

Alaska Tobacco Facts

The impact of tobacco on the lives
of Alaska's people.



Alaska Tobacco Facts

2009 Update

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1. Introduction

In 2004, the Alaska Division of Public Health produced *Tobacco in the Great Land* (www.epi.hss.state.ak.us/pubs/tobaccofeb04.pdf), a monograph intended to provide the reader with a comprehensive review of data related to tobacco use and its consequences in Alaska. *Alaska Tobacco Facts* is designed to be a brief, annual update to *Tobacco in the Great Land* that can be used to educate Alaskans about the toll that tobacco continues to take on the health and well-being of our citizens.

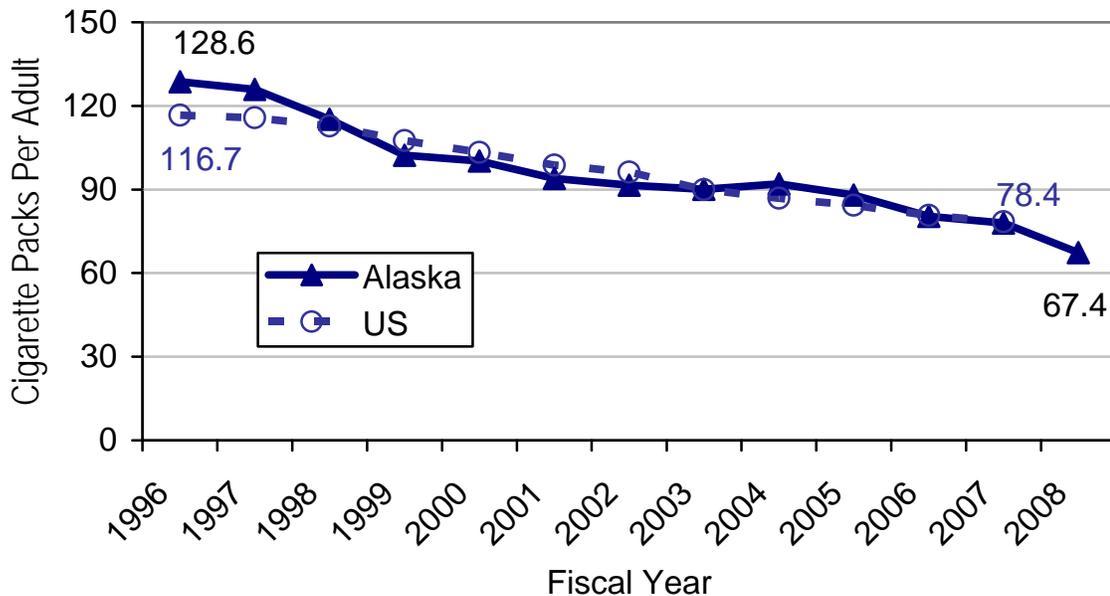
Trends in tobacco use are measured from the baseline year of 1996, prior to two early events in tobacco prevention and control in Alaska: the tobacco tax increase in 1997 and Alaska's decision to join in the national multi-state Tobacco Master Settlement Agreement in 1998. Differences are noted where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

The following are highlights from *Alaska Tobacco Facts, 2009 Update*:

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

2. Cigarette Consumption

**Annual Per Adult Sales of Cigarette Packs, By Fiscal Year,
Alaska and US (minus Alaska), 1996-2008**

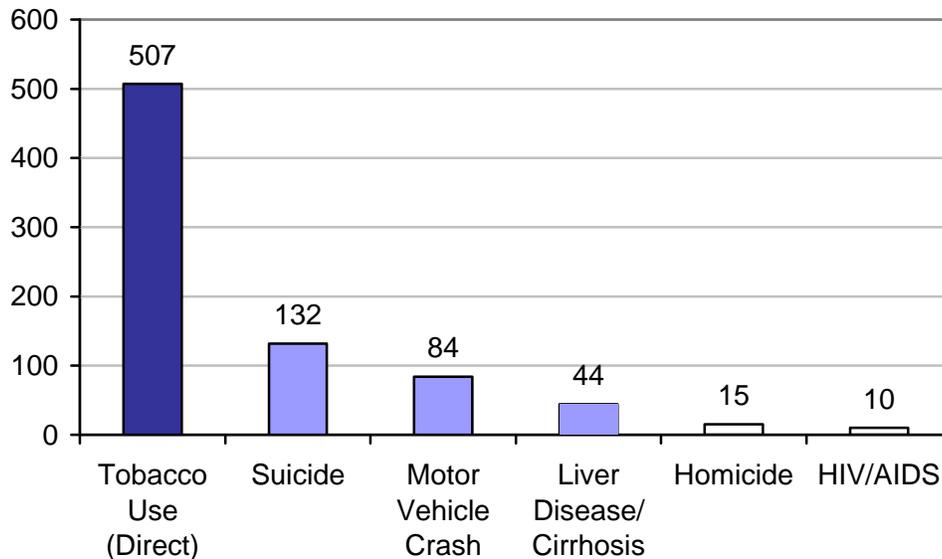


Sources: Alaska Department of Revenue, Tax Division FY08 Reports;
Orzechowski & Walker, *The Tax Burden on Tobacco*, 2007.

- Between State Fiscal Years (SFY) 1996 and 2008, the per adult number of cigarette packs sold in Alaska dropped 48%, from 128.6 packs to 67.4 packs per adult.
- This drop in cigarette sales translates to 405 million fewer cigarettes sold in Alaska in 2008 compared to 1996.

3. Tobacco-Related Deaths and Economic Costs

Number of Deaths Due to Selected Causes,
Alaska, 2006



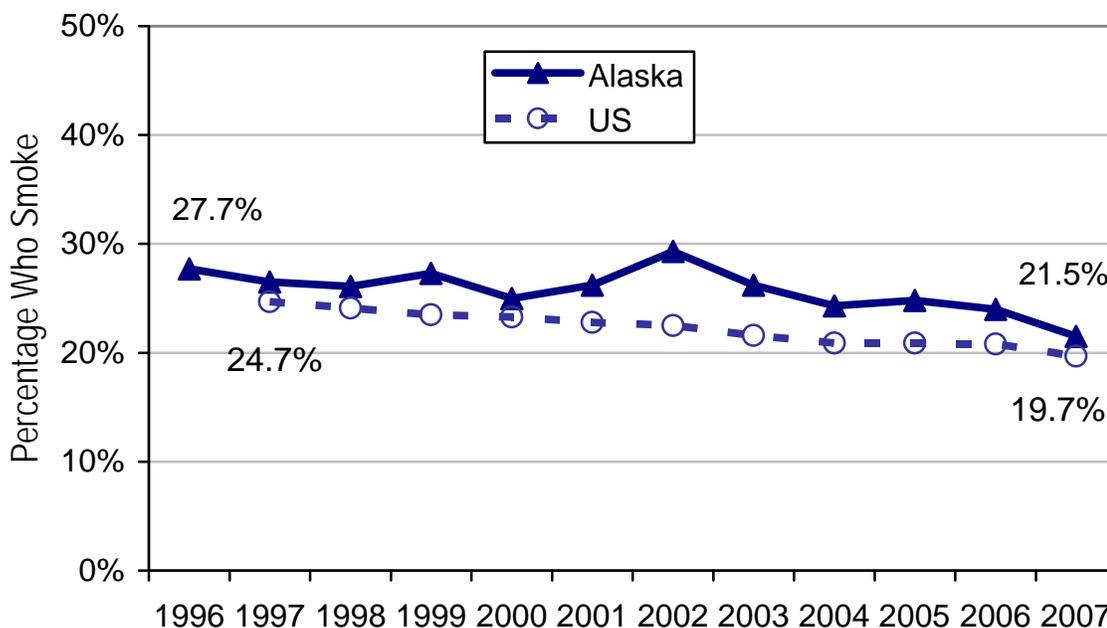
Sources: Alaska Bureau of Vital Statistics (2006 deaths); Alaska Behavioral Risk Factor Surveillance System (smoking prevalence); CDC, Smoking Attributable Morbidity, Mortality, and Economic Costs.*

- More Alaskans die annually from the effects of tobacco use than from suicide, motor vehicle crashes, chronic liver disease and cirrhosis, homicide, and HIV/AIDS combined.
- An additional estimated 120 Alaskans die each year from lung cancer and heart disease caused by exposure to secondhand smoke.*
- In 2007, tobacco use cost Alaskans an estimated \$314 million annually in direct medical expenditures and an additional \$177 million annually in lost productivity due to tobacco-related deaths.
- This sums to an astounding \$491 million; yet it underestimates total costs; lost productivity from tobacco-related illness and costs due to second-hand smoke exposure-related illness or death are not included.

* See Section 13: Data Sources, pp 48-49 for information on how smoking-attributable and secondhand smoke-attributable deaths were estimated.

4. Adult Smoking

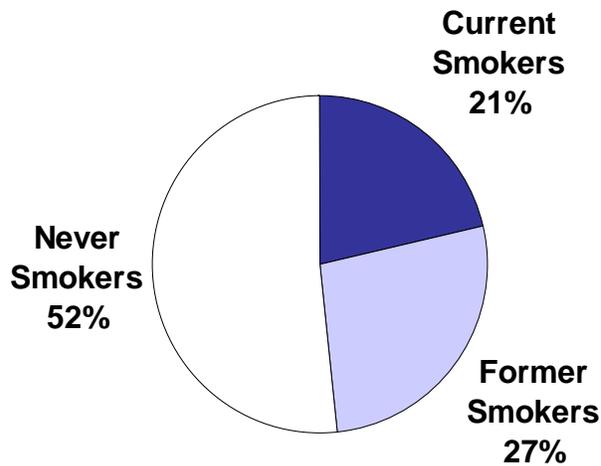
Percentage of Adults Who Smoke, by Year
Alaska and US, 1996-2007



Sources: Alaska Behavioral Risk Factor Surveillance System, Standard BRFSS Survey (1996-2003), combined Modified and Standard BRFSS Surveys (2004-2007); National Health Interview Survey

- Smoking prevalence has declined significantly from 27.7% in 1996 to 21.5% in 2007.
- Among women, the proportion of smokers decreased significantly from 24.2% in 1996 to 18.9% in 2007.
- Among men, the decline in smoking was not significant.
- Men continue to be significantly more likely than women to be smokers; in 2007, 24.0% of Alaskan men vs. 18.9% of Alaskan women were current smokers.

Smoking Status of Adults, Alaska, 2007

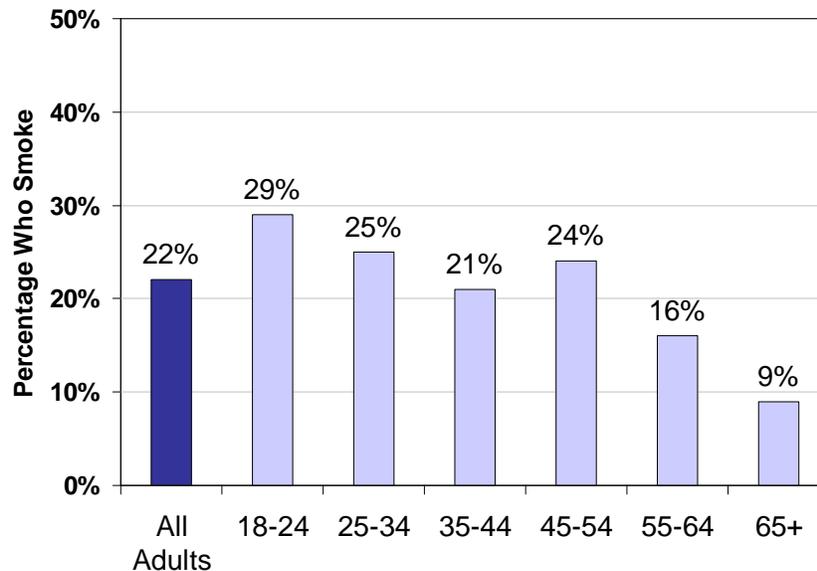


Source: Alaska Behavioral Risk Factor Surveillance System, combined Modified and Standard BRFSS Surveys

- As the proportion of smokers decreases, the proportion of Alaskans who have never been smokers has increased from 46.3% in 1996 to 51.7% in 2007.
- Although proportion of former smokers among all Alaskan adults has remained at about a quarter of the population, among Alaskans who have ever been smokers, the proportion of former smokers increased from 48.4% in 1996 to 55.5% in 2007.
- Being able to stay quit for 3 or more months greatly increases the chances of quitting tobacco for life. Among recent smokers--those who smoked in the past year, the proportion that have successfully remained quit for 3 or more months has increased from 5.5% in 2001 to 9.1% in 2007.

Note: Questions in the Alaska Behavioral Risk Factor Surveillance System about when former smokers last smoked changed in 2001, and data from earlier years are not comparable.

Percentage of Adults Who Smoke, by Age Group, Alaska, 2007



Note: Throughout this report percentages are rounded to the nearest whole number in graphs and tables in which at least one category's prevalence estimate is based on fewer than 500 responses (per national BRFSS guidelines).

Source: Alaska Behavioral Risk Factor Surveillance System, combined Modified and Standard BRFSS Surveys

- Among Alaskans between the ages of 40 to 59, smoking decreased significantly from 28.7% in 1996 to 21.6% in 2007.
- Younger adults between the ages of 18 and 34 are the most likely to be smokers (27%).
- More than half of all current smokers (57%) were smoking by the time they were 17 years old.

