What State Surveys Tell Us About Tobacco Use Among Alaska Natives:

Implications for Program Planning

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Report Copies

This report and related documents are available online from the Alaska Tobacco Prevention and Control Program www.hss.state.ak.us/dph/chronic/tobacco

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I. Introduction

This purpose of this report is to inform people working to support the health of Alaska Natives and Alaskan communities. This report was commissioned by the Alaska Tobacco Prevention and Control Program within the Alaska Department of Health and Social Services with the intention of collecting, interpreting, and providing the best information available that may be relevant to planning tobacco prevention and control programs for Alaska Natives. We gathered information from published research about tobacco use among Alaska Natives, and also analyzed existing datasets to specifically describe tobacco risks for Alaska Native people. Unless specifically identified as "non-Native," data cited in this report are specific to Alaska Native people.

Generally, each section of this report integrates findings from published research and new data analyses. The report is organized into several main sections:

- Introduction – we describe several main assumptions guiding the report and methods for assembling information
- Background - research and data that suggest why Alaska Natives may be at greater than expected risk for tobacco use or exposure
- Burden of Tobacco use – we summarize significant diseases or conditions caused by tobacco use, and the relative impact of those conditions within the Alaska Native population
- Prevalence – description of tobacco use trends and current use among population subgroups for adults, youth and pregnant women
- Prevention – research and data relevant to preventing the uptake of tobacco use among young people
- Cessation – research and data relevant to helping people who are addicted to tobacco to quit
- Secondhand smoke – research and data relevant to eliminating secondhand smoke exposure, particularly among non-smokers of all ages
- Alaska Natives at-risk – summary of themes or findings that were consistent throughout the report
- Appendices – descriptions of data sources, tables used to create graphics or referenced in the discussion, technical notes about classifications or methods used in the report, and research references.

Defining "Alaska Native"

The term Alaska Native is used to refer to the original inhabitants of the land that is now the state of Alaska. The more than 100,000 Alaska Native people now living in Alaska make up between sixteen and twenty percent of its residents. In our literature review and data analyses, we attempted to use technical definitions that would most truly represent the Alaska Native populations. See Appendix C for additional discussion of Alaska Native population distribution across the state, and resources to describe Alaska Native populations.

Literature Review – Methods

For each section of the report, we integrated findings from research literature to provide context for presentation of new Alaska Native data. Research cited was identified during a literature search for Alaska Native and Tobacco articles conducted during November 2005 and again in January 2006. Published, peer-reviewed articles were identified using the Medline database. Generally, we limited review to articles published in 1995 or more recently, although a few older articles that were unique in topic were included.

We also reviewed key non-peer-reviewed publications, such as the Alaska Department of Health publication "Tobacco in the Great Land" and a 2004 Alaska Native Policy Center report on the overall status of Alaska Natives.

See Appendix C for further information regarding the scope of the literature review.

Data Analysis – Methods Summary

We identified three key public health surveillance data systems that contained large enough numbers of Alaska Natives to support detailed analyses. These three systems are:

- Behavioral Risk Factor Surveillance System (BRFSS)
- Youth Risk Behavior Surveillance System (YRBS)
- Pregnancy Risk Assessment Monitoring System (PRAMS).

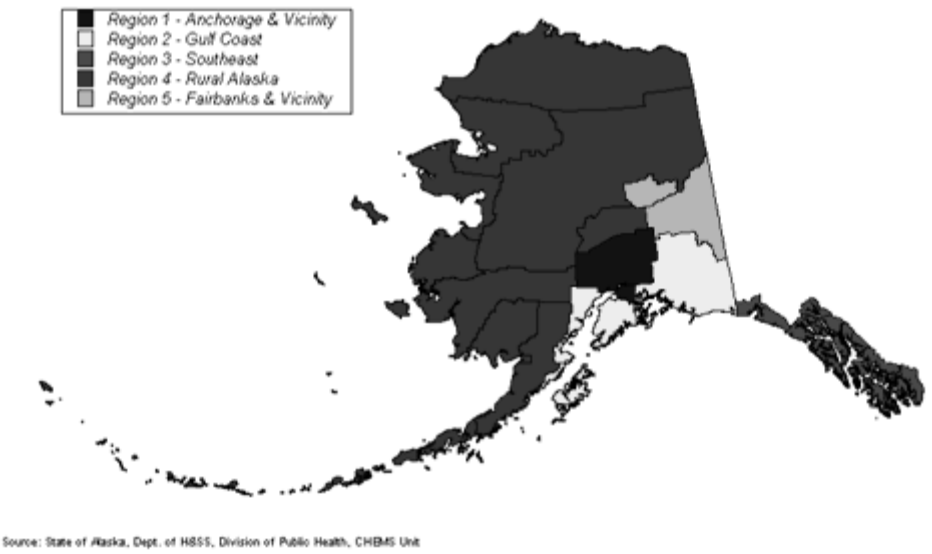
Detailed descriptions of these three data systems are included in Appendix A.

We analyzed each of these data systems to completely extract whatever information could potentially be informative for program planning. We provide frequencies for all key tobacco-related measures among Alaska Natives for the most recent years of data available, and also within critical demographic subgroups (such as age, gender, geographic area). Results of these analyses are presented as tables in Appendix B. In addition to the prevalence of characteristics among Alaska Native subgroups, we have also created estimates for the number of people affected within those subgroups (see Appendix C for population calculation methods). Reference maps of the geographic regions used in this report are displayed in Appendix C and below.

The regions from BRFSS and PRAMS correlate in the following manner:

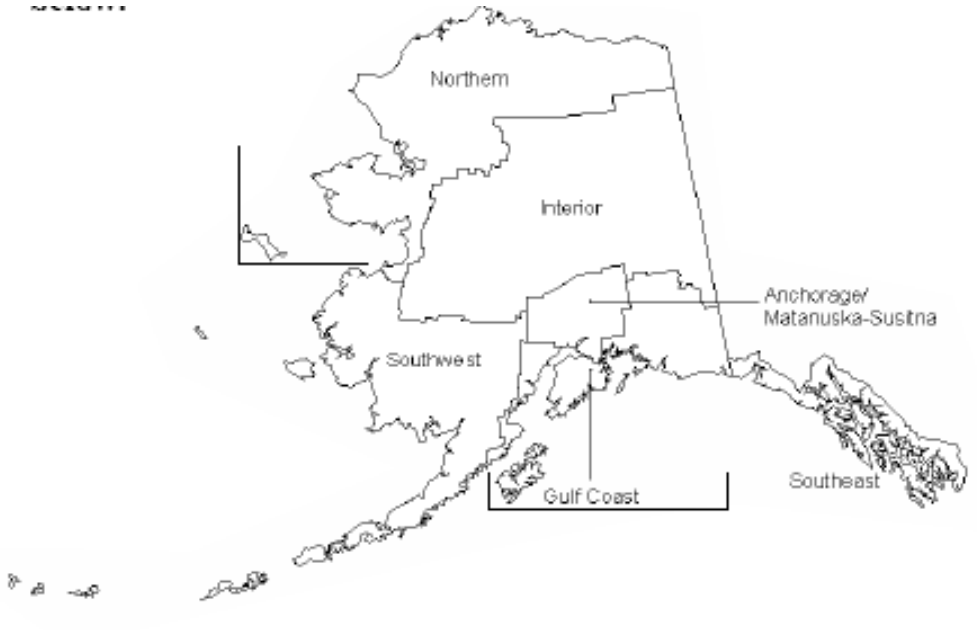
BRFSS Region	**PRAMS Region**
Region 1: Anchorage and vicinity	Anchorage/Matanuska-Susitna (Mat-Su)
Region 2: Gulf Coast	Gulf Coast
Region 3: Southeast	Southeast
Region 4: Rural Alaska + Region 5: Fairbanks and Vicinity	Southwest + Northern + Interior

Map 1: *BRFSS Regions in Alaska*



Source: State of Alaska, Dept. of H&SS, Division of Public Health, CHEMS Unit

Map 2: PRAMS Regions



This information is useful for program planning because, for example, planners may need to weigh the alternatives of prioritizing activities to reach a small subgroup with a very high prevalence of some risk factor or to reach a large subgroup with a lower prevalence of the risk factor. We have attempted to fully interpret findings within the

context of program planning for Alaska Natives, including with respect to prevalence and numbers affected, in the text and section conclusions.

Additionally, key data findings (such as significant associations for measures with some demographic characteristic) are represented graphically in the report. In general, we did not include charts to display non-significant associations for prevalence by demographic group. We followed these general guidelines for graphic display:

- Time-trend data for a consistent measure are displayed as line graphs
- When prevalence information from different questions is combined into a single chart, those data are displayed as column charts (vertical bars)
- When prevalence information from one question is displayed to show statistically significant differences among subgroups, those data are displayed in bar charts (horizontal bars)
- When population numbers of affected people are displayed for a single question (for example, the number of smokers who are from different geographic regions), those data are displayed in pie charts.

For BRFSS and YRBS we defined Alaska Native respondents as people who identified their race as Alaska Native only or as their preferred race; for PRAMS we identified Alaska Natives using the mother's race marked on infant birth certificates. We made this decision based on the argument that people who identified mainly with Alaska Native heritage would be most representative of Alaska Native communities, and we did not want to make assumptions about affiliation with the Alaska Native community among people who marked multiple race categories. We would expect that if people who mark multiple race categories in surveys do primarily identify with the Alaska Native community then these findings will apply to them. See Appendix C for additional information about how Alaska Native race was defined for each survey.

We did not do new analyses of vital statistics data systems data (such as death certificates) where significant numbers of Alaska Natives were represented, because the purpose of this report is to describe data related to tobacco control programs and not primarily to describe health impacts of tobacco use. In referencing such data we relied on previously published estimates.

Planning for Tobacco Control in Alaska Native Communities

In addition to providing tobacco prevention and control activities to benefit all Alaskans, the Alaska Department of Health provides funding specifically to help Alaska Natives. These efforts are intended to reach Alaska Natives across the state, including in all Native Health Corporations (see Map 3).

The Centers for Disease Control and Prevention (CDC) has published guidelines for developing successful tobacco control programs.[1] These programs should include the goals of preventing initiation, promoting quitting, eliminating secondhand smoke exposure, and identifying/eliminating disparities (inequities) among specific population groups. Recommended components to address these goals as part of a

comprehensive program include: community-based strategies, school-based strategies, policy enforcement, counter-marketing/public education, and cessation support strategies. We have organized the presentation of data in this report around these goal areas, as well as specific strategies within those goal areas.

We reference the *Community Guide to Preventive Services*[2] when discussing specific strategies in tobacco control. The *Community Guide* project was an exhaustive research review conducted to evaluate the effectiveness of public health interventions. The *Community Guide on Tobacco* summarizes research related to specific tobacco control strategies in prevention, cessation and eliminating secondhand smoke exposure. While we cannot always be certain that these findings and recommendations for general populations can be applied to Alaska Native communities, they at least provide us with a starting point for considering program priorities.

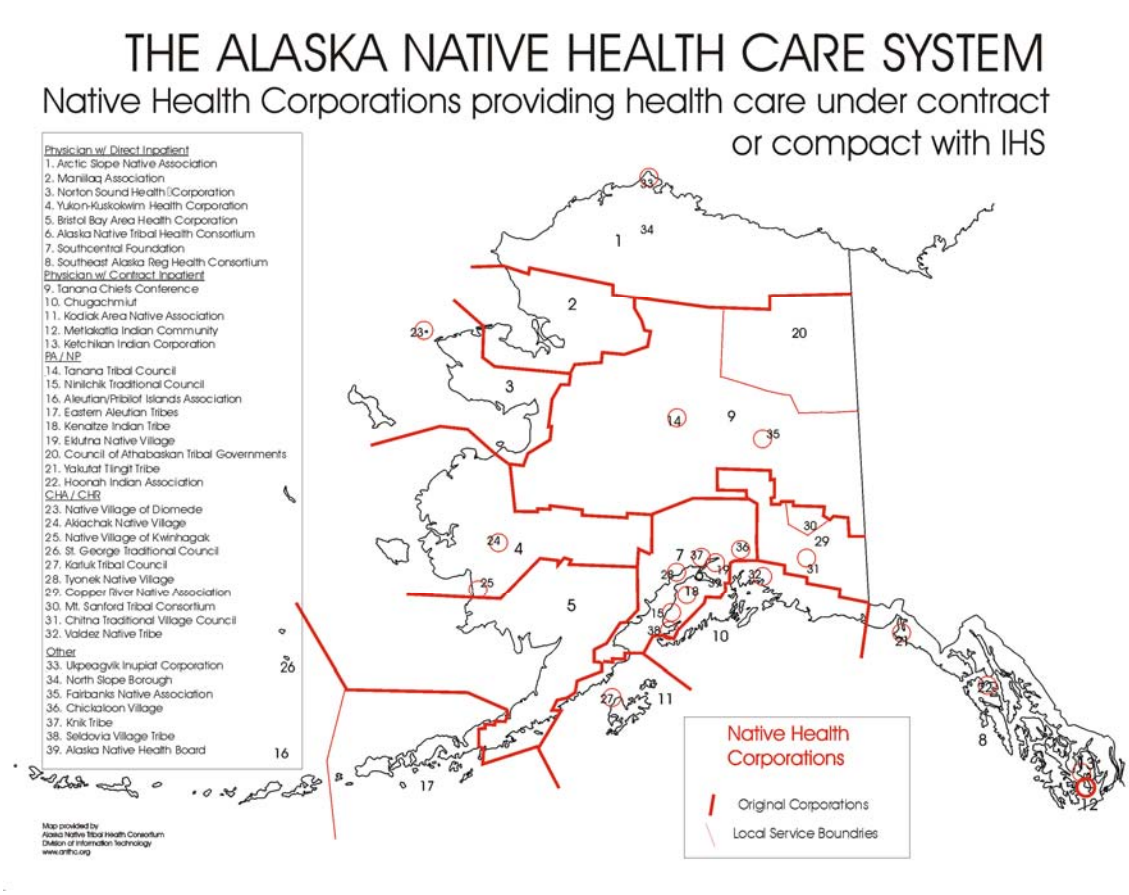
Alaska Native leaders face many challenges today as they prioritize from among multiple threats to the health and well-being of Alaska Native people. A report by the Alaskan Native Policy Center - *Our Choices, Our Future* [3] - identifies tobacco use as a critical health goal, but only one among many critical health issues facing Alaska Native people today. The report also suggests that even health issues in general are only one challenge faced by a population that also struggles with economic development and job creation, a high cost of living, and educational achievement. The authors of that report assert:

> "None of these issues can be addressed unless Native individuals and communities take the lead. What is needed is a shared community vision that gives our people a perspective on where we have come from, where we are now, and where we are going – signs along the trail."

Tobacco use is a health issue, but to successfully reduce the damage it does to Alaska Native hearts, lungs and lives will take more than the efforts of healthcare systems alone. To be effective, tobacco control programs need the support of adult and youth community leaders, school administrators and teachers, law enforcement, business owners, parents and families. This report references strategies that these people can work together on.

In an effort to aid Native leaders and communities in their tobacco control program planning, we summarized key findings and recommendations related to programs at the end of each report section. These summaries and conclusions reflect the perspective of our research team based on a rigorous analysis of the best data available, but may not be accurate for the many diverse Native communities and individuals in Alaska. We encourage anyone planning tobacco control programs for Alaska Natives to consider our findings carefully and critically alongside information from real people who implement and are affected by tobacco control programs.

Map 3: Alaska Native Health Corporations



Map Source: http://www.anthc.org/ref/maps/images/NativeHealthCorp.gif

Summary

In creating this report, we found evidence that tobacco is the cause of great harm to Alaska Native people. We attempted to assemble all the information we could find - all the signs along the trail - to inform Alaska Native community leaders so that they can develop a shared community vision and make good choices that result in healthier people and healthier communities.

II. Background

Literature Review

History of Tobacco Introduction to Alaska Natives

Two articles documenting the history of tobacco in Alaska were identified in the literature review. One article focused on European explorers' accounts written in the 1700-1800's and described the introduction of tobacco and subsequent addiction among different regions of Alaska.[4] Another focused specifically on the Inuit population.[5]

Both of these articles report that tobacco was first offered to Alaska Natives during the mid-1700s by European or Russian explorers. Alaska Natives did not cultivate tobacco prior to that time, and historical records indicate that they did not know what to do with it initially. Thus, there were no cultural or spiritual practices among the Alaska Native culture that included tobacco prior to the time it was introduced. The one exception was that the Indians of Southeast Alaska (Tlingit) did cultivate a "tobacco-like" plant that was mixed with lime and chewed.

Within forty years of contact, tobacco use appeared almost universal among men, as well as among most women and many children, including infants. It was smoked (usually in pipes), chewed and taken as snuff. Numerous accounts are offered that Alaska Natives in all regions demonstrated very strong addiction to tobacco – even to being "complete slaves to tobacco (St. Lawrence Island)." In 1820 an Orthodox missionary reported that often more than half of a hunter's income was spent on tobacco. Some Natives began using tobacco following shamanistic ceremonies. Further details indicate that the general perception of explorers was that Natives experienced strong physical reactions to tobacco and were extremely addicted ("having the appearance of someone using opium," "falling into a daze or stupor").

These articles suggest that the Alaska Native population very quickly adopted tobacco – a substance for which there was neither cultural precedent nor local source – into their lifestyle in a variety of forms. They also indicate an early high prevalence of tobacco use among Alaska Natives, as well as a potential synergy between the use of tobacco and cultural practices of the time.

Cultural practices

Tobacco does not have traditional spiritual significance for Alaska Natives, as it does for many Native American tribes in the "lower 48," but it is culturally embedded in other ways. For example, it may be offered as a gift at a potlatch, or burned (among favorite foods) as an offering to someone who has died and who used tobacco.[6]

In Inuit communities, offering tobacco was viewed as a part of serving others. This is because the person in need of tobacco (addicted) was seen as suffering and thus it is perceived as a caring thing to alleviate that suffering by giving tobacco.[5]

One article suggested that the concept of prevention – not specific to tobacco, but in general application – did not exist historically and is comparatively new for Alaska Natives (Inuit). Long-established traditional lifestyles incorporated prevention as part of the learning that was handed down from elders, and communities did not orient themselves to scientific learning or changing established practices based on assessment of new information.

Tobacco intervention approaches in communities should honor cultural practices and values related to tobacco when they are present. Identification of cultural significance of tobacco in individual communities, and designing intervention approaches in a way that treats values respectfully, may be an important step for planning.

Iqmik

Several reports described use of a smokeless tobacco variant called "Iqmik" (ick-mick)* or "Blackbull" that is unique to Alaska Native culture. Iqmik is used almost exclusively in rural areas and the Gulf Coast region of Alaska. It is prepared by mixing ash from burning a woody fungus (*Phellinus igniarius*) from birch trees, or sometimes (less desirable) alder, willow bushes, or driftwood, with leaf tobacco. The burned ash is mixed with tobacco leaves and then pre-chewed in the mouth or mixed in a bowl with water. The mix is spit out into containers to share. Women and girls often prepare Iqmik and then share it with the family. A supply is carried by an individual for several days. All the ingredients are available in local stores in areas where Iqmik is frequently used, or bartered among individuals.[7]

Iqmik 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 stores permission to sell supplies for Iqmik to their children, and people share their supply with one another.[8] Parents reportedly introduce children to use early (including as a teething remedy for infants).[8,6] This early introduction of Iqmik to young children may explain results from a study of 3-6 year old preschoolers: 3.5% were found to have saliva cotinine levels far exceeding levels consistent with secondary exposure, but suggestive of primary tobacco use by the children.[9]

Iqmik is perceived as natural and socially acceptable in most situations – unlike cigarette smoking - particularly among rural villagers. Iqmik is also perceived by users as "stronger" than commercial smokeless tobacco or cigarettes. Focus group participants mentioned that men often switch from Iqmik to cigarettes as adults, while women continue using Iqmik, and yet others may switch to Iqmik when quitting cigarettes or if cigarettes are not available.[8]

*Alaska Native focus group participants used the term "Iqmik" both as a noun and as a verb – "we use Iqmik" and "we Iqmik" (see reference 40).

Cultural Values around Childrearing

Focus group participants from the Yukon-Kuskokwim (Y-K) Delta who discussed tobacco prevention among children expressed that it is culturally unacceptable to tell others what to do, and that this value extends even to parents with their children. [8] Participants said that children need to decide for themselves about tobacco use or nonuse, and "the decision to stop needs to come from within."

An article comparing childrearing practices of Inuit/Eskimo families with Anglo families confirms these observations about Alaska Native parental communication with children.[10] The Eskimo concept of *isuma* refers to an individual's ability to think and reason, and it is development of this ability in children that is inherent in parenting as well as physical and verbal games parents play with children. Adults wait for a child to come to understanding on his/her own, and minimally interfere with a child's direct experiential learning: "'Correct' solutions are not pressed on children; indeed, they are often not even suggested. Children are not prevented from making mistakes…and not punished, except by being reminded – usually by a question – of some unpleasant consequence they have already experienced." Interestingly, this style of learning results in children who are "observant, sensitive to the messages of others, tend to actively correlate experienced events and draw conclusions from them." The implication of this tendency is that children may be extremely sensitive to the behaviors of adults (including their tobacco use practices).

Although the subjects of these articles were outside the primary focus of this literature review and therefore these articles may not be truly representative of the full body of literature regarding cultural values around childrearing, the information is included here because it may inform program work. These findings suggest that activities to provide tobacco prevention information to children in schools and engage parents in youth tobacco prevention may need to be modified to a culturally appropriate context in order to be acceptable and effective for Native people.

Cultural Barriers to Counseling

Alaska Natives have alarmingly high rates of depression and suicide. Tobacco use has been correlated with mental health conditions; more importantly, barriers to seeking help for tobacco use may be similar to those for seeking mental health help in contrast to seeking help for an injury or acute health condition. There may be significant cultural barriers to seeking the kind of help that is relevant to tobacco interventions. In published proceedings from a conference of mental health professionals in Alaska (95% of whom were non-Native), record of a formal dialogue to discuss such barriers for Alaska Natives indicated that these professionals identified culture as a key barrier to effective service (in addition to other geographic, healthcare access barriers).[11,12] Providers reported that Alaska Natives were mistrustful of mental health support. They mentioned several issues which may be cultural "clashes" between Western counseling and Native culture, potentially informative for tobacco support planning: provider training in strict adherence to clock time (valuing the practitioner's time) and thus the increased speed and tone of care delivery, in contrast to more deliberative pace of Native culture; differences in cultural communication styles, such as eye contact (impolite among Eskimos) or directive advice; as well as underlying stress imposed by cultural disintegration and failing community identity (thus a lesser degree of

community stability and support). The authors point out that Native healers may provide important insight into treatment of mental health, and this may be true for tobacco interventions as well. Suggested "mandates" for health providers include: consciously refrain from imposing values and culture; respect and practice local communication styles; become part of the village culture and "culture keepers" in partnership with Native healers; incorporate Native concepts into curative process; validate and support Native customs; and assist with restorative efforts at the community level.

Focus group participants from the Y-K Delta speaking about resources for tobacco cessation said that credible information or support (including from healthcare, media, or personal interactions) to stop using tobacco did not have to come from Natives, but that non-Natives who were supportive and willing to help were also perceived as credible. These participants said that there were few people they knew who had stopped, thus there were few role models for quitting (especially for Iqmik). Surprisingly, community health workers were not mentioned as a source or potential source of tobacco cessation advice or support. Adults expressed a lack of trust in medications (nicotine replacement), and also expressed that it is culturally unacceptable to tell others what to do. Adolescents in the same study said that people who continued to use tobacco themselves were not credible sources for information about stopping.

A recurring theme among different articles[3,11,13,14] was the cultural importance of "not telling people what to do." Consideration of this value may be especially important for counseling approaches, but also for other community norms change initiatives.

Other Substance Abuse

Alaska Natives have high rates of alcohol use and binge drinking.[15] For example, in a study of two small villages, primarily populated by Alaska Natives, high rates of accidental injury and intentional injury (including suicide and homicide), domestic violence, about 200 police contacts per year (in villages with fewer than 700 residents), and high student dropout and behavior problems among children were attributed to alcohol abuse by residents despite alcohol bans. The nearest alcohol treatment facility was an hour away by plane.

Marijuana use is also high among Alaska Natives. In a study of two small villages, about one in five parents of preschool-aged children reported using marijuana during the past month.

Drinking alcohol and using marijuana are correlated with tobacco use, and may have a role catalyzing initiation to tobacco as well as be a barrier to cessation of tobacco. Tobacco interventions among Alaska Natives may be improved by attention to alcohol or marijuana use behaviors and partnership with other substance abuse treatment approaches. Substance abuse by parents may also need to be considered when implementing youth tobacco prevention programs.

Proven Tobacco-specific Interventions for Alaska Natives

Only two peer-reviewed articles that described tobacco-specific interventions with Alaska Natives were found in our search. Grant reports provide additional detail about one of these projects.

The "Trampling Tobacco" Project [16] was an initiative of the Alaska Tobacco Control Alliance (ATCA) and funded by the Robert Wood Johnson Foundation. The initiative was launched in 1995 with a strategic plan to reach rural Alaska (largely although not exclusively populated by Alaska Natives) and develop local knowledge and community involvement in tobacco prevention and control. Achievements claimed by the project include helping to increasing the membership and diversity of the Alaska Tobacco Control Alliance (ATCA), which in 1994 had 73 member organizations and by 2001 had 180 members, including 26 Alaska Native and rural health organizations.

The Trampling Tobacco Project also took a lead role in securing public policy changes both locally and statewide. Some of these policy changes arose from unanticipated opportunities – such as the project's partner involvement in securing state funding appropriations specifically for tobacco prevention and cessation, and state cigarette excise tax increases in 1997 and again in 2004. Other policy-related goals were part of the grant objectives, such as annual campaigns to ensure that 20% of Master Settlement Agreement funds were appropriated for tobacco prevention. Project staff noted the importance of comprehensive tobacco prevention programming and increased tobacco prices in reducing rates of smoking, and the role of these policy-related accomplishments in effecting the 50% decrease in smoking among high school youth between 1995 and 2003.

Another key goal of the Trampling Tobacco project was facilitating the development of local clean indoor air (CIA) ordinances in several communities. The first clean indoor air ordinance in the state was enacted in Bethel in the Yukon-Kuskokwim region in 1998. Between 2001 and 2004, nine other local ordinances were passed (in Barrow, Dillingham, Juneau, Kenai, Soldotna, Port Lions, Chevak, Ekwok, and Fairbanks); two were voted down (in Ketchikan and Homer), and Trampling Tobacco had assisted two more local tobacco coalitions in preparing for local CIA votes (in Valdez and Sitka). Overall, local ordinances ensured cleaner indoor air for over 50% of Alaska's population being covered by these ordinances by early 2004.

Using a format and process that had been successful for a rural sanitation program at the Alaska Native Health Board (ANHB), the Trampling Tobacco Project issued a request for proposals to over 200 tribal councils across the state to provide support in developing tobacco control measures. The four Alaska Native communities who received awards in the 2001-2004 grant cycle focused on clean indoor activities, ranging from passing community ordinances (Chevak and Ekwok) to encouraging community discussion about clean indoor air and other tobacco issues (Port Graham) to sponsoring a media institute for teens from across rural Alaska (Sitka).

A ten-year old study by Hensel et al. (1995)[17] reported results from a tobacco cessation program. This program was offered to Alaska Native adults in the Anchorage area through the Alaska Native Medical Center. The program included behavior modification and nicotine replacement therapy (patches). Behavior

modification classes were provided in two formats: a two-week, four-session series based on the American Cancer Society's "Fresh Start" program; or a six-week, seven-session series based on the American Lung Association's "Freedom from Smoking" program. Information was not provided about how or why the established programs were changed. Data were available from 193 participants who had completed the series. Quit rates among participants who could be recontacted were 31%, 30%, 24% and 21% and three, six, nine and twelve months, respectively. Although a control group was not available for comparison, the authors indicated that the results were comparable with other studies available at the time. The authors also estimated the cost per quitter at $720 for implementation of the program (in 1992).

Although we were unable to find substantive research describing proven tobacco interventions to reach Alaska Natives, it should be noted that many of the tobacco control strategies summarized in the *Community Guide to Preventive Services: Tobacco* have been effective across diverse populations. For example, an evaluation of the Quit Line in Washington found similar quit rates and satisfaction among Native Americans and non-Natives, as well as other race/ethnic minority groups, regarding use of the service and its effectiveness in helping people to quit.[18]

Proven Chronic Disease Interventions for Alaska Natives

Intervention for tobacco use was included in a small randomized trial to test culturally appropriate behavior modification interventions to reduce cardiovascular disease risk factors among Alaska Native women in the Anchorage area.[19] After reviewing a variety of resources, a curriculum for the healthcare team-based intervention entitled *Traditions of the Heart* was developed modifying the *A New Leaf* curriculum originally tailored to African American women and delivered according to the more culturally appropriate "talking circle" format of a *Native Nutrition Circles* program. Subjects attended 12 two-hour weekly sessions. A detailed description of the tobacco component of this intervention was not provided, but content appeared to be focused on cigarette smoking rather than all types of tobacco. Although some improvement among subjects was noted in this trial for physical activity and attention to diet, there were no changes in tobacco use behaviors. Participants also reported that tobacco information was their least enjoyed topic of the curriculum. It is not clear whether this tobacco intervention failure was due to the quality of information, format of the intervention, or lack of substantial focus on the tobacco topic.

Proven Substance Abuse Interventions for Alaska Natives

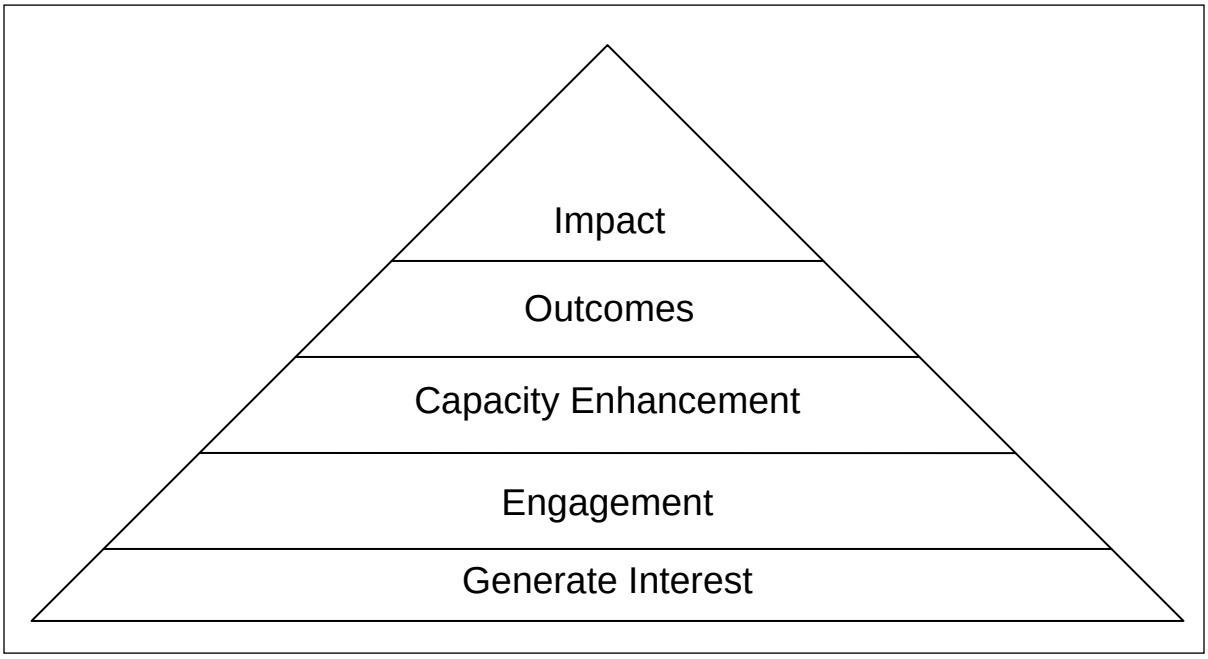
During the early 1990s the Robert Wood Johnson Foundation launched an initiative to fund American Indian and Alaska Native community-based programs to conduct substance abuse prevention and harm reduction programs.[20] Two organizations were funded in Alaska as part of this program: Central Council of Tlingit and Haida Indian Tribes of Alaska – Juneau, and Norton Sound Health Corporation – Nome. The University of Alaska, Anchorage, was also awarded funds to conduct a formal assessment of the programs.

The key concept for this program was to have communities find their own solutions – using their natural wisdom in deciding how to address substance abuse. Each community was encouraged to develop strategies based on their own strengths and traditions. For example, the Norton Sound Health Corporation instituted a Village-Based Counselor program to provide behavioral counseling in 17 remote villages.

A theoretical model for change (see Figure 1 below) in Native communities was provided to explain how communities would experience improvement, and this model may suggest an approach for identifying community-based tobacco control progress within Alaska Native communities (or all communities). The authors describing this model argue against singular focus on outcomes because they are insufficient, insensitive measures of change. The “hierarchy of results” illustrates a series of accomplishments that a community must achieve along the way to outcomes and community health impact:

- Generating Interest: getting people to attend activities, meetings, events; exposure to no-use messages and healthy alternative activities (for example, anti-tobacco media messages, educational outreach at traditional events)
- Engagement: gaining commitment from key people to do work that changes the community; interest and engagement mobilize social capital to generate higher-level results (for example, tribal leaders committing to and doing specific tobacco control activities)
- Capacity Enhancement: changes in practices of individuals and groups in communities; key types of capacity enhancement result in policy, procedure or environmental changes (for example, smoking bans in communities, tax increases).
- Outcomes: specific, observable behavioral changes of members of the population (for example, reduced prevalence of tobacco use and exposure)
- Impacts: measurable changes in social indicators used to gauge the levels of problem occurrence (for example, incidence of cancer, heart disease, asthma)

Figure 1: Hierarchy of Results – Conceptual model for "Healthy Nations" Initiative.[20]



Early evaluation of the Healthy Nations interventions suggest that Tribal communities were able to achieve success in interest, engagement, capacity enhancement and policy change, and also sought ways to assure the sustainability of their achievements. Characteristics of successful communities included: consistent, effective leadership; culture-centered approach; achievement of community ownership; creative and entrepreneurial approaches; comprehensive efforts (reaching as many community systems as possible – such as schools, families, neighborhoods); and effective collaboration to combine talents and resources. Strengthening these attributes in Alaska Native communities may lead to increased success in achieving community change.

This evaluation model may be helpful to those implementing tobacco control initiatives in Alaska Native communities. Given the limited research information about effective tobacco control specifically among Alaska Natives, evaluation of activities and sharing of findings is even more important to increase knowledge about what strategies really work. In program evaluation at the community level, measurement of "general interest," "engagement" and "capacity" are much more feasible than "outcomes" or "impact."

Lack of Knowledge of Tobacco Use Harm

Participants in a focus group study conducted in the Y-K Delta did report that smoking is harmful to unborn babies and children, and that most homes were smoke-free; however, knowledge of specific harm was not established (e.g., heart disease). Participants did not report knowledge of cancer or heart disease from Iqmik use, but only gum disease, hypertension, and consequences related to appearance (teeth staining, bad breath).

On a more encouraging note, in other community dialogues tobacco use intervention and prevention was identified as an important health priority. The *Our Choices Our Future* report, which documented feedback obtained from Alaska Native people as part of data presentations reported that participants felt that the reported rates of Fetal Alcohol Syndrome, suicide and smoking were underestimating the actual prevalence and "preventive health services, particularly on matters of behavioral health is important, particularly to reduce levels of tobacco use, abuse of alcohol and/or other drugs, huffing, obesity and AIDS."

A less recent study (1991) of health attitudes among Alaska Natives in several villages found that one in five smokers said that quitting was "not important" to health, among all smokers about half had "tried" and 14% "tried hard" to stop smoking during the previous year. Among those who said that stopping smoking was "very important" to health, about one-third had not tried to stop (and more than half of smokers who said stopping was "not important" had tried or tried hard to stop anyway). The authors note that these findings suggest that attempts to quit do not correlate, at least in a present-time assessment, with perceived importance of quitting. Interestingly, Yup'ik-only speakers were the most likely to report that quitting was "not important" but that they had tried to quit anyway; English-only speakers were least likely to say that quitting was not important. While not entirely clear, this finding could indicate many things—from cultural values playing a role in the interpretation of health information, to the fact the interview questions were originally composed in a language other than Yup'ik.

These findings could be considered within the context of the "hierarchy of change" model offered in previous discussion, and suggest that community awareness and engagement may be necessary steps for making significant progress in achieving tobacco use reduction within Alaska Native communities.

Summary of Key Findings:

Tobacco use is a relatively recent addition to Alaska Native culture, but it was widely adopted after introduction by Russian traders in the 1700s.

"Iqmik" is a smokeless tobacco variant unique to Alaska Native culture used in certain areas of the state; it has both social value and highly addictive properties.

There is almost no research about effective tobacco control interventions specifically among Alaska Natives; research discussing some Alaska Native cultural values or practices (such as those related to counseling and childrearing) suggests that "mainstream" tobacco control interventions may need to be modified in order to be effective.

When available, program evaluations from previously implemented general health initiatives, substance abuse or tobacco control programs may provide some guidance for planning.

Recommendations:

Tobacco control interventions among Alaska Natives should be thoughtfully designed using general tobacco control guidelines with special consideration to cultural values of the community

Evaluation findings should be shared and archived to increase knowledge about what approaches can be effective specifically among Alaska Natives

Interventions to address Iqmik specifically should be included in tobacco control programs within Alaska Native communities where Iqmik is used.

III. Burden of Tobacco Use and Exposure among Alaska Natives

Tobacco use is the single leading cause of preventable death and disease nationwide. Substantial proportions of important chronic disease deaths are caused by tobacco use: 80 percent of all deaths due to chronic obstructive pulmonary disease (COPD), 30 percent of all cancer deaths (including 90 percent of lung cancer deaths), and 20 percent of coronary heart disease and stroke deaths.[21] People who smoke die an average of 13-14 years sooner than nonsmokers.[22]

We conducted a review of the literature in order to describe the burden of tobacco-related disease among Alaska Natives.

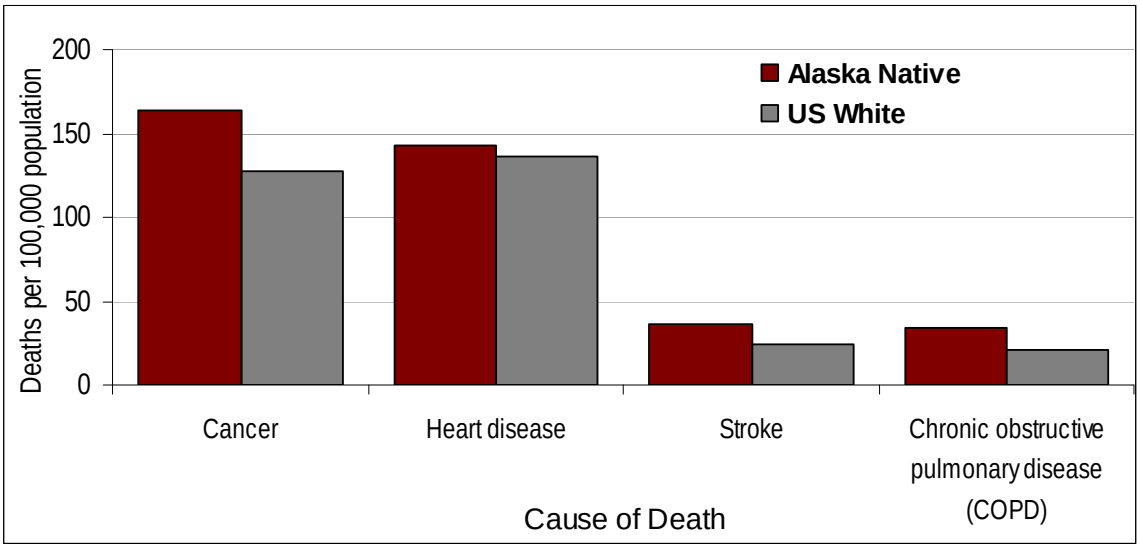
Literature Review

Cancer

Smoking causes cancer of the lung, oral cavity, pharynx, larynx, esophagus, and bladder. Secondhand smoke also causes cancer in nonsmokers.[23]

Historically thought to be rare, cancer is now the leading cause of death for Alaska Natives.[24] Lung cancer is the leading cause of cancer death for both men and women. In fact, cancer mortality is greater among Alaska Natives than among whites nationally (see figure 2).[25] In a review of Alaska Native cancer epidemiology, Lanier writes “Cancer incidence patterns in Alaska Natives (Eskimos, Indians, Aleuts) differ from those of US whites and American Indians” and “data showing that more than one-third of cancer cases and cancer death are tobacco related necessitate that cancer control efforts in this population should focus on the eradication of tobacco.”[26]

Figure 2: Mortality Rates for Tobacco-Related Conditions, Alaska Natives and US White



Source: 1989-1998 data, adjusted to US standard 1940 population. AK Native – Alaska Death Certificates and Indian Health Services Population Estimates; US White – National Center for Health Statistics.

The average cancer incidence rates for 1969-1998 are as high as for US Whites, significantly higher for oral cavity (7.9 per 100,000 vs. 0.4 per 100,000) and lung cancers (82.7 per 100,000 vs. 57.3 per 100,000), both associated with tobacco use.[27] For the time period under study, the authors note that there has been a significant and multi-fold increase in lung cancer incidence (two-fold for men and four-fold increase for women).

Another review of cancer incidence among the Inupiat of the North Slope Borough also concluded that tobacco is the primary cause of lung cancer and specifically cancer rate increases, but also acknowledged potential contribution to lung cancer from seal oil lamp use, carving dust exposure, indoor burning of coal.[28]

Cardiovascular Disease

Smoking causes coronary heart disease and stroke. Secondhand smoke also causes coronary heart disease in nonsmokers.[29] After cancer, cardiovascular disease is the second leading cause of death among Alaska Natives.

A review of cardiovascular disease (CVD) among Alaska Natives found that heart disease and stroke deaths among Alaska Natives are a problem of increasing proportion.[30] During the period 1955-65 heart disease mortality rates among Alaska Native adults older than 40 were 50% lower than US rates; however, while rates among US whites decreased by 32% from 1979-1998 mortality rates among Alaska Natives remained constant. Among Alaska Natives aged 25-44 the heart disease mortality rate was 30% higher than among US whites, among Natives aged 45-54 the rate was 40% higher, but among Native people age 75+ the rate was 20% lower than US whites. Death due to cerebrovascular disease (stroke) increased by 17% among Alaska Natives during 1978-1998, while mortality among US whites decreased by 31% during the same time period. Rates among Alaska Natives were 1.5 times greater than US whites during 1994-1998. The authors note that tobacco

use (both cigarette smoking and smokeless tobacco use) is an important risk factor for heart disease and stroke. They also note that historically healthy traditional diets (high in marine mammals and fish) and high levels of physical activity from a subsistence lifestyle may have previously protected Alaska Natives from CVD, including increased risk from tobacco use. The authors also note that differential trends in CVD mortality between Alaska Natives and US whites may be at least partially attributable to improvements in heart disease and stroke medical treatment in the "lower 48."

Respiratory Illness

Smoking damages airways and alveoli of the lung, increasing the risk for upper and lower respiratory infections, and eventually leading to chronic obstructive pulmonary disease (COPD).[21] COPD is the seventh leading cause of death among Alaska Natives.[24]

Prior to the 1980s Alaska Natives had COPD death rates similar to or less than non-Native Alaskans, but since the early 1990s mortality rates have doubled and now significantly exceed those for non-Natives.[31]

Secondhand smoke exposure causes asthma, bronchitis and pneumonia among children. We were not able to find data to describe the prevalence of asthma or respiratory conditions among Alaska youth, but nationally asthma is a leading chronic condition among children that contributes to school absenteeism, decreased quality of life and even death.[32]

A recent study examined the prevalence and risk factors for chronic respiratory illness and asthma-like symptoms (undiagnosed as asthma) among Y-K Delta children. Alaska Native children in the Y-K delta region were identified as "at-risk" for this study because of several risk factors, including crowded living conditions, low income levels, exposure to wood-burning stove emissions and secondhand smoke as well as high frequency of lower respiratory infections and post-respiratory infection complications. The authors concluded that asthma is under-diagnosed among these children and similar to other groups in the "lower 48" despite fewer asthma risk factors, and that exposure to secondhand smoke and primary smoking are significant contributors to respiratory disease risk.[33]

Even though it is only suggestive of a relationship between tobacco use and childhood respiratory disease, the next study is included here because there is so little research available to describe the specific experience of Alaska Natives on this issue. This retrospective study of invasive pneumonia and meningitis among Y-K Delta Alaska Native children younger than two found excess risk for disease associated with having at least one tobacco chewer in the household (conditional multiple logistic regression OR: 20.6, 1.4-294.5), although having at least one smoker in the household was non-significant at the 95% confidence level.[34] The authors did not draw clear conclusions from this association, but hypothesized that household smokeless tobacco use may be a marker for providing smokeless tobacco to young children, and that such primary smokeless tobacco use is actually the risk factor for these respiratory diseases among young children. Further study was recommended to describe associations between household tobacco use and childhood respiratory disease.

Oral Health

Smoking causes serious gum disease that can result in tooth decay and bone loss. Smokeless tobacco use is associated with oral health impacts such as tooth decay, gum disease, and cancer.[35]

An Indian Health Service Oral Health Survey conducted in Alaska found that about 30% of observable oral soft tissue changes in school children could be attributed to smokeless tobacco use.[36] The author noted that in the communities where the surveys were conducted family and leaders did not consider that use of smokeless tobacco by children was an important health concern.

Another study of oral health among Southwest Alaska Native children ages 12-36 months and their caregivers found that about 33% of primary adult caregivers and 31% of other household members chewed "homemade tobacco" (the article does not name Iqmik but the region of the study is consistent with other reports of this tobacco use), while 22% of primary caregivers chewed commercial smokeless tobacco. An interesting finding "of unclear significance" in this study was that most (86% of primary caregivers and 75% of any other household members) premasticate food (pre-chew) for children prior to giving that food to them, and that use of homemade tobacco by primary caregivers was associated with lower rates of dental caries among children in their care ($p<.001$).[37] Although prevalence of adult tooth decay was very high (98% dental decay with an average 11 decayed, missing or filled teeth), the study did not explore associations between adult tobacco use and tooth decay. We noted that this described act of chewing food for children parallels the act of preparing Iqmik for family members, pre-chewing tobacco and punk ash to create packets that can be chewed by other people.

Infant Outcomes

Smoking during pregnancy causes health problems for both mothers and babies, such as pregnancy complications, premature birth, low birthweight infants, stillbirth and infant death. Smoking during pregnancy and infant exposure to secondhand smoke after birth are both associated with increased risk of sudden infant death syndrome (SIDS). Between 2001-2003, about 1 in 7 Alaska Native infant deaths were due to SIDS.[38]

A review of birth certificates for infants born Alaska Native women examined associations between tobacco use, alcohol, and birthweight.[39] The mean birthweight for Native women who reported the highest use of tobacco (cigarettes) was 300g less than for women who did not use tobacco. For Yup'ik women, birthweight was 400g less among the highest tobacco users in comparison to non-tobacco users, and the mean birthweight for Yup'ik women overall was similar to the mean birthweight from thirty years before the study (1960s) despite the significant improvements in medical care that have been implemented during that time. Maternal tobacco use made a quantitatively larger contribution to low birthweight than maternal alcohol use, although both are important. This study was not able to include measures of maternal smokeless tobacco use, which may be an important issue for Alaskan Native – especially Yup'ik – women. Thus, the impacts already identified likely underestimate the real burden of tobacco use on infants in these groups.

A pilot study of pregnant women who used Iqmik and/or other tobacco during pregnancy found that serum cotinine as well as nicotine and cotinine in cord blood were higher in Iqmik users than for other tobacco users, and the infants born to Iqmik-using mothers exhibited more signs and symptoms of nicotine withdrawal than infants born to mothers who used other forms of tobacco.[40] The study was too small to describe specific and less frequent adverse birth outcomes related to any tobacco use.

Nicotine Toxicity

Nicotine, the addictive chemical in cigarettes and smokeless tobacco, is a poison which has been used as an insecticide and which is toxic to humans in large doses.[41] Increased pH in tobacco products increases the rate of nicotine absorption in the system. The tobacco industries manipulate nicotine delivery by addition of ammonia to tobacco products to increase pH for the purpose of more quickly delivering large doses of addictive nicotine to tobacco users.[42]

The cultural practice of chewing ash and tobacco in the preparation of Iqmik may result in rapid absorption and exposure to substantial quantities of nicotine. A study of the pH in different smokeless tobacco varieties found that commercial smokeless tobacco has a pH of about 8, whereas the pH of fungus ash was 11, and a sample of pre-chewed Iqmik mixture was pH 10.

Y-K Delta focus group participants who discussed Iqmik preparation also reported physical symptoms consistent with nicotine toxicity after pre-chewing the ash and tobacco leaf mixture. These symptoms included dizziness, vomiting, hyperactivity, and being "knocked out."[8] We did not find any research to describe long-term health impacts attributed to Iqmik preparation, but symptoms of Iqmik preparation were mentioned by focus group participants as a reason for wanting to quit making and using it.

Summary of Key Findings:

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 Natives (including lung cancer and oral cancer), and the occurrence of these diseases has increased dramatically in recent years

Cancer is the leading cause of death for Alaska Natives, lung cancer (caused primarily by smoking) is the leading cause of cancer death – one in three cancer deaths are caused by tobacco.

Cardiovascular disease is the second leading cause of death and an

increasingly greater problem among Alaska Natives than among non-natives – one in five heart disease and stroke deaths is caused by tobacco.

Chronic obstructive pulmonary disease (COPD) is a leading cause of Native death and significantly greater among Alaska Natives than non-Natives – 8 out of 10 COPD deaths are caused by tobacco.

Secondhand smoke exposure causes asthma, bronchitis and pneumonia among Alaska Native children and Sudden Infant Death Syndrome (SIDS) among babies.

Smokeless tobacco use causes tooth decay, gum disease and oral cancers among Alaska Native youth and adults.

Recommendations:

Tobacco Control should be a high priority for people concerned about improving the health of Alaska Native communities

Tobacco control program staff should seek to build partnerships with people working on specific tobacco-related disease conditions such as cancer, heart disease or SIDS.

IV. Prevalence of Tobacco Use

This section summarizes findings that describe prevalence of different types of tobacco use among Alaska Native adults, youth and pregnant women. We summarize trends in prevalence for Alaska Natives in comparison to non-Natives, and also current prevalence among Alaska Natives alone by demographic subgroups when information was available (including by age, gender, income and/or education, geographic region, having children in the home [adults], important associated behavioral risk factors [youth], and source of usual prenatal care [pregnant women]).

Literature Review

The last comprehensive research review of data to specifically describe the prevalence of Alaska Native tobacco use was published in 1997 by Kaplan, Lanier et al.[43] Prior to that time, a review of Alaska Native tobacco use and impact had been conducted in 1990 by Lanier, et al.[44] The conclusion of both reports was that Alaska Natives had higher tobacco use rates than non-Natives, that tobacco-related disease is a problem of epidemic proportion in the Alaska Native community, and that tobacco control is a critical public health priority for Alaska Native leaders to address.

In 2004 the Alaska Native Health Board published a review of tobacco use prevalence among adult Alaska Natives using the 1998-2000 Alaska Behavioral Risk Factor Surveillance System (BRFSS). The findings of this report validated previous findings for excess risk of tobacco use among Alaska Natives in comparison to non-Native adults. The authors were also able to stratify prevalence of tobacco use (cigarettes and smokeless tobacco) by age, gender, and region of the state; Alaska Natives were at greater risk than non-Natives for almost all subgroups.

Tobacco in the Great Land is an extensively detailed report that used recent (through 2003) data to describe tobacco use and exposure among all Alaskans, including numerous comparisons of Alaska Native and non-Native peoples' behaviors. In general, the authors of this report also found that Alaska Native adults, youth, and pregnant women all have higher rates of tobacco use than non-Natives. These authors were also able for the first time to describe relative trends in tobacco use prevalence for Alaska Natives and non-Natives, which are confirmed in this report. In contrast to declines in prevalence among non-Natives, prevalence rates among Alaska Natives have:

- not declined significantly among Native adults for cigarette use, remaining about double the prevalence for non-Natives
- declined among youth for cigarette smoking, but remain three to four times greater than for non-Natives
- actually increased for smokeless tobacco use among Native female youth

- not declined among pregnant women and remain about double the rate for non-Natives.

These comprehensive reviews all identify a substantial and persistent health disparity for Alaska Natives in comparison to non-Natives. On a positive note, the increasing amount of information included in these reports also reflects the increasing availability of public health surveillance data and the ability to use those data to describe Alaska Natives, such as in this report.

Cigarette Smoking

The *Great Land* report provides the most current cigarette smoking prevalence estimates for High School youth. The percent of youth who are current smokers – defined as those who have smoked at least one cigarette in the past 30 days, the nationally accepted definition for tobacco use among youth – is as follows:

- 39.7% for males, 48.7% for females, in comparison to 13.7% and 11.4% among non-Natives (2003 Alaska YRBS), and 21.8% for all males and 21.9% for all females in the US (2003 National YRBS[45])

- 21.5% of all Alaska Native youth had started smoking at age 13 or younger, in comparison to 5.7% of all non-Native Alaskan youth who started smoking at this age

Some information about smoking rates among middle school children was included as part of a population-based study of respiratory illness among children in grades 6-9 on the Y-K Delta. Most of the children in this area (85% of all children, 81% of children in the study) are Alaska Native, primarily Yup'ik. Nearly 500 students completed a written survey in 1997 to assess respiratory risk factors. About 60% of the children were from the region's large town (Bethel, population 5,600) and the remaining children were from more rural surrounding villages. The authors reported a high prevalence of self-reported current smoking* among these children: 27% in town and 41% in surrounding rural villages (non-significant difference, $p<.05$). During 1995 Alaska Native high school youth smoking rates statewide were 62.7% among males and 61.1% among females, which is approximately double what is reported here for these middle school children. It should be noted that statewide smoking rates among Alaska Native high school youth declined substantially from 1999 to 2003, thus these reported rates among middle school youth may have declined similarly from what is reported. Even if rates declined by half to about 15% smoking prevalence among middle school youth, this would still be a disturbingly high prevalence for such a young group.

Among adults, *Great Land* authors reported current smoking as:

- 46.1% among Alaska Native men, in comparison to 25.3% among white Alaskan men (2000-02 Alaska BRFSS), and 25.4% of all US men (2001 BRFSS median)

* a specific definition of "smoking" was not provided

- 41.3% among Alaska Native women, in comparison to 22.5% among white Alaskan women (2000-02 Alaska BRFSS), and 21.2% of all US women (2001 BRFSS median)
- 29.3% among Alaska Native/American Indian women during their last three months of pregnancy, in comparison to 13.6% among white Alaskan women (Alaska PRAMS 2000).

Smokeless Tobacco

The *Great Land* report provided current smokeless tobacco use prevalence – defined as those who have used smokeless tobacco on at least one of the past 30 days, the nationally accepted definition – for Alaska Native High School youth as follows:

- 31.7% of males and 18.2% of females, in comparison to 11.5% and 2.4% among non-Native Alaskan youth (2003 Alaska YRBS), and 11.0% for all males and 2.2% for all females in the US (2001 National YRBS).

