, Non-Natives (aged 25-64) by SES, 1996-2008



Source: Alaska Behavioral Risk Factor Surveillance System
Note: No data on SLT use was collected in 2003.

Trends by Gender, Age and Region

Prevalence of smokeless tobacco use remained stable among most groups by gender, age and region. However, SLT use decreased among:

- Adults aged 55 and older (3.1% in 1996 to 2.4% in 2008)

Trends by Smoking Status

Smokeless tobacco use remained stable among former smokers and those who had never been smokers (never smokers). However, SLT use increased slightly but significantly among:

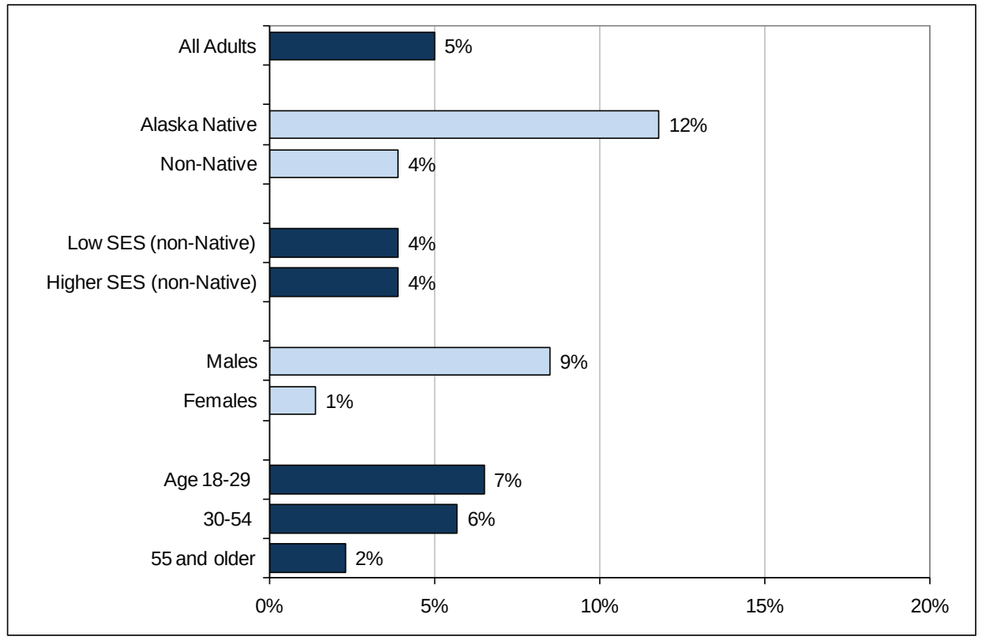
- Current smokers (3.6% in 1996 to 5.4% in 2008)

Who Is Most Likely To Use Smokeless Tobacco?

In this section, we review disparities in smokeless use in Alaska. In order to examine differences in smoking and related behavior among a wider variety of subpopulations, we combined the three most recent years of survey data to report the information below.

As indicated earlier, smokeless use is disproportionally higher among Alaska Natives. SLT use is also significantly higher among men than among women, and prevalence is significantly lower among those aged 55 and older, compared to adults in the younger and middle categories (see Figure 31).

Figure 31. Percent of Adults Who Currently Use Smokeless Tobacco, Alaska, 2006-2008



Source: Alaska Behavioral Risk Factor Surveillance System

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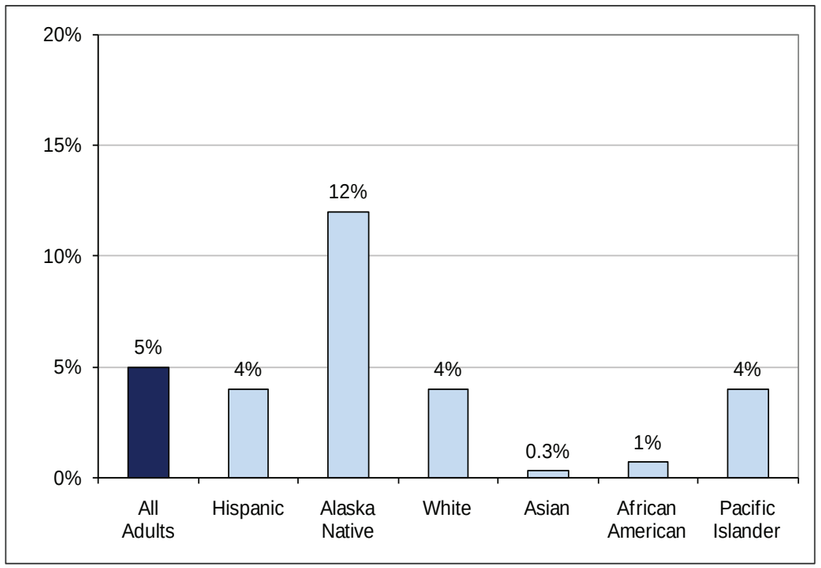
Disparities in Smokeless Tobacco Use by Race and Ethnicity – Six Categories

According to the 2010 U.S. Census, approximately 5% of Alaska adults identify as Hispanic or Latino. Of those who are non-Hispanic, 13% identify as Alaska Native alone, 68% are White, 5% are Asian, 3% are African American, and 1% are Hawaiian/Other Pacific Islander. The remaining 4-5% identify with either some other race group or multiple race groups—about 3% identify as Alaska Native in addition to another race group.

Alaska Natives are significantly more likely than any other group to use SLT; about 12% of Alaska Native adults use SLT, compared to roughly 4% of White, Hispanic, and Pacific Islander adults, and less than 1% of African American and Asian adults (see Figure 32). It also appears that White adults are significantly more likely to use SLT than African American or Asian adults in Alaska. However, because the number of respondents in the sample is still quite low for all groups except Alaska Natives and Whites (in particular the Pacific Islander (non-Hispanic) group), and because prevalence is very low among Hispanics, Pacific Islanders, African Americans and Asians, the prevalence estimates report for these groups may be less stable or precise than those for other groups, and it may not be possible to determine if there are significant differences between any of these groups.

Figure 32. Percent of Adults Who Currently Use Smokeless Tobacco, by Race and Ethnicity, Alaska, 2006-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Note: The race categories of Alaska Native, White, Asian, African American, and Pacific Islander, do not include respondents of Hispanic ethnicity. The prevalences for Hispanic, Asians, African Americans and Pacific Islanders have a high coefficient of variation.

Disparities for the Alaska Native Priority Group by Other Factors

While Alaska Natives as a group have a higher prevalence of smokeless tobacco use than non-Natives, there are also disparities in use within the Alaska Native population. Alaska Native men are significantly more likely than women to use smokeless tobacco, at least in most geographic regions. Smokeless use is higher among people aged 30 to 54 than either younger or older adults, and among those with children in the home. Alaska Natives in Southwest Alaska are the most likely to use smokeless tobacco.

Among both Alaska Natives and non-Natives, men are more likely than women to use SLT. However, Alaska Native women are as likely as non-Native me SLT (see Table 17).

Table 17. Percent of Alaska Adults Who Use Smokeless Tobacco, by Gender and Race Group, 2006-2008

Gender	Alaska Natives	Non-Natives	Total
Men	14.9%	7.5%	8.5%
Women	8.5%	0.1%*	1.4%
All Adults	**11.8%**	**3.9%**	**5.0%**

Source: Alaska Behavioral Risk Factor Surveillance System

Note: Asterisk marks those estimates with a high coefficient of variation.

Table 18 shows SLT prevalence by age and race group. Among Alaska Natives, adults aged 30-54 are more likely than either younger adults or older adults to use SLT. Among non-Natives, older adults aged 55 and older are least likely to use SLT. In all age groups, Alaska Natives are more likely than non-Natives to use SLT.

Table 18. Percent of Alaska Adults Who Use Smokeless Tobacco, by Age and Race Group, 2006-2008

Age	Alaska Natives	Non-Natives	Total
18-29	10.0%	5.8%	6.5%
30-54	15.5%	4.3%	5.7%
55 and older	6.4%	1.6%	2.3%
All Adults	**11.8%**	**3.9%**	**5.0%**

Source: Alaska Behavioral Risk Factor Surveillance System

As noted in Chapter 1, nearly half of all Alaska adults surveyed (46.6%) report having children also living in the household. Adults with children living in their home represent 57.6% of adult smokeless users. Among Alaska Natives, those with children in the home are significantly more likely to use SLT than those with no children in the home (see Table 19). Among non-Natives, smokeless use does not differ significantly by presence of children in the home.

Table 19. Percent of Alaska Adults Who Use Smokeless Tobacco, by Children in Home and Race Group, 2006-2008

Children in Home	Alaska Natives	Non-Natives	Total
Yes	14.7%	4.4%	6.3%
No	6.8%	3.5%	3.9%
All Adults	**11.8%**	**3.9%**	**5.0%**

Source: Alaska Behavioral Risk Factor Surveillance System

Smokeless tobacco use is highest in Southwest Alaska, followed by the North/Northwest/ Interior region (see Table 20). Among non-Native adults, smokeless tobacco is highest in the Gulf Coast; other regions do not significantly differ from Anchorage/Mat-Su in smokeless prevalence. Among Alaska Natives, use is highest among those in Southwest Alaska, and lowest in Southeast Alaska. Smokeless use by Alaska Natives is ten to fifteen times higher in Southwest Alaska than in Anchorage/Mat-Su or Southeast Alaska, and three times higher than in the North/Northwest/Interior.

Table 20. Percent of Alaska Adults Who Use Smokeless Tobacco, by Region and Race Group, 2006-2008

Geographic Region	Alaska Natives	Non-Natives	Total
North/NW/Interior	10.4%	3.4%	7.1%
Southwest AK	30.7%	4.6%	23.2%
Gulf Coast	6.9%	5.7%	5.7%
Anchorage/Mat-Su	2.8%*	3.3%	3.2%
Fairbanks North Star	4.9%*	4.8%	4.8%
Southeast	1.7%*	4.1%	3.7%
All Adults	**11.8%**	**3.9%**	**5.0%**

Source: Alaska Behavioral Risk Factor Surveillance System

Note: Asterisk marks those estimates that may lack precision due to a high coefficient of variation or sample size inadequate to very uncommon events.

Among Alaska Natives, SLT use is significantly higher among never smokers and former smokers than current smokers (see Table 21). However, among non-Natives, this pattern is reversed; smokers are significantly more likely to be SLT users than former or never smokers.

Table 21. Percent of Alaska Adults Who Use Smokeless Tobacco, by Smoking Status and Race Group, 2006-2008

Smoking Status	Alaska Natives	Non-Natives	Total
Current Smoker	8.4%	6.3%	6.8%
Former Smoker	12.4%	4.8%	5.9%
Never Smoker	15.4%	2.6%	3.8%
All Adults	**11.8%**	**3.9%**	**5.0%**

Source: Alaska Behavioral Risk Factor Surveillance System

Consumption and Interest in Quitting Among Alaska Native and non-Native SLT Users

Most current SLT users use it on a daily basis. Consumption of SLT is measured in the Alaska BRFSS by the number of days in the past 30 in which current SLT users report having used SLT. The majority (63.6%) use SLT on a daily basis, and this pattern is similar among both Alaska Natives and non-Natives (see Table 22).

Table 22. Past Month Use of SLT among Alaska Adult SLT Users, by Race Group, 2006-2008

Number of Days	Alaska Natives	Non-Natives	Total
0 to 2 days	8.8%	7.8%	8.1%
3 to 10 days	13.0%	13.6%	13.4%
11 to 29 days	15.3%	14.7%	14.9%
All 30 days	63.0%	63.8%	63.6%
All SLT Use	**100%**	**100%**	**100%**

Source: Alaska Behavioral Risk Factor Surveillance System

Among Alaska Natives and non-Natives alike, nearly two thirds of SLT users want to quit using SLT (see Table 23).

Table 23. Percent of SLT-Using Alaska Adults Who Want to Quit, by Race Group, 2006-2008

Want to Quit	Alaska Natives	Non-Natives	Total
Yes	64.5%	62.0%	62.6%
No	35.5%	38.0%	37.4%
All SLT Use	**100%**	**100%**	**100%**

Source: Alaska Behavioral Risk Factor Surveillance System

Disparities for the Low SES Non-Native (age 25-64) Priority Group by Other Factors

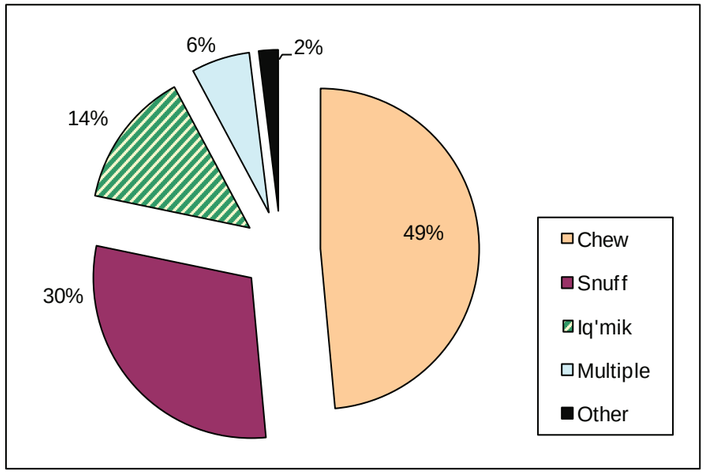
Because of relatively small numbers of non-Native respondents who use SLT and the fact that the prevalence of smokeless tobacco use does not differ significantly by SES, we did not examine potential disparities within the Low SES non-Native priority group.

Who Is Most Likely To Use Iq'mik?

In Alaska, the BRFSS includes questions about the type of smokeless tobacco use: chewing tobacco, snuff, Iq'mik /Blackbull, or other types. Overall, 4.3% use the commercial products (chewing tobacco or snuff), and only 0.7% of Alaska adults use Iq'mik/Blackbull. However, nearly one in twenty Alaska Native adults (4.7%) report using Iq'mik (see Table 2-6 in Appendix B). Another 6% of Alaska Natives report using more than one SLT type, which might also include Iq'mik use. Use of commercial SLT—chewing tobacco and snuff—is also higher among Alaska Natives (7.0%) than non-Natives (3.9%).

When we look at the proportion of types among SLT users, it seems clear that a majority of Alaska adult users of SLT are using commercial products; about half (49%) report using chewing tobacco, and another 30% report using snuff (see Figure 33). Relatively few SLT users report using more than one type of smokeless product (6%).

Figure 33. Smokeless Tobacco Product Types Used by All Adult Current Users of SLT, Alaska 2006-2008

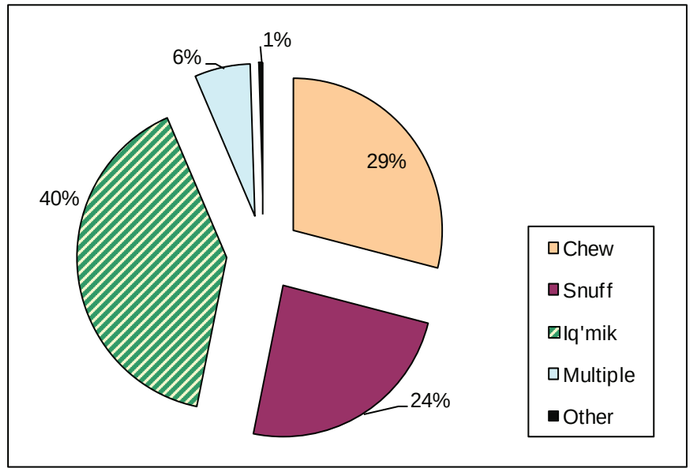


Source: Alaska Behavioral Risk Factor Surveillance System

As indicated above, however, prevalence of product types differs considerably by Alaska Native or non-Native status. Iq'mik represents 14% of all SLT types used, but its use is almost exclusively among Alaska Natives.

Among Alaska Natives, four of every ten SLT users (40%) use Iq'mik alone. Roughly three in ten use commercial chewing tobacco (29%), and about 24% use snuff (see Figure 34). Relatively few Alaska Native SLT users report using more than one type.

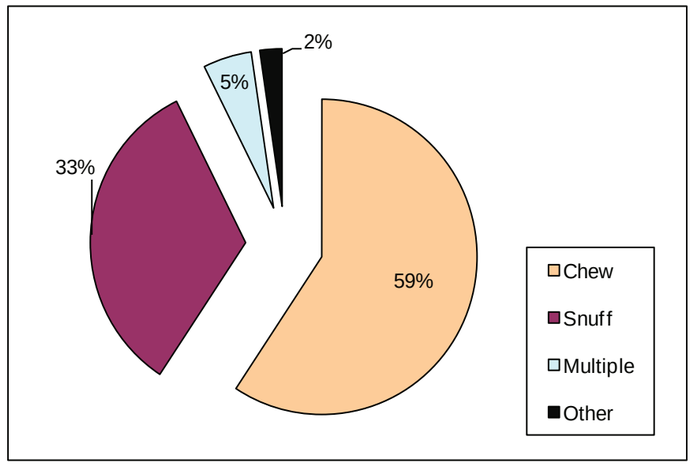
Figure 34. Smokeless Tobacco Product Types Used by Alaska Native Current Users of SLT, Alaska 2006-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Among non-Native SLT users, the most common product in use is chewing tobacco (59.0%); about one-third use snuff (see Figure 35). However, as with Alaska Native SLT users, relatively few non-Natives use multiple product types.

Figure 35. Smokeless Tobacco Product Types Used by Non-Native Current Users of SLT, Alaska 2006-2008



Source: Alaska Behavioral Risk Factor Surveillance System

While the use of Iq'mik is basically exclusive to Alaska Natives, its use is associated with a particular region and culture. Most Iq'mik use (95.0%) occurs among residents of Southwest Alaska, particularly in and around Bethel and the Wade Hampton census area. More than 1 in 6 Alaska Native adults in Southwest Alaska (17.5%) use Iq'mik, and another 13.2% report commercial SLT use. Among Alaska Natives, two thirds of women SLT users (66.3%) are using Iq'mik, versus 25.7% of men who use SLT. Iq'mik use does not differ significantly by gender, although men are more likely than women to use other SLT types (see Table 24).

Table 24. Percent of Alaska Native SLT Users Who Use Iq'mik versus Other Products, by Gender, Alaska, 2006-2008

Gender	Iq'mik	Other (chew, snuff)	Total SLT
AK Native Men	3.8%	11.0%	14.9%
AK Native Women	5.7%	2.9%	8.5%
All AK Natives	**4.7%**	**7.0%**	**11.8%**

Source: Alaska Behavioral Risk Factor Surveillance System

Iq'mik use does not differ significantly by age group, but the overall pattern is similar to that of commercial and overall SLT use (see Table 25).

Table 25. Percent of Alaska Native SLT Users Who Use Iq'mik versus Other Products, by Age, Alaska, 2006-2008

Age	Iq'mik	Other (chew, snuff)	Total SLT
AK Native 18-29	4.3%	5.6%	10.0%
AK Native 30-54	5.9%	9.6%	15.5%
AK Native 55 and older	2.8%	3.5%	6.4%
All AK Natives	**4.7%**	**7.0%**	**11.8%**

Source: Alaska Behavioral Risk Factor Surveillance System

Most (78.1%) of Alaska Natives who are dual tobacco users (cigarette smoking and SLT) are using commercial SLT types (see Table 26). Iq'mik use differs significantly by smoking status; only 1.8% of Alaska Native smokers use Iq'mik, compared to 5.9% of former smokers and 7.4% of never smokers.

Table 26. Percent of Alaska Native SLT Users Who Use Iq'mik versus Other Products, by Smoking Status, Alaska, 2006-2008

Smoking Status	Iq'mik	Other (chew, snuff)	Total SLT
AK Native Smokers	1.8%	6.5%	8.4%
AK Native Non-smokers	6.7%	7.2%	14.0%
All AK Natives	**4.7%**	**7.0%**	**11.8%**

Source: Alaska Behavioral Risk Factor Surveillance System

Both Iq'mik and commercial SLT use are higher among Alaska Natives with children in their households (see Table 27).

Table 27. Percent of Alaska Native SLT Users Who Use Iq'mik versus Other Products, by Children in Home, Alaska, 2006-2008

Children in Home	Iq'mik	Other (chew, snuff)	Total SLT
Yes	6.3%	8.4%	14.7%
No	2.4%	4.9%	6.8%
All AK Natives	**4.7%**	**7.0%**	**11.8%**

Source: Alaska Behavioral Risk Factor Surveillance System

Summary and Next Steps

Unlike the trends in adult smoking, overall smokeless tobacco use prevalence in Alaska has not changed over the past 15 years. Smokeless tobacco use has remained stable among adults who have never smoked and among former smokers but has increased among adults who are current smokers. The reasons for increased SLT use among smokers are unclear. Some smokers may be switching to smokeless tobacco use in situations where smoking is not allowed and some may be using smokeless tobacco as part of an attempt to quit smoking without stopping all smokeless tobacco use.[5] The reasons for increased dual use of tobacco products should be explored and program interventions may need to be structured differently for dual users than for adults who use only one form of tobacco. Program strategies should also take into account other variations in smokeless tobacco use patterns including patterns of use that differ by age, gender, race and ethnicity, region, as well as the specific type or types of smokeless tobacco used.

As is the case with smoking, smokeless tobacco use is higher among Alaska Native adults than non-Native adults and rates are elevated across most population groups. Patterns of smokeless tobacco use among Alaska Native adults suggest that intervention strategies may need to be tailored for specific subsets of the population. Smokeless tobacco use is more common among Alaska Native never and former smokers than it is among current smokers. Efforts to further understand why smokeless tobacco is used by adults who have never smoked or who have quit smoking may help to inform program strategies designed to reduce smokeless tobacco use. Any statewide efforts to address the dual use of tobacco and cigarettes may not be appropriate for all Alaska Native smokeless tobacco users, as many of them do not use both products.

The use of smokeless tobacco by non-smoking Alaska Native adults may be partially explained by the types of smokeless tobacco used. In addition to commercial tobacco, many Alaska Native adults report using a variation of smokeless tobacco known as "Iq'mik" or "Blackbull". Iq'mik is prepared by mixing leaf tobacco with the ash of a fungus that grows on birch trees.[6,2] Literature indicates that Iq'mik use and preparation has social value for Alaska Natives who use it: families have used it for generations, young people learn to prepare it from elders or adults, adult family members – especially women – may prepare it for use by others, parents give permission to stores to sell ingredients or supplies for Iq'mik to their children, and people share their supply with one another.[2] Focus group participants have reported adults may switch to Iq'mik when quitting cigarettes or if cigarettes are not available.[2] Program efforts to reduce smokeless tobacco use may need to be designed differently for users of commercial tobacco and Iq'mik, with attention to the cultural and social significance of Iq'mik use.

The vast majority (95%) of Iq'mik use in the state occurs in the Bethel and Wade Hampton census areas and accounts for more than half of the smokeless tobacco use seen in Southwest Alaska. Previous research has found that found that use of Iq'mik was more highly prevalent among Yup'ik adults practicing traditional lifestyles, while cigarette smoking was more highly prevalent among Yup'ik adults practicing more Western-acculturated lifestyles.[7]

Efforts to address smokeless tobacco use, including Iq'mik use within the Alaska Native population, should also account for gender differences in SLT use. Alaska Native women are much more likely to use smokeless tobacco than are non-Native women and use smokeless tobacco at rates that are similar to rates among non-Native men. Among those who use some form of SLT, two-thirds of Alaska Native women use Iq'mik, compared to roughly a quarter (26%) of Alaska Native men. Focus group participants have reported that men often switch from Iq'mik to cigarettes as adults, while women continue using Iq'mik.[2] Strategies to reduce smokeless tobacco use among Alaska Native women should also address the use of Iq'mik in regions where Iq'mik is used.

Among non-Native Alaska adults, smokeless tobacco use is confined almost exclusively to men. Less than 1% of non-Native women use smokeless tobacco, compared to nearly 9% of Alaska Native women. As mentioned previously, non-Native adult SLT users are more likely to be current smokers than to be former or never smokers and SLT use rates are similar for younger (18-29) and middle aged (30-54) adults. Understanding the reasons for dual use of SLT products and cigarettes may help inform program interventions among non-Native adults.

Data indicate that nearly two-thirds (63%) of adult smokeless tobacco users would like to quit; these numbers are similar for Alaska Native and non-Native adults. As is the case with smoking, tobacco prevention and control efforts among smokeless tobacco users should build on the high interest in quitting smokeless tobacco and provide support for making successful quit attempts.

Smokeless tobacco is used by a relatively small proportion (5%) of the Alaska adult population. While it does not affect as large a percentage of the population as smoking does, it does merit attention and intervention. The varying patterns of tobacco use found in Alaska suggest that a multi-faceted approach to smokeless tobacco prevention and cessation is warranted, with specific interventions tailored to the characteristics of subpopulations in which SLT use is high.

CHAPTER 2 - References

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Part IV - Adult Tobacco Use

CHAPTER 3 - Other Smoked Tobacco Types and Multiple Product Use

Introduction

The majority of tobacco smoked in Alaska is in the form of cigarettes. However, recent adult health surveys have also included questions regarding use of other smoked tobacco products, including cigars, pipes, bidis, and clove cigarettes. Cigars contain the same toxic and carcinogenic compounds found in cigarettes and are linked to the same health diseases and risks as conventional cigarettes.[1] Bidis are small, thin hand-rolled cigarettes imported to the United States primarily from India and other Southeast Asian countries.[2] Clove cigarettes, also known as kreteks, are imported primarily from Indonesia and typically contain a mixture of tobacco, cloves, and other additives. Bidis and kreteks have higher concentrations of nicotine, tar, and carbon monoxide than conventional cigarettes sold in the United States.[3,4] None of these products are a safe alternative to conventional cigarettes.[1,5]

Cigar, bidi and kretek smoking is highest among youth and young adults.[6,7] Until relatively recently, the Surgeon General's health warning was not legally mandated for some tobacco products, such as cigars.[8] Studies indicate that many young adults perceive use of non-traditional tobacco products as less of a health risk than conventional cigarettes.[9,10]

Nationally, 5.4% of all adults in the United States smoke cigars, and pipe and bidi/kretek use are each closer to 1%. Alaska follows a similar pattern; 5.1% of adults report recent cigar use and 2.0% total report smoking a pipe, bidis or clove cigarettes. While many of those who smoke other tobacco products also smoke conventional cigarettes, overall tobacco smoking prevalence in Alaska is 24.8%; that is, one in four Alaska adults smoked cigarettes or other tobacco in the past month.

This chapter provides information about current adult use of four other smoked tobacco products besides conventional cigarettes – cigars, pipes, bidis and clove cigarettes. In addition, there is information about disparities in other smoked tobacco use (all products combined) by conventional cigarette smoking status, gender, age, region and priority population. The last sections of the chapter examine multiple smoked tobacco product use, as well as overall (smoked and smokeless) tobacco product use.

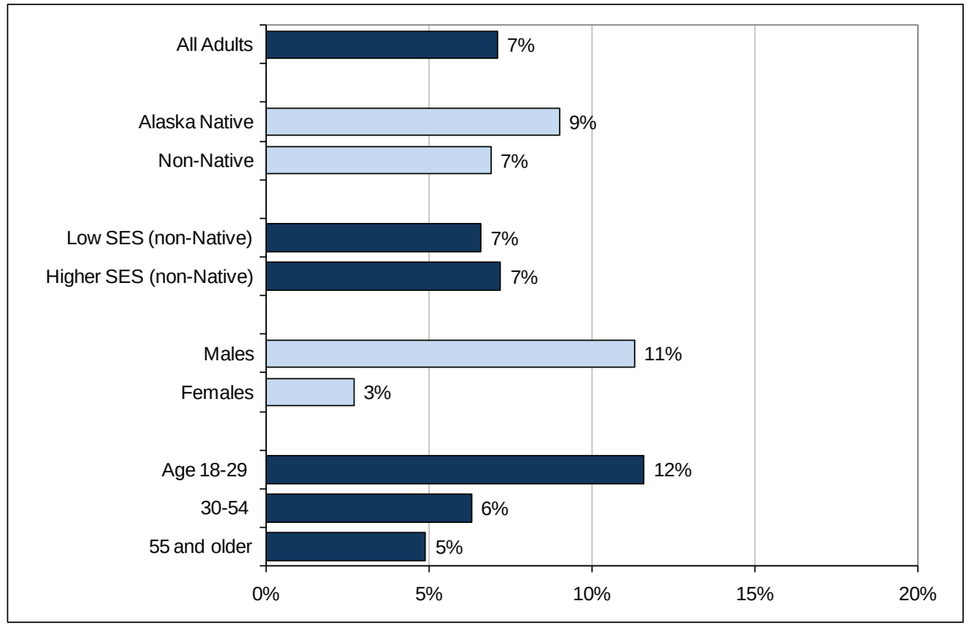
Data Sources

Data on other smoked tobacco product use by Alaska adults come from the Behavioral Risk Factor Surveillance System (BRFSS) and were collected in the 2007 and 2008 surveys. Respondents who reported any smoking of a cigar (even just a puff), tobacco in a pipe, clove cigarettes or bidis in the past month were categorized as current users of other smoked tobacco products.

Who Is Most Likely To Smoke Cigars, Pipes, Bidis, or Clove Cigarettes?

In this section, we review disparities in current use of other smoked tobacco in Alaska, whether cigar, pipe, bidi or clove cigarette. Use of any of these other smoked tobacco products is highest among men and young adults aged 18-29 (see Figure 36, below). In the tables that follow, we also examine cigar smoking prevalence separately from pipe, bidi or clove cigarette smoking.

Figure 36. Percent of Alaska Adults Who Currently Smoke Cigars, Pipes, Bidis or Clove Cigarettes, 2007-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Additional Factors by Cigar or Other Smoked Tobacco Use

Cigar prevalence does not differ significantly between Alaska Native and non-Native adults. Smoking of pipes, bidis and/or clove cigarettes is slightly higher among Alaska Natives than non-Natives (see Table 28).

Table 28. Percent of Alaska Adults Who Smoke Cigars, Pipes, Bidis or Clove Cigarettes, by Race Group, 2007-2008

	Cigar	Pipe, Bidi or Clove	Total
Alaska Natives	5.4%	3.6%	9.0%
Non-Natives	5.1%	1.8%	6.9%
All Adults	**5.1%**	**2.0%**	**7.1%**

Source: Alaska Behavioral Risk Factor Surveillance System

As noted earlier, young adults (age 18-29) are significantly more likely than those in the 30-54 or 55 and older age groups to use some form of smoked tobacco (see Table 29). When this use is broken out to cigars versus pipes, bidis or clove cigarettes, cigar smoking is significantly higher for young adults than for those aged 55 and older.

Table 29. Percent of Alaska Adults Who Smoke Cigars, Pipes, Bidis or Clove Cigarettes, by Age, 2007-2008

Age	Cigar	Pipe, Bidi or Clove	Total
18-29	8.2%	3.3%	11.6%
30-54	4.5%	1.7%	6.3%
55 and older	3.5%	1.5%	4.9%
All Adults	**5.1%**	**2.0%**	**7.1%**

Source: Alaska Behavioral Risk Factor Surveillance System

As noted in Chapter 5, nearly half of all Alaska adults surveyed (46.6%) report having children also living in the household. While cigarette smoking and smokeless tobacco use are higher among adults with children living in their home, the use of other smoked tobacco products does not differ significantly by the presence of children at home (see Table 30).

Table 30. Percent of Alaska Adults Who Smoke Cigars, Pipes, Bidis or Clove Cigarettes, by Children in Home, 2007-2008

Children in Home	Cigar	Pipe, Bidi or Clove	Total
Yes	4.9%	2.2%	7.1%
No	5.3%	1.9%	7.2%
All Adults	**5.1%**	**2.0%**	**7.1%**

Source: Alaska Behavioral Risk Factor Surveillance System

Combined use of other smoked tobacco products (cigars included) is significantly higher in the Gulf Coast than in Anchorage/Mat-Su, Fairbanks North Star, or Southeast Alaska (see Table 31). The driving factor in this difference is higher pipe, bidi and/or clove cigarette use in the Gulf Coast.

Table 31. Percent of Alaska Adults Who Smoke Cigars, Pipes, Bidis or Clove Cigarettes, by Region, 2007-2008

Geographic Region	Cigar	Pipe, Bidi or Clove	Total
North/NW/Interior	5.0%	2.1%*	7.1%
Southwest AK	6.8%	2.8%	9.6%
Gulf Coast	6.1%	4.4%	10.4%
Anchorage/Mat-Su	5.2%	1.5%*	6.7%
Fairbanks North Star	4.2%	2.4%	6.6%
Southeast	4.2%	1.2%*	5.4%
All Adults	**5.1%**	**2.0%**	**7.1%**

Source: Alaska Behavioral Risk Factor Surveillance System

Note: Asterisk marks those estimates that may lack precision due to a high coefficient of variation or sample size inadequate to very uncommon events.

Current smokers of conventional cigarettes are more likely than former or never smokers to also smoke cigars, and other smoked tobacco products (see Table 32). Cigarette smokers are more than 3 times as likely to be smokers of cigars or other tobacco products, than those who do not currently smoke conventional cigarettes.

Table 32. Percent of Alaska Adults Who Smoke Cigars, Pipes, Bidis or Clove Cigarettes, by Conventional Cigarette Smoking Status, 2007-2008

Smoking Status	Cigar	Pipe, Bidi or Clove	Total
Current Smoker	13.0%	4.8%	17.8%
Former Smoker	4.1%	1.9%*	6.0%
Never Smoker	2.5%	1.0%*	3.4%
All Adults	**5.1%**	**2.0%**	**7.1%**

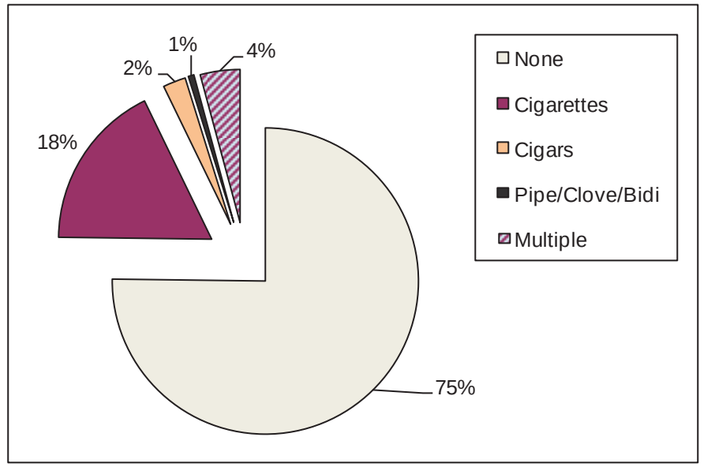
Source: Alaska Behavioral Risk Factor Surveillance System

Note: Asterisk marks those estimates that may lack precision due to a high coefficient of variation or sample size inadequate to very uncommon events.

Use of Any Smoked Tobacco Products

In Alaska, patterns of use for other smoked tobacco products are similar to those nationally; 5.1% smoke cigars, 0.7% smoke pipes, 0.6% smoke cloves or bidis, and 0.8% smoke more than one of these. Over half (53.1%) of those who use other smoked tobacco products also smoke conventional cigarettes. Overall, one out of every four Alaska adults (24.8%) currently smokes one or more tobacco products, including conventional cigarettes, cigars, pipes, cloves, and bidis (see Figure 37, below).

Figure 37. Percent of Adults Who Currently Use Smoked Tobacco, by Type, Alaska, 2007-2008



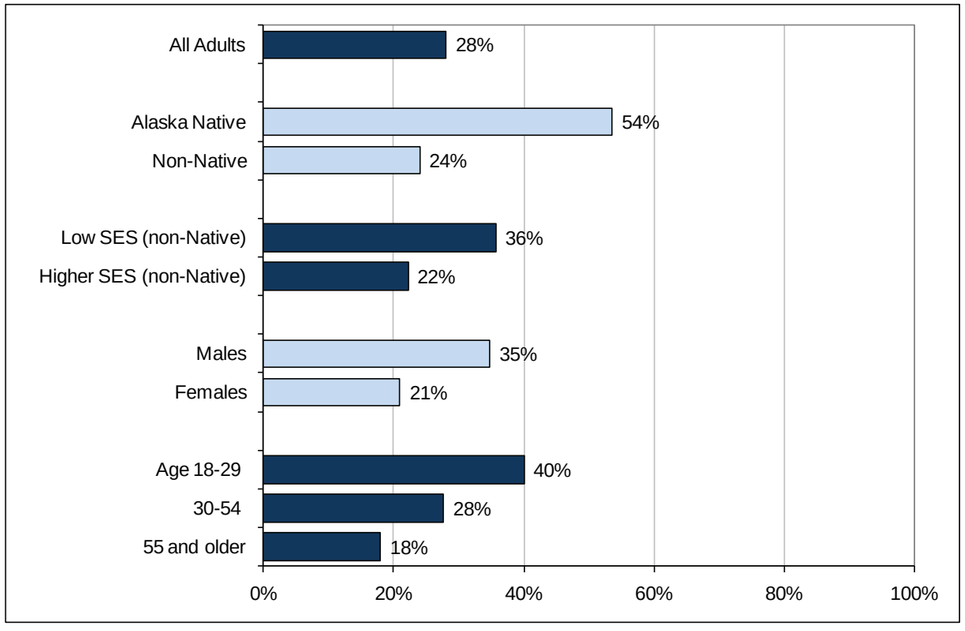
Source: Alaska Behavioral Risk Factor Surveillance System

Men are more likely than women to smoke cigars only (4.1% versus 0.4%) or smoke multiple tobacco types (6.4% versus 1.8%).

Who Is Most Likely To Use Any Type of Tobacco?

In this section, we review disparities in current use of any type of tobacco, including both smoked and smokeless types. Over half of Alaska Native adults (53.6%) use some form of tobacco, twice as high as the prevalence among non-Natives (see Figure 38). Roughly two in five young adults aged 18-29 use some form of tobacco, which is significantly higher than prevalence among adults aged 30-54 and older adults (55 and older).

Figure 38. Percent of Alaska Adults Who Currently Use Any Type of Tobacco (including cigarettes, cigars, pipes, bidis, cloves and SLT), Alaska, 2007-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Regionally, any tobacco use is highest in Southwest Alaska (51.9%) and North/NW/Interior (40.6%). Use in these regions is significantly higher than in the Gulf Coast (30.3%), as well as the three other most populated regions (Anchorage/Mat-Su, Fairbanks North Star, and Southeast Alaska), where 25-26% of adults report one or more forms of tobacco use.

Summary and Next Steps

The majority of tobacco use in Alaska is from smoked tobacco products; approximately one in four Alaska adults use some form of smoked tobacco. Most Alaska adults who use smoked tobacco products are smoking conventional cigarettes exclusively. About one in five Alaska adults (18%) smoke cigarettes only; 4% of adults use multiple forms of smoked tobacco and 3% smoke only cigars or only pipes, bidis or cloves. As neither cigars nor pipes nor bidis nor clove cigarettes can be considered safe alternatives to conventional cigarettes prevention and control efforts should include all smoked tobacco product. All smoked tobacco types should have the same health warnings on packaging, and be subject to taxes and comprehensive clean indoor air laws.

Overall, 28% of Alaska adults use some form of tobacco. Alaska Native adults are twice as likely to use tobacco as non-Native adults, with over half (54%) of Alaska Native adults reporting some form of tobacco use. Some research indicates that those who are more acculturated to a 'Western' lifestyle use smoked tobacco, whereas those practicing a more traditional lifestyle use SLT.[11] However, this finding reinforces the impression that tobacco is uniquely integrated into the lives of people in multiple Alaska Native communities. Rates of both smoking and smokeless tobacco use are higher among Alaska Native people than non-Native people; reducing tobacco use rates will require interventions with both smoked and smokeless tobacco products.

As is the case with smoking only, non-Native adults of lower socioeconomic status are more likely to use some form of tobacco than those with higher levels of income and education. The high rates of tobacco use among lower SES adults are driven primarily by high smoking rates; smokeless tobacco use rates do not vary by SES. Tobacco prevention and control rates with lower SES adults should focus primarily on reducing the use of smoked tobacco.

Younger adults (aged 18-29) are more likely to use some form of tobacco than adults aged 30 and over. Young adults who use tobacco are more likely to smoke cigarettes or use smoked products such as bidis, cigars, or clove cigarettes than older adults. As mentioned earlier, young adults are emerging as a priority population for tobacco prevention and control. Efforts to reduce tobacco use within this population should focus on cigarettes but may also need to address the use of other smoked tobacco products. Although smokeless tobacco use rates for young adults are similar to the state average, many new products such as snus, strips, and orbs are being engineered for nicotine content and marketed towards new users—notably youth and young adults.[12] Smokeless tobacco use rates and types of tobacco used should be monitored especially closely in this age group for signs that young people are becoming tobacco users through experimentation with these new products.[12]

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Part V - Youth Tobacco Use

CHAPTER 4 - Smoking

Introduction

In 2009, about one in six (15.7%) Alaska high school students report smoking on at least one day in the past 30 days. One in twenty (5.1%) are frequent smokers, having smoked on 20 or more days in the past month. Approximately one-third of those who continue to smoke will eventually die a premature death from a smoking-related disease.[1]

Nationally, youth smoking has decreased since 1997, and a similar pattern can be seen in Alaska, although state-level Youth Risk Behavior Survey (YRBS) data are only available for 1995, 2003, 2007, and 2009. Alaska students do not differ from the national sample in regards to initiation of smoking by age 13 and heavy smoking (defined as smoking 10 or more cigarettes per day on days they smoked). However, Alaska youth are significantly less likely than the national sample to be current smokers (15.7 vs. 19.5%, p=0.02), or to be frequent smokers—defined as smoking on 20 or more days in the past month (5.1% vs. 7.3%, p=0.02). Alaska youth smokers are at least as likely to have tried to quit sometime in the past year (58.2% vs. 50.8%, p=0.12). In addition, Alaska youth are also less likely than the national sample to have smoked cigars, cigarillos or little cigars (10.3% vs. 14.0%, $p<0.01$).[2]

This chapter provides information about trends in youth cigarette smoking from 1995 to 2009 by race groups, gender, and grade.

This chapter also includes more detailed comparisons using data from 2007 and 2009 YRBS combined, including information on frequent cigarette smoking, age at initiation of smoking, attempts to quit, and cigar/cigarillo smoking prevalence.

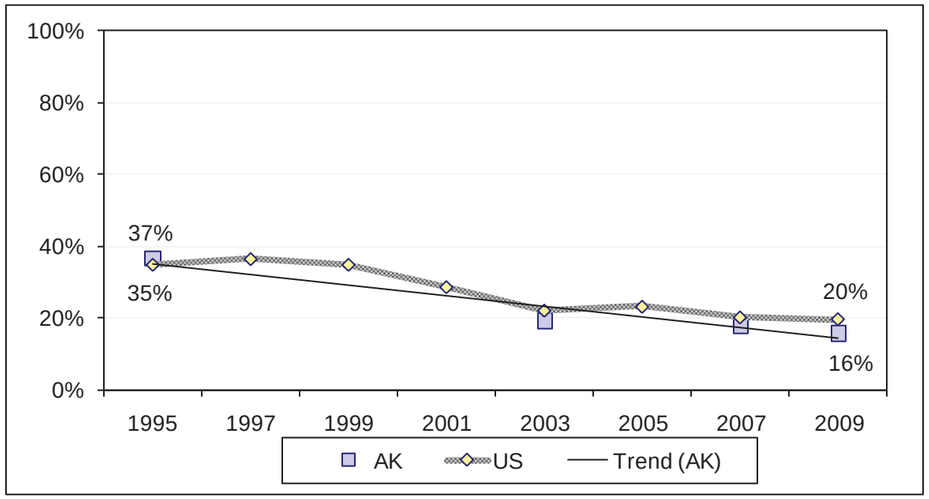
Data Sources

As described in detail in Appendix C, data on youth smoking and quitting come primarily from the Youth Risk Behavior Survey (YRBS). Reporting by race group is limited primarily to Alaska Native youth and White (non-Native) youth for most question items. All YRBS participants who report being Alaska Native, either alone or in combination with other race groups or Hispanic ethnicity, are grouped as Alaska Native. Similarly, all participating students who report being White but not Alaska Native are grouped as White. For other race and ethnic groups, reporting is limited due to relatively small numbers.

Trends in Youth Cigarette Smoking

In Alaska, youth smoking has decreased significantly from 36.5% in 1995 to 15.7% in 2009 (see Figure 39). Nationally, the decrease in youth smoking began in 1997; between 1991 and 1997, youth smoking prevalence had been on the rise. It is not clear if smoking prevalence among Alaska high school students followed the national pattern of increase between 1991 and 1997. Between 2003 and 2009, the apparent decrease in youth smoking in Alaska, from 19.2% to 15.7%, does not quite reach statistical significance (p=0.07).

Figure 39. Percent of High School Youth Who Smoke, Alaska and US, 1995-2009



Sources: Alaska Youth Risk Behavior Survey, National Youth Risk Behavior Survey

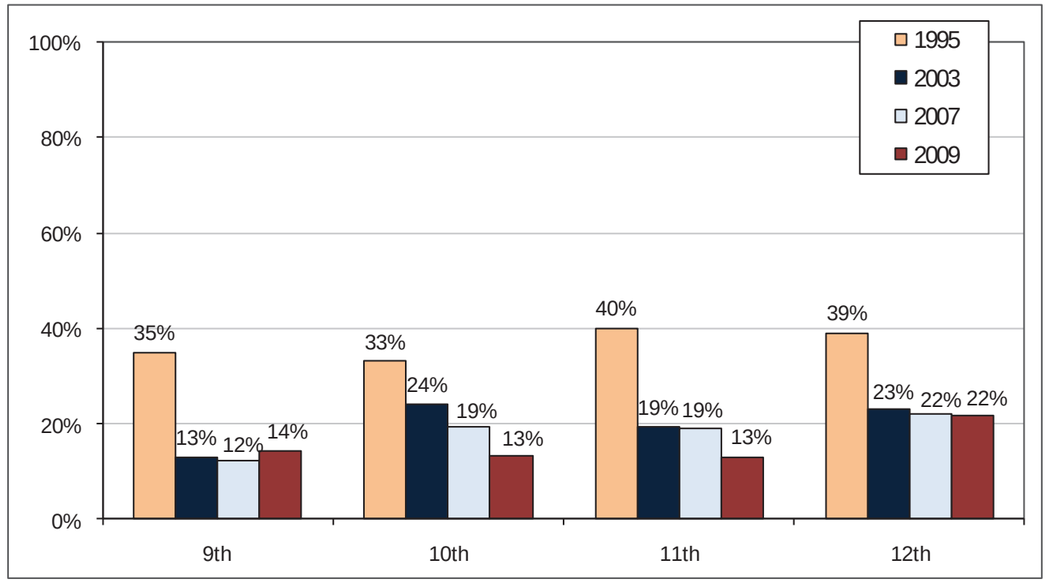
Trends by Race Group

Among high school youth, smoking prevalence has declined significantly since 1995 among all three race groups (see Figure 40). Between 2003 and 2009, youth smoking prevalence continued to decline among Alaska Native students, but did not significantly change for White students or Other Race Group students (including black/African American, Asian, Hawaiian/Other Pacific Islander, and Hispanic students).

Currently, almost one out of four Alaska Native youth smoked in the past 30 days (22.9%). In both of the other groups, a little over one in ten youth are current smokers (13.4% among White youth and 10.4% among other race groups combined).

Although smoking prevalence is still highest for Alaska Native youth, the disparity has decreased considerably since 2003. In 2003, Alaska Native youth were almost four times as likely to smoke as White or Other Race youth; in 2009 Alaska Native youth were about twice as likely as White or Other Race youth to smoke.

Figure 40. Percent of Alaska High School Youth Who Smoke, by Race Group, 1995-2009

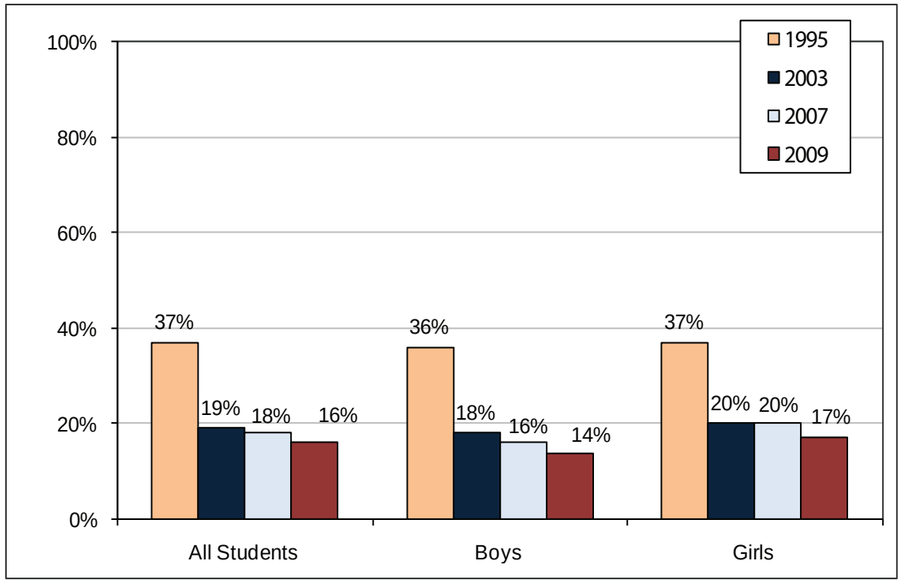


Source: Alaska Youth Risk Behavior Survey

Trends by Gender

Smoking prevalence decreased among both boys and girls between 1995 and 2009. As noted previously, the significant decrease occurred between 1995 and 2003. Smoking prevalence has been similar for both boys and girls at each time period of measurement (see Figure 41).

Figure 41. Percent of Alaska High School Youth Who Smoke, by Gender, 1995-2009

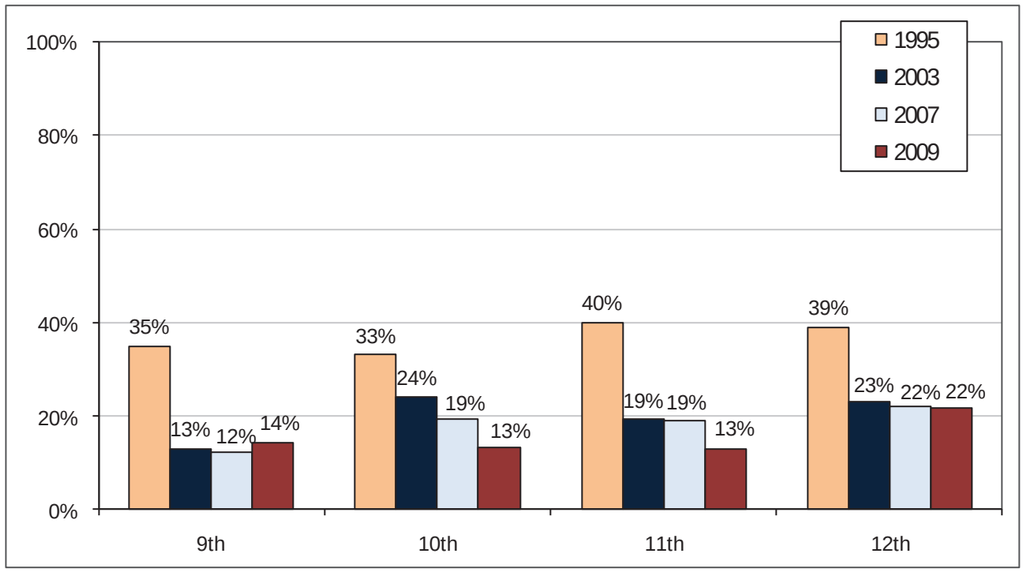


Source: Alaska Youth Risk Behavior Survey

Trends by Grade

Smoking prevalence has decreased significantly in all grades in the past 15 years, since 1995 (see Figure 42). Among 10th graders, there has been an additional significant decrease between 2003 and 2009, but there were no significant changes in any grade between 2007 and 2009.

Figure 42. Percent of High School Youth Who Smoke, by Grade, 1995-2009

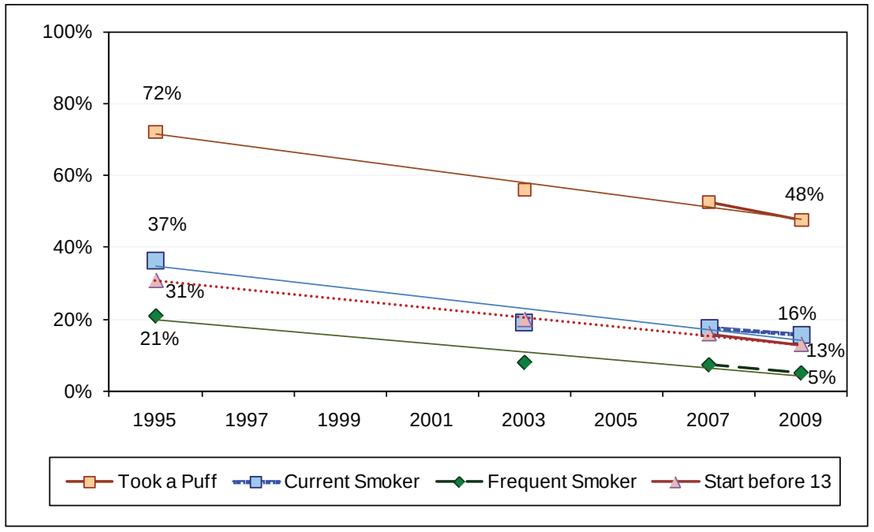


Source: Alaska Youth Risk Behavior Survey

Trends in Ever Smoking, Starting Cigarette Smoking before Age 13, and Frequent Smoking

The younger people begin smoking cigarettes, the more likely they are to become strongly addicted to nicotine. Young people who try to quit suffer the same nicotine withdrawal symptoms as adults who try to quit. Of all addictive behaviors, cigarette smoking is the one most likely to become established during adolescence.[3] Smoking at an early age increases the risk of lung cancer. For most smoking-related cancers, the risk rises as the individual continues to smoke.[1] For these reasons, Alaska also reviews trends in how many students have ever tried smoking, how early they started smoking regularly, and how many are frequent smokers. As shown in Figure 43, all of these indicators have also shown a decrease in prevalence, as has current smoking.

Figure 43. Selected Smoking Indicators: Percent of Alaska High School Youth Who Ever Smoked, Currently Smoke, Frequently Smoke and Who Started Smoking Before Age 13, 1995-2009



Source: Alaska Youth Risk Behavior Survey

Students who report ever having tried smoking, even a puff, are categorized as having ever smoked. In 1995, nearly three out of four Alaska students (72%) report ever smoking; by 2009, just under half (48%) report having ever tried smoking.

Early initiation of smoking is measured by whether a student smoked their first whole cigarette before the age of 13. In Alaska, initiation of smoking among high school students before age 13 decreased significantly from 30.7% in 1995 to 12.8% in 2009. Among students who were current smokers, there was also a significant decrease. Nationally, 11% of youth report smoking a whole cigarette before the age of 13.[4]

Frequent smoking, defined as smoking on 20 or more days in the past 30 days, decreased from 21% in 1995 to 5% in 2009. Frequent smokers represented over half of youth smokers in 1995 but comprise less than one-third of current youth smokers in 2009.

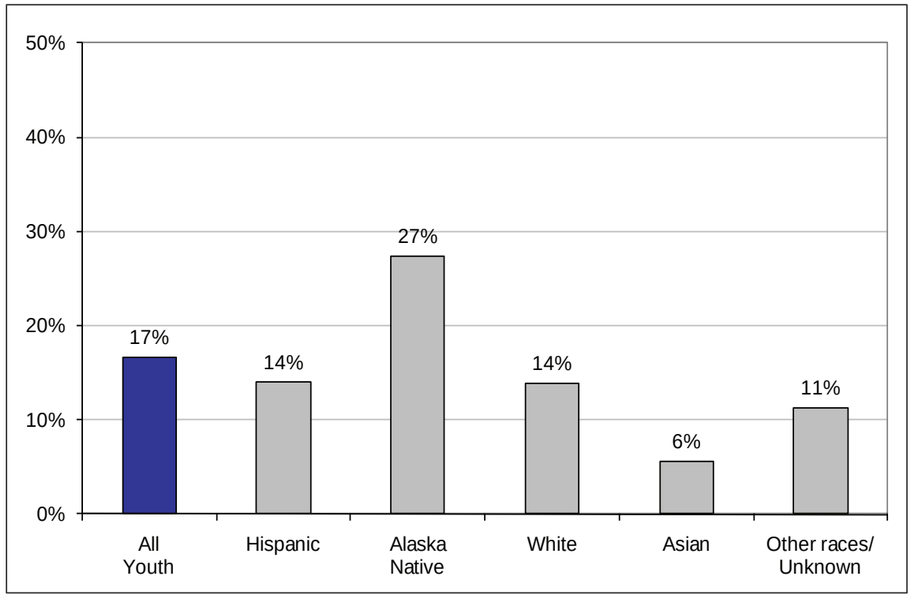
Who Is Most Likely To Be A Cigarette Smoker?

In this section, we review disparities in smoking prevalence. When 2007 and 2009 data are combined, it is possible to provide some additional information about smoking prevalence among race and ethnicity groups other than Alaska Native and White youth. In addition, we report on current smoking and frequent smoking across three race groups, by gender and by grade.

Smoking Prevalence by Race and Ethnicity Categories

Youth who report being Hispanic have a smoking prevalence similar to White non-Hispanic youth. Those who report being Asian are significantly less likely than Alaska Natives, Whites, or Hispanics to be smokers. This group includes all students who report being Asian but not Hispanic, White, or Alaska Native as well as Asian. There were not sufficient numbers to report by group for African American youth or Hawaiian and Other Pacific Islander youth. Both groups are included in the "Other races and Unknown Race" group in Figure 44 below.

Figure 44. Percent of High School Youth Who Smoke, by Race and Ethnicity, Alaska, 2007 and 2009



Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Note: Note: Each group after "Hispanic" includes only those students who did not report being Hispanic; those who reported multiple races other than Alaska Native, and those who did not report race, are included in "Other races/Unknown."

Smoking Prevalence within Race Groups by Gender and Grade

Although Alaska Native youth as a group have a higher smoking prevalence than non-Native youth, there are also disparities in smoking within these race groups by gender and grade. Alaska Native girls are significantly more likely than Alaska Native boys to smoke (see Table 33). White girls are significantly more likely to smoke than girls in the Other Race group.

Table 33. Percent of Youth Who Smoke, by Race Group and Gender, Alaska, 2007 and 2009

Gender	Alaska Native Youth	White Youth	Youth of Other Races	Total
Girls	32.0%	14.4%	6.1%	18.4%
Boys	22.0%	13.3%	9.3%	15.0%
All Youth	**27.0%**	**13.8%**	**8.7%**	**16.7%**

Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Among Alaska Native youth, smoking prevalence is significantly higher among 12th graders than among 9th and 10th graders. However, among White youth, 12th graders are not significantly more likely than youth in 10th or 11th grades to be smokers (see Table 34).

Table 34. Percent of Youth Who Smoke, by Race Group and Grade, Alaska, 2007 and 2009

Grade	Alaska Native Youth	White Youth	Youth of Other Races	Total
9th Grade	23.4%	9.4%	7.0%	13.1%
10th Grade	19.0%	17.6%	7.4%	16.4%
11th Grade	27.2%	13.7%	4.9%	16.1%
12th Grade	43.3%	15.0%	*	21.7%
All Youth	**27.0%**	**13.8%**	**8.7%**	**16.7%**

Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Note: Asterisk indicates that information is suppressed due to insufficient numbers.

Frequent Smoking within Race Groups by Gender and Grade

As noted earlier, the YRBS also provides information about how frequently youth smoke. Those who report smoking on 20 or more days in the past 30 days prior to the survey are considered to be "frequent smokers". Nationally, 7.3% of students reported frequent smoking in 2009, compared to 6.2% in Alaska (2007-2009 combined year data). Although Alaska Native youth as a group have a higher smoking prevalence than non-Native youth, only Alaska Native girls are significantly more likely to be frequent smokers than any other group of boys or girls (see Table 35).

Table 35. Percent of Youth Who are Frequent Smokers, by Race Group and Gender, Alaska, 2007 and 2009

Gender	Alaska Native Youth	White Youth	Youth of Other Races	Total
Girls	13.4%	5.0%	4.9%	7.4%
Boys	6.5%	4.8%	3.0%	5.0%
All Youth	**10.0%**	**4.9%**	**4.2%**	**6.2%**

Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Among Alaska Native youth, frequent smoking does not differ significantly by grade (see Table 36, below). Among White youth, however, 9th graders are significantly less likely than those in higher grades to be frequent smokers. Frequent smoking prevalence among youth in the Other Race group is generally more similar to that of White youth.

Table 36. Percent of Youth Who are Frequent Smokers, by Race Group and Grade, Alaska, 2007 and 2009

Grade	Alaska Native Youth	White Youth	Youth of Other Races	Total
9th Grade	9.0%	1.5%	3.1%	3.9%
10th Grade	10.1%	6.6%	2.8%	7.1%
11th Grade	10.0%	5.6%	4.3%	6.6%
12th Grade	11.9%	6.1%	*	7.6%
All Youth	**10.0%**	**4.9%**	**4.2%**	**6.2%**

Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Note: Asterisk indicates that information is suppressed due to insufficient numbers.

Early Initiation of Cigarette Smoking within Race Groups by Gender and Grade

Among all youth, 14.3% report early initiation of cigarette smoking (in the combined 2007-2009 data; see Table 37, below). Almost half of those who smoked their first whole cigarette before age 13 (47.4%) are current smokers, whereas only 12.2% of those who did not smoke before age 13 are current smokers. Alaska Native youth—both boys and girls—are significantly more likely than other youth to have smoked a whole cigarette before age 13. Among White youth, boys were more likely than girls to have initiated smoking before age 13.

Table 37. Percent of Youth Who Started Smoking before Age 13, by Race Group and Gender, Alaska, 2007 and 2009

Gender	Alaska Native Youth	White Youth	Youth of Other Races	Total
Girls	22.9%	8.2%	11.1%	13.0%
Boys	21.4%	13.1%	14.7%	15.5%
All Youth	**22.2%**	**10.8%**	**14.2%**	**14.3%**

Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Early initiation of smoking did not differ significantly by grade in any of the race groups (see Table 38).

Table 38. Percent of Youth Who Started Smoking before Age 13, by Race Group and Grade, Alaska, 2007 and 2009

Grade	Alaska Native Youth	White Youth	Youth of Other Races	Total
9th Grade	23.8%	7.6%	15.6%	13.7%
10th Grade	15.3%	14.3%	12.5%	14.3%
11th Grade	26.8%	10.6%	15.7%	15.6%
12th Grade	22.9%	10.7%	*	13.1%
All Youth	**22.2%**	**10.8%**	**14.2%**	**14.3%**

Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009
Note: Asterisk indicates that information is suppressed due to insufficient numbers.

Quit Attempts among Current Cigarette Smokers

In Alaska, the proportion of high school students who report trying to quit smoking within the past 12 months is similar to that of adult smokers; almost three in five Alaska student smokers (59.9%) recently tried to quit (2007-2009 YRBS). Nationally, 50.8% of high school student smokers report trying to quit during the 12 months prior to the survey.

There are no significant differences by gender in the proportion who attempt to quit (56.8% of girls and 64.0% of boys, see Appendix B, Table 4-5). Alaska Native youth smokers are slightly more likely than White youth smokers to have a quit attempt (65.9% vs. 53.9%, p=0.05). There were not sufficient numbers to report for other groups.

Who Is Most Likely To Smoke Cigars, Cigarillos, or Little Cigars?

Since 2003, the Alaska YRBS has included a question about cigar, cigarillo, or little cigar smoking in the 30 days prior to the survey. As noted in other sections of this report, cigars contain the same toxic and carcinogenic compounds found in cigarettes and are linked to the same health diseases and risks as conventional cigarettes.[5] In 2009, about one in ten Alaska youth (10.3%) report smoking any kind of cigar, representing a small but significant increase since 2003 (7.7%). Nationally, 13.6% of youth smoked cigars in the past 30 days, and there has been no significant change since 2003.[1]

In this section, we review disparities in cigar smoking prevalence. Data reported here come from 2007 and 2009 YRBS combined, in order to report by gender and grade within race groups. Although the majority (61.8%) of Alaska youth who smoked cigars in the past 30 days are also current cigarette smokers, a little over a third of cigar smokers (38.2%) do not report smoking cigarettes.

Cigar use differs significantly by gender in all race groups; boys are significantly more likely than girls to smoke cigars. Among boys, the difference by race group in cigar smoking prevalence did not reach significance. Overall, however, White youth are significantly more likely than Alaska Native youth to smoke cigars (see Table 39).

Table 39. Percent of Youth Who Smoke Cigars, by Race Group and Gender, Alaska, 2007 and 2009

Gender	Alaska Native Youth	White Youth	Youth of Other Races	Total
Girls	4.8%	7.1%	5.1%	6.2%
Boys	10.5%	15.7%	11.7%	13.7%
All Youth	**7.6%**	**11.5%**	**10.0%**	**10.0%**

Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Cigar smoking increased by grade; 9th graders are significantly less likely than students in other grades to smoke cigars (see Table 40). This pattern was true among White youth as well, but apparent differences by grade among Alaska Natives and youth of Other Races did not reach significance.