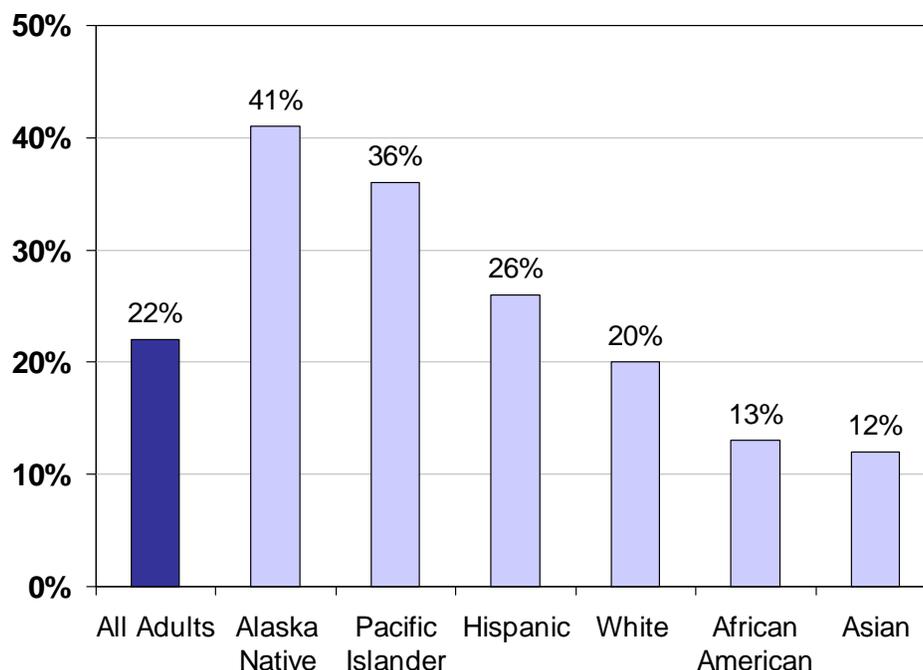
Percentage of Adults Who Smoke, by Region, Alaska, 2007

Region	Percentage
North/Interior	36%
Southwest	34%
Mat-Su Borough	26%
Fairbanks (North Star)	22%
Gulf Coast	20%
Anchorage Borough	20%
Southeast	19%
All Adults	22%

Source: Alaska Behavioral Risk Factor Surveillance System, combined Modified and Standard BRFSS Surveys

- Residents of more rural regions in Alaska – Southwest and North/Interior Regions – are more likely than residents of other regions of Alaska to smoke.
- Between 1996 and 2007, adult smoking prevalence decreased in three regions of Alaska: Anchorage (23% to 17%), Gulf Coast (29% to 20%), and Southeast (28% to 19%).
- Regional groupings include:
 - Anchorage Borough
 - Mat-Su Borough
 - Gulf Coast – Kenai, Kodiak, and Valdez Cordova Boroughs and Census Areas (plus part of Denali)
 - Southeast – Yakutat, Skagway, Juneau, Sitka, Haines, Wrangell-Petersburg, Ketchikan, and Ketchikan Gateway Boroughs and Census Areas
 - Fairbanks (North Star) – Fairbanks North Star Borough
 - North/Interior – Nome, Northwest Arctic, North Slope, Yukon-Koyukuk, Southeast Fairbanks, and Denali Boroughs and Census Areas
 - Southwest – Bristol Bay, East Aleutians, West Aleutians, Dillingham, Lake & Peninsula, Bethel, and Wade Hampton Boroughs and Census Areas (plus part of Yukon-Koyukuk)

Percentage of Adults Who Smoke, by Race/Ethnicity, Alaska, 2005-2007

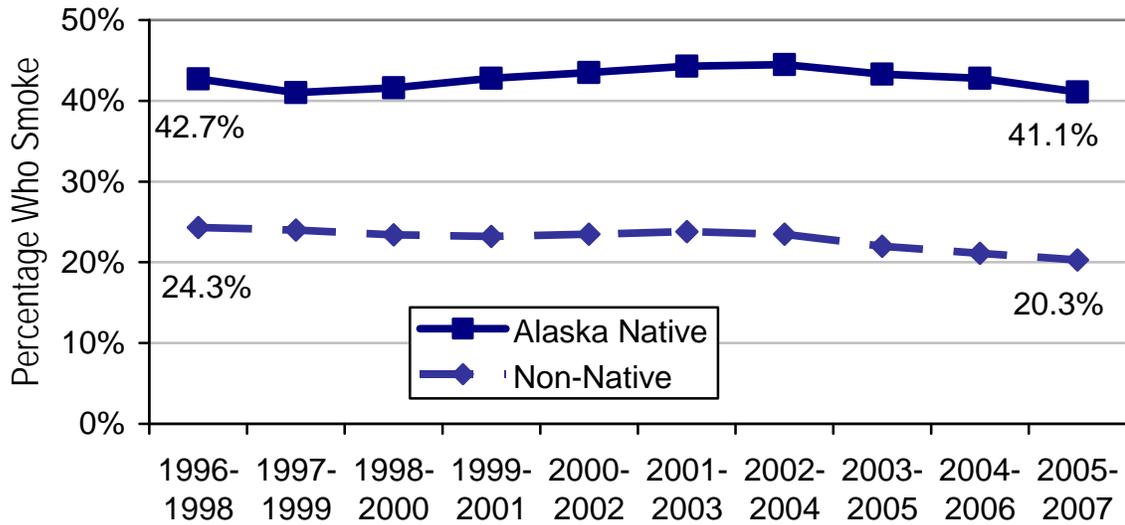


Note: The race categories of Alaska Native, African American, Asian, Pacific Islander, and White do not include respondents of Hispanic ethnicity.

Source: Alaska Behavioral Risk Factor Surveillance System, combined Modified and Standard BRFSS Surveys

- In Alaska, African American adults and Asian adults are significantly less likely to smoke than adults from all other race/ethnicity groups.
- Alaska Native adults are more likely to be smokers than Hispanic, White, African American, or Asian adults.
- Alaskans of Native Hawaiian or Pacific Islander heritage are more likely to be smokers than are White, African American, or Asian adults.
- There is no significant difference in smoking prevalence between White and Hispanic adults.

Percentage of Adults Who Smoke, by Year
Alaska Natives and Non-Natives, 1996-2007
(3-year moving averages)



Source: Alaska Behavioral Risk Factor Surveillance System, combined Modified and Standard BRFSS Surveys

- Smoking prevalence has remained relatively stable among Alaska Natives over the past decade; among non-Native adults, there has been a small but significant decrease in smoking from 1996 to 2007.
- Alaska Native adults are currently twice as likely to smoke as non-Native Alaskan adults.

Percentage of Adults Who Smoke, by Socio-Economic Status and Race, Alaska, 2005-2007

SES Status*	Alaska Natives	Alaska Non-Natives	Total
Lower	48%	34%	38%
Higher	33%	16%	18%
All Adults	41%	20%	22%

Source: Alaska Behavioral Risk Factor Surveillance System, combined Modified and Standard BRFSS Surveys

*Lower SES is calculated as those persons with less than a High School education or less than 185% of the Alaska Poverty Level Guideline.

- Nearly half (42%) of adult smokers live in households earning less than 185% of the Alaska Poverty Level Guideline.

Source: Alaska Behavioral Risk Factor Surveillance System, combined Modified and Standard BRFSS Surveys, 2007

- Although unemployed adults and those who are unable to work comprise about 11% of the overall adult population, they are disproportionately likely to smoke; 43% of unemployed adults and 46% of those who are unable to work are smokers, compared to 20% of employed adults who smoke.

Source: Alaska Behavioral Risk Factor Surveillance System, combined Modified and Standard BRFSS Surveys, 2007

**Percentage of Adults Who Smoke, by Education and Race,
Alaska, 2005-2007**

Education Level	Alaska Natives	Alaska Non-Natives	Total
Less than high school graduate	45%	45%	45%
High school graduate or GED	45%	29%	33%
Some college	36%	21%	23%
College graduate	27%	9%	10%
All Adults	41%	20%	23%

Source: Alaska Behavioral Risk Factor Surveillance System, combined Modified and Standard BRFSS Surveys

**Percentage of Adults Who Smoke, by Income and Race,
Alaska, 2005-2007**

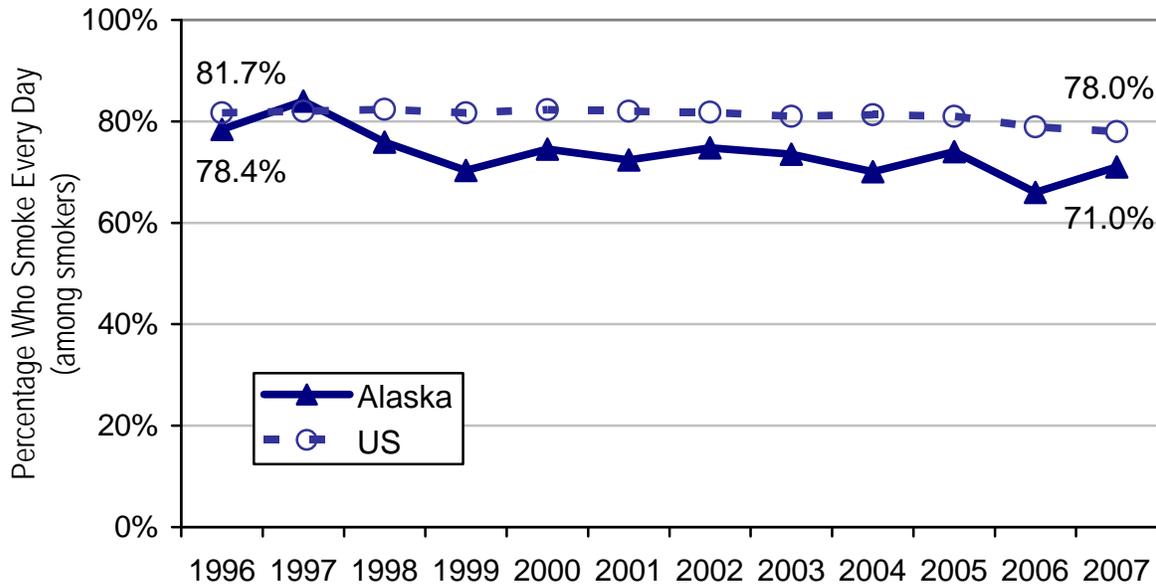
Household Income Level	Alaska Natives	Alaska Non-Natives	Total
Less than \$15,000	49%	39%	43%
\$15,000 - \$24,999	49%	31%	35%
\$25,000 - \$49,000	45%	25%	28%
\$50,000 - \$74,000	37%	17%	18%
\$75,000 or more	21%	13%	14%
All Adults	42%	20%	23%

Source: Alaska Behavioral Risk Factor Surveillance System, combined Modified and Standard BRFSS Surveys

- Alaskans with fewer years of education and/or lower household income are more likely to be smokers; this pattern is true for both Alaska Native and non-Native adults.

Source: Alaska Behavioral Risk Factor Surveillance System, combined Modified and Standard BRFSS Surveys, 2005-2007

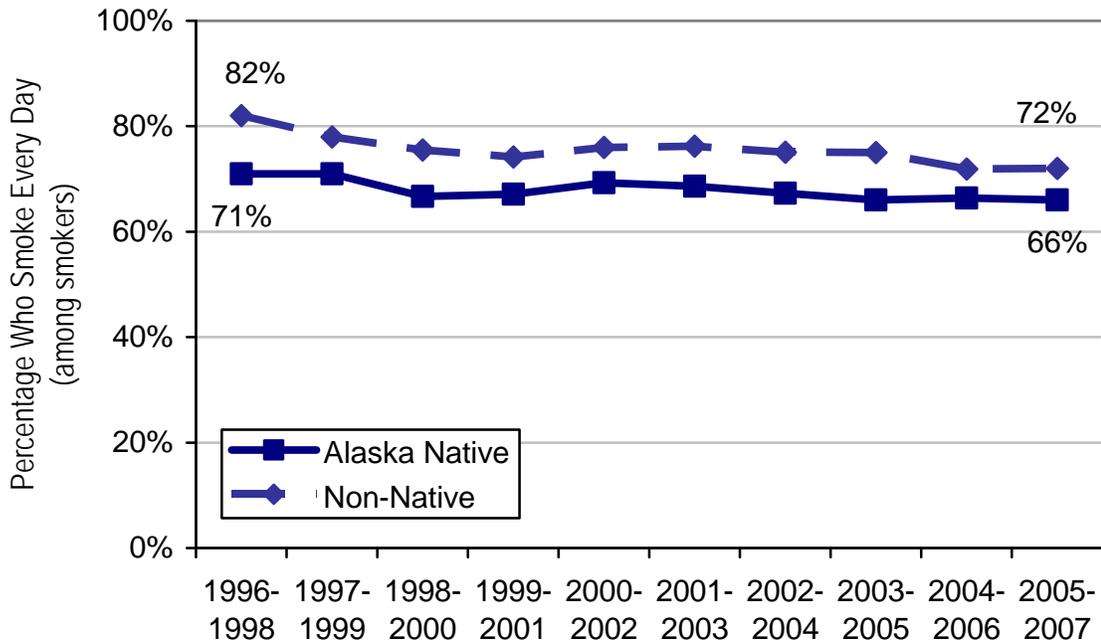
Percentage of Adult Smokers Who Smoke Every Day, by Year Alaska and United States, 1996-2007



Sources: Alaska Behavioral Risk Factor Surveillance System, Standard Survey (1996-2003), combined Modified and Standard BRFSS Surveys (2004-2007); National Health Interview Survey

- The proportion of Alaskan smokers who smoke every day has remained about the same since 1996; roughly 7 out of 10 smoke daily.

