



ALASKA TOBACCO FACTS

2017

Alaska Tobacco Facts

2017 Update

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Introduction

Alaska Tobacco Facts is designed to be a brief, annual update of key indicators from state data sources. This report 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. In this report, we have also assessed more recent change, from 2007 to the present. Differences are noted where there is statistical significance ($p < 0.05$).

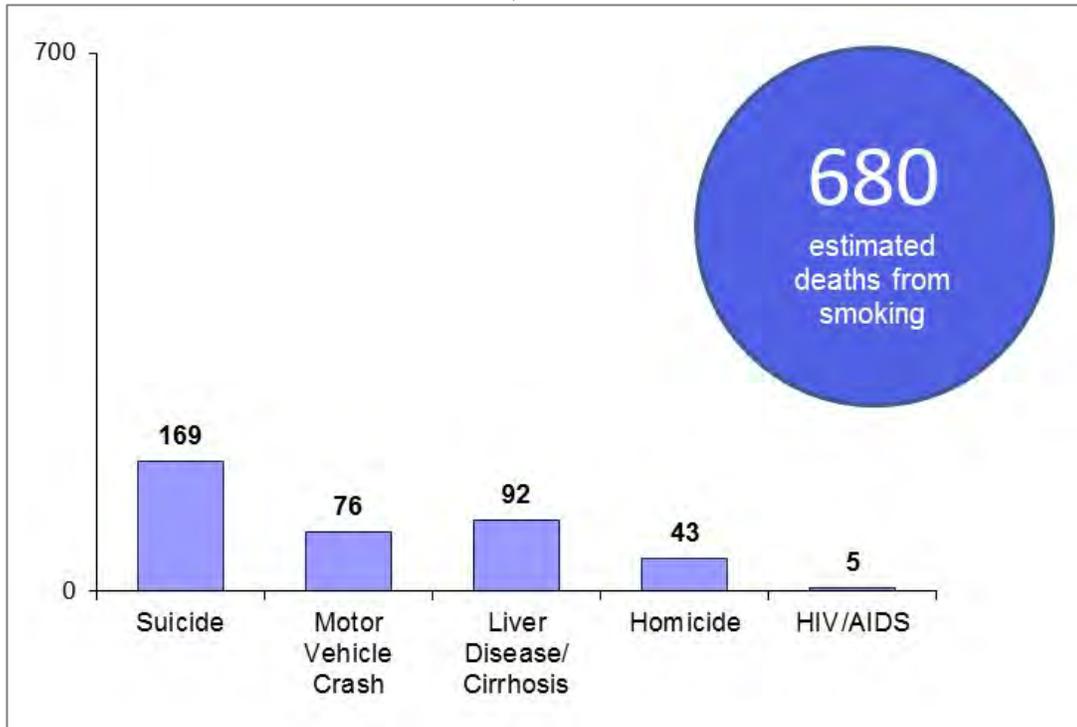
The following are highlights from *Alaska Tobacco Facts, 2017 Update*:

- Per adult cigarette consumption declined 61% from State Fiscal Year (SFY) 1996 to SFY 2015; 505 million fewer cigarettes were sold in 2015 compared to 1996.
- The annual cost of smoking to Alaska in 2014 dollars includes \$575 million in direct medical expenditures and \$258 million in lost productivity due to smoking-related deaths.
- The percentage of adult smokers in Alaska has declined approximately 31% between 1996 and 2015, a statistically significant decrease. In 2015, 19.2% of Alaska adults were smokers; this is the lowest percentage of adult smokers since the Alaska BRFSS survey began in 1991.
- The smoking prevalence among Alaska Native adults was over double that of non-Native adults (36.7% compared to 16.7%), but has decreased significantly since 1996.
- Among non-Native adults age 25 to 64, those of low socioeconomic status (SES) are over twice as likely as those of higher SES to be smokers (35.9% versus 12.9%).
- The majority of Alaska adults who currently smoke want to quit (67.8%); moreover, the majority of smokers tried to quit in the last 12 months (58.6%).
- Smoking among high school students has declined 70%, from 36.5% in 1995 to 11.1% in 2015.
- Alaska Native high school students—both boys and girls—are significantly more likely to smoke than non-Native students, although the gap has decreased considerably since 2003.
- Since the mid-2000s, secondhand smoke (SHS) exposure has decreased significantly among children at home, and among high school students at home and other indoor spaces, but 32.8% of high school students are still regularly exposed to indoor secondhand smoke.
- Among those who work primarily indoors, men are significantly less likely to be protected from SHS by a clean indoor air policy than women.

- Nearly all Alaska adults (90.2%) agree that people should be protected from SHS. Support is high even among adult smokers; 83.6% of adult smokers agree that people should be protected from SHS.

I. Smoking-Related Deaths and Economic Costs

Figure 1. Average Annual Number of Deaths Due to Selected Causes, Alaska, 2011-2015



Sources: Alaska Bureau of Vital Statistics; see Appendix B for data sources and methods for smoking-related mortality estimate.¹

- More Alaskans die annually from the direct effects of smoking tobacco than from suicide, motor vehicle crashes, chronic liver disease and cirrhosis, homicide, and HIV/AIDS combined.
- Using data from 2011 to 2015, an average of 680 Alaskans died annually from smoking-related diseases. These deaths were associated with an annual average of \$258 million dollars in lost productivity due to premature death.
- In 2014, smoking cost Alaska an estimated \$575 million in direct medical expenditures. However, these figures underestimate total costs, as lost productivity from tobacco-related illness and costs due to secondhand smoke exposure-related illness or death are not included.²

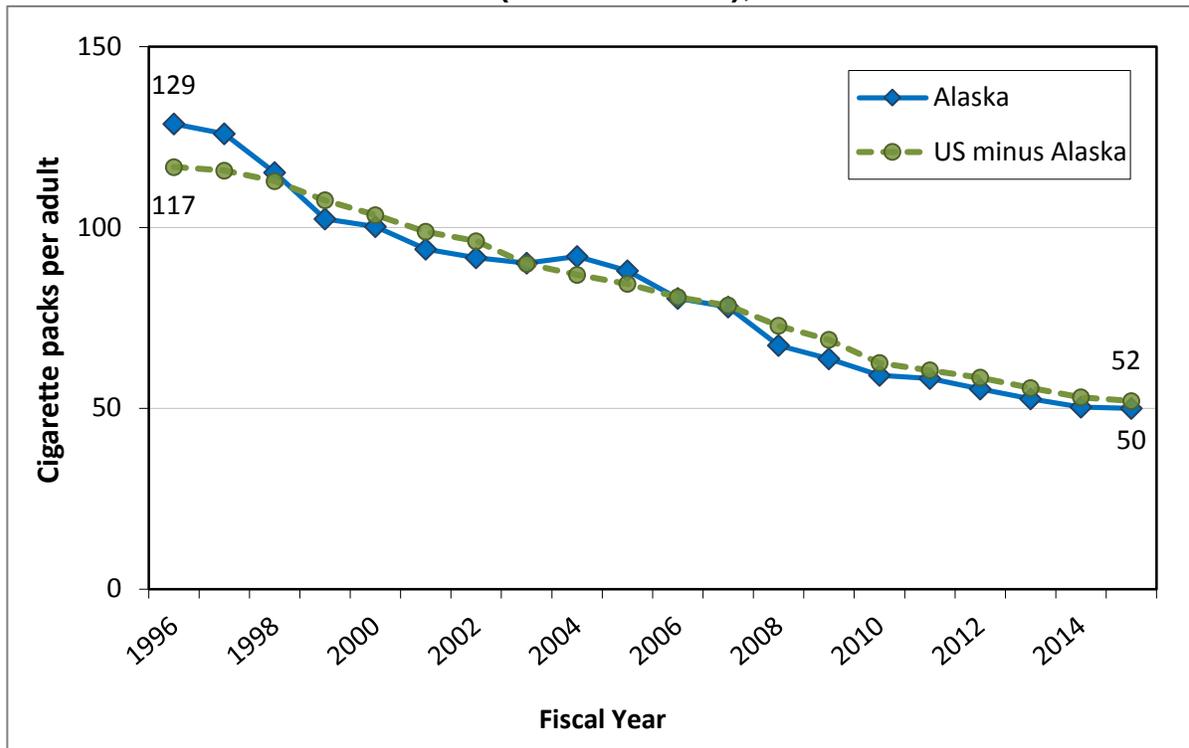
¹ See Appendix B for information on how smoking-attributable mortality and economic costs were estimated.

² Nationally, exposure to secondhand smoke causes more than 41,000 deaths among nonsmoking adults and 400 deaths in infants each year, and approximately \$5.6 billion annually in lost productivity (U.S. Department of Health and Human Services 2014 report, "The health consequences of smoking: 50 years of progress: a report of the Surgeon General." Available at <http://www.surgeongeneral.gov/library/reports/50-years-of-progress>; Max W, Sung H-Y, Shi Y. Deaths from secondhand smoke exposure in the United States: economic implications. *Am J Public Health* 2012; 102:2173-80).

II. Adult Tobacco Use

A. Cigarette Consumption

Figure 2. Annual Per Adult Sales of Cigarette Packs, By Fiscal Year, Alaska and US (minus Alaska), 1996 – 2015

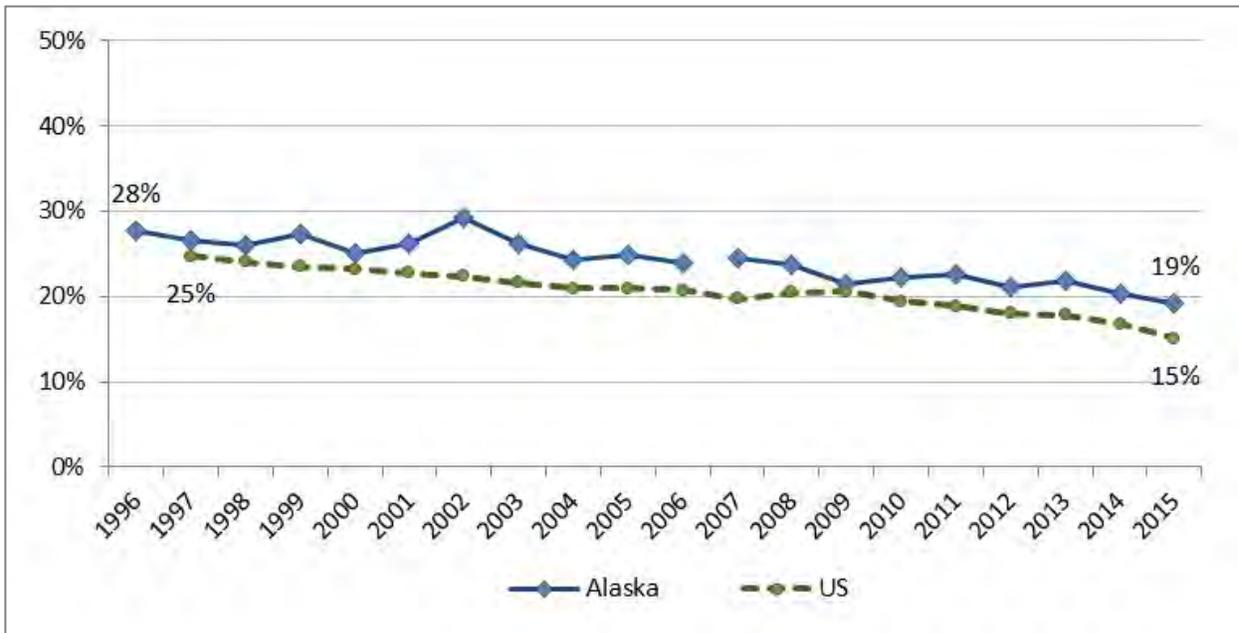


Sources: Alaska Department of Revenue, Tax Division FY16 Reports;
Orzechowski & Walker, *The Tax Burden on Tobacco*, 2015 (vol 50).

- The number of cigarette packs sold per adult in Alaska dropped 61%, from 129 packs in 1996 to 50 packs in 2015.
- This drop in cigarette sales translates to 505 million fewer cigarettes sold in Alaska in 2015 than in 1996.

B. Smoking Prevalence

Figure 3. Percentage of Adults Who Smoke, by Year, Alaska and US, 1996 – 2015



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

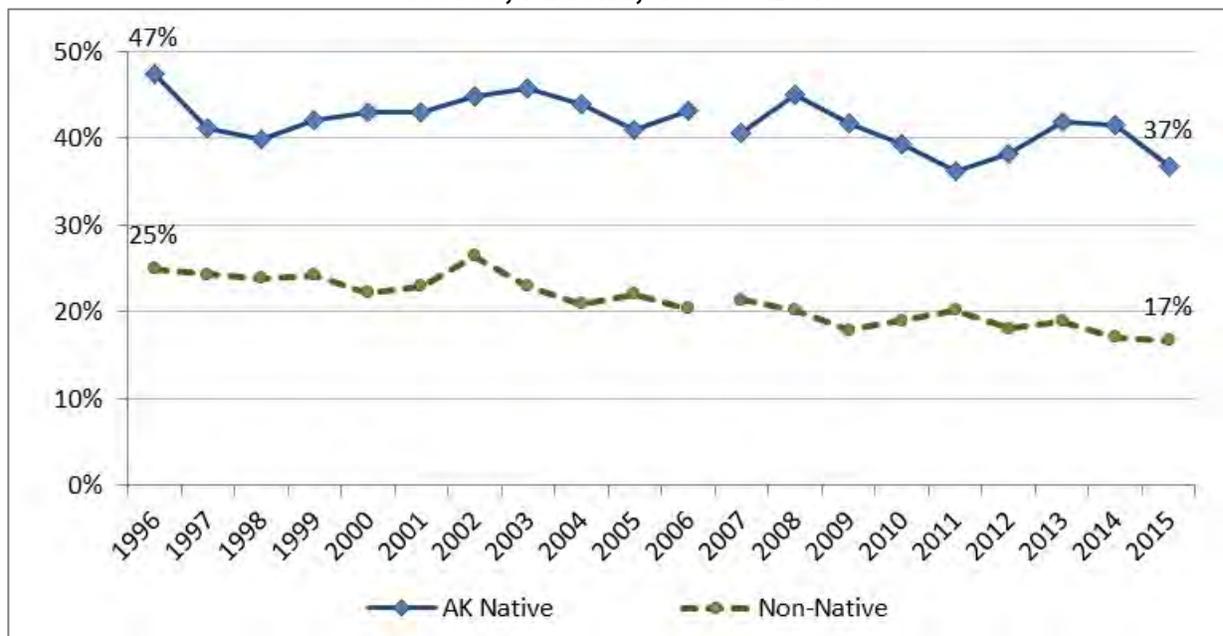
BRFSS estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

For Alaska:

- Smoking prevalence has declined significantly from 27.7% in 1996 to 19.2% in 2015, the lowest it has been since 1996. The more recent trend from 2007 to 2015 also shows a significant decline in smoking.
- This decrease represents about 44,000 fewer adult smokers in 2015 than in 1996.³
- Smoking prevalence decreased for both men and women. Among women, smoking prevalence went from 24.2% in 1996 to 17.5% in 2015, and among men, it fell from 30.8% in 1996 to 20.8% in 2015. The more recent trends from 2007 to 2015 also show a significant decline in smoking for both groups.
- Regionally, from 1998 to 2015, smoking prevalence decreased significantly in all regions of Alaska except the Southwest region. More recent trends (from 2007 to 2015) for smoking by region show the same pattern. (See Appendix A Table 6 for more detailed information.)

³ The estimated number fewer adult smokers is calculated using 2010 Census adult population total for Alaska, multiplied by the Alaska adult smoking prevalence for 1996 and for 2015 respectively, and then subtracting the 2015 estimated number of smokers from the 1996 number (of smokers) and rounding to the nearest 1,000.

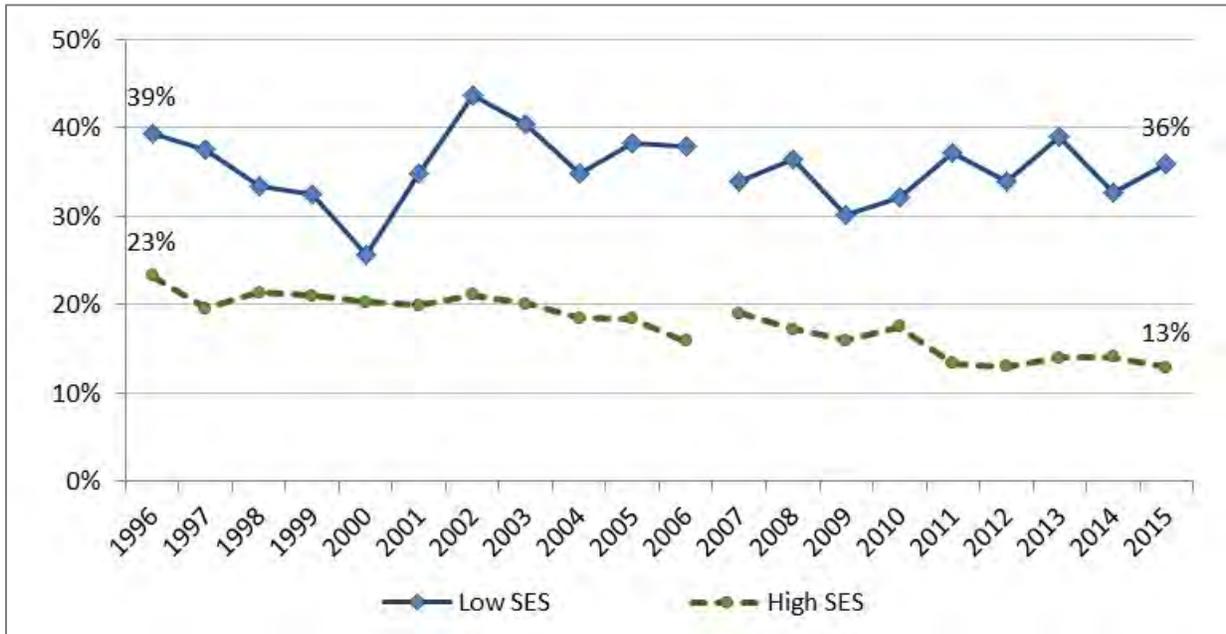
Figure 4. Percentage of Adults Who Smoke, by Year and Alaska Native Status, Alaska, 1996 – 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Combined File
 Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- Among Alaska Native adults, the trend in smoking prevalence from 1996 to 2015 showed a significant decrease for the first time. The more recent trend from 2007 to 2015 was not significant.
- Among non-Native adults, smoking has decreased significantly from 24.9% in 1996 to 16.7% in 2015. The more recent trend was also a significant decrease.

Figure 5. Percentage of Adults who Smoke, by Year and Socioeconomic Status,⁴ Alaska, 1996 – 2015

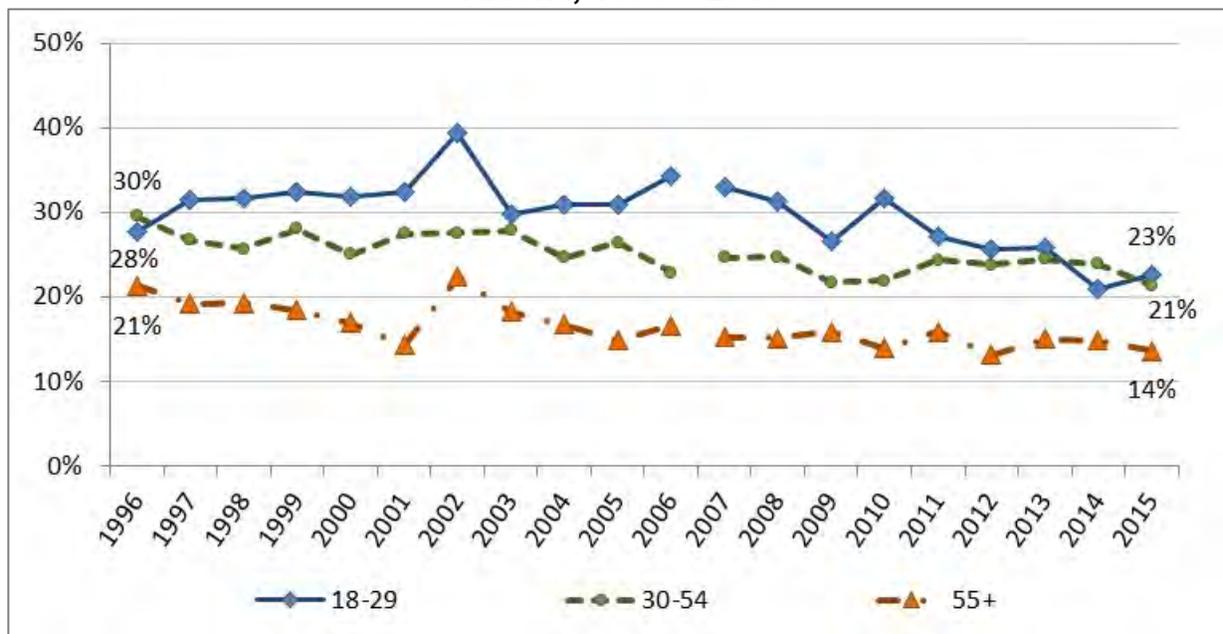


Source: Alaska Behavioral Risk Factor Surveillance System, Combined File
 Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- Among adults with low socioeconomic status (SES), smoking prevalence has not changed significantly between 1996 and 2015, and the trend from 2007 to 2015 is also not significant.
- Among adults with higher SES, smoking prevalence has decreased significantly from 23.3% in 1996 to 12.9% in 2015. The more recent trend from 2007 to 2015 was also significant.

⁴ The SES measure is restricted to non-Natives age 25 to 64. Low SES is defined as less than high school education or household income at 185% or less of the Alaska Poverty Level Guideline. See Appendix B for more information.

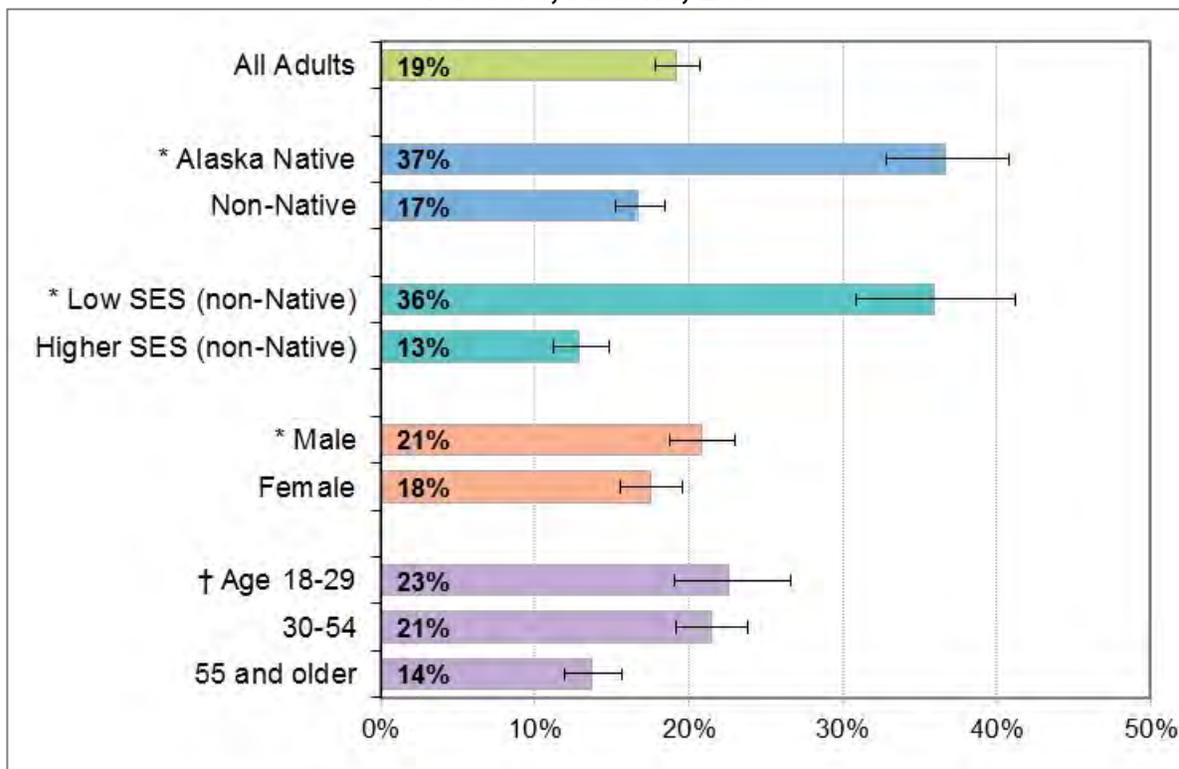
Figure 6. Percentage of Adults Who Smoke, by Year and Age Group, Alaska, 1996 – 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Combined File
 Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- Among adults age 18 to 29, smoking has decreased significantly from 27.7% in 1996 to 22.6% in 2015. Most of the decrease has occurred in more recent years; the trend from 2007 to 2015 was also significant.
- Among adults age 30 to 54, smoking has decreased significantly from 29.6% in 1996 to 21.4% in 2015. In more recent years, the trend was not significant.
- Smoking also decreased significantly among adults age 55 and older from 21.4% in 1996 to 13.7% in 2015. In more recent years, the trend was not significant.

Figure 7. Percentage of Adults Who Smoke, by Selected Demographic Factors, Alaska, 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Combined File

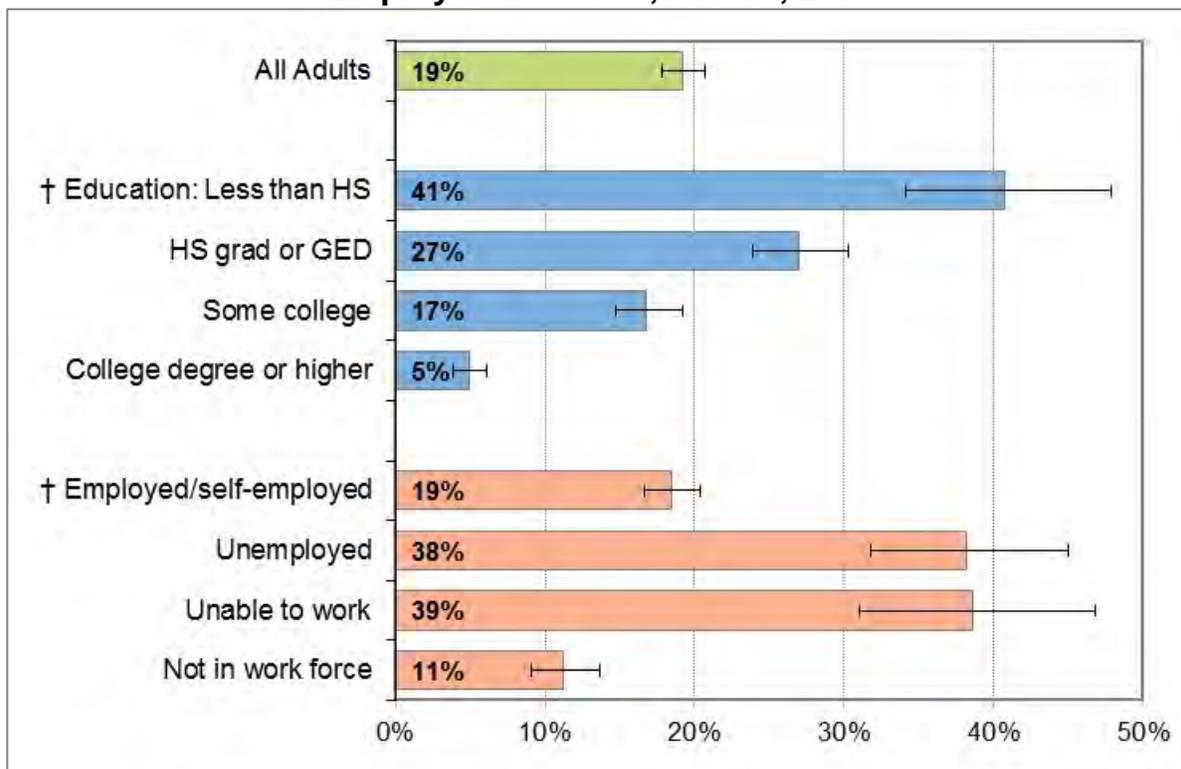
* Significant difference between the two sub-groups

† Significant difference between age 18-29 and age 55+.

‡ Significant difference between age 30-54 and age 55+.

- In 2015, adult smoking was significantly higher among Alaska Native adults than among non-Native adults.
- Adults in the low SES group were more likely than those of higher SES to be smokers.
- Men were more likely than women to be smokers.
- Smoking prevalence was about the same for young adults age 18 to 29 and adults age 30 to 54. Both groups were significantly more likely to be smokers than adults age 55 and older.
- Age at initiation of smoking:
More than half of adults who were current smokers in 2015 (55.4%) reported that they had started smoking regularly before they were 18 years old. Adults in the low SES group were significantly more likely than those of higher SES to have started smoking before age 18 (67.5% vs 49.8%).

Figure 8. Percentage of Adults Who Smoke, by Formal Education Status and Employment Status, Alaska, 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Combined File

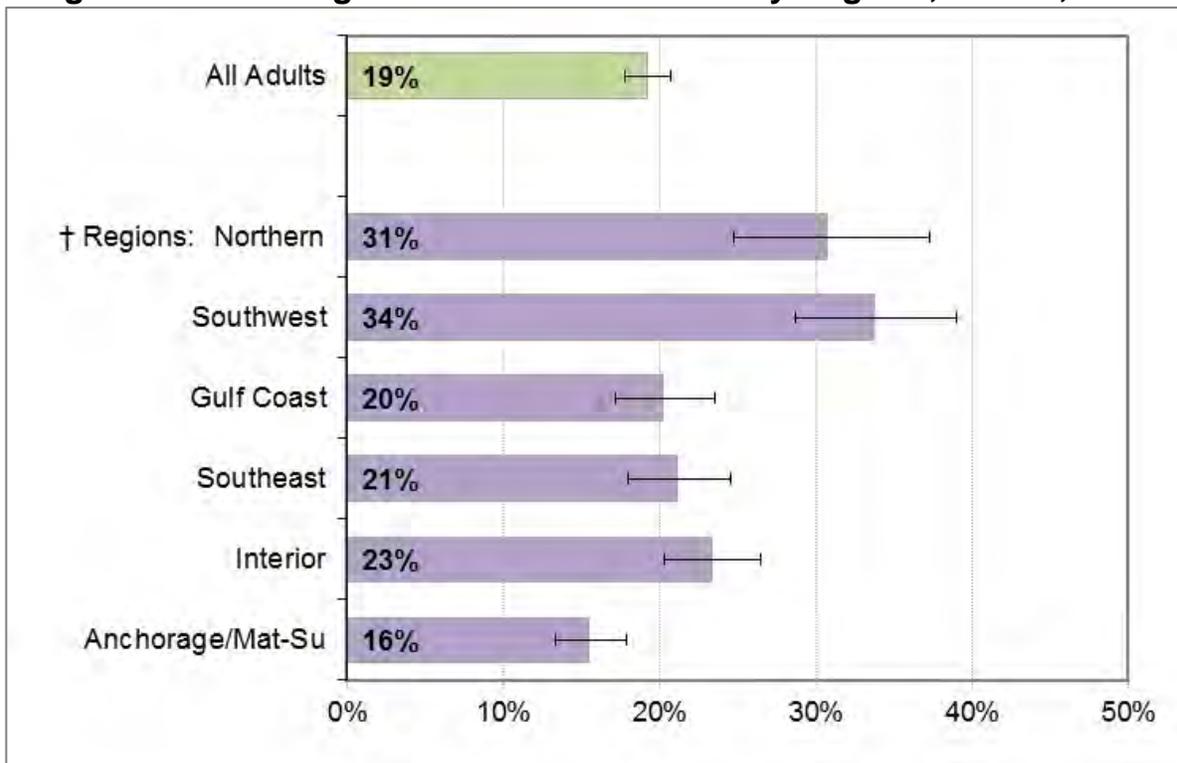
† Significant difference between each education level subgroup.

† Significant difference between employed/self-employed and the other employment status groups.

† Significant difference between those not in work force and the other employment status groups.

- In 2015, smoking was higher among adults with less educational attainment. Each increase in level of education from less than high school to high school grad or GED, to some college, to a college degree or higher, was associated with a significant decrease in smoking prevalence.
- Alaska adults who were employed were significantly less likely to smoke than those who were unemployed or unable to work.
- Adults who are not in the work force:
Those who were not in the work force were less likely to smoke than those in the other employment status groups. Adults in this group include those who reported their employment status as retired, homemakers or students. Smoking prevalence among homemakers was 17.7%, compared to 8.8% among students and 9.1% among retirees.

Figure 9. Percentage of Adults Who Smoke by Region⁵, Alaska, 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Combined File

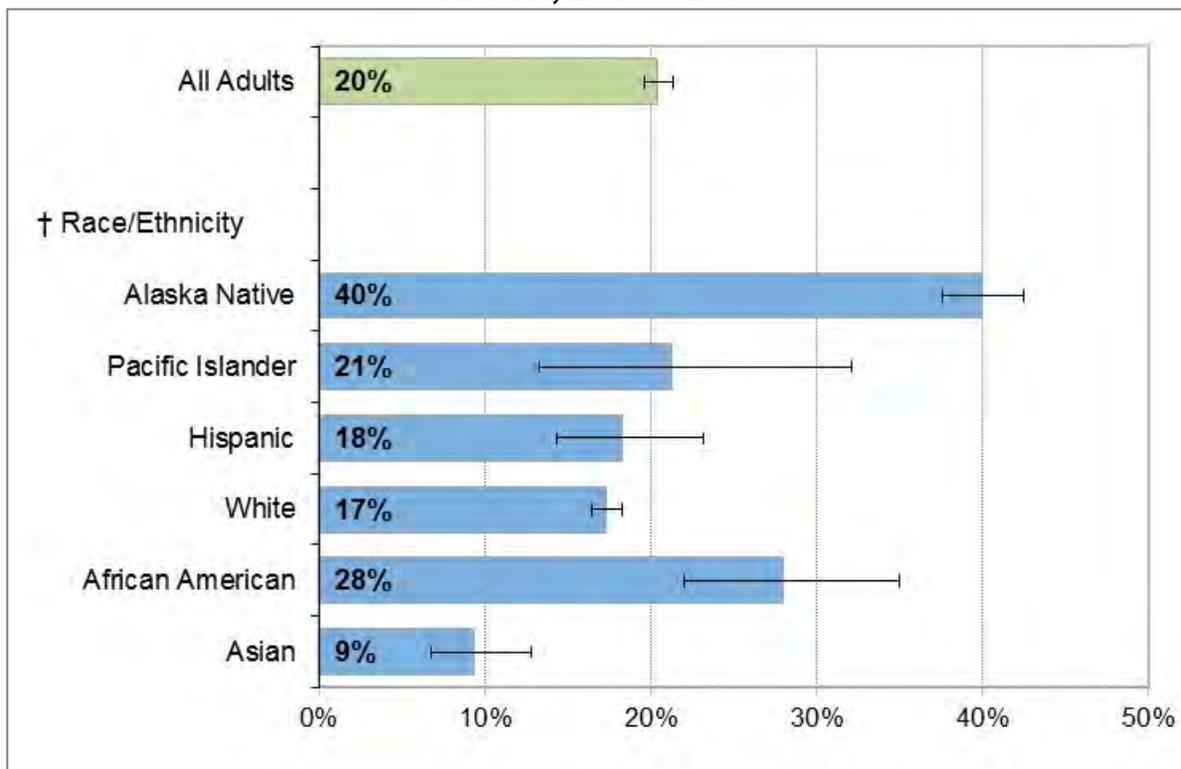
† Significant differences between regions are described below.

- In 2015, adults in more rural regions in Alaska – Southwest and Northern Regions – were more likely to smoke than adults in other regions.
- Adult smoking prevalence was significantly lower Anchorage/Mat-Su than in any other region.
- Adult smoking prevalence was not significantly different between the Gulf Coast, Interior and Southeast regions.

⁵ Public Health Regions include:

- Northern – Nome, Northwest Arctic, and North Slope
- Southwest – Bristol Bay, East Aleutians, West Aleutians, Dillingham, Lake & Peninsula, Bethel, and Kusilvak
- Gulf Coast – Kenai, Kodiak, and Valdez Cordova
- Interior – Denali, Fairbanks North Star, Southeast Fairbanks, and Yukon Koyukuk
- Southeast – Yakutat, Skagway, Hoonah-Angoon, Juneau, Sitka, Haines, Wrangell, Petersburg, Prince of Wales-Hyder, and Ketchikan Gateway
- Anchorage/Mat-Su – Municipality of Anchorage, Matanuska-Susitna Borough

Figure 10. Percentage of Adults Who Smoke, by Race/Ethnicity, Alaska, 2013 – 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Combined File

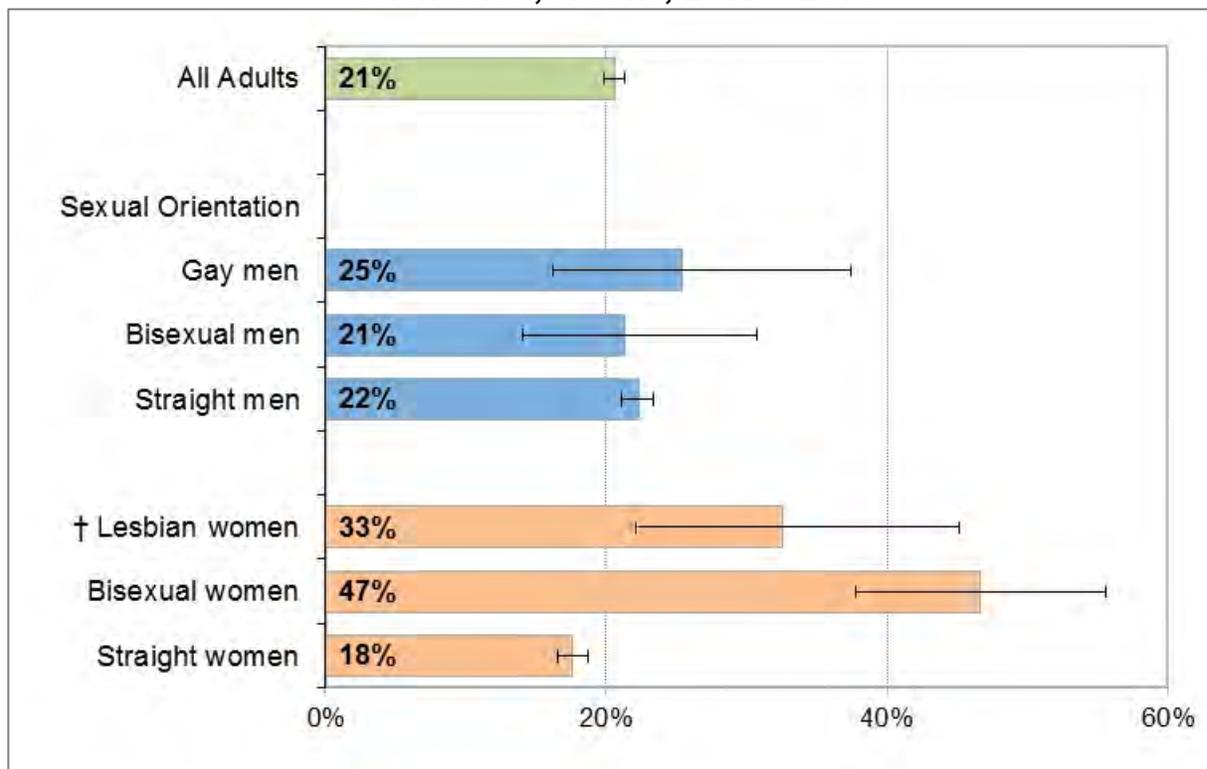
† Significant differences between specific race and ethnicity groups are described below.

Note: The race categories of African American, Asian, Pacific Islander, and White do not include respondents of Hispanic ethnicity. Percentages reported in this graph are for 2013-2015 combined, and may differ from those reported elsewhere for 2015 only.