Other research suggests that the problem of smokeless tobacco use among young children is not a new one. A study from 1987 documented a high prevalence of early initiation of smokeless tobacco use among Alaska Native and Washington State middle school-aged children from tribal schools – half of all males first used smokeless tobacco when younger than eight and half of all females first used smokeless tobacco when younger than ten.[46]

Among adults, *Great Land* reported current smokeless tobacco use prevalence as:

- 19.9% among Alaska Native men, in comparison to 9.4% among white Alaskan men (2000-02 Alaska BRFSS)
- 9.5% among Alaska Native women, in comparison to 0.2% among white Alaskan women (2000-02 Alaska BRFSS).

Smokeless tobacco use has been reported as significantly more prevalent among Natives living in the most rural regions of the state than in other areas. One recent report from a focus group study stated that smokeless tobacco use is particularly high – over 50% of adults using some form – on the Yukon-Kuskokwim (Y-K) Delta of Western Alaska. Another recent article described tobacco use among pregnant women using medical record review in the Y-K Delta found that 58% of pregnant women used smokeless tobacco.[47]

As described in the Background section of this report, Iqmik is a smokeless tobacco variant unique to Alaska Natives. A few research articles specifically documented use of Iqmik among pregnant women. Hurt et al. reported that Iqmik is frequently used by Native pregnant women, and Renner et al. (2005) specifically documented 24% of pregnant women in the Y-K Delta used Iqmik during pregnancy. Renner et al. (2004) reported that in a focus group series with Alaska Native pregnant women participants reported that many women switch to Iqmik during pregnancy (rather than cigarettes or commercial smokeless tobacco) because it is perceived as less harmful or even harmless.[8]

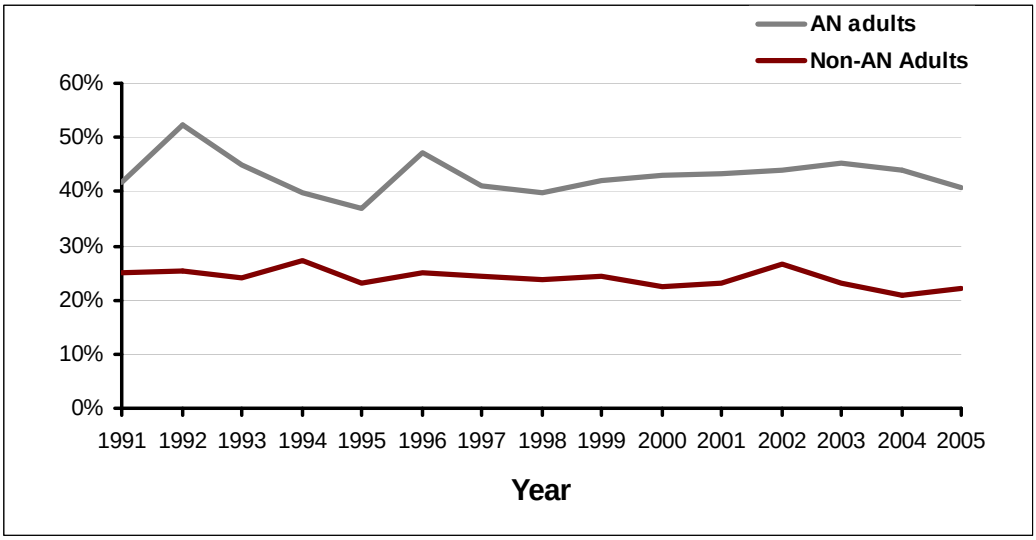
Data and Program Recommendations

Adults

Cigarette Smoking

Information to describe the current cigarette smoking among Alaska Natives is available beginning in 1991. For the entire time period, prevalence of cigarette smoking has been higher among Natives than among non-Natives in Alaska (see Figure 3). Although smoking has declined among Alaska Natives from a high of more than 50% in 1992 to just above 40% in 2004-05, there has not been a statistically significant decline for the period 1991 to 2005. In contrast, there has been a modest but statistically significant decline in smoking among non-Native Alaskans. Smoking prevalence remains about double among Natives in comparison to non-Native Alaskans.

Figure 3: Trends in Adult Cigarette Smoking Prevalence Among Alaskans

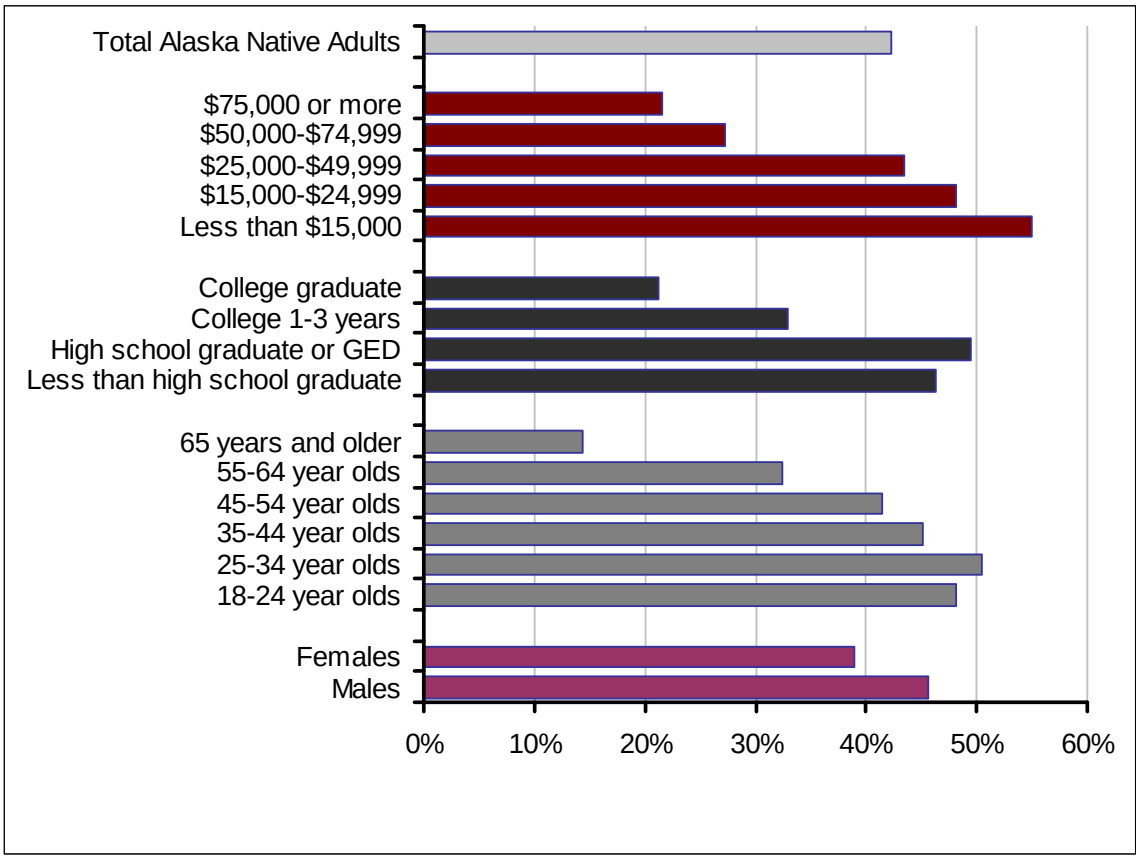


Source: 1991-2005 Alaska BRFSS, see Appendix B-Table 1.

We used the most current years of data (2004-05) to describe current cigarette smoking among adult Alaska Natives alone. A large proportion of Native adults (42%) reported that they currently smoke cigarettes (see Figure 4). This translates into more than 31,000 adults who smoke and are at-risk for the serious health consequences of smoking.

Men are more likely than women to be smokers (46% vs. 39%). Younger people are more likely to be smokers than older people (for example, 50% of adults age 25-34 smoke in comparison to 14% of those 65 and older). Adults with less education are more likely to smoke (46-49% among those with high school or less education in comparison to 21-33% among those with some or more college), as well as those in the lowest income brackets (55% among those with annual income less than $15,000).

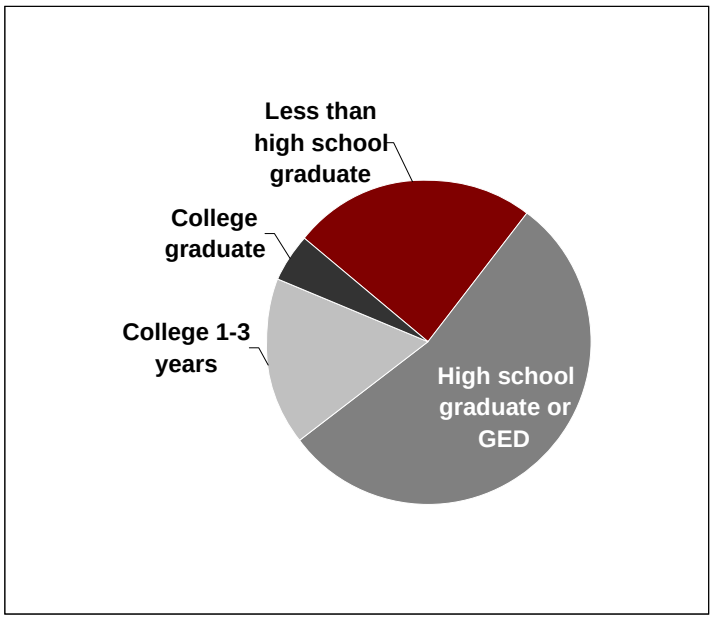
Figure 4: Current Cigarette Smoking Among Alaska Native Adults



Source: Alaska BRFSS 2004-05, see Appendix B - Table 2.

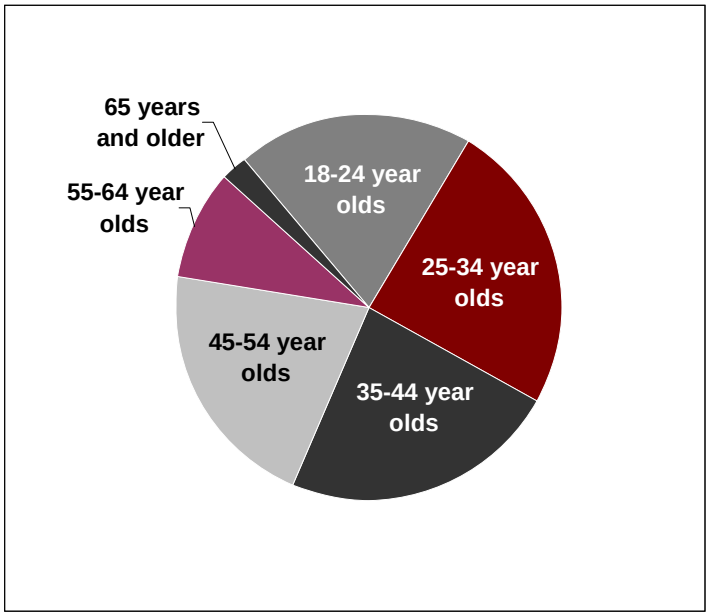
In terms of numbers of smokers, the largest size groups are adults with high school or less education (approximately 24,500 smokers, see Figure 5) and younger adults (approximately 27,600 smokers under age 55, see Figure 6).

Figure 5: Proportion of Alaska Native Adult Smokers by Education Status



Source: Alaska BRFSS 2004-05, see Appendix B - Table 2.

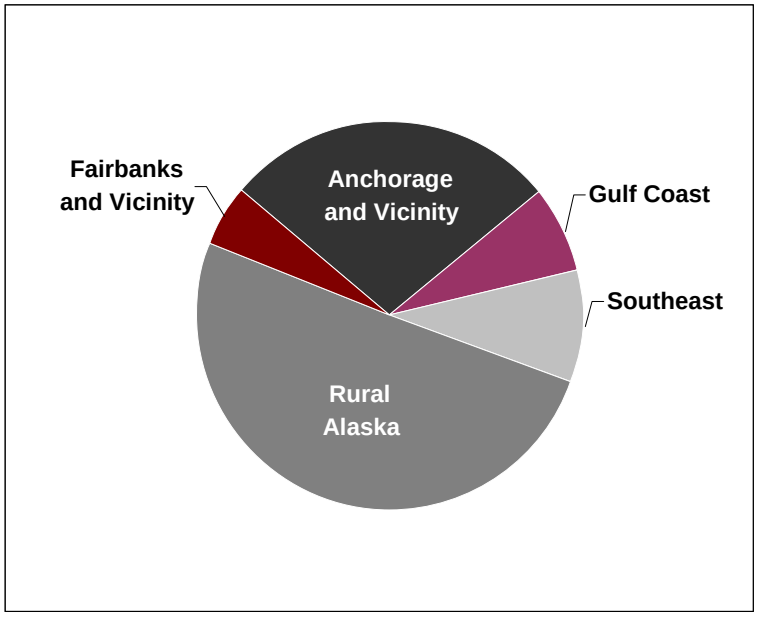
Figure 6: Proportion of Alaska Native Adult Smokers by Age Group



Source: Alaska BRFSS 2004-05, see Appendix B - Table 2.

There are not significant differences in current smoking prevalence among groups by geographic region, but the largest estimated number of Native smokers are in Anchorage (approximately 8,800 smokers) and the rural Alaska region (about 15,800 smokers) See Figure 7, and refer to Appendix C for maps of BRFSS regions.

Figure 7: Proportion of Alaska Native Adult Smokers by Geographic Region



Source: Alaska BRFSS 2004-05, see Appendix B - Table 2.

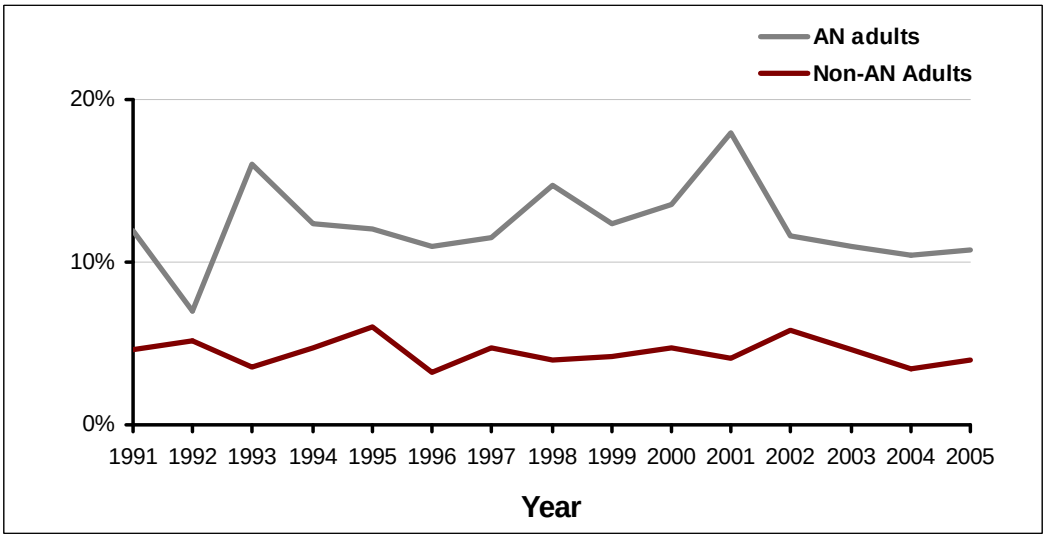
We also examined only those who smoked every day (daily). Twenty-eight percent (an estimated 21,000) of Alaska Native adults reported smoking every day – that is, about two-thirds of all Native adults who smoke. One-third of Alaska Native adult smokers smoke less than every day.

Among daily smokers alone, associations by demographic group were similar to associations for current smoking overall: men, younger adults, and lower income/ education groups have the highest smoking rates (see Appendix B – Table 3).

Smokeless Tobacco Use

The prevalence of smokeless tobacco use among Alaska Native adults has varied by year, but remained between 10-20% for the past ten-year period (see Figure 8). As with cigarette smoking, the prevalence of smokeless tobacco use among Natives has historically been and remains currently about double that of non-Native Alaskans.

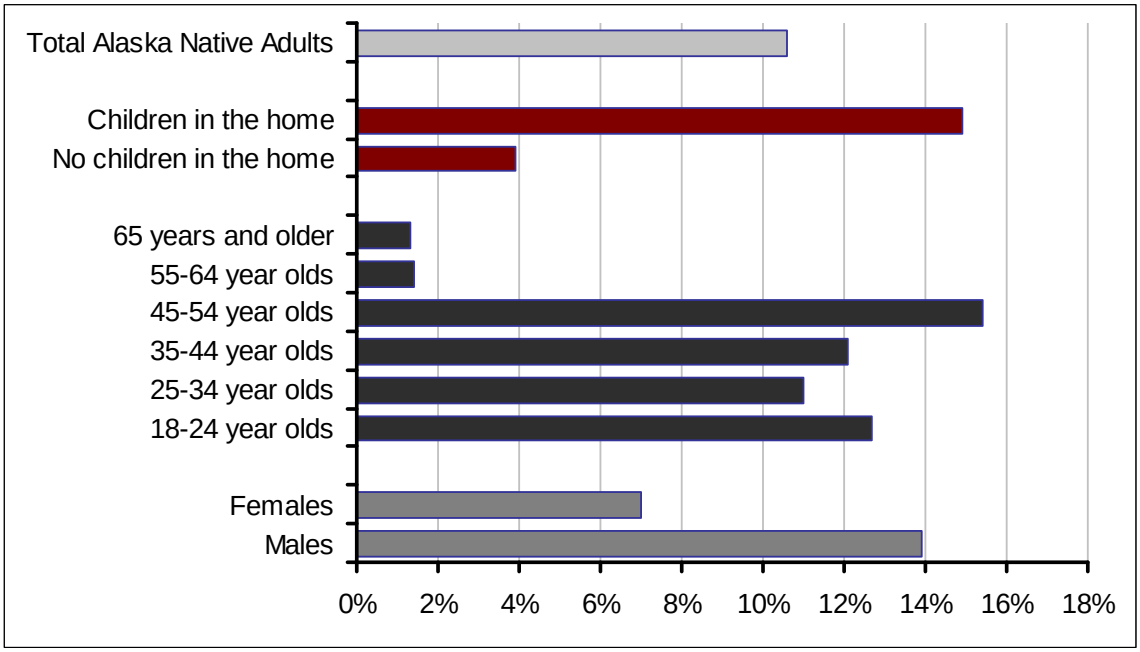
Figure 8: Trends in Smokeless Tobacco Use Among Adult Alaskans



Source: 1991-2005 Alaska BRFSS, see Appendix B - Table 4.

In 2004-05, about 11% of Alaska Native adults reported currently using some type of smokeless tobacco, either commercial or Iqmik (see Figure 9). This translates into approximately 7,800 adults. Rates are higher among men (14%) than women (7%), but the prevalence among women is particularly high in comparison to non-Native women (less than 1%). Prevalence is similar among adults ages 18-54 (between 11-15%), and much lower among people 55 and older (1%). Significantly more adults with children in the home (15%) reported being current smokeless tobacco users in comparison to people without children in the home (4%) although this may be partly explained by the difference in use among age groups.

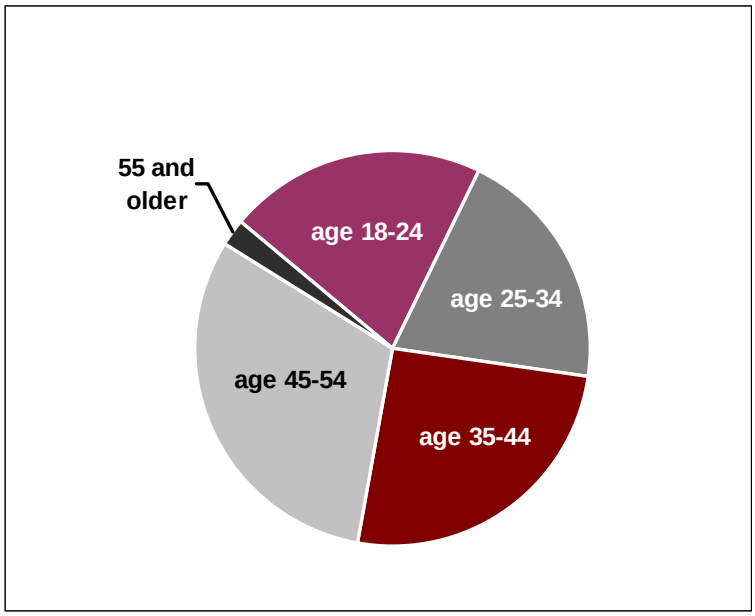
Figure 9: Current Smokeless Tobacco Use Among Alaska Native Adults



Source: Alaska BRFSS 2004-05, see Appendix B - Table 5.

Among current smokeless tobacco users, the greatest number are younger than 55 (we estimate fewer than 200 Alaska Native users age 55 or older, see Figure 10).

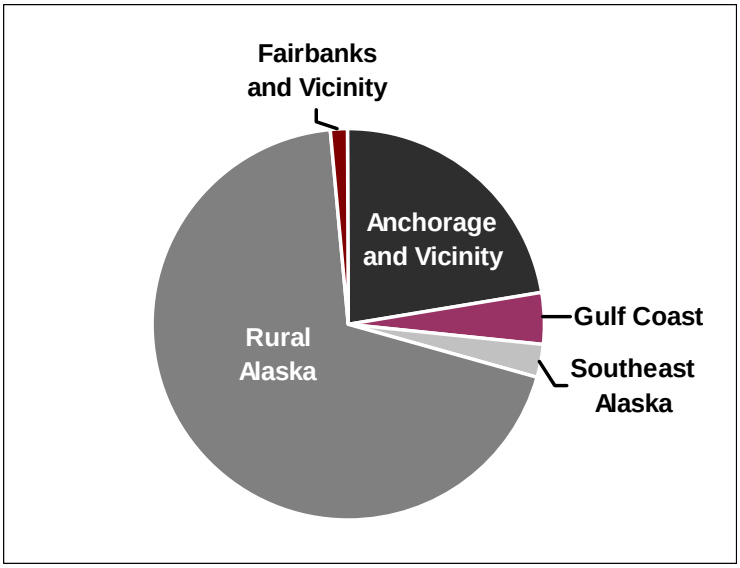
Figure 10: Proportion of Alaska Native Adult Smokeless Tobacco Users by Age Group



Source: Alaska BRFSS 2004-05, see Appendix B - Table 5.

As Figure 11 indicates, the largest number of current smokeless tobacco users live in the rural region of the state (5,400), followed by Anchorage and vicinity (1,800).

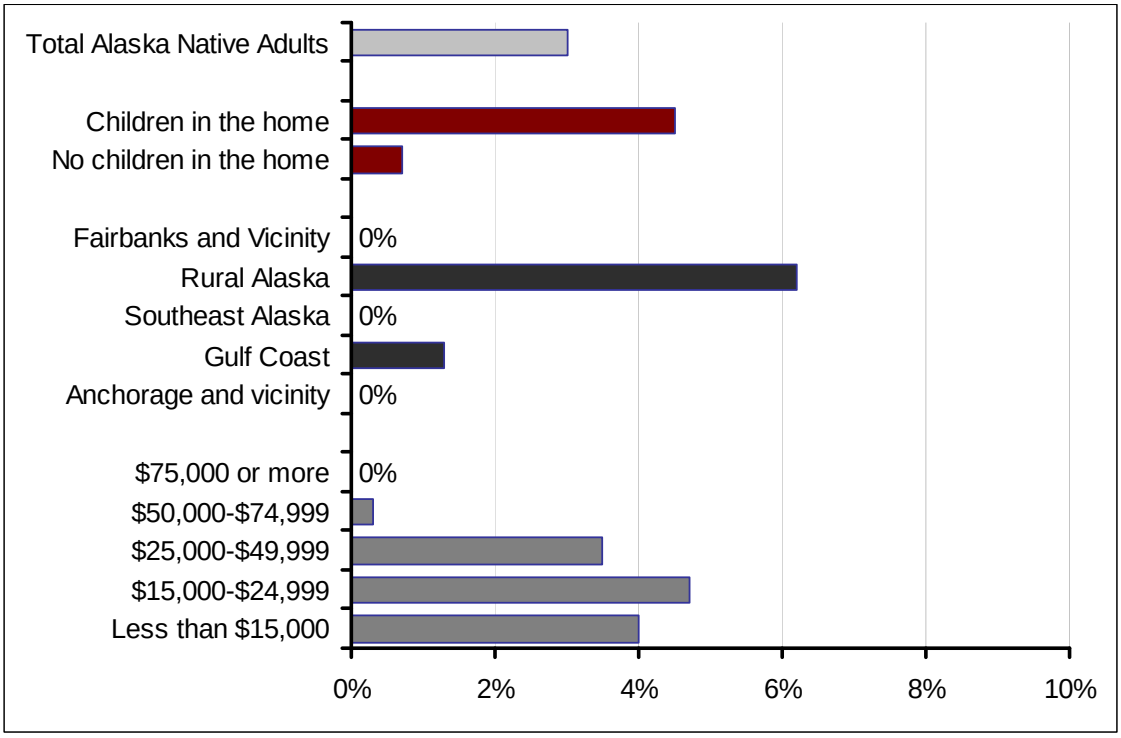
Figure 11: Proportion of Alaska Native Adult Smokeless Tobacco Users by Geographic Region



Source: Alaska BRFSS 2004-05, see Appendix B - Table 5.

Using the most current available data, we are also able to also describe Alaska Natives who use Iqmik (see Figure 12). About 3% of Alaska Natives overall, an estimated 2,200 in the state, reported using Iqmik. In our survey, any prevalence of Iqmik use was entirely restricted to Rural Alaska (6%) and the Gulf Coast region (1%). Prevalence was also almost entirely restricted to lower income adults (4-5% among those with household income less than $50,000 per year in comparison to nearly zero among those with higher income).

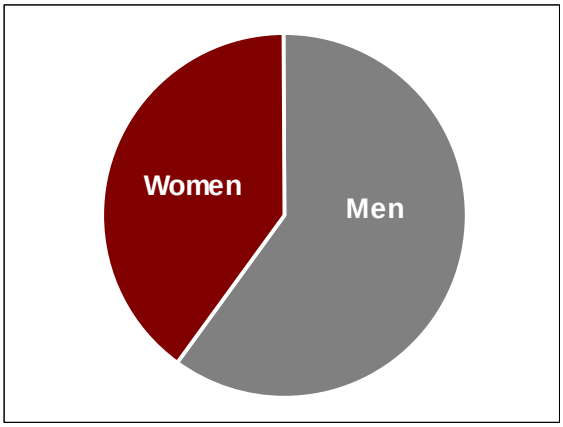
Figure 12: Current Iqmik/Blackbull Use Among Alaska Native Adults



Source: Alaska BRFSS 2004-05, see Appendix B - Table 6.

Men and women reported very similar prevalence rates for Iqmik use. We estimate that about 1,300 men and 900 women currently use Iqmik (see Figure 13).

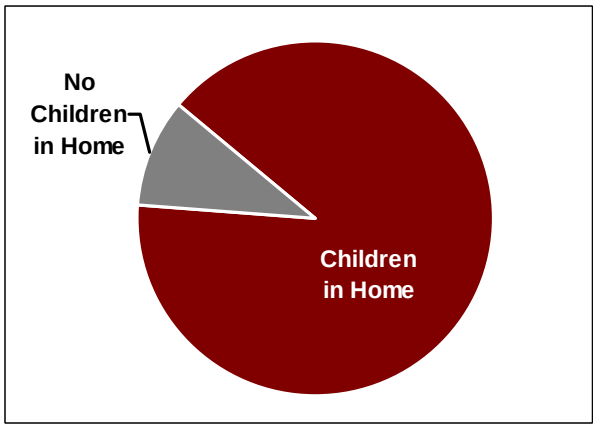
Figure 13: Proportion of Alaska Native Adult Iqmik/Blackbull Users by Gender



Source: Alaska BRFSS 2004-05, see Appendix B - Table 6.

As we observed with general smokeless tobacco use, the majority of people who use Iqmik have children in the home. We estimate that 2,000 Alaska Native adults with children in the home, and only about 200 Alaska Native adults without children, use Iqmik (see Figure 14).

Figure 14: Proportion of Alaska Native Adult Iqmik/Blackbull Users With/Without Children in the Home

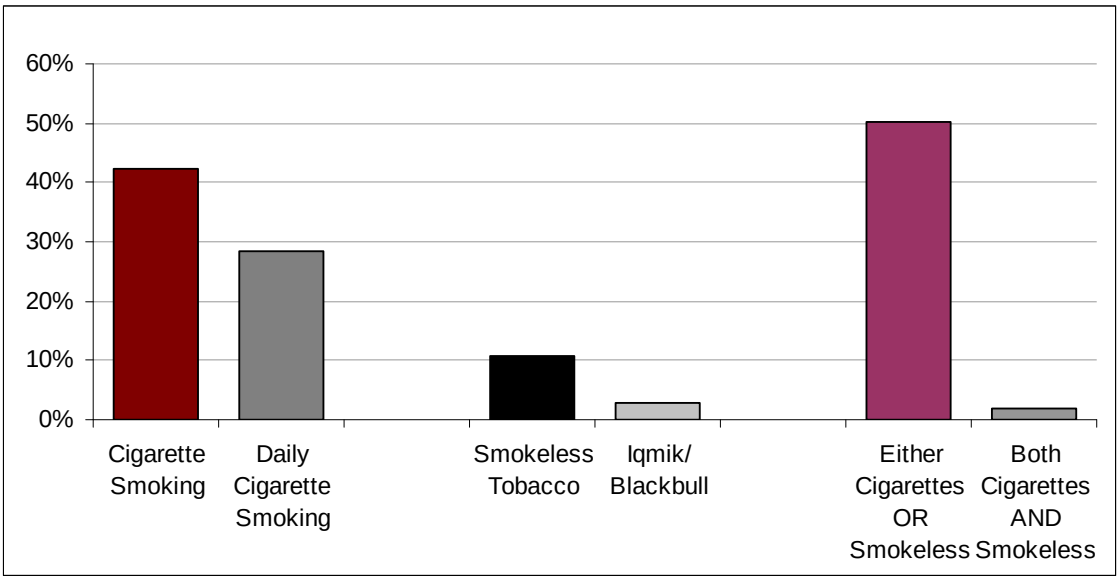


Source: Alaska BRFSS 2004-05, see Appendix B - Table 6.

Combinations of Tobacco Used

About half (50.2%) of Alaska Native adults – an estimated 37,100 people - reported current use of either cigarettes or smokeless tobacco (see Table 7, Appendix B). A potential concern for those working in tobacco control is whether people are using cigarettes and smokeless tobacco in combination, so that they switch from one to another instead of quitting the addiction entirely. We explored this and found that only a very small proportion (about 2%, or an estimated 1,400 Alaska Native adults) in the adult population report current use of both cigarettes and smokeless tobacco(see Figure 15).

Figure 15: Summary of Current Tobacco Use Status Among Alaska Native Adults



Source: Alaska BRFSS 2004-05, see Appendix B - Table 8.

Summary of Key Findings:

About half of Alaska Native adults use some type of tobacco and are at-risk for tobacco-related disease - over 31,000 Alaska Native adults currently smoke cigarettes, and 7,800 use smokeless tobacco

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

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

Iqmik is less prevalent than cigarettes or general smokeless tobacco use in the overall adult population, but may be of particular concern in areas of rural Alaska – (including Northern and Southwest regions) - prevalence of Iqmik use is highest among younger people and adults with children in the home

Recommendations:

To reach the greatest number of people who are at-risk, programs to target Alaska Native smokers should be especially focused on adults under the age of 55 and those who have less education

Programs to target smokeless tobacco users should be focused on adults under the age of 55, and consider that most smokeless tobacco users have children in the home

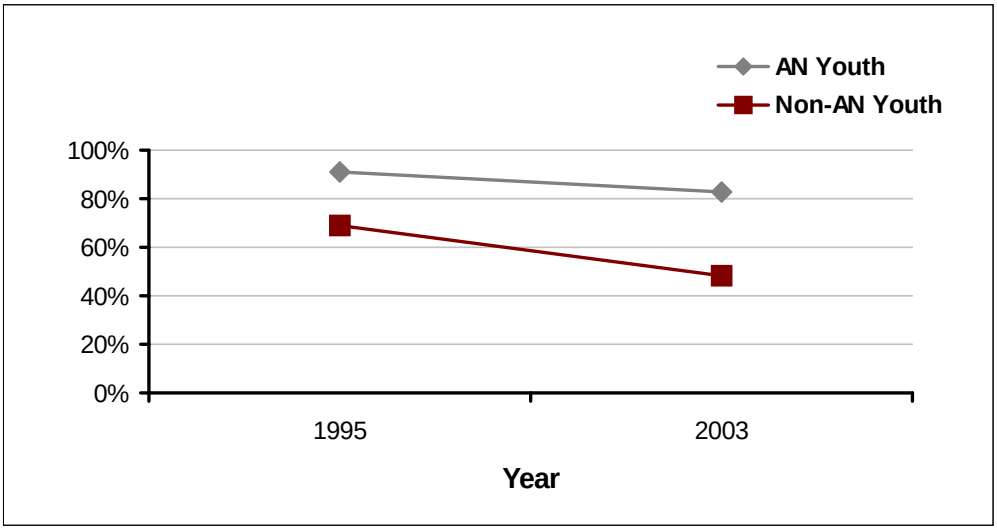
Programs to target Iqmik users should focus on both men and women in rural Alaska, including those with children in the home.

Youth

Cigarette Smoking

From 1995 to 2003 the prevalence of having ever smoked a cigarette (even just a puff) decreased significantly among Alaska Native high school youth, from 90.7% to 83.0% (see Figure 16). The decrease among Alaska Native youth was similar to decreases seen for non-Native youth in the state. The prevalence of ever having smoked a cigarette among Alaska Native high school youth is almost double that for non-Native youth.

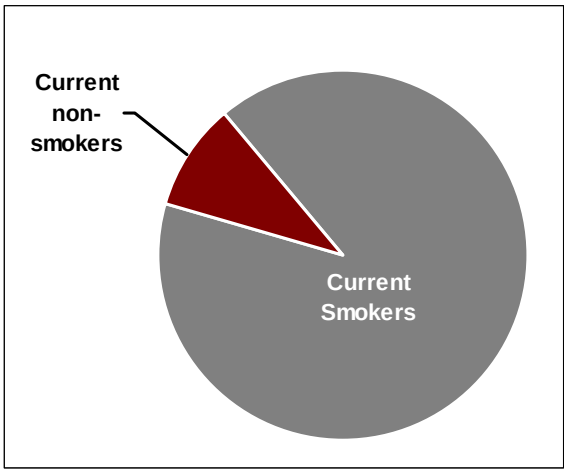
Figure 16: Trends in Lifetime Cigarette Smoking Among Alaskan High School Students



Source: Alaska YRBS 1995 and 2003, see Appendix B - Table 9.

The prevalence of lifetime smoking (even just a puff) was similar for males and females, older and younger students, but higher for students who usually get Cs/Ds/Fs in comparison to those who usually get As/Bs (91% vs. 76%, see Table 11, Appendix B). Youth were also asked if they had ever smoked regularly – that is, every day for at least a month. About 27% of all Alaska Native high school youth said they had ever smoked regularly, including 55% of all youth who currently smoke (see Table 12, Appendix B). Among those who have ever smoked regularly, the clear majority remain smokers – an estimated 1,800 Alaska Native youth among the estimated 2,100 who have ever smoked regularly (see Figure 17). This underscores the importance of preventing youth from initiating tobacco use and progressing to regular use.

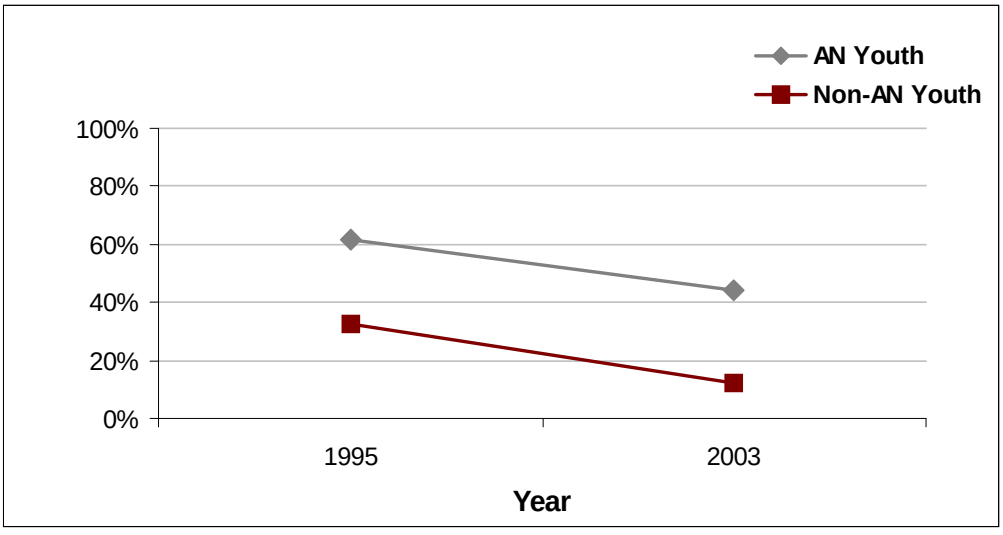
Figure 17: Proportion of Alaska Native High School Students Who Currently Smoke, Among Students Who Ever Smoked Regularly



Source: 2003 Alaska YRBS, see Appendix B - Table 11

From 1995 to 2003 there was a significant decline in current cigarette smoking (having smoked one or more cigarettes during the past 30 days) among Alaska Native youth, from 61.9% to 44.2% (see Figure 18). This decline was smaller than the decline among non-Native Alaskan youth (from 32.4% to 12.3%). Alaska Native youth smoking rates remain considerably higher than non-Native youth smoking rates.

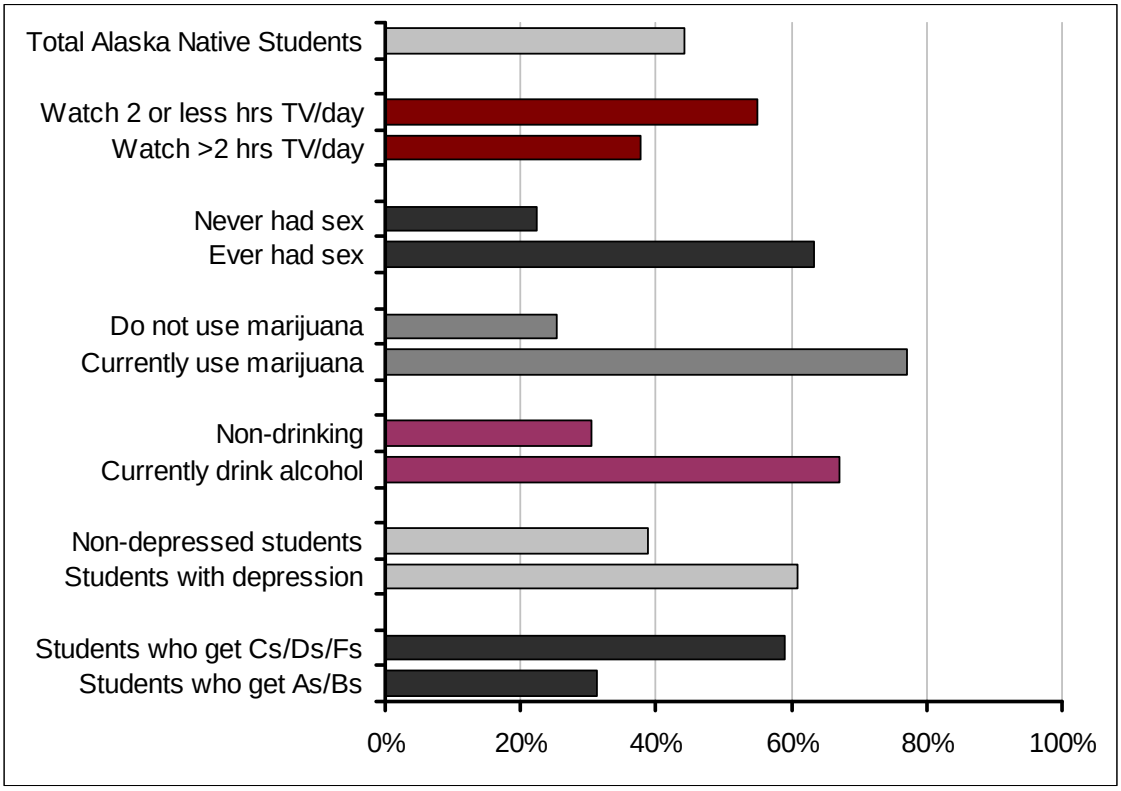
Figure 18: Trends in Current Cigarette Smoking Among Alaskan High School Students



Source: Alaska YRBS 1995 and 2003, see Appendix B - Table 12.

Currently, about 44% of Alaska Native high school youth are smoking cigarettes – an estimated 3,400 Native youth statewide. We did not find significant differences in smoking prevalence by gender or grade level (see Table 13, Appendix B). Due to small numbers of survey respondents and/or methods we did not have the ability to explore demographic characteristics of Alaska Native youth such as income/household socioeconomic status or geographic region. Alternatively, we explored associations between smoking and other risky behaviors for youth, to provide some context to describe youth at-risk for smoking (see Figure 19 and Table 13, Appendix B). We found that youth who currently get lower grades in school, drink alcohol, use marijuana, are depressed and who have ever had sex are all more likely to smoke.

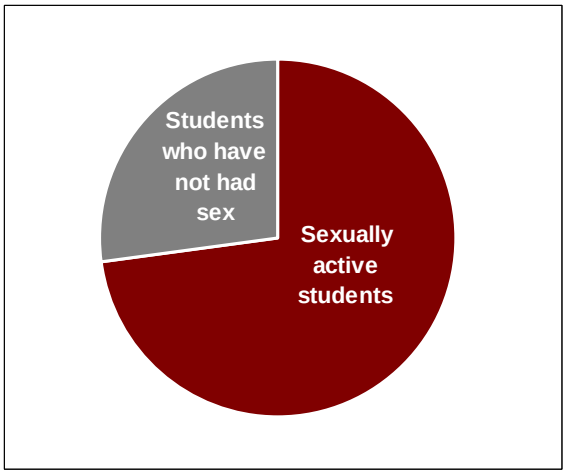
Figure 19: Current Cigarette Smoking Among Alaska Native High School Students



Source: 2003 Alaska YRBS, see Appendix B - Table 13.

Moreover, the proportion of youth reporting these risk factors is high. The majority of youth smokers are also engaging in one or more of these behaviors. For example, the clear majority of youth who smoke are also sexually active (see Figure 20).

Figure 20: Proportion of Alaska Native High School Smokers Who Have Ever Had Sexual Activity

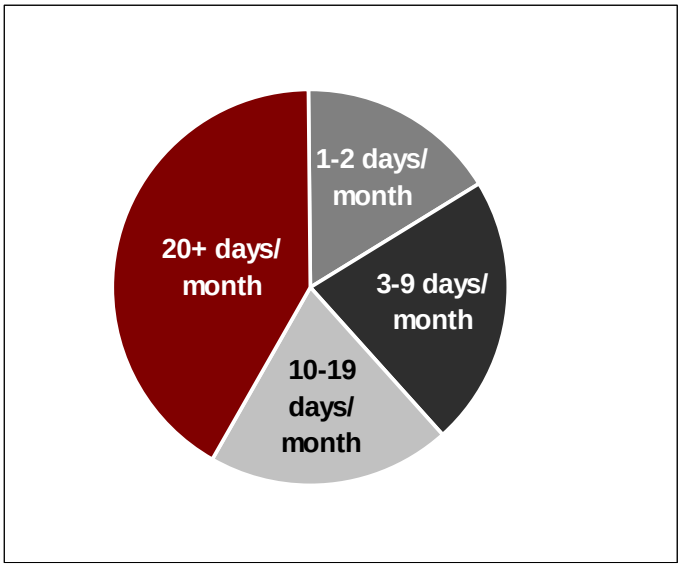


Source: 2003 Alaska YRBS, see Appendix B - Table 13

The definition of current smoking among youth is highly sensitive – a youth may have smoked only one cigarette on one day during the past 30 days and still be classified as a current smoker. We wanted to describe the real frequency and intensity of smoking to provide more detail about this potential range of behavior among those classified as smokers.

Among youth who were classified as current smokers, about 42% smoked on 20 or more of those 30 days, while 16% smoked only one or two days (see Figure 21).

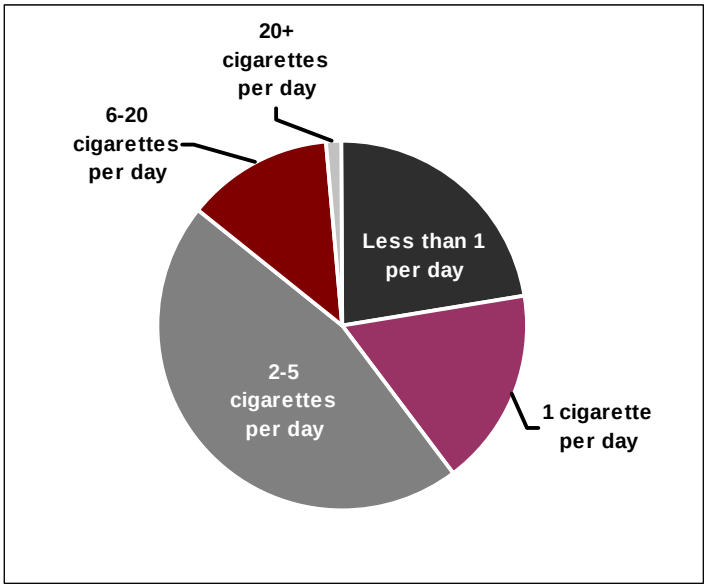
Figure 21: Frequency of Cigarette Smoking (Days per Month) Among Alaska Native High School Smokers



Source: Alaska BRFSS 2004-05, see Appendix B - Table 14.

More than eight in ten youth reported that they smoked five or fewer cigarettes per days on the days they smoked (see Figure 22). Taken together, these findings suggest that youth smoke at least weekly, but many do not smoke daily, and on the days they do smoke they smoke relatively few cigarettes. Programs to target these young people should take into account that their smoking patterns, and therefore their needs for help to quit, are different than adults.

Figure 22: Amount Smoked Per Day Among Alaska Native High School Smokers (20 cigarettes = 1 pack)

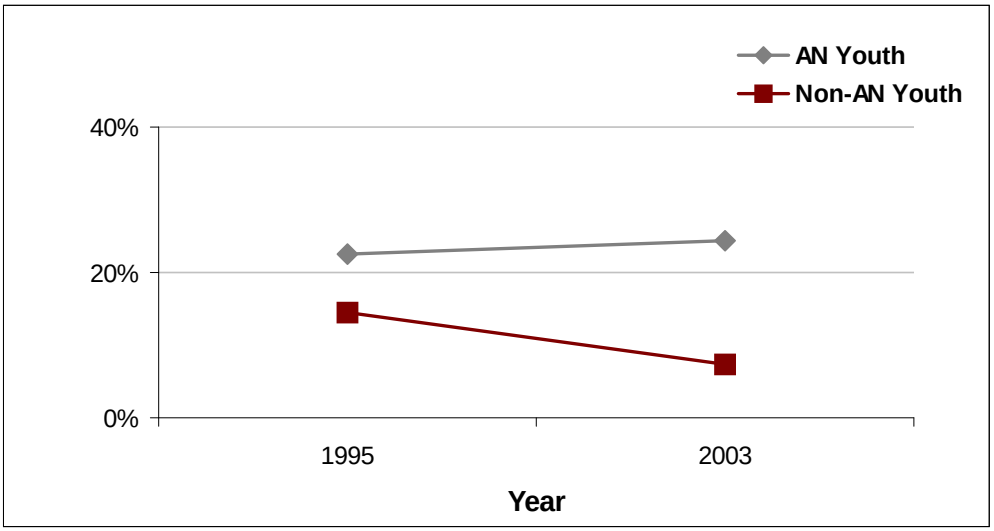


Source: 2003 Alaska YRBS, see Appendix B - Table 15

Smokeless Tobacco

Smokeless tobacco use has declined significantly among non-Native youth in recent years, but it has not declined at all for Alaska Native youth (see Figure 23).

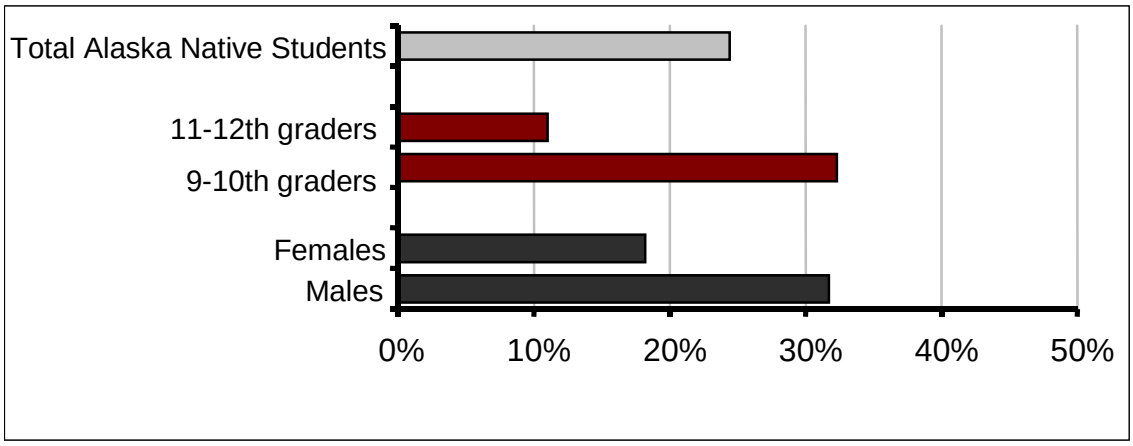
Figure 23: Trends in Current Smokeless Tobacco Use Among Alaskan High School Students



Source: Alaska YRBS 1995 and 2003, see Appendix B - Table 16.

About 24% of Alaska Native high school youth currently use some form of smokeless tobacco (see Figure 24. This translates into about 1,900 young Alaska Native people who are at-risk for the dangers of exposure to smokeless tobacco use.

Figure 24: Current Smokeless Tobacco Use Among Alaska Native High School Students



Source: 2003 Alaska YRBS, see Appendix B - Table 17.

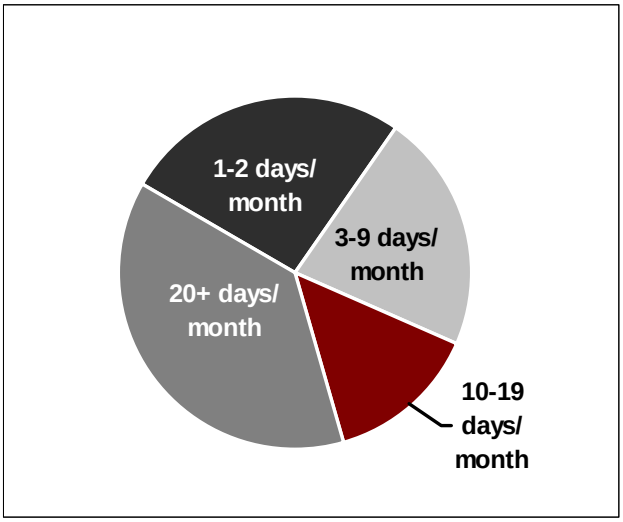
We found that the prevalence of smokeless tobacco use is higher among males than females (32% vs. 18%), higher among younger high school youth than older youth (32% for 9-10th graders vs. 11% for 11-12th graders), and that there were significant associations with cigarette smoking. In contrast to our findings among

youth smokers, we did not find associations between smokeless tobacco use and reported grades in school, depression, alcohol use, sexual activity or TV-watching. We did find that students who used marijuana were more likely to use smokeless tobacco, which was similar to findings for cigarette smoking. This suggests that although there is an overlap of youth who use both types of tobacco, there may also be important differences between the kinds of youth who use cigarettes and smokeless tobacco. Programs should investigate further among their own communities' youth to understand the youth who use either or both types.

Given that Iqmik use is of concern among adult populations, and associated with having children in the home, it may be important to describe Iqmik use among Alaska Native youth. The YRBS questionnaire did not collect information about Iqmik use among Alaska Native youth; this may be an important item for addition to future youth behavior surveys implemented in Alaska, particularly in rural Alaska.

Frequency of smokeless tobacco use was very similar to frequency of cigarette smoking among youth. Among current smokeless tobacco users, more than one-third had used on 20 or more of those 30 days. About one-quarter of the smokeless tobacco users said they used on only one or two of the past 30 days (see Figure 25).

Figure 25: Frequency of Use (Days per Month) Among Alaska Native High School Smokeless Tobacco Users



Source: 2003 Alaska YRBS, see Appendix B - Table 17

Cigar Smoking

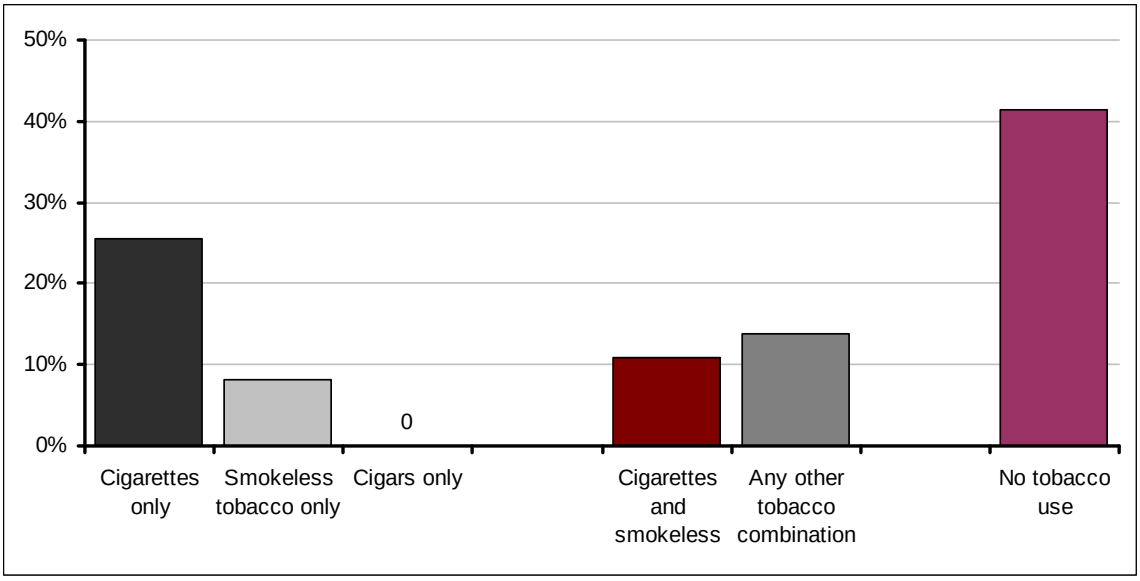
The prevalence of current cigar use (having smoked cigars on one or more of the past 30 days) was low among Alaska Natives in comparison to cigarettes or smokeless use. About 5% of Alaska Native youth (an estimated 400 statewide) reported currently using cigars; this prevalence also appears to be lower than that of non-Native youth (see Table 19 and notes, Appendix B).

Combinations of Tobacco Used

We further explored current use of combinations of tobacco products: cigarettes, smokeless tobacco and cigars among youth. About 26% of all youth - nearly half of the current tobacco users - reported using only cigarettes in the past 30 days, and 8% overall reported using smokeless tobacco alone (see Figure 26). Eleven percent reported using both, and 14% used some other combination of tobacco products (cigars + cigarettes, smokeless or both). There were no youth who reported using cigars alone – all youth who had used cigars in the past month had also used either cigarettes or smokeless tobacco products. This is notably different from adults, who almost entirely reported exclusive use of either cigarettes or smokeless tobacco rather than product combinations.