Table 40. Percent of Youth Who Smoke Cigars, by Race Group and Grade, Alaska, 2007 and 2009

Grade	Alaska Native Youth	White Youth	Youth of Other Races	Total
9th Grade	6.8%	5.9%	6.9%	6.3%
10th Grade	3.8%	12.1%	7.9%	9.0%
11th Grade	10.5%	15.0%	10.3%	13.1%
12th Grade	11.1%	13.4%	*	12.4%
All Youth	**7.6%**	**11.5%**	**10.0%**	**10.0%**

Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009
Note: Asterisk indicates that information is suppressed due to insufficient numbers.

Summary and Next Steps

In Alaska, high school cigarette smoking prevalence has declined since 1995 and is now below the national average. Smoking prevalence has decreased among both girls and boys, across all grades and across the three race groups for which data can be reported. Just under half of youth report having ever tried smoking, even a puff. In 1995 nearly three out of four students reported ever trying a cigarette. Fewer youth are beginning to smoke at young ages; the percentage of students who smoked their first cigarette by the age of 13 dropped from 31% to 13% between 1995 and 2009. Fewer students are smoking frequently; frequent smokers represented over half of youth smokers in 1995 (21% of the population reported frequent smoking, and 37% reported current smoking) but comprise less than one third of current youth smokers in 2009 (5% frequent smokers and 16% current smokers). A majority of youth who do smoke have tried to quit; 60% report that they have recently made a quit attempt.

Several tobacco prevention and control strategies in Alaska have likely contributed to the drop in youth smoking rates. The state tax on cigarettes in Alaska has been raised twice since 1995 and many communities levy additional taxes on cigarettes. Research has shown that youth are especially sensitive to price increases,[6] and in Alaska these increases have been implemented as part of a comprehensive tobacco prevention and control effort. Many communities in Alaska, including the large population centers of Anchorage and Juneau, have implemented comprehensive clean indoor air laws that support and reinforce a non-smoking norm. A statewide media campaign, coupled with local community and school programs, have served to reinforce those norms.

The declines in cigarette smoking have been accompanied by a small but significant increase in the percentage of students who smoke some other form of tobacco, such as a cigar or cigarillo. Nearly two in three high school students who smoke some form of cigar also smoke cigarettes (62%), while one in three smoke only cigars. Boys are more likely than girls to smoke cigars or cigarillos. To date, tobacco prevention and control efforts have not specifically addressed other forms of smoked tobacco. Although some existing local clean indoor air policies ban smoking of any tobacco product in workplaces or public indoor spaces, these policies do not cover all areas of the state. In the future, counter-marketing and school-based tobacco prevention efforts may expand to address other forms of smoked tobacco.

Smoking prevalence has dropped significantly among Alaska Native students since 1995. Prevalence among White students dropped substantially between 1995 and 2003 but has been relatively stable since then. Since 2003, smoking rates among Alaska Native students have continued to fall, leading to a lessening in the disparity between Alaska Native and non-Native students. Smoking rates among Alaska Native students remain higher than those among non-Native students, however, and smoking rates among Alaska Native girls are especially concerning. Alaska Native girls are approximately twice as likely to smoke as non-Native girls and are also more likely to smoke than Alaska Native boys. The reasons for the higher smoking rates among Alaska Native girls are unclear; further research into the reasons Alaska Native girls give for smoking may help inform program efforts.

Reductions in youth smoking rates are an especially encouraging indication that the investment made in tobacco prevention and control is paying off. Efforts should be made to sustain the reductions in youth smoking and to continue to lessen the disparity between Alaska Native and non-Native smoking rates. It may be useful to more closely examine the factors contributing to the drop in Alaska Native youth smoking rates as a means to develop strategies around reducing disparities in Alaska Native adult smoking rates.

CHAPTER 4 - References

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Part V - Youth Tobacco Use

CHAPTER 5 - Smokeless Tobacco Use

Introduction

In 2009, almost one in seven (13.6%) Alaska high school students report using smokeless tobacco on at least one day in the past 30 days. As noted in Chapter 6 of this report, smokeless tobacco (SLT) has been found by the U.S. Surgeon General, the American Cancer Society and the International Agency for Research on Cancer to be a cause of oral cancer and pancreatic cancer.[1] SLT use is also linked to periodontitis and tooth loss. In Alaska, SLT use among Alaska Native youth may include the use of Iq'mik, an Alaska Native smokeless tobacco prepared by community members and often used at an early age.[2,3]

Nationally, youth SLT use decreased slightly between 1995 and 2003, but has remained between 8-9% since then. While a similar pattern can be seen among White youth in Alaska, overall SLT use is higher among Alaska youth than the national prevalence (13.6% vs. 8.9%, p=0.01). In particular, SLT use by girls is significantly higher in Alaska than the national prevalence (7.4% vs. 2.2%).[4]

This chapter provides information about trends in youth SLT use from 1995 to 2009 by race groups, gender, and grade. In addition, this chapter also includes detailed comparisons by race using data from 2007 and 2009 YRBS combined.

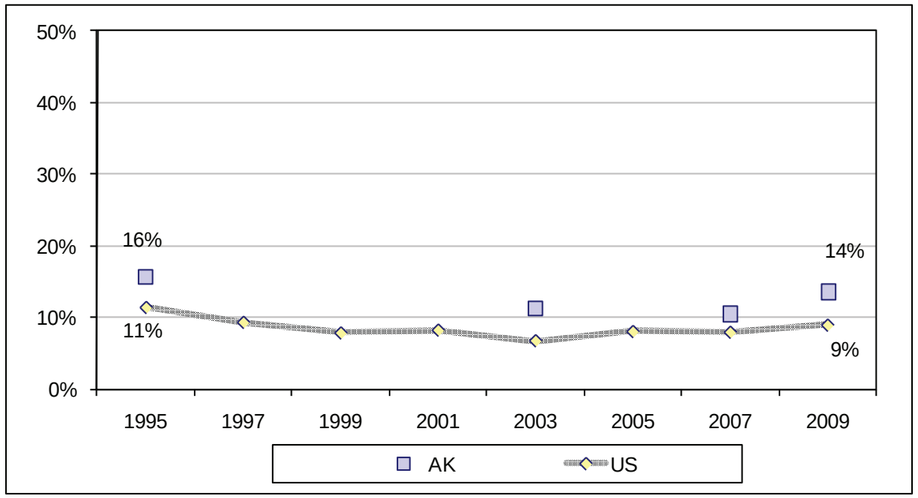
Data Sources

Data on smokeless tobacco use among youth come primarily from the Alaska Youth Risk Behavior Survey (YRBS). Reporting by race group is limited primarily to Alaska Native and White youth for most question items. All YRBS participants who report being Alaska Native, either alone or in combination with other race groups or Hispanic ethnicity, are grouped as Alaska Native. Similarly, all participating students who report being White but not Alaska Native are grouped as White. For other race and ethnic groups, reporting is limited due to relatively small numbers.

Trends in Youth Smokeless Tobacco Use

In Alaska, youth SLT use has not changed significantly between 1995 and 2009 (see Figure 45). Nationally, while there was a significant decrease in youth SLT use between 1995 and 2003, SLT use has remained stable since then.

Figure 45. Percent of High School Youth Who Use Smokeless Tobacco, Alaska and US, 1995-2009

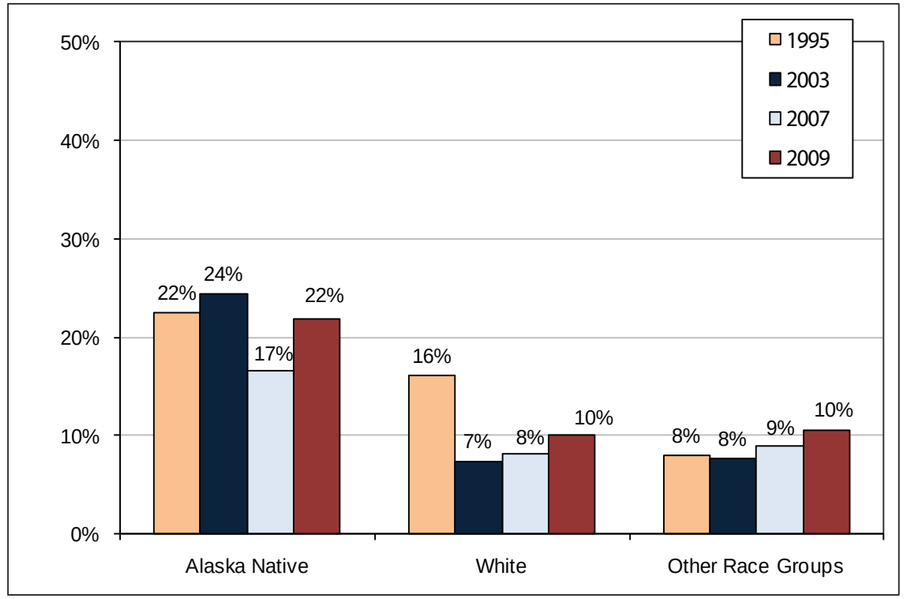


Sources: Alaska Youth Risk Behavior Survey, National Youth Risk Behavior Survey

Trends by Race Group

Among high school youth, SLT use decreased between 1995 and 2003 for White youth, but has remained stable since then. There have been no significant changes in trend for SLT use among Alaska Natives or the Other Race Groups category (see Figure 46).

Figure 46. Percent of Alaska High School Youth Who Use Smokeless Tobacco, by Race Group, 1995-2009

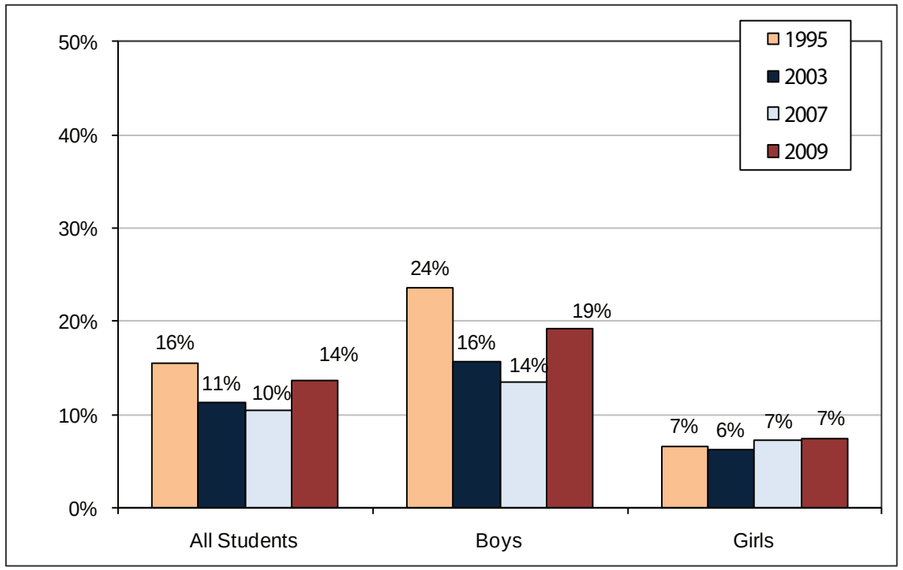


Source: Alaska Youth Risk Behavior Survey

Trends by Gender

Between 1995 and 2009, SLT use has not changed significantly among Alaska's high school girls. However, among Alaska's boys, there is a decreasing trend between 1995 and 2009, even though SLT use prevalence is significantly higher in 2009 than in it was in 2007 (see Figure 47).

Figure 47. Percent of Alaska High School Youth Who Use Smokeless Tobacco, by Gender, 1995-2009

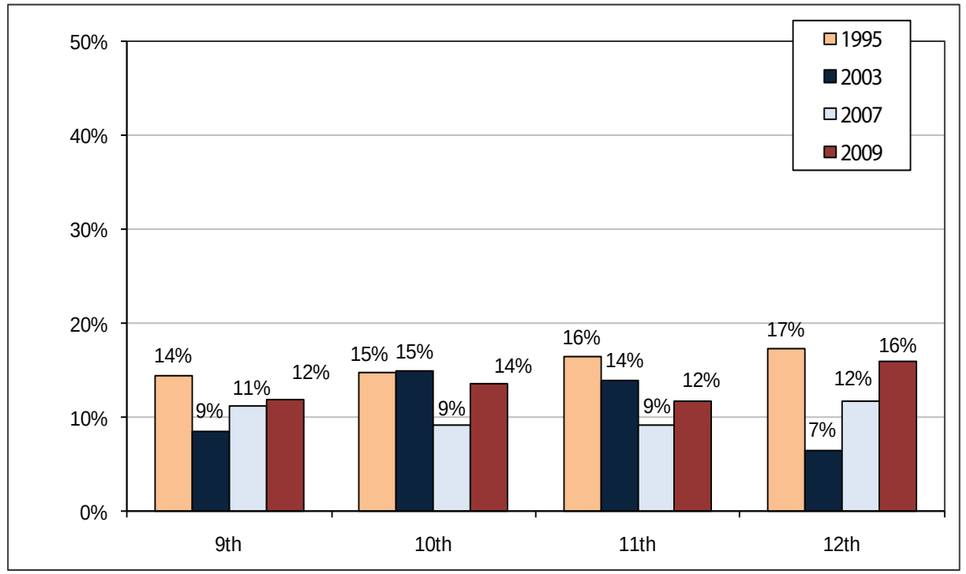


Source: Alaska Youth Risk Behavior Survey

Trends by Grade

SLT use trends from 1995 to 2009 show no significant change in SLT use within any high school grade (see Figure 48).

Figure 48. Percent of High School Youth Who Use Smokeless Tobacco, by Grade, 1995-2009



Source: Alaska Youth Risk Behavior Survey

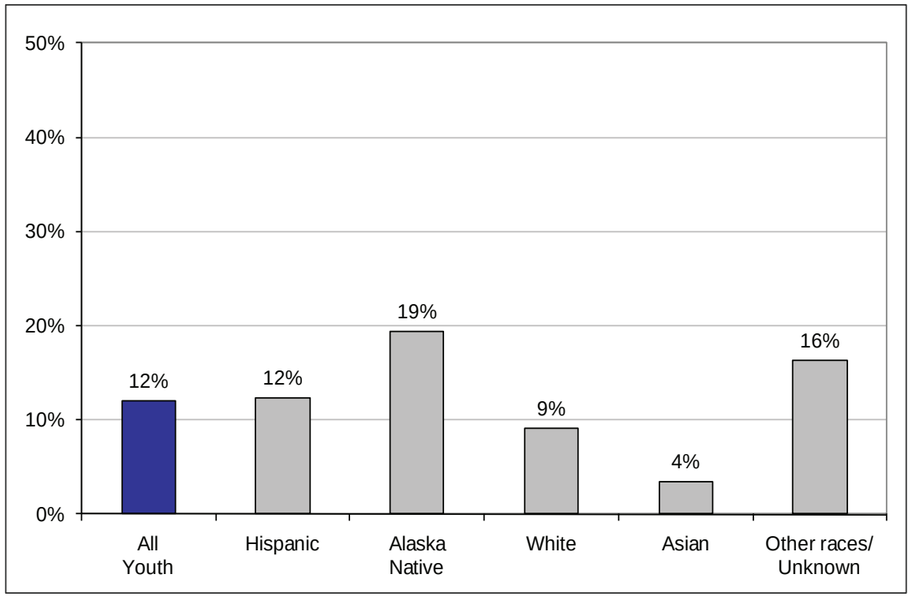
Who Is Most Likely To Use Smokeless Tobacco?

In this section, we review disparities in smokeless tobacco use. When 2007 and 2009 data are combined, it is possible to provide some additional information about SLT Use among race and ethnicity groups other than Alaska Native and White youth. In addition, we report on current SLT use within three race groups, by gender and by grade.

Smokeless Tobacco Use by Race and Ethnicity Categories

Alaska Native high school students are significantly more likely to use SLT than Hispanic, White non-Hispanic, or Asian non-Hispanic youth. Asian youth are significantly less likely than any other group to be SLT users. As noted in the previous chapter, there were not sufficient numbers to report by group for African American youth or Hawaiian and Other Pacific Islander youth. Both groups are included in the "Other races and Unknown Race" group in Figure 49 below. Those in the "Other races and Unknown Race" group are significantly more likely to use SLT than Hispanic, White non-Hispanic, or Asian non-Hispanic youth.

Figure 49. Percent of High School Youth Who Use SLT, by Race and Ethnicity, Alaska, 2007-2009



Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Note: Each group after "Hispanic" includes only those students who did not report being Hispanic; those who reported multiple races other than Alaska Native, and those who did not report race, are included in "Other races/Unknown."

Smokeless Tobacco Use within Race Groups by Gender and Grade

Both in Alaska and nationally, boys are more likely than girls to use SLT. However, SLT use among Alaska Native girls is as high as that of boys of all race groups (see Table 41). SLT use among Alaska Native boys appears higher than that of Alaska Native girls as well as boys of other race groups, but is not statistically different; similarly, SLT use among Alaska Native girls is not significantly higher than use by boys or among youth overall.

Table 41. Percent of Youth Who Use SLT, by Race Group and Gender, Alaska, 2007 and 2009

Gender	Alaska Native Youth	White Youth	Youth of Other Races	Total
Girls	16.8%	3.4%	3.7%	7.3%
Boys	21.9%	14.4%	13.9%	16.3%
All Youth	**19.3%**	**9.0%**	**9.7%**	**12.0%**

Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

SLT use was similar across all grades. Apparent differences in SLT use by grade among Alaska Native youth and among White youth did not reach statistical significance (see Table 42).

Table 42. Percent of Youth Who Use SLT, by Race Group and Grade, Alaska, 2007 and 2009

Grade	Alaska Native Youth	White Youth	Youth of Other Races	Total
9th Grade	24.2%	6.3%	6.3%	11.6%
10th Grade	15.6%	10.5%	6.1%	11.3%
11th Grade	17.2%	8.1%	8.1%	10.6%
12th Grade	19.7%	11.1%	*	13.8%
All Youth	**19.3%**	**9.0%**	**9.7%**	**12.0%**

Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Note: Asterisk indicates that information is suppressed due to insufficient numbers.

Summary and Next Steps

While youth smoking rates have decreased dramatically in Alaska since 1995, smokeless tobacco use has not changed and smokeless use rates in Alaska exceed the national average. Between 1995 and 2003 smokeless tobacco use dropped among White youth but rates have not changed since 2003. Boys are more likely to use smokeless tobacco than girls and although smokeless tobacco use rates have dropped among boys since 1995 they increased slightly between 2007 and 2009.

As is the case with smoking, Alaska Native high school students are more likely to use smokeless tobacco than students in other race groups. Smokeless tobacco use is especially high among Alaska Native girls who are approximately four times more likely to use smokeless tobacco than non-Native girls. Alaska Native girls are also as likely to use smokeless tobacco as boys of all race groups.

Further work is needed to understand the reasons that smokeless tobacco use remains high in Alaska and especially high among Alaska Native girls. Tobacco prevention and control efforts have not specifically addressed smokeless tobacco, though many of the same strategies that work to reduce smoking rates may be relevant to smokeless tobacco use. The tobacco tax increase in 1997 raised the state tax on smokeless tobacco as well as cigarettes and other tobacco. The second increase, phased in between 2005 and 2007, increased the tax on cigarettes only. It is possible that smokeless tobacco use is a more affordable option than cigarettes.

Iq'mik use is another possible contributor to the elevated smokeless tobacco use rates seen among Alaska Native girls. BRFSS data indicate that Iq'mik is used primarily by Alaska Native adult women living in Southwest Alaska and Iq'mik use could account for a substantial proportion of use among Alaska Native girls. It is not possible to examine the types of smokeless tobacco using the YRBS, which does not include detailed questions on smokeless tobacco. Regional estimates are not available through the YRBS either so it is not possible to tell if regional patterns of smokeless tobacco use mirror those found in adults.

Space for questions on the YRBS is limited, but it would be beneficial to capture additional information on smokeless tobacco. In addition to the YRBS, the TPCP is planning to conduct a series of interviews statewide around the social norms related to tobacco use, particularly in rural Alaska Native communities. It may be possible to gather qualitative information on smokeless tobacco use among women and girls through this project. The TPCP is reviewing its program strategic plan and may want to consider adding specific initiatives related to smokeless tobacco. The Alaska Tobacco Control Alliance has recently formed a workgroup on smokeless tobacco, which may bring additional focus on statewide SLT prevention and reduction strategies.

CHAPTER 5 - References

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Part V - Youth Tobacco Use

CHAPTER 6 - Use of Multiple Tobacco Products

Introduction

In addition to monitoring the use of different types of tobacco, it is useful to review overall tobacco use. Different types of tobacco products are regulated and marketed differently, and it is important to examine whether changes in use of one product reflect real change in tobacco use, or whether there has also been a shift in what types of tobacco people are using.

As noted, both in Alaska and nationally, cigarette use has decreased since the mid-1990's, likely due in large part to the application of a variety of tobacco prevention and control strategies that have been shown to be effective in reducing cigarette smoking among youth.[1]

As noted earlier, while smokeless tobacco use among youth decreased nationally—a little bit—between 1995 and 2003, it remained relatively unchanged in Alaska. The use of other tobacco products, namely cigars, including cigarillos and little cigars, was not measured in earlier years in the YRBS, but nationally it has remained relatively unchanged since 2001. As noted in Chapter 4, youth cigar (cigarillo and little cigar) smoking in Alaska has increased slightly, from 7.7% in 2003 to 10.3% in 2009.

This chapter provides information about youth trends in cigarette, cigar or smokeless tobacco use combined from 2003 to 2009 by race groups, gender, and grade. In addition, this chapter also includes detailed comparisons by race using data from 2007 and 2009 YRBS combined.

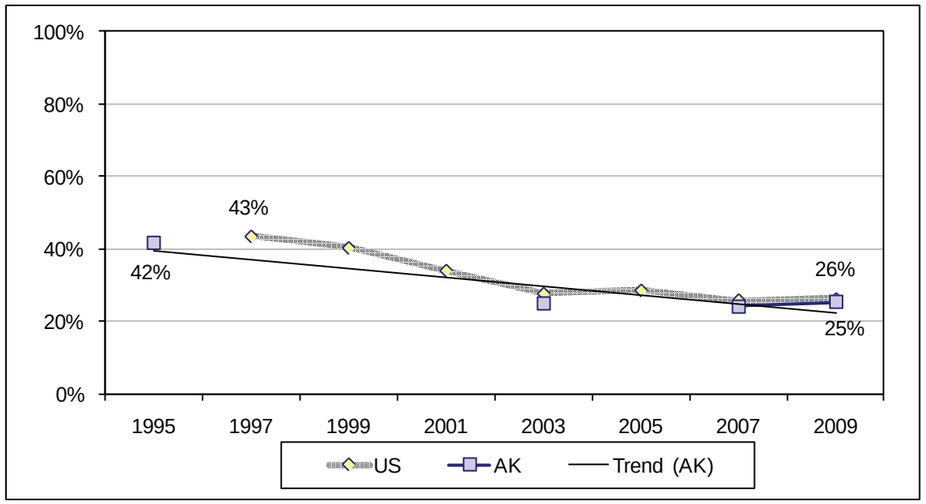
Data Sources

Data on youth tobacco use come primarily from the Alaska Youth Risk Behavior Survey (YRBS). Reporting by race group is limited primarily to Alaska Native and White youth for most question items. For other race and ethnic groups, reporting is limited by the number of students participating.

Trends in Any Tobacco Use among Youth

In Alaska, the use of any tobacco type—including cigarette, cigar and smokeless tobacco, is measured from 1995, although the cigar information was only added starting in 2003, the first year in which cigar use information was available in the Alaska YRBS data. Nationally, data are available since 1997. Use of any tobacco has not changed in Alaska since 2003. Although youth cigar use information is not available in Alaska prior to 2003, the pattern for cigarette and smokeless use combined is similar to the national trend for any use—in 1995, 42% of Alaska youth reported using cigarettes and/or smokeless tobacco (seeFigure 50). Nationally, overall tobacco use among youth decreased from 1997 to 2003, and there has been no significant change since 2003.

Figure 50. Percent of High School Youth Who Use Any Tobacco, Alaska and US, 1995-2009

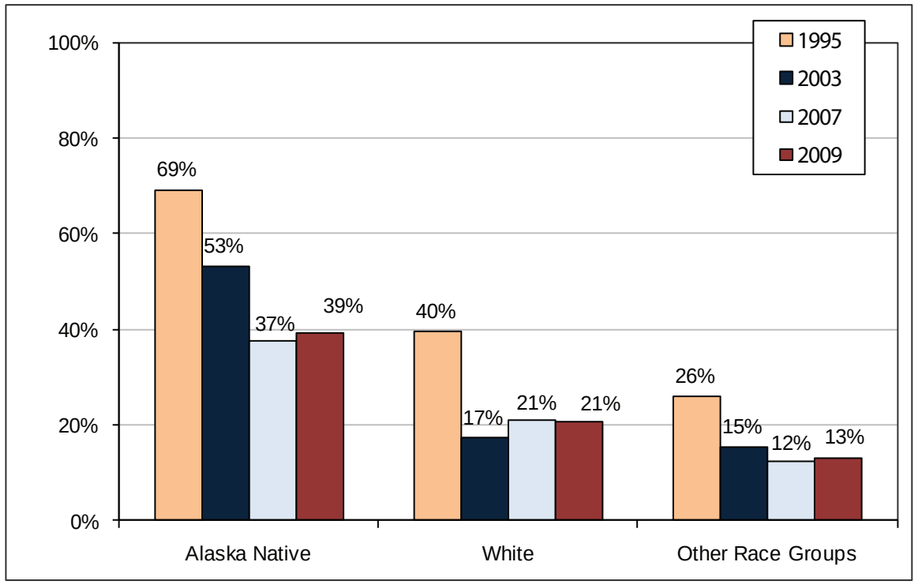


Sources: Alaska Youth Risk Behavior Survey, National Youth Risk Behavior Survey

Trends by Race Group

Trends in overall tobacco use by race reflect the trends seen in cigarette smoking prevalence. Among Alaska Native youth, use of any tobacco decreased between 2003 and 2007 (see Figure 51). Among White and Other Race youth, prevalence of any tobacco use remains unchanged between 2003 and 2009.

Figure 51. Percent of Alaska High School Youth Who Use Any Tobacco, by Race Group, 1995-2009

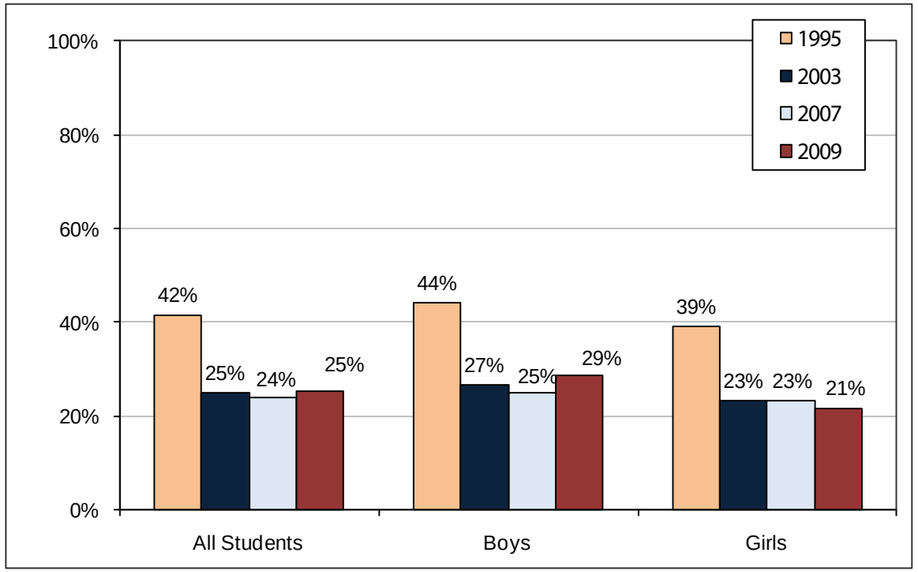


Source: Alaska Youth Risk Behavior Survey; 1995 does not include cigar use.

Trends by Gender

The prevalence of any tobacco use decreased among both boys and girls since 1997, but did not change significantly overall or by gender, between 2003 and 2009 (see Figure 52).

Figure 52. Percent of Alaska High School Youth Who Use Any Tobacco, by Gender, 1995-2009

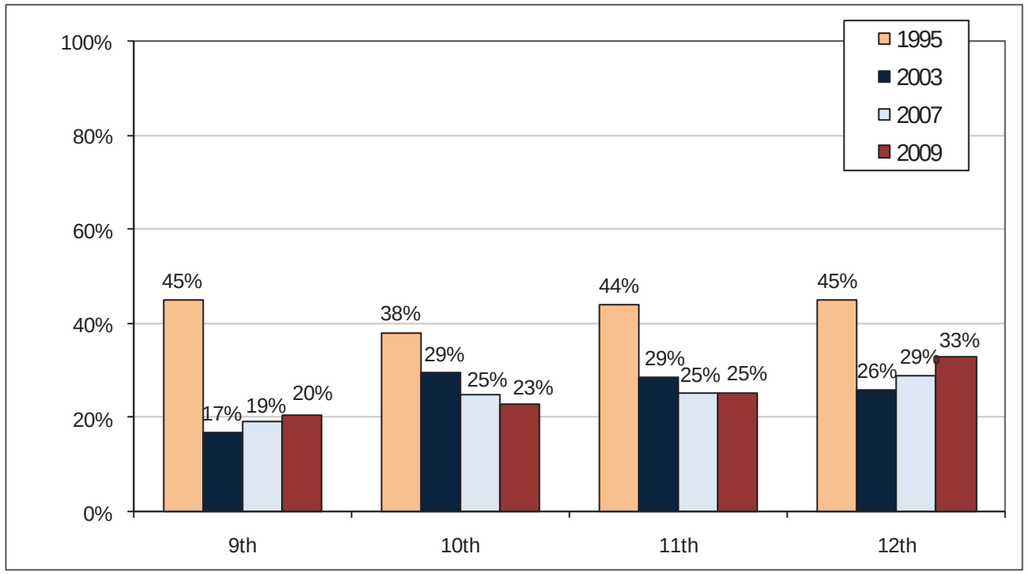


Source: Alaska Youth Risk Behavior Survey

Trends by Grade

Prevalence of any tobacco use has not changed significantly in any grade level, since 2003 (seeFigure 53).

Figure 53. Percent of Alaska High School Youth Who Use Any Tobacco, by Grade, 1995-2009



Source: Alaska Youth Risk Behavior Survey

Who Is Most Likely To Use Any Tobacco Product?

In this section, we review disparities in use of any tobacco—including cigarette, cigar and smokeless tobacco. Data reported here come from 2007 and 2009 YRBS combined, in order to report by gender and grade within race groups. We also examine the use of multiple tobacco types, by race group and by gender.

When we look at overall tobacco use, about one in four (24.6%) Alaska high school students are current users. Nationally, 26.0% of youth report any tobacco use in 2009.[2]

As shown in Table 43 below, Alaska Native youth are more likely to use tobacco in any form, and use among Alaska Native youth does not differ significantly by gender. In contrast, among White and Other Race youth, boys are significantly more likely than girls to use tobacco. Overall, Other Race youth are significantly less likely than Alaska Native and White youth to use tobacco.

Table 43. Percent of Youth Who Used Any Tobacco Product, by Race Group and Gender, Alaska, 2007 and 2009

Gender	Alaska Native Youth	White Youth	Youth of Other Races	Total
Girls	39.3%	17.5%	7.4%	22.5%
Boys	37.5%	24.4%	16.5%	26.7%
All Youth	**38.4%**	**21.0%**	**12.8%**	**24.6%**

Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Among all students, 9th graders are significantly less likely than 12th graders to use tobacco overall (see Table 44. This pattern holds true among White youth; in fact, 9th graders in this group are less likely than those in any other grade to be tobacco users. However, among Alaska Native youth, overall tobacco use does not differ significantly by grade.

Table 44. Percent of Youth Who Used Any Tobacco Product, by Race Group and Grade, Alaska, 2007 and 2009

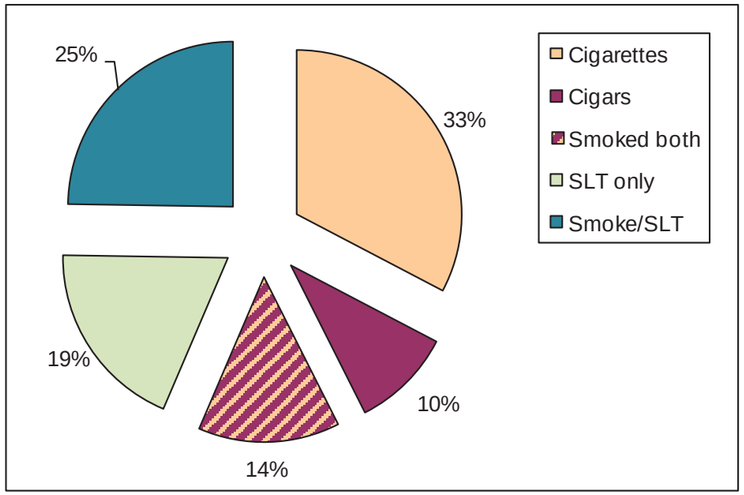
Gender	Alaska Native Youth	White Youth	Youth of Other Races	Total
9th Grade	38.8%	13.1%	7.9%	19.7%
10th Grade	27.4%	25.1%	12.7%	23.9%
11th Grade	39.1%	22.7%	8.9%	25.2%
12th Grade	*	23.7%	*	30.8%
All Youth	**38.4%**	**21.0%**	**12.8%**	**24.6%**

Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Note: Asterisk indicates that information is suppressed due to insufficient numbers.

Among youth tobacco users, more than one third use two or more tobacco products; one in four (24.6%) use both smoked and smokeless tobacco, and 13.6% smoke both cigarettes and cigars (see Figure 54).

Figure 54. Tobacco Product Types Used by High School Students, Alaska 2007 and 2009

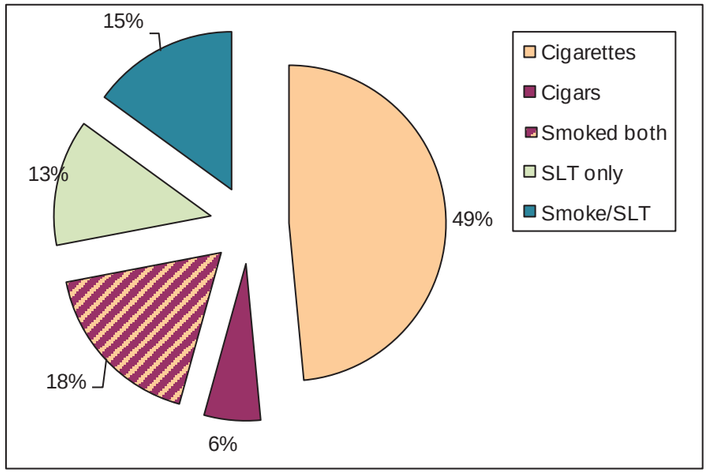


Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

The graphs in the next pages show types of tobacco use among boys, girls, Alaska Native youth, and White youth. There were not sufficient numbers to report detailed information about multiple tobacco product use among Other Race youth.

Among Alaska girls who use tobacco, almost half (49%) use only cigarettes, and roughly seven in ten tobacco-using girls (72%) use smoked tobacco only (see Figure 55). About half of the smokeless tobacco users also use smoked tobacco.

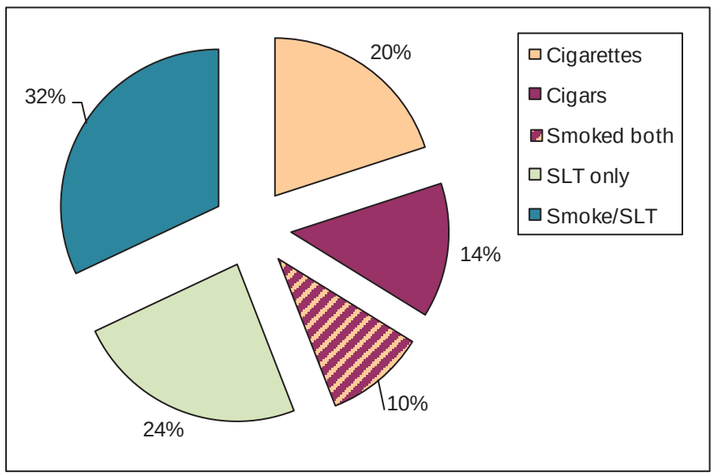
Figure 55. Tobacco Product Types Used by High School Girls, Alaska 2007 and 2009



Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Among Alaska boys who use tobacco, one in three (32%) use both smokeless and smoked tobacco; this dual use is significantly higher than for girls (see Figure 56). Boys were more likely than girls to smoke cigars only, but they were less likely than girls to only use smoked tobacco—cigars or cigarettes (72% versus 44%).

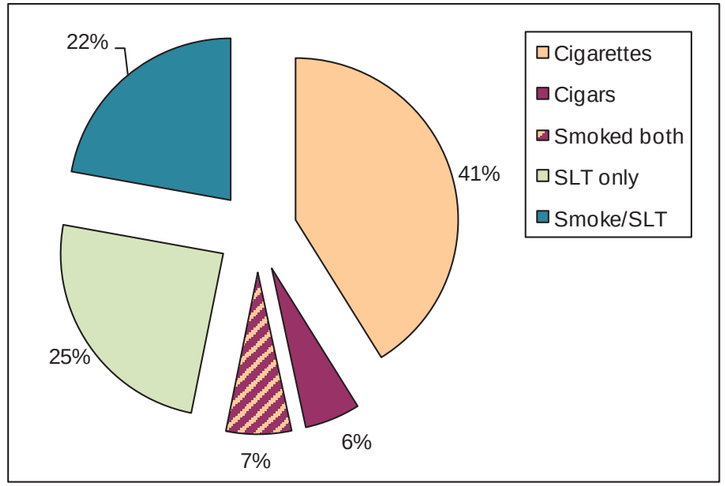
Figure 56. Tobacco Product Types Used by High School Boys, Alaska 2007-2009



Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Among Alaska Native youth who use tobacco, a little over half of tobacco users (54%) are using smoked tobacco only (see Figure 57). However, among youth who use tobacco, nearly 2 out of 3 (61%) of White youth are more likely to use smoked tobacco only (see Figure 58), whereas Alaska Native youth are almost as likely to use smokeless tobacco (alone or in combination with smoked tobacco) (47%) as they are to use smoked tobacco only.

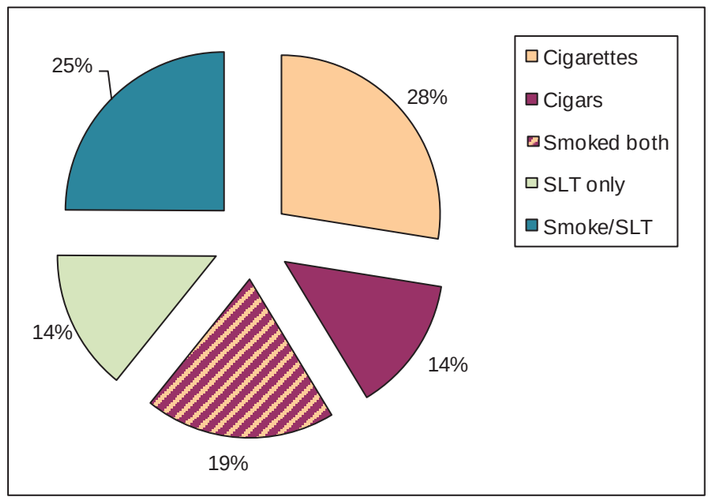
Figure 57. Tobacco Product Types Used by Alaska Native Youth, Alaska 2007 and 2009



Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Alaska Native youth are significantly less likely than White youth to smoke both cigarettes and cigars (7% versus 19%). Differences by other types were not statistically significant.

Figure 58. Tobacco Product Types Used by White Youth, Alaska 2007 and 2009



Source: Alaska Youth Risk Behavior Survey 2007 and 2009

Summary and Next Steps

Approximately one in four Alaska high school students use some form of tobacco, a number that has been relatively unchanged since 2003. Use of any tobacco product has decreased among Alaska Native students since 2003, however. A disparity in use is evident between Alaska Native and non-Native students, and youth patterns of tobacco use suggest that interventions may need to be tailored for gender as well as for race and ethnicity.

As noted earlier, Alaska Native students are more likely to use tobacco—they are twice as likely to smoke and twice as likely to use smokeless tobacco as non-Native students. Tobacco use among Alaska Native girls is especially concerning, because they use tobacco at rates that are as high as rates among Alaska Native boys. Among all other youth, boys are more likely to use any tobacco than girls, although the gender difference among White youth shows primarily in the use of SLT and cigars.

The types and combinations of tobacco products used differ by race and by gender. Among those who use tobacco, White and Alaska Native youth are equally as likely to be dual users—smoking and using SLT. However, White youth are more likely to smoke cigars, either alone or in combination with cigarettes. Alaska Native students are more likely than White students to use SLT, alone or in combination with other tobacco types. When considering findings from both youth and adult data, it seems likely that SLT use and cigarette smoking fit into cultural norms in different ways and different settings for Alaska Natives. Interventions focused on Alaska Native youth should take into consideration these different social norms for different typed of tobacco.

Overall, boys are more likely to use smokeless tobacco than girls and to use smokeless tobacco in combination with cigarettes or another smoked tobacco product. Nearly half of all girls who use tobacco smoke cigarettes only. Based on these findings, tobacco prevention and control interventions focused on girls should perhaps focus more heavily on reducing smoking, while interventions with boys should include a more substantial focus on smokeless tobacco prevention. Tobacco control interventions with Alaska Native girls should also include a smokeless tobacco prevention component, however.

CHAPTER 6 - References

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2. National Center for Chronic Disease Prevention and Health Promotion, YRBSS Youth Online: Comprehensive Results. http://apps.nccd.cdc.gov/yrbss/index.asp. Accessed June 2010.

Part V - Youth Tobacco Use

CHAPTER 7 - Selected Policies Related To Youth Tobacco Use

Introduction

Many population-based strategies help to prevent young people from starting to use tobacco. Some strategies include raising the price of tobacco products, conducting media campaigns to help shape a smoke-free social norm, and ensuring smoke-free homes and public places. Policies that focus on ensuring smoke-free public spaces help to reduce smoking, by a combination of making it more difficult to smoke and reducing the social acceptability of smoking. In addition, adolescents are less likely to be on a trajectory for smoking if their perception is that it is difficult to find (public) places to smoke.[1]

In this chapter, we focus on two strategies of tobacco prevention—promoting comprehensive smoke-free policies in and around schools, and restricting youth access to tobacco.

Comprehensive school policy

Although the Alaska public school system has made progress in the development of tobacco-free school policies, there continues to be room for improvement, particularly in providing further support for a smoke-free social norm. School programs to prevent tobacco use and addiction will be most effective if they are part of a coordinated school health program through which teachers, students, families, administrators, and community leaders deliver consistent messages about tobacco use, and are reinforced by communitywide efforts to prevent tobacco use and addiction.[2]

Age Restrictions on the Sale and Distribution of Tobacco Products

Since 1992, federal legislation referred to as the "Synar Amendment" has required states to have laws in place prohibiting the sale and distribution of tobacco products to persons under age 18. Alaska, Utah, Alabama, and New Jersey have expanded this prohibition to persons under 19. States must also implement annual random, unannounced compliance inspections (RUIs) to determine their buy rates of tobacco products sold to youth under the age of 18. State-level annual reporting of retailer violation rates (RVRs) was instituted in 1997. Alaska state law was also amended in 2002 to ensure that violations result in a temporary suspension of tobacco vendor's license.

Both the Synar compliance data and youth self-report indicate that Alaska has made great progress in the last decade in reducing sales of tobacco directly to underage youth, and adult support for restricting tobacco sales to youth is high. However, most underage smokers get their cigarettes by borrowing them or having someone else buy cigarettes for them, indicating a need to find additional ways to establish and reinforce tobacco-free social norms among youth.

Data Sources

Information regarding school tobacco policies comes from the School Health Profiles Survey (SHPS) 2008 .[3] Information regarding Synar enforcement data on vendor compliance is obtained through the Alaska Department of Health and Social Services, Division of Behavioral Health's Tobacco Enforcement Program.

Additionally, Alaska's BRFSS data from 2004 and 2006 provide information on adult attitudes about restricting all smoking on school grounds and about ensuring that stores do not sell tobacco products to teenagers. Alaska YRBS data include information regarding the use of cigarettes or smokeless tobacco on school grounds, and where youth usually obtain their cigarettes.

Policies and Behavior regarding Tobacco Use at School

School Policies to Prevent Tobacco Use

CDC guidelines[2] recommend that schools develop a policy on tobacco use, developed in collaboration with students, parents, school staff, and others. Such policies should:

- Prohibit students, staff, parents, and visitors from using tobacco on school premises, in school vehicles, and at school functions.
- Prohibit tobacco advertising (e.g., on signs, T-shirts, or caps or through sponsorship of school events) in school buildings, at school functions, and in school publications.
- Require that all students receive instruction on avoiding tobacco use.
- Provide access and referral to cessation programs for students and staff.
- Help students who violate tobacco-free policies to quit using tobacco rather than just punishing them.

According to the 2008 SHPS survey of principals, almost all of Alaska high schools, middle schools and combined junior/senior high schools (96%) have enacted tobacco policies prohibiting tobacco use.[3] The majority specifically prohibit cigarette, SLT, cigar and pipe tobacco use by staff and visitors as well as students. However, less than half of these schools (41%) prohibit tobacco use at all times in all locations as recommended by the CDC guidelines.

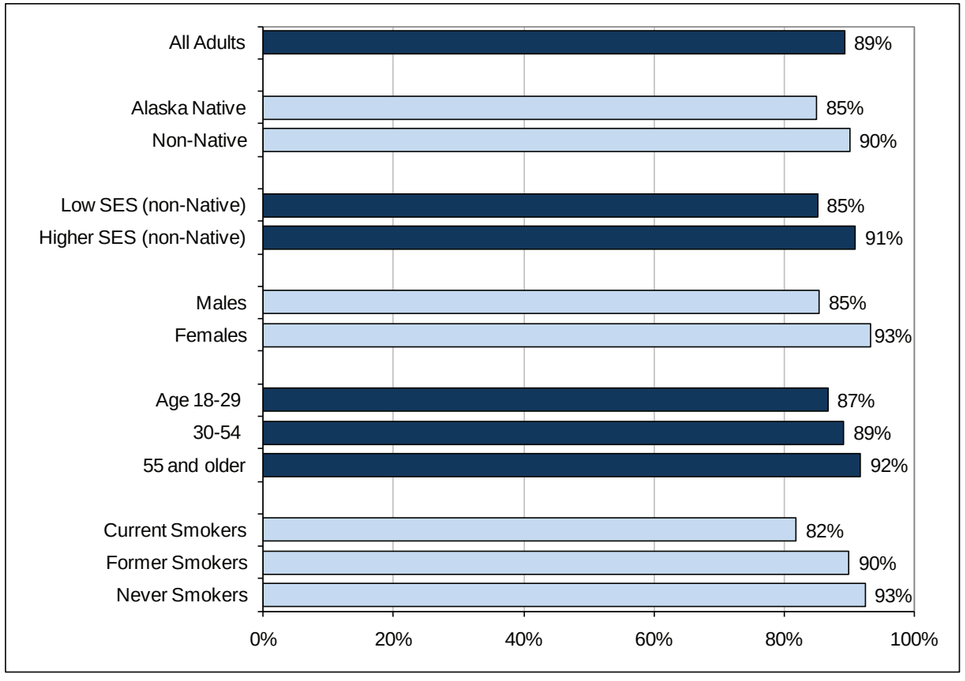
While 91%-96% prohibit tobacco use by students in school buildings, school buses, parking lots, playing fields and other areas of school campuses, and at off-campus school sponsored events, restrictions vary based on school hours. Only 78% of schools surveyed specifically prohibit tobacco use by students after school hours. Although most school policies (86%-87%) also prohibit smoking during school hours by staff and visitors, only about half (56%) prohibit smoking during non-school hours. As noted, only 41% of school policies provide specific prohibitions in all locations noted above, at all times, for all people at the school or school events.

While 97%-99% of Alaska high schools, middle schools and combined junior/senior high schools have procedures to inform students and staff about tobacco policies, only 80% have procedures to inform visitors. Some school policies include various components that indicated some level of coordination with other organizations and community members in order to promote tobacco-free norms. For example, three quarters (74%) of school policies included posting of signs marking a tobacco-free zone including areas outside the school grounds. About half (54%) of principals reported recent coordination with local groups to plan and implement programs intended to reduce tobacco use. While few schools can provide cessation services in-house for students (19%) or staff (9%), a larger proportion of schools have arrangements with outside organizations or health care professionals to provide these services to students (34%) or staff (24%).

Adult Attitudes about Adult Tobacco Use on School Grounds

Alaska BRFSS information indicates that the majority of Alaska adults are supportive of school policies banning all tobacco use on school grounds and at school events. In the 2004 and 2006 data, 89.3% of adults agreed or strongly agreed that tobacco use by adults should not be allowed on school grounds or at any school events (see Figure 59). Support was relatively high across a variety of sub-groups, although women were more likely than men to support this statement (93.4% vs. 85.4%). While support was somewhat lower among Alaska Natives than non-Natives, and lower among non-Natives of low SES than their higher SES counterparts, 85% of these high priority groups agreed that adult tobacco use should not be allowed on school grounds or at any school events.

Figure 59. Percent of Alaska Adults who Agree or Strongly Agree that Tobacco Use by Adults Should Not Be Allowed on School Grounds or at Any School Events, Alaska BRFSS 2004 and 2006



Source: Alaska Behavioral Risk Factor Surveillance System

Although current smokers were significantly less likely than former and never smokers to support the idea that tobacco use by adults should not be allowed on school grounds or at any school events, 4 out of 5 smokers (81.9%) did agree. Furthermore, most strongly agreed with the statement; two-thirds of all adults (67.5%) and over half of smokers (54.8%) strongly agreed that tobacco use by adults should not be allowed on school grounds or at any school events.

Youth Tobacco Use on School Grounds

Alaska YRBS data indicate that two out of five high school students who currently smoke cigarettes or use smokeless tobacco have done so on school grounds on one or more occasions in the 30 days prior to the survey. While 24.6% of students currently use some form of tobacco, 10.8% recently used tobacco on school property. However, it is not clear from these data whether tobacco use took place during school hours or not.

As with tobacco use in general, Alaska Native youth are more likely than other youth to use tobacco on school property. Among Alaska Native youth, girls are as likely as boys to use tobacco on school property, whereas among White youth, girls are less likely than boys to use tobacco on school property (see Table 45).

Table 45. Percent of Youth Who Use Tobacco on School Property, by Race Group and Gender, Alaska, 2007 and 2009

Gender	Alaska Native Youth	White Youth	Youth of Other Races	Total
Girls	19.3%	5.0%	3.2%	9.0%
Boys	18.2%	10.8%	8.1%	12.4%
All Youth	**18.8%**	**8.0%**	**7.3%**	**10.8%**

Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Use of tobacco on school property did not differ significantly by grade, overall or within race groups (see Table 46 below).

Table 46. Percent of Youth Who Use Tobacco on School Property, by Race Group and Grade, Alaska, 2007 and 2009

Grade	Alaska Native Youth	White Youth	Youth of Other Races	Total
9th Grade	19.5%	6.6%	3.4%	10.1%
10th Grade	17.0%	8.9%	5.8%	10.8%
11th Grade	21.7%	8.7%	5.7%	11.7%
12th Grade	17.4%	7.7%	*	10.4%
All Youth	**18.8%**	**8.0%**	**7.3%**	**10.8%**

Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

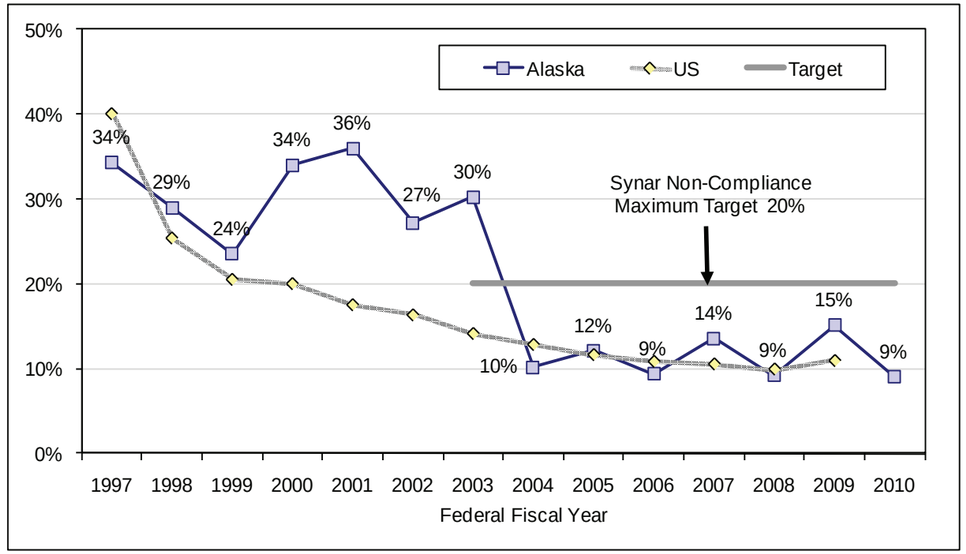
Note: Asterisk indicates that information is suppressed due to insufficient numbers.

Policies and Behavior regarding Youth Access to Tobacco

Synar Compliance Data: Tobacco Sales to Minors

In Alaska, the percentage of tobacco vendors or retailers who sold tobacco to minors decreased from 34.3% in 1997 to 9.0% in 2010 (see Figure 60). Nationally, the weighted average rate went from 40.1% in 1997 to 10.9% in 2009. Prior to 2003, states negotiated target compliance rates, but in 2003 the national target rate of 20% or below was established, and 2006 was the first year in which all states achieved the compliance rate.[4] Alaska has maintained the "20% or below" compliance rate since 2003 (see below).

Figure 60. Percent of Tobacco Retailers Found Selling Tobacco to Minors, by Fiscal Year, Alaska and US, 1997-2010



Source: Alaska Synar Compliance Database

Adult Attitudes about Importance of Preventing Sales of Tobacco Products to Teenagers

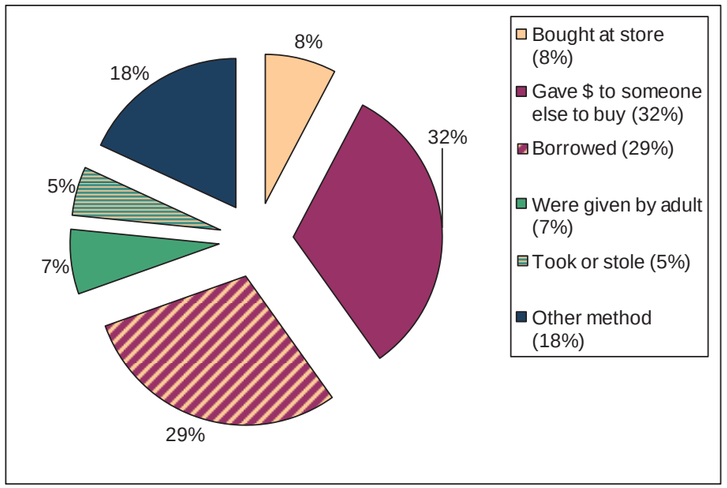
In 2004 and 2006, the Alaska BRFSS included this question: "*How important is it that communities keep stores from selling tobacco products to teenagers?*" The majority of Alaska adults (85.3%) agree that it is very important, and an additional 10.1% agree that it is at least somewhat important for communities to keep stores from selling tobacco to youth. Support was relatively high across groups by gender, age and region, although women, non-Natives, those aged 30 and older and non-smokers were more likely to prioritize restricting underage tobacco sales as "very important." Among smokers, 79.7% felt it was very important and 14.9% felt it was somewhat important for communities to keep stores from selling tobacco products to teenagers. Additional information is available in Appendix B, Table 7-3 and Table 7-4.

Youth Smokers Report How They Obtain Their Cigarettes

The Alaska YRBS includes this question: "*In the past 30 days, how did you usually get your own cigarettes?*" The proportion of youth smokers who report purchasing their own cigarettes in stores has decreased dramatically from 27.1% in 1995 to 7.7% in 2009, showing a similar pattern to the Synar retailer compliance data in Figure 60.

When we combine the 2007 and 2009 YRBS data, we find that less than one in ten (7.7%) of Alaska high school student smokers report purchasing their cigarettes in a store. Figure 61 below shows how youth smokers report obtaining cigarettes. Although only a small proportion of smoking students buy their own cigarettes in a store, over two-thirds are able to get them with a little help from others. About one-third of high school student smokers (32.4%) give money to someone else to buy cigarettes for them. An additional 29.4% borrowed their cigarettes from someone else, and 7.0% report that they were usually given cigarettes by someone aged 18 or older. Nearly one in five (18.1%) report obtaining their cigarettes by "some other method," and there is no additional information about what that includes. These findings indicate that while it might be difficult for most students to actually purchase their own cigarettes, they are able to find other people in their community who can and do provide them with access to cigarettes.

Figure 61. Usual Method of Obtaining Cigarettes among High School Smokers, Alaska, 2007 and 2009



Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Methods of obtaining cigarettes did not differ significantly by race group (Alaska Native vs. White youth). Boys were more likely than girls to purchase their cigarettes from a store (13.6% versus 2.6%). There were not sufficient numbers to report detailed information for other groups.

Summary and Next Steps

Alaska has made great strides in establishing and enforcing policies that restrict youth access to tobacco and make it more difficult for youth to find places to smoke. Penalties for retailers who sell tobacco to youth are strong and Alaska has consistently been below the federal target for tobacco sales to minors since. Adults overwhelming say they feel it is important to keep stores from selling tobacco to youth, and less than one in ten Alaska high school students report that they purchase cigarettes in stores.

Despite progress in restricting access to tobacco further efforts are needed to foster smoke-free social norms. Although there is strong support for limiting adult smoking around youth, less than half of middle and high schools have established truly comprehensive policies restricting all smoking in and around school property and at school events, by all people, at all hours. In many smaller communities in Alaska, development and enforcement of school policy may be complicated by the fact that schools may be multi-use facilities and the primary meeting place for other community events, regardless of whether they are youth-related.

With over one in three youth tobacco users reporting that they used tobacco on school property in the past 30 days, work is needed to ensure that comprehensive school tobacco policies are implemented and enforced throughout the state. Community norms and practices also influence youth behavior and should be addressed in conjunction with school policy efforts. While very few students report purchasing cigarettes in stores, more than two-thirds of high school smokers report that they get cigarettes with the help of other people in the community. Both of these indicators point to a need for further community-wide efforts to prevent tobacco use and addiction among youth.

In 2007 Alaska implemented a K-12 grant program that emphasized the development, implementation, and enforcement of comprehensive school tobacco policies. Six school districts in Alaska were funded in the initial grant cycle and have made some progress in implementing or strengthening school policies in their communities.

In order to receive funding, school grantees must be located in a geographic area that is also served by one of Alaska's 21 funded community prevention grantees. Community grantees work on community-level tobacco policy and social norm change and can play an important role in strengthening and reinforcing tobacco free norms among youth. Grantee program reports indicate that levels of school and community program collaboration vary; efforts to foster collaboration between schools and community groups that serve the same geographic regions could lead to increased synergy in tobacco prevention and control efforts.

CHAPTER 7 - References

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Part VI - Pregnant Women and Tobacco

CHAPTER 8 - Tobacco Use During Pregnancy

Introduction

Prenatal tobacco use accounts for 20% - 30% of all low birth weight births in the United States. According to the 2004 Surgeon General's Report, eliminating maternal smoking may lead to a 10% reduction in all sudden infant deaths and a 12% reduction in deaths from perinatal conditions.[1]

Smoking during pregnancy is associated with numerous risks, including premature rupture of membranes, abruptio placentae (placenta separation from the uterus), and placenta previa (abnormal location of the placenta, which can cause massive hemorrhaging during delivery). Smoking is also associated with an increase in risk for preterm delivery, ectopic pregnancy, and spontaneous abortion.[2]

Infants born to women who smoke during pregnancy have a lower average birth weight and are more likely to be small for gestational age than infants born to women who do not smoke. Low birth weight is associated with increased risk for neonatal, perinatal, and infant morbidity and mortality. The longer the mother smokes during pregnancy, the greater the effect on the infant's birth weight.[2]

Women who quit smoking before or during pregnancy reduce the risk for adverse reproductive outcomes, including difficulties in becoming pregnant, infertility, premature rupture of membranes, preterm delivery, and low birth weight.[2]

Less is known about potential adverse effects of smokeless tobacco (SLT) on women and infants; few studies have occurred in the United States in part because smokeless tobacco use is so low among American women in general (less than 1%),[3] even though it is higher among Alaska Native women. Internationally, use of a variety of local SLT variants is also much more widespread, and these products are often used by women and children as well as men.[4] A study in Mumbai, India indicates that daily use of mishri (a local SLT variant) is linked to low birth weight and a variety of adverse reproductive outcomes, and that there is a dose-response relationship.[5]

SLT use among Alaska women is higher than in many other states, in large part because of Alaska Native SLT use, including Iq'mik, Alaska's own local SLT variant. As noted in earlier chapters, Iq'mik is widely used among Alaska Natives in the Yukon-Kuskokwim Delta region. Iq'mik is prepared by mixing chewing tobacco with the ash of a punk fungus.[6] The ash increases the amount of free nicotine available for absorption, potentially making this product more addictive than commercial products. A CDC report of PRAMS data found that well over 60% of women in the Yukon region were using this product during pregnancy.[7]

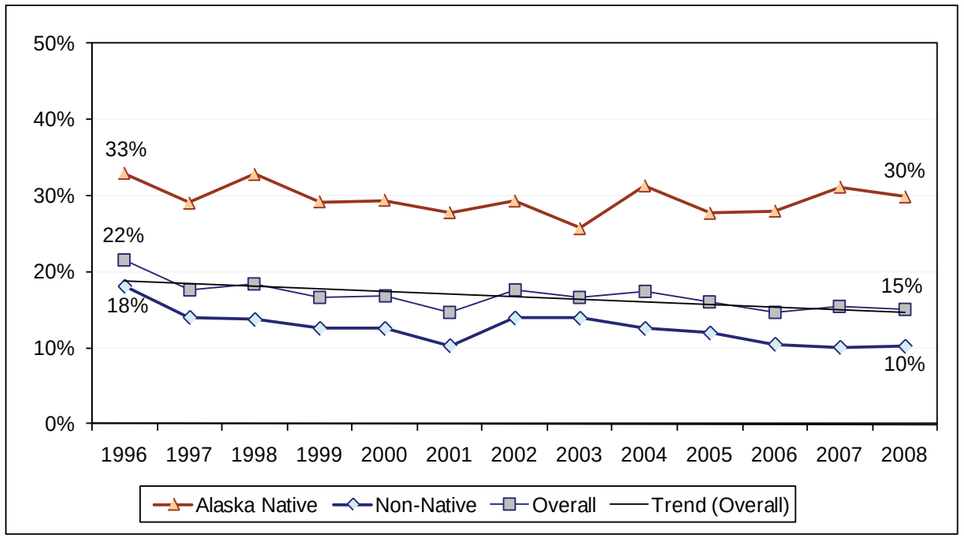
Data Sources

Data on prenatal and postpartum tobacco use among Alaska women come from the Pregnancy Risk Assessment and Monitoring System (PRAMS). PRAMS collects population-based information on behaviors and circumstances that influence maternal and infant health. Each year, a sample of Alaska women who recently delivered a live-born infant were asked about experiences before, during, and after pregnancy that may affect their health or that of their child. PRAMS was implemented in Alaska in 1990. This health monitoring system provides information on maternal and postpartum smoking, as well as prenatal smokeless tobacco use and infant exposure to secondhand smoke.

Trends in Prenatal Smoking

In 2008, 15.1% of Alaska women who gave birth to a live-born infant smoked during the last 3 months of pregnancy. Although there was a statistically significant decline in overall prenatal smoking for the 1996-2008 timeframe, it was not a steady decline during the whole period (see Figure 62). The largest decrease occurred between 1996 and 1997, from 21.6% to 17.6%. For Alaska Native women, the modest decline from 33.0% in 1996 to 29.9% in 2008 is not statistically significant. These findings indicate that the disparity between non-Native and Native Alaskan prenatal smoking has increased; in 1996 Alaska Native prenatal smoking was about twice as high as that of non-Natives, and in 2008 it was about three times higher.