In 2013-2015:

- Alaska Native adults were significantly more likely to be smokers than were adults from any other race or ethnicity group.
- Asian adults were less likely to be smokers than were adults from any other race or ethnicity group.
- African American adults were more likely to be smokers than were Asian, Hispanic or White adults, and less likely to be smokers than Alaska Native adults.
- Pacific Islander adults were more likely to be smokers than were Asian adults and less likely to be smokers than Alaska Native adults.
- There was no significant difference in smoking prevalence between White, Hispanic, and Pacific Islander adults.

Figure 11. Percentage of Adults Who Smoke, by Gender and Sexual Orientation, Alaska, 2012 – 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Combined File

† Significant differences between specific groups are described below.

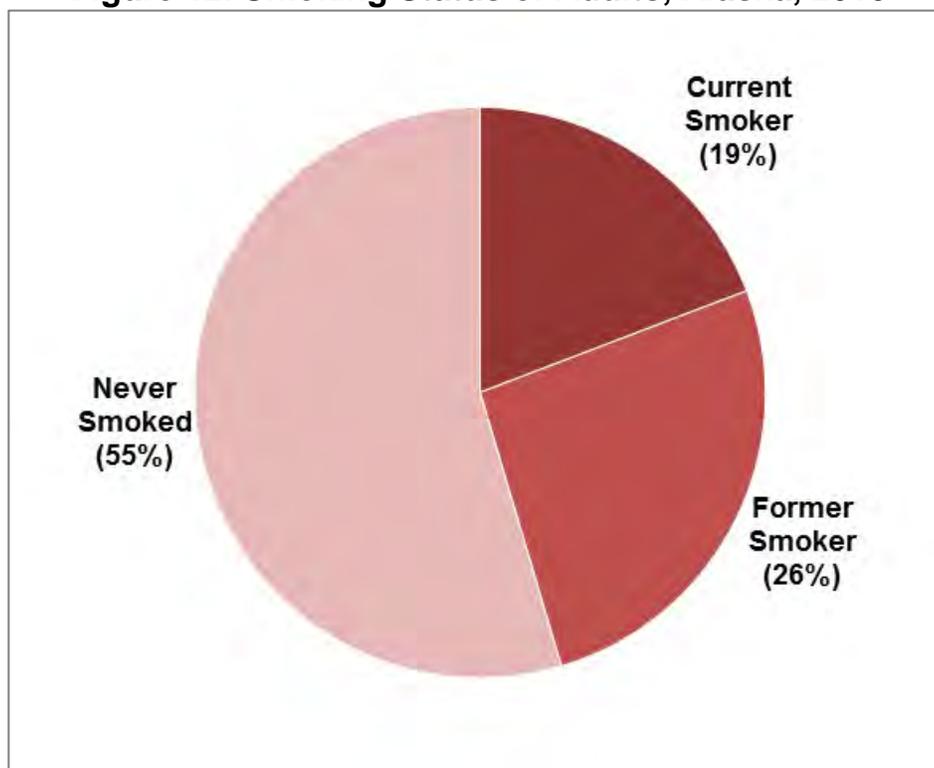
Note: Percentages reported in this graph are for 2012-2015 combined, and may differ from those reported elsewhere for 2015 only.

In 2012-2015:

- Among men, there were no significant differences in smoking prevalence by sexual orientation.
- Women who identify as bisexual or lesbian were significantly more likely to be smokers than were women who identify as heterosexual.

C. Cessation: Quitting Smoking

Figure 12. Smoking Status of Adults, Alaska, 2015

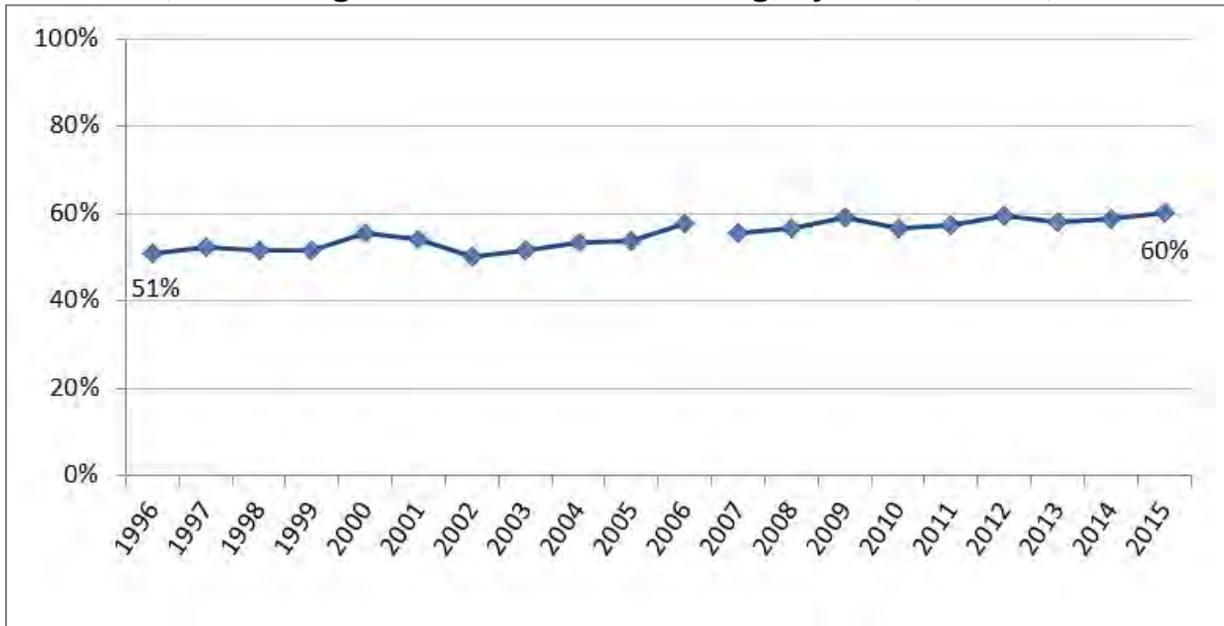


Source: Alaska Behavioral Risk Factor Surveillance System, Combined File

- As the proportion of smokers has decreased over time, the proportion of Alaskans who have never been smokers has increased, from 46.3% in 1996 to 54.6% in 2015.
- There are disparities in never smoking by gender, race and socio-economic status.
- In 2015, 57.3% of women had never been smokers, compared to 52.2% of men.
- Alaska Native adults were significantly less likely than non-Native adults to have never smoked (36.3% vs 57.3%).
- Those with higher SES⁶ are significantly more likely to have never been smokers compared to adults with low SES (60.6% vs. 40.3%).

⁶ The SES measure is restricted to non-Natives age 25 to 64. Low SES is defined as less than high school education or household income at 185% or less of the Alaska Poverty Level Guideline. See Appendix B for more information.

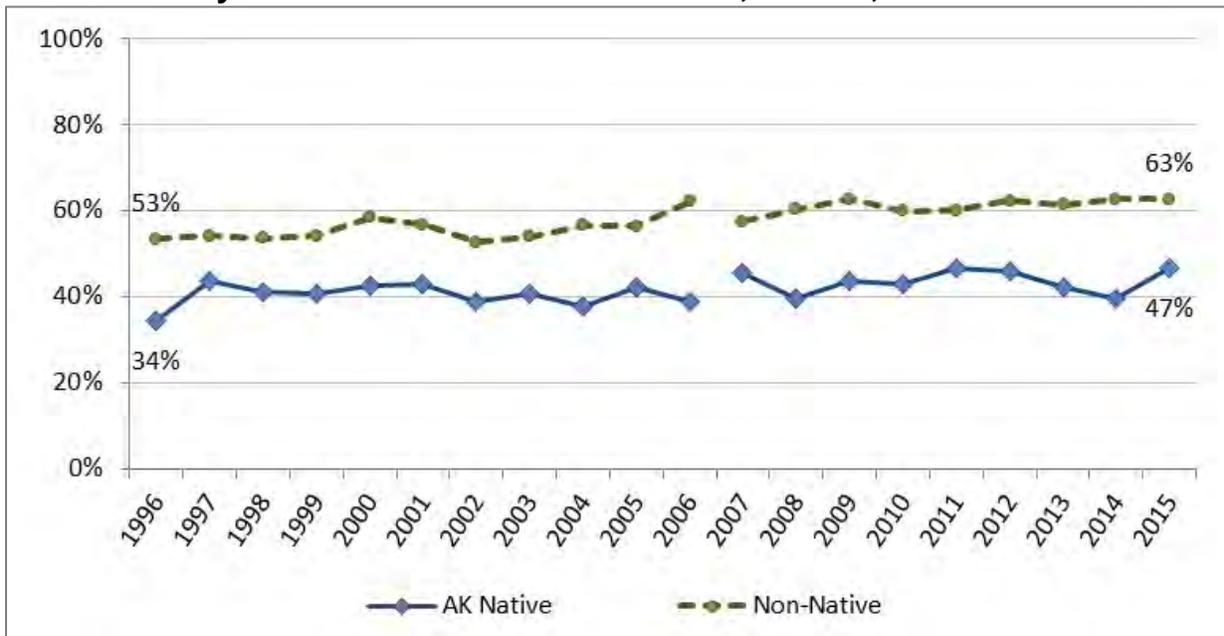
Figure 13. Quit Ratio: Among Adults age 25 or Older who were Ever Smokers, Percentage who have Quit Smoking, by Year, Alaska, 1996 – 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Combined File
 Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- The quit ratio is a measure that shows the proportion of people who have quit smoking among those who have ever been smokers. This measure is reported among adults who are age 25 or older, so that the trend is less likely to be affected by changes in initiation of smoking occurring in those who are less than 25 years of age.
- The quit ratio has increased significantly since 1996. The proportion of ever smokers age 25 or older who have quit smoking increased from 50.7% in 1996 to 60.4% in 2015. The more recent trend from 2007 to 2015 also shows an increase.
- The quit ratio has increased significantly among men (from 50.4% in 1996 to 59.7% in 2015) and among women (from 51.2% in 1996 to 61.2% in 2015). The more recent trends from 2007 to 2015 do not show a significant change for either men or women.
- From 1996 to 2015, the quit ratio increased significantly in four regions—the Gulf Coast, Anchorage/Mat-Su, Interior, and Southeast Alaska. Although there has been no significant change in those regions since 2007, the quit ratio has increased significantly in the Northern region (from 34.5% in 2007 to 46.6% in 2015). See Appendix A Tables 12 and 13 for more detailed information.

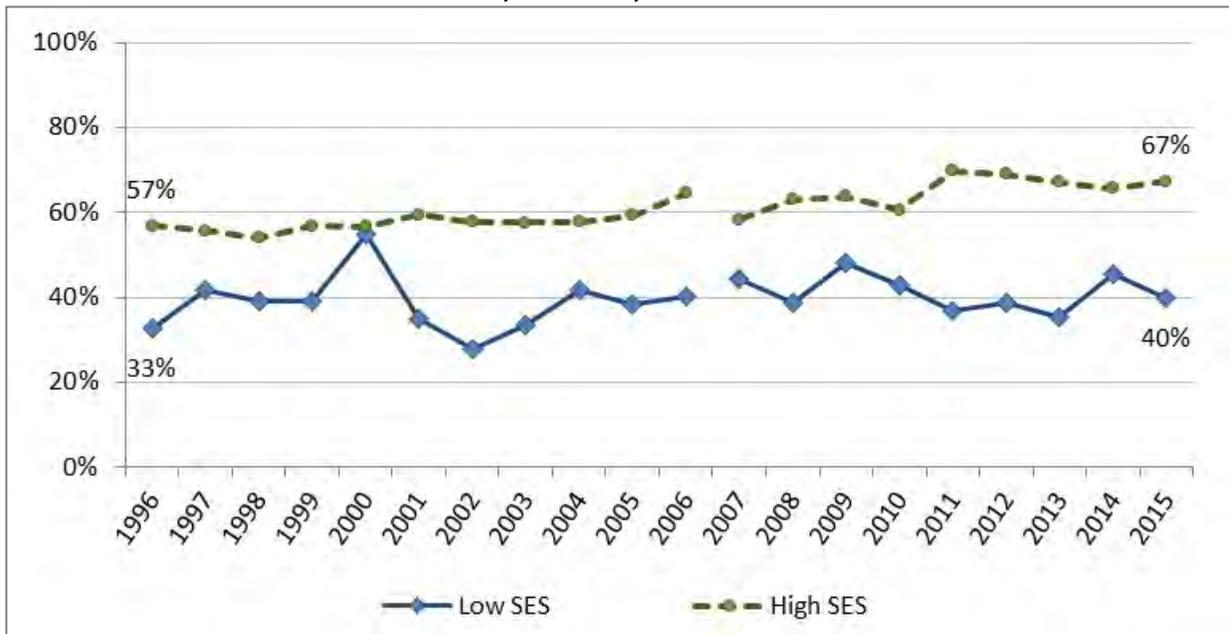
Figure 14. Quit Ratio: Among Adults age 25 or Older who were Ever Smokers, Percentage who have Quit Smoking, by Year and Alaska Native Status, Alaska, 1996 – 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Combined File
 Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- Among Alaska Native adults age 25 and older who ever smoked, there has been no significant trend in the quit ratio from 1996 to 2015, or from 2007 to 2015.
- Among non-Native adults age 25 and older, the quit ratio has increased significantly between 1996 and 2015. The more recent trend was also significant.

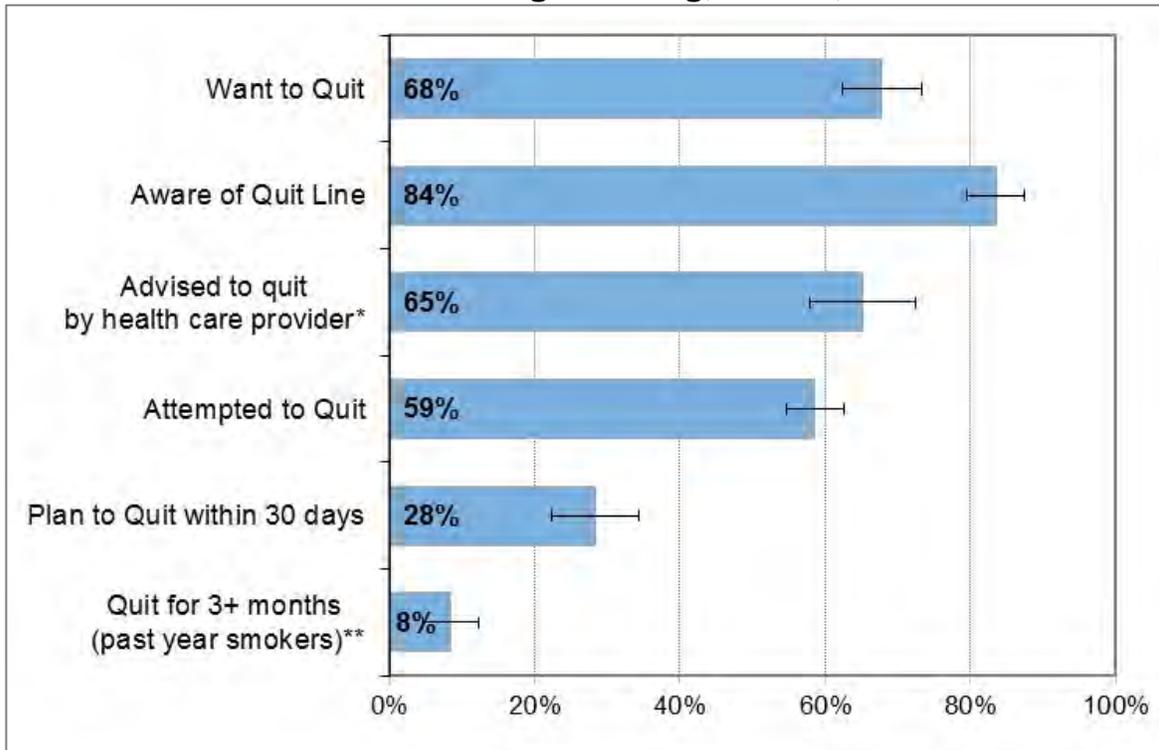
Figure 15. Quit Ratio: Among Adults age 25 or Older who were Ever Smokers, Percentage who have Quit Smoking, by Year and Socioeconomic Status, Alaska, 1996 – 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Combined File
 Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- Among adults with low SES, the quit ratio has not changed significantly between 1996 and 2015, and the trend from 2007 to 2015 is also not significant.
- Among adults with higher SES, the quit ratio has increased significantly between 1996 and 2015. The more recent trend from 2007 to 2015 was also significant.

Figure 16. Percentage of Adult Smokers Represented in Selected Indicators Related to Quitting Smoking, Alaska, 2015



Sources: Alaska Behavioral Risk Factor Surveillance System, Combined and Supplemental Files.

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

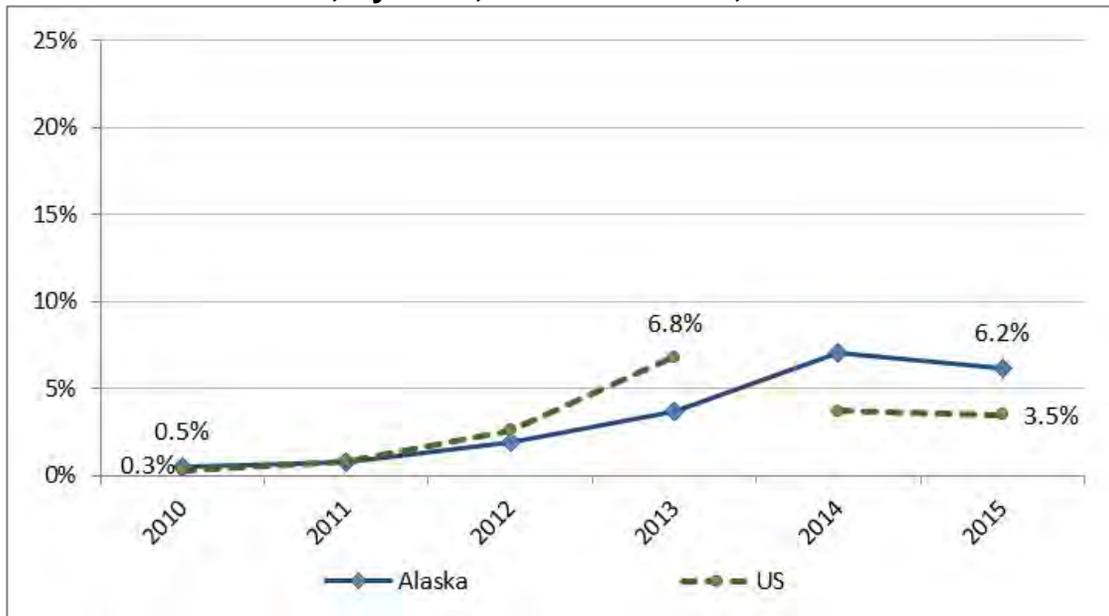
**Among current and former smokers who were smoking in the past year.

- Most Alaska adult smokers want to quit, and most are aware that Alaska has a Tobacco Quit Line that provides free, phone based counseling and nicotine replacement therapy. In 2015, 2,657 Alaska residents called the Quit Line. Most calls (91.2%, 2,422 callers) were from tobacco users who requested a cessation intervention.
- Over half of current smokers (58.6%) have attempted to quit in the past 12 months.
- In 2015, 8.4% of Alaska adults who smoked in the past year had successfully quit for 3 or more months. Being able to stay quit for 3 or more months greatly increases the chances of quitting tobacco for life.⁷

⁷ Hughes JR, Keely J, Naud S. Shape of the relapse curve and long-term abstinence among untreated smokers. *Addiction*. 2004;99:29-38.

D. Use of E-Cigarettes and Other Vapor Products⁸

Figure 17. Percentage of Adults Who Use E-cigarettes or Other Vapor Products, by Year, Alaska and US, 2010 – 2015



Source for AK data: Alaska Behavioral Risk Factor Surveillance System Supplemental and Combined Files. Source for US data 2010-2013: McMillen et al, Trends in Electronic Cigarette Use among US Adults: Use is Increasing in Both Smokers and Nonsmokers, *Nicotine & Tobacco Research*, 2015, 1195-1202. Source for US data 2014-2015: National Health Interview Survey⁹.

- The national estimates in the graph above come from two different studies with similar questions about current use. However, multiple studies indicate rapid increases in national e-cigarette use.¹¹
- E-cigarette and other vapor product use among adults has been measured in Alaska since 2010, and use has increased significantly between 2010 and 2015.
- Although these products are relatively new and prevalence is still relatively low, use increased sharply between 2010 and 2014. Prevalence was stable between 2014 and 2015.
- This pattern was similar across demographic subpopulations (by gender, age, Alaska Native status, and SES). See Appendix A Table 16 for more detailed information.

⁸ Electronic vapor products are battery-operated nicotine devices that heat a liquid solution into a vapor which is inhaled. Electronic vapor products include e-cigarettes, vape pipes, vaping pens, e-hookahs, and hookah pens.

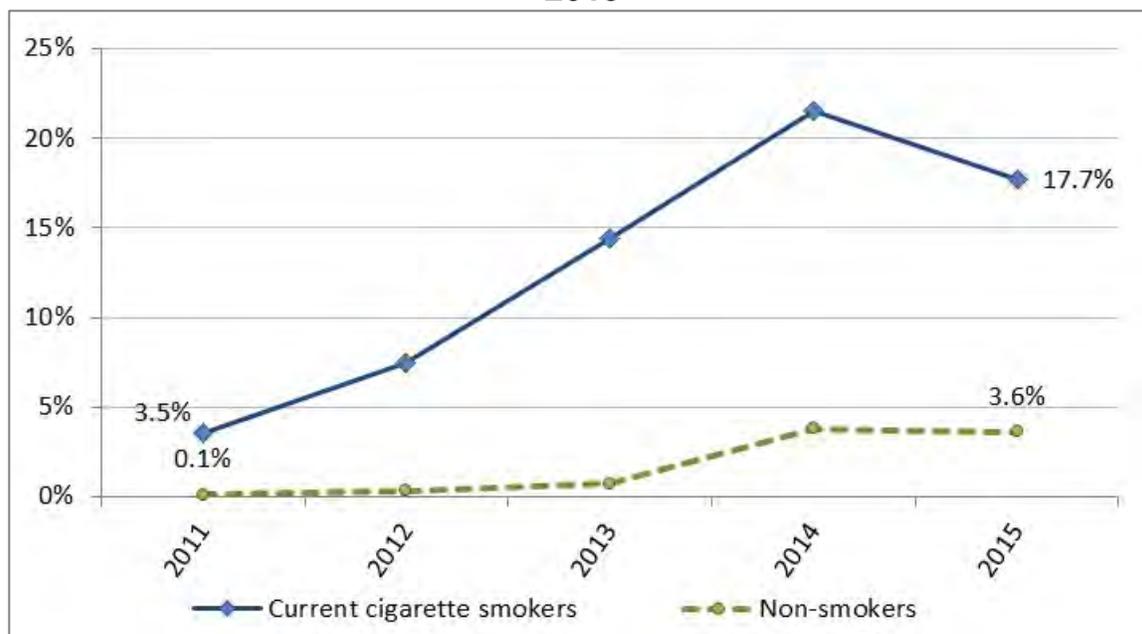
⁹ 2014 NHIS estimate: Schoenborn CA, Gindi RM. Electronic cigarette use among adults: United States, 2014. NCHS data brief, no. 217. Hyattsville, MD: National Center for Health Statistics. 2015.

<https://www.cdc.gov/nchs/data/databriefs/db217.pdf>.

2015 NHIS estimate: QuickStats: Cigarette Smoking Status Among Current Adult E-cigarette Users, by Age Group — National Health Interview Survey, United States, 2015. *MMWR Morb Mortal Wkly Rep* 2016;65:1177. DOI:

<http://dx.doi.org/10.15585/mmwr.mm6542a7>.

Figure 18. Percentage of Adults Who Use E-cigarettes or Other Vapor Products, by Year and Combustible Cigarette Smoking Status, Alaska, 2011 – 2015

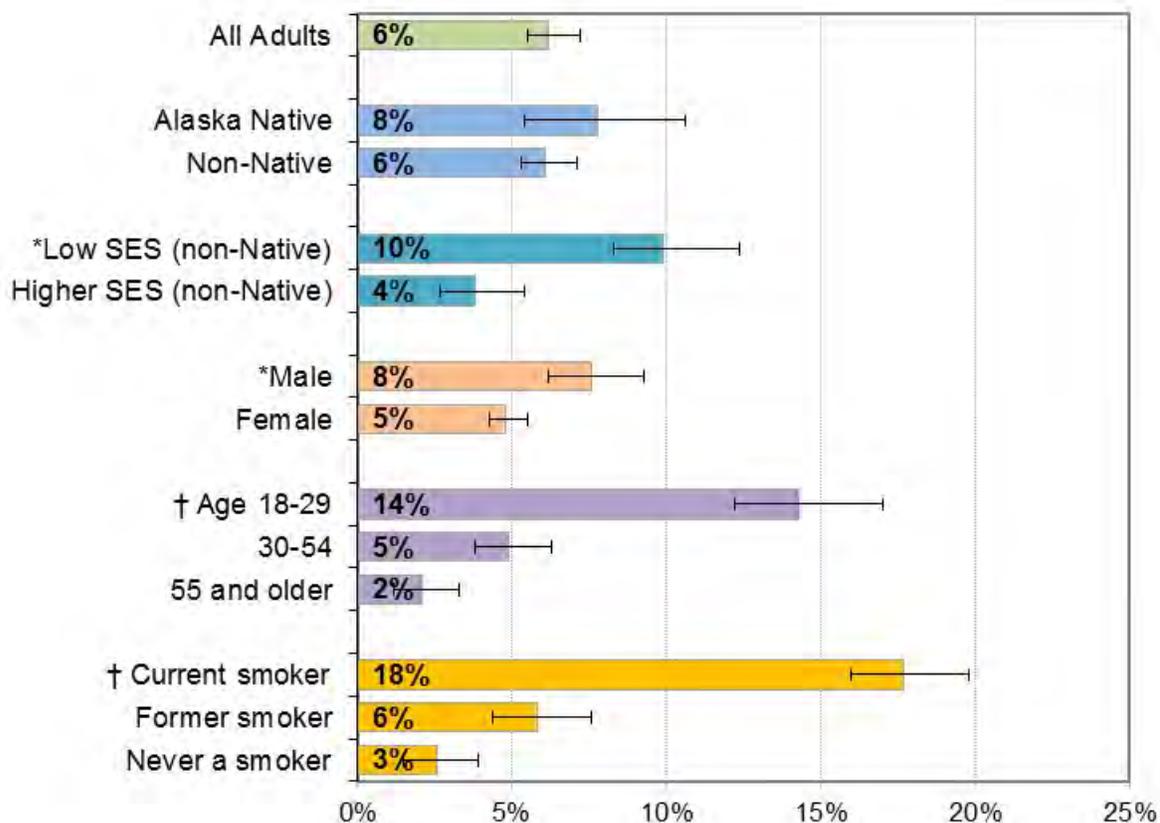


Source: Alaska Behavioral Risk Factor Surveillance System Supplemental and Combined Files.

- In Alaska and nationally,¹⁰ the use of e-cigarettes was disproportionately higher among smokers of combustible cigarettes than among non-smokers.
- Between 2011 and 2015, use of e-cigarettes increased significantly among Alaska adult smokers and non-smokers (of combustible cigarettes). In order to show Alaska trends in e-cigarette use from 2011 to the present, former smokers and never smokers are combined as one group.
- By combining years of data, we can compare e-cigarette use by smoking status and how recently former smokers have quit. In 2014-2015, Alaska adult former smokers who quit within the past year were the most likely to report current e-cigarette use (31.6%), significantly higher than current smokers (20.0%), as well as former smokers who quit between 1 and 5 years ago (11.3%), former smokers who quit 5 or more years ago (1.9%) and never smokers (2.4%).
- National data show a similar pattern; in 2014, use of e-cigarettes was highest among recent former smokers who quit in the past year and current smokers, compared to longer-term former smokers and never smokers.¹³

¹⁰ Schoenborn CA, Gindi RM. Electronic cigarette use among adults: United States, 2014. NCHS data brief, no. 217. Hyattsville, MD: National Center for Health Statistics. 2015. <https://www.cdc.gov/nchs/data/databriefs/db217.pdf>

Figure 19. Percentage of Adults Who Used E-Cigarettes or other Vapor Products in the Past 30 Days, by Selected Demographic Factors and Smoking Status, Alaska, 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Combined File

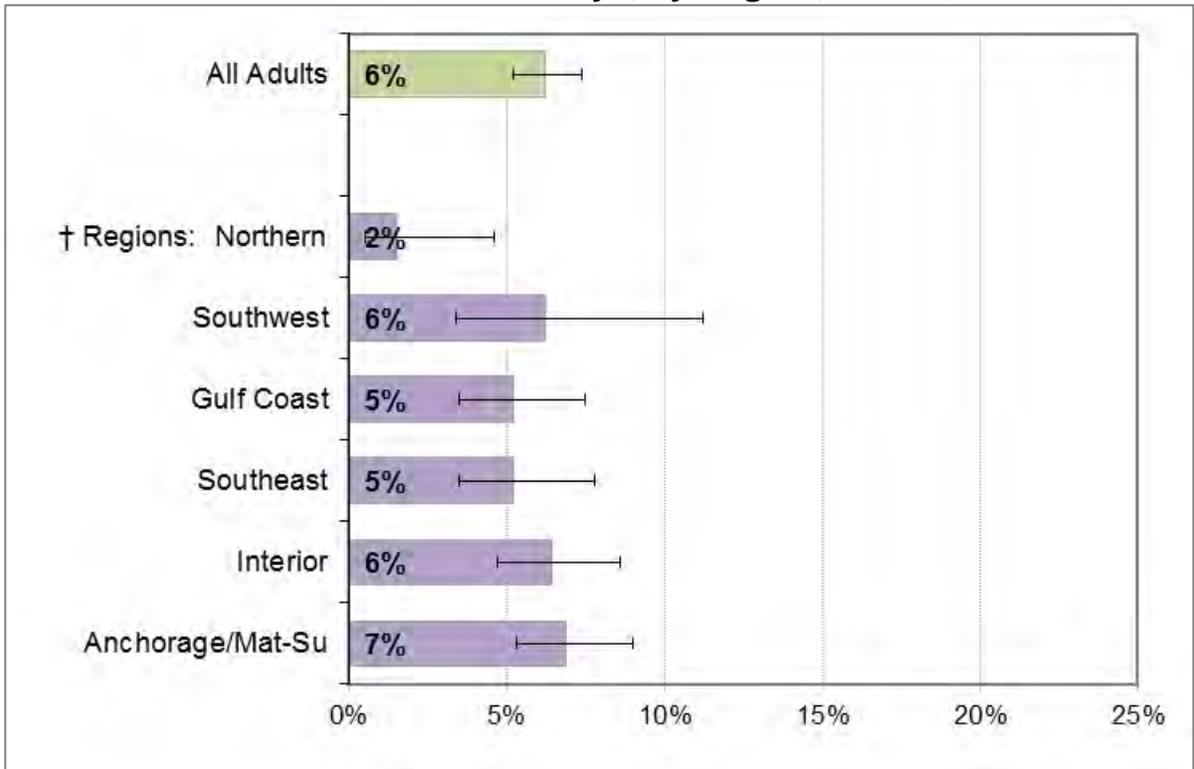
* Significant difference between the two sub-groups

† Significant differences between age groups and smoking status groups are described below.

- There were disparities in e-cigarette or other vapor product use by SES,¹¹ gender, age and smoking status, but not by Alaska Native status.
- Young adults age 18 to 29 were significantly more likely than adults in the older age groups to use e-cigarettes, and adults age 30 to 54 were more likely than those age 55 and older to use e-cigarettes.
- Current smokers of combustible cigarettes were more likely than former or never smokers to use e-cigarettes; former smokers were more likely than never smokers to use them as well.
- Among smokers who use e-cigarettes, 50.3% reported using them because they were trying to quit smoking.

¹¹ The SES measure is restricted to non-Natives age 25 to 64. Low SES is defined as less than high school education or household income at 185% or less of the Alaska Poverty Level Guideline. See Appendix B for more information.

Figure 20. Percentage of Adults Who Use E-Cigarettes or other Vapor Products in the Past 30 Days, by Region, Alaska, 2015



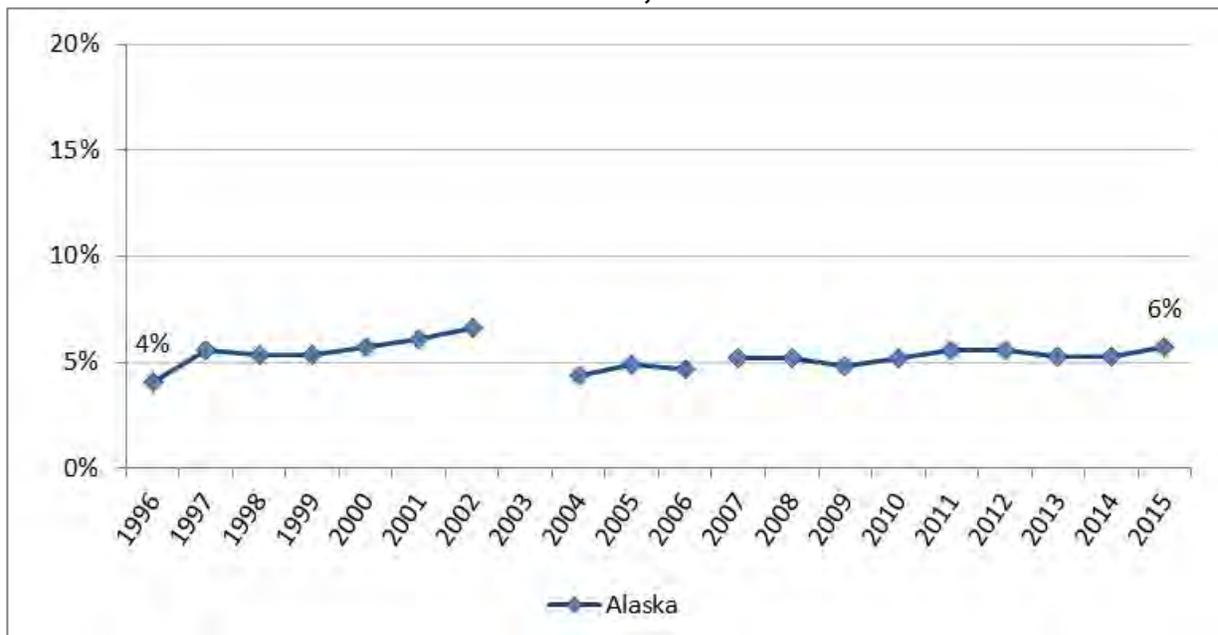
Source: Alaska Behavioral Risk Factor Surveillance System, Combined File

† Significant differences between regions are described below.

- Use of e-cigarettes or other vapor products was roughly the same across all regions of Alaska except for the Northern region, where use was significantly lower than in any other region.

E. Smokeless Tobacco Prevalence

Figure 21. Percentage of Adults Who Use Smokeless Tobacco, by Year, Alaska and U.S., 1996 – 2015



Source for AK data: Alaska Behavioral Risk Factor Surveillance System Supplemental and Combined Files.

Note: Question about SLT use was not asked in 2003 in the Alaska BRFSS.

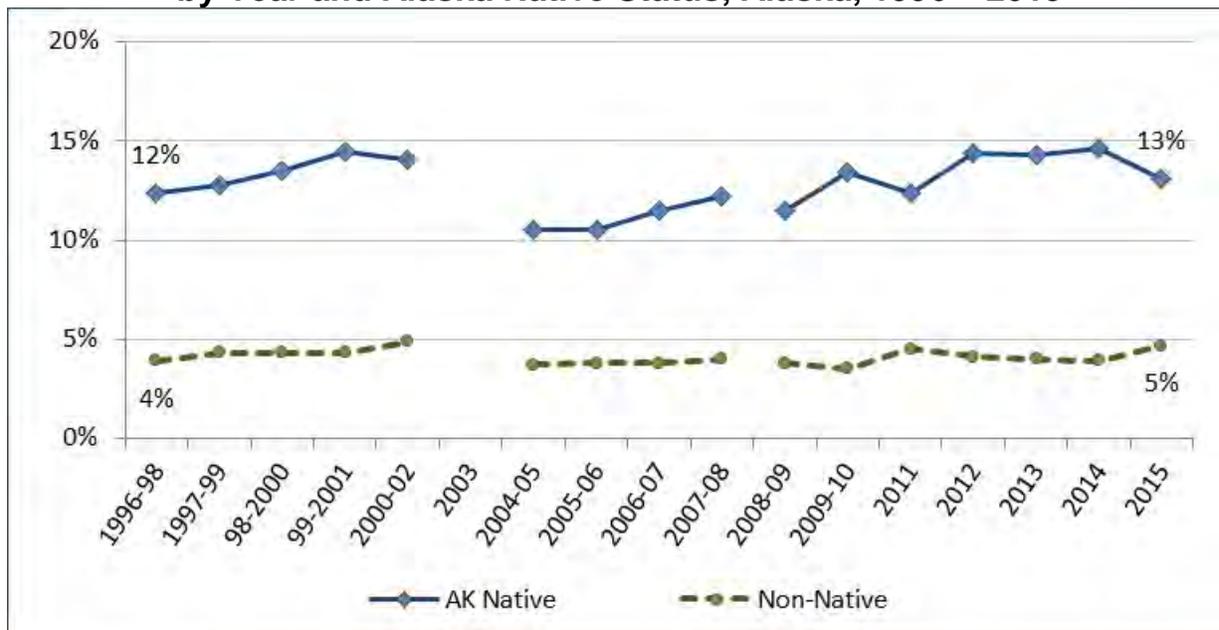
State estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- Smokeless tobacco (SLT) use is a known cause of cancer of the mouth and gum, and is linked to oral health problems like periodontitis and tooth loss.¹²
- Use of SLT in Alaska has not changed significantly between 1996 and 2015 overall or by gender. Recent trends from 2007 to 2015 also show no change.
- SLT use did not significantly decrease or increase in any of the Public Health Regions between 1996 and 2015, or between 2007 and 2015. There has been a slight but significant increase in SLT use in the Municipality of Anchorage (located within the Anchorage/Mat-Su Public Health Region) between 2007 and 2015.
- Although a national source of comparable SLT trend data is not available, the questions used in the National Health Interview Survey (NHIS) are similar to the BRFSS. Combined year 2012-2014 NHIS data show that nationally, 2.9% of U.S. adults and 5.4% of adult men currently use SLT.¹³

¹² IARC Working Group on the Evaluation of Carcinogenic Risk to Humans. Smokeless Tobacco and Some Tobacco-specific N-Nitrosamines. Lyon (FR): International Agency for Research on Cancer; 2007. <http://www.ncbi.nlm.nih.gov/books/NBK326493/>. Accessed May 15, 2016.

¹³ Clarke TC, Villarreal MA, Schoenborn CA. Tables of adult health behaviors, tobacco use: National Health Interview Survey, 2011–2014. 2016. Available from: <http://www.cdc.gov/nchs/nhis/SHS/tables.htm>.