Taken together, we found that more than half (58.5%) of all Alaska Native youth reported currently using some form of tobacco, whether alone or in combination.

Figure 26: Current Use of Different Tobacco Products and Combinations (Cigarette, Smokeless, Cigar) Among All Alaska Native High School Students



Source: 2003 Alaska YRBS, see Appendix B - Table 20.

Summary of Key Findings:

More than 4,000 Alaska Native youth currently use tobacco products – cigarettes are the most popular product, but there is also significant use of smokeless tobacco and tobacco product combinations.

More than eight in ten high school youth have already tried smoking - our data suggests 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.

Recommendations:

The very high prevalence of tobacco product use among high school age Alaska Natives and reports of early initiation suggests the need for prevention programs to be implemented among much younger age groups, such as elementary school students.

Interventions to help youth smokers quit should include consideration of youth smoking patterns that are infrequent and light in comparison to adult patterns of use.

Interventions to help youth smokers should consider that these youth may be using other substances, including multiple types of tobacco, be sexually active and/or experiencing depression: comprehensive support strategies may be useful.

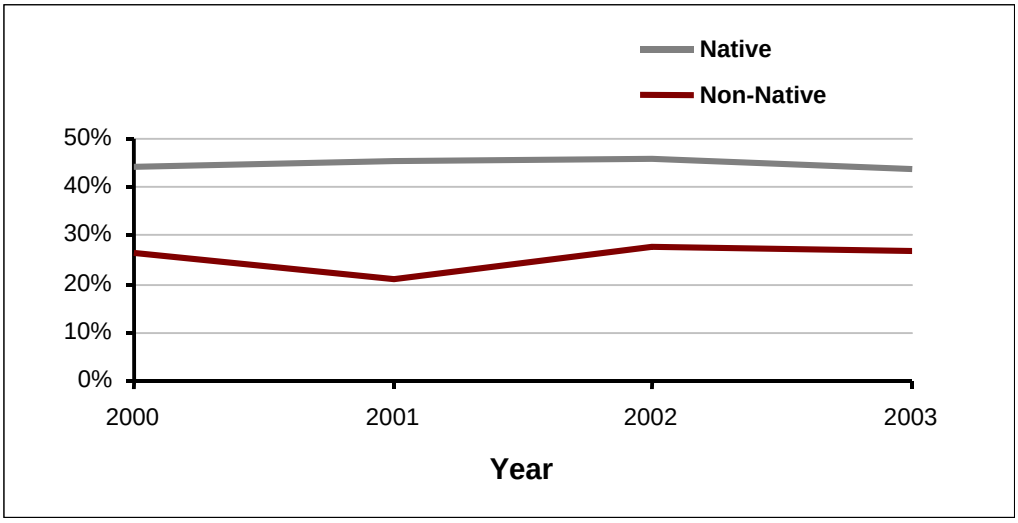
Future YRBS questionnaires could be used to gather information about Iqmik use among Alaska Native youth.

Pregnant Women

Cigarette Smoking

Recent trends for smoking prior to pregnancy (during the 3 months prior to pregnancy) indicate that the prevalence has been stable for both Alaska Native and non-Native mothers (see Figure 27). As for adults and youth, the prevalence among Alaska Native mothers is significantly higher than for non-Native mothers.

Figure 27: Trends in Smoking Prior to Pregnancy Among Alaskan Mothers of Newborns

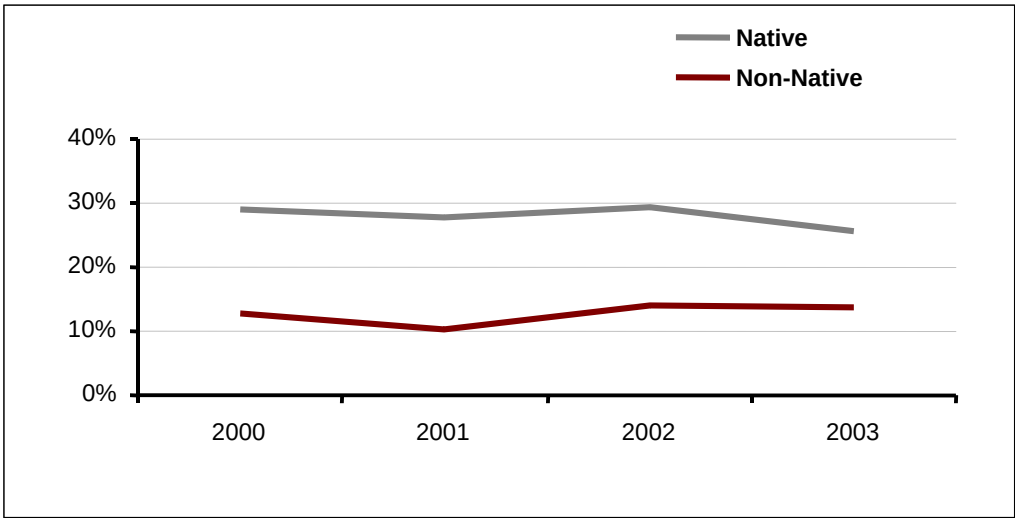


Source: Alaska PRAMS 2000-03, see Appendix B - Table 21.

Monitoring smoking prior to pregnancy is important because many pregnancies are unexpected; it would be ideal to reduce the risk of tobacco use exposure for babies prior to conception. About 45% of Alaska Native mothers reported that they smoked cigarettes prior to their pregnancy (see Table 22, Appendix B). As seen among the general adult population, prevalence was highest among younger mothers (52-55% among those younger than 25 vs. 29% among those 35 and older) and those with the least education (more than 40% among those with high school or less education vs. 17% among college graduates). We also found that smoking prevalence was significantly higher in Alaska's Northern Region (59%) and lower in the Southwest Region (31%) in comparison to other regions (for example, 50% in Anchorage/Mat-su).

Some mothers do quit or reduce their tobacco use after learning that they are pregnant. The recent trend for smoking cigarettes during the last three months of pregnancy has also been stable for both Alaska Natives and non-Natives, and Alaska Native mothers report nearly double the prevalence of smoking of non-Natives (see Figure 28).

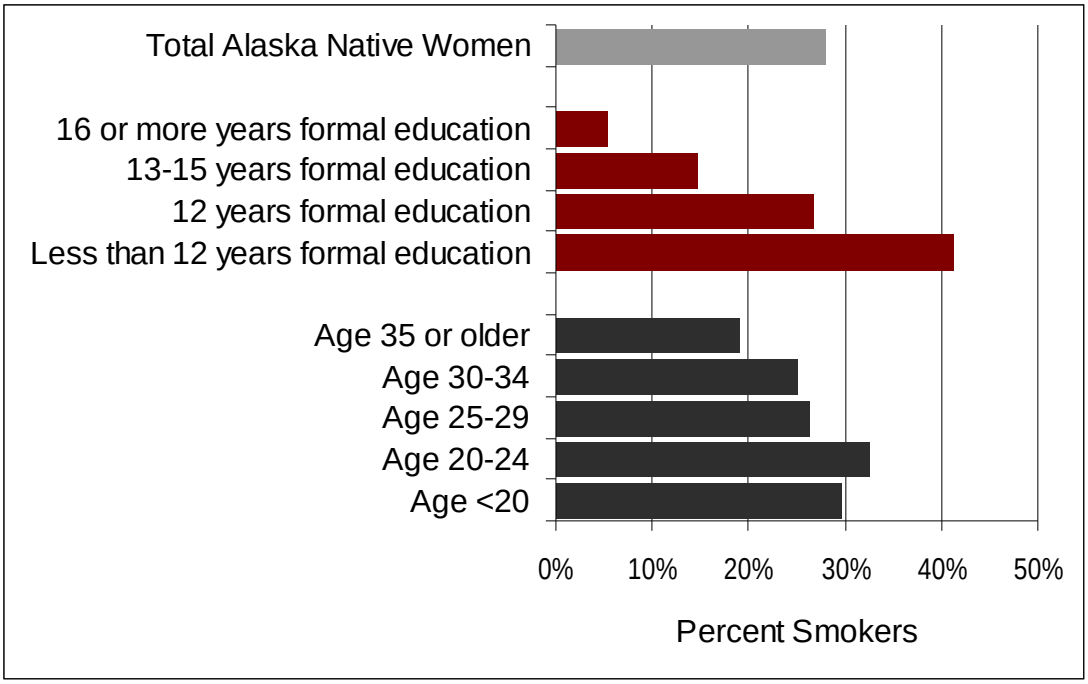
Figure 28: Trends in Smoking During Last Three Months of Pregnancy Among Alaskan Mothers of Newborns



Source: Alaska PRAMS 2000-03, see Appendix B - Table 23.

About 28% of Alaska Native mothers – nearly one in three – reported smoking during their last three months of pregnancy (see Figure 29). This translates into nearly 700 babies per year who have been exposed to cigarettes in the womb. Differences in prevalence were similar to pre-pregnancy differences, with younger and less educated mothers having the highest prevalence. Prevalence was also significantly higher in the Northern Region (44%) than for other regions.

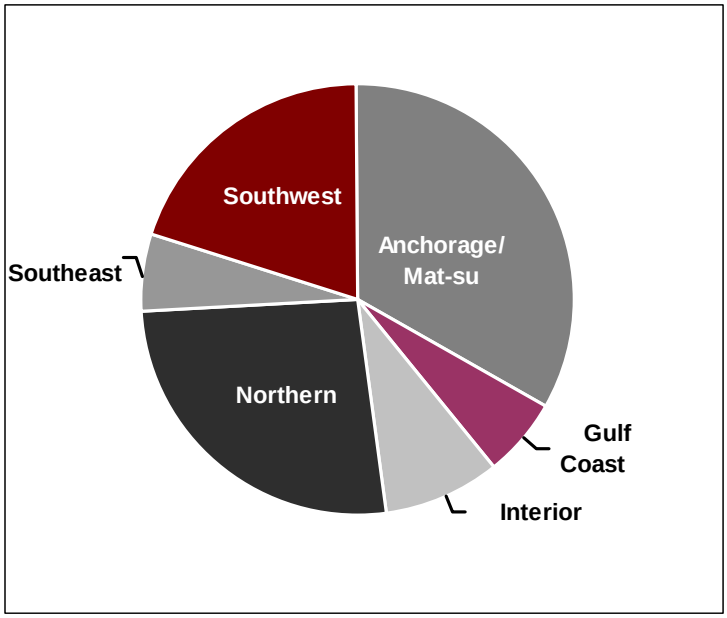
Figure 29: Cigarette Smoking During Last Three Months of Pregnancy Among Alaska Native Mothers of Newborns



Source: Alaska PRAMS 2000-03, see Appendix B - Table 24.

Although the prevalence of smoking during pregnancy is not higher than for other regions, because the general population is larger there are more babies born to smoking mothers who live in Anchorage than other regions – about 230 per year (see Figure 30). Large numbers of the babies born to smoking mothers are also seen in the Northern and Southwest regions.

Figure 30: Proportion by Geographic Region Among Alaska Native Mothers Who Smoked During Last Three Months of Pregnancy



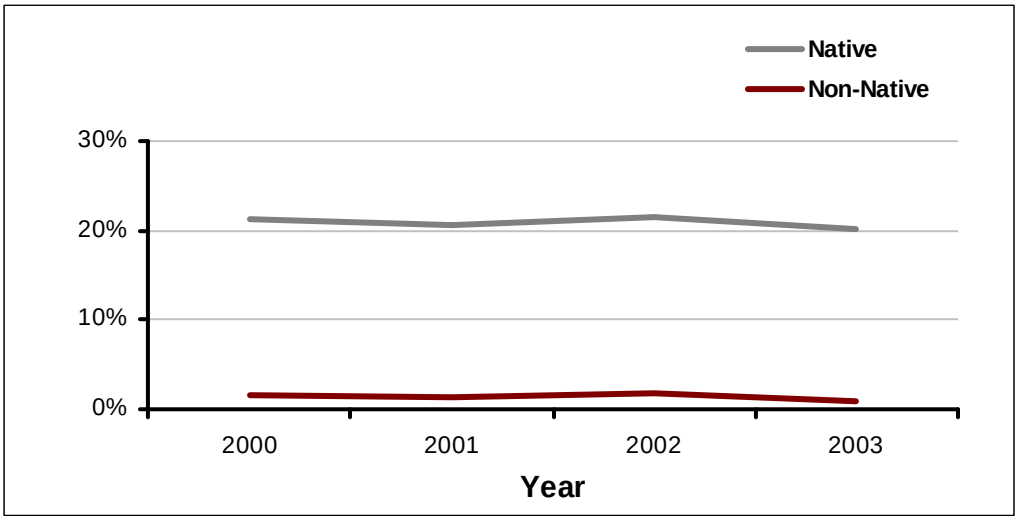
Source: Alaska PRAMS 2000-03, see Appendix B – Table 24.

We also examined the prevalence of smoking after pregnancy among Alaska Native mothers. About 37% of mothers overall reported smoking at post-partum, and differences by age, education and region were similar to those seen at pre-pregnancy and during the last three months of pregnancy (see Table 25, Appendix B).

Smokeless Tobacco Use

Smokeless tobacco use rates have been stable for both Native and non-Native women during recent years (see Figure 30). The prevalence of smokeless tobacco use among Native women remains nearly twenty times greater than the prevalence among non-Native women.

Figure 31: Trends in Smokeless Tobacco Use Prior to Pregnancy Among Alaskan Mothers of Newborns

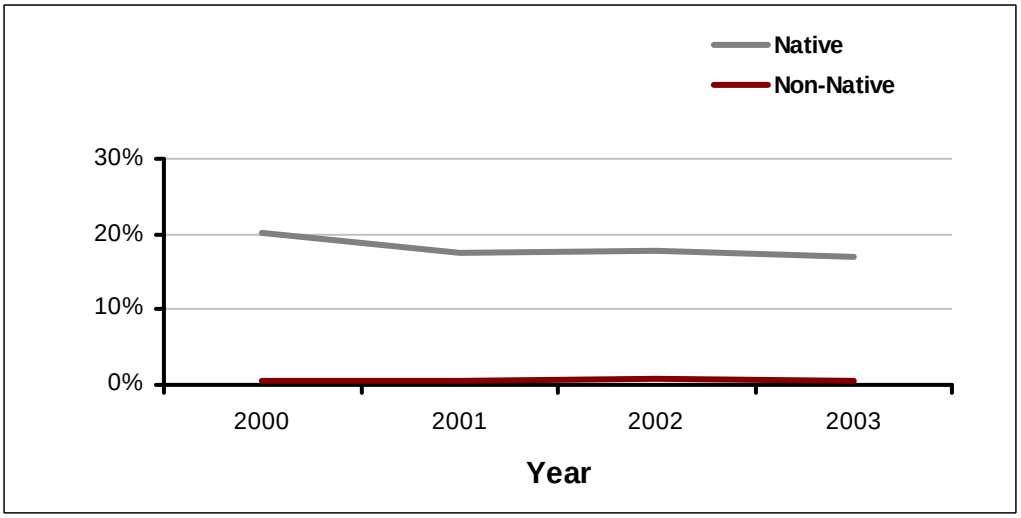


Source: Alaska PRAMS 2000-03, see Appendix B - Table 26.

About 21% of Alaska Native mothers reported using smokeless tobacco prior to pregnancy, translating into about 500 mothers at-risk for exposing their infants to tobacco as well as endangering their own health (see Table 27, Appendix B). Pre-pregnancy differences among demographic subgroups were similar to differences seen during pregnancy – see detailed later discussion.

As with pre-pregnancy trends, recent trends for smokeless tobacco use during pregnancy have also been stable for both Native and non-Native mothers, with Native mothers at substantially higher prevalence rates (17% among Native mothers vs. 0.4% for non-Native mothers in 2003, see Figure 32).

Figure 32: Trends in Smokeless Tobacco Use During Pregnancy Among Alaskan Mothers of Newborns

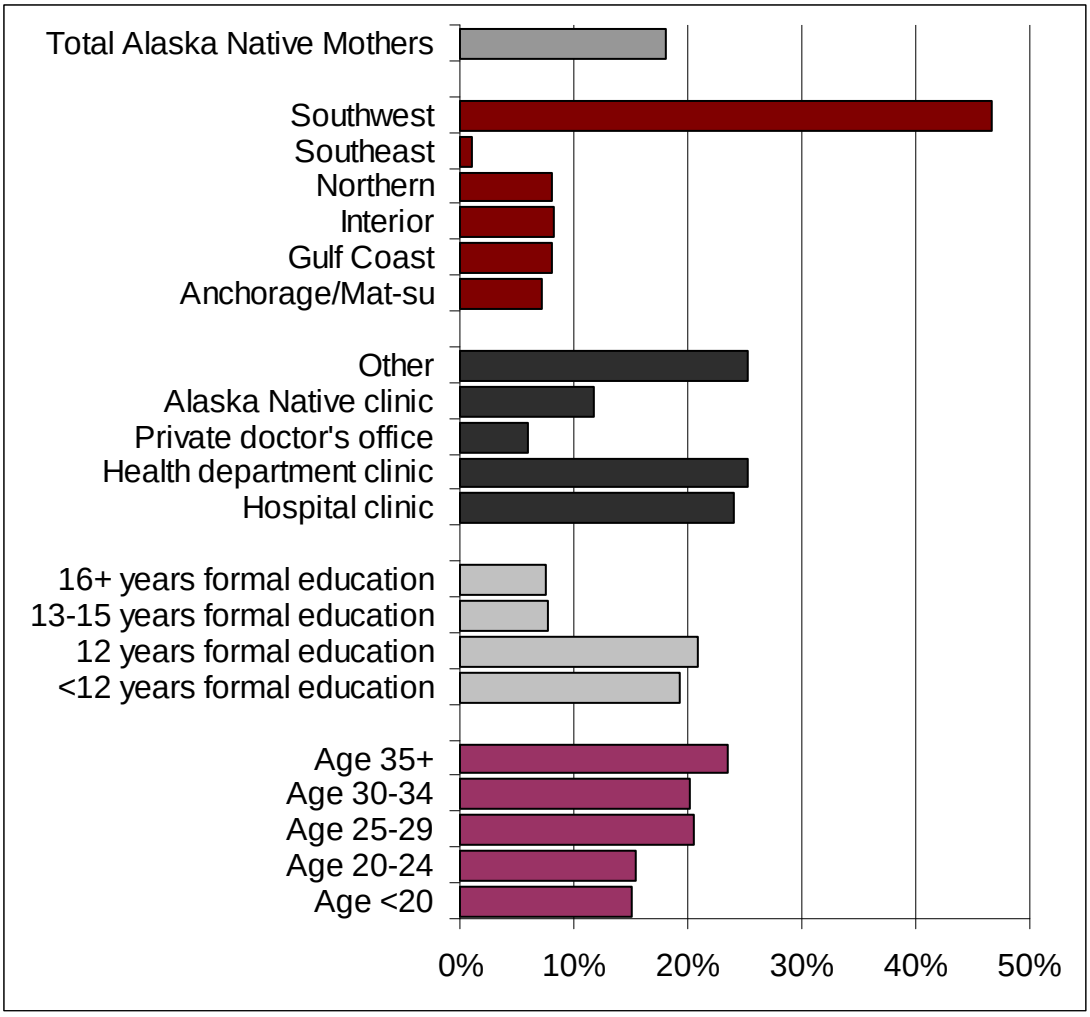


Source: Alaska PRAMS 2000-03, see Appendix B - Table 28.

About 18% of Native mothers reported that they used smokeless tobacco during their pregnancy, translating into about 430 babies per year exposed to the smokeless tobacco in the womb (see Figure 32). In contrast to cigarette smoking, where rates decrease with increasing age, we found that the prevalence of smokeless tobacco increased with increasing age (from 15% among mothers younger than 20 to 24% among mothers age 35 and older). This observation was consistent with previously reporting findings by Renner et al., in a study of women in the Y-K Delta (Southwest) Region. As with smoking, prevalence was higher among less educated women (19-21% among those with a high school education or less in comparison to 8% among those with some or more college).

We also observed differenced in smokeless tobacco use during pregnancy by the type of health facility where women received most of their prenatal care. Smokeless use was highest among mothers who received their prenatal care at a health department clinic (25%) or hospital (24%). It was lowest among those who received their care from a doctor's office (6%) or Alaska Native Clinic (12%).

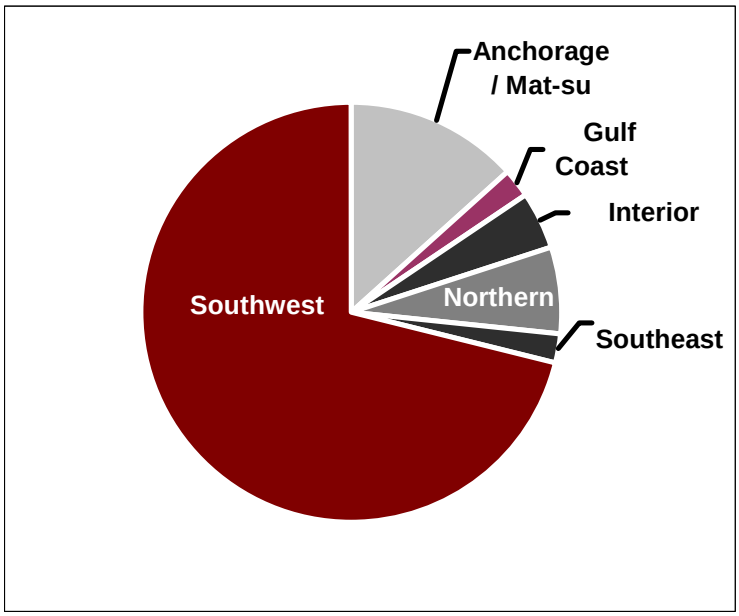
Figure 33: Smokeless Tobacco Use During Pregnancy Among Alaska Native Mothers of Newborns



Source: Alaska PRAMS 2000-03, see Appendix B - Table 29.

Smokeless tobacco use prevalence in the Southwest region was significantly and substantially higher among mothers both at pre-pregnancy (50% in Southwest vs. 5-11% in other regions) and during pregnancy (47% in Southwest vs. 1-8% in other regions). About two-thirds of the babies born to mothers who use smokeless tobacco are born in the Southwest Region (see Figure 34).

Figure 34: Proportion in Geographic Areas Among Alaska Native Mothers Who Used Smokeless Tobacco During Pregnancy



Source: Alaska PRAMS 2000-03, see Appendix B – Table 29.

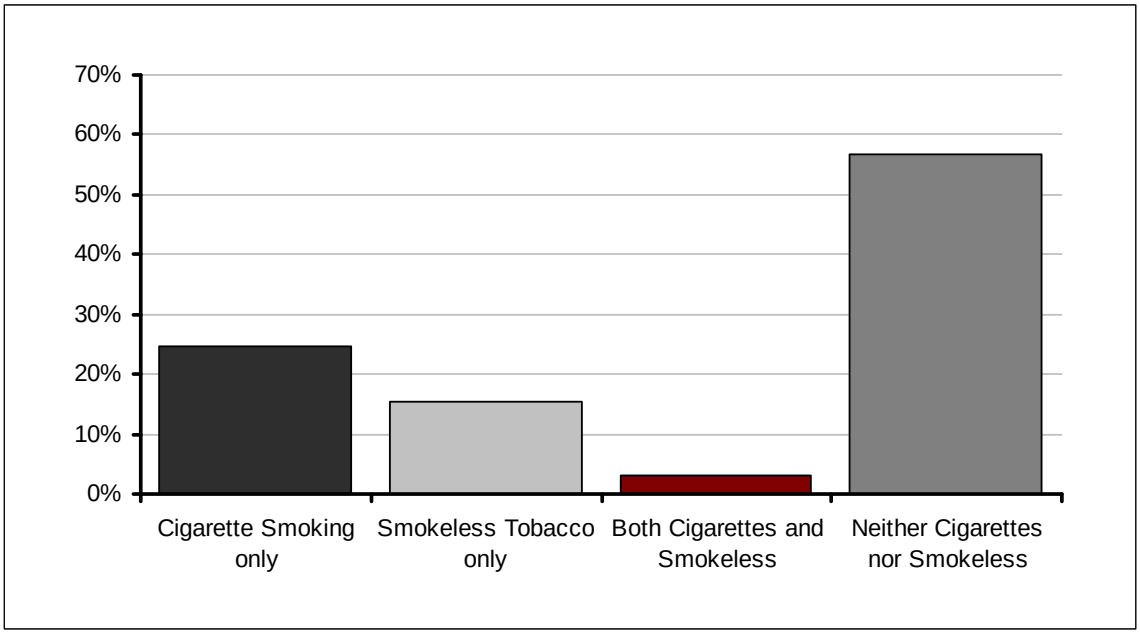
The prevalence of smokeless tobacco use after pregnancy was about 20%, similar to pre-pregnancy (see Table 30, Appendix B).

The PRAMS questionnaires in 2000-03 did not have a specific question about Iqmik use. Published research indicates this may be a widespread practice in some regions of the state, particularly the Southwest.[8,40,] A question to assess Iqmik use has been added to the PRAMS 2004 instrument, and future analyses will be able to address this gap.

Combinations of Tobacco Used

We did find associations between cigarette smoking and smokeless tobacco use; however, the overall percentage of women who use both during pregnancy was small (3% overall, see Figure 35). Nearly half of Alaska Native mothers – representing about 1,000 births per year - reported use of some type of tobacco during pregnancy.

Figure 35: Overall Tobacco Use Status During Pregnancy Among Alaska Native Mothers of Newborns



Source: Alaska PRAMS 2000-03, see Appendix B - Table 31.

Summary of Key Findings:

About 690 Alaska Native babies born each year are exposed to cigarette smoke in the womb; about 450 per year are exposed to smokeless tobacco or Iqmik.

To the extent that they achieve results among women of childbearing age, tobacco control programs targeted toward the general adult population will also reduce exposure of infants to tobacco during pregnancy. Recent trends for both cigarette and smokeless use among adult women of childbearing age have been stable.

Smoking prior to pregnancy and during pregnancy is highest among younger women and those with less education.

Mothers in the Northern Region of Alaska have the highest prevalence of smoking during pregnancy; Anchorage and the Southwest also have large numbers of infants born to smoking mothers.

Smokeless tobacco use during pregnancy is highest among older mothers and those with less education.

Mothers in the Southwest region have the highest prevalence and numbers of babies born to mothers who use smokeless tobacco.

Recommendations:

The large numbers of infants born every year to tobacco-using women suggest that this is an important priority for tobacco control programs.

Programs to help women quit smoking should be targeted to younger, less formally educated women.

The Northern Region may be a critical area for pregnancy and smoking interventions.

Programs to help women quit using smokeless tobacco should be targeted to older, less formally educated women.

The Southwest Region may be a critical area for pregnancy and smokeless tobacco use interventions.

Programs to help mothers quit should be created specific to the type of tobacco used.

Analyses of future PRAMS datasets (2004 and beyond) should include exploration of the new Iqmik survey question to describe prevalence of Iqmik use among pregnant women.

V. Preventing Tobacco Use

Preventing people from ever starting to use tobacco is a foundational goal for reducing tobacco use. Because most adults who use tobacco began doing so before age 18, tobacco prevention activities are typically focused on young people.

Recommended strategies to prevent youth from starting to use tobacco include media campaigns, school-based and community-based programs. Increasing quitting among current tobacco users, and eliminating exposure to secondhand smoke (described in following sections) also contribute to preventing tobacco use by sending social cues that tobacco use is not an acceptable activity for anyone – not only among youth.

In this section we will highlight these strategies to prevent tobacco use initiation among youth, and specifically explore data related to Alaska Native youth that may inform planned interventions.

Literature Review

As described in the Background literature review, there are several points that may provide important context for planning tobacco prevention activities among Alaska Natives:

- The concept of "prevention" may not be inherent to Alaska Native culture or in some specific Native groups[5] and this may create subtle barriers to implementing tobacco prevention activities in communities
- The cultural practices of childrearing in at least some Alaska Native groups do not include "telling children what to do," and in fact children learn by observation and experience, implying that adult behavior modeling around tobacco use may be of particular importance in preventing youth initiation[8,]
- Specific to Iqmik, Alaska Native parents may provide tobacco to very small children, including as a teething remedy, and involve children in the preparation of Iqmik for use by adults by giving stores permission to sell tobacco to minors.[6,] These practices may further "normalize" tobacco use and establish an addiction to nicotine that is later fed with cigarettes or smokeless tobacco products.

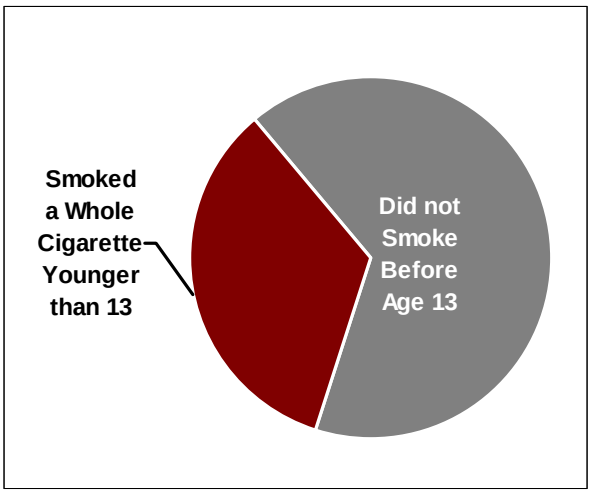
Data and Program Recommendations

Prevention-Related Behavior, Knowledge, Attitudes

As discussed previously, most Alaska Native youth in high school (83% overall, 91% among students who usually get poorer grades) have already tried smoking cigarettes (see Table 10, Appendix B). In fact, one-third (34%) of high school students said they had smoked at least one whole cigarette before age 13 (approximately before the 7th grade, see Figure 36). We can infer that the remaining 50% of all students who have smoked at least one whole cigarette in their lifetime by high school first did so during middle school. Taken together, these findings suggest

that any prevention campaign – whether media, school, or community-based – should include students in elementary school age groups.

Figure 36: Proportion Who Smoked/Did Not Smoke a Whole Cigarette Before Age 13 Among All Alaska Native High School Students



Source: 2003 Alaska YRBS, see Appendix B - Table 32.

Summary of Key Findings:

More than eight in ten high school youth have tried smoking cigarettes.

One-third of all Alaska Native youth have tried smoking during elementary school.

Recommendations:

Prevention programs should include elementary school-aged children as a focus.

Media Campaigns

The Centers for Disease Control and Prevention and the Community Guide to Preventive Services[2] recommend media campaigns (in combination with other influences) as an effective method for preventing tobacco use initiation. Campaign messages are developed through formative research, to learn what critical knowledge or beliefs related to tobacco use can be effectively changed, and use broadcast messages on TV, radio, and alternative formats (billboards, print media, movies).

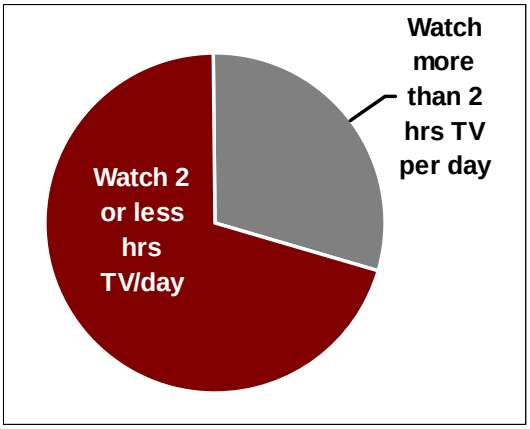
Some examples of youth-focused tobacco prevention campaign themes that have been used in other states include de-glamorization of tobacco use (communication that it is a gross habit, has a negative impact on appearance), education about health consequences (short-term effects such as interfering with ability to run fast, long-term effects such as cancer), and education about manipulative activities of the

tobacco industry (to create resistance to pro-tobacco use pressures from media and peers).

Communities may choose to create anti-tobacco prevention campaigns using media outlets that are appropriate to their environment. We wanted to explore associations between TV watching (a major media campaign venue) and current tobacco use among youth, to learn whether youth who smoke watch TV.

Although TV-watching is typically a risk factor for unhealthy behaviors, we found that Alaska Native youth who watched more than two hours of TV per day were less likely to smoke than youth who watched less TV (see Table 13, Appendix B). Among the high school youth who are already current smokers, about two-thirds of that number watch less than two hours of TV per day (see Figure 37). We did not find any association between smokeless tobacco use and TV-watching among youth (see Table 17, Appendix B).

Figure 37: Proportion Who Watch TV More/Less Than 2 Hours Per Day Among Alaska Native High School Youth Smokers



Source: 2003 Alaska YRBS, see Appendix B - Table 13.

Although we did not have sufficient data to identify what proportion of Alaska Native youth live in rural communities or villages (where media may be less accessible), we can assume from adult data findings that a large proportion of Alaska Native youth who smoke or use tobacco do live in rural Alaska. It may be that this "protective" association for TV-watching among youth is the result of less access to TV (or fewer channels and programs) in rural areas, although a similar relationship with smokeless tobacco use would be expected under those conditions. While this association suggests that relying on TV media for prevention campaigns may not be the best method for reaching Alaska Native youth who are most at risk for smoking, one rural focus group study indicated that Native Alaska adults thought tobacco prevention messages on TV might be effective for youth; the same adults did not think TV messages would be effective in helping adults to quit tobacco.[48]

Summary of Key Findings:

Alaska Native youth who smoke are less likely to watch TV more than two hours

daily than non-smokers.

Recommendations:

Media campaigns for tobacco prevention should be deployed through media outlets appropriate to communities, and TV media may not be very relevant for a significant portion of Alaska Native youth, such as rural youth, who may be at-risk for smoking.

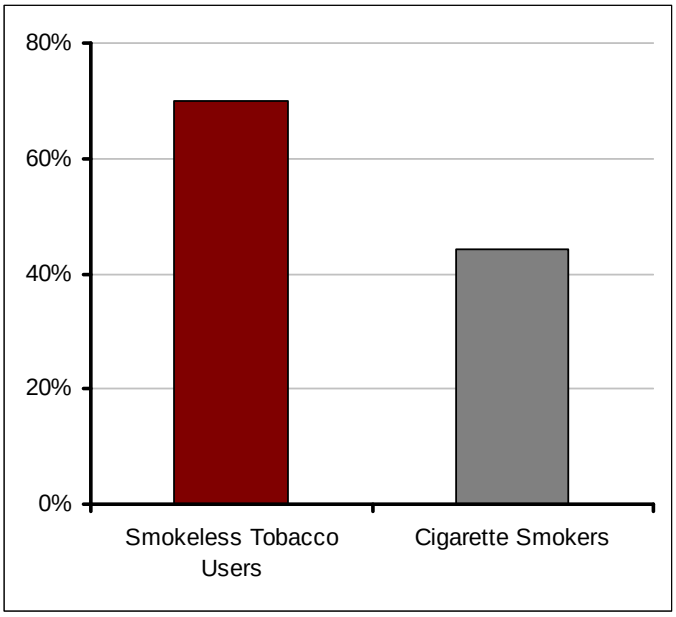
School-based Programs

The CDC has described “best practices” for school-based tobacco prevention programs. These include strengthening tobacco-free school policies (no tobacco use or possession on school property for anyone, anywhere, anytime), providing an evidence-based curriculum to educate about the dangers of tobacco use for all students, teacher training, support for students who have already started using tobacco to quit, and engagement of parents and community members.[49]

Enforcement of tobacco-free school policies is a critical component of school-based prevention. By allowing youth to use or possess tobacco products on school property, the behavior is normalized and there are increased opportunities for youth to share tobacco with other youth (and perhaps social pressure to become a tobacco user). We examined youth survey questions about tobacco use on school property from the YRBS to assess whether school policies were being strongly enforced.

Among Alaska Native high school youth tobacco users, 44% of current smokers and 70% of current smokeless tobacco users had used tobacco products on school property during the past month (see Figure 38). We do not know whether tobacco use on school property is officially “allowed” or whether youth are able to hide their use.

Figure 38: Percent Tobacco Use on School Property During the Past Month Among Alaska Native High School Students Who Use Tobacco

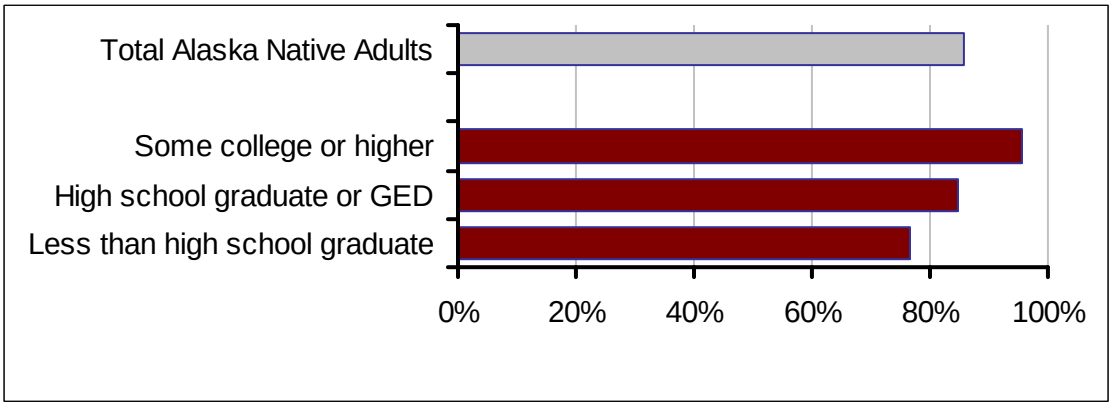


Source: 2003 Alaska YRBS, see Appendix B - Tables 33 and 34

In small communities where school facilities serve as the hub for a variety of community events, strict enforcement of "tobacco-free policies" that apply to use by adults outside of school hours may be a barrier for school officials.

A question about support for enforcement of bans against tobacco use – including by adults – on school property was included in the BRFSS for 2004. Most adults (86%) in all groups supported school tobacco bans, including for adults (see Figure 39). There were not significant differences by personal smoking status, and 81% of current smokers supported school bans. The only difference among demographic subgroups was by education: support among adults with less than a high school education was 77% in comparison to 96% among those with some or more college education. However, even this lowest rate of support is a clear majority of people.

Figure 39: Belief That Tobacco Use by Adults Should Be Banned on School Grounds Among Alaska Native Adults



Source: Alaska BRFSS 2004, see Appendix B - Table 35.

Findings from the literature review suggested that Alaska Native youth are highly sensitive to behavior modeling, thus the importance of enforcing policy for the purpose of establishing anti-tobacco social norms may be even greater.

We did not have information about other components of school-based tobacco prevention programs; however, in the absence of other evidence, we may assume that "best practice" school programs are effective if culturally tailored for implementation in Alaska Native communities.

Summary of Key Findings:

Implementation and enforcement of tobacco-free school policies is a critical component of tobacco prevention, and may even impact communities more broadly where schools are a gathering place for community events.

More than four in ten current high school youth smokers and seven in ten smokeless tobacco users reported using tobacco on school property during the past month.

There is high support among all adult groups – even among smokers – for banning tobacco use by everyone, including adults, on school property.

Recommendations:

There is a great deal of work to be done improving, implementing and promoting and/or enforcing tobacco-free school policies.

High support among adults for banning tobacco use on school property suggests that this may be a good strategy for local tobacco control programs to engage their communities.

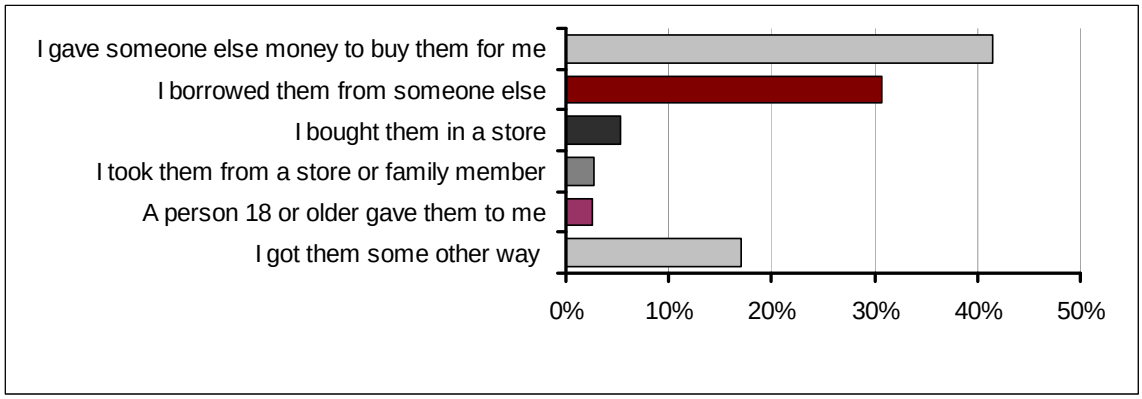
Community-based Programs

Tobacco prevention programs often focus on restricting sources of tobacco for youth. The *Community Guide to Preventive Services* indicates that this activity is

effective for tobacco prevention when the community is engaged, laws governing retailers are strengthened, enforced and retailers are also educated about the laws.

After age 18 young people can legally obtain cigarettes from a store, but prior to that time youth typically obtain their tobacco from a number of sources. The "usual source" of their cigarettes as reported by Alaska Native high school youth smokers under age 18 are illustrated in Figure 40. The most frequent ways that youth report getting their cigarettes are from "social sources" such as giving someone else money to buy them or getting them from friends (72% total). Although these are the most often listed "usual sources," other sources of cigarettes may still be commonly used by youth, especially as alternative methods to their "usual source."

Figure 40: Usual Source of Cigarettes Among Alaska Native High School Student Smokers Under Age 18



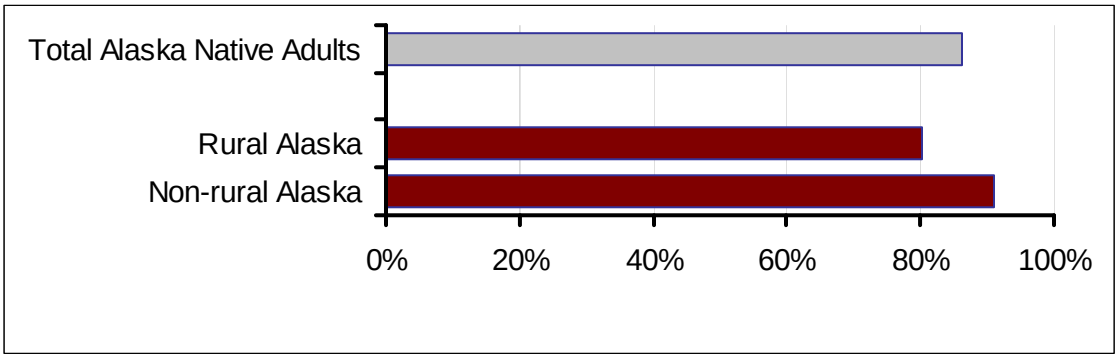
Source: 2003 Alaska YRBS, see Appendix B - Table 36.

Although retail sources of tobacco – stores – are not frequently listed as a "usual source" of tobacco for youth under age 18 (5%), they are an important point of intervention. By educating retailers about the importance of not selling tobacco to minors, and assuring compliance with laws restricting sales to minors, we can limit the availability of that tobacco from a source that would be accessible to anyone and reinforce community norms that tobacco use is unacceptable for young people.

Additionally, limiting minors' access to tobacco may be a good strategy for engaging community support in tobacco prevention. Most adults (86%) said that they believe it is "very important" to keep stores from selling tobacco to minors (see Figure 41). This agreement was consistent across groups, including among smokers (84%). There were significant differences in agreement among rural and non-rural Alaska Native adults (80% vs. 91%). It is possible that in rural communities where there are few stores and store operators are community members who are familiar with the youth and their families, adults may not view retail sources as an important uncontrolled source of tobacco. On the other hand, 80% agreement is very high,

and therefore minors' access strategies may be a good approach for engaging communities in tobacco prevention.

Figure 41: Belief That It Is Very Important To Keep Stores From Selling Tobacco To Teens Among Alaska Native Adults



Source: Alaska BRFSS 2004, see Appendix B - Table 37.

In our literature review we found mention of parents providing tobacco (particularly Iqmik) to their children, even very young children,[6] and giving stores permission to sell tobacco materials to their children. We did not have specific survey response options that would clearly reflect parents providing tobacco to their children, and in fact parents who provide Iqmik to their children may still not approve of cigarettes or provide cigarettes to their children. Approaches to limiting minors' access from parents should be developed thoughtfully, and with respect to the social value that Iqmik may have for families.

The *Community Guide* also recommends increasing the cost of tobacco products as an effective youth tobacco prevention strategy. Several communities in Alaska have implemented local tax increases, and based on research we expect that this has prevented some of those communities' youth from starting to use tobacco or progressing to addiction; however, we do not have data to support this assumption.

Summary of Key Findings:

Alaska Native youth cigarette smokers report obtaining cigarettes from a variety of sources.

Among those under age 18, more than half of youth smokers usually get cigarettes from social sources (friends or other people who help them get cigarettes), and only a small number "usually" obtain their cigarettes from a store.

The majority of Alaska Natives adults agree that it is important to keep stores from selling tobacco to minors, although support is somewhat less in rural communities.

We did not have information from our youth survey about parents providing tobacco (particularly Iqmik) to their children, but other research suggests this may occur.

We did not have information from Alaska youth about the impact of increased price on their tobacco use, but research suggest this would contribute effectively to tobacco prevention.

Recommendations:

Programs seeking to restrict Alaska Native youths' access to tobacco products may choose to focus on a variety of sources – such as social sources and retail sources and price sources.

Restricting retail sources of tobacco for youth may be a good strategy for engaging communities in tobacco prevention because there are already high levels of support.

VI. Quitting Tobacco Use

A critical goal of Tobacco Control programs is helping people who are addicted to tobacco products to successfully quit. In this section we describe data related to Alaska Natives and quitting tobacco products.

Proven strategies for helping tobacco users to quit and stay quit are woven together to provide supportive cues for quitting and resources for taking action. They include media campaigns, healthcare provider interventions, healthcare systems support, telephone Quit Lines and community-based programs (including support services). Strategies to reduce exposure to secondhand smoke (see next section) also encourage tobacco users to quit and limit cues or opportunities to start using again.

This report section specifically discusses tobacco quitting services that are provided through healthcare providers and systems. Alaska Natives are eligible to receive health care services through the Indian Health Service. The federal government is required to provide funding for healthcare services to the Alaska Native population in the state through twelve regional Native health organizations that were established in the Alaska Native Claims Settlement Act of 1973. The Alaska Tribal Health Consortium (ANTHC) was developed in 1997 by the regional Native health organizations to provide statewide comprehensive health services to Alaska Natives. The ANTHC is a non-profit health organization owned and managed by Alaska Native tribal governments and their regional health organizations.

Literature Review

We identified several key points or themes in our literature review that may be specifically applicable when planning tobacco cessation strategies:

- Alaska Native cultural values may not lend themselves to asking for help or participating in counseling and cessation programs.
- Research-based guidelines for tobacco cessation interventions from the U.S. Public Health Service emphasize that healthcare providers conduct brief interventions with directive statements about the importance of quitting;[50] guidelines for providing health/counseling services to Alaska Natives include avoiding directive advice and fast-paced delivery of interventions.
- One somewhat old study of a tobacco cessation program based on American Cancer Society and American Lung Association models found high utilization of nicotine replacement therapy (patches) and behavioral therapy among Alaska Native adults in the Anchorage area, especially among middle aged adults, and similar long-term quit rates as other published studies. This was somewhat contrary to more recent focus group opinions expressed among adults in the more rural Y-K Delta indicating a lack of trust in quitting medications. A different intervention that incorporated tobacco cessation into a randomized trial to reduce cardiovascular disease risk factors found low satisfaction and no behavior change among participants.

- In focus groups, Y-K Delta adults reported that they had few role models for quitting tobacco use, and that non-Natives could be credible sources of quitting information if they were supportive and willing to help. Youth in the same study indicated that adults who continued to use tobacco were not credible sources for information about quitting.
- Community health workers, an existing health network across the state, were not mentioned in any study we found as a potential source for quitting information or support.
- Recent focus groups suggested that there was a lack of knowledge about serious health consequences of long-term tobacco use, such as heart disease and cancer,[8] which may result in low motivation to quit using tobacco.
- Motivation to quit Iqmik may be especially absent. In a focus group study of adolescents in the Y-K Delta, youth did not perceive that there was interest in stopping Iqmik use, specifically, among adults or elders in their community. In complementary focus groups among adults as part of the same study, the adults themselves reportedly had difficultly thinking of reasons for stopping use of Iqmik.
- There were multiple reports about the substantial burden of alcohol abuse, marijuana use and depression among Alaska Native adults; these conditions are frequently associated with tobacco use and may complicate the process of quitting tobacco.[3,13]

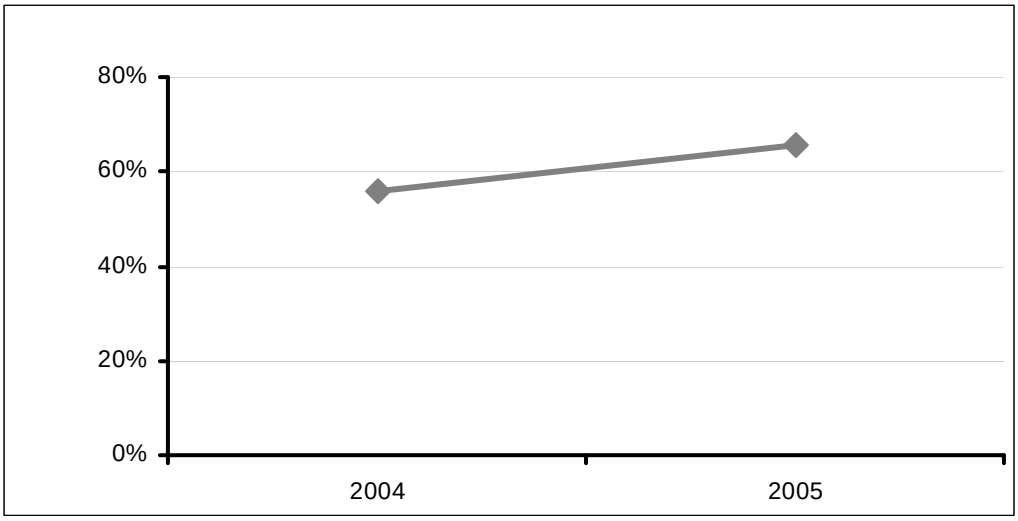
Data and Program Recommendations

Cessation-related Behavior and Attitudes, Barriers and Supports to Quitting

Adults and Quitting

As reported previously, there have not been significant declines during recent years in tobacco use among Alaska Native adults. Although we did not generally explore trends for indicators other than tobacco use prevalence, we did have sufficient data to explore quit attempts during the past year among smokers. Among Alaska Native smokers there was a significant increase in the prevalence of quit attempts from 56% in 2004 to 66% in 2005 (see Figure 42). If this trend continues, and if those quitters can be supported to be successful, we can expect to see decreases in the prevalence of smoking in upcoming years.

Figure 42: Recent Trend in Making At Least One Smoking Quit Attempt During the Past Year Among Alaska Native Adult Smokers

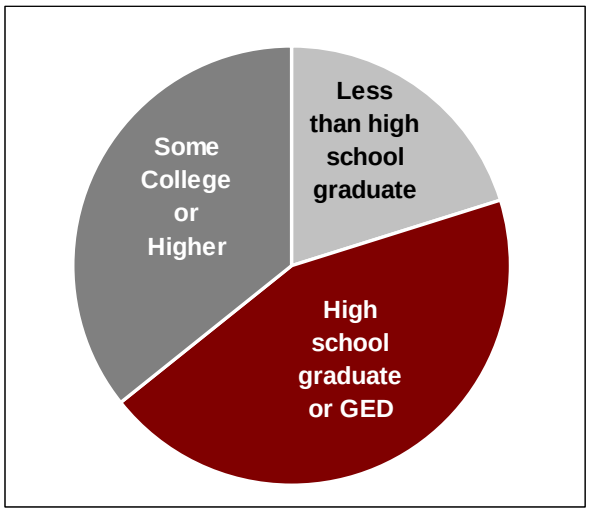


Source: Alaska 2004-2005 BRFSS, p=.04 for difference between years. See Appendix B – Table 38.

We examined the population of "recent quitters," that is, adults among all lifetime smokers who have successfully quit smoking during the past five years. As increasing numbers of adults make quit attempts and are successful, the population of "recent quitters" should increase, and by describing those quitters we can identify which groups are most successful in quitting. About 18% of Alaska Native lifetime smokers were "recent quitters" (see Table 39, Appendix B).

There were not significant differences in being "recent quitters" among subgroups; however, the prevalence of recent quitting appeared higher among Alaska Native adults with more education (24% among those with some college vs. 16% among those with a high school education or less) and also higher among adults with progressively higher income levels (25% among those with $50,000 or more annual household income vs. 12% among those with less than $15,000 annual household income). Therefore there was a greater share of "recent quitters" with some college or more in comparison to their share of the general population of smokers (see Figure 43, compare to Figure 5).

Figure 43: Proportion by Education Status Among Alaska Native Adults Who Quit Smoking in the Past Five Years



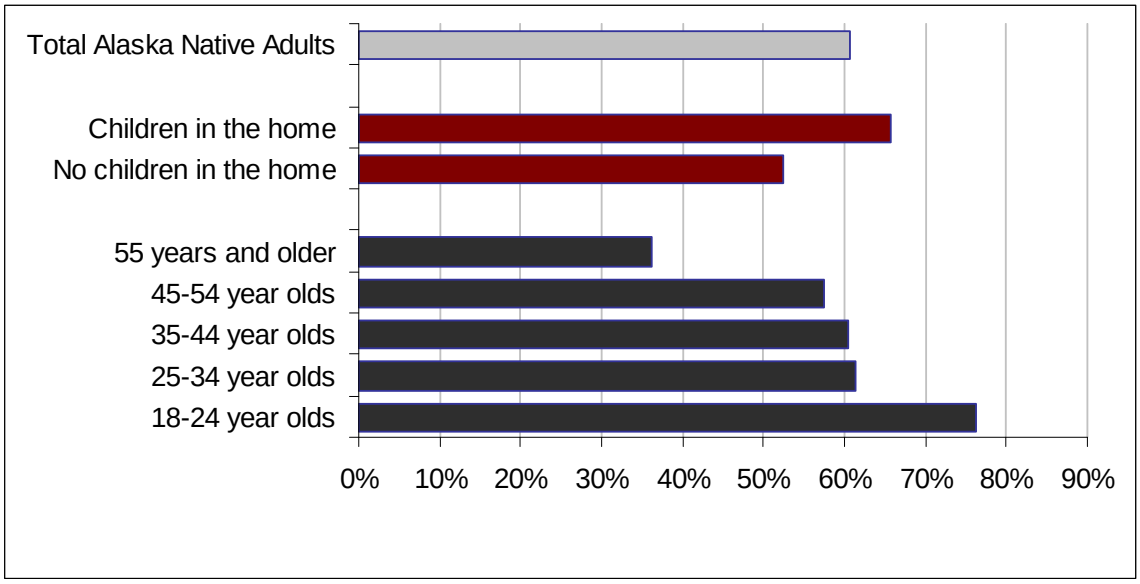
Source: Alaska BRFSS 2004-05, see Appendix B - Table 39.