Figure 62. Percent of Alaska Mothers Who Report Smoking During Last 3 Months of Pregnancy, Alaska Native and Non-Native, 1996-2008



Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS)

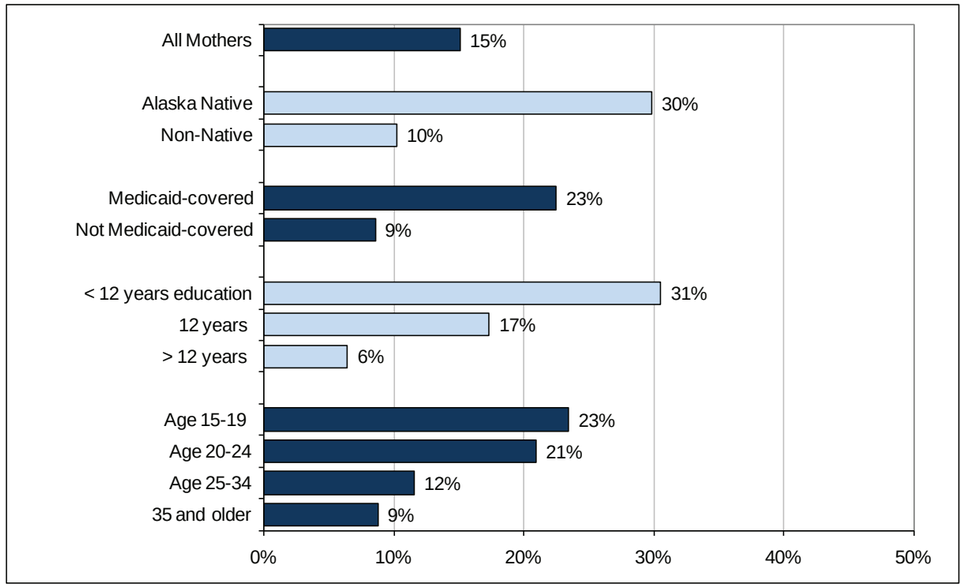
Consumption of Cigarettes

In order to examine consumption among Alaska women who smoked during pregnancy, PRAMS data from 2006 through 2008 were combined. The majority of women who did smoke during the last 3 months of their pregnancy (67%) report smoking 5 or fewer cigarettes per day (see Appendix B, Table 8-3). However, one in three were smoking 6 or more cigarettes per day.

Who Is Most Likely To Have Smoked in the Last Three Months of Pregnancy?

In this section, we review disparities in cigarette smoking in the last 3 months of pregnancy. Prevalence of maternal smoking during pregnancy varied not only by Alaska Native or non-Native status, but also by age, education, and type of health care coverage for prenatal care (see Figure 63). Mothers aged 15 to 24 were more likely than those aged 25 or older to have smoked during the last 3 months of their pregnancy (21-23% vs. 9-12%). Education and smoking prevalence showed an inverse relationship; 30.6% of women with less than high school (< 12 years of education) smoked during pregnancy, compared with 17.4% of those with a high school education and 6.5% of those with more than 12 years of education. Women who received prenatal care through Medicaid report a 22.4% prevalence of smoking during pregnancy, compared to 8.6% of those whose prenatal care was not covered by Medicaid.

Figure 63. Percent of Alaska Mothers Who Report Smoking During Last 3 Months of Pregnancy, by Selected Factors, 2008



Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS)

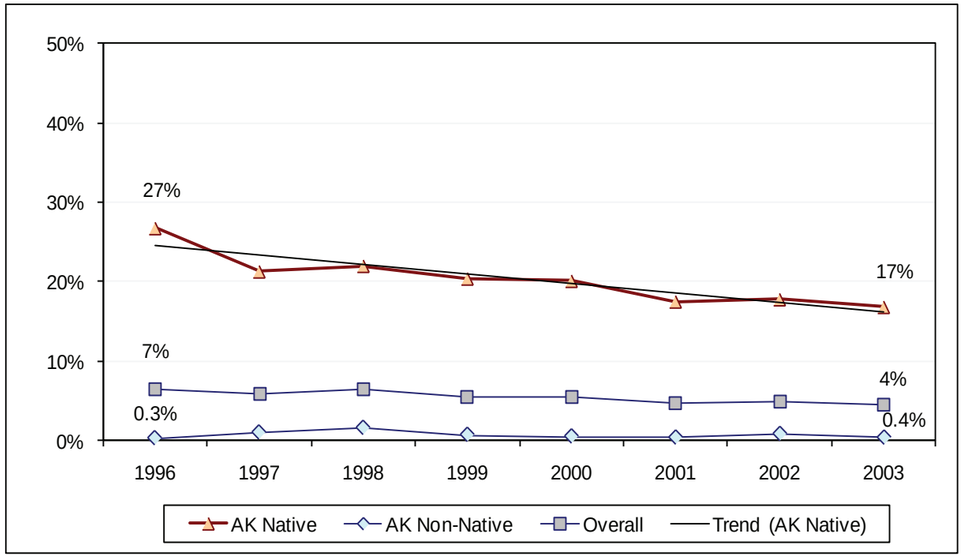
In order to examine regional differences, data from 2006 through 2008 were combined. Regionally, maternal smoking during pregnancy was significantly higher in the North (48%) and Southwest (24%) regions (see Appendix B, Table 8-2).

Birth certificate information reported in the 2009 Alaska Native Health Status Report also shows regional differences in smoking during pregnancy among Alaska Natives. During 2006-2007, Alaska Native women from the Arctic Slope, Northwest Arctic, and Norton Sound regions were significantly more likely to have reported smoking during pregnancy than were Alaska Native mothers statewide. In contrast, Alaska Native women from Anchorage/Mat-Su, Southeast, and Yukon-Kuskokwim regions were significantly less likely to have reported smoking during pregnancy than were Alaska Native mothers statewide.[8]

Trends in Prenatal Smokeless Tobacco Use

From 1996 to 2003 there was a significant decline in the percentage of women who used SLT during pregnancy (see Figure 64). The overall statistically significant downward trend reflects the significant decline in smokeless tobacco use among Alaska Native pregnant women during this time period.

Figure 64. Prenatal Smokeless Tobacco Use by Alaska Mothers, Alaska Native and Non-Native, 1996-2003



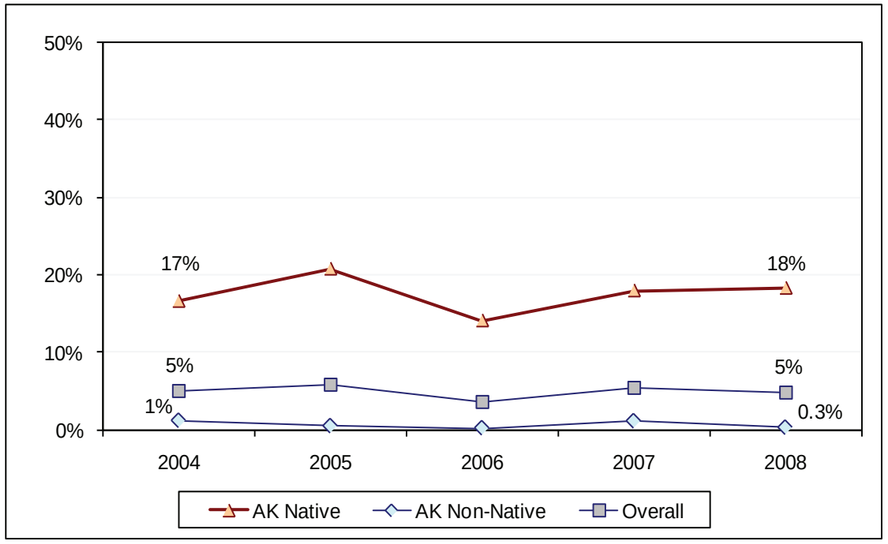
Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS)

Trends in Iq'mik or Spit Tobacco

In 2004, the Alaska PRAMS survey changed the questions about SLT use, specifically to distinguish the use of Iq'mik as well as commercial 'spit tobacco' (the term used to define smokeless tobacco in the PRAMS survey). Iq'mik is most widely used among Alaska Natives in the Yukon Delta region. As noted earlier, Iq'mik is prepared by mixing chewing tobacco with the ash of a punk fungus, resulting in high proportions of freebase nicotine.

In 2008, about 18.3% of Alaska Native women used Iq'mik or spit tobacco during their pregnancy that resulted in a live-born infant (see Figure 65). Between 2004 and 2008 there was no significant overall decline in prenatal Iq'mik or spit tobacco use among either Alaska Native or non-Native women in Alaska.

Figure 65. Prenatal Spit Tobacco and Iq'mik Use by Alaska Mothers, Alaska Native and Non-Native, 2004-2008



Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS)

Using combined year data from 2006 – 2008, we examined Iq'mik and/or spit tobacco use among Alaska Native women by age and region. Although there were no significant differences by age groups, there were significant regional differences (see Appendix B, Table 8-4). At least half of Alaska Native mothers in Southwest Alaska (51.5%) report using either Iq'mik or spit tobacco during pregnancy. In other regions, smokeless tobacco use during pregnancy ranged between 0 and 9%. Birth certificate information from 2006-2007, reported in the 2009 Alaska Native Health Status Report, also shows that Alaska Native women from the Yukon-Kuskokwim region were significantly more likely to have reported SLT use during pregnancy than were Alaska Native mothers statewide (41% vs. 10.5%).[8]

Use of Multiple Tobacco Types (Cigarette, Spit tobacco or Iq'mik)

Use of both cigarettes and smokeless tobacco during pregnancy was not common among either Alaska Native or non-Native women. In PRAMS data from 2006-2008 combined, dual use (of smoked and smokeless tobacco) accounted for 4.2% of use among Alaska Native women and 0.7% of use among non-Native women who used tobacco at all during the last three months of pregnancy. Among Alaska Native women who used smokeless tobacco during pregnancy, over one in four (28.9%) used both spit tobacco and Iq'mik. See Appendix B Table 8-6 for additional information.

Summary and Next Steps

Smoking during pregnancy is the single most preventable cause of infant low birth weight and prematurity. Women who quit smoking before or during pregnancy reduce the risk for adverse reproductive outcomes, up to and including infant death.

Although smoking during pregnancy has decreased since 1996 among non-Native mothers, roughly one in ten still smoke in the third trimester. Among Native Alaskan mothers, nearly one in three report smoking during the last 3 months of their pregnancy, and there has been no significant change in this statistic since 1996.

Effective state and local strategies to prevent the initiation of smoking or to increase smoking cessation among nonpregnant women are the same ones that are effective for the entire community, and include banning all forms of tobacco advertisement, enforcing laws that prohibit sales to children and adolescents, promoting smoke-free policies in public places and in the workplace, and increasing the cost of cigarettes through state, federal or local taxes.

The prenatal health care visit is a prime opportunity for cessation intervention, combining the increased frequency of health care encounters associated with prenatal care with an effective means of addressing tobacco-related health risks to mothers and infants. Smoking cessation counseling and programs offered during prenatal care can provide effective assistance to encourage pregnant women to quit smoking, especially women who were light- to moderate-level smokers before becoming pregnant (i.e., women who smoke <1 pack of cigarettes a day).[9] Alaska's PRAMS data indicate that the majority of those who smoke during pregnancy are smoking an average of <1-5 cigarettes daily. In addition, efforts to integrate smoking cessation assistance with prenatal care could be focused on groups who are disproportionately more likely to smoke—Alaska Natives, those with Medicaid coverage, and younger mothers.

Pregnancy is also an opportune time to encourage women to quit smoking for their lifetime. A review of PRAMS data in 31 sites indicated high interest in quitting during this time. The 2005 proportion who quit during the last 3 months of their pregnancy ranged from 30% in West Virginia to 61% in Hawaii and New York City (Alaska's rate was 46%).[10] Women who were more likely to relapse to smoking after delivery were younger and had a lower annual income. Other important factors associated with relapse include living with a partner who smoked and experiencing a stressful life event and depression.[11] Relapse to smoking is common, and women should be encouraged to make additional attempts if relapse occurs. However, more work may be needed to develop effective strategies to address relapse. A meta-analysis of nine interventions to prevent relapse among pregnant and postpartum ex-smokers indicated that clinic-based interventions to prevent postpartum relapse have not proven to be effective,[12] although community-based interventions (such as increasing cigarette taxes) have been shown to be effective in reducing relapse. Reducing smoking before, during and after pregnancy is likely to require sustained and comprehensive tobacco control efforts.

In regards to SLT use during pregnancy, there is less information and publicity about the potential adverse effects of smokeless tobacco (SLT) on women and infants. However, it is known that SLT use is linked to low birth weight and a variety of adverse reproductive outcomes, in addition to health risks for the mother, and that there is a dose-response relationship, as with smoked tobacco. We also know that SLT use is disproportionately high among Alaska Natives, both men and women, and that SLT use during pregnancy is also exceedingly high among Alaska Native women.

Both international and Alaska-specific studies may yield additional and more compelling evidence about the specific effects of smokeless tobacco use on pregnancy outcomes and reproductive health. The official report of the International Smokeless Tobacco Symposium held in March 2009 noted the challenges and health threats posed by smokeless tobacco use.[5] This report acknowledges that increased use and industry promotion of smokeless tobacco represents an increasing threat to public health worldwide. The report also noted that smokeless tobacco has not received adequate attention from researchers and policy makers, including the WHO Framework Convention on Tobacco Control. It cited the importance of identifying and implementing user-driven strategies for cessation that are built on a foundation of respect for the smokeless tobacco user.

Locally there have also been efforts to gather more information about SLT use during pregnancy. The 2008 Tribal Consultation Report notes a case-cohort study of Alaska Native women from the Yukon-Kuskokwim Delta region to explore the effects of maternal smokeless tobacco use on pregnancy outcomes.[13] Medical records were reviewed for deliveries occurring from 1997 through 2005 for four case groups of women presenting with conditions that can be related to smokeless tobacco use: women with placental abruption, women with preterm delivery, women with gestational hypertension, and women with preeclampsia. For comparison, a subcohort representing 10% of the population of all deliveries was randomly selected from the pool of deliveries to women from the same geographic area and over the same time span. Key partners in the study are: Yukon Kuskokwim Health Corporation, Alaska Native Tribal Health Consortium, Alaska Native Medical Center, South Central Foundation, Mayo Clinic, and Providence Hospital.

The Alaska Native Tribal Health Consortium (ANTHC) has also conducted several community-driven intervention studies to explore and quantify nicotine exposure and carcinogens from different tobacco types used by Alaska Natives, particularly in the Bristol Bay area. Results from these studies may help in generating information for nicotine replacement therapy dosing, as well as developing culturally-specific public health messages for local tobacco control programs.

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Part VII - Secondhand Smoke

CHAPTER 9 - Secondhand Smoke Exposure and Bans or Policies to Prevent Exposure

Introduction

According to the 2006 Surgeon General's report, there is no risk-free level of secondhand smoke (SHS) exposure. SHS causes premature death and disease in children and in adults who do not smoke. Even brief exposure can be dangerous.[1] The home is the primary source of SHS exposure for infants and children, and a major source of exposure for non-smoking adults.[2] Having rules against smoking in the home significantly decreases the risk of exposure. Eliminating smoking in indoor spaces is the only way to fully protect non-smokers from secondhand smoke exposure. Separating smokers from non-smokers, cleaning the air, and ventilating buildings cannot eliminate secondhand smoke exposure.[1]

Alaskans have made great progress in reducing exposure to secondhand smoke. In 2008, less than one in ten adults (9.3%) reported that smoking had occurred inside their homes in the past month, compared to one in four (25.6%) in 1998. The proportion of adults living in households with a smoking ban increased from 76.8% in 2001 to 88.7% in 2008, a trend mirrored in all subgroups and regions. Among Alaska Natives, home smoking bans went from 80.7% in 2001 to 89.4% in 2008.

However, SHS exposure in households with one or more smokers is significantly higher. In 2008, in Alaskan households with one or more smokers, one in four respondents (25.9%) reported that smoking occurred inside the home in the past 30 days. Exposure for non-smoking respondents who live with at least one smoker was nearly as high as that for smokers (24.6% vs. 26.8%).

Overall, SHS exposure in the home among children has also decreased, from 13.0% in 2004 to 5.5% in 2008. However, those who live with a smoker are at higher risk. A recent study using data from 2004-2005 found that more than one in four Alaska smokers with children in the home (27.8%) reported that someone was smoking in the home in the past 30 days. The risk of exposure to secondhand smoke for children living with smokers was higher for those aged 5 to 12 (32.7%) than for children under age 5 (13.7%). Having a rule against smoking anywhere inside the home significantly lowered the risk of exposure.[3]

Progress in reducing SHS exposure in the workplace has been mixed. Although most indoor workers (79.2%) are protected by workplace policies prohibiting smoking in any work areas, about one in four adults who work primarily indoors (25.3%) report being exposed to secondhand smoke somewhere at their workplace.

Other indicators included in this chapter are SHS exposure in cars, and youth SHS exposure in any indoor setting, as reported by high school youth.

Data Sources

Data on secondhand smoke exposure, knowledge, policies and attitudes come primarily from the BRFSS. In this chapter, trends are reported for questions about home smoking bans, SHS exposure in the home, and workplace bans among those working primarily indoors. Questions about home smoking rules were asked in 2001 and from 2004 to 2008. Questions about workplace smoking policies and SHS exposure in the home were asked in 1998, 2000, and from 2004 to 2008. From 2004 to 2008, the inclusion of a special survey section[b] has made it possible to also report prevalence of children exposed to SHS in the home. Additional questions about exposure at work and in cars were also examined for differences by priority populations, smoking status, and selected demographic characteristics.

Data on high school youth exposure to cigarette smoke in an indoor space in the past 7 days come from the YRBS, and were asked in 2003, 2007 and 2009.

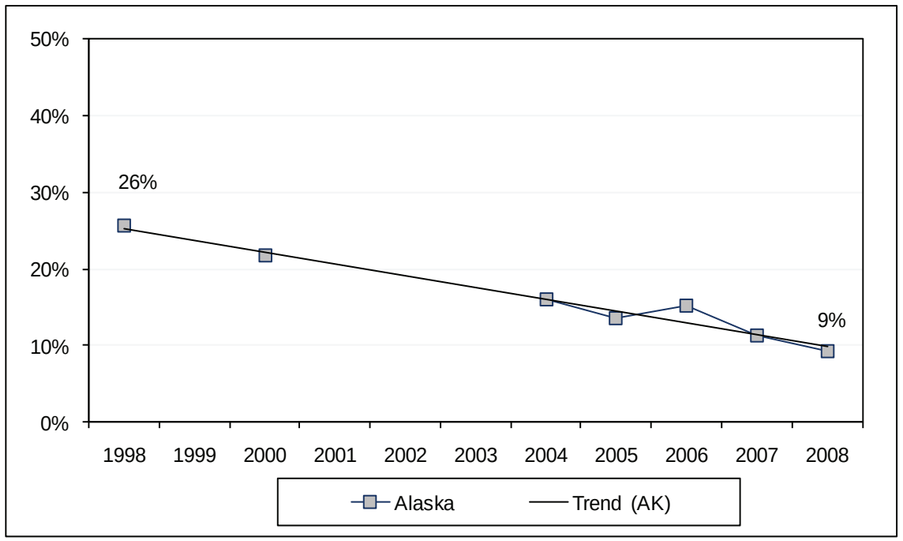
[b] This new section, called the "random child selection module", is used so that adults can report on selected health conditions and factors for one randomly selected child in their household. Information gathered in the process of random selection helps to make the estimates more accurate regarding the proportion or number of children affected by a health condition or factor.

Trends in Secondhand Smoke Exposure in the Home

SHS exposure inside the home has decreased dramatically among Alaska adults since 1998, when it was first measured in the Alaska BRFSS. In 2008, 9.3% of adults reported that smoking had occurred inside their homes in the past month, compared to 25.6% in 1998 (see Figure 66).

Although there is no national level comparison information, these results indicate that Alaskans may be among the frontrunners in reducing SHS exposure in the home, at least compared to the states for which this information is available. The median for SHS exposure in home within the past 7 days was 15.6%, in a study in 17 states, between 2003 to 2007.[4]

Figure 66. Percent of Alaska Adults Who Report that Someone Smoked Inside their Home in the Past Month, 1998-2008

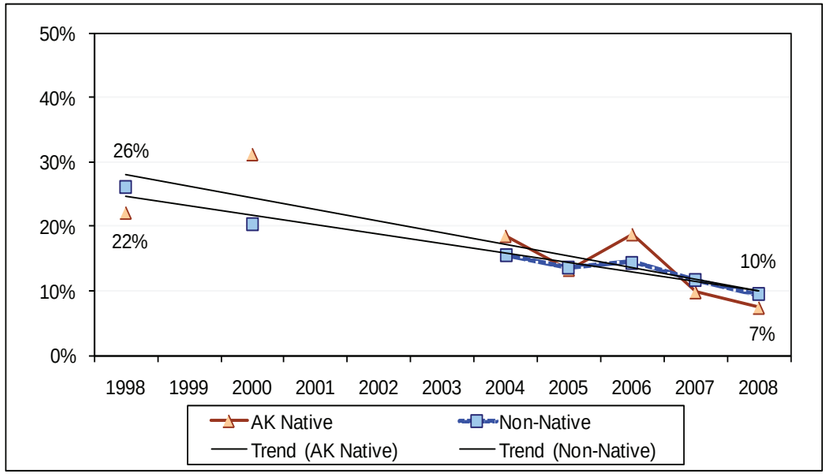


Source: Alaska Behavioral Risk Factor Surveillance System

Trends by Priority Populations

SHS exposure in the home decreased significantly among Alaska Natives as well as among non-Natives. See Figure 67 below.

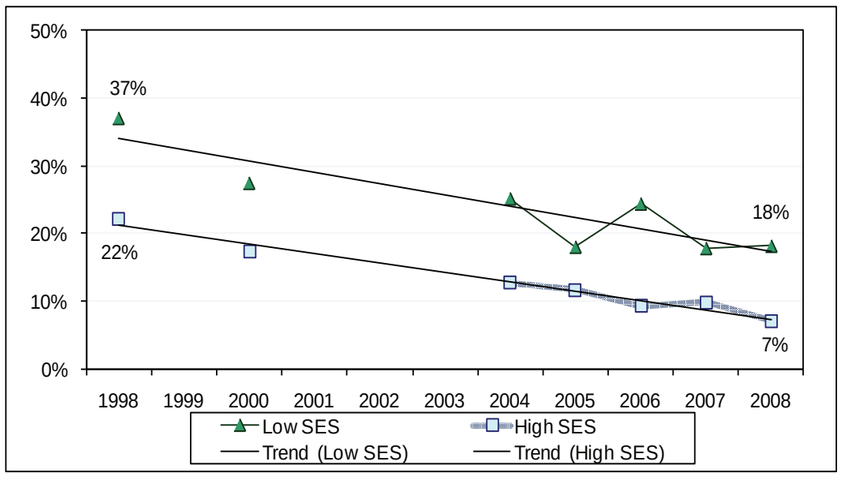
Figure 67. Percent of Alaska Adults Who Report that Someone Smoked Inside their Home in the Past Month, Alaska Native and Non-Native, 1998-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Among non-Natives aged 25-64, SHS exposure decreased significantly among both SES groups (see Figure 68). However, those of low SES have continued to be at more risk than those of higher SES.

Figure 68. Percent of Alaska Adults Who Report that Someone Smoked Inside their Home in the Past Month, Non-Natives Aged 25-64, by SES, 1998-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Trends by Gender, Age and Region

Prevalence of SHS exposure in the home has decreased significantly among:

- Men (27.7% in 1998 to 11.9% in 2008)
- Women (23.4% in 1998 to 6.5% in 2008)

Adults in all age groups

- Younger adults aged 18-29 (29.7% in 1998 to 8.9% in 2008)
- Adults aged 30-54 (24.3% in 1998 to 9.4% in 2008)
- Older adults aged 55 and older (24.5% in 1998 to 9.6% in 2008)

Residents in all regions of Alaska

- Anchorage/Mat-Su (25.4% in 1998 to 8.2% in 2008)
- Gulf Coast (28.0% in 1998 to 13.8% in 2008)
- Southwest (19.6% in 1998 to 7.1% in 2008)
- Southeast (21.7% in 1998 to 11.0% in 2008)
- North/NW/Interior (27.2% in 1998 to 9.2% in 2008)
- Fairbanks North Star (29.6% in 1998 to 9.5% in 2008)

Trends by Smoking Status

Prevalence of SHS exposure in the home has decreased significantly across all groups by smoking status:

- Current smokers (63.8% in 1998 to 26.9% in 2008)
- Former smokers (13.0% in 1998 to 5.0% in 2008)
- Never smokers (12.1% in 1998 to 3.9% in 2008)

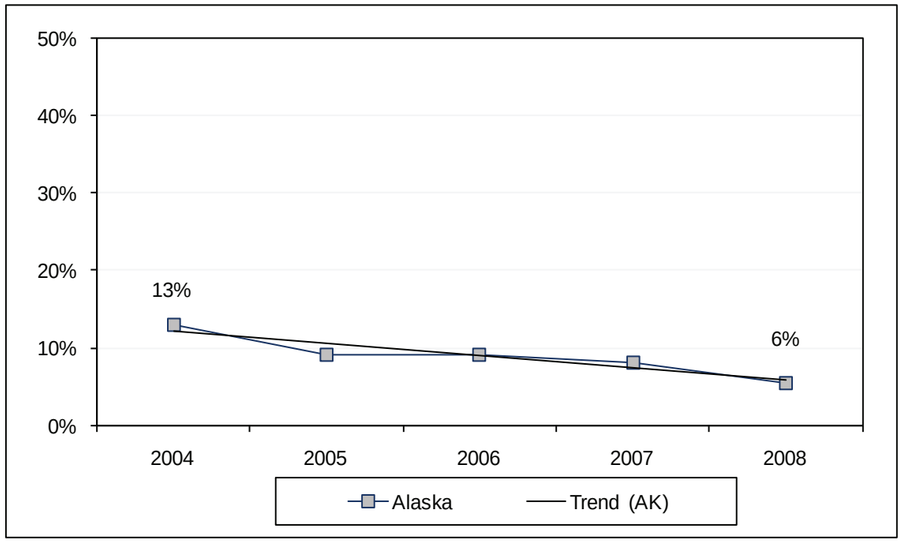
In summary, prevalence of exposure to tobacco smoke in the home has decreased within the priority populations, Alaska Natives and low SES non-Natives aged 25-64, and by all gender, age and regional groups in Alaska.

Trends for Children Exposed to Secondhand Smoke in the Home

Prevalence of SHS exposure inside the home among children is available from the 2004 through 2008 Alaska BRFSS surveys. As with adult SHS exposure, child exposure is measured by the adult respondent's report that someone had smoked inside their home in the 30 days prior to the survey. Data indicate significant decreases in childhood home exposure to smoke during this period, overall and among priority populations.

In 2008, 5.5% of children were exposed to smoke inside their homes in the past month, compared to 13.0% in 2004 (see Figure 69). Although there are no national data that are directly comparable, other studies with both national and Alaska-specific data have shown similar results to the Alaska BRFSS. Data from the 2007 National Survey of Children's Health[5] indicate that while Alaska's children are more likely than those nationwide to live in a household with one or more smokers (30.9% vs. 26.2%), the overall proportion of children exposed to smoke in their homes is lower in Alaska (4.7%, in this study) than the national prevalence (7.6%).

Figure 69. Percent of Children Exposed to Smoke in the Home, Alaska, 2004-2008

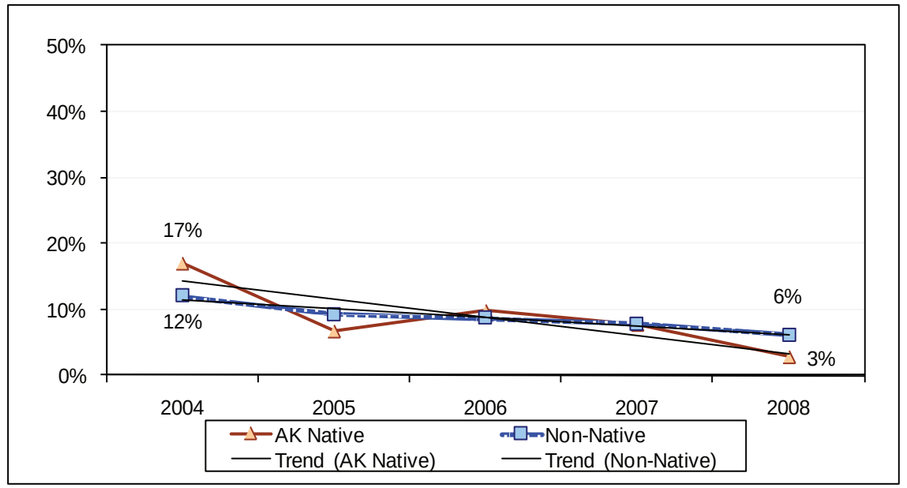


Source: Alaska Behavioral Risk Factor Surveillance System

Trends by Priority Populations

Child exposure to SHS in the home decreased significantly among both Alaska Natives and non-Natives. See Figure 70 below.

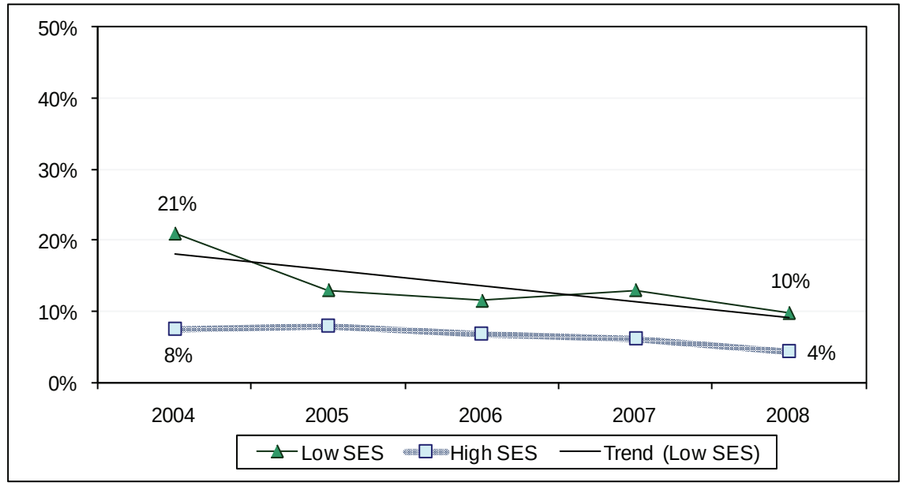
Figure 70. Percent of Children Exposed to Smoke in the Home, by Race Group of Adult Respondent, Alaska, 2004-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Child exposure to SHS decreased significantly among low SES non-Natives; the decrease was not statistically significant among higher SES non-Natives (see Figure 71).

Figure 71. Percent of Children Exposed to Smoke in the Home, by SES of Adult Non-Native Respondents Aged 25-64, Alaska, 2004-2008,

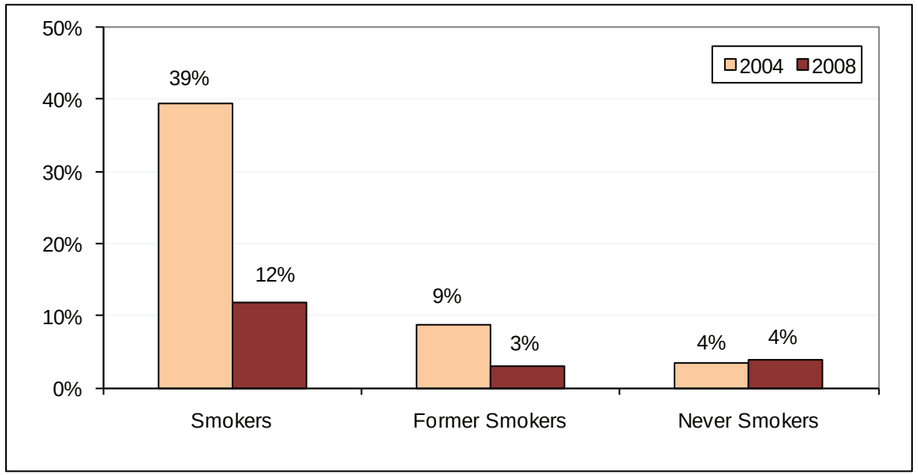


Source: Alaska Behavioral Risk Factor Surveillance System

Trends by Smoking Status of Adult Respondent

Child exposure to SHS in the home decreased significantly in households of both current and former smokers (see Figure 72). However, children living in a household with a smoker continue to be at higher risk for home SHS exposure.

Figure 72. Percent of Children Exposed to Smoke in the Home, by Smoking Status of Adult Respondent, Alaska, 2004 and 2008



Source: Alaska Behavioral Risk Factor Surveillance System

Child Secondhand Smoke Exposure by Child Age

As noted in previous studies,[3,5] SHS exposure among children is more prevalent as age increases. In 2008, Alaska's children aged 0 to 4 were least likely to be exposed to smoke in their homes (2.5%), followed by those aged 5 to 12 (5.9%) and those aged 13 to 17 (7.6%).

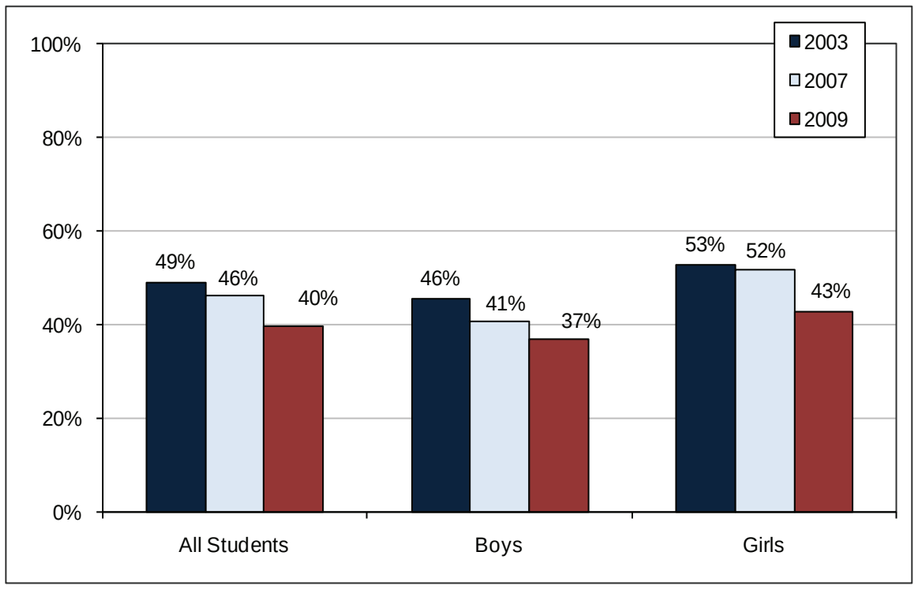
Trends in High School Aged Youth Exposure to Secondhand Smoke, Any Indoor Room

Although the home is the most likely place for indoor SHS exposure for younger children, teenagers spend increasing amounts of time outside the home, and may also be exposed to indoor SHS in many other locations. The Alaska YRBS has included this question since 2003: *"On how many of the past 7 days were you in a room with someone who was smoking cigarettes?"* While there are no known national data for comparison, the findings from the Alaska YRBS present a very different picture than the BRFSS data on SHS exposure in the home among children aged 13 to 17. The ability to compare information between the BRFSS and YRBS data is limited by the fact that age groups and the time frames measured do not match perfectly between the BRFSS and YRBS data; the age range of high school students in the YRBS includes a small proportion of youth aged 18 or 19, in addition to those aged 13 to 17. In the YRBS, teens are asked about the past 7 days instead of the past 30 days. However, it seems likely that the YRBS findings reflect the fact that there are many other indoor places besides the home, in which older youth might be exposed to SHS.

In 2009, two in five high school students (39.7%) reported being in a room with someone who was smoking cigarettes in the past 7 days (see Figure 73), and among non-smoking youth, three in ten (31.3%) reported SHS exposure. The proportion of Alaska high school students who report indoor SHS exposure has decreased significantly since 2003 ($p<0.001$), when almost half reported exposure.

Indoor SHS exposure has decreased significantly among both boys and girls since 2003. In past years, girls have been significantly more likely than boys to be exposed to secondhand smoke, but the difference was not significant in 2009.

Figure 73. Percent of Alaska High School Youth Who Were Exposed to Indoor Cigarette Smoke in the Past 7 Days, Overall and by Gender, 2003-2009

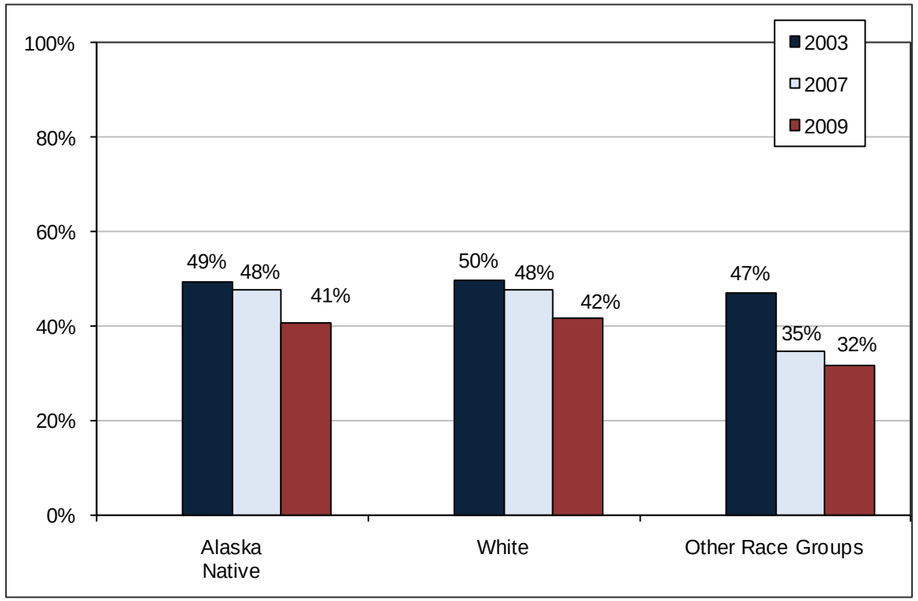


Source: Alaska Youth Risk Behavior Survey

Trends in Youth SHS Exposure by Race Group

SHS exposure has decreased significantly among White youth and Other Race Groups youth, but the perceived decrease among Alaska Native youth is not significant (see Figure 74). Although smoking prevalence is still highest for Alaska Native youth, Alaska Natives are not more likely than White youth to report SHS exposure.

Figure 74. Percent of Alaska High School Youth Who Were Exposed to Indoor Cigarette Smoke in the Past 7 Days, by Race Group, 2003-2009

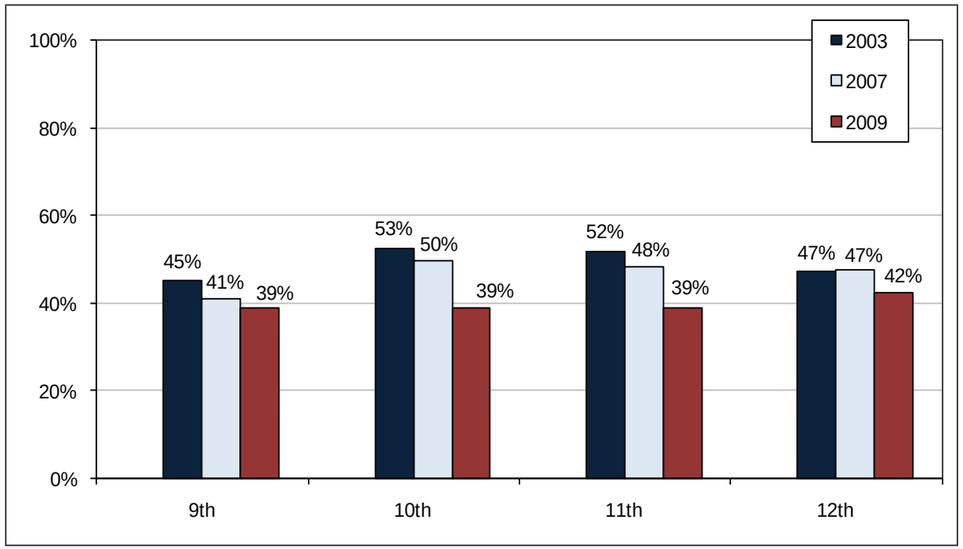


Source: Alaska Youth Risk Behavior Survey

Trends in Youth Exposure to Secondhand Smoke by Grade

Prevalence of SHS exposure has decreased significantly among 10th and 11th graders (see Figure 75). In 2009, there were no significant differences by grade.

Figure 75. Percent of Alaska High School Youth Who Were Exposed to Indoor Cigarette Smoke in the Past 7 Days, by Grade, 2003-2009



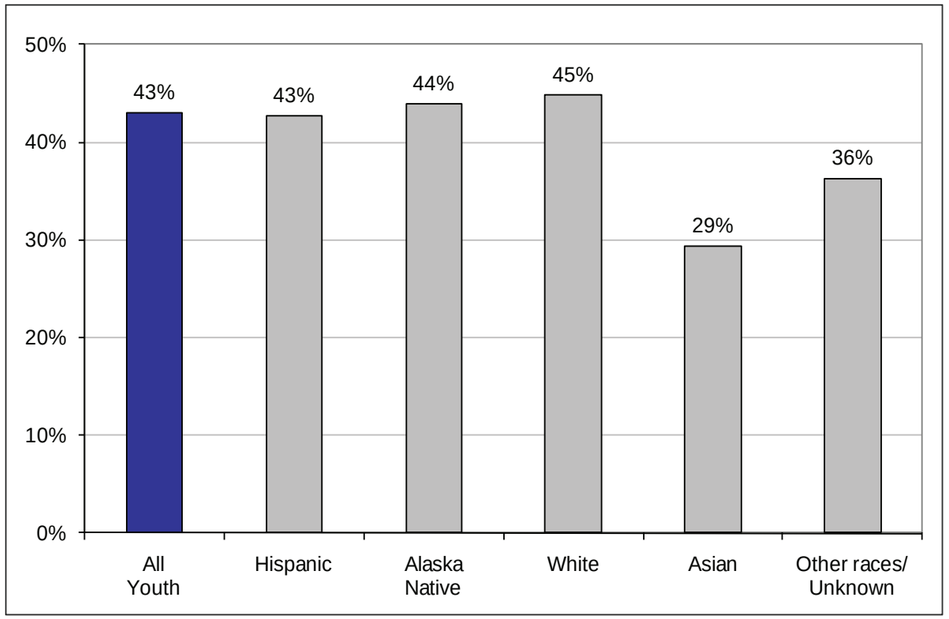
Source: Alaska Youth Risk Behavior Survey

Youth Exposure to Secondhand Smoke by Race and Ethnicity Categories

In order to examine prevalence of SHS exposure by each of the race and ethnicity categories available in the YRBS, we must combine two years of data. It should be noted that there were differences in SHS exposure between 2007 and 2009, by the three race groups reported earlier, as well as by gender and grade.

Asian youth are significantly less likely than any other group to have had recent SHS exposure. As noted in prior chapters, there were not sufficient numbers to report by group for African American youth or Hawaiian and Other Pacific Islander youth. Both groups are included in the "Other races and Unknown Race" group in Figure 76 below. Those in the "Other races and Unknown Race" category are less likely than White youth to have had recent SHS exposure.

Figure 76. Percent of Alaska High School Youth Who Were Exposed to Indoor Cigarette Smoke in the Past 7 Days, by Race and Ethnicity Categories, 2007 and 2009



Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Note: Each group after "Hispanic" includes only those students who did not report being Hispanic; those who reported multiple races other than Alaska Native, and those who did not report race, are included in "Other races/Unknown."

Youth Exposure to Secondhand Smoke within Race Groups by Gender

In order to examine prevalence of SHS exposure in more detail within race groups, we must combine two years of data. It should be noted that SHS exposure decreased significantly between 2007 and 2009 for some groups (like girls and 10th graders) but not among others. For this reason, the information presented below may or may not accurately reflect disparities in SHS exposure that were still current as of 2009.

Although SHS exposure does not differ overall by gender, among Alaska Native youth, girls are significantly more likely than boys to have had recent SHS exposure (see Table 47).

Table 47. Percent of Youth Who Were Exposed to Indoor Cigarette Smoke, by Race Group and Gender, Alaska, 2007 and 2009

Gender	Alaska Native Youth	White Youth	Youth of Other Races	Total
Girls	54.5%	45.5%	37.8%	47.2%
Boys	33.1%	44.3%	28.8%	38.9%
All Youth	**44.0%**	**44.9%**	**33.0%**	**43.0%**

Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Although it appears that there might be differences in SHS exposure by race and grade, these differences are not statistically significant (see Table 48).

Table 48. Percent of Youth Who Were Exposed to Indoor Cigarette Smoke, by Race Group and Grade, Alaska, 2007 and 2009

Grade	Alaska Native Youth	White Youth	Youth of Other Races	Total
9th Grade	44.7%	39.7%	31.5%	
10th Grade	39.1%	50.5%	34.0%	
11th Grade	46.7%	45.3%	29.0%	
12th Grade	48.5%	44.5%	*	
All Youth	**44.0%**	**44.9%**	**33.0%**	**43.0%**

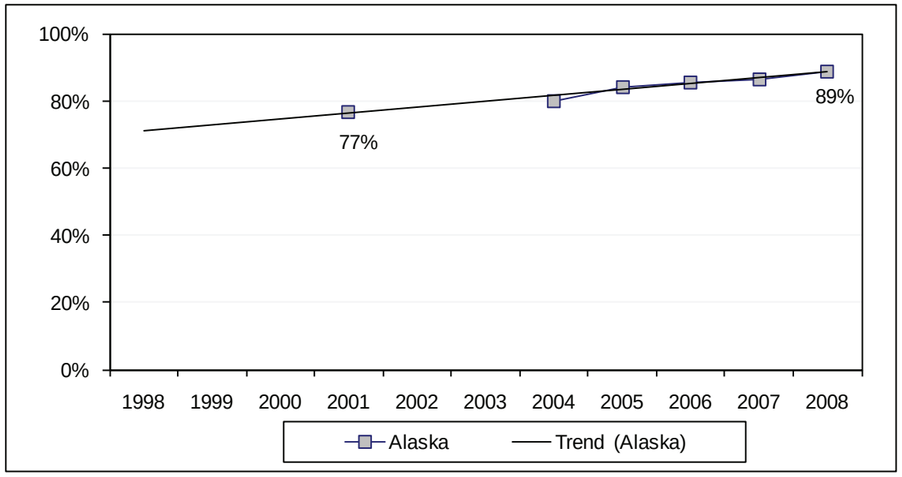
Source: Alaska Youth Risk Behavior Survey, combined years 2007 and 2009

Note: Asterisk indicates that information is suppressed due to insufficient numbers.

Trends in Home Smoking Bans

The proportion of adults who have home smoking bans increased significantly from 76.8% in 2001 to 88.7% in 2008 (see Figure 77). Although questions about home bans and home SHS exposure only overlap since 2004, it is clear that the increase in the proportion of people who report that smoking is not allowed anywhere inside their home corresponds with the decrease in SHS exposure in the home. In 2008, roughly nine out of ten Alaska adults (88.7%) reported having a home smoking ban, while one in ten (9.3%) reported SHS exposure in the home sometime during the past month. In 2006-2007, the national median was 77.6% for home smoking bans.[6]

Figure 77. Percent of Alaska Adults Who Have Home Smoking Bans, 2001-2008

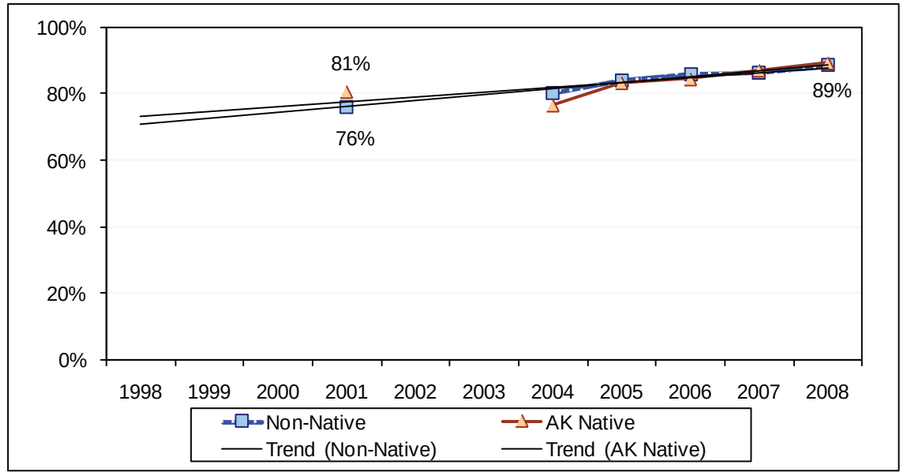


Source: Alaska Behavioral Risk Factor Surveillance System

Trends by Priority Populations

The presence of home smoking bans increased significantly among both Alaska Natives and non-Natives. Currently 89% of adults in both groups have home smoking bans, as shown in Figure 78.

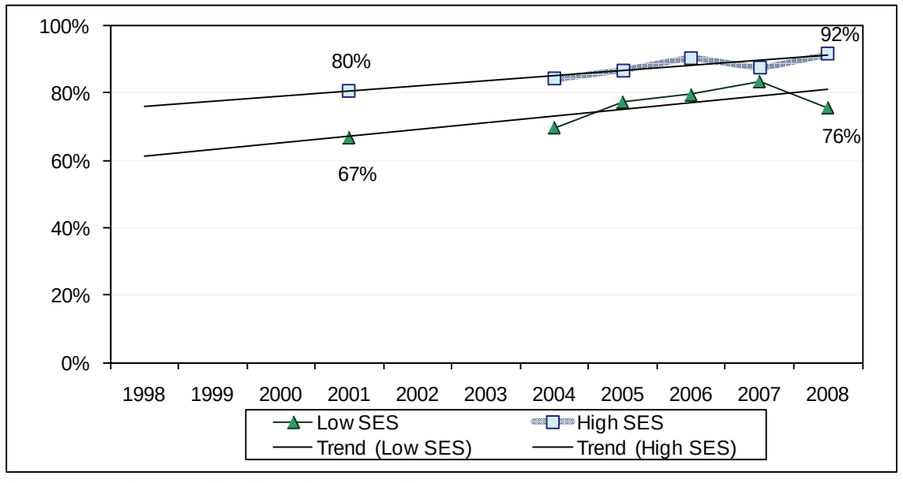
Figure 78. Percent of Alaska Adults Who Have Home Smoking Bans, by Year, Alaska Native and Non-Native, 2001-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Among non-Natives aged 25-64, the presence of home smoking bans increased significantly among both low and higher SES groups (see Figure 79). The perceived drop in home smoking bans among those in the low SES group between 2007 and 2008 is not significant.

Figure 79. Percent of Alaska Adults Who Have Home Smoking Bans, by Year, Non-Natives Aged 25-64, by SES, 2001-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Trends in Home Smoking Bans by Gender, Age and Region

Prevalence of home smoking bans has increased significantly among all groups by gender, age and region:

- Men (76.9% in 2001 to 86.0% in 2008)
- Women (76.6% in 2001 to 91.5% in 2008)

Adults in all age groups

- Younger adults aged 18-29 (79.0% in 2001 to 91.5% in 2008)
- Adults aged 30-54 (76.6% in 2001 to 88.0% in 2008)
- Older adults aged 55 and older (75.0% in 2001 to 87.3% in 2008)

Residents in all regions of Alaska

- Anchorage/Mat-Su (77.4% in 2001 to 89.7% in 2008)
- Gulf Coast (72.2% in 2001 to 85.0% in 2008)
- Southwest (82.9% in 2001 to 88.4% in 2008)
- Southeast (79.3% in 2001 to 85.2% in 2008)
- North/NW/Interior (76.9% in 2001 to 87.7% in 2008)
- Fairbanks North Star (73.9% in 2001 to 90.9% in 2008)

Trends in Home Smoking Bans by Smoking Status

Prevalence of home smoking bans has increased significantly across all groups by smoking status:

- Current smokers (48.3% in 1998 to 69.4% in 2008)
- Former smokers (84.4% in 1998 to 89.9% in 2008)
- Never smokers (89.9% in 1998 to 96.4% in 2008)

In summary, prevalence of home smoking bans has increased within the priority populations, Alaska Natives and low SES non-Natives aged 25-64, and by all gender, age and regional groups in Alaska.

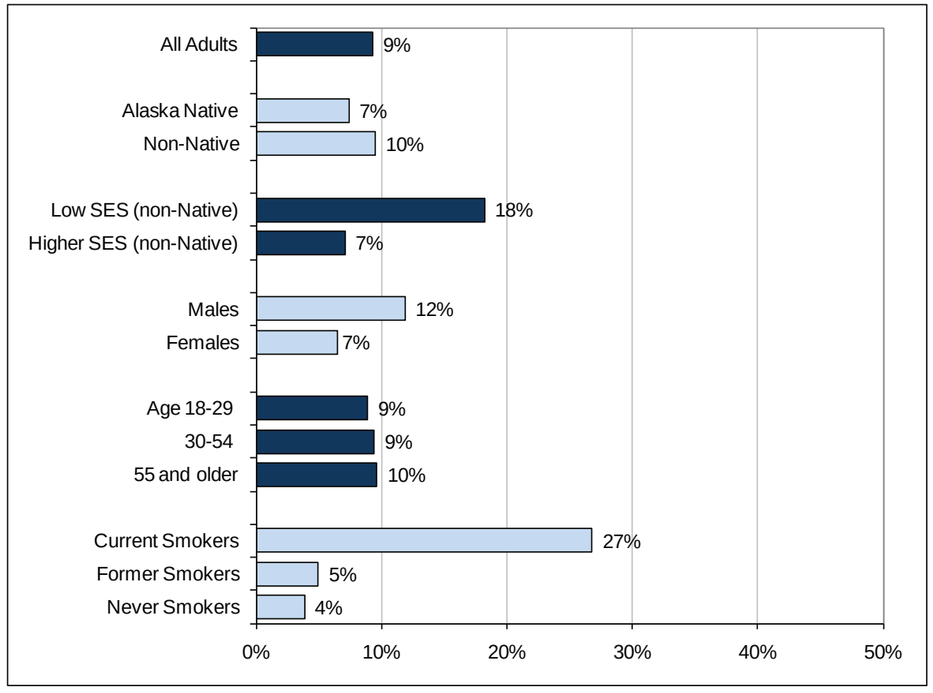
Who Is Most Likely To Be Exposed to Tobacco Smoke in their Home?

In this section, we will first examine the disparities in (adult) home SHS exposure by group, and then compare how well the presence of home bans corresponds with no recent home smoke exposure.

As might be expected, adults who currently smoke are most likely to be exposed to SHS in their homes (26.9%, as shown in Figure 80 below). Men are at higher risk than women of home SHS exposure. Among non-Natives aged 25-64, those of low SES are more than twice as likely as those of higher SES to report home SHS exposure.

However, some groups with disproportionately high smoking prevalence, such as Alaska Natives and younger adults aged 18-29, are not more (or less) likely to experience home SHS exposure.

Figure 80. Percent of Alaska Adults Who Report Home Smoke Exposure in the Past Month, Alaska, 2008



Source: Alaska Behavioral Risk Factor Surveillance System

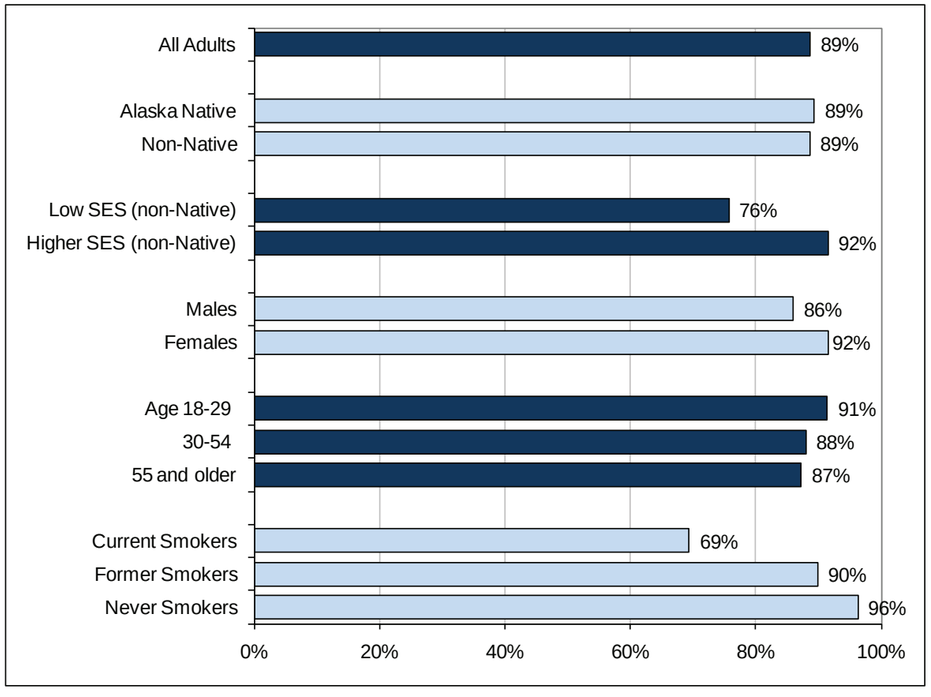
In addition, those who live in rental housing are twice as likely as those who own their home to report being exposed to tobacco smoke in their home (16.4% vs. 7.4%).

Who Is Most Likely To Have a Ban on Smoking Inside Their Home?

Disparities in home smoking bans are similar to those for home SHS exposure. As might be expected, adults who currently smoke are least likely to have rules against smoking anywhere inside their homes, although roughly seven in ten smokers (69.4%) report having such a ban (see Figure 81).

Men are less likely than women to have a home smoking ban, and among non-Natives aged 25-64, those of low SES are less likely than those of higher SES to report a home smoking ban.

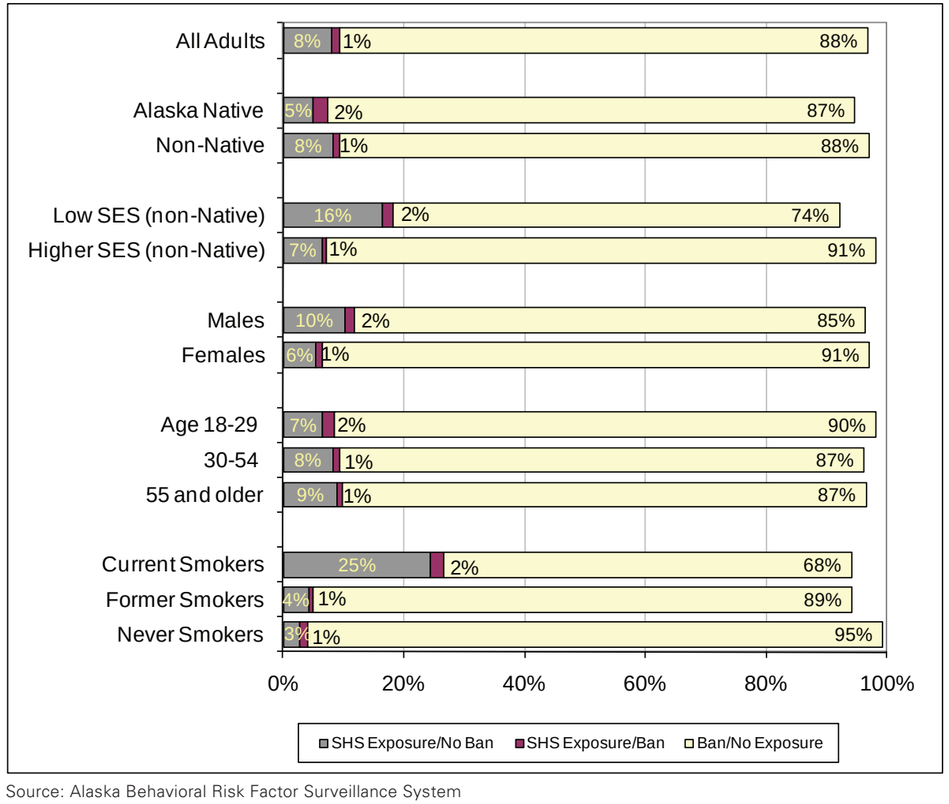
Figure 81. Percent of Alaska Adults Who Have a Home Smoking Ban, Alaska, 2008



Source: Alaska Behavioral Risk Factor Surveillance System

Home smoking bans are protective of home SHS exposure across groups, even for those groups who are more likely to experience home exposure (men, non-Natives of low SES, smokers). Only a very small proportion—between 1%-2%--of adults in any group report recent home exposure even though they have home smoking bans, as shown in the darkest bar in Figure 82 below. This graph adds together three categories of SHS exposure and bans; first, those who were exposed to smoke in their homes but do not have home bans, then those who reported exposure even though they have a smoking ban. The third and largest light-colored bar represents those who have a ban and reported no home SHS exposure. The stacks do not quite add up to 100% because the remaining proportion (not shown) represents those who were not exposed but also do not have a home smoking ban.

Figure 82. Percent of Alaska Adults Who Report Home Smoke Exposure in the Past Month in Relation to Percent with Home Smoking Bans, Alaska, 2008



Source: Alaska Behavioral Risk Factor Surveillance System

Although not presented here, these findings were also true across Alaskan regions and regardless of the presence of children in the home; home smoking bans were associated with protection from home SHS exposure.

Prevalence of Home Smoking Bans by Alaska Native and non-Native Groups

As indicated earlier, the prevalence of home smoking bans did not differ significantly by race group. However, we examined the 2006-2008 data for potential disparities within race groups by selected demographics to help understand which groups might benefit from more support in establishing rules against smoking in their home.

Among both Alaska Natives and non-Natives, the prevalence of home smoking bans does not differ significantly by gender (see Table 49). Note that although prevalence of home smoking bans differed by gender overall in 2008, it was not different in 2006 or 2007.

Table 49. Percent of Alaska Adults Who Have Home Smoking Bans, by Gender and Race Group, 2006-2008

Gender	Alaska Natives	Non-Natives	All Adults
Men	89.1%	85.8%	86.2%
Women	84.5%	88.3%	87.7%
All Adults	**86.9%**	**87.0%**	**86.9%**

Source: Alaska Behavioral Risk Factor Surveillance System

Table 50 below shows that among both Alaska Natives and non-Natives, the prevalence of home smoking bans does not differ significantly by age.

Table 50. Percent of Alaska Adults Who Have Home Smoking Bans, by Age and Race Group, 2006-2008

Age	Alaska Natives	Non-Natives	All Adults
18-29	88.0%	87.9%	87.8%
30-54	87.0%	88.0%	87.8%
55 and older	83.9%	84.6%	84.4%
All Adults	**86.9%**	**87.0%**	**86.9%**

Source: Alaska Behavioral Risk Factor Surveillance System

Adults with children in the home are significantly more likely to have home smoking bans; this is true for both Alaska Natives and non-Natives (see Table 51).

Table 51. Percent of Alaska Adults Who Have Home Smoking Bans, by Children in Home and Race Group, 2006-2008

Children in Home	Alaska Natives	Non-Natives	All Adults
Yes	90.3%	91.0%	90.7%
No	81.8%	83.8%	83.7%
All Adults	**86.9%**	**87.0%**	**86.9%**

Source: Alaska Behavioral Risk Factor Surveillance System

Adults in the Gulf Coast region are significantly less likely than those in Anchorage/Mat-Su, Fairbanks North Star or Southwest Alaska to have home smoking bans (see Table 52). Home smoking ban prevalence is significantly higher in Southwest Alaska than in all other regions except Anchorage/Mat-Su and Fairbanks North Star. Among Alaska Natives, adults in the Gulf Coast region are significantly less likely than those in Anchorage/Mat-Su, Fairbanks North Star or Southwest Alaska to have home smoking bans. Differences by region appear among both Alaska Natives and non-Natives.

Table 52. Percent of Alaska Adults Who Have Home Smoking Bans, by Region and Race Group, 2006-2008

Geographic Region	Alaska Natives	Non-Natives	All Adults
North/NW/Interior	84.5%	84.0%	84.2%
Southwest AK	91.5%	88.5%	90.6%
Gulf Coast	78.3%	83.0%	82.8%
Anchorage/Mat-Su	89.0%*	87.9%	87.8%
Fairbanks North Star	82.3%	88.1%	87.6%
Southeast	83.5%	85.9%	85.5%
All Adults	**86.9%**	**87.0%**	**86.9%**

Source: Alaska Behavioral Risk Factor Surveillance System

Note: Asterisk marks those estimates that may lack precision due to a high coefficient of variation.

Those who are unable to work are least likely to be protected by a ban on smoking in the home, differing significantly from those who are employed or not in the workforce (including students, retirees and homemakers). However, among Alaska Natives, having a home smoking ban does not differ by employment status (see Table 53).

Table 53. Percent of Alaska Adults Who Have Home Smoking Bans, by Employment Status and Race Group, 2006-2008

Employment	Alaska Natives	Non-Natives	All Adults
Employed/Self-Employed	87.0%	88.5%	88.2%
Not in Workforce	86.8%	86.5%	86.6%
Unemployed	89.5%	78.7%	83.3%
Unable to Work	81.1%	66.3%	71.1%
All Adults	**86.9%**	**87.0%**	**86.9%**

Source: Alaska Behavioral Risk Factor Surveillance System

Note: Those not in the workforce include retired persons, students, and homemakers.

Prevalence of home smoking bans differs significantly by smoking status overall, and among both Alaska Natives and non-Natives (see Table 54). Smokers are significantly less likely than former and never smokers to have home smoking bans. Among non-Natives, former smokers also differ significantly from never smokers. Alaska Native smokers are more likely than non-Native smokers to have home smoking bans.

Table 54. Percent of Alaska Adults Who Have Home Smoking Bans, by Smoking Status and Race Group, 2006-2008

Smoking Status	Alaska Natives	Non-Natives	All Adults
Current Smoker	79.9%	61.8%	66.7%
Former Smoker	92.8%	89.9%	90.2%
Never Smoker	91.7%	94.3%	94.0%
All Adults	**86.9%**	**87.0%**	**86.9%**

Source: Alaska Behavioral Risk Factor Surveillance System

Prevalence of Home Smoking Bans by non-Natives (aged 25-64), by Socioeconomic Status (SES)

As noted earlier, the prevalence of home smoking bans is significantly lower for the non-Native low SES priority group. We examined the 2006-2008 data for potential disparities within the priority group and its higher SES counterpart by selected demographics, to help understand which groups might benefit from more support in establishing rules against smoking in their home.