Figure 22. Percentage of Adults Who Use Smokeless Tobacco, by Year and Alaska Native Status, Alaska, 1996 – 2015



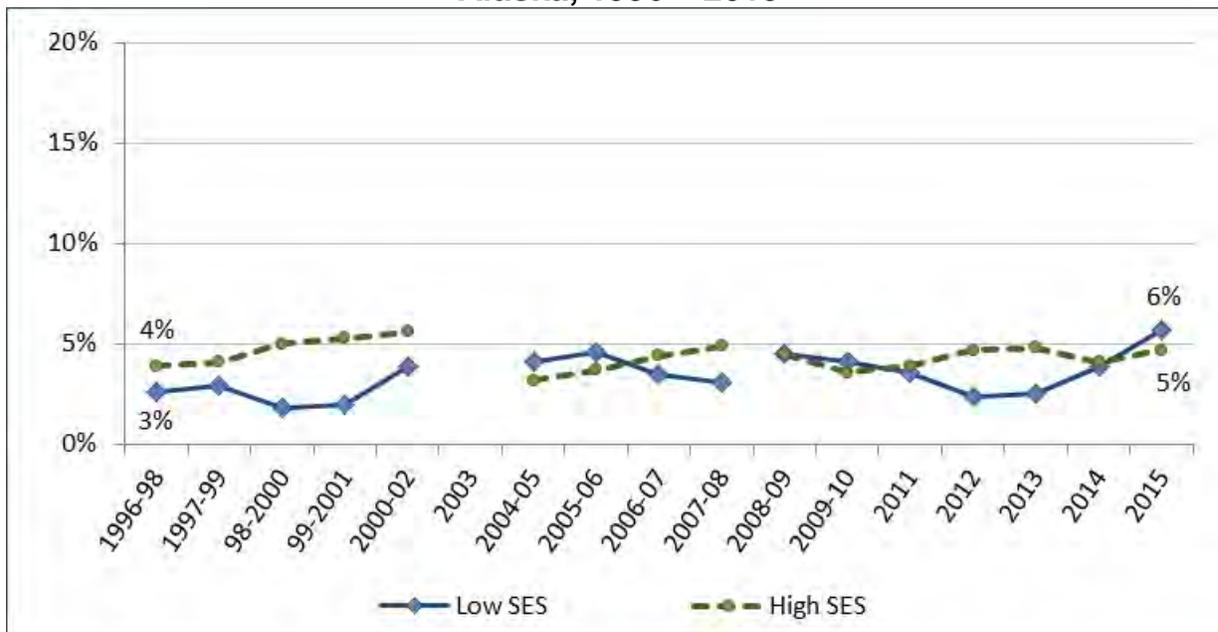
Source: Alaska Behavioral Risk Factor Surveillance System, Combined and Supplemental Files, question not asked in 2003.

Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

In years prior to 2011, SLT use estimates by Alaska Native status are reported using combined year rolling averages, so that the N (denominator) is higher and the estimates are more stable. Increases in sample size occurred in 2005 and in 2011. See Appendix A for more information.

- Alaska Native adults are more likely to use smokeless tobacco (SLT) than are non-Native adults, but there was no significant trend in prevalence for either group, between 1996 and 2015. In addition, there were no changes in the more recent trend from 2007 to 2015.

Figure 23. Percentage Adults Who Use Smokeless Tobacco, by Year and Socioeconomic Status,¹⁴ Alaska, 1996 – 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Combined and Supplemental Files, question not asked in 2003.

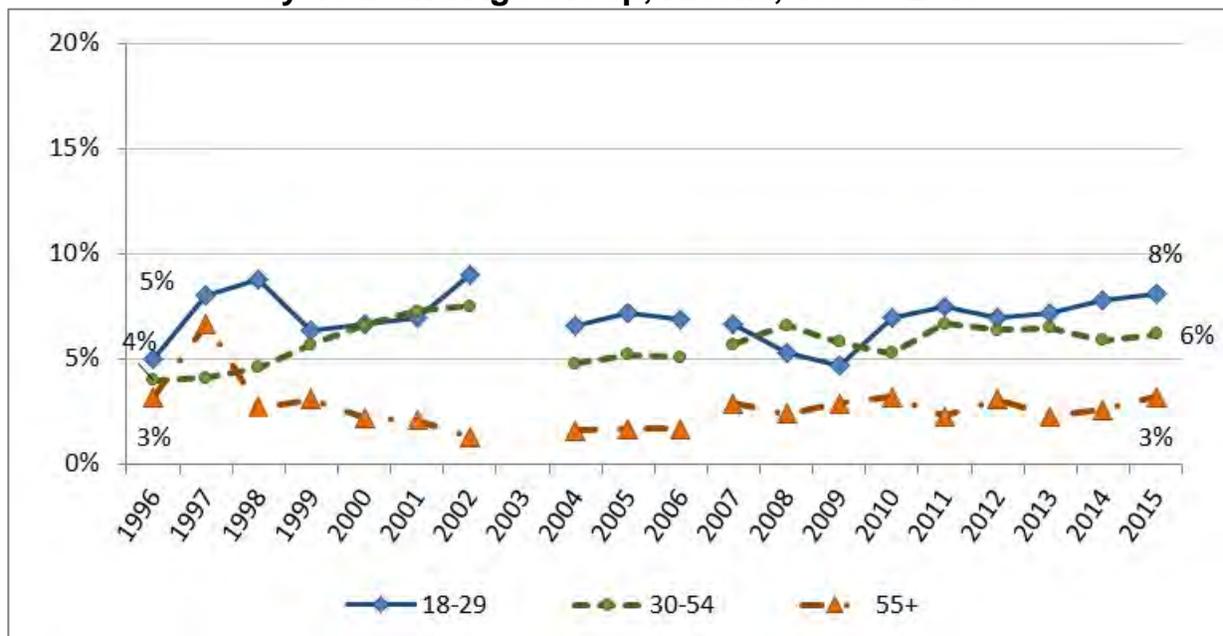
Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

In years prior to 2011, estimates for SES groups are reported using combined year rolling averages, so that the N (denominator) is higher and the estimates are more stable. Increases in sample size occurred in 2005 and in 2011. See Appendix A for more information.

- There was no significant trend in SLT prevalence by SES; SLT use did not change significantly among adults with low SES or those with higher SES between 1996 and 2015. There were also no changes between 2007 and 2015.

¹⁴ The SES measure is restricted to non-Natives age 25 to 64. Low SES is defined as less than high school education or household income at 185% or less of the Alaska Poverty Level Guideline. See Appendix B for more information.

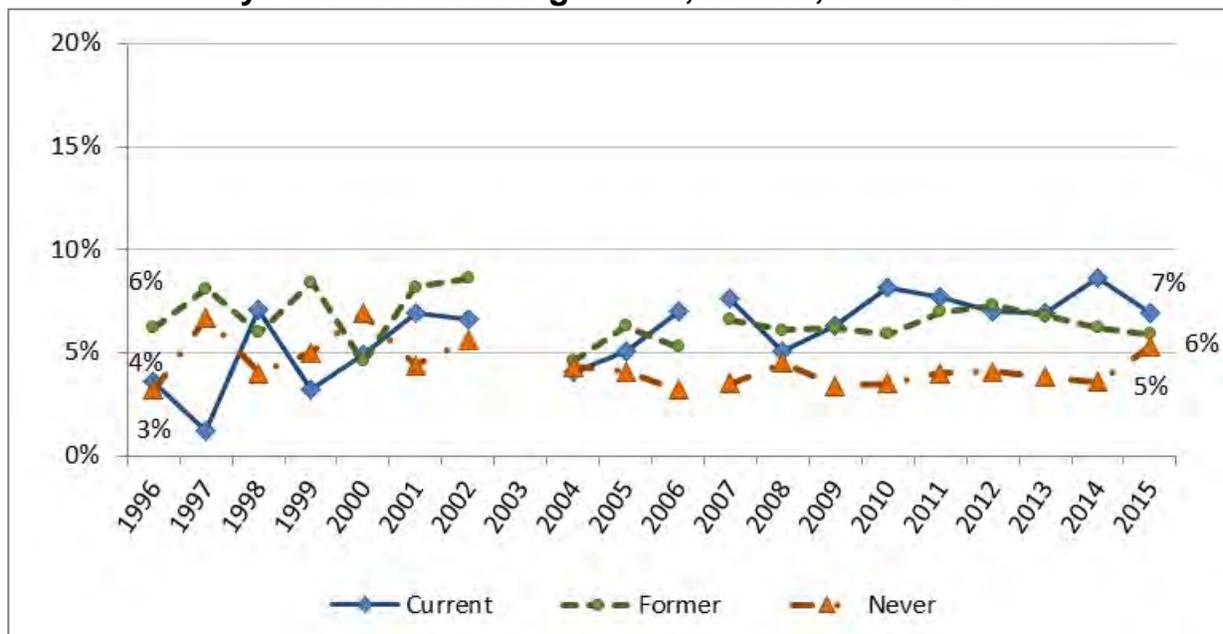
Figure 24. Percentage of Adults Who Use Smokeless Tobacco, by Year and Age Group, Alaska, 1996 – 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Combined and Supplemental Files, question not asked in 2003.
 Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- Use of smokeless tobacco (SLT) increased slightly among adults age 30 to 54, from 4.0% in 1996 to 6.2% in 2015. The more recent trend, from 2007 to 2015, shows no change.

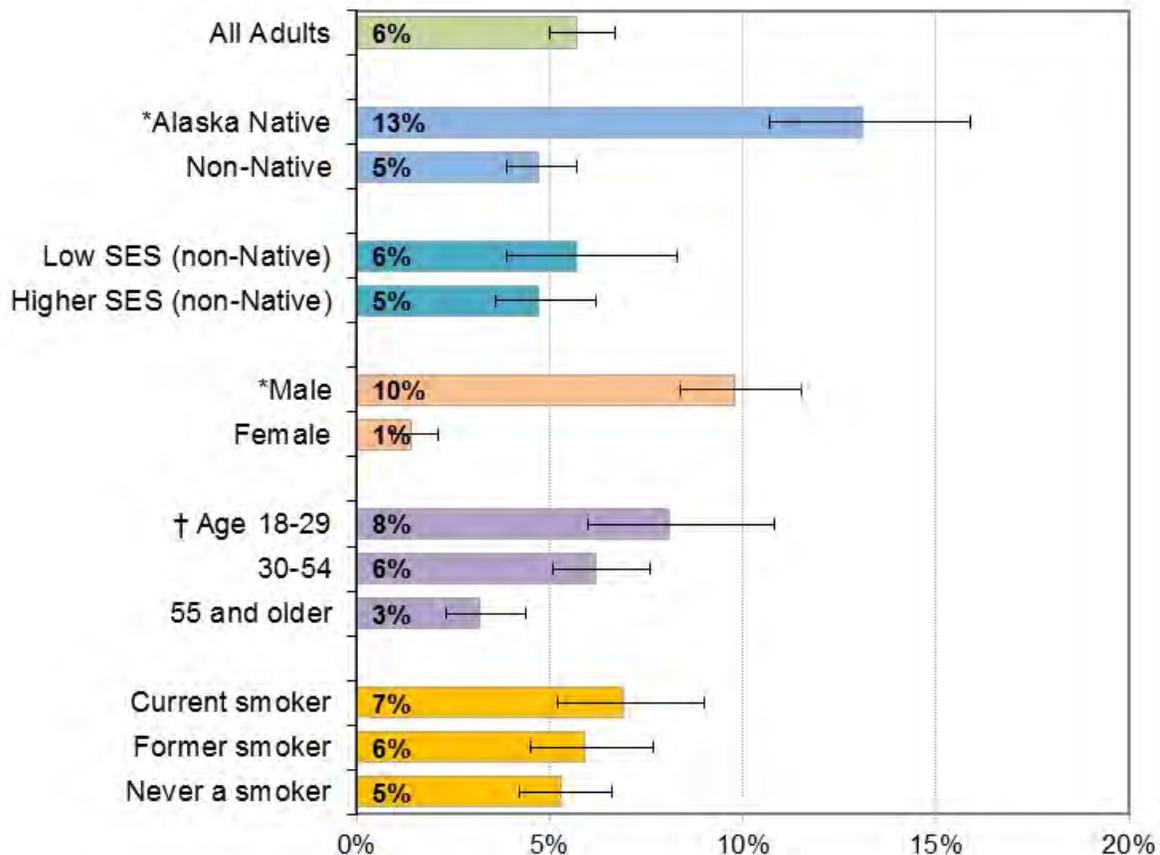
Figure 25. Percentage of Adults Who Use Smokeless Tobacco, by Year and Smoking Status, Alaska, 1996 – 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Combined and Supplemental Files, question not asked in 2003.
 Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- Use of smokeless tobacco (SLT) increased significantly among current smokers from 3.6% in 1996 to 6.9% in 2015, although there is no significant trend more recently between 2007 and 2015.

Figure 26. Percentage of Adults Who Use Smokeless Tobacco by Selected Demographic Factors and Smoking Status, Alaska, 2015



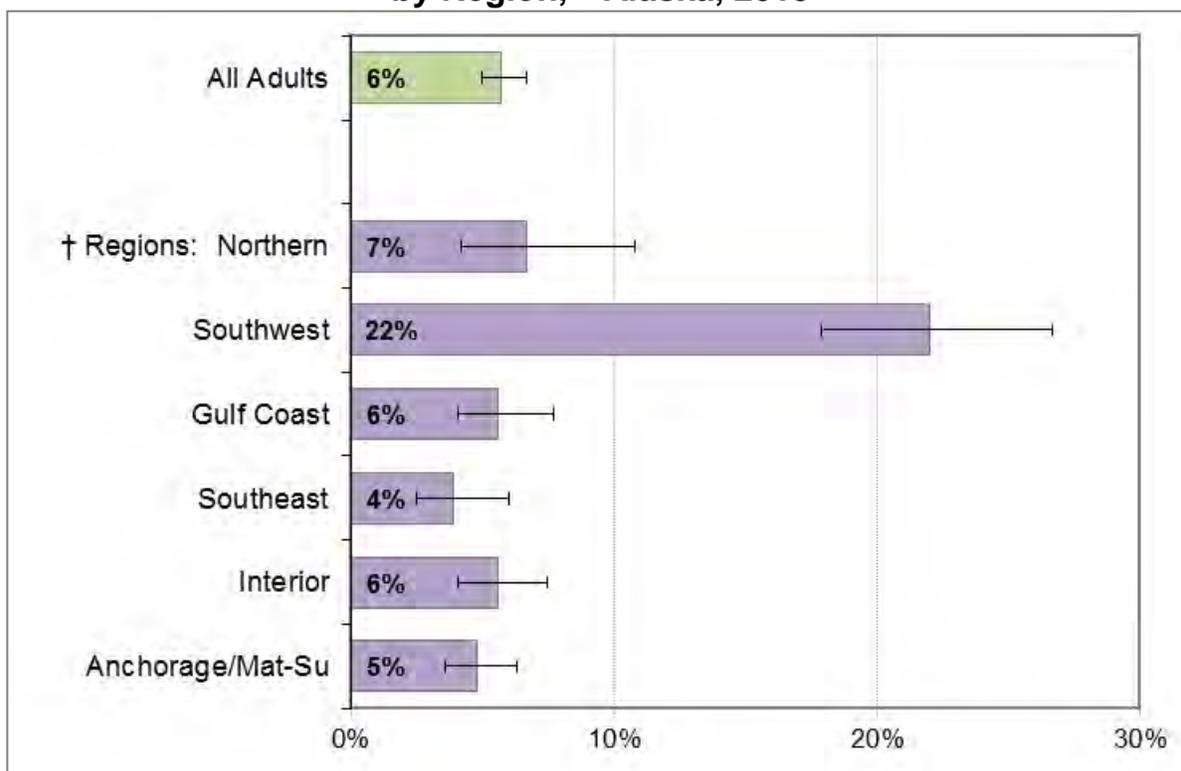
Source: Alaska Behavioral Risk Factor Surveillance System, Combined File

* Significant difference between the two sub-groups

† Significant differences between age groups and smoking status groups are described below.

- Use of smokeless tobacco (SLT) was significantly higher among Alaska Native adults than non-Native adults (13.1% vs 4.7%).
- Men were significantly more likely than women to use SLT.
- Young adults age 18 to 29 and middle-aged adults (age 30 to 54) were significantly more likely than older adults (age 55 and older) to use SLT.
- Adults living with children in their home were significantly more likely than those without children in the home to use SLT (7.2% vs 4.8%).

Figure 27. Percentage of Adults Who Use Smokeless Tobacco, by Region,¹⁵ Alaska, 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Combined File

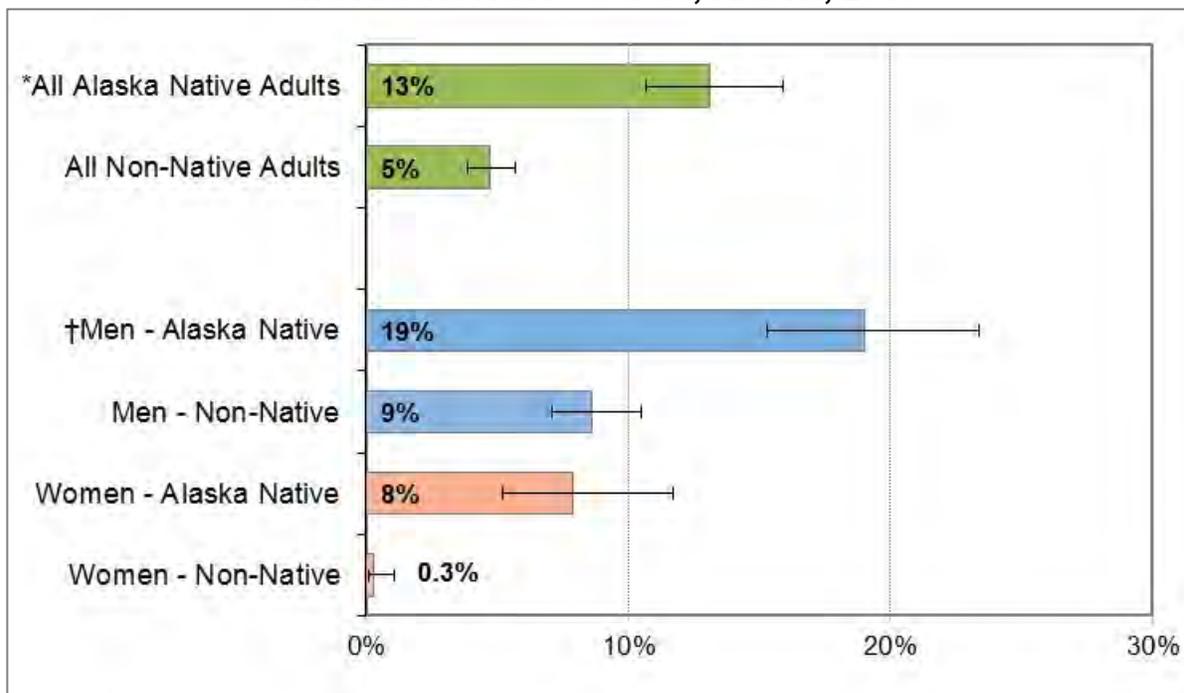
† Significant differences between regions are described below.

- Adults in Southwest Alaska are significantly more likely to use smokeless tobacco (SLT) than adults in any other region.
- In 2015, 30.7% of Alaska Native adults in Southwest Alaska reported using SLT, compared to 5.3% of non-Native adults in the region.

¹⁵ Public Health Regions include:

- Northern – Nome, Northwest Arctic, and North Slope
- Southwest – Bristol Bay, East Aleutians, West Aleutians, Dillingham, Lake & Peninsula, Bethel, and Kusilvak
- Gulf Coast – Kenai, Kodiak, and Valdez Cordova
- Interior – Denali, Fairbanks North Star, Southeast Fairbanks, and Yukon Koyukuk
- Southeast – Yakutat, Skagway, Hoonah-Angoon, Juneau, Sitka, Haines, Wrangell, Petersburg, Prince of Wales-Hyder, and Ketchikan Gateway
- Anchorage/Mat-Su – Municipality of Anchorage, Matanuska-Susitna Borough

Figure 28. Percentage of Adults Who Use Smokeless Tobacco, by Gender and Alaska Native Status, Alaska, 2015

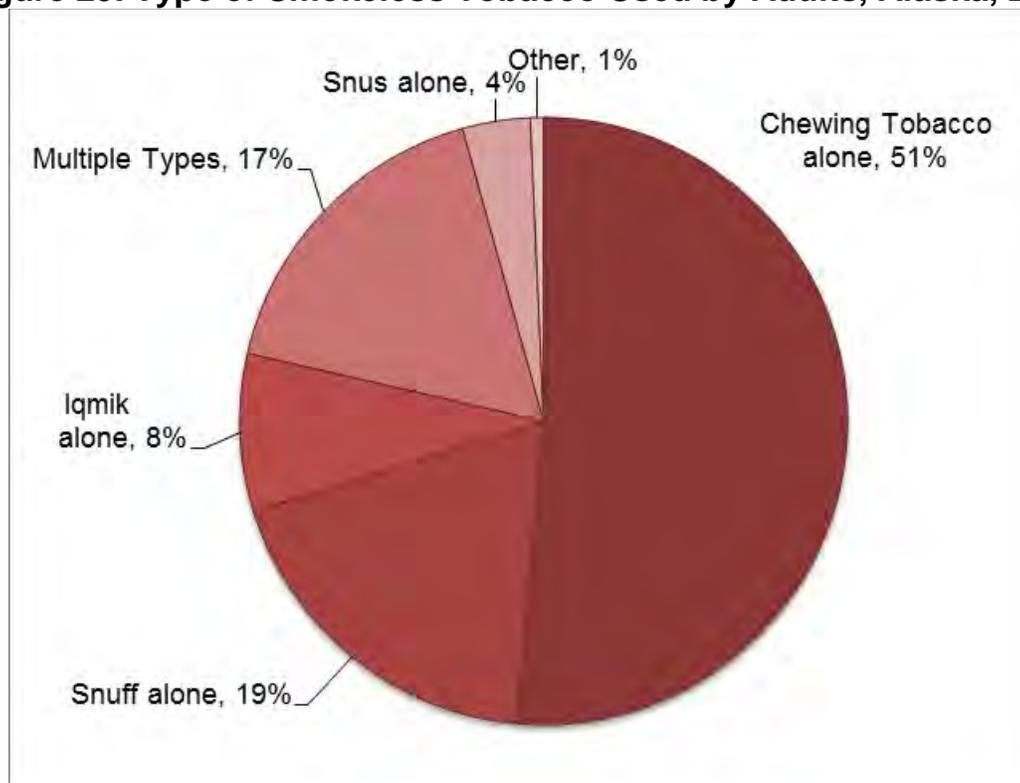


Source: Alaska Behavioral Risk Factor Surveillance System, Combined File.

† Significant differences between groups are described below.

- In general, men are more likely than women to use smokeless tobacco (SLT). In addition, SLT use among Alaska Native adults has historically been higher than among non-Native adults.
- In 2015, Alaska Native men were more likely to use SLT than any other group.
- Alaska Native women and non-Native men were equally likely to use SLT.

Figure 29. Type of Smokeless Tobacco Used by Adults, Alaska, 2015

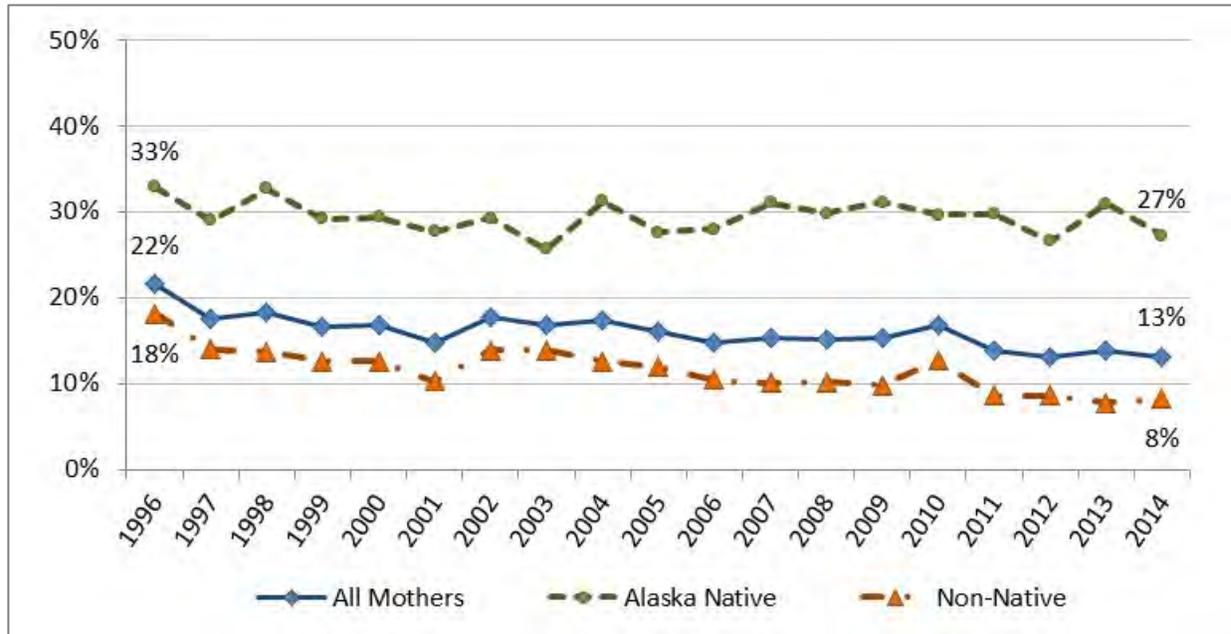


Source: Alaska Behavioral Risk Factor Surveillance System, Combined File

- In 2015, half of all Alaska adults who use smokeless tobacco (SLT; 51.4%) reported “chewing tobacco” as their only type of SLT use. However, the proportion using only chewing tobacco differs by race group. Among those who use SLT, 27.7% of Alaska Native adults reported using only chewing tobacco, compared to 61.0% of non-Native adults.
- Overall, 8.4% of Alaska adults who use SLT reported using Iqmik as their only type of SLT. Iqmik, also known as Blackbull, is an Alaska-specific SLT variant prepared by mixing chewing tobacco with the ash of a punk fungus. Iqmik is used primarily by Alaska Native groups in the Southwest region of Alaska. In that region, 48.4% of Alaska Native adults who use SLT reported using only Iqmik.

F. Tobacco Use During Pregnancy

Figure 30. Percentage of Alaska Mothers who Smoked Cigarettes during the Last 3 Months of Pregnancy, by Year and Alaska Native Status, Alaska, 1996 – 2014



Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS)

- Prenatal smoking (maternal smoking during pregnancy) 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.¹⁶
- Prenatal smoking in Alaska has decreased significantly from 1996 to 2014 overall in Alaska, as well as among non-Native mothers (from 18.2% to 8.3%). In the more recent trend from 2007 to 2014, the decrease is still significant overall and among non-Native mothers. Among Alaska Native mothers, prenatal smoking prevalence has not changed significantly since 1996 or since 2007.

¹⁶ 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.

Figure 31. Percentage of Alaska Mothers who Used Smokeless Tobacco during Pregnancy, including Chew and/or Snuff Use, by Year and Alaska Native Status, Alaska, 1996 – 2003



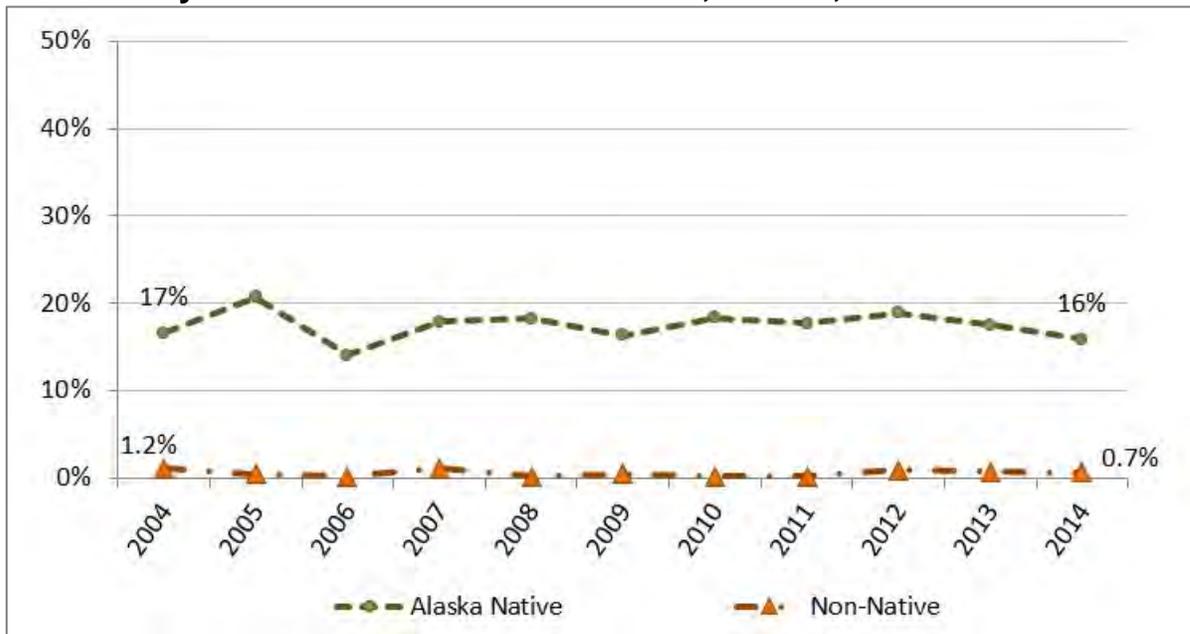
Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS)

Note: Prior to 2004, survey questions about SLT use in PRAMS asked about smokeless tobacco use (chew or snuff) and did not specifically include Iqmiq. For this reason, information about smokeless tobacco or spit tobacco use is presented in separate trend tables.

- Between 1996 and 2003 there was a statistically significant decline in prenatal smokeless tobacco (SLT) use among Alaska Native women, from 26.7% to 16.9%. Prenatal SLT use among non-Native women stayed below 2% during this time period.¹⁷

¹⁷ Schoellhorn KJ, Perham-Hester KA, Goldsmith YW. Alaska Maternal and Child Health Data Book 2008: Health Status Edition. Anchorage, AK. Maternal and Child Health Epidemiology Unit, Section of Women’s, Children’s, and Family Health, Division of Public Health, Alaska Department of Health and Social Services. December 2008,

Figure 32. Percentage of Alaska Mothers who Used Smokeless Tobacco during Pregnancy, including Chew, Snuff and/or Iqmik Use, by Year and Alaska Native Status, Alaska, 2004 – 2014



Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS)

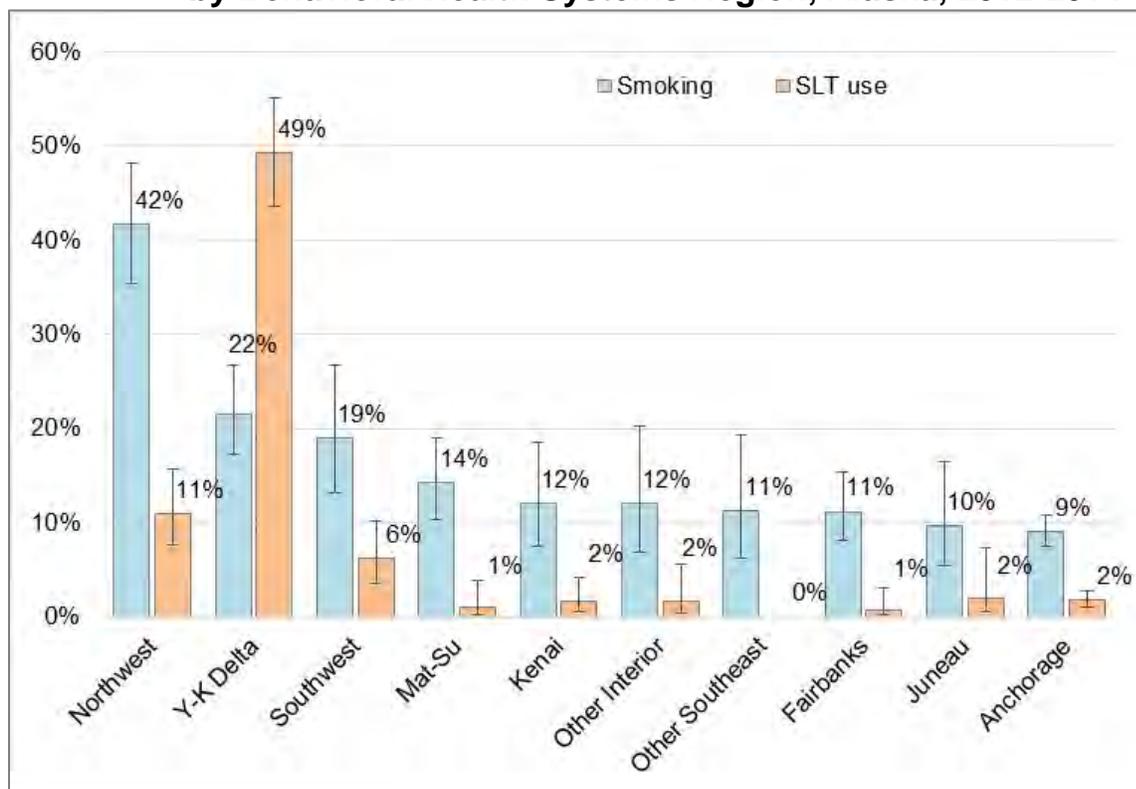
Note: Since 2004, PRAMS questions about smokeless tobacco (SLT) use during pregnancy have included language about Iqmik as well as spit tobacco, chew or snuff. Iqmik is an Alaska-specific type of SLT and is prepared by mixing chewing tobacco with the ash of a punk fungus.

- Between 2004 and 2014, prenatal use of SLT did not change significantly overall or by Alaska Native status. SLT use during pregnancy is higher in Alaska than in many other states, in large part because of Alaska Native SLT use, which includes Iqmik, an Alaska-specific smokeless tobacco (SLT) variant.

Among Alaska Native mothers:

- During 2004-2014, prenatal use of SLT among Alaska Native mothers ranged between 14.1% (in 2006) and 20.8% (in 2005), but there was no significant trend during this time period.
- Among Alaska Native mothers who used SLT during pregnancy, 76.8% reported using Iqmik either alone or in addition to other SLT products.

Figure 33. Percentage of Alaska Mothers who Smoked Cigarettes during the Last 3 Months of Pregnancy and Percentage of Alaska Mothers who Used Smokeless Tobacco during Pregnancy, by Behavioral Health Systems Region, Alaska, 2012-2014



Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS)

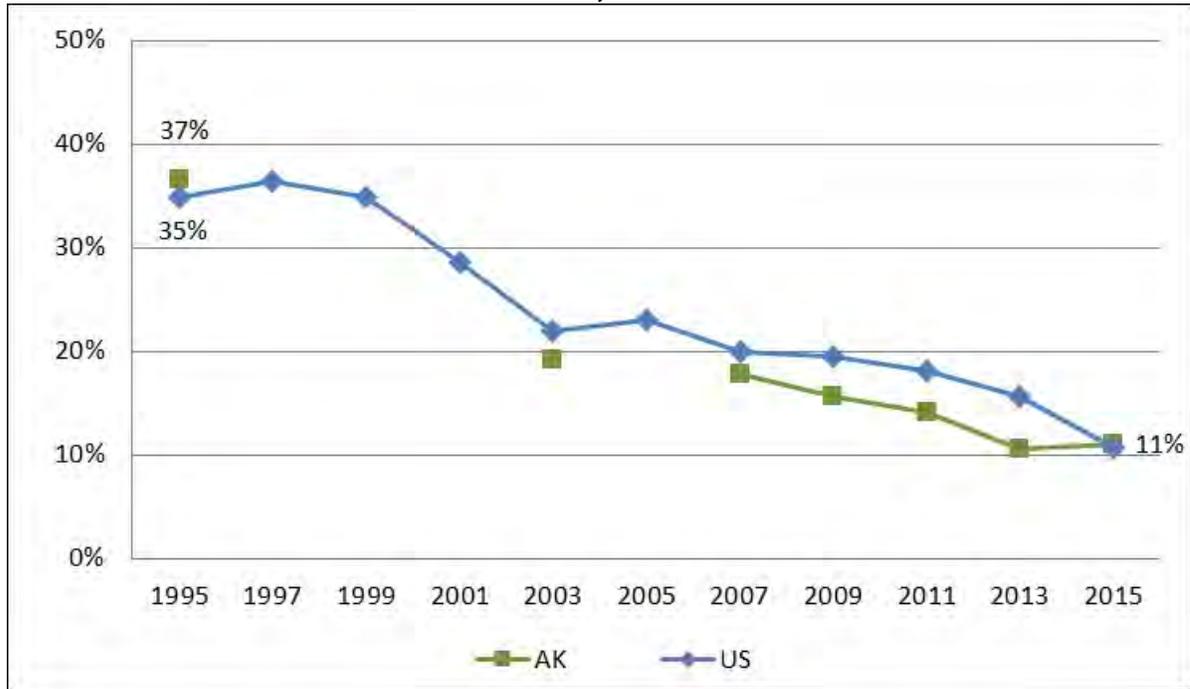
- By combining years of data, we can report estimates of prenatal tobacco use by Behavioral Health Systems Regions.¹⁸
- For the period 2012-2014, prenatal smoking was significantly higher in the Northwest than in any other region; 41.7% of mothers in that region reported smoking cigarettes during the last 3 months of pregnancy compared to between 9% and 22% in the other regions. Prenatal smoking was also significantly higher in the Y-K Delta (21.6%) than in Anchorage, Fairbanks and Juneau, and higher in the Southwest (19.0%) than in Anchorage.
- In the Y-K Delta, 49.3% of mothers reported using SLT during pregnancy, higher than in any other region (range of 0% to 11%). Use of Iqmiq occurs primarily in this region.
- Prenatal SLT use was also higher in the Northwest than in any of the other regions besides the Y-K Delta and Southwest, and was higher in the Southwest than in Anchorage, Fairbanks, and Other Southeast.

¹⁸ These regions are not the same as the Public Health Regions. Differences in prenatal tobacco use by Behavioral Health Systems Region were determined by assessing overlap in 95% confidence intervals. See Appendix B for regional map.

III. Youth Tobacco Use

A. Smoking Prevalence – Cigarettes

Figure 34. Percentage of High School Students Who Smoke, Alaska & US, 1995 – 2015

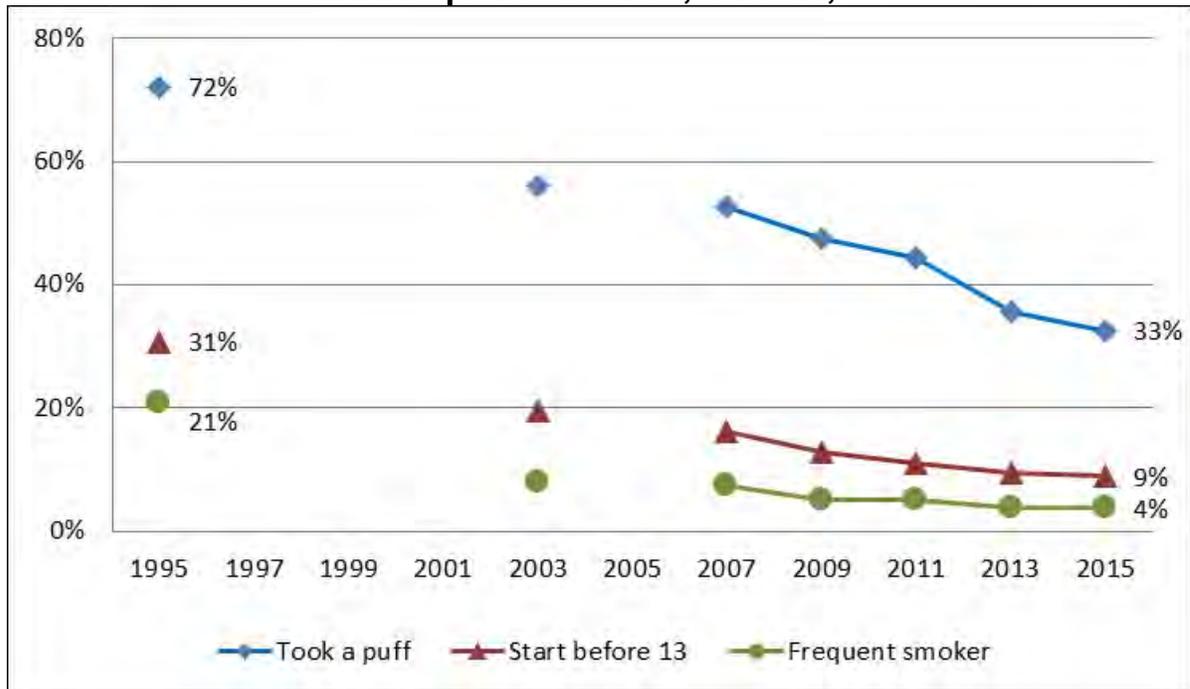


Source: Alaska Youth Risk Behavior Survey and National Youth Risk Behavior Survey
Alaska YRBS data are only available for 1995, 2003, and 2007 to present.