We examined Alaska Native current adult smokers to describe those who had made at least one quit attempt during the past year. For the combined years 2004-05, 61% had made a quit attempt (see Figure 44). People under age 55 were more likely to have made quit attempts (ranging from 57-76% among those 18-54 vs. 36% among those 55 and older), and people with children in the home (which is associated with younger age) were more likely to have made quit attempts.

It should be noted that this measure is effectively the prevalence of "failed" quit attempts because the question is only asked of current smokers. Potentially, the percent of smokers who made quit attempts overall and resulting in successful quitting could be quite different (for example, the proportion of quit attempts, although not significantly different, appeared lower for the highest income group – this could complement the apparently higher *successful* quit attempts among those with higher income observed in Table 39, Appendix B).

In aggregate, these results indicate that there is high interest in quitting among most Alaska Native smokers, but particularly among people under age 55 and those with children in the home, thus support programs to help people quit could tailor their content to these groups.

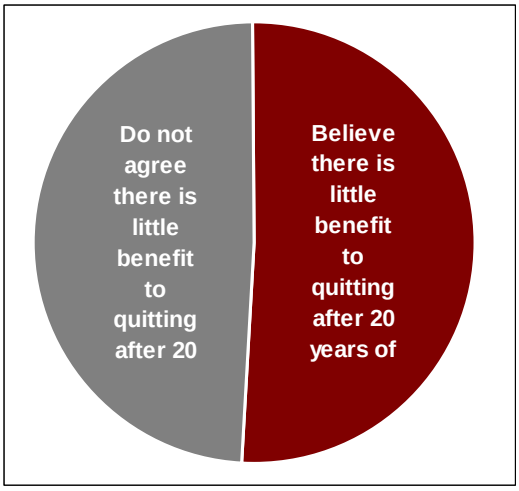
Figure 44: Percent Making At Least One Quit Attempt During the Past Year Among Alaska Native Adult Smokers



Source: Alaska BRFSS 2004-05, see Appendix B - Table 40.

As indicated in the literature review, it may be that Alaska Natives do not perceive that there are serious long-term health consequences associated with smoking or they do not have motivation to quit. In 2004, adults were asked whether they agreed with the statement “if a person has smoked a pack of cigarettes a day for 20 years, there is little benefit to quitting smoking.” About 43% agreed with this statement overall. Although there were not significant differences among any subgroup of Alaska Native adults, among smokers about 51% did agree with this statement (see Figure 45). This indicates that there is substantial progress to be made in educating Alaska Native adults about the benefits of quitting smoking at any age.

Figure 45: Proportion Who Believe in Benefits of Quitting Among Alaska Native Adult Current Smokers



Source: Alaska BRFSS 2004, see Appendix B - Table 42.

Questions on cessation-related attitudes, barriers and supports were not asked of smokeless tobacco users.

Youth and Quitting

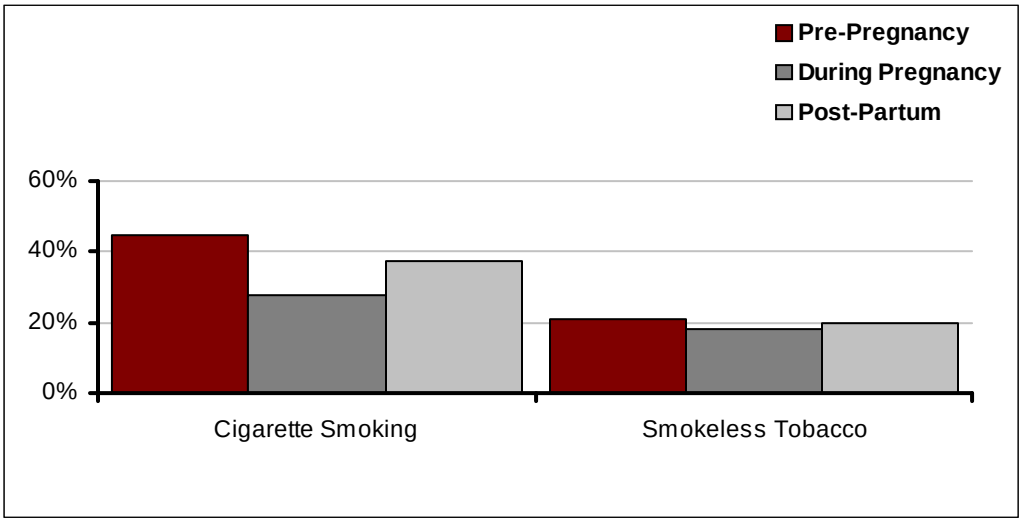
Among Alaska Native high school youth smokers (current or former smokers), about 77% said that they had tried to quit during the past year (see Table 41, Appendix B), and there were not significant differences among subgroups. This overall prevalence of quit attempts is similar to that seen among young adults (76% among adults 18-24).

It should be noted that due to the very sensitive definition of “smoker” for youth (having smoked a cigarette on one or more of the past 30 days), that “quitting” may be a different process than for adults. For example, youth who use tobacco infrequently may not yet be physically addicted to nicotine, but may be extremely vulnerable and unable to resist social cues for tobacco use when tobacco is available.

Pregnant Women and Quitting

As discussed in previous sections, Alaska Native women of childbearing age (pre-pregnancy) have high rates of tobacco use. Some quit when they learn that they are pregnant, perhaps motivated by the desire to protect the health of their baby, and many of those quitters relapse after pregnancy. Figure 46 illustrates patterns of smoking and smokeless tobacco use at pre-pregnancy, during pregnancy, and after delivery (post-partum) among Alaska Native mothers of newborns.

Figure 46: Prevalence of Tobacco Use Before, During and After Pregnancy Among Alaska Native Mothers of Newborns

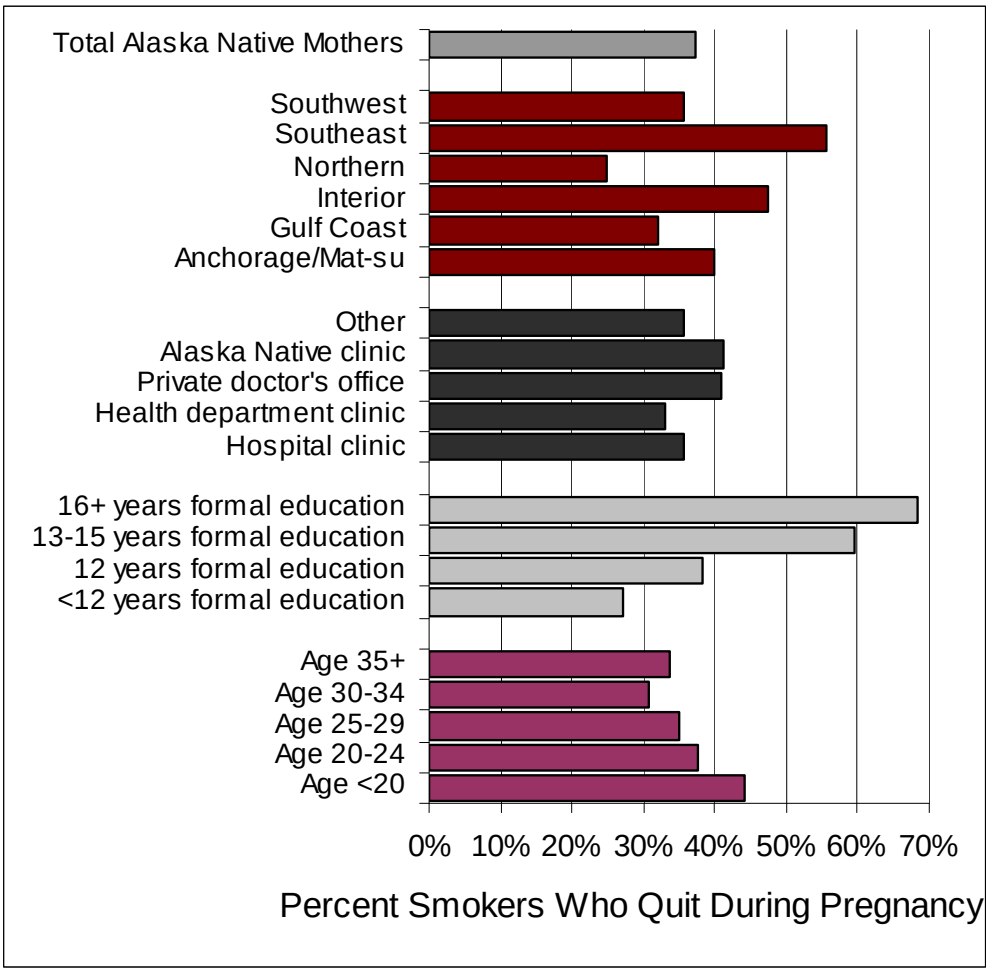


Source: Alaska PRAMS 2000-03, see Appendix B - Table 43.

We analyzed the patterns of quitting and relapse separately for Alaska Native mothers before, during and after pregnancy.

A substantial portion (37%, about 400 per year) of women who smoked cigarettes prior to pregnancy had quit by their last three months of pregnancy (see Figure 47). There were some differences among subgroups: the youngest mothers were most likely to quit successfully (44%); mothers with more education were more likely to quit (60-69% among those with some or more college vs. 27% among those with less than high school education). Geographically, mothers in the Southeast region were most likely to quit (56%), while those in the Northern Region – which had the highest prevalence of smoking at pre-pregnancy – were the least likely to quit (25%).

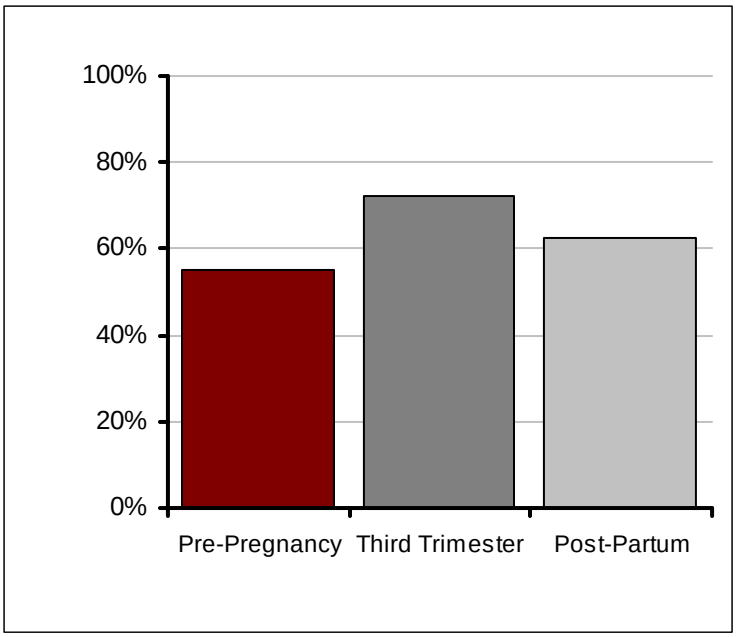
Figure 47: Percent Quit Smoking During Pregnancy Among Alaska Native Mothers Who Smoked Prior to Pregnancy



Source: Alaska PRAMS 2000-03, see Appendix B - Table 44.

Among those who were still smoking during pregnancy, mothers appeared to decrease the amount that they smoked. Figure 48 illustrates the percent of women who smoked less than one cigarette per day, among mothers who smoked.

Figure 48: Percent Light Smokers (Less Than One Cigarette Per Day) Among Alaska Native Mothers Before, During and After Pregnancy

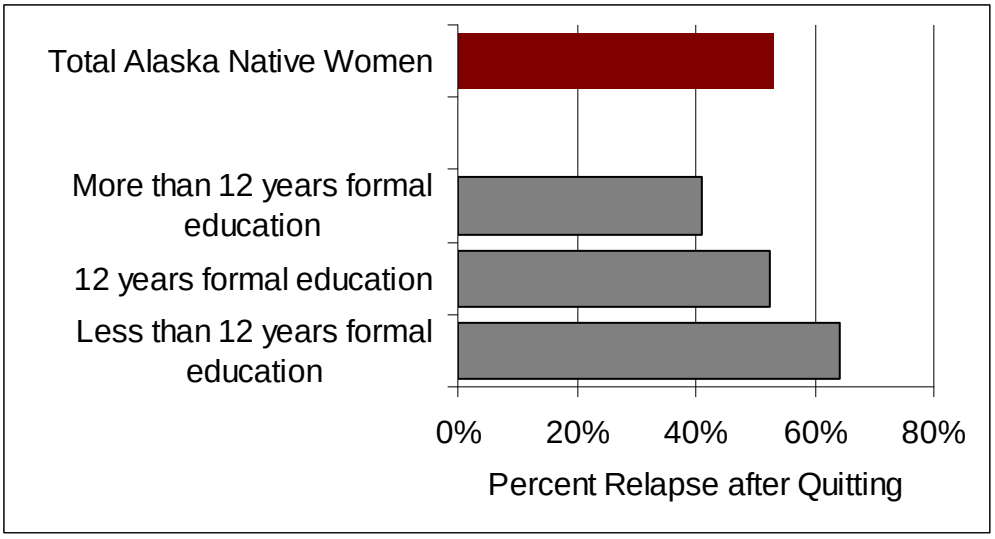


Source: Alaska PRAMS 2000-03, see Appendix B - Table 45.

Unfortunately, a very large share of women who quit successfully during their pregnancy reported relapsing after delivery. The PRAMS survey is given to mothers at two to six months after delivery. By this time, 53% of mothers who successfully quit had relapsed (see Figure 49). Relapse rates were similar across groups, except that they were higher among mothers with less education (64% relapse among mothers with less than high school education vs. 41% relapse among mothers with some college or more).

This high relapse rate suggests that mothers of newborns, particularly those who are less educated, may need interventions to help them stay quit.

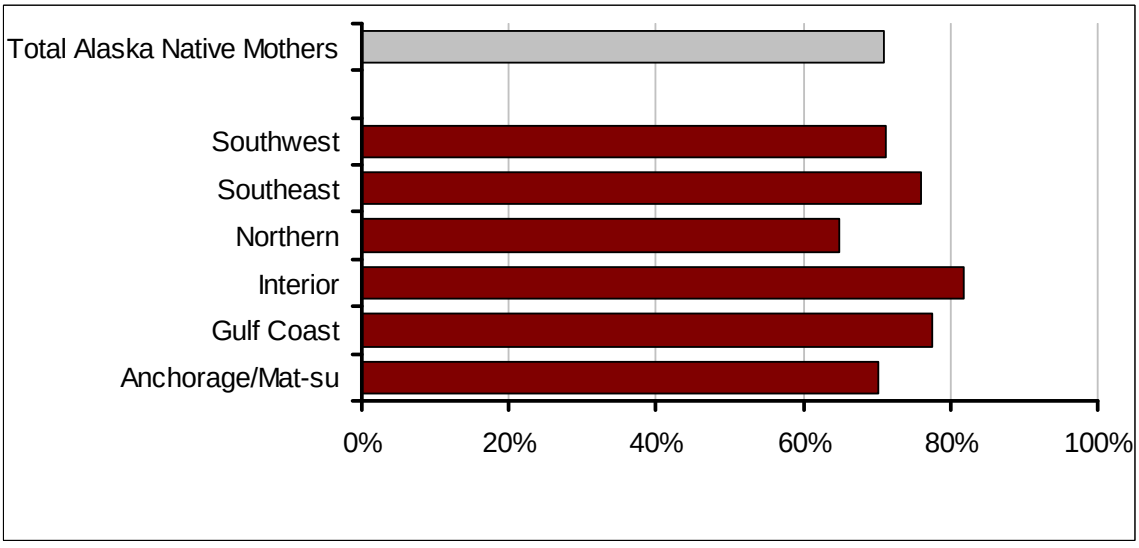
Figure 49: Percent Relapse in Smoking After Pregnancy Among Alaska Native Mothers Who Quit During Pregnancy



Source: Alaska PRAMS 2000-03, see Appendix B - Table 46.

Alaska Native mothers who were smoking at post-partum (whether they had quit during pregnancy or not) were asked whether they would like to completely quit smoking in the next six months. Most mothers (71%) said that they would like to quit (see Figure 50). Interest in quitting was similar among most subgroups of mothers, except that mothers in the Northern region were less interested in quitting than mothers in other regions.

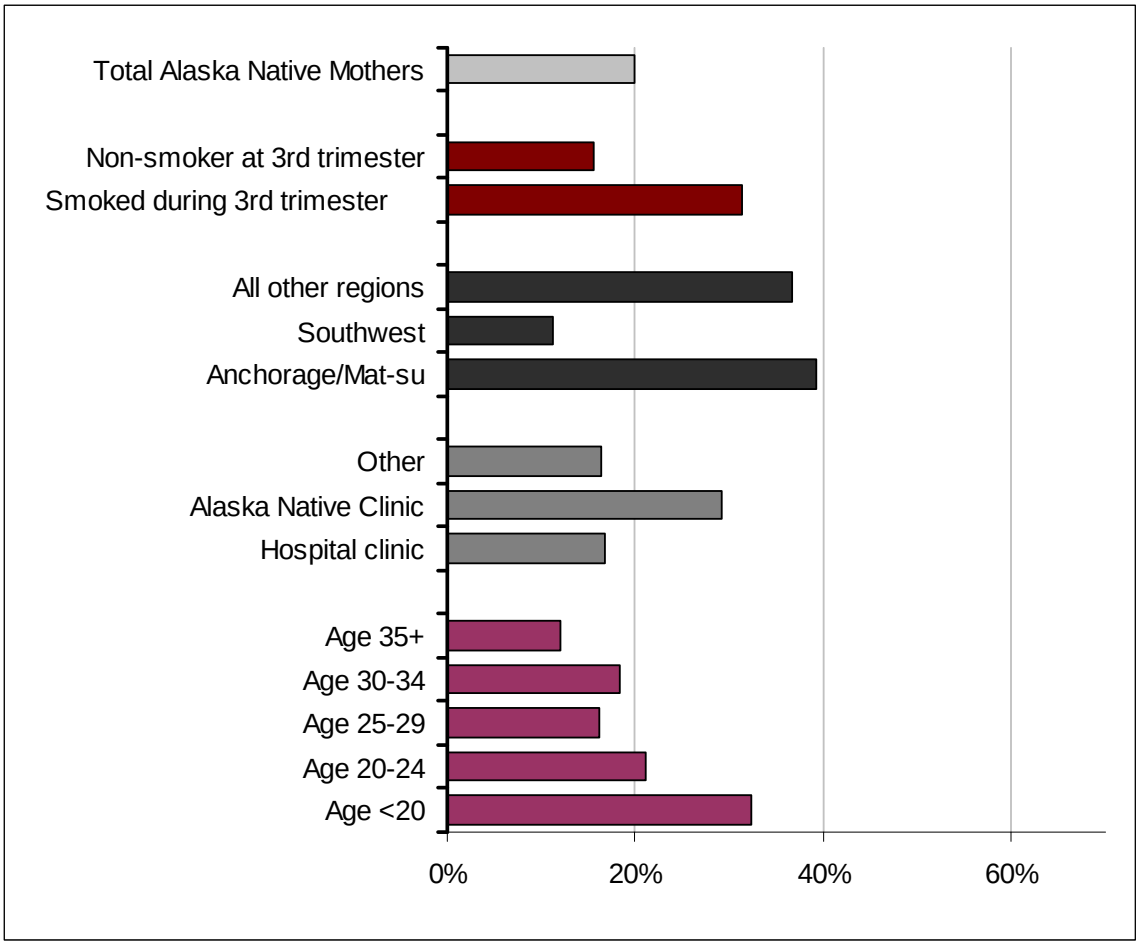
Figure 50: Percent Interested in Quitting Smoking Among Alaska Native Mothers Who Smoke After Pregnancy



Source: Alaska PRAMS 2000-03, see Appendix B - Table 47.

In comparison to cigarette smokers, Alaska Native mothers who used smokeless tobacco prior to pregnancy were less successful at quitting. About 20% (an estimated 100 mothers statewide per year) were successful in quitting their smokeless tobacco use during pregnancy (see Figure 51). As with smoking, younger mothers were more successful than older mothers (32% quit among mothers younger than 20 vs. 12% among mothers 35 and older). Women who received most of their prenatal care through an Alaska Native clinic were more likely to quit than women who received care through a hospital (29% vs. 17%). Perhaps most compelling, women in the Southwest Region (which had the highest baseline prevalence of smokeless tobacco use, and documented use of Iqmik) were less likely to quit than mothers in other regions (11% vs. 37-39% in other regions).

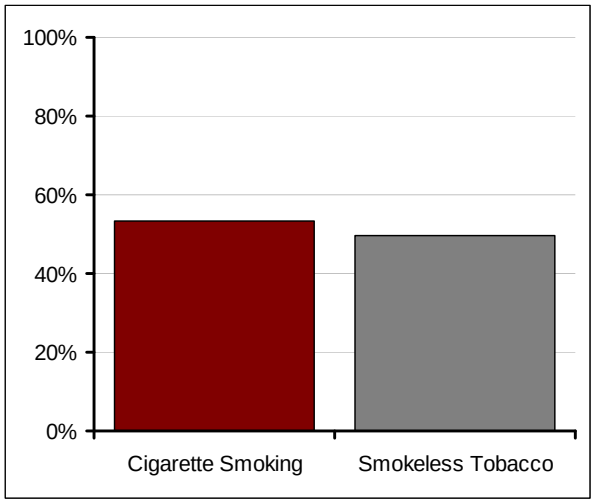
Figure 51: Percent Quit Smokeless Tobacco Use During Pregnancy Among Alaska Native Mothers Who Used Prior to Pregnancy



Source: Alaska PRAMS 2000-03, see Appendix B - Table 48.

Relapse rates for smokeless tobacco after pregnancy were very similar to relapse rates for cigarette smoking. Fifty percent of women who had quit smokeless tobacco during pregnancy had relapsed after delivery (see Figure 52). Because so few women quit during pregnancy, we were not able to analyze relapse rates by subgroup.

Figure 52: Percent Relapse in Tobacco Use After Pregnancy Among Alaska Native Mothers Who Quit During Pregnancy



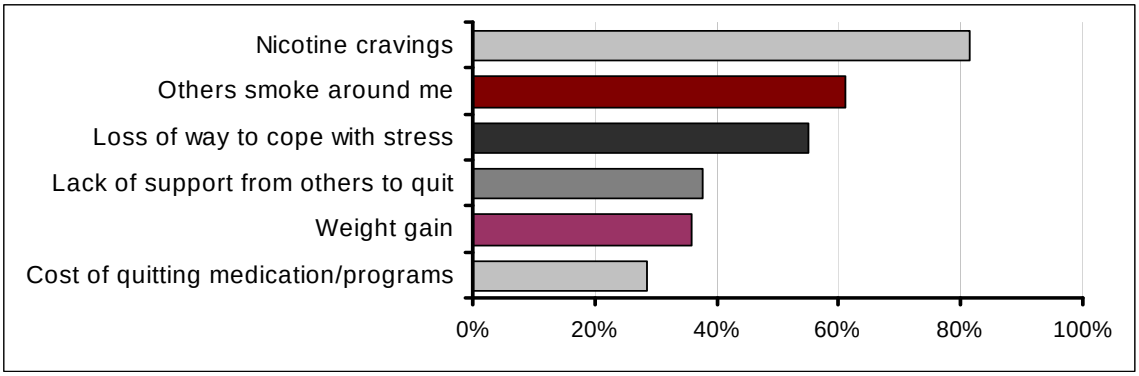
Source: Alaska PRAMS 2000-03, see Appendix B – Tables 46, 49.

Barriers and Supports to Quitting

Adults and youth in our surveys were not asked about their interest in quitting, specific barriers to quitting, or desired support for quitting. Alaska Native mothers who were smoking cigarettes after pregnancy were asked these questions. It is possible that their barriers and interests in quitting support are similar to those of the general population.

Women who smoked after pregnancy and who had responded previously that they were interested in quitting were further asked about what barriers they perceived to quitting. Prioritized barriers are illustrated in Figure 53. Mothers reported that nicotine cravings were the leading barrier to quitting (82%), followed by social cues/others smoking around them (61%) and loss of a way to cope with stress (55%). Fewer than half reported that lack of support from others to quit (38%), weight gain (36%) and cost of quitting medications/programs (29%) were significant barriers.

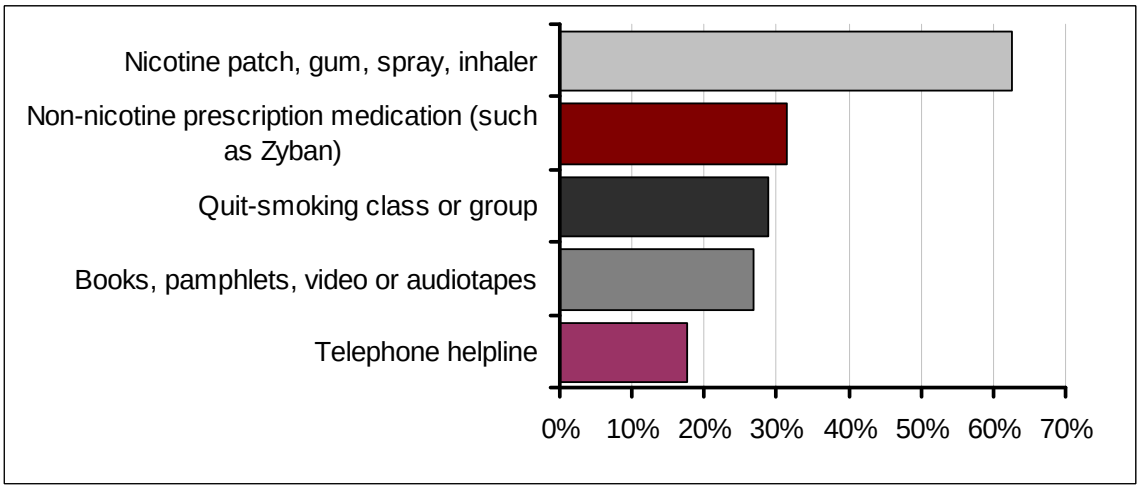
Figure 53: Percent Identifying Specific Barriers to Quitting Smoking Among Alaska Native Mothers Who Smoke after Pregnancy and Want to Quit



Source: Alaska PRAMS 2000-03, see Appendix B - Table 50.

The same women were also asked about their interest in specific support mechanisms for quitting smoking. Figure 54 illustrates the prioritized list of cessation support mechanisms of interest to Alaska Native mothers who smoke and want to quit. Nicotine replacement therapy was the leading item of interest (63%), followed by other non-nicotine pharmacotherapy (31%). Fewer than one in three women expressed interest in classes/groups (29%) or books/other self-help materials (27%). Not quite one in five expressed interest in a telephone helpline (18%).

Figure 54: Percent Identifying Specific Interest in Help for Quitting Smoking Among Alaska Native Mothers Who Smoke after Pregnancy and Want to Quit



Source: Alaska PRAMS 2000-03, see Appendix B - Table 51.

Smokeless tobacco users were not asked about their barriers or desired supports for quitting.

Summary of Key Findings:

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.

Younger people report more quit attempts than older people.

Adults do not report strong belief in the benefits of quitting long-term smoking. Our literature review indicated that there may be a lack of knowledge about the long-term harms of tobacco use

Youth report high rates of quitting, although their tobacco use patterns are much less predictable and frequent than adults.

More than one-third of mothers who smoke prior to pregnancy are able to quit during pregnancy, but half of those quitters relapse early in post-partum.

Few smokeless tobacco using mothers quit during pregnancy, and about half of those that do quit relapse early in post-partum.

Most mothers who smoke at post-partum want to quit.

Nicotine cravings are the leading reported quitting barrier, and nicotine replacement therapy is the leading desired support tool for quitting.

We did not have substantial 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.

Recommendations:

Cessation strategies should seek to support less educated and lower income groups, both among general adults and specifically among pregnant women.

Adults may benefit from campaigns to educate them about the harms of long-term smoking or tobacco use and the benefits of quitting even after long-term smoking or tobacco use.

Interventions are needed to help pregnant women who have quit smoking to stay quit.

Interventions are needed to motivate pregnant women who use smokeless tobacco to quit and stay quit after pregnancy.

Easy access to nicotine replacement therapy may support quit attempts among post-partum mothers and other groups.

Additional research on the process of successful quitting for Alaska Native smokeless tobacco users, especially Iqmik users, may be helpful.

Media Campaigns

The Centers for Disease Control and Prevention and the *Community Guide to Preventive Services* recommend media campaigns (in combination with other influences) as an effective method for encouraging people to reduce consumption or completely quit using tobacco. Campaign messages are developed through formative research, to learn what critical knowledge or beliefs related to tobacco use can be effectively changed, and use broadcast messages on TV, radio, and alternative formats (billboards, print media, movies).

Examples of cessation campaigns that have been conducted in other states include promotion of specific cessation services (such as Quit Lines or healthcare services), encouraging/empowering messages for quitting ("it's hard but you can do it"), and peer role modeling (individuals talk about specific strategies they used in quitting successfully). The *Community Guide* indicates that campaigns should be conducted over a long period of time and in conjunction with other activities (not as a single activity).

A recent focus group study of six rural villages (Angoon and Yakutat in the Southeast, McGrath and Huslia in the Interior, and Ouzinkie and Old Harbor in the Koniag/Gulf Coast region) assessed interest of Alaska Natives, many of whom were current or former users of tobacco, in tobacco control media messages. Nearly everyone had a television and TV viewing averaged between 3 to 6 hours per day, even though reception and channels were limited in some areas. However, participants did not feel that tobacco cessation TV advertisements focusing on the hazards of tobacco use would influence people to quit, even though they did think that TV-delivered prevention messages could influence young people and keep them from starting to use tobacco. The author concluded that providing health information by itself may not be an adequate motivator, although information about health hazards – perhaps through brochures and other printed materials – was still an important component to include in local tobacco education efforts, especially given the low reported knowledge and awareness. From a cultural perspective, approaches that rely on interpersonal interactions – such as support groups, storytelling, and talking circles – could more directly engage community values and practices, and are likely to be more influential than mass media in helping people to quit tobacco.

As discussed for Prevention media campaigns, it is not clear whether rural Alaska Native communities receive media in the same way as urban communities. In very small communities, messages to the public may be better delivered in alternative formats that are unique. Identifying how community members receive information, and determining community capacity to use existing media outlets for disseminating their own local information, are important first steps in planning any information campaign.

In our review and data analyses we found that only about half of Alaska Native smokers believed there was substantial benefit to quitting after 20 years. Using campaigns to educate smokers and other tobacco users about the benefits of quitting at any time in life may be helpful. Focus group findings also indicated that some people were not motivated to quit.

Based on reported leading barriers to quitting from Alaska Native new mothers, nicotine cravings, having others smoke around them, and coping with stress were important challenges for people thinking of quitting. Specific tips for coping with such challenges could be woven into campaigns.

Research done among Alaska Natives indicated that there were few role models available for successful quitting. Campaigns could promote role models, particularly Native role models, and the strategies they used to be successful.

Summary of Key Findings:

While media campaigns are generally found to be effective, Alaska Native communities may receive information in ways other than through mass media (TV) outlets

A variety of campaign themes may be beneficial as a component of tobacco control programs – improving knowledge about the harms of tobacco use or benefits of quitting, specific skills or resources for coping with barriers to quitting, or role models to demonstrate successful quitting among peers.

Recommendations:

Alaska Native communities should identify how their community members receive information (from media or alternative sources) and utilize those venues for delivering campaigns.

Campaign planners should investigate what kinds of sustained campaign themes will best resonate with their unique communities and best complement available activities or resources.

Healthcare Provider Interventions

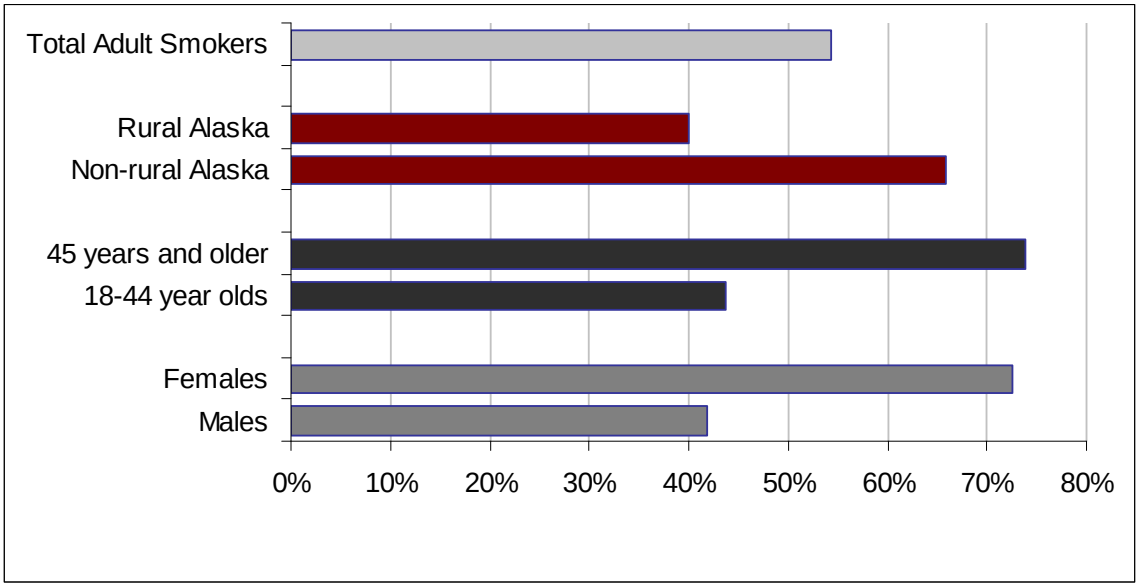
In general populations, when healthcare providers advise their patients who use tobacco to quit, there is an increase in the number of patients who quit.[50] We noted in the literature review at the beginning of this section that general guidelines for healthcare interventions that recommend physicians be brief and directive in their advice may not be culturally appropriate in Alaska Native settings. We also noted that community health workers may be an untapped resource for healthcare provider support.

We first wanted to describe the proportion of tobacco users who visited a healthcare provider during the past year, and were therefore available for a healthcare provider to talk to them about quitting. About half (54%) of Alaska Native current smokers (translating to about 17,000 people) reported that they had visited a healthcare provider during the past year (see Figure 55). It is not clear what type of healthcare provider was seen (these visits could include visits to community health workers).

Among Alaska Native current smokers, women were more likely than men to have visited a provider (73% vs. 42%); older adults were more likely than young adults

(74% among those 45 and older vs. 44% among those 18-44 years old); and non-Rural were more likely than Rural adults to have visited a provider (66% vs. 40%).

Figure 55: Percent Visiting a Healthcare Provider in the Past Year Among Alaska Native Adults Who Are Current Smokers



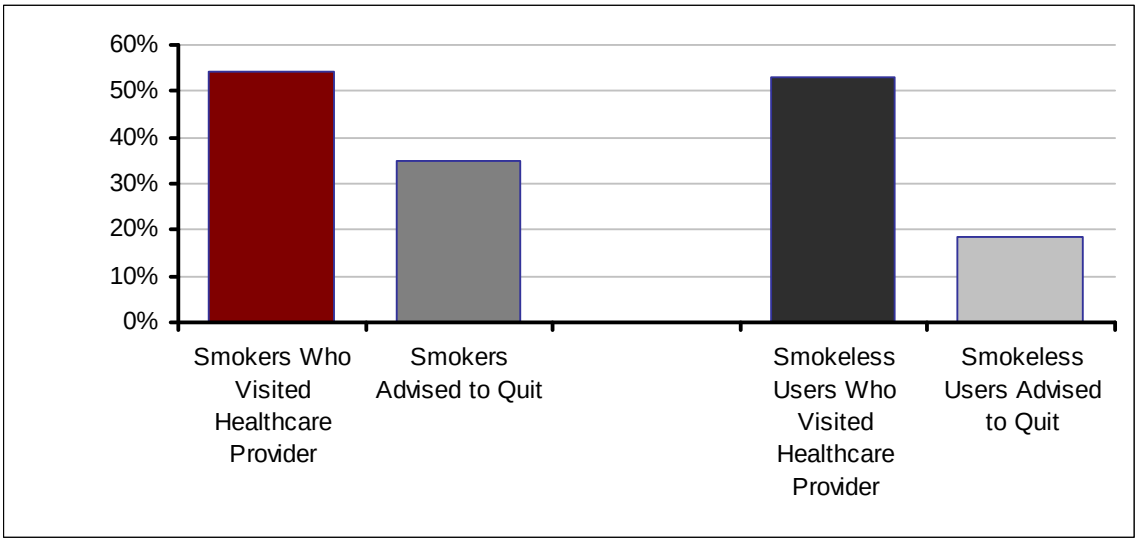
Source: Alaska BRFSS 2004-05, see Appendix B - Table 52.

Alaska Native adults who were current smokeless tobacco users were similar to smokers in the prevalence of visiting a healthcare provider during the past year (53%, translating to 4,200 adults, see Figure 56).

Among those smokers who had visited a healthcare provider during the past year, 64% were advised by the healthcare provider to quit. This translates into about 11,000 of the estimated 31,300 total Alaska Native smokers.

Among those smokeless tobacco users who had visited a healthcare provider during the past year, 35% were advised by the healthcare provider to quit. This translates into about 1,400 of the estimated 7,800 total Alaska Native smokeless tobacco users.

Figure 56: Percent Visiting a Healthcare Provider and Percent Visiting Who ALSO Received Advice to Quit During the Past Year Among Alaska Native Adult Tobacco Users

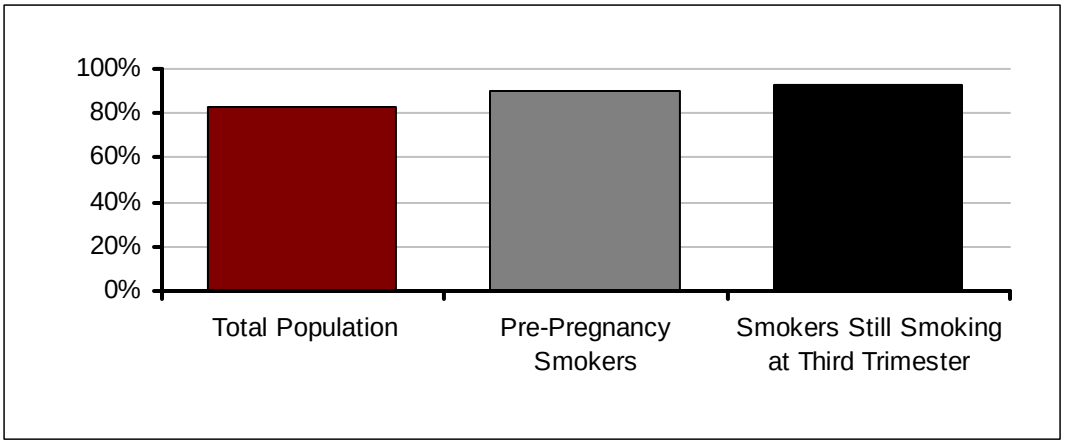


Source: Alaska BRFSS 2004-05, see Appendix B - Table 52, 53, 54, 55

Additional study of healthcare providers who serve rural regions may be useful in understanding provider-patient interactions for tobacco cessation support, both for cigarette smoking and smokeless tobacco. Data from the Nicotine Dependence Treatment Program (NDTP) conducted in three regional hub clinics indicated an increase in the frequency of screening for tobacco use. In addition, a provider survey indicated that health care facility staff felt cessation services were appropriate for the clinical setting, but that continued training is needed regarding safety and efficacy of NRT.[51]

During pregnancy, women have more than usual contact with healthcare providers, and also may be highly motivated to quit tobacco use to protect the health of the baby. Alaska Native mothers, regardless of smoking status, were asked whether their healthcare provider had talked to them about how smoking could hurt their baby. About 83% of all women, 91% of women who smoked pre-pregnancy, and 93% of those who smoked pre-pregnancy and during last three months of pregnancy said that their provider had talked to them about smoking (see Figure 57). There were no significant differences by subgroup among women who smoked at pre-pregnancy: healthcare providers appeared to talk to all kinds of women about equally. It is possible that some additional providers did advise their patients to quit without explaining specifically how smoking could harm the baby.

Figure 57: Percent Who Said Their Healthcare Provider Talked About How Smoking Could Hurt the Baby Among Alaska Native Mothers of Newborns



Source: Alaska BRFSS 2004-05, see Appendix B - Table 56-57.

Summary of Key Findings:

Rural Alaska Natives, men, and younger people are less likely than other groups to visit healthcare providers – they also have higher tobacco use prevalence.

Nearly two-thirds of current smokers who visited a healthcare provider were advised to quit.

Smokeless tobacco users were almost half as likely as smokers who visited healthcare providers to be advised to quit.

Almost all Alaska Native women – especially smokers - report being counseled by their healthcare providers during pregnancy about harm to the baby from smoking, but we do not know whether they were provided with specific resources for quitting.

Recommendations:

Healthcare providers who serve Alaska Native adults and pregnant women may need motivation and support to provide effective counseling to help both smokers and smokeless tobacco users quit.

Additional investigation to describe positive patient-provider interactions for tobacco cessation support that make sense for a variety of Alaska Native healthcare providers may be helpful.

Investigation to describe healthcare providers specifically serving rural Native communities, and how they can effectively support quitting of both cigarettes and smokeless tobacco, may be helpful.

Healthcare System Support

The Community Guide found that some healthcare system practices can be highly effective in helping tobacco users to quit. These system practices include providing provider reminders so that tobacco users are “flagged” and providers remember to ask them about their tobacco use at each visit (with or without provider education about how to conduct interventions for tobacco use), and reducing the cost of effective cessation therapies.

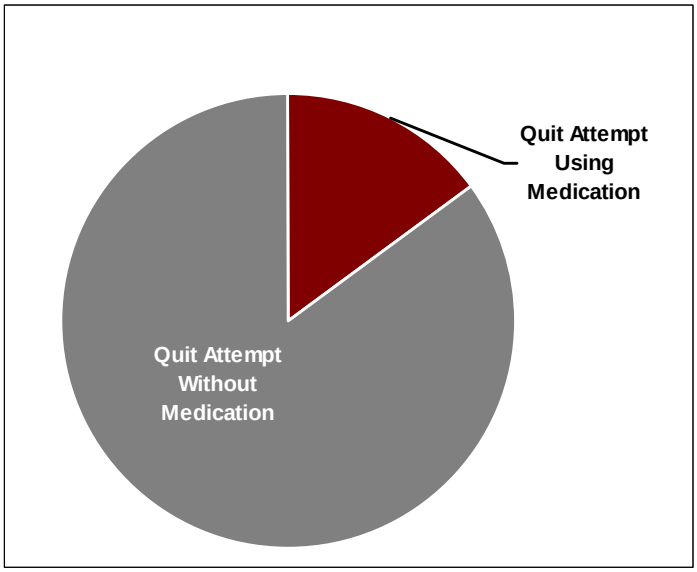
Nicotine Replacement Therapy (NRT) has been proven as a highly effective method for improving quitting attempts among adults quitting tobacco use. Although some Alaska Natives have reported mistrust of medications for quitting, limited evidence (available from a single study) suggests that NRT is similarly effective when used by Alaska Natives, and that all but a small percentage of Natives participating in a cessation program where the nicotine patch was available did choose to use the patch. Additionally, there is evidence of increased use of NRT in the NDTP program over the last several years (2003-2005).[51]

Although NRT is available as an over-the-counter drug, it can also be very expensive as an out-of-pocket cost for tobacco users or inconvenient to obtain in some areas of the state. In addition to screening and advice to quit, as discussed earlier, healthcare systems can play a critical role in providing easy access to NRT by encouraging healthcare providers to prescribe it so that the cost is covered by medical insurance, and even by dispensing NRT through the healthcare provider so that patients can use it immediately.

Among the estimated 18,900 Alaska Native adult smokers who made a quit attempt during the past year (either successfully or unsuccessfully), about 2,800 (15%) used medications to help (see Figure 58). We do not know whether those who did not use medications consciously chose not to do so, or whether they were prevented from using medications by financial, geographic or other barriers to obtaining medications.

We reported previously that among Alaska Native mothers who smoked after pregnancy and were interested in quitting, nicotine cravings were the leading barrier to cessation and that nicotine replacement therapy was the leading support resource that women were interested in receiving (63% reported wanting to use NRT patches, gum, spray or inhaler). Coupled with findings from the research on NRT described above, this suggests that Alaska Natives would be willing to use NRT if it were easily available, and it would likely improve their success in quitting if they did so.

Figure 58: Proportion Who Used/Did Not Use Medications in their Quit Attempt Among Alaska Native Adult Smokers Who Made a Quit Attempt in the Past Year



Source: Alaska BRFSS 2004-05, see Appendix B - Table 58.

We do not have specific information about smokeless tobacco users and healthcare systems or NRT use. In the absence of other evidence, we may assume that similar findings apply for smokeless tobacco users as smokers.

Summary of Key Findings:

There may be an unmet interest in using Nicotine Replacement Therapy (NRT) or other medication support among Alaska Native adult smokers who want to quit.

Recommendations:

Healthcare systems that serve Alaska Natives should incorporate provider reminder systems that “flag” tobacco users for intervention at every visit, to trigger providers to provide quitting resources such as NRT.

Healthcare systems can make NRT or other medications easier for tobacco users to get by prescribing and/or dispensing them.

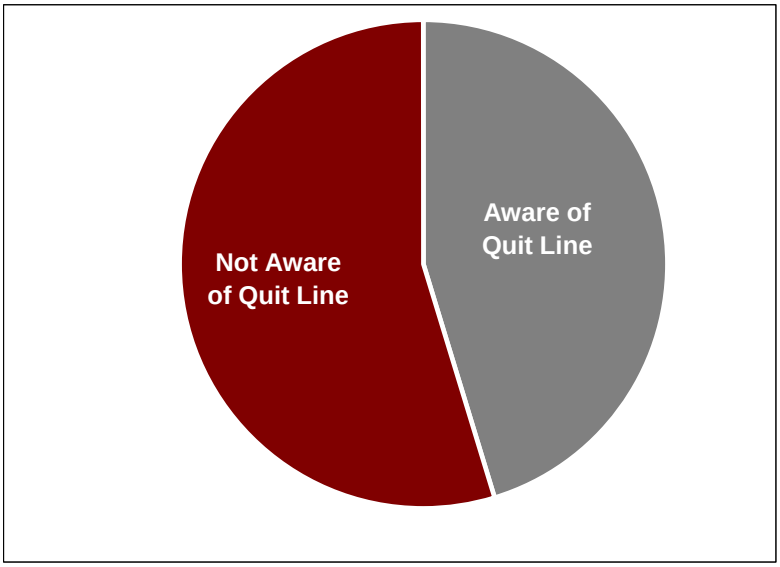
Telephone Quit Line

The *Community Guide* recommends providing help to tobacco users who want to quit through telephone-based counseling and support, including in conjunction with medical therapies. The Alaska Quitline was established in 2002 as a free statewide service to provide telephone counseling and medications that help people who want

to quit tobacco.[52] It is managed by the Providence Alaska call center and staffed by trained nurses. The program of services offered by the Alaska Quitline is based on a highly effective protocol developed by the Mayo Clinic. The Quitline has been promoted statewide using media and other outreach.

Alaska Native tobacco users (either cigarettes or smokeless) were asked whether they were aware of the Alaska Quitline, which was described as "a telephone service that can help people quit smoking or using smokeless tobacco." About 45% were aware of the Quitline – about 16,800 Alaska Native tobacco users. There were not differences in awareness among subgroups.

Figure 59: Proportion Aware/Unaware of the Quit Line Among Alaska Native Adult Tobacco Users



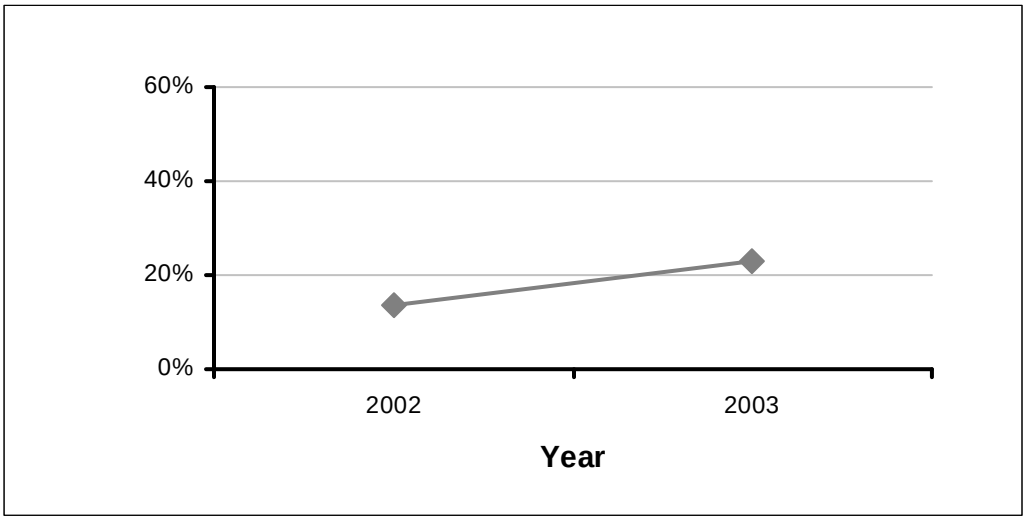
Source: Alaska BRFSS 2004-05, see Appendix B - Table 59.

A statewide Quitline could be an important resource for providing quitting support to Alaska Natives, particularly those in rural regions who do not have easy access to healthcare providers or other means of support. As indicated previously, however, some standard counseling approaches may need to be modified in order to be acceptable and effective among Alaska Natives. As discussed in relation to healthcare provider interventions, counselors at the Quitline may need to avoid standard practices of fast-paced, directive advice and adopt more measured styles in services for Alaska Natives. Also, marketing activities to promote the service of the Quitline may need to be tailored to reflect Alaska Native values (or overcome cultural barriers) related to counseling and health support.

We indicated previously that a telephone quit line was the least-desired (among a list of potential) support mechanism among Alaska Native post-partum smokers who wanted help to quit (18%). However, the PRAMS survey data were collected in 2000-03, and the Alaska Quitline was launched in 2002. We explored the trend for willingness to use the Quitline after the Alaska Quitline was launched. From 2002 to 2003 there was a significant increase in Alaska Native mothers' interest in using a telephone quit line, from 14% to 23% (see Figure 60). This suggests that while interest in using a telephone helpline among Alaska Natives may be very low before

much is known about what that service is, interest may increase as specific information and availability of the service becomes known.

Figure 60: Recent Trend in Willingness to Use the Quit Line Among Alaska Native Mothers Who Smoke After Pregnancy and Are Interested in Quitting



Source: Alaska PRAMS 2002-03, p=.02 for difference between years, see Appendix B - Table 60.

Online help programs were not included as a potential resource discussed with Alaska Native mothers or adults, although this approach is similar to a Quitline and might be of interest to some people.

Summary of Key Findings:

A statewide toll-free Quitline support, including NRT, is available to Alaska Natives, including those in rural regions of the state where other resources may not be as available.

Fewer than half of Alaska Native adult smokers are aware of the Alaska's Tobacco Quitline.

Alaska Native women recently showed increasing interest in using a telephone helpline.

Recommendations:

Modifications in marketing and services of the Quitline may be necessary to reflect Alaska Native values (or address specific cultural barriers) related to asking for and receiving support.

Community-Based Support

Quitting Resources

Community-based cessation resources, such as quitting groups, are not a recommended strategy from the Community Guide, although they may support some tobacco users to quit and may be effective under some conditions.

Among those who made a quit attempt during the past year, about 500 (3%) used classes or counseling as part of their quit attempt (see Figure 61). There were not significant differences among subgroups, except that older adults were more likely than younger adults to have used groups or counseling (1% among 18-44 year olds vs. 6% among adults 45 and older).

Figure 61: Proportion Who Used/Did Not Use Counseling/Classes in their Quit Attempt Among Alaska Native Adult Smokers Who Made a Quit Attempt in the Past Year

Source: Alaska BRFSS 2004-05, see Appendix B – Table 61.

We do not know whether people who made quit attempts without use of counseling or classes did so consciously, or whether they wanted such support and were prevented from using it by financial, geographic, or other barriers. Community-based tobacco control programs might consider the cost of counseling or medications as a barrier to provision of such community level services, perhaps especially in rural areas. However, in a study of a quitting program for Alaska Natives that was conducted in the Anchorage area, researchers calculated the cost per quitter to be $720 (in 1992), with a 21% quit rate among the two-thirds of participants who were re-contacted after one year. This is not an unreasonably high cost, and the authors noted that this was less than the cost of medical care for tobacco-related disease.

Alaska Native mothers who smoke cigarettes and want to quit after pregnancy listed quitting groups or materials as a lower priority among desired support to quit (27-

29%). This suggests that low utilization of such services may reflect low interest in the type of service as well as barriers to availability.

Increasing the Price of Tobacco

The *Community Guide* also recommends increasing the cost of tobacco products as an effective cessation strategy. Several communities in Alaska have implemented local tax increases, and based on research we expect that this has motivated some adults to reduce or quit their tobacco use; however, we do not have data to support this assumption.

Summary of Key Findings:

Few Alaska Native adults reported using counseling or classes to help in quitting smoking.

Comparatively few Alaska Native women prioritized classes as a desirable quitting support resource.

One published study of a community-based tobacco cessation program conducted among Alaska Natives found a good quit rate, but reported it to be very expensive to implement.

Recommendations:

More review is needed to determine the best cessation approaches and how different approaches might complement each other.

Community tax increases are likely to be an effective strategy for increasing cessation, although we did not have data to describe their impact among Alaska Natives.

VII. Eliminating Exposure to Secondhand Smoke

Eliminating exposure to secondhand smoke, particularly among non-smokers, is another key goal area for tobacco control. In this section we will describe data related to secondhand smoke exposure for Alaska Natives, and suggest how the data may inform program strategies.

Strategies to eliminate exposure to secondhand smoke are not only valuable in reducing harm from non-smokers' exposure, they also contribute to preventing tobacco use uptake among youth and encouraging quitting among current users by sending social cues that tobacco use is not an acceptable behavior in the community. Proven strategies for eliminating exposure include media campaigns and community-based programs (including policies, such as smoking bans).

Literature Review

In our literature review we identified a few key findings that may be relevant in planning for secondhand smoke strategies in Alaska Native communities:

- The *Great Land* report did not provide detailed information about secondhand smoke exposure among Native adults or youth, therefore we believe that this is the first report to provide a comprehensive description of exposure among Alaska Natives.
- In a study of respiratory risk factors among Y-K Delta middle school youth, researchers found that 30% of these children reported being exposed to secondhand smoke "occasionally" and 16% reported being exposed "several hours per day" (results were consistent between town and village residents).
- A fifteen year old study in the rural Y-K Delta documented tobacco exposure among preschool children (ages 3-6) using direct measurement of saliva cotinine. This study found that 83 of 85 (98%) children had detectable levels although only half of parents reported that their children were exposed to tobacco smoke. All but one of 33 children whose parents reported "no exposure" to tobacco smoke did have detectable levels of cotinine, suggesting that parents may not have been sensitized to or aware of opportunities for exposure.
- In more recent focus groups held in the Y-K Delta, adults reported knowing that smoke is harmful to children and unborn babies, and indicated that most homes are smoke-free.