Among non-Natives aged 25-64, prevalence of home smoking bans differed by gender within the low SES priority group, but not within the higher SES group (see Table 55).

Table 55. Percent of Non-Native Adults (Aged 25-64) Who Have Home Smoking Bans, by Gender and SES, Alaska, 2006-2008

Gender	Low SES Non-Natives	Higher SES Non-Natives	All Adults
Men	73.7%	89.0%	86.2%
Women	83.9%	90.7%	87.7%
All Adults	**79.5%**	**89.8%**	**86.9%**

Source: Alaska Behavioral Risk Factor Surveillance System

Among non-Native adults aged 25-64 in the higher SES group, younger adults (aged 25-29) are significantly more likely than adults 30 and older to have home smoking bans (see Table 56). A similar pattern occurs within the low SES priority group, although the differences are not statistically significant.

Table 56. Percent of Non-Native Adults (Aged 25-64) Who Have Home Smoking Bans, by Age and SES, Alaska, 2006-2008

Age	Low SES Non-Natives	Higher SES Non-Natives	All Adults
25-29	84.8%	95.3%*	87.8% (18-29)
30-54	79.0%	89.8%	87.8%
55-64	78.4%	87.0%	84.4% (age 55+)
All Adults	**79.5%**	**89.8%**	**86.9%**

Source: Alaska Behavioral Risk Factor Surveillance System

Note: Asterisk marks those estimates that may lack precision due to a high coefficient of variation.

Table 57 shows that the prevalence of home smoking bans is higher among those with children in the home within the low SES priority group as well as non-Natives of higher SES.

Table 57. Percent of Non-Native Adults (Aged 25-64) Who Have Home Smoking Bans, by Children in Home and SES, Alaska, 2006-2008

Children in Home	Low SES Non-Natives	Higher SES Non-Natives	All Adults
Yes	84.9%	94.1%	90.7%
No	71.0%	85.9%	83.7%
All Adults	**79.5%**	**89.8%**	**86.9%**

Source: Alaska Behavioral Risk Factor Surveillance System

Among non-Native adults aged 25-64, prevalence of home smoking bans does not differ by geographic regions, for either the low SES priority group or their higher SES counterpart (see Table 58). Since the number of survey respondents in some regions was too small to report by SES, for the table below, regions are grouped into Rural (North/NW/Interior, and Southwest Alaska) and not Rural (Anchorage/Mat-Su, Southeast, Fairbanks, and Gulf Coast).

Table 58. Percent of Non-Native Adults (Aged 25-64) Who Have Home Smoking Bans, by Region and SES, Alaska, 2006-2008

Geographic Region	Low SES Non-Natives	Higher SES Non-Natives	All Adults
Rural (North/NW/Interior and Southwest)	76.0%	86.6%	87.6%
Not Rural	79.7%	89.9%	86.9%
All Adults	**79.5%**	**89.8%**	**86.9%**

Source: Alaska Behavioral Risk Factor Surveillance System

Table 59 indicates that regardless of SES, among non-Native adults aged 25-64, those who are unable to work are significantly less likely to be protected by home smoking bans than those who are employed and those not in the workforce. However, the prevalence of home smoking bans is not statistically different for employed and unemployed in the low SES group.

Table 59. Percent of Non-Native Adults (Aged 25-64) Who Have Home Smoking Bans, by Employment Status and SES, Alaska, 2006-2008

Employment	Low SES Non-Natives	Higher SES Non-Natives	All Adults
Employed/Self-Employed	81.6%	90.4%	88.2%
Not in Workforce	89.2%	87.8%	86.6%
Unemployed	70.8%	89.3%*	83.3%
Unable to Work	60.8%	70.0%*	71.1%
All Adults	**79.5%**	**89.8%**	**86.9%**

Source: Alaska Behavioral Risk Factor Surveillance System
Note: Those not in the workforce include retired persons, students, and homemakers.
Note: Asterisk marks those estimates that may lack precision due to a high coefficient of variation or small sample size.

As noted earlier, prevalence of home smoking bans differs significantly between each group, smokers, former smokers, and never smokers (see Table 60). This pattern is true among non-Natives aged 25-64 of low SES and those of higher SES.

Table 60. Percent of Non-Native Adults (Aged 25-64) Who Have Home Smoking Bans, by Smoking Status and SES, Alaska, 2006-2008

Smoking Status	Low SES Non-Natives	Higher SES Non-Natives	All Adults
Current Smoker	55.3%	63.4%	66.7%
Former Smoker	86.2%	91.8%	90.2%
Never Smoker	95.2%*	96.2%	94.0%
All Adults	**79.5%**	**89.8%**	**86.9%**

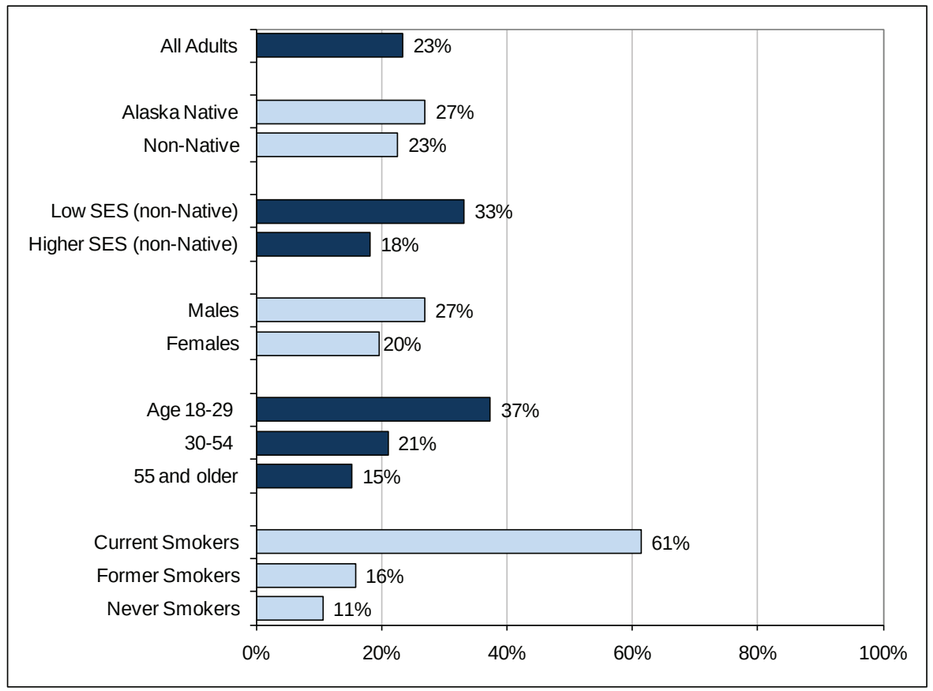
Source: Alaska Behavioral Risk Factor Surveillance System
Note: Asterisk marks those estimates that may lack precision due to a high coefficient of variation.

Who Is Most Likely To Be Exposed to Tobacco Smoke in a Car?

Since 2004, the Alaska BRFSS has included this question: *"In the past 30 days has anyone, including yourself, smoked cigarettes, cigars or pipes in a car you were in?"* Overall, SHS exposure in cars is more likely than home exposure; nearly one in four Alaska adults (23.4%) report SHS exposure in a car in the past month (see Figure 83 below).

Current smokers are most likely to report SHS exposure while in a car (61.4%), and car SHS exposure has a linear relationship to smoking status and age group. Other groups who are disproportionately more likely to be exposed to tobacco smoke in a car include men, younger adults (aged 18-29), and those in the non-Native low SES priority group (aged 25-64). In contrast, Alaska Natives were marginally less likely than non-Natives to experience SHS exposure in a car (p=0.05).

Figure 83. Percent of Alaska Adults Who Report Smoke Exposure in a Car in the Past Month, Alaska, 2006-2008



Source: Alaska Behavioral Risk Factor Surveillance System

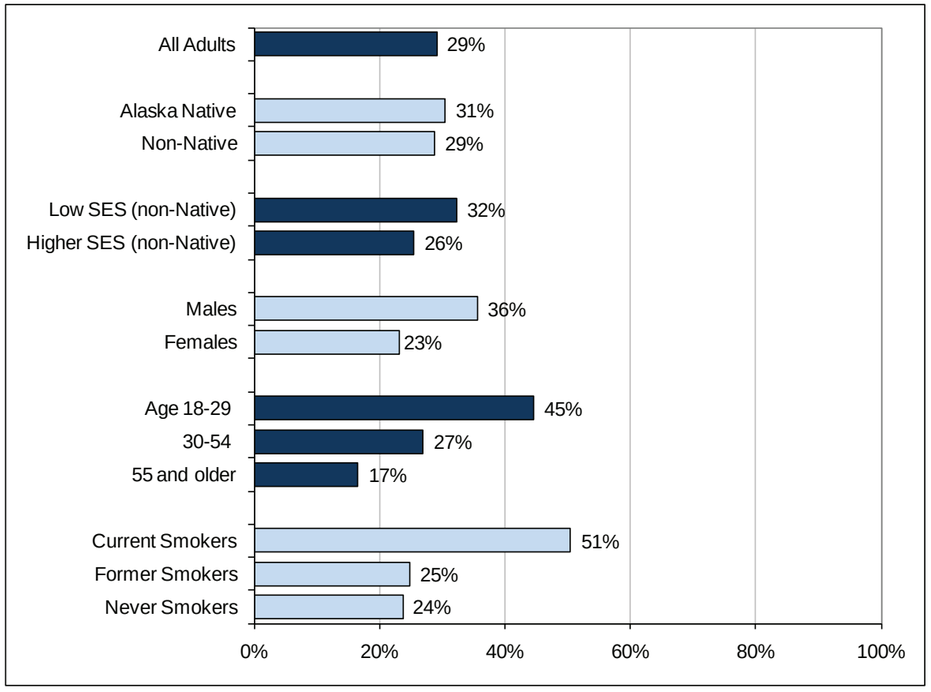
The prevalence of SHS exposure in a car also differed significantly by region. Adults in Southwest Alaska (16.3%) are significantly less likely that those in Anchorage/Mat-Su (22.9%), Gulf Coast (27.9%), Southeast (23.3%), and Fairbanks North Star (25.6%) to report car SHS exposure. However, it is possible that these findings primarily reflect regional differences in availability and usage of cars, rather than differences in the prevalence of smoking in cars.

Who Is Most Likely To Be Exposed to Tobacco Smoke in their Indoor Workplace?

In this section, we will first examine the disparities in workplace smoke exposure by group, and then compare how well the presence of workplace smoking bans corresponds with lack of workplace SHS exposure. Overall, seven in ten adults (68.3%) report being employed or self-employed (9.8% report being self-employed and 58.5% are employed by someone else). More than three quarters of those employed (79.0%) work primarily indoors. Given these parameters, a little over half of adult Alaskans (54.0%) could be protected by smoke-free indoor workplace policies.

All survey respondents who report being either employed or self-employed and are working primarily indoors are asked questions about SHS exposure anywhere at the workplace in the past month, and whether smoking is allowed anywhere, in some work areas, or not allowed in any work areas. About three out of ten Alaska adults employed indoors (29.1%) report tobacco SHS exposure in their workplace in the past month (see Figure 84).

Figure 84. Percent of Employed Alaska Adults Working Primarily Indoors who Report SHS Exposure in their Workplace in the Past Month, Alaska, 2006-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Smokers are twice as likely as former or never smokers to report that someone had smoked anywhere at their workplace in the past month (50.5% vs. 24.8% and 23.8% respectively). Men are more likely than women to be exposed to SHS at their workplace.

Young adults (aged 18-29) are also at higher risk; more than two in five young adults employed indoors (44.6%) report workplace SHS exposure.

Gender and age disparities were also present among non-smokers. Nearly one-third of non-smoking men employed indoors (30.6%) report workplace SHS exposure, compared to 18.1% of women. Exposure is nearly twice as high for young adult non-smokers (38.4%) than for those aged 30-54 (22.5%) or adults aged 55 and older (15.3%). See Appendix B, Table 9-8 for additional information.

Adults employed indoors in Southwest Alaska are significantly less likely than those in any other region to experience workplace SHS exposure (see Table 61 below). This is true for non-smokers, and even smokers employed indoors in Southwest Alaska are less likely than those in Gulf Coast, Anchorage/Mat-Su, and Fairbanks North Star to be exposed to SHS anywhere at their workplace.

Table 61. Percent of Employed Adults Working Primarily Indoors who Reported SHS Exposure in their Workplace in the Past Month, by Smoking Status and Region, Alaska, 2006-2008

Geographic Region	Smokers	Non-Smokers	Total
North/NW/Interior	37.5%	22.1%	26.7%
Southwest	33.1%	12.3%	18.4%
Gulf Coast	52.0%	22.5%	29.4%
Anchorage/Mat-Su	55.8%	24.8%	30.0%
Fairbanks North Star	50.5%	27.4%	31.2%
Southeast	44.4%	22.4%	26.6%
All Adults	**50.5%**	**24.1%**	**29.1%**

Source: Alaska Behavioral Risk Factor Surveillance System

Discrepancies between Reported Workplace Exposure and Workplace Smoking Bans

It should be noted that of the 29.1% of adults employed indoors who report SHS exposure anywhere at their workplace in the past month, almost two-thirds (or 19.4% of all adults employed indoors) also report having a smoke-free policy at their workplace. However, the question about official workplace smoking policies focuses on work areas, whereas the question about exposure asks whether anyone (including the respondent) has smoked anywhere at the workplace. In the 2008 survey, a question was added to get more information about the location of the workplace SHS exposure. Among those employed indoors and covered by smoke-free workplace policies, nearly all who report exposure also said it occurred in outdoor areas only. Less than 1% report SHS exposure in indoor work areas, and another 1.5% report exposure in indoor public areas.

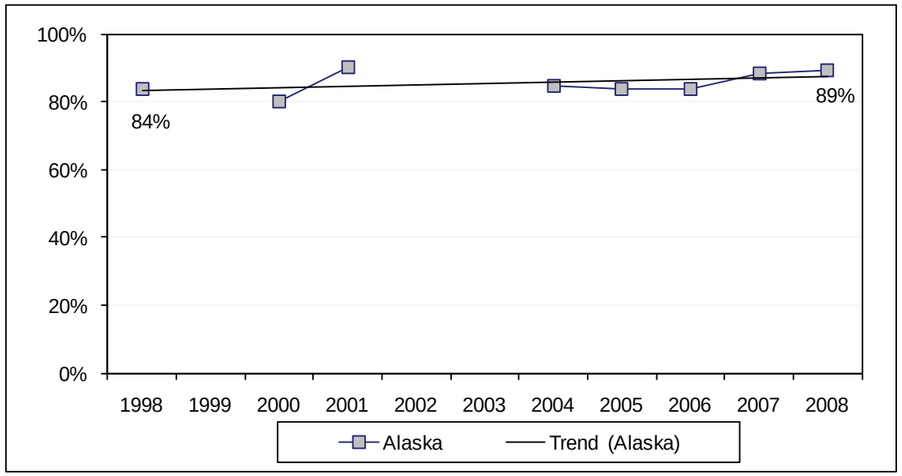
These additional findings indicate that smoke-free workplace policies do help to protect employees from SHS exposure in indoor work areas.

Trends in Workplace Smoking Bans

The proportion of employed or self-employed adults who work primarily indoors who are protected by indoor workplace smoking bans increased moderately but significantly, from 83.9% in 1998 to 89.4% in 2008 (see Figure 85). The prevalence of adult indoor workers who are now protected by workplace smoke-free policies in Alaska appears to be higher than the median across 16 states (79.0%) according to the 2003-2007 Adult Tobacco Survey.[4]

As can be seen in Figure 85, the main increase in prevalence occurred between 2006 and 2008. One key reason is that the Borough of Anchorage, representing about 41% of the adult population of Alaska, passed a comprehensive clean indoor air law in mid-2007, resulting in a notable increase the prevalence of adults protected by smoke-free workplace policies.

Figure 85. Percent of Employed Alaska Adults Working Primarily Indoors at Workplaces with Smoke-free Indoor Work Area Policy, 1998-2008

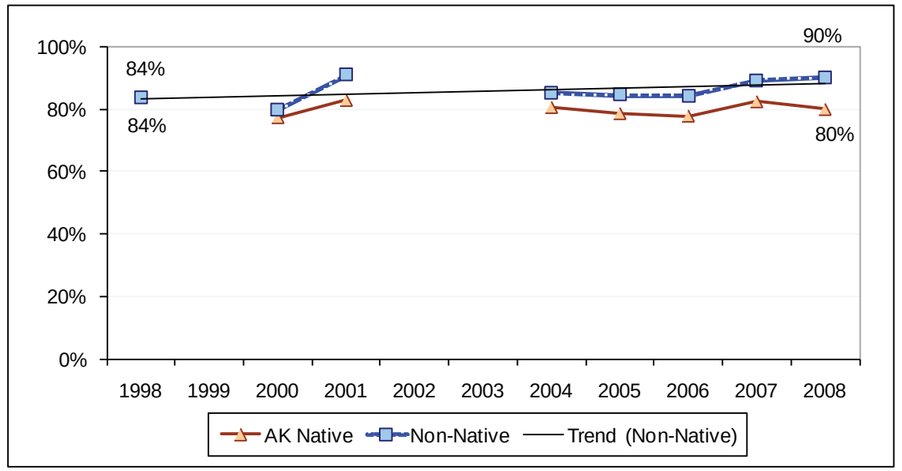


Source: Alaska Behavioral Risk Factor Surveillance System

Trends by Priority Populations

Among employed adults who work primarily indoors, trends for indoor workplace smoking bans differed by race group. Among non-Natives, prevalence of indoor workers covered by workplace smoking bans increased significantly, from 83.9% in 2001 to 90.3% in 2008. In contrast, there was no significant change among Alaska Natives employed primarily indoors. Although the apparent disparity in 2008 in coverage by workplace smoking bans (80% for Alaska Native adults, versus 90% for non-Native adults) is not significant, this difference is significant when we look at the 2006-2008 combined year data (see Figure 88, next pages).

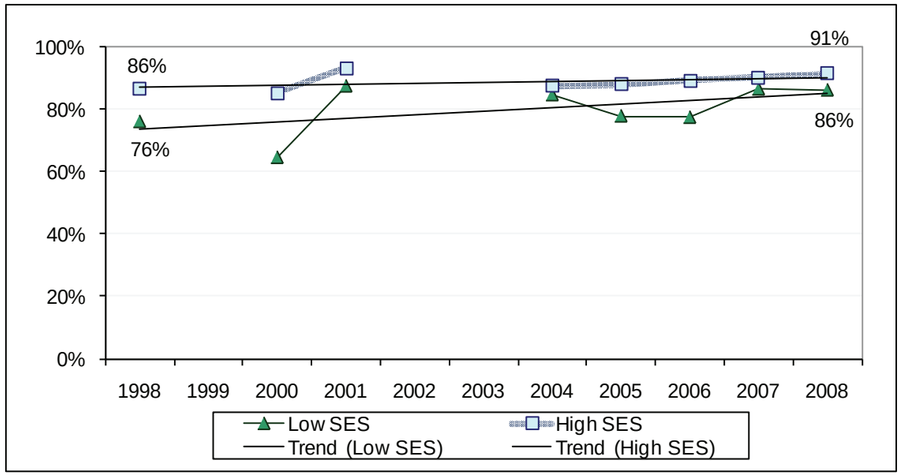
Figure 86. Percent of Employed Alaska Adults Working Primarily Indoors at Workplaces with Smoke-free Indoor Work Area Policy, by Race Group, 1998-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Among non-Native indoor workers aged 25-64, the apparent increase seen among both low SES and higher SES groups did not quite reach significance (p=0.06 for both trends). However, the general increasing trend in workplace protection from smoke is reflected in the results for these groups (see Figure 87 below).

Figure 87. Percent of non-Native Adults Aged 25-64 Working Primarily Indoors at Workplaces with Smoke-free Indoor Work Area Policy, by SES, Alaska 2001-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Trends in Workplace Smoking Bans among Indoor Workers by Gender, Age and Region

Prevalence of workplace smoking bans increased significantly among:

- Women (89.1% in 1998 to 93.2% in 2008)

Adults aged 30 and older

- Adults aged 30-54 (85.6% in 1998 to 91.7% in 2008)
- Adults aged 55 and older (71.0% in 1998 to 91.1% in 2008)

Residents of both Anchorage/Mat-Su and the Gulf Coast Region

- Anchorage/Mat-Su (86.8% in 1998 to 93.3% in 2008)
- Gulf Coast (78.7% in 1998 to 83.4% in 2008)

Trends in Workplace Smoking Bans by Smoking Status

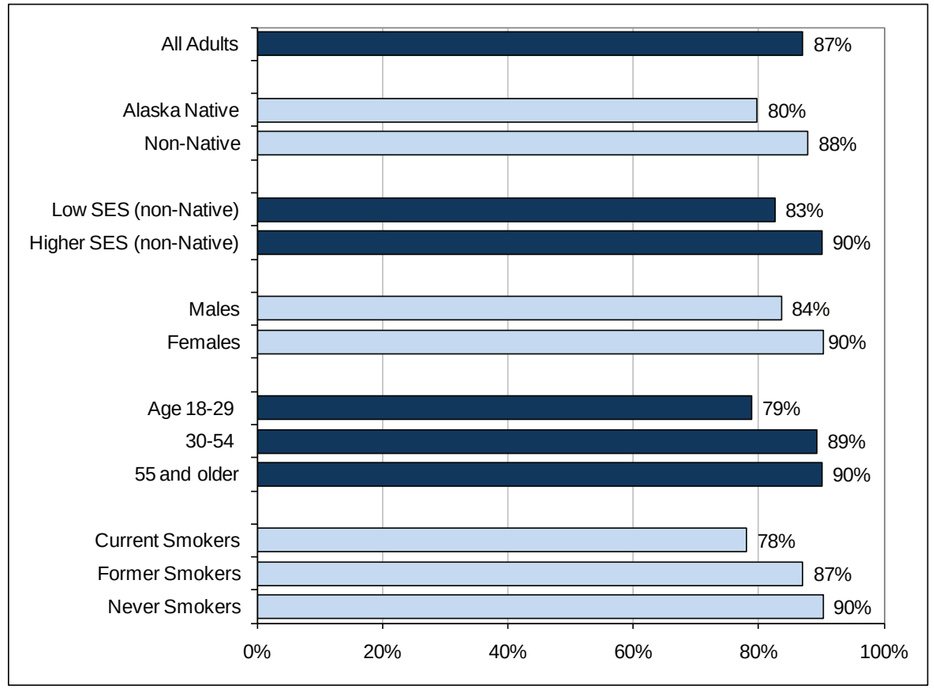
Prevalence of workplace smoking bans did not change significantly within any one group based on smoking status, although the patterns for both current smokers and those who were never smokers reflect the overall increase in proportion of indoor workers protected by workplace smoking bans. See Appendix A, Table 9-E for more detail.

Which Workers Employed Indoors are More Likely To Be Protected by a Smoke-free Workplace Policy?

In order to examine disparities in coverage by smoke-free workplace policies by demographics and priority subpopulations, we combined the three most recent years of survey data to report the information below. Totals reported here are lower than those listed for 2008 in the trend information. One likely factor in this discrepancy is the passage of a comprehensive clean indoor air law in the Borough of Anchorage in mid-2007.

Although most adults employed indoors are covered by smoke-free workplace policies, significant disparities occur by priority populations, gender, age and smoking status (see Figure 88). In the 2006-2008 time period, Alaska Natives and those in the non-Native low SES priority group are less likely to be protected by smoke-free workplace policies, as are males, young adults, and smokers.

Figure 88. Percent of Employed Adults Working Primarily Indoors at Workplaces with Smoke-free Indoor Work Area Policy, Alaska, 2006-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Regionally, Anchorage/Mat-Su had a higher proportion of employed adults covered by smoke-free workplace policies (89.7%) than North/NW/Interior and Fairbanks North Star (both 81.9%). Other regions ranged from 88.4% in Southwest Alaska to about 85% in the Gulf Coast and Southeast Alaska.

Summary and Next Steps

Alaska has made considerable progress in reducing exposure to secondhand smoke in a variety of settings, though increased protection from SHS is still needed in workplaces and within several population subgroups.

Alaskans are now much less likely to be exposed to secondhand smoke in their homes than they were a decade ago. Fewer than one in ten Alaskans reported being exposed to SHS in their homes in 2008, compared to one in four adults in 1998. SHS exposure has decreased among men, women, adults of all age groups, adults in all regions of the state, and among the priority populations of Alaska Native adults and non-Native adults of low SES. Alaska Native adult SHS exposure rates are similar to the state average but non-Native adults of low SES remain a priority group for SHS exposure reduction efforts. Non-Native adults of low SES are more likely to be exposed to SHS at home than higher SES adults and adults overall.

The declines in SHS exposure in the home correspond with increases in home smoking bans across all population groups. Nearly 90% of Alaska adults reported that smoking was not allowed anywhere in their homes in 2008. Adults who have a home smoking ban are unlikely to report that they have been exposed to SHS at home. Home smoking bans have increased across population groups, though low SES adults remain less likely than other population groups to ban smoking in their homes. Within the low SES population group women, younger adults, and adults with children in the home are more likely to ban smoking in their homes; program efforts to support the establishment of home smoking bans may need to focus on men, adults over age 30, and adults who do not have children.

Home smoking bans have contributed to reductions in children's exposure to SHS at home as well. Overall 6% of children in Alaska live in homes where indoor smoking has occurred in the past month, indicating that adults are taking steps to protect their children from SHS exposure. Children who live with smokers are still at greater risk of exposure than children who live with non-smokers, despite dramatic declines in exposure over time. Work to encourage smokers to protect their children from secondhand smoke by eliminating home SHS exposure should continue. Parents should be reminded that children deserve protection from SHS no matter what their age, as older children are currently more likely to be exposed to SHS at home.

Although Alaska has made progress in enacting clean indoor air policies, approximately one-quarter of Alaska adults working indoors report that they have been exposed to SHS at work, and many Alaskans report that smoking is allowed in indoor work areas. Based on information from the combined years 2006-2008, young adults, adults of low SES, men, and Alaska Native adults were less likely to be protected by workplace clean indoor air policies. In 2007, however, Anchorage implemented a comprehensive clean indoor air law and Juneau expanded its law to include bars and clubs. As a result, single year data for 2008 show fewer disparities in workplace policies that protect against SHS exposure. Conducting the analysis with a smaller number of respondents (who are employed primarily indoors) does make it more difficult to see whether there might be statistically significant differences by population group. Further analysis using combined years of data, starting with the time period after the establishment of these policies, will provide a better measure of which disparities in workplace exposure and protection continue to exist, and whether these disparities fall primarily in regions without comprehensive clean indoor air protection.

Comprehensive indoor air policies in workplaces and public spaces have the potential to protect the vast majority of the population from SHS exposure and should be implemented throughout the state. Alaska does not currently have a state law that protects all employed workers from secondhand smoke, though clean indoor air policies have been implemented in numerous communities throughout Alaska. Ensuring that all Alaskans are protected from SHS should be a high priority in both statewide and local tobacco prevention and control efforts. The fact that some Alaskans who report that smoking is not allowed indoors at their workplace also report that they have been exposed to tobacco smoke indoors indicates that efforts should also be made to ensure that workplace policies are being enforced.

CHAPTER 9 - References

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Part VII - Secondhand Smoke

CHAPTER 10 - Support for Clean Indoor Air Policies and Protection From Secondhand Smoke

Introduction

As noted earlier, there is no risk-free level of secondhand smoke exposure. Non-smokers who are exposed to secondhand smoke at home or work increase their heart disease risk by 25%–30% and their lung cancer risk by 20%–30%. Almost 60% of U.S. children aged 3–11 years—or almost 22 million children—are exposed to secondhand smoke. Eliminating smoking in indoor spaces is the only way to fully protect non-smokers from secondhand smoke exposure. Separating smokers from non-smokers, cleaning the air, and ventilating buildings cannot eliminate secondhand smoke exposure.[1]

One of the key mechanisms for protecting all people from secondhand smoke is through regulation or legislation. National and international studies have shown that state and local smoke-free laws typically result in high levels of public support.[2,3,4] Evidence from peer-reviewed studies shows that smoke-free policies and regulations do not have an adverse impact on the hospitality industry—and in some cases, bar and restaurant revenue has in fact increased after comprehensive clean indoor air policies have been adopted.[1,5,6]

By and large, Alaskans agree that people should be protected from secondhand smoke exposure. Support for smoking bans in restaurants and all indoor workplaces has increased significantly since 1998.

As noted earlier, Alaskans have made great progress in reducing exposure to secondhand smoke. In 2008, 9% of adults reported that smoking had occurred inside their homes in the past month, compared to 26% in 1998. However, progress in reducing exposure outside the home has been mixed. Although most indoor workers (79.2%) are protected from smoke exposure by workplace policies prohibiting smoking in any work areas, some workers, such as many of those working in restaurants and bars, do not have these protections. In 2008, among those who work primarily indoors, about one in four adults (25.3%) report being exposed to secondhand smoke at their workplace. The proportion that report working in smoke-free environments has in fact decreased for some groups.

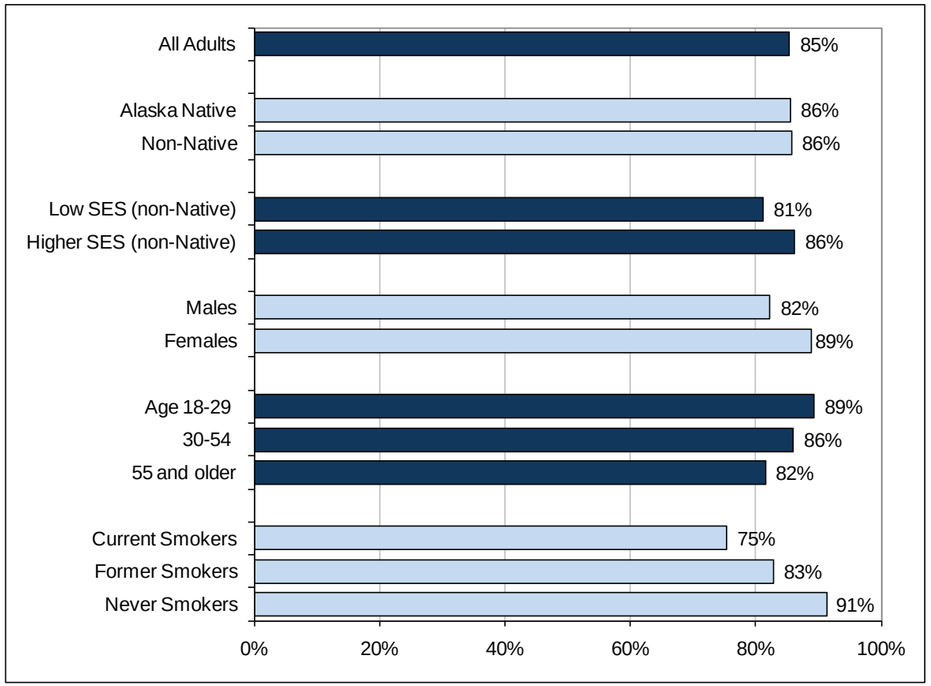
Data Sources

Data on secondhand smoke exposure, knowledge, policies and attitudes come primarily from the Behavioral Risk Factor Surveillance System (BRFSS). In this chapter, trends are reported for questions about support of clean indoor air in restaurants and workplaces in general, which were asked in 1998, 2000, and from 2004 to 2008. Trends are not reported for questions asked only from 2004-2008, including attitudes about protection from cigarette smoke and support for smoke-free bars. However, all items were examined for differences by priority populations, smoking status, and selected demographic characteristics.

General Support for Protections Against Secondhand Smoke Exposure

More than four out of five Alaska adults (85.4%) agree or strongly agree that people should be protected from smoke from other people's cigarettes (see Figure 89). Although support differs significantly by gender, age and SES priority group, in all groups at least 80% believe there should be protection against secondhand smoke exposure. Women are more likely than men to support protection against secondhand smoke, a pattern found in other indicators as well. Interestingly, younger adults aged 18-29 (and those aged 30-54) are more likely than older adults aged 55 and older to agree that people should be protected from cigarette smoke.

Figure 89. Percent of Adults Who Agree that People Should be Protected from Smoke from Other People's Cigarettes, Alaska, 2006-2008



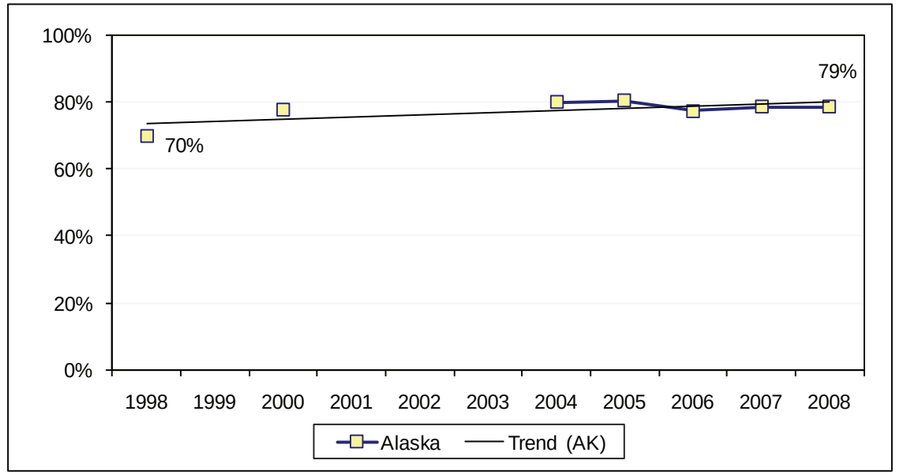
Source: Alaska Behavioral Risk Factor Surveillance System

As might be expected, smokers are less likely than former smokers or never smokers to agree that people should be protected from secondhand smoke exposure. However, support is high even in this group; three out of four smokers (75.4%) believe that people should be protected from secondhand smoke.

Trends in Support of Smoke-free Workplaces

Support for clean indoor air has increased among Alaska adults since 1998, when it was first measured by the Alaska BRFSS (see Figure 90). The proportion of adults who agree that smoking should not be allowed in any indoor work areas increased from 70.0% in 1998 to 77.7% in 2000, and remained at or just below 80% from 2004 to 2008. Although there is no national level information for direct comparison, these results are similar to those found in 17 other states between 2003-2007, in the Adult Tobacco Survey, for which the median was 77.6%.[7]

Figure 90. Percent of Alaska Adults Who Agree that Smoking Should Not be Allowed in Indoor Work Areas, 1998-2008

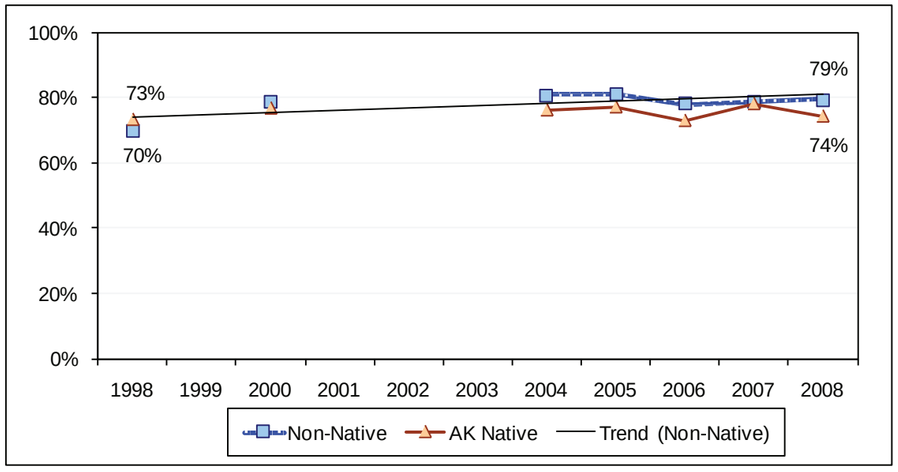


Source: Alaska Behavioral Risk Factor Surveillance System

Trends by Priority Populations

Support of smoke-free workplaces significantly increased among non-Natives from 69.7% in 1998 to 79.3% in 2008. There was no significant increase in support among Alaska Natives, but support remained high over the decade, ranging from from 73.2% in 1998 to 78.1% in 2007 and 74.2% in 2008. There is also no disparity between Alaska Natives and non-Natives in support of clean indoor air in workplaces (see Figure 91 below).

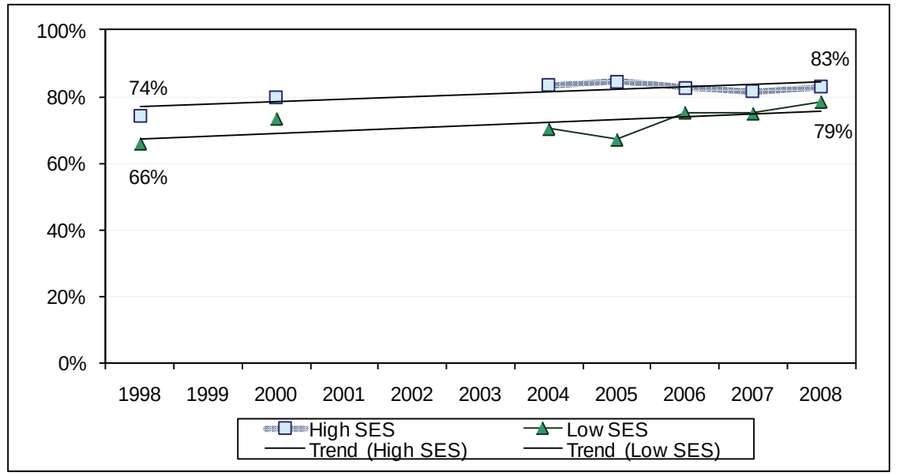
Figure 91. Percent of Alaska Adults Who Agree that Smoking Should Not be Allowed Anywhere in Indoor Work Areas, Alaska Native and Non-Native, 1998-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Among non-Natives aged 25-64, support for smoke-free workplaces increased significantly among those of higher SES and those of low SES (see Figure 92).

Figure 92. Percent of Alaska Adults Who Agree that Smoking Should Not be Allowed Anywhere in Indoor Work Areas, Non-Native Aged 25-64, by SES, 1998-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Trends by Gender, Age and Region

Prevalence of support for smoke-free workplaces increased significantly among:

- Men (63.5% in 1998 to 72.2% in 2008)
- Women (77.2% in 1998 to 85.3% in 2008)

Adults aged 30 and older:

- Adults aged 30-54 (73.4% in 1998 to 81.8% in 2008)
- Adults aged 55 and older (66.4% in 1998 to 78.6% in 2008)

Support for smoke-free workplaces increased significantly in some regions:

- Gulf Coast (64.5% in 1998 to 74.6% in 2008)
- Southeast (75.7% in 1998 to 83.2% in 2008)
- Fairbanks North Star (62.4% in 1998 to 83.3% in 2008)

Trends by Smoking Status

Support for smoke-free workplaces increased significantly among:

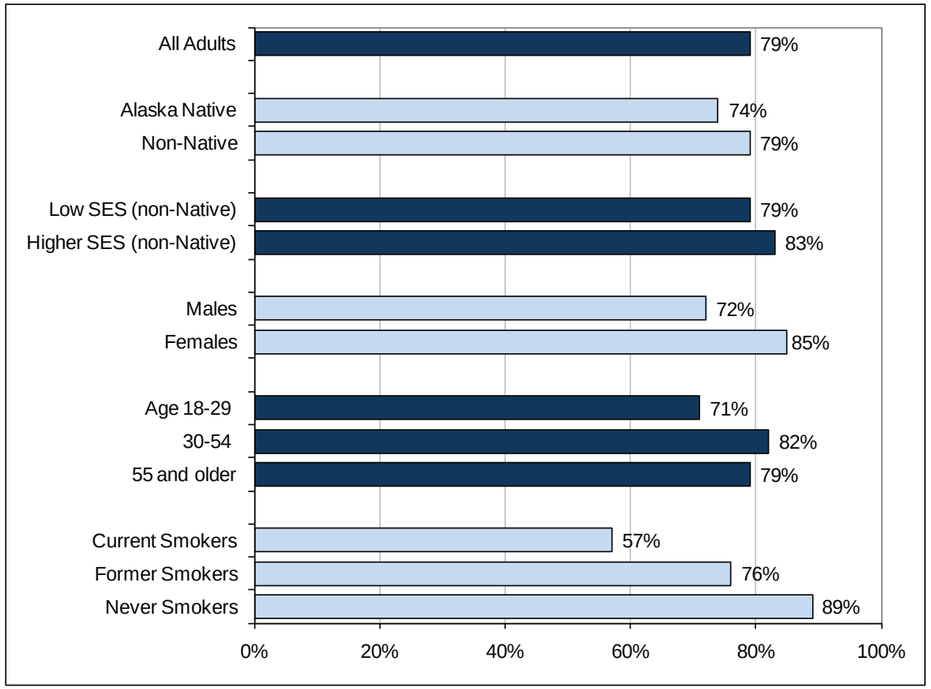
- Former smokers (69.6% in 1998 to 75.8% in 2008)
- Never smokers (79.2% in 1998 to 89.3% in 2008)

Although there was no significant increase in support among smokers, by 2008, over half of smokers (56.8%) agreed that smoking should not be allowed anywhere in indoor work areas.

Who Is Most Likely To Support Smoke-free Work Environments?

In this section, we review disparities in support for smoke-free workplaces. As noted earlier, support for smoke-free work environments has increased among some groups but not others. Although support differs significantly by gender and smoking status, support for smoke-free workplaces was relatively high among all groups (see Figure 93).

Figure 93. Percent of Alaska Adults Who Agree that Smoking Should Not be Allowed Anywhere in Indoor Work Areas, 2008



Source: Alaska Behavioral Risk Factor Surveillance System

In 2008, support for smoke-free workplaces was highest in Southeast Alaska and Fairbanks North Star, and lowest in North/NW/Interior Alaska (see Appendix B, Table 10-2). However, in order to examine differences in support by Alaska Native/non-Native status, employment status, and by whether people work primarily indoors, we combined the three most recent years of survey data to report the information below. Please note that percentages in the tables below may not match those listed above for the most current year.

Support for Smoke-free Workplaces by Alaska Native and non-Native Groups

In the 2006-2008 combined data, support for smoke-free workplaces is highest in Southeast Alaska, and Southwest Alaska, and lowest in Anchorage/Mat-Su, North/NW/Interior, and the Gulf Coast region (see Table 62). Support is significantly lower in the Gulf Coast region than in all other regions except North/NW/Interior Alaska. There are no significant regional differences in support among Alaska Natives. Among non-Native adults, support for smoke-free workplaces is highest in Southwest and Southeast Alaska. Among non-Natives support is significantly lower in the Gulf Coast region than in all other regions except North/NW/Interior Alaska. Support in North/NW/Interior Alaska is significantly lower than in Fairbanks North Star, Southwest and Southeast Alaska, although it does not differ significantly from Anchorage/Mat-Su.

Table 62. Percent of Alaska Adults Who Support Smoke-free Indoor Workplaces, by Region and Race Group, 2006-2008

Geographic Region	Alaska Natives	Non-Natives	All Adults
North/NW/Interior	74.2%	70.5%	72.4%
Southwest	80.1%	86.2%	81.6%
Gulf Coast	66.0%	74.1%	73.4%
Anchorage/Mat-Su	70.5%*	78.5%	77.9%
Fairbanks North Star	71.5%	81.3%	80.7%
Southeast	81.7%	82.5%	82.2%
All Adults	**74.9%**	**78.7%**	**78.1%**

Source: Alaska Behavioral Risk Factor Surveillance System

Note: Asterisk marks those estimates that may lack precision due to a high coefficient of variation.

Table 63 below shows that support for smoke-free workplaces differs significantly by employment status among non-Native Alaska adults. Support is higher among employed or self-employed adults than those who are unemployed or unable to work. Among Alaska Natives, however, support for smoke-free workplaces does not differ by employment status.

Table 63. Percent of Alaska Adults Who Support Smoke-free Indoor Workplaces, by Employment Status and Race Group, 2006-2008

Employment	Alaska Natives	Non-Natives	All Adults
Employed/Self-Employed	76.7%	81.3%	80.7%
Not in Workforce	76.8%	75.5%	75.6%
Unemployed	70.0%	68.4%	69.6%
Unable to Work	70.3%*	52.8%	58.8%
All Adults	**74.9%**	**78.7%**	**78.1%**

Source: Alaska Behavioral Risk Factor Surveillance System

Note: Those not in the workforce include retired persons, students, and homemakers.

Note: Asterisk marks those estimates that may lack precision due to a high coefficient of variation.

Additional information about support for smoke-free workplaces by race group and selected factors is available in Appendix B, Table 10-3.

Support for Smoke-free Indoor Workplaces by Indoor Employment Status

Although the standard question about employment only allows for one answer, we know that many people may work part-time or on a temporary basis, even while being students, homemakers, retirees, or currently out of work or unable to work. For this reason, all survey respondents were asked about whether they were employed primarily indoors or not. While the majority of those employed indoors (77%) had reported that they were employed (by someone else), 11% were self-employed, 4.7% were currently out of work or unable to work, 3.7% were students, 2.5% were homemakers and 1.9% were retired. All of these respondents may have direct experience with the benefits of smoke-free workplace policies or the challenges of working in settings where they are not protected from secondhand smoke exposure.

Another way to review this information is by grouping those who are more likely to be affected by workplace indoor air policies, versus those who are not. Support for smoke-free indoor workplaces is higher among those who are employed indoors, regardless of gender, age, region, or smoking status. Although women are more likely than men to support smoke-free workplace policies, men who work primarily indoors are as likely as women who do not work indoors, to support smoke-free workplace policies (see Table 64 below).

Table 64. Percent of Alaska Adults Who Support Smoke-free Indoor Workplaces, by Gender and Indoor Employment Status, 2006-2008

Gender	Employed Indoors	Not Employed Indoors	All Adults
Men	79.3%	61.9%	71.6%
Women	87.1%	81.7%	85.1%
All Adults	**83.5%**	**69.8%**	**78.1%**

Source: Alaska Behavioral Risk Factor Surveillance System

Although both younger adults (aged 18-29) and older adults (aged 55 and older) are less likely than those aged 30-54 to support smoke-free workplaces, support is high across age groups among adults who are employed primarily indoors (see Table 65). Support is lowest among 18-29 year olds who are not employed indoors.

Table 65. Percent of Alaska Adults Who Support Smoke-free Indoor Workplaces, by Age and Indoor Employment Status, 2006-2008

Age	Employed Indoors	Not Employed Indoors	All Adults
18-29	79.5%	61.4%	73.3%
30-54	84.6%	73.9%	81.0%
55 and older	86.0%	69.7%	76.7%
All Adults	**83.5%**	**69.8%**	**78.1%**

Source: Alaska Behavioral Risk Factor Surveillance System

In each region, support for smoke-free indoor workplaces is higher among those who are employed in primarily indoor settings (see Table 66). Among those employed indoors, those in the Gulf Coast and North/NW/Interior regions are significantly less likely to support smoke-free workplaces than those in Fairbanks North Star, Southwest and Southeast Alaska.

Table 66. Percent of Alaska Adults Who Support Smoke-free Indoor Workplaces, by Region and Indoor Employment Status, 2006-2008

Geographic Region	Employed Indoors	Not Employed Indoors	All Adults
North/NW/Interior	76.0%	67.9%	72.4%
Southwest	86.7%	75.0%	81.6%
Gulf Coast	78.6%	67.0%	73.4%
Anchorage/Mat-Su	83.9%	67.8%	77.9%
Fairbanks North Star	84.6%	74.7%	80.7%
Southeast	86.6%	75.6%	82.2%
All Adults	**83.5%**	**69.8%**	**78.1%**

Source: Alaska Behavioral Risk Factor Surveillance System

Even though smokers as a group are less likely than former or never smokers to support smoke-free indoor workplaces, there are differences based on employment status among smokers. Those smokers who already work primarily indoors are more likely to support clean indoor air policies in workplaces, than smokers who are not employed indoors (see Table 67).

Table 67. Percent of Alaska Adults Who Support Smoke-free Indoor Workplaces, by Smoking Status and Indoor Employment Status, 2006-2008

Smoking Status	Employed Indoors	Not Employed Indoors	All Adults
Current Smoker	66.6%	47.8%	57.8%
Former Smoker	82.5%	70.9%	77.6%
Never Smoker	90.0%	82.7%	87.4%
All Adults	**83.5%**	**69.8%**	**78.1%**

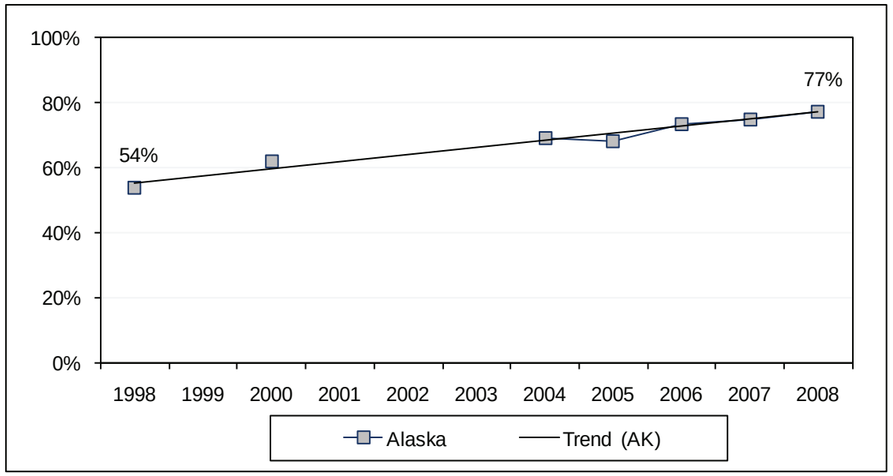
Source: Alaska Behavioral Risk Factor Surveillance System

Trends in Support of Smoke-free Restaurants

Support for clean indoor air in restaurants increased among Alaska adults in all demographic and regional groups included in this report. Support has also increased among smokers as well as non-smokers.

The proportion of Alaska adults who agree that smoking should not be allowed at all in restaurants increased steadily from 53.9% in 1998 to 77.2% in 2008 (see Figure 94). Although there is no directly comparable national-level information, these results are similar to those found in 17 other states between 2003-2007, in the Adult Tobacco Survey.[7]

Figure 94. Percent of Alaska Adults Who Agree that Smoking Should Not be Allowed Anywhere in Restaurants, 1998-2008

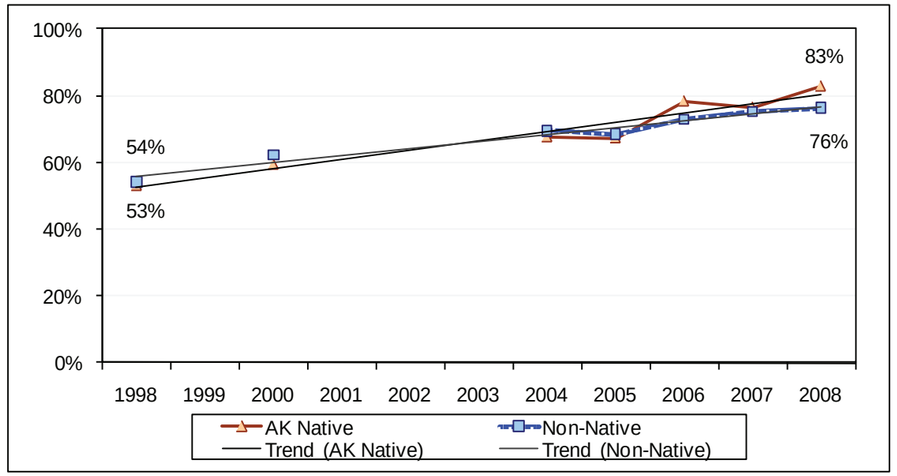


Source: Alaska Behavioral Risk Factor Surveillance System

Trends by Priority Populations

Support of smoke-free restaurants increased among Alaska Natives from 53.1% in 1998 to 82.8% in 2008, and among non-Natives from 54.2% in 1998 to 76.4% in 2008 (see Figure 95).

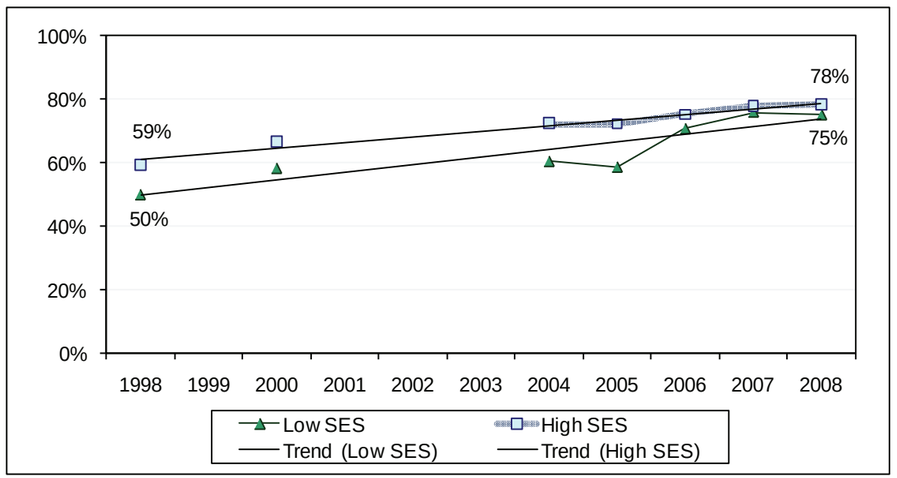
Figure 95. Percent of Adults Who Agree that Smoking Should Not be Allowed Anywhere in Restaurants, Alaska Native and Non-Native, 1998-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Among non-Natives aged 25-64, support for smoke-free restaurants increased among those of low SES (50.0% to 75.1%) as well as those of higher SES (59.4% to 78.3%). See Figure 96 below.

Figure 96. Percent of Alaska Adults Who Agree that Smoking Should Not be Allowed Anywhere in Restaurants, Non-Native Aged 25-64, by SES, 1998-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Trends by Gender, Age and Region

Prevalence of support for smoke-free restaurants increased significantly among men, women and all age groups.

- Men (49.0% in 1998 to 71.9% in 2008)
- Women (59.3% in 1998 to 83.0% in 2008)
- Younger adults aged 18-29 (42.9% in 1998 to 77.2% in 2008)
- Adults aged 30-54 (59.3% in 1998 to 77.6% in 2008)
- Adults aged 55 and older (52.0% in 1998 to 76.4% in 2008)

Support for smoke-free restaurants increased significantly in all regions of Alaska:

- Gulf Coast (49.6% in 1998 to 74.4% in 2008)
- Southwest (56.9% in 1998 to 80.6% in 2008)
- Southeast (54.4% in 1998 to 76.4% in 2008)
- North/NW/Interior (54.0% in 1998 to 84.2% in 2008)
- Fairbanks North Star (51.0% in 1998 to 78.4% in 2008)
- Anchorage/Mat-Su (55.3% in 1998 to 76.6% in 2008)

Trends by Smoking Status

Support for smoke-free restaurants increased significantly among smokers and non-smokers:

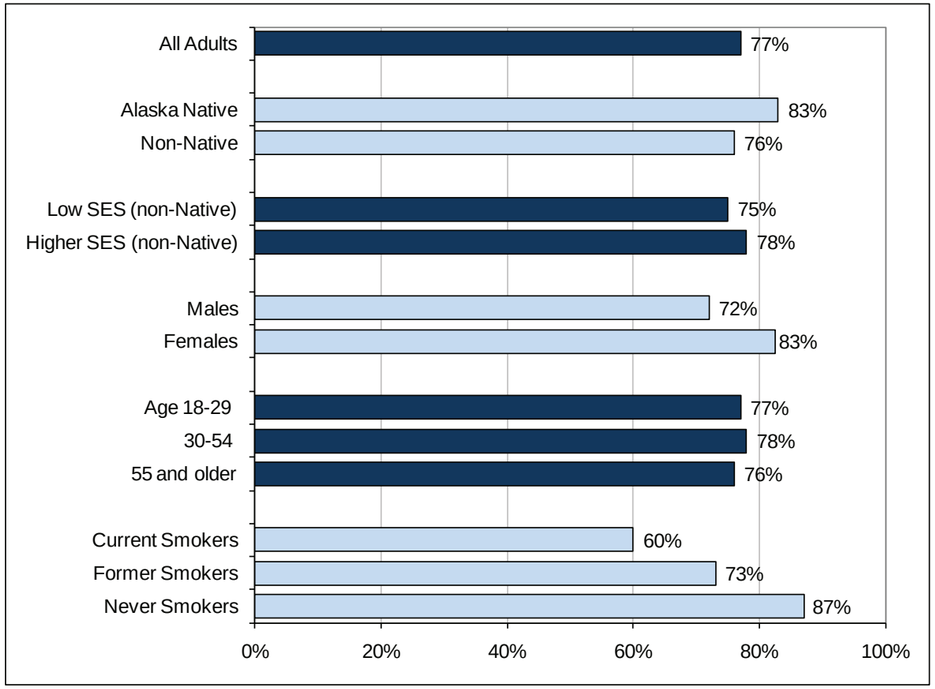
- Current smokers (28.4% in 1998 to 60.1% in 2008)
- Former smokers (52.1% in 1998 to 73.4% in 2008)
- Never smokers (68.4% in 1998 to 86.5% in 2008)

Support for smoke-free restaurants among all Alaskans, including smokers, has increased steadily since 1998.

Who Is Most Likely To Support Smoke-free Restaurants?

In this section, we review disparities in support for smoke-free restaurants. There is strong support for smoke-free restaurants across different groups of Alaska adults, including those who smoke cigarettes themselves. Currently about three in five Alaska smokers (60.1%) agree that smoking should not be allowed in restaurants (see Figure 97). Although we do not have national comparison data, information from other states indicates that support of clean indoor air policies among Alaska smokers is as high or higher than in other states. In states asking a similar question in 2007 (Florida, Illinois, South Carolina, Wyoming), support among smokers ranged from 27.9% in Illinois to 58.8% in Florida.[7]

Figure 97. Percent of Alaska Adults Who Agree that Smoking Should Not be Allowed Anywhere in Restaurants, Alaska, 2008



Source: Alaska Behavioral Risk Factor Surveillance System

In order to examine differences in support among a wider variety of subpopulations, we combined the three most recent years of survey data to report the information below. Please note that totals may appear lower than those listed above for the most current year. The reason for this discrepancy is that support for smoke-free restaurants has continued to increase across most subpopulations between 2006 and 2008.

Support for Smoke-free Restaurants by Alaska Native and non-Native Groups

As indicated in Figure 97 (on prior page), Alaska Natives as a group are slightly more likely than non-Natives to support smoke-free restaurants. In addition, there are relatively few disparities in support among Alaska Natives. In the 2006-2008 combined year data, we found some differences in support between subgroups of Alaska Native and non-Native adults.

Among both Alaska Natives and non-Natives, women are more likely than men to support policies for smoke-free restaurants (see Table 68). However, differences by gender are more pronounced among non-Natives.

Table 68. Percent of Alaska Adults Who Support Smoke-free Restaurants, by Gender and Race Group, 2006-2008

Gender	Alaska Natives	Non-Natives	All Adults
Men	76.2%	69.5%	70.2%
Women	82.5%	80.7%	80.7%
All Adults	**79.2%**	**74.9%**	**75.3%**

Source: Alaska Behavioral Risk Factor Surveillance System

Table 69 below shows that the significant difference in support for smoke-free restaurants between Alaska Natives and non-Natives occurs largely among adults aged 30-54. Support among Alaska Natives does not differ significantly by age.

Table 69. Percent of Alaska Adults Who Support Smoke-free Restaurants, by Age and Race Group, 2006-2008

Age	Alaska Natives	Non-Natives	All Adults
18-29	76.1%	71.5%	72.2%
30-54	83.1%	76.4%	77.1%
55 and older	74.0%	74.8%	74.3%
All Adults	**79.2%**	**74.9%**	**75.3%**

Source: Alaska Behavioral Risk Factor Surveillance System

As noted in Chapter 5, nearly half of all Alaska adults surveyed (46.6%) reported having children also living in the household. Among non-Natives, those with children in the home are significantly more likely to support smoke-free restaurants (see Table 70). Among Alaska Natives, the difference is not quite significant (p=0.06).

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Table 70. Percent of Alaska Adults Who Support Smoke-free Restaurants, by Children in Home and Race Group, 2006-2008

Children in Home	Alaska Natives	Non-Natives	All Adults
Yes	75.2%	72.4%	72.4%
No	81.9%	78.0%	78.5%
All Adults	**79.2%**	**74.9%**	**75.3%**

Source: Alaska Behavioral Risk Factor Surveillance System

Among Alaska Natives, those in the Gulf Coast region are significantly less likely to support smoke-free restaurants than those in the North and Interior, Southwest, Southeast, and Anchorage/Mat-Su regions (see Table 71). Residents in other regions did not significantly differ from those in Anchorage/Mat-Su. Among non-Native adults, support for smoke-free restaurants did not differ significantly by region.

Table 71. Percent of Alaska Adults Who Support Smoke-free Restaurants, by Region and Race Group, 2006-2008

Geographic Region	Alaska Natives	Non-Natives	All Adults
North/NW/Interior	81.9%	76.1%	79.1%
Southwest	84.9%	76.4%	82.2%
Gulf Coast	64.4%	72.6%	72.0%
Anchorage/Mat-Su	79.3%	75.7%	75.4%
Fairbanks North Star	69.4%	73.3%	73.2%
Southeast	76.2%	74.7%	74.9%
All Adults	**79.2%**	**74.9%**	**75.3%**

Source: Alaska Behavioral Risk Factor Surveillance System

Among Alaska Natives, support for smoke-free restaurants does not differ by employment status (see Table 72). Among non-Natives, those who are unable to work were significantly less supportive than people who are employed or self-employed, or not currently in the workforce.

Table 72. Percent of Alaska Adults Who Support Smoke-free Restaurants, by Employment Status and Race Group, 2006-2008

Employment	Alaska Natives	Non-Natives	All Adults
Employed/Self-Employed	79.7%	76.6%	76.6%
Not in Workforce	82.1%	73.7%	74.7%
Unemployed	80.3%	67.8%	71.9%
Unable to Work	67.0%	55.7%	59.6%
All Adults	**79.2%**	**74.9%**	**75.3%**

Source: Alaska Behavioral Risk Factor Surveillance System

Note: Those not in the workforce include retired persons, students, and homemakers.

Although Alaska Native smokers are significantly less supportive of smoke-free restaurants than Alaska Native former or never smokers, they are significantly more likely than non-Native smokers to support such a policy (see Table 73). Alaska Native former smokers are similar to never smokers in their support of smoke-free restaurants, whereas non-Native former smokers are significantly less supportive of smoke-free restaurants than those who have never been smokers.

Table 73. Percent of Alaska Adults Who Support Smoke-free Restaurants, by Smoking Status and Race Group, 2006-2008

Smoking Status	Alaska Natives	Non-Natives	All Adults
Current Smoker	72.5%	49.3%	55.3%
Former Smoker	85.4%	72.1%	73.4%
Never Smoker	82.9%	85.3%	85.0%
All Adults	**79.2%**	**74.9%**	**75.3%**

Source: Alaska Behavioral Risk Factor Surveillance System

Support for Smoke-free Restaurants among Non-Natives (aged 25-64), by Socioeconomic Status (SES)

Although support for smoke-free restaurants does not differ significantly by SES among non-Natives aged 25-64, we examined potential disparities within the Low SES Non-Native priority group and its counterpart the higher SES non-Native group. Note that these are compared to the total for all adults, not just non-Native adults within the 25-64 age range.

Among non-Native adults aged 25-64, women of higher SES are significantly more likely than higher SES men to support policies for smoke-free restaurants (see Table 74). Although a similar pattern is indicated for those of lower SES, support does not differ significantly by gender.

Table 74. Percent of Non-Native Adults (Aged 25-64) Who Support Smoke-free Restaurants, by Gender and SES, Alaska, 2006-2008

Gender	Low SES Non-Natives	Higher SES Non-Natives	All Adults
Men	69.0%	72.3%	70.2%
Women	77.6%	82.8%	80.7%
All Adults	**73.8%**	**77.2%**	**75.3%**

Source: Alaska Behavioral Risk Factor Surveillance System

Among non-Native adults aged 25-64, there are no significant differences in support for smoke-free restaurants by age and SES (see Table 75).

Table 75. Percent of Non-Native Adults (Aged 25-64) Who Support Smoke-free Restaurants, by Age and SES, Alaska, 2006-2008

Age	Low SES Non-Natives	Higher SES Non-Natives	All Adults
25-29	79.1%	75.8%	72.2%
30-54	73.0%	76.9%	77.1%
55 and older	73.5%	78.9%	74.3%
All Adults	**73.8%**	**77.2%**	**75.3%**

Source: Alaska Behavioral Risk Factor Surveillance System

Among non-Native adults aged 25-64, those with children in the home are significantly more likely to support smoke-free restaurants, regardless of SES (see Table 76). In addition, those of lower SES with no children in the home are significantly less likely to support smoke-free restaurants than those of higher SES with no children in the home.

