ALASKA TOBACCO PREVENTION AND CONTROL PROGRAM

TOBACCO FACTS
2023 UPDATE

Alaska Tobacco Facts

2023 Update

Mike Dunleavy, Governor
Heidi Hedberg, Commissioner, Department of Health
Anne Zink, MD, Chief Medical Officer, Department of Health
Lindsey Kato, MPH, Director, Division of Public Health
Cheley Grigsby, Section Chief, Chronic Disease Prevention and Health Promotion

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Alaska Department of Health, Division of Public Health, Section of Chronic Disease Prevention and Health Promotion

- Andrea Fenaughty, PhD, Deputy Section Chief
- Matthew Dungan, MPH, CPH, Tobacco Prevention and Control Program Epidemiologist
- Jodi Barnett, MA, Alaska Behavioral Risk Factor Surveillance System Coordinator
- Abigail Newby-Kew, MPH, Public Health Data Analyst
- Tazlina Mannix, MPH, Alaska Youth Risk Behavior Survey Data Manager
- Karol Fink, MS RDN, Youth Risk Behavior Survey Health Program Manager

Alaska Department of Health, Division of Public Health, Section of Women's, Children's and Family Health

- Kathy Perham-Hester, MS, MPH, Alaska PRAMS Coordinator

Alaska Department of Revenue, Tax Division

- Brandon Spanos, Deputy Director

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Executive Summary

Alaska Tobacco Facts is an annual update of key indicators about tobacco prevention and control from state data sources. The report summarizes Alaska's most currently available data on tobacco and nicotine use among adults, youth, and pregnant women. The results can be used to educate Alaskans about the toll that tobacco continues to take on the health and well-being of our citizens.

The following are highlights from *Alaska Tobacco Facts: 2023 Update*. This report includes data collected from Alaska's adult surveys through 2021, and from youth surveys through 2019. These are the most recently available data.

Adults

The prevalence of use of any form of tobacco or nicotine remained stable from 2014 through 2021. Many people still use tobacco or nicotine products.

- In 2021, 25% of adults statewide currently used some form of tobacco or nicotine.
- Between 2014 and 2021, the percentage of adults who currently use any tobacco or nicotine product remained stable.
- This translates to more than 136,500 adults in Alaska who are at risk for poor health outcomes due to tobacco or nicotine products.

Though smoking prevalence has continued to decline since 1997, it remains higher among some groups compared to others.

- 17% of Alaska adults smoked cigarettes in 2021. Cigarette smoking prevalence among adults has declined significantly in the long term, from 27% in 1997. Smoking among adults has also declined in the past 10 years alone, from 21% in 2012. Adult smoking prevalence has also declined in the United States overall.
- In 2021, cigarette smoking prevalence was greater among some populations, including Alaska Native adults; people ages 30-54; people experiencing frequent mental distress; people of lower socioeconomic status; people with less educational attainment; people unable to work or unemployed; and residents of the Northern and the Southwest regions of the state.
- A majority of adults who smoke cigarettes want to quit. Among adults who currently smoked in 2021, 52% had tried to quit in the past year and 60% of those who had a healthcare visit in the past 12 months were advised to quit by a healthcare provider. However, quitting is difficult: among adults who were recent smokers (smoking in the past year), just 9% had quit for at least 3 months.

Alaska's adult prevalence of smokeless tobacco use is higher than in the U.S.

- 6% of Alaska adults currently used smokeless tobacco in 2021, which is higher than the U.S. national estimate (2%).
- Statewide, over the past 10 years, the prevalence of smokeless tobacco use (including chew, dip, snus, snuff, and iqmik) among Alaska adults has not changed meaningfully. The prevalence of smokeless tobacco use was 6% in both 2012 and 2021.

- Smokeless tobacco use is more common among Alaska Native adults; men; people under age 55; current and former smokers; people of lower socioeconomic status; and residents of Southwest and Northern Alaska.