Data and Program Recommendations

Secondhand Smoke Exposure, Knowledge, Beliefs

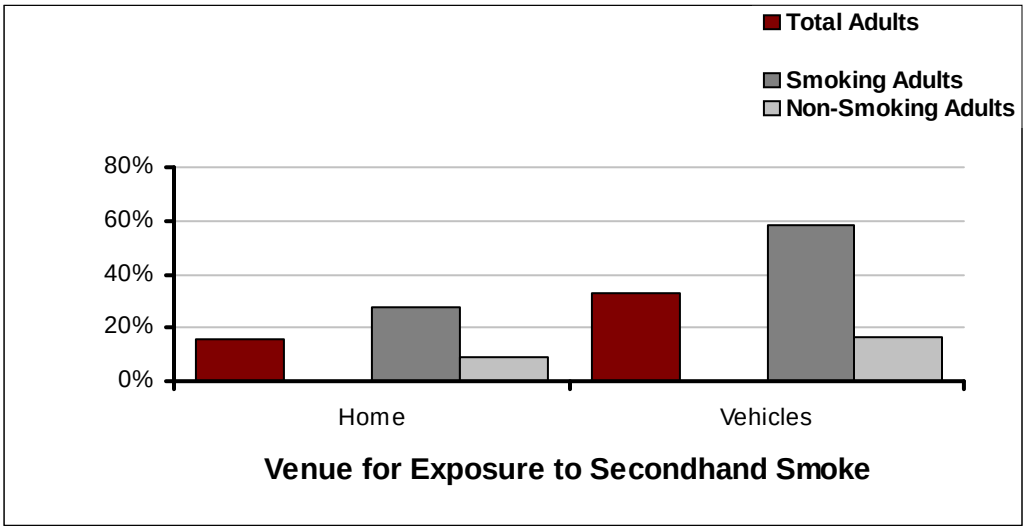
Adult Exposure to Secondhand Smoke

Alaska Native adults were asked if they had been exposed to secondhand smoke indoors or in vehicles during the past 30 days. Results are summarized in Figure 62.

About 16% of all adults (nearly an estimated 11,700) and 9% of non-smokers (about 3,800) reported being exposed to secondhand smoke in their homes during the past month (see Table 62, Appendix B). There were not significant differences in home exposure by subgroup, except that lower income people were more likely to report exposure than higher income people (29% among those with annual household income less than $15,000 vs. 5% among those with annual household income of $75,000 or more). Adults with children in the home were less likely to be exposed than adults without children in the home (12% vs. 22%). These differences could be partially explained by differential smoking prevalence among the groups.

About 33% of all adults (translating to 24,400 adults) and 16% of non-smokers (7,400 adults) reported being exposed to secondhand smoke in a vehicle during the past month (see Table 63, Appendix B). Those with children in the home were less likely to report exposure than those without children in the home (27% vs. 41%). Younger adults and adults with less education were more likely to be exposed to secondhand smoke in vehicles, again potentially reflecting background smoking rates. We also observed that exposure to secondhand smoke in cars was significantly less in Rural Alaska than in any other region (20% vs. 35-48% in other regions).

Figure 62: Percent Exposed to Secondhand Smoke in the Past 30 Days Among Alaska Native Adults



Source: Alaska BRFSS 2004-05, see Appendix B - Tables 62, 63.

Reported prevalence of exposure to secondhand smoke in vehicles is about double the reported exposure in homes among the total population and non-smokers. This is interesting and may warrant additional investigation to describe the frequency and duration of vehicle-related exposure.

Youth Exposure to Secondhand Smoke

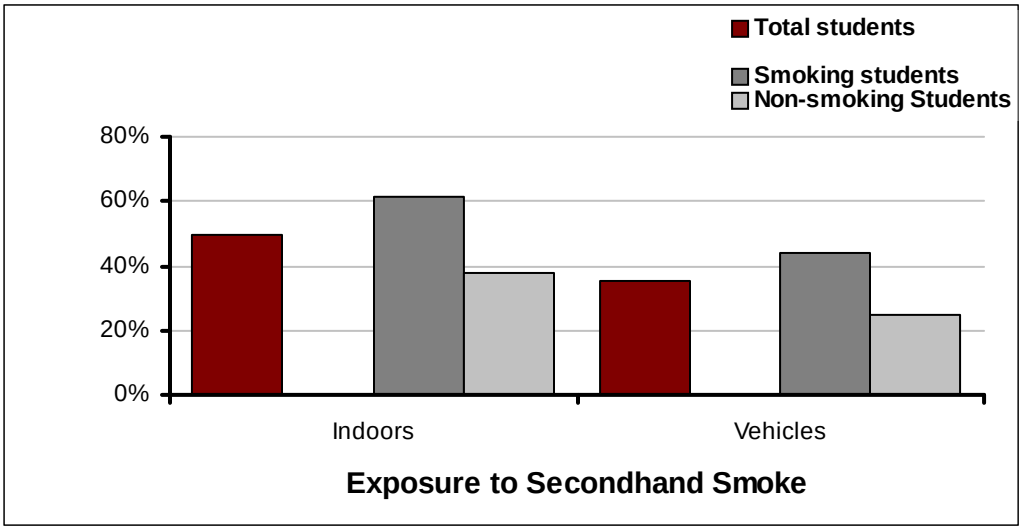
Among Alaska Native high school youth 49% overall (translating to an estimated 3,800 youth) and 38% of non-smokers (more than 2,000 youth) reported exposure to secondhand smoke indoors – the question did not specify "at home" - during the past week (see Figure 63). There were not differences by subgroup.

This reported level of exposure among high school students is similar to the 46% exposure reported by middle school children in the Y-K Delta respiratory health study.

We noted that youths' reported exposure indoors is higher than for adults (16%) and adults with children in the home (12%), despite the fact that the youth are being asked only about exposure during the shorter period of *past week* while adults are asked about the *past month.* The difference may be partially explained by the adult question specifically asking about home, while the youth question asks generally about "in a room" (anywhere indoors).

About 36% of Alaska Native high school youth overall (translating to an estimated 2,700 youth) and 25% of non-smoking youth (about 1,500) reported exposure in cars. The prevalence of exposure for non-smoking youth in cars is similar to reported car exposure for adults with children in the home (27%).

Figure 63: Percent Exposed to Secondhand Smoke in the Past Week Among Alaska Native High School Youth



Source: 2003 Alaska YRBS, see Appendix B - Tables 64, 65.

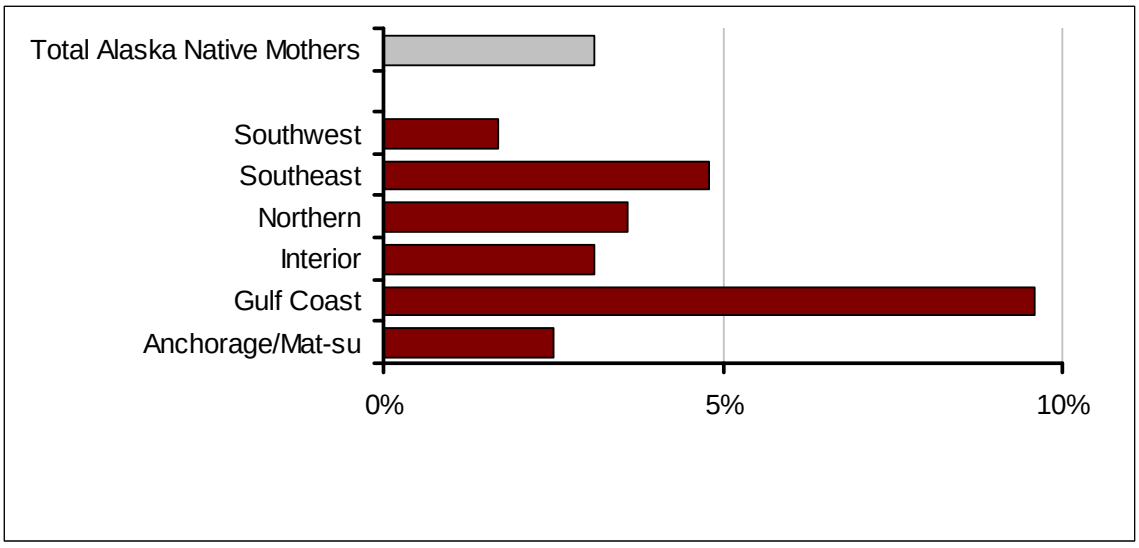
Unlike adults, youth reported less exposure in cars or vehicles than indoors. It is not clear why this is the case, but may be related to the very inclusive “indoor” wording of the survey question discussed previously.

Pregnant Women and Exposure to Secondhand Smoke

We do not have information to describe the exposure of non-smoking pregnant women during their pregnancy, but mothers of newborns were asked about exposure for their babies after delivery.

Alaska Native mothers were asked how many hours per day their new baby is in the same room with someone who is smoking. Only 3% of Alaska Native mothers in all regions (or fewer than 100 new mothers per year) reported more than “0 hours” (that is, any exposure – See Figure 64). We noted that the design of this question does not lend itself to disclosure of actual exposure: infants may be exposed to secondhand smoke on a non-daily basis, or infants may be exposed to secondhand smoke from someone who is in a different room in the same house. Both of these situations could result in significant infant exposure that would not be reported by the mother for this survey question. For these reasons, the prevalence of exposure reported here might be an underestimate of true exposure to secondhand smoke in the home. However, relative differences between regions may still be meaningful. Mothers in the Gulf Coast region were significantly more likely to report that their baby was exposed to secondhand smoke than mothers in other regions (10% vs. 2-5% in other regions).

Figure 64: Percent Who Reported Their New Baby is Ever In the Same Room With Someone Who Is Smoking Among Alaska Native Mothers at Post-Partum



Source: Alaska PRAMS 2000-03, see Appendix B - Table 66.

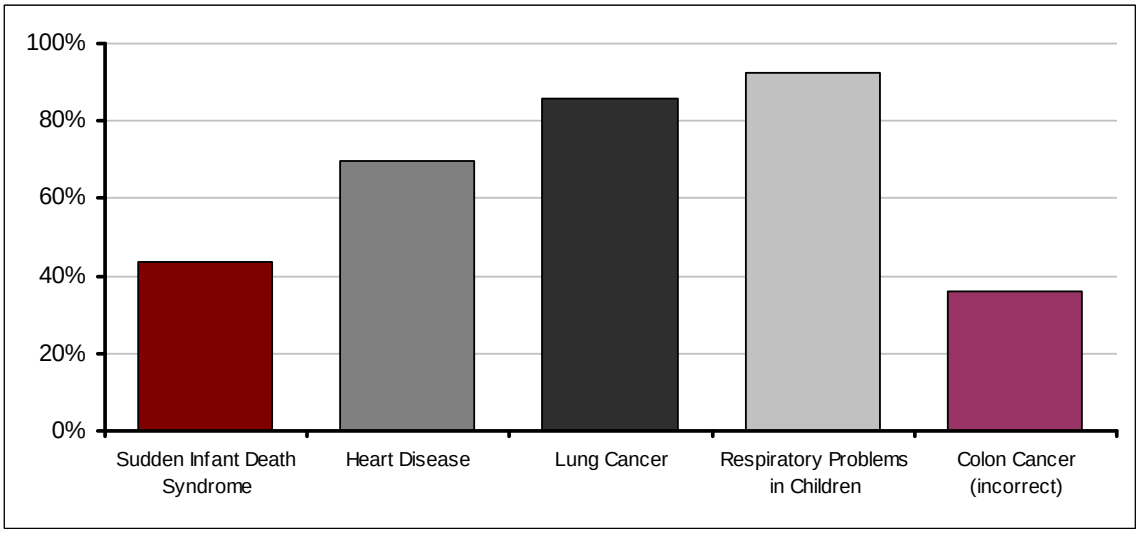
Knowledge of Harm from Secondhand Smoke

In 2004, Alaska Native adults were asked about five different diseases or health conditions, and whether secondhand smoke caused each of them. More than half of adults reported accurately that secondhand smoke (breathing smoke from other people's cigarettes) causes respiratory problems in children (93%), lung cancer (86%), and heart disease (70%, see Figure 65).

Less than half of adults (44%) reported knowledge that exposure to secondhand smoke causes sudden infant death syndrome (SIDS). This may be an opportune area for public education, as SIDS has been identified as a critical health priority in Alaska Native communities.

Additionally, 36% of adults reported that they thought secondhand smoke exposure caused colon cancer, which is not a commonly accepted opinion in medical research. We noted that although this is an incorrect answer, if individuals think that secondhand smoke causes colon cancer that may be associated with even higher belief in the harmfulness of secondhand smoke.

Figure 65: Among Alaska Native Adults, Percent Who Reported Knowledge that Secondhand Smoke Causes Specific Diseases

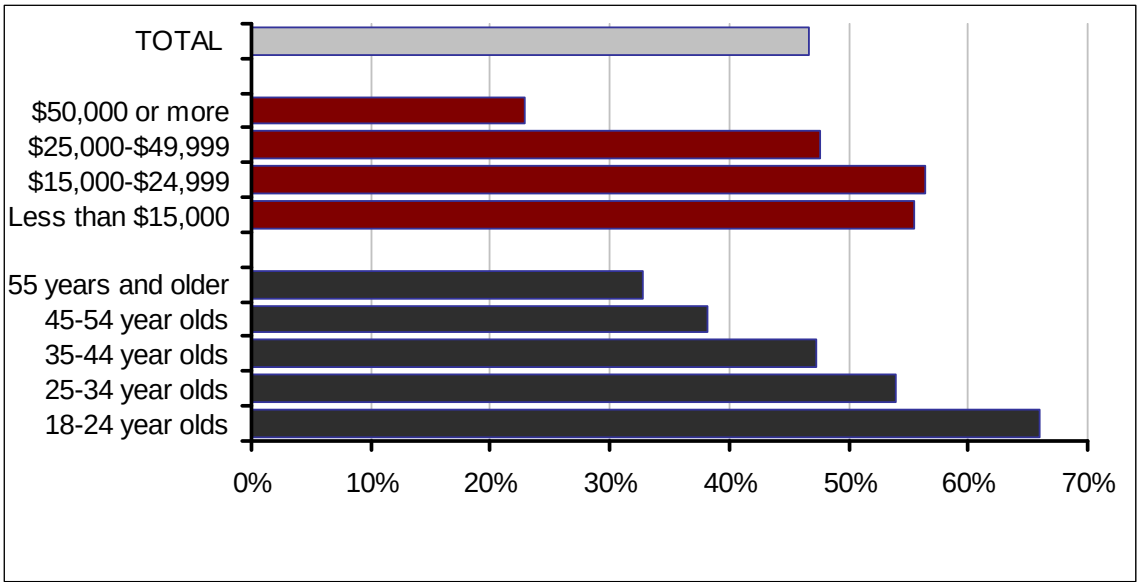


Source: Alaska BRFSS 2004, see Appendix B - Tables 67-71.

We classified adults by whether they identified four illnesses caused by secondhand smoke. We did not penalize adults who thought that smoking also caused colon cancer. Nearly half (47%) of adults had substantial knowledge about the harm of secondhand smoke (see Figure 66). There were not significant differences among subgroups except that younger adults (66% among 18-24 vs. 33% among those 55 and older) and those with lower incomes (56% among those with annual household income less than $15,000 vs. 23% among those with annual household income $50,000 or more), were more likely to have knowledge about the harm from secondhand smoke.

Smokers and non-smokers demonstrated similar knowledge about specific harms from secondhand smoke exposure (42% among non-smokers and 54% among smokers, non-significant difference).

Figure 66: Among Alaska Native Adults, Percent Who Know that Secondhand Smoke Causes Four Illnesses

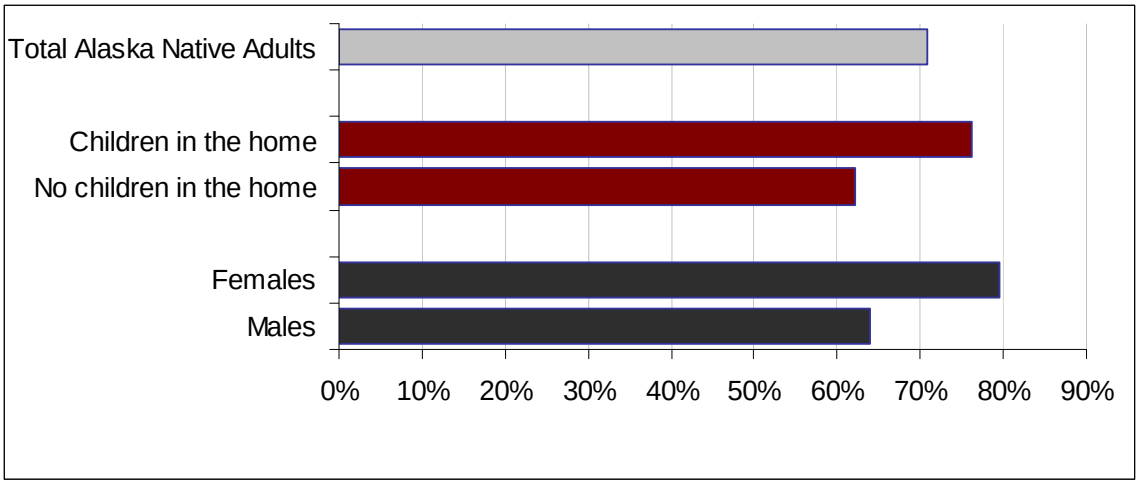


Source: Alaska BRFSS 2004, see Appendix B - Table 72.

Knowledge of the specific health risks from exposure to secondhand smoke would be expected to translate into belief in the harmfulness of secondhand smoke. About 71% of Alaska Native adults reported that they believe secondhand smoke is “very harmful” (see Figure 67). Although there were not differences in specific knowledge about health risks demonstrated by people with or without children in the home, or between men and women, there were differences in perceived harm. More people with children in the home (76% vs. 62% among those without children in the home) and more women than men (80% vs. 74%) reported believing that secondhand smoke is “very harmful.” Although there was greater reported knowledge in the harm of secondhand smoke among younger people and lower income people, these groups were not significantly more likely than older people or higher income people to believe that secondhand smoke is “very harmful.” Smokers and non-smokers expressed similar belief in the harm of secondhand smoke (74% among non-smokers and 68% among smokers, non-significant difference).

Alaska Native high school youth were also asked about secondhand smoke harm. About 78% of youth believed secondhand smoke is “very harmful” (see Table 74, Appendix B). This is similar to the 77% prevalence of belief among young adults (18-24). There were not differences in belief among subgroups, including among youth by smoking status, or by whether they are currently exposed to secondhand smoke.

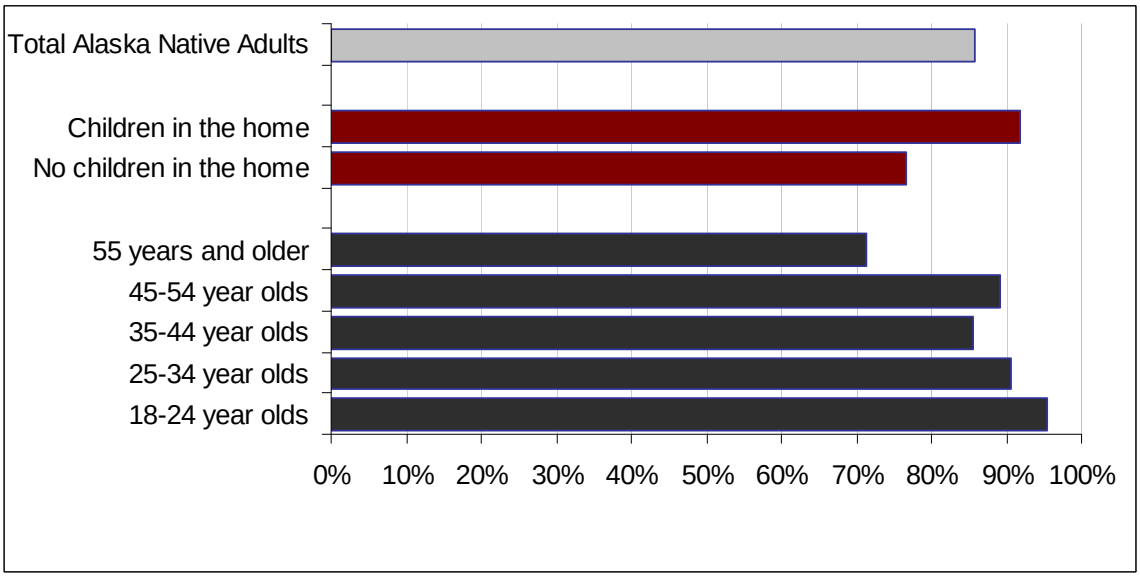
Figure 67: Among Alaska Native Adults, Percent Who Believe that Secondhand Smoke is Very Harmful



Source: Alaska BRFSS 2004, see Appendix B - Table 73.

Finally, belief in the harm of exposure to secondhand smoke might be expected to translate into belief that people should be protected from that exposure. A clear majority of Alaska Native adults (86%) reported agreement that people should be protected from secondhand smoke (see Figure 68). Agreement was higher among those aged 18-24 (95%) than those aged 55 or older (71%). Agreement was also higher among those with children in the home (92%) than among those without children (77%).

Figure 68: Among Alaska Native Adults, Percent Who Believe that People Should Be Protected from Secondhand Smoke



Source: Alaska BRFSS 2004, see Appendix B - Table 75.

Surprisingly, the overall agreement with the need for protection from secondhand smoke (86%) is higher than both overall knowledge of specific health consequences of exposure (47%) and overall belief in the harm of secondhand smoke (71%). This suggests that the belief in need for protection from secondhand smoke is not entirely driven by knowledge about specific diseases or perceived harm of the exposure.

Based on previously cited findings that Alaska Natives value “not telling [other] people what to do,” we anticipated that support for protecting people from secondhand smoke might be low, because such protection would be provided by policies or rules that restrict the behavior of some individuals (i.e., smokers). Instead, support for protection from secondhand smoke is very high, including among smokers. We also noted that belief in the association between secondhand smoke exposure and respiratory problems among children is very high (93% overall) and that Alaska Natives place a high value on the health of children; perhaps these factors comprise the primary driver for support in protecting against secondhand smoke exposure.

We did not find published research that substantively described attitudes and opinions among Alaska Natives related to secondhand smoke. Such studies may be beneficial and timely for understanding how tobacco control strategies can be implemented in an effective and culturally respectful way.

Summary of Key Findings:

Many non-smoking Alaska Natives are in danger from the substantial health risks of secondhand smoke exposure: An estimated 3,800 non-smoking Alaska Native adults and 2,000 non-smoking high school youth reported recent exposure to secondhand smoke in homes or other indoor areas; an estimated 7,400 non-smoking Alaska Native adults and 1,500 non-smoking high school youth reported recent exposure to secondhand smoke in cars or vehicles.

Among adults, more exposure was reported for vehicles than in homes; among youth, vehicle exposure was similar to that of adults, but “indoor” exposure was higher.

Few women reported that their babies are exposed to secondhand smoke, but this may be a significant underestimate of real exposure; Gulf Coast region mothers may be at greater risk for having a baby exposed to secondhand smoke.

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.

Support for protection from secondhand smoke was highest among younger adults ages 18-24, who also have more knowledge about the harmful effects of secondhand smoke than those aged 55 and older.

Overall agreement with need for protection from secondhand smoke was substantially higher than knowledge of specific harms and general belief in harmfulness of secondhand smoke.

Recommendations:

Eliminating exposure to secondhand smoke may be an important priority for Alaska Native tobacco control programs.

Secondhand smoke elimination strategies should be focused on both indoor exposure and vehicle exposure.

There may be some need to educate the public about specific health risks associated with secondhand smoke exposure, particularly SIDS.

Older adults are often in positions of leadership in communities; efforts to educate people about the harm of secondhand smoke exposure and need for protection from exposure may benefit from focused attention to older adult groups.

Additional investigation to understand Alaska Native beliefs about the act of secondhand smoke exposure and cultural acceptability of bans to protect non-smokers may be helpful.

Media Campaigns

Media campaigns (in combination with other influences) have not been conclusively evaluated as effective for eliminating exposure to secondhand smoke; however, they are an obvious means of generating public support for bans and restrictions on smoking, which have been found to be effective in reducing secondhand smoke exposure. ***[We have recently been made aware of the existence of a report on media delivery in rural Alaska. The report will be reviewed and its findings incorporated into this chapter]***

Examples of secondhand smoke campaign themes that have been implemented in other states include education about the specific dangers of secondhand smoke (portrayals of death or illness due to cancer, heart disease), encouraging parents to ban smoking in their home to protect children (including because of specific harms to children such as asthma or SIDS), and communicating social disapproval of smoking in restaurants, bars or other public environments.

In discussion of prevention and cessation media campaigns, we indicated that it is not clear whether rural Alaska Native communities receive media in the same way as urban communities. In very small communities, messages to the public may be delivered in alternative formats that are unique. Identifying how community members receive information, and taking advantage of existing outlets, is an important first step in planning any campaign.

Most Alaska Natives already believe that secondhand smoke is harmful. As previously discussed, both youth (78%) and adults (71%) – particularly women (80%) and adults with children in the home (76%) – all believe that secondhand smoke is “very harmful.” This may suggest that campaigns could promote specific strategies to reduce exposure, rather than simply educating about the harm of exposure. One potential exception may be campaigns that educate adults about secondhand smoke as a cause of SIDS; less than half of adults reported knowledge of this association.

Summary of Key Findings:

Alaska Natives already express strong agreement about the harmfulness of secondhand smoke and knowledge about specific diseases related to secondhand smoke exposure, thus campaigns may not need to address these factors. One exception is knowledge about the association between secondhand smoke and SIDS, which was comparatively low.

Secondhand smoke campaign themes that may be useful include promoting specific strategies that communities or individuals can use to ban smoking in public environments or homes.

Recommendations:

Alaska Native communities should identify how their community members receive information (from media or alternative sources) and utilize those venues for delivering campaigns.

Campaign planners should investigate what kinds of sustained campaign themes will best resonate with the values of their Alaska Native community members.

Community-Based Programs

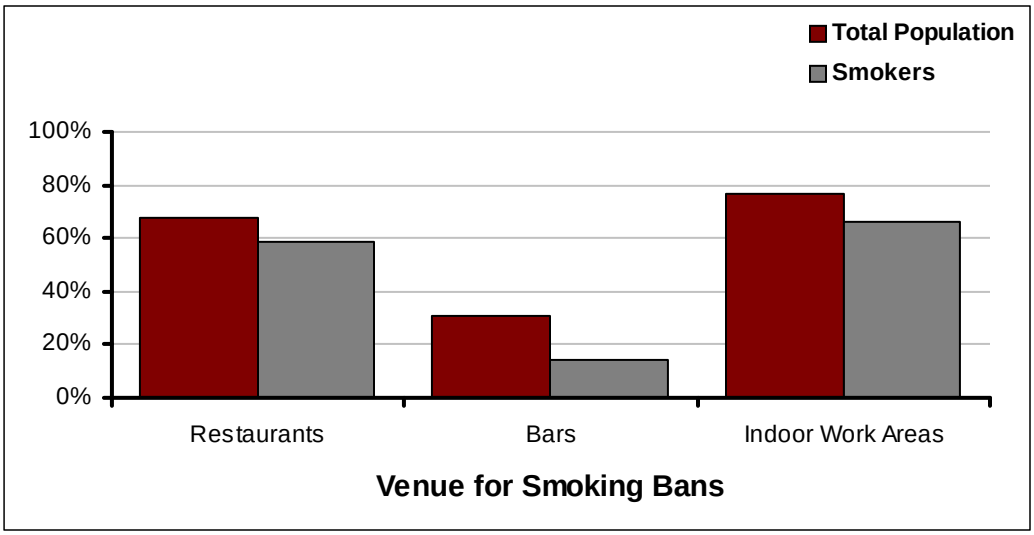
Smoking Bans in Public Environments

The Community Guide recommends smoking bans and restrictions as effective in reducing exposure to secondhand smoke. Bans, which prohibit smoking entirely, are more effective than restrictions, which limit areas where smoking is allowed. Smoking bans have been shown to reduce exposure in a wide variety of public workplaces and healthcare settings, and also reduce smoking among the workers or patrons where bans are implemented.

Alaska Native adults expressed high general agreement (86%) that all people should be protected from secondhand smoke. Adults were also asked about how much they supported banning smoking in specific establishments.

About 68% of Alaska Native adults, including 59% of smokers, expressed support for banning smoking in restaurants (see Figure 69). Substantially fewer (31% of all adults, 15% of smokers) supported smoking bans in bars. Highest agreement was reported for banning smoking in indoor work areas (which would include restaurants and bars from the perspective of the worker), with 77% of all adults and 67% of smokers supporting these bans.

Figure 69: Percent Who Support Banning Smoking in Different Venues Among Alaska Native Adults



Source: Alaska BRFSS 2004-05, see Appendix B – Tables 76, 77, 78.

There were some differences by subgroup in support for smoking bans, particularly for bans in bars (see Figure 70).

Alaska Native women were significantly more likely than men to support smoking bans in restaurants (73% vs. 62%) and indoor work areas (86% vs. 69%). Agreement was not significantly different for support of smoking bans in bars.

Although younger adults were more likely than older adults to have knowledge about specific harms of secondhand smoke and to agree that all people should be protected from secondhand smoke, they were significantly less likely than older adults to support bans in bars (20% among adults age 18-24 vs. 45% among adults 65 and older). Support for bans in restaurants and indoor work areas was similar by age group.

Support for banning smoking in restaurants and bars was similar among geographic regions of the state, but support for bans in indoor work areas was significantly higher in Rural Alaska than in Anchorage, the Gulf Coast or the Southeast (83% vs. 69-72%).

Adults with children in the home were more likely to support bans in all environments than adults without children in the home (73% vs. 59% for restaurants, 34% vs. 25% for bars, and 83% vs. 68% for indoor work areas).

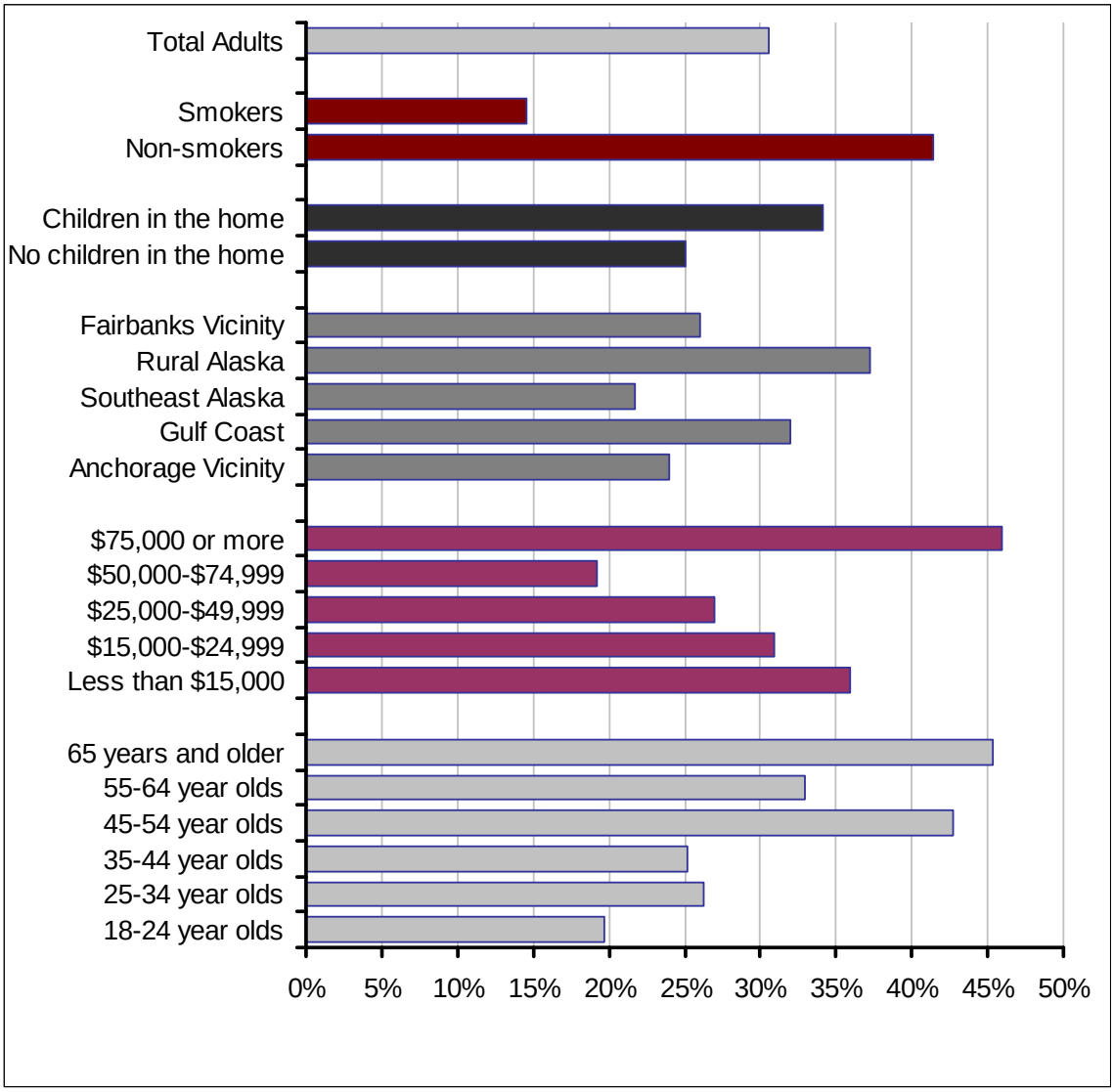
Similarly, non-smokers were consistently more likely than smokers to support bans in all environments (74% vs. 59% for restaurants, 41% vs. 15% for bars, and 84% vs. 67% for indoor work areas).

There were not significant associations for differential support of bans in any environment by income or education groups.

The high level of support for non-specific “protection from secondhand smoke” contrasts with lower reported support for bans in specific venues. Although these findings may indicate that Alaska Natives are more conservative about making policy commitments than in agreeing to the need for them, a portion of the difference could also be related to differential framing of the questions as “protection” vs. “banning.” In any case, the groups most likely to be in support of bans usually represent large population blocks, suggesting that specific policies that provide protection from secondhand smoke may garner wide support.

We do not have information about the actual prevalence of smoking bans in restaurants, bars, or indoor work areas in Alaska Native communities or statewide. Those implementing tobacco control activities in local communities should assess the presence of existing bans during planning stages of their program.

Figure 70: Percent Who Support Banning Smoking in Bars Among Alaska Native Adults



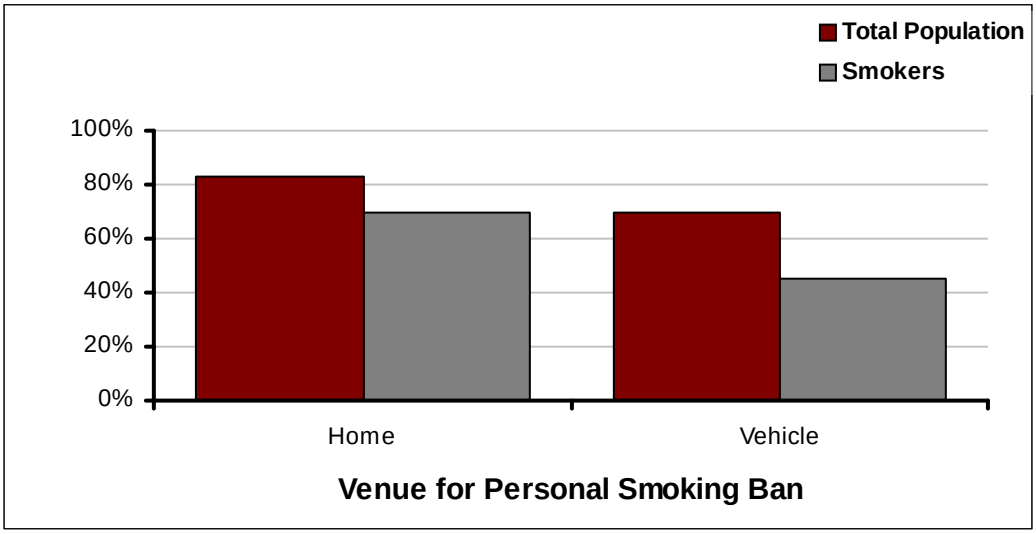
Source: Alaska BRFSS 2004-05, see Appendix B - Table 77.

Smoking Bans in Private Homes/Vehicles

Alaska Native adults were asked about the rules in their home and personal vehicles. We categorized adults who said that “smoking is never allowed” as having a home or vehicle “smoking ban.”

Eighty-three percent of Alaska Native adults had a home smoking ban (see Figure 71). Smoking bans were more commonly reported among women than men (88% vs. 79%), adults with children in the home than those without (95% vs. 68%), among Rural Alaskans than non-rural Alaskans (89% vs. 79%), and among non-smokers than smokers (91% vs. 70%). The 70% prevalence of home bans among current smokers is encouraging.

Figure 71: Percent Who Ban Smoking in Their Personal Homes/Vehicles



Source: Alaska BRFSS 2005, see Appendix B - Tables 79, 80.

About 70% of all Alaska Native adults had a smoking ban in all their personal vehicles. In contrast to home bans, there were no significant associations by gender, presence of children in the home, or geographic region. Adults with more education were more likely to have vehicle bans than those with less education (82-84% among those with some college vs. 61-65% among those with high school or less education), and those with higher incomes were more likely to have vehicle bans than those with lower incomes (91% among those with annual household income of $75,000 or more vs. 65% among those with an annual household income less than $15,000). Non-smokers were nearly twice as likely as smokers to have vehicle bans (85% vs. 45%).

These findings, taken together with the reported exposure of non-smoking adults and youth, indicate that improvements could be made in increasing the prevalence of vehicle bans among Alaska Natives, similar to the high prevalence of home bans. We did not find any studies that documented the process, specific methods, and facilitators or barriers to implementing smoking bans in homes or vehicles among Alaska Natives. However, such studies could be useful at the state or community level to support implementation of personal bans.

Summary of Key Findings:

Support for smoking bans in specific venues is somewhat lower than general support for protecting people from secondhand smoke.

There is strong agreement for banning smoking specifically in indoor work areas (similar to the proportion of adults who believe all people should be protected from secondhand smoke); there is lower agreement, although still a clear majority, for supporting bans in restaurants, and a minority of adults (fewer than one-third) support banning smoking in bars.

Most Alaska Natives have implemented personal home bans and many have also banned smoking in their personal vehicles.

Recommendations:

Activities that promote banning smoking in restaurants, bars or other public places in Alaska Native communities should begin with an assessment of the current presence of bans in a variety of venues and focus on presenting these areas as indoor work environments.

Activities to promote personal home and vehicle bans among Alaska Natives may benefit from focused attention to convince men, non-rural Alaskans, and low-income/less educated Alaskans of the benefits of those bans.

Studies to describe adoption of personal home/vehicle bans among Alaska Natives, and cultural factors that assist or are barriers to ban adoption, may be useful.

VIII. Who is Most Affected?

Data and Program Recommendations

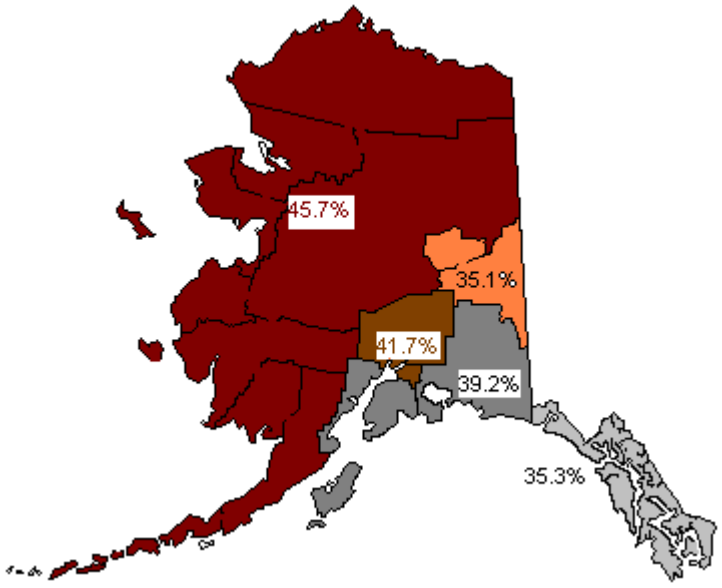
Public health programs are typically planned and implemented with specific populations in mind. Sometimes programs are targeted to general populations within geographic areas, to specific population groups across areas or within system (such as within healthcare systems or a workforce), and sometimes both.

Findings from this report are summarized here according to geographic regions and characteristics of individuals, to assist those who are planning Alaska Native programs in most easily digesting results for their use.

Geographic Variation

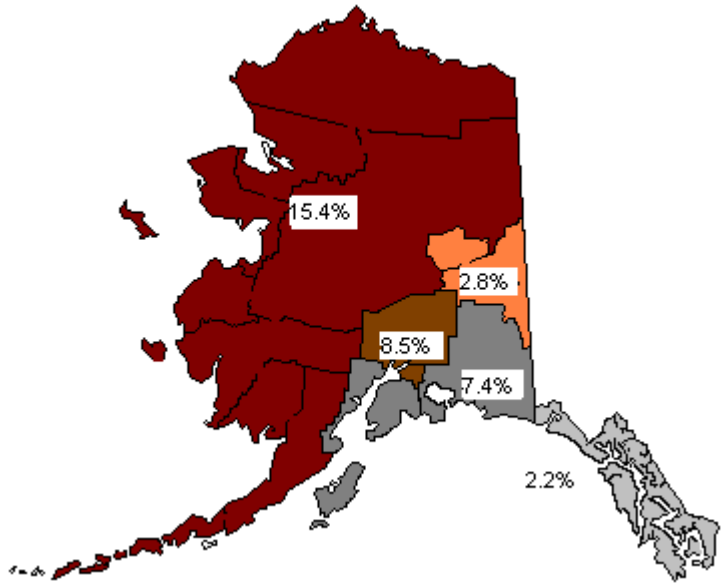
The following is a summary of findings to describe Alaska Natives who live in specific geographic regions of the state. Youth data were not available to describe any sub-regions of the state, thus the only findings we present that are specific to geographic regions relate to adults (from BRFSS, see Figures 72-73) and pregnant women (from PRAMS, see Figures 74-75). The BRFSS and PRAMS regional breakouts, which are dictated by survey sampling methods, are slightly different; please refer to the map in Appendix C for a comparison of the regions from the two surveys.

Figure 72: Current Cigarette Smoking Among Alaska Native Adults by Geographic Region



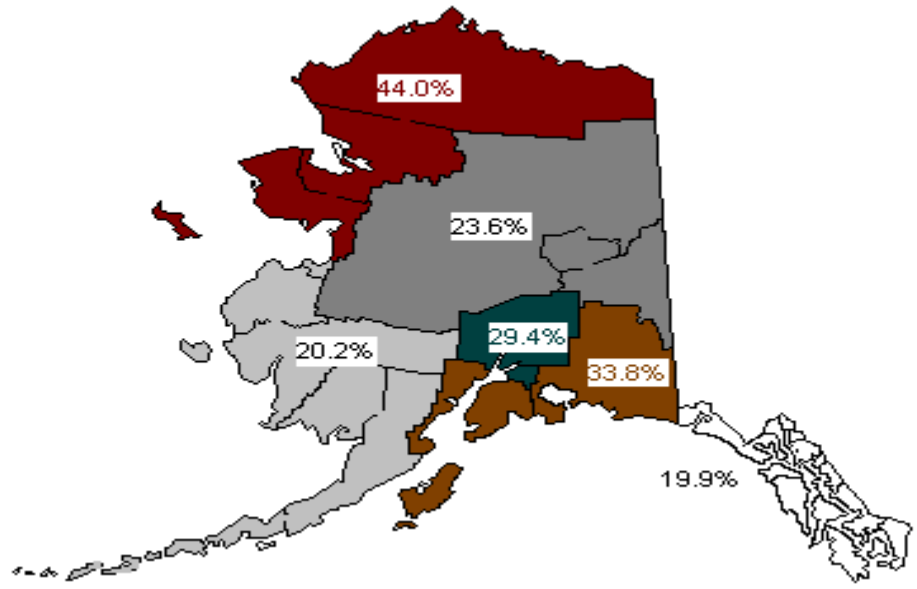
Source: Alaska BRFSS 2004-05, see Appendix B - Table 2.

Figure 73: Current Smokeless Tobacco Use Among Alaska Native Adults by Geographic Region



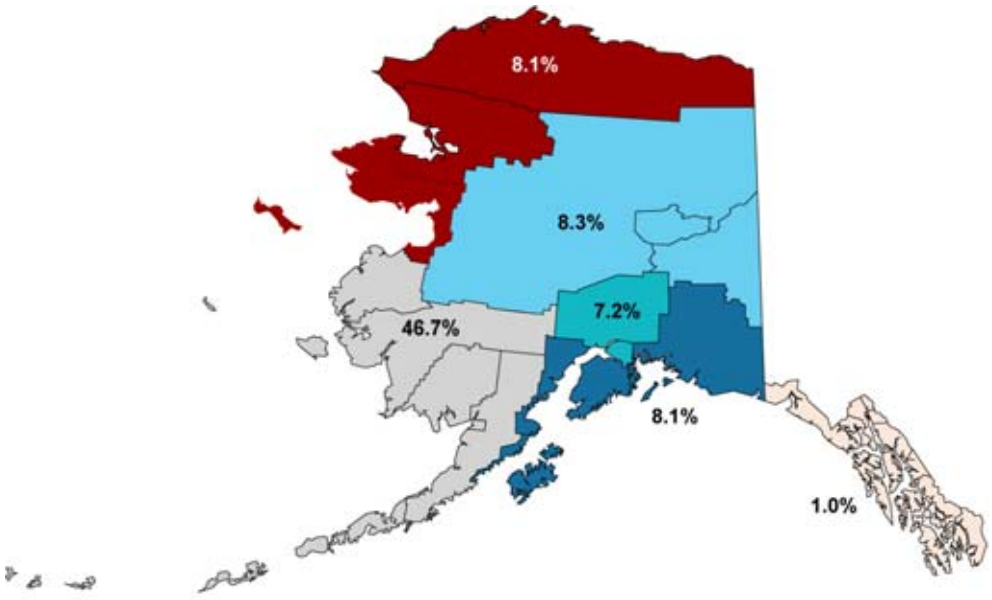
Source: Alaska BRFSS 2004-05, see Appendix B - Table 5.

Figure 74: Cigarette Smoking During Last Three Months of Pregnancy Among Alaska Native Women by Geographic Region



Source: Alaska PRAMS 2000-03, see Appendix B - Table 24.

Figure 75: Smokeless Tobacco Use During Pregnancy Among Alaska Native Women by Geographic Region



Source: Alaska PRAMS 2000-03, see Appendix B - Table 29.

Anchorage and vicinity:

BRFSS findings for Adults

- Although prevalence of tobacco use is not higher in the Anchorage Region than in other parts of the state (42% smoking and 9% smokeless tobacco use), because many of the state's Alaska Natives live in the Anchorage area there are large populations of adult smokers (about 8,800) and smokeless users (about 1,800)

PRAMS findings for Pregnant Women

- Although the prevalence of smoking during pregnancy is not higher in Anchorage than for other regions (29% during last three months of pregnancy), there are more babies born to smoking mothers who live in Anchorage than in other regions – about 230 per year

Gulf Coast:

BRFSS findings for Adults

- Adult smoking among Alaska Natives is similar in the Gulf Coast Region to the state overall (39%) – there are about 2,200 adult smokers in this region

- Adult smokeless tobacco use in the Gulf Region is similar to the state as a whole (7%) and there are an estimated 300 adult smokeless users in this region
- A small amount Iqmik use (1% prevalence) may occur in the Gulf Coast region

PRAMS findings for Pregnant Women

- Smoking during pregnancy for the Gulf Coast region is similar to that statewide - about 34% of women smoked during their last three months of pregnancy, translating into about 40 infants per year born to mothers who smoked
- Women in this region are significantly more likely to report that their new baby was ever in the room with someone who was smoking (10% vs. 2-5% in other regions)

Southeast Region:

BRFSS findings for Adults

- Adult smoking among Alaska Natives in the Southeast Region is similar to the state overall (35%) – there are about 2,900 estimated adult smokers in this region
- Smokeless tobacco use is low in the Southeast Region (2%) in comparison to the state overall (11%) – there are only an estimated 200 adult smokeless users in this area

PRAMS findings for Pregnant Women

- Smoking during pregnancy for the Southeast Region is similar to that statewide – about 20% of mothers smoked during their last three months of pregnancy, translating into about 40 infants per year born to mothers who smoked
- Alaska Native mothers in this region are the most likely to quit smoking successfully during pregnancy (56%)

Fairbanks and Vicinity (included in Interior Region for PRAMS):

BRFSS findings for Adults

- Adult smoking among Alaska Natives in the Fairbanks Region is similar to the state overall (35%) – there are an estimated 1,500 adult smokers in this area
- Adult smokeless tobacco use is low in the Fairbanks Region (3%) in comparison to the state overall (11%) – there are only an estimated 100 adult smokeless users in this area

Rural Alaska (Reported alone for BRFSS; reported separately as Southwest, Northern and Interior areas in PRAMS):

Please note: The "rural" region is so vast and diverse in Alaska Native communities that an aggregate description relying on public health data may be much less useful than a more subjective assessment of local communities.

BRFSS findings for Adults

- Smoking prevalence in Rural Alaska is similar to the prevalence statewide (46% vs. 42%) but due to the large proportion of Alaska Natives who live in Rural Alaska, the majority of Alaska Native adult smokers are located here too – an estimated 15,800 people
- Smokeless tobacco use prevalence in Rural Alaska is not significantly different than the prevalence statewide (15% vs. 11%), but due to the large proportion of Alaska Natives who live in Rural Alaska the majority of Alaska Native adult smokeless tobacco users are located here too – an estimated 5,400 people
- Iqmik use is highest in this region among all adults (6%) and most adult Iqmik users live in this area – an estimated 2,100 people
- Significantly fewer adults in rural than non-rural Alaska believe it is very important to keep stores from selling tobacco to minors (80% vs. 91%)
- Adults in this region are less likely than adults in non-rural regions to have visited a healthcare provider in the previous year (40% vs. 66%)
- Adults in this region are significantly less likely to report exposure to secondhand smoke in vehicles during the past month than adults in non-rural regions (20% vs. 35-48%)
- Support for smoking bans in indoor work areas is higher in Rural Alaska than in Anchorage, the Gulf Coast or Southeast Regions (83% vs. 69-72%)
- Rural Alaska Natives are more likely than non-Rural Alaska Natives to have smoking bans in their homes (89% vs. 79%)

Southwest Region (Reported alone for PRAMS, included in Rural Alaska for BRFSS):

PRAMS findings for Pregnant Women

- Smoking prevalence is significantly lower in the Southwest Region than in other regions among women pre-pregnancy (31%) and during last three months of pregnancy (20%) – an estimated 140 infants per year are born in this region to mothers who smoke
- Smokeless tobacco use during pregnancy is significantly higher than for other regions at pre-pregnancy (50%) and during pregnancy (47%) –

about two-thirds of babies born to mothers who use smokeless tobacco are born in the Southwest Region

- Women in this region are less likely than women in other regions to quit using smokeless tobacco during pregnancy (11% vs. 37-39% in other regions)

Northern Region (Reported alone for PRAMS, included in Rural Alaska for BRFSS):

PRAMS findings for Pregnant Women

- Smoking prevalence is significantly higher than in other regions among women prior to pregnancy (59%), and in the last three months of pregnancy (44%) – an estimated 180 infants per year are born in this region to mothers who smoked during pregnancy
- Alaska Native mothers in this region are less likely than mothers in other regions to quit smoking during pregnancy (25%)
- Alaska Native mothers in this region who smoked after pregnancy are less likely than mothers in other regions to be interested in quitting (65%)

Interior Region (Reported alone for PRAMS – but includes Fairbanks Region from BRFSS; included in Rural Alaska Region for BRFSS):

PRAMS findings for Pregnant Women

- Smoking prevalence during pregnancy in the Interior Region is similar to rates statewide - about 24% of mothers smoked during the last three months of pregnancy, this translates into about 60 infants per year born in this region to mothers who smoked
- There were no findings in PRAMS where women in the Interior region are significantly different than women in other regions

Summary of Key Findings:

There are differences in tobacco use patterns among Alaska Natives in Alaska's geographic regions.

The geographic regions described in this report are extremely large and summary descriptions of any region may not accurately reflect conditions in its diverse individual communities.

Recommendations:

State and Regional programs to serve Alaska Natives should consider regional variations in tobacco use or associated factors when supporting implementation of local tobacco control activities.

Community-based programs should use data from this report and also carefully assess their own situation as part of program planning.