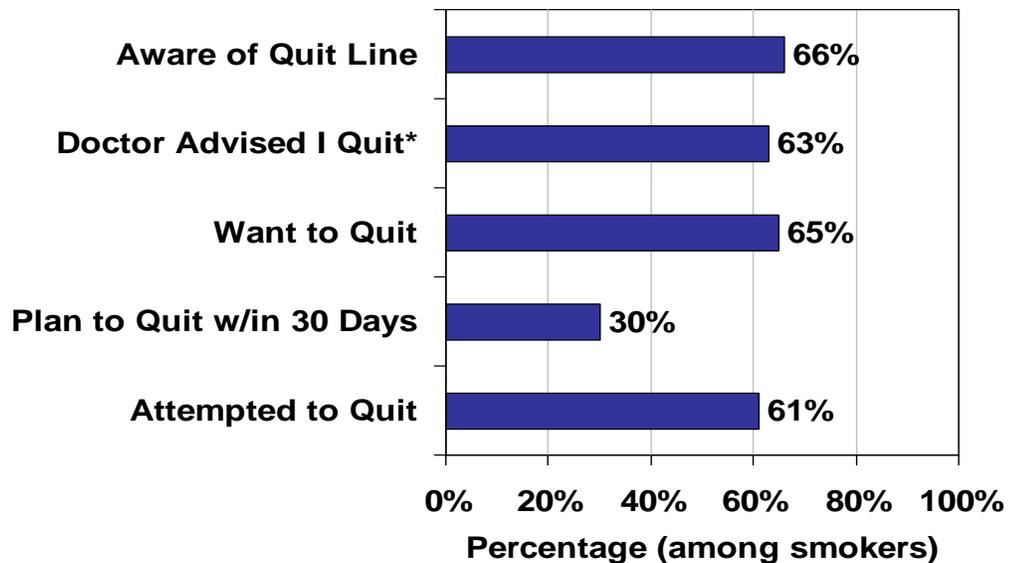
Percentage of Adult Smokers Who Smoke Every Day, by Year
Alaska Natives and Non-Natives, 1996-2007
(3-Year moving averages)



Source: Alaska Behavioral Risk Factor Surveillance System, Standard Survey (1996-2003), combined Modified and Standard BRFSS Surveys (2004-2007)

- Compared to non-Native adult smokers in Alaska, Alaska Native adult smokers have consistently been less likely to smoke every day.
- The proportion of non-Native adult smokers who smoke daily has significantly decreased since 2007.

Percentage of Adult Smokers Endorsing Key Cessation Variables Alaska, 2007



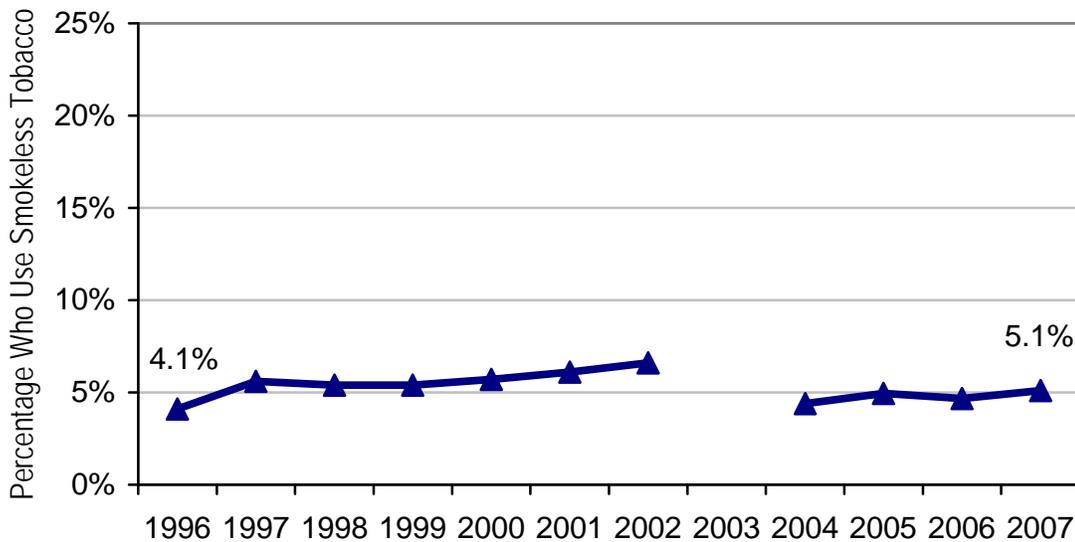
Sources: Alaska Behavioral Risk Factor Surveillance System, Modified Survey (except for 'Attempted to Quit' which was based on data from combined Modified and Standard BRFSS Surveys)

*Among current smokers who had a health care visit in the past 12 months.

- Two thirds of Alaskans who currently smoke (65%) want to quit.
- Three out of five current smokers (61%) have attempted to quit in the past 12 months; quit attempts were made by over half of those who smoke every day (55%) and three quarters of those who smoke some days (74%).
- Quit attempts among Alaska Native people who currently smoke have increased from 59% in 2001 to 70% in 2007.
- The proportion of Alaskan smokers who had a health care visit in the past 12 months and received advice from their health care provider to quit has decreased from 73% in 2001 to 63% in 2007.

5. Adult Smokeless Tobacco Use

Percentage of Adults Who Use Smokeless Tobacco, by Year Alaska, 1996-2007



Note: NA = Data not available.

Source: Alaska Behavioral Risk Factor Surveillance System, Standard Survey (1996-2002), Modified Survey (2004), combined Standard and Modified Surveys (2005-07)

- Use of smokeless tobacco in Alaska has remained stable over the past twelve years.

Source: Alaska Behavioral Risk Factor Surveillance System.

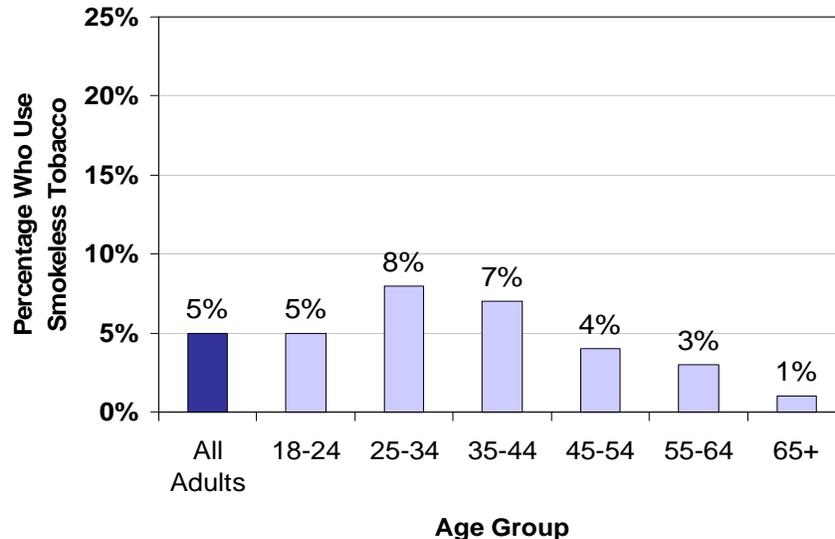
- Nationally, an estimated 3% of adults are current smokeless tobacco users; with use much higher among men (6%) than women (0.4%).

Source: Substance Abuse and Mental Health Services Administration. Results From the 2005 National Survey on Drug Use and Health: Detailed Tables. Rockville, MD: Substance Abuse and Mental Health Services Administration, Office of Applied Studies; 2006.

- Smokeless tobacco use is a known cause of cancer of the mouth and gum, and is linked to oral health problems like periodontitis and tooth loss.

Source: International Agency for Research on Cancer (IARC). Summaries and Evaluations Tobacco Products, Smokeless (Group 1); February 1998.

Percentage of Adults Who Use Smokeless Tobacco, by Age Group Alaska, 2006-2007



Source: Alaska Behavioral Risk Factor Surveillance System, Combined Surveys

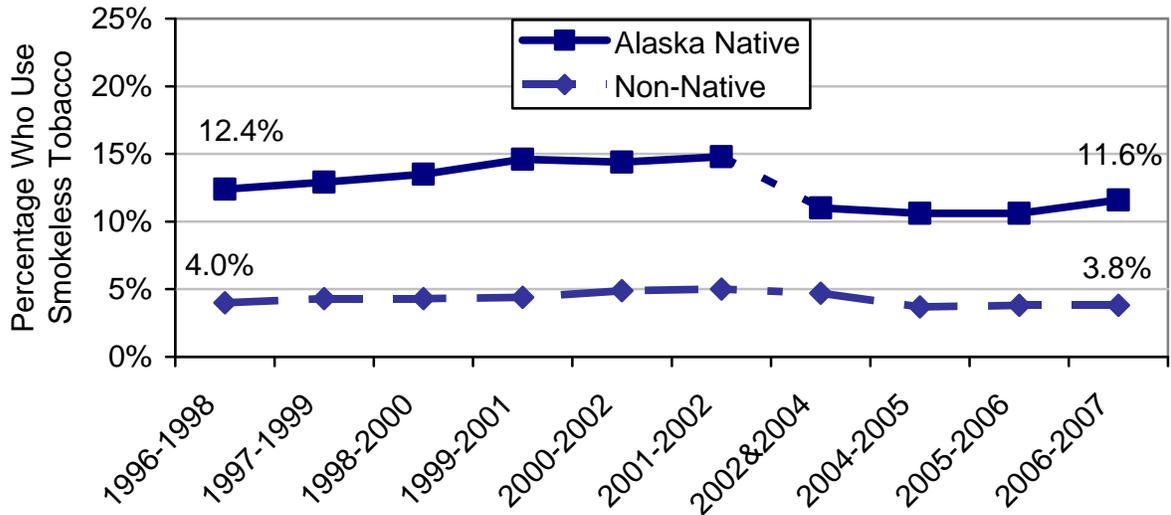
Percentage of Adults Who Use Smokeless Tobacco, by Region Alaska, 2006-2007

BRFSS Region	Percentage
Southwest	23%
North/Interior	6%
Gulf Coast	6%
Southeast	4%
Fairbanks and Vicinity	4%
Anchorage and Vicinity	3%
All Adults	5%

Source: Alaska Behavioral Risk Factor Surveillance System, Combined Surveys

- Younger Alaskans ages 18-44 are significantly more likely to use smokeless tobacco than those who are aged 45 and older.
- Alaskans in the Southwest Region are significantly more likely to use smokeless tobacco than those in any other region.

**Percentage of Adults Who Use Smokeless Tobacco, by Year
Alaska Natives and Non-Natives, 1996-2007
(Multi-year averages)**



Notes: Due to missing data for 2003, the last five time points are 2-year averages.

Source: Alaska Behavioral Risk Factor Surveillance System, Standard Survey (1996-2002), Modified Survey (2004), combined Standard and Modified Surveys (2005-07)

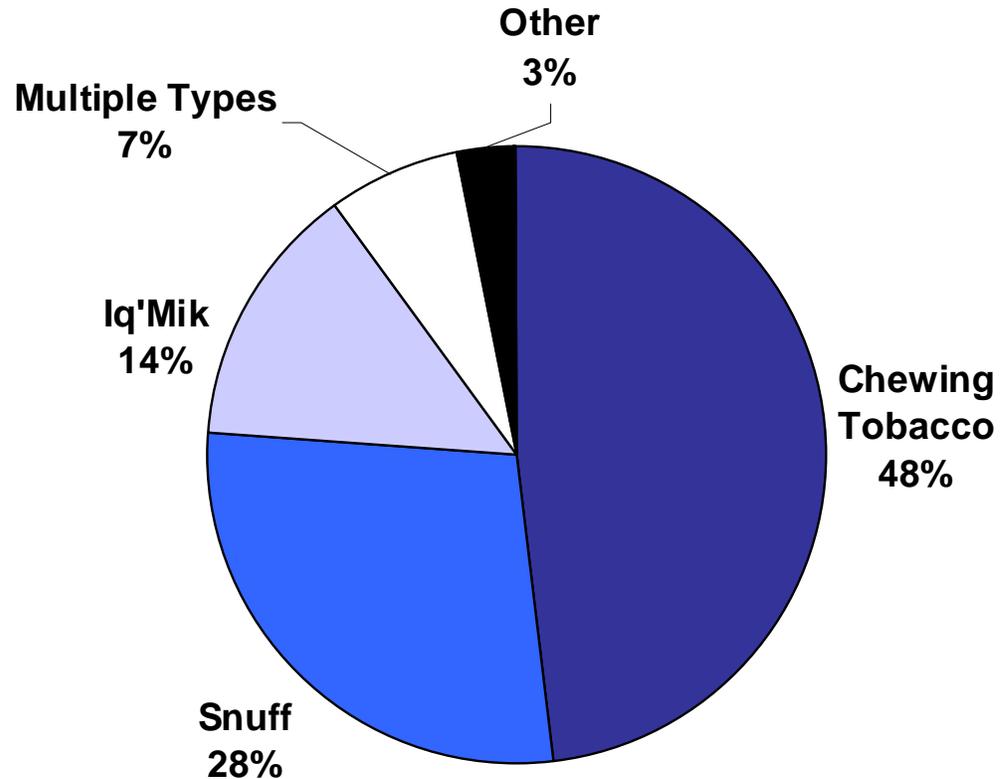
**Percentage of Adults Who Use Smokeless Tobacco, by Sex
Alaska Natives and Non-Natives, 2006-2007 Combined**

	Alaska Native	Non-Native	Total
Men	14.8%	7.2%	8.3%
Women	8.1%	0.1%	1.3%
Total	11.6%	3.8%	4.9%

Source: Alaska Behavioral Risk Factor Surveillance System, combined Surveys

- Adult Alaska Natives use smokeless tobacco more than adult non-Natives, and men use smokeless tobacco more than women.