Though the prevalence of vaping among Alaska adults has remained stable since 2014, it is still higher among certain groups compared to others.

- 6% of Alaska adults currently used electronic vapor products (e-cigarettes or "vapes") in 2021, which is similar to the U.S. national estimate. Among Alaska adults, this percentage has not changed significantly since consistent measurement began in 2014.
- Electronic vapor product use is more common among adults ages 18-29; adults who smoke cigarettes; adults experiencing frequent mental distress; adults without a college degree; adults of lower socioeconomic status; adults who are in the workforce or are unable to work (compared to students, homemakers, and retired adults); and among bisexual men and women.

Pregnant Women

The prevalence of Alaska women smoking during pregnancy has declined significantly since 2012.

- 7% of Alaska women who delivered a child in 2021 reported smoking cigarettes during their last 3 months of pregnancy. The percentage of women who smoked during pregnancy has declined significantly from 13% in 2012.
- Data in 2021 suggests that over half of women who smoked cigarettes before pregnancy (17%) quit smoking during pregnancy in 2021.
- Some women appear to take up cigarette smoking again after delivery: 9% smoked after delivery vs. 7% during pregnancy. However, smoking after delivery does not immediately return to the same level as pre-pregnancy smoking (17%).

Youth

The 2021 Alaska Youth Risk Behavior Survey was canceled due to challenges Alaska school districts and schools faced during the COVID-19 pandemic. For this reason, the most recent YRBS data in this report is from 2019. The 2023 Alaska YRBS was conducted during the 2022-2023 school year with data scheduled to be available in the fall of 2024.

Though the prevalence of smoking among Alaska high school youth has declined over the past 10 years, the prevalence of vaping has increased.

- In 2019, 35% of high school students in Alaska used some form of tobacco or nicotine. This percentage has not changed significantly since 2015.
- This translates to more than 13,300 students in Alaska who are at risk of poor health outcomes due to tobacco or nicotine products.
- 26% of Alaska high school students currently used electronic vapor products (e-cigarettes or "vapes") in 2019. Electronic vapor product use has increased significantly from 18% in 2015 to 26% in 2019. Similar increases have been seen in the U.S.

- 46% of Alaska high school students had ever tried using an electronic vapor product in 2019. This was a significant increase from 36% in 2015.
- 8% of Alaska high school students currently smoked cigarettes in 2019. Cigarette smoking has declined significantly among youth in the long term, from 37% in 1995, and during the past 10 years, from 16% in 2009.
- Current cigarette smoking prevalence is relatively higher among male students, Alaska Native youth, and among older (11^{th} and 12^{th} grade) high school students.
- 28% of Alaska high school students had ever tried smoking cigarettes in 2019; this is significantly fewer than in comparison to 72% in 1995 and 48% in 2009.

Though the prevalence of smokeless tobacco use has not increased overall, the prevalence is greater among Alaska Native students compared to non-Native students.

- 11% of Alaska high school students currently used smokeless tobacco in 2019. The percentage of students using smokeless tobacco has not changed significantly since 2013. Among all U.S. students, the percentage of students using smokeless tobacco has declined significantly during the same years, to 4% in 2019.
- Current smokeless tobacco use prevalence is relatively greater among Alaska Native students than among non-Native students (24% and 4%, respectively).
- In 2019, 7% of Alaska high school students had used smokeless tobacco on school property in the past month, compared to 2% who had smoked cigarettes on school property.

Introduction

Purpose

Tobacco use remains a leading cause of preventable death and illness in Alaska. Tobacco use can lead to death earlier than expected as well as millions of dollars in avoidable medical care costs. Therefore, quitting the use of all tobacco products is the best thing that Alaska tobacco users can do to improve their health and the health of those around them. The Centers for Disease Control and Prevention (CDC) has identified reducing tobacco use as one of the most important "winnable battles" in public health. A winnable battle is a priority with large impacts on health and known, effective strategies to address the priority.[1]

This report is intended as a resource for people working to support the health of Alaskans by reducing harms from tobacco use initiation, nicotine dependence, and secondhand smoke exposure. First, it provides information that can be used to educate about the need for continued efforts to reduce these harms. Second, it can help people who are planning programs, by providing a strategic view of tobacco use trends and use in different populations.