Personal Characteristics and Risk

Gender

Men

- Men have higher rates of smoking and smokeless tobacco use than women, and high school boys have higher rates of smokeless tobacco use than girls
- Men and women have similar prevalences of Iqmik use
- Men are less likely than women to have visited a healthcare provider during the previous year (42% vs. 73%)
- Men are less likely than women to report believing that secondhand smoke is "very harmful" (74% vs. 80%)
- Men are less likely than women to support smoking bans in restaurants (62% vs. 73%) and indoor work areas (69% vs. 86%)
- Men are less likely than women to have smoking bans in their homes (79% vs. 88%)

Women

- Alaska Native women have very high rates of smoking and smokeless tobacco use in comparison to non-Native women
- Men and women have similar prevalences of Iqmik use

- Women of childbearing age are of particular importance because of their potential for exposing unborn children to tobacco toxins

Age

Youth/Children

- Smoking and tobacco use prevalence is very high among Alaska Native youth in comparison to non-Native youth
- Most adults who use tobacco began doing so prior to age 18, thus this group is important to target for prevention activities – see section on Prevention
- Youth are more likely than adults to use combinations of tobacco products rather than exclusively using cigarettes or smokeless tobacco
- Youth are much more likely than adults to report any indoor exposure to secondhand smoke
- Youth are more likely than adults over age 25 to report believing that secondhand smoke is “very harmful” (78%)

Younger adults (ages 18-34)

- This group has the highest adult prevalence of smoking of any age group (48-50%) and represents a large numbers of adult smokers (about 13,800)
- Smokeless tobacco use is high among this group (11-13%) and there are an estimated 3,100 smokeless users in this group
- Women in this group are those most likely to become pregnant, and also have the highest smoking rates during pregnancy (52-55% among those younger than 25)
- Smokers in this group are the most likely to make quit attempts (76% among those 18-24 had made one or more quit attempts during the past year)
- Mothers in this group are the most likely of any age group to quit smoking successfully (44%) and quit smokeless tobacco use successfully (32%) during pregnancy
- Younger adults are less likely than older adults to support smoking bans in bars (20% among adults age 18-24 vs. 45% among those 65 and older)

Middle-aged adults (ages 35-54)

- This group has a high adult prevalence of smoking (42-45%) and represents large numbers of adult smokers (about 13,800)

- Smokeless tobacco use is similar to prevalence among young adults (12-15%), and this group makes up the largest number of smokeless tobacco users (about 4,400)
- Smokeless tobacco use among women during pregnancy is highest among women age 35 and older (20-24%)
- Adults age 45 and older are more likely than younger adults to have visited a healthcare provider during the previous year (74% vs. 44%)

Seniors (age 55 and older)

- The prevalence of smoking and smokeless tobacco is lowest among this group, and they also make up the smallest number of tobacco users (about 4,100 smokers and smokeless tobacco users combined)
- Adults smokers in this group are the least likely to make quit attempts (36% of current smokers made an attempt during the past year)
- Older adults are less likely than younger adults to have correct knowledge of specific health effects associated with secondhand smoke exposure (33% among those 55 and older vs. 66% among those 18-24)
- Older adults are less likely than young adults to agree that all people should be protected from secondhand smoke (71% among those 55 and older vs. 95% among those 18-24)

Socioeconomic Status (Education, Income)

Adults with less education and/or lower income

- Adults in the lowest income bracket (less than $15,000 annual household income) have the highest smoking rates of any income category (46%)
- Adults with the least education have the highest smoking rates (46-49% among those with high school or less education in comparison to 21-33% among those with some or more college) – those with high school or less education are also a large share of the total number of adult smokers (an estimated 24,500)
- Iqmik use is almost entirely restricted to adults with an annual household income less than $50,000
- Smoking among women pre-pregnancy is highest among those with the least education (40% among those with high school or less vs. 17% among college graduates), and women with the least education are also the least likely to quit successfully during pregnancy (27% among those with less than high school education) and most likely to relapse (64% among mothers with less than high school education)
- Successful quitting is lower among adults with less education (16% among those with a high school education or less vs. 24% among those

with some or more college), and also lower with progressively lower income levels (25% among those with annual household income of $50,000 or more vs. 12% among those with less than $15,000 household income)

- Lower income people are more likely to report exposure to secondhand smoke in the home than higher income people (29% among those with annual household income less than $15,000 vs. 5% among those with annual household income of $75,000 or more)
- Lower income people are more likely than higher income people to report knowledge about specific health effects (56% among those with annual household income less than $15,000 vs. 23% among those with annual household income of $50,000 or more)
- Adults with less education or less income are also less likely to have smoking bans in their personal vehicles (61-65% vehicle bans vs. 82-84% among those with some college; 65% among those with annual household income less than $15,000 vs. 91% among those with annual household income of $75,000 or more)

Family Status

Adults with Children in the Home

- This group has higher smokeless tobacco use than adults without children in the home (14% vs. 4%)
- Iqmik use is also higher among adults with children – an estimated 2,000 Alaska Native adults with children in the home use Iqmik
- Adult smokers with children in the home are more likely to have made a quit attempt during the past year than people without children
- Adults with children in the home are less likely to report that someone smoked in their home during the past month than adults without children (12% vs. 22%), and also that they were exposed to secondhand smoke in vehicles during the past month (27% vs. 41%)
- Adults with children in the home are more likely than those without children in the home to report believing that secondhand smoke is “very harmful” (76% vs. 62%)
- Adults with children in the home are more likely than those without children in the home to report believing that all people should be protected from secondhand smoke (92% vs. 77%)
- Adults with children in the home are more likely than those without to support smoking bans in all environments (73% vs. 59% for restaurant bans, 34% vs. 25% for bar bans, and 83% vs. 68% for indoor work areas bans)

- Adults with children in the home are more likely than those without to have smoking bans in their homes (95% vs. 68%)

Other Risk Factors

Substance abuse

- Youth who use alcohol, marijuana, who are depressed, and who are sexually active are all more likely to smoke cigarettes – we did not conduct new analyses of these associations for adults, but published research suggests that the same is true for adults
- Smoking bans have been shown to be effective in a wide variety of facilities, and this may include substance abuse treatment facilities.

Summary of Key Findings:

Within the Alaska Native population statewide there are specific demographic subgroups at-risk for excess harm from tobacco use.

Although we did not have the ability to analyze subgroups within regions, we can assume that these patterns of risk may be similar in any particular area of the state.

Recommendations:

People working to serve Alaska Natives in different areas may want to join together to maximize impact on some subgroups that are at greatest risk.

Sharing information with partners throughout the state about already existing or on-going evaluations of any activities that serve Alaska Native groups at-risk is a particularly important step in furthering knowledge about “what works” and “what doesn’t work” for the people who need help most.

Appendix A: Data Sources

Alaska Behavioral Risk Factor Surveillance System (BRFSS)

BRFSS is an anonymous telephone survey of adults conducted by the Alaska Division of Public Health since 1991 in cooperation with the CDC. The survey includes questions about health-related behaviors and health status. Interviews are conducted throughout the year and combined by calendar year.

The BRFSS uses a random digit dial method to select a representative sample of Alaska adults. The sample is stratified into five regions, with roughly equal numbers of interviews conducted in each region. One survey respondent from each selected household is randomly chosen from among the adults living in the household. People without home-based telephones are not eligible for sampling (that is, persons living in dormitories, military housing, prisons, nursing homes and other institutional settings). Cell phones are not available for sampling, so individuals who use only cell phones as their home telephone are ineligible. Alaska's BRFSS is administered only in English.

Data are weighted to compensate for under- or over-representation of people from any subgroup and appropriately reflect the general population.

For most of our analyses we included only the more than 2,000 Alaska Native adults who participated in the survey during the years 2004-2005. See Appendix C "Defining Alaska Natives" for information about the definition of Alaska Natives in surveys. Demographic characteristics of those adults are summarized in the table below. In 2004 and 2005, about half of Alaska respondents received the "core" Alaska survey and a modified version of the BRFSS survey that included a variety of tobacco-related questions. Therefore, the total number of respondents for these questions is less than the total number of respondents for "core" questions such as overall smoking.

BRFSS Core demographics for Alaska Native Adults

Alaska Native Adult Subgroup	Weighted % (95% ci)	Number in Survey
Gender		*No missings*
Males	49.8% (46.7-52.9)	961
Females	50.2% (47.1-53.3)	1,166
Age Group		*Missing = 33*
18-24 year olds	17.4% (14.9-20.3)	260
25-34 year olds	20.6% (18.1-23.2)	443
35-44 year olds	21.6% (19.2-24.1)	493
45-54 year olds	21.6% (19.1-24.4)	443
55 years and older	18.9% (16.7-21.2)	455
Education Level		*Missing = 9*
Less than high school graduate	22.5% (20.0-25.2)	465
High school graduate or GED	46.0% (43.0-49.1)	1,000
Some college or higher	31.5% (28.6-34.6)	653
Annual Household Income Group		*Missing = 384*
Less than $15,000	20.3% (18.0-22.9)	415
$15,000-$24,999	25.4% (22.5-28.5)	442
$25,000-$49,999	28.0% (25.1-31.2)	512
$50,000 or more	26.3% (23.1-29.8)	374
Geographic Region		*No missings*
Non-rural Alaska	53.0% (50.3-55.7)	799
Rural Alaska	47.0% (44.3-49.7)	1,328
Children in Household		*Missing = 5*
No children in the home	40.2% (37.1-43.3)	878
Children in the home	59.9% (56.7-62.9)	1244
Year of Survey		
2004 – total survey	--	1,017
2004 – modified survey (tobacco questions)	--	464
2005 – total survey	--	1,110
2005 – modified survey (tobacco questions)	--	566
Total		**2,127**

For any question, particularly when data are presented for demographic subgroups, we suppressed or collapsed groups if the total number of respondents (denominator) was less than 50. “Non-rural Alaska” includes all the BRFSS sampling regions other than the “rural Alaska” region (see Map 1, page 4).

Population Estimates

Caveats

- BRFSS may under-represent poorer or more mobile populations because they are less likely to live in homes with telephones
- Alaska's BRFSS findings may not accurately represent non-English speaking populations
- Health risk behaviors/attitudes may be underestimated because people might be reluctant to report behaviors/attitudes that others might not find acceptable (particularly over the phone to a stranger)
- Use of preventive services, including healthcare visits or receiving advice to quit smoking from a healthcare provider, might be underestimated because of recall error.

Further Information

For additional information about Alaska's BRFSS, please visit the BRFSS website:

http://www.hss.state.ak.us/dph/chronic/hsl/brfss/default.htm

Alaska Youth Risk Behavior Survey (YRBS)

The YRBS is a survey of high school students (grades 9-12) to describe health-related behaviors that contribute to morbidity, mortality and social problems among youth and adults. The Centers for Disease Control and Prevention (CDC) sponsors state and national surveys in the spring of odd-numbered years. In order to report results from the YRBS a participation rate of 60% or better must be achieved; Alaska achieved sufficient participation in 1995 and 2003.

The survey employs a two-stage sampling design to generate a state-level representative sample of Alaska's high school students: first schools are selected with a probability proportional to size, and then a random sample of classrooms is selected within the school. In 2003, active parental consent was required for students to participate in the Alaska YRBS. Students complete the anonymous questionnaire in classrooms, and standard collection procedures are used to protect students' confidentiality.

In the 2003 survey, 42 high schools from 19 districts were sampled. The overall response rate was 62% (90% for schools and 68% for students within schools). Data were weighted to reflect the true distribution of Alaska high school students by sex and grade level.

For most of our analyses we included only the nearly 300 Alaska Native students who participated in the survey in 2003. See Appendix C "Defining Alaska Natives" for information about the definition of Alaska Natives in surveys. Demographic characteristics and numbers of those students are summarized in the table below.

YRBS Core demographics for Alaska Native Students

Alaska Native Student Subgroup	Weighted % (95% ci)	Number in Survey
Gender		*No missing*
Males	48.3% (42.4-54.3)	138
Females	51.7% (45.8-57.7)	153
Grade Level		*Missing = 11*[†]
9-10th graders	61.7% (55.6-67.4)	176
11-12th graders	38.3% (32.6-44.4)	104
Academic Performance		*Missing = 47*[‡]
Students who get As/Bs	56.6% (50.0-63.0)	141
Students who get Cs/Ds/Fs	43.4% (37.0-50.0)	103
Additional Risk Factors		
Depression		*No missing*
Students with depression	25.1% (20.3-30.5)	77
Non-depressed students	74.9% (69.5-79.7)	214
Alcohol Use		*Missing = 16*
Students currently drink alcohol	37.6% (31.9-43.7)	102
Non-drinking students	62.4% (56.3-68.1)	173
Marijuana Use		*Missing = 15*
Students currently use marijuana	35.7% (30.1-41.8)	100
Non-using students	64.3% (58.2-69.9)	176
Sexual Activity		*Missing = 27*
Students ever had sex	50.3% (44.0-56.5)	132
Non-active students	49.7% (43.5-56.0)	132
TV-Watching		*No missing*
Students watch >2 hrs TV per day	62.1% (56.2-67.7)	178
Students watch 2 or less TV hrs	37.9% (32.3-43.8)	113
Total	**100%**	**291**

Tobacco use prevalence is presented among students with other risk factors indicated in the demographic table (for example, alcohol use and sexual activity) because we wanted to describe the complex issues at hand for youth who use tobacco. We also explored tobacco use among youth by seatbelt use, whether youth perceived "teachers care about me," whether youth reported their parents ask about school, part-time employment status, fruit/vegetable eating, and overweight status. None of these other factors was associated with smoking or tobacco use, so they were not included in the report.

[†] Includes 8 students who marked "ungraded or other grade"

[‡] Includes 40 students who indicated "not sure"

For any question, particularly when data are presented for demographic subgroups, we suppressed or collapsed groups if the total number of respondents (denominator) was less than 50.

Population Estimates

Caveats

- Youth who do not attend public schools are not represented in the findings. This includes youth attending private or tribal schools, students who completed school early, dropouts, and youth in detention facilities.
- All measures are self-reported, and may be influenced by perceptions of youth. Studies to examine the validity and reliability of YRBSS questions indicate that youth do accurately report their tobacco use and related factors.[53]
- YRBS does not ask specific questions about Iqmik use.

Further Information

For additional information about Alaska's YRBS, please visit the YRBS website:

http://www.hss.state.ak.us/dph/chronic/school/YRBS.htm

Alaska Pregnancy Risk Assessment Monitoring System (PRAMS)

PRAMS is an on-going survey of mothers of newborns initiated by the State of Alaska Division of Public Health, Section of Maternal, Child and Family Health in 1990. PRAMS was developed by the Centers for Disease Control and Prevention (CDC) Division of Reproductive Health and is part of CDC's initiative to reduce infant mortality and low birth weight. PRAMS collects state-specific, population-based data on maternal attitudes and experiences before, during, and after pregnancy.

A stratified sample is drawn each month from the state's live birth records (including for Alaska residents who deliver out of state) for infants between two and six months of age. Sampled mothers receive a series of mailed questionnaires, and telephone follow-up is used to gather information from those who do not respond to the mailed survey. Responses are confidential. PRAMS data are linked to birth certificate records to provide demographic information, including for maternal race.

In recent years the survey response rate has been approximately 80%. For most of our analyses we reported on only PRAMS data collected from 2,701 Alaska Native mothers during 2000-2003. See Appendix C "Defining Alaska Natives" for information about the definition of Alaska Natives in surveys. Demographic characteristics and numbers of these mothers in the survey are summarized in the table below.

PRAMS Core demographics for Alaska Native Mothers

Alaska Native Mothers Subgroup	Weighted % (95% ci)	Number in Survey
Maternal Age		*No missing*
Age <20	17.5% (15.6-19.6)	498
Age 20-24	38.4% (35.8-41.0)	861
Age 25-29	23.1% (20.9-25.4)	653
Age 30-34	13.2% (11.5-15.1)	383
Age 35+	7.9% (6.5-9.4)	306
Maternal Education		*Missing = 65*
Less than 12 years	23.5% (21.3-25.8)	711
12 years	52.1% (49.3-54.8)	1,453
13-15 years	19.5% (17.4-21.9)	354
16+ years	4.9% (3.8-6.3)	118
Medicaid coverage before pregnancy		*Missing = 29*
Medicaid covered	18.9% (17.0-21.0)	675
Other health coverage	81.1% (79.0-83.0)	1,997
Usual source of prenatal care		*Missing = 169*
Hospital clinic	21.4% (19.3-23.6)	894
Health department clinic	7.1% (5.8-8.7)	153
Private doctor's office	36.2% (33.5-39.0)	189
Alaska Native Clinic	17.1% (15.5-18.8)	1,039
Other	18.3% (16.1-20.6)	257
Geographic Region		*Missing = 5*
Anchorage/Mat-su	49.6% (46.9-52.3)	885
Gulf Coast	9.8% (8.3-11.7)	112
Interior	15.8% (13.8-17.9)	252
Northern	8.2% (7.2-9.4)	452
Southeast	9.2% (7.7-10.9)	225
Southwest	7.4% (6.4-8.5)	770
Year		
2000	--	648
2001	--	669
2002	--	681
2003	--	703
Total	**100%**	**2,701**

For any question, particularly when data are presented for demographic subgroups, we suppressed or collapsed groups if the total number of respondents (denominator) was less than 50.

Under "usual source of care" the group "other" includes women who received prenatal care in military facilities.

Population Estimates

Estimates of the population of Alaska Native women (or infants born to Alaska Native women) were created by multiplying the relevant percentage (for example, the percent of Alaska Native women who smoked cigarettes during their last three months of pregnancy) by the total number of births to Alaska Native women in 2003, 2460 births. We used 2003 because it was the most current year in the dataset (2000-2003). The Alaska PRAMS program provides estimates of populations of women using a different method, and any estimates provided by PRAMS should be considered more reliable than those presented in this report.

Caveats

- In spite of the confidential and anonymous survey format, women may significantly under-report behaviors that are perceived as unacceptable or harmful to the baby (for example, smoking during pregnancy, exposure of new baby to secondhand smoke)
- PRAMS does not currently distinguish between commercial smokeless tobacco use and Iqmik use by pregnant women, but one article mentioned that Iqmik-specific use has been added to the 2004 and more recent PRAMS instrument.

Further Information

For more information about Alaska PRAMS, please visit the PRAMS website at:

http://www.epi.hss.state.ak.us/mchepi/prams/default.stm

Appendix B: Data Tables

Prevalence Tables

Table 1. Trends in Adult Cigarette Smoking Among Alaskans*

Year	Alaska Natives % (95% confidence interval)	Non-Native Alaskans % (95% confidence interval)
1991	41.8% (34.8-49.0)	25.1% (21.7-28.8)
1992	52.4% (43.6-61.0)	25.2% (21.8-28.9)
1993	44.9% (36.9-53.1)	24.1% (20.9-27.7)
1994	39.9% (32.4-47.9)	27.2% (23.6-31.1)
1995	37.0% (29.8-44.9)	23.1% (19.9-26.7)
1996	47.3% (38.9-55.9)	24.9% (21.5-28.7)
1997	41.1% (33.6-49.0)	24.3% (20.9-28.1)
1998	39.8% (33.7-46.2)	23.8% (21.1-26.8)
1999	42.1% (35.3-49.4)	24.3% (21.1-27.8)
2000	42.9% (35.7-50.4)	22.3% (19.4-25.4)
2001	43.4% (37.4-49.6)	23.0% (20.5-25.7)
2002	44.1% (37.4-51.0)	26.7% (23.8-29.8)
2003	45.4% (39.2-51.7)	23.0% (20.6-25.7)
2004	44.0% (39.5-48.7)	20.9% (19.2-22.7)
2005	40.6% (36.6-44.7)	22.0% (20.2-23.9)
Joinpoint Tests for Trend	1991-2005: Slope not significantly different than zero	1991-2005: Significantly declining slope**

* percent of Alaska resident adults who responded “yes” to “have you smoked at least 100 cigarettes in your life?” and responded “everyday” or “some days” to “do you now smoke cigarettes everyday, some days or not at all?” – weighted percentage shown with 95% confidence interval in parentheses. Alaska Natives are adults who reported “American Indian/Alaska Native” as their primary race group affiliation; “non-Native” are adults who had a valid response and reported some race group other than “AI/AN” as their primary race group affiliation.

** The Joinpoint test model predicts a mean 0.3% decline per year.

Source: Alaska BRFSS

Data represented graphically in Figure 3.

Table 2. Current Cigarette Smoking Among Alaska Native Adults

Alaska Native Adult Subgroup	% who smoke cigarettes* (n=2098)	Number who smoke cigarettes**
Males	45.7% (41.0-50.4)	16,800
Females	39.0% (35.0-43.1)	14,500
Significant association (p=.04)		
18-24 year olds	48.1% (39.6-56.7)	6,100
25-34 year olds	50.4% (43.4-57.4)	7,700
35-44 year olds	45.1% (38.9-51.4)	7,200
45-54 year olds	41.5% (34.9-48.5)	6,600
55-64 year olds	32.5% (25.0-41.0)	2,900
65 years and older	14.3% (8.8-22.4)	700
Significant association (p<.001)		
Less than high school graduate	46.3% (39.8-52.9)	7,700
High school graduate or GED	49.4% (45.0-53.8)	16,800
College 1-3 years	32.9% (26.7-39.7)	5,300
College graduate	21.3% (14.7-29.8)	1,500
Significant association (p<.001)		
Less than $15,000	55.0% (48.5-61.4)	8,200
$15,000-$24,999	48.2% (41.3-55.1)	9,100
$25,000-$49,999	43.5% (37.2-50.0)	9,100
$50,000-$74,999	27.2% (19.4-36.6)	2,600
$75,000 or more	21.6% (14.2-31.5)	2,200
Significant association (p<.001)		
Anchorage and vicinity	41.7% (33.3-50.7)	8,800
Gulf Coast	39.2% (32.1-46.8)	2,200
Southeast Alaska	35.3% (29.1-42.0)	2,900
Rural Alaska	45.7% (42.6-48.9)	15,800
Fairbanks and Vicinity	35.1% (26.4-45.1)	1,500
Non-significant association		
No children in the home	40.9% (35.9-46.0)	12,100
Children in the home	43.4% (39.5-47.3)	19,200
Non-significant association		
Total	**42.3% (39.2-45.4)**	**31,200**

* percent of Alaska Native adults who responded “yes” to “have you smoked at least 100 cigarettes in your life?” and responded “everyday or some days” to “do you now smoke cigarettes everyday, some days or not at all?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who are current smokers – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 and 2005 combined surveys

Data represented graphically in Figures 4, 5, 6, 7.

Table 3. Current DAILY Cigarette Smoking Among Alaska Native Adults

Alaska Native Adult Subgroup	% who smoke daily* (n=2098)	Number who smoke daily**
Males	32.5% (28.2-37.1)	12,000
Females	24.3% (20.9-28.2)	9,000
Significant association (p=.005)		
18-24 year olds	29.4% (22.0-38.0)	3,700
25-34 year olds	34.2% (27.8-41.2)	5,200
35-44 year olds	29.8% (23.9-36.3)	4,700
45-54 year olds	30.3% (24.4-36.9)	4,800
55-64 year olds	21.8% (16.0-28.9)	1,900
65 years and older	12.8% (7.5-21.0)	700
Significant association (p=.01)		
Less than high school graduate	34.8% (28.8-41.4)	5,700
High school graduate or GED	31.9% (27.7-36.4)	10,900
College 1-3 years	21.0% (15.8-27.3)	3,400
College graduate	14.2% (8.8-22.2)	1,000
Significant association (p<.001)		
Less than $15,000	36.5% (30.3-43.1)	5,300
$15,000-$24,999	34.1% (27.6-41.3)	6,300
$25,000-$49,999	30.8% (25.1-37.2)	6,300
$50,000-$74,999	19.5% (12.9-28.2)	1,900
$75,000 or more	13.7% (7.7-23.3)	1,300
Significant association (p<.001)		
Anchorage and vicinity	30.5% (23.0-39.2)	6,500
Gulf Coast	26.6% (20.6-33.6)	1,400
Southeast Alaska	22.1% (17.0-28.2)	1,800
Rural Alaska	29.5% (26.7-32.5)	10,200
Fairbanks and Vicinity	23.8% (16.2-33.5)	1,100
Non-significant association		
No children in the home	27.4% (23.1-32.1)	8,100
Children in the home	29.2% (25.6-33.1)	12,800
Non-Significant association		
Total	**28.4% (25.6-31.4)**	**21,000**

* percent of Alaska Native adults who responded “yes” to “have you smoked at least 100 cigarettes in your life?” and responded “everyday” to “do you now smoke cigarettes everyday, some days or not at all?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who smoke every day – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 and 2005 combined surveys

Data not represented graphically in report.

Table 4. Trends in Adult Smokeless Tobacco Use Among All Adult Alaskans*

Year	Alaska Natives % (95% confidence interval)	Non-Native Alaskans % (95% confidence interval)
1991	12.3% (8.7-17.0)	4.6% (3.2-6.7)
1992	7.0% (4.5-10.8)	5.2% (3.3-8.2)
1993	16.0% (11.3-22.1)	3.6% (2.4-5.3)
1994	12.4% (8.5-17.8)	4.7% (3.2-6.8)
1995	12.0% (8.1-17.5)	6.0% (4.3-8.4)
1996	11.0% (7.5-15.9)	3.2% (2.1-4.8)
1997	11.5% (7.6-17.2)	4.7% (3.1-7.0)
1998	14.7% (10.2-20.8)	4.0% (2.8-5.7)
1999	12.4% (8.9-17.0)	4.2% (3.1-5.8)
2000	13.5% (10.2-17.7)	4.7% (3.2-6.9)
2001	18.0% (13.2-24.2)	4.1% (3.1-5.6)
2002	11.6% (8.7-15.1)	5.8% (4.4-7.6)
2003	NA	NA
2004	10.4% (6.1-17.1)	3.4% (2.5-4.6)
2005	10.8% (8.6-13.6)	4.0% (3.2-5.1)
Joinpoint Tests for Trend	1991-2005: Slope not significantly different than zero	1991-2005: Slope not significantly different than zero

* percent of Alaska resident adults who responded “yes” to ““do you currently use any smokeless tobacco products such as chewing tobacco or snuff, Iq’mik, or Blackbull?” – weighted percentage shown with 95% confidence interval in parentheses. Alaska Natives are adults who reported “American Indian/Alaska Native” as their primary race group affiliation; “non-Native” are adults who had a valid response and reported some race group other than “AI/AN” as their primary race group affiliation.

NA – Smokeless tobacco use was not included in the BRFSS questionnaire for 2003

Source: Alaska BRFSS

Data represented graphically in Figure 8.

Table 5. Current Smokeless Tobacco Use Among Alaska Native Adults

Alaska Native Adult Subgroup	% who use smokeless tobacco* (n=1486)	Number who use smokeless tobacco**
Males	13.9% (9.5-20.0)	5,300
Females	7.0% (4.8-10.2)	2,500
Significant association (p=.01)		
18-24 year olds	12.7% (6.8-22.6)	1,600
25-34 year olds	11.0% (7.7-15.5)	1,500
35-44 year olds	12.1% (8.8-16.4)	2,000
45-54 year olds	15.4% (7.2-30.2)	2,400
55-64 year olds	1.4% (0.6-3.7)	100
65 years and older	1.3% (0.3-5.0)	70
Significant association (p=.04)		
Less than high school graduate	6.8% (4.4-10.3)	1,200
High school graduate or GED	12.5% (9.4-16.4)	4,200
College 1-3 years	13.8% (5.7-29.6)	2,100
College graduate	4.7% (2.4-9.0)	300
Non-significant association		
Less than $15,000	13.1% (8.6-19.4)	1,900
$15,000-$24,999	10.1% (7.0-14.3)	1,900
$25,000-$49,999	8.8% (5.9-12.7)	1,900
$50,000-$74,999	2.3% (1.1-5.0)	200
$75,000 or more	20.4% (6.6-48.2)	2,000
Non-significant association		
Anchorage and vicinity	8.5% (2.7-24.0)	1,800
Gulf Coast	7.4% (3.7-14.1)	300
Southeast Alaska	2.2% (0.7-6.9)	200
Rural Alaska	15.4% (12.7-18.6)	5,400
Fairbanks and Vicinity	2.8% (0.9-8.3)	100
Non-significant association		
No children in the home	3.9% (2.5-6.1)	1,100
Children in the home	14.9% (10.8-20.2)	6,700
Significant association (p<.001)		
Total	**10.6% (7.9-14.0)**	**7,800**

* percent of Alaska Native adults who responded “yes” to “do you currently use any smokeless tobacco products such as chewing tobacco or snuff, Iq’mik, or Blackbull?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who use smokeless tobacco – estimated population size rounded to nearest 10 or 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified and 2005 combined surveys

Data represented graphically in Figures 9, 10, 11

Table 6. Current Iqmik/Blackbull Use Among Alaska Native Adults

Alaska Native Adult Subgroup	% who use Iq'mik/Blackbull* (n=1,486)	Number who use Iq'mik/Blackbull**
Males	3.4% (2.1-5.3)	1,300
Females	2.7% (1.7-4.1)	900
Non-significant association		
18-24 year olds	3.1% (1.1-8.6)	400
25-34 year olds	3.8% (2.3-6.1)	500
35-44 year olds	4.6% (2.7-7.5)	800
45-54 year olds	3.1% (1.5-6.3)	400
55-64 year olds	0.5% (0.1-3.7)	40
65 years and older	0.6% (0.1-4.4)	30
Non-significant association		
Less than high school graduate	2.7% (1.4-5.0)	400
High school graduate or GED	4.3% (2.8-6.4)	1,400
College 1-3 years	1.6% (0.6-4.2)	200
College graduate	1.2% (0.4-4.2)	100
Non-significant association		
Less than $15,000	4.0% (1.9-8.3)	500
$15,000-$24,999	4.7% (2.8-8.0)	900
$25,000-$49,999	3.5% (2.0-6.2)	800
$50,000-$74,999	0.3% (0.0-2.1)	30
$75,000 or more	0.0% (NA)	--
Significant association (p=.03)		
Anchorage and vicinity	0.0% (NA)	--
Gulf Coast	1.3% (0.3-6.0)	70
Southeast Alaska	0.0% (NA)	--
Rural Alaska	6.2% (4.5-8.5)	2,100
Fairbanks and Vicinity	0.0% (NA)	--
Significant association (p<.001)		
No children in the home	0.7% (0.3-1.7)	200
Children in the home	4.5% (3.2-6.4)	2,000
Significant association (p<.001)		
Total	**3.0% (2.2-4.2)**	**2,200**

* percent of Alaska Native adults who responded "yes, Iq'mik or Blackbull" to "do you currently use any smokeless tobacco products such as chewing tobacco or snuff, Iq'mik, or Blackbull?" – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who use Iq'mik or Blackbull – estimated population size rounded to nearest 10 or 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified and 2005 combined surveys

Data represented graphically in Figures 12, 13, 14.

Table 7. Current Smoking OR Smokeless Tobacco Use Among Alaska Native Adults

Alaska Native Adult Subgroup	% who use cigarettes or smokeless tobacco* (n=1,467)	Number who use cigarettes or smokeless tobacco**
Males	57.1% (50.7-63.2)	21,800
Females	42.8% (37.8-47.8)	15,300
Significant association (p<.001)		
18-24 year olds	57.6% (45.4-68.9)	7,700
25-34 year olds	54.5% (46.0-62.7)	7,800
35-44 year olds	57.2% (48.9-65.2)	9,700
45-54 year olds	52.0% (42.5-61.3)	8,000
55-64 year olds	37.0% (27.2-48.0)	3,200
65 years and older	16.0% (7.8-30.1)	900
Significant association (p<.001)		
Less than high school graduate	50.6% (40.9-60.1)	8,600
High school graduate or GED	58.5% (53.1-63.7)	19,900
College 1-3 years	44.6% (34.9-54.8)	6,800
College graduate	23.9% (16.6-33.1)	1,800
Significant association (p<.001)		
Less than $15,000	64.9% (56.6-72.4)	9,600
$15,000-$24,999	57.5% (48.6-65.9)	11,000
$25,000-$49,999	48.0% (40.2-56.0)	10,400
$50,000-$74,999	24.7% (16.1-35.9)	2,400
$75,000 or more	38.5% (22.5-57.4)	3,700
Significant association (p<.001)		
Anchorage and vicinity	48.3% (36.7-60.0)	10,100
Gulf Coast	42.6% (33.2-52.6)	2,100
Southeast Alaska	37.3% (29.1-46.4)	3,300
Rural Alaska	56.6% (52.3-60.8)	19,700
Fairbanks and Vicinity	42.8% (31.1-55.3)	1,900
Significant association (p=.03)		
No children in the home	44.3% (37.7-51.2)	12,700
Children in the home	53.9% (48.7-59.0)	24,300
Significant association (p=.03)		
Total	**50.2% (46.0-54.3)**	**37,100**

* percent of Alaska Native adults who are current smokers or who currently use chewing tobacco– weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who are current smokers or use smokeless tobacco – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified and 2005 combined surveys

Data not represented graphically in report (except as utilized in Table 8).

Table 8. Summary of Current Tobacco Use Status Among Alaska Native Adults

Type or Combination of Tobacco Currently Used	% total adults who used this type/combination of tobacco*	Number who used this type/combination of tobacco**
Current Cigarette Smoking	42.3% (39.2-45.4)	31,300
Daily Cigarette Smoking	28.4% (25.6-31.4)	21,000
Current Smokeless Tobacco	10.6% (7.9-14.0)	7,800
Current Iqmik/Blackbull	3.0% (2.2-4.2)	2,200
Both Cigarettes AND Smokeless	1.9% (1.2-2.8)	1,400
Either Cigarettes OR Smokeless	50.2% (46.0-54.3)	37,100

* percent of Alaska Native adults who are current users of this type or combination of tobacco types - weighted percentage shown with 95% confidence interval in parentheses. Groups are not mutually exclusive.

** estimated number of Alaska Native adults in the state who are current users of this type/types of tobacco – estimated population size rounded to nearest 100. Estimates are not mutually exclusive.

Source: Alaska BRFSS - 2004 modified and 2005 combined surveys

Data represented graphically in Figure 15.

Table 9. Trends in Lifetime Cigarette Smoking Among High School Students in Alaska*

Year	Alaska Natives % (95% confidence interval)	Non-Native Alaskans % (95% confidence interval)
1995	90.7% (85.4-94.3)	69.0% (66.5-71.5)
2003	83.0% (78.0-87.0)	48.1% (45.0-51.2)
Tests for trend: *non-significant interaction – trend not different from AN and non-Native youth*	*Significant reduction (9% relative decrease) for AN from 1995-2003 (p=.02)*	*Significant reduction (30% relative decrease) for non-AN from 1995-2003 (p<.001)*

* percent of students among total Alaska students who responded “yes” to “have you ever tried cigarette smoking, even just a puff” – weighted percentage shown with 95% confidence interval in parentheses.

Source: 1995 and 2003 Alaska YRBS

Data represented graphically in Figure 16.

Table 10. Ever Smoked a Cigarette Among Alaska Native High School Students

Alaska Native Student Subgroup	% who have Tried Smoking Cigarettes* (n=282)	Number who have Tried Smoking Cigarettes**
Males	81.0% (73.0-87.0)	2,900
Females	84.4% (77.6-89.4)	3,400
Non-significant association		
9-10th graders	83.6% (77.0-88.6)	4,000
11-12th graders	81.2% (72.3-87.6)	2,300
Non-significant association		
Students who get As/Bs	76.2% (68.2-82.7)	3,400
Students who get Cs/Ds/Fs	90.8% (82.8-95.3)	2,900
Significant association (p=.006)		
Total	**83.0% (78.0-87.0)**	**6,400**

* percent of students among total Alaska Native students who responded “yes” to “have you ever tried cigarette smoking, even just a puff” – weighted percentage shown with 95% confidence interval in parentheses

** number of total estimated Alaska Native students in the state who have tried smoking within this subgroup – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: 2003 Alaska YRBS

Data not represented graphically in report.

Table 11. Ever Smoked Cigarettes Regularly Among Alaska Native High School Students

Alaska Native Student Subgroup	% who have ever smoked daily for at least a month* (n=290)	Number who have ever smoked daily for at least a month**
Males	25.8% (18.8-34.4)	940
Females	28.4% (21.6-36.5)	1100
Non-significant association		
9-10th graders	27.5% (21.1-34.9)	1300
11-12th graders	28.2% (20.1-38.1)	800
Non-significant association		
Students who get As/Bs	16.9% (11.3-24.5)	750
Students who get Cs/Ds/Fs	40.0% (30.5-50.2)	1300
Significant association (p<.001)		
Students who currently smoke	54.5% (45.0-63.6)	1800
Non-smoking students	5.5% (2.6-11.2)	190
Significant association (p<.001)		
Total	**26.9% (21.9-32.6)**	**2100**

* percent of students among total Alaska Native students who responded "yes" to the question "have you ever smoked cigarettes daily – that is, every day for at least 30 days?"

** number of total estimated Alaska Native students in the state who have ever smoked daily for at least a month within this subgroup – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: 2003 Alaska YRBS

Data represented graphically in Figure 17.

Table 12. Trends in Current Cigarette Smoking Among All Alaska High School Students*

Year	Alaska Natives % (95% confidence interval)	Non-Native Alaskans % (95% confidence interval)
1995	61.9% (54.2-69.0)	32.4% (29.9-35.1)
2003	44.2% (38.2-50.4)	12.3% (10.4-14.5)
Tests for trend: *Significant interaction – trend is different for AN and non-AN youth (p=.03)*	*Significant reduction (29% relative decrease) for AN from 1995-2003 (p<.001)*	*Significant reduction (62% relative decrease) for non-AN from 1995-2003 (p<.001)*

* percent of students among total Alaska high school students who gave a valid response other than "0 days" to the question "in the past 30 days, on how many days did you smoke cigarettes?" This is the nationally accepted definition for "current smoking" among youth.

Source: 1995 and 2003 Alaska YRBS

Data represented graphically in Figure 18.

Table 13. Current Cigarette Smoking Among Alaska Native High School Students

Alaska Native Student Subgroup	% who smoked cigarettes during past month* (n=268)	Number who smoked cigarettes during past month**
Males	39.7% (31.0-49.0)	1400
Females	48.7% (40.3-57.2)	2000
Non-significant association		
9-10th graders	46.5% (38.6-54.6)	2200
11-12th graders	42.2% (32.5-52.5)	1200
Non-significant association		
Students who get As/Bs	31.2% (23.6-39.8)	1400
Students who get Cs/Ds/Fs	58.9% (48.3-68.8)	1900
Significant association (p<.001)		
Students with Additional Risk Factors		
Students with depression	61.0% (48.6-72.2)	1200
Non-depressed students	38.8% (32.0-46.1)	2200
Significant association (p=.002)		
Students currently drink alcohol	67.0% (56.6-76.1)	2000
Non-drinking students	30.5% (23.5-38.4)	1500
Significant association (p<.001)		
Students currently use marijuana	77.1% (67.1-84.7)	2100
Non-using students	25.3% (19.0-32.9)	1200
Significant association (p<.001)		
Students ever had sex	63.3% (54.2-71.5)	2400
Non-active students	22.4% (15.5-31.2)	900
Significant association (p<.001)		
Students watch >2 hrs TV per day	37.8% (30.4-45.9)	1100
Students watch 2 or less TV hrs	55.1% (45.2-64.6)	2600
Significant association (p=.008)		
Total	**44.2% (38.1-50.5)**	**3,400**

* percent of students among total Alaska Native students who gave a valid response other than "0 days" to the question "in the past 30 days, on how many days did you smoke cigarettes?" This is the nationally accepted definition for "current smoking" among youth.

** number of total estimated Alaska Native students in the state who have smoked cigarettes in the past 30 days within this subgroup – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: 2003 Alaska YRBS

Data represented graphically in Figures 19,20,37.

Table 14. Frequency of Cigarette Smoking (days/month) Among Alaska Native High School Students

Alaska Native Student Subgroup	% smokers who smoked cigarettes days in the past month* (n=117)	Number smokers who smoked cigarettes # days in the past month**
1-2 days/month	16.4% (10.6-24.4)	560
3-5 days/month	10.8% (6.2-18.1)	370
6-9 days/month	11.2% (6.4-19.1)	380
10-19 days/month	19.8% (13.3-28.4)	670
20-29 days/month	12.4% (7.4-19.9)	420
All 30 days	29.5% (21.5-39.0)	1,000

* percent of students among Alaska Native students who smoke (any valid responses except "0 days") to the question "in the past 30 days, on how many days did you smoke cigarettes?"

** number of total estimated Alaska Native students in the state who have smoked cigarettes on 20+ of the past 30 days within this subgroup – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: 2003 Alaska YRBS

Data represented graphically in Figure 21.

Table 15. Cigarettes Smoked Per Day Among Alaska Native High School Students Who Smoke (pack = 20 cigarettes)

Alaska Native Student Subgroup	% smokers who smoked 10+ cigarettes per day * (n=117)	Number who smoked 10+ cigarettes per day**
Less than 1 per day	22.5% (15.6-31.4)	760
1 cigarette per day	17.2% (11.2-25.5)	580
2-5 cigarettes per day	46.0% (36.7-55.5)	1,600
6-10 cigarettes per day	12.2% (7.1-19.9)	410
11-20 cigarettes per day	0.7% (0.1-5.1)	20
More than 20 cigarettes per day	1.4% (0.3-5.8)	50

* percent of students among Alaska Native students who smoke , who gave any valid response other than "I did not smoke cigarettes" to the question "in the past 30 days, how many cigarette did you smoke per day on the days that you smoked?"

** number of total estimated Alaska Native students in the state who smoked 10+ cigarettes per day within this subgroup – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: 2003 Alaska YRBS

Data represented graphically in Figure 22.

Table 16. Trends in Current Smokeless Tobacco Use Among Alaska High School Students*

Year	Alaska Natives % (95% confidence interval)	Non-Native Alaskans % (95% confidence interval)
1995	22.5% (16.7-29.5)	14.5% (12.7-16.5)
2003	24.4% (19.5-30.1)	7.3% (5.9-9.1)
Tests for trend: *Significant interaction – trend is different for AN and non-AN youth (p=.02)*	*Non-significant change in smokeless use for AN from 1995-2003.*	*Significant reduction (49% relative decrease) for non-AN from 1995-2003 (p<.001)*

* percent of students among total Alaska Native students who gave a valid response other than "0 days" to the question "in the past 30 days on how many days did you use smokeless tobacco" Thirty-day use is the nationally accepted definition for 'current" use among youth.

Source: 1995 and 2003 Alaska YRBS

Data represented graphically in Figure 23.

Table 17. Current Smokeless Tobacco Use Among Alaska Native High School Students

Alaska Native Student Subgroup	% who reported current smokeless tobacco use* (n=284)	Number who reported current smokeless tobacco use**
Males	31.7% (24.1-40.4)	1200
Females	18.2% (12.4-26.0)	730
Significant association (p=.01)		
9-10th graders	32.3% (25.3-40.2)	1600
11-12th graders	11.0% (6.2-19.0)	310
Significant association (p<.001)		
Students who get As/Bs	19.9% (13.7-28.1)	880
Students who get Cs/Ds/Fs	22.6% (15.2-32.4)	730
Non-significant association		
Current smokers	31.5% (23.3-41.0)	1100
Non-smoking students	16.3% (10.8-23.7)	700
Significant association (p=.007)		
Students with Additional Risk Factors		
Students with depression	23.4% (14.8-35.0)	480
Non-depressed students	24.6% (18.9-31.3)	1400
Non-significant association		
Students currently drink alcohol	20.0% (13.1-29.3)	580
Non-drinking students	26.4% (19.9-34.1)	1300
Non-significant association		
Students currently use marijuana	33.3% (24.3-43.7)	920
Non-using students	18.5% (13.1-25.6)	910
Significant association (p=.01)		
Students ever had sex	20.2% (14.0-28.4)	780
Non-active students	23.6% (16.6-32.4)	910
Non-significant association		
Students watch >2 hrs TV per day	25.4% (19.2-32.8)	740
Students watch 2 or less TV hrs	22.1% (15.0-31.5)	1,100
Non-significant association		
Total	**24.4% (19.5-30.1)**	**1900**

* percent of students among total Alaska Native students who gave a valid response other than “0 days” to the question “in the past 30 days on how many days did you use smokeless tobacco” Thirty-day use is the nationally accepted definition for ‘current” use among youth.

** number of total estimated Alaska Native students in the state who currently use smokeless tobacco within this subgroup – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: 2003 Alaska YRBS

Data represented graphically in Figure 24, 25.

Table 18. Frequency of Smokeless Tobacco Use (days/month) Among Alaska Native High School Students

Alaska Native Student Subgroup	% smokers who smoked cigarettes days in the past month* (n=66)	Number smokers who smoked cigarettes # days in the past month**
1-2 days/month	26.4% (16.7-38.9)	460
3-5 days/month	14.2% (7.2-26.0)	270
6-9 days/month	7.9% (3.2-18.1)	150
10-19 days/month	13.8% (7.2-24.9)	260
20-29 days/month	7.2% (2.8-17.2)	130
All 30 days	30.6% (20.1-43.6)	570

* percent of students among Alaska Native students who use smokeless tobacco (any valid responses except "0 days") to the question "in the past 30 days, on how many days did you use smokeless tobacco?"

** number of total estimated Alaska Native students in the state who have smoked cigarettes on 20+ of the past 30 days within this subgroup – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: 2003 Alaska YRBS

Data not represented graphically in report.

Table 19. Current Cigar Use Among Alaska Native High School Students

Alaska Native Student Subgroup	% who use cigars* (n= 294)	Number who use cigars**
Males	7.0% (3.8-12.5)	250
Females	3.7% (1.5-8.7)	150
Non-significant association		
9-10th graders	6.0% (3.3-10.7)	290
11-12th graders	2.5% (0.6-9.6)	70
Too few obs for chi-square test		
Students who get As/Bs	2.8% (1.0-7.6)	120
Students who get Cs/Ds/Fs	8.3% (4.2-16.0)	270
Too few obs for chi-square test		
Total	**5.2% (3.2-8.5)**	**400**

* percent of students among total Alaska Native students who gave a valid response other than "0 days" to the question "in the past 30 days, on how many days did you use cigars, cigarillos or little cigars?" This is the nationally accepted definition for "current cigar use" among youth.

** number of total estimated Alaska Native students in the state who use cigars within this subgroup – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Note: Because there is only one year of data regarding cigar use, there is no separate table comparing cigar use trends for Alaska Native and non-Native youth. However, it may be worth noting a borderline significant finding that Alaska Native youth are somewhat less likely than non-Native youth to report current cigar smoking [5.2% (3.2-8.9) for Alaska Native youth vs. 8.7% (7.2-10.5) for non-Native youth, p=.05].

Source: 2003 Alaska YRBS

Data not represented graphically in report.

Table 20. Current Use of Different Tobacco Products (Cigarette, Smokeless, Cigar) among Alaska Native High School Students

Alaska Native Student Subgroup	% who use each type or combination of tobacco* (n=294)	Number who use any type of tobacco**
Cigarettes only	25.5% (20.7-31.0)	2,000
Smokeless tobacco only	8.1% (5.3-12.2)	620
Cigars only	0%	<10
Cigarettes and smokeless only	10.9% (7.7-15.3)	840
Any other tobacco combination	13.9% (10.2-18.7)	1,100
No tobacco use	41.5% (35.8-47.4)	3,200

* percent of students among total Alaska Native students who had valid responses to 30-day questions about cigarette, smokeless and cigar use, and who reported that they had used any of these products in the past 30 days.

** number of total estimated Alaska Native students in the state who have used any type of tobacco during the past 30 days within this subgroup – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: 2003 Alaska YRBS

Data represented graphically in Figure 26.

Table 21. Trends in Smoking Prior to Pregnancy Among All Alaskan Mothers*

Year	Alaska Natives % (95% confidence interval)	Non-Native Alaskans % (95% confidence interval)
2000	44.2% (40.7-47.8)	26.5% (23.3-29.9)
2001	45.6% (42.2-49.1)	21.2% (18.4-24.4)
2002	45.8% (42.4-49.2)	27.5% (24.4-30.9)
2003	43.9% (40.6-47.2)	26.8% (23.7-30.2)
Tests for trend: *Non-significant interaction – trend is similar for AN and non-AN women*	*Non-significant trend (slope not different than zero)*	*Non-significant trend (slope not different than zero)*

* percent of mothers among total Alaska mothers who reported “yes” to “have you smoked at least 100 cigarettes in the past 2 years? (a pack has 20 cigarettes)” and also gave any valid answer other than “I didn’t smoke” to the question “In the 3 months before you got pregnant, how many cigarettes or packs of cigarettes did you smoke on an average day?”

Source: Alaska PRAMS

Data represented graphically in Figure 27.

Table 22. Cigarette Smoking Before Pregnancy Among Alaska Native Mothers of Newborns

Alaska Native Mothers Subgroup	% who smoked cigarettes just prior to pregnancy* (n=2543)	Number who smoked just prior to pregnancy **
Maternal Age		
Age <20	54.5% (50.4-58.6)	240
Age 20-24	52.0% (48.9-55.0)	400
Age 25-29	41.1% (37.7-44.6)	240
Age 30-34	35.4% (31.2-39.9)	120
Age 35+	28.6% (24.2-33.5)	70
Significant association (p<.001)		
Maternal Education		
Less than 12 years	57.5% (54.1-60.8)	380
12 years	43.6% (41.3-46.0)	570
13-15 years	35.2% (30.8-39.8)	110
16+ years	17.2% (12.0-24.1)	190
Significant association (p<.001)		
Medicaid coverage before pregnancy		
Medicaid covered	47.2% (43.7-50.7)	290
Other health coverage	43.9% (41.9-45.9)	780
Non-significant association		
Usual source of prenatal care		
Hospital clinic	43.8% (40.8-46.8)	370
Health department clinic	49.3% (42.2-56.4)	70
Private doctor ‘s office	45.7% (39.4-52.2)	80
Alaska Native Clinic	47.2% (44.4-49.9)	460
Other	39.5% (34.3-45.0)	100
Non-significant association		
Geographic Region		
Anchorage/Mat-su	49.7% (46.7-52.7)	380
Gulf Coast	48.9% (40.8-57.1)	50
Interior	42.1% (36.7-47.7)	100
Northern	59.2% (54.8-63.4)	240
Southeast	45.7% (39.9-51.5)	100
Southwest	31.2% (28.3-34.3)	210
Significant association (p<.001)		
Total	**44.9% (43.2-46.6)**	**1,100**

* percent of mothers among total Alaska Native mothers who reported “yes” to “have you smoked at least 100 cigarettes in the past 2 years? (a pack has 20 cigarettes)” and also gave any valid answer other than “I didn’t smoke” to the question “In the 3 months before you got pregnant, how many cigarettes or packs of cigarettes did you smoke on an average day?”

** number of total estimated Alaska Native mothers in the state who smoked cigarettes three months prior to pregnancy – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data not represented graphically in report.

Table 23. Trends in Smoking During Last three months of Pregnancy Among All Alaskan Mothers of Newborns*

Year	**Alaska Natives** % (95% confidence interval)	**Non-Native Alaskans** % (95% confidence interval)
2000	29.2% (26.0-32.6)	12.8% (10.5-15.5)
2001	27.8% (24.9-31.0)	10.3% (9.0-11.8)
2002	29.3% (26.4-32.5)	14.0% (12.5-15.7)
2003	25.7% (22.9-28.7)	13.9% (12.3-15.6)
Tests for Trend: *Borderline significant interaction (p=.05) – trends individually are not significantly different than zero, but the trends may be different from each other*	*Non-significant trend (slope not different than zero)*	*Non-significant trend (slope not different than zero)*

* percent of mothers among total Alaska mothers who reported "yes" to "have you smoked at least 100 cigarettes in the past 2 years? (a pack has 20 cigarettes)" and also gave any valid answer other than "I didn't smoke" to the question "In the last 3 months of your pregnancy, how many cigarettes or packs of cigarettes did you smoke on an average day?"

Source: Alaska PRAMS

Data represented graphically in Figure 28.

Table 24. Cigarette Smoking During Last 3 Months of Pregnancy Among Alaska Native Mothers of Newborns

Alaska Native Mothers Subgroup	% who smoked during last three months of pregnancy* (n=2590)	Number who smoked during last three months of pregnancy**
Maternal Age		
Age <20	29.6% (26.1-33.3)	130
Age 20-24	32.5% (29.7-35.4)	250
Age 25-29	26.4% (23.5-29.6)	150
Age 30-34	25.2% (21.5-29.3)	90
Age 35+	19.1% (15.1-23.7)	50
Significant association (p<.001)		
Maternal Education		
Less than 12 years	41.2% (37.9-44.6)	270
12 years	26.8% (24.8-29.0)	350
13-15 years	14.7% (11.7-18.2)	50
16+ years	5.4% (2.8-10.3)	10
Significant association (p<.001)		
Medicaid coverage before pregnancy		
Medicaid covered	30.7% (27.6-34.0)	190
Other health coverage	27.0% (25.2-28.8)	480
Significant association (p=.04)		
Usual source of prenatal care		
Hospital clinic	28.7% (26.1-31.4)	240
Health department clinic	33.0% (26.6-40.0)	50
Private doctor ‘s office	27.2% (21.9-33.3)	50
Alaska Native Clinic	27.2% (24.8-29.7)	270
Other	25.4% (20.9-30.4)	60
Non-significant association		
Geographic Region		
Anchorage/Mat-su	29.4% (26.8-32.2)	230
Gulf Coast	33.8% (26.5-42.0)	40
Interior	23.6% (18.9-29.0)	60
Northern	44.0% (39.8-48.2)	180
Southeast	19.9% (15.7-24.8)	40
Southwest	20.2% (17.7-22.9)	140
Significant association (p<.001)		
Total	**28.0% (26.5-29.6)**	**670**

* percent of mothers among total Alaska Native mothers who reported “yes” to “have you smoked at least 100 cigarettes in the past 2 years? (a pack has 20 cigarettes)” and also gave any valid answer other than “I didn’t smoke” to the question “In the last 3 months of your pregnancy, how many cigarettes or packs of cigarettes did you smoke on an average day?”

** number of total estimated Alaska Native mothers in the state who smoked cigarettes during their last three months of pregnancy – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined Data represented graphically in Figures 29, 30.

Table 25. Current Cigarette Smoking (After Pregnancy) Among Alaska Native Mothers of Newborns

Alaska Native Mothers Subgroup	% who smoke cigarettes after pregnancy* (n=2615)	Number who smoke cigarettes after pregnancy**
Maternal Age		
Age <20	46.9% (42.9-50.9)	210
Age 20-24	42.5% (39.6-45.5)	330
Age 25-29	35.1% (31.9-38.5)	200
Age 30-34	27.6% (23.8-31.9)	90
Age 35+	23.3% (19.2-27.8)	10
Significant association (p<.001)		
Maternal Education		
Less than 12 years	52.3% (49.0-55.7)	40
12 years	35.6% (33.4-37.9)	460
13-15 years	24.2% (20.5-28.4)	80
16+ years	8.2% (4.7-13.7)	10
Significant association (p>.001)		
Medicaid coverage before pregnancy		
Medicaid covered	40.3% (37.0-43.7)	250
Other health coverage	36.3% (34.4-38.2)	650
Significant association (p=.04)		
Usual source of prenatal care		
Hospital clinic	37.2% (34.4-40.2)	310
Health department clinic	43.0% (36.2-50.1)	60
Private doctor ‘s office	33.6% (27.9-39.9)	60
Alaska Native Clinic	39.1% (36.5-41.8)	380
Other	33.5% (28.6-38.9)	80
Non-significant association		
Geographic Region		
Anchorage/Mat-su	39.4% (36.5-42.3)	300
Gulf Coast	41.3% (33.5-49.6)	40
Interior	34.7% (29.5-40.2)	80
Northern	53.7% (49.5-57.9)	220
Southeast	37.0% (31.6-42.8)	80
Southwest	26.0% (23.3-28.9)	180
Significant association (p<.001)		
Total	**37.4% (35.7-39.0)**	**900**

* percent of mothers among total Alaska Native mothers who reported “yes” to “have you smoked at least 100 cigarettes in the past 2 years? (a pack has 20 cigarettes)” and also gave any valid answer other than “I didn’t smoke” to the question “How many cigarettes or packs of cigarettes do you smoke on an average day now?”

** number of total estimated Alaska Native mothers in the state who smoke cigarettes after pregnancy – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data not represented graphically in report.

Table 26. Trends in Smokeless Tobacco Use Prior to Pregnancy Among All Alaskan Mothers of Newborns*

Year	Alaska Natives % (95% confidence interval)	Non-Native Alaskans % (95% confidence interval)
2000	21.3% (18.6-24.3)	1.6% (0.9-2.9)
2001	20.5% (17.9-23.4)	1.4% (0.7-2.4)
2002	21.4% (18.8-24.3)	1.8% (1.1-3.0)
2003	20.2% (17.7-22.9)	0.9% (0.4-1.9)
Tests for trend: *Non-significant interaction – trend is similar for AN and non-AN women*	*Non-significant trend (slope not different than zero)*	*Non-significant trend (slope not different than zero)*

* percent of mothers among total Alaska mothers who said "yes" to the question "During any of the following time periods, did you use smokeless tobacco (chew or snuff)? … During the 12 months before you got pregnant?"

Source: Alaska PRAMS

Data represented graphically in Figure 31.