- Current smoking prevalence, defined as smoking on 1 or more days in the past 30 days, decreased nationally and in Alaska since 1995. Smoking among Alaska high school students dropped from 36.5% in 1995 to 11.1% in 2015.
- This decrease means that there are approximately 10,600 fewer Alaska youth smokers in 2015 than there were in 1995.¹⁹
- In 2015, 59.5% of Alaska youth who currently smoke reported that they tried to quit smoking cigarettes during the 12 months prior to the survey. Nationally in 2015, 45.4% of high school student current smokers tried to quit in the past year.

¹⁹ The estimated number fewer youth smokers is calculated using 2010 Census population total people age 14-17 in Alaska, multiplied by the Alaska youth smoking prevalence for 1995, and for 2014, and subtracting the 2014 estimated number of smokers from the 1995 number (of smokers).

Figure 35. Selected Smoking Indicators: Percentage of High School Students Who Ever Tried Smoking, Started Smoking before Age 13, and Who are Frequent Smokers,* Alaska, 1995 – 2015



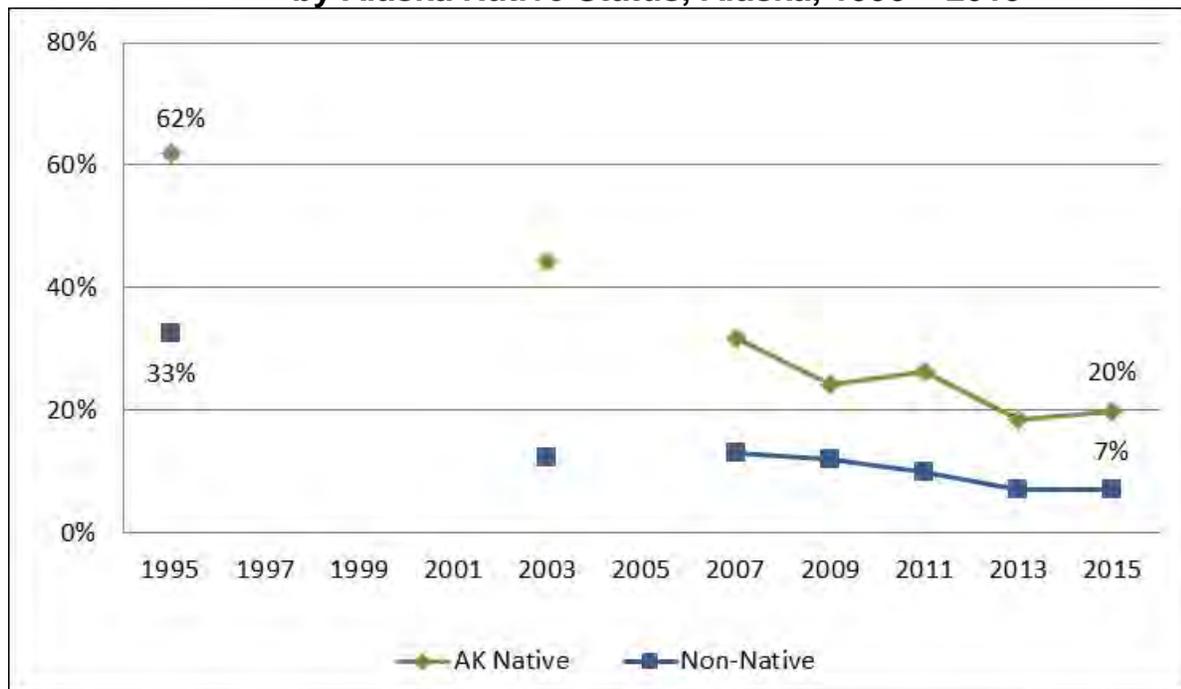
Source: Alaska Youth Risk Behavior Survey

Alaska YRBS data are only available for 1995, 2003, and 2007 to present.

*Frequent smoking is defined as having smoked on 20 or more of the past 30 days.

- Among Alaska high school students, the proportion who reported ever trying smoking (even a puff) decreased from 72.1% of students in 1995 to 32.5% in 2015.
- The proportion of Alaska high school students who started smoking prior to age 13 decreased from 30.7% of students in 1995 to 8.9% of students in 2015.
- The proportion of Alaska high school students who are frequent smokers (defined as smoking on 20 or more of the past 30 days) decreased from 21.0% of students in 1995 to 3.7% of students in 2015.

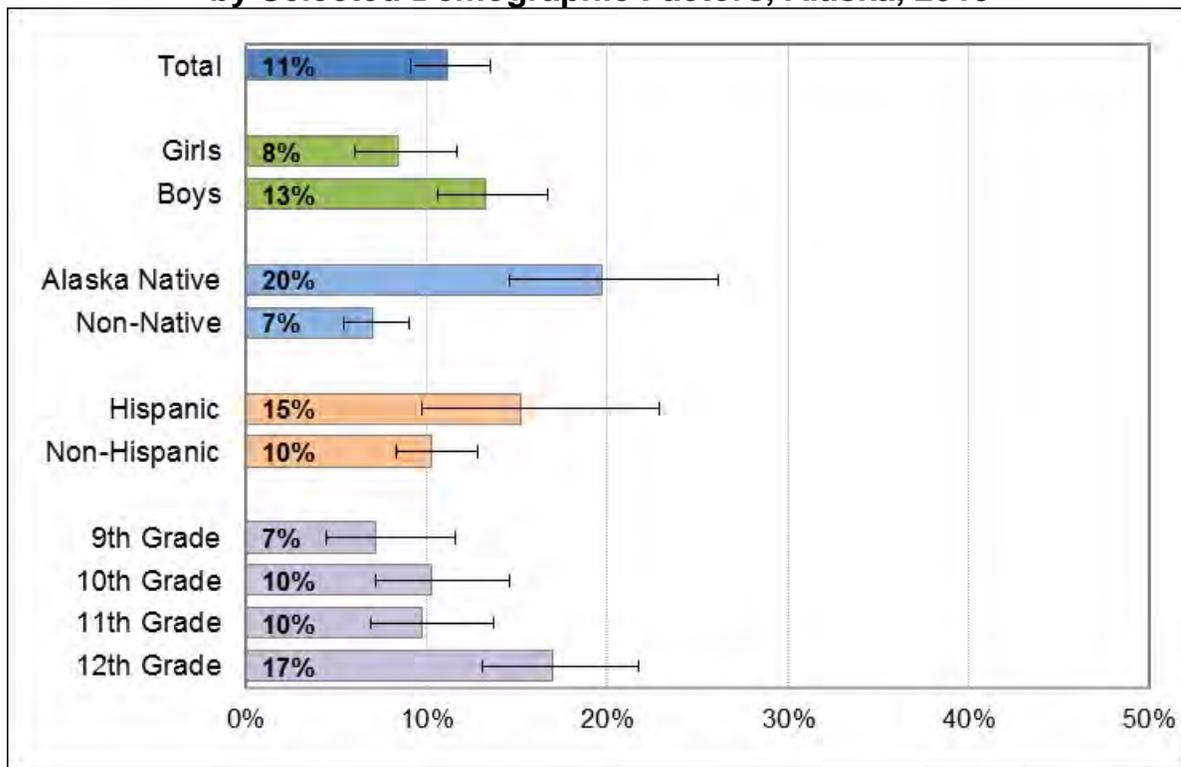
Figure 36. Percentage of High School Students Who Smoke, by Alaska Native Status, Alaska, 1995 – 2015



Source: Alaska Youth Risk Behavior Survey
 Alaska YRBS data are only available for 1995, 2003, and 2007 to present.

- Between 1995 and 2015, significant declines in youth smoking occurred among both Alaska Native and non-Native students.
- The percentage of Alaska Native students who are current smokers declined 68% from 1995 to 2015.

Figure 37. Percentage of High School Students Who are Current Smokers, by Selected Demographic Factors, Alaska, 2015

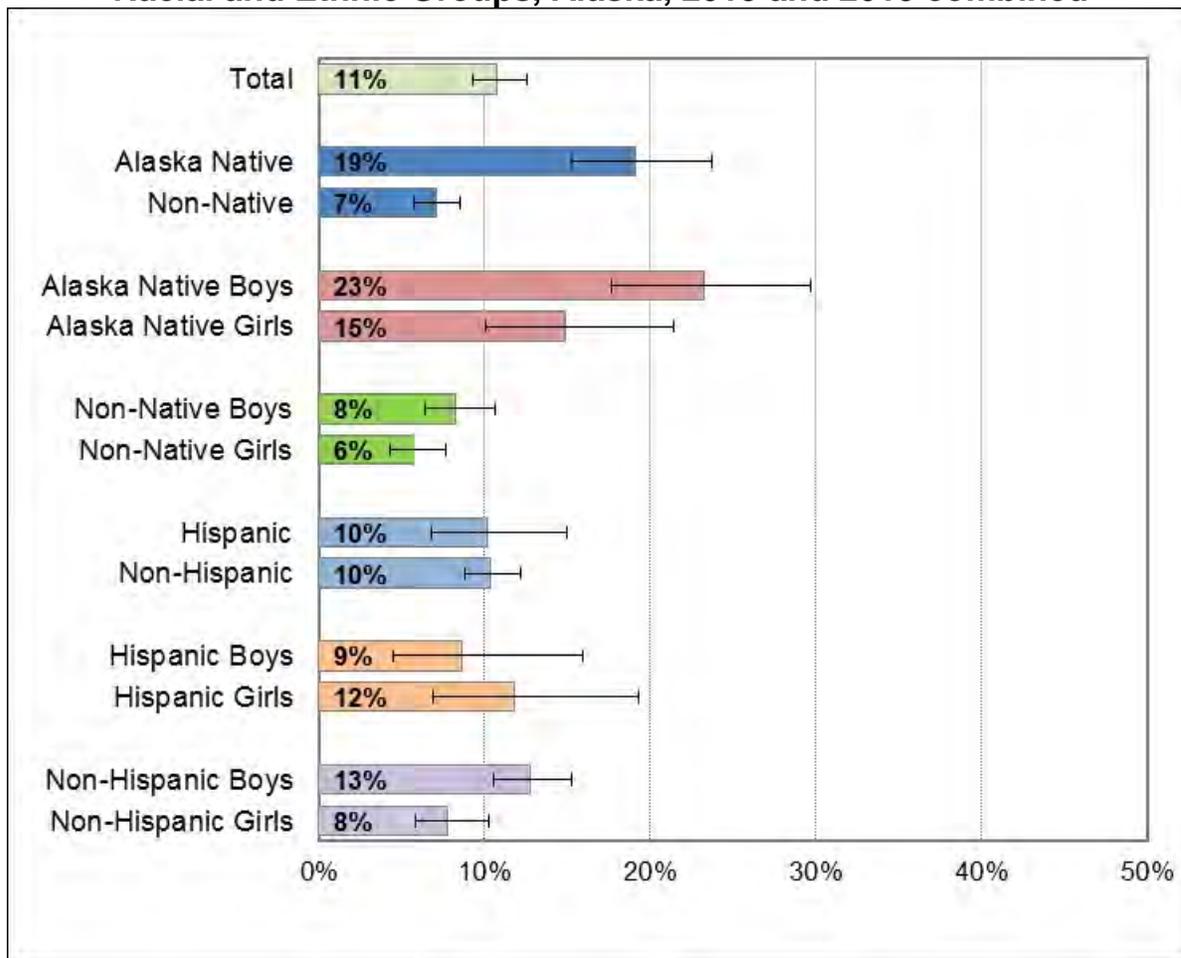


Source: Alaska Youth Risk Behavior Survey

- Alaska Native youth were more likely than non-Native youth to be current smokers—that is, to have smoked 1 or more days in the past 30 days.
- Boys were more likely than girls to be current smokers.
- Smoking prevalence was higher among twelfth graders than among those in lower grades.
- Youth smoking prevalence was significantly higher in Northern Alaska (24.3%) and Southwest Alaska (25.4%) than in the Gulf Coast (11.0%), Anchorage/Mat-Su (9.2%), Southeast Alaska (7.7%), or the Interior (6.9%). Regional differences are also likely to reflect differences by Alaska Native status, since the majority of student survey participants in Southwest Alaska and Northern Alaska are Alaska Native.²⁰
- Statewide, 76.0% of Alaska high school students report that their parents consider it very wrong for them to smoke cigarettes. However, this proportion was significantly lower in Northern Alaska (67.7%) and Southwest Alaska (57.9%) than in Anchorage/Mat-Su (80.4%), in the 2015 YRBS survey.

²⁰ More information about regional reporting for YRBS can be found in Appendix B. Additional information and graphic presentation is also available online at http://dhss.alaska.gov/dph/InfoCenter/Pages/ia/yrbss/yrbss_health_profiles.aspx

Figure 38. Percentage of High School Students Who Smoke, by Gender within Racial and Ethnic Groups, Alaska, 2013 and 2015 combined

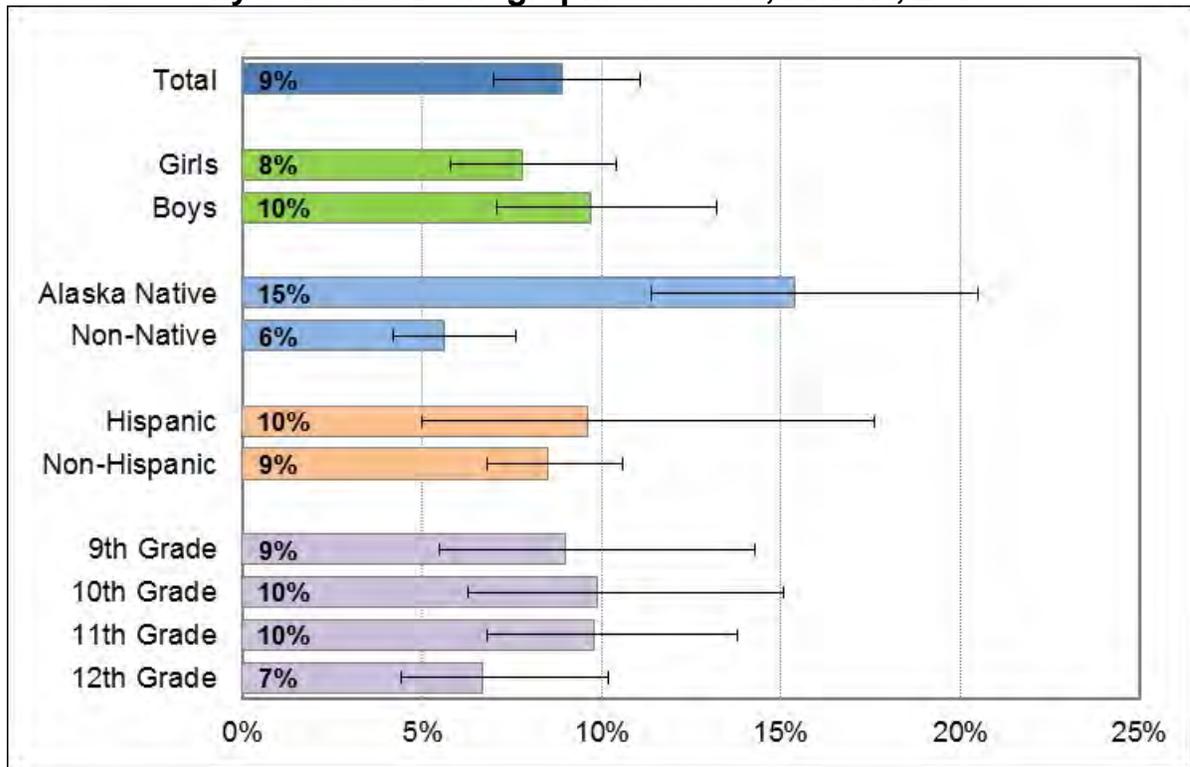


Source: Alaska Youth Risk Behavior Survey

Note: Percentages reported in this graph are for 2013 and 2015 data combined, and may differ from those reported elsewhere for 2015 only.

- If we combine the two most recent years of survey data, we can examine youth tobacco use prevalence within race group by gender, and ethnic group by gender.
- Alaska Native boys and girls were significantly more likely to smoke than either non-Native boys or non-Native girls. Alaska Native boys were also more likely to be current smokers than Alaska Native girls.
- Among non-Native youth, boys were slightly more likely than girls to report current smoking.
- Among Hispanic youth, boys and girls were equally likely to smoke. Among non-Hispanic youth, however, boys were significantly more likely than girls to report current smoking.

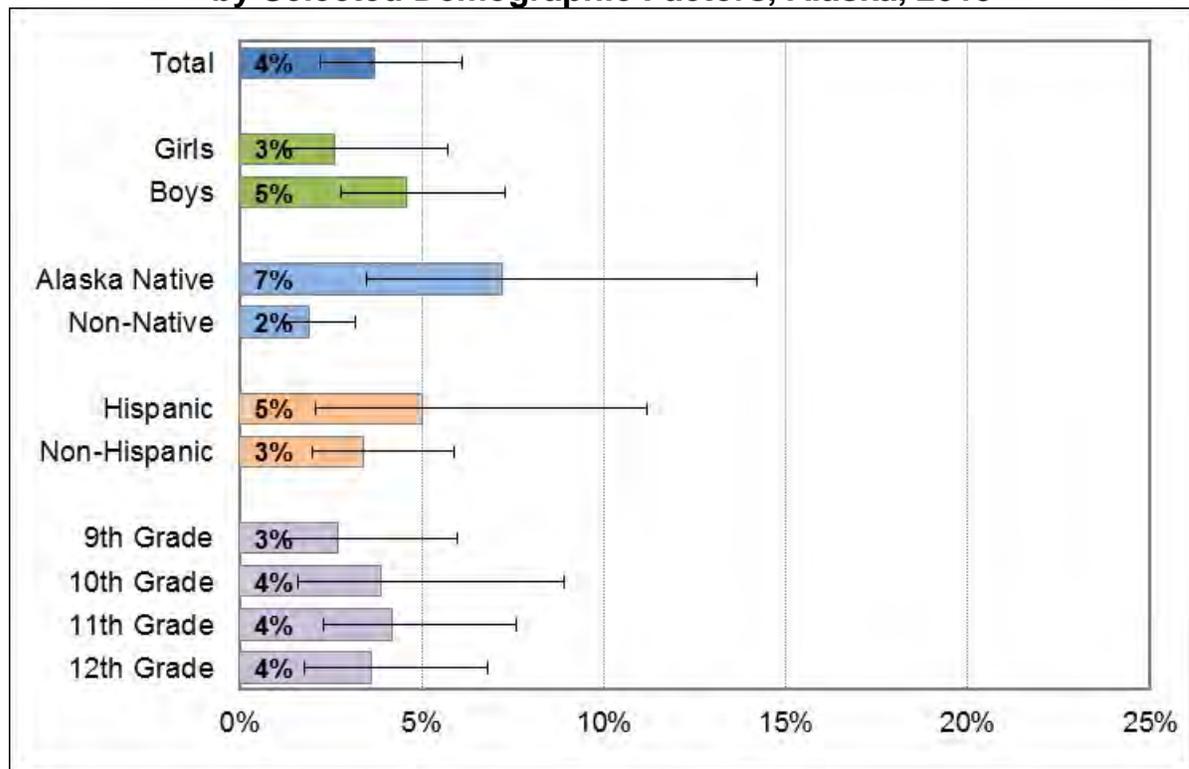
Figure 39. Percentage of High School Students Who Smoked before Age 13, by Selected Demographic Factors, Alaska, 2015



Source: Alaska Youth Risk Behavior Survey

- Alaska Native students were significantly more likely than non-Native students to have started smoking before age 13. In 2015; 15.4% of Alaska Native students reported started smoking before age 13, compared to about 5.6% of non-Native students.
- Regionally, starting smoking before age 13 was significantly higher among high school students in Southwest Alaska (24.0%) and Northern Alaska (23.8%) than in the Gulf Coast (8.5%), Southeast Alaska (7.7%), Anchorage/Mat-Su (7.6%), or the Interior (5.9%).

Figure 40. Percentage of High School Students Who Are Frequent Smokers,* by Selected Demographic Factors, Alaska, 2015

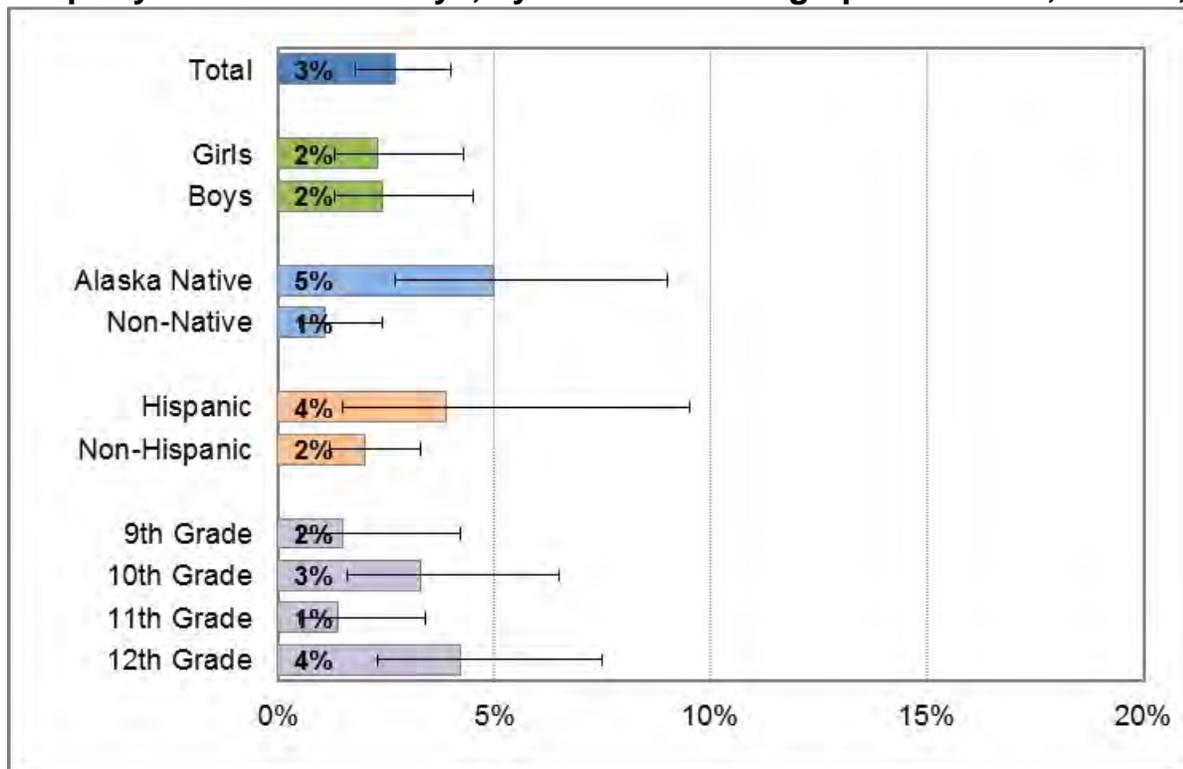


*Frequent smokers are defined as having smoked on 20 or more of the past 30 days.

Source: Alaska Youth Risk Behavior Survey

- Alaska Native youth were more likely than non-Native youth to be frequent smokers.
- Students in Northern and Southwest Alaska were significantly more likely to report smoking frequently in the past 30 days than other regions. Regionally, frequent smoking among high school students is 9.2% in Northern Alaska, 9.0% in Southwest, 3.9% in the Gulf Coast, 2.7% Anchorage/Mat-Su, 2.6% in Southeast Alaska, and 1.8% in the Interior.
- Overall, 60.0% of Alaska high school students thought that people greatly risk harming themselves if they smoke one or more packs of cigarettes per day. However, Alaska Native students were significantly less likely than non-Native students to recognize this risk (49.9% vs 64.8%). Compared to students in other regions, fewer students in Northern Alaska (44.6%) and Southwest Alaska (44.1%) reported that they think people risk harm from this level of smoking.

Figure 41. Percentage of High School Students Who Smoked on School Property in the Past 30 days, by Selected Demographic Factors, Alaska, 2013²¹



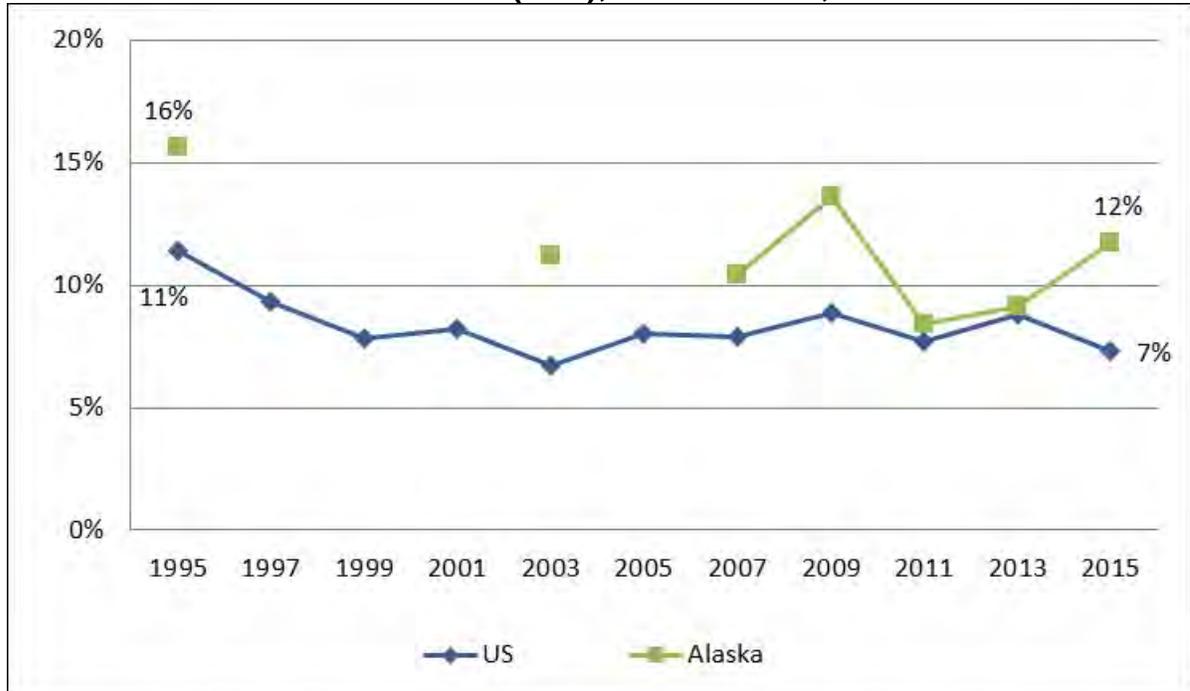
Source: Alaska Youth Risk Behavior Survey

- Alaska Native students were more likely than non-Native students to have smoked on school property in the past 30 days. There is no difference by the other demographic factors shown in Figure 41.
- Regionally, high school students in Northern and Southwest Alaska were significantly more likely than those in Anchorage/MatSu to report smoking on school property in the past 30 days. In Northern Alaska, 7.1% of students report smoking on school property, compared to 5.0% in Southwest Alaska, 3.7% in Southeast Alaska, 3.2% in the Gulf Coast, 2.6% in the Interior, and 2.5% in Anchorage/Mat-Su.

²¹ There is a new question on smoking on school grounds on 2015 YRBS, which measures smoking on school property in a different way. The results from that new question are not comparable to previous years or to the way the smokeless tobacco use on school property is asked; therefore we have chosen not to present those results in this report.

B. Smokeless Tobacco Use

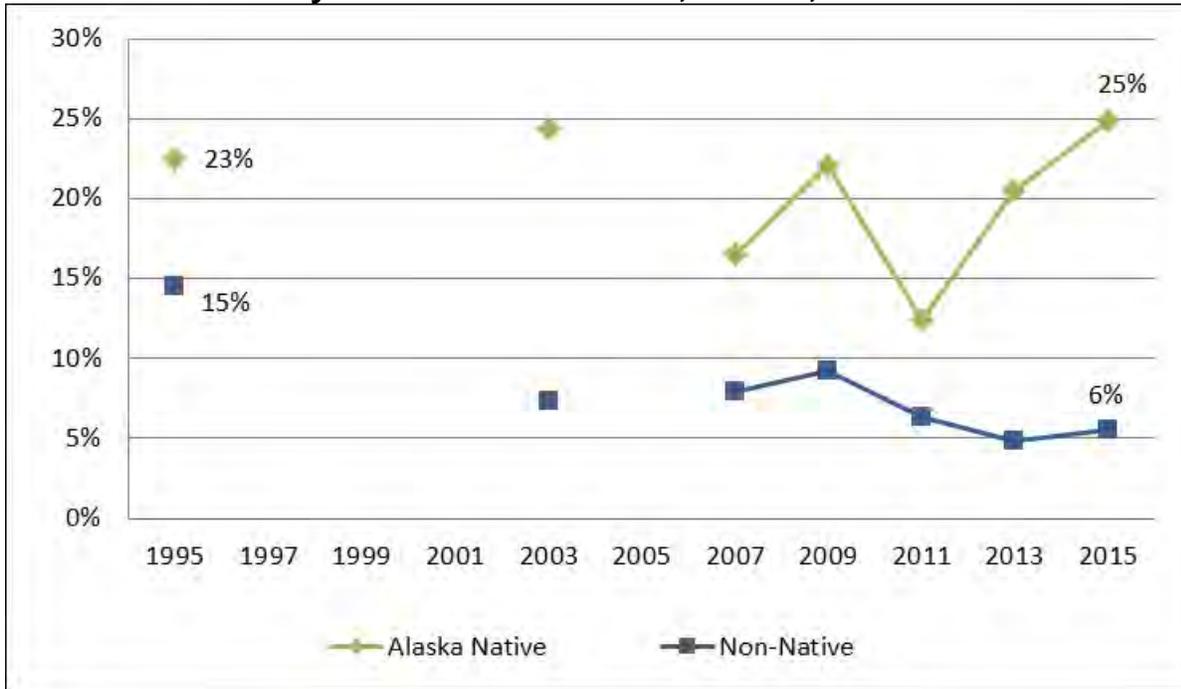
Figure 42. Percentage of High School Students Who Use Smokeless Tobacco (SLT), Alaska & US, 1995 – 2015



Source: Alaska Youth Risk Behavior Survey and National Youth Risk Behavior Survey
Alaska YRBS data are only available for 1995, 2003, and 2007 to present.

- Overall, use of smokeless tobacco (SLT) among Alaska high school students dropped from 15.6% in 1995 to 11.7% in 2015. Nationally, youth SLT use decreased from 1995 to 1999, but has remained relatively flat since then.
- Among high school boys, SLT use dropped from 23.5% in 1995 to 14.7% in 2015.

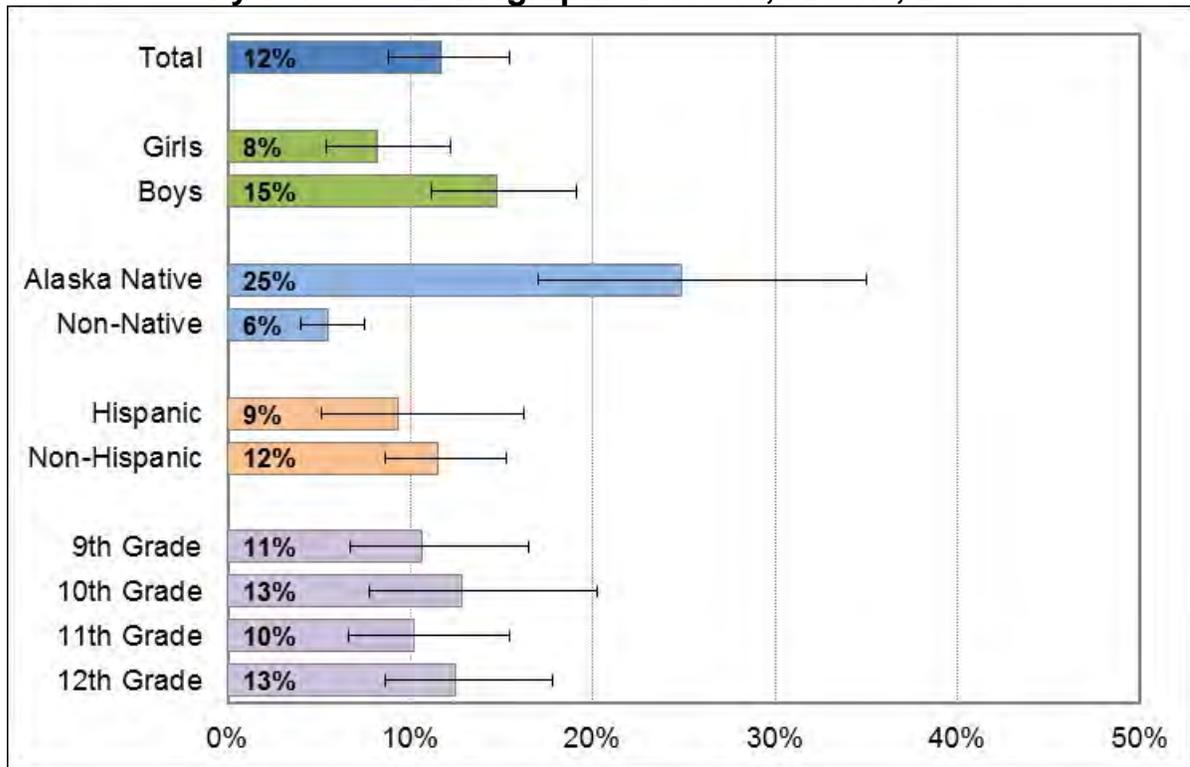
Figure 43. Percentage of High School Students Who Use SLT, by Alaska Native Status, Alaska, 1995 – 2015



Source: Alaska Youth Risk Behavior Survey
Alaska YRBS data are only available for 1995, 2003, and 2007 to present.

- SLT use decreased significantly among non-Native youth, but not among Alaska Native youth.
- Among non-Native high school students, SLT use decreased from 14.5% in 1995 to 5.5% in 2015.

Figure 44. Percentage of High School Students Who Currently Use SLT, by Selected Demographic Factors, Alaska, 2015



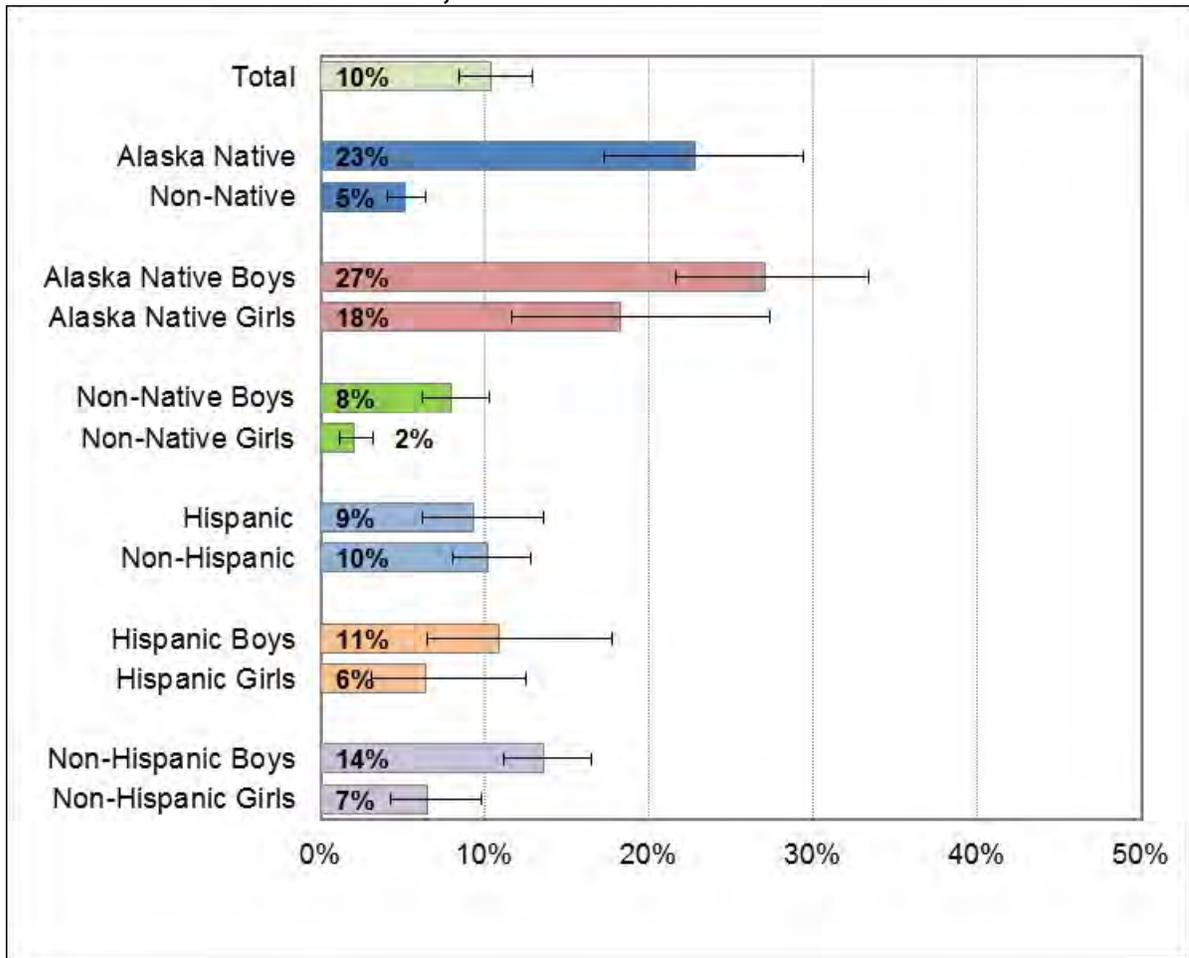
Source: Alaska Youth Risk Behavior Survey

- Boys are more likely than girls to use smokeless tobacco (SLT).
- Alaska Native students were more than 4 times more likely than non-Native students to use SLT (24.9% versus 5.5%).
- Regional patterns for youth SLT use in 2015 were similar to those seen among adults.²² Youth SLT use was significantly higher in Northern Alaska (27.6%) and in Southwest Alaska (27.3%) than in the Gulf Coast (8.0%), Anchorage/Mat-Su (5.8%), the Interior (4.2%), or Southeast Alaska (3.5%).
- As described on page 32, Iqmik is a regional variant of SLT used by Alaska Natives.²³ As with adults, youth Iqmik use was significantly higher in Southwest Alaska (30.9%) than in any other region, and was also higher in Northern Alaska (7.7%) than other regions, where only 0.9 to 2.7% of youth report Iqmik use.

²² More information about regional reporting for YRBS can be found in Appendix B. Additional information and graphic presentation is also available online at http://dhss.alaska.gov/dph/InfoCenter/Pages/ia/yrbss/yrbss_health_profiles.aspx

²³ The YRBS question about Iqmik use was added in 2013 and is a separate from the SLT use question. About 70% of those who report using Iqmik also reported SLT use.