Table 76. Percent of Non-Native Adults (Aged 25-64) Who Support Smoke-free Restaurants, by Children in Home and SES, Alaska, 2006-2008

Children in Home	Low SES Non-Natives	Higher SES Non-Natives	All Adults
Yes	79.7%	79.7%	78.5%
No	64.4%	74.9%	72.4%
All Adults	**73.8%**	**77.2%**	**75.3%**

Source: Alaska Behavioral Risk Factor Surveillance System

Among non-Native adults aged 25-64, support for smoke-free restaurants does not differ by region. Although the number of survey respondents in some regions was too small to report by SES, in Table 77 below, regions are grouped into Rural (North and Interior, and Southwest Alaska) and Non-Rural (Anchorage/Mat-Su, Southeast, Fairbanks, and Gulf Coast).

Table 77. Percent of Non-Native Adults (Aged 25-64) Who Support Smoke-free Restaurants, by Region and SES, Alaska, 2006-2008

Geographic Region	Low SES Non-Natives	Higher SES Non-Natives	All Adults
Rural (North/NW/Interior and Southwest)	76.8%	77.0%	81.9%
Non-Rural	73.6%	77.2%	74.5%
All Adults	**73.8%**	**77.2%**	**75.3%**

Source: Alaska Behavioral Risk Factor Surveillance System

Table 78 shows that support for smoke-free restaurants differs by employment status among non-Natives aged 25-64 of lower SES. Those who are unable to work were significantly less supportive than people who are employed or self-employed, or not currently in the workforce. Among those of higher SES, support for smoke-free restaurants does not differ significantly by employment status. Note that because of the age limit in the SES priority group definition, non-Native adults aged 25-64 not in the workforce probably include far fewer retirees or students.

Table 78. Percent of Non-Native Adults (Aged 25-64) Who Support Smoke-free Restaurants, by Employment Status and SES, Alaska, 2006-2008

Employment	Low SES Non-Natives	Higher SES Non-Natives	All Adults
Employed/Self-Employed	76.7%	77.4%	76.6%
Not in Workforce	82.5%	75.5%	74.7%
Unemployed	65.5%	80.1%	71.9%
Unable to Work	56.5%	67.2%*	59.6%
All Adults	**73.8%**	**77.2%**	**75.3%**

Source: Alaska Behavioral Risk Factor Surveillance System

Note: Those not in the workforce include retired persons, students, and homemakers.

Note: Asterisk marks those estimates that may lack precision due to a high coefficient of variation or small sample size.

Among non-Native adults aged 25-64, support for smoke-free policies differs significantly by smoking status, with smokers least supportive and never smokers most supportive (see Table 79). This pattern was similar across both low and higher SES non-Native groups.

Table 79. Percent of Non-Native Adults (Aged 25-64) Who Support Smoke-free Restaurants, by Smoking Status and SES, Alaska, 2006-2008

Smoking Status	Low SES Non-Natives	Higher SES Non-Natives	All Adults
Current Smoker	52.2%	54.8%	55.3%
Former Smoker	76.8%	73.3%	73.4%
Never Smoker	89.4%	85.5%	85.0%
All Adults	**73.8%**	**77.2%**	**75.3%**

Source: Alaska Behavioral Risk Factor Surveillance System

Who Is Most Likely To Support Smoke-free Bars?

Support for smoke-free bars is measured by whether respondents would go to bars more often, less often, or about the same amount, if smoking were not allowed there. Overall, the proportions have not changed significantly since 2004, when this question was first asked. In 2007 and 2008, questions were added to the Alaska BRFSS to provide additional context regarding whether respondents would go to bars more often, less often, or about the same amount, if smoking were not allowed there. In addition, new questions were added about actual changes in visits to these establishments, for people in communities already covered by comprehensive clean indoor air laws, which include a ban on smoking in bars, restaurants, and all other indoor workplaces. Two of the largest boroughs, Anchorage and Juneau, enacted clean indoor air ordinances in 2007 and 2008 respectively,[c] ensuring that the vast majority of indoor workers—including those in restaurants and bars—no longer have to "passively smoke" at work. By 2008, nearly half of Alaska adults (47.4%) reported being protected by comprehensive clean indoor air laws. In addition, about 8.5% of adults report living in communities without bars. Those who reported that they live in communities with no bars were excluded in the analyses below.

Among adults living in communities with bars not currently covered under smoke-free workplace regulations, less than one in ten adults (7.3%) report that they would be less likely to frequent bars if smoking were not allowed. In contrast, 18.8% say they would be more likely to go to bars, 71.4% would go to bars about the same amount, and 2.4% do not know whether it would be more, less, or the same.

These findings correspond well with results from reports in actual bar visits in communities where smoking is not allowed in bars. In Anchorage, 18% of respondents report going more frequently to bars now that they are smoke-free, and 74% report going as often as they did before. Only 7% report going less frequently to bars now that they are smoke-free. Even among current smokers in Anchorage, 71% report going as often or more often to bars, since the comprehensive smoke-free legislation went into effect.

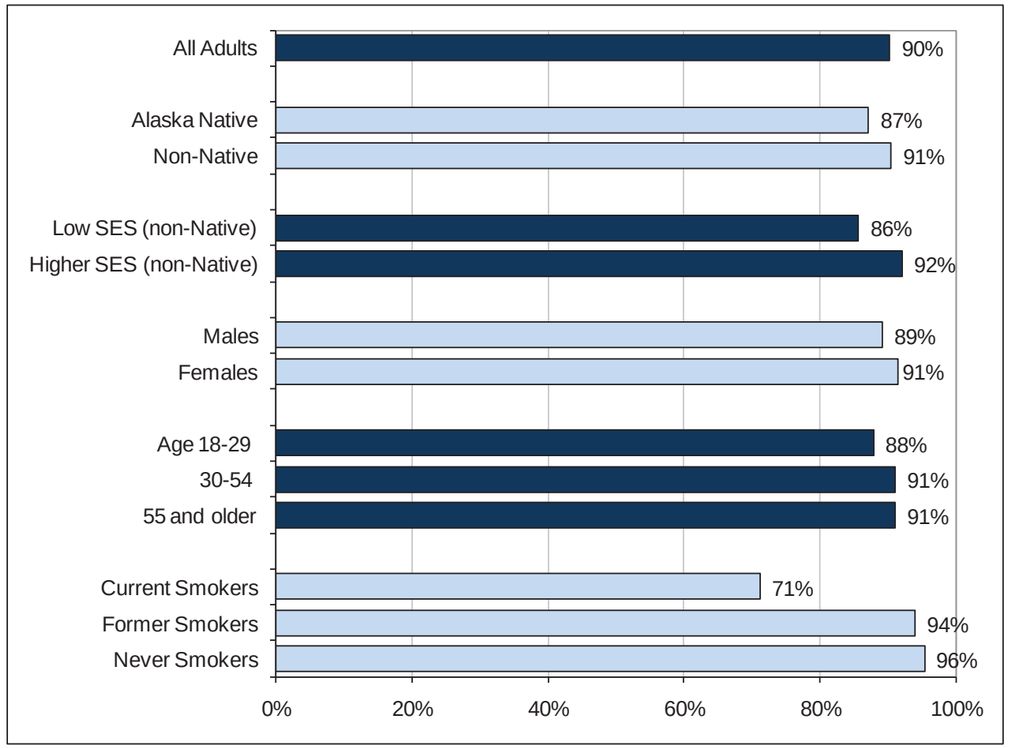
[c] The Anchorage Assembly adopted a municipal clean indoor air ordinance in 2006, which went into effect July 1, 2007. This ordinance also prohibits smoking within 20 feet of any public place or place of employment covered by the ordinance. However, the Anchorage ordinance does exclude private clubs unless an event is open to the public, and allows hotels to designate up to 25% of its rooms as "smoking permitted". (It should be noted that Anchorage also had a prior "Prohibition of Smoking in Public Places" ordinance, passed in June of 2000. This ordinance applied to enclosed workplaces and public places, including restaurants, but excluding some bars and a variety of establishments that provided 'no smoking' areas.) Juneau enacted their clean indoor air ordinance in 2004, including restaurants, but bars were given until January 2, 2008 to comply. The city adopted a revised ordinance on March 10, 2008 that eliminated loopholes for "private clubs" and retail tobacco stores. Smoking is still allowed in outdoor areas of restaurants and bars in Juneau. According to the 2010 Census, Anchorage and Juneau combined represent 45% of the overall population in Alaska.

Support for Smoke-free Bars Among Alaskans who Do Not Yet Have Comprehensive Protection

Support for smoke-free bars is high among all adults living in communities without clean indoor air protection (see Figure 98). While smokers are significantly less likely than former or never smokers to support smoke-free bars, seven in ten (71.2%) agree that they would go as often or more often to bars if smoking were not allowed.

Low SES non-Natives aged 25-64 are also somewhat less likely than their higher SES counterparts to anticipate going as often or more often to bars if smoking were not allowed. However, they do not differ significantly in the proportion who said they would go less (8.8% vs. 6.8%). Those in the low SES priority group are only more likely than those of higher SES to respond that they do not know what they would do (5.5% vs. 1.3%).

Figure 98. Percent of Adults Who Would Visit Bars the Same Amount or More Often, If Smoking Were Not Allowed, Alaska, 2007-2008



Source: Alaska Behavioral Risk Factor Surveillance System

The proportion of those who would go to smoke-free bars as often or more often also does not differ significantly by region. Estimates range from 88.6% in the Gulf Coast region to 91.0% in Fairbanks North Star. (See Table 10-8 in Appendix B for more detail.)

Summary and Next Steps

The vast majority of Alaska adults believe that it is important to establish protections from secondhand smoke exposure. Over 80% of adults across age, gender, income, and race categories believe that people should be protected from smoke from other people's cigarettes. Three-quarters of adult current smokers also believe that it is important to protect people from secondhand smoke exposure.

The general value on the importance of protecting people from secondhand smoke exposure translates into support for specific policy initiatives; nearly 80% of adults agree that smoking should not be allowed in any indoor work areas, including restaurants. Again, support for clean indoor air workplace policies is high across the state and among most population subgroups. Current smokers are less likely to agree that smoking should be prohibited in indoor work areas but nearly 60% of smokers are supportive of workplace smoking restrictions.

Alaskans also support policies that eliminate secondhand smoke exposure in bars. When asked whether they would go to bars more, less, or the same if smoking were prohibited, nine out of ten Alaska adults report that they would go to bars as often or more often. Even seven out of ten current smokers report that they would visit bars as much or more often if smoking were not allowed. These results are very similar to the actual behavior reported in communities that prohibit smoking in bars. In Anchorage, 93% of adults report that they go to bars as often or more often now than they did before the comprehensive workplace ordinance was implemented, including 71% of smokers.

As mentioned previously, eliminating smoking in indoor spaces is the only way to completely protect non-smokers from secondhand smoke exposure.[1] Policies that provide clean indoor air protection need to cover all workplaces, including bars and restaurants. While there is room for further education on the importance of eliminating secondhand smoke in indoor areas a substantial majority of Alaskans, even those who smoke, support clean indoor air policies.

CHAPTER 10 - References

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Part VII - Secondhand Smoke

CHAPTER 11 - Perceptions and Knowledge About Health Risks of Secondhand Smoke Exposure

Introduction

As noted in the preceding chapters, there is no risk-free level of secondhand smoke (SHS) exposure. SHS causes premature death and disease in children and in adults who do not smoke. Even brief exposure can be dangerous.

Non-smokers who are exposed to secondhand smoke at home or work increase their heart disease risk by 25%–30% and their lung cancer risk by 20%–30%. Decades of studies provide evidence that secondhand smoke exposure causes respiratory diseases and slows lung growth in children. Exposure to tobacco smoke also puts children at increased risk for more severe asthma, acute respiratory infections, and ear problems. Almost 60% of U.S. children aged 3–11 years—or almost 22 million children—are exposed to secondhand smoke.[1] In addition, while smoking by women during pregnancy increases the risk for sudden infant death syndrome (SIDS),[2] infants who are exposed to secondhand smoke after birth are also at greater risk for SIDS. Chemicals in secondhand smoke appear to affect the brain in ways that interfere with its regulation of infants' breathing.[1]

Information in this chapter reflects perceptions of risk from secondhand smoke exposure. One general question asks people how harmful they think SHS exposure is. Four additional questions ask about the causal relationship between SHS exposure and specific diseases—lung cancer, heart disease, respiratory problems in children, and sudden infant death syndrome (SIDS). We interpret these data as representing knowledge about specific health risks of secondhand smoke exposure. However, answers may reflect not only whether a respondent has ever heard or remembered this knowledge, but also whether the respondent is currently willing to accept these scientific findings as valid.

Data Sources

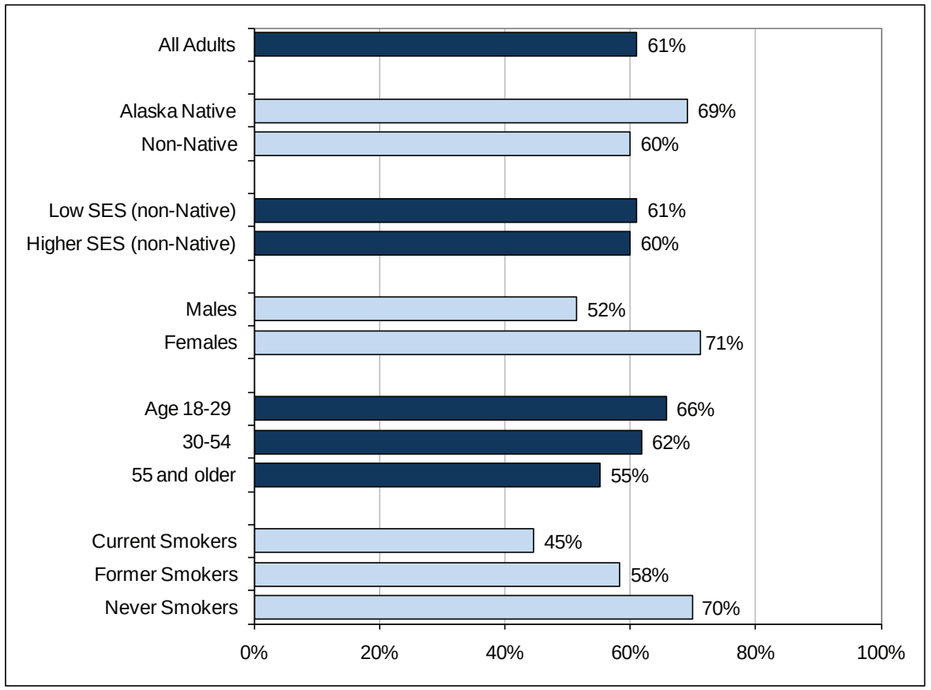
Data on secondhand smoke exposure, knowledge, policies and attitudes come primarily from the Behavioral Risk Factor Surveillance System (BRFSS). Questions about risk for specific diseases or health conditions were asked in 2004, 2007 and 2008. The question about perception of harm from secondhand smoke exposure has been included in the survey in 2004, 2006, 2007, and 2008.

General Perceptions of Harm Caused by Secondhand Smoke Exposure

In 2004, 2006, 2007 and 2008, the Alaska BRFSS has included a question about risk perception, asking respondents if they think that breathing smoke from other people's cigarettes is very harmful, somewhat harmful, not very harmful or not harmful at all to one's health. The proportion of people responding in each of these categories has not changed substantively since 2004; about 61% of Alaska adults think that it is very harmful, about 29% answer that it is somewhat harmful, about 5% think it is not very harmful, less than 2% report thinking it is not harmful at all, and about 3% say they do not know.

In Figure 99 below, data are presented from 2006-2008 combined. Although perception of harm from secondhand smoke (SHS) exposure differs by Native/non-Native status, gender and age, in all cases more than 50% think that it is very harmful. Women are more likely than men to think SHS exposure is very harmful, a pattern found in other secondhand smoke indicators as well. Interestingly, younger adults aged 18-29 (and those aged 30-54) are more likely than older adults aged 55 and older to think SHS exposure is very harmful.

Figure 99. Percent of Alaska Adults Who Think that Breathing Smoke from Other People's Cigarettes is Very Harmful, Alaska, 2006-2008



Source: Alaska Behavioral Risk Factor Surveillance System

Perceptions of harm from SHS are significantly different by each smoking status level. Current smokers are least likely to perceive SHS as very harmful (44.6%) and most likely to respond that it is not very harmful, not harmful at all, or that they do not know if it is harmful (17.9%, vs. 10.7% among former smokers and 5.3% among never smokers).

Overall, perception of harm from SHS exposure was significantly higher in Southwest Alaska than in all other regions except North/NW/Interior Alaska (see Table 80). There are no significant differences in perception of harm between Alaska Natives and non-Natives in Southwest, Gulf Coast, Anchorage and Fairbanks. In North/NW/Interior and Southeast Alaska, however, Alaska Natives are significantly more likely than non-Natives to believe that breathing smoke from other people's cigarettes is very harmful.

Table 80. Percent of Alaska Adults Who Think that Breathing Smoke from Other People's Cigarettes is Very Harmful, by Region, 2006-2008

Geographic Region	Alaska Natives	Non-Natives	All Adults
North/NW/Interior	72.8%	52.9%	62.9%
Southwest	72.2%	65.6%	70.0%
Gulf Coast	57.9%	54.9%	55.1%
Anchorage/Mat-Su	64.6%	61.2%	62.6%
Fairbanks North Star	65.5%	59.8%	60.2%
Southeast	74.7%	60.4%	62.6%
All Adults	**69.1%**	**60.0%**	**61.1%**

Source: Alaska Behavioral Risk Factor Surveillance System

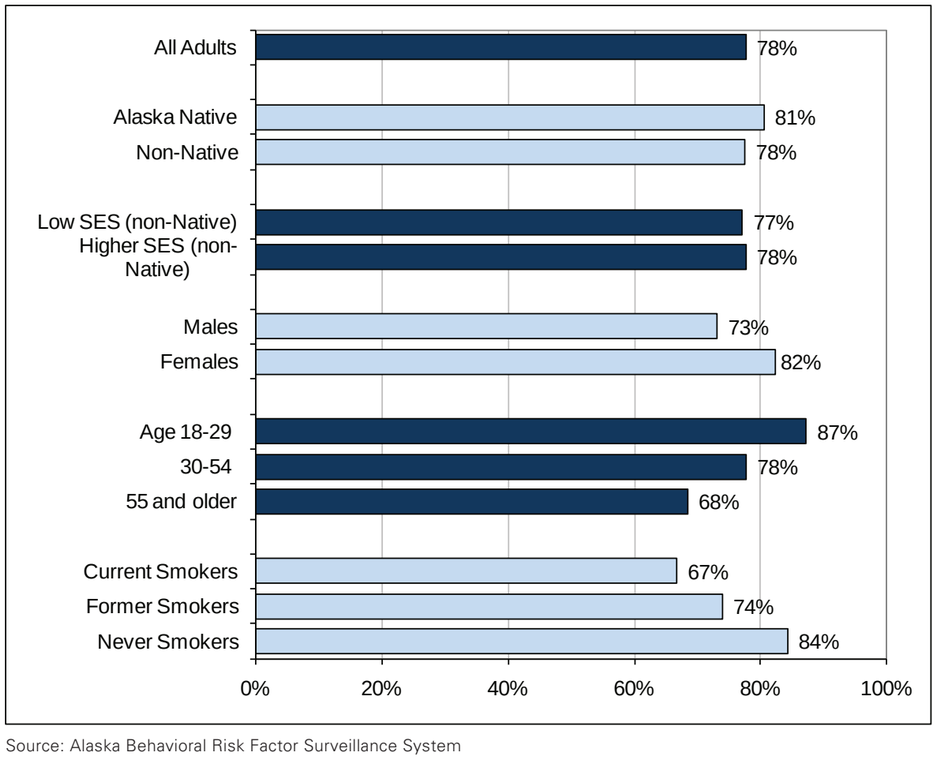
Perceptions about Secondhand Smoke Exposure and Lung Cancer

In 2004, 2007 and 2008, the Alaska BRFSS included this question: *"Would you say that breathing smoke from other people's cigarettes causes lung cancer in adults?"* Data presented below represent information from 2007-2008 combined.

Overall, 77.6% of adults agree that secondhand smoke exposure causes lung cancer in adults, 7.9% disagree, and 14.4% report that they do not know (see Appendix B, Table 11-3 for more information). Knowledge about the causal relationship between SHS and lung cancer was high across all groups (see Figure 100), although it was lowest among smokers (66.7%) and adults aged 55 and older (68.4%). Females were more likely than males to report knowledge that SHS exposure causes lung cancer. Knowledge decreased significantly by age. Alaska Natives were significantly more likely than non-Natives to know that SHS exposure causes lung cancer.

Reported knowledge that SHS exposure causes lung cancer differs significantly by each smoking status level. As noted, current smokers are least likely to report yes to this question (66.7%) and most likely to report that they do not know (19.7%) whether SHS exposure causes lung cancer.

Figure 100. Percent of Alaska Adults Who Think that Breathing Smoke from Other People's Cigarettes Causes Lung Cancer in Adults, Alaska, 2007–2008



Source: Alaska Behavioral Risk Factor Surveillance System

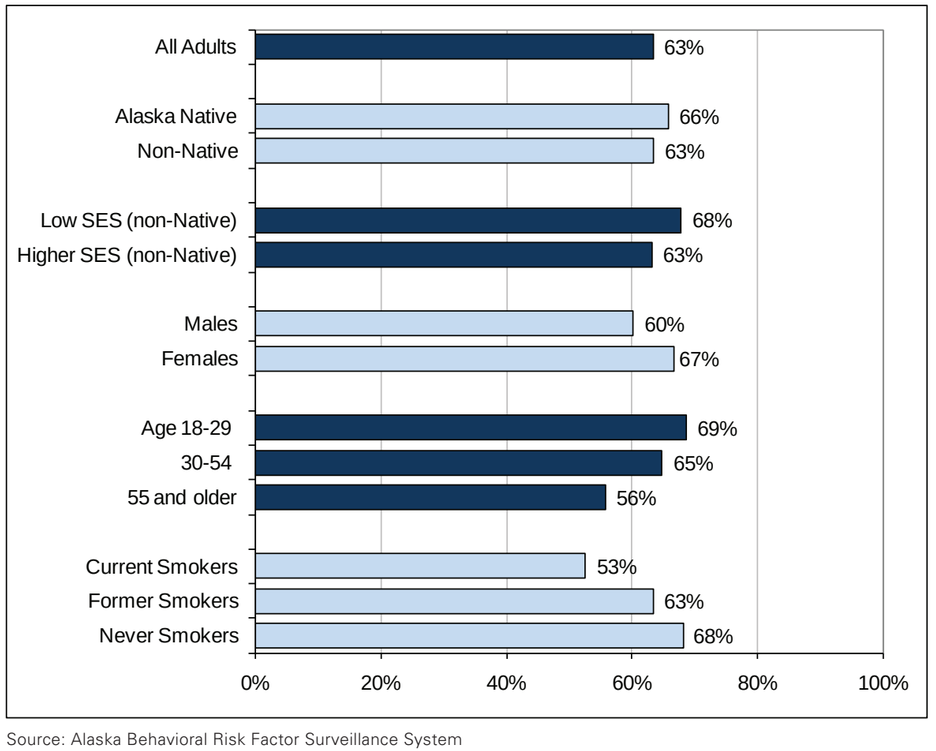
Perceptions about Secondhand Smoke Exposure and Heart Disease

In 2004, 2007 and 2008, the Alaska BRFSS included this question: *"Would you say that breathing smoke from other people's cigarettes causes heart disease in adults?"* Data presented below represent information from 2007-2008 combined.

Overall, 63.3% of adults know that secondhand smoke exposure causes heart disease in adults, 10.6% disagree, and 26.1% report that they do not know. Knowledge about the causal link between SHS and heart disease was not as high as knowledge about lung cancer, but disparities in knowledge were similar (see Figure 101 below). Females were more likely than males to report knowledge that SHS exposure causes heart disease, and knowledge decreased significantly by age.

Reported knowledge that SHS exposure causes heart disease differs significantly by each smoking status level. As noted, current smokers are least likely to know (52.6%) and most likely to disagree that they would say SHS exposure causes heart disease (19.1% vs. 11.9% among former smokers and 6.4% among never smokers). The proportion reporting that they did not know whether or not SHS exposure causes heart disease did not differ significantly by smoking status level (24.8%-28.3%).

Figure 101. Percent of Alaska Adults Who Agree that Breathing Smoke from Other People's Cigarettes Causes Heart Disease in Adults, Alaska, 2007–2008



Source: Alaska Behavioral Risk Factor Surveillance System

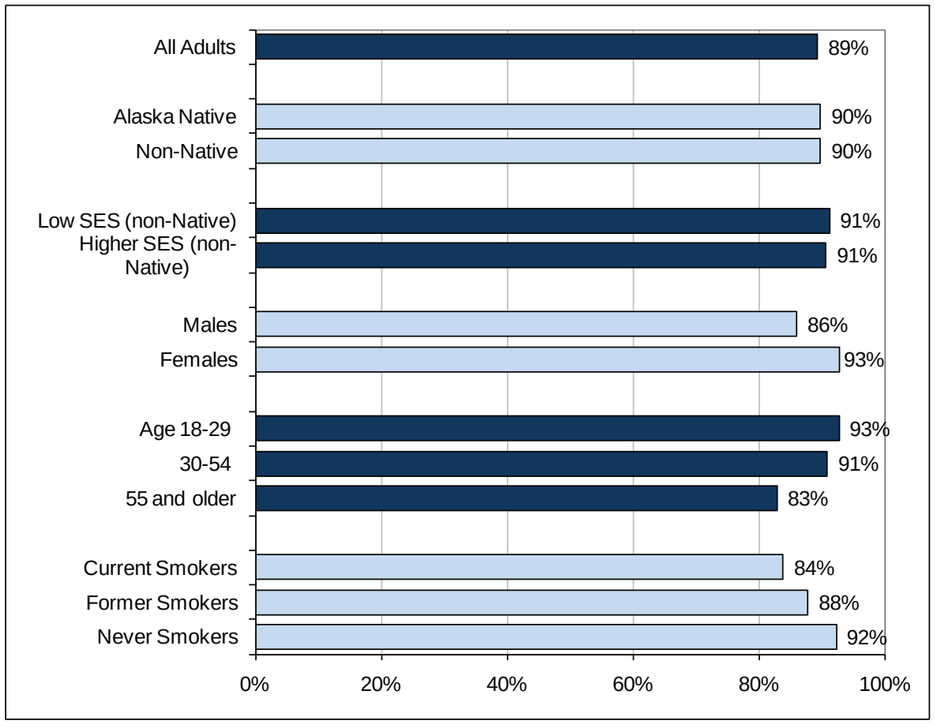
Perceptions about Secondhand Smoke Exposure and Respiratory Problems in Children

In 2004, 2007 and 2008, the Alaska BRFSS included this question: *"Would you say that breathing smoke from other people's cigarettes causes respiratory problems in children?"* Data presented below represent information from 2007-2008 combined.

Overall, 89.2% of adults know that secondhand smoke exposure causes respiratory problems in children (see Figure 102 below). Only 3.1% of Alaska adults disagree with this statement, and 7.7% report that they do not know. Knowledge about the causal relationship between SHS and respiratory problems in children is significantly higher among women compared to men, and adults under age 54, compared to those aged 55 and older.

Those who have never been smokers are significantly more likely than former or current smokers to report knowledge of the causal link between SHS and respiratory problems in children. However, even among smokers, more than four in five (83.8%) agree with the statement, while 10.8% say they do not know, and only 5.3% disagree.

Figure 102. Percent of Alaska Adults Who Think that Breathing Smoke from Other People's Cigarettes Causes Respiratory Problems in Children, Alaska, 2007–2008



Source: Alaska Behavioral Risk Factor Surveillance System

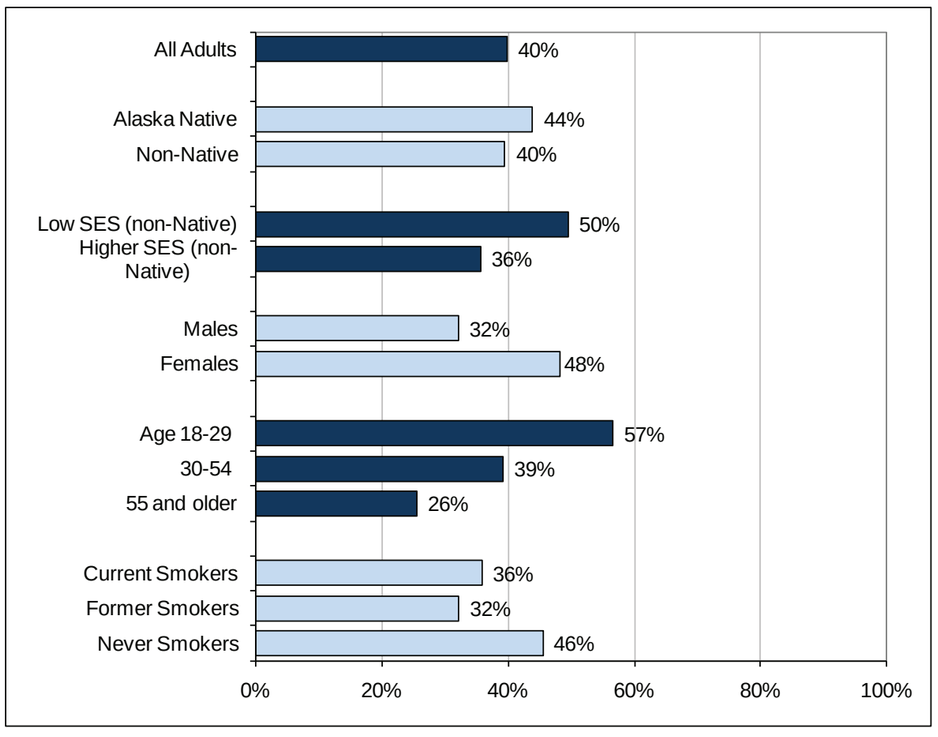
Perceptions about Secondhand Smoke Exposure and Sudden Infant Death Syndrome (SIDS)

In 2004, 2007 and 2008, the Alaska BRFSS included this question: *"Would you say that breathing smoke from other people's cigarettes causes sudden infant death syndrome (SIDS)?"* Data presented below represent information from 2007-2008 combined.

Overall, knowledge about SIDS and SHS is lower than knowledge about other health issues related to SHS (see Figure 103). Only two in five adults (39.8%) know that SHS exposure causes SIDS. Nearly half of adults report that they do not know (47.0%), and 13.2% disagree with the statement (13.2%). Knowledge about the causal relationship between SHS and SIDS is significantly higher among women compared to men, and those in the non-Native low SES priority group aged 25-64 (compared to their higher SES counterparts). Knowledge decreases by age.

Those who have never been smokers are significantly more likely than former or current smokers to report knowledge of the causal link between SHS and SIDS. Among smokers, less than two in five (35.8%) agree with the statement, while (44.4% say they do not know, and one in five (19.8%) disagree.

Figure 103. Percent of Alaska Adults Who Think that Breathing Smoke from Other People's Cigarettes Causes SIDS, Alaska, 2007–2008



Source: Alaska Behavioral Risk Factor Surveillance System

Perceptions about the Relationship between Secondhand Smoke Exposure and Specific Health Risks, by Region

Regionally, there are no significant differences in knowledge that SHS exposure causes lung cancer and heart disease in adults and respiratory problems in children (see Table 81).

Table 81. Percent of Alaska Adults by Region, Who Think that Breathing Smoke from Other People's Cigarettes Causes Specific Diseases, 2007-2008

Geographic Region	Lung cancer	Heart disease	Respiratory problems in children	SIDS
North/NW/Interior	79.2%	59.5%	86.0%	37.1%
Southwest	76.4%	65.9%	90.4%	44.2%
Gulf Coast	76.3%	61.8%	87.5%	35.0%
Anchorage/Mat-Su	77.2%	64.0%	89.4%	41.4%
Fairbanks North Star	79.2%	62.2%	90.2%	42.9%
Southeast	79.2%	63.8%	89.8%	33.1%
All Adults	**77.6%**	**63.3%**	**89.2%**	**39.8%**

Source: Alaska Behavioral Risk Factor Surveillance System

Alaska adults in all regions are more likely to be aware of respiratory health risks to children from SHS exposure, than the association of secondhand smoke exposure to the risk of heart disease and lung cancer. As noted earlier, knowledge or understanding about the relationship between SHS exposure and SIDS is low. Adults in Southeast Alaska are less likely to know about this risk than those in Anchorage/Mat-Su, Fairbanks North Star, or Southwest Alaska.

Perceptions about the Relationship between Secondhand Smoke Exposure and Specific Health Risks, among Adults Living with Children in the Household

Adults with children in their household are significantly more likely than those not living with children to report knowledge that SHS exposure is a cause of lung cancer and heart disease in adults, and respiratory problems and SIDS in children and infants (see Table 82).

Table 82. Percent of Alaska Adults Who Think that Breathing Smoke from Other People's Cigarettes Causes Specific Diseases, among Adults Living with Children in the Household, 2007-2008

Children in Household	Lung cancer	Heart disease	Respiratory problems in children	SIDS
Yes	81.2%	66.3%	92.8%	47.3%
No	74.4%	60.7%	86.0%	33.2%
All Adults	**77.6%**	**63.3%**	**89.2%%**	**39.8%**

Source: Alaska Behavioral Risk Factor Surveillance System

However, even among those living with children in their households, knowledge about the relationship between SHS exposure and SIDS is low; less than half of adults living with children report knowing that SHS exposure is a cause of SIDS. About 2 in 5 adults with children in the household (41.8%) said they did not know or were not sure whether SHS exposure could cause SIDS (see Appendix B, Table 11-7).

Summary and Next Steps

As mentioned previously, secondhand smoke exposure contributes to a wide variety of very severe health outcomes, including cancer, heart disease, respiratory illnesses in adults and children, and even sudden infant death syndrome. Even short periods of exposure can be extremely harmful.

Over time Alaska has included a variety of questions on state surveys to gauge public perceptions of the harms of secondhand smoke. The majority of Alaska adults are aware that secondhand smoke is harmful; 60% report that breathing secondhand smoke from someone else's cigarettes is very harmful, an additional 29% feel that it is somewhat harmful. Women, young adults, and Alaska Native adults are the most likely to report that they believe that secondhand smoke is very harmful, though over half of adults in other age, gender, and income groups also report that SHS is very harmful.

Lung cancer and respiratory problems are widely recognized as a consequence of secondhand smoke exposure, with almost eight in ten Alaska adults reporting that they think that breathing smoke from someone else's cigarette causes lung cancer. Nearly nine out of ten adults report that they believe that secondhand smoke causes respiratory problems in children.

Alaska adults appear to be less familiar with the link between secondhand smoke exposure and heart disease, though 63% of adults say that smoking causes heart disease. Women, younger adults, and non-smokers were more likely to agree that secondhand smoke causes heart disease, a pattern that was similar to that found for the relationship of lung cancer to secondhand smoke.

Of most concern is the fact that so few Alaska adults know about the link between secondhand smoke and sudden infant death syndrome (SIDS). Only two in five adults report that they think that secondhand smoke exposure causes SIDS, and even among those living with children in their households, knowledge about the relationship between SHS exposure and SIDS was low (47.3%). Nearly as many adults with children in the household (41.8%) said they did not know whether SHS exposure could cause SIDS. While it is not clear why knowledge about this issue is so low, one possibility is lack of understanding about SIDS itself. SIDS is the sudden, unexplained, unexpected death of an infant in the first year of life, and is the leading cause of death in otherwise healthy infants.[3]

While smoke exposure is not the only cause of SIDS, research definitively shows that infants whose mothers smoked during pregnancy or who are exposed to secondhand smoke after birth are also at greater risk for SIDS.[1] The landmark 2006 document, *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General,* notes that chemicals in secondhand smoke appear to affect the brain in ways that interfere with its regulation of infants' breathing. Infants who die from SIDS have higher concentrations of nicotine in their lungs and higher levels of cotinine (a biological marker for secondhand smoke exposure) than infants who die from other causes. Ensuring that information about secondhand smoke exposure and SIDS is provided as part of counseling to new and prospective parents may help build support for parental quit attempts as well as home smoking bans.

CHAPTER 11 - References

1. U.S. Department of Health and Human Services. The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006. http://www.surgeongeneral.gov/library/secondhandsmoke/report/. Accessed March 2012.

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Part VIII - Conclusion and Next Steps

Research has shown that a comprehensive, population-based, multi-channel approach has worked well to reduce tobacco use on a population level. The implementation of policy-based efforts such as price increases and clean indoor air policies, combined with tobacco counter-marketing, linkages to cessation services, and school and community policy and education initiatives are effective in reducing tobacco use rates. Using these strategies, many states, including Alaska, have achieved reductions in tobacco use among adults and youth.

In Alaska, smoking has declined among both adults and youth. Cigarette consumption, as measured by sales, has decreased. Nearly half of the state's population is covered by a clean indoor air policy, and support for clean indoor air environments is high. Tobacco prevention and control efforts have expanded and become progressively more comprehensive over the past 15 to 20 years. Alaska now implements strategies in all of the areas that CDC recommends as part of a comprehensive effort.

Although great progress has been made in reducing tobacco use in Alaska, more work is needed. Smoking prevalence in Alaska is still slightly higher than the national rate, and smokeless use rates among Alaska adults and youth also exceed the national average. Alaska has numerous disparities in tobacco use, with Alaska Native adults, adults of lower socioeconomic status, and young adults aged 18 to 29 all using tobacco at rates that are significantly higher than the state average overall. Although many Alaska adults and youth are protected from secondhand smoke at work or in public places, nearly one in four Alaska adults still report being exposed to secondhand smoke at work. Over one-third of high school students also report that they have been in the same room with someone who was smoking sometime in the past 7 days. Sustained program efforts are needed to continue the reductions in tobacco use and to reduce the disproportionate health and economic burden that tobacco use has on many subpopulations.

Alaska Native adults and youth are priority populations for tobacco prevention and control efforts. Great strides have been made in reducing smoking among Alaska Native high school students; smoking rates are now nearly 60% lower than they were in 1995. Smoking prevalence has not decreased among Alaska Native adults, however, and Alaska Native adults and youth use smokeless tobacco at rates that exceed the state average. Smokeless tobacco use among Alaska Native girls and women is especially concerning; Alaska Native girls and women use SLT at rates that are comparable to those among non-Native boys and men. Patterns of smokeless tobacco use are complex, with Iq'mik use contributing to high rates of use in Southwest of Alaska, particularly among women.

Despite high rates of tobacco use, Alaska Native adults and youth report many positive behaviors and attitudes that could lead to eventual reductions in tobacco use. Almost two thirds of Alaska Native adult smokers and smokeless users would like to quit using tobacco and Alaska Native smokers are as likely to have made a quit attempt as non-Native smokers. Alaska Native adults are aware of the health consequences of secondhand smoke and are at least as likely to implement home smoking bans as non-Native adults. Alaska Native adults are also highly supportive of workplace and public policies that prohibit smoking in indoor areas.

The TPCP and its partners are implementing numerous initiatives in an effort to better understand and address the disparity in Alaska Native tobacco use rates. The TPCP has a staff position that focuses on addressing disparities in tobacco use. The TPCP Disparities Coordinator facilitates the Leadership for Eliminating Alaska Disparities (LEAD) workgroup, a statewide workgroup tasked with developing and implementing strategies to reduce tobacco-related disparities. The LEAD group has recently updated its strategic plan and a key initiative for the next year focuses on engaging Alaska Native leaders in tobacco prevention and control efforts.

In addition to the work conducted by LEAD, the TPCP is engaged in a variety of projects designed to ensure that tobacco prevention and control efforts within the Alaska Native population are appropriate and effective. In 2008, the TPCP worked with a group of statewide stakeholders and the state's Quit Line vendor to develop a cultural competency training module for quit coaches. Alaskans from around the state were asked to provide input on strategies that the program could use to increase the value and utility of the Quit Line as a cessation resource.

The qualitative information collected to inform the Alaska Tobacco Quit Line training development will be complemented by a current initiative examining the social norms around tobacco use within Alaska Native communities, particularly rural communities. TPCP staff and contractors are trying to better understand the factors that contribute to disparate tobacco use rates within the Alaska Native population through a comprehensive project that examines the reach of current tobacco prevention and control interventions. The project also includes a qualitative component designed to further TPCP understanding of the social and cultural factors surrounding tobacco use in Alaska Native communities and to inform future program work. In addition, TPCP staff and contractors can build on the high interest in quitting and high percentage of quit attempts and include a focus on supporting successful quit attempts. Because smokers often need to make multiple quit attempts before they permanently stop smoking, it will be important to ensure that those who are trying to quit tobacco and those who are providing assistance understand that relapse is a normal part of the quitting process.

Alaska adults of lower socioeconomic status are another high priority population for tobacco prevention and control efforts. Lower SES adults smoke at rates that exceed the state average and rates among adults of higher SES. Women in the low SES group are as likely to smoke as men, a pattern not seen in other population subgroups. While smokeless tobacco use rates among low SES smokers are similar to the state average, lower SES adults are more likely to be exposed to secondhand smoke at home and less likely to have a home smoking ban. Lower SES adults are also less likely to support indoor workplace bans.

Like Alaska Native adults, however, many positive patterns emerge from the data on lower SES adults. A majority of low SES smokers report that they would like to quit smoking and quit attempts have increased within the low SES population over time. As is the case for Alaska Native smokers who try to quit but have not yet been successful, program efforts with low SES smokers may need to focus on normalizing relapse and encouraging repeated quit attempts. Low SES smokers are as likely to see a health care provider as higher SES adults and are advised more frequently to quit than higher SES smokers.

The LEAD workgroup has also identified low SES adults as a priority population and has designed strategies for the upcoming year that focus on reducing tobacco use in the low SES population. These strategies include working with low-income assistance programs, Community Health Centers and other health professionals who serve low-income patients to increase messaging about quitting tobacco and resources available to help people to quit, including instituting the "Ask, Advise, Refer" clinical intervention process for tobacco use at every health visit. Changes to regulations could also ensure that tobacco cessation treatment is a reimbursable service for substance abuse and behavioral health providers as well as other health systems with large groups of low-income patients. Strategies to protect people from exposure to secondhand smoke—such as working with low income housing and transitional housing providers to establish and enforce smoke-free housing policies—will also help to create social and physical environments that make it easier for low-income smokers to quit.

As mentioned previously, young adults are emerging as another priority population for tobacco prevention and control efforts. Young adults smoke at rates that are above the state average and express less interest in quitting smoking than older adults. Young adults are also more likely to use multiple forms of tobacco than adults in other age groups and may be susceptible to the introduction of new tobacco products. Young adults are also more likely than adults in other age groups to be exposed to secondhand smoke at work and exhibit less support for smoke-free workplace policies than adults in other age groups. Young adults are as likely as adults in other age groups to report having a home smoking ban, however, and home secondhand smoke exposure also similar to adults in other age groups.

Across many different groups of Alaskans, there is strong support for clean indoor air and preventing youth from starting to use tobacco, and recognition that tobacco use is harmful to the health of tobacco users and those around them. Nearly 90% of Alaska adults report that smoking was not allowed anywhere in their homes in 2008. Nearly half of Alaska adults now live in communities that have enacted comprehensive clean indoor air ordinances.

However, the tobacco industry continues to aggressively market cigarettes as well as newer smokeless tobacco products. Although precise data on how much the tobacco industry spends on marketing in each state is not publicly available, estimates indicate that the top 5 manufacturers spent about $19 million in Alaska in 2008,[1] far outstripping the state's public health expenditures for tobacco prevention and control.

Recent actions at the federal level provide additional support in the fight between tobacco or health. On June 22, 2009, the U.S. enacted the Family Smoking Prevention and Tobacco Control Act. This historic legislation grants authority to the U.S. Food and Drug Administration (FDA) to regulate advertising and promotion of tobacco products. The FDA can now require stronger health warnings and labeling, require changes in tobacco products such as reduction of nicotine and removal of some other harmful ingredients, and otherwise regulate the content of tobacco products. However, action at the state and local levels is equally important. States and some local government entities have the ability to assess taxes on tobacco products, restrict smoking in public places, restrict distribution of tobacco samples and selling of single cigarettes, and change the minimum age for tobacco use.

We know how to end the epidemic of tobacco use and the staggering toll it takes on our families and communities. Using proven tobacco policies and strategies, we have the ability to dramatically reduce the health and economic burden of tobacco use. When combined, these interventions—increasing the price of tobacco products, implementing smoke-free policies, reducing tobacco advertising and promotion, providing counter-marketing, controlling access to tobacco products and promoting and assisting tobacco users to quit—can significantly reduce tobacco use. It is essential that Alaskans continue to support a comprehensive and sustained approach to tobacco prevention and control, in order to ensure that tobacco use continues to decline among all groups of Alaskans.

Part VIII - References

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Part IX - Appendices

A. Trend Tables

Trend tables present the denominator N (number of people who responded to the question), point estimates, margins of error around the point prevalence for each year, and the p-values from linear regression test for trend. Where $p<0.05$, there is a significant change in prevalence for the time period presented in the table. Trend information is included for the overall Alaska population (e.g., adults, or youth), subpopulations, and demographic groups.

For BRFSS data, these groups include priority populations (Alaska Natives and Low SES Non-Natives aged 25-64) and their counterparts, by gender, age group, and region. Trend data is presented for 1996-2008 when data are available for all years. However, all trend reporting for region starts with 1998, when sample sizes increased and the sampling strategy changed to include 5 regions instead of 4. For trends related to SLT use and secondhand smoke, information is also reported by smoking status.

For YRBS data, these groups include gender, race (Alaska Native, White, and Other Race Groups), and grade.

For PRAMS data, these groups include Alaska Native and Non-Native.

Tables for Chapter 1: Adult Cigarette Smoking and Quitting Smoking

1-A Percent of Alaska Adults Who Smoke, by Year 1996-2008

		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
All Adults		28%	27%	26%	27%	25%	26%	29%	26%	24%	25%	24%	22%	22%	<0.001
	±	3.4%	3.3%	2.6%	3.0%	2.7%	2.4%	2.7%	2.4%	1.7%	1.7%	1.9%	1.8%	1.9%	
		1,530	1,543	1,986	2,045	2,072	2,866	2,690	2,657	5,094	5,722	4,219	5,068	4,915	decrease
Male		31%	27%	28%	25%	27%	26%	32%	30%	27%	29%	25%	24%	24%	0.03
	±	5.2%	4.9%	3.8%	3.5%	4.1%	3.6%	4.1%	3.6%	2.6%	2.6%	2.9%	2.9%	2.9%	
		712	716	922	999	984	1,356	1,185	1,228	2,317	2,665	1,882	2,305	2,272	decrease
Female		24%	26%	24%	29%	23%	26%	27%	22%	21%	21%	22%	19%	20%	<0.001
	±	4.2%	4.3%	3.4%	4.9%	3.6%	3.2%	3.6%	3.0%	2.1%	2.0%	2.5%	2.2%	2.3%	
		818	827	1,064	1,046	1,088	1,510	1,505	1,429	2,777	3,057	2,337	2,763	2,643	decrease
AK Native		47%	41%	40%	42%	43%	43%	44%	45%	44%	41%	44%	39%	43%	0.66
	±	8.5%	7.7%	6.3%	7.1%	7.4%	6.1%	6.9%	6.3%	4.6%	4.1%	5.3%	5.4%	4.8%	
		317	317	361	417	389	572	544	516	1,004	1,094	788	985	938	
Non-Native		25%	24%	24%	24%	22%	23%	27%	23%	21%	22%	20%	19%	19%	<0.001
	±	3.6%	3.6%	2.8%	3.3%	2.9%	2.6%	3.0%	2.5%	1.8%	1.8%	2.0%	1.9%	2.0%	
		1,203	1,207	1,604	1,599	1,628	2,213	2,119	2,127	4,046	4,565	3,376	4,030	3,919	decrease
Low SES non-Native		39%	37%	34%	32%	28%	35%	44%	40%	35%	39%	38%	33%	35%	0.82
(age 25-64)	±	9.8%	9.7%	7.5%	6.8%	7.5%	7.0%	7.8%	7.4%	5.0%	5.1%	6.6%	5.7%	6.0%	
		197	201	287	287	259	353	364	368	708	792	469	570	575	
High SES non-Native		23%	19%	21%	21%	20%	20%	21%	20%	18%	19%	16%	16%	15%	<0.001
(age 25-64)	±	4.3%	4.0%	3.5%	4.3%	3.4%	3.2%	3.3%	3.0%	2.0%	2.1%	2.0%	2.0%	2.0%	
		832	809	1,037	1,090	1,101	1,520	1,353	1,371	2,620	2,927	2,244	2,691	2,644	decrease
Ages 18-29		28%	32%	32%	32%	32%	33%	39%	30%	31%	31%	34%	29%	30%	0.97
	±	7.3%	7.5%	5.5%	6.2%	7.1%	5.8%	7.0%	5.6%	4.4%	4.4%	5.6%	5.3%	5.5%	
	N	250	260	397	370	376	545	459	466	890	927	607	767	676	
Ages 30-39		30%	31%	27%	27%	26%	31%	28%	27%	25%	28%	21%	21%	23%	<0.001
	±	6.4%	7.0%	5.2%	5.4%	5.2%	5.6%	5.2%	5.3%	3.7%	3.9%	3.7%	3.5%	3.9%	
	N	437	382	505	523	519	606	583	528	1005	1054	773	959	838	decrease
Ages 40-49		29%	25%	27%	29%	24%	24%	29%	26%	28%	27%	28%	22%	22%	0.14
	±	6.9%	6.2%	5.2%	7.4%	5.2%	4.3%	5.1%	4.9%	3.5%	3.4%	3.9%	3.6%	3.7%	
	N	413	442	538	576	577	749	701	667	1243	1392	950	1109	1031	
Ages 50-59		28%	23%	24%	27%	23%	23%	26%	28%	19%	20%	19%	21%	20%	0.01
	±	8.9%	8.3%	7.3%	7.4%	7.1%	5.1%	5.8%	5.6%	3.1%	3.5%	3.3%	3.7%	2.9%	
	N	230	226	278	314	310	571	506	538	1083	1254	972	1172	1201	decrease
Age 60 and older		20%	16%	15%	15%	14%	13%	19%	16%	14%	14%	15%	11%	12%	0.03
	±	10.0%	6.7%	5.4%	6.1%	4.6%	4.7%	6.6%	4.2%	3.2%	2.8%	3.2%	2.7%	2.5%	
	N	190	221	258	252	278	361	427	435	822	1046	852	1004	1114	decrease

1-A (continued). Percent of Alaska Adults Who Smoke, by Year and Region, 1998-2008

Regions	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
Anchorage	22%	23%	22%	22%	26%	24%	22%	23%	18%	17%	17%	<0.001
±	4.8%	4.9%	5.2%	4.6%	5.2%	4.6%	3.3%	3.2%	3.2%	3.5%	3.6%	
N	327	341	345	437	415	430	817	918	739	759	754	decrease
Anchorage/Mat-Su	23%	25%	24%	24%	28%	25%	23%	24%	21%	20%	19%	<0.01
±	4.4%	5.3%	4.7%	4.1%	4.8%	4.1%	2.8%	2.9%	3.2%	3.1%	3.1%	
N	403	407	424	552	509	553	1061	1191	951	1027	1035	decrease
Gulf Coast	30%	29%	24%	31%	31%	23%	26%	21%	27%	20%	23%	<0.001
±	5.4%	5.1%	5.1%	4.9%	4.6%	4.3%	3.0%	2.6%	3.5%	3.2%	3.1%	
N	415	397	407	545	572	511	1100	1223	868	1028	997	decrease
Southwest	34%	35%	25%	35%	32%	41%	34%	35%	43%	33%	35%	0.13
±	7.6%	7.7%	7.0%	6.5%	7.1%	7.3%	4.8%	4.7%	6.2%	5.2%	5.5%	
N	206	228	218	315	275	257	535	584	374	538	503	
Southeast	24%	27%	26%	27%	26%	24%	23%	21%	23%	19%	22%	<0.01
±	4.7%	5.2%	5.0%	4.2%	4.3%	4.0%	3.2%	2.7%	3.5%	2.6%	3.2%	
N	398	411	432	564	542	538	860	1140	810	1038	919	decrease
North/NW/Interior	36%	41%	43%	39%	48%	44%	37%	43%	38%	36%	39%	0.46
±	7.5%	9.2%	8.5%	6.4%	8.2%	6.8%	4.6%	4.7%	5.5%	4.9%	6.7%	
N	202	210	208	339	297	275	559	562	419	517	529	
Fairbanks North Star	27%	27%	23%	23%	25%	23%	21%	21%	21%	22%	18%	0.04
±	5.1%	4.9%	4.5%	3.9%	4.5%	4.0%	2.8%	3.0%	3.4%	3.2%	3.3%	
N	362	392	383	551	495	523	979	1022	797	920	932	decrease

1-B Percent of Alaska Adults Who Smoke Daily, 1996-2008

		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
All Adults		22%	22%	20%	19%	19%	19%	22%	19%	17%	18%	16%	15%	16%	<0.01
	±	3.1%	3.1%	2.3%	2.4%	2.5%	2.1%	2.5%	2.2%	1.5%	1.5%	1.6%	1.6%	1.7%	
	N	1530	1543	1986	2045	2072	2866	2690	2657	5094	5722	4219	5068	4915	decrease
Male		23%	22%	21%	18%	19%	18%	23%	23%	19%	22%	17%	17%	18%	0.01
	±	4.6%	4.5%	3.5%	3.0%	3.7%	2.9%	3.8%	3.3%	2.3%	2.5%	2.4%	2.6%	2.6%	
	N	712	716	922	999	984	1356	1185	1228	2317	2665	1882	2305	2272	decrease
Female		21%	22%	19%	20%	18%	20%	21%	15%	15%	15%	15%	14%	13%	<0.01
	±	4.0%	4.1%	3.1%	3.8%	3.3%	2.9%	3.4%	2.7%	1.7%	1.8%	2.1%	2.0%	2.0%	
	N	818	827	1064	1046	1088	1510	1505	1429	2777	3057	2337	2763	2643	decrease
AK Native		31%	32%	27%	28%	28%	30%	32%	29%	29%	28%	28%	26%	28%	0.24
	±	7.2%	7.6%	5.4%	6.9%	7.0%	5.9%	6.5%	5.5%	4.3%	3.8%	5.0%	5.4%	4.1%	
	N	317	317	361	417	389	572	544	516	1004	1094	788	985	938	
Non-Native		20%	21%	19%	18%	17%	17%	20%	18%	15%	17%	14%	13%	14%	<0.01
	±	3.4%	3.4%	2.6%	2.6%	2.7%	2.2%	2.8%	2.4%	1.5%	1.7%	1.6%	1.7%	1.8%	
	N	1203	1207	1604	1599	1628	2213	2119	2127	4046	4565	3376	4030	3919	decrease
Low SES non-Native		35%	34%	26%	25%	25%	27%	36%	32%	25%	30%	28%	24%	28%	0.18
(age 25-64)	±	9.7%	9.4%	6.8%	6.1%	7.3%	6.5%	7.8%	7.2%	4.4%	4.9%	5.8%	5.4%	5.8%	
	N	197	201	287	287	259	353	364	368	708	792	469	570	575	
High SES non-Native		19%	16%	17%	15%	14%	15%	16%	15%	14%	14%	11%	12%	11%	<0.01
(age 25-64)	±	4.0%	3.8%	3.2%	3.0%	2.9%	2.5%	2.9%	2.7%	1.8%	1.9%	1.6%	1.8%	1.7%	
	N	832	809	1037	1090	1101	1520	1353	1371	2620	2927	2244	2691	2644	decrease
Ages 18-29		20%	25%	22%	20%	23%	20%	27%	21%	20%	22%	22%	20%	19%	0.31
	±	6.3%	6.9%	5.0%	5.5%	6.7%	4.4%	6.9%	5.0%	3.8%	4.0%	4.0%	4.7%	4.9%	
	N	250	260	397	370	376	545	459	466	890	927	607	767	676	decrease
Ages 30-54		24%	23%	20%	20%	18%	21%	21%	20%	18%	20%	16%	16%	16%	<0.01
	±	4.1%	4.0%	3.0%	3.1%	3.0%	2.9%	3.0%	3.0%	2.0%	2.1%	1.9%	2.1%	2.0%	
	N	1000	968	1219	1284	1285	1703	1579	1518	2875	3168	2246	2706	2500	decrease
55 and older		16%	17%	17%	15%	15%	12%	17%	15%	12%	11%	12%	10%	11%	<0.01
	±	6.3%	6.2%	5.4%	5.3%	4.9%	3.5%	4.7%	3.5%	2.4%	2.1%	2.4%	2.1%	2.0%	
	N	270	303	360	381	399	584	638	650	1278	1578	1301	1538	1684	decrease

1-B (continued) Percent of Alaska Adults Who Smoke Daily, by Region, 1998-2008

Regions	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
Anchorage	18%	16%	16%	16%	20%	18%	16%	17%	10%	13%	12%	<0.01
±	4.4%	4.4%	4.7%	3.8%	4.8%	4.3%	2.9%	2.9%	2.4%	3.2%	3.2%	
N	327	341	345	437	415	430	817	918	739	759	754	decrease
Anchorage/Mat-Su	18%	17%	17%	17%	21%	18%	16%	19%	13%	14%	14%	0.01
±	4.0%	4.1%	4.3%	3.5%	4.4%	3.7%	2.5%	2.7%	2.6%	2.9%	2.8%	
N	403	407	424	552	509	553	1061	1191	951	1027	1035	decrease
Gulf Coast	22%	22%	20%	23%	23%	18%	19%	15%	21%	15%	18%	<0.01
±	5.1%	4.7%	4.7%	4.5%	4.3%	3.9%	2.6%	2.2%	3.3%	2.7%	2.7%	
N	415	397	407	545	572	511	1100	1223	868	1028	997	decrease
Southwest	23%	20%	19%	22%	23%	27%	20%	21%	27%	20%	24%	0.48
±	6.9%	5.8%	6.2%	5.4%	6.5%	6.7%	4.1%	4.0%	5.4%	4.3%	5.3%	
N	206	228	218	315	275	257	535	584	374	538	406	
Southeast	17%	20%	16%	18%	18%	17%	14%	16%	14%	13%	15%	<0.01
±	4.1%	4.8%	4.4%	3.5%	3.7%	3.6%	2.6%	2.4%	2.7%	2.1%	2.7%	
N	398	411	432	564	542	538	860	1140	810	1038	793	decrease
North/NW/Interior	27%	30%	32%	29%	40%	34%	28%	30%	26%	27%	25%	0.12
±	6.7%	8.7%	8.3%	5.9%	8.5%	6.5%	4.4%	4.5%	5.0%	4.5%	5.2%	
N	202	210	208	339	297	275	559	562	419	517	529	
Fairbanks North Star	22%	21%	19%	18%	17%	16%	14%	15%	16%	15%	13%	<0.01
±	4.7%	4.5%	4.2%	3.6%	4.0%	3.5%	2.3%	2.6%	2.9%	2.8%	2.9%	
N	362	392	383	551	495	523	979	1022	797	920	932	decrease

1-C Percent of Alaska Adults Who Have Never Been Smokers, 1996-2008

		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
All Adults		46%	49%	48%	47%	47%	47%	45%	48%	51%	50%	49%	52%	51%	<0.01
	±	3.8%	3.7%	3.1%	3.2%	3.1%	2.8%	2.9%	2.7%	2.0%	1.9%	2.2%	2.1%	2.2%	
	N	1530	1543	1986	2045	2072	2866	2690	2657	5094	5722	4219	5068	4915	increase
Male		42%	45%	44%	47%	44%	43%	40%	43%	45%	45%	44%	48%	47%	0.15
	±	5.5%	5.5%	4.7%	4.5%	4.4%	4.1%	4.2%	3.9%	2.9%	2.8%	3.3%	3.2%	3.3%	
	N	712	716	922	999	984	1356	1185	1228	2317	2665	1882	2305	2272	
Female		52%	53%	54%	47%	50%	51%	51%	53%	57%	55%	54%	56%	55%	<0.01
	±	5.2%	5.1%	4.0%	4.6%	4.4%	3.8%	4.0%	3.6%	2.6%	2.5%	2.9%	2.7%	2.9%	
	N	818	827	1064	1046	1088	1510	1505	1429	2777	3057	2337	2763	2643	increase
AK Native		31%	35%	35%	35%	27%	28%	29%	28%	31%	32%	34%	30%	29%	0.42
	±	7.4%	7.4%	6.4%	6.6%	5.6%	5.1%	6.3%	5.4%	4.3%	3.8%	5.3%	4.7%	4.3%	
	N	317	317	361	417	389	572	544	516	1004	1094	788	985	938	
Non-Native		48%	51%	51%	49%	50%	50%	48%	51%	54%	53%	51%	55%	54%	<0.01
	±	4.2%	4.2%	3.4%	3.6%	3.5%	3.2%	3.2%	3.0%	2.2%	2.1%	2.5%	2.3%	2.4%	
	N	1203	1207	1604	1599	1628	2213	2119	2127	4046	4565	3376	4030	3919	increase
Low SES non-Native		41%	37%	46%	46%	41%	46%	39%	39%	40%	38%	36%	40%	41%	0.34
(age 25-64)	±	9.8%	9.9%	7.8%	8.0%	8.6%	7.7%	7.4%	7.0%	5.3%	4.8%	6.8%	6.0%	6.5%	
	N	197	201	287	287	259	353	364	368	708	792	469	570	575	
High SES non-Native		46%	55%	53%	51%	53%	50%	50%	53%	56%	55%	55%	57%	56%	<0.01
(age 25-64)	±	5.0%	5.1%	4.3%	4.6%	4.2%	4.0%	4.0%	3.7%	2.6%	2.5%	2.8%	2.7%	2.7%	
	N	832	809	1037	1090	1101	1520	1353	1371	2620	2927	2244	2691	2644	increase
Ages 18-29		60%	57%	51%	51%	48%	49%	47%	50%	56%	55%	52%	55%	54%	0.80
	±	8.3%	8.1%	6.4%	6.8%	7.2%	6.5%	6.8%	6.2%	4.8%	4.6%	5.8%	5.6%	5.9%	
	N	250	260	397	370	376	545	459	466	890	927	607	767	676	
Ages 30-54		44%	49%	50%	49%	49%	48%	45%	47%	51%	49%	51%	53%	53%	<0.01
	±	4.6%	4.9%	3.9%	4.2%	4.0%	3.6%	3.7%	3.6%	2.6%	2.5%	2.9%	2.7%	2.9%	increase
	N	1000	968	1219	1284	1285	1703	1579	1518	2875	3168	2246	2706	2500	
55 and older		37%	39%	41%	36%	38%	42%	42%	45%	46%	46%	40%	46%	43%	0.01
	±	9.1%	8.0%	7.8%	7.3%	6.6%	6.4%	6.2%	5.1%	3.7%	3.5%	3.8%	3.6%	3.4%	increase
	N	270	303	360	381	399	584	638	650	1278	1578	1301	1538	1684	

1-C (continued) Percent of Alaska Adults Who Have Never Been Smokers, by Region, 1998-2008

Regions	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
Anchorage	53%	51%	48%	50%	47%	47%	54%	54%	54%	57%	57%	<0.01
±	6.0%	6.0%	6.1%	5.7%	5.7%	5.3%	3.9%	3.7%	4.2%	4.2%	4.3%	
N	327	341	345	437	415	430	817	918	739	759	754	increase
Anchorage/Mat-Su	51%	49%	46%	49%	45%	48%	53%	51%	51%	54%	54%	0.01
±	5.5%	5.7%	5.4%	5.0%	5.1%	4.6%	3.4%	3.2%	3.7%	3.6%	3.7%	
N	403	407	424	552	509	553	1061	1191	951	1027	1035	increase
Gulf Coast	46%	47%	49%	42%	43%	51%	51%	49%	44%	50%	49%	0.17
±	5.6%	5.8%	6.1%	4.9%	4.7%	5.1%	3.4%	3.2%	3.8%	3.8%	3.7%	
N	415	397	407	545	572	511	1100	1223	868	1028	997	
Southwest	41%	43%	47%	39%	45%	37%	42%	44%	35%	44%	39%	0.20
±	7.6%	7.8%	8.8%	6.5%	7.3%	6.9%	5.0%	4.6%	5.6%	5.9%	5.2%	
N	206	228	218	315	275	257	535	584	374	538	503	
Southeast	51%	45%	48%	48%	43%	48%	46%	48%	49%	51%	47%	0.83
±	5.4%	5.5%	5.4%	4.6%	4.8%	4.7%	3.7%	3.3%	4.1%	3.4%	3.6%	
N	398	411	432	564	542	538	860	1140	810	1038	919	
North/NW/Interior	43%	34%	34%	32%	34%	33%	38%	37%	35%	40%	38%	0.89
±	7.9%	8.5%	8.2%	6.4%	7.4%	6.8%	4.6%	4.5%	5.4%	4.9%	8.7%	
N	202	210	208	339	297	275	559	562	419	517	529	
Fairbanks North Star	46%	49%	53%	50%	52%	55%	56%	56%	53%	53%	54%	0.02
±	5.4%	5.5%	5.4%	4.7%	5.0%	4.7%	3.5%	3.5%	4.0%	3.7%	4.1%	
N	362	392	383	551	495	523	979	1022	797	920	932	increase

1-D Quit Ratio: Percent of Alaska Adults Aged 25 and Older Who No Longer Smoke, Among Ever Smokers, 1996-2008