Table 27. Smokeless Tobacco During 12 Months Before Pregnancy Among Alaska Native Mothers of Newborns

Alaska Native Mothers Subgroup	% who used smokeless tobacco prior to pregnancy* (n=2651)	Number who used smokeless tobacco prior to pregnancy**
Maternal Age		
Age <20	18.7% (15.9-21.9)	80
Age 20-24	17.9% (15.8-20.3)	140
Age 25-29	22.7% (19.9-25.7)	130
Age 30-34	23.9% (20.3-28.0)	80
Age 35+	25.1% (20.9-29.7)	70
Significant association (p=.003)		
Maternal Education		
Less than 12 years	22.8% (20.1-25.6)	150
12 years	23.6% (21.7-25.6)	310
13-15 years	9.0% (6.7-12.0)	30
16+ years	10.5% (6.5-16.4)	10
Significant association (p<.001)		
Medicaid coverage before pregnancy		
Medicaid covered	28.6% (25.6-31.7)	180
Other health coverage	18.1% (16.7-19.7)	320
Significant association (p<.001)		
Usual source of prenatal care		
Hospital clinic	26.7% (24.2-29.4)	220
Health department clinic	28.5% (22.6-35.4)	40
Private doctor's office	7.8% (4.9-12.1)	10
Alaska Native Clinic	14.9% (13.0-16.9)	150
Other	28.7% (24.1-33.8)	70
Significant association (p<.001)		
Geographic Region		
Anchorage/Mat-su	11.0% (9.3-12.9)	80
Gulf Coast	8.1% (4.6-13.9)	<10
Interior	9.7% (6.9-13.5)	20
Northern	9.2% (7.0-11.9)	40
Southeast	4.9% (2.9-8.0)	10
Southwest	49.7% (46.5-52.8)	340
Significant association (p<.001)		
Smoking status		
Smoked during last three months of pg.	11.7% (9.7-13.9)	130
Non-smoker at last three months of pg.	24.2% (22.5-26.0)	330
Significant association (p<.001)		
Total	**20.8% (19.5-22.2)**	**500**

* percent of mothers among total Alaska Native mothers who said "yes" to the question "During any of the following time periods, did you use smokeless tobacco (chew or snuff)? … During the 12 months before you got pregnant?"

(continued from Table 27)

** number of total estimated Alaska Native mothers in the state who used smokeless tobacco during the 12 months prior to their pregnancy – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data not represented graphically in report.

Table 28. Trends in Smokeless Tobacco Use During Pregnancy Among All Alaskan Mothers of Newborns*

Year	**Alaska Natives** % (95% confidence interval)	**Non-Native Alaskans** % (95% confidence interval)
2000	20.1% (17.5-23.1)	0.5% (0.2-1.5)
2001	17.5% (15.1-20.3)	0.5% (0.2-1.2)
2002	17.8% (15.4-20.5)	0.9% (0.4-1.8)
2003	16.9% (14.6-19.4)	0.4% (0.1-1.1)
Tests for trend: *Non-significant interaction – trend is similar for AN and non-AN women*	*Non-significant trend (slope not different than zero)*	*Non-significant trend (slope not different than zero)*

* percent of mothers among total Alaska mothers who said "yes" to the question "During any of the following time periods, did you use smokeless tobacco (chew or snuff)? … During your most recent pregnancy?"

Source: Alaska PRAMS

Data represented graphically in Figure 32.

Table 29. Smokeless Tobacco Use During Pregnancy Among Alaska Native Mothers

Alaska Native Mothers Subgroup	% who used smokeless tobacco during pregnancy* (n=2659)	Number who used smokeless tobacco during pregnancy**
Maternal Age		
Age <20	15.0% (12.4-18.0)	70
Age 20-24	15.4% (13.4-17.7)	120
Age 25-29	20.5% (17.9-23.4)	120
Age 30-34	20.1% (16.8-24.0)	70
Age 35+	23.5% (19.4-28.1)	60
Significant association (p<.001)		
Maternal Education		
Less than 12 years	19.3% (16.9-22.0)	130
12 years	20.8% (19.0-22.7)	270
13-15 years	7.7% (5.5-10.5)	30
16+ years	7.6% (4.3-13.1)	10
Significant association (p<.001)		
Medicaid coverage before pregnancy		
Medicaid covered	25.8% (23.0-28.9)	160
Other health coverage	15.4% (14.0-16.9)	270
Significant association (p<.001)		
Usual source of prenatal care		
Hospital clinic	24.0% (21.6-26.6)	200
Health department clinic	25.2% (19.5-32.0)	40
Private doctor's office	6.0% (3.5-10.0)	10
Alaska Native Clinic	11.8% (10.2-13.7)	120
Other	25.2% (20.8-30.1)	60
Significant association (p<.001)		
Geographic Region		
Anchorage/Mat-su	7.2% (5.9-8.8)	60
Gulf Coast	8.1% (4.6-13.9)	10
Interior	8.3% (5.7-12.1)	20
Northern	8.1% (6.1-10.7)	30
Southeast	1.0% (0.3-3.4)	<10
Southwest	46.7% (43.6-49.9)	320
Significant association (p<.001)		
Smoking status		
Smoked during last three months of pg.	11.5% (9.6-13.7)	130
Non-smoker at last three months of pg.	20.4% (18.8-22.1)	280
Significant association (p<.001)		
Total	**18.1% (16.8-19.4)**	**430**

* percent of mothers among total Alaska Native mothers who said "yes" to the question "During any of the following time periods, did you use smokeless tobacco (chew or snuff)? … During your most recent pregnancy?"

(continued from Table 29)

** number of total estimated Alaska Native mothers in the state who used smokeless tobacco during their pregnancy – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data represented graphically in Figures 33, 34.

Table 30. Current Smokeless Tobacco Use (After Pregnancy) Among Alaska Native Mothers

Alaska Native Mothers Subgroup	% who use smokeless tobacco now* (n=2661)	Number who use smokeless tobacco now**
Maternal Age		
Age <20	16.8% (14.1-19.9)	80
Age 20-24	16.6% (14.5-18.9)	130
Age 25-29	22.3% (19.6-25.3)	130
Age 30-34	23.0% (19.4-27.0)	80
Age 35+	25.7% (21.5-30.4)	70
Significant association (p<.001)		
Maternal Education		
Less than 12 years	20.6% (18.0-23.3)	140
12 years	22.8% (21.0-24.8)	300
13-15 years	9.3% (6.9-12.3)	30
16+ years	9.2% (5.4-15.1)	10
Significant association (p<.001)		
Medicaid coverage before pregnancy		
Medicaid covered	26.3% (23.5-29.4)	160
Other health coverage	17.6% (16.2-19.2)	310
Significant association (p<.001)		
Usual source of prenatal care		
Hospital clinic	25.9% (23.5-28.6)	220
Health department clinic	26.5% (20.7-33.3)	40
Private doctor ‘s office	6.0% (3.5-10.0)	10
Alaska Native Clinic	13.9% (12.1-15.9)	140
Other	26.9% (22.4-32.0)	70
Significant association (p<.001)		
Geographic Region		
Anchorage/Mat-su	9.2% (7.6-11.0)	70
Gulf Coast	7.2% (3.9-12.8)	10
Interior	10.2% (7.3-14.2)	20
Northern	10.8% (8.5-13.7)	40
Southeast	3.6% (2.0-6.5)	10
Southwest	47.7% (44.6-50.9)	330
Significant association (p<.001)		
Smoking status		
Smoked during last three months of pg.	12.1% (10.2-14.4)	130
Non-smoker last three months of pg.	22.6% (21.0-24.4)	310
Significant association (p<.001)		
Total	**19.9% (18.6-21.3)**	**480**

* percent of mothers among total Alaska Native mothers who said “yes” to the question “During any of the following time periods, did you use smokeless tobacco (chew or snuff)? … Since your new baby was born?” at the time of the survey (2-6 months post-partum)

(continued from Table 30)

** number of total estimated Alaska Native mothers in the state who reporting using smokeless tobacco at post-partum – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data not represented graphically in report.

Table 31. Overall Tobacco Use Status Among Alaska Native Mothers During Pregnancy

Alaska Native Mothers Subgroup	% who used this type of tobacco during pregnancy* (n=703)	Number who used this type of tobacco during pregnancy**
Cigarette Smoking only	24.8% (23.4-26.4)	600
Smokeless Tobacco only	15.3% (14.2-16.6)	370
Both Cigarettes and Smokeless	3.2% (2.6-3.8)	80
Neither Cigarettes nor Smokeless	56.7% (54.9-58.3)	1,400

* percent of mothers among total Alaska Native mothers who reported smoking cigarettes during last three months of pregnancy, using smokeless tobacco during pregnancy, both, or neither. Cigarette smoking may be somewhat under-reported in comparison to smokeless tobacco use because the question to assess status for cigarette smoking asks only about last three months of pregnancy, while the question to assess smokeless tobacco use asks about anytime during pregnancy.

** number of total estimated Alaska Native mothers in the state classified as using each type of tobacco – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data represented graphically in Figure 35.

Prevention Tables

Table 32. Early Initiation of Cigarette Smoking Among Alaska Native High School Students

Alaska Native Student Subgroup	% who smoked a whole cigarette before Age 13* (n=282)	Number who smoked a whole cigarette before Age 13**
Males	35.8% (27.8-44.8)	1,300
Females	33.4% (26.0-41.7)	1,300
Non-significant association		
9-10th graders	34.1% (27.1-41.9)	1,600
11-12th graders	32.9% (24.2-43.0)	900
Non-significant association		
Students who get As/Bs	29.7% (22.4-38.1)	1,300
Students who get Cs/Ds/Fs	42.1% (32.4-52.5)	1,400
Non-significant association		
Total	**34.2% (28.7-40.2)**	**2,600**

* percent of students among total Alaska Native students who responded "8 years or younger" "9-10" or "11-12" to "how old were you when you first smoked a whole cigarette" – weighted percentage shown with 95% confidence interval in parentheses

** number of total estimated Alaska Native students in the state who initiated smoking early within this subgroup – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: 2003 Alaska YRBS

Data represented graphically in Figure 36.

Table 33. Cigarette Smoking on School Property Among Alaska Native High School Students

Alaska Native Student Subgroup	% who use Cigarettes on School Property*	Number who use Cigarettes on School Property**
Males	13.1% (8.1-20.6)	480
Females	22.7% (16.5-30.6)	920
Borderline association (p=.05)		
9-10th graders	18.4% (13.1-25.3)	890
11-12th graders	18.8% (12.1-28.2)	540
No significant association		
Students who get As/Bs	12.4% (7.7-19.4)	550
Students who get Cs/Ds/Fs	24.2% (16.6-34.0)	780
Significant association (p=.03)		
Students who smoked any cigarettes in past 30 days	44.1% (35.0-53.7)	1,400
Non-smoking students	-	-
Not applicable		
Total	**18.0% (13.7-23.2)**	**1,400**

* percent of students among total Alaska Native students who gave a valid answer but did not respond "0 days" to "during the past 30 days on how many days have you smoked cigarettes on school property " – weighted percentage shown with 95% confidence interval in parentheses

** number of total estimated Alaska Native students in the state who have used cigarettes on school property in the past 30 days within this subgroup – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: 2003 Alaska YRBS

Data represented graphically in Figure 38.

Table 34. Using Smokeless Tobacco on School Property Among Alaska Native High School Students

Alaska Native Student Subgroup	% who use smokeless tobacco on school property* (n=278)	Number who use smokeless tobacco on school property**
Males	21.2% (14.7-29.5)	770
Females	14.1% (9.0-21.6)	570
Non-significant association		
9-10th graders	23.0% (16.8-30.6)	1,100
11-12th graders	7.7% (3.7-15.4)	220
Significant association (p=.003)		
Students who get As/Bs	12.6% (7.6-20.2)	560
Students who get Cs/Ds/Fs	17.3% (10.7-26.6)	560
Non-significant association		
Current smokeless users	70.0% (57.3-80.2)	1,300
Non-smokeless using students	--	--
Relevant for only one group		
Total	**17.4% (13.1-22.7)**	**1,300**

* percent of students among total Alaska Native students who gave a valid response other than "0 days" to the question "in the past 30 days, on how many days did you use chewing tobacco on school property?"

** number of total estimated Alaska Native students in the state who have used smokeless tobacco on school property within this subgroup – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: 2003 Alaska YRBS

Data represented graphically in Figure 38.

Table 35. Belief That Tobacco Use by Adults Should Be Banned on School Grounds Among Alaska Native Adults

Alaska Native Adult Subgroup	% who say tobacco use by adults should be banned on school grounds* (n=454)	Number who say tobacco use by adults should be banned on school grounds**
Males	83.2% (73.0-90.0)	31,200
Females	89.3% (81.7-94.0)	26,600
Non-significant association		
18-24 year olds	83.4% (59.9-94.5)	10,500
25-34 year olds	94.8% (86.9-98.0)	10,300
35-44 year olds	84.3% (67.2-93.3)	13,700
45-54 year olds	85.4% (73.4-92.6)	13,000
55 years and older	81.9% (66.5-91.1)	10,300
Non-significant association		
Less than high school graduate	76.7% (60.9-87.4)	13,400
High school graduate or GED	84.7% (74.0-91.5)	25,200
Some college or higher	95.6% (90.5-98.0)	19,200
Significant association (p=.02)		
Less than $15,000	87.5% (70.2-95.4)	10,200
$15,000-$24,999	84.9% (72.5-92.2)	15,600
$25,000-$49,999	82.1% (65.4-91.8)	15,800
$50,000 or more	96.9% (90.9-98.9)	16,200
Non-significant association		
Non-rural Alaska	82.8% (71.5-90.3)	30,000
Rural Alaska	89.5% (84.6-92.9)	27,800
Non-significant association		
No children in the home	82.4% (70.3-90.2)	20,900
Children in the home	88.0% (80.2-93.0)	36,900
Non-significant association		
Non-smokers	89.6% (83.2-93.7)	34,700
Smokers	81.4% (68.4-89.7)	23,100
Non-significant association		
Total	**85.9% (79.6-90.5)**	**57,800**

* percent of Alaska Native adults who responded “strongly agree” or “agree” to “How strongly do you agree with the following statement: tobacco use by adults should not be allowed on school grounds or at any school event?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who agree that smoking by adults should not be allowed on school grounds or at any school event – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified survey

Data represented graphically in Figure 39.

Table 36. Usual Source of Cigarettes Among Alaska Native High School Students Smokers Under 18

Alaska Native Student Subgroup	% who usually get cigarettes this way* (n=98)	Number who usually get cigarettes this way**
I bought them in a store	5.3% (2.3-11.5)	180
I gave someone money to buy them for me	41.5% (31.7-52.1)	1,400
I borrowed them from someone else	30.7% (22.0-41.2)	1,000
A person 18 or older gave them to me	2.6% (0.8-8.1)	90
I took them from a store or family member	2.8% (0.9-8.9)	100
I got them some other way	17.0% (10.6-26.3)	580

* percent of students among total Alaska Native students who gave any valid answer except "I did not smoke in the past 30 days", who gave each response option to the question "in the past 30 days, how did you usually get your cigarettes?"

** number of total estimated Alaska Native students under age 18 and who smoke in the state who reported usually getting cigarettes from a store within this subgroup – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: 2003 Alaska YRBS

Data represented graphically in Figure 40.

Table 37. Belief That It Is Very Important to Keep Stores From Selling Tobacco To Teens Among Alaska Native Adults

Alaska Native Adult Subgroup	% who say it is very important to keep stores from selling tobacco to teens* (n=451)	Number who say it is very important to keep stores from selling tobacco to teens**
Males	84.7% (77.6-89.8)	31,600
Females	87.9% (82.5-91.8)	26,300
Non-significant association		
18-24 year olds	85.8% (69.7-94.1)	10,100
25-34 year olds	89.9% (82.6-94.4)	10,300
35-44 year olds	87.0% (78.9-92.4)	14,100
45-54 year olds	86.4% (76.5-92.5)	13,200
55 years and older	84.4% (70.9-92.4)	10,200
Non-significant association		
Less than high school graduate	83.7% (70.8-91.5)	13,900
High school graduate or GED	84.8% (78.3-89.6)	25,400
Some college or higher	90.3% (83.6-94.4)	18,600
Non-significant association		
Less than $15,000	84.0% (72.3-91.3)	9,600
$15,000-$24,999	85.6% (76.9-91.3)	15,800
$25,000-$49,999	83.5% (70.8-91.3)	16,200
$50,000 or more	97.0% (85.6-99.4)	16,300
Non-significant association		
Non-rural Alaska	91.0% (85.0-94.8)	33,800
Rural Alaska	80.1% (73.4-85.5)	24,200
Significant association (p=.009)		
No children in the home	85.1% (77.0-90.7)	21,400
Children in the home	86.9% (81.4-91.0)	36,500
Non-significant association		
Non-smokers	87.8% (82.1-91.9)	34,100
Smokers	83.7% (76.1-89.3)	23,800
Non-significant association		
Total	**86.1% (81.7-89.6)**	**57,900**

* percent of Alaska Native adults who responded “very important” to “How important is it that communities keep stores from selling tobacco products to teenagers – would you say very important, somewhat important, not very important, or not al all important?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who agree it is very important to keep stores from selling tobacco to teens – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified survey

Data represented graphically in Figure 41.

Cessation Tables

Table 38. Recent Trend in Quitting Smoking During the Past Year Among Alaska Natives Adults Who Currently Smoke*

Year	Alaska Native Smokers % (95% confidence interval)
2004	56.0% (48.6-63.2)
2005	65.6% (59.7-71.1)
Tests for trend: *p =.04 for chi-square test of difference between years*	

* percent of Alaska Native adult smokers who responded “yes” to “during the past 12 months have you stopped smoking for one day or longer because you were trying to quit smoking?” – weighted percentage shown with 95% confidence interval in parentheses.

Source: 2004 and 2005 Alaska BRFSS

Data represented graphically in Figure 42.

Table 39. Quit Smoking in the Past 5 Years Among Alaska Native Adults Who Have Ever Smoked

Alaska Native Adult Subgroup	% of ever smokers who have quit in the past 5 years* (n=686)	Number of ever smokers who have quit in the past 5 years**
Males	18.4% (12.7-26.0)	5,500
Females	17.4% (11.9-24.9)	3,700
Non-significant association		
18-24 year olds	16.4% (8.3-29.6)	1,500
25-34 year olds	28.9% (18.1-42.7)	2,900
35-44 year olds	20.1% (10.3-35.4)	2,400
45-54 year olds	11.9% (6.1-21.7)	1,200
55 years and older	12.6% (7.7-20.0)	1,200
Non-significant association		
Less than high school graduate	15.9% (8.0-29.1)	1,900
High school graduate or GED	15.7% (11.5-21.2)	4,100
Some college or higher	24.2% (14.5-37.6)	3,300
Non-significant association		
Less than $15,000	11.5% (6.5-19.6)	1,200
$15,000-$24,999	15.4% (9.3-24.5)	1,900
$25,000-$49,999	21.1% (13.4-31.5)	2,900
$50,000 or more	25.4% (13.4-42.9)	3,300
Non-significant association		
Non-rural Alaska	20.2% (13.5-29.1)	5,800
Rural Alaska	15.2% (11.8-19.5)	3,400
Non-significant association		
No children in the home	17.2% (10.5-26.8)	3,800
Children in the home	18.6% (13.6-24.8)	5,400
Non-significant association		
Total	**18.0% (13.8-23.2)**	**9,200**

* Among Alaska Native respondents who have smoked at least 100 cigarettes in their life, the percent who responded “not at all” to “do you now smoke cigarettes everyday, some days or not at all?” and who responded sometime in the past five years to “about how long has it been since you last smoked cigarettes regularly”– weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who have quit smoking in the past five years – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 and 2005 modified Surveys

Data represented graphically in Figure 43.

Table 40. Quit Attempt In Past Year Among Alaska Native Adult Smokers

Alaska Native Adult Subgroup	% who attempted to quit smoking in past year* (n=871)	Number who attempted to quit smoking in past year**
Males	58.3% (51.2-65.1)	9,800
Females	63.2% (56.5-69.4)	9,100
Non-significant association		
18-24 year olds	76.2% (64.4-85.0)	4,700
25-34 year olds	61.4% (50.4-71.3)	4,700
35-44 year olds	60.4% (50.3-69.6)	4,400
45-54 year olds	57.4% (47.1-67.1)	3,800
55 years and older	36.1% (25.9-47.7)	1,300
Significant association (p<.001)		
Less than high school graduate	55.0% (45.6-64.1)	4,300
High school graduate or GED	63.4% (56.3-69.9)	10,600
Some college or higher	60.3% (50.2-69.6)	4,200
Non-significant association		
Less than $15,000	62.8% (54.1-70.8)	5,300
$15,000-$24,999	65.2% (54.8-74.3)	6,000
$25,000-$49,999	56.0% (44.9-66.6)	5,200
$50,000 or more	50.2% (36.9-63.5)	2,400
Non-significant association		
Non-rural Alaska	57.4% (48.8-65.6)	8,900
Rural Alaska	63.7% (59.0-68.1)	10,000
Non-significant association		
No children in the home	52.5% (44.2-60.7)	6,400
Children in the home	65.7% (59.8-71.1)	12,500
Significant association (p=.01)		
Total	**60.6% (55.7-65.3)**	**18,900**

* percent of Alaska Native adult smokers who responded “yes” to “during the past 12 months have you stopped smoking for one day or longer because you were trying to quit smoking?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who have attempted to quit smoking in the past 12 months – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 and 2005 combined surveys

Data represented graphically in Figures 44.

Table 41. Quit Attempts During Past Year Among Alaska Native High School Students Who Smoked

Alaska Native Student Subgroup	% who tried to quit smoking during the past year* (n=142)	Number who tried to quit smoking during the past year**
Males	76.1% (64.0-85.1)	1,500
Females	79.5% (68.3-87.4)	1,700
Non-significant association		
9-10th graders	80.7% (70.6-88.0)	2,100
11-12th graders	73.3% (59.0-84.1)	1,100
Non-significant association		
Students who get As/Bs	82.8% (70.1-90.8)	1,900
Students who get Cs/Ds/Fs	78.9% (66.3-87.7)	1,300
Non-significant association		
Current smokers†	77.9% (68.9-84.8)	2,600
Non-smoking students (who smoked in past year)	n.a.	
Non-significant association		
Total	**77.3% (69.4-83.7)**	**3,100**

* percent of students among total Alaska Native students who responded "yes" or "no" to the question 'during the past 12 months did you ever try to quit smoking?" Students who responded "I did not smoke during the past year" were excluded.

** number of total estimated Alaska Native students in the state who tried to quit smoking during the past year within this subgroup – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

† There were nine students who smoked during the past year who answered the question about whether they had tried to quit in the past year, but did not provide information about their current smoking status. Five of the nine (59%) reported that they had quit smoking during the past year. Thus, these students were included in – and reduced - the overall population estimate for quitting during the past year, but not in the smoking group-specific estimate.

n.a. – too few students in this subgroup (<50) to report prevalence

Source: 2003 Alaska YRBS

Data not represented graphically in report.

Table 42. Belief That There is Little Benefit to Quitting After Smoking for 20 Years Among Alaska Native Adults

Alaska Native Adult Subgroup	% who say that there is little benefit to quitting after smoking for 20 years* (n=460)	Number who say that there is little benefit to quitting after smoking for 20 years**
Males	45.1% (34.8-55.8)	18,600
Females	41.1% (33.2-49.4)	13,400
Non-significant association		
18-24 year olds	54.0% (34.3-72.5)	7,400
25-34 year olds	36.8% (25.0-50.4)	4,500
35-44 year olds	44.3% (31.4-57.9)	7,900
45-54 year olds	40.8% (25.8-57.8)	6,800
55 years and older	39.5% (27.5-52.9)	5,400
Non-significant association		
Less than high school graduate	42.4% (28.4-57.7)	8,100
High school graduate or GED	51.9% (42.5-61.2)	17,000
Some college or higher	31.1% (19.1-46.3)	6,800
Non-significant association		
Less than $15,000	44.4% (31.0-58.7)	5,700
$15,000-$24,999	58.2% (44.3-70.9)	11,700
$25,000-$49,999	34.3% (23.0-47.7)	7,200
$50,000 or more	39.5% (21.5-60.8)	7,200
Non-significant association		
Non-rural Alaska	38.3% (27.3-50.6)	15,200
Rural Alaska	49.1% (42.1-56.2)	16,800
Non-significant association		
No children in the home	44.7% (33.2-56.7)	12,500
Children in the home	42.3% (34.1-51.1)	19,500
Non-significant association		
Non-smokers	38.1% (29.3-47.9)	16,200
Smokers	50.9% (40.4-61.4)	15,800
Non-significant association		
Total	**43.3% (36.5-50.4)**	**31,900**

* percent of Alaska Native adults who responded “strongly agree” or “agree” to “How strongly do you agree with the following statement: if a person has smoked a pack of cigarettes a day for 20 years, there is little benefit to quitting smoking?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who say that there is little benefit to quitting after smoking a pack of cigarettes a day for 20 years – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified survey

Data represented graphically in Figure 45.

Table 43. Tobacco Use Status Before, During and After Pregnancy Among Alaska Native Mothers of Newborns

Alaska Native Mothers Subgroup	% who smoke or use smokeless tobacco*	Number who use tobacco**
Cigarette Smoking		
Pre-pregnancy	44.9% (43.2-46.6)	1,100
Last three months of pregnancy	28.0% (26.5-29.6)	670
Post-Partum	37.4% (35.7-39.0)	900
Smokeless Tobacco Use		
Pre-pregnancy	20.8% (19.5-22.2)	500
During pregnancy	18.1% (16.8-19.4)	430
Post-Partum	19.9% (18.6-21.3)	480

* percent of mothers among Alaska Native mothers who were classified as smokers during the time period specified who said they smoked each amount of cigarette per day

** number of total estimated Alaska Native mothers in the state who smoke specified amount of cigarettes – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data represented graphically in Figure 46.

Table 44. Quit Smoking During Pregnancy Among Alaska Native Mothers Who Smoked Prior to Pregnancy

Alaska Native Mothers Subgroup	% who quit smoking during pregnancy* (n=1157)	Number who quit smoking during pregnancy**
Maternal Age		
Age <20	44.1% (38.6-49.8)	110
Age 20-24	37.7% (33.7-41.9)	150
Age 25-29	35.0% (30.0-40.4)	80
Age 30-34	30.9% (24.3-38.4)	40
Age 35+	33.6% (25.2-43.2)	30
Significant association (p=.03)		
Maternal Education		
Less than 12 years	27.1% (23.3-31.3)	100
12 years	38.4% (35.0-42.0)	220
13-15 years	59.4% (51.5-66.7)	70
16+ years	68.5% (48.7-83.2)	10
Significant association (p<.001)		
Medicaid coverage before pregnancy		
Medicaid covered	33.4% (28.8-38.3)	100
Other health coverage	38.9% (36.0-41.9)	300
Non-significant association		
Usual source of prenatal care		
Hospital clinic	35.6% (30.6-41.0)	130
Health department clinic	33.1% (22.9-45.2)	20
Private doctor's office	40.9% (30.5-52.2)	30
Alaska Native Clinic	41.1% (26.7-46.1)	190
Other	35.8% (36.6-45.8)	40
Significant association		
Geographic Region		
Anchorage/Mat-su	39.8% (35.7-44.1)	150
Gulf Coast	32.1% (22.2-43.9)	20
Interior	47.4% (38.9-56.0)	50
Northern	24.7% (20.1-29.9)	60
Southeast	55.5% (46.8-63.8)	50
Southwest	35.8% (30.5-41.6)	80
Significant association (p<.001)		
Total	**37.4% (35.0-40.0)**	**400**

* percent of mothers among Alaska Native mothers who reported smoking during the three months prior to pregnancy who reported not smoking during last three months of pregnancy.

** number of total estimated Alaska Native mothers in the state who quit smoking during pregnancy – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data represented graphically in Figure 47.

Table 45. Cigarettes Smoked Per Day Before, During and After Pregnancy Among Alaska Native Mothers Who Smoked Cigarettes (one pack=20 cigarettes)

Alaska Native Mothers Subgroup	% who smoke each amount*	Number who smoke this amount**
Three months prior to pregnancy	(n=2543)	
Less than one per day	55.1% (53.4-22.4)	590
1-9/day	23.9% (22.4-25.4)	260
10-19/day	13.5% (12.4-14.7)	150
20+/day	5.8% (5.0-6.6)	60
Last three months of pregnancy	(n=2590)	
Less than one per day	72.0% (70.4-73.5)	480
1-9/day	21.3% (20.0-22.8)	140
10-19/day	5.2% (4.5-6.0)	40
20+/day	1.0% (0.7-1.4)	10
After pregnancy	(n=2615)	
Less than one per day	62.6% (61.0-64.3)	560
1-9/day	23.4% (22.0-24.9)	210
10-19/day	10.4% (9.4-11.4)	90
20+/day	3.3% (2.7-3.9)	30

* percent of mothers among Alaska Native mothers who were classified as smokers during the time period specified who said they smoked each amount of cigarette per day

** number of total estimated Alaska Native mothers in the state who smoke specified amount of cigarettes – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data represented graphically in Figure 48.

Table 46. Relapse in Cigarette Smoking After Pregnancy Among Alaska Native Mothers Who Quit During Pregnancy

Alaska Native Mothers Subgroup	% who relapsed after delivery* (n=421)	Number who relapsed after delivery**
Maternal Age		
Age <25	55.1% (48.9-61.3)	140
Age 25+	49.8% (41.7-57.9)	70
Non-significant association		
Maternal Education		
Less than 12 years	64.3% (53.9-73.5)	70
12 years	52.6% (45.9-59.3)	110
More than 12 years	40.9% (30.6-52.1)	30
Significant association (p=.01)		
Medicaid coverage before pregnancy		
Medicaid covered	61.2% (50.7-70.7)	60
Other health coverage	50.8% (45.2-56.5)	150
Non-significant association		
Usual source of prenatal care		
Hospital clinic	56.4% (47.2-65.2)	70
Alaska Native Clinic	53.5% (46.1-60.7)	100
Other	51.7% (41.2-62.1)	30
Non-significant association		
Geographic Region		
Anchorage/Mat-su	47.4% (39.5-55.5)	70
Southwest	52.5% (41.2-63.6)	100
All Other Regions	58.6% (51.0-65.8)	40
Non-significant association		
Total	**53.2% (48.2-58.1)**	**210**

* percent of mothers who reported any smoking at the time of the survey (post-partum) among Alaska Native mothers who reported smoking during 3 months prior to pregnancy and not smoking during last three months of pregnancy (quitters).

** number of total estimated Alaska Native mothers in the state who were smoking prior to pregnancy, quit by last three months of pregnancy, but relapsed after delivery – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data represented graphically in Figure 49, 52.

Table 47. Desire to Quit Smoking Among Alaska Native Mothers Who Smoke Now (After Pregnancy)

Alaska Native Mothers Subgroup	% who want to quit smoking* (n=1002)	Number who want to quit smoking**
Maternal Age		
Age <20	73.6% (68.2-78.3)	150
Age 20-24	72.2% (67.9-76.1)	240
Age 25-29	66.6% (60.9-71.9)	140
Age 30-34	71.8% (63.7-78.8)	70
Age 35+	69.0% (59.1-77.3)	40
Non-significant association		
Maternal Education		
Less than 12 years	72.9% (68.7-76.7)	250
12 years	68.8% (65.1-72.3)	320
13-15 years	74.9% (65.9-82.1)	60
16+ years	72.1% (42.5-90.0)	10
Non-significant association		
Medicaid coverage before pregnancy		
Medicaid covered	71.6% (66.6-76.1)	180
Other health coverage	70.9% (67.8-73.7)	460
Non-significant association		
Usual source of prenatal care		
Hospital clinic	71.9% (66.6-76.6)	230
Health department clinic	69.5% (56.9-79.8)	40
Private doctor's office	73.2% (60.3-83.1)	40
Alaska Native Clinic	72.4% (67.5-76.7)	280
Other	64.2% (53.4-73.8)	50
Non-significant association		
Geographic Region		
Anchorage/Mat-su	70.3% (65.7-74.5)	210
Gulf Coast	77.6% (65.4-86.3)	30
Interior	81.8% (74.0-87.7)	70
Northern	64.8% (59.3-70.0)	140
Southeast	75.9% (66.9-83.0)	60
Southwest	71.2% (65.4-76.4)	130
Significant association (p=.01)		
Total	**71.0% (68.4-73.4)**	**640**

* percent among Alaska Native mothers who reported smoking after pregnancy (post-partum) who reported "yes" to the question "Would you like to completely quit smoking within the next 6 months?"

** number of total estimated Alaska Native mothers in the state who would like to quit smoking, among post-partum smokers – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data represented graphically in Figure 50.

Table 48. Quit Smokeless Tobacco Use During Pregnancy Among Alaska Native Mothers Who Used Smokeless Tobacco Prior to Pregnancy

Alaska Native Mothers Subgroup	% who quit using smokeless tobacco* (n=561)	Number who quit using smokeless tobacco **
Maternal Age		
Age <20	32.3% (24.6-41.1)	20
Age 20-24	21.0% (15.9-27.3)	30
Age 25-29	16.2% (11.5-22.2)	20
Age 30-34	18.4% (12.2-26.7)	10
Age 35+	12.0% (6.9-20.0)	10
Significant association (p=.002)		
Medicaid coverage before pregnancy		
Medicaid covered	16.5% (12.3-21.7)	30
Other health coverage	22.1% (18.5-26.1)	70
Non-significant association		
Usual source of prenatal care		
Hospital clinic	16.8% (13.0-21.5)	40
Alaska Native Clinic	29.1% (23.1-35.9)	20
Other	16.3% (11.5-22.5)	30
Significant association (p=.001)		
Geographic Region		
Anchorage/Mat-su	39.3% (31.1-48.1)	30
Southwest	11.2% (8.6-14.3)	40
All other regions	36.7% (28.1-46.1)	30
Significant association (p<.001)		
Smoking status		
Smoked during last three months of pg.	16.1% (10.3-24.3)	40
Non-smoker last three months of pg.	21.3% (18.1-24.8)	50
Non-significant association		
Total	**20.0% (17.3-23.2)**	**100**

* percent of mothers among Alaska Native mothers who reported “yes” to smokeless tobacco use before pregnancy, who also reported “no” to smokeless tobacco use during pregnancy.

** number of total estimated Alaska Native mothers in the state who quit using smokeless tobacco during pregnancy – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data represented graphically in Figure 51.

Table 49. Relapse in Smokeless Tobacco Use After Pregnancy Among Alaska Native Mothers Who Quit During Pregnancy

Alaska Native Mothers Subgroup	% who relapsed at post-partum* (n=113)	Number who relapsed at post-partum**
Total Alaska Native Mothers	**49.6% (40.0-59.2)**	**50**

* percent of mothers among Alaska Native mothers who were defined as quitting smokeless tobacco during pregnancy (reported use before pregnancy but not during pregnancy) who reported "yes" to using smokeless tobacco after pregnancy.

** number of total estimated Alaska Native mothers in the state who quit smokeless tobacco during pregnancy and had relapsed after delivery – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data represented graphically in Figure 52.

Table 50. Barriers to Quitting Smoking Among Alaska Native Mothers Who Currently Smoke (After Pregnancy) and Want to Quit

Alaska Native Mothers Subgroup	% who think this is a barrier to quitting* (n=690)	Number who think this is a barrier to quitting**
Nicotine cravings	81.6% (78.4-84.4)	520
Others smoke around me	61.1% (57.3-64.9)	390
Loss of way to cope with stress	54.9% (51.0-58.7)	350
Lack of support from others to quit	37.6% (33.9-41.4)	240
Weight gain	35.8% (32.1-39.6)	230
Cost of quitting medication/programs	28.7% (25.3-32.5)	180

* percent of mothers who reported "yes" to specific quitting barriers, among total Alaska Native mothers who smoke after pregnancy and would like to quit. Specific question wording: "Listed below are some reasons that discourage people from quitting smoking. Please circle Y (Yes) if it is a reason for you or N (No) if it is not a reason. …Cost of medicines, products, or classes to help you quit; Fear of gaining weight; Loss of a way to handle stress; Other people around me smoke; Lack of support from others to quit smoking; Some other reason." Responses were re-ordered for table presentation to represent their reported order of priority. "Some other reason" is not displayed because responses were not frequent enough to be useful for program planning.

** number of total estimated Alaska Native mothers in the state who express that this is a barrier to quitting smoking, among smokers who want to quit – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data represented graphically in Figure 53.

Table 51. Desired Support to Quit Smoking Among Alaska Native Mothers Who Currently Smoke (After Pregnancy) and Want to Quit

Alaska Native Mothers Subgroup	% who would like this type of support* (n=703)	Number who would like this type of support**
Nicotine patch, gum, spray, inhaler	62.7% (58.8-66.3)	400
Non-nicotine prescription medication (such as Zyban)	31.3% (27.7-35.0)	200
Quit-smoking class or group	28.9% (25.5-32.5)	180
Books, pamphlets, video or audiotapes	26.8% (23.5-30.3)	170
Telephone helpline	17.5% (14.7-20.7)	110

* percent of mothers who reported "yes" to specific supports for quitting, among Alaska Native mothers who smoke and who want to quit. Specific question wording: "If you were trying to quit smoking and cost were not an issue, would you use any of the following programs, products, or medicines to help you quit? For each thing circle Y (Yes) if you would use it or N (No) if you would not… Nicotine patch, gum, nasal spray, or inhaler; Zyban or other non-nicotine prescription medication; A quit smoking class or group; Books, pamphlets, videotapes or audiotapes; A telephone helpline to quit smoking; Something else". Responses were ordered in the table according to reported priority of the respondents. "Something else" is not displayed because responses were not frequent enough to be useful for program planning.

** number of total estimated Alaska Native mothers in the state who are interested in this type of cessation support, among those who smoke and want to quit – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data represented graphically in Figure 54.

Table 52. Visited a Health Care Provider in Past 12 Months Among Alaska Native Adults Who Are Current Smokers

Alaska Native Adult Subgroup	% who saw healthcare provider in past 12 months* (n=192)	Number who saw healthcare provider in past 12 months**
Males	41.8% (27.6-57.4)	7,800
Females	72.6% (61.4-81.6)	9,200
Significant association (p=.001)		
18-44 year olds	43.7% (30.9-57.5)	8,800
45 years and older	73.8% (60.0-83.9)	8,200
Significant association (p=.002)		
High school graduate or less	49.6% (37.1-62.1)	11,900
Some college or higher	69.8% (52.6-82.8)	5,200
Non-significant association		
Less than $25,000	58.4% (42.2-73.0)	9,200
$25,000 or more	66.9% (46.7-82.4)	7,800
Non-significant association		
Non-rural Alaska	65.8% (45.7-81.4)	11,400
Rural Alaska	40.0% (30.6-50.2)	5,600
Significant association (p=.02)		
No children in the home	53.0% (33.8-71.4)	6,400
Children in the home	54.9% (42.1-67.0)	10,600
Non-significant association		
Total	**54.3% (43.4-64.8)**	**17,000**

* Among Alaska Native respondents who are current smokers, the percent who responded "yes" to "In the past 12 months, have you seen a doctor, nurse, or other health professional to get any kind of care for yourself?"– weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who are smokers and who saw a healthcare provider in the past 12 months – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified survey

Data represented graphically in Figure 55, 56.

Table 53. Visited a Health Care Provider in Past 12 Months Among Alaska Native Adults Who Use Smokeless Tobacco

Alaska Native Adult Subgroup	% who saw healthcare provider in past 12 months* (n=43)	Number who saw healthcare provider in past 12 months**
Total	**53.2% (27.7-77.1)**	**4,200**

* Among Alaska Native respondents who currently use smokeless tobacco, the percent who responded "yes" to "In the past 12 months, have you seen a doctor, nurse, or other health professional to get any kind of care for yourself?"– weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who use smokeless tobacco and who saw a healthcare provider in the past 12 months – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified survey

Data represented graphically in Figure 56.

Table 54. Advised to Quit In Past Year Among Alaska Native Adult SMOKERS Who Had a Healthcare Visit in Past Year

Alaska Native Adult Subgroup	% who were advised to quit smoking in the past year* (n=106)	Number who were advised to quit smoking in the past year**
Non-rural Alaska	67.2% (47.0-82.5)	7,500
Rural Alaska	58.8% (43.1-73.0)	3,500
Non-significant association		
Total	**64.3% (50.4-76.1)**	**11,000**

* Among Alaska Native respondents who are current smokers and have seen a health professional in the past 12 months, the percent who responded "yes" to "in the past 12 months has a doctor, nurse, or other health professional advised you to quit smoking?"– weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who were advised to quit smoking in the past 12 months – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified survey

Data represented graphically in Figure 56.

Table 55. Advised to Quit In Past Year Among Alaska Native Adults Who Use SMOKELESS TOBACCO and Who Had a Healthcare Visit in Past Year

Alaska Native Adult Subgroup	% who were advised to quit smokeless tobacco in the past year* (n=23)	Number who were advised to quit smokeless tobacco in the past year**
Total	**34.6% (10.3-70.9)**	**1,400**

* Among Alaska Native respondents who currently use smokeless tobacco and have seen a health professional in the past 12 months, the percent who responded "yes" to "in the past 12 months has a doctor, nurse, or other health professional advised you to stop using smokeless tobacco?"– weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who were advised to quit using smokeless tobacco in the past 12 months – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified survey

Data represented graphically in Figure 56.

Table 56. Healthcare Providers Talked About How Smoking Could Hurt the Baby Among All Alaska Native Mothers of Newborns (note that this is protective/desirable)

Alaska Native Mothers Subgroup	% whose healthcare provider talked to them* (n=2612)	Number whose healthcare provider talked to them**
Maternal Age		
Age <20	90.6% (88.1-92.7)	400
Age 20-24	84.3% (82.0-86.4)	650
Age 25-29	80.4% (77.6-83.0)	470
Age 30-34	77.3% (73.3-80.9)	260
Age 35+	77.1% (72.4-81.2)	200
Significant association (p<.001)		
Maternal Education		
Less than 12 years	88.1% (85.8-90.1)	580
12 years	82.6% (80.8-84.3)	1,100
13-15 years	75.6% (71.4-79.4)	240
16+ years	72.9% (65.1-79.5)	80
Significant association (p<.001)		
Medicaid coverage before pregnancy		
Medicaid covered	82.6% (79.8-85.0)	510
Other health coverage	82.7% (81.2-84.2)	1,500
Non-significant association		
Usual source of prenatal care		
Hospital clinic	83.6% (81.3-85.6)	700
Health department clinic	83.8% (77.8-88.4)	120
Private doctor's office	75.6% (69.8-80.6)	130
Alaska Native Clinic	84.0% (81.9-85.9)	830
Other	78.3% (73.6-82.4)	190
Significant association (p=.005)		
Geographic Region		
Anchorage/Mat-su	85.5% (83.3-87.4)	650
Gulf Coast	79.0% (71.6-84.9)	80
Interior	78.8% (73.9-83.0)	180
Northern	84.1% (80.8-87.0)	340
Southeast	80.8% (75.8-84.9)	170
Southwest	81.5% (78.9-83.9)	560
Significant association (p=.03)		
Smoking status		
Smoked during last three months of pg.	90.5% (88.9-91.9)	980
Non-smoker last three months of pg.	76.1% (74.0-78.0)	1,000
Significant association (p<.001)		
Total	**82.8% (81.5-84.0)**	**2,000**

* percent of mothers among total Alaska Native mothers who reported "yes" to the question "During any of your prenatal visits, did a doctor, nurse or other healthcare worker talk with you about any of the things listed below? …How smoking during pregnancy could affect your baby?"

(continued from Table 56)

** number of total estimated Alaska Native mothers in the state who said a healthcare provider talked with them about how smoking could hurt their baby – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data represented graphically in Figure 57.

Table 57. Healthcare Providers Talked About How Smoking Could Hurt the Baby Among Alaska Native Mothers Who Smoked Prior to Pregnancy

Alaska Native Mothers Subgroup	% whose healthcare provider talked to them* (n=1126)	Number whose healthcare provider talked to them**
Maternal Age		
Age <20	91.4% (87.0-94.4)	80
Age 20-24	91.2% (88.0-93.6)	130
Age 25-29	91.6% (87.3-94.5)	120
Age 30-34	86.7% (79.5-91.7)	70
Age 35+	86.2% (75.9-92.5)	60
Non-significant association		
Maternal Education		
Less than 12 years	92.3% (88.9-94.8)	140
12 years	89.8% (87.0-92.0)	280
13-15 years	89.3% (82.2-93.8)	30
16+ years	89.7% (66.8-97.4)	10
Non-significant association		
Medicaid coverage before pregnancy		
Medicaid covered	91.2% (87.3-94.0)	160
Other health coverage	90.1% (87.8-92.0)	290
Non-significant association		
Usual source of prenatal care		
Hospital clinic	91.9% (88.5-94.3)	210
Health department clinic	92.2% (82.5-96.7)	40
Private doctor's office	88.2% (79.1-93.7)	10
Alaska Native Clinic	89.8% (86.5-92.3)	130
Other	88.6% (80.4-93.7)	60
Non-significant association		
Geographic Region		
Anchorage/Mat-su	92.3% (89.2-94.5)	80
Gulf Coast	88.4% (76.4-94.7)	10
Interior	87.5% (79.3-92.8)	20
Northern	89.2% (84.3-92.7)	30
Southeast	87.8% (79.5-93.1)	10
Southwest	91.8% (87.2-94.9)	310
Non-significant association		
Smoking status		
Smoked during last three months of pg.	92.5% (90.1-94.3)	140
Non-smoker last three months of pg.	87.6% (83.9-90.5)	300
Significant association (p=.009)		
Total	**90.5% (88.6-92.1)**	**450**

* percent of mothers among Alaska Native mothers who said they smoked cigarettes during 12 months before pregnancy who reported "yes" to the question "During any of your prenatal visits, did a doctor, nurse or other healthcare worker talk with you about any of the things listed below? …How smoking during pregnancy could affect your baby?"

(continued from Table 57)

** number of total estimated Alaska Native mothers in the state who said a healthcare provider talked with them about how smoking could hurt their baby – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data represented graphically in Figure 57.

Table 58. Used Medications to Help Quit Among Alaska Native Adults Who Have Tried to Quit Smoking in Past Year or Who Quit Smoking in Past Year

Alaska Native Adult Subgroup	% who used medications to help quit* (n=288)	Number who used medications to help quit**
Males	15.0% (8.2-25.9)	1,500
Females	14.7% (8.2-25.0)	1,300
Non-significant association		
18-44 year olds	11.7% (7.0-18.9)	1,800
45 years and older	16.6% (7.9-31.7)	1,000
Non-significant association		
Less than high school graduate	4.3% (1.0-17.7)	100
High school graduate or GED	18.5% (11.2-29.0)	2,100
Some college or higher	13.1% (5.5-28.4)	600
Non-significant association		
Less than $25,000	14.6% (7.6-26.3)	1,600
$25,000 or more	13.3% (6.9-24.1)	1,200
Non-significant association		
Non-rural Alaska	17.4% (9.0-31.0)	1,600
Rural Alaska	12.4% (8.0-18.8)	1,200
Non-significant association		
No children in the home	21.7% (11.4-37.4)	1,700
Children in the home	10.3% (6.6-15.8)	1,100
Non-significant association		
Successfully quit	7.1% (2.4-19.3)	300
Tried to quit, but still smoking	16.7% (10.8-25.1)	2,500
Non-significant association		
Total	**14.9% (9.8-21.9)**	**2,800**

* Among Alaska Native respondents who have tried to quit smoking (successfully or unsuccessfully) in the past 12 months, the percent who responded "yes" to "[when you quit smoking for good] / [the last time you tried to quit smoking] did you use the nicotine patch, nicotine gum, or any other medication to help you quit?"– weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who have used medications to assist in quitting smoking – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 and 2005 modified surveys

Data represented graphically in Figure 58.

Table 59. Aware of Quitline Among Alaska Native Adults Who Use Tobacco

Alaska Native Adult Subgroup	% who are aware of the Quitline* (n=487)	Number who are aware of the Quitline**
Males	44.0% (34.7-53.7)	9,400
Females	47.0% (38.3-55.8)	7,300
Non-significant association		
18-24 year olds	57.2% (40.9-72.1)	4,800
25-34 year olds	48.6% (35.1-62.3)	3,500
35-44 year olds	35.2% (25.4-46.3)	3,400
45-54 year olds	37.7% (24.4-53.1)	2,900
55 years and older	56.8% (39.0-73.0)	2,100
Non-significant association		
Less than high school graduate	49.1% (35.5-62.8)	3,800
High school graduate or GED	45.5% (36.9-54.3)	9,500
Some college or higher	40.9% (27.5-55.9)	3,300
Non-significant association		
Less than $15,000	54.6% (42.5-66.2)	5,200
$15,000-$24,999	45.3% (30.6-60.8)	4,700
$25,000-$49,999	48.3% (36.4-60.5)	5,000
$50,000 or more	31.9% (16.3-52.9)	2,000
Non-significant association		
Non-rural Alaska	39.2% (28.0-51.6)	6,900
Rural Alaska	50.8% (44.5-57.0)	9,900
Non-significant association		
No children in the home	48.0% (36.6-59.7)	6,400
Children in the home	43.6% (35.8-51.8)	10,400
Non-significant association		
Total	**45.2% (38.7-52.0)**	**16,800**

* percent of Alaska Native adult smokers and smokeless tobacco users who responded “yes” to “are you aware of the Alaska Quitline, which is a telephone service that can help people quit smoking or using smokeless tobacco?” – weighted percentage shown with 95% confidence interval in parentheses

** estimated number of Alaska Native adults in the state who currently use tobacco (cigarettes or smokeless tobacco) and are aware of the Quitline – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 and 2005 modified surveys

Data represented graphically in Figure 59.

Table 60. Trends in Willingness to Use a Quit Line for Cessation Support Among Alaska Native Mothers of Newborns*

Year	Alaska Natives % (95% confidence interval)
2002	13.5% (9.5-18.8)
2003	22.8% (17.2-29.6)
Tests for trend:	*Significant increase from 2002 to 2003 (p=.02)*

* percent of mothers among Alaska Native mothers who smoke cigarettes at post-partum and who said "yes" to the question "Would you like to completely quit smoking within the next 6 months?"

Source: Alaska PRAMS 2002 and 2003

Data represented graphically in Figure 60.

Table 61. Used Classes/Counseling to Help Quit Among Alaska Native Adults Who Have Tried to Quit Smoking in Past Year or Who Quit Smoking in Past Year

Alaska Native Adult Subgroup	% who used classes or counseling to help quit* (n=288)	Number who used classes or counseling to help quit**
Males	2.3% (0.7-7.7)	240
Females	2.8% (1.1-7.1)	270
Non-significant association		
18-44 year olds	0.6% (0.2-2.5)	110
45 years and older	5.8% (2.2-14.2)	410
Significant association (p=.001)		
Less than high school graduate	4.4% (1.0-16.9)	140
High school graduate or GED	2.6% (0.9-7.3)	310
Some college or higher	1.2% (0.3-5.4)	70
Non-significant association		
Less than $25,000	2.5% (0.8-7.0)	330
$25,000 or more	1.6% (0.4-7.3)	190
Non-significant association		
Non-rural Alaska	2.6% (0.9-7.5)	260
Rural Alaska	2.5% (0.8-7.2)	250
Non-significant association		
No children in the home	2.9% (0.9-8.9)	240
Children in the home	2.3% (0.8-6.3)	270
Non-significant association		
Successfully quit	6.5% (1.8-20.9)	250
Tried to quit, but still smoking	1.6% (0.6-3.9)	260
Non-significant association		
Total	**2.5% (1.2-5.4)**	**520**

* Among Alaska Native respondents who have tried to quit smoking (successfully or unsuccessfully) in the past 12 months, the percent who responded "yes" to "[when you quit smoking for good] / [the last time you tried to quit smoking] did you use any other assistance such as classes or counseling?"– weighted percentage shown with 95% confidence interval in parentheses

** estimated number of Alaska Native adults in the state who have used classes or counseling to assist in quitting smoking – estimated population size rounded to nearest 10. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 and 2005 modified surveys

Data represented graphically in Figure 61.

Secondhand Smoke Tables

Table 62. Smoking in the Home in the Past 30 days Among Alaska Native Adults

Alaska Native Adult Subgroup	% who had smoking in the home* (n=1027)	Number who had smoking in the home**
Males	14.9% (11.1-19.8)	5,800
Females	16.9% (12.8-21.9)	5,900
Non-significant association		
18-24 year olds	15.1% (8.7-25.0)	2,000
25-34 year olds	8.6% (4.9-14.7)	1,100
35-44 year olds	15.3% (10.1-22.5)	2,700
45-54 year olds	20.1% (13.6-28.5)	3,200
55-64 year olds	23.4% (14.3-35.8)	2,000
65 years and older	12.1% (5.0-26.4)	700
Non-significant association		
Less than high school graduate	17.5% (11.5-25.9)	2,900
High school graduate or GED	18.0% (13.6-23.5)	6,300
College 1-3 years	12.2% (7.6-19.2)	1,900
College graduate	10.4% (5.6-18.8)	900
Non-significant association		
Less than $15,000	29.0% (20.8-38.8)	4,000
$15,000-$24,999	16.8% (10.4-25.9)	2,700
$25,000-$49,999	16.9% (11.5-24.0)	3,500
$50,000-$74,999	11.1% (5.2-22.1)	1,100
$75,000 or more	4.7% (2.0-10.9)	400
Significant association (p=.001)		
Anchorage and vicinity	17.6% (10.8-27.3)	4,100
Gulf Coast	21.2% (12.0-34.6)	1,000
Southeast Alaska	16.5% (10.7-24.7)	1,300
Rural Alaska	13.6% (10.9-17.0)	4,600
Fairbanks and Vicinity	17.3% (8.9-31.0)	700
Non-significant association		
No children in the home	22.4% (17.1-28.8)	6,600
Children in the home	11.5% (8.5-15.5)	5,200
Significant association (p<.001)		
Non-smokers	8.6% (5.9-12.4)	3,800
Smokers	27.3% (21.7-33.8)	7,900
Significant association (p<.001)		
Total	**15.9% (13.0-19.3)**	**11,700**

* percent of Alaska Native adults who responded “yes” to “in the past 30 days has anyone, including yourself, smoked cigarettes, cigars, or pipes anywhere inside your home?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who had smoking in their home – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

(Continued from Table 62)

Source: Alaska BRFSS - 2004 and 2005 modified surveys

Data represented graphically in Figure 62.

Table 63. Secondhand Smoke Exposure in Car Among Alaska Native Adults

Alaska Native Adult Subgroup	% who were in a car with smoking* (n=1,013)	Number who were in a car with smoking**
Males	36.5% (29.8-43.6)	14,300
Females	29.0% (23.5-35.3)	10,100
Non-significant association		
18-24 year olds	48.4% (35.8-61.3)	6,400
25-34 year olds	35.1% (25.1-46.6)	4,700
35-44 year olds	34.4% (26.0-44.0)	6,000
45-54 year olds	29.3% (21.1-39.2)	4,700
55-64 year olds	20.3% (11.9-32.6)	1,800
65 years and older	13.5% (5.9-28.1)	800
Significant association (p=.003)		
Less than high school graduate	35.0% (24.9-46.8)	5,600
High school graduate or GED	40.7% (34.4-47.5)	14,100
College 1-3 years	21.5% (14.7-30.3)	3,300
College graduate	17.7% (10.1-29.1)	1,400
Significant association (p=.001)		
Less than $15,000	31.2% (22.4-41.7)	4,500
$15,000-$24,999	33.9% (23.4-46.3)	6,100
$25,000-$49,999	37.3% (29.0-46.5)	8,200
$50,000-$74,999	34.6% (20.2-52.6)	3,700
$75,000 or more	17.8% (10.1-29.4)	1,900
Non-significant association		
Anchorage and vicinity	47.8% (36.0-59.9)	11,000
Gulf Coast	36.4% (25.4-49.0)	1,800
Southeast Alaska	39.6% (30.5-49.5)	3,300
Rural Alaska	20.4% (16.8-24.6)	6,900
Fairbanks and Vicinity	35.3% (23.4-49.3)	1,400
Significant association (p<.001)		
No children in the home	41.4% (33.8-49.4)	12,300
Children in the home	27.4% (22.3-33.1)	12,100
Significant association (p=.004)		
Non-smokers	16.2% (11.9-21.8)	7,400
Smokers	58.0% (51.4-64.4)	17,000
Significant association (p<.001)		
Total	**33.0% (28.5-37.7)**	**24,400**

* percent of Alaska Native adults who responded “yes” to “in the past 30 days has anyone, including yourself, smoked cigarettes, cigars, or pipes in a car you were in?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who were in a car in the past 30 days where someone smoked – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 and 2005 modified surveys

Data represented graphically in Figure 62.