Figure 45. Percentage of High School Students Who Use SLT, by Gender within Racial and Ethnic Groups, Alaska, 2013 and 2015 combined

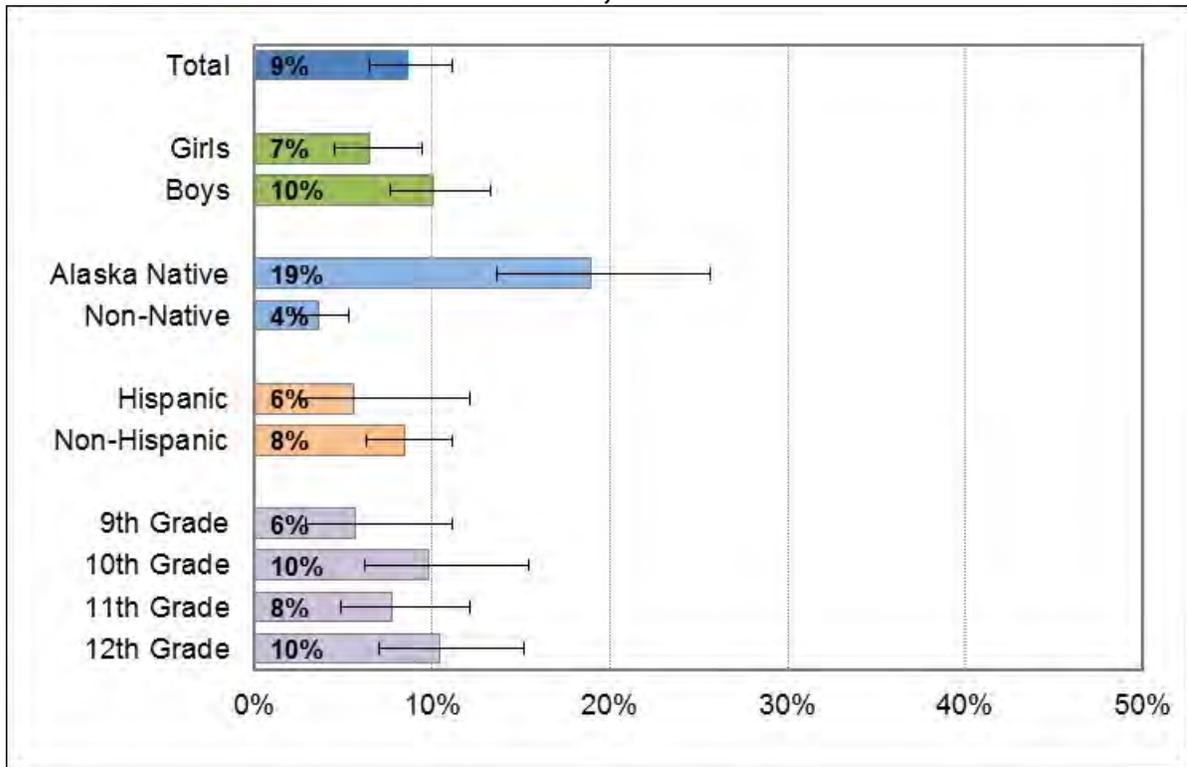


Source: Alaska Youth Risk Behavior Survey

Note: Percentages reported in this graph are for 2013 and 2015 data combined, and may differ from those reported elsewhere for 2015 only.

- If we combine the two most recent years of survey data, we can examine youth smokeless tobacco (SLT) use prevalence within race group and ethnicity group by gender.
- Both Alaska Native girls and boys were significantly more likely than their non-Native peers to use SLT.
- Alaska Native boys were significantly more likely to use SLT than Alaska Native girls (27.1% versus 18.2%).
- Non-Native boys were significantly more likely to use SLT than non-Native girls (8.0% versus 2.0%).

Figure 46. Percentage of High School Students Who Currently Use SLT on School Property, by Selected Demographic Factors, Alaska, 2015

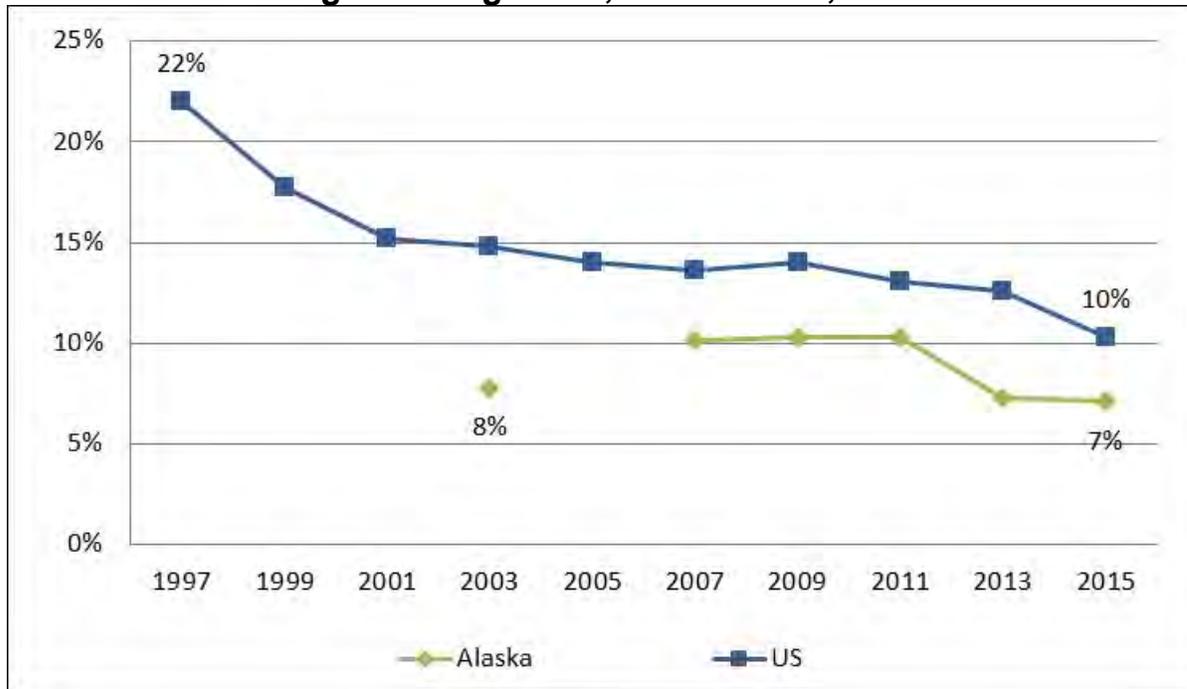


Source: Alaska Youth Risk Behavior Survey

- Patterns of SLT use on school property were similar to those for youth SLT use in general.
- SLT use on school property was more likely among Alaska Native students than non-Native students (18.9% versus 3.6%).
- Boys are significantly more likely than girls to report SLT use on school property.
- Regionally, youth SLT use on school property was significantly higher in Southwest Alaska (20.0%) and in Northern Alaska (18.4%) than in Anchorage/Mat-Su (3.6%), Southeast Alaska (2.4%), the Gulf Coast (4.9%), or the Interior (2.8%).

C. Cigar Use

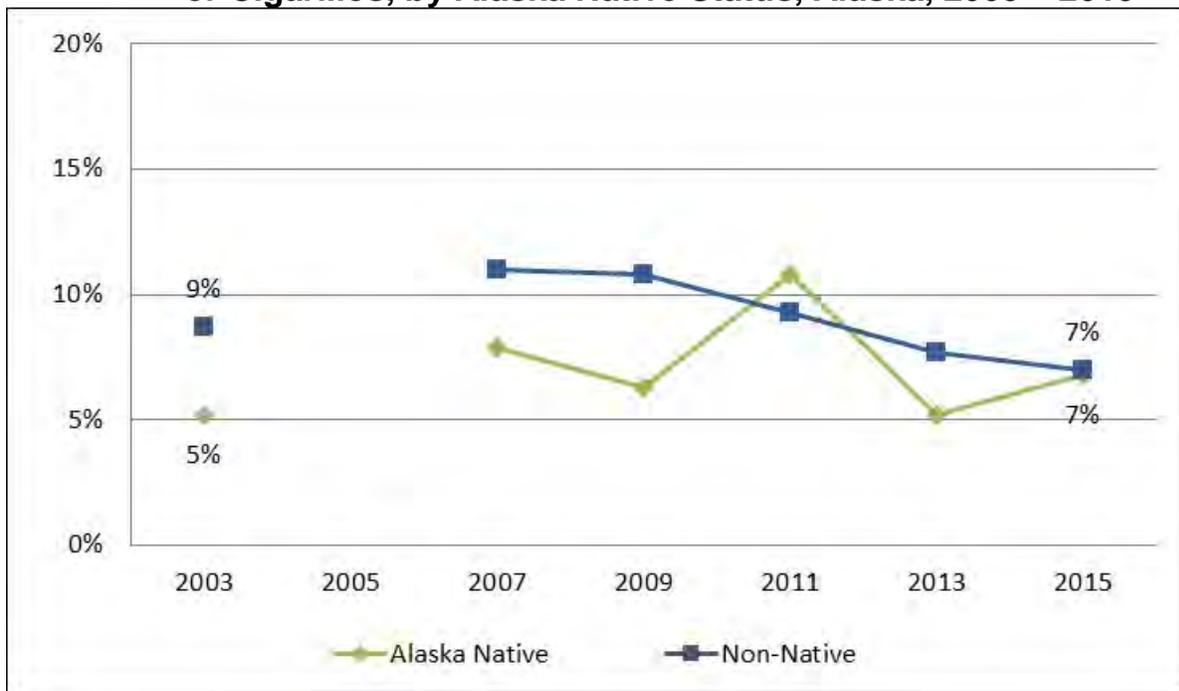
Figure 47. Percentage of High School Students Who Smoke Cigars or Cigarillos, Alaska & US, 1997 – 2015



Source: Alaska Youth Risk Behavior Survey and National Youth Risk Behavior Survey
Alaska YRBS data about cigar use are only available for 2003 and 2007 to present.
Note: Question was not in the national YRBS prior to 1997, and was first included in the Alaska YRBS in 2003.

- Nationally, the proportion of high school students who smoke cigars or cigarillos has decreased since 1997.
- The Alaska YRBS has included a question about cigar or cigarillo use since 2003. There has been no significant change in cigar use during the previous decade.
- In addition, there have been no significant changes in cigar/cigarillo use among either girls or boys since 2003.

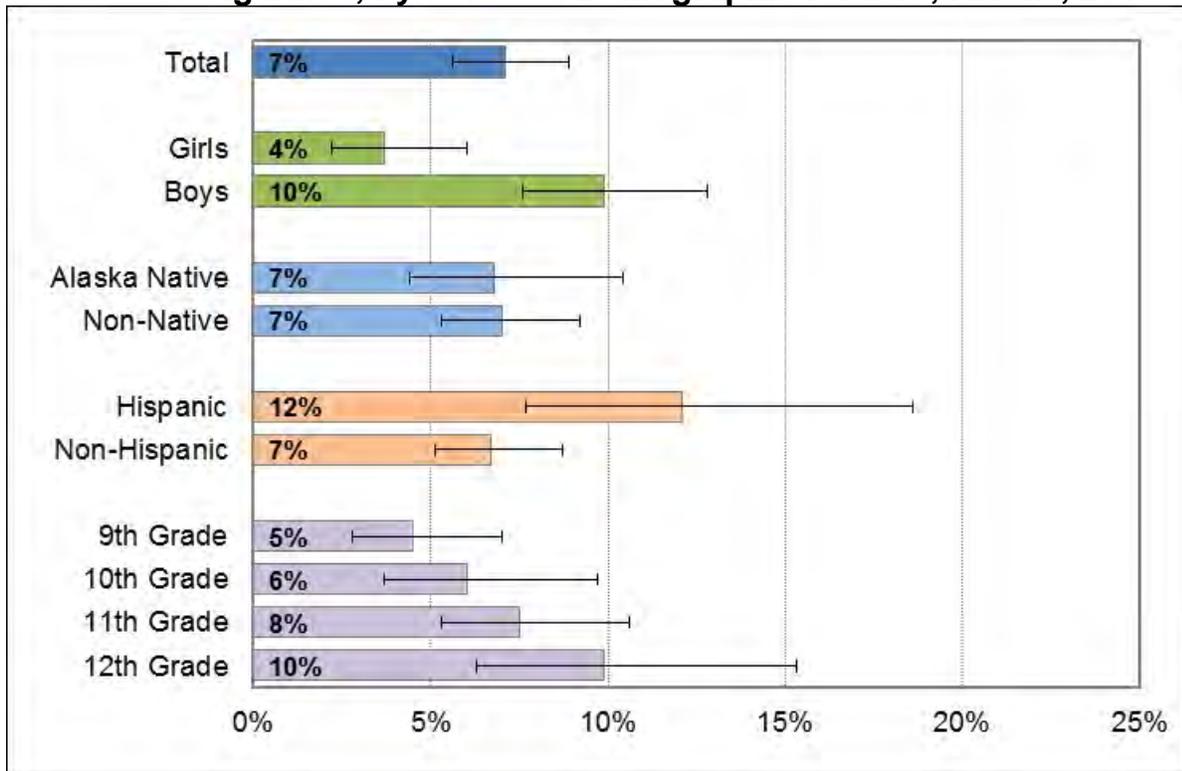
Figure 48. Percentage of High School Students Who Smoke Cigars or Cigarillos, by Alaska Native Status, Alaska, 2003 – 2015



Source: Alaska Youth Risk Behavior Survey
Alaska YRBS data about cigar use are only available for 2003 and 2007 to present.

- Cigar/cigarillo use has not changed significantly among either Alaska Native or non-Native high school students in Alaska since 2003.

Figure 49. Percentage of High School Students Who Currently Smoke Cigars or Cigarillos, by Selected Demographic Factors, Alaska, 2015

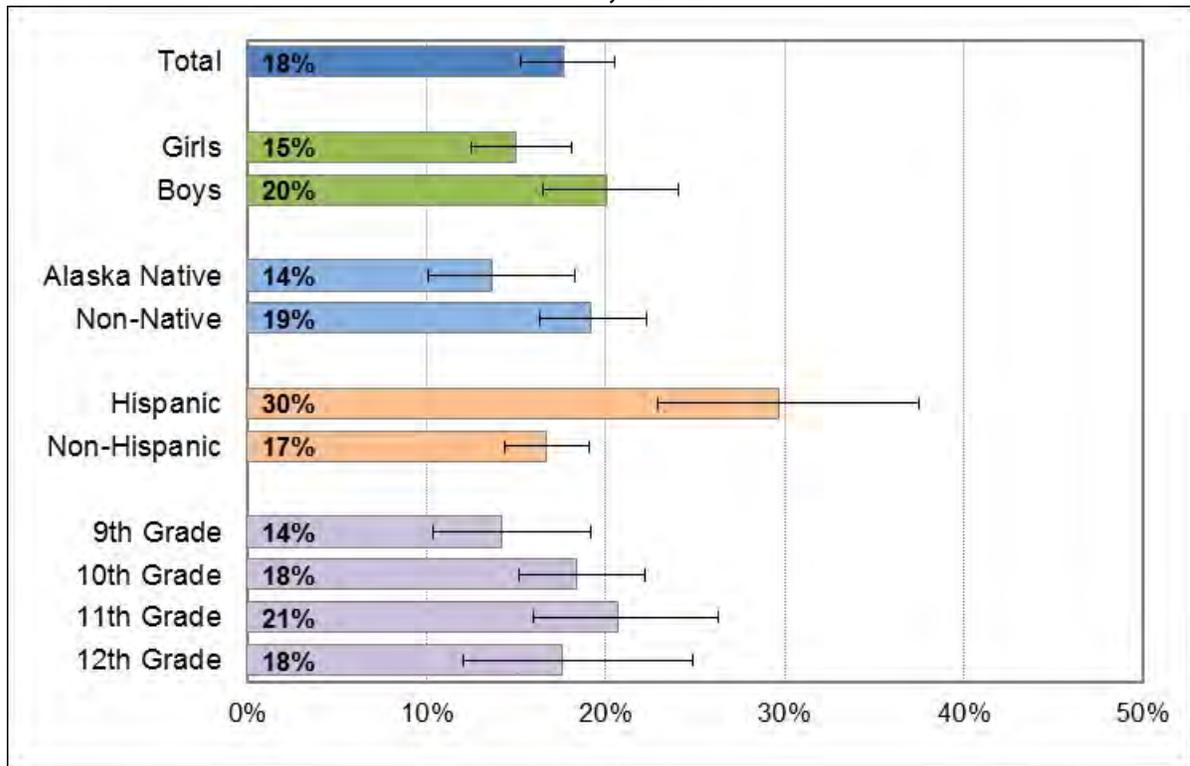


Source: Alaska Youth Risk Behavior Survey

- Boys were significantly more likely than girls to smoke cigars or cigarillos (9.9% versus 3.7%).
- Hispanic students were significantly more likely than non-Hispanic students to smoke cigars or cigarillos (12.1% versus 6.7%).
- One third of students (33.4%) who smoke cigarettes also reported smoking cigars/cigarillos in the past 30 days, whereas only 3.3% of students who do not smoke cigarettes reported smoking cigars/cigarillos.
- In contrast to cigarette smoking and SLT use, youth cigar/cigarillo use was significantly higher in the Gulf Coast (10.0%) and Anchorage/Mat-Su (8.2%) regions than in the Interior (3.3%) and Northern Alaska (4.9%). Prevalence in the rest of Alaska was significantly lower than in the Gulf Coast but not significantly different than Anchorage/Mat-Su: cigar/cigarillo use was 5.8% in Southeast Alaska, and 5.4% in Southwest Alaska.

D. Vaping and E-Cigarette Use

Figure 50. Percentage of High School Students Who Currently Use E-Cigarettes or other Vapor Products, by Selected Demographic Factors, Alaska, 2015

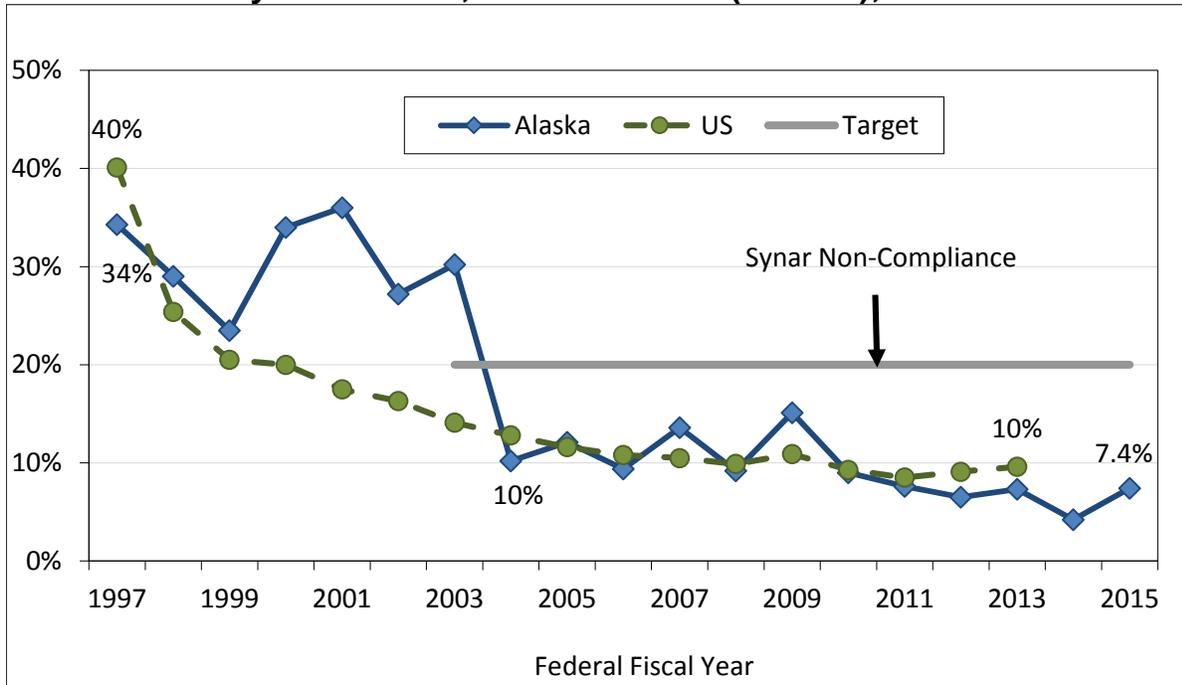


Source: Alaska Youth Risk Behavior Survey

- Hispanic students were significantly more likely to be current users of e-cigarettes or other vapor products than non-Hispanic students (29.7% versus 16.7%).
- High school boys were more likely than girls to report current vaping (20.1% versus 15.0%).
- Non-Native students were more likely than Alaska Native students to report current vaping (19.2% versus 13.7%).
- Regionally, e-cigarette or vapor product use was significantly higher among students in the Gulf Coast (25.0%) and Anchorage/Mat-Su (22.5%) than in Interior (16.8%), Southeast (15.2%) or Northern Alaska (13.6%). Vaping was also significantly higher in the Gulf Coast than in Southwest Alaska, where 16.7% of students report current vaping.
- About half of youth (45.6%) who smoke regular cigarettes also reported using e-cigarettes or other vapor products. Among youth who do not smoke regular cigarettes, 13.0% reported vaping in the past 30 days.

E. Youth Access to Tobacco

Figure 51. Percentage of Vendors Found Selling Tobacco to Minors by Fiscal Year, Alaska and US (Median), 1997 – 2015

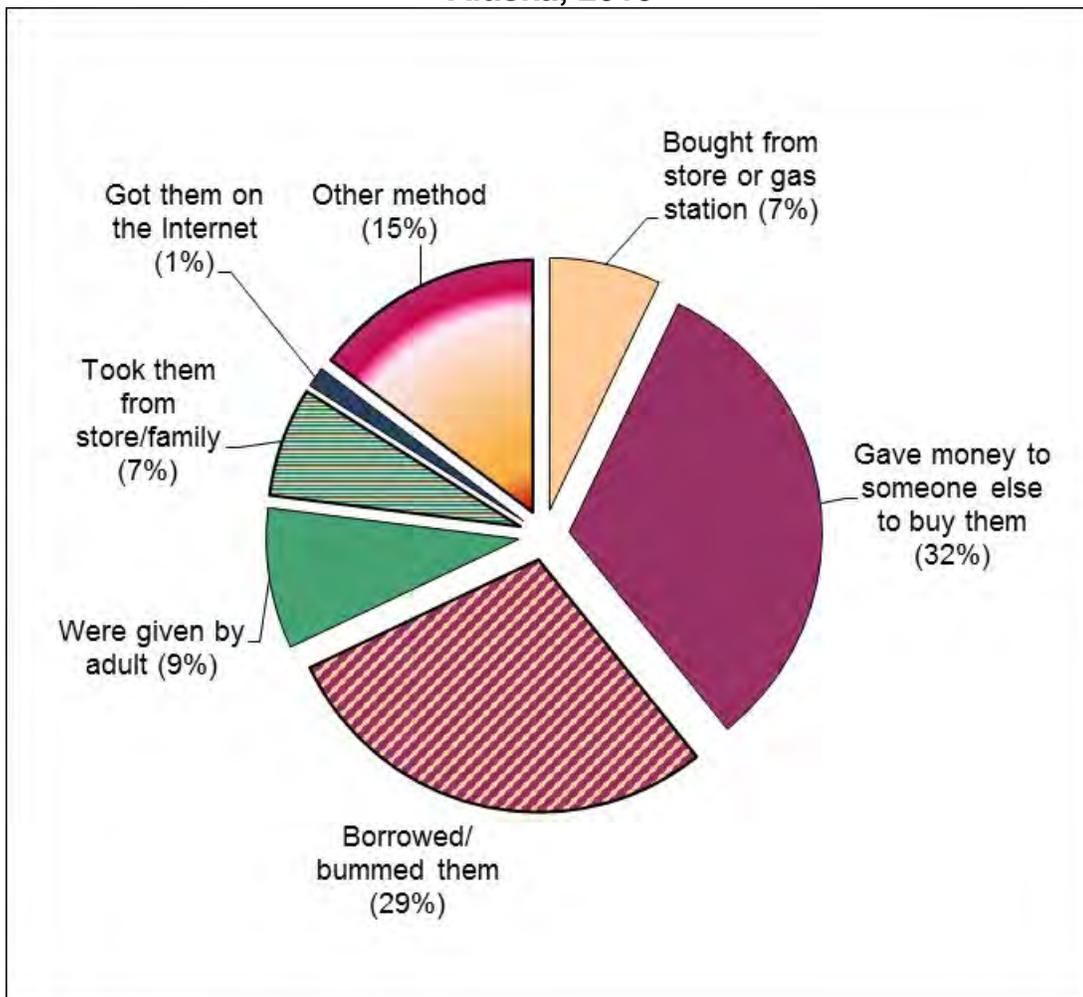


Source: Alaska Synar Compliance Database.

- 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.
- Both the Synar compliance data and youth self-report indicate that Alaska has made great progress in reducing sales of tobacco directly to underage youth.
- Youth self-report data indicate similar patterns. The proportion of Alaska high school smokers who reported that their usual way of getting cigarettes was to buy them in a store decreased from 27.1% in 1995 to 7.5% in 2015.

Source: Alaska Youth Risk Behavior Survey

**Figure 52. Usual Methods of Getting Cigarettes in the Past 30 Days
Among High School Student Smokers,
Alaska, 2015**



Source: Alaska Youth Risk Behavior Survey

- In 2015, over two-thirds of high school smokers reported that they usually get their cigarettes with help from other people. This includes 32% of youth smokers who give money to someone else to buy cigarettes, 29% who borrow or bum their cigarettes from someone else, and 9% who report that someone age 18 or older usually gives them cigarettes.

IV. Secondhand Smoke

According to the 2006 Surgeon General's report²⁴:

- 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%.
- 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.

In Alaska:

- Roughly 9,800 Alaska children are exposed to secondhand smoke in their homes.²⁵
- Having a home rule against smoking inside significantly lowers the risk of secondhand smoke exposure for children. Alaska BRFSS data show that 61.4% of Alaska children living in a home with no rules about smoking were exposed to tobacco smoke in their homes in the past 30 days, compared to 1.0% of children living in homes where smoking is not allowed inside. Even among children living with a smoker, those with rules against smoking in the home were significantly less likely to be exposed to smoke than those without those rules (2.4% vs 86.4%).²⁶
- The proportion of Alaska high school students who report being in the same room with someone who was smoking in the past 7 days has decreased from 49.1% in 2003 to 32.8% in 2015. However, this means that a large number of high school students are still being exposed to indoor secondhand smoke exposure on a regular basis.²⁷
- There is widespread support for clean indoor air policies. The majority of Alaska adults agree that smoking should not be allowed on hospital grounds (85.2%), in workplaces (88.3%), or in restaurants (84.1%). Even among smokers, most agree that smoking should not be allowed in workplaces (76.0%).²⁸

²⁴ 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/>

²⁵ Alaska Behavioral Risk Factor Surveillance System Supplemental File, combined years 2013-2015, and Alaska Department of Labor and Workforce Development Population Estimates, 2015.

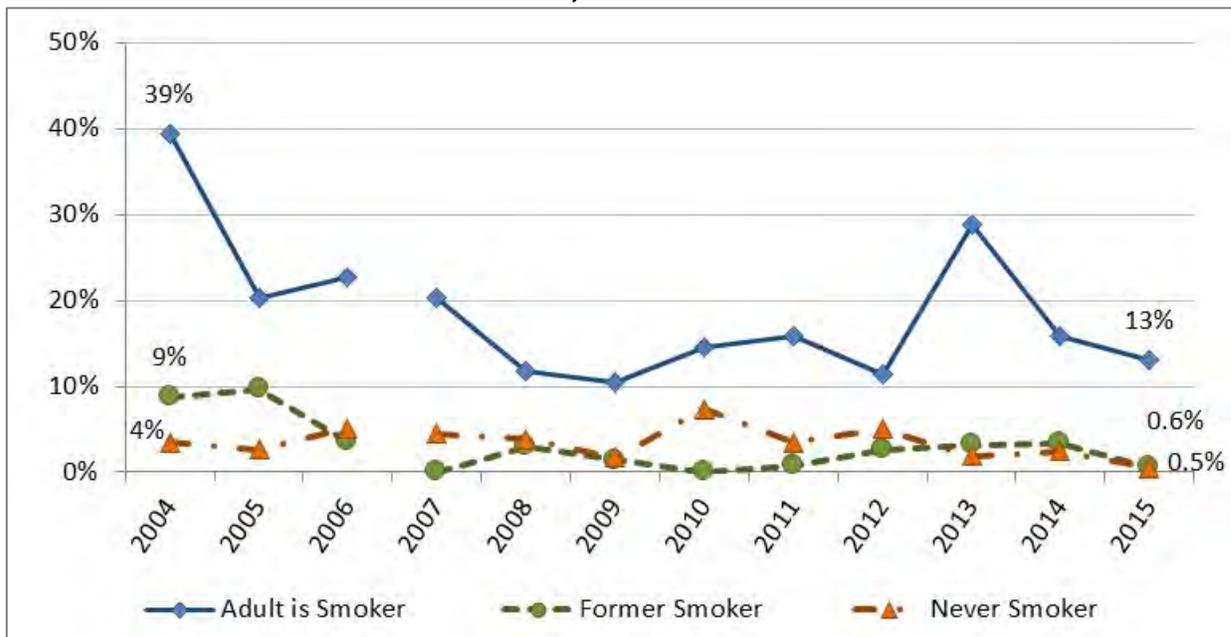
²⁶ Alaska Behavioral Risk Factor Surveillance System Supplemental File, combined years 2013-2015.

²⁷ Alaska Youth Risk Behavior Survey 2015.

²⁸ Alaska Behavioral Risk Factor Surveillance System Supplemental File, 2015.

A. *Secondhand Smoke at Home*

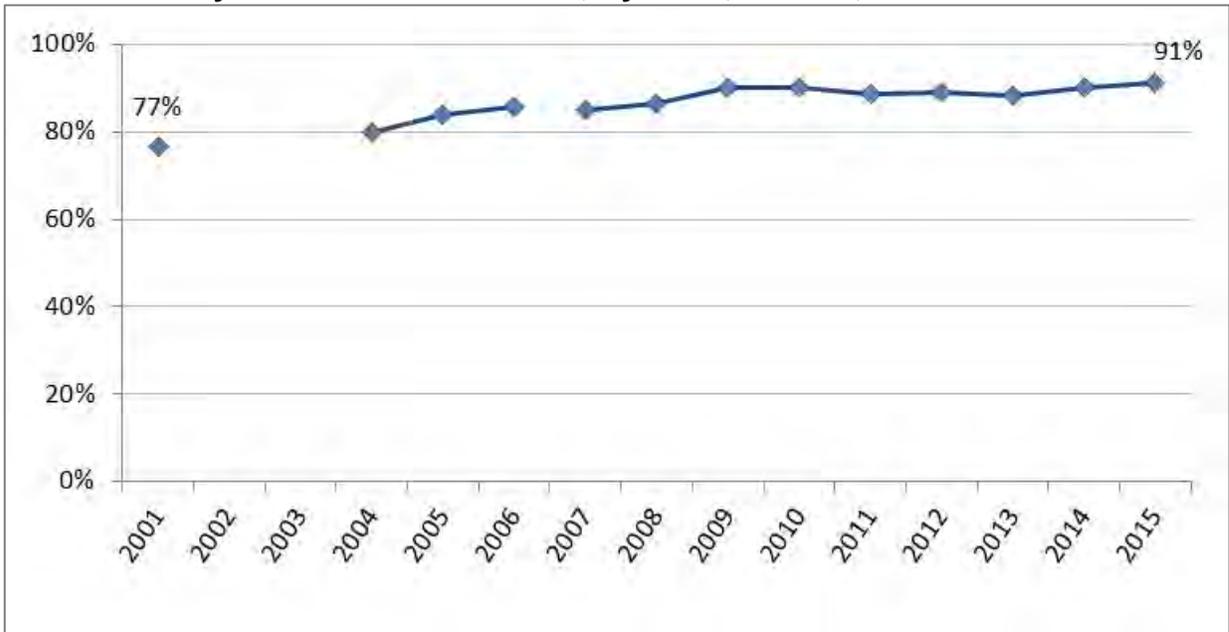
Figure 53. Percentage of Children Exposed to Smoke in their Homes in the Past Month, by Smoking Status of Adult Respondent, Alaska, 2004 – 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File.

- Overall, the proportion of children exposed to secondhand smoke at home decreased in Alaska from 13.0% in 2004 to 2.4% in 2015. Exposure is measured by report of any smoking inside the home in the past 30 days, among adults who report that children live in their household.
- Among households where the adult respondent is a smoker, child exposure to secondhand smoke at home decreased from 39.4% in 2004 to 13.1% in 2015.
- Child exposure to secondhand smoke at home also decreased in households where the adult respondent is a former smoker, from 8.8% in 2004 to 0.6% in 2015.

Figure 54. Percentage of Adults Who Report that Smoking is Not Allowed Anywhere in their Homes, by Year, Alaska, 2001 – 2015

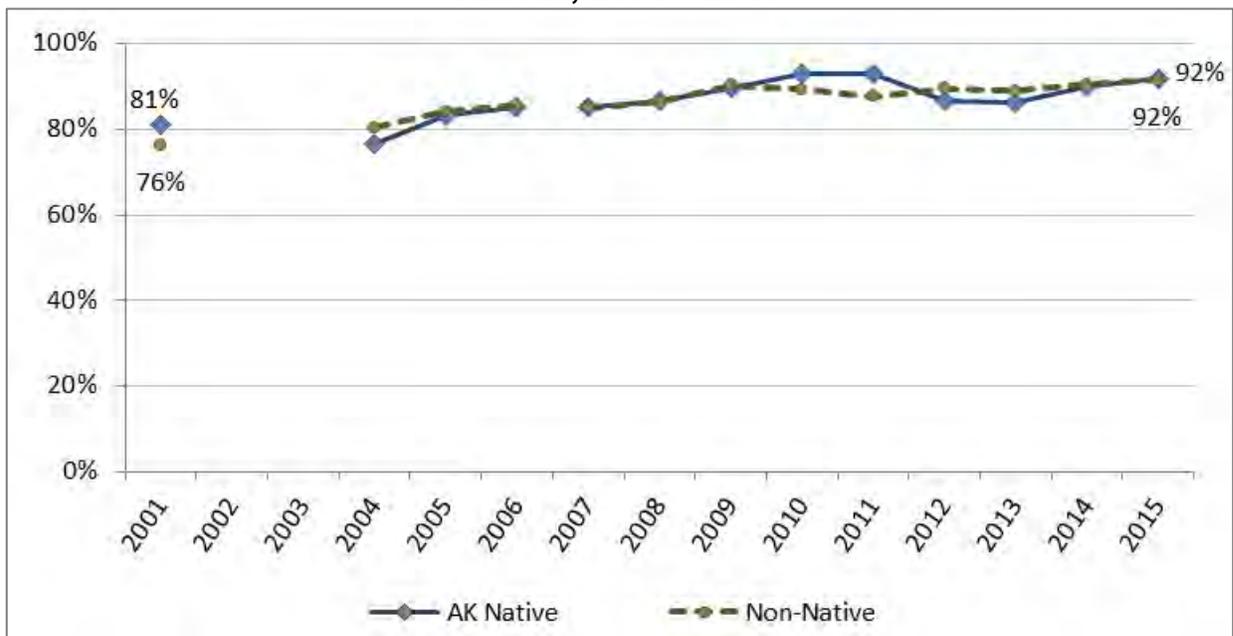


Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File, (collected in 2001 and 2004 to present).

Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- The proportion of Alaska adults who reported that smoking is not allowed anywhere inside their home increased significantly from 76.8% in 2001 to 91.4% in 2015. The recent trend from 2007 to 2015 was also significant.
- The proportion of Alaska adults who reported that smoking is not allowed anywhere inside their home increased in all regions of Alaska except the Interior region, and across all demographic groups.

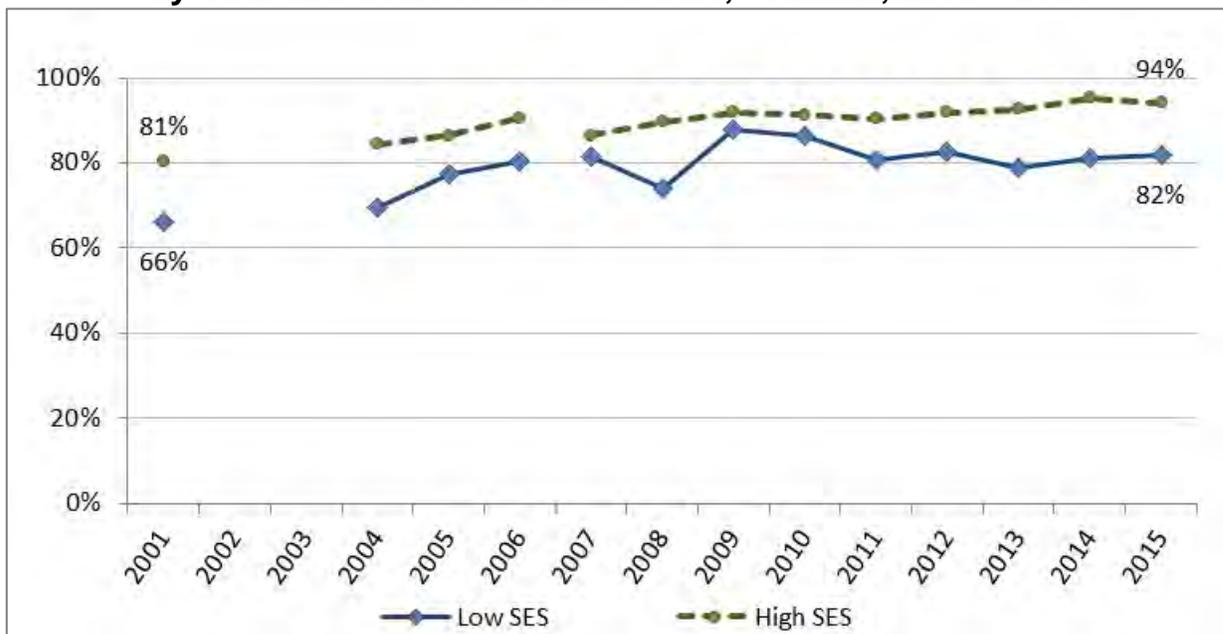
Figure 55. Percentage of Adults Who Report that Smoking is Not Allowed Anywhere in their Homes, by Year and Alaska Native Status, Alaska, 2001 – 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File (collected in 2001 and 2004 to present).
 Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- The proportion of Alaska Native adults who reported that smoking is not allowed anywhere inside their home increased significantly from 80.9% in 2001 to 92.0% in 2015. The more recent trend from 2007 to 2015 was not significant.
- The proportion of non-Native adults who reported that smoking is not allowed anywhere inside their home increased significantly from 76.1% in 2001 to 91.5% in 2015. The more recent trend from 2007 to 2015 was significant as well.

Figure 56. Percentage of Adults Who Report that Smoking is Not Allowed Anywhere in their Homes, by Year and Socioeconomic Status,²⁹ Alaska, 2001 – 2015



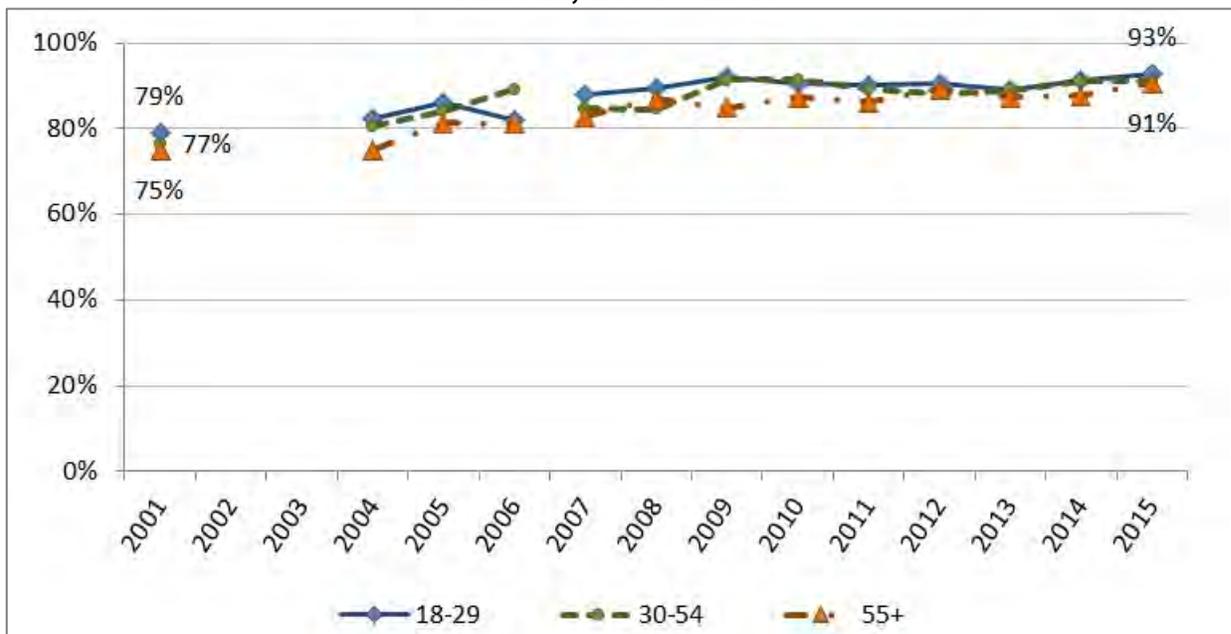
Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File (collected in 2001 and 2004 to present).

Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- Among those of low SES, the proportion who reported that smoking is not allowed anywhere inside their home increased significantly from 66.2% in 2001 to 81.7% in 2015. The more recent trend from 2007 to 2015, however, was not significant.
- The proportion of adults of higher SES who reported that smoking is not allowed anywhere inside their home increased significantly from 80.5% in 2001 to 94.2% in 2015. The more recent upward trend from 2007 to 2015 was also significant.

²⁹ The SES measure is restricted to non-Natives age 25 to 64. Low SES is defined as less than high school education or household income at 185% or less of the Alaska Poverty Level Guideline. See Appendix B for more information.

Figure 57. Percentage of Adults Who Report that Smoking is Not Allowed Anywhere in their Homes, by Year and Age Group, Alaska, 2001 – 2015

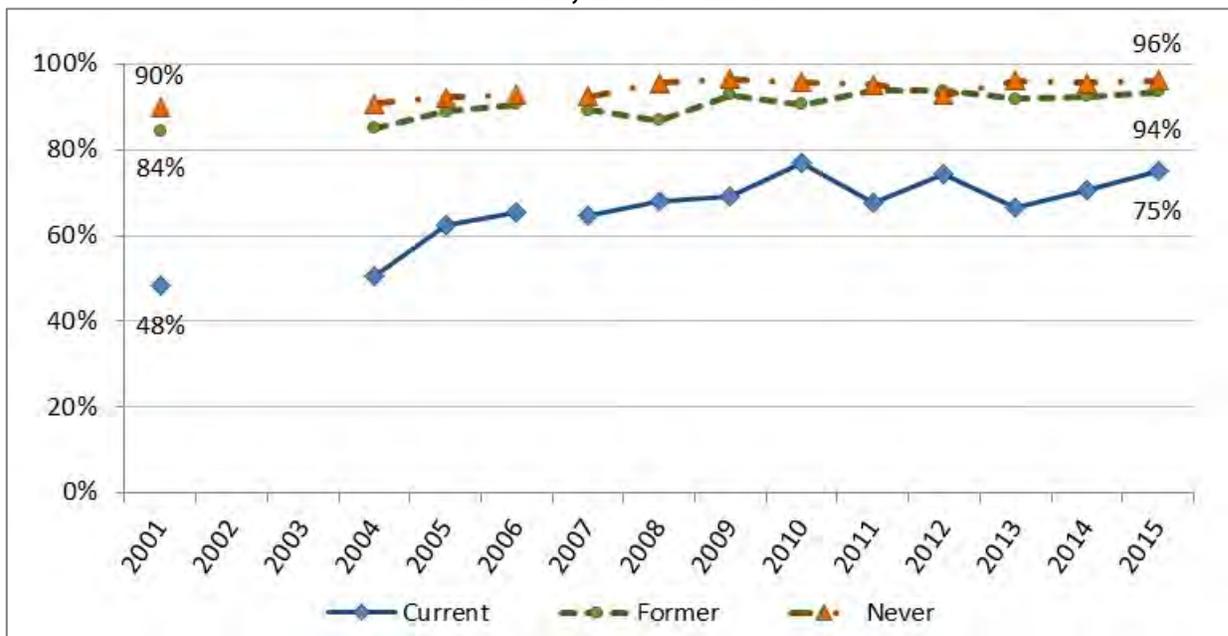


Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File (collected in 2001 and 2004 to present).

Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- The proportion of Alaska adults age 18 to 29 who reported that smoking is not allowed anywhere inside their home increased significantly from 79.0% in 2001 to 92.9% in 2015. The more recent trend from 2007 to 2015 was not significant.
- The proportion of Alaska adults age 30 to 54 who have smokefree rules in their home increased significantly from 76.6% in 2001 to 91.0% in 2015. There was no significant trend from 2007 to 2015.
- The proportion of Alaska adults age 55 and older who have smokefree rules in their home increased significantly from 75.0% in 2001 to 90.6% in 2015. The more recent trend from 2007 to 2015 was also significant.

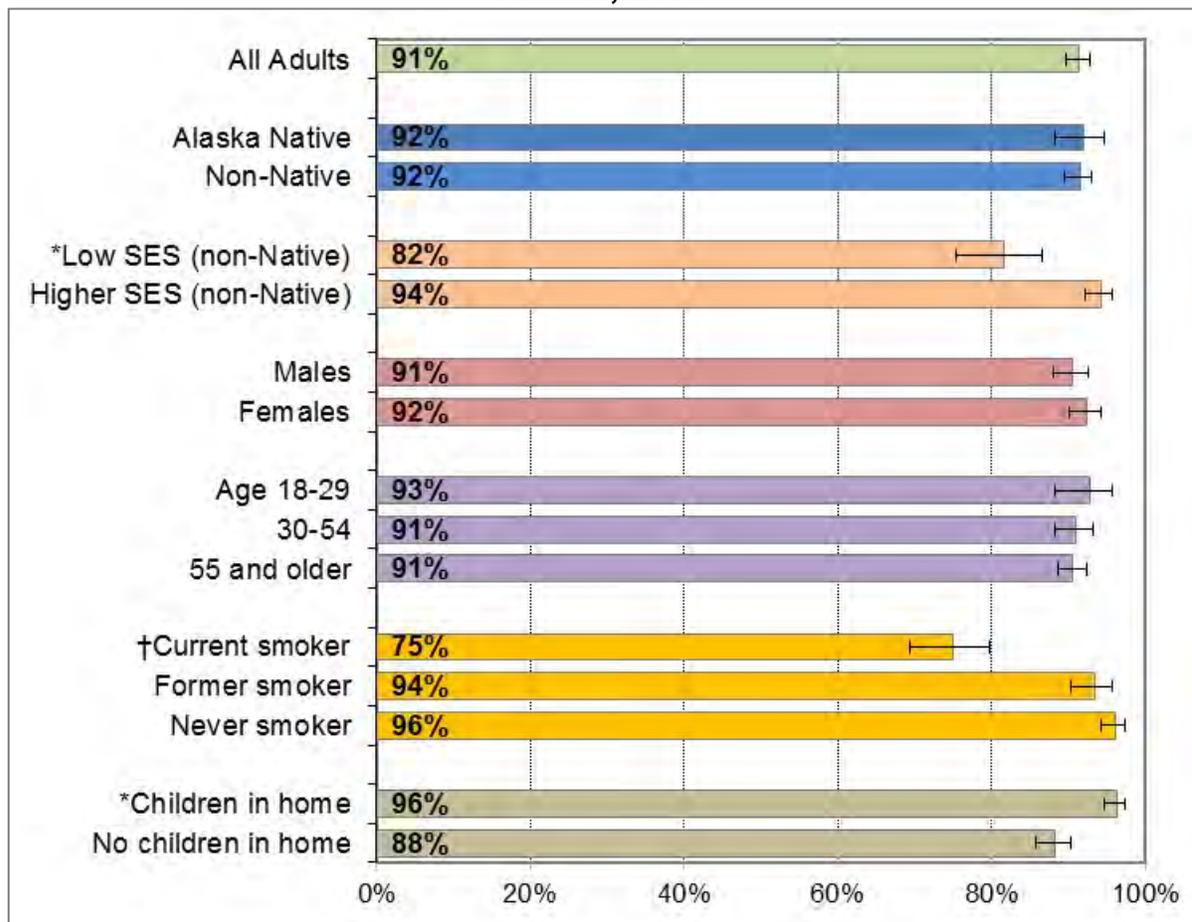
Figure 58. Percentage of Adults Who Report that Smoking is Not Allowed Anywhere in their Homes, by Year and Smoking Status, Alaska, 2001 – 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File (collected in 2001, and 2004 to present).
 Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- Among current smokers as well as non-smokers, there has been a significant increase in the proportion of people who have home smokefree rules.
- The proportion of Alaska adult smokers who reported that smoking is not allowed anywhere inside their home increased significantly from 48.3% in 2001 to 74.9% in 2015. There was not a significant trend from 2007 to 2015.
- The proportion of Alaska adult former smokers who have smokefree rules in their home increased significantly from 84.4% in 2001 to 93.5% in 2015. There was also a significant increase in the more recent trend from 2007 to 2015.
- The proportion of never-smoking Alaska adults who have smokefree rules in their home increased significantly from 89.9% in 2001 to 96.1% in 2015, however there was no significant trend from 2007 to 2015.

Figure 59. Percentage of Adults Who Report that Smoking is Not Allowed Anywhere in their Homes, by Selected Demographic Factors, Alaska, 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File.

* Significant difference between the two sub-groups.

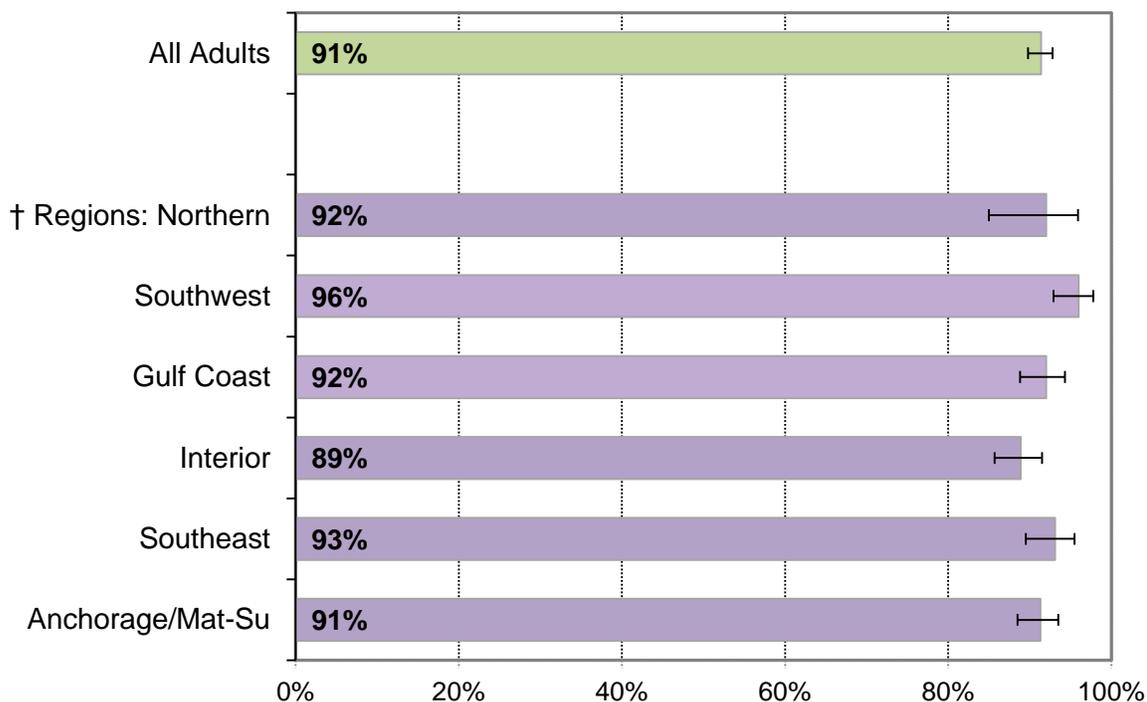
† Significant difference between current smoker and former smoker.

† Significant difference between current smoker and never smoker.

- Adults in the low SES group were significantly less likely to have a smokefree home rule than adults in the higher SES group, 81.7% compared to 94.2%.
- Current smokers (74.9%) were significantly less likely to have rules against smoking in the home than both former smokers (93.5%) and never smokers (96.1%).
- Adults with children living in the household were significantly more likely to have rules against smoking in the home as compared to those without children, 96.3% compared to 88.3%.
- In 2014, nearly all Alaska women (97.8%) who had recently delivered a live-born infant reported that smoking is not allowed in their home. This proportion was similar for both Alaska Native women and non-Native women.³⁰

³⁰ Source: Alaska Pregnancy Risk Monitoring System 2014.

Figure 60. Percentage of Adults Who Report that Smoking is Not Allowed Anywhere in their Homes, by Region,³¹ Alaska, 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File.

† Significant differences between regions are described below.

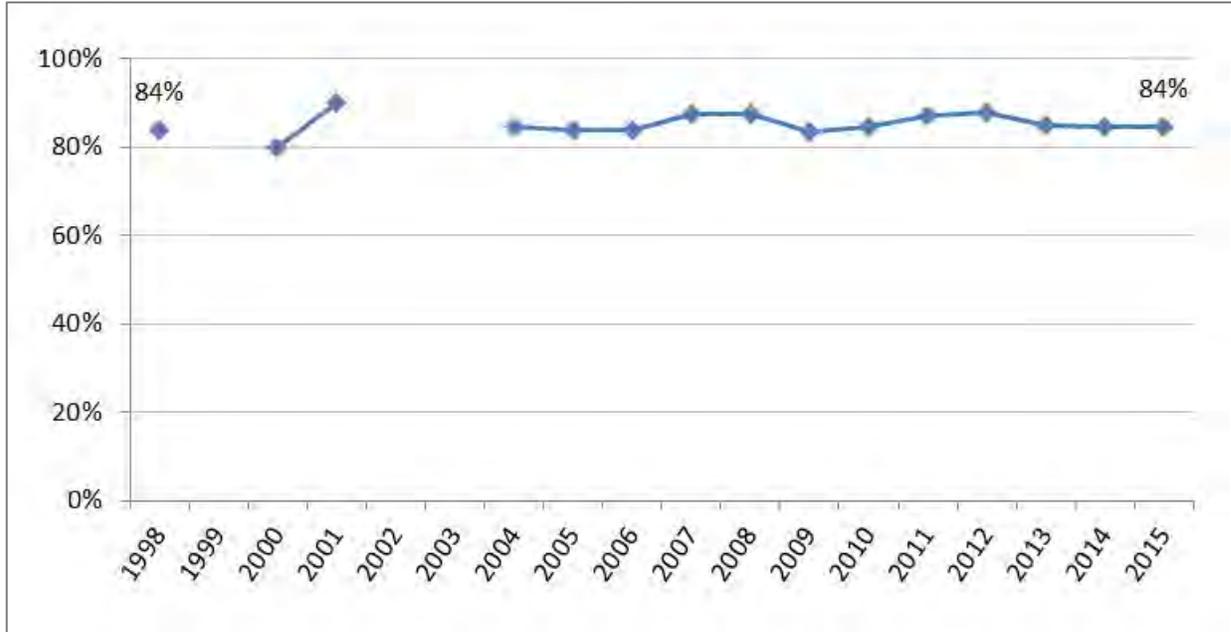
- Across Alaska, most adults report that smoking is not allowed anywhere inside their homes.
- Rules against smoking in the home were significantly higher in the Southwest region as compared to the Anchorage/Mat-Su, Gulf Coast and Interior regions.

³¹ Public Health Regions include:

- Northern – Nome, Northwest Arctic, and North Slope
- Southwest – Bristol Bay, East Aleutians, West Aleutians, Dillingham, Lake & Peninsula, Bethel, and Kusilvak
- Gulf Coast – Kenai, Kodiak, and Valdez Cordova
- Interior – Denali, Fairbanks North Star, Southeast Fairbanks, and Yukon Koyukuk
- Southeast – Yakutat, Skagway, Hoonah-Angoon, Juneau, Sitka, Haines, Wrangell, Petersburg, Prince of Wales-Hyder, and Ketchikan Gateway
- Anchorage/Mat-Su – Municipality of Anchorage, Matanuska-Susitna Borough

B. *Secondhand Smoke at Work*

Figure 61. Percentage of Adults Working Primarily Indoors Who Report that Smoking is Not Allowed in Work Areas, by Year, Alaska, 1998 – 2015

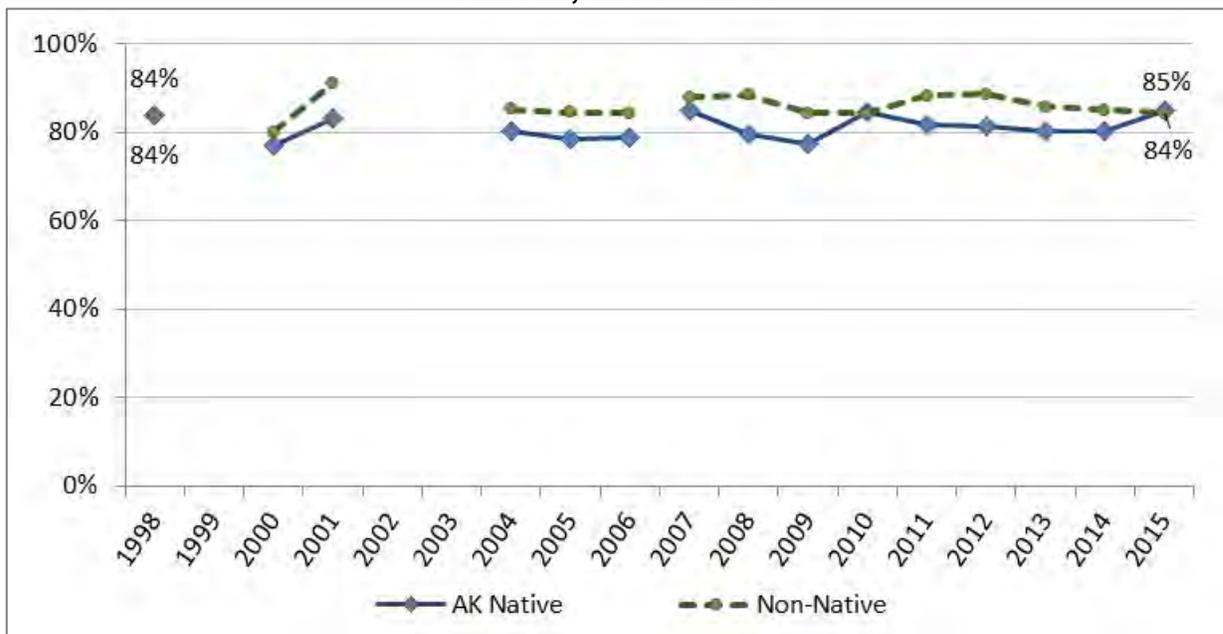


Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File; information not collected in 1999, 2002, or 2003.

Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- The majority of adults working primarily indoors (84.4%) report that their workplace does not allow smoking in work areas. Trends did not show a significant change between 1998 and 2015 or between 2007 and 2015.

Figure 62. Percentage of Adults Working Primarily Indoors Who Report that Smoking is Not Allowed in Work Areas by Year and Alaska Native Status, Alaska, 1998 – 2015

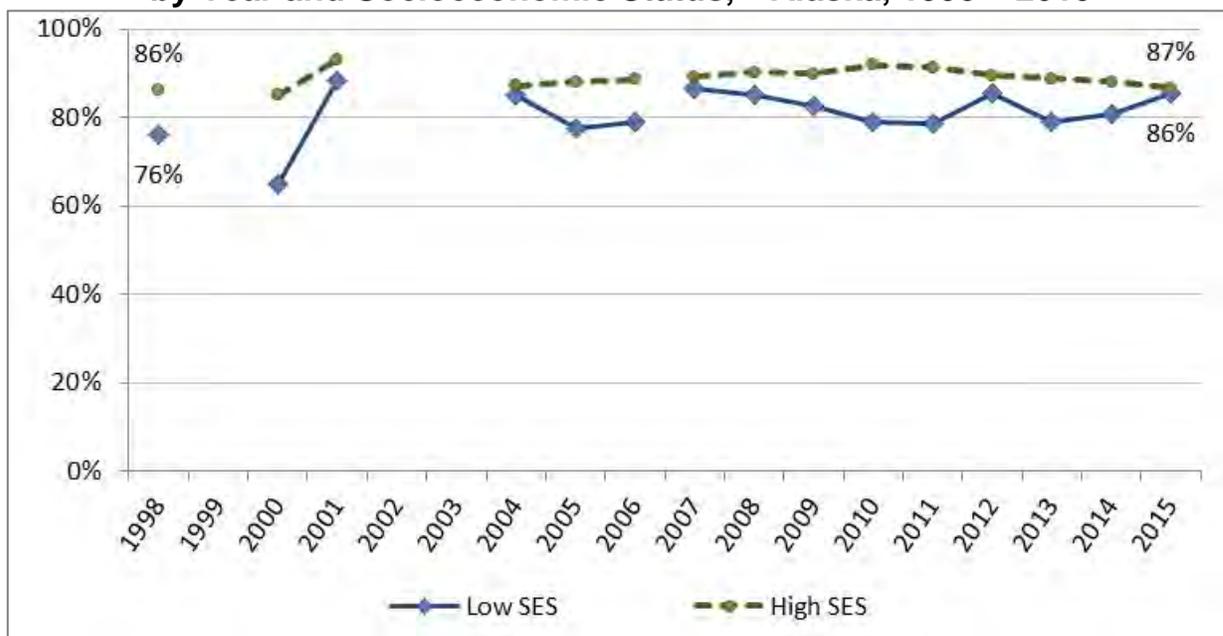


Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File; information not collected in 1999, 2002, or 2003.

Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- Among Alaska Native adults and non-Native adults who work primarily indoors, there was no significant change between 1998 and 2015 in the proportion who report that their workplace does not allow smoking in work areas. Moreover, there has been no significant trend since 2007.

Figure 63. Percentage of Adults Working Primarily Indoors Who Report that Smoking is Not Allowed in Work Areas, by Year and Socioeconomic Status,³² Alaska, 1998 – 2015



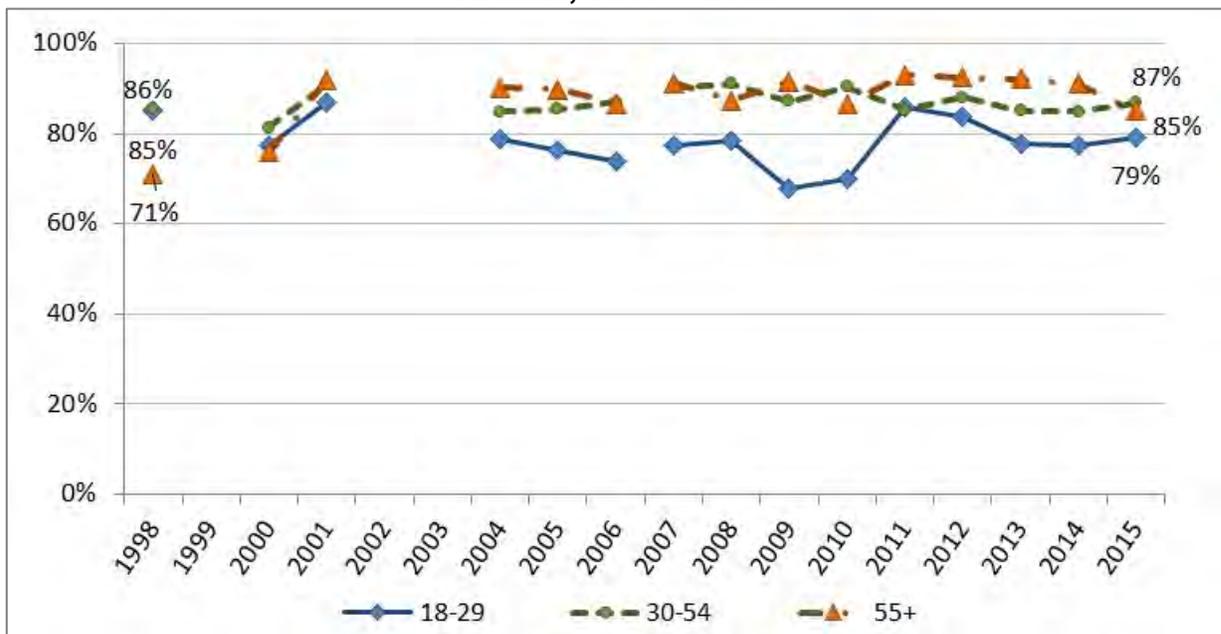
Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File; information not collected in 1999, 2002, or 2003.

Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- The percentage of adults working primarily indoors who report that their workplace does not allow smoking in work areas has remained relatively high since 1998 and has not changed significantly within socioeconomic groups. Moreover, there was no significant recent trend (from 2007 to 2015) for either socioeconomic group.

³² The socioeconomic (SES) measure is restricted to non-Natives age 25 to 64. Low SES is defined as less than high school education or household income at 185% or less of the Alaska Poverty Level Guideline. See Appendix B for more information.

Figure 64. Percentage of Adults Working Primarily Indoors Who Report that Smoking is Not Allowed in Work Areas, by Year and Age Group, Alaska, 1998 – 2015

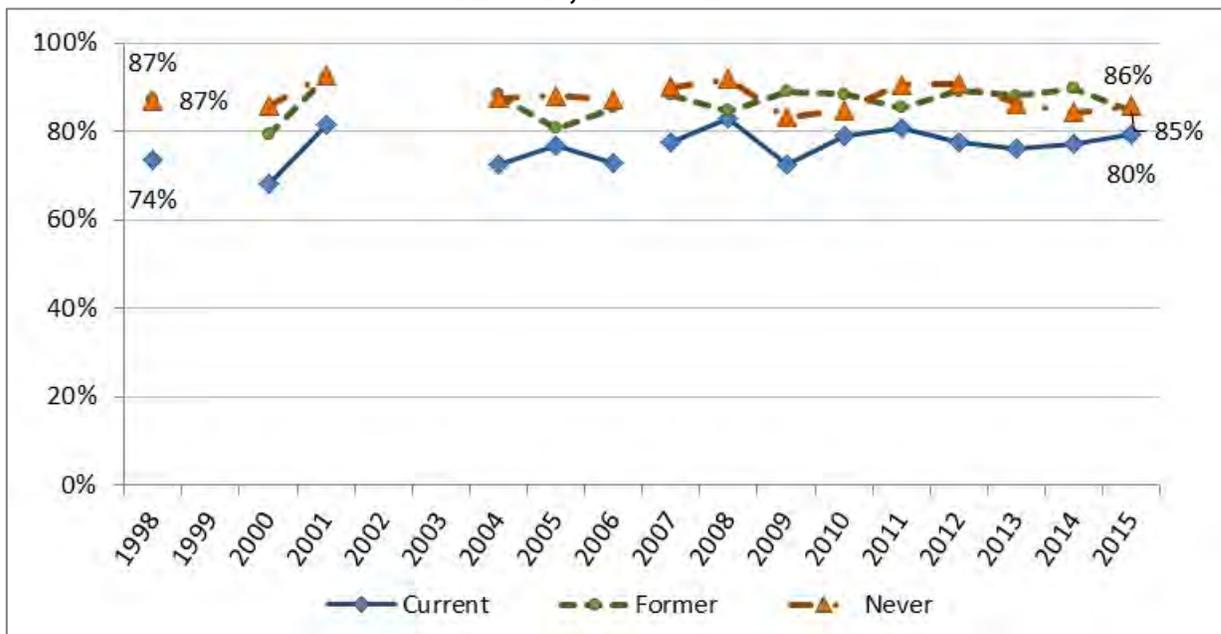


Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File; information not collected in 1999, 2002, or 2003.

Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- Among adults age 30 to 54, the proportion who are protected by workplace smokefree policies has significantly decreased from 2007 (90.2%) to 2015 (86.8%)
- Among adults age 55 or more, the proportion who are protected by workplace smokefree policies has significantly increased from 1998 (71.0%) to 2015 (85.1%). However, there is no significant recent trend from 2007 to 2015 for this age group.

Figure 65. Percentage of Adults Working Primarily Indoors Who Report that Smoking is Not Allowed in Work Areas, by Year and Smoking Status, Alaska, 1998 – 2015

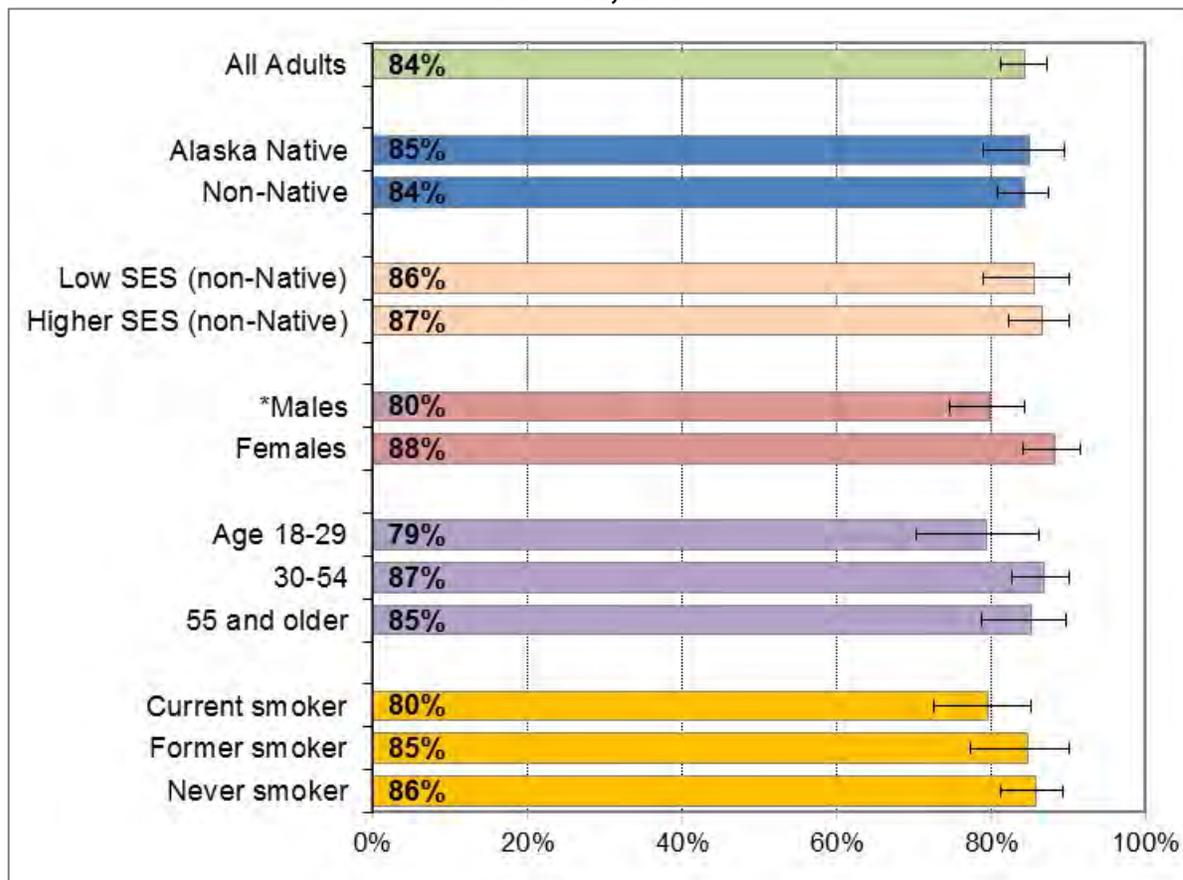


Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File; information not collected in 1999, 2002, or 2003.

Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- The proportion of workers protected by workplace smokefree policies did not change significantly from either 1998 to 2015 or from 2007 to 2015 among current smokers, former smokers or never smokers.

Figure 66. Percentage of Adults Working Primarily Indoors Who Report that Smoking is Not Allowed in Work Areas, by Selected Demographic Factors, Alaska, 2015

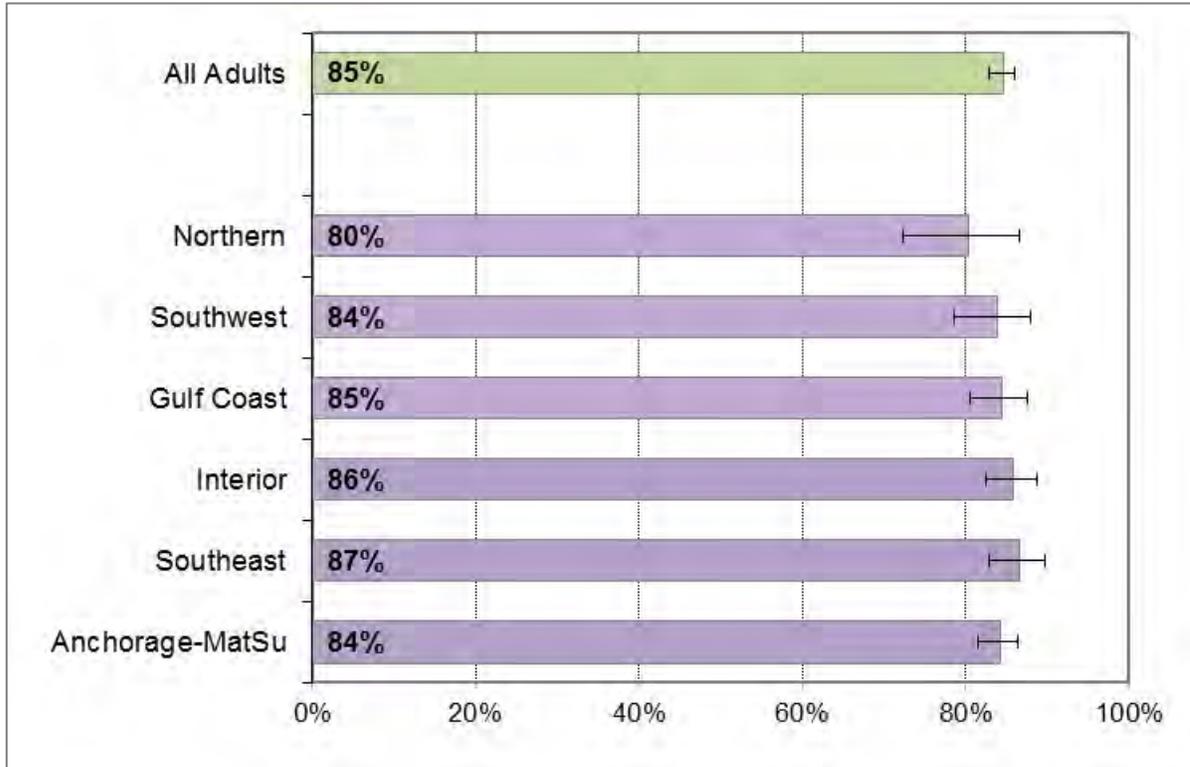


Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File.

*Significant difference between the two sub-groups.

- Among adults who work primarily indoors, men are significantly less likely than women to be protected by smokefree workplace policies. There were no other significant differences among the demographic groups.

Figure 67. Percentage of Adults Working Primarily Indoors Who Report that Smoking is Not Allowed in Work Areas, by Region, Alaska, 2013-2015

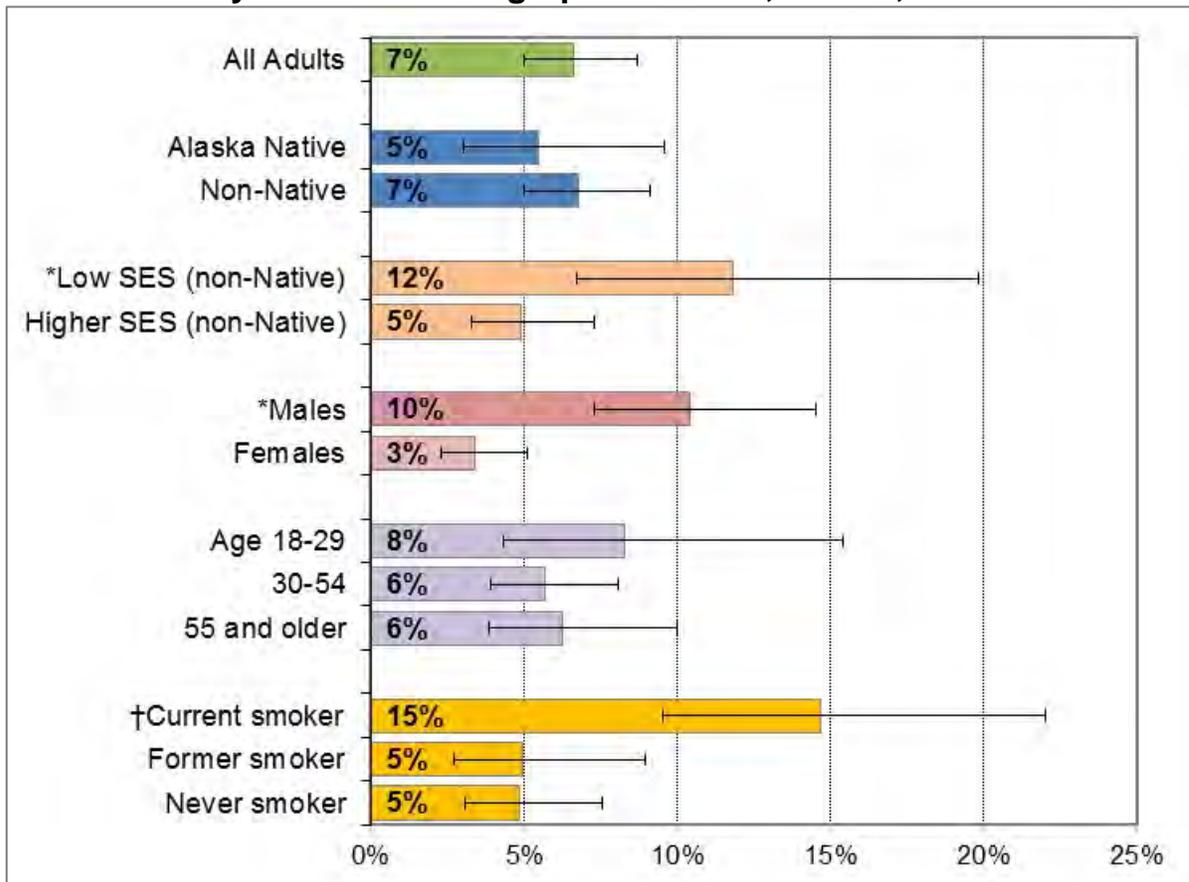


Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File.

Note: Percentages reported in this graph are for 2013-2015 combined, and may differ from those reported elsewhere for 2015 only.

- There were no significant differences across the regions among adults who work primarily indoors who reported that smoking is not allowed in work areas.

Figure 68. Percentage of Adults Working Primarily Indoors Who Report Workplace Exposure to Smoke in Past 30 Days, by Selected Demographic Factors, Alaska, 2015



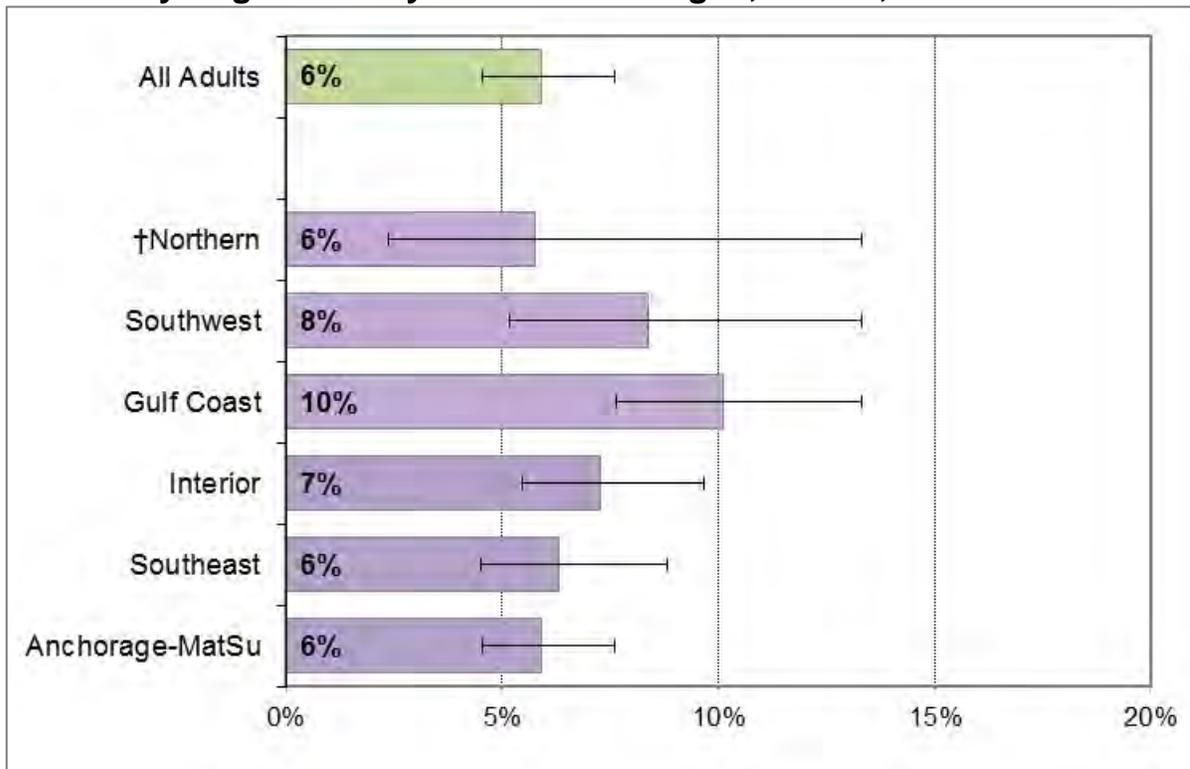
Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File.