Alaska Tobacco Facts provides a summary of Alaska's most current tobacco use prevalence estimates among three key populations: adults, pregnant women, and youth. Within these populations we show tobacco use estimates among different groups of people, including by demographic factors such as age, gender, race/ethnicity, and sexual orientation; social determinants of health such as education, socioeconomic status, employment status; and by geographic region in Alaska. This report also describes recent trends (up to 10 years for some measures) in different types of tobacco use or related indicators.

Additional Information Sources

Related reports. Other data reports that include information of potential interest to readers are available on the Alaska Tobacco Prevention and Control website: https://health.alaska.gov/dph/Chronic/Pages/Tobacco/publications.aspx#facts

- *Regional Profiles.* Estimates of tobacco use, attitudes, and policy-related information for each of Alaska's seven public health regions. These reports are organized by programmatic goals: prevention, quitting, and secondhand smoke.
- *Tobacco factsheets.* A series of data briefs that provide detail and discussion about specific topics. The most recent addition to this series is *E-cigarette use, suspension, and academic outcomes among Alaska high school students (2021).*

Other resources. The State of Alaska Department of Health provides some online systems that people can use to explore the data sources in this report. These are available at:

- Alaska Youth Risk Behavior Survey (AK YRBS) – Alaska high school students' risk and protective factor data https://health.alaska.gov/dph/Chronic/Pages/yrbs/yrbs19.aspx - select either "traditional high school" or "alternative high school" data dashboard links

[1] U.S. Centers for Disease Control and Prevention (CDC) *Winnable Battles* http://www.cdc.gov/winnablebattles/

- Alaska Behavioral Risk Factor Surveillance System (AK BRFSS) – Alaska adults' risk behavior data https://alaska-dph.shinyapps.io/BRFSS/
- Alaska Pregnancy Risk Assessment Monitoring System (PRAMS) – Data on Alaska mothers' maternal behaviors and experiences during pregnancy https://health.alaska.gov/dph/wcfh/Pages/mchepi/prams/default.aspx

Recent Major Events

The following are a selection of recent important dates and events relevant to tobacco industry actions, health programs, policy implementation, or other effects on health in Alaska. These events occurred within the time period of this report, and they may be important to consider when thinking about trends reported here.

During the past 10 years:

- **2018.** The U.S. Surgeon General issued an advisory on e-cigarette use among youth, following the rise of electronic vaping products to become the most common form of tobacco or nicotine product used by youth.[2,3]
- **2018.** Alaska passed a *Smokefree Workplace Law* (AS 18.35.301). Beginning October 2018, smoking and vaping are not allowed in Alaska's enclosed public places and workplaces (including private offices, and hotel and motel rooms).
- **2019.** Federal *Food, Drug, and Cosmetic Act* signed in December 2019, raising the federal minimum age for sale of tobacco products (including e-cigarettes and electronic vapor products) to 21 years. This policy change is sometimes called "T-21". However, no resources or support were provided to states to enforce it; Alaska maintains enforcement of the current state law, AS 11.76.100, which is age 19 for purchase of tobacco and nicotine products.
- **2019.** Alaska updated state youth access law to include e-cigarettes and products containing nicotine (AS 11.76.109).
- **2020.** The global COVID-19 pandemic began in 2020, with various emergency "shutdown" orders implemented in March 2020. Alaskans were affected throughout the year. This report includes adult data from 2020, but no youth data have been shared since 2019 (prior to the pandemic).