Type of Smokeless Tobacco Used by Adults, Alaska, 2006-2007

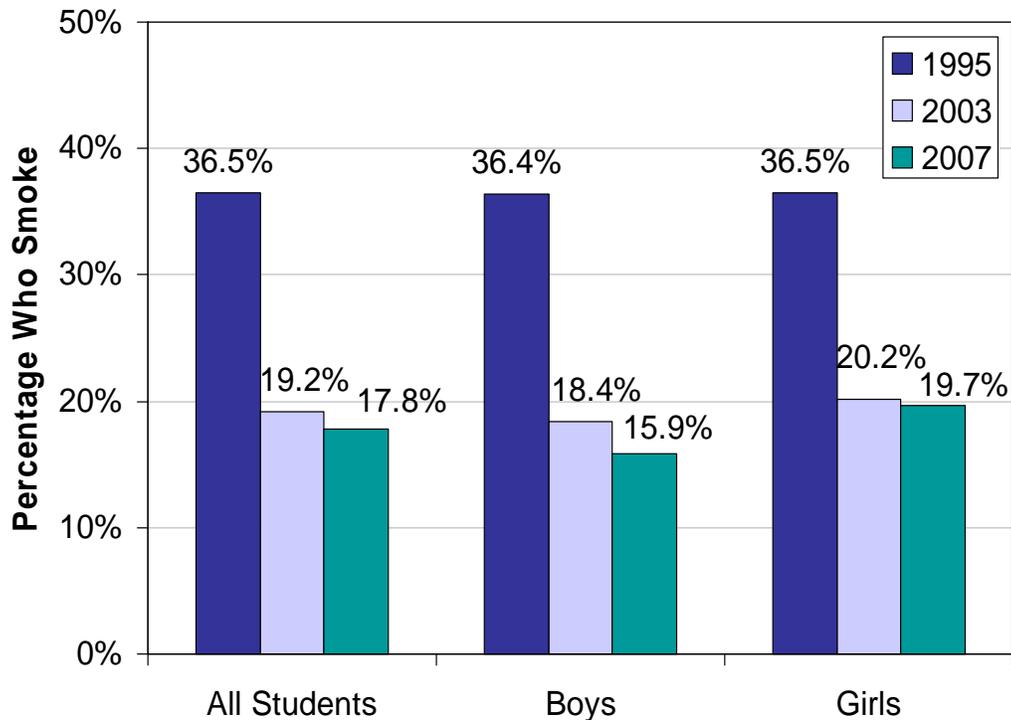


Source: Alaska Behavioral Risk Factor Surveillance System, Modified Survey

- Approximately half of adult Alaskans who are using smokeless tobacco report using “chewing tobacco” alone; chewing tobacco accounts for 26% of Alaska Native and 59% of non-Native smokeless tobacco use.
- Fourteen percent of adults who use smokeless tobacco—40% of Alaska Native users—are using tobacco in the form of Iq'mik or Blackbull, which is leaf tobacco mixed with ash created from burning a common tree fungus (i.e., “punk ash”).

6. Youth Cigarette Smoking

**Percentage of High School Students Who Smoke, by Sex and Year
Alaska, 1995, 2003 and 2007**

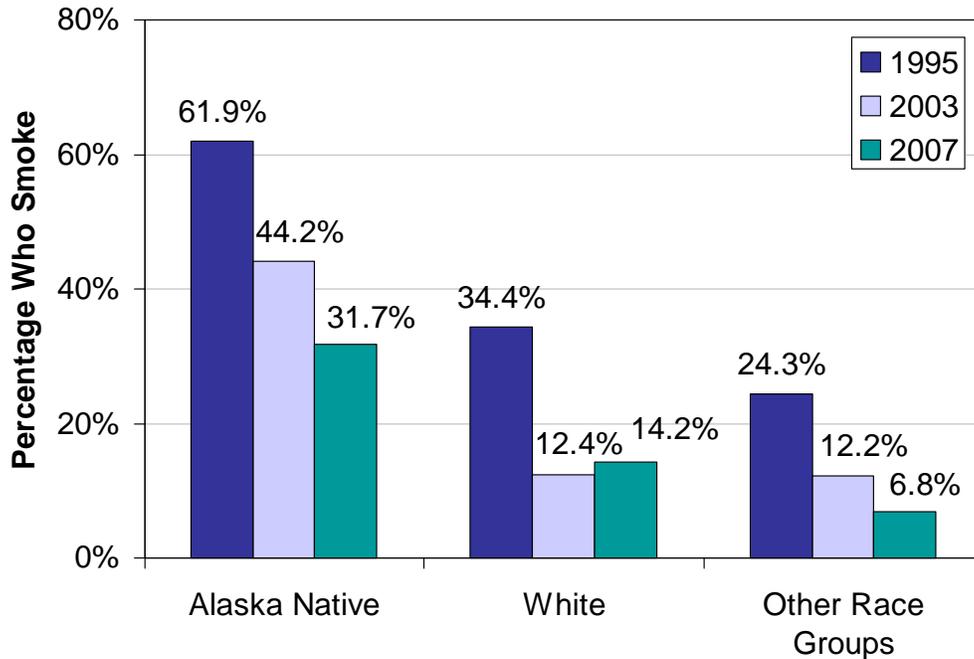


Source: Alaska Youth Risk Behavior Survey

- Smoking among high school students dropped from 36.5% in 1995 to 17.8% in 2007.
- This decrease means that there are approximately 8,200 fewer youth smokers in 2007 than there were in 1995.

Note: Population numbers used to calculate the number fewer smokers are from 2000 Census, ages 14 to 17.

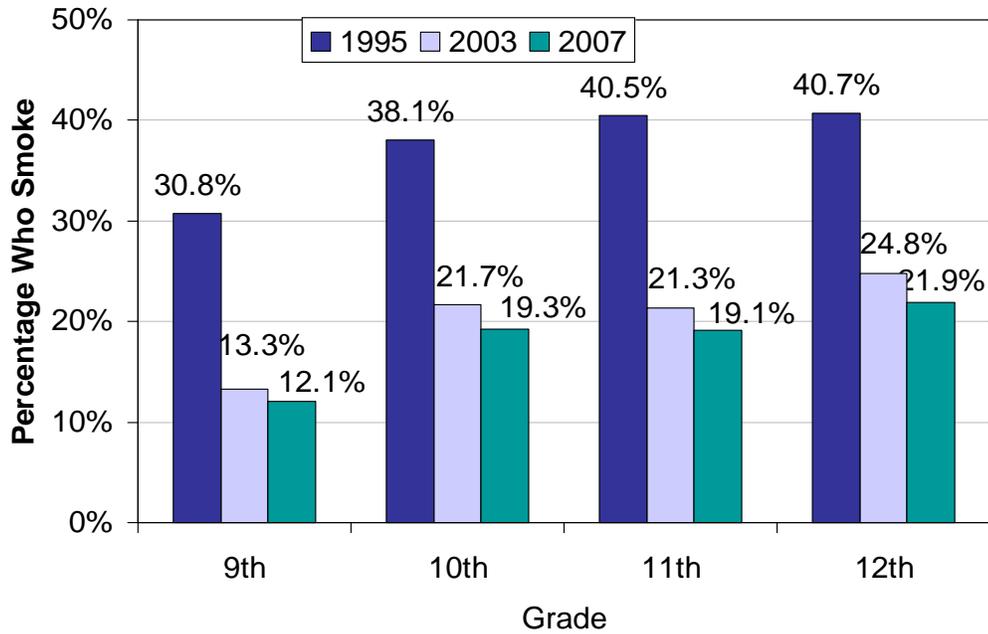
**Percentage of High School Students Who Smoke,
by Race and Year
Alaska, 1995, 2003 and 2007**



Source: Alaska Youth Risk Behavior Survey

- Between 2003 and 2007, the decline in youth smoking was notable for Alaska Native students, but did not significantly change for White or Other Race Group students.
- Alaska Native high school students are still more than twice as likely to smoke as students of other racial/ethnic backgrounds, but the gap has decreased considerably since 2003.
- Among Alaska Native high school boys, frequent smoking – 20 or more days in the past month – decreased from 19.3% in 2003 to 8.1% in 2007.

Percentage of High School Students Who Smoke, by Grade and Year Alaska, 1995, 2003 and 2007



Source: Alaska Youth Risk Behavior Survey

- Between 1995 and 2007, declines in youth smoking were seen in each high school grade level.

**Percentage of High School Students Who Smoke, by Sex and Grade
Alaska, 2007**

	9th Grade	10th Grade	11th Grade	12th Grade	Total
Girls	12.5%	21.4%	20.6%	25.9%	19.7%
Boys	11.9%	17.3%	17.8%	18.0%	15.9%
Total	12.1%	19.3%	19.1%	21.9%	17.8%

Source: Alaska Youth Risk Behavior Survey

**Percentage of High School Students Who Smoke, by Race and Sex
Alaska, 2007**

	Girls	Boys	Total
Alaska Native	35.8%	27.4%	31.7%
White	15.7%	13.0%	14.2%
Other Race Groups	4.8%	7.7%	6.8%
Total	19.7%	15.9%	17.8%

Source: Alaska Youth Risk Behavior Survey

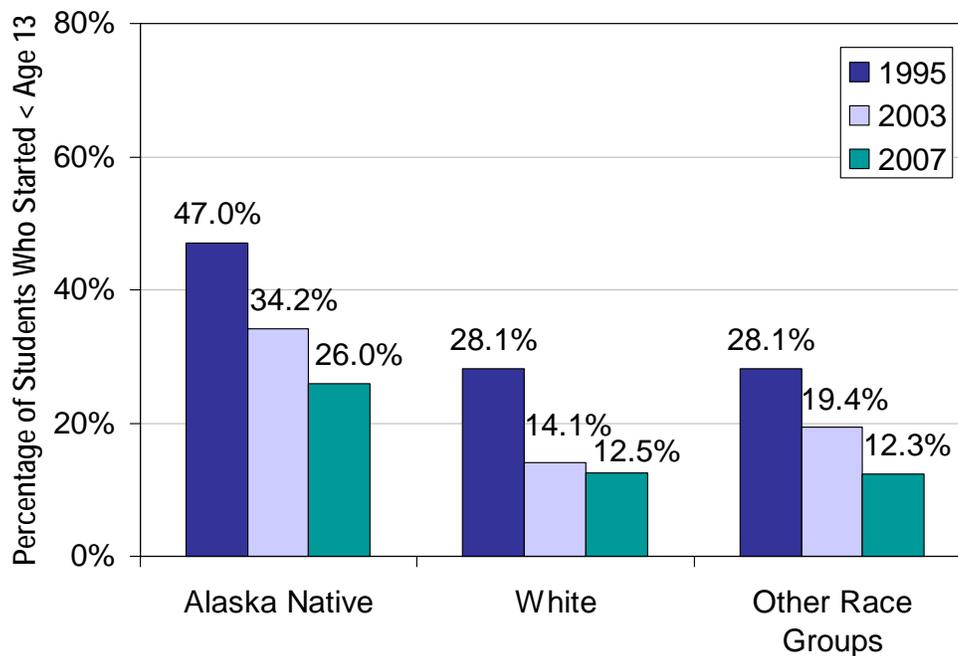
**Percentage of High School Students Who Smoke, by Race and Grade
Alaska, 2007**

	9th Grade	10th Grade	11th Grade	12th Grade	Total
Alaska Native	22.1%	24.4%	37.4%	52.1%	31.7%
White	8.8%	20.5%	14.3%	14.3%	14.2%
Other Race Groups	3.9%	5.0%	8.1%	8.2%	6.8%
Total	12.1%	19.3%	19.1%	21.9%	17.8%

Source: Alaska Youth Risk Behavior Survey

- In all grades, Alaska Native high school students were more likely to smoke than their White or Other Race classmates.

Percentage of High School Students Who Started Smoking Before Age 13, by Race and Year, Alaska, 1995, 2003 and 2007

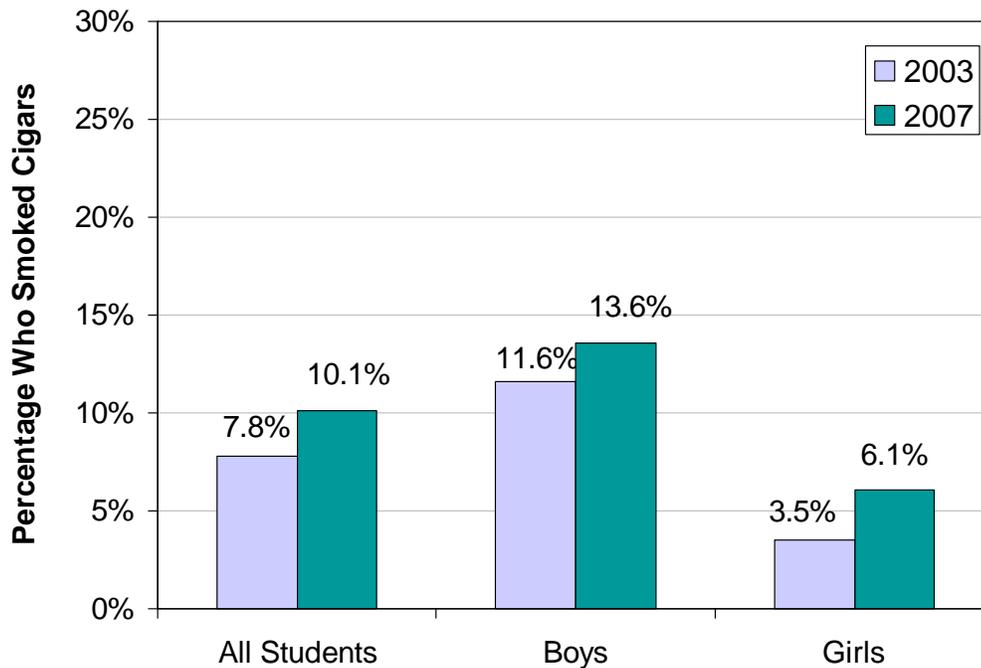


Source: Alaska Youth Risk Behavior Survey

- Overall, the proportion of high school students who started smoking before age 13 dropped from 30.7% in 1995 to 19.6% in 2003, to 16.1% in 2007.
- Among currently smoking high school students, the proportion of those who started before age 13 dropped from 53.1% in 1995 to 48.2% in 2003 to 40.8% in 2007.
- Over one in four Alaska Native high school students (26.0%) started smoking before age 13.