		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
All Adults		51%	53%	51%	51%	55%	54%	50%	52%	53%	54%	58%	59%	59%	<0.01
	±	5.4%	5.4%	4.4%	4.9%	4.5%	4.0%	4.2%	3.9%	2.8%	2.7%	2.9%	2.8%	2.8%	
	N	801	754	938	1033	987	1443	1343	1319	2442	2769	2136	2460	2503	increase
Male		50%	56%	53%	55%	56%	57%	51%	50%	53%	51%	60%	58%	59%	0.07
	±	7.5%	7.4%	6.1%	6.2%	6.1%	5.7%	5.7%	5.4%	4.0%	3.9%	4.1%	4.0%	4.0%	
	N	401	388	485	523	499	745	668	677	1244	1423	1073	1237	1290	
Female		51%	48%	50%	47%	55%	50%	50%	53%	53%	56%	55%	61%	58%	<0.01
	±	7.6%	7.9%	6.3%	7.5%	6.8%	5.2%	6.2%	5.7%	4.0%	3.6%	4.2%	3.9%	4.0%	
	N	400	366	453	510	488	698	675	642	1198	1346	1063	1223	1213	increase
AK Native		34%	44%	40%	41%	43%	42%	41%	42%	38%	42%	39%	49%	42%	0.29
	±	11.0%	10.8%	8.7%	9.2%	10.5%	8.1%	8.6%	8.0%	5.5%	5.8%	6.0%	5.8%	5.6%	
	N	187	180	203	260	228	351	335	328	600	649	489	603	610	
Non-Native		54%	55%	54%	54%	59%	57%	53%	54%	57%	56%	62%	61%	62%	<0.01
	±	6.0%	6.2%	5.1%	5.7%	5.0%	4.5%	4.7%	4.5%	3.2%	3.1%	3.4%	3.3%	3.3%	
	N	608	563	726	758	728	1043	991	984	1820	2087	1620	1831	1858	increase
Low SES non-Native		33%	42%	38%	40%	53%	35%	28%	34%	42%	38%	40%	45%	40%	0.62
(age 25-64)	±	12.2%	12.8%	10.3%	11.3%	12.1%	8.6%	7.8%	8.6%	6.9%	6.2%	7.8%	7.5%	7.3%	
	N	116	124	164	169	149	214	224	216	425	485	308	343	367	
High SES non-Native		57%	56%	54%	56%	57%	59%	58%	58%	58%	59%	64%	62%	65%	<0.01
(age 25-64)	±	7.0%	7.5%	6.3%	7.2%	6.1%	5.4%	5.7%	5.4%	3.9%	3.8%	4.0%	4.0%	4.0%	
	N	443	379	491	534	514	764	648	650	1190	1329	1059	1209	1187	increase
Ages 25-39		41%	38%	42%	41%	43%	41%	39%	41%	41%	39%	47%	46%	46%	0.11
	±	8.4%	9.0%	7.3%	7.2%	8.1%	7.3%	7.6%	7.4%	5.4%	4.9%	5.9%	5.5%	5.5%	
	N	282	234	336	355	327	439	390	377	703	739	521	637	635	
Ages 40-59		54%	57%	50%	51%	59%	59%	53%	51%	54%	55%	56%	58%	58%	0.23
	±	7.8%	7.7%	6.7%	7.6%	6.6%	5.2%	5.6%	5.6%	3.9%	3.9%	4.2%	4.2%	4.1%	
	N	400	380	439	516	496	773	696	679	1282	1407	1067	1233	1176	
60 and older		69%	74%	76%	75%	75%	74%	66%	71%	74%	75%	76%	80%	79%	0.11
	±	14.8%	10.6%	8.5%	9.8%	7.8%	8.3%	10.1%	7.0%	5.8%	4.9%	5.1%	4.5%	4.2%	
	N	115	131	155	154	158	207	248	250	427	600	511	562	664	

1-D Quit Ratio: Percent of Alaska Adults Aged 25 and Older Who No Longer Smoke, Among Ever Smokers, by Region, 1998-2008

Regions	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
Anchorage	51%	55%	60%	59%	56%	55%	55%	54%	64%	62%	62%	0.05
±	9.0%	9.2%	8.7%	8.1%	8.2%	7.9%	5.9%	5.5%	5.9%	6.2%	6.1%	
N	138	149	158	203	191	199	351	399	334	322	340	increase
Anchorage/Mat-Su	52%	54%	59%	56%	52%	53%	54%	53%	62%	62%	62%	0.02
±	7.9%	9.2%	7.7%	7.1%	7.3%	6.9%	5.0%	4.7%	5.2%	5.1%	5.1%	
N	181	180	199	261	245	262	476	546	443	456	476	increase
Gulf Coast	49%	48%	53%	48%	50%	59%	49%	61%	54%	62%	57%	<0.01
±	7.6%	7.8%	9.4%	7.3%	6.6%	6.6%	4.9%	4.2%	5.2%	5.1%	4.8%	
N	214	211	184	290	296	254	521	618	456	509	522	increase
Southwest	48%	43%	55%	48%	45%	40%	46%	44%	40%	47%	45%	0.43
±	10.6%	11.1%	15.1%	9.8%	9.7%	9.4%	6.8%	6.5%	7.5%	0.0%	7.1%	
N	0	0	0	0	0	0	0	0	0	0	0	
Southeast	53%	55%	55%	52%	56%	55%	62%	60%	59%	63%	59%	<0.01
±	8.0%	7.4%	7.7%	6.7%	6.7%	6.5%	5.1%	4.5%	5.2%	4.6%	4.9%	
N	177	211	211	275	288	268	433	584	418	525	490	increase
North/NW/Interior	41%	44%	39%	47%	29%	37%	43%	36%	46%	44%	39%	0.79
±	10.8%	11.9%	10.2%	8.6%	8.6%	7.7%	6.3%	6.0%	7.1%	6.6%	6.3%	
N	105	129	127	205	176	177	318	314	248	282	309	
Fairbanks North Star	55%	52%	53%	61%	55%	52%	53%	57%	58%	56%	62%	0.13
±	8.7%	7.9%	8.1%	6.7%	7.6%	7.3%	5.2%	5.2%	5.7%	5.3%	5.7%	
N	156	178	171	246	202	217	418	418	366	404	430	

1-E Percent of Alaska Adult Current Smokers Who Made a Quit Attempt in the Past 12 Months, 1996-2008

		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
All Adults		45%	56%	57%	61%	51%	61%	54%	55%	56%	58%	58%	61%	63%	<0.01
	±	7.9%	7.8%	6.5%	6.7%	7.6%	5.1%	5.7%	5.4%	3.9%	4.0%	4.6%	4.7%	4.5%	
	N	350	324	418	431	403	817	753	719	1318	1405	1032	1120	1107	increase
Male		41%	56%	56%	65%	47%	64%	50%	49%	53%	55%	58%	60%	62%	0.04
	±	11.2%	11.4%	9.5%	8.2%	10.6%	7.2%	8.0%	7.2%	5.6%	5.6%	6.4%	6.8%	6.5%	
	N	168	146	194	220	205	397	353	376	643	712	508	560	567	increase
Female		51%	57%	59%	57%	56%	57%	58%	64%	61%	62%	58%	62%	65%	0.02
	±	10.6%	10.2%	8.7%	10.4%	10.1%	6.9%	8.1%	7.6%	5.1%	5.3%	6.5%	6.1%	6.1%	
	N	182	178	224	211	198	420	400	343	675	693	524	560	540	increase
AK Native		61%	61%	67%	65%	62%	59%	51%	57%	56%	66%	65%	70%	65%	0.27
	±	12.7%	14.8%	10.1%	13.7%	13.3%	10.2%	10.9%	9.7%	7.3%	5.7%	7.2%	8.2%	7.1%	
	N	98	85	115	120	109	248	228	227	430	441	341	378	397	
Non-Native		42%	55%	55%	60%	50%	61%	55%	54%	56%	55%	55%	57%	62%	0.01
	±	9.1%	9.0%	7.7%	7.7%	8.8%	6.0%	6.8%	6.3%	4.7%	4.9%	5.7%	5.6%	5.7%	
	N	250	234	301	301	283	539	518	491	878	941	679	733	701	increase
Low SES non-Native		41%	51%	60%	58%	57%	58%	60%	55%	57%	62%	66%	51%	66%	0.03
(age 25-64)	±	16.8%	16.7%	13.7%	13.0%	16.4%	12.0%	12.1%	12.3%	8.5%	8.6%	10.2%	10.8%	9.5%	
	N	68	65	82	88	72	132	146	133	254	291	175	188	220	increase
High SES non-Native		42%	46%	53%	57%	50%	61%	56%	52%	53%	54%	51%	57%	62%	0.02
(age 25-64)	±	12.0%	12.2%	10.7%	9.9%	10.9%	8.0%	8.7%	8.4%	6.2%	6.3%	6.8%	6.9%	6.8%	
	N	151	133	163	182	166	326	279	283	507	513	395	450	395	increase
Ages 18-29		59%	71%	66%	76%	52%	71%	61%	73%	64%	61%	62%	70%	70%	0.75
	±	17.0%	14.0%	12.3%	11.5%	17.5%	8.6%	12.8%	9.3%	8.2%	8.4%	9.9%	9.6%	9.3%	
	N	61	67	99	81	83	199	170	146	297	296	204	230	218	
30-54		43%	50%	57%	57%	50%	58%	56%	50%	55%	57%	56%	60%	61%	<0.01
	±	9.9%	10.1%	8.6%	8.4%	9.2%	6.8%	6.9%	7.1%	5.0%	5.1%	5.6%	5.9%	5.7%	
	N	234	198	250	285	253	490	444	441	780	833	576	647	614	increase
55 and older		37%	52%	43%	52%	52%	47%	31%	45%	47%	50%	52%	45%	54%	0.33
	±	19.1%	18.3%	16.4%	18.7%	17.3%	13.7%	11.8%	11.2%	9.3%	8.7%	9.3%	9.5%	8.5%	
	N	53	58	67	60	65	115	136	127	229	262	237	229	267	

1-E (continued) Percent of Alaska Adult Current Smokers Who Made a Quit Attempt in the Past 12 Months, by Region, 1998-2008

Regions	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
Anchorage/Mat-Su	54%	61%	50%	64%	51%	52%	55%	58%	59%	61%	64%	0.19
±	12.2%	13.0%	14.2%	9.6%	10.3%	9.8%	7.2%	6.9%	8.6%	8.8%	8.6%	
N	77	70	71	134	130	131	239	275	181	182	180	
Gulf Coast	54%	62%	47%	52%	56%	63%	58%	52%	53%	56%	53%	0.82
±	13.8%	11.6%	13.4%	10.1%	9.5%	10.0%	6.5%	6.8%	8.0%	8.5%	7.6%	
N	89	86	78	161	158	123	286	265	217	203	230	
Southeast	58%	57%	51%	62%	63%	56%	54%	50%	48%	57%	50%	0.11
±	13.1%	13.4%	15.1%	8.6%	9.0%	9.6%	8.1%	7.2%	8.8%	7.7%	8.1%	
N	67	76	65	152	143	131	186	241	184	197	198	
Rural	61%	57%	59%	66%	52%	60%	61%	64%	64%	60%	70%	0.09
±	11.3%	14.5%	12.2%	7.1%	10.3%	7.9%	5.9%	5.6%	7.0%	6.3%	6.5%	
N	99	107	107	234	198	203	366	396	270	332	329	
Fairbanks & Vicinity	68%	65%	51%	54%	58%	51%	54%	58%	58%	67%	72%	0.26
±	10.6%	10.5%	11.7%	9.4%	10.4%	9.6%	7.0%	7.6%	8.3%	7.3%	8.2%	
N	86	92	82	136	124	131	241	228	180	206	170	

Note: Regions reported here combine Southwest and most of the North/Northwest/ Interior regions into "Rural," and combine Southeast Fairbanks with Fairbanks North Star Boroughs into "Fairbanks & Vicinity." This change was made in order to be able to report based on relatively small numbers by year.

Tables for Chapter 2: Adult Smokeless Tobacco Use

2-A Percent of Alaska Adults Who Use Smokeless Tobacco, by Year, 1996-2008

		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
All Adults		4%	6%	5%	5%	6%	6%	7%		4%	5%	5%	5%	5%	0.67
	±	1.3%	1.7%	1.4%	1.3%	1.6%	1.3%	1.4%		1.2%	0.9%	0.9%	0.9%	0.9%	
	N	1,506	1,543	1,989	2,050	2,079	2,873	2,692		2,462	5,343	4,124	4,939	4,732	
Male		7%	9%	9%	9%	9%	10%	11%		8%	9%	8%	9%	9%	0.98
	±	2.4%	3.1%	2.5%	2.3%	2.9%	2.5%	2.6%		2.2%	1.6%	1.7%	1.7%	1.7%	
	N	699	715	924	1,001	985	1,357	1,186		1,103	2,489	1,835	2,244	2,155	
Female		1%	2%	2%	2%	2%	2%	2%		1%	1%	1%	1%	1%	0.24
	±	0.5%	1.0%	0.9%	0.9%	0.6%	0.7%	0.6%		0.7%	0.3%	0.5%	0.4%	0.5%	
	N	807	828	1,065	1,049	1,094	1,516	1,506		1,359	2,854	2,289	2,695	2,577	
AK Native		11%	12%	15%	12%	13%	18%	12%		10%	11%	10%	13%	12%	0.36
	±	4.2%	4.7%	5.3%	4.1%	3.8%	5.5%	3.2%		5.4%	2.5%	2.5%	3.1%	2.5%	
	N	307	318	363	420	393	576	547		461	1025	758	931	877	
Non-Native		3%	5%	4%	4%	5%	4%	6%		3%	4%	4%	4%	4%	0.75
	±	1.3%	1.9%	1.4%	1.3%	1.8%	1.2%	1.6%		1.0%	0.9%	1.0%	1.0%	1.0%	
	N	1,189	1,206	1,605	1,600	1,631	2,215	2,118		1,976	4,257	3,313	3,955	3,803	
Low SES non-Native		1%	4%	3%	2%	1%	4%	7%		3%	5%	5%	3%	3%	0.11
(age 25-64)	±	1.0%	4.5%	2.6%	1.2%	0.7%	2.8%	5.7%		2.9%	2.7%	3.6%	1.6%	3.1%	
	N	192	201	287	288	259	353	363		338	727	462	554	559	
High SES non-Native		4%	4%	4%	5%	6%	5%	6%		3%	4%	4%	4%	5%	0.73
(age 25-64)	±	2.0%	1.9%	1.8%	1.8%	2.6%	1.7%	1.9%		1.0%	1.0%	1.1%	1.1%	1.3%	
	N	824	809	1,038	1,090	1,102	1,521	1,352		1,289	2,746	2,206	2,646	2,562	
Ages 18-29		5%	8%	9%	6%	7%	7%	9%		7%	7%	7%	7%	6%	0.70
	±	3.0%	4.6%	3.5%	3.1%	2.8%	2.5%	4.0%		3.2%	2.5%	3.0%	2.7%	2.3%	
	N	246	260	397	372	375	546	460		430	866	587	744	643	
Ages 30-54		4%	4%	5%	6%	7%	7%	8%		5%	5%	5%	6%	6%	0.13
	±	1.7%	1.8%	1.8%	1.7%	2.4%	2.1%	1.9%		1.7%	1.2%	1.1%	1.2%	1.3%	
	N	982	970	1,220	1,286	1,288	1,706	1,579		1,413	2,949	2,197	2,647	2,421	
Age 55 and older		3%	7%	3%	3%	2%	2%	1%		2%	2%	2%	3%	2%	0.02
	±	2.2%	4.4%	1.8%	2.0%	1.3%	1.3%	0.7%		1.3%	0.7%	0.6%	1.1%	0.9%	
	N	269	302	362	381	404	587	639		590	1,482	1,281	1,495	1,622	decrease

2-A (continued) Percent of Alaska Adults Who Use Smokeless Tobacco, by Region, 1998-2008 and by Smoking Status, 1996-2008

Regions		1996	1997	1998	1999	2000	2001
Anchorage/Mat-Su		*	*	4%	4%	4%	4%
	±			2.4%	2.1%	2.7%	2.2%
	N			403	407	428	552
Gulf Coast		*	*	3%	3%	4%	8%
	±			2.2%	2.0%	2.4%	3.4%
	N			415	399	408	547
Southwest		*	*	20%	20%	28%	26%
	±			6.7%	6.4%	7.4%	6.5%
	N			207	228	220	318
Southeast		*	*	5%	6%	5%	3%
	±			2.5%	2.8%	2.5%	1.7%
	N			398	412	432	563
North/NW/Interior		*	*	8%	5%	6%	12%
	±			5.1%	3.5%	4.2%	4.7%
	N			179	182	184	312
Fairbanks North Star		*	*	6%	5%	4%	4%
	±			2.5%	2.6%	1.9%	1.8%
	N			387	422	407	581
Smokers		4%	1%	7%	3%	5%	7%
	±	2.2%	0.8%	2.7%	1.5%	2.6%	3.2%
	N	443	403	549	592	536	819
Former Smokers		6%	8%	6%	8%	5%	8%
	±	3.6%	4.3%	3.1%	3.2%	1.9%	3.2%
	N	395	414	505	532	542	779
Never Smokers		3%	7%	4%	5%	7%	4%
	±	1.3%	2.8%	1.9%	1.9%	2.8%	1.3%
	N	663	724	932	921	990	1,266

2002	2003	2004	2005	2006	2007	2008	p-value
6%		3%	4%	3%	3%	3%	0.11
2.4%		1.9%	1.5%	1.4%	1.5%	1.4%	
508		540	1,103	930	1,017	1,006	
8%		5%	4%	6%	7%	5%	0.25
3.2%		2.6%	1.3%	2.0%	2.3%	1.8%	
572		515	1,150	855	1,003	959	
23%		17%	20%	22%	22%	25%	0.96
6.2%		5.4%	4.1%	5.4%	4.8%	5.0%	
278		250	551	361	517	479	
5%		4%	4%	4%	4%	3%	0.10
2.3%		2.5%	1.4%	1.6%	1.4%	1.1%	
542		421	1,055	794	1,011	891	
6%		6%	6%	7%	6%	7%	0.58
3.8%		4.5%	2.4%	3.3%	2.9%	3.4%	
264		220	468	338	431	421	
6%		5%	5%	4%	5%	6%	0.77
2.4%		2.2%	1.7%	1.7%	1.7%	2.0%	
528		516	1,016	846	960	976	
7%		4%	5%	7%	8%	5%	0.04
3.0%		2.3%	1.9%	2.9%	2.7%	2.1%	
753		611	1,312	1,000	1,062	1,044	increase
9%		5%	6%	5%	6%	6%	0.26
3.2%		2.0%	2.0%	1.5%	1.8%	1.7%	
714		642	1,461	1,206	1,440	1,432	
6%		4%	4%	3%	4%	4%	0.07
1.7%		1.8%	1.1%	1.0%	1.1%	1.2%	
1,221		1,194	2,540	1,896	2,395	2,229	

Tables for Chapter 4: Youth Smoking

4-A Percent of Alaska High School Youth Who Smoke Cigarettes, 1995-2009

	1995	2003	2007	2009	p-value
All High School Students	37%	19%	18%	16%	<0.001
±	4.5%	2.6%	2.9%	2.8%	decrease
N	1,602	1,408	1,247	1,286	
Boys	36%	18%	16%	14%	<0.001
±	5.3%	3.0%	2.7%	3.2%	decrease
N	801	715	620	599	
Girls	36%	20%	20%	17%	<0.001
±	5.8%	4.0%	4.9%	3.5%	decrease
N	795	688	622	678	
AK Native Youth	62%	44%	32%	23%	<0.001
±	9.2%	5.7%	7.4%	7.1%	decrease
N	177	268	243	341	
White Youth	34%	12%	14%	13%	<0.001
±	3.8%	2.6%	2.8%	3.1%	decrease
N	1,127	867	801	703	
Other Race Group Youth	24%	12%	7%	10%	<0.001
±	4.9%	5.0%	3.6%	4.0%	decrease
N	298	273	203	242	
9th Grade	35%	13%	12%	14%	<0.001
±	7.2%	3.7%	3.5%	4.1%	decrease
N	482	488	396	366	
10th Grade	33%	24%	19%	13%	<0.001
±	7.7%	4.7%	6.4%	4.3%	decrease
N	379	301	238	314	
11th Grade	40%	19%	19%	13%	<0.001
±	4.5%	6.1%	6.9%	4.8%	decrease
N	468	342	319	338	
12th Grade	39%	23%	22%	22%	<0.001
±	6.6%	6.4%	5.1%	6.1%	decrease
N	265	261	276	238	

4-B Percent of Alaska High School Youth Who Smoke Cigarettes Frequently (20+ days in past 30 days), 1995-2009

	1995	2003	2007	2009	p-value
All High School Students	21%	8%	7%	5%	<0.001
±	4.1%	1.8%	3.0%	1.5%	decrease
N	1,602	1,408	1,247	1,286	
Boys	21%	8%	6%	4%	<0.001
±	4.1%	2.1%	1.8%	1.7%	decrease
N	801	715	620	599	
Girls	21%	8%	9%	6%	<0.001
±	5.6%	2.6%	4.8%	2.6%	decrease
N	795	688	622	678	
AK Native Youth	44%	18%	14%	7%	<0.001
±	12.0%	5.1%	9.4%	3.9%	decrease
N	177	268	243	341	
White Youth	18%	5%	5%	4%	<0.001
±	2.4%	1.8%	1.7%	1.5%	decrease
N	1,127	867	801	703	
Other Race Group Youth	14%	6%	4%	4%	<0.001
±	4.5%	3.8%	2.8%	3.0%	decrease
N	298	273	203	242	
9th Grade	20%	4%	4%	3%	<0.001
±	6.6%	2.0%	2.2%	2.2%	decrease
N	482	488	396	366	
10th Grade	18%	10%	8%	6%	<0.001
±	5.5%	3.7%	4.4%	2.9%	decrease
N	379	301	238	314	
11th Grade	23%	8%	8%	5%	<0.001
±	3.1%	3.5%	4.6%	2.6%	decrease
N	468	342	319	338	
12th Grade	25%	12%	9%	6%	<0.001
±	7.3%	4.4%	4.8%	2.8%	decrease
N	265	261	276	238	

4-C Percent of Alaska High School Youth Who Ever Tried Smoking Cigarettes, 1995-2009

		1995	2003	2007	2009	p-value
All High School Students		72%	56%	53%	48%	<0.001
	±	3.1%	3.6%	4.2%	3.4%	decrease
	N	1,609	1,390	1,266	1,315	
Boys		71%	56%	51%	47%	<0.001
	±	4.4%	4.5%	5.3%	4.7%	decrease
	N	803	704	622	610	
Girls		73%	56%	54%	48%	<0.001
	±	4.0%	4.4%	5.9%	4.4%	decrease
	N	800	678	637	696	
AK Native Youth		91%	83%	73%	64%	<0.001
	±	3.9%	4.9%	6.0%	5.3%	decrease
	N	178	282	253	360	
White Youth		69%	47%	47%	39%	<0.001
	±	3.0%	4.4%	5.3%	4.4%	decrease
	N	1,139	843	804	708	
Other Race Group Youth		68%	51%	35%	45%	<0.001
	±	4.9%	6.7%	7.3%	6.6%	decrease
	N	292	265	209	247	
9th Grade		70%	45%	45%	44%	<0.001
	±	4.5%	6.4%	8.1%	8.0%	decrease
	N	487	474	403	367	
10th Grade		72%	61%	58%	44%	<0.001
	±	7.1%	6.6%	9.2%	5.9%	decrease
	N	378	299	244	327	
11th Grade		73%	61%	54%	48%	<0.001
	±	4.2%	7.1%	7.2%	6.6%	decrease
	N	471	340	323	352	
12th Grade		74%	59%	57%	53%	<0.001
	±	5.5%	6.7%	8.4%	6.7%	decrease
	N	265	260	278	241	

4-D Percent of Alaska High School Youth Who Started Smoking Before Age 13, 1995-2009

		1995	2003	2007	2009	p-value
All High School Students		31%	20%	16%	13%	<0.001
	±	3.1%	2.5%	2.9%	2.4%	decrease
	N	1,621	1,379	1,244	1,286	
Boys		33%	21%	17%	14%	<0.001
	±	4.7%	3.8%	4.3%	2.9%	decrease
	N	812	696	611	597	
Girls		28%	18%	14%	12%	<0.001
	±	3.6%	3.2%	3.7%	3.0%	decrease
	N	803	673	625	680	
AK Native Youth		47%	34%	26%	19%	<0.001
	±	5.3%	5.0%	7.0%	5.0%	decrease
	N	181	282	250	349	
White Youth		28%	14%	12%	9%	<0.001
	±	3.9%	3.0%	3.2%	2.6%	decrease
	N	1,141	837	791	696	
Other Race Group Youth		27%	19%	12%	16%	<0.001
	±	6.3%	3.6%	5.5%	4.4%	decrease
	N	299	260	203	241	
9th Grade		40%	17%	12%	16%	<0.001
	±	6.4%	4.1%	4.0%	5.3%	decrease
	N	492	467	393	355	
10th Grade		29%	22%	18%	10%	<0.001
	±	5.5%	5.2%	6.9%	4.2%	decrease
	N	379	297	241	315	
11th Grade		28%	19%	20%	12%	<0.001
	±	5.2%	4.9%	4.9%	4.1%	decrease
	N	477	337	319	347	
12th Grade		22%	20%	16%	11%	<0.001
	±	7.1%	4.6%	5.6%	3.8%	decrease
	N	265	261	274	238	
Current Smokers		53%	48%	41%	34%	<0.001
	±	4.7%	6.5%	8.4%	8.4%	decrease
	N	560	247	180	174	
Not Current Smokers		17%	12%	10%	8%	<0.001
	±	2.2%	2.2%	2.2%	1.8%	decrease
	N	1,038	1,078	1,004	1,047	

4-E Percent of Alaska High School Youth Who Smoke Cigars, 2003-2009

	1995	2003	2007	2009	p-value
All High School Students		8%	10%	10%	0.02
±		1.7%	1.7%	1.9%	increase
N		1,480	1,313	1,368	
Boys		12%	14%	14%	0.24
±		2.7%	2.6%	3.2%	
N		761	654	641	
Girls		4%	6%	6%	0.01
±		1.3%	2.2%	1.7%	increase
N		709	651	716	
AK Native Youth		5%	8%	7%	0.28
±		3.0%	3.2%	3.2%	
N		294	262	369	
White Youth		9%	11%	12%	0.08
±		2.3%	2.4%	2.8%	
N		899	833	736	
Other Race Group Youth		8%	8%	11%	0.19
±		3.2%	3.7%	4.1%	
N		287	218	263	
9th Grade		5%	8%	4%	0.84
±		2.0%	2.8%	2.0%	
N		510	420	382	
10th Grade		7%	10%	8%	0.55
±		2.9%	3.6%	2.7%	
N		313	255	339	
11th Grade		11%	10%	16%	0.10
±		3.9%	3.2%	4.1%	
N		362	337	362	
12th Grade		9%	13%	12%	0.21
±		3.6%	4.8%	3.5%	
N		273	283	250	

Tables for Chapter 5: Youth Smokeless Tobacco Use:

5-A Percent of Alaska High School Youth Who Use Smokeless Tobacco, 1995-2009

	1995	2003	2007	2009	p-value
All High School Students	16%	11%	10%	14%	0.14
±	2.8%	2.7%	3.5%	3.1%	
N	1,622	1,457	1,301	1,323	
Boys	24%	16%	14%	19%	0.02
±	4.0%	3.1%	4.2%	4.3%	decrease
N	815	741	648	618	
Girls	7%	6%	7%	7%	0.67
±	2.5%	4.5%	3.4%	2.9%	
N	801	706	647	699	
AK Native Youth	22%	24%	17%	22%	0.57
±	6.8%	10.6%	10.8%	8.0%	
N	183	284	257	356	
White Youth	16%	7%	8%	10%	<0.001
±	2.8%	2.0%	2.0%	3.2%	decrease
N	1,141	891	829	722	
Other Race Group Youth	8%	8%	9%	10%	0.53
±	4.5%	3.8%	4.4%	4.7%	
N	298	282	215	245	
9th Grade	14%	9%	11%	12%	0.41
±	4.3%	2.6%	4.7%	5.5%	
N	492	502	415	373	
10th Grade	15%	15%	9%	14%	0.34
±	4.5%	6.8%	5.7%	5.7%	
N	381	308	253	332	
11th Grade	16%	14%	9%	12%	0.06
±	4.7%	5.2%	3.7%	4.8%	
N	474	358	334	351	
12th Grade	17%	7%	12%	16%	0.62
±	5.4%	3.4%	4.5%	7.7%	
N	267	267	282	237	

Tables for Chapter 6: Use of Multiple Tobacco Products Among Youth

6-A Percent of Alaska High School Youth Who Use Any Tobacco, 1995-2009
(Cigarettes or Smokeless only in 1995, and Cigarettes, Smokeless and Cigars from 2003 to 2009)

		1995	2003	2007	2009	p-value
All High School Students		42%	25%	24%	25%	<0.001
	±	4.9%	2.8%	2.5%	3.5%	decrease
	N	1,604	1,392	1,231	1,248	
Boys		44%	27%	25%	29%	<0.001
	±	5.2%	3.6%	3.0%	5.0%	decrease
	N	805	700	612	581	
Girls		39%	23%	23%	21%	<0.001
	±	6.1%	3.8%	4.0%	3.6%	decrease
	N	793	687	615	661	
AK Native Youth		69%	53%	37%	39%	<0.001
	±	8.2%	6.9%	5.0%	8.7%	decrease
	N	179	263	236	331	
White Youth		40%	17%	21%	21%	<0.001
	±	3.9%	2.9%	3.4%	3.6%	decrease
	N	1,129	861	794	690	
Other Race Group Youth		26%	15%	12%	13%	<0.01
	±	5.8%	5.2%	3.2%	4.7%	decrease
	N	296	268	201	227	
9th Grade		40%	17%	19%	20%	<0.001
	±	7.4%	3.8%	5.3%	6.5%	decrease
	N	481	481	389	359	
10th Grade		38%	29%	25%	23%	<0.01
	±	8.3%	6.1%	6.1%	6.3%	decrease
	N	380	298	237	306	
11th Grade		44%	29%	25%	25%	<0.001
	±	4.2%	7.2%	6.1%	5.9%	decrease
	N	470	340	316	330	
12th Grade		45%	26%	29%	33%	<0.01
	±	7.3%	6.5%	5.6%	7.6%	decrease
	N	265	257	273	226	

6-B Percent of Alaska High School Youth Who Use Both Cigarettes and Smokeless Tobacco, 1995-2009

		1995	2003	2007	2009	p-value
All High School Students		11%	5%	5%	5%	<0.001
	±	1.8%	1.8%	1.5%	1.7%	decrease
	N	1,620	1,442	1,293	1,320	
Boys		16%	7%	6%	6%	<0.001
	±	2.7%	2.0%	2.5%	2.7%	decrease
	N	811	735	643	613	
Girls		5%	3%	3%	3%	0.08
	±	1.8%	2.9%	1.3%	1.7%	
	N	803	702	644	700	
AK Native Youth		15%	13%	9%	7%	<0.01
	±	3.5%	7.3%	4.6%	3.4%	decrease
	N	181	277	255	351	
White Youth		11%	3%	3%	4%	<0.001
	±	2.2%	1.2%	1.4%	2.1%	decrease
	N	1,139	886	828	719	
Other Race Group Youth		6%	3%	2%	6%	0.56
	±	3.4%	2.4%	2.2%	3.4%	
	N	300	279	210	250	
9th Grade		10%	4%	5%	3%	<0.001
	±	3.0%	1.5%	2.1%	1.9%	decrease
	N	493	501	416	370	
10th Grade		10%	8%	4%	5%	<0.01
	±	3.4%	5.0%	2.5%	2.8%	decrease
	N	380	303	249	330	
11th Grade		12%	6%	4%	3%	<0.001
	±	3.4%	3.5%	2.0%	2.7%	decrease
	N	472	353	330	348	
12th Grade		11%	4%	6%	7%	0.27
	±	4.3%	2.8%	3.5%	4.8%	
	N	267	267	281	243	

Tables for Chapter 8: Tobacco Use During Pregnancy

8-A Cigarette Smoking by Alaska Women in the Last Three Months of Pregnancy

		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
All		22%	18%	18%	17%	17%	15%	18%	17%	17%	16%	15%	15%	15%	<0.001
	±	2.5%	2.2%	2.2%	2.1%	2.1%	1.9%	2.1%	2.1%	2.4%	2.3%	2.2%	2.2%	2.3%	
	N	1,264	1,331	1,348	1,400	1,371	1,417	1,488	1,506	1,241	1,251	1,221	1,331	1,206	decrease
AK Native		33%	29%	33%	29%	29%	28%	29%	26%	31%	28%	28%	31%	30%	0.29
	±	3.8%	3.6%	3.4%	3.3%	3.3%	3.1%	3.1%	2.9%	3.9%	3.7%	3.9%	3.8%	3.9%	
	N	512	542	588	618	618	640	658	677	514	523	476	517	501	
AK Non-Native		18%	14%	14%	13%	13%	10%	14%	14%	13%	12%	11%	10%	10%	<0.001
	±	3.1%	2.7%	2.7%	2.5%	2.5%	2.3%	2.5%	2.6%	3.0%	2.8%	2.6%	2.6%	2.8%	
	N	752	789	760	782	753	777	830	829	727	728	745	814	705	decrease
Medicaid		33%	27%	28%	28%	25%	21%	27%	24%	25%	23%	22%	23%	22%	<0.001
for Prenatal Care	±	5.1%	4.5%	4.5%	4.2%	3.8%	3.3%	3.7%	3.5%	4.2%	3.8%	3.8%	3.8%	3.9%	
	N	448	504	522	624	641	684	729	761	620	646	658	708	636	decrease
Not Medicaid		16%	12%	12%	9%	11%	10%	11%	10%	11%	10%	8%	8%	9%	<0.001
for Prenatal Care	±	2.7%	2.3%	2.2%	2.0%	2.2%	2.1%	2.2%	2.3%	2.8%	2.6%	2.2%	2.2%	2.6%	
	N	796	806	813	783	775	786	832	798	667	677	698	732	623	decrease
Education <12 years		45%	30%	35%	40%	36%	36%	41%	32%	41%	37%	29%	41%	31%	0.40
	±	8.2%	7.1%	7.4%	7.6%	7.6%	6.8%	6.7%	6.4%	8.7%	8.1%	7.4%	8.4%	8.1%	
	N	182	192	213	220	221	226	266	259	182	215	191	215	196	
Education 12 years		28%	24%	24%	22%	18%	17%	20%	21%	21%	21%	19%	16%	17%	<0.001
	±	4.3%	3.9%	3.7%	3.7%	3.1%	3.0%	3.3%	3.5%	4.0%	3.9%	3.8%	3.2%	3.6%	
	N	554	602	605	639	631	687	661	699	580	559	572	620	579	decrease
Education >12 years		9%	7%	8%	5%	9%	6%	7%	6%	7%	6%	6%	7%	6%	0.12
	±	2.6%	2.3%	2.6%	2.0%	2.6%	2.2%	2.3%	2.0%	2.8%	2.3%	2.4%	2.3%	2.7%	
	N	518	527	494	525	518	507	550	563	467	542	581	585	452	
Ages 15-19		32%	27%	25%	27%	18%	23%	27%	24%	25%	27%	20%	22%	23%	0.19
	±	8.4%	8.2%	7.7%	7.6%	6.3%	6.1%	6.9%	6.8%	8.8%	9.2%	7.6%	7.7%	9.3%	
	N	142	162	163	196	188	186	212	189	137	125	155	175	136	
Ages 20-24		28%	23%	25%	19%	26%	18%	21%	21%	19%	22%	16%	22%	21%	0.01
	±	5.6%	4.8%	4.7%	4.1%	4.8%	3.8%	4.1%	4.0%	4.6%	4.9%	4.1%	4.5%	4.7%	
	N	343	348	392	414	396	416	433	513	380	383	392	447	373	decrease
Ages 25-34		18%	13%	12%	15%	13%	12%	17%	13%	16%	14%	15%	11%	12%	0.07
	±	3.4%	2.8%	2.5%	2.9%	2.6%	2.5%	2.9%	2.9%	3.4%	3.0%	3.2%	2.7%	3.0%	
	N	610	633	618	627	654	697	712	679	616	639	669	665	603	
Ages 35 and older		12%	12%	21%	11%	10%	11%	8%	11%	13%	7%	6%	9%	9%	0.004
	±	5.0%	4.6%	6.8%	4.4%	4.2%	4.7%	4.0%	4.8%	5.9%	4.0%	4.1%	4.1%	5.3%	
	N	168	191	180	193	193	195	225	219	187	205	168	191	170	decrease

8-B Smokeless Tobacco Use by Alaska Women During Pregnancy: 1996-2003

		1996	1997	1998	1999	2000	2001	2002	2003	p-value
All		7%	6%	7%	6%	5%	5%	5%	4%	<0.001
	±	1.1%	0.9%	1.1%	0.9%	0.8%	0.7%	0.8%	0.7%	
	N	1,039	1,364	1,361	1,444	1,460	1,523	1,605	1,617	decrease
AK Native		27%	21%	22%	20%	20%	18%	18%	17%	<0.001
	±	4.1%	3.1%	3.0%	2.9%	2.8%	2.6%	2.5%	2.4%	
	N	410	566	596	630	643	654	672	693	decrease
Non-Native		0.3%	1.0%	1.6%	0.7%	0.5%	0.4%	0.8%	0.4%	0.19
	±	0.5%	0.7%	1.0%	0.6%	0.5%	0.4%	0.6%	0.4%	
	N	625	793	758	783	752	786	831	827	

8-C Spit Tobacco or Iq'mik Use by Alaska Women During Pregnancy: 2004-2008

		2004	2005	2006	2007	2008	p-value
All		5%	6%	4%	5%	5%	0.55
	±	1.1%	0.9%	0.8%	1.0%	0.9%	
	N	1,312	1,337	1,386	1,476	1,273	
AK Native		17%	21%	14%	18%	18%	0.90
	±	3.1%	3.3%	2.9%	3.1%	3.3%	
	N	508	518	485	526	498	
Non-Native		1.2%	0.5%	0.2%	1.1%	0.3%	0.33
	±	1.0%	0.6%	0.4%	0.9%	0.4%	
	N	726	715	738	807	698	

Tables for Chapter 9: Secondhand Smoke Exposure and Bans or Policies to Prevent Exposure

9-A Percent of Alaska Adults who Report being Exposed to Smoke in their Homes in the Past Month, 1998 – 2008

		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
All Adults		26%		22%				16%	14%	15%	11%	9%	<0.001
	±	2.7%		2.6%				2.0%	1.8%	2.7%	1.9%	1.7%	decrease
	N	1,958		2,065				2,065	2,460	2,936	2,128	2,559	
Male		28%		22%				18%	16%	14%	12%	12%	<0.001
	±	4.1%		3.8%				3.0%	2.8%	3.4%	2.8%	2.8%	decrease
	N	909		981				1101	1377	937	1190	1045	
Female		23%		21%				14%	11%	16%	11%	7%	<0.001
	±	3.4%		3.5%				2.5%	2.0%	4.1%	2.6%	1.9%	decrease
	N	1049		1084				1359	1559	1191	1369	1231	
AK Native		22%		31%				19%	13%	19%	10%	7%	<0.001
	±	4.9%		7.3%				4.9%	3.9%	5.7%	3.2%	2.9%	decrease
	N	349		388				462	565	394	474	426	
Non-Native		26%		20%				16%	14%	14%	12%	10%	<0.001
	±	3.1%		2.7%				2.2%	2.0%	3.0%	2.2%	1.9%	decrease
	N	1589		1622				1973	2330	1694	2042	1813	
Low SES non-Native		37%		27%				25%	18%	24%	18%	18%	<0.001
(age 25-64)	±	7.7%		7.8%				6.4%	4.9%	8.6%	6.5%	6.5%	decrease
	N	284		259				337	409	232	273	263	
High SES non-Native		22%		17%				13%	12%	9%	10%	7%	<0.001
(age 25-64)	±	3.5%		3.0%				2.4%	2.2%	2.0%	2.2%	1.9%	decrease
	N	1028		1097				1287	1496	1168	1398	1239	
Ages 18-29		30%		22%				16%	14%	21%	11%	9%	<0.001
	±	5.8%		6.2%				4.9%	4.7%	8.7%	5.2%	4.4%	decrease
	N	1205		1281				1412	1594	1155	1361	1189	
Ages 30-54		24%		22%				16%	14%	12%	11%	9%	<0.001
	±	3.4%		3.3%				2.6%	2.3%	2.7%	2.4%	2.3%	decrease
	N	1205		1281				1412	1594	1155	1361	1189	
Age 55 and older		25%		20%				16%	12%	16%	12%	10%	<0.001
	±	6.7%		5.5%				3.9%	2.9%	4.0%	3.5%	2.6%	decrease
	N	352		399				589	818	660	771	746	

9-A (continued) Percent of Alaska Adults who Report being Exposed to Smoke in their Homes in the Past Month, by Region and by Smoking Status, 1998 – 2008

Regions		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
Anchorage/Mat-Su		25%		21%				14%	13%	15%	10%	8%	<0.001
	±	4.8%		4.4%				3.3%	3.0%	4.6%	3.1%	2.7%	decrease
	N	397		425				541	594	460	521	482	
Gulf Coast		28%		26%				21%	15%	18%	15%	14%	<0.001
	±	5.2%		5.1%				4.3%	3.3%	4.3%	4.2%	3.9%	decrease
	N	409		407				514	620	432	522	445	
Southwest		20%		21%				14%	11%	15%	13%	7%	<0.001
	±	6.3%		6.7%				4.9%	3.7%	7.4%	8.8%	4.0%	decrease
	N	201		217				250	306	191	260	243	
Southeast		22%		20%				15%	14%	12%	12%	11%	<0.001
	±	4.6%		4.5%				3.7%	3.2%	3.5%	3.1%	3.5%	decrease
	N	393		428				418	598	423	539	427	
North/NW/Interior		27%		26%				19%	18%	20%	13%	9%	<0.001
	±	7.3%		7.7%				5.8%	5.0%	6.8%	4.9%	4.5%	decrease
	N	197		206				255	293	215	266	254	
Fairbanks North Star		30%		24%				18%	12%	13%	12%	9%	<0.001
	±	5.3%		4.6%				3.9%	3.1%	4.0%	3.6%	3.8%	decrease
	N	361		382				482	525	407	451	425	
Smokers		64%		58%				48%	32%	36%	32%	27%	<0.001
	±	5.4%		6.5%				5.7%	5.0%	6.5%	6.3%	5.5%	decrease
	N	533		529				612	723	522	534	508	
Former Smokers		13%		12%				9%	11%	9%	6%	5%	<0.001
	±	4.6%		4.5%				3.3%	3.3%	3.4%	2.2%	2.2%	decrease
	N	502		539				641	813	616	738	699	
Never Smokers		12%		8%				5%	5%	8%	6%	4%	<0.001
	±	2.9%		2.2%				1.3%	1.6%	4.0%	2.3%	2.0%	decrease
	N	921		986				1192	1383	980	1268	1056	

9-B Percent of Alaska Children Exposed to Smoke in the Home, 2004 – 2008

		2004	2005	2006	2007	2008	p-value
All Adults		13%	9%	9%	8%	6%	<0.001
	±	2.9%	2.2%	2.9%	2.4%	2.2%	decrease
	N	2,460	2,936	2,128	2,559	2,276	
AK Native		17%	7%	10%	8%	3%	<0.01
	±	8.0%	3.7%	4.9%	4.5%	2.2%	decrease
	N	462	565	394	474	426	
Non-Native		12%	9%	9%	8%	6%	<0.01
	±	3.1%	2.5%	3.3%	2.5%	2.5%	decrease
	N	1973	2330	1694	2042	1813	
Low SES non-Native		21%	13%	12%	13%	10%	0.04
(age 25-64)	±	8.0%	5.7%	7.8%	7.8%	5.7%	decrease
	N	337	409	232	273	263	
High SES non-Native		8%	8%	7%	6%	4%	0.08
(age 25-64)	±	2.5%	3.1%	3.1%	2.5%	2.7%	
	N	1287	1496	1168	1398	1239	
Smokers		39%	20%	23%	20%	12%	<0.001
	±	8.4%	6.1%	8.6%	7.3%	4.7%	decrease
	N	612	723	522	534	508	
Former Smokers		9%	10%	4%	6%	3%	0.05
	±	6.7%	5.5%	3.5%	3.3%	3.5%	decrease
	N	641	813	616	738	699	
Never Smokers		4%	3%	5%	5%	4%	0.49
	±	1.6%	1.6%	2.9%	2.5%	2.9%	
	N	1192	1383	980	1268	1056	

9-C Percent of Alaska High School Youth Exposed to Indoor Cigarette Smoke in the Past 7 Days, 2003 – 2009

	1995	2003	2007	2009	p-value
All High School Students		49%	46%	40%	<0.001
±		3.1%	3.7%	3.1%	decrease
N		1,461	1,310	1,370	
Boys		46%	41%	37%	<0.01
±		3.5%	5.1%	4.7%	decrease
N		750	652	642	
Girls		53%	52%	43%	0.01
±		4.7%	4.9%	4.1%	decrease
N		700	650	718	
AK Native Youth		49%	48%	41%	0.15
±		9.4%	7.6%	5.3%	
N		279	262	369	
White Youth		50%	48%	42%	0.02
±		3.5%	4.5%	4.1%	decrease
N		896	831	737	
Other Race Group Youth		47%	35%	32%	<0.01
±		7.1%	7.6%	6.3%	decrease
N		286	217	264	
9th Grade		45%	41%	39%	0.10
±		4.6%	5.6%	5.9%	
N		505	420	382	
10th Grade		53%	50%	39%	0.02
±		6.6%	7.7%	6.8%	decrease
N		308	255	341	
11th Grade		52%	48%	39%	<0.01
±		5.0%	7.3%	5.5%	decrease
N		357	334	362	
12th Grade		47%	47%	42%	0.43
±		7.8%	6.5%	6.6%	
N		269	283	251	
Current Smokers		72%	73%	76%	0.39
±		6.1%	6.3%	6.7%	
N		247	184	186	
Not Current Smokers		43%	40%	31%	<0.001
±		3.3%	4.3%	3.3%	decrease
N		1,145	1,056	1,099	

9-D Percent of Alaska Adults who Report that Smoking is Not Allowed Anywhere In their Homes, 2001 – 2008

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
All Adults				77%			80%	84%	86%	86%	89%	<0.001
±				2.4%			2.1%	1.9%	2.5%	1.9%	1.9%	increase
N				2,646			2,646	2,457	2,930	2,116	2,535	
Male				77%			77%	81%	87%	85%	86%	<0.001
±				3.5%			3.3%	3.0%	3.1%	2.9%	3.0%	increase
N				1,260			1,098	1,375	933	1,176	1,037	
Female				77%			83%	87%	84%	88%	92%	<0.001
±				3.2%			2.7%	2.2%	4.0%	2.6%	2.1%	increase
N				1,386			1,359	1,555	1,183	1,359	1,226	
AK Native				81%			77%	83%	84%	87%	89%	<0.001
±				4.3%			5.6%	4.6%	5.0%	3.7%	3.4%	increase
N				521			463	564	391	469	427	
Non-Native				76%			80%	84%	86%	86%	89%	<0.001
±				2.7%			2.3%	2.1%	2.9%	2.2%	2.1%	increase
N				2,048			1,969	2,326	1,685	2,024	1,801	
Low SES non-Native				67%			70%	77%	80%	84%	76%	<0.001
(age 25-64) ±				7.3%			6.8%	5.7%	7.4%	5.6%	7.5%	increase
N				325			336	409	227	272	263	
High SES non-Native				80%			84%	87%	90%	87%	92%	<0.001
(age 25-64) ±				3.2%			2.6%	2.5%	2.0%	2.4%	2.1%	increase
N				1414			1284	1490	1166	1386	1236	
Ages 18-29				79%			82%	86%	82%	89%	91%	<0.001
±				5.5%			5.0%	4.2%	8.7%	4.8%	4.3%	increase
N				1572			1411	1588	1149	1350	1189	
Ages 30-54				77%			81%	84%	89%	86%	88%	<0.001
±				3.0%			2.8%	2.6%	2.1%	2.6%	2.6%	increase
N				1572			1411	1588	1149	1350	1189	
Age 55 and older				75%			75%	81%	81%	85%	87%	<0.001
±				5.1%			4.5%	4.0%	4.2%	3.5%	3.1%	increase
N				544			588	817	655	764	733	

9-D (continued) Percent of Alaska Adults who Report that Smoking is Not Allowed Anywhere In their Homes, 2001 – 2008

Regions	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
Anchorage/Mat-Su				77%			81%	83%	86%	88%	90%	<0.001
±				4.1%			3.6%	3.3%	4.4%	3.2%	3.1%	increase
N				512			539	592	459	517	480	
Gulf Coast				72%			77%	86%	82%	82%	85%	<0.001
±				4.8%			4.2%	2.9%	4.1%	4.4%	3.5%	increase
N				512			513	619	427	519	442	
Southwest				83%			89%	89%	92%	91%	88%	0.03
±				4.7%			4.3%	3.9%	4.3%	4.0%	5.3%	increase
N				291			250	305	189	258	244	
Southeast				79%			81%	84%	87%	84%	85%	<0.001
±				3.8%			4.1%	3.2%	3.3%	3.5%	3.9%	increase
N				517			419	599	420	535	425	
North/NW/Interior				77%			75%	79%	80%	84%	88%	<0.001
±				5.3%			6.4%	5.1%	6.4%	5.6%	5.4%	increase
N				314			255	292	214	261	250	
Fairbanks North Star				74%			77%	85%	86%	86%	91%	<0.001
±				4.3%			4.2%	3.4%	4.1%	3.8%	3.2%	increase
N				500			481	523	407	445	422	
Smokers				48%			51%	62%	65%	65%	69%	<0.001
±				5.3%			5.7%	5.3%	6.3%	6.3%	5.9%	increase
N				806			608	721	519	530	506	
Former Smokers				84%			85%	89%	90%	90%	90%	<0.001
±				3.6%			3.7%	3.2%	3.2%	2.7%	3.3%	increase
N				766			642	813	613	734	691	
Never Smokers				90%			91%	92%	93%	93%	96%	<0.001
±				2.4%			2.0%	2.0%	3.8%	2.3%	1.8%	increase
N				1068			1192	1379	973	1254	1052	

9-E Percent of Employed or Self-Employed Alaska Adults Working Primarily Indoors who Report that Smoking is not Allowed in Any Work Areas, 1998 – 2008

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
All Adults	84%		80%	90%			85%	84%	84%	88%	89%	<0.01
±	3.2%		3.9%	2.0%			2.5%	2.8%	3.4%	2.4%	2.3%	increase
N	1,061		1,108	1,523			1,364	1,521	1,119	1,334	1,173	
Male	78%		78%	89%			80%	79%	80%	85%	85%	0.15
±	5.8%		5.8%	3.1%			4.3%	4.7%	5.7%	3.8%	3.9%	
N	422		471	644			535	636	426	571	480	
Female	89%		82%	91%			89%	88%	87%	91%	93%	0.01
±	3.1%		5.3%	2.5%			2.9%	3.0%	4.1%	2.8%	2.5%	increase
N	639		637	879			829	885	693	763	693	
AK Native	84%		77%	83%			81%	78%	78%	82%	80%	0.68
±	8.9%		12.6%	7.4%			6.8%	7.9%	10.4%	6.6%	7.4%	
N	140		162	266			226	237	158	200	167	
Non-Native	84%		80%	91%			85%	85%	84%	89%	90%	<0.01
±	3.4%		4.2%	2.0%			2.8%	3.0%	3.7%	2.5%	2.4%	increase
N	913		929	1214			1123	1270	940	1108	993	
Low SES non-Native	76%		65%	87%			84%	78%	77%	86%	86%	0.06
(age 25-64) ±	8.9%		15.0%	5.4%			7.2%	9.7%	12.3%	7.8%	9.6%	
N	139		113	165			154	171	98	106	103	
High SES non-Native	86%		85%	93%			87%	88%	89%	90%	91%	0.06
(age 25-64) ±	4.2%		3.4%	1.9%			2.8%	2.8%	2.8%	2.7%	2.4%	
N	689		735	971			878	977	782	919	823	
Ages 18-29	85%		77%	87%			79%	76%	74%	82%	81%	0.19
±	5.2%		9.6%	5.6%			8.4%	7.5%	11.0%	6.8%	7.6%	
N	206		207	292			210	263	158	206	145	
Ages 30-54	86%		81%	91%			85%	85%	87%	90%	92%	<0.01
±	3.4%		4.3%	2.2%			2.9%	3.2%	3.4%	2.8%	2.3%	increase
N	756		794	1035			939	961	729	849	753	
Age 55 and older	71%		76%	92%			90%	90%	87%	92%	91%	<0.01
±	16.9%		13.2%	4.3%			4.1%	5.3%	6.2%	5.7%	5.1%	increase
N	96		101	178			200	275	217	262	260	

9-E (continued) Percent of Employed or Self-Employed Alaska Adults Working Primarily Indoors who Report that Smoking is not Allowed in Any Work Areas, by Region and Smoking Status, 1998 – 2008

Regions		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
Anchorage/Mat-Su		87%		80%	92%			88%	84%	85%	91%	93%	0.04
	±	5.3%		6.5%	3.2%			4.0%	4.7%	5.5%	3.7%	3.3%	increase
	N	242		243	308			311	311	271	283	253	
Gulf Coast		79%		73%	85%			77%	80%	81%	90%	83%	0.03
	±	7.1%		8.2%	4.8%			6.5%	5.0%	6.8%	3.9%	6.2%	increase
	N	175		181	252			259	311	189	242	208	
Southwest		81%		88%	89%			81%	87%	91%	86%	88%	0.40
	±	10.1%		6.7%	5.4%			8.5%	6.1%	5.4%	6.5%	7.1%	
	N	104		103	165			126	158	87	132	122	
Southeast		83%		83%	91%			81%	86%	82%	86%	88%	0.69
	±	5.8%		5.7%	3.7%			5.6%	4.2%	6.2%	4.5%	5.2%	
	N	224		253	279			247	308	236	285	221	
North/NW/Interior		82%		77%	79%			85%	84%	80%	87%	78%	0.53
	±	8.3%		10.5%	8.0%			7.1%	6.8%	9.4%	6.2%	9.2%	
	N	120		103	187			129	140	103	137	119	
Fairbanks North Star		78%		81%	89%			80%	84%	80%	80%	85%	0.67
	±	6.7%		5.8%	3.6%			5.2%	5.1%	7.0%	6.3%	5.9%	
	N	196		225	332			292	293	233	255	250	
Smokers		74%		68%	82%			73%	77%	73%	79%	83%	0.10
	±	7.3%		9.6%	5.4%			7.3%	7.0%	9.1%	7.0%	6.0%	
	N	268		268	392			302	325	242	252	218	
Former Smokers		87%		79%	92%			88%	81%	86%	89%	87%	0.75
	±	5.7%		8.4%	3.1%			4.5%	6.0%	5.3%	4.9%	4.8%	
	N	253		271	410			342	404	322	368	335	
Never Smokers		87%		86%	93%			88%	88%	87%	91%	93%	0.08
	±	4.5%		3.9%	2.4%			3.1%	3.3%	4.7%	2.8%	2.5%	
	N	540		566	717			782	856	608	888	763	

Tables for Chapter 10: Support for Clean Indoor Air Policies and Protection From Secondhand Smoke

10-A Percent of Alaska Adults who Agree that Smoking Should Not be Allowed in Indoor Work Areas, 1998 – 2008

		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
All Adults		70%		78%				80%	80%	77%	78%	79%	<0.001
	±	2.8%		2.7%				2.2%	2.2%	2.9%	2.5%	2.9%	increase
	N	1,951		2,052				2,448	2,921	2,110	2,551	2,268	
Male		63%		72%				72%	75%	71%	72%	72%	0.01
	±	4.4%		4.1%				3.5%	3.4%	4.5%	4.0%	4.5%	increase
	N	903		972				1,090	1,361	927	1,185	1,037	
Female		77%		84%				88%	86%	84%	86%	85%	<0.001
	±	3.5%		3.1%				2.3%	2.5%	3.6%	2.5%	3.5%	increase
	N	1,048		1,080				1,358	1,560	1,183	1,366	1,231	
AK Native		73%		77%				76%	77%	73%	78%	74%	0.85
	±	5.9%		7.2%				5.7%	5.8%	7.7%	7.0%	6.9%	
	N	349		387				461	564	391	472	431	
Non-Native		70%		78%				81%	81%	78%	79%	79%	<0.001
	±	3.2%		2.8%				2.3%	2.3%	3.2%	2.7%	3.2%	increase
	N	1,582		1,610				1,964	2,317	1,682	2,036	1,801	
Low SES non-Native		66%		73%				70%	67%	75%	75%	79%	0.05
(age 25-64)	±	7.5%		7.6%				6.7%	7.0%	8.6%	6.7%	7.2%	
	N	284		258				333	405	228	273	263	
High SES non-Native		74%		80%				83%	85%	83%	82%	83%	<0.001
(age 25-64)	±	3.8%		3.2%				2.8%	2.6%	3.0%	2.9%	3.3%	increase
	N	1,024		1,091				1,285	1,489	1,158	1,394	1,233	
Ages 18-29		65%		76%				85%	80%	74%	75%	71%	0.22
	±	6.2%		6.7%				4.4%	5.0%	8.8%	7.0%	8.5%	
	N	394		374				429	494	278	395	315	
Ages 30-54		73%		79%				79%	80%	80%	81%	82%	<0.001
	±	3.5%		3.2%				3.0%	3.0%	3.4%	3.0%	3.4%	increase
	N	1,203		1,274				1,408	1,586	1,146	1,357	1,187	
Age 55 and older		66%		76%				78%	82%	75%	76%	79%	0.02
	±	7.7%		6.1%				4.4%	3.7%	4.4%	4.3%	4.2%	increase
	N	347		393				584	810	651	767	739	

10-A (continued) Percent of Alaska Adults who Agree that Smoking Should Not be Allowed in Indoor Work Areas, by Region and by Smoking Status, 1998 – 2008

Regions		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
Anchorage/Mat-Su		71%		81%				82%	81%	78%	77%	79%	0.16
	±	5.1%		4.5%				3.6%	3.7%	5.0%	4.3%	4.7%	
	N	395		419				538	593	454	520	479	
Gulf Coast		65%		67%				73%	77%	70%	75%	75%	<0.001
	±	5.5%		6.2%				4.5%	4.0%	5.1%	4.7%	5.0%	increase
	N	408		406				512	613	426	520	439	
Southwest		79%		82%				81%	89%	79%	88%	78%	0.55
	±	6.6%		6.9%				5.9%	4.1%	7.4%	5.2%	7.5%	
	N	201		216				251	304	191	260	245	
Southeast		76%		79%				76%	81%	79%	84%	83%	0.01
	±	4.6%		4.5%				4.7%	3.7%	4.3%	3.3%	4.2%	increase
	N	391		425				414	596	421	537	427	
North/NW/Interior		73%		73%				77%	78%	74%	79%	65%	0.78
	±	7.1%		7.6%				6.6%	5.3%	6.7%	6.0%	13.7%	
	N	196		206				255	293	214	266	256	
Fairbanks North Star		62%		74%				82%	79%	80%	79%	83%	<0.001
	±	5.3%		4.8%				3.7%	4.1%	4.6%	4.6%	4.6%	increase
	N	360		380				478	522	404	448	422	
Smokers		53%		63%				59%	62%	57%	60%	57%	0.68
	±	5.9%		6.6%				5.6%	5.5%	6.9%	6.9%	7.2%	
	N	532		524				609	719	514	531	507	
Former Smokers		70%		75%				79%	80%	79%	78%	76%	0.03
	±	5.9%		5.3%				4.3%	4.3%	4.7%	4.5%	5.1%	increase
	N	497		533				640	808	610	735	693	
Never Smokers		79%		86%				90%	90%	87%	86%	89%	<0.001
	±	3.9%		2.6%				2.1%	2.2%	4.0%	2.9%	3.3%	increase
	N	920		984				1,184	1,377	974	1,265	1,054	

10-B Percent of Alaska Adults that Agree that Smoking Should Not be Allowed in Restaurants, 1998 – 2008

		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
All Adults		54%		62%				69%	68%	73%	75%	77%	<0.001
	±	3.1%		3.1%				2.5%	2.5%	2.9%	2.6%	2.8%	increase
	N	1,952		2,050				2,050	2,449	2,924	2,117	2,558	
Male		49%		58%				63%	61%	70%	69%	72%	<0.001
	±	4.6%		4.5%				3.9%	3.8%	4.3%	4.1%	4.4%	increase
	N	904		971				1,093	1,365	928	1,188	1,043	
Female		59%		66%				76%	76%	77%	82%	83%	<0.001
	±	4.0%		4.2%				3.1%	3.0%	3.9%	3.2%	3.1%	increase
	N	1,048		1,079				1,356	1,559	1,189	1,370	1,230	
AK Native		53%		59%				68%	67%	78%	76%	83%	<0.001
	±	6.6%		7.7%				6.4%	5.6%	5.4%	7.0%	4.7%	increase
	N	349		386				460	563	393	474	430	
Non-Native		54%		62%				70%	69%	73%	75%	76%	<0.001
	±	3.5%		3.4%				2.8%	2.8%	3.3%	2.8%	3.1%	increase
	N	1,583		1,609				1,963	2,322	1,687	2,041	1,808	
Low SES non-Native		50%		58%				60%	59%	71%	76%	75%	<0.001
(age 25-64)	±	7.8%		8.8%				7.4%	7.2%	8.5%	6.5%	7.8%	increase
	N	284		258				334	407	230	272	263	
High SES non-Native		59%		67%				73%	72%	75%	78%	78%	<0.001
(age 25-64)	±	4.3%		4.0%				3.2%	3.2%	3.4%	3.1%	3.5%	increase
	N	1,024		1,090				1,281	1,490	1,161	1,396	1,235	
Ages 18-29		43%		56%				65%	65%	69%	70%	77%	<0.001
	±	6.5%		7.3%				6.7%	5.9%	8.6%	7.5%	7.3%	increase
	N	394		374				429	494	278	395	315	
Ages 30-54		59%		64%				69%	69%	76%	78%	78%	<0.001
	±	3.8%		3.9%				3.3%	3.3%	3.4%	3.1%	3.7%	increase
	N	1,203		1,274				1,405	1,586	1,148	1,357	1,187	
Age 55 and older		52%		62%				73%	71%	73%	73%	76%	<0.001
	±	7.9%		6.9%				4.6%	4.6%	4.5%	4.4%	4.3%	increase
	N	348		391				587	813	656	774	743	

10-B (continued) Percent of Alaska Adults who Agree that Smoking Should Not be Allowed in Restaurants, by Region and by Smoking Status, 1998 – 2008

Regions	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	p-value
Anchorage/Mat-Su	55%		62%				72%	70%	75%	75%	77%	<0.001
±	5.5%		5.4%				4.3%	4.2%	4.9%	4.5%	4.6%	increase
N	395		419				538	594	457	519	481	
Gulf Coast	50%		58%				65%	66%	68%	74%	74%	<0.001
±	6%		6%				5%	4%	5%	5%	5%	increase
N	408		404				511	614	430	520	443	
Southwest	57%		72%				71%	73%	84%	82%	81%	<0.001
±	7.9%		9.8%				7.8%	5.9%	5.7%	5.7%	7.2%	increase
N	201		216				250	304	191	261	243	
Southeast	54%		65%				64%	67%	70%	78%	76%	<0.001
±	5.5%		5.2%				5.3%	4.2%	5.0%	3.8%	4.6%	increase
N	391		426				414	599	420	540	426	
North/NW/Interior	54%		60%				66%	66%	73%	78%	84%	<0.001
±	8.1%		8.6%				7.1%	6.1%	6.6%	5.8%	5.9%	increase
N	196		205				256	293	215	267	256	
Fairbanks North Star	51%		60%				68%	65%	70%	71%	78%	<0.001
±	5.6%		5.3%				4.6%	4.7%	5.2%	5.0%	5.2%	increase
N	361		380				480	520	404	451	424	
Smokers	28%		29%				46%	46%	49%	57%	60%	<0.001
±	5.3%		5.3%				5.7%	5.7%	6.9%	7.0%	7.2%	increase
N	533		523				609	723	518	535	508	
Former Smokers	52%		61%				70%	71%	74%	73%	73%	<0.001
±	6.3%		6.2%				5.1%	4.4%	4.9%	4.9%	5.0%	increase
N	497		531				640	806	613	739	697	
Never Smokers	68%		79%				80%	78%	85%	83%	87%	<0.001
±	4.3%		3.4%				3.1%	3.1%	3.0%	3.0%	3.1%	increase
N	920		985				1,185	1,379	973	1,265	1,054	

Part IX - Appendices

B. Descriptive Tables

Descriptive tables provide information about disparities in the prevalence of tobacco use and exposure, as well as related behaviors, attitudes and knowledge. These tables present the denominator "N" (number of people who responded to the question), point estimates, confidence intervals for the point prevalence, and the p-values from chi-square tests within each subgroup category. Where $p<0.05$, there is a significant difference between two or more of the subgroups in the comparison. When necessary, some tables also present the numerator "n" (number of people who provided a specific answer), along with point estimates and confidence intervals for the point prevalence. In many cases data from 2006-2008 (or 2007 and 2009, for YRBS) have been combined to provide adequate sample size for the analyses. Descriptive information is provided for the priority subpopulations and demographic groups, with the overall prevalence presented at the top of the table for reference.