Unique Alaska Factors

This report compares Alaska adult and youth tobacco use trends and current prevalence with similar data from the U.S. for some indicators (like cigarette smoking, smokeless tobacco use). In addition to major events that may have been Alaska-specific (see prior subsection), when comparing Alaska to the U.S. there are some factors unique to the state that may be important to consider.

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[2] U.S. Centers for Disease Control and Prevention (CDC), *E-Cigarettes and Youth Toolkit for Partners: How You Can Help End the Epidemic.* https://www.cdc.gov/tobacco/basic_information/e-cigarettes/pdfs/e-cigarettes-youth-partners-toolkit-508.pdf

[3] U.S. Centers for Disease Control and Prevention (CDC), *Quick Facts on the Risks of E-cigarettes for Kids, Teens, and Young Adults*. https://www.cdc.gov/tobacco/basic_information/e-cigarettes/Quick-Facts-on-the-Risks-of-E-cigarettes-for-Kids-Teens-and-Young-Adults.html

- **Alaska's higher legal age for tobacco purchase prior to recent federal policy change.** Most state policies and U.S. federal policies prior to 2019 had established the minimum age for tobacco purchase as 18.[4] Since 1988, Alaska's minimum age to purchase tobacco products has been 19; in 2018, state law was amended to also include e-cigarettes.[5] Youth data included in this report were collected through 2019, and therefore Alaska's laws were relatively stricter than the U.S. during this period.
- **Iqmik ("ick-mick") or blackbull, a unique Alaska smokeless tobacco variant**. Iqmik has been used among Alaska Native people in the Southwest region of the state since at least the 19th century. Iqmik is prepared by burning a woody fungus (*Phellinus igniarius*) from birch trees and mixing the ash with leaf tobacco. The ash increases the alkaline level of the tobacco, resulting in a more rapid absorption of nicotine. This is thought to increase risk for addiction, making it more difficult to quit.[6] Iqmik, as well as commercial products, is important to consider when examining data on smokeless tobacco use patterns, especially within the Southwest region and among Alaska Native people.

Tobacco Use Inequities

This report examines tobacco use indicators for different demographic groups, including by age, gender, race and ethnicity, socioeconomic status, sexual orientation, and geographic region. Observed differences in tobacco use or harms between population groups, sometimes called "tobacco-related inequities", are the result of complex factors. Underlying causes of these differences can be social determinants of health, tobacco industry influence, a lack of comprehensive tobacco control policies reaching specific communities, and a changing U.S. population.[7]

To improve understanding about how behavioral health factors can influence tobacco use and make quitting harder, this 2023 *Tobacco Facts* report has added a new characteristic with which to sort tobacco indicators: frequent mental distress. BRFSS asks adults about their mental health. "Frequent mental distress" is defined as when a person self-reports experiencing stress, depression, and/or problems with emotions on 14 or more of the past 30 days. Having frequent mental distress has been

[4] A few states raised their minimum age for tobacco/nicotine purchase to 21 prior to federal policy change in 2019, including Hawaii in 2015, California in 2016, Oregon in 2018. Before states moved to raise the age to 21, Alaska, Alabama, and Utah were the only states with a minimum tobacco sales age of 19 and other states had a minimum age of 18.

[5] Alaska Statutes 2020: AS 11.76.105 Possession of tobacco, electronic smoking products, or products containing nicotine by a minor.

[6] Bryan A. Hearn, PhD, Caroline C. Renner, MPH, Yan S. Ding, PhD, Christina Vaughan-Watson, MPH, Stephen B. Stanfill, MS, Liqin Zhang, MS, Gregory M. Polzin, PhD, David L. Ashley, PhD, Clifford H. Watson, PhD, *Chemical Analysis of Alaskan Iq'mik Smokeless Tobacco*, Nicotine & Tobacco Research, Volume 15, Issue 7, July 2013, Pages 1283–1288. https://academic.oup.com/ntr/article/15/7/1283/1377797