7. Youth Cigar Use

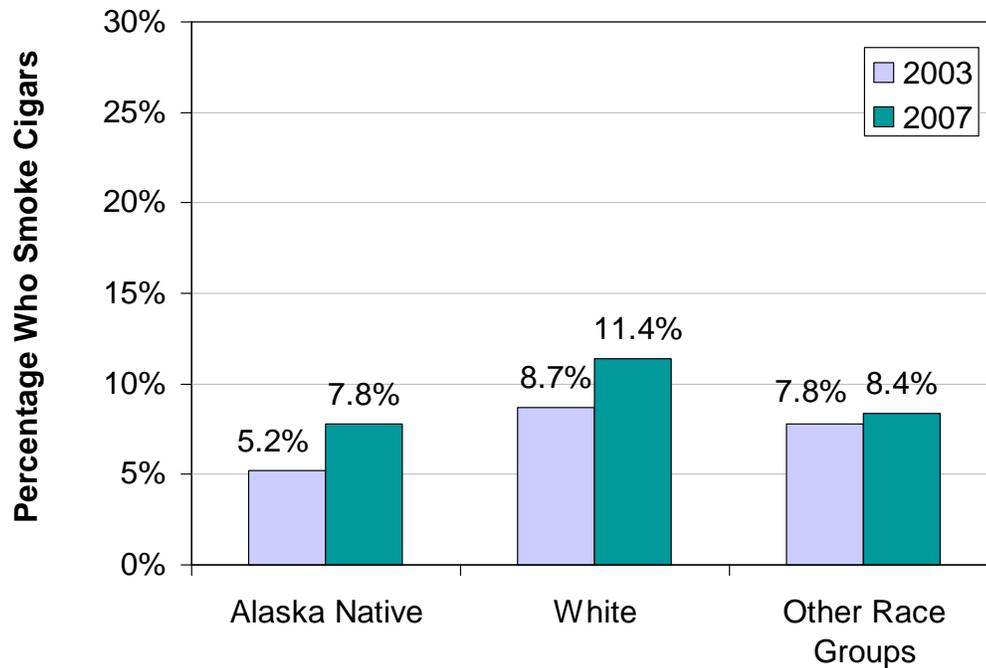
Percentage of High School Students Who Smoke Cigars or Cigarillos, by Sex and Year, Alaska, 2003 and 2007



Source: Alaska Youth Risk Behavior Survey; question first added in 2003

- Although boys are more likely to smoke cigars, the proportion smoking cigars increased significantly among girls between 2003 and 2007.
- The majority of cigar smoking occurred among students who currently smoke cigarettes. Among students who smoke cigarettes, 17.5% also reported cigar use, whereas only 2.2% of students who do not smoke cigarettes reported smoking cigars.

Percentage of High School Students Who Smoke Cigars, by Race and Year, Alaska, 2003 and 2007

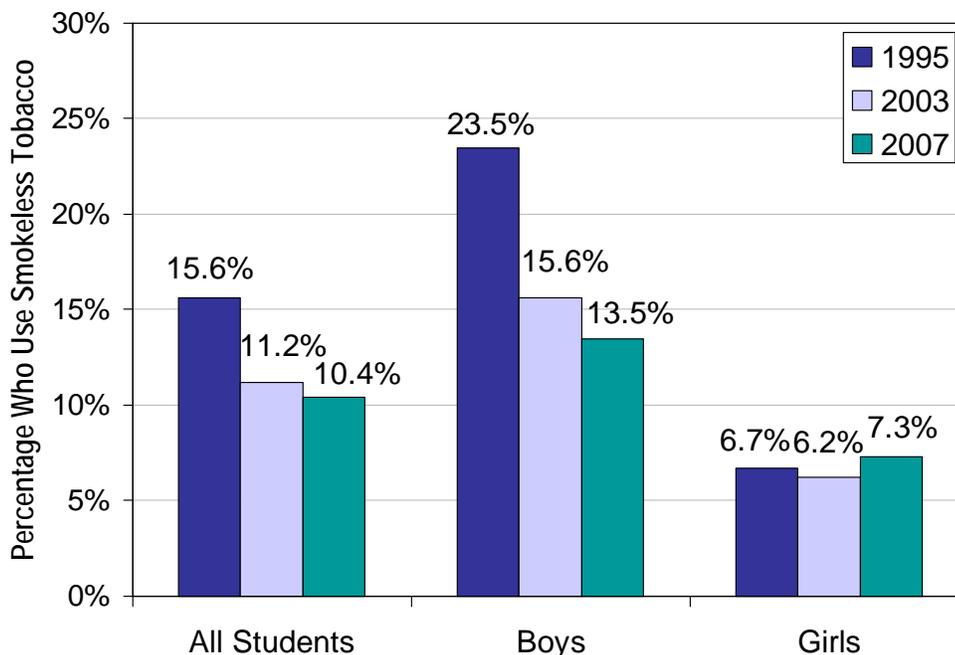


Source: Alaska Youth Risk Behavior Survey

- Among Alaska Natives, Whites, and other race groups, cigar use was not significantly different for 2003 and 2007.
- Across race groups, the majority of cigar smoking occurred among students who currently smoke cigarettes. Among cigarette smoking youth, 10.8% of Alaska Native, 21.4% of White, and 20.6% of Other Race Group student cigarette smokers had also smoked one or more cigars in the past 30 days.

8. Youth Smokeless Tobacco Use

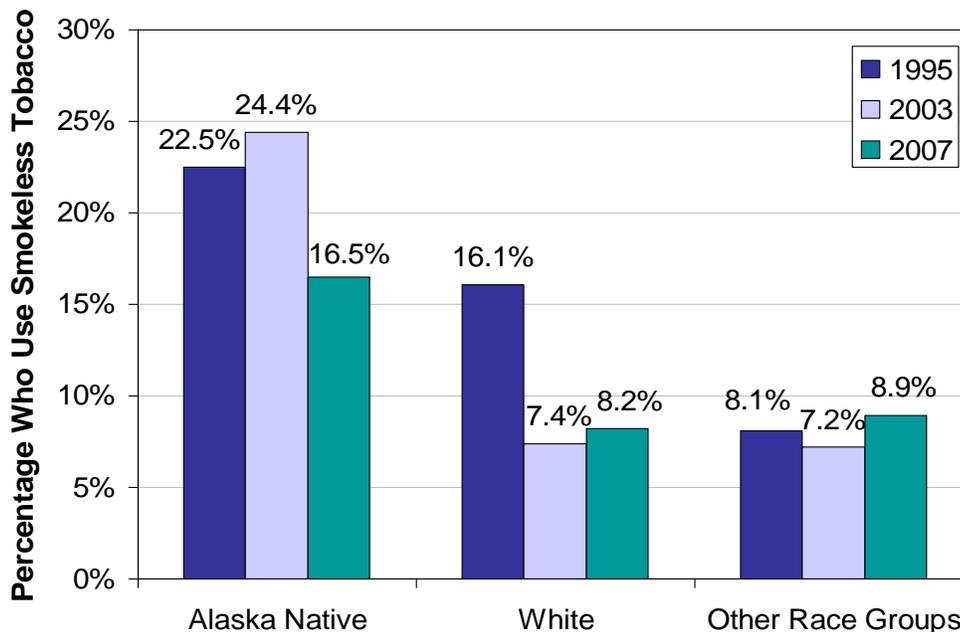
Percentage of High School Students Who Use Smokeless Tobacco, by Sex and Year Alaska, 1995, 2003 and 2007



Source: Alaska Youth Risk Behavior Survey

- Overall, use of smokeless tobacco among high school students dropped from 15.6% in 1995 to 10.4% in 2007, due to the decline in boys' use of smokeless tobacco during this time.
- Alaska Native girls have a higher prevalence of smokeless use (16.4%) than White (3.9%) or Other Race girls (4.2%).

**Percentage of High School Students Who Use Smokeless Tobacco, by
Race and Year
Alaska, 1995, 2003 and 2007**



Source: Alaska Youth Risk Behavior Survey

- Although it appeared that there was a decrease in smokeless use among Alaska Native students between 2003 and 2007, this decrease was not significant.
- Smokeless tobacco use decreased for White students between 1995 and 2003, but there was no significant change between 2003 and 2007.

9. Youth Access to Tobacco

Percentage of High School Student Smokers Who Bought Their Own Cigarettes in the Past 30 Days, by Race and Year Alaska, 1995, 2003 and 2007

	1995	2003	2007
Alaska Native	28.6%	11.5%	6.3
White	27.1%	13.6%	9.0
Other Race Groups	27.1%	13.6%	*
Total	27.1%	12.1%	7.6%

Source: Alaska Youth Risk Behavior Survey

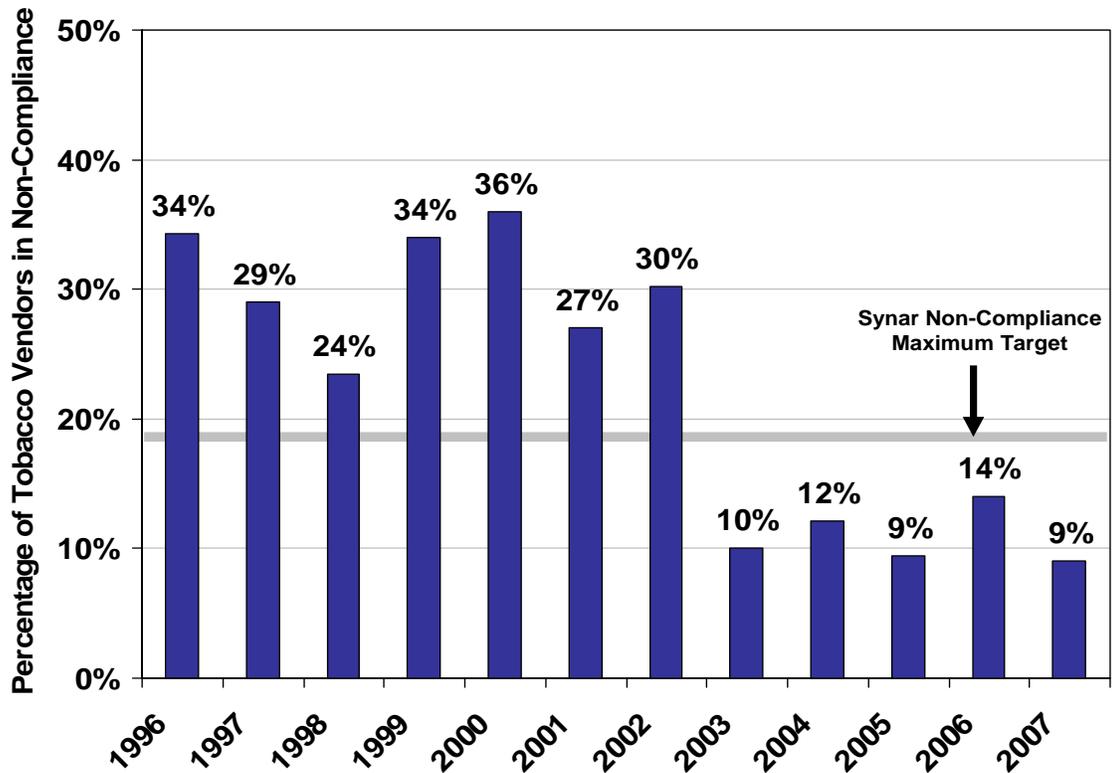
- Since 1995, there has been a dramatic decrease in the proportion of high school students who report buying their own cigarettes.
- In 2007, the majority of high school smokers (69.0%) got their cigarettes primarily from other people around them; 33.7% gave money to someone else to buy them, 27.1% borrowed them from someone else, and 8.2% were given cigarettes by someone who was 18 or older.

Source: Alaska Youth Risk Behavior Survey

- Most adults (95.5%) believe it is somewhat or very important for communities to keep stores from selling tobacco products to teenagers.

Source: Alaska Behavioral Risk Factor Surveillance System, Modified Survey 2006

Percentage of Vendors Found Selling Tobacco to Minors, Alaska by Fiscal Year, 1996-2007

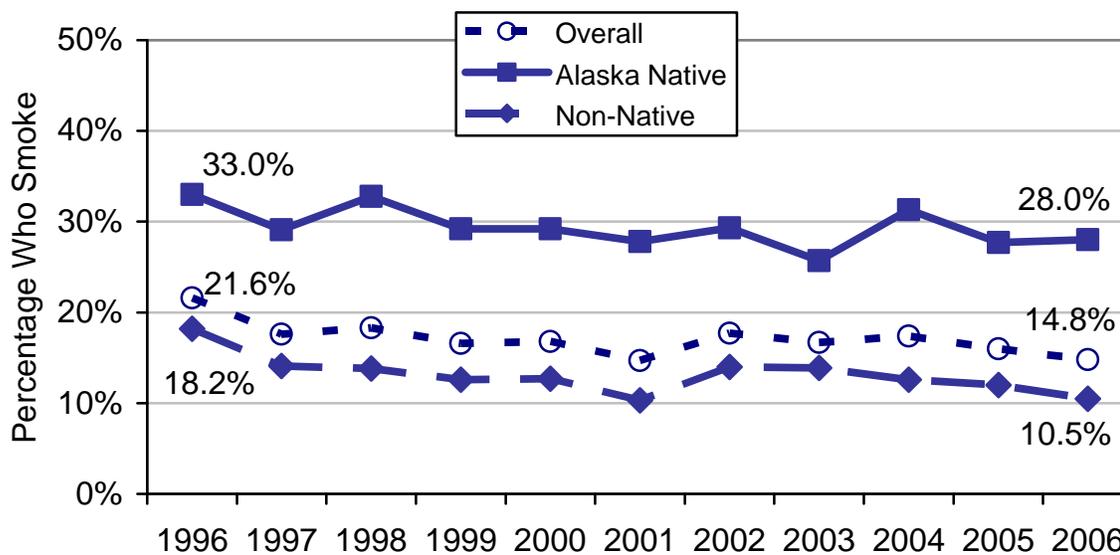


Source: Alaska Synar Compliance Database.