For BRFSS data, the groups for comparison include priority populations and their counterparts (Alaska Natives/Non-Natives, and Low SES Non-Natives aged 25-64/higher SES Non-Natives aged 25-64), as well as gender, age group, and region. For some indicators, tables also provide comparison by smoking status, education, employment, general socioeconomic status (without regard to race or age), and presence of children in the household. Also included in this section are detailed comparison tables. Most of these tables show information for priority populations and their counterparts by key demographic factors, side by side. In some instances, the detailed tables present information based on smoking status, employment status, or presence of children in the household. For BRFSS data, information is flagged with an asterisk for estimates that lack statistical precision based on statistical guidelines derived from national standards (see Appendix C for more information). An asterisk across the category is used to denote that information is suppressed where denominator $N<30$ or numerator $n<5$.

For YRBS data, information is presented for each race group (Alaska Native, White, and Other Race) by gender and grade. Information is suppressed where denominator $N<100$ or numerator $n<5$.

For PRAMS data, information is presented by mother's race group (Alaska Native and Non-Native), prenatal care coverage (Medicaid or Not), mother's education and age. Information is suppressed where denominator $N<30$ or numerator $n<5$.

Tables for Chapter 1: Adult Cigarette Smoking and Quitting Smoking

1-1 Percent of Alaska Adults Who are Current Smokers (BRFSS 2008)

	N	Percent	Confidence Interval	p value
All Adults	4,915	21.9%	20.1-23.8%	
Male	2,272	24.1%	21.3-27.1%	
Female	2,643	19.5%	17.3-21.9%	p=0.01
Alaska Natives	938	43.3%	38.6-48.1%	
Non-Natives	3,919	18.5%	16.6-20.6%	p<0.001
Low SES non-Native (25-64)	575	35.3%	29.6-41.6%	
High SES non-Native (25-64)	2,644	15.4%	13.5-17.5%	p<0.001
Ages 18-29	676	30.3%	21.5-36.0%	
Ages 30-54	2,500	22.0%	19.8-24.4%	
Ages 55 and older	1,684	13.9%	11.8-16.2%	p<0.001
Anchorage/MatSu	1,035	19.1%	16.2-22.4%	
Gulf Coast	997	23.4%	20.4-26.7%	
Southwest	503	35.3%	30.0-41.0%	
Southeast	919	22.4%	19.4-25.7%	
North/NW/Interior	529	39.1%	32.5-46.0%	
Fairbanks North Star	932	18.5%	15.4-22.0%	p<0.001

1-2 Percent of Alaska Adults Who are Current Smokers by Five Race and Ethnicity Groups, (BRFSS 2006-2008)

	N	Percent	Confidence Interval	p value
All Adults	13,598	22.2%	21.2-23.4%	
Hispanic	396	23.0%	16.5-31.1%	p<0.001
Alaska Native (non-Hispanic)	2,613	41.6%	38.7-44.6%	reference group
White (non-Hispanic)	10,052	19.1%	17.9-20.3%	p<0.001
Asian (non-Hispanic)	253	11.0%	6.7-17.4%	p<0.001
African American (non-Hispanic)	208	14.8%	9.6-22.1%	p<0.001
Pacific Islander (non-Hispanic)	76	28.4%	15.6-45.9%	p=0.14

1-3 Percent of Alaska Adults Who are Current Smokers by Alaska Native Priority Group and Non-Native Group (BRFSS 2006-2008)

	Alaska Native				Non-Native			
	N	Percent	CI	p value	N	Percent	CI	p value
All Adults	2,711	41.9%	39.0-45.0%		11,325	19.1%	18.0-20.3%	
Male	1,191	47.1%	42.5-51.8%		5,181	20.8%	19.2-22.6%	
Female	1,520	36.7%	33.3-40.3%	p<0.001	6,144	17.2%	15.8-18.7%	p<0.01
Ages 18-29	550	51.7%	44.7-58.6%		1,474	26.2%	22.9-29.8%	
Ages 30-54	1,415	41.5%	37.9-45.2%		5,961	19.4%	18.0-20.8%	
Ages 55 and older	688	29.1%	24.3-34.4%	p<0.001	3,788	12.6%	11.2-14.1%	p<0.001
Children in Home	1,567	45.0%	41.0-49.1%		4,321	19.9%	18.1-21.8%	
No Children in Home	1,136	37.0%	32.8-41.4%	p<0.01	6,981	18.5%	17.1-20.0%	p=0.26
Anchorage/MatSu	205	35.7%	27.4-44.9%		2,766	18.5%	16.8-20.4%	
Gulf Coast	258	41.9%	34.6-49.6%		2,604	21.4%	19.5-23.3%	
Southwest	904	43.6%	39.6-47.6%		495	21.8%	16.8-27.7%	
Southeast	424	38.8%	33.6-44.3%		2,301	18.1%	16.4-20.0%	
North/NW/Interior	760	53.6%	48.8-57.2%		691	19.0%	15.5-23.1%	
Fairbanks North Star	160	31.8%	24.0-40.8%	p<0.01	2,468	19.9%	18.0-21.9%	p=0.20
Formal Education								
Less than high school	531	48.5%	41.3-55.9%		544	46.4%	39.0-53.9%	
High School degree	1,269	45.0%	40.8-49.4%		2,986	25.9%	23.6-28.2%	
Some college	648	37.5%	32.2-43.1%		3,502	20.5%	18.6-22.7%	
College degree or higher	249	25.5%	17.5-35.5%	p<0.001	4,269	8.3%	7.1-9.6%	p<0.001
Employment Status								
Employed	1,525	40.7%	37.2-44.4%		7,803	18.0%	16.7-19.3%	
Unemployed	471	53.8%	45.7-61.7%		460	43.7%	36.6-51.0%	
Not in Workforce	486	31.0%	24.5-38.4%		2,640	13.6%	11.7-15.8%	
Unable to Work	187	48.0%	36.9-59.3%	p<0.001	387	46.2%	38.6-54.1%	p<0.001
Socio-Economic Status								
Low SES	1,486	50.0%	45.8-54.2%		2,260	33.1%	29.9-36.5%	
Higher SES	1,216	32.4%	28.7-36.3%	p<0.001	9,048	15.1%	14.1-16.2%	p<0.001

1-4 Percent of Alaska Adults Who are Current Smokers by Low SES Non-Native (age 25-64) Priority Group and Higher SES Group (BRFSS 2006-2008)

	Low SES Non-Native (age 25-64)				Higher SES Non-Native (age 25-64)			
	N	Percent	CI	p value	N	Percent	CI	p value
All Adults	1,614	35.4%	31.9-39.0%		7,579	15.9%	14.7-17.1%	
Male	682	39.0%	33.5-44.9%		3,538	17.2%	15.5-19.0%	
Female	932	32.0%	27.9-36.5%	p=0.05	4,041	14.4%	12.9-16.0%	p=0.02
Ages 18-29	244	38.4%	29.7-48.0%		597	24.7%	20.2-29.8%	
Ages 30-54	1,026	36.6%	32.3-41.0%		5,003	15.6%	14.3-17.1%	
Ages 55 and older	336	26.2%	19.7-33.9%	p=0.09	1,912	12.7%	10.8-14.9%	p<0.001
Children in Home	883	32.5%	28.2-37.1%		3,123	14.8%	13.1-16.6%	
No Children in Home	730	39.8%	34.3-45.7%	p=0.05	4,437	16.8%	15.3-18.5%	p=0.09
Anchorage/MatSu	377	35.8%	30.2-41.7%		1,847	14.8%	13.0-16.7%	
Gulf Coast	444	32.2%	27.4-37.5%		1,652	18.8%	16.7-21.0%	
Rural (SW/North/NW/Interior)	133	33.9%	22.8-47.0%		764	18.2%	15.1-21.6%	
Southeast	297	35.4%	29.6-41.7%		1,566	15.9%	14.0-18.0%	
Fairbanks & Vicinity	363	37.2%	31.6-43.3%	p=0.83	1,750	17.2%	15.2-19.3%	p=0.02
Formal Education								
Less than high school	316	47.7%	40.0-55.5%		NA	NA	NA	
High School degree	550	33.0%	27.5-39.1%		1,725	27.9%	25.0-31.1%	
Some college	494	35.6%	29.5-42.3%		2,373	19.7%	17.5-22.1%	
College degree or higher	253	26.3%	18.2-36.4%	p<0.01	3,476	7.1%	6.1-8.4%	p<0.001
Employment Status								
Employed	905	32.1%	27.8-36.8%		6,234	15.2%	14.0-16.5%	
Unemployed	178	47.6%	36.3-59.1%		200	32.5%	24.0-42.3%	
Not in Workforce	281	26.1%	19.4-34.2%		1,032	14.0%	11.1-17.5	
Unable to Work	242	53.8%	44.0-63.3%	p<0.001	95	37.3%	25.2-51.3%	p<0.001

1-5 Usual Place of Cigarette Purchase by Alaska Adult Smokers (BRFSS 2006-2008)

	Rural Smokers			Non-Rural Smokers			Alaskan Smokers		
	n	Percent	CI	n	Percent	CI	n	Percent	CI
Where Usually Buy Cigarettes									
In own community	342	88.9%	84.8-91.9%	1,011	96.7%	95.0-97.8%	1,353	95.4%	94.0-96.6%
In other AK community	33	7.1%	4.7-10.7%	27	1.8%	1.0-3.2%	60	2.6%	1.8-3.8%
Community outside AK	5	0.7%	0.3-1.8%	8	0.8%	0.3-2.2%	13	0.8%	0.3-1.9%
Mail/Internet/800 Number	15	3.3%	1.8-5.8%	12	0.7%	0.4-1.3%	27	1.1%	0.7-1.7%
Total	**395**	**100.0%**		**1,058**	**100.0%**		**1,453**	**100.0%**	

1-6 Prevalence of Alaska Adult Daily Smokers and Some Days Smokers, (BRFSS 2008)

	N	Percent Daily	Confidence Interval	p value	Percent Some Days	Confidence Interval	p value
All Adults	4,915	15.6%	14.0-17.3%		6.3%	5.3-7.4%	
Male	2,272	17.6%	15.1-20.3%		6.5%	5.1-8.3%	
Female	2,643	13.5%	11.6-15.5%	p=0.01	6.0%	4.8-7.5%	p=0.64
Alaska Natives	938	27.9%	24.0-32.2%		15.4%	11.9-19.7%	
Non-Natives	3,919	13.6%	11.9-15.6%	p<0.001	4.9%	3.9-6.0%	p<0.001
Low SES non-Native (25-64)	575	27.9%	22.5-34.0%		7.5%	5.2-10.6%	
High SES non-Native (25-64)	2,644	10.7%	9.2-12.5%	p<0.001	4.7%	3.5-6.2%	p=0.04
Ages 18-29	676	20.8%	16.2-26.3%		9.5%	6.8-13.0%	
Ages 30-54	2,500	15.6%	13.7-17.7%		6.4%	5.2-7.9%	
Ages 55 and older	1,684	10.8%	9.0-12.9%	p<0.001	3.1%	2.2-4.3%	p<0.001
Anchorage/MatSu	1,035	13.9%	11.3-17.0%		5.2%	3.7-7.2%	
Gulf Coast	997	17.7%	15.1-20.6%		5.7%	4.1-8.0%	
Southwest	503	24.4%	19.5-30.0%		10.9%	7.9-14.8%	
Southeast	919	15.1%	12.6-18.0%		7.3%	5.5-9.6%	
North/NW/Interior	529	25.3%	20.4-30.8%		13.8%	10.0-18.8%	
Fairbanks North Star	932	13.2%	10.6-16.3%	p<0.001	5.3%	3.6-7.7%	p<0.001

1-7 Average Number of Cigarettes Smoked Daily, by Alaska Adult Daily Smokers and Some Days Smokers, (BRFSS 2006–2008)

	Daily Smokers			Non-Daily Smokers		
	N	Average	Confidence Interval	N	Average	Confidence Interval
All Adults	1,087	13.9	13.1-14.7	365	4.9	4.1-5.6
Male	574	15.4	14.2-16.5	158	5.1	4.1-6.0
Female	513	12.0	11.0-12.9	207	4.6	3.5-5.7
Alaska Natives	324	10.6	9.4-11.8	144	5.0	3.2-6.7
Non-Natives	748	15.0	14.1-16.0	218	4.8	4.0-5.5
Low SES non-Native (25-64)	210	14.7	13.0-16.5	52	6.2	4.5-7.9
High SES non-Native (25-64)	461	15.3	14.1-16.6	138	4.9	4.1-5.8
Ages 18-29	199	11.8	9.9-13.7	101	3.9	2.7-5.1
Ages 30-54	633	14.3	13.4-15.1	195	5.5	4.4-6.5
Ages 55 and older	243	16.5	14.9-18.1	65	5.5	4.0-7.0
Anchorage/MatSu	183	13.3	11.9-14.7	69	4.9	3.8-6.0
Gulf Coast	230	16.4	14.7-18.2	61	5.5	4.1-6.9
Southwest	129	12.1	10.2-13.9	62	3.1	2.4-3.7
Southeast	192	15.5	12.9-18.1	74	4.3	3.5-5.2
North/NW/Interior	171	13.2	11.7-14.8	50	7.1	2.2-12.0
Fairbanks North Star	182	13.9	12.4-15.4	49	4.4	3.3-5.4

1-8 Percent of Alaska Adult Current Smokers Who Would Like to Quit Smoking (BRFSS 2006-2008)

	N	Percent	Confidence Interval	p value
All Adults	1,565	67.2%	63.0-71.1%	
Male	791	65.8%	59.9-71.3%	
Female	774	68.9%	63.2-74.1%	p=0.44
Alaska Natives	537	63.5%	56.7-69.8%	
Non-Natives	1,008	69.2%	64.1-74.0%	p=0.17
Low SES non-Native (25-64)	277	80.8%	74.1-86.1%	
High SES non-Native (25-64)	613	71.4%	65.8-76.3%	p=0.02
Ages 18-29	327	56.4%	47.3-65.0%	
Ages 30-54	884	75.0%	70.5-79.0%	
Ages 55 and older	334	65.0%	57.4-72.0%	p<0.001
Anchorage/MatSu	263	66.6%	58.6-73.8%	
Gulf Coast	308	66.9%	59.9-73.2%	
Southwest	221	65.4%	56.7-73.1%	
Southeast	288	63.1%	56.2-69.6%	
North/NW/Interior	245	71.7%	64.6-77.9%	
Fairbanks North Star	240	71.2%	63.5-77.9%	p=0.65

1-9 Percent of Alaska Adult Current Smokers Who are Planning to Quit in the Next 30 Days (BRFSS 2006-2008)

	N	Percent	Confidence Interval	p value
All Adults	1,563	25.7%	22.5-29.1%	
Male	789	25.0%	20.9-29.6%	
Female	774	26.6%	22.0-31.8%	p=0.64
Alaska Natives	535	21.3%	17.0-26.3%	
Non-Natives	1,008	27.6%	23.6-32.0%	p=0.06
Low SES non-Native (25-64)	277	25.5%	19.2-33.0%	
High SES non-Native (25-64)	613	32.4%	27.0-38.4%	p=0.14
Ages 18-29	327	22.9%	17.2-29.8%	
Ages 30-54	882	29.0%	24.6-33.7%	
Ages 55 and older	334	20.4%	15.4-26.4%	p=0.09
Anchorage/MatSu	263	24.8%	19.2-31.3%	
Gulf Coast	308	26.4%	20.7-33.1%	
Southwest	220	26.7%	19.7-35.2%	
Southeast	288	24.7%	19.3-31.0%	
North/NW/Interior	244	23.0%	17.5-29.5%	
Fairbanks North Star	240	30.8%	24.1-38.5%	p=0.69

1-10 Percent Who Received Health Care Provider Advice to Quit in the Past 12 Months, Among Alaska Adult Current Smokers with a Past Year Health Visit (BRFSS 2007-2008)

	N	Percent	Confidence Interval	p value
All Adults	630	66.1%	60.0-71.7%	
Male	273	65.7%	56.1-74.1%	
Female	357	66.5%	58.6-73.6%	p=0.88
Alaska Natives	192	58.0%	47.3-67.9%	
Non-Natives	431	69.4%	62.3-75.7%	p=0.06
Low SES non-Native (25-64)	115	79.7%	70.0-86.8%	
High SES non-Native (25-64)	259	63.8%	54.3-72.4%	p=0.01
Ages 18-29	121	65.8%	52.2-77.2%	
Ages 30-54	357	64.7%	56.7-71.9%	
Ages 55 and older	144	71.8%	61.1-80.5%	p=0.65
Anchorage/MatSu	120	70.4%	59.7-79.3%	*
Gulf Coast	127	66.2%	54.9-75.9%	
Southwest	62	65.9%	51.6-77.8%	
Southeast	126	56.4%	46.2-66.1%	
North/NW/Interior	93	58.5%	46.7-69.4%	
Fairbanks North Star	102	60.5%	47.8-72.0%	p=0.65

Note: The asterisk [*] indicates estimates that have a high coefficient of variation.

1-11 Percent of Alaska Adult Current Smokers who Had a Health Care Visit in the Past 12 Months (BRFSS 2007-2008)

	N	Percent	Confidence Interval	p value
All Adults	1,033	60.6%	55.7-65.4%	
Male	529	52.8%	45.7-59.7%	
Female	504	71.2%	64.7-76.9%	p<0.001
Alaska Natives	360	50.8%	42.5-59.1%	
Non-Natives	661	64.4%	58.5-69.9%	p<0.01
Low SES non-Native (25-64)	181	61.7%	51.1-71.2%	
High SES non-Native (25-64)	400	61.5%	53.8-68.6%	p=0.97
Ages 18-29	232	56.3%	46.1-66.1%	
Ages 30-54	580	61.6%	55.3-67.5%	
Ages 55 and older	212	66.7%	56.9-75.3%	p=0.33
Anchorage/MatSu	179	65.2%	56.0-73.4%	
Gulf Coast	192	63.2%	54.0-71.5%	
Southwest	150	33.7%	25.2-43.3%	
Southeast	188	64.9%	56.1-72.8%	
North/NW/Interior	170	51.2%	42.4-59.9%	
Fairbanks North Star	154	60.9%	50.9-70.1%	p<0.001

1-12 Percent of Alaska Adult Current Smokers Who are Aware of the Alaska Tobacco Quit Line (BRFSS 2006-2008)

	N	Percent	Confidence Interval	p value
All Current Smokers	1542	64.5%	60.6-68.2%	
Male	776	60.8%	55.1-66.2%	
Female	766	69.2%	63.9-74.1%	p = 0.03
Alaska Natives	525	60.7%	54.1-66.9%	
Non-Natives	996	65.6%	60.7-70.2%	p = 0.22
Low SES non-Native (25-64)	277	66.1%	57.4-73.8%	
High SES non-Native (25-64)	605	63.9%	58.1-69.3%	p = 0.67
Ages 18-29	322	70.3%	61.3-78.0%	
Ages 30-54	875	64.0%	59.2-68.5%	
Ages 55 and older	326	55.5%	47.6-63.2%	p = 0.06
Anchorage/MatSu	261	64.8%	57.3-71.6%	
Gulf Coast	302	68.0%	61.0-74.3%	
Southwest	219	63.6%	55.3-71.1%	
Southeast	284	64.0%	57.2-70.3%	
North/NW/Interior	242	59.9%	52.5-66.8%	
Fairbanks North Star	234	64.2%	56.4-71.4%	p=0.82

1-13 Percent of Alaska Adult Past Year Smokers Who Remain Quit for 3+ Months (BRFSS 2006-2008)

	N	Percent	Confidence Interval	p value
All Adults	1,777	8.9%	7.0-11.3%	
Male	891	9.2%	6.6-12.8%	
Female	886	8.6%	6.2-11.7%	p=0.75
Alaska Natives	588	6.2%	3.8-9.9%	
Non-Natives	1,164	9.9%	7.5-12.9%	p=0.09
Low SES non-Native (25-64)	305	8.9%	4.9-15.8%	*
High SES non-Native (25-64)	709	10.3%	7.2-14.6%	p=0.68
Ages 18-29	380	8.9%	5.6-13.9%	
Ages 30-54	993	8.4%	6.0-11.6%	
Ages 55 and older	381	10.0%	6.0-16.3%	p=0.86
Anchorage/MatSu	313	10.5%	7.2-15.1%	
Gulf Coast	342	6.0%	3.6-9.8%	
Southwest	249	7.0%	4.0-11.9%	
Southeast	324	8.1%	5.2-12.3%	
North/NW/Interior	263	4.9%	2.4-9.8%	*
Fairbanks North Star	286	10.3%	6.3-16.3%	p=0.19

The asterisk [*] indicates estimates that have a high coefficient of variation.

1-14 Percent of Alaska Current and Former Adult Smokers Who Began to Smoke Regularly Before Age 18 (BRFSS 2007-2008)

	N	Percent	Confidence Interval	p value
All Adults	2,429	54.5%	51.5-57.6%	
Male	1,241	57.3%	53.1-61.5%	
Female	1,188	51.0%	46.8-55.2%	p=0.04
Alaska Natives	606	57.6%	51.8-63.1%	
Non-Natives	1,781	53.9%	50.4-57.4%	p=0.29
Low SES non-Native (25-64)	314	61.1%	53.1-68.5%	
High SES non-Native (25-64)	1,167	52.1%	47.9-56.3%	p=0.05
Ages 18-29	342	61.0%	53.0-68.4%	
Ages 30-54	1,217	57.7%	53.6-61.7%	
Ages 55 and older	840	44.5%	39.8-49.3%	p<0.001
Anchorage/MatSu	464	56.1%	50.7-61.3%	
Gulf Coast	492	54.6%	49.2-59.8%	
Southwest	279	46.7%	39.5-54.1%	
Southeast	489	52.8%	47.7-57.8%	
North/NW/Interior	304	50.8%	44.2-57.4%	
Fairbanks North Star	401	56.1%	50.1-61.8%	p=0.33

Tables for Chapter 2: Adult Smokeless Tobacco Use

2-1 Percent of Alaska Adults Who Currently Use Smokeless Tobacco (BRFSS 2006-2008)

	N	Percent	Confidence Interval	p value
All Adults	13,835	5.0%	4.5-5.6%	
Male	6,269	8.5%	7.6-9.5%	
Female	7,566	1.4%	1.1-1.6-%	p<0.001
Alaska Natives	2,576	11.8%	10.3-13.4%	
Non-Natives	11,100	3.9%	3.4-4.5%	p<0.001
Low SES non-Native (25-64)	1,585	3.9%	2.5-6.0%	
High SES non-Native (25-64)	7,463	4.4%	3.7-5.1%	p = 0.63
Ages 18-29	1,978	6.5%	5.2-8.3%	
Ages 30-54	7,292	5.7%	5.1-6.5%	
Ages 55 and older	4,407	2.3%	1.8-2.9%	p<0.001
Anchorage/MatSu	2,960	3.2%	2.5-4.2%	
Gulf Coast	2,826	5.7%	4.7-7.0%	
Southwest	1,365	23.2%	20.4-26.3%	
Southeast	2,697	3.7%	3.0-4.6%	
North/NW/Interior	1,403	7.1%	5.6-9.1%	
Fairbanks North Star	2,584	4.8%	3.8-6.0%	p<0.001
Current Smokers	3,119	6.8%	5.4-8.5%	
Former Smokers	4,095	5.9%	5.0-6.9%	
Never been a Smoker	6,529	3.8%	3.2-4.5%	p<0.001

2-2 Alaska Adults Who Currently Use Smokeless Tobacco, by Alaska Native Priority Group and Non-Native Group (BRFSS 2006-2008)

	Alaska Native				Non-Native			
	N	Percent	CI	p value	N	Percent	CI	p value
All Adults	2,576	11.8%	10.3-13.3%		11,100	3.9%	3.4-4.5%	
Male	1,136	14.9%	12.5-17.7%		5,053	7.5%	6.5-8.7%	
Female	1,440	8.5%	7.0-10.3%	p<0.001	6,047	0.1%	0.0-0.3%	* p<0.001
Ages 18-29	524	10.0%	7.6-13.1%		1,428	5.8%	4.2-8.0%	
Ages 30-54	1,351	15.5%	13.3-18.1%		5,866	4.3%	3.6-5.1%	
Ages 55 and older	648	6.4%	4.2-9.5%	p<0.001	3,716	1.6%	1.2-2.2%	p<0.001
Children in Home	1,487	14.7%	12.6-17.0%		4,229	4.4%	3.5-5.5%	
No Children in Home	1,082	6.8%	5.2-8.9%	p<0.001	6,848	3.5%	2.9-4.3%	p=0.14
Anchorage/MatSu	201	2.8%	1.1-6.6%	*	2,718	3.3%	2.6-4.3%	
Gulf Coast	248	6.9%	3.8-12.2%		2,549	5.7%	4.5-7.0%	
Southwest	862	30.7%	27.0-34.7%		488	4.6%	2.7-7.8%	
Southeast	400	1.7%	0.8-3.7%	*	2,257	4.1%	3.3-5.1%	
North/NW/Interior	713	10.4%	7.9-13.7%		676	3.4%	2.0-5.8%	
Fairbanks North Star	152	4.9%	2.2-10.7%	* p<0.001	2,412	4.8%	3.8-6.1%	p=0.01
Current Smokers	1,044	8.4%	6.3-11.1%		2,048	6.3%	4.7-8.5%	
Former Smokers	708	12.4%	10.0-15.4%		3,326	4.8%	3.9-6.0%	
Never been a Smoker	790	15.4%	12.6-18.6%	p<0.01	5,669	2.6%	2.1-3.4%	p<0.001

Note: The asterisk [*] indicates estimates that have a high coefficient of variation or lack of precision related to inadequate sample size for very uncommon events.

2-3 Percent of Alaska Adults Who Currently Use Smokeless Tobacco, by Five Race and Ethnicity Groups, (BRFSS 2006-2008)

	N	Percent	Confidence Interval	p value
All Adults	13,222	5.0%	4.4-5.5%	
Hispanic	387	3.9%	1.9-7.9%	* p<0.01
Alaska Native (non-Hispanic)	2,474	11.7%	10.3-13.4%	reference group
White (non-Hispanic)	9,843	4.0%	3.5-4.7%	p<0.001
Asian (non-Hispanic)	242	0.3%	0.1-1.3%	* p<0.001
African American (non-Hispanic)	202	0.7%	0.2-3.0%	* p<0.001
Pacific Islander (non-Hispanic)	74	4.4%	1.6-11.2%	* p=0.04

Note: The asterisk [*] indicates estimates that have a high coefficient of variation.

2-4 Days of SLT Use in Past Month and Interest in Quitting among Alaska Adult Current Smokeless Tobacco Users by Alaska Native Priority Group and Non-Native Group (BRFSS 2006-2008)

	Alaska Native			Non-Native			All Adults		
	n	Percent	CI	n	Percent	CI	n	Percent	CI
Number of Days of Use, Past Month									
0 to 2 days	20	8.8%	5.5-13.7%	29	7.8%	4.5-13.3%	49	8.1%	5.4-11.9%
3 to 10 days	37	13.0%	8.4-19.6%	43	13.6%	8.7-20.8%	80	13.4%	9.6-18.6%
11 to 29 days	46	15.3%	10.9-20.9%	60	14.7%	10.2-20.9%	106	14.9%	11.3-19.3%
All 30 days	189	63.0%	55.7-69.7%	263	63.8%	56.2-70.8%	452	63.8%	57.9-68.9%
Total	292	100.0%		395	100.0%		687	100.0%	
Want to Quit									
Yes	181	64.5%	57.3-71.0%	230	62.0%	53.9-69.5%	411	62.8%	56.9-68.4%
No	109	35.5%	29.0-42.7%	138	38.0%	30.5-46.1%	247	37.2%	31.6-43.1%
Total	290	100.0%		368	100.0%		658	100.0%	

Note: This table presents frequencies of two indicators.
No p-values are presented because the table is not presenting a comparison of prevalence by different demographic factors.

2-5 Current Type of SLT Use among Alaska Adult Current Smokeless Tobacco Users by Alaska Native Priority Group and Non-Native Group (BRFSS 2006-2008)

	Alaska Native			Non-Native			All Adults		
	n	Percent	CI	n	Percent	CI	n	Percent	CI
Type of Smokeless Tobacco Used									
Chew	87	29.0%	23.1-35.7%	244	59.0%	51.2-66.3%	331	48.9%	43.5-54.3%
Snuff	79	24.2%	18.9-30.5%	132	33.2%	26.7-40.5%	211	30.2%	25.4-35.4%
Iq'mik	142	40.3%	34.1-46.8%	*	*	*	143	13.7%	11.2-16.6%
Multiple Types	19	6.0%	3.2-10.7%	11	5.3%	1.9-13.7%	30	5.5%	2.8-10.5%
Other	*	*	*	*	*	*	6	1.7%	0.4-6.3%
Total	329	100.0%		392	100.0%		721	100.0%	

Asterisk denotes cells where the numerator n<5.
No p-values are presented because the table is not presenting a comparison of prevalence by different demographic factors.

2-6 Percent of Native Alaskan Adults Who Currently Use Iqmik (BRFSS 2006-2008)

	N	Percent	Confidence Interval	p value
All Alaska Natives	2,575	4.7%	3.9-5.7%	
Male	1,135	3.8%	2.8-5.2%	
Female	1,440	5.7%	4.4-7.2%	p=0.05
Ages 18-29	523	4.3%	2.9-6.4%	
Ages 30-54	1,351	5.9%	4.6-7.5%	
Ages 55 and older	648	2.8%	2.8-4.4%	p<0.01
Anchorage/MatSu	201	0.1%	0.0-0.6%	
Gulf Coast	248	1.5%	0.3-7.5%	
Southwest	862	17.5%	14.6-20.9%	
Southeast	400	0.0%	na	
North/NW/Interior	684	0.5%	0.1-1.6%	
Fairbanks & Vicinity	180	0.0%	na	p<0.001
Current Smokers	1,044	1.8%	1.2-2.9%	
Former Smokers	708	5.9%	4.3-8.2%	
Never been a Smoker	789	7.4%	5.5-9.8%	p<0.001

Note: In this table, regional grouping is revised for North/NW/Interior and for Fairbanks. Southeast Fairbanks is included with Fairbanks North Star to increase the sample size for Fairbanks region.

Tables for Chapter 3: Other Smoked Tobacco and Multiple Tobacco Product Use Among Adults

3-1 Percent of Alaska Adults Who Currently Smoke Cigars, Pipes, Bidis or Clove Cigarettes, (BRFSS 2007-2008)

	N	Percent	Confidence Interval	p value
All Adults	4,830	7.1%	6.1-8.4%	
Male	2,231	11.3%	9.4-13.5%	
Female	2,599	2.7%	1.9-3.8%	p<0.001
Alaska Natives	900	9.0%	6.3-12.6%	
Non-Natives	3,851	6.9%	5.7-8.2%	p = 0.18
Low SES non-Native (25-64)	2,636	7.2%	4.6-11.1%	
High SES non-Native (25-64)	536	6.6%	5.3-8.2%	p = 0.73
Ages 18-29	709	11.6%	8.5-15.5%	
Ages 30-54	2,548	6.3%	5.0-7.8%	
Ages 55 and older	1,514	4.9%	3.6-6.7%	p<0.001
Anchorage/Mat-Su	1,001	6.7%	5.0-8.9%	
Gulf Coast	963	10.4%	7.9-13.6%	
Southwest	501	9.6%	6.2-14.5%	
Southeast	968	5.4%	4.0-7.3%	
North/NW/Interior	521	7.1%	4.8-10.4%	
Fairbanks & Vicinity	876	6.6%	4.8-9.1%	p=0.06
Current Smokers	1,033	17.8%	14.3-22.0%	
Former Smokers	1,439	6.0%	4.4-8.1%	
Never been a Smoker	2,328	3.4%	2.4-4.8%	p<0.001

3-2 Percent of Alaska Adults Who Smoke Cigars Versus Pipes, Bidis or Clove Cigarettes (BRFSS 2007-2008)

		Cigar Only			Pipe, Bidi, Clove or Multiple		
	N	Percent	CI	p value	Percent	CI	p value
All Adults	4,830	5.1%	4.2-6.2%		2.0%	1.5-2.7%	
Male	2,231	8.5%	6.8-10.5%		2.8%	2.1-3.8%	
Female	2,599	1.5%	1.0-2.4%	p<0.001	1.2%	0.7-2.1%	p<0.01
Alaska Native	900	5.4%	3.3-8.7%		3.6%	2.2-6.0%	
Non-Native	3,851	5.1%	4.0-6.3%	p=0.83	1.8%	1.3-2.5%	p=0.02
Low SES non-Native (25-64)	536	4.1%	2.2-7.5%	*	3.1%	1.6-5.8%	*
High SES non-Native (25-64)	2,636	5.3%	4.1-6.8%	p=0.46	1.3%	0.9-2.0%	p=0.03
Ages 18-29	709	8.2%	5.7-11.8%		3.3%	1.9-5.6%	
Ages 30-54	2,548	4.5%	3.4-6.0%		1.7%	1.2-2.5%	
Ages 55 and older	1,514	3.5%	2.3-5.1%	p<0.01	1.5%	0.9-2.5%	p=0.04
Children in Home	2,068	4.9%	3.6-6.6%		2.2%	1.4-3.4%	
No Children in Home	2,762	5.3%	4.1-6.9%	p=0.68	1.9%	1.3-2.6%	p=0.55
Anchorage/Mat-Su	1,001	5.2%	3.7-7.2%		1.5%	0.9-2.6%	*
Gulf Coast	963	6.1%	4.3-8.5%		4.4%	2.7-6.9%	
Southwest	501	6.8%	3.9-11.5%		2.8%	1.3-5.7%	
Southeast	968	4.2%	2.9-5.9%		1.2%	0.6-2.4%	*
North/NW/Interior	521	5.0%	3.3-7.7%		2.1%	0.9-4.8%	*
Fairbanks & Vicinity	876	4.2%	2.8-6.3%	p=0.60	2.4%	1.4-4.1%	p=0.01
Current Cigarette Smokers	1,033	13.0%	9.8-17.1%		4.8%	3.4-6.8%	
Former Cigarette Smokers	1,439	4.1%	2.9-5.8%		1.9%	1.0-3.4%	*
Never been a Cigarette Smoker	2,328	2.5%	1.6-3.6%	p<0.001	1.0%	0.5-1.9%	* p<0.001

The asterisk [*] indicates estimates that have a high coefficient of variation or lack precision due to inadequate sample size for very uncommon events.

3-3 Percent of Alaska Adults Who Use Smoked Tobacco, by Tobacco Type and by Gender (BRFSS 2007-2008)

	Men			Women			All Adults		
	n	Percent	CI	n	Percent	CI	n	Percent	CI
Overall Smoked Tobacco Use	668	29.3%	26.4-32.4%	533	19.8%	17.6-22.3%	1,201	24.8%	22.9-26.7%
Cigarettes Only	424	18.0%	15.6-20.8%	472	17.2%	15.1-19.5%	896	17.6%	16.0-19.4%
Cigars Only	101	4.1%	3.1-5.5%	14	0.4%	0.2-0.9%	115	2.4%	1.8-3.1%
Pipe, Clove or Bidi only	18	0.7%	0.4-1.3%	8	0.4%	0.2-1.1%	26	0.6%	0.3-0.9%
Multiple Types	125	6.4%	4.9-8.2%	39	1.8%	1.2-2.9%	164	4.2%	3.3-5.2%
Do Not Smoke Tobacco	1,571	70.7%	67.6-73.6%	2,069	80.1%	77.7-82.4%	3,640	75.2%	73.3-77.1%
Total	2,239	100.0%		2,602	100.0%		4,841	100.0%	

3-4 Percent of Alaska Adults Who Use Any Smoked Tobacco Type (BRFSS 2007-2008)

	N	Percent	Confidence Interval	p value
All Adults	4,814	24.9%	23.0-26.9%	
Male	2,223	29.6%	26.7-32.7%	
Female	2,591	19.9%	17.7-22.4%	p<0.001
Alaska Natives	895	45.9%	40.9-51.0%	
Non-Natives	3,840	21.6%	19.6-23.7%	p<0.001
Low SES non-Native (25-64)	531	35.0%	29.4-41.0%	
High SES non-Native (25-64)	2,630	19.2%	17.0-21.5%	p<0.001
Ages 18-29	705	37.4%	32.0-43.1%	
Ages 30-54	2,534	23.6%	21.3-26.1%	
Ages 55 and older	1,516	16.2%	13.8-19.0%	p<0.001
Anchorage/MatSu	998	22.7%	19.6-26.2%	
Gulf Coast	959	27.7%	24.2-31.6%	
Southwest	499	35.9%	30.5-41.6%	
Southeast	967	23.8%	20.8-27.1%	
North/NW/Interior	519	37.2%	31.4-43.4%	
Fairbanks & Vicinity	872	22.3%	19.0-26.0%	p<0.001

3-5 Percent of Alaska Adults Who Currently Use Any Type of Tobacco, Including SLT, Cigarettes, Cigars, Pipes, Bidis, or Multiple Types (BRFSS 2007-2008)

	N	Percent	Confidence Interval	p value
All Adults	4,808	28.1%	26.2-30.1%	
Male	2,214	34.8%	31.8-37.9%	
Female	2,594	21.0%	18.7-23.4%	p<0.001
Alaska Natives	897	53.6%	48.6-58.6%	
Non-Natives	3,832	24.0%	22.0-26.3%	p<0.001
Low SES non-Native (25-64)	532	35.7%	30.1-41.7%	
High SES non-Native (25-64)	2,622	22.2%	19.9-24.6%	p<0.001
Ages 18-29	709	40.0%	34.5-45.7%	
Ages 30-54	2,532	27.7%	25.3-30.4%	
Ages 55 and older	1,508	18.0%	15.5-20.8%	p<0.001
Anchorage/MatSu	1,000	24.7%	21.5-28.2%	
Gulf Coast	956	30.3%	26.7-34.2%	
Southwest	499	51.9%	46.2-57.6%	
Southeast	965	26.3%	23.2-29.7%	
North/NW/Interior	515	40.6%	34.4-47.0%	
Fairbanks North Star	873	26.0%	22.5-29.9%	p<0.001

Tables for Chapter 4: Youth Smoking

Note: All data shown in the Chapter 4 tables use combined 2007 and 2009 YRBS data.

4-1 Percent of Alaska High School Youth Who Smoke Cigarettes, by Race Groups (YRBS 2007 and 2009)

	Alaska Native Youth			
	N	Percent	CI	p value
All	583	27.1%	21.6-33.3%	
Boys	264	22.0%	17.7-27.0%	
Girls	319	32.0%	24.6-40.3%	p=<0.01
9th Grade	182	23.4%	18.4-29.3%	
10th Grade	135	19.0%	10.3-32.2%	
11th Grade	148	27.2%	17.9-39.1%	
12th Grade	104	43.3%	34.1-52.9%	p=<0.01

	White Youth			
	N	Percent	CI	p value
All	1,497	13.8%	11.9-16.1%	
Boys	724	13.3%	10.9-16.2%	
Girls	773	14.4%	11.6-17.6%	p=0.58
9th Grade	435	9.4%	6.6-13.2%	
10th Grade	305	17.6%	13.6-22.4%	
11th Grade	401	13.7%	9.9-18.6%	
12th Grade	347	15.0%	11.4-19.3%	p=0.04

	Other Race Group Youth			
	N	Percent	CI	p value
All	439	7.9%	5.7-10.7%	
Boys	231	9.3%	6.2-13.6%	
Girls	208	6.1%	3.2-11.2%	p=0.29
9th Grade	145	7.0%	4.1-11.6%	
10th Grade	112	7.4%	3.9-13.7%	
11th Grade	108	4.9%	2.0-11.2%	
12th Grade	*	*	*	p=0.32

Asterisk denotes cells where the denomintor N<100.

4-2 Percent of Alaska High School Youth Who Smoke Cigarettes, by Five Race and Ethnicity Groups (YRBS 2007 and 2009)

	N	Percent	CI	p value
All	2,533	16.8%	14.8-18.9%	
Hispanic	220	14.0%	8.8-21.5%	
Alaska Native	537	27.4%	21.6-33.9%	
White non-Hispanic	1,412	13.9%	11.9-16.2%	
Asian non-Hispanic	173	5.6%	2.9-10.5%	
Other (non-Hispanic)	191	11.3%	7.0-17.7%	p=0.01

4-3 Percent of Alaska High School Youth Who Smoked Frequently in the Past 30 Days, by Race Group (YRBS 2007 and 2009)

	Alaska Native Youth			
	N	Percent	CI	p value
All	583	10.0%	5.7-16.8%	
Boys	264	6.5%	4.0-10.2%	
Girls	319	13.4%	7.0-23.9%	
9th Grade	182	9.0%	5.5-14.5%	
10th Grade	135	10.1%	4.7-20.5%	
11th Grade	148	10.0%	4.5-20.7%	
12th Grade	104	11.9%	5.1-25.6%	p=0.90

	White Youth			
	N	Percent	CI	p value
All	1,504	4.9%	3.9-6.2%	
Boys	724	4.8%	3.5-6.8	
Girls	773	5.0%	3.6-7.1%	p=0.88
9th Grade	435	1.5%	0.7-3.4%	
10th Grade	305	6.6%	4.5-9.6%	
11th Grade	401	5.6%	3.7-8.4%	
12th Grade	347	6.1%	3.9-9.4	p=<0.01

	Other Race Group Youth			
	N	Percent	CI	p value
All	445	4.2%	2.6-6.8%	
Boys	231	3.0%	1.5-6.1%	
Girls	208	4.9%	2.4-9.9%	p=0.35
9th Grade	145	3.1%	1.2-7.7%	
10th Grade	112	2.8%	0.9-8.4%	
11th Grade	108	4.3%	1.6-11.1%	
12th Grade	*	*	*	p=0.58

Asterisk denotes cells where the denomintor N<100.

Note: Frequent smoking is defined as smoking 20 or more days in the past 30 days.

4-4 Percent of Alaska High School Youth Who Started Smoking Cigarettes Before Age 13, by Race Groups (YRBS 2007 and 2009)

	Alaska Native Youth			
	N	Percent	CI	p value
All	599	22.2%	18.0-27.0%	
Boys	267	21.4%	16.0-27.9%	
Girls	331	22.9%	17.8-29.0%	0.67
9th Grade	188	23.8%	17.7-31.3%	
10th Grade	139	15.3%	8.6-25.8%	
11th Grade	152	26.8%	19.0-36.2%	
12th Grade	105	22.9%	16.6-30.6%	0.15

	White Youth			
	N	Percent	CI	p value
All	1,487	10.8%	8.8-13.0%	
Boys	710	13.1%	10.4-16.3%	
Girls	769	8.2%	6.2-10.7%	**<0.01**
9th Grade	425	7.6%	4.9-11.7%	
10th Grade	306	14.3%	10.3-19.4%	
11th Grade	401	10.6%	7.6-14.7%	
12th Grade	340	10.7%	7.4-15.2%	0.09

	Other Race Group Youth			
	N	Percent	CI	p value
All	444	14.2%	10.1-16.7%	
Boys	231	14.7%	10.6-19.9%	
Girls	205	11.1%	7.1-16.8%	0.30
9th Grade	135	15.6%	10.1-23.3%	
10th Grade	111	12.5%	6.0-24.0%	
11th Grade	113	15.7%	9.6-24.5%	
12th Grade	*	*	*	0.24

Asterisk denotes cells where the denomintor N<100.

4-5 Percent of Alaska High School Youth Smokers who Made a Quit Attempt within the Past 12 Months (YRBS 2007 and 2009)

	N	Percent	CI	p value
All High School Students	352	59.9%	52.9-66.4%	
Boys	155	64.0%	55.3-71.9%	
Girls	193	56.8%	47.0-66.0%	p=<0.22
Alaska Native Youth	135	65.9%	56.3-74.4%	
White Youth	185	53.9%	45.3-62.2%	p=<0.05

4-6 Percent of Alaska High School Youth Who Smoke Cigars, Cigarillos, or Little Cigars, by Race Groups (YRBS 2007 and 2009)

	Alaska Native Youth			
	N	Percent	CI	p value
All	631	7.6%	5.6-10.2%	
Boys	285	10.5%	7.1-15.2%	
Girls	345	4.8%	2.8-8.2%	p=0.02
9th Grade	201	6.8%	4.1-11.1%	
10th Grade	146	3.8%	1.6-8.6%	
11th Grade	160	10.5%	6.0-17.8%	
12th Grade	109	11.1%	5.8-20.2%	p=0.11

	White Youth			
	N	Percent	CI	p value
All	1,569	11.5%	9.9-13.4%	
Boys	759	15.7%	13.1-18.7%	
Girls	801	7.1%	5.4-9.3%	p=<0.001
9th Grade	451	5.9%	4.0-8.7%	
10th Grade	326	12.1%	8.7-16.7%	
11th Grade	421	15.0%	11.7-18.9%	
12th Grade	354	13.4%	9.9-17.9%	p=<0.01

	Other Race Group Youth			
	N	Percent	CI	p value
All	481	10.0%	7.7-12.8%	
Boys	251	11.7%	9.0-15.1%	
Girls	221	5.1%	2.7-9.6%	p=0.02
9th Grade	150	6.9%	3.6-12.8%	
10th Grade	122	7.9%	4.3-14.1%	
11th Grade	118	10.3%	5.9-17.4%	
12th Grade	*	*	*	p=0.81

Asterisk denotes cells where the denomintor N<100.

Tables for Chapter 5: Youth Smokeless Tobacco Use

5-1 Percent of Alaska High School Youth Who Use Smokeless Tobacco, by Race Groups (YRBS 2007 and 2009)

	Alaska Native Youth			
	N	Percent	CI	p value
All	613	19.3%	12.5-28.6%	
Boys	279	21.9%	14.2-32.1%	
Girls	333	16.8%	10.3-26.3%	p=0.09
9th Grade	195	24.2%	15.3-36.0%	
10th Grade	140	15.6%	7.0-31.2%	
11th Grade	158	17.2%	9.9-28.2%	
12th Grade	104	19.7%	9.8-35.8%	p=0.50

	White Youth			
	N	Percent	CI	p value
All	1,551	9.0%	7.4-11.0%	
Boys	748	14.4%	11.9-17.4%	
Girls	795	3.4%	2.4-4.8%	p=<0.001
9th Grade	446	6.3%	4.2-9.3%	
10th Grade	324	10.5%	7.8-14.0%	
11th Grade	415	8.1%	5.6-11.7%	
12th Grade	351	11.1%	7.1-17.0%	p=0.18

	Other Race Group Youth			
	N	Percent	CI	p value
All	460	9.7%	6.8-13.7%	
Boys	239	13.9%	9.3-20.2%	
Girls	218	3.7%	1.5-8.8%	p=<0.01
9th Grade	147	6.3%	3.3-11.8%	
10th Grade	121	6.1%	2.4-15.0%	
11th Grade	112	8.1%	4.2-15.2%	
12th Grade	*	*	*	p=0.06

Asterisk denotes cells where the denomintor N<100.

5-2 Percent of Alaska High School Youth Who Use Smokeless Tobacco, by Five Race and Ethnicity Groups (YRBS 2007 and 2009)

	Alaskan Youth			
	N	Percent	CI	p value
All	2,624	12.0%	9.4-15.1%	
Hispanic	232	12.4%	8.0-18.6%	
Alaska Native	559	19.4%	12.3-29.2%	
White non-Hispanic	1,456	9.1%	7.4-11.1%	
Asian non-Hispanic	179	3.5%	1.5-8.0%	
Other (non-Hispanic)	198	16.3%	10.6-24.3%	p<0.001

Tables for Chapter 6: Use of Multiple Tobacco Products Among Youth

6-1 Percent of Alaska High School Youth Who Use Any Tobacco Product (Cigarette, Cigar or Smokeless), by Race Group (YRBS 2007 and 2009)

	Alaska Native Youth			
	N	Percent	CI	p value
All	567	38.4%	32.9-44.2%	
Boys	256	37.5%	30.7-44.9%	
Girls	310	39.3%	33.0-46.0%	p=0.65
9th Grade	177	38.8%	29.0-49.6%	
10th Grade	131	27.4%	17.5-40.3%	
11th Grade	146	39.1%	32.2-46.4%	
12th Grade	99	52.8%	41.2-64.2%	p=0.02

	White Youth			
	N	Percent	CI	p value
All	1,484	21.0%	18.6-23.6%	
Boys	716	24.4%	21.7-27.3%	
Girls	762	17.5%	14.3-21.3%	p=<0.01
9th Grade	429	13.1%	9.8-17.4%	
10th Grade	303	25.1%	20.2-30.7%	
11th Grade	396	22.7%	18.4-27.7%	
12th Grade	341	23.7%	18.9-29.3%	p=<0.01

	Other Race Group Youth			
	N	Percent	CI	p value
All	428	12.8%	10.1-16.0%	
Boys	221	16.5%	12.1-22.2%	
Girls	204	7.4%	4.7-11.7%	p=<0.01
9th Grade	142	7.9%	4.3-14.0%	
10th Grade	109	12.7%	7.6-20.7%	
11th Grade	104	8.9%	4.9-15.7%	
12th Grade	*	*	*	p=0.02

Asterisk denotes cells where the denomintor N<100.

6-2 Types of Tobacco Used by Gender, Among Alaska High School Youth Tobacco Users (YRBS 2007 and 2009)

	Boys			Girls			All High School Tobacco Users		
	n	Percent	CI	n	Percent	CI	n	Percent	CI
Type of Tobacco Used									
Cigarettes only	52	20.0%	13.8-28.0%	111	48.5%	38.6-58.5%	163	32.5%	25.1-41.0%
Cigars only	46	13.8%	10.1-18.8%	17	5.8%	3.5-9.6%	63	10.3%	7.7-13.5%
Cigarettes and Cigars	34	10.3%	7.1-14.7%	45	17.7%	13.5-22.9%	79	13.5%	11.0-16.6%
SLT only	68	23.9%	18.6-30.2%	34	13.0%	7.0-22.7%	102	19.0%	13.5-26.1%
Smoked and SLT	97	32.0%	25.2-39.6%	42	15.0%	11.4-19.5%	141	24.7%	20.3-29.6%
Total	**297**	**100.0%**		**249**	**100.0%**		**548**	**100.0%**	

Note: No p-values are presented because the table is not presenting a comparison of prevalence by different demographic factors.

6-3 Types of Tobacco Used by Race Group, Among Alaska High School Youth Tobacco Users (YRBS 2007 and 2009)

	Alaska Native Youth			White Youth		
	n	Percent	CI	n	Percent	CI
Type of Tobacco Used						
Cigarettes only	73	41.3%	26.2-58.3%	82	27.5%	22.7-32.8%
Cigars only	10	5.5%	2.3-12.7%	44	14.0%	10.6-18.2%
Cigarettes and Cigars	16	6.5%	3.5-11.5%	56	19.4%	15.2-24.5%
SLT only	48	24.6%	14.1-39.3%	42	14.3%	10.5-19.1%
Smoked and SLT	49	22.1%	15.7-30.1%	72	24.9%	19.5-31.2%
Total	**196**	**100.0%**		**296**	**100.0%**	

Note: No p-values are presented because the table is not presenting a comparison of prevalence by different demographic factors.

Tables for Chapter 7: Selected Policies Related To Youth Tobacco Use

7-1 Percent of Alaska Adults Who Agree or Strongly Agree that Tobacco Use by Adults Should Not Be Allowed on School Grounds or at Any School Events, (BRFSS 2004 and 2006)

	N	Percent	Confidence Interval	p value
All Adults	4,564	89.3%	87.8-90.6%	
Male	2,023	85.4%	82.9-87.6%	
Female	2,541	93.4%	91.7-94.7%	p<0.001
Alaska Natives	852	85.0%	80.2-88.8%	
Non-Natives	3,649	90.1%	88.6-91.5%	p=0.01
Low SES non-Native (25-64)	502	85.1%	79.5-89.4%	
High SES non-Native (25-64)	2,228	91.0%	89.2-92.4%	p=0.01
Ages 18-29	706	86.7%	82.0-90.3%	
Ages 30-54	2,556	89.2%	87.2-90.9%	
Ages 55 and older	1,241	91.8%	89.5-93.5%	p=0.07
Anchorage/MatSu	998	88.5%	85.8-90.7%	
Gulf Coast	941	90.1%	87.6-92.2%	
Southwest	437	88.3%	83.9-91.6%	
Southeast	834	92.6%	90.4-94.4%	
North/NW/Interior	468	88.4%	84.4-91.4%	
Fairbanks & Vicinity	886	89.7%	87.1-91.9%	p=0.18
Current Smokers	1,123	81.9%	77.8-85.4%	
Former Smokers	1,251	90.0%	87.4-92.2%	
Never been a Smoker	2,163	92.6%	90.7-94.1%	p<0.001

7-2 Percent of Alaska High School Youth Who Use Tobacco on School Property, by Race Group (YRBS 2007 and 2009)

	Alaska Native Youth			
	N	Percent	CI	p value
All	620	18.8%	15.0-23.3%	
Boys	278	18.2%	14.4-22.8%	
Girls	341	19.3%	14.2-25.6%	p=0.71
9th Grade	199	19.5%	11.5-31.2%	
10th Grade	144	17.0%	11.2-24.9%	
11th Grade	155	21.7%	15.6-29.5%	
12th Grade	106	17.4%	11.5-25.3%	p=0.77

	White Youth			
	N	Percent	CI	p value
All	1,545	8.0%	6.4-9.8%	
Boys	741	10.8%	8.4-13.8%	
Girls	795	5.0%	3.6-6.8%	p=<0.001
9th Grade	444	6.6%	4.4-9.7%	
10th Grade	319	8.9%	5.9-13.2%	
11th Grade	417	8.7%	5.9-12.7%	
12th Grade	349	7.7%	4.6-12.5%	p=0.74

	Other Race Group Youth			
	N	Percent	CI	p value
All	463	7.3%	5.0-10.4%	
Boys	242	8.1%	4.8-13.3%	
Girls	214	3.2%	1.4-7.1%	p=<0.07
9th Grade	143	3.4%	1.2-9.5%	
10th Grade	121	5.8%	2.0-15.5%	
11th Grade	114	5.7%	2.6-12.1%	
12th Grade	*	*	*	p=0.42

Asterisk denotes cells where the denomintor N<100.

7-3 Percent of Alaska Adults who Believe that is Very Important versus Somewhat Important to Keep Stores from Selling Tobacco Products to Teenagers, (BRFSS 2004 and 2006)

	N	Percent Very Important	Confidence Interval	p value	Percent Somewhat Important	Confidence Interval	p value
All Adults	4,568	85.3%	83.7-86.8%		10.1%	8.8-11.5%	
Male	2,023	80.5%	77.9-82.8%		13.0%	11.1-15.2%	
Female	2,545	90.4%	88.5-92.1%	p<0.001	6.9%	5.5-8.7%	p<0.001
Alaska Natives	853	81.6%	77.3-85.3%		8.8%	6.8-11.4%	
Non-Natives	3,652	85.9%	84.1-87.5%	p=0.04	10.4%	9.0-12.0%	p=0.29
Low SES non-Native (25-64)	563	85.7%	80.5-89.7%		10.8%	7.2-15.9%	
High SES non-Native (25-64)	2,446	86.1%	84.0-87.9%	p=0.89	10.3%	8.7-12.1	p=0.84
Ages 18-29	707	80.8%	76.0-84.8%		13.0%	9.7-17.2%	
Ages 30-54	2,557	86.8%	84.8-88.6%		9.0%	7.6-10.8%	
Ages 55 and older	1,242	86.3%	83.4-88.8%	p=0.01	9.4%	7.3-12.1%	p=0.07
Anchorage/MatSu	997	86.0%	83.2-88.4%		9.8%	7.8-12.3%	
Gulf Coast	973	84.6%	81.4-87.3%		10.7%	8.4-13.4%	
Southwest	437	77.6%	71.7-82.6%		12.7%	9.0-17.7%	
Southeast	837	87.5%	84.7-89.8%		8.8%	6.8-11.3%	
North/NW/Interior	468	81.5%	77.0-85.3%		10.5%	7.7-14.1%	
Fairbanks & Vicinity	886	85.9%	83.1-88.3%	p=0.01	10.4%	8.3-12.9%	p=0.67
Current Smokers	1,124	79.7%	75.5-83.3%		14.9%	11.6-19.0%	
Former Smokers	1,252	85.1%	82.0-87.8%		10.1%	8.0-12.8%	
Never been a Smoker	2,165	88.2%	86.2-90.0%	p<0.001	7.6%	6.3-9.2%	p<0.001

7-4 Percent of Alaska Adults who Believe that is Very/Somewhat Important to Keep Stores from Selling Tobacco Products to Teenagers, (BRFSS 2004 and 2006)

	N	Percent	Confidence Interval	p value
All Adults	4,568	95.4%	94.3-96.2%	
Male	2,023	93.5%	91.7-94.9%	
Female	2,545	97.4%	96.4-98.0%	p<0.001
Alaska Natives	853	90.4%	86.3-93.4%	
Non-Natives	3,652	96.3%	95.3-97.1%	p<0.001
Low SES non-Native (25-64)	563	96.5%	94.0-97.9%	
High SES non-Native (25-64)	2,446	96.4%	95.0-97.4%	p=0.94
Ages 18-29	707	93.8%	90.5-96.0%	
Ages 30-54	2,557	95.9%	94.5-96.9%	
Ages 55 and older	1,242	95.7%	94.2-96.9%	p=0.17
Anchorage/MatSu	997	95.8%	94.0-97.1%	
Gulf Coast	943	95.3%	93.0-96.8%	
Southwest	437	90.3%	85.5-93.7%	
Southeast	837	96.3%	94.5-97.5%	
North/NW/Interior	468	92.0%	88.5-94.5%	
Fairbanks & Vicinity	886	96.3%	94.6-97.4%	p<0.01
Current Smokers	1,124	94.6%	92.5-96.1%	
Former Smokers	1,252	95.3%	93.2-96.8%	
Never been a Smoker	2,165	95.8%	94.2-97.0%	p=0.54

7-5 Usual Method of Obtaining Cigarettes among Alaska High School Cigarette Smokers (YRBS 2007 and 2009)

	Boys Who Smoke			Girls who Smoke			All High School Smokers		
	n	Percent	CI	n	Percent	CI	n	Percent	CI
How Obtained Cigarettes									
Bought at Store	21	13.6%	8.4-21.3%	7	2.6%	1.1-6.3%	28	7.7%	4.7-12.1%
Gave $ to Someone to Buy	48	28.9%	20.0-39.7%	63	35.5%	29.8-41.6%	112	32.3%	26.6-38.7%
Borrowed	48	30.2%	22.1-39.7%	64	28.7%	22.8-35.4%	112	29.2%	24.2-34.7%
Were Given by Adult	7	4.3%	1.6-11.5%	17	9.3%	5.5-15.3%	25	7.0%	5.0-9.8%
Took or Stole	13	6.7%	3.5-12.5%	13	4.2%	2.5-7.0%	26	5.3%	3.5-8.0%
Other Method	28	16.3%	11.8-22.1%	37	19.7%	14.1-26.9%	67	18.5%	14.4-23.5%
Total	**165**	**100.0%**		**201**	**100.0%**		**370**	**100.0%**	

	Alaska Native Youth Smokers			White Youth Smokers		
	n	Percent	CI	n	Percent	CI
How Obtained Cigarettes						
Bought at Store	7	4.7%	1.3-15.3%	19	10.6%	7.0-15.8%
Gave $ to Someone to Buy	43	34.5%	24.1-46.5%	60	30.8%	25.1-37.1%
Borrowed	44	27.5%	20.3-36.1%	62	32.5%	26.3-39.3%
Were Given by Adult	11	9.6%	6.0-14.9%	11	4.8%	2.6-8.7%
Took or Stole	7	3.0%	1.2-7.2%	12	5.7%	3.0-10.5%
Other Method	30	20.8%	13.8-30.0%	29	15.6%	11.4-21.1%
Total	**142**	**100.0%**		**193**	**100.0%**	

Note: No p-values are presented because the table is not presenting a comparison of prevalence by different demographic factors.

Tables for Chapter 8: Tobacco Use During Pregnancy

8-1 Percent of Alaska Mothers Who Smoked in the Last Three Months of Pregnancy (PRAMS 2008)

	N	Percent	Confidence Interval	Significant difference
All Mothers	1,206	15.1%	12.9-17.5%	
Alaska Natives	501	29.9%	26.1-33.9%	
Non-Natives	705	10.2%	7.8-13.3%	p<0.001
Coverage for Prenatal Care				
Medicaid	636	22.5%	18.8-26.6%	
Not Medicaid	623	8.6%	6.3-11.5%	p<0.001
Formal Education				
<12 years	196	30.6%	23.1-39.2%	
12 years	579	17.4%	14.0-21.3%	
>12 years	452	6.5%	4.2-9.7%	p<0.001
Age				
15-19	136	23.5%	15.5-33.9%	
20-24	373	21.0%	16.6-26.0%	
25-34	603	11.6%	8.9-14.9%	
Age 35 and older	170	8.8%	4.7-15.8%	p<0.001

8-2 Percent of Alaska Mothers Who Smoked in the Last Three Months of Pregnancy, by Region (PRAMS 2006-2008)

	N	Percent	Confidence Interval	Significant difference
All Mothers	4,144	15.1%	13.9-16.4%	
Anchorage/MatSu	2,485	13.3%	11.7-14.9%	
Gulf Coast	238	13.3%	9.1-19.0%	
Southwest	335	24.2%	19.9-29.0%	
Southeast	266	11.5%	7.7-16.8%	
North	188	48.2%	41.3-58.7%	
Interior (incl. Fairbanks)	632	14.5%	11.5-18.2%	p<0.001

8-3 Daily Consumption of Cigarettes During Last Three Months of Pregnancy, among Alaska Mothers Who Smoked (PRAMS 2006-2008)

	n	Percent	Confidence Interval
Average Number of Cigarettes Per Day			
<1 cigarette	123	14.2%	11.5-17.4%
1 to 5	397	52.5%	48.0-57.0%
6 to 20	254	30.7%	26.7-35.0%
21 or more	17	2.6%	1.4-4.8%
Total	**791**	**100.0%**	

Note: No p-values are presented because the table is not presenting a comparison of prevalence by different demographic factors.

8-4 Maternal Iq'mik or Spit Tobacco Use During Pregnancy among Alaska Native Mothers, by Age and Region (PRAMS 2006-2008)

	N	Percent	Confidence Interval
All AK Native Mothers	1,509	16.8%	15.1-18.7%
Age			
15-19	256	14.8%	11.2-19.3%
20-24	526	15.1%	12.4-18.2%
25-34	593	18.1%	15.3-21.3%
Age 35 and older	133	22.5%	16.4-30.0%
Region			
Anchorage/MatSu	690	9.1%	7.3-11.3%
Gulf Coast	60	7.3%	3.0-16.5%
Southwest	330	51.5%	46.4-56.6%
Southeast	110	0.0%	NA
North	183	5.5%	3.1-9.6%
Interior (incl. Fairbanks)	136	2.3%	0.9-5.5%

8-5 Maternal Tobacco Use During Pregnancy by Type, among Alaska Native and Non-Native Mothers Who Used Tobacco (PRAMS 2006-2008)

	Alaska Native Mothers			Non-Native Mothers		
	n	Percent	CI	n	Percent	CI
Type of Tobacco Use						
Cigarettes	391	61.1%	57.4-64.6%	274	95.1%	90.6-97.5%
Smokeless Tobacco	216	32.3%	29.0-35.9%	12	4.2%	2.1-8.4%
Both	45	4.2%	5.0-8.7%	*	*	*
Total	**652**	**100.0%**		**286**	**100.0%**	

Note: No p-values are presented because the table is not presenting a comparison of prevalence by different demographic factors.

Asterisk denotes that numerator n<5.

8-6 Maternal Smokeless Tobacco Use During Pregnancy by Type, among Alaska Native Mothers Who Used Smokeless Tobacco (PRAMS 2006-2008)

	Alaska Native Mothers		
	n	Percent	CI
Type of Smokeless Use			
Iq'mik	143	53.9%	48.1-59.7%
Spit	46	17.2%	13.2-22.1%
Both	79	28.9%	23.9-34.4%
Total	**268**	**100.0%**	

Note: No p-values are presented because the table is not presenting a comparison of prevalence by different demographic factors.