*Significant difference between the two sub-groups.

†Significant difference between smoking status groups are described below.

- Lower SES adults were significantly more likely to report secondhand smoke exposure in the workplace than their higher SES counterparts (11.8% vs 4.9%).
- Men were significantly more likely to report secondhand smoke exposure in the workplace than women (10.4% vs 3.4%).
- Current smokers (14.7%) were significantly more likely to report secondhand smoke exposure in the workplace than both former smokers (5.0%) and never smokers (4.9%).

Figure 69. Percentage of Adults Working Primarily Indoors Who Report Exposure to Smoke Anywhere at the Workplace, by Region and by Selected Boroughs, Alaska, 2013-2015



Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File.

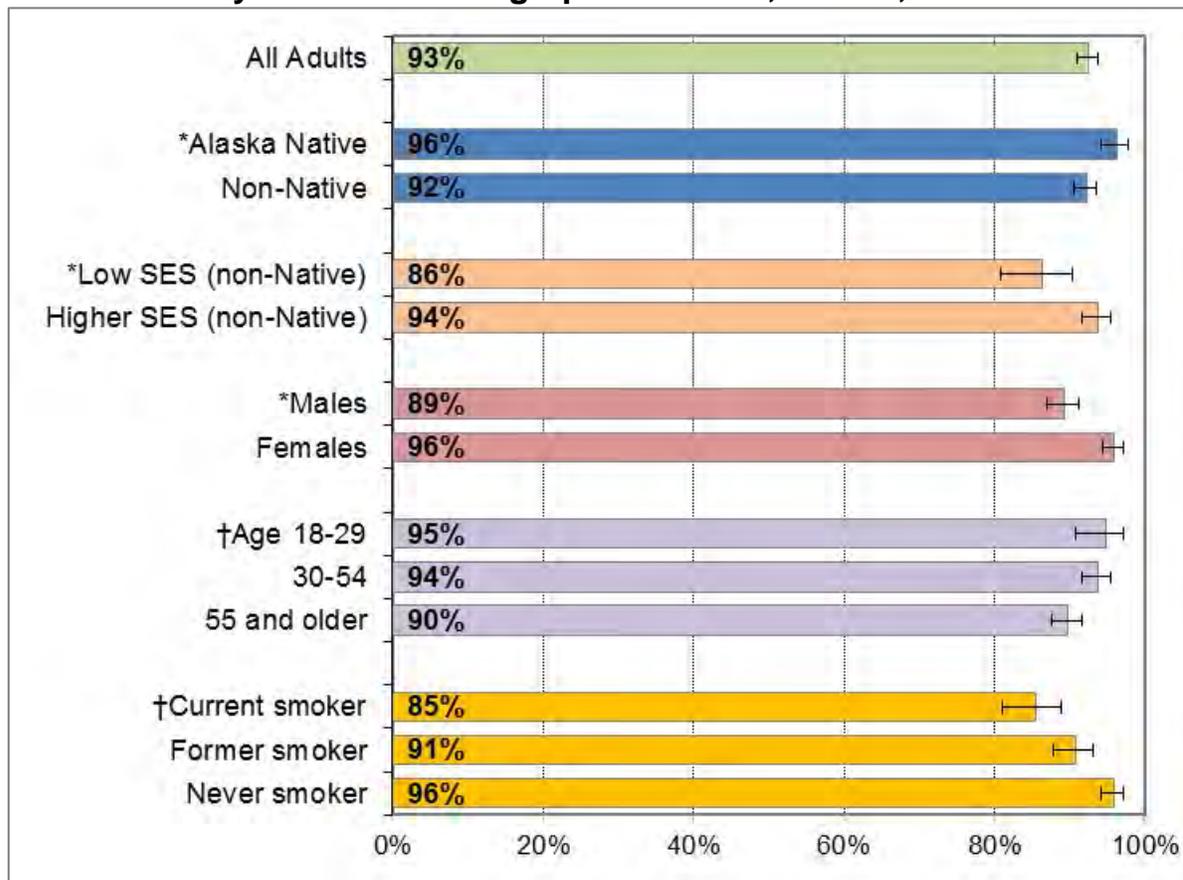
Note: Percentages reported in this graph are for 2013-2015 combined, and may differ from those reported elsewhere for 2015 only.

† Significant differences between regions are described below.

- If we combine data for 2013 to 2015, we can compare the proportion of adults who work primarily indoors and report smoke exposure in their workplace in the past 30 days by geographic location.
- The proportion of adults reporting indoor workplace smoke exposure in the Gulf Coast (10.1%) was significantly higher than in Anchorage/Mat-Su (5.9%) and Southeast Alaska (6.3%).
- These findings are consistent with the presence of community-wide smokefree workplace policies in Anchorage and Juneau.

C. Knowledge of Health Risks from Secondhand Smoke Exposure

Figure 70. Percentage of Adults Who Agree that Breathing Smoke from Other People’s Cigarettes is Somewhat or Very Harmful to One’s Health, by Selected Demographic Factors, Alaska, 2015



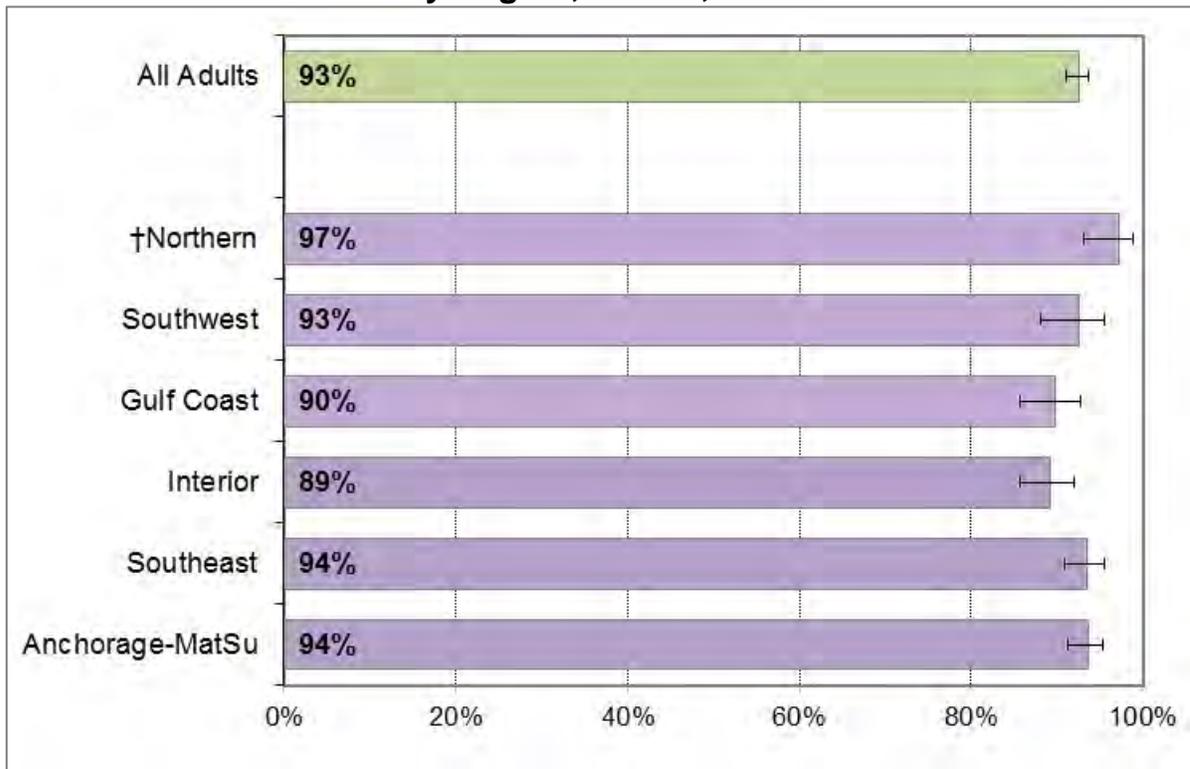
Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File.

*Significant difference between the two sub-groups.

†Significant differences between groups with more than 2 categories are described below.

- Most Alaskans (92.5%) recognized that there are health risks to secondhand smoke exposure, but there were differences between groups. Recognition was significantly higher among Alaska Native adults than non-Native adults (96.3% vs 92.2%), and higher among non-Native adults of high SES than those of lower SES (93.8% vs 86.3%).
- Women were significantly more likely than men to recognize the harm of secondhand smoke (95.9% vs 89.4%).
- Alaskan adults age 55 and older (89.8%) were significantly less likely to recognize this harm compared to those age 18-29 (94.9%) and those age 30-54 (93.8%).
- Current smokers (85.4%) were significantly less likely to view secondhand smoke as harmful as compared to former smokers (90.8%) and never smokers (95.8%). Moreover, recognition that secondhand smoke is harmful was significantly higher among never smokers than among former smokers.

Figure 71. Percentage of Adults Who Agree that Breathing Smoke from Other People’s Cigarettes is Somewhat or Very Harmful to One’s Health, by Region, Alaska, 2015

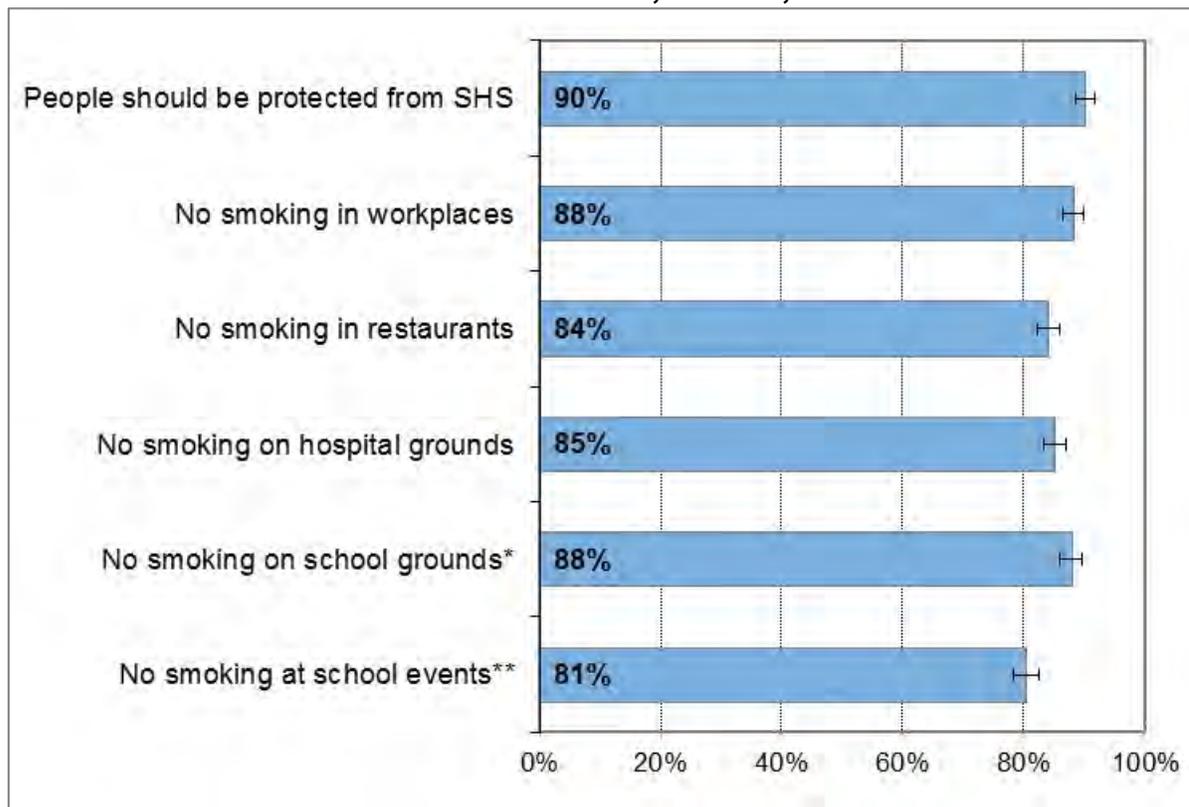


Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File.
 † Significant differences between regions are described below.

- The percentage of adults who agree that breathing smoke from other people’s cigarettes is somewhat or very harmful was significantly higher in Anchorage/MatSu (93.6%) as compared to the Gulf Coast (89.7%) and the Interior (89.2%) regions.
- Likewise, adults in the Northern region (97.1%) were significantly more likely to agree that secondhand smoke is harmful as compared to adults in the Gulf Coast (89.7%) and the Interior (89.2%) regions.
- Adults in the Southeast (93.5%) region were significantly more likely to recognize that secondhand smoke is harmful as compared to those in the Interior (89.2%) region.

D. Attitudes about Secondhand Smoke

Figure 72. Support for Protection against Secondhand Smoke in Selected Venues, Alaska, 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File.

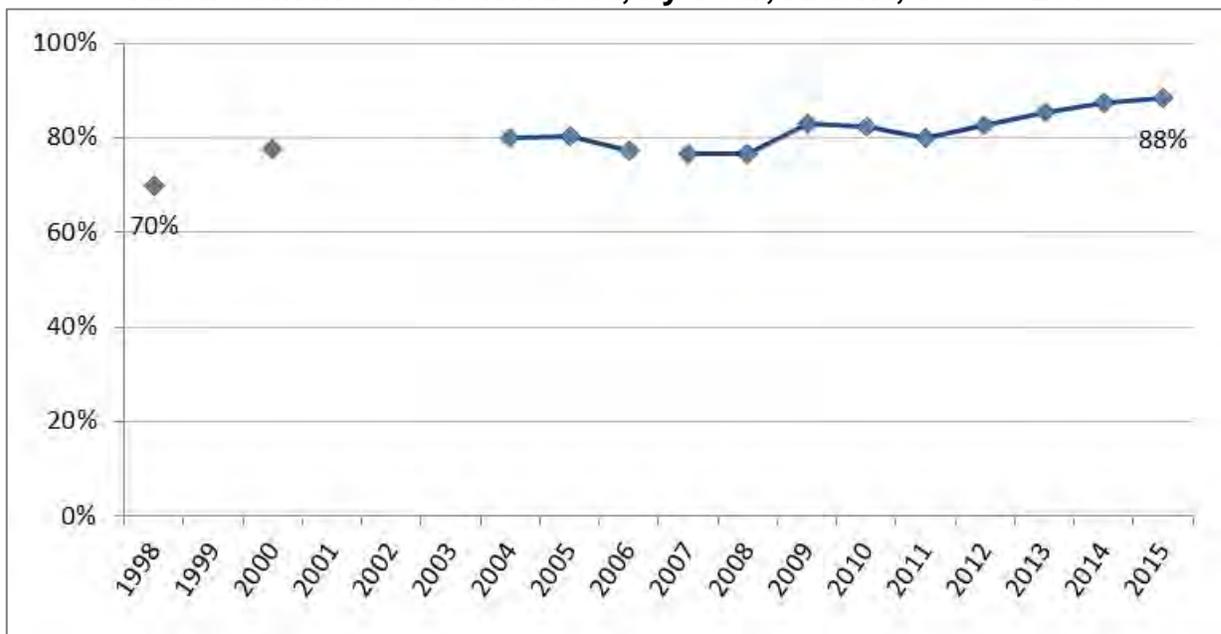
* Support for not allowing smoking on school grounds after school hours, including evenings and weekends.

** Support for not allowing smoking at school-sponsored events, even those that are not held on school grounds.

- The majority of Alaska adults (90.2%) agreed that people should be protected from secondhand smoke (SHS). Support was high even among smokers (83.6%).
- There is widespread support for clean indoor air policies; Alaska adults agreed that smoking should not be allowed in hospitals or on hospital grounds (85.2%), or in workplaces (88.3%). Most Alaska adults agreed that smoking should not be allowed on school grounds, not just during school (95.4%), but also after school or on weekends (88.0%) and at school events held off school grounds (80.5%).
- Most Alaska adults also supported smokefree restaurants (84.1%). Even among smokers, the majority (72.0%) supported smokefree restaurants.
- Studies across the country show that comprehensive clean indoor air policies do not have an adverse impact on the hospitality industry.³³

³³ The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General. (2006).

Figure 73. Percentage of Adults Who Agree that Smoking Should Not Be Allowed in Indoor Work Areas, by Year, Alaska, 1998 – 2015

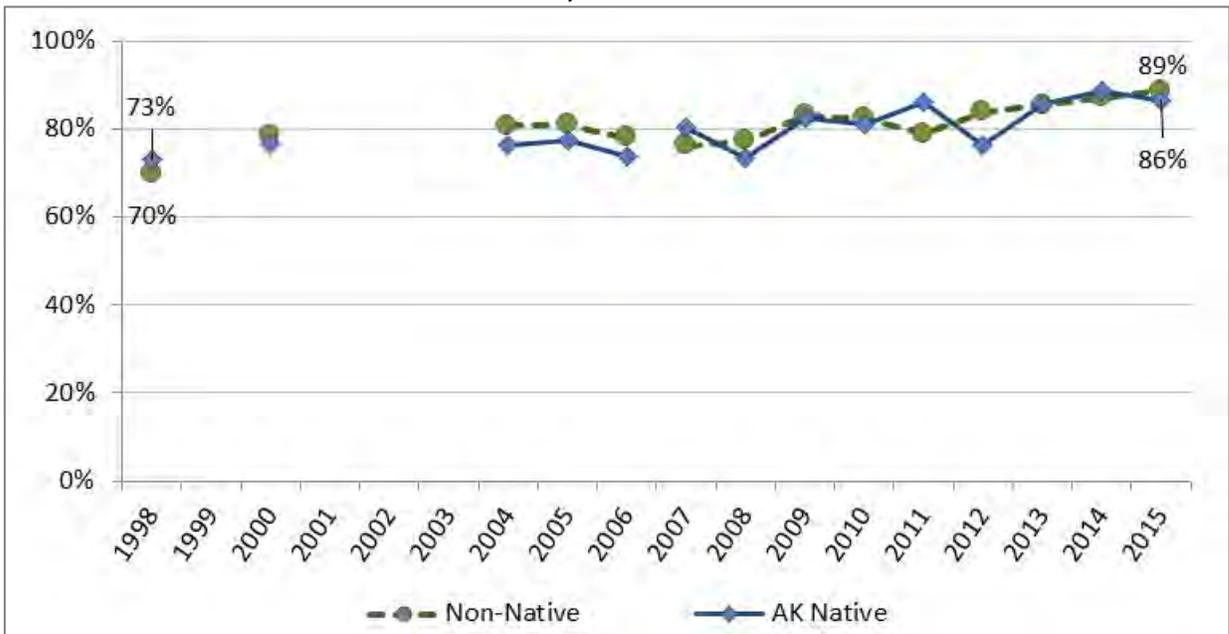


Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File; data not collected in 1999 or 2001 through 2003.

Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- Support for smokefree workplace policies that protect people from secondhand smoke (SHS) have increased across many groups of Alaskans. The proportion of adults who agree that smoking should not be allowed in indoor work areas has increased significantly from 70.0% in 1998 to 88.3% in 2015.
- The more recent trend (2007 to 2015) also shows a significant increase in support for smokefree workplace policies.
- Regionally, support for smokefree workplaces increased significantly in all regions from 1998 to 2015. Moreover, support increased significantly in all regions except in the Southwest region from 2007 to 2015, where the increase did not quite reach statistical significance (significance is at $p < 0.05$, and the p value for Southwest was 0.076).

Figure 74. Percentage of Adults Who Agree that Smoking Should Not Be Allowed in Indoor Work Areas, by Year and Alaska Native Status, Alaska, 1998 – 2015

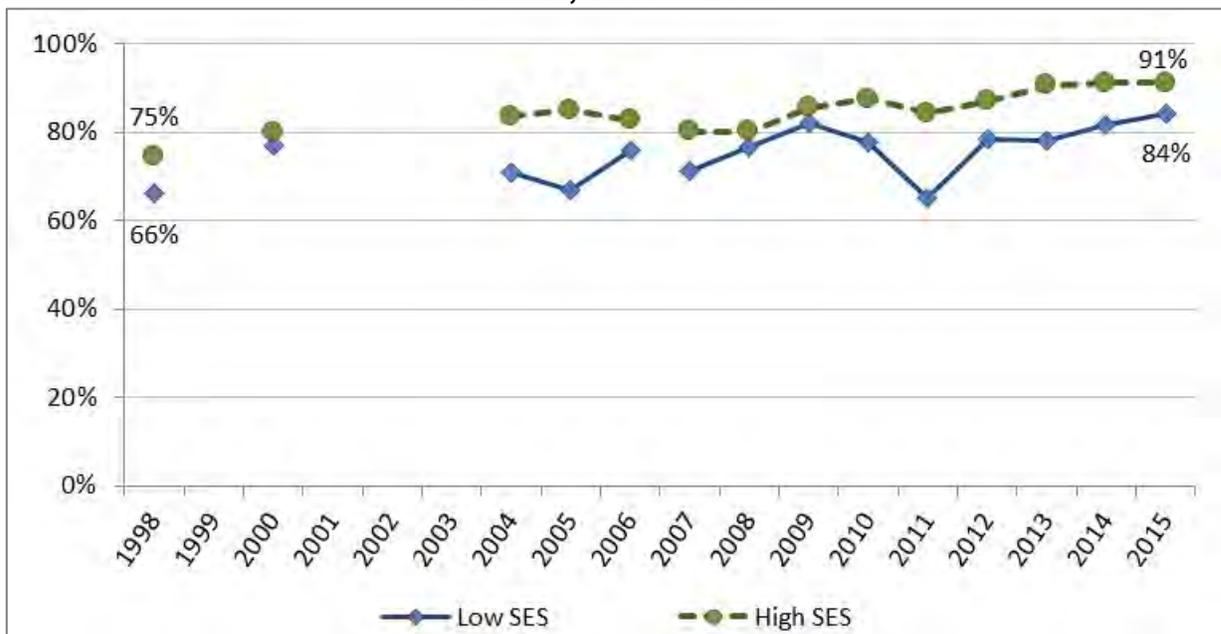


Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File; data not collected in 1999 or 2001 through 2003.

Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- The proportion of Alaska Native adults who agree that smoking should not be allowed in indoor work areas has increased significantly from 73.2% in 1998 to 86.3% in 2015. The more recent trend (2007 to 2015) also shows a significant increase.
- The proportion of non-Native adults who agree that smoking should not be allowed in indoor work areas has increased significantly from 69.8% in 1998 to 88.8% in 2015. The more recent trend (2007 to 2015) also shows a significant increase.

Figure 75. Percentage of Adults Who Agree that Smoking Should Not Be Allowed in Indoor Work Areas, by Year and Socioeconomic Status³⁴, Alaska, 1998 – 2015



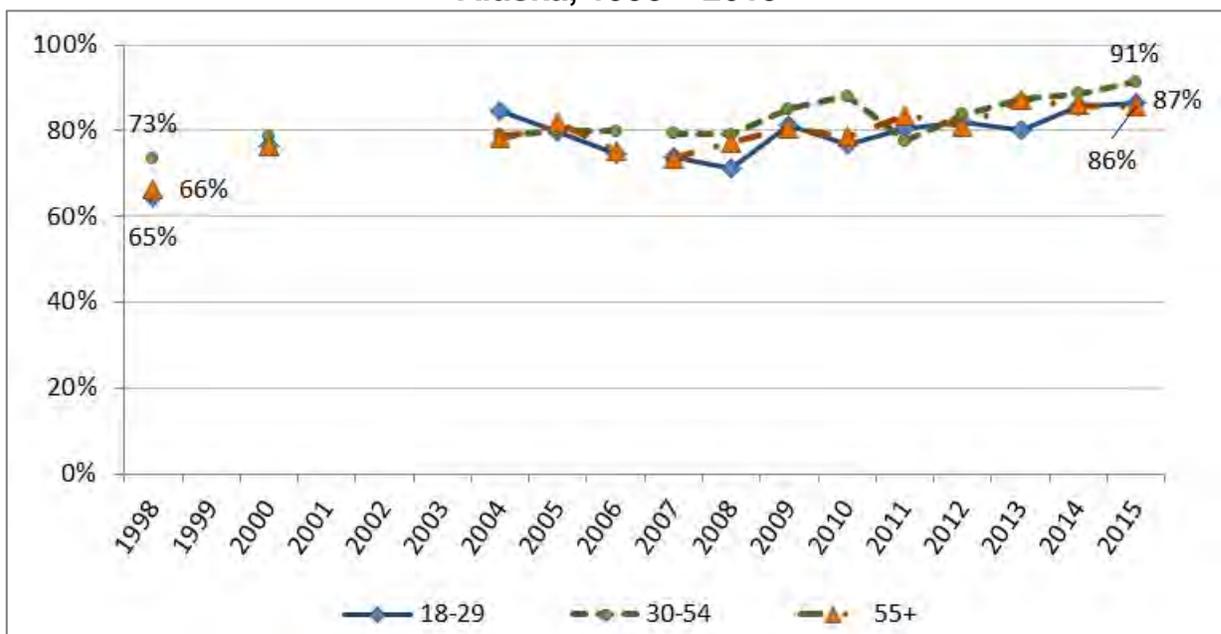
Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File; data not collected in 1999 or 2001 through 2003.

Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- Among adults with low SES, the percentage who agree that smoking should not be allowed in indoor work areas has significantly increased from 66.3% in 1998 to 84.4% in 2015. The more recent trend (2007 to 2015) also shows a significant increase.
- Among adults with higher SES, the percentage who agree that smoking should not be allowed in indoor work areas also increased significantly, from 74.6% in 1998 to 91.2% in 2015. The more recent trend (2007 to 2015) also shows a significant increase.

³⁴ The socioeconomic status (SES) measure is restricted to non-Natives age 25 to 64. Low SES is defined as less than high school education or household income at 185% or less of the Alaska Poverty Level Guideline. See Appendix B for more information.

Figure 76. Percentage of Adults Who Agree that Smoking Should Not Be Allowed in Indoor Work Areas, by Year and Age Group, Alaska, 1998 – 2015

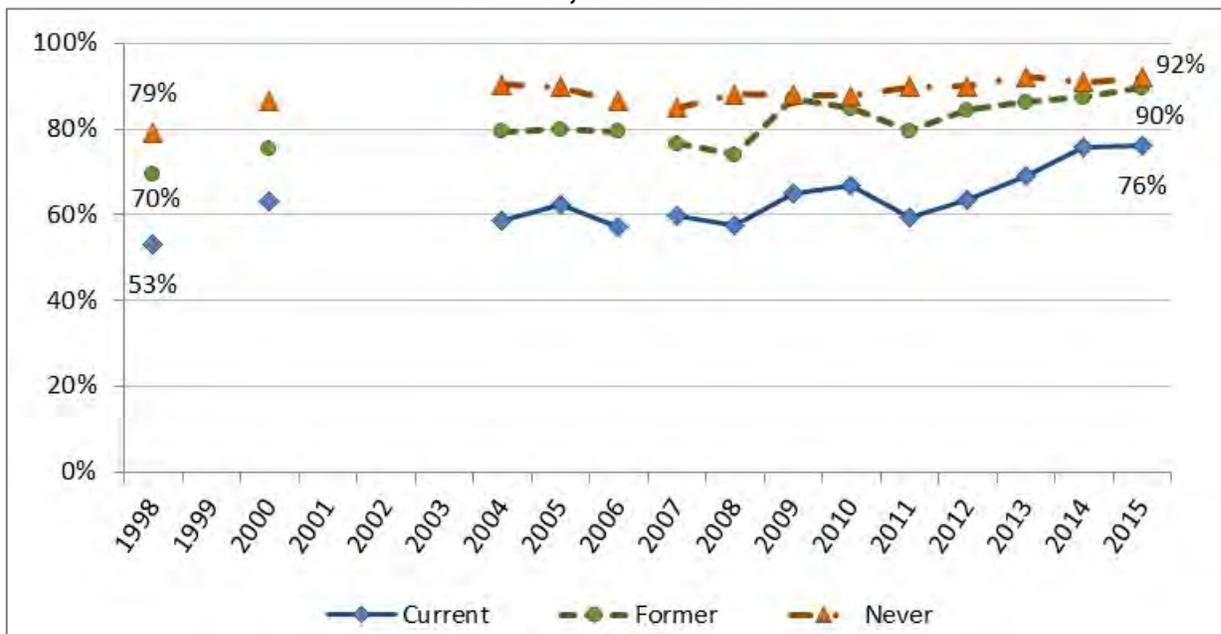


Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File; data not collected in 1999 or 2001 through 2003.

Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- The proportion of Alaska adults age 18 to 29 who support smokefree workplace policies increased significantly from 64.6% in 1998 to 86.5% in 2015.
- Likewise, the proportion of Alaska adults age 30 to 54 who support smokefree workplace policies increased significantly from 73.4% in 1998 to 91.4% in 2015.
- Similar to the increase in support among young adults, the proportion of Alaska adults age 55 and older who support smokefree workplace policies increased significantly from 66.4% in 1998 to 85.7% in 2015.
- The more recent trend (2007 to 2015) also shows a significant increase in support for smokefree workplace policies in all age groups.

Figure 77. Percentage of Adults Who Agree that Smoking Should Not Be Allowed in Indoor Work Areas, by Year and Smoking Status, Alaska, 1998 – 2015

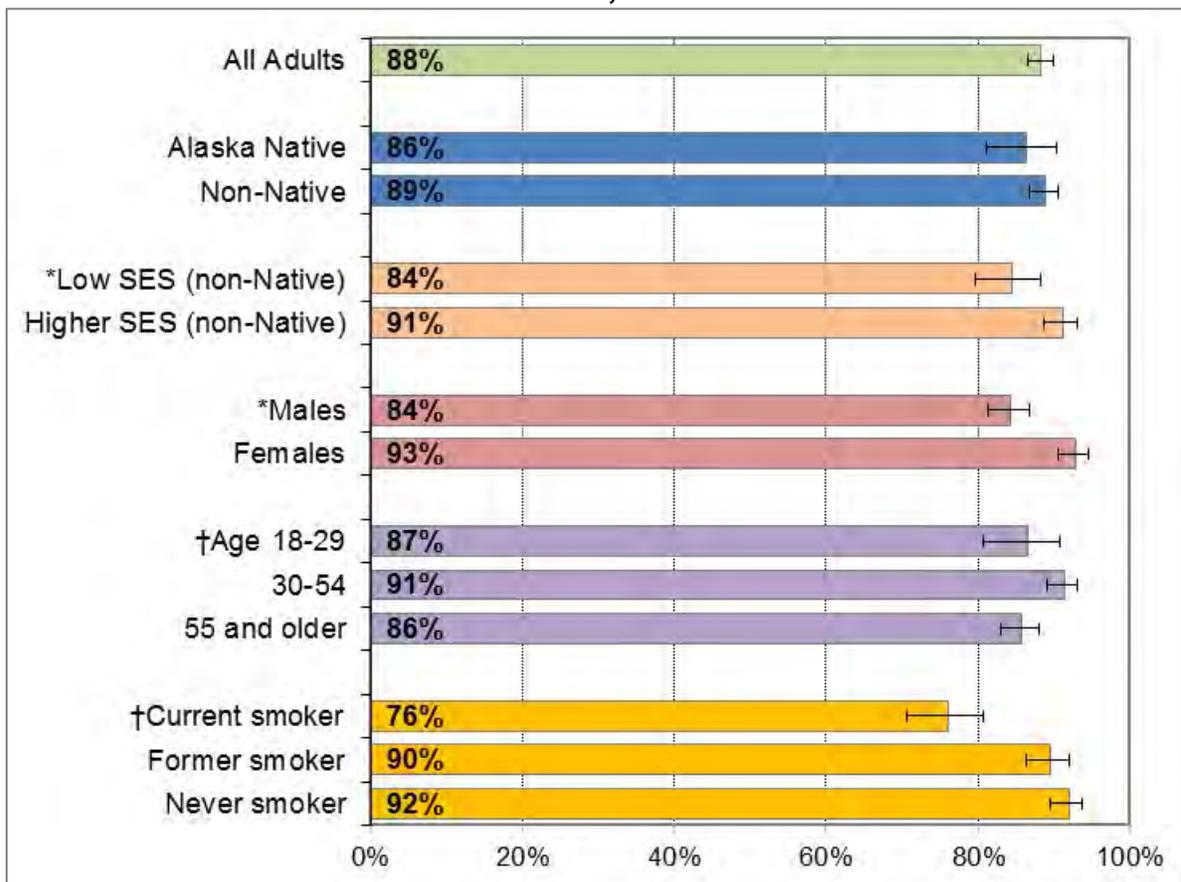


Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File; data not collected in 1999 or 2001 through 2003.

Estimates for 2007 and later use a newer weighting method; see Appendix B for more information.

- Among Alaska adults who are current smokers, support for smokefree workplaces increased significantly from 53.0% in 1998 to 76.0% in 2015.
- Among Alaska adult never smokers, support for smokefree workplaces also increased significantly from 79.2% in 1998 to 92.0% in 2015.
- The proportion of Alaska adult former smokers who agree that smoking should not be allowed in indoor work areas increased significantly from 69.6% in 1998 to 89.6% in 2015.
- The more recent trend (2007 to 2015) also shows a significant increase in support for smokefree workplace policies across all groups—smokers as well as former and never smokers.

Figure 78. Percentage of Adults Who Agree that Smoking Should Not Be Allowed in Indoor Work Areas, by Selected Demographic Factors, Alaska, 2015



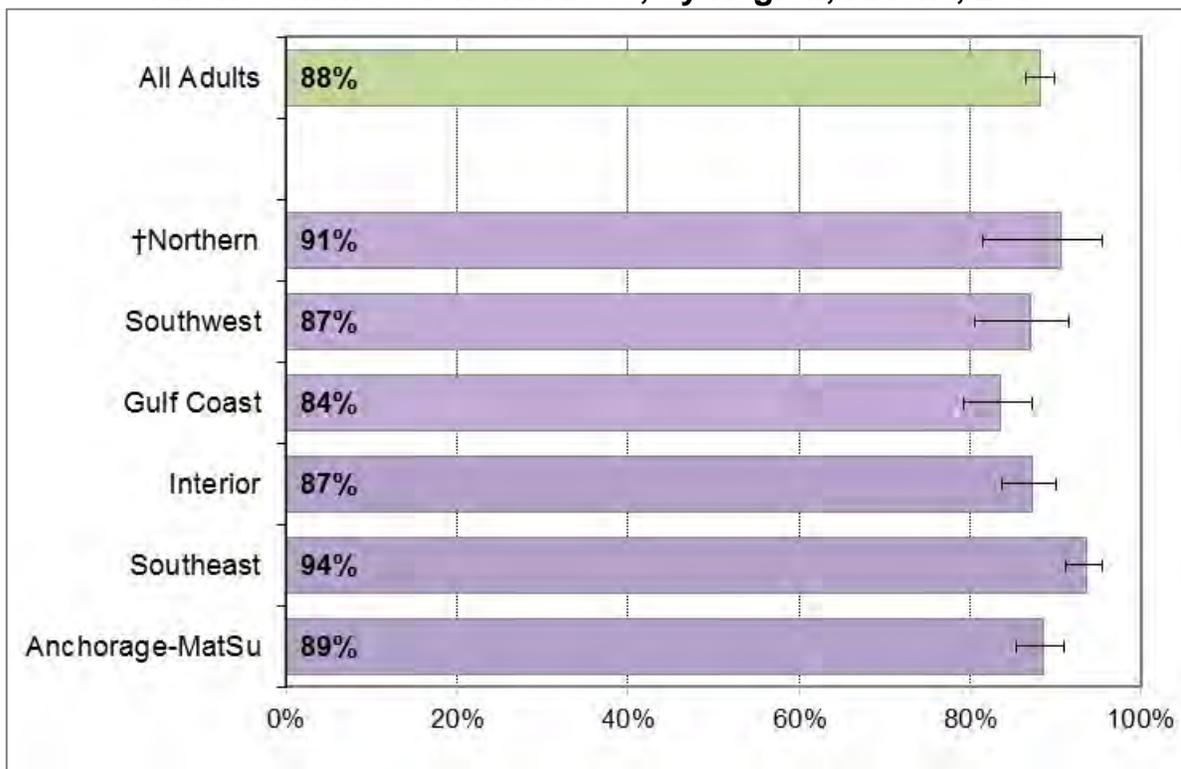
Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File.

*Significant difference between the two sub-groups.

†Significant differences between age groups and smoking status groups are described below.

- Most Alaskans (88.3%) agreed that smoking should not be allowed in indoor work areas, but there were differences between groups. Adults with higher SES (91.2%) were significantly more likely to support smokefree workplaces than their lower SES counterparts (84.4%).
- Support for smokefree workplaces was significantly higher among females (92.8%) as compared to males (84.2%).
- Adults age 30-54 (91.4%) were significantly more likely to support smokefree workplaces as compared to adults age 55 or more (85.7%).
- Current smokers (76.0%) were significantly less likely than both former smokers (89.6%) and never smokers (92.0%) to support smokefree workplaces.

Figure 79. Percentage of Adults Who Agree that Smoking Should Not Be Allowed in Indoor Work Areas, by Region, Alaska, 2015

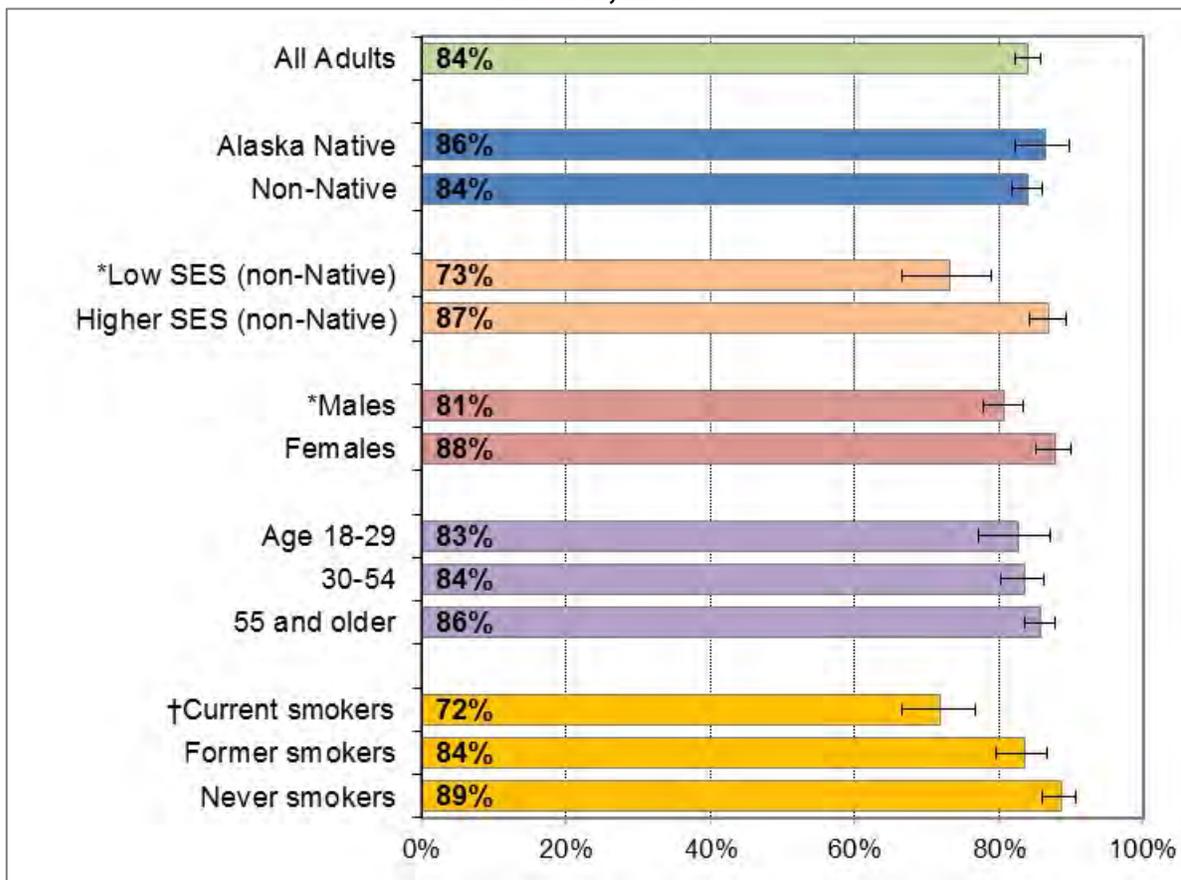


Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File.