- Since 2003, Alaska has maintained the “20% or below” compliance rate established by the federal Synar amendment. This means fewer tobacco vendors statewide are selling tobacco products to minors compared to previous years.

10. Tobacco Use During Pregnancy

**Prenatal Smoking (last 3 months), by Year
Alaska, 1996-2006**



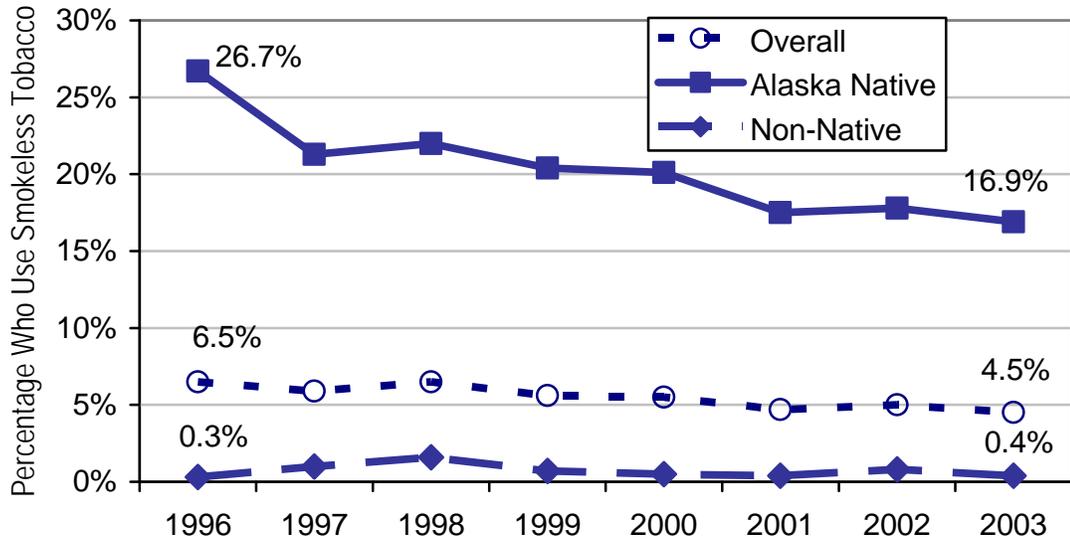
Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS)

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

Source: The Health Consequences of Smoking: A Report of the Surgeon General. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004.

- In 2006, 14.8% of Alaskan women who gave birth to a live-born infant smoked during the last 3 months of their pregnancy.
- Although there was a statistically significant decline in overall prenatal smoking for the 1996-2006 timeframe, it was not a steady decline during the whole period; the biggest decrease occurred between 1996 and 1997, from 21.6% to 17.6%.

Prenatal Smokeless Tobacco Use, by Year Alaska, 1996-2003

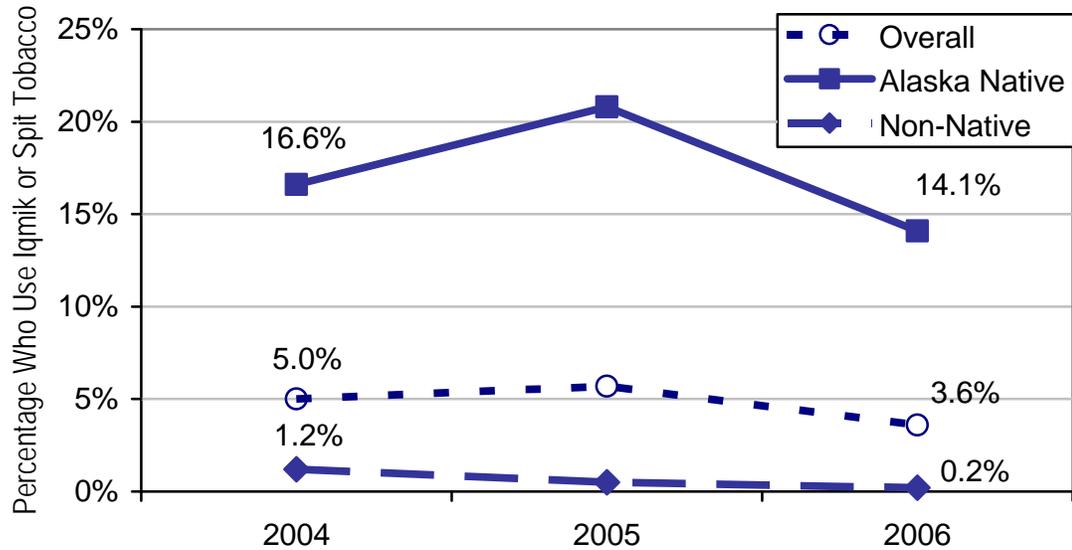


Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS)

- Between 1996 and 2003 there was a statistically significant decline in prenatal smokeless tobacco use among Alaska Native women.
- Prenatal smokeless tobacco use was more common among women who:
 - live in Southwest Alaska (43.0% vs. 1.4 - 6.4% for other Dept. of Labor regions, 2001-2003 data)
 - have less than 12 years of education (8.2% vs. 6.3% of women with 12 years of education and 1.5% of women with >12 years of education, 2003 data)
 - had their prenatal care paid for by Medicaid (7.9% vs. 1.4% of women with non-Medicaid prenatal payer sources, 2003 data)

Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS)

Prenatal Iq'mik or Spit Tobacco Use, by Year Alaska, 2004-2006



	Year		
	2004	2005	2006
Overall	5.0%	5.7%	3.6%
Alaska Native	16.6%	20.8%	14.1%
Non-Native	1.2%	0.5%	0.2%

Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS)

Note: Although data about smokeless tobacco use have been collected since 1996, the questions used since 2004 are substantively different than those used prior. For this reason, data since 2004 are presented separately.

- In 2006, approximately 377 Alaska women used iq'mik or spit tobacco during their pregnancy that resulted in a live-born infant.
- Between 2004 and 2006 there was no significant decline in prenatal iq'mik or spit tobacco use among Alaska Native women.
- For the years 2004 through 2006 combined, Alaska Native women (17.1%) were 28 times as likely as non-Native women (0.6%) to use iq'mik or spit tobacco prenatally.
- Prenatal iq'mik or spit tobacco use is more common among women who live in Southwest Alaska (56.3% vs. 0 - 7.7% for other Dept. of Labor regions, 2004-2005 data).

11. Secondhand Smoke

According to a recent report from the Surgeon General:

- There is no risk-free level of secondhand smoke exposure. Even brief exposure can be dangerous.
- Nonsmokers who are exposed to secondhand smoke at home or work increase their heart disease risk by 25–30% and their lung cancer risk by 20–30%.
- Almost 60% of U.S. children aged 3–11 years—or almost 22 million children—are exposed to secondhand smoke.
- Eliminating smoking in indoor spaces is the only way to fully protect nonsmokers from secondhand smoke exposure. Separating smokers from nonsmokers, cleaning the air, and ventilating buildings cannot eliminate secondhand smoke exposure.

Source: U.S. Department of Health and Human Services. [The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General](#). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006 [cited 2006 Sep 27]. Available from: <http://www.surgeongeneral.gov/library/secondhandsmoke/report/>.

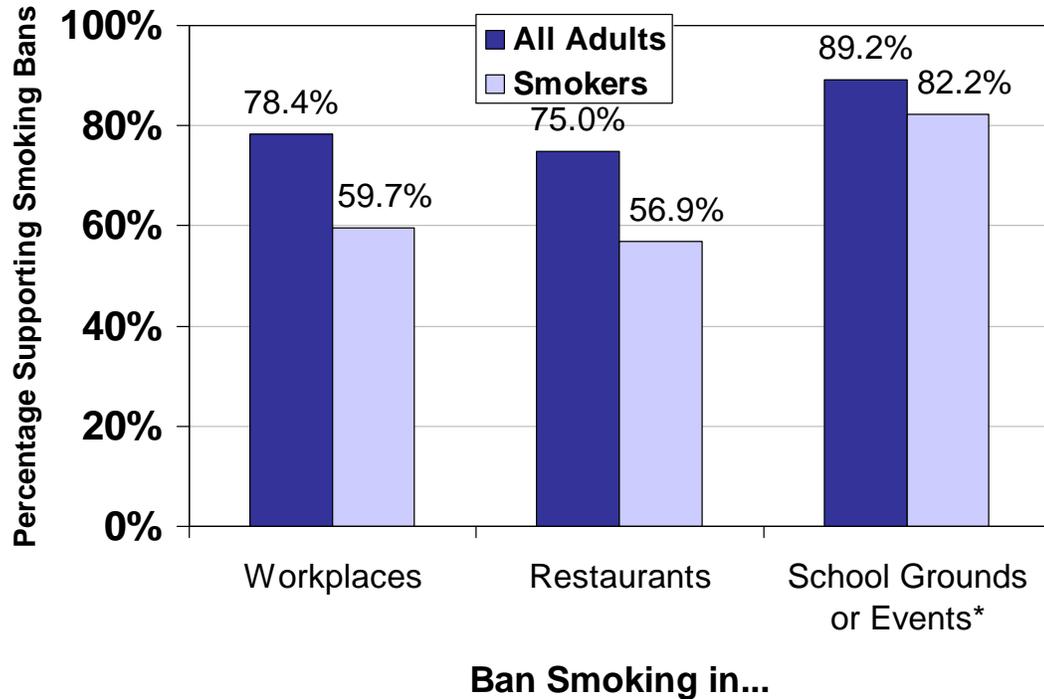
- Roughly 19,130 Alaskan children are exposed to secondhand smoke in their homes.

Source: Alaska Behavioral Risk Factor Surveillance System, Modified Survey; Alaska Department of Labor and Workforce Development Population Estimates, 2007.

- More than 1 in 4 Alaskan smokers with children in the home (27.8%) reported that someone was smoking in the home in the past 30 days.
- Risk of exposure to secondhand smoke for children living with smokers was higher for those aged 5 to 12 (32.7%) than for children under age 5 (13.7%).
- Having a home rule against smoking inside significantly lowers the risk of secondhand smoke exposure.

Source: Dent, C. Assessment of Factors Related to Secondhand Smoke Exposure Among Alaskan Households With a Smoker and Children at Home. Anchorage, AK: Section of Chronic Disease Prevention and Health Promotion, Division of Public Health, Alaska Department of Health and Social Services; June 2007.

Percentage of Adults Who Support Full Smoking Bans in Selected Locations, by Smoking Status, Alaska, 2007



Source: Alaska Behavioral Risk Factor Surveillance System, Modified Survey, 2007
 * Source: Alaska Behavioral Risk Factor Surveillance System, Modified Survey, 2004

- Recently enacted comprehensive clean indoor air policies in Anchorage and Juneau protect workers in these jurisdictions.
- There is widespread support for clean indoor air policies such as smoking bans in work places, including establishments like restaurants.

**Indicators of Home Secondhand Smoke Exposure and Policy,
by Select Demographics, Alaska, 2007**

	Percentage with:	
	No Exposure at Home ^a	Full Smoking Ban in Home ^b
Smoking status		
Non-smokers	94%	92%
Smokers	68%	65%
Race		
Alaska Native	90%	87%
Non-Native	88%	86%
Education level		
Did not graduate H.S.	78%	80%
High school graduate	89%	85%
Some college	85%	83%
College graduate	95%	93%
Household Income		
Less than \$15,000	73%	72%
\$15,000-\$24,999	85%	84%
\$25,000-\$49,555	89%	85%
\$50,000-\$74,999	89%	87%
\$75,000 or more	91%	90%
All Adults	89%	86%

^aNo one (including respondent) smoked anywhere inside respondent's home in the past 30 days;

^bRules about smoking inside respondent's home best described as: "Smoking is not allowed anywhere inside your home".

Source: Alaska Behavioral Risk Factor Surveillance System, Modified Survey

- Non-smokers and adults with higher education or higher household income are least likely to be exposed to secondhand smoke in their homes; these same groups are also most likely to have a smoking ban in their homes.