Tables for Chapter 9: Secondhand Smoke Exposure and Bans or Policies to Prevent Exposure

9-1 Percent of Alaska High School Youth Who Were Exposed to Indoor Cigarette Smoke in the Past Seven Days, by Race Group and Gender (YRBS 2007 and 2009)

	Alaska Native Youth			
	N	Percent	CI	p value
All	631	44.0%	38.9-49.2%	
Boys	285	33.1%	27.6-39.1%	
Girls	345	54.5%	48.9-59.9%	p<0.001
9th Grade	201	44.7%	37.3-52.3%	
10th Grade	146	39.1%	30.0-49.1%	
11th Grade	160	46.7%	38.7-54.8%	
12th Grade	109	48.5%	33.8-63.4%	p=0.55

	White Youth			
	N	Percent	CI	p value
All	1,559	44.9%	41.7-48.1%	
Boys	757	44.3%	39.7-48.9%	
Girls	802	45.5%	41.4-49.7%	p=0.68
9th Grade	452	39.7%	35.3-44.3%	
10th Grade	326	50.5%	43.9-57.2%	
11th Grade	418	45.3%	39.5-51.3%	
12th Grade	355	44.5%	39.0-50.0%	p=0.07

	Other Race Group Youth			
	N	Percent	CI	p value
All	481	33.0%	28.3-38.1%	
Boys	252	28.8%	22.7-35.7%	
Girls	221	37.8%	30.5-45.7%	p=0.08
9th Grade	149	31.5%	22.6-42.2%	
10th Grade	124	34.0%	24.6-44.8%	
11th Grade	118	29.0%	21.0-38.5%	
12th Grade	*	*	*	p=0.68

Asterisk denotes cells where the denomintor N<100.

9-2 Percent of AlaskanAdults Who Report Home Smoke Exposure in the Past Month, (BRFSS 2008)

	N	Percent	Confidence Interval	p value
All Adults	2,276	9.3%	7.7-11.1%	
Male	1,045	11.9%	9.4-14.9%	
Female	1,231	6.5%	4.9-8.7%	p=0.001
Alaska Natives	426	7.4%	5.0-10.9%	
Non-Natives	1,813	9.5%	7.7-11.6%	p=0.26
Low SES non-Native (25-64)	263	18.2%	12.6-25.6%	
High SES non-Native (25-64)	1,239	7.1%	5.4-9.3%	p<0.001
Ages 18-29	313	8.9%	5.4-14.4%	
Ages 30-54	1,189	9.4%	7.4-12.0%	
Ages 55 and older	746	9.6%	7.3-12.6%	p=0.94
Anchorage/MatSu	482	8.2%	5.9-11.4%	
Gulf Coast	445	13.8%	10.4-18.1%	
Southwest	243	7.1%	4.0-12.3%	
Southeast	427	11.0%	7.9-15.1%	
North/NW/Interior	254	9.2%	5.6-14.8%	
Fairbanks North Star	425	9.5%	6.3-13.9%	p=0.16
Current Smokers	508	26.8%	21.7-32.7%	
Former Smokers	699	5.0%	3.2-7.7%	
Never been a Smoker	1,056	3.9%	2.4-6.4%	p<0.001

9-3 Percent of Alaska Adults Who Have a Home Smoking Ban, (BRFSS 2008)

	N	Percent	Confidence Interval	p value
All Adults	2,263	88.7%	86.7-90.4%	
Male	1,037	86.0%	82.7-88.8%	
Female	1,226	91.5%	89.2-93.4%	p<0.01
Alaska Natives	427	89.4%	85.4-92.3%	
Non-Natives	1,801	88.6%	86.3-90.6%	p=0.72
Low SES non-Native (25-64)	263	75.7%	67.3-82.4%	
High SES non-Native (25-64)	1,236	91.5%	89.1-93.4%	p<0.001
Ages 18-29	314	91.5%	86.0-94.9%	
Ages 30-54	1,189	88.0%	85.1-90.4%	
Ages 55 and older	733	87.3%	83.9-90.1%	p=0.28
Anchorage/MatSu	480	89.7%	86.2-92.4%	
Gulf Coast	442	85.0%	81.1-88.2%	
Southwest	244	88.4%	82.0-92.7%	
Southeast	425	85.2%	80.9-88.7%	
North/NW/Interior	250	87.7%	81.1-92.2%	
Fairbanks North Star	422	90.9%	87.2-93.7%	p=0.15
Current Smokers	506	69.4%	63.3-75.0%	
Former Smokers	691	89.9%	86.0-92.8%	
Never been a Smoker	1,052	96.4%	94.1-97.9%	p<0.001

9-4 Percent of Alaska Adults Who Have Home Smoking Bans, by Alaska Native Priority Group and Non-Native Group (BRFSS 2006-2008)

	Alaska Native				Non-Native			
	N	Percent	CI	p value	N	Percent	CI	p value
All Adults	1,287	86.9%	84.3-89.1%		5,510	87.0%	85.6-88.3%	
Male	564	89.1%	86.0-91.6%		2,524	85.8%	83.7-87.7%	
Female	723	84.5%	80.3-88.0%	p<0.05	2,986	88.3%	86.2-90.1%	p=0.09
Ages 18-29	270	88.0%	82.0-92.2%		697	87.9%	82.8-91.6%	
Ages 30-54	682	87.0%	83.5-89.9%		2,950	88.0%	86.3-89.5%	
Ages 55 and older	300	83.9%	77.8-88.5%	p=0.51	1,818	84.6%	82.2-86.7%	p=0.19
Children in Home	765	90.3%	86.9-92.9%		2,133	91.0%	88.8-92.9%	
No Children in Home	522	81.8%	77.2-85.6%	p<0.01	3,377	83.8%	81.8-85.6%	p<0.001
Anchorage/MatSu	101	89.0%	81.1-93.9%	*	1,324	87.9%	85.5-89.9%	
Gulf Coast	117	78.3%	69.4-85.2%		1,252	83.0%	80.4-85.4%	
Southwest	432	91.5%	87.7-94.2%		252	88.5%	82.6-92.6%	
Southeast	207	83.5%	77.4-88.2%		1,142	85.9%	83.5-88.0%	
North/NW/Interior	358	84.5%	79.1-88.8%		356	84.0%	78.4-88.4%	
Fairbanks North Star	72	82.3%	69.9-90.3%	p<0.05	1,184	88.1%	85.7-90.2%	p=0.03
Employment Status								
Employed	725	87.0%	83.3-90.0%		3,829	88.5%	86.8-90.0%	
Unemployed	228	89.5%	83.2-93.6%		221	78.7%	69.9-85.5%	
Not in Workforce	223	86.8%	79.6-91.7%		1,271	86.5%	83.3-89.3%	
Unable to Work	92	81.1%	69.1-89.1%	p=0.48	175	66.3%	55.2-75.8%	p<0.001
Socio-Economic Status								
Low SES	726	86.7%	83.3-89.5%		1,072	79.1%	74.5-83.1%	
Higher SES	553	86.8%	82.4-90.3%	p=0.95	4,429	89.3%	88.0-90.5%	p<0.001
Smoking Status								
Current Smokers	533	79.9%	75.3-83.9%		1,002	61.8%	57.1-66.3%	
Former Smokers	340	92.8%	88.5-95.6%		1,655	89.9%	87.7-91.7%	
Never been a Smoker	402	91.7%	86.7-94.9%	p<0.001	2,824	94.3%	92.4-95.8%	p<0.001

The asterisk [*] indicates estimates that have a high coefficient of variation.

9-5 Percent of Alaska Adults Who Have Home Smoking Bans, by Low SES Non-Native (age 25-64) Priority Group and Higher SES Group (BRFSS 2006-2008)

	Low SES Non-Native (age 25-64)				Higher SES Non-Native (age 25-64)			
	N	Percent	CI	p value	N	Percent	CI	p value
All Adults	762	79.5%	75.1-83.2%		3,788	89.8%	88.4-91.0%	
Male	309	73.7%	66.2-80.1%		1,786	89.0%	87.0-90.7%	
Female	453	83.9%	78.7-88.0%	p=0.01	2,002	90.7%	88.9-92.2%	p=0.18
Ages 18-29	102	84.8%	73.5-91.8%		294	95.3%	91.0-97.6%	*
Ages 30-54	492	79.0%	73.5-83.6%		2,507	89.8%	88.1-91.2%	
Ages 55 and older	163	78.4%	67.5-86.4%	p=0.56	942	87.0%	84.0-89.5%	p<0.01
Children in Home	426	84.9%	79.2-89.2%		1,574	94.1%	92.5-95.4%	
No Children in Home	336	71.0%	63.5-77.4%	p<0.01	2,214	85.9%	83.8-87.8%	p<0.001
Region								
Rural	80	76.0%	61.4-86.3%		396	86.6%	81.8-90.3%	
Not Rural	682	79.7%	75.0-83.6%	p=0.58	3,392	89.9%	88.5-91.1%	p=0.11
Employment Status								
Employed	424	81.6%	75.7-86.3%		3,116	90.4%	89.0-91.6%	
Unemployed	82	70.8%	54.5-83.1%		102	89.3%	77.2-95.4%	*
Not in Workforce	146	89.2%	81.4-94.0%		516	87.8%	83.3-91.1%	
Unable to Work	108	60.8%	46.4-73.5%	p=0.001	48	70.0%	48.4-85.3%	* p<0.01
Smoking Status								
Current Smokers	277	55.3%	46.6-63.7%		610	63.4%	57.9-68.6%	
Former Smokers	199	86.2%	76.0-92.5%		1,132	91.8%	89.5-93.6%	
Never been a Smoker	278	95.2%	90.6-97.6%	* p<0.001	2,032	96.2%	94.9-97.2%	p<0.001

The asterisk [*] indicates estimates that have a high coefficient of variation or sample size inadequate for a very common event.

9-6 Percent of Alaska Adults Who Report Smoke Exposure in a Car in the Past Month (BRFSS 2006-2008)

	N	Percent	Confidence Interval	p value
All Adults	6,947	23.4%	21.8-25.1%	
Male	3,160	26.9%	24.5-29.5%	
Female	3,787	19.6%	17.5-21.8%	p<0.001
Alaska Natives	1,292	27.0%	23.0-31.4%	
Non-Natives	5,538	22.6%	20.9-24.5%	p=0.05
Low SES non-Native (25-64)	763	33.2%	28.4-38.4%	
High SES non-Native (25-64)	3,795	18.2%	16.5-20.0%	p<0.001
Ages 18-29	988	37.4%	32.6-42.4%	
Ages 30-54	3,691	21.0%	19.1-23.0%	
Ages 55 and older	2,174	15.3%	13.3-17.6%	p<0.001
Anchorage/MatSu	1,460	22.9%	20.2-25.8%	
Gulf Coast	1,394	27.9%	25.1-30.8%	
Southwest	692	16.3%	12.6-20.7%	
Southeast	1,385	23.3%	20.7-26.1%	
North/NW/Interior	735	20.7%	17.2-24.8%	
Fairbanks North Star	1,281	25.6%	22.6-28.9%	p<0.01
Current Smokers	1,560	61.4%	57.6-65.2%	
Former Smokers	2,045	15.8%	13.5-18.3%	
Never been a Smoker	3,298	10.8%	9.0-12.9%	p<0.001

9-7 Percent of Employed Alaska Adults Working Primarily Indoors Who Report That Smoking Occurred Anywhere at their Workplace in the Past Month (BRFSS 2006-2008)

	N	Percent	Confidence Interval	p value
All Adults	3,578	29.1%	26.7-31.5%	
Male	1,436	35.6%	31.9-39-4%	
Female	2,142	23.2%	20.2-26.5%	p<0.001
Alaska Natives	528	30.5%	24.7-37.0%	
Non-Natives	2,990	28.8%	26.2-31.5%	p=0.61
Low SES non-Native (25-64)	300	32.3%	24.8-40.8%	
High SES non-Native (25-64)	2,490	25.5%	23.0-28.0%	p=0.10
Ages 18-29	500	44.6%	37.8-51.5%	
Ages 30-54	2,301	27.0%	24.3-29.8%	
Ages 55 and older	730	16.6%	13.1-20.8%	p<0.001
Anchorage/MatSu	800	30.0%	26.1-34.1%	
Gulf Coast	624	29.4%	25.2-34.1%	
Southwest	343	18.4%	14.3-23.4%	
Southeast	729	26.6%	23.0-30.4%	
North/NW/Interior	355	26.7%	21.7-32.5%	
Fairbanks North Star	727	31.2%	27.1-35.7%	p=0.06
Current Smokers	707	50.5%	44.8-56.1%	
Former Smokers	1,008	24.8%	21.0-29.0%	
Never been a Smoker	1,847	23.8%	20.6-27.2%	p<0.001

9-8 Percent of Employed Alaska Adults Working Primarily Indoors Who Report Smoke Exposure in their Workplacein the Past Month, by Smoking Status (BRFSS 2006-2008)

	Smokers				Non-Smokers			
	N	Percent	CI	p value	N	Percent	CI	p value
All Adults Employed Indoors	707	50.5%	44.8-56.1%		2,855	24.1%	21.6-26.8%	
Male	287	57.7%	49.3-65.7%		1,141	30.6%	26.7-34.9%	
Female	420	44.4%	36.7-52.4%	p=0.02	1,714	18.1%	15.2-21.6%	p>0.001
Alaska Natives	208	41.2%	32.4-50.6%		316	23.2%	15.9-32.6%	
Non-Natives	490	52.5%	45.7-59.2%	p=0.05	2,489	24.1%	21.5-26.9%	p=0.85
Low SES non-Native (25-64)	105	49.1%	35.6-62.8%		191	24.8%	16.7-35.2%	
High SES non-Native (25-64)	356	47.0%	39.5-54.6%	p=0.79	2,127	21.8%	19.4-24.5%	p=0.53
Ages 18-29	151	61.9%	50.7-71.9%		346	38.4%	30.4-47.0%	
Ages 30-54	454	46.4%	39.6-53.3%		1,837	22.5%	19.8-25.5%	
Ages 55 and older	89	30.9%	19.6-45.0%	p<0.01	639	15.3%	11.7-19.8%	p<0.001
Anchorage/MatSu	131	55.8%	45.6-65.5%		663	24.8%	20.8-29.2%	
Gulf Coast	127	52.0%	41.3-62.5%		494	22.5%	18.3-27.3%	
Southwest	84	33.1%	22.7-45.4%		258	12.3%	8.8-16.8%	
Southeast	138	44.4%	34.9-54.4%		590	22.4%	18.7-26.6%	
North/NW/Interior	101	37.5%	27.4-48.9%		251	22.1%	16.6-28.8%	
Fairbanks & Vicinity	126	50.5%	40.1-60.8%	p=0.04	599	27.4%	23.0-32.2%	p=0.05

9-9 Percent of Employed Alaska Adults Working Primarily Indoors at Workplaces with a Smoke-free Indoor Work Area Policy (BRFSS 2006-2008)

	N	Percent	Confidence Interval	p value
All Adults	3,626	87.1%	85.5-88.7%	
Male	1,477	83.6%	80.8-86.0%	
Female	2,149	90.4%	88.4-92.2%	p<0.001
Alaska Natives	525	79.8%	74.3-84.4%	
Non-Natives	3,041	87.9%	86.1-89.5%	p<0.001
Low SES non-Native (25-64)	307	82.6%	75.6-88.0%	
High SES non-Native (25-64)	2,524	90.1%	88.4-91.5%	p<0.01
Ages 18-29	509	78.9%	73.3-83.6%	
Ages 30-54	2,331	89.3%	87.5-90.9%	
Ages 55 and older	739	90.1%	86.7-92.7%	p<0.001
Anchorage/Mat-Su	807	89.7%	86.9-92.0%	
Gulf Coast	639	84.8%	81.2-87.9%	
Southwest	341	88.4%	84.1-91.7%	
Southeast	742	85.0%	81.7-87.9%	
North/NW/Interior	359	81.9%	76.6-86.2%	
Fairbanks North Star	738	81.9%	77.8-85.3%	p<0.001
Current Smokers	712	78.1%	73.2-82.3%	
Former Smokers	1,025	87.1%	83.9-89.7%	
Never been a Smoker	1,870	90.4%	88.2-92.2%	p<0.001

Tables for Chapter 10: Support for Clean Indoor Air Policies and Protection From Secondhand Smoke

10-1 Percent of Alaska Adults Who Believe that People Should be Protected from Smoke from Other People's Cigarettes (BRFSS 2006-2008)

	N	Percent	Confidence Interval	p value
All Adults	6,905	85.4%	84.2-86.6%	
Male	3,134	82.3%	80.3-84.1%	
Female	3,771	88.8%	87.2-90.1%	p<0.001
Alaska Natives	1,287	85.5%	82.2-88.3%	
Non-Natives	5,501	85.7%	84.3-87.0%	p=0.91
Low SES non-Native (25-64)	761	81.2%	76.8-84.9%	
High SES non-Native (25-64)	3,764	86.2%	84.5-87.7%	p=0.01
Ages 18-29	982	89.3%	86.4-91.6%	
Ages 30-54	3,672	86.0%	84.3-87.5%	
Ages 55 and older	2,157	81.5%	79.0-83.8%	p<0.001
Anchorage/Mat-Su	1,455	85.2%	83.0-87.1%	
Gulf Coast	1,377	83.0%	80.3-85.3%	
Southwest	691	86.0%	82.3-89.0%	
Southeast	1,377	86.7%	84.5-88.6%	
North/NW/Interior	732	87.4%	84.4-89.9%	
Fairbanks North Star	1,273	86.6%	84.2-88.6%	p=0.23
Current Smokers	1,538	75.4%	72.1-78.5%	
Former Smokers	2,035	82.8%	80.2-85.2%	
Never been a Smoker	3,285	91.3%	89.8-92.6%	p<0.001

10-2 Percent of Alaska Adults Who Agree that Smoking Should Not be Allowed Anywhere in Indoor Work Areas (BRFSS 2008)

	N	Percent	Confidence Interval	p value
All Adults	2,268	78.5%	75.5-81.3%	
Male	1,037	72.2%	67.5-76.5%	
Female	1,231	85.3%	81.5-88.4%	p<0.001
Alaska Natives	431	74.2%	66.7-80.5%	
Non-Natives	1,801	79.3%	75.9-82.3%	p=0.18
Low SES non-Native (25-64)	263	78.5%	70.5-84.9%	
High SES non-Native (25-64)	1,233	83.0%	79.4-86.0%	p=0.24
Ages 18-29	315	71.0%	61.9-78.7%	
Ages 30-54	1,187	81.8%	78.2-85.0%	
Ages 55 and older	739	78.6%	74.1-82.5%	p=0.02
Anchorage/MatSu	479	79.0%	73.9-83.3%	
Gulf Coast	439	74.6%	69.3-79.2%	
Southwest	245	78.0%	69.6-84.6%	
Southeast	427	83.2%	78.6-86.9%	
North/NW/Interior	256	64.7%	50.2-77.0%	
Fairbanks North Star	422	83.3%	78.2-87.4%	p=0.02
Current Smokers	507	56.8%	49.5-63.9%	
Former Smokers	693	75.8%	70.3-80.5%	
Never been a Smoker	1,054	89.3%	85.5-92.2%	p<0.001

10-3 Percent of Alaska Adults Who Agree that Smoking Should Not be Allowed Anywhere in Indoor Work Areas, by Race/Ethnic Group and Selected Factors (BRFSS 2006-2008)

	Alaska Native				Non-Native			
	N	Percent	CI	p value	N	Percent	CI	p value
All Adults	1,294	74.9%	70.4-79.0%		5,519	78.7%	76.8-80.4%	
Male	568	66.0%	58.7-72.6%		2,526	72.5%	69.7-75.2%	
Female	726	84.5%	80.8-87.6%	p<0.001	2,993	85.2%	83.0-87.2%	p<0.001
Ages 18-29	273	65.5%	55.0-74.6%		698	74.6%	68.8-79.6%	
Ages 30-54	684	77.2%	71.8-81.9%		2,952	81.6%	79.5-83.6%	
Ages 55 and older	301	83.6%	77.1-88.5%	p<0.01	1,822	76.0%	73.2-78.7%	p<0.01
Children in Home	769	75.6%	69.6-80.8%		2,135	83.1%	80.4-85.5%	
No Children in Home	525	73.9%	66.9-79.8%	p=0.68	3,384	75.1%	72.6-77.4%	p<0.001
Anchorage/MatSu	101	70.5%	56.3-81.7%	*	1,323	78.5%	75.6-81.1%	
Gulf Coast	115	66.0%	55.0-75.5%		1,251	74.1%	71.0-77.0%	
Southwest	434	80.1%	74.3-84.8%		254	86.2%	80.0-90.7%	
Southeast	207	81.7%	74.4-87.3%		1,148	82.5%	79.9-84.7%	
North/NW/Interior	365	74.2%	68.2-79.4%		359	70.5%	58.1-80.5%	
Fairbanks North Star	72	71.5%	57.9-82.1%	p=0.19	1,184	81.3%	78.5-83.9%	p<0.01
Employment Status								
Employed	727	76.7%	71.0-81.6%		3,826	81.3%	79.2-83.2%	
Unemployed	231	70.0%	59.2-79.0%		221	68.4%	58.1-77.2%	
Not in Workforce	224	76.8%	63.4-86.3%		1,283	75.5%	71.4-79.1%	
Unable to Work	93	70.3%	51.5-84.1%	* p=0.65	175	52.8%	41.3-64.0%	p<0.001
Socio-Economic Status								
Low SES	734	75.1%	69.3-80.1%		1,071	72.1%	67.1-76.6%	
Higher SES	553	76.1%	69.4-81.8%	p=0.81	4,438	80.6%	78.8-82.3%	p<0.001
Smoking Status								
Current Smokers	534	61.1%	54.0-67.8%		997	56.1%	50.9-61.0%	
Former Smokers	341	86.4%	79.8-91.1%		1,656	76.4%	73.2-79.3%	
Never been a Smoker	406	84.5%	75.7-90.5%	p<0.001	2,835	87.8%	85.6-89.7%	p<0.001

The asterisk [*] indicates estimates that have a high coefficient of variation or sample size inadequate for a very common event.

10-4 Percent of Alaska Adults Who Agree that Smoking Should Not be Allowed Anywhere in Indoor Work Areas, by Employment Status and Selected Factors (BRFSS 2006-2008)

	Employed Indoors				Not Employed Indoors			
	N	Percent	CI	p value	N	Percent	CI	p value
All Adults	4,077	83.5%	81.5-85.3%		2,692	69.8%	66.9-72.5%	
Male	1,592	79.3%	76.1-82.2%		1,470	61.9%	57.8-65.9%	
Female	2,485	87.1%	84.5-89.2%	p<0.001	1,222	81.7%	78.5-84.5%	p<0.001
Alaska Native	667	80.5%	74.8-85.1%		594	69.0%	61.9-75.3%	
Non-Native	3,343	83.9%	81.8-85.9%	p=0.20	2,054	70.0%	66.7-73.0%	p=0.79
Socio-Economic Status								
Low SES	816	76.8%	71.1-81.7%		970	69.5%	64.2-74.4%	
Higher SES	3,253	85.3%	83.3-87.1%	p<0.01	1,711	70.3%	66.9-73.5%	p=0.80
Ages 18-29	648	79.5%	73.6-84.3%		319	61.4%	52.3-69.7%	
Ages 30-54	2,517	84.6%	82.3-86.6%		1,100	73.9%	69.9-77.6%	
Ages 55 and older	855	86.0%	82.6-88.8%	p=0.05	1,244	69.7%	66.0-73.2%	p=0.01
Anchorage/MatSu	895	83.9%	80.6-86.7%		532	67.8%	62.6-72.6%	
Gulf Coast	734	78.6%	74.6-82.0%		615	67.0%	62.3-71.3%	
Southwest	404	86.7%	81.7-90.5%		275	75.0%	67.3-81.4%	
Southeast	821	86.6%	83.7-89.1%		522	75.6%	71.2-79.5%	
North/NW/Interior	417	76.0%	63.8-85.0%		304	67.9%	61.3-73.9%	
Fairbanks North Star	806	84.6%	81.3-87.4%	p=0.04	444	74.7%	69.5-79.4%	p=0.05
Smoking Status								
Current Smokers	814	66.6%	61.2-71.6%		703	47.8%	41.8-53.9%	
Former Smokers	1,137	82.5%	78.8-85.7%		855	70.9%	66.1-75.3%	
Never been a Smoker	2,105	90.0%	87.3-92.1%	p<0.001	1,116	82.7%	78.9-85.9%	p<0.001

10-5 Percent of Alaska Adults Who Agree that Smoking Should Not be Allowed Anywhere in Restaurants (BRFSS 2008)

	N	Percent	Confidence Interval	p value
All Adults	2,273	77.2%	74.4-79.9%	
Male	1,043	71.9%	67.3-76.1%	
Female	1,230	83.0%	79.6-85.8%	p<0.001
Alaska Natives	430	82.8%	77.6-87.0%	
Non-Natives	1,808	76.5%	73.2-79.4%	p=0.04
Low SES non-Native (25-64)	263	75.1%	66.5-82.0%	
High SES non-Native (25-64)	1,235	78.3%	74.6-81.6%	p=0.45
Ages 18-29	315	77.2%	69.1-83.7%	
Ages 30-54	1,187	77.6%	73.7-81.1%	
Ages 55 and older	743	76.5%	71.9-80.5%	p=0.93
Anchorage/MatSu	481	76.6%	71.6-80.9%	
Gulf Coast	443	74.3%	69.1-79.0%	
Southwest	243	80.6%	72.4-86.8%	
Southeast	426	76.4%	71.5-80.7%	
North/NW/Interior	256	84.2%	77.4-89.3%	
Fairbanks North Star	424	78.5%	72.8-83.2%	p=0.38
Current Smokers	508	60.1%	52.7-67.0%	
Former Smokers	697	73.4%	68.1-78.1%	
Never been a Smoker	1,054	86.5%	83.1-89.3%	p<0.001

10-6 Percent of Alaska Adults Who Agree that Smoking Should Not be Allowed Anywhere in Restaurants, by Race/Ethnic Group and Selected Factors (BRFSS 2006-2008)

	Alaska Native				Non-Native			
	N	Percent	CI	p value	N	Percent	CI	p value
All Adults	1,297	79.2%	75.7-82.4%		5,536	74.9%	73.1-76.6%	
Male	569	76.2%	70.3-81.2%		2,535	69.5%	66.7-72.2%	
Female	728	82.5%	78.7-85.8%	p=0.05	3,001	80.7%	78.4-82.8%	p<0.001
Ages 18-29	273	76.1%	67.3-83.1%		698	71.5%	66.0-76.5%	
Ages 30-54	685	83.1%	79.6-86.1%		2,954	76.4%	74.2-78.6%	
Ages 55 and older	303	79.0%	75.4-82.2%	p-0.07	1,836	74.8%	72.0-77.4%	p=0.14
Children in Home	769	81.9%	77.1-85.8%		2,135	78.0%	75.0-80.7%	
No Children in Home	528	75.2%	69.5-80.1%	p=0.06	3,402	72.4%	70.1-74.6%	p<0.01
Anchorage/MatSu	101	79.3%	68.1-87.2%		1,326	75.7%	72.7-78.4%	
Gulf Coast	117	64.4%	53.5-74.0%		1,257	72.6%	69.5-75.5%	
Southwest	434	84.9%	80.1-88.7%		254	76.4%	68.8-82.6%	
Southeast	208	76.2%	68.2-82.7%		1,149	74.7%	71.8-77.4%	
North/NW/Interior	365	81.9%	76.9-86.1%		361	76.1%	69.6-81.6%	
Fairbanks North Star	72	69.4%	56.6-79.8%	p=0.02	1,189	73.3%	70.1-76.2%	p=0.52
Employment Status								
Employed	728	79.7%	74.5-84.0%		3,835	76.6%	74.4-78.6%	
Unemployed	231	80.3%	72.6-86.2%		222	67.8%	57.4-76.6%	
Not in Workforce	226	82.1%	74.7-87.7%		1,290	73.7%	69.7-77.3%	
Unable to Work	93	67.0%	50.2-80.3%	p=0.19	175	55.7%	44.0-66.7%	p<0.001
Socio-Economic Status								
Low SES	734	78.7%	73.7-83.0%		1,077	69.1%	64.2-73.6%	
Higher SES	555	79.2%	74.1-83.6%	p=0.88	4,450	76.6%	74.7-78.4%	p<0.01
Smoking Status								
Current Smokers	536	72.5%	66.1-78.1%		1,004	49.3%	44.3-54.3%	
Former Smokers	342	85.4%	79.3-89.9%		1,666	72.1%	68.9-75.2%	
Never been a Smoker	406	82.9%	77.3-87.4%	p<0.01	2,835	85.3%	83.3-87.1%	p<0.001

10-7 Percent of Non-Native Alaska Adults Aged 25-64 Who Agree that Smoking Should Not be Allowed Anywhere in Restaurants, by Socio-economic Status and Selected Factors (BRFSS 2006-2008)

	Low SES Non-Native (age 25-64)				Higher SES Non-Native (age 25-64)			
	N	Percent	CI	p value	N	Percent	CI	p value
All Adults	765	73.8%	69.0-78.1%		3,792	77.2%	75.2-79.0%	
Male	310	69.0%	61.0-75.9%		1,784	72.3%	69.2-75.1%	
Female	455	77.6%	71.5-82.6%	p=0.07	2,008	82.8%	80.3-85.0%	p<0.001
Ages 18-29	102	79.1%	66.3-88.0%		293	75.8%	68.4-81.9%	
Ages 30-54	494	73.0%	67.0-78.3%		2,506	76.9%	74.4-79.2%	
Ages 55 and older	164	73.5%	63.3-81.6%	p=0.60	944	78.9%	75.3-82.1%	p=0.62
Children in Home	427	79.7%	73.8-84.5%		1,571	79.7%	76.7-82.5%	
No Children in Home	338	64.4%	56.5-71.6%	p<0.01	2,221	74.9%	72.3-77.4%	p=0.02
Region								
Rural	80	76.8%	64.7-85.8%		398	77.0%	71.3-81.9%	
Not Rural	685	73.6%	68.6-78.1%	p=0.60	3,394	77.2%	75.1-79.1%	p=0.96
Employment Status								
Employed	426	76.7%	70.6-81.9%		3,118	77.4%	75.3-79.5%	
Unemployed	83	65.5%	48.6-79.3%		102	80.1%	67.2-88.7%	
Not in Workforce	146	82.5%	73.2-89.1%		519	75.5%	69.6-80.6%	
Unable to Work	108	56.5%	42.3-69.7%	p<0.01	47	67.2%	46.9-82.7%	* p=0.58
Smoking Status								
Current Smokers	277	52.2%	43.5-60.8%		610	54.8%	49.0-60.5%	
Former Smokers	200	76.8%	67.8-83.8%		1,132	73.3%	69.3-77.0%	
Never been a Smoker	280	89.4%	83.7-93.3%	p<0.001	2,034	85.5%	83.2-87.6%	p<0.001

The asterisk [*] indicates estimates that have a high coefficient of variation.

10-8 Percent of Alaska Adults Who Would Visit Bars the Same Amount or More Often, If Smoking Were Not Allowed (BRFSS 2007-2008)

	N	Percent	Confidence Interval	p value
All Adults	3,322	90.3%	88.7-91.7%	
Male	1,521	89.2%	86.7-91.3%	
Female	1,801	91.4%	89.1-93.2%	p=0.17
Alaska Natives	342	87.2%	82.2-91.0%	
Non-Natives	2,921	90.5%	88.7-92.1%	p=0.13
Low SES non-Native (25-64)	416	85.7%	80.1-89.9%	
High SES non-Native (25-64)	1,958	92.1%	90.1-93.6%	p<0.01
Ages 18-29	466	87.9%	82.4-91.8%	
Ages 30-54	1,707	91.1%	89.1-92.7%	
Ages 55 and older	1,105	91.1%	88.9-93.0%	p=0.22
Anchorage/Mat-Su	566	90.8%	87.5-93.3%	
Gulf Coast	836	88.6%	85.8-90.9%	
Southwest	151	89.2%	82.5-93.6%	
Southeast	720	89.8%	86.8-92.1%	
North/NW/Interior	209	90.2%	85.1-93.8%	
Fairbanks North Star	840	91.0%	88.3-93.2%	p=0.75
Current Smokers	637	71.2%	65.5-76.4%	
Former Smokers	1,021	94.0%	91.5-95.8%	
Never been a Smoker	1,640	96.3%	94.6-97.5%	p<0.001

Note: Percent is among those who live in areas without comprehensive Clean Indoor Air laws, so excludes those who reported living in Anchorage or Juneau Boroughs, or other places where smoking is not currently allowed in bars.

Tables for Chapter 11: Perceptions and Knowledge About Health Risks of Secondhand Smoke Exposure

11-1 Percent of Alaska Adults Who Think that Breathing Smoke from Other People's Cigarettes is Very Harmful (BRFSS 2006-2008)

	N	Percent	Confidence Interval	p value
All Adults	6,933	61.1%	59.3-62.8%	
Male	3,154	51.5%	48.8-54.2%	
Female	3,779	71.3%	69.1-73.4%	p<0.001
Alaska Natives	1,290	69.1%	65.0-72.9%	
Non-Natives	5,528	60.0%	58.0-61.9%	p<0.001
Low SES non-Native (25-64)	763	61.1%	55.9-66.1%	
High SES non-Native (25-64)	3,786	60.0%	57.7-62.2%	p=0.69
Ages 18-29	987	65.7%	61.1-70.1%	
Ages 30-54	3,689	61.8%	59.5-64.1%	
Ages 55 and older	2,165	55.2%	52.2-58.1%	p<0.001
Anchorage/Mat-Su	1,457	61.2%	58.2-64.1%	
Gulf Coast	1,389	55.1%	51.9-58.2%	
Southwest	694	70.0%	65.5-74.1%	
Southeast	1,381	62.6%	59.6-65.5%	
North/NW/Interior	738	62.9%	56.9-68.7%	
Fairbanks North Star	1,274	60.2%	56.9-63.5%	p<0.01
Current Smokers	1,548	44.6%	40.6-48.7%	
Former Smokers	2,042	58.4%	55.3-61.5%	
Never been a Smoker	3,297	69.9%	67.5-72.2%	p<0.001

11-2 Percent of Alaska Adults by Region and Race Group, Who Think that Breathing SHS is Very Harmful (BRFSS 2006-2008)

	Alaska Native				Non-Native			
	N	Percent	CI	p value	N	Percent	CI	p value
All Adults	1,290	69.1%	65.0-72.9%		5,528	60.0%	58.0-61.9%	
Anchorage/MatSu	100	64.6%	52.2-75.3%	*	1,326	61.2%	58.1-64.2%	
Gulf Coast	116	57.9%	46.8-68.1%		1,255	54.9%	51.6-58.2%	
Southwest	434	72.2%	66.6-77.1%		252	65.6%	57.6-72.8%	
Southeast	203	74.7%	66.9-81.2%		1,150	60.4%	57.2-63.6%	
North/NW/Interior	365	72.8%	66.9-78.0%		361	52.9%	43.5-62.1%	
Fairbanks North Star	72	65.5%	52.1-76.8%	p=0.17	1,184	59.8%	56.4-63.2%	p=0.04

11-3 Percent of Alaska Adults Who Think that Breathing Smoke from Other People's Cigarettes Causes Lung Cancer in Adults (BRFSS 2007-2008)

	N	Percent Yes	Confidence Interval	Percent Don't know	Confidence Interval	p value
All Adults	4,822	77.6%	75.8-79.4%	14.4%	13.1-15.9%	
Male	2,225	73.1%	70.3-75.8%	16.6%	14.4-18.9%	
Female	2,597	82.4%	80.0-84.5%	12.2%	10.6-14.0%	p<0.001
Alaska Natives	903	80.5%	76.6-83.9%	14.9%	11.8-18.5%	
Non-Natives	3,843	77.5%	75.5-79.5%	14.1%	12.6-15.8%	p=0.03
Low SES non-Native (25-64)	532	77.1%	71.4-81.9%	15.2%	11.3-20.1%	
High SES non-Native (25-64)	2,624	77.6%	75.2-79.8%	13.7%	11.9-15.6%	p=0.74
Ages 18-29	709	87.2%	82.8-90.6%	7.1%	4.9-10.2%	
Ages 30-54	2,541	77.7%	75.2-80.0%	14.5%	12.6-16.6%	
Ages 55 and older	1,514	68.4%	65.0-71.7%	21.2%	18.4-24.3%	p<0.001
Anchorage/MatSu	999	77.2%	74.1-80.0%	13.9%	11.7-16.5%	
Gulf Coast	966	76.3%	73.0-79.2%	16.3%	13.9-19.1%	
Southwest	506	76.4%	71.2-80.8%	17.70%	13.9-22.2%	
Southeast	959	79.2%	76.2-81.9%	15.1%	12.8-17.7%	
North/NW/Interior	523	79.2%	69.2-86.5%	11.5%	8.7-15.0%	
Fairbanks North Star	869	79.2%	75.8-82.2%	14.40%	11.8-17.4%	p=0.42
Current Smokers	1,037	66.7%	62.1-71.0%	19.7%	16.3-23.7%	
Former Smokers	1,433	73.9%	70.5-77.1%	16.1%	13.6-18.9%	
Never been a Smoker	2,318	84.4%	82.0-86.5%	11.2%	9.5-13.0%	p<0.001

11-4 Percent of Alaska Adults Who Think that Breathing Smoke from Other People's Cigarettes Causes Heart Disease in Adults (BRFSS 2007-2008)

	N	Percent Yes	Confidence Interval	Percent Don't know	Confidence Interval	p value
All Adults	4,823	63.3%	61.2-65.4%	26.1%	24.3-27.9%	
Male	2,227	60.2%	57.0-63.2%	26.8%	24.2-29.6%	
Female	2,596	66.7%	63.9-69.3%	25.3%	23.0-27.7%	p<0.001
Alaska Natives	903	65.7%	60.6-70.5%	26.2%	22.1-30.8%	
Non-Natives	3,843	63.4%	61.1-65.7%	25.8%	23.8-27.8%	p=0.38
Low SES non-Native (25-64)	533	67.8%	61.8-73.2%	23.7%	19.0-29.1%	
High SES non-Native (25-64)	2,625	63.1%	60.4-65.7%	26.1%	23.8-28.5%	p=0.33
Ages 18-29	709	68.6%	63.0-73.7%	21.1%	17.1-25.8%	
Ages 30-54	2,542	64.8%	62.0-67.5%	25.1%	22.7-27.5%	
Ages 55 and older	1,514	55.7%	52.1-59.2%	32.2%	29.0-35.6%	p<0.01
Anchorage/MatSu	999	64.0%	60.4-67.3%	24.3%	21.4-27.5%	
Gulf Coast	964	61.8%	58.0-65.4%	26.9%	23.8-30.2%	
Southwest	506	65.9%	60.3-71.1%	27.2%	22.4-32.5%	
Southeast	960	63.8%	60.3-67.2%	28.7%	25.6-32.0%	
North/NW/Interior	523	59.5%	51.8-66.8%	28.3%	23.4-33.8%	
Fairbanks North Star	871	62.2%	58.2-66.1%	29.0%	25.4-32.9%	p=0.20
Current Smokers	1,039	52.6%	47.6-57.5%	28.3%	24.2-32.7%	
Former Smokers	1,433	63.3%	59.7-66.8%	24.8%	21.9-28.0%	
Never been a Smoker	2,317	68.1%	65.2-70.9%	25.4%	22.9-28.1%	p<0.001

11-5 Percent of Alaska Adults Who Think that Breathing Smoke from Other People's Cigarettes Causes Respiratory Problems in Children (BRFSS 2007-2008)

	N	Percent Yes	Confidence Interval	Percent Don't know	Confidence Interval	p value
All Adults	4,823	89.2%	87.8-90.5%	7.7%	6.7-8.9%	
Male	2,225	85.9%	83.7-87.8%	10.4%	8.7-12.3%	
Female	2,598	92.7%	90.7-94.3%	4.9%	3.9-6.1%	p<0.001
Alaska Natives	903	89.7%	86.3-92.3%	7.9%	5.6-11.1%	
Non-Natives	3,843	89.7%	88.1-91.0%	7.5%	6.4-8.7%	p=0.84
Low SES non-Native (25-64)	533	91.1%	87.7-93.6%	7.1%	4.8-10.3%	
High SES non-Native (25-64)	2,624	90.6%	88.9-92.0%	6.7%	5.5-8.1%	p=0.33
Ages 18-29	709	92.6%	88.3-95.4%	3.6%	2.1-6.3%	
Ages 30-54	2,542	90.8%	89.0-92.3%	7.0%	5.7-8.6%	
Ages 55 and older	1,515	82.8%	80.0-85.3%	12.8%	10.6-15.4%	p<0.001
Anchorage/MatSu	1,001	89.4%	87.1-91.3%	7.8%	6.2-9.8%	
Gulf Coast	964	87.5%	84.8-89.8%	9.1%	7.2-11.4%	
Southwest	505	90.4%	86.6-93.2%	7.6%	5.2-11.1%	
Southeast	960	89.8%	87.6-91.7%	7.6%	6.0-9.6%	
North/NW/Interior	523	86.0%	74.3-92.9%	7.3%	5.2-10.2%	
Fairbanks North Star	870	90.2%	87.6-92.3%	6.4%	4.8-8.6%	p=0.42
Current Smokers	1,036	83.8%	80.2-86.9%	10.8%	8.4-14.0%	
Former Smokers	1,432	87.7%	85.1-89.9%	8.9%	7.0-11.3%	
Never been a Smoker	2,321	92.3%	90.2-93.9%	5.8%	4.6-7.3%	p<0.001

11-6 Percent of Alaska Adults Who Think that Breathing Smoke from Other People's Cigarettes Causes Sudden Infant Death Syndrome (SIDS) (BRFSS 2007-2008)

	N	Percent Yes	Confidence Interval	Percent Don't know	Confidence Interval	p value
All Adults	4,822	39.8%	37.7-42.0%	47.0%	44.8-49.1%	
Male	2,223	32.1%	29.0-35.4%	51.7%	48.5-54.9%	
Female	2,599	48.1%	45.2-51.0%	41.9%	39.1-44.8%	p<0.001
Alaska Natives	903	43.9%	39.0-48.8%	45.8%	40.8-50.9%	
Non-Natives	3,841	39.5%	37.1-42.0%	47.0%	44.6-49.4%	p=0.14
Low SES non-Native (25-64)	535	49.5%	43.4-55.6%	37.9%	32.3-43.8%	
High SES non-Native (25-64)	2,624	35.6%	33.0-38.4%	50.6%	47.8-53.3%	p<0.001
Ages 18-29	709	56.6%	50.8-62.2%	31.9%	26.8-37.4%	
Ages 30-54	2,545	39.2%	36.4-42.0%	48.3%	45.4-51.1%	
Ages 55 and older	1,510	25.5%	22.4-28.8%	58.4%	54.9-61.9%	p<0.001
Anchorage/MatSu	1,000	41.4%	37.7-45.1%	45.1%	41.5-48.7%	
Gulf Coast	962	35.0%	31.4-38.7%	50.3%	46.5-54.1%	
Southwest	506	44.2%	38.6-49.9%	47.6%	42.0-53.2%	
Southeast	963	33.1%	29.8-36.6%	55.8%	52.2-59.3%	
North/NW/Interior	523	37.1%	31.4-43.3%	46.9%	40.3-53.6%	
Fairbanks North Star	868	42.9%	38.8-47.1%	44.2%	40.3-48.1%	p=0.02
Current Smokers	1,040	35.8%	30.9-41.0%	44.4%	39.7-49.3%	
Former Smokers	1,433	32.2%	28.8-35.8%	52.2%	48.4-55.9%	
Never been a Smoker	2,315	45.6%	42.4-48.7%	45.1%	42.1-48.3%	p<0.001

11-7 Percent of Alaska Adults Who Think that Breathing Smoke from Other People's Cigarettes Causes Specific Diseases, by Presence of Children in the Household, (BRFSS 2007-2008)

	N	Percent Yes	Confidence Interval	Percent Don't know	Confidence Interval	p value
Lung Cancer						
Children in Home	2,063	81.2%	78.6-83.6%	11.9%	10.0-14.0%	
No Children in Home	2,759	74.4%	71.9-76.9%	16.7%	14.8-18.8%	p<0.01
Heart Disease						
Children in Home	2,065	66.3%	63.2-69.3%	24.6%	21.9-27.4%	
No Children in Home	2,758	60.7%	57.8-63.4%	27.4%	25.1-29.9%	p=0.03
Respiratory Illness in Children						
Children in Home	2,063	92.8%	91.0-94.2%	5.4%	4.2-7.0%	
No Children in Home	2,760	86.0%	83.8-88.0%	9.8%	8.2-11.5%	p<0.001
Sudden Infant Death Syndrome (SIDS)						
Children in Home	2,065	47.3%	44.0-50.6%	41.8%	38.6-45.1%	
No Children in Home	2,757	33.2%	30.4-36.2%	51.5%	48.6-54.4%	p<0.001

Part IX - Appendices

C. Data Sources and Technical Notes

Data represented in this report were obtained from a variety of sources. The following provides a brief description of each data system. Analyses for this report were completed using Intercooled Stata 11.1 (BRFSS and YRBS) and SUDAAN 10.0 (PRAMS). Some estimates and information were obtained from previously published reports.

Behavioral Risk Factor Surveillance System (BRFSS)

The BRFSS is an anonymous telephone survey conducted by the Alaska Division of Public Health in cooperation with the CDC. It aims to estimate the prevalence of behavioral risk factors in the general population that are known to be associated with the leading causes of morbidity and mortality in adults. The BRFSS has operated continuously in Alaska since it began in 1991.

The BRFSS uses a probability (or random) sample in which all Alaska residential households have a known, nonzero chance of selection. The sample is stratified into five regions, with roughly equal numbers of interviews conducted in each region. This method deliberately over-samples rural areas of the state. Respondents are randomly selected from among the adult members of each household reached through a series of random telephone calls. Those living in institutional housing (i.e., nursing homes, dormitories) are not surveyed.

Interviews are conducted by trained college interns and administrative clerks, during weekdays, evenings, and weekends throughout the year. In addition to tobacco use, the BRFSS questionnaire covers such topics as general health status, health care access, nutrition, physical activity, diabetes, alcohol use, women's health, injury prevention, and HIV/AIDS awareness. There are also questions on the demographic characteristics of respondents.

Alaska presently conducts two BRFSS surveys: the standard BRFSS and a modified BRFSS, which includes many tobacco questions adopted from the CDC's Adult Tobacco Survey. Both surveys are conducted throughout the year, using separate samples drawn using the same methodology. BRFSS data appearing throughout this report are identified as coming from either the modified survey ("Modified") or the standard and modified surveys combined ("Combined"). From 2004 through 2010 approximately 210 Alaska adults are interviewed each month for the standard BRFSS, to reach an annual sample size of 2,500 (500 per region); the same number are interviewed for the modified BRFSS, for a total of roughly 5,000 survey respondents.

Both the standard and modified BRFSS are weighted (separately) to compensate for the over-representation 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 addition, a combined dataset (standard plus modified) is created of union of questions appearing on both surveys. This combined dataset is weighted separately.

Where possible, the combined dataset was used to provide the estimates contained in this report. In cases where questions appeared on only one or another of the BRFSS surveys, that particular dataset was used. Weighted percentages (and in some cases numbers) were reported, and 95% confidence intervals were used to determine the significance of differences between population subgroups.

Reporting by Priority Populations

Alaska Natives and people of low SES are two groups with disproportionately high prevalence of tobacco use. We drew upon the previous ATPCP studies, including *Smoking Behavior and Beliefs Among Non-Native Alaskans of Low Socio-Economic Status: Implications for Program Planning* and *What State Surveys Tell Us About Tobacco Use Among Alaska Natives: Implications for Program Planning* to define Alaska Native and low SES priority groups.

When reporting about priority populations and their comparison groups in relation to other demographic factors such as gender, age, employment, etc., BRFSS data are grouped in multiple year sets to increase precision for group comparisons. Trends, however, are reported by year.

Alaska Native Priority Population

The term Alaska Native is used to refer to the original inhabitants of the land that is now the state of Alaska. Alaska Natives comprise roughly 14% of the adult population in Alaska. For this study, Alaska Native includes all survey respondents who report "Alaska Native/American Indian" as their primary or only race group. Although some Alaska Natives such as the Tlingit and Haida share cultural background with Pacific Coast Native Americans, many Alaska Natives are culturally much closer to other sub-arctic region peoples such as Canadian First Nations. Alaska Natives are also different than "lower 48" Native Americans in regards to tobacco. Tobacco was not historically or traditionally used by Alaska Native people, but was widely adopted after introduction by Russian traders in the 1700s. It is possible that some respondents in this "Alaska Native" category are members of Native American tribes or cultures that are not based in Alaska, but the majority of survey respondents in this category are member of Alaska Native cultures.

Low SES (non-Native) Priority Population

The Low SES priority group is defined more specifically as non-Native adults between the ages of 25 and 64 who are at or below 185% of poverty level and/or have less than a high school education. This group excludes Native Alaskans primarily because they are a priority group in themselves. "Non-Native" is defined as those who report their race as White, African American or Black, Asian, Hawaiian or other Pacific Islander, and Other (non-Native), as well as those who did not report race. Those who identify "Native Alaskan or American Indian" as any of their multiple race groups, were also excluded from the "non-Native" group.

Young adults under the age of 25 are not included in these analyses because the measures of SES used in this study (i.e., income and education) are not adequate markers of socioeconomic status for those who have not had a chance to complete their education and begin to earn an income. Older adults aged 65 and over are similarly excluded because income and education might be inadequate SES markers for those who are potentially retired and eligible for Medicare.

Poverty level (as calculated by income and household size) and less education were identified as key indicators of low SES that were available using BRFSS. The State of Alaska guideline for Medicaid eligibility – household incomes at or below the 185% poverty guideline - was adopted as the poverty measure. Of the response categories available for education, less than high school was chosen as a conservative estimate of low education – 7% of 2004/2005 BRFSS respondents ages 25-64 reported having less than high school education whereas almost one third of the respondents (30%) reported having a high school education or GED. Those with missing information on income (7% of non-Native adults aged 25-64) were categorized as low or higher SES based on information about their education only. Those missing information about income, household size and education represented only a handful of cases in the 2004-2006 AK BRFSS dataset used in the first analysis and report about this priority population.

Reporting by Race and Ethnicity Categories

Because the number of BRFSS respondents who report their primary race group or ethnicity group as something other than White (non-Hispanic) or Alaska Native (non-Hispanic) is relatively small each year, the most recent three years of data are combined to report information about smoking prevalence and SLT use prevalence. The race and ethnicity categories include: Hispanic, Asian (non-Hispanic), African American (non-Hispanic), Pacific Islander (non-Hispanic), White (non-Hispanic), and Alaska Native (non-Hispanic).

Regional Reporting

Regions were defined using borough designation using a mapping of telephone prefixes to borough. Although the BRFSS survey data do not provide enough representation for reporting annual information by borough, regional grouping of boroughs provides a useful geographic factor for analyses.

In general, regional groups used in this report are as follows:

- **Anchorage and Vicinity** – Anchorage and Mat-Su Boroughs
- **Gulf Coast** – Kenai, Kodiak, and Valdez Cordova Boroughs
- **Southwest** – Bristol Bay, East Aleutians, West Aleutians, Dillingham, Lake & Peninsula, Bethel, and Wade Hampton Boroughs
- **Southeast** – Yakutat, Skagway, Juneau, Sitka, Haines, Wrangell-Petersburg, Ketchikan, and Ketchikan Gateway Boroughs
- **North/NW/Interior** – Nome, Northwest Arctic, North Slope, Yukon-Koyukuk, Southeast Fairbanks, and Denali Boroughs
- **Fairbanks North Star**

For some detailed reporting on non-Native groups by SES, the two most rural regional groups (Southwest and most of the North/NW/Interior area noted above) are combined, and Southeast Fairbanks is combined Fairbanks North Star. Those groups are as follows:

- **Anchorage and Vicinity** – Anchorage and Mat-Su Boroughs
- **Gulf Coast** – Kenai, Kodiak, and Valdez Cordova Boroughs
- **Southeast** – Yakutat, Skagway, Juneau, Sitka, Haines, Wrangell-Petersburg, Ketchikan, and Ketchikan Gateway Boroughs
- **Rural (N, NW, Interior and Southwest AK)**– Nome, Northwest Arctic, North Slope, Yukon-Koyukuk and Denali Boroughs; Bristol Bay, East Aleutians, West Aleutians, Dillingham, Lake & Peninsula, Bethel, and Wade Hampton Boroughs
- **Fairbanks and Vicinity** – Fairbanks North Star and Southeast Fairbanks

Where respondent numbers are too small for either of these groupings, data are grouped into two categories: Rural (including North/NW/Interior and Southwest regions above) and Non-Rural (all other regions listed above).

Data Suppression Guidelines

In this report BRFSS information is suppressed or flagged based on statistical guidelines developed by Alaska's Division of Public Health in the Department of Health and Human Services, which are based upon the national Joint Policy of Variance Estimation and Statistical Reporting Standards for the National Health and Nutrition Examination Survey (NHANES-III) and the Continuing Survey of Food Intake by Individuals (CSFII) Reports. An asterisk is used to indicate that the estimate may lack statistical precision. Estimates are flagged if the coefficient of variation (ratio of the standard error to the mean expressed as a percent) is greater than 30. In some cases, the flag also denotes that estimates are based on an inadequate sample size, as determined by whether the event or risk factor is very common, common, or very uncommon. Regional estimates are not reported prior to 1998 due to generally smaller sample sizes and a difference in geo-stratification of the sample prior to 1998. Finally, information is suppressed if the unweighted sample size for the denominator (N) is less than 30, or if the numerator (n) is less than 5.

Youth Risk Behavior Survey (YRBS)

The YRBS is a systematic survey of high school students investigating behaviors related to the leading causes of mortality, morbidity and social problems among youth. The Centers for Disease Control and Prevention sponsors national and state surveys every two years, most recently in 2009.

Alaska first participated in the YRBS in 1995. Although Alaska participation rates met CDC standards in 1999, this sample did not include Anchorage schools and so the 1999 YRBS data are generally not included in multi-year analyses. The next statewide survey with a statistically valid, representative sample was in 2003. Alaska was unsuccessful in its attempt to obtain a statewide representative sample in 2005, but achieved the participation rates required to meet the CDC representative sample standards in the 2007 and 2009 YRBS. Overall participation rates were above 60% in all four years for which data are presented.

The Alaska YRBS is conducted using a two-stage sampling design. Schools are selected first with a probability of inclusion proportional to the size of their enrollment. Once a school is chosen, classes are selected, with each student having an equal opportunity for inclusion. From 2003 through 2009, active parental consent was required for each student participating in the YRBS. On the appointed survey day students completed written questionnaires and returned them in class in unmarked, sealed envelopes.

In spring 2009, the department surveyed 1,373 students from 43 high schools that were scientifically selected to represent all public high schools (excluding boarding schools, alternative schools, correspondence and home study schools, and correctional schools) in Alaska. These results are representative of Alaska's 33,271 high school students grades 9-12 in traditional public high schools. A total of 1,318 respondents participated in 2007, 1,481 respondents in 2003 and 1,634 in 1995. Data were weighted to reflect the true distribution of Alaska high school students by gender and grade level.

School-based surveys do not estimate risk behaviors associated with youth who drop out of school or do not attend school. However, for the first time in 2009, 1,020 students from 15 alternative high schools in Alaska were surveyed to evaluate and address the health risks of this unique population. Further information about that survey and the standard YRBS is available at
http://www.hss.state.ak.us/dph/chronic/school/YRBSresults.htm.

Reporting by Race Group

All survey participants who report being Alaska Native, either alone or in combination with other race groups or Hispanic ethnicity, are grouped here as Alaska Native. Similarly, all students who report being White but not Alaska Native are grouped here as White. All students who do not report being Alaska Native or White are grouped together for most reporting. This grouping provides data specific to Alaska Native youth and White (non-Native) youth for most question items; for other race and ethnic groups, however, reporting is limited by the number of students participating.

Data Suppression Guidelines

Information is suppressed where the total participation (denominator) is less than 100 students by group, or where the number of students reporting a behavior (numerator) is fewer than 5.

Pregnancy Risk Assessment Monitoring System (PRAMS)

PRAMS data were used in this report to document prenatal tobacco use. PRAMS is a population-based survey of Alaska women who have recently delivered a live-born infant. It gathers information on the health risk behaviors and circumstances of pregnant and postpartum women. PRAMS is conducted in collaboration with the CDC in 37 states and New York City. In Alaska, the Division of Public Health has administered PRAMS since 1990.

A stratified systematic sample is drawn each month from the state's live birth records for infants between two and six months of age. Sampled mothers receive a series of mailed questionnaires to solicit a response, and since 1997, telephone follow-up has been initiated among those who do not respond to the third mailed request.

In addition to maternal tobacco use, the PRAMS questionnaire addresses such topics as access to prenatal care, maternal use of alcohol, maternal stress, breatfeeding, physical abuse, and other topics. Survey responses are weighted so that reported prevalences accurately describe Alaska women delivering a live-born infant during the year of the survey. The weighted response rate ranged from 71-77% for 2006 through 2008.

Because the questions about smokeless tobacco use changed significantly in 2004, trend data are available from 1996 to 2003. Data from 2004 on reflect combined information from questions about different types of smokeless tobacco, including Iq'mik.

Data Suppression Guidelines

Because estimates based on small samples are imprecise and may be biased, estimates are suppressed where the number of respondents for the group of interest is fewer than 30. Data may be unreliable when the number of respondents was more than 30, but less than 60. Information is also suppressed if the unweighted numerator (n) is less than 5.

Tobacco Tax Data

Data on cigarette sales in Alaska were obtained from the Alaska Department of Revenue, Tax Division. In Alaska, a tobacco tax is levied on cigarettes and other tobacco products that are sold, imported, or transferred into the state. This tax, which currently amounts to $2.00 for a pack of 20 cigarettes and 75 percent of wholesale price for cigars and chewing tobacco, is collected primarily from licensed wholesalers and distributors. Tobacco tax returns are filed monthly by the last day of the month following the month in which the sales were made. Alaska tax data may fail to account for tobacco products that are consumed here but are purchased out of state or through other means not captured by tax records (e.g., bought over the Internet). Because data files are updated monthly, variations can occur depending on when a report is accessed.

Sales estimates for years prior to FY 2008 are those calculated for and included in prior reports, and are not updated to reflect any further changes. Estimates used for 2009 come from the "FY 09 Cigarette and Other Tobacco Products Summary" dated 9/10/09. This report and other fiscal year reports can be found at this website: http://www.tax.alaska.gov//programs/reports.aspx.

Population Estimates

Alaska and US population estimates by age, used in calculating US tobacco consumption (packs per adult), come from the U.S. Census Bureau Population Division website Table 2, Annual Estimates of the Population by Sex and Selected Age Groups for the United States: April 1, 2000 to July 1, 2007 (NC-EST2007-02), data release of May 1, 2008.

Alaska population estimates by age, sex and race/ethnicity, used in calculating the number of tobacco users and Alaska consumption (packs per adult), come from the Alaska Department of Labor and Workforce Development population estimate web pages. Information accessed October 2009 at: http://laborstats.alaska.gov/?PAGEID=67&SUBID=171.

Smoking Attributable Mortality, Morbidity and Economic Costs (SAMMEC)

Estimates of Alaska's mortality and economic costs associated with tobacco use were calculated using an online application developed at CDC known as Smoking Attributable Mortality, Morbidity and Economic Costs (SAMMEC). The SAMMEC formula applies age- and sex-specific smoking-attributable fractions to mortality data for each smoking-related disease in the population under study, also taking into consideration the smoking prevalence for each population. The overall smoking-attributable mortality is the sum of the smoking-attributable deaths across age groups and causes of death for both sexes combined for 2008.

SAMMEC also provides estimates of smoking-attributed medical expenditures and for productivity losses due to smoking mortality. This application does not currently allow estimates of morbidity-related productivity costs. The estimates of adult medical expenditures attributable to smoking and the loss of productivity due to smoking-related mortality were calculated using such measures as the state's 2008 age - and - sex-specific mortality rates for specified conditions, the 2008 BRFSS estimate of adult smoking prevalence, the 2004 present value for future earnings, and the 2004 US life expectancy. The 2004 estimate of total medical spending in Alaska, obtained from the Centers for Medicare and Medicaid Services, was used in estimating smoking-related medical expenditures. This estimate was then adjusted to 2008 using the medical consumer price index.

Data on specific causes of deaths from smoking-related diseases in Alaska were abstracted from death certificates, provided by the Alaska Bureau of Vital Statistics. The cause of death used in our analysis was the underlying cause, based on the Tenth Revision of the International Classification of Diseases (ICD-10). Deaths of Alaska residents who died out of state were not included in the figures used to produce the SAMMEC estimates of tobacco-related deaths and the associated economic costs. The estimates of current smoking prevalence used for the SAMMEC calculations were obtained from the Alaska BRFSS.

Estimated deaths due to secondhand smoke are national estimates from the U.S. Department of Health and Human Services 2006 report, *"The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General.*

Death Certificate System

The Bureau of Vital Statistics Information System contains records on all deaths in Alaska and all deaths to Alaska residents. The system provides demographic information as well as the underlying cause and contributing causes of death. Cause of death is generally provided by the attending physician or the coroner/ medical examiner.

Beginning in 1999, all states began using the International Classification of Disease, Tenth Revision (ICD-10) to code cause of death. Bureau staff members type the narrative causes of death into the computer system and use SuperMICAR, a program produced, maintained and provided by the National Center for Health Statistics (NCHS), to code 85-90% of causes of death. Data are sent to NCHS, where the remaining records are coded by nosologists. This coding is then returned to the Bureau and uploaded into its database. Bureau staff researchers perform computer checks for missing, out-of-range, and duplicate data. For more information, see http://www.hss.state.ak.us/dph/bvs/data/default.htm.

Synar Compliance Data

The Center for Substance Abuse Prevention (CSAP) oversees implementation of the Synar Amendment, which requires states to have laws in place prohibiting the sale and distribution of tobacco products to persons under age 18. (Alaska, Utah, Alabama, and New Jersey have expanded this prohibition to persons under 19.) States are required to collect data on vendor compliance with underage sales laws, and must achieve a maximum sales-to-minors rate of not greater than 20 percent to avoid penalties. The sample from which these data are collected must reflect the distribution of the underage population throughout the state and the distribution of outlets that are accessible to youth throughout the state.

Alaska data on vendor sales of tobacco products to minors are obtained through the Alaska Department of Health and Social Services, Division of Behavioral Health's Tobacco Enforcement Program. A business license database provided by the Department of Occupational Licensing is used to identify outlets that are accessible to youth. Each summer, eligible, trained, underage youth attempt to purchase tobacco products in the sampled establishments. Undercover Tobacco Enforcement staff monitors these transactions, noting whether sales occurred.

Synar data are reported for the federal fiscal year, October through September. The year reported in this document reflects the end date of the federal fiscal year; that is, data collected from October 2006 to September 2007 are reported as the 2007 data.

Analytic Terms and Methods

Because of the nature of the sampling for BRFSS and YRBS, confidence intervals and significance tests were generated using Stata (version 11.1) software to account for complex sampling designs. Descriptive data tables in the Appendices present the denominator N (number of people who responded to the question), point estimates, confidence intervals, and p-values from the chi-square tests. Trend tables present margins of error around the point prevalence for each year in place of the confidence intervals, and the p-values are from linear regression test for trend.

Confidence intervals and Margins of Error

In this report, we have used confidence levels of 95%. Confidence intervals provide a means of assessing and reporting the precision of a point estimate. They are commonly used with survey data to account for the differences due to random factors or chance, between prevalence estimates computed with a sample from the population and the actual prevalence within the overall population itself. Confidence intervals do not account for several other sources of uncertainty, including missing or incomplete data, bias resulting from non-response to a survey, or poor data collection. Confidence intervals are typically expressed as a range between an upper and lower value which will contain the population or "true" prevalence 95% of the time.

For the trend tables in Appendix A, we report the half width of the 95% confidence interval, or margin of error, as plus or minus a value in parentheses after the indicator description (± x.x%). The margin of error can also be used to indicate precision of the estimate reported.

A simple and conservative statistical approach to compare difference between two estimates involves examining 95% confidence intervals. If confidence intervals of the two estimates do not overlap, then the prevalence estimates can be considered statistically different. It should be noted, however, that this method will only detect large differences between two prevalence estimates, and may miss statistically significant differences that are smaller. For this reason, we also used two standard types of statistical testing for difference and trend, as described below.

Tests for Statistical Significance of Associations

Statistically significant differences – differences between estimates that are not likely due to chance alone – are identified in this report in Appendix A and B tables, as well as in discussion of the graphs and tables within the body of the report. Discussion in the text of this report only notes changes in trend or differences between groups where the appropriate statistical test shows a significant difference.

P-values less than 0.05 indicate that the change or difference is statistically significant at the 95% confidence level. In this report, we used chi-square tests in our comparisons between groups of Alaskans by gender, age, priority population status, region and smoking status, as reported in Appendix B. Chi-square tests are simple tests of association between group and outcome variables (for example, smoking [yes, no] and gender [male, female]).

For trend analyses reported in Appendix A, we use logistic regression. Logistic regression analysis assumes a linear change over time using logistic models, and provides an appropriate test for determining if a statistically significant change has occurred over time. Linear trends indicate a statistically significant increase or decrease during the entire time period for which estimates are examined. There are other tests that can examine decreases, increases, or leveling off in part of the time period, and in some cases we discuss these patterns within a trend. However, the p-values reported in Appendix A and in the body of the report come from linear regression tests.

Public Health Significance

Statistically significant differences or trends often but not always have public health or "real world" significance. Because statistically significant differences or trends are partly a function of sample size (the larger the sample, the smaller the change that can be detected), they may not be big enough to merit public policy consideration. Conversely, some non-significant differences between groups (for example, where there is a smaller sample) may be of interest for public policy and planning. Nonetheless, statistically significant differences or trends should be considered as a general or minimum starting point for any discussion about differences or changes over time.

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