Table 64. Exposure to Secondhand Smoke Indoors Among Alaska Native High School Students

Alaska Native Student Subgroup	% who are exposed indoors* (n=279)	Number exposed indoors**
Males	46.2% (37.5-55.2)	1700
Females	51.9% (43.5-60.2)	2100
Non-significant association		
9-10th graders	51.2% (43.4-59.0)	2500
11-12th graders	45.3% (35.5-55.6)	1300
Non-significant association		
Students who get As/Bs	45.5% (37.0-54.3)	2000
Students who get Cs/Ds/Fs	55.4% (45.0-65.3)	1800
Non-significant association		
Current smokers	61.5% (51.8-70.4)	2100
Non-smoking students	38.1% (30.3-46.6)	1600
Significant association (p<.001)		
Total	**49.4% (43.3-55.5)**	**3800**

* percent of students among total Alaska Native students who gave a valid response other than "0 days" to the question "During the past 7 days, on how many days were you in the same room with someone who was smoking cigarettes, cigars or pipe tobacco?"

** number of total estimated Alaska Native students in the state who are exposed to secondhand smoke within this subgroup – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: 2003 Alaska YRBS

Data represented graphically in Figure 63.

Table 65. Exposure to Secondhand Smoke in Cars Among Alaska Native High School Students

Alaska Native Student Subgroup	% who are exposed in cars* (n=280)	Number exposed in cars**
Males	35.2% (27.3-44.1)	1300
Females	34.4% (27.0-42.6)	1400
Non-significant association		
9-10th graders	38.0% (30.8-45.9)	1800
11-12th graders	31.5% (23.0-41.5)	900
Non-significant association		
Students who get As/Bs	35.2% (27.5-43.9)	1600
Students who get Cs/Ds/Fs	38.8% (29.4-49.2)	1300
Non-significant association		
Current smokers	44.0% (34.8-53.6)	1500
Non-smoking students	25.1% (18.6-33.0)	1100
Significant association (p=.002)		
Total	**35.5% (29.9-41.4)**	**2700**

* percent of students among total Alaska Native students who gave a valid response other than "0 days" to the question "during the past 7 days, on how many days were you in a car with someone who was smoking cigarettes, cigars or pipe tobacco"

** number of total estimated Alaska Native students in the state who are exposed to SHS in cars within this subgroup – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10.

Source: 2003 Alaska YRBS

Data represented graphically in Figure 63.

Table 66. New Baby Is Ever In the Same Room With Someone Smoking Among Alaska Native Mothers of Newborns

Alaska Native Mothers Subgroup	% whose baby is ever in the same room with someone smoking* (n=2422)	Number whose baby is ever in the same room with someone who is smoking**
Usual source of care		
Hospital clinic	3.9% (2.8-5.2)	30
Health department clinic	5.3% (2.8-9.8)	10
Doctor office/HMO	3.5% (1.8-6.7)	10
Alaska Native Clinic	2.7% (1.9-3.8)	30
Other	0.9% (0.3-3.0)	<10
Significant association (p=.04)		
Geographic Region		
Anchorage/Mat-su	2.5% (1.7-3.7)	20
Gulf Coast	9.6% (5.6-16.0)	10
Interior	3.1% (1.7-5.8)	10
Northern	3.6% (2.3-5.6)	20
Southeast	4.8% (2.9-8.0)	10
Southwest	1.7% (1.0-2.8)	10
Significant association (p<.001)		
Smoking status post-partum		
Mother currently smokes	3.4% (2.5-4.6)	30
Non-smoking mother	2.9% (2.2-3.8)	50
Non-significant association		
Total	**3.1% (2.5-3.7)**	**70**

* percent of mothers among total Alaska Native mothers who gave any response other than “0 hours” to the question “About how many hours a day, on average, is your new baby in the same room with someone who is smoking?” This estimate may under-represent actual exposure to secondhand smoke for infants, because smoking anywhere in the same household with a new infant may affect him/her.

** number of total estimated Alaska Native mothers in the state who said their baby is in the same room with someone who is smoking – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10.. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: Alaska PRAMS – 2000-03 combined

Data represented graphically in Figure 64.

Table 67. Knowledge that Secondhand Smoke Causes LUNG CANCER Among Alaska Native Adults

Alaska Native Adult Subgroup	% who believe that secondhand smoke causes lung cancer* (n=459)	Number who believe that secondhand smoke causes lung cancer**
Males	85.8% (78.9-90.7)	35,200
Females	85.4% (77.4-90.9)	28,000
Non-significant association		
18-24 year olds	99.2% (94.5-99.9)	13,500
25-34 year olds	96.1% (90.0-98.5)	11,700
35-44 year olds	77.3% (63.2-87.1)	13,500
45-54 year olds	88.6% (80.8-93.5)	14,700
55 years and older	72.7% (58.4-83.4)	9,900
Significant association (p<.001)		
Less than high school graduate	82.8% (69.9-90.9)	15,900
High school graduate or GED	83.8% (75.4-89.7)	27,400
Some college or higher	90.7% (84.9-94.4)	19,800
Non-significant association		
Less than $15,000	84.9% (73.9-91.8)	11,000
$15,000-$24,999	86.8% (73.9-93.8)	17,800
$25,000-$49,999	85.5% (72.6-92.9)	18,400
$50,000 or more	86.3% (73.0-93.6)	15,900
Non-significant association		
Non-rural Alaska	83.5% (75.0-89.5)	33,000
Rural Alaska	88.0% (82.5-92.0)	30,200
Non-significant association		
No children in the home	83.8% (76.2-89.3)	23,500
Children in the home	86.9% (79.7-91.8)	39,700
Non-significant association		
Non-smokers	88.1% (81.7-92.5)	37,300
Smokers	83.5% (74.8-89.7)	25,900
Non-significant association		
Total	**85.6% (80.6-89.5)**	**63,200**

* percent of Alaska Native adults who responded “yes” to “would you say that breathing smoke from other people’s cigarettes causes lung cancer in adults?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who believe that secondhand smoke causes lung cancer – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified survey

Data represented graphically in Figure 65.

Table 68. Knowledge that Secondhand Smoke Causes HEART DISEASE Among Alaska Native Adults

Alaska Native Adult Subgroup	% who believe that secondhand smoke causes heart disease* (n=459)	Number who believe that secondhand smoke causes heart disease**
Males	70.6%(59.6-79.7)	29,100
Females	68.8% (60.2-76.3)	22,500
Non-significant association		
18-24 year olds	86.0% (73.8-93.0)	11,700
25-34 year olds	67.9% (50.6-81.4)	8,200
35-44 year olds	65.8% (52.4-77.1)	11,600
45-54 year olds	66.6% (47.5-81.5)	11,000
55 years and older	65.9% (51.7-77.8)	8,900
Non-significant association		
Less than high school graduate	71.9% (56.7-83.3)	13,700
High school graduate or GED	67.0% (57.7-75.2)	22,000
Some college or higher	72.4% (56.2-84.2)	15,900
Non-significant association		
Less than $15,000	70.6% (55.3-82.3)	9,100
$15,000-$24,999	74.9% (61.9-84.6)	15,400
$25,000-$49,999	72.1% (59.0-82.3)	15,600
$50,000 or more	61.6% (40.6-79.0)	11,500
Non-significant association		
Non-rural Alaska	66.2% (54.5-76.2)	26,200
Rural Alaska	74.0% (67.1-79.9)	25,400
Non-significant association		
No children in the home	71.8% (61.1-80.6)	20,100
Children in the home	68.5% (59.1-76.6)	31,500
Non-significant association		
Non-smokers	70.5% (60.2-79.1)	29,800
Smokers	70.2% (60.4-78.5)	21,800
Non-significant association		
Total	**69.8% (62.8-76.1)**	**51,600**

* percent of Alaska Native adults who responded “yes” to “would you say that breathing smoke from other people’s cigarettes causes heart disease in adults?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who believe that secondhand smoke causes heart disease – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified survey

Data represented graphically in Figure 65.

Table 69. Knowledge that Secondhand Smoke Causes RESPIRATORY PROBLEMS IN CHILDREN Among Alaska Native Adults

Alaska Native Adult Subgroup	% who believe that secondhand smoke causes respiratory problems in children* (n=460)	Number who believe that secondhand smoke causes respiratory problems in children**
Males	90.5% (83.8-94.6)	37,300
Females	95.0% (90.9-97.2)	31,000
Non-significant association		
18-24 year olds	94.2% (76.5-98.8)	13,000
25-34 year olds	97.6% (91.6-99.3)	12,000
35-44 year olds	93.4% (82.7-97.7)	16,600
45-54 year olds	94.0% (87.6-97.2)	15,600
55 years and older	82.2% (69.4-90.4)	11,200
Non-significant association		
Less than high school graduate	86.6% (74.3-93.5)	16,600
High school graduate or GED	94.3% (88.6-97.3)	30,900
Some college or higher	95.1% (90.4-97.5)	20,900
Non-significant association		
Less than $15,000	86.2% (74.9-92.9)	11,300
$15,000-$24,999	95.6% (88.0-98.4)	19,800
$25,000-$49,999	89.9% (76.9-96.0)	19,700
$50,000 or more	94.3% (81.5-98.4)	17,700
Non-significant association		
Non-rural Alaska	93.0% (87.2-96.3)	37,000
Rural Alaska	91.8% (85.8-95.4)	31,300
Non-significant association		
No children in the home	90.9% (84.1-95.0)	25,500
Children in the home	93.4% (87.9-96.5)	42,800
Non-significant association		
Non-smokers	93.7% (88.0-96.8)	39,700
Smokers	91.7% (85.3-95.5)	28,500
Non-significant association		
Total	**92.5% (88.6-95.1)**	**68,300**

* percent of Alaska Native adults who responded “yes” to “would you say that breathing smoke from other people’s cigarettes causes respiratory problems in children?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who believe that secondhand smoke causes respiratory problems in children – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified survey

Data represented graphically in Figure 65.

Table 70. Knowledge that Secondhand Smoke Causes SUDDEN INFANT DEATH SYNDROME Among Alaska Native Adults

Alaska Native Adult Subgroup	% who believe that secondhand smoke causes sudden infant death syndrome* (n=460)	Number who believe that secondhand smoke causes sudden infant death syndrome**
Males	38.5% (29.2-48.7)	15,800
Females	50.7% (42.4-58.9)	16,600
Non-significant association		
18-24 year olds	64.0% (42.8-80.9)	8,600
25-34 year olds	47.6% (34.2-61.4)	5,700
35-44 year olds	42.8% (30.5-56.0)	7,500
45-54 year olds	38.1% (25.5-52.6)	6,300
55 years and older	32.0% (21.4-44.9)	4,300
Non-significant association		
Less than high school graduate	41.8% (28.1-56.7)	8,000
High school graduate or GED	47.6% (38.1-57.2)	15,600
Some college or higher	39.9% (29.3-51.6)	8,800
Non-significant association		
Less than $15,000	58.0% (44.3-70.5)	7,800
$15,000-$24,999	56.0% (42.0-69.0)	11,900
$25,000-$49,999	38.6% (27.8-50.7)	8,600
$50,000 or more	22.0% (12.7-35.4)	4,300
Significant association (p<.001)		
Non-rural Alaska	42.1% (31.6-53.3)	16,700
Rural Alaska	45.9% (39.0-53.0)	15,700
Non-significant association		
No children in the home	37.9% (27.6-49.6)	10,600
Children in the home	47.3% (39.0-55.8)	21,700
Non-significant association		
Non-smokers	42.1% (33.9-50.7)	17,800
Smokers	47.1% (36.6-57.9)	14,600
Non-significant association		
Total	**43.8% (37.3-50.7)**	**32,300**

* percent of Alaska Native adults who responded “yes” to “would you say that breathing smoke from other people’s cigarettes causes sudden infant death syndrome?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who believe that secondhand smoke causes sudden infant death syndrome – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified survey

Data represented graphically in Figure 65.

Table 71. Knowledge that Secondhand Smoke Causes COLON CANCER Among Alaska Native Adults [Trick Question]

Alaska Native Adult Subgroup	% who believe that secondhand smoke causes colon cancer* (n=458)	Number who believe that secondhand smoke causes colon cancer**
Males	34.2% (25.4-44.2)	14,100
Females	38.0% (30.3-46.4)	12,400
Non-significant association		
18-24 year olds	39.5% (22.4-59.6)	5,400
25-34 year olds	44.1% (31.2-57.8)	5,300
35-44 year olds	36.7% (24.1-51.4)	6,400
45-54 year olds	30.6% (20.1-43.7)	5,100
55 years and older	32.6% (21.7-45.8)	4,400
Non-significant association		
Less than high school graduate	42.3% (28.7-57.2)	8,100
High school graduate or GED	35.0% (26.2-44.9)	11,400
Some college or higher	31.8% (22.4-42.8)	6,900
Non-significant association		
Less than $15,000	46.6% (32.9-60.7)	6,000
$15,000-$24,999	43.9% (30.9-57.7)	9,100
$25,000-$49,999	39.2% (27.2-52.7)	8,600
$50,000 or more	14.6% (7.3-27.1)	2,700
Significant association (p=.003)		
Non-rural Alaska	27.7% (18.9-38.5)	11,000
Rural Alaska	45.4% (38.4-52.6)	15,500
Significant association (p=.007)		
No children in the home	30.0% (20.9-41.1)	8,500
Children in the home	39.3% (31.5-47.8)	18,000
Non-significant association		
Non-smokers	36.8% (29.1-45.3)	15,600
Smokers	35.3% (25.6-46.4)	10,900
Non-significant association		
Total	**35.9% (29.8-42.5)**	**26,500**

* percent of Alaska Native adults who responded “yes” to “would you say that breathing smoke from other people’s cigarettes causes colon cancer in adults?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who believe that secondhand smoke causes colon cancer – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified survey

Data represented graphically in Figure 65.

Table 72. Knowledge that Secondhand Smoke Causes Four Illnesses Among Alaska Native Adults

Alaska Native Adult Subgroup	% who believe that secondhand smoke causes 4-5 of the 5 listed illnesses* (n=458)	Number who believe that secondhand smoke causes 4-5 of the 5 listed illnesses**
Males	47.8% (37.7-58.2)	19,700
Females	45.3% (37.2-53.6)	14,800
No significant association		
18-24 year olds	66.0% (45.0-82.2)	9,000
25-34 year olds	54.0% (39.6-67.8)	6,600
35-44 year olds	47.3% (34.3-60.6)	8,200
45-54 year olds	38.1% (25.9-52.2)	6,300
55 years and older	32.7% (21.8-54.8)	4,400
Significant association (p=.03)		
Less than high school graduate	44.7% (30.6-59.7)	8,600
High school graduate or GED	50.1% (40.6-59.7)	16,500
Some college or higher	43.4% (32.2-55.3)	9,400
No significant association		
Less than $15,000	55.5% (41.4-68.8)	7,500
$15,000-$24,999	56.4% (42.3-69.6)	12,000
$25,000-$49,999	47.6% (35.2-60.3)	10,600
$50,000 or more	22.8% (13.1-36.5)	4,400
Significant association (p=.002)		
Non-rural Alaska	42.6% (32.0-54.0)	16,900
Rural Alaska	51.4% (44.2-58.4)	17,600
No s*ignificant association*		
No children in the home	40.4% (29.5-52.3)	11,300
Children in the home	50.4% (42.0-58.9)	23,200
No significant association		
Non-smokers	41.9% (33.7-50.5)	17,700
Smokers	54.2% (43.7-64.3)	16,800
No significant association		
Total	**46.7% (39.9-53.6)**	**34,500**

* percent of Alaska Native adults who responded "yes" to 4 or 5 of the 5 secondhand smoke causes illness questions (see Tables 18a-18e) – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who responded "yes" to 4 or 5 of the 5 secondhand smoke causes illness questions– estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified survey

Data represented graphically in Figure 66.

Table 73. Belief That Secondhand Smoke is Very Harmful Among Alaska Native Adults

Alaska Native Adult Subgroup	% who believe that secondhand smoke is very harmful* (n=460)	Number who believe that secondhand smoke is very harmful**
Males	64.0% (53.9-72.9)	26,300
Females	79.6% (72.2-85.5)	26,000
Significant association (p=.007)		
18-24 year olds	77.8% (60.3-89.0)	10,600
25-34 year olds	70.5% (53.7-83.2)	8,700
35-44 year olds	66.9% (52.4-78.8)	11,900
45-54 year olds	77.0% (65.3-85.7)	12,800
55 years and older	61.9% (47.6-74.5)	8,300
Non-significant association		
Less than high school graduate	66.4% (50.9-79.0)	12,700
High school graduate or GED	70.7% (61.1-78.8)	23,100
Some college or higher	75.3% (64.9-83.4)	16,600
Non-significant association		
Less than $15,000	70.8% (57.6-81.1)	9,200
$15,000-$24,999	76.8% (63.9-86.0)	15,900
$25,000-$49,999	66.0% (51.1-78.3)	14,400
$50,000 or more	68.8% (51.3-82.2)	12,800
Non-significant association		
Non-rural Alaska	69.0% (58.4-78.0)	27,300
Rural Alaska	73.1% (65.8-79.3)	25,000
Non-significant association		
No children in the home	62.1% (50.4-72.5)	17,300
Children in the home	76.2% (68.6-82.4)	35,000
Significant association (p=.03)		
Non-smokers	73.7% (65.3-80.6)	31,200
Smokers	67.9% (57.2-77.1)	21,200
Non-significant association		
Total	**70.9% (64.4-76.6)**	**52,400**

* percent of Alaska Native adults who responded “very harmful to one’s health” to “do you think that breathing smoke from other people’s cigarettes is very harmful to one’s health, somewhat harmful to one’s health, not very harmful to one’s health, or not harmful at all to one’s health?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who believe that secondhand smoke is very harmful – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified survey

Data represented graphically in Figure 67.

Table 74. Belief in Harm of Secondhand Smoke Among Alaska Native High School Students

Alaska Native Student Subgroup	% who believe SHS is "definitely harmful"* (n=278)	Number who believe SHS is "definitely harmful" **
Males	76.8% (68.2-83.6)	2,800
Females	81.2% (73.7-86.9)	3,300
Non-significant association		
9-10th graders	75.7% (68.1-81.9)	3,700
11-12th graders	83.8% (74.8-90.0)	2,400
Non-significant association		
Students who get As/Bs	81.7% (74.1-87.5)	3,600
Students who get Cs/Ds/Fs	77.7% (68.0-85.2)	2,500
Non-significant association		
Current smokers	75.3% (66.2-82.7)	2,600
Non-smoking students	84.6% (77.6-89.8)	3,600
Non-significant association		
Currently SHS exposed (indoors or cars)	76.9% (69.6-82.9)	3,500
Non-SHS exposed students	80.1% (71.1-86.9)	2,500
Non-significant association		
Total	**78.2% (72.7-82.9)**	**6,000**

* percent of students among total Alaska Native students who responded "definitely yes" to the question "do you think that secondhand smoke – smoke from other peoples' cigarettes – is harmful to you?"

** number of total estimated Alaska Native students in the state who believe SHS is definitely harmful within this subgroup – estimated population size rounded to nearest two significant figures (for example, nearest 100 for estimates at 1,000 - 9,999 and nearest 10 for estimates at 10 - 999); numbers rounded to zero reported as <10. Subgroup estimates may not add to grand totals due to rounding or missing data.

Source: 2003 Alaska YRBS

Data not represented graphically in report.

Table 75. Belief That People Should Be Protected From Secondhand Smoke Among Alaska Native Adults

Alaska Native Adult Subgroup	% who say that people should be protected from secondhand smoke* (n=461)	Number who say that people should be protected from secondhand smoke**
Males	86.2% (77.7-91.8)	35,500
Females	85.6% (77.9-90.9)	28,000
Non-significant association		
18-24 year olds	95.4% (84.0-98.8)	13,000
25-34 year olds	90.6% (82.5-95.2)	11,100
35-44 year olds	85.5% (68.6-94.1)	15,200
45-54 year olds	89.2% (80.1-94.4)	14,700
55 years and older	71.4% (55.5-83.3)	9,700
Significant association (p=.02)		
Less than high school graduate	83.1% (69.5-91.4)	15,900
High school graduate or GED	85.4% (75.7-91.6)	28,000
Some college or higher	89.2% (81.8-93.8)	19,700
Non-significant association		
Less than $15,000	86.1% (75.2-92.7)	11,200
$15,000-$24,999	87.5% (75.0-94.2)	18,000
$25,000-$49,999	78.9% (62.8-89.2)	17,000
$50,000 or more	92.8% (82.4-97.3)	17,200
Non-significant association		
Non-rural Alaska	82.0% (72.5-88.8)	32,600
Rural Alaska	90.5% (84.9-94.1)	30,900
Non-significant association		
No children in the home	76.7% (65.0-85.4)	21,400
Children in the home	91.7% (86.7-94.9)	42,000
Significant association (p=.002)		
Non-smokers	89.9% (84.2-93.7)	38,100
Smokers	81.8% (70.9-89.2)	25,400
Non-significant association		
Total	**85.9% (80.4-90.1)**	**63,400**

* percent of Alaska Native adults who responded “strongly agree” or “agree” to “How strongly do you agree with the following statement: people should be protected from smoke from other people’s cigarettes?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who believe that people should be protected from secondhand smoke – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 modified survey

Data represented graphically in Figure 68.

Table 76. Support for Banning Smoking In RESTAURANTS Among Alaska Native Adults

Alaska Native Adult Subgroup	% who say that smoking should not be allowed in restaurants* (n=1,023)	Number who say that smoking should not be allowed in restaurants**
Males	62.2% (55.6-68.5)	24,200
Females	73.4% (67.6-78.5)	25,700
Significant association (p=.01)		
18-24 year olds	59.5% (46.3-71.4)	7,700
25-34 year olds	72.7% (63.1-80.6)	9,700
35-44 year olds	71.8% (63.4-79.0)	12,500
45-54 year olds	68.1% (58.5-76.4)	10,800
55-64 year olds	66.6% (54.3—77.0)	5,600
65 years and older	66.8% (51.5-79.2)	3,700
Non-significant association		
Less than high school graduate	63.9% (53.0-73.6)	10,300
High school graduate or GED	63.9% (57.8-69.6)	22,200
College 1-3 years	76.8% (68.2-83.6)	11,500
College graduate	72.4% (57.6-83.6)	5,900
Non-significant association		
Less than $15,000	68.5% (59.4-76.4)	9,300
$15,000-$24,999	70.1% (60.6-78.2)	11,700
$25,000-$49,999	66.7% (57.6-74.7)	13,800
$50,000-$74,999	69.4% (51.1-83.1)	6,900
$75,000 or more	84.7% (74.5-91.3)	8,100
Non-significant association		
Anchorage and vicinity	64.1% (52.3-74.4)	14,600
Gulf Coast	62.7% (50.2-73.7)	3,100
Southeast Alaska	63.6% (54.0-72.2)	5,200
Rural Alaska	71.0% (66.3-75.3)	24,200
Fairbanks and Vicinity	71.1% (57.5-81.8)	2,900
Non-significant association		
No children in the home	59.1% (51.5-66.3)	17,500
Children in the home	73.0% (67.8-77.7)	32,400
Significant association (p=.002)		
Non-smokers	74.1% (68.4-79.1)	32,700
Smokers	58.9% (51.8-65.6)	17,100
Significant association (p<.001)		
Total	**67.5% (63.1-71.6)**	**49,900**

* percent of Alaska Native adults who responded “not allowed at all” to “in restaurants, do you think that smoking should be allowed in all areas, some areas, or not allowed at all?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who believe that smoking should not be allowed in restaurants – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 and 2005 modified surveys Data represented graphically in Figure 69.

Table 77. Support for Banning Smoking In BARS Among Alaska Native Adults

Alaska Native Adult Subgroup	% who say that smoking should not be allowed in bars* (n=1020)	Number who say that smoking should not be allowed in bars**
Males	27.1% (21.5-33.4)	10,500
Females	34.3% (28.9-40.1)	12,000
Non-significant association		
18-24 year olds	19.7% (13.0-28.7)	2,500
25-34 year olds	26.2% (18.7-35.5)	3,500
35-44 year olds	25.2% (18.6-33.1)	4,400
45-54 year olds	42.7% (32.3-53.8)	6,700
55-64 year olds	32.9% (22.5-45.2)	2,700
65 years and older	45.3% (32.9-58.3)	2,500
Significant association (p=.001)		
Less than high school graduate	31.7% (23.5-41.3)	5,200
High school graduate or GED	29.2% (24.3-34.6)	10,100
College 1-3 years	28.0% (18.1-40.5)	4,200
College graduate	38.6% (26.2-52.7)	3,100
Non-significant association		
Less than $15,000	35.9% (27.3-45.5)	5,100
$15,000-$24,999	30.9% (22.8-40.4)	5,400
$25,000-$49,999	27.0% (20.4-34.8)	5,700
$50,000-$74,999	19.2% (11.0-31.5)	2,000
$75,000 or more	46.0% (29.8-63.2)	4,500
Significant association (p=.04)		
Anchorage and vicinity	24.0% (15.0-36.2)	5,500
Gulf Coast	32.0% (22.3-43.4)	1,500
Southeast Alaska	21.7% (15.2-30.1)	1,800
Rural Alaska	37.2% (32.9-41.8)	12,600
Fairbanks and Vicinity	26.0% (15.1-41.0)	1,100
Significant association (p=.04)		
No children in the home	25.0% (19.7-31.2)	7,400
Children in the home	34.1% (28.8-39.9)	15,200
Significant association (p=.03)		
Non-smokers	41.4% (35.6-47.4)	18,200
Smokers	14.5% (10.8-19.4)	4,300
Significant association (p<.001)		
Total	**30.5% (26.5-34.8)**	**22,500**

* percent of Alaska Native adults who responded “not allowed at all” to “in bars and cocktail lounges, do you think that smoking should be allowed in all areas, some areas, or not allowed at all?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who believe that smoking should not be allowed in bars – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 and 2005 modified surveys. Data represented graphically in Figures 69, 70.

Table 78. Support for Banning Smoking In INDOOR WORK AREAS Among Alaska Native Adults

Alaska Native Adult Subgroup	% who say that smoking should not be allowed in indoor work areas* (n=1,025)	Number who say that smoking should not be allowed in indoor work areas**
Males	68.6% (61.8-74.7)	26,700
Females	85.5% (80.5-89.3)	29,900
Significant association (p<.001)		
18-24 year olds	81.2% (71.4-88.2)	10,500
25-34 year olds	78.7% (68.9-86.1)	10,500
35-44 year olds	70.8% (59.7-79.8)	12,400
45-54 year olds	79.5% (70.6-86.2)	12,400
55-64 year olds	75.8% (63.8-84.7)	6,500
65 years and older	76.0% (59.4-87.3)	4,300
Non-significant association		
Less than high school graduate	81.2% (72.3-87.7)	13,100
High school graduate or GED	71.9% (65.6-77.4)	25,000
College 1-3 years	77.1% (65.0-85.9)	11,400
College graduate	86.5% (73.8-93.6)	7,000
Non-significant association		
Less than $15,000	75.0% (65.9-82.3)	10,400
$15,000-$24,999	81.7% (72.5-88.3)	14,100
$25,000-$49,999	75.1% (65.3-82.9)	15,800
$50,000-$74,999	74.7% (54.9-87.8)	7,700
$75,000 or more	87.3% (77.5-93.2)	8,700
Non-significant association		
Anchorage and vicinity	69.4% (57.3-79.2)	15,900
Gulf Coast	68.6% (55.5-79.4)	3,300
Southeast Alaska	71.5% (62.3-79.2)	5,800
Rural Alaska	82.8% (79.0-86.1)	28,200
Fairbanks and Vicinity	84.7% (73.1-91.9)	3,400
Significant association (p=.009)		
No children in the home	67.7% (59.7-74.9)	20,000
Children in the home	82.5% (78.0-86.2)	36,600
Significant association (p<.001)		
Non-smokers	84.3% (78.8-88.6)	37,400
Smokers	66.5% (59.3-73.0)	19,200
Significant association (p<.001)		
Total	**76.6% (72.3—80.4)**	**56,600**

* percent of Alaska Native adults who responded “not allowed at all” to “in indoor work areas, do you think that smoking should be allowed in all areas, some areas, or not allowed at all?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who believe that smoking should not be allowed in indoor work areas – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 and 2005 modified surveys. Data represented graphically in Figure 69.

Table 79. Home Smoking Ban Among Alaska Native Adults

Alaska Native Adult Subgroup	% who ban smoking in the home* (n=564)	Number who ban smoking in the home**
Males	78.9% (70.5-85.4)	29,100
Females	87.8% (81.8-92.0)	32,400
Significant association (p=.05)		
18-24 year olds	83.3% (70.0-91.4)	10,200
25-34 year olds	85.0% (71.0-92.9)	12,200
35-44 year olds	90.7% (84.8-94.5)	15,500
45-54 year olds	78.4% (63.8-88.2)	11,700
55 years and older	81.2% (68.8-89.4)	11,900
Non-significant association		
Less than high school graduate	74.6% (61.1-84.6)	9,800
High school graduate or GED	83.7% (76.1-89.3)	30,500
Some college or higher	87.4% (78.3-93.0)	21,200
Non-significant association		
Less than $15,000	66.5% (52.0-78.5)	10,300
$15,000-$24,999	89.8% (80.4-95.0)	13,100
$25,000-$49,999	81.8% (69.9-89.6)	17,900
$50,000 or more	89.7% (79.7-95.1)	20,300
Significant association (p=.004)		
Non-rural Alaska	78.6% (69.7-85.5)	31,400
Rural Alaska	88.9% (84.6-92.0)	30,100
Significant association (p=.01)		
No children in the home	67.8% (57.7-76.4)	21,100
Children in the home	94.6% (91.6-96.5)	40,400
Significant association (p<.001)		
Non-smokers	91.0% (85.3-94.6)	42,500
Smokers	69.9% (60.2-78.1)	19,000
Significant association (p<.001)		
Total	**83.3% (78.2-87.4)**	**61,500**

* percent of Alaska Native adults who responded “smoking is not allowed anywhere inside your home” to “Which statement best describes the rules about smoking inside your home: smoking is not allowed anywhere inside your home, smoking is allowed in some places or some times, or smoking is allowed anywhere inside the home?” – weighted percentage shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who do not allow smoking in their home – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2005 modified survey

[note: question wording changed in 2005, so only used 2005 data]

Data represented graphically in Figure 71.

Table 80. Smoking Ban in Enclosed Vehicles Among Alaska Native Adults

Alaska Native Adult Subgroup	% who do not allow smoking in their cars* (n=825)	Number who do not allow smoking in their cars**
Males	69.2% (61.8-75.7)	22,600
Females	70.6% (63.9-76.5)	21,400
Non-significant association		
18-24 year olds	59.8% (45.7-72.4)	6,700
25-34 year olds	70.7% (57.6-81.0)	8,000
35-44 year olds	67.6% (57.9-76.1)	10,400
45-54 year olds	76.3% (65.6-84.5)	9,900
55-64 year olds	77.3% (63.6-86.9)	5,500
65 years and older	74.7% (56.0-87.2)	3,500
Non-significant association		
Less than high school graduate	66.1% (54.2-76.3)	8,600
High school graduate or GED	61.2% (53.7-68.3)	17,200
College 1-3 years	83.7% (75.8-89.4)	11,700
College graduate	81.8% (69.5-89.8)	6,600
Significant association (p<.001)		
Less than $15,000	64.7% (53.1-74.8)	6,500
$15,000-$24,999	61.5% (48.1-73.3)	8,200
$25,000-$49,999	71.0% (61.5-79.0)	13,200
$50,000-$74,999	77.7% (64.4-87.1)	7,700
$75,000 or more	90.6% (82.1-95.3)	8,500
Significant association (p=.003)		
Anchorage and vicinity	65.8% (53.5-76.3)	14,600
Gulf Coast	64.6% (51.7-75.7)	3,100
Southeast Alaska	68.9% (59.2-77.2)	5,300
Rural Alaska	74.5% (69.5-78.9)	18,300
Fairbanks and Vicinity	72.1% (59.1-82.2)	2,900
Non-significant association		
No children in the home	68.5% (60.7-75.4)	18,100
Children in the home	70.8% (64.2-76.6)	25,900
Non-significant association		
Non-smokers	84.9% (79.8-89.0)	33,400
Smokers	45.2% (37.1-53.6)	10,600
Significant association (p<.001)		
Total	**69.9% (64.9-74.4)**	**44,000**

* percent of Alaska Native adults who responded “smoking is never allowed in any vehicle” to “what are the rules about smoking your family’s enclosed vehicles, such as cars, trucks, and boats - would you say: smoking is never allowed in any vehicle, smoking is allowed in some times or in some enclosed vehicles, or smoking is allowed in all enclosed vehicles?” – weighted percentage (excluding respondents who do not own enclosed vehicles) shown with 95% confidence interval in parentheses.

** estimated number of Alaska Native adults in the state who do not allow smoking in their cars – estimated population size rounded to nearest 100. Subgroup estimates may not add to grand totals due to rounding data.

Source: Alaska BRFSS - 2004 and 2005 modified surveys. Data represented graphically in Figure 71.

Appendix C: Technical Notes

Defining Alaska Natives

Alaska Native people reside in communities throughout the state, and are a significant segment of the population in over 200 rural villages and communities that range in size from 50 to 25,000 persons. Alaska Natives also represent seven to eight percent of the population of Anchorage, the largest city in Alaska, and the nation's largest Alaska Native community. Alaska Native people are divided into eleven distinct cultures, speaking twenty different languages. The largest populations of Alaska Native people include the Eskimo groups of Yup'ik, Cup'ik, St. Lawrence Island Yupik, Alutiiq and Inupiaq; the Indian groups of Athabaskan, Tlingit, Haida, Eyak, and Tsimshian; and the Aleut peoples. There is only one reservation in Alaska (Metlakatla, located in the Southeast region of the state), which is populated by approximately 1000 Alaska Natives. Most Alaska Natives live in villages throughout the state, and many have retained their indigenous customs, language, hunting and fishing practices and ways of living.

Alaska Natives make up between 15.9% and 19.5% of the total Alaska state population. If Alaska Native is defined as those who describe themselves as being Alaska Native alone, then the population is 15.9% of the total state population (105,800 Alaska Native only individuals within the state's total population of 663,661). If the definition of Alaska Native is broadened to include those who describe their race/ethnicity as being Alaska Native in combination with any other race/ethnicity, the population is 19.5% of the total state population (129,594 individuals who are Alaska Native alone or in combination). We do not know whether individuals who report being Alaska Native in combination with other race/ethnicities have close affinity with their Alaska Native heritage; thus, we can assume that the number of people who can be considered as Alaska Native in culture may be somewhere in this range.

Population figures are based on July 1, 2005, estimates provided by the Alaska Department of Labor and Workforce Development, Section of Research and Analysis: http://almis.labor.state.ak.us/

Literature Review – Scope and Definition Issues

In our literature review and data analyses, we attempted to use technical definitions that would most truly represent the people described above.

Initial searches were for articles using keywords "Alaskan Native" or "Alaska Native" or "Native Alaskan" and "tobacco" or "smoking". We also searched separately for any of these keywords plus "tobacco": Inuit, Eskimo, Inupiat/Inupiaq, Yupik, Yup'ik, Athabascan, Athabaskan, Tlingit, Alutiiq, Aleut, Aleutian, Tsimshian, and Haida. About 40 articles with "Alaska Native" or variants and tobacco were identified. References to articles used in support of sentinel articles were obtained if they appeared to have new information. A search of general health interventions (i.e., same Alaska Native keywords and "health") was also conducted and a few key articles where tobacco was mentioned were included from that search (for example, one study of a cardiovascular disease intervention).

Most articles that emerged during initial searches described tobacco use and related factors among the aggregate group "American Indian/Alaska Native" (AI/AN). We did not generally include these articles in the review because "AI/AN" populations may not accurately represent "Alaska Native" populations due to their small proportion of the total AI/AN group, as well as distinct cultural and geographic properties. For example, in 2000 there were 2.5 million AI/AN identified in the United States, of whom about 3% were Alaska Native living in Alaska.[54] The 1998 Surgeon General's Report on tobacco use among US minority groups very clearly identified the "AI/AN" group as a population at-risk for excess tobacco use and health impacts from tobacco use, but there was only one reference to data specifically describing Alaska Natives: one table (pg. 50-51) described tobacco use prevalence among AI/AN people by geographic region. The "Alaska" region had the highest reported prevalence of current smoking (45.1%), higher than the geographically closest Pacific Northwest Natives (33.1%), much higher than the lowest prevalence as reported for Natives in the Southwest region of the US (17.0%), and also higher than the overall AI/AN smoking prevalence (29.2%).

Similarly, a comprehensive review of all available data to describe Alaska Native tobacco use was conducted by Kaplan, Lanier, et al. in 1997, and the authors analyzed data from the 1992/93 Current Population Survey data to specifically describe tobacco use prevalence stratified by Native status and Alaska residence. They reported cigarette smoking prevalence of 46% among Alaska Natives (for both women and men), and 35% and 40% among US AI/AN women and men outside Alaska. The same authors also used the 1993 BRFSS and found higher rates of smokeless tobacco use for Alaska Natives (11% for women, 23% for men, 16% overall) in comparison to AI/AN outside Alaska (1% for women, 11% for men, 6% overall).

These findings suggest that Alaska Native tobacco use rates exceed those of AI/AN outside Alaska, and because Alaska Natives make up a somewhat small proportion of all AI/AN in aggregate, descriptions of AI/AN overall may under-estimate and inaccurately represent the impact or burden of tobacco use among Alaska Natives. For this reason, we screened articles included in this review to assure that they specifically described Alaska Native groups.

We also screened articles describing interventions (as well as prevalence) for tobacco use among AI/AN on the principle that if tobacco use rates were so different, and given the geographic distance and unique qualities of life in Alaska (many extremely rural populations, extremes of climate and seasonal daylight), as well as cultural differences (for example, Alaska Natives are not land reservation-based and do not use tobacco spiritually/ceremonially), that interventions studied only in AI/AN outside Alaska should not be assumed to be relevant to Alaska Natives.

Most of the articles we identified were descriptive. In some cases the findings related to tobacco were not particularly strong or compelling, but given that few articles overall were available to describe Alaska Natives we at least mentioned the findings and also advised caution in interpretation when appropriate.

We did not initially select articles where tobacco was not a main outcome or exposure variable; however some articles not focused on tobacco did emerge either

because tobacco was included as an important covariate or because some measure of tobacco use or exposure prevalence was assessed within the study.

Generally, we limited review to articles published in 1995 or more recently, although a few older articles that were unique in topic were included.

We also reviewed key non-peer-reviewed publications, such as the Alaska Department of Health publication "Tobacco in the Great Land" and a 2004 Alaska Native Policy Center report on the overall status of Alaska Natives.

Data System Definitions for Alaska Native

In this report we use three established public health surveillance systems – the BRFSS, YRBS and PRAMS – to describe tobacco-related health behaviors and attitudes among Alaska Natives. These three surveys are components of national public health surveillance systems and incorporate race/ethnicity categories developed at the national level. We also relied on these established definitions in identifying "Alaska Native" individuals from survey datasets for analyses.

Consistent with national categories, in all three surveys Alaska Natives would be identified as part of the category "American Indian/Alaska Native." This means that there may be some number of American Indians (such as Native Americans who have moved to Alaska from the "lower 48" and are not affiliated with the Alaska Native community) incorrectly classified as "Alaska Native" and included in our results, but we expect that this number will be small.

Consistent with national survey design, the YRBS includes "Hispanic or Latino" as one of the multiple response options for a combined race/ethnicity question, thus any youth who marked Hispanic and Alaska Native was assigned as "multiple race" and not included in our analysis. We did not have access to original answers provided by youth so that it would be possible to identify any youth who were classified as non-Alaska Native for this reason. We expect that the number of youth affected would be small.

Also consistent with national protocols, respondents to the BRFSS were offered separate questions to identify race and Hispanic/Latino ethnicity, thus in these surveys a respondent could have been identified as Hispanic and also included in our analysis as Alaska Native. For the BRFSS, adults who indicated multiple race were further asked "which of these best describes you?" and we included in our Alaska Native analyses those people who indicated that "Alaska Native" was the race group that best described them even if they were multiple races.

In PRAMS the race classification was provided using maternal race from the linked infant birth certificate. If the mother reports multiple races, then the first race reported is classified as maternal race, and this same race is applied to the child regardless of the father's race. Thus, there are slight differences in how mothers' race may be classified in comparison to race in the general population, but we do not expect that this difference would meaningfully affect our results.

Additional Alaska Native Resources

Alaska Native culture is only briefly touched upon in this report. Additional resources to describe Alaska Natives and communities are provided below:

Alaska Native Tribal Health Consortium (ANTHC)

The Alaska Native Tribal Health Consortium is a non-profit health organization owned and managed by Alaska Native tribal governments and their regional health organizations. The Consortium was created in 1997 to provide statewide Native health services. Through its six divisions, the Consortium works in cooperation with tribes, Native health organizations, and municipalities to achieve its goals. The website includes information about healthcare for Alaska Natives.

http://www.anthc.org/abt/

Alaska Native Heritage Center

An educational and cultural institution for all Alaskans, the Alaska Native Heritage Center provides programs in both academic and informal settings, including workshops, demonstrations, and guided tours of indoor exhibits and outdoor village sites. The website includes information about different Alaska Native cultures and their history.

http://www.alaskanative.net/2.asp

National Network of Libraries of Medicine – Pacific Northwest Region, Alaska Page

The mission of the National Network of Libraries of Medicine (NN/LM) is to advance the progress of medicine and improve the public health by: 1) providing all U.S. health professionals with equal access to biomedical information; and, 2) improving the public's access to information to enable them to make informed decisions about their health. The Program is coordinated by the National Library of Medicine and carried out through a nationwide network of health science libraries and information centers. The Pacific Northwest Regional Medical Library (PNRML), based at the University of Washington Health Sciences Library, is the regional headquarters for the National Network of Libraries of Medicine. This website contains links to a variety of demographic and health data resources.

http://www.nnlm.nlm.nih.gov/pnr/characteristics/alaska.html

Bristol Bay Native Corporation – Links Page

The BBNC has approximately 7,800 shareholders who are Eskimo, Indian and Aleut. The region is 150 miles southwest of Anchorage, and approximately 40,000 square miles in size (slightly larger than the state of Ohio). The links webpage contains a large number of links to interesting resources for describing a variety of aspects of Alaska Native life.

http://www.bbnc.net/home/links/

Population Estimates

In Appendix B tables, and throughout the report in discussion, we provide estimates of the "number of Alaska Natives affected." These numbers were calculated by applying percentages from frequencies to relevant total populations or to subgroups (for example, adults who currently smoke cigarettes). We used simple calculations based on proportions of the total population, not stratified by any demographic characteristics.

- For BRFSS, the population estimates were based on a total of about 73,900 Alaska Native adults in the state (age 18 or older), from Census 2005, using "bridge estimates" to include individuals with Alaska Native as both single race and part of multiple race (approximating those who self-identify as '*primarily* Alaska Native').
- For YRBS, the population estimates were based on a total of about 8,000 Alaska Native youth who attended high school in 2003 (calculated by CDC within the YRBS dataset based on student enrollment data from that period).
- For PRAMS, the population estimates were based on a total of 2,400 births per year among Alaska Native mothers (from the year 2000 Alaska birth records).

All population estimates were rounded to the nearest hundred or nearest ten, depending on the overall magnitude of people affected.

Analytic Terms and Methods

Confidence Intervals

Confidence intervals (CI) are used to account for the difference between a sample from a population and true population. They can also be used to account for uncertainty that arises from natural variation inherent in the world around us. As such, they provide a means of assessing and reporting the precision of a point estimate, such as a mortality or hospitalization rate or the frequency of reported behaviors. 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. In this report, we have used confidence levels of 95%. This level means that in 95 out of 100 cases, the confidence interval contains the true value. Because of the nature of the sampling for BRFSS, YRBS, and PRAMS, confidence intervals for frequencies using these data sources were generated using Stata (version 9.0) software to account for complex sampling designs.

Confidence intervals are presented in Appendix B tables, adjacent to point estimates as "(lower bound of estimate, upper bound of estimate)."

Tests for Statistical Significance of Associations (p-values)

Statistically significant differences – differences between estimates that are not likely due to chance alone – are identified in this report in a variety of ways.

Some significant differences can be identified by visually comparing confidence intervals reported in Appendix B tables. When comparing two percentages, if the 95% CI of a percentage overlaps the point estimate for the other percentage, the two percentages are NOT statistically significantly different. If the confidence intervals do not overlap, the percentages ARE significantly different. If the confidence intervals overlap with each other, but not with the point estimates, the two percentages may or may not be significantly different. In this case, formal statistical testing for significance is needed to produce a p-value.

P-values less than 0.05 indicate that both percentages are statistically significant at the 95% confidence level. In this report, we used chi-square tests to produce p-values reported in tables. Chi-square tests are simple tests of association between group and outcome variables (for example, smoking [yes, no] and gender [male, female]). We used Stata (version 9.0) statistical software to conduct these tests in order to account for complex sampling design of the surveys.

We used logistic regression models to examine time-trends for YRBS (where only time points from 1995 and 2003 were available) and to identify whether there were interactions – that is, significantly different trends – by Alaska Native vs. non-Native race.

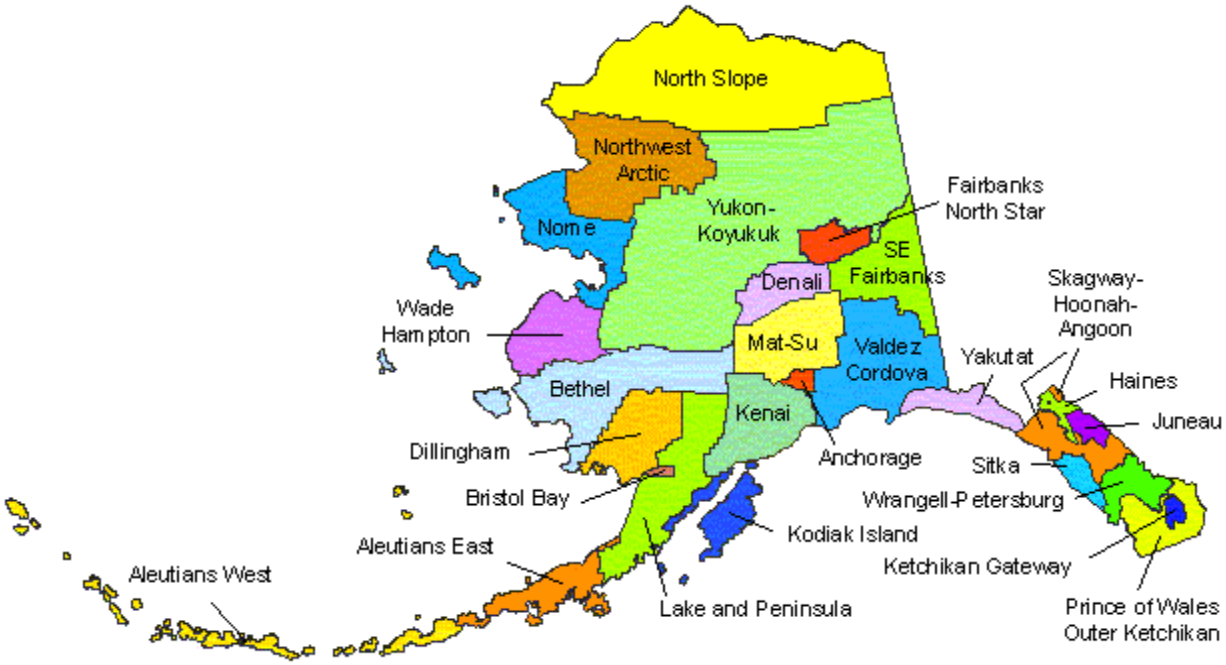
Tests for Statistical Significance of Trend (slope values)

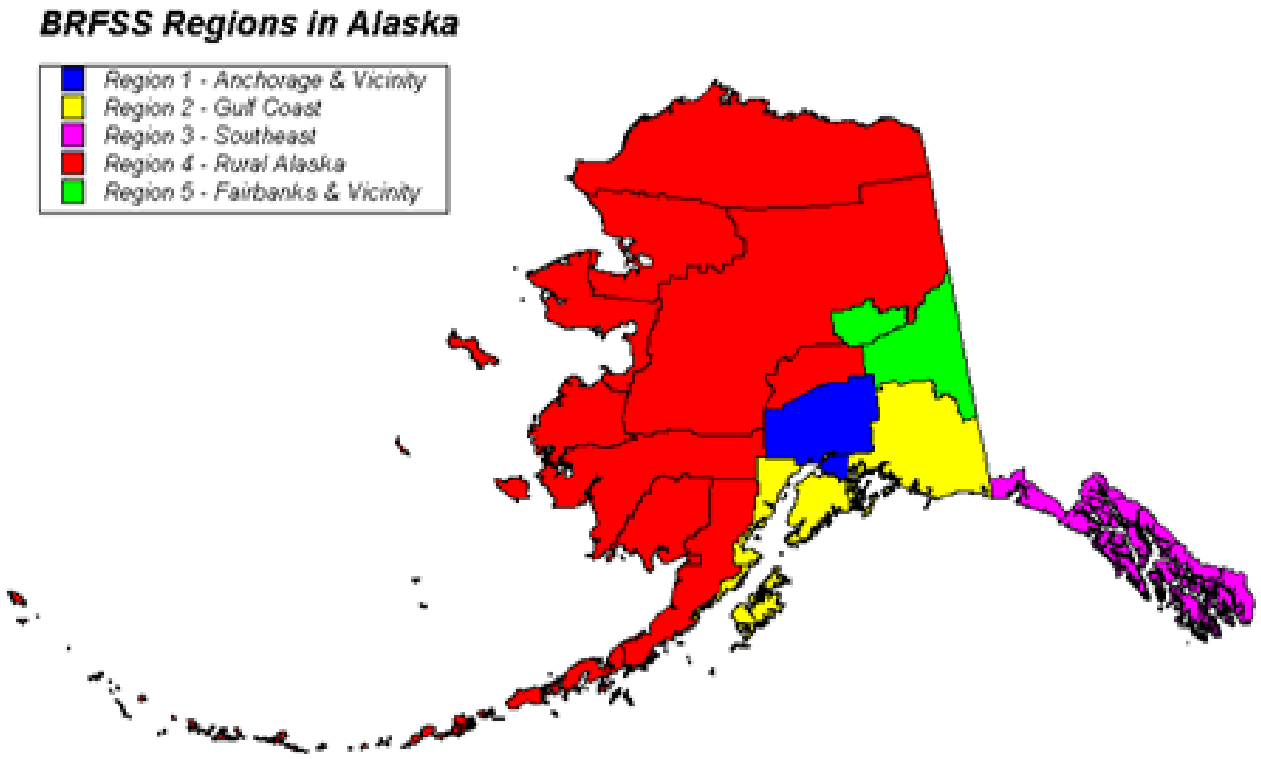
We examined smoking prevalence trends for BRFSS and PRAMS (where more than two time points were included) among Alaska Natives and non-Natives using the National Cancer Institute Joinpoint software version 3.0,[55] which calculates slope values (indicating the change in prevalence per year) and also identifies “points of inflection” where the slope of a trend line significantly changes.

Geographic regions

We had sufficient data from BRFSS and PRAMS to enable regional reporting of some variables among Alaska Natives. Regions are assigned to survey respondents by their residential zipcode. The maps below illustrate the regions referred to in the report for each surveillance system.

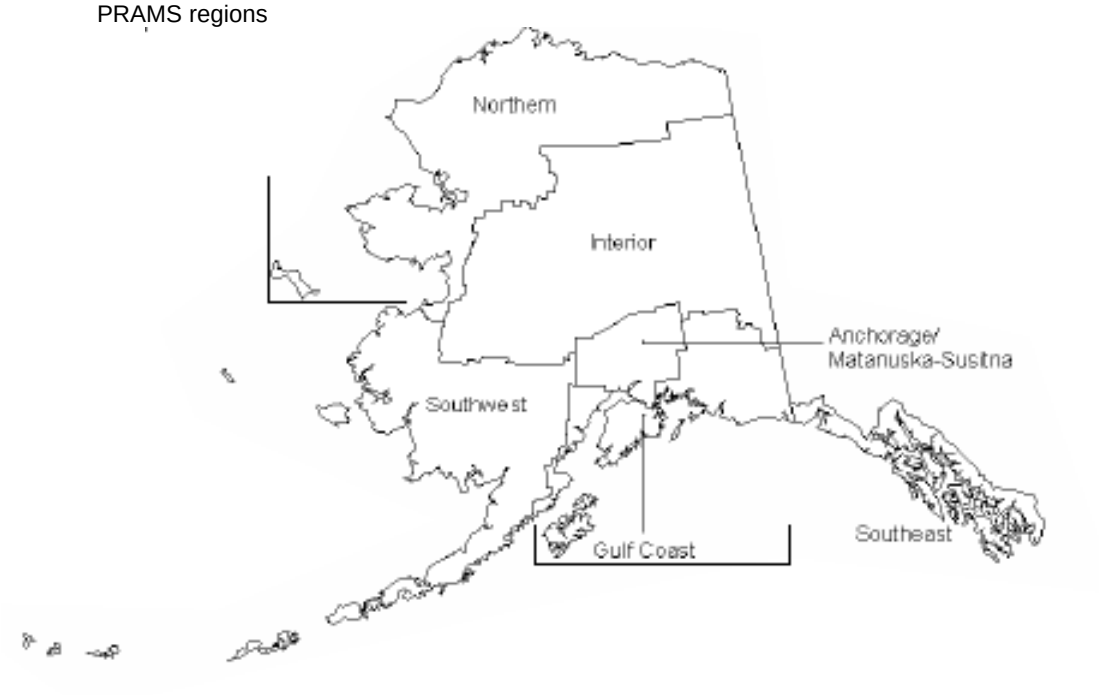
Map: Alaska Boroughs





Source: State of Alaska, Dept. of H&SS, Division of Public Health, CHEMS Unit

PRAMS regions



The regions from BRFSS and PRAMS correlate in the following manner:

BRFSS Region	**PRAMS Region**
Region 1: Anchorage and vicinity	Anchorage/Matanuska-Susitna (Mat-Su)
Region 2: Gulf Coast	Gulf Coast
Region 3: Southeast	Southeast
Region 4: Rural Alaska + Region 5: Fairbanks and Vicinity	Southwest + Northern + Interior

Appendix D: References

[1] Centers for Disease Control and Prevention. *Best Practices for Tobacco Control Programs.* Atlanta, GA. US 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. August 1999.

[2] Tobacco. Guide to Community Preventive Services Website. Centers for Disease Control and Prevention. www.thecommunityguide.org/tobacco/. Last updated: 06/14/2005. Accessed on: 6/21/2006.

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[4] Fortuine R. Historical Notes on the Introduction of Tobacco into Alaska. *Alaska Medicine.* 1996;38(1):3-7.

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