Indicators of Work Secondhand Smoke Exposure and Policy, by Select Demographics, Alaska, 2007

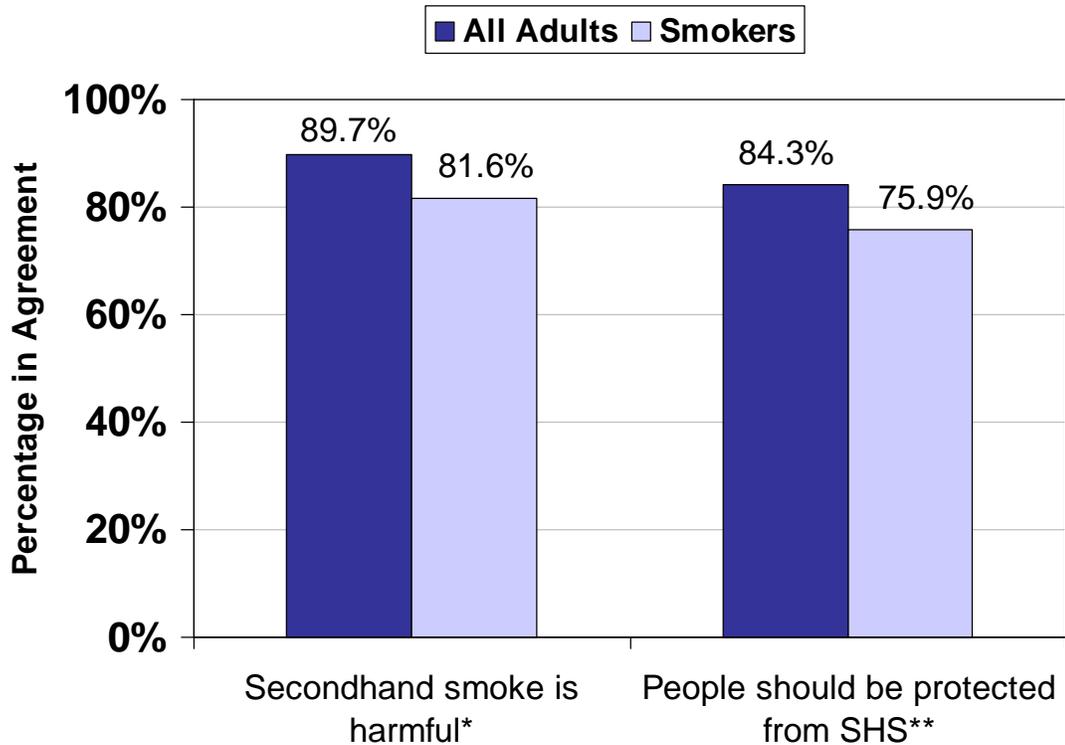
	Percentage with:	
	No Exposure at Work ^a	Full Smoking Ban at Work ^b
Sex		
Men	68%	72%
Women	80%	88%
Smoking status		
Non-smokers	79%	81%
Smokers	52%	68%
Race		
Alaska Native	66%	71%
Non-Native	75%	80%
Education level		
Did not graduate H.S.	51%	67%
High school graduate	65%	64%
Some college	71%	82%
College graduate	86%	92%
Household Income		
Less than \$15,000	52%	53%
\$15,000-\$24,999	74%	67%
\$25,000-\$49,555	77%	80%
\$50,000-\$74,999	67%	77%
\$75,000 or more	79%	87%
All Adults	74%	79%

^aNo one (including respondent) smoked anywhere inside respondent's workplace in the past 30 days. (Asked only of employed adults who work mostly indoors.); ^bRules about smoking inside respondent's workplace best described as: "Smoking is not allowed in any work areas".

Source: Alaska Behavioral Risk Factor Surveillance System, Modified Survey

- Women and adults with higher education are least likely to be exposed to secondhand smoke in their workplaces.
- Workplace smoking bans are most common among non-smokers, women, non-Natives, college graduates, and those with household incomes above \$50,000.

Adults' Opinions on Harm from Secondhand Smoke, by Smoking Status, Alaska, 2007



* Percentage who say that secondhand smoke is somewhat harmful or very harmful.

** Percentage who agree or strongly agree that people should be protected from secondhand smoke.

Source: Alaska Behavioral Risk Factor Surveillance System, Modified Survey 2006

- Most Alaskans—whether smokers or non-smokers—see secondhand smoke as a source of harm from which people should be protected.
- How would Alaskans respond if smoking were no longer allowed in bars?
 - 90% of all Alaskan adults say they would go to bars just as often or even more if smoking was not allowed in bars.
 - 72% of adult **smokers** in Alaska say they would go to bars just as often or more often if smoking was not allowed in bars.

Source: Alaska Behavioral Risk Factor Surveillance System, Modified Survey 2007

12. Alaska Tobacco Prevention and Control Program

The State of Alaska TPC Program is located within the Department of Health & Social Services, Division of Public Health, in the Section of Chronic Disease Prevention and Health Promotion. In 1994, funding was received from the Centers for Disease Control and Prevention (CDC) to address the problem of tobacco use in Alaska by establishing the State of Alaska Tobacco Prevention and Control program. Since then, the tobacco prevention and control effort in Alaska has become comprehensive, involving local coalitions, nonprofit and tribal organizations, schools, healthcare centers, state legislators, local governments, and the statewide Alaska Tobacco Control Alliance (ATCA). Funding for tobacco prevention and control work has also improved since 1994.

In 1998, the State of Alaska joined 45 other states in the national multi-state Tobacco Master Settlement Agreement with the tobacco industry, under which the state is entitled to receive approximately \$816 million over 25 years. The settlement funds to states are intended to support tobacco prevention and cessation programs.

According to CDC *Best Practices for Comprehensive Tobacco Control Programs*², increasing excise taxes on cigarettes reduces tobacco consumption rates. In 1997, a \$0.71 per pack cigarette tax increase was implemented in Alaska, raising the tax to \$1.00 per pack. In 2005, the legislature implemented a progressive increase in the cigarette tax from \$1.00 per pack to \$2.00 per pack (\$.60 in 2005 and \$.20 each in 2006 and 2007). Between fiscal years 1995 and 2008, per capita taxable cigarette sales have decreased by 48%.

In 2001 the Alaska State legislature established the Tobacco Use Education and Cessation Fund (TUECF) under AS 37.05.580 to provide a source to finance the comprehensive smoking education, tobacco use prevention, and tobacco control program authorized by AS 44.29.020(A)(15). Each year, 20 percent of MSA funds and a portion of cigarette tax revenue are to be placed into the Tobacco Use Education and Cessation Fund. The Alaska legislature authorized \$8.4 million in expenditures from this fund in FY09 for use by the TPC Program.

The TPC Program has four major public health goals based on recommendations from the CDC *Best Practices*, which also support program components to address the needs and conditions articulated in *Healthy Alaskans 2010 Plan*. The 4 major program goals follow.

Table 1: Goals for a comprehensive approach to reducing tobacco use
Goal 1: Preventing the initiation of tobacco use among young people
Goal 2: Promoting tobacco cessation among adults and young people
Goal 3: Eliminating exposure to secondhand smoke
Goal 4: Identifying and eliminating tobacco-related disparities in specific populations

² CDC, *Best Practices for Comprehensive Tobacco Control Programs* (2007). 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.

The structure of Alaska's TPC Program is also based on guidance from the CDC Best Practices. In October, 2007, CDC released an updated edition of their 1999 Best Practices document, which reorganized the nine components of comprehensive tobacco control programs into five overarching components. Below are descriptions of each program component according to Best Practices recommendation areas; cases where there is no program component to match the Best Practices recommendation area are noted.

1. State and Community Interventions:

The overarching component of "State and Community Interventions" is broken up into five subheadings, each of which are described below.

Statewide Programs

Statewide programs increase the capacity of local organizations by: providing assistance and support around community development, promoting media advocacy, implementing clean indoor air policies, and reducing minor's access to tobacco. Statewide programs also sponsor training, conferences, and the provision of technical assistance.

The Alaska TPC Program currently has the following statewide programs:

- Technical assistance to community programs (State grantees) on action planning, coalition development; supporting communities on clean indoor air ordinances, local policy change, and promoting media advocacy
- General support, training, and development to the statewide tobacco coalition (ATCA),
- Implementation of a statewide strategic plan in conjunction with ATCA

Community Programs

In order to achieve the reductions in secondhand smoke (SHS) exposure and individual behavior change that support non-use of tobacco, communities must change the way tobacco is promoted, sold and used. Communities must also change social norms around tobacco use by targeting tobacco-related knowledge, attitudes and practices.

The Alaska TPC Program provides grants to local organizations for staff, operating expenses, resource and educational materials, and education, training and media. These grantees organize their communities to establish plans of action, draw leaders into tobacco control activities and promote local tobacco control policies and ordinances. The TPC Program currently has community program grants in 20 communities/regions. Expected outcomes include the creation, implementation, and enforcement of population-based policies that protect residents from SHS, discourage youth initiation, and provide support for tobacco users to quit.

Tobacco-Related Disparities

The TPC Program is also engaged in efforts to identify and eliminate tobacco-related disparities. In FY06 Alaska was chosen as one of 11 states funded by the national Centers for Disease Control and Prevention (CDC) to participate in a strategic planning process around disparities. The strategic planning process resulted in a set of

recommendations for action to be undertaken by the Alaska TPC Program and its statewide partners to reduce and eventually eliminate disparities in tobacco use due to race, region of residence, or socio economic status in the state of Alaska. The TPC Program created a position to oversee the disparities component of the program and hired a coordinator in the summer of 2008.

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

Youth

Because most people who start smoking are younger than age 18, programs that prevent the onset of smoking among young people are an important part of a comprehensive tobacco control program. In 2007 the TPC Program initiated a school-based tobacco prevention program. The TPC Program currently funds 6 school districts to develop comprehensive school tobacco prevention programs. Funded districts address the following five key priority areas: 1) institute and enforce comprehensive tobacco prevention policies, 2) implement effective K-12 tobacco prevention classroom instruction, 3) provide assistance to students, families, and staff who want to quit using tobacco products, 4) involve parents and families in support of school-based tobacco prevention programs, and 5) create and maintain linkages to community-based tobacco prevention coalitions. To promote synergy between school-based and community efforts, all funded school programs are located in regions with community grantee programs

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

Chronic Disease Programs

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

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

2. Health Communications Interventions:

TPC Health Communications Interventions consist of a wide range of efforts, including paid television, radio and print media. Research shows that counter-marketing promotes quitting, decreases the likelihood of initiation, and supports community efforts to create tobacco-free social norms. The TPC Program currently has two counter-marketing contractors, one for urban markets and the other for rural markets.

3. Cessation Interventions:

Programs that assist both young and adult smokers in quitting can produce significant health and economic benefits. Evidence-based clinical practice guidelines describe a variety of effective cessation strategies, including brief advice by medical providers to quit smoking, FDA approved pharmacotherapy (e.g., nicotine replacement therapy, NRT) and population based cessation helplines or *Quitlines*. System changes are critical to the broad-based success of cessation interventions.

The TPC Program currently funds a statewide, toll-free *Quitline* that includes the provision of NRT. The program also funds 9 tobacco federally qualified health care systems to implement the clinical practice guidelines.

4. Surveillance and Evaluation:

The Alaska Tobacco Prevention and Control Program maintains a surveillance and evaluation system in order to monitor progress in reducing tobacco use and to document program accountability. The surveillance component of the program includes the examination of tobacco-related behaviors, attitudes and health outcomes at regular intervals. Through surveillance, the TPC Program monitors the achievement of the primary program goals, including reduced prevalence of tobacco use among young people and adults, and declines in exposure to secondhand smoke. The TPC Program publishes key tobacco indicators annually in Alaska Tobacco Facts. In addition, the Program has completed specialized data analysis projects on tobacco use among priority populations and specific tobacco topics, including reports on youth, Alaska Natives, economically disadvantaged adults, secondhand smoke, and smokeless tobacco.

Program evaluation uses surveillance data to assess program impact and to measure progress in each program component. Grantees and contractors submit routine progress reports containing information on program activities and results. The program also conducts detailed assessments of specific TPC components, including a survey of quit rates and satisfaction among Alaska Tobacco Quitline participants.

The TPC Program entered into an inter-governmental agreement, beginning FY 06 with Program Design and Evaluation Services Unit (PDES). PDES has experience evaluating

state programs in Oregon, Washington and California and provides rigorous technical support related to the evaluation needs of the TPC Program.

5. Administration and Management:

An effective tobacco control program requires a strong management structure. The TPC Program must coordinate with other state agencies, the Alaska Tobacco Control Alliance (ATCA), numerous non-profit organizations intent on reducing tobacco use, the CDC, and other key stakeholders.

13. Trend Tables

Section 2. Cigarette Consumption

Annual Per Adult Sales of Cigarettes, By Fiscal Year

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

Sources: Alaska Department of Revenue, Tax Division FY08 Reports; Orzechowski & Walker, *The Tax Burden on Tobacco*, 2007.