†Significant differences between regions are described below.

- The proportion of adults who agree that smoking should not be allowed in indoor work areas was significantly higher in Anchorage (88.5%) as compared to the Gulf Coast (83.6%).
- A significantly larger proportion of adults in the Southeast region (93.6%) agreed that indoor work areas should be smokefree as compared to adults in the Anchorage/Mat-Su (88.5%), Gulf Coast (83.6%), Interior (87.3%) and Southwest (87.0%) regions.

Figure 80. Percentage of Adults Who Agree that Smoking Should Not Be Allowed in Restaurants, by Selected Demographic Factors, Alaska, 2015



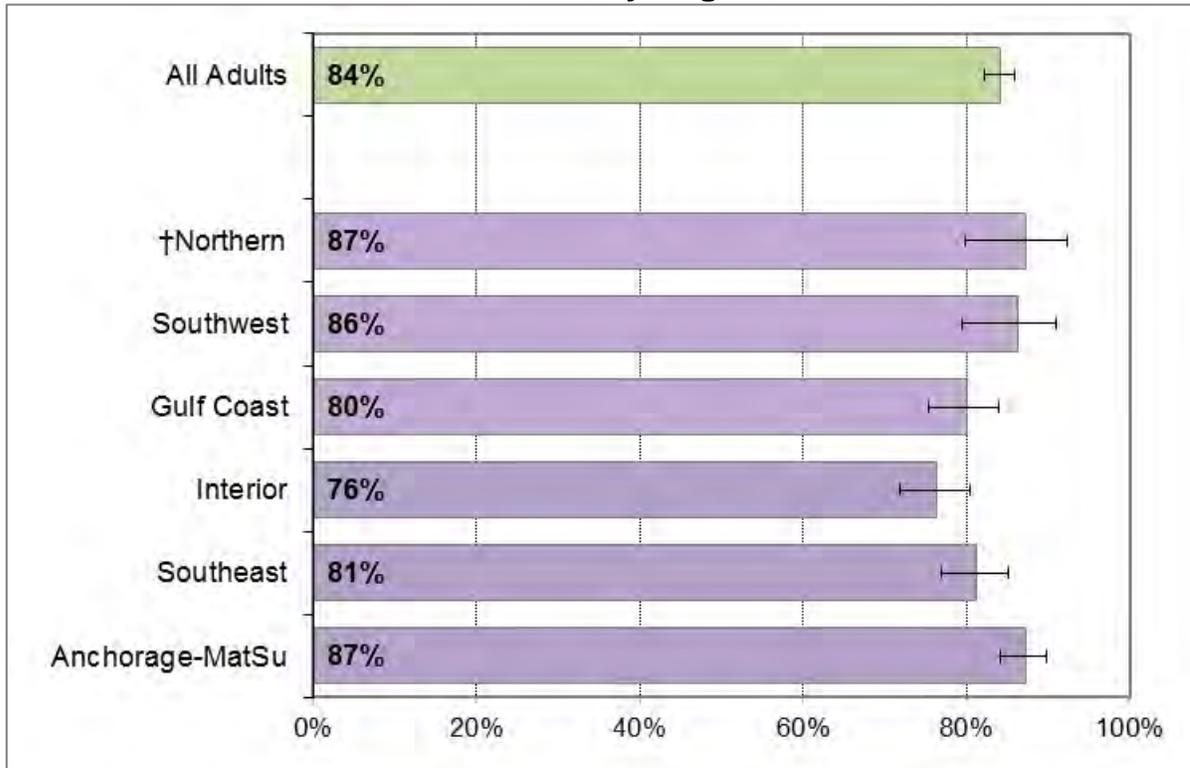
Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File.

*Significant differences between the two sub-groups.

†Significant differences between smoking status groups are described below.

- Support for smokefree restaurants was significantly higher among adults with higher SES (87.0%) as compared to those with low SES (73.2%).
- Women (87.8%) were significantly more likely than men (80.7%) to support smokefree restaurants.
- Current smokers (72.0%) were significantly less likely to support smokefree restaurants than both former smokers (83.5%) and never smokers (88.6%). Support for smokefree restaurants was significantly higher among never smokers as compared to former smokers.

Figure 81. Percentage of Adults Who Agree that Smoking Should Not Be Allowed in Restaurants, by Region, Alaska, 2015



Source: Alaska Behavioral Risk Factor Surveillance System, Supplemental File.
 † Significant differences between regions are described below.

- Adults in Anchorage/Mat-Su (87.3%) were significantly more likely to agree that smoking should not be allowed in restaurants than those in the Gulf Coast (80.1%), Interior (76.4%), or Southeast (81.3%) regions of Alaska.
- Adults in Interior Alaska (76.4%) were significantly less likely to support smokefree restaurants than adults in the Northern (87.4%) or Southwest (86.3%) regions.
- In the Municipality of Anchorage, where smoking is not allowed in any restaurants, bars or other indoor workplaces, 95.5% of adults reported that they go out to bars and similar establishments just as much or more often than they did when smoking was allowed in those places. Among smokers, 84.2% reported going as often or more often.

V. Alaska Tobacco Prevention and Control Program

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

The Alaska TPCP follows the model outlined in *Best Practices for Comprehensive Tobacco Prevention and Control Programs*, a CDC document that describes strategies shown to reduce tobacco use when employed in a sustained and comprehensive manner.³⁵ The model, drawing on the tobacco prevention and control literature and outcomes in states across the country, has four primary goals, which are:

1. Prevent the initiation of tobacco use by young people
2. Promote tobacco cessation among adults and young people
3. Eliminate exposure to secondhand smoke
4. Identify and eliminate tobacco-related disparities in specific populations

Work to achieve the four goals is accomplished through work in five overarching categories, including: 1) State and Community Interventions, 2) Health Communications, 3) Cessation Interventions, 4) Surveillance and Evaluation, and 5) Administration and Management. A description of each category and TPCP activities in each is given below.

1) State and Community Interventions

The State and Community Interventions component focuses on building infrastructure and implementing programming at the state and local level, including efforts to reduce tobacco-related disparities.

Statewide Programs

Statewide programs are designed to provide resources and information that support coordinated and effective tobacco control activities in a state. The Alaska TPCP currently has the following statewide programs:

³⁵ Centers for Disease Control and Prevention. *Best Practices for Comprehensive Tobacco Control Programs*-2014. Atlanta, GA: 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; 2014.

- Technical assistance and training to community programs on action planning, coalition development, local policy change, and media advocacy
- Support, training, and development for the statewide tobacco coalition (ATCA)
- Implementation of a statewide strategic plan in conjunction with ATCA

Community Programs

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

The Alaska TPCP provides grants to local organizations for staff, operating expenses, resource materials, education, training, and public education. As of FY14, the TPCP has been implementing a regional funding model designed to support comprehensive tobacco prevention and control efforts at the local level. The TPCP funds 13 lead organizations across the 6 Public Health/Labor Market Regions in the state and 3 organizations working at a statewide level. The lead agencies have subcontracted with an additional 16 organizations.

Regional and statewide grantees provide education around the effects of tobacco use and SHS exposure and promote evidence-based strategies that discourage youth initiation, provide support for tobacco users to quit, and protect residents from SHS exposure. Grantees also act as a resource to community leaders and organizations interested in reducing the impact of tobacco use within their communities.

Tobacco-Related Disparities

Tobacco-related disparities have been defined as “differences in patterns, prevention, and treatment in tobacco use, differences in the risk, incidence, morbidity, mortality, and burden of tobacco-related illness that exist among specific population groups in the United States, and related differences in capacity and infrastructure, access to resources, and environmental tobacco smoke exposure.”³⁶ The CDC recommends that state program plans include strategies to identify and eliminate tobacco-related disparities.

Regional and statewide grantees have identified tobacco-related disparities in their service areas and incorporate efforts to eliminate those disparities in their workplans. In addition to focused local efforts, the TPCP has a number of statewide initiatives designed to identify and reduce tobacco-related disparities.

In 2006 Alaska was chosen as one of 11 states funded by the CDC to participate in a strategic planning process around disparities. The TPCP convened a planning team, the Leadership for Eliminating Alaskan Disparities (LEAD) workgroup, which published a

³⁶ Fagan P, King G, Lawrence D, Petrucci SA, Robinson RG, Banks D, et al. Eliminating tobacco-related health disparities: directions for future research. *American Journal of Public Health* 2004; 94:211-217.

strategic plan to eliminate disparities in tobacco use due to race, region of residence, or socioeconomic status.

The TPCP created a position to oversee the disparities component of the program in 2008 and hired a contractor to revise and update the disparities plan in March 2010. An updated plan was published in 2011 that included detailed strategies and action steps for each of the program goals among priority populations. The priority populations include Alaska Native adults, adults of low socioeconomic status, and young adults age 18-29. Workgroups were formed to implement the strategies for each of the priority populations. Grantees and partners across the state continue to work on these strategies. In addition, the TPCP supports tobacco prevention and control efforts with community-based organizations that partner with and provide service to ethnic minorities, and the Lesbian/Gay/Bisexual/Transgender population.

2) Health Communication Interventions

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

TPCP health communications interventions include a wide range of activities, including paid television, radio, online, and print media. The television, radio, online, and print materials developed by the TPCP are designed to motivate tobacco users to quit and educate Alaskans about the health risks associated with exposure to secondhand smoke. TPCP grantees also receive technical assistance around the development, production, and placement of media that supports their local tobacco prevention and cessation efforts.

3) Cessation Interventions

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

The TPCP currently funds a statewide, toll-free tobacco quit line that includes the provision of NRT and counseling via the telephone, web, or text message. TPCP grantees also work with local health care organizations to integrate protocols for identifying and treating tobacco use into their clinical practices. A key component of this program is training staff in Alaska's hospitals and clinics to screen patients for tobacco use and exposure to secondhand smoke, advise patients to quit tobacco, and to refer tobacco users to cessation services.

4) Surveillance and Evaluation

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

The Alaska TPCP collects tobacco-related data annually through a variety of methods, which are described in detail in Appendix B. Key tobacco indicators are published annually in Alaska Tobacco Facts (this report). In addition, the TPCP routinely conducts specialized data analysis projects, including reports on tobacco use among Alaska Native adults, adults of lower socioeconomic status, smokeless tobacco (SLT), and tobacco cessation.

The focus of program evaluation efforts shifts from year to year based on program and partner needs, but has included evaluation of grantee progress, quit rates and satisfaction among Alaska's Tobacco Quit Line clients, and recall and reaction to tobacco prevention media.

5) Administration and Management

An effective tobacco control program requires a strong management structure that can oversee the implementation of program components and coordinate efforts with partner agencies. The TPCP administers numerous grants and contracts to implement the activities of the comprehensive program. The TPCP also partners with other state agencies, ATCA, non-profit organizations, the CDC, tribal health organizations, local governments, schools, and community groups. The TPCP is overseen by a full-time Program Manager and supported by a Deputy Manager. Several administrative staff positions in the CDPHP Section also provide some clerical support to the TPCP on an as-needed basis.

Funding for the TPCP Program is provided primarily through the Tobacco Use Education and Cessation Fund (TUECF), which was established in 2001 by the Alaska State Legislature under AS 37.05.580 to provide a source to finance a comprehensive tobacco use prevention, education, and cessation program authorized by AS 44.29.020(A)(15). In 1998 the State of Alaska joined 45 other states in the national multi-state Master Settlement Agreement (MSA) with the tobacco industry. The settlement funds to states are intended to offset the costs of tobacco-related illness by supporting tobacco prevention and cessation programs. Each year, 20 percent of the MSA revenue and a portion of the state cigarette tax revenue are to be placed in the TUECF fund and are available for appropriation to tobacco prevention and control efforts.

The Centers for Disease Control and Prevention (CDC) has issued recommendations on the financial resources needed in each state to counter the aggressive marketing of tobacco products. Since 2000 Alaska's funding appropriations have grown to levels at or near the CDC recommendations, with funds administered by the Alaska TPCP.

VI. Appendix A: Trend Tables

Omitted. Available upon request at surveys@Alaska.gov.

VII. Appendix B: 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. Sales estimates for years prior to FY 2008 are those calculated for and included in prior Tobacco Facts reports, and are not updated to reflect any further changes. Estimates used for 2015 come from the “FY 15 Cigarette and Other Tobacco Products Summary” dated August 2015. Tax reports can be found on the Alaska Department of Revenue web pages at: <http://www.tax.alaska.gov//programs/programs/reports/index.aspx?60170>.

Population Estimates

Alaska and U.S. population estimates by age, used in calculating U.S. 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, 2010 (NC-EST2007-02). For 2010, these data were replaced with information from the Census release at <http://2010.census.gov/2010census/>. The Alaska census data are also located on the Alaska Department of Labor and Workforce Development population estimate web pages at <http://laborstats.alaska.gov/census/>.

Current year 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>.

Smoking-Related Deaths and Economic Costs

In prior years, we estimated the proportion of deaths and economic costs associated with smoking using an online program developed by CDC called “Smoking Attributable Mortality, Morbidity and Economic Costs (SAMMEC).” Several years ago this application was taken offline when new data became available on relative risks for smoking-related diseases. Several new smoking-related diseases were also identified.

These new data were published in Chapter 12 of the U.S. Department of Health and Human Services 2014 report, “The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General.” The report (referred to below as the SG report) is available at <http://www.surgeongeneral.gov/library/reports/50-years-of-progress>.

We calculated smoking-attributable deaths, lost productivity and medical expenditures using the methods described in the SG report. All estimates were done in a spreadsheet entitled, “2011-2015 SAMMEC-with SAM YPLL & Medical exp.xlsx.”

Smoking-attributable mortality

We requested resident mortality data from the Alaska Bureau for Vital Statistics for 2011-2015 in 5 year age groups from age 35 and older for the smoking-related diseases identified. We combined deaths from these age groups to match the age- and sex-specific relative risk estimates published in the SG report. We used age- and sex-specific smoking prevalence estimates from BRFSS for 2011-2015 to produce a combined estimate for each age and sex group.

We calculated age- and sex-specific smoking-attributable fractions (SAFs) using smoking prevalence and mortality data for smoking-related diseases. The SAFs were applied to the mortality data for each smoking-related disease and summed to produce the overall smoking-attributable mortality across age groups and causes of death for both sexes for each year from 2011-2015. We then calculated the average number of smoking-attributable deaths for that time period.

Lost productivity costs due to smoking-attributable deaths

We estimated productivity losses based on premature mortality using methods from the SG report. We began with estimates for lifetime production (total and market) provided by Grosse et al³⁷ of the present value of future earnings, published for 2007. We then updated this table to 2013 dollars by using the Employment Cost Index current dollars table. We used the figures for total production (not market production) for each age group and multiplied the previously estimated deaths in each age group to corresponding forgone earnings. We used total estimates rather than those for men and women separately, as well as the 3% discount rate, as recommended by CDC.

³⁷ Grosse SD, Krueger KV, Mvundura M. Economic Productivity by Age and Sex, 2007 Estimates for the United States. *Medical Care* 2009;47: S94-S103.

The total amount of lost productivity as represented by forgone earnings was determined by summing the product of earnings and smoking-attributable deaths across all age groups. For the average annual estimate for 2011-2015, we divided by five.

Smoking-attributable medical expenditures

We used the smoking attributable fractions (SAFs) of medical expenditures developed by CDC and used in the 2014 Surgeon General Report. These SAFs were originally estimated in 2004 and were used in the SAMMEC web application before it was taken offline. The SAFS were obtained via personal communication from CDC and are listed below:

	Alaska	US
Hospitals	0.1172	0.1025
Ambulatory Care	0.0506	0.049
Nursing Home Care	0.0822	0.0787
Prescription Drugs	0.102	0.0948
Other Services	0.037	0.0331

To estimate smoking-attributable medical expenditures, the SAFs are applied to total medical expenditures by category. Data for Alaska for 2011-2014 were obtained from the Centers for Medicare and Medicaid Services: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsStateHealthAccountsResidence.html>

Before applying the SAFs, we combined some CMS categories (home health, durable medical equipment, other health professionals fees, and costs for other residential and personal care), to correspond to the “Other Services” category used by CDC, as per the methods used in the SG report. We also excluded dental expenses.

In addition, we excluded the estimated 9.6% of costs for services delivered to children and adolescents 19 years of age or younger. We derived this estimate using work published by Bul, et al³⁸, in which 2013 total health care expenditures for children and adolescents 19 or younger was estimated at \$233,500 million. We divided total US expenditures (\$2,435,624 million) by this figure to arrive at 9.6%. Total expenditures were adjusted downward by this percentage.

³⁸ Bul AL, Dieleman JL, Hamavid H, et al. Spending on children’s personal health care in the United States, 1996-2013. JAMA Pediatr. 2017;171(2):181-189. Available at: <http://jamanetwork.com/journals/jamapediatrics/fullarticle/2593700>

Deaths due to secondhand smoke

Estimates for deaths due to secondhand smoke inhalation are national estimates referenced in “The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General.”

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 Centers for Disease Control (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 1991.

Alaska presently conducts two BRFSS surveys: the standard BRFSS and a separately funded supplemental BRFSS. The supplemental survey contains most of the additional tobacco-related questions, some of which have been adapted from the CDC’s Adult Tobacco Survey. Both surveys are conducted throughout the year, using separate samples drawn using the same methodology. In 2015, approximately 687 Alaska adults were interviewed each month for the two BRFSS surveys combined. The 2015 sample includes 2,487 respondents reached by cell phone and 5,761 respondents reached by their residential landline phone. Because sample size is lower for some subpopulation reporting groups, data years have occasionally been combined to report some key indicators.

How BRFSS Survey Participants are Selected

The BRFSS uses a probability (or random) sample in which all Alaska households with landline telephones have a known, nonzero chance of selection. Respondents are randomly selected from among the adult members of each household reached through a series of telephone calls. Historically, those living in institutional housing (i.e., nursing homes and barracks) are not surveyed. The sample is stratified into geographic regions, with roughly equal numbers of interviews conducted in each region. This method deliberately oversamples rural areas of the state. The sample was stratified into six geographic regions in 2011—Anchorage, Mat-Su, Gulf, Southeast, Fairbanks North Star, and Rural. Since 2012, the landline sample has been stratified into seven regions for the supplemental survey and six regions for the cell sample. Where possible, the rural region is divided into two regions: Southwest and Northern/Interior.

In addition, the sampling frame has been expanded to include cell phones as well as landline or household phones. This step was important because the proportion of households served only by cell phones has increased rapidly. By June 2010, about 20% of Alaska households were cell-only. Starting in 2011, Alaska's cell phone sample was large enough to include it in weighting and reporting of data.

Interviews are conducted by trained interviewers 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.

Data Weighting and Methods Issues

BRFSS data are weighted to adjust the distribution of the sample data so that it reflects the total population of the sampled area, and to compensate for the over-representation or under-representation of persons in various subgroups.

Changes in both the weighting and sampling methods are reflected in the estimates reported in this update of Tobacco Facts (and other recent Tobacco Facts updates since 2013). These changes help ensure that the BRFSS can continue to be a valuable source of information for health planning and improvement. The first change is a newer weighting method known as iterative proportional fitting, or raking. Raking allows for the inclusion of several key demographic factors in adjusting survey data to the adult population totals. To provide additional context for interpretation about changes in prevalence estimates over time, raking was applied to data from 2007 forward, and therefore the estimates listed for 2007 through 2010 may be slightly different from estimates reported in earlier publications.

As noted above, starting in 2011 survey participants include people who have cell phones, in addition to those who have a traditional landline phone. Therefore, 2011 and later data for many key indicators like adult smoking and smokeless tobacco use will reflect the population of cell-only Alaskan adults as well as those who have landline only or landline

and cell phones. This change in sampling may also have an effect on prevalence estimates, although the differences are often minimal. More information about the changes in BRFSS methods can be found in the January 2013 issue of *Chronicles*: <http://dhss.alaska.gov/dph/Chronic/Documents/Publications/assets/ChronicleSV5-1.pdf>.

Both the standard and supplemental BRFSS are weighted (separately) for analysis of items that occur only in one version. In addition, a combined dataset (standard plus supplemental) is created and weighted for analysis of questions that occur in both versions. In recent years, the combined sample has included more respondents (a little more than 6,000 in 2011, and between 8,000-9,000 each year from 2012 to 2015), but prior years included fewer respondents. Between 1996 and 2003 annual sample size ranged from 1,536 to 2,875 respondents, and from 2004 to 2010, the annual combined sample size averaged about 4,750 respondents. The larger sample sizes allow for more precision in the estimates of tobacco-related items, including prevalence of smoking and SLT use. 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.

In this report, we used chi-square tests in our comparisons between groups of Alaskans. Chi-square tests are tests of association between group and outcome variables (for example, smoking [yes, no] and gender [male, female]). For trend analyses, we used logistic regression models that tested for a statistically significant linear change over time. P-values less than 0.05 indicate that a difference seen between percentages or across years is statistically significant at the 95% confidence level.

In the appendix tables, we report the 95% confidence intervals as well as the estimates and denominators. In the bar graphs, the error bars (lines with a “T” at either end) reflect the confidence intervals and show the range of where the true population estimate is expected to be, at the 95% confidence level.

Defining Tobacco Use

Since 1996, the BRFSS has defined current cigarette smoking from two questions: 1) Have you smoked at least 100 cigarettes in your entire life? and 2) Do you now smoke cigarettes every day, some days, or not at all. Current smoking includes those who have smoked at least 100 cigarettes in their life and now smoke every day or some days. Former smoking is defined as having smoked at least 100 cigarettes in your entire life but currently not smoking at all.

For 2015, the question about e-cigarette use includes an introductory statement: “Now I’m going to ask about electronic vapor products, which include e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens.” Respondents are asked if they have ever used e-cigarettes or other electronic vapor products, and if they have used e-cigarettes in the past 30 days. Current e-cigarette use is defined as having used e-

cigarettes or other electronic vapor products one or more days in the past 30 days. Former e-cigarette use is defined as having ever used these products, but not in the past 30 days.

For smokeless tobacco use, respondents are asked if they currently use chewing tobacco, snuff, snus and/or Iqmiq every day, some days, or not at all. In the Supplemental BRFSS there is also a question about ever use of smokeless tobacco products. From 1996 to 2002, current use was defined as every day or some days use of chewing tobacco and/or snuff. Since 2004, Iqmiq has also been in the list of SLT products noted in the question, and since 2009, Snus has also been included. In 2008, a follow-up question was added to get more information about which products respondents use.

Reporting by Priority Populations

The Leadership for Eliminating Alaskan Disparities (LEAD) workgroup identified three initial priority populations in the 2007 Alaska Strategic Plan for Eliminating Tobacco-Related Disparities. BRFSS data are a key source of information for all three priority populations – Alaska Natives, people of low socio-economic status, and young adults (age 18-29).

Reporting by Race Group

Alaska Native includes all survey respondents who report “Alaska Native/American Indian” as their primary or only race group, as well as those who reported “Alaska Native/American Indian” as one of their race groups but did not select a different race group as primary. Those who report being Hispanic or reported their race as something other than Alaska Native or American Indian are included in the “non-Native” group. Information presented in the 2016 Tobacco Facts report may differ slightly from prior year reports, due to changes in definition for Alaska Native and non-Native groups where respondents reported more than one race group or did not choose a race group.

In order to monitor disparities in tobacco use among other racial/ethnic groups, adult tobacco use is also reported for 5 race/ethnicity categories. 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 in order to report adult tobacco use for these groups.

Reporting by Socio-Economic Status (SES)

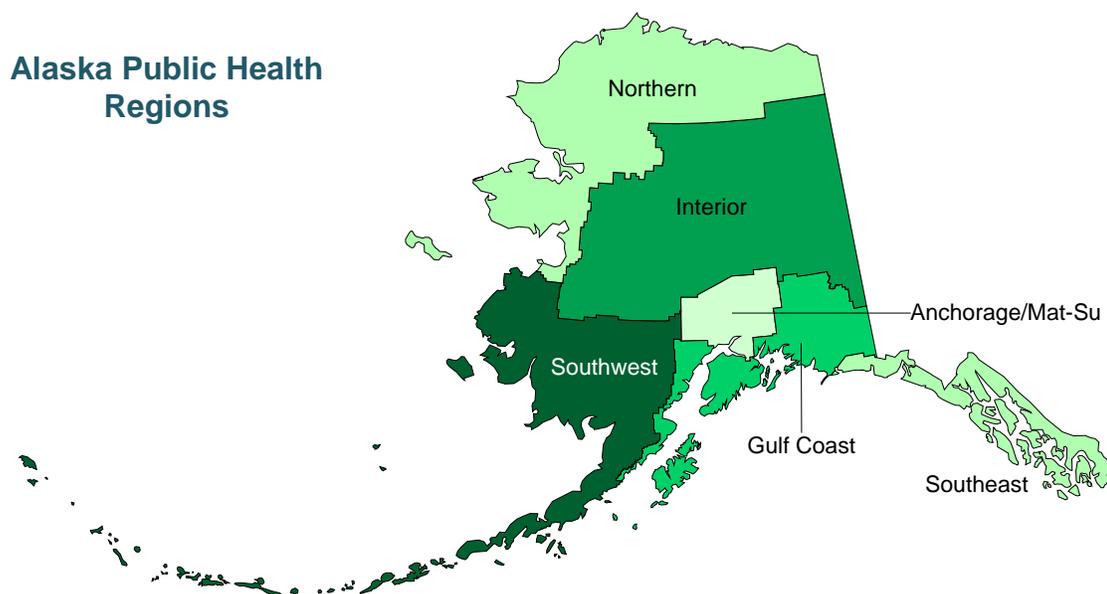
In the BRFSS data, the low SES priority population is defined as 'non-Native adults (age 25-64) of low socio-economic status.' Reporting by SES is restricted to non-Native because reporting for Alaska Native as a priority population is already done separately. Reporting by SES is also restricted to age 25 to 64 because younger adults (age 18-24) may not have had a chance to complete their education and begin to earn an income. Older adults age 65 and over are similarly excluded because income and education might be inadequate SES markers for those who are potentially retired and eligible for Medicare.

Poverty level (as calculated by income and household size) and education level were identified as key indicators of SES that are available using BRFSS. The State of Alaska guideline for Medicaid eligibility – household incomes at or below the 185% poverty

guideline - was adopted as the poverty measure. Therefore, “low SES” was calculated as those persons with less than a High School education or less than 185% of the Alaska Poverty Level Guideline. Information presented in the 2016 Tobacco Facts report may differ slightly from prior year reports, due to changes in definition for Alaska Native and non-Native groups and a change in calculating poverty status for records with partially missing information for number of people in the household.

Regional Reporting

As the BRFSS survey data do not provide sufficient representation for reporting by most of the individual boroughs, we combined boroughs to create regions for analysis of patterns by the geographic areas of Alaska. Regions reported here are the Alaska Public Health Regions, which are the same as Labor Market Regions used by the Alaska Department of Labor and Workforce Development.



Source: State of Alaska, DHSS, DPH, Section of Chronic Disease Prevention and Health Promotion

The Alaska Public Health Regions are defined using borough designation as follows:

- 1) **Anchorage/Mat-Su** – Municipality of Anchorage and Matanuska-Susitna Borough
- 2) **Gulf Coast** – Kenai Peninsula Borough, Kodiak Island Borough, and Valdez-Cordova Census Area
- 3) **Interior** – Denali Borough, Fairbanks North Star Borough, Southeast Fairbanks Census Area, and Yukon-Koyukuk Census Area
- 4) **Northern** – Nome Census Area, North Slope Borough, and Northwest Arctic Borough
- 5) **Southeast** – Haines Borough, Hoonah-Angoon Census Area, Juneau City and Borough, Ketchikan Gateway Borough, Petersburg Census Area, Prince of Wales-Hyder Census Area, Sitka City and Borough, Skagway Municipality, Wrangell City and Borough, and Yakutat City and Borough

- 6) **Southwest** – Aleutians East Borough, Aleutians West Census Area, Bethel Census Area, Bristol Bay Borough, Dillingham Census Area, Lake and Peninsula Borough, and Kusilvak Census Area

In addition, separate estimates for the Municipality of Anchorage, and Matanuska-Susitna (Mat-Su) are included in the trend tables in Appendix A.

Data Suppression Guidelines

In this report BRFSS information is suppressed or flagged based on statistical guidelines developed by Alaska's Division of Public Health in the Department of Health and Human Services, which are based upon the national Joint Policy of Variance Estimation and Statistical Reporting Standards for the National Health and Nutrition Examination Survey (NHANES-III) and the Continuing Survey of Food Intake by Individuals (CSFII) Reports. An asterisk is used to indicate that the estimate may lack statistical precision. Estimates are suppressed if the unweighted sample size for the denominator (N) is less than 30, or if the numerator (n) is less than 5. In addition, estimates may be reported but flagged with an asterisk if there is inadequate sample size for normal approximation, or for uncommon or very common event. Finally, if the coefficient of variation is greater than 30%, the estimate is also considered imprecise and is flagged.

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 2015. Data are currently available through 2015.

How YRBS Survey Participants are Selected

The statewide Alaska YRBS is conducted using a two-stage sampling design. Schools are selected first with a probability of inclusion proportional to the size of their enrollment. Once a school is chosen, classes are selected, with each student having an equal opportunity for inclusion. From 2003 through 2015, active parental consent was required for each student participating in the YRBS. On the appointed survey day students completed written questionnaires and returned them in class in unmarked, sealed envelopes.

In addition to the statewide survey, all Alaska school districts have the opportunity to conduct a local survey, which employs the same questionnaire and data analysis methods as the statewide survey. If a district conducts a local survey and one of its classrooms was selected for the statewide survey, additional classrooms will be surveyed as part of the local survey. Districts that conduct a local survey and obtain at least 30 responses receive a district level report based on results of all classrooms surveyed.

Data Weighting and Methods Issues

In a typical YRBS administration, about 1,300 to 1,400 students are surveyed from about 40 to 45 high schools that are scientifically selected to represent all public high schools (excluding boarding schools, alternative schools, correspondence and home study schools, and correctional schools) in Alaska. These results are considered to be representative of Alaska's more than 33,000 high school students in grades 9-12 in traditional public high schools. Data are weighted to reflect the true distribution of Alaska high school students by gender and grade level, but not by region of the state, since the CDC's sampling method for YRBS does not stratify by region.

Alaska first conducted a statewide YRBS in 1995. Although Alaska participation rates met CDC standards in 1999, this sample did not include Anchorage schools and so the 1999 YRBS data are generally not included in multi-year analyses. To assure statistical validity for weighting, the CDC requires a response rate of at least 60% for the statewide survey. In addition to the 1995 survey, Alaska achieved a representative sample on the statewide survey in 2003, and 2007 through 2015.

Analyses used for YRBS data are similar to those used for BRFSS. We used chi-square tests in our comparisons between groups of Alaskans, and for trend analyses we used logistic regression models that tested for a statistically significant linear change over time. P-values less than 0.05 indicate that a difference seen between percentages or across years is statistically significant at the 95% confidence level.

School-based surveys do not estimate risk behaviors associated with youth who drop out of school or do not attend school. However, for the first time in 2009, about 1,000 students from 15 alternative high schools in Alaska were surveyed to evaluate and address the health risks of this unique population. This process was repeated in subsequent surveys in 2011, 2013 and 2015 (with 16 alternative high schools). High school-age youth in correctional institutions have also been surveyed since 2009. Further information about the Alaska YRBS surveys and health information from those surveys is available at <http://www.hss.state.ak.us/dph/chronic/school/YRBSresults.htm>.

Reporting by Race Group and by Ethnicity

We report race/ethnicity by whether the survey participant reported being Alaska Native or not. All YRBS survey participants who report being Alaska Native, either alone or in combination with other race groups or Hispanic ethnicity, are categorized in this report as being Alaska Native. We combine all other race groups to report a category "Non-Native". This category includes students who report being White, Hispanic, African American, Asian, Hawaiian or Other Pacific Islander, or who report multiple race groups (except for Alaska Native). Those who did not report a race and ethnicity are not included in the race group reporting.

Reporting by other individual race or ethnicity groups is limited by the relatively small number of students in the YRBS sample. In 2015, however, the number of Hispanic students participating in the YRBS was large enough for us to include reporting by

ethnicity—Hispanic versus non-Hispanic. These categories refer only to how the student reported ethnicity, not race.

Data Suppression Guidelines

Information for population subgroups is suppressed where the total participation (as indicated by the denominator N in the appendix tables) is less than 100 students by group. Data are also suppressed if the number of students reporting a behavior (n) is fewer than 5 or the denominator (N) minus the number of students reporting the behavior (n) is less than 5.

Reporting YRBS by Alaska Public Health Regions

In addition to contributing to the scientific sample of traditional (comprehensive) Alaska high schools in order to obtain statewide prevalence estimates, school districts were given the opportunity to survey their student body starting in 2003 in order to learn more about local adolescent behavior. These ad hoc student surveys have been aggregated to the six Alaska Public Health regions. As this collection of surveys is not conducted with the same scientific rigor as those producing the statewide estimates, the resulting rates should be considered indicators of the existence of specific behaviors but not necessarily the precise prevalence estimates. For the regional estimates, the surveys have been weighted to represent their district or school if participation was 50% or higher of eligible students. Surveys collected where the participation was less than 50% received a weight of one, i.e., representative of the respondent only. All available high school YRBS surveys are used regardless of their source as part of the statewide and/or local samples or type of school. Regional representation varies from a low of 7.6% of students in the Interior region in 2003 to effectively 100% for the Anchorage/Mat-Su region in 2009. Since 2009, the weighted sample represents over three-quarters of high school students from traditional, alternative, and correctional institutions. Additional information about the representation can be found here: http://www.hss.state.ak.us/instantatlas/yrbss/YRBS_Local_Sample_by_APHR.pdf.

The regional presentation of the YRBS data is intended to provide information about adolescent behaviors at the sub-state level. The data show that adolescent risk behaviors exist in every region, although the magnitude can vary. Statewide estimates for traditional high school students are included for comparison.

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 monitor 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 federal fiscal year in which the data are used as a planning tool. Therefore, data collected from 2015 are reported for the FY2016 indicator.

Pregnancy Risk Assessment Monitoring System (PRAMS)

PRAMS data were used in this report to document prenatal tobacco use, both cigarettes and smokeless, chewing or spit tobacco. PRAMS is a population-based survey of Alaska women who have recently delivered a live-born infant. It gathers information on the health risk behaviors and circumstances of pregnant and postpartum women. PRAMS is conducted in collaboration with the CDC. Forty-seven states, New York City, Puerto Rico, the District of Columbia and the Great Plains Tribal Chairmen's Health Board (GPTCHB) currently participate in PRAMS, representing approximately 83% of all U.S. live births.

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 up to three mailed questionnaires to solicit a response, and since 1997, telephone follow-up has been initiated among those who do not respond by mail. Sampling is not limited to adult women, so PRAMS data does include responses from teenage mothers (approximately 6% in recent years).

In addition to maternal tobacco use, the PRAMS questionnaire addresses such topics as content of prenatal care, maternal use of alcohol, maternal stress, breastfeeding, physical abuse, and other topics. Survey responses are weighted so that reported prevalence accurately describes the population of Alaska women delivering a live-born infant during the year reported. The weighted response rate was 65% in 2012, 69% in 2013, and 65% in 2014.

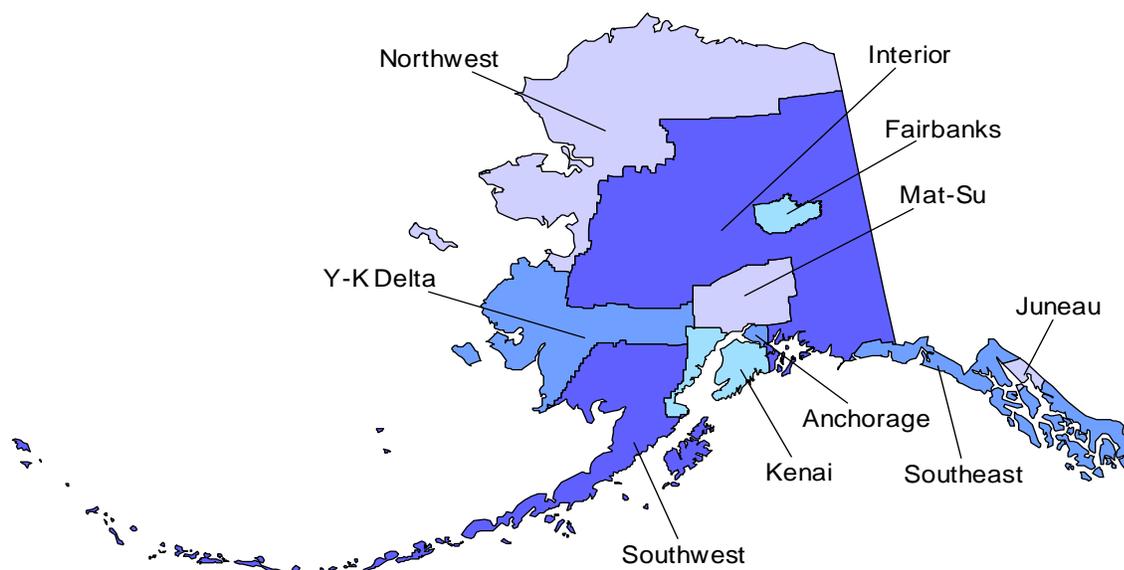
Because the questions about smokeless tobacco use changed significantly in 2004, trend data are shown with a break between 1996 to 2003, and 2004 to 2014. Starting in 2004, question wording changed to spit tobacco use and included a specific question about Iqmik use, whereas prior to 2004, the question referred only to chew or snuff and used the term

“smokeless”. The questions also changed slightly in 2009 and again in 2012, but responses still reflect smokeless tobacco use that includes Iqmiq.

See <http://dhss.alaska.gov/dph/wcfh/Pages/mchepi/prams/default.aspx> for more information about PRAMS questionnaires and methodology.

Reporting PRAMS data by Alaska Behavioral Health Systems Regions

By combining years of data, PRAMS information can also be reported by region. For this report, Behavioral Health Systems Regions were used for PRAMS data.



Source: State of Alaska, DHSS, DPH, Section of Chronic Disease Prevention and Health Promotion

The Alaska Behavioral Health Systems Regions are defined using borough designation as follows:

- 1) **Northwest** – Nome Census Area, North Slope Borough, and Northwest Arctic Borough
- 2) **Other Interior** – Denali Borough, Southeast Fairbanks Census Area, Valdez-Cordova Census Area, and Yukon-Koyukuk Census Area
- 3) **Fairbanks** – Fairbanks North Star Borough
- 4) **Y-K Delta** – Bethel Census Area and Kusilvak Census Area
- 5) **Southwest** – Aleutians East Borough, Aleutians West Census Area, Bristol Bay Borough, Dillingham Census Area, Kodiak Island Borough, and Lake and Peninsula Borough
- 6) **Kenai** – Kenai Peninsula Borough
- 7) **Anchorage** – Municipality of Anchorage
- 8) **Mat-Su** – Matanuska-Susitna Borough

- 9) **Other Southeast** –Haines Borough, Hoonah-Angoon Census Area, Ketchikan Gateway Borough, Petersburg Census Area, Prince of Wales-Hyder Census Area, Sitka City and Borough, Skagway Municipality, Wrangell City and Borough, and Yakutat City and Borough
- 10) **Juneau** – Juneau City and Borough