Section 4. Adult Smoking

Percentage of Alaskan Adults Who Smoke, by Year

Year	Alaska	US
1996	27.7%	NA
1997	26.5%	24.7%
1998	26.1%	24.1%
1999	27.3%	23.5%
2000	25.0%	23.3%
2001	26.2%	22.8%
2002	29.3%	22.5%
2003	26.2%	21.6%
2004	24.3%	20.9%
2005	24.8%	20.9%
2006	24.0%	20.8%
2007	21.5%	19.7%

Combined years	Alaska Natives	Non-Natives
1996-1998	42.7%	24.3%
1997-1999	41.0%	24.0%
1998-2000	41.6%	23.4%
1999-2001	42.8%	23.2%
2000-2002	43.5%	23.5%
2001-2003	44.3%	23.8%
2002-2004	44.5%	23.1%
2003-2005	43.3%	22.0%
2004-2006	42.8%	21.1%
2005-2007	41.1%	20.3%

Percentage of Adult Smokers Who Smoke Every Day, by Year

Year	Alaska	US
1996	78%	82%
1997	84%	82%
1998	76%	82%
1999	70%	82%
2000	75%	82%
2001	72%	82%
2002	75%	82%
2003	74%	81%
2004	70%	81%
2005	74%	81%
2006	66%	79%
2007	71%	78%

Combined years	Alaska Natives	Non-Natives
1996-1998	71%	82%
1997-1999	71%	78%
1998-2000	67%	76%
1999-2001	67%	74%
2000-2002	69%	76%
2001-2003	69%	76%
2002-2004	67%	75%
2003-2005	66%	75%
2004-2006	66%	72%
2005-2007	66%	72%

Sources: Alaska Behavioral Risk Factor Surveillance System, Standard BRFSS Survey (1998-2003), combined Modified and Standard BRFSS Surveys (2004-2007); National Health Interview Survey

Section 5. Adult Smokeless Tobacco Use

Percentage of Adults Who Use Smokeless, by Year

Year	All Alaskan Adults
1996	4.1%
1997	5.6%
1998	5.4%
1999	5.4%
2000	5.7%
2001	6.1%
2002	6.6%
2003	NA
2004	4.4%
2005	4.9%
2006	4.7%
2007	5.1%

Combined Years	Alaska Native	Non-Native
1996-1998	12.4%	4.0%
1997-1999	12.9%	4.3%
1998-2000	13.5%	4.3%
1999-2001	14.6%	4.4%
2000-2002	14.4%	4.9%
2001-2002	14.8%	5.0%
2002& 2004	11.0%	4.7%
2004-2005	10.6%	3.7%
2005-2006	10.6%	3.8%
2006-2007	11.6%	3.8%

Source: Alaska Behavioral Risk Factor Surveillance System, Standard Survey (1996-2002), Modified Survey (2004), combined Standard and Modified Surveys (2005-07)

Section 10. Tobacco Use During Pregnancy

Prenatal Smoking (last 3 months), by Year

Year	Overall	Alaska Native	Non-Native
1996	21.6%	33.0%	18.2%
1997	17.6%	29.1%	14.1%
1998	18.3%	32.8%	13.8%
1999	16.6%	29.2%	12.6%
2000	16.8%	29.2%	12.7%
2001	14.7%	27.8%	10.3%
2002	17.7%	29.3%	14.0%
2003	16.7%	25.7%	13.9%
2004	17.4%	31.3%	12.6%
2005	16.0%	27.7%	12.0%
2006	14.8%	28.0%	10.5%

Prenatal Smokeless Tobacco Use, by Year

Year	Overall	Alaska Native	Non-Native
1996	6.5%	26.7%	0.3%
1997	5.9%	21.3%	1.0%
1998	6.5%	22.0%	1.6%
1999	5.6%	20.4%	0.7%
2000	5.5%	20.1%	0.5%
2001	4.7%	17.5%	0.4%
2002	5.0%	17.8%	0.8%
2003	4.5%	16.9%	0.4%

Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS)

14. Data Sources

Tobacco Tax Data

Data on cigarette sales in Alaska were obtained from the Alaska Department of Revenue, Tax Division. In Alaska, a tobacco tax is levied on cigarettes and other tobacco products that are sold, imported, or transferred into the state. This tax, which currently amounts to \$2.00 for a pack of 20 cigarettes and 75 percent of wholesale price for cigars and chewing tobacco, is collected primarily from licensed wholesalers and distributors. Tobacco tax returns are filed monthly by the last day of the month following the month in which the sales were made. Alaska tax data may fail to account for tobacco products that are consumed here but are purchased out of state or through other means not captured by tax records (e.g., bought over the Internet). Because data files are updated monthly, variations can occur depending on when a report is accessed. Tobacco Facts sales estimates for years prior to FY 2008 are those calculated for and included in prior reports, and are not updated to reflect any further changes. Estimates used for 2008 come from the "FY 08 Cigarette and Other Tobacco Products Summary" dated 9/16/08.

Population Estimates

Alaska and US population estimates by age, used in calculating US tobacco consumption (packs per adult), come from the U.S. Census Bureau Population Division website Table 2: Annual Estimates of the Population by Sex and Selected Age Groups for the United States: April 1, 2000 to July 1, 2007 (NC-EST2007-02), data release of May 1, 2008.

Alaska population estimates by age, sex and race/ethnicity, used in calculating the number of tobacco users and Alaska consumption (packs per adult), come from the Alaska Department of Labor and Workforce Development population estimate web pages at, <http://laborstats.alaska.gov/?PAGEID=67&SUBID=171>, accessed January 13, 2009.

Smoking Attributable Mortality, Morbidity and Economic Costs (SAMMEC)

Estimates of Alaska's mortality and economic costs associated with tobacco use were calculated using an online application developed at CDC known as Smoking Attributable Mortality, Morbidity and Economic Costs (SAMMEC). The SAMMEC formula applies age- and sex-specific smoking-attributable fractions to mortality data for each smoking-related disease in the population under study, also taking into consideration the smoking prevalence for each population. The overall smoking-attributable mortality is the sum of the smoking-attributable deaths across age groups and causes of death for both sexes combined for 2006.

SAMMEC also provides estimates of smoking-attributed medical expenditures and for productivity losses due to smoking mortality. This application does not currently allow estimates of morbidity-related productivity costs. The estimates of adult medical

expenditures attributable to smoking and the loss of productivity due to smoking-related mortality were calculated using such measures as the state's 2004 age- and sex-specific mortality rates for specified conditions, the 2004 BRFSS estimate of adult smoking prevalence, the 2004 present value for future earnings, and the 2004 US life expectancy. The 2004 estimate of total medical spending in Alaska, obtained from the Centers for Medicare and Medicaid Services, was used in estimating smoking-related medical expenditures. This estimate was then adjusted to 2007 using the medical consumer price index.

Data on specific causes of deaths from smoking-related diseases in Alaska were abstracted from death certificates, provided by the Alaska Bureau of Vital Statistics. The cause of death used in our analysis was the underlying cause, based on the Tenth Revision of the International Classification of Diseases (ICD-10). Deaths of Alaskan residents who died out of state were not included in the figures used to produce the SAMMEC estimates of tobacco-related deaths and the associated economic costs. The estimates of current smoking prevalence used for the SAMMEC calculations were obtained from the Alaska BRFSS.

Estimated deaths due to secondhand smoke were calculated by applying national environmental tobacco smoke exposure mortality estimates provided in *"Health Effects of Exposure to Environmental Tobacco Smoke, Final Report, September 1997"*, produced by the California Environmental Protection Agency, to Alaska 2001 census population estimates.

Behavioral Risk Factor Surveillance System (BRFSS)

The BRFSS is an anonymous telephone survey conducted by the Alaska Division of Public Health in cooperation with the CDC. It aims to estimate the prevalence of behavioral risk factors in the general population that are known to be associated with the leading causes of morbidity and mortality in adults. The BRFSS has operated continuously in Alaska since it began in 1991.

The BRFSS uses a probability (or random) sample in which all Alaskan households have a known, nonzero chance of selection. The sample is stratified into five regions, with roughly equal numbers of interviews conducted in each region. This method deliberately over-samples rural areas of the state. Respondents are randomly selected from among the adult members of each household reached through a series of random telephone calls. Those living in institutions (i.e., nursing homes, dormitories) are not surveyed.

Interviews are conducted by trained college interns and administrative clerks, during weekdays, evenings, and weekends throughout the year. In addition to tobacco use, the BRFSS questionnaire covers such topics as general health status, health care access, nutrition, physical activity, diabetes, alcohol use, women's health, injury prevention, and HIV/AIDS awareness. There are also questions on the demographic characteristics of respondents.

Alaska presently conducts two BRFSS surveys: the standard BRFSS and a modified BRFSS, which contains many tobacco questions adopted from the CDC's Adult Tobacco Survey. Both surveys are conducted throughout the year, using separate samples drawn using the same methodology. BRFSS data appearing throughout this report are identified as coming from either the modified survey ("Modified") or the standard and modified surveys combined ("Combined"). At present approximately 210 Alaskan adults are interviewed each month for the standard BRFSS, to reach an annual sample size of 2,500 (500 per region); the same number are interviewed for the modified BRFSS, for a total of roughly 5,000 survey respondents.

Both the standard and modified BRFSS are weighted (separately) to compensate for the over-representation or under-representation of persons in various subgroups. The data are further weighted to adjust the distribution of the sample data so that it reflects the total population of the sampled area. In addition, a combined dataset (standard plus modified) is created of union of questions appearing on both surveys. This combined dataset is weighted separately.

Where possible, the combined dataset was used to provide the estimates contained in this report. In cases where questions appeared on only one or another of the BRFSS surveys, that particular dataset was used. Weighted percentages (and in some cases numbers) were reported, and 95% confidence intervals were used to determine the significance of differences between population subgroups.

Regional Reporting

Regions were defined using borough designation using a mapping of telephone prefixes to borough. Although the BRFSS survey data do not provide enough representation for reporting by most of the individual boroughs, combining boroughs provided a useful geographic factor for analyses. Region was also modified by tribal health organization region designation. While the individual tribal health organizations are generally too small to represent with survey data from the BRFSS, these aggregated units help meet the need of providing information at a useful level of geography. In this report, most boroughs fall entirely within the boundary of one region; the exceptions are Yukon-Koyukuk and Denali Boroughs. Tribal health care is provided for part of these boroughs by organizations in another borough, and the regions used in this report reflect that difference between tribal health provision and borough. For this reason, about 14% of respondents from the Yukon-Koyukuk Borough are categorized with the Southwest region, and about 14% of those from the Denali Borough are grouped with the Gulf Coast Region for the purposes of this report.

Regional groups for the associations analyses are as follows:

- 1) Anchorage and Vicinity – Anchorage and Mat-Su Boroughs (each borough reported separately for cigarette smoking prevalence)
- 2) Gulf Coast – Kenai, Kodiak, and Valdez Cordova Boroughs (plus part of Denali)
- 3) Southeast – Yakutat, Skagway, Juneau, Sitka, Haines, Wrangell-Petersburg, Ketchikan, and Ketchikan Gateway Boroughs
- 4) Fairbanks North Star

- 5) North/Interior – Nome, Northwest Arctic, North Slope, Yukon-Koyukuk, Southeast Fairbanks, and Denali Boroughs
- 6) Southwest -- Bristol Bay, East Aleutians, West Aleutians, Dillingham, Lake & Peninsula, Bethel, and Wade Hampton Boroughs (plus part of Yukon-Koyukuk)

Reporting by Race Group

Because there are small numbers of BRFSS respondents who report their primary race group as something other than White or Alaska Native each year, the most recent three years of data are combined to report information by race group.

Reporting by Alaska Native vs. Non-Native Status

When reporting trends by Alaska Native and non-Native groups, or when reporting by Native status and gender, BRFSS data are also grouped in multiple year sets to increase precision for group comparisons and for graphing of trends over time. However, significance tests for trend are conducted using single year data.

Youth Risk Behavior Survey (YRBS)

The YRBS is a systematic survey of high school students investigating behaviors related to the leading causes of mortality, morbidity and social problems among youth. The Centers for Disease Control and Prevention sponsors national and state surveys every two years, most recently in 2007. Alaska first participated in the YRBS in 1995. The next statewide survey with a statistically valid, representative sample was in 2003. Alaska was unsuccessful in its attempt to obtain a statewide representative sample in 2005, but achieved the participation rates required to meet the CDC representative sample standards in the 2007 YRBS.

The Alaska YRBS is conducted using a two-stage sampling design. Schools are selected first with a probability of inclusion proportional to the size of their enrollment. Once a school is chosen, classes are selected, with each student having an equal opportunity for inclusion. In 2007, active parental consent was required for each student participating in the YRBS. On the appointed survey day students completed written questionnaires and returned them in class in unmarked, sealed envelopes.

The 2007 sampling frame included 159 schools, from which 43 were sampled and 41 participated. Overall participation rates were above 60% in all three years for which data are presented. A total of 1,318 respondents participated in 2007, 1,481 respondents in 2003 and 1,634 in 1995. Data were weighted to reflect the true distribution of Alaska high school students by sex and grade level.

Synar Compliance Data

The Center for Substance Abuse Prevention (CSAP) oversees implementation of the Synar Amendment, which requires states to have laws in place prohibiting the sale and distribution of tobacco products to persons under age 18. (Alaska, Utah, Alabama, and

New Jersey have expanded this prohibition to persons under 19.) States are required to collect data on vendor compliance with underage sales laws, and must achieve a maximum sales-to-minors rate of not greater than 20 percent to avoid penalties. The sample from which these data are collected must reflect the distribution of the underage population throughout the state and the distribution of outlets that are accessible to youth throughout the state.

Alaska data on vendor sales of tobacco products to minors are obtained through the Alaska Department of Health and Social Services, Division of Behavioral Health's Tobacco Enforcement Program. A business license database provided by the Department of Occupational Licensing is used to identify outlets that are accessible to youth. Each summer, eligible, trained, underage youth attempt to purchase tobacco products in the sampled establishments. Undercover Tobacco Enforcement staff monitors these transactions, noting whether sales occurred.

Synar data are reported for the federal fiscal year, October through September. The year reported in this document reflects the end date of the federal fiscal year; that is, data collected from October 2006 to September 2007 are reported as the 2007 data.

Pregnancy Risk Assessment Monitoring System (PRAMS)

PRAMS data were used in this report to document prenatal tobacco use. PRAMS is a population-based survey of Alaskan women who have recently delivered a live-born infant. It gathers information on the health risk behaviors and circumstances of pregnant and postpartum women. PRAMS is conducted in collaboration with the CDC in 37 states, New York City, and South Dakota (Yankton Sioux Tribe). In Alaska, the Division of Public Health has administered PRAMS since 1990.

A stratified systematic sample is drawn each month from the state's live birth records for infants between two and six months of age. Sampled mothers receive a series of mailed questionnaires to solicit a response, and since 1997, telephone follow-up has been initiated among those who do not respond to the third mailed request.

In addition to maternal tobacco use, the PRAMS questionnaire addresses such topics as access to prenatal care, obstetric history, maternal use of alcohol, nutrition, economic status, maternal stress, and early infant development and health status. Survey responses are weighted so that reported prevalences accurately describe Alaskan women delivering a live-born infant during the year of the survey. The weighted response rate for 2006 was 77 percent.

Because the questions about smokeless tobacco use changed significantly in 2004, trend data are available from 1990 to 2003. Data from 2004 reflect combined information from questions about different types of smokeless tobacco, including Ikmik.