[7] Centers for Disease Control and Prevention (CDC), *Best Practices User Guide: Health Equity in Tobacco Prevention and Control.* Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2015. https://www.cdc.gov/tobacco/stateandcommunity/guides/pdfs/bp-health-equity.pdf

previously associated with smoking,[8] and the prevalence of frequent mental distress varies by race, ethnicity, gender, and socioeconomic status (SES).[9]

Readers should keep in mind that external pressures can influence tobacco use and may need to be accounted for when designing interventions and evaluating their effectiveness. For example, research demonstrates that stress and depression are associated with prenatal and postnatal tobacco use.[10] The experience of stress and depression can be related to other factors such as social determinants of health: poverty, housing, social support, discrimination, quality and safety of schools, health care access, and transportation.[5] In other words, greater prevalence of tobacco use or other measures indicates that it is more difficult for some groups of people to avoid tobacco and quit successfully, rather than that they have less knowledge about dangers of tobacco use or motivation to quit. For example, this report shows that Alaska adults with lower socioeconomic status (SES) are more likely to have tried to quit smoking in the past year than adults with higher SES (59% vs. 53%, see Figure 30), yet they are less likely to maintain quitting in the long term (the "quit ratio" or long-term quitting if 47% among low SES adults vs. 70% among higher SES adults, see Figure 26).

Therefore, data in this report that show greater tobacco use in some populations should be viewed not only with an eye toward more effective tobacco control interventions, but also as supportive for the development of interventions that address and mitigate these foundational influences so that all people have equitable opportunities to achieve optimal health.

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[8] Strine TW, Balluz L, Chapman DP, Moriarty DG, Owens M, Mokdad AH. *Risk behaviors and healthcare coverage among adults by frequent mental distress status,* 2001. Am J Prev Med. 2004 Apr;26(3):213-6. doi: 10.1016/j.amepre.2003.11.002. PMID: 15026100.

[9] *Self-Reported Frequent Mental Distress Among Adults --- United States, 1993--2001*. (n.d.). Retrieved September 4, 2022, from https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5341a1.htm

[10] Allen A, Jung AM, Lemieux AM, Alezander AC, Allen SS, Ward KD, al'Absi M. *Stressful life events are associated with perinatal cigarette smoking.* Preventive Medicine, Volume 118,2019, Pages 264-271,ISSN 0091-7435, https://doi.org/10.1016/j.ypmed.2018.11.012. https://www.sciencedirect.com/science/article/abs/pii/S0091743518303578?via%3Dihub

Methods

Data sources

This report includes information from three key Alaska public health data sources. These sources are summarized in Table 1, and more detailed information is included in the Appendix.

Table 1: Summary of key data sources used for this report

Data Source (Abbreviation)	**Description**
Alaska Behavioral Risk Factor Surveillance System (**BRFSS**)	BRFSS data are collected from adults ages 18 and older through anonymous telephone interviews using random-digit-dialing (RDD). Telephone numbers are sampled using a stratified sampling design defined by Alaska's seven public health regions. BRFSS provides annual representative data in Alaska about adult health behaviors, preventative health practices, and chronic conditions. It is coordinated and sponsored by the Centers for Disease Control and Prevention (CDC) and implemented in all U.S. states and some territories. BRFSS is Alaska's primary source of information about adult use of tobacco or nicotine products. When examining differences among subgroups, including by region, multiple years of BRFSS data are often combined so that there are enough data to report estimates. Most regional data reported here are created from combining years 2019-2021 together.
Alaska Pregnancy Risk Assessment Monitoring System (**PRAMS**)	PRAMS is an ongoing survey of mothers of newborns that is sponsored by the CDC and the sites that implement the program. PRAMS surveys a sample of women who have delivered a live newborn (about 1 in every 6 live births in Alaska). This survey asks about maternal behaviors and experiences, to plan and improve perinatal health programs. Multiple questions about tobacco have been included on the survey for many years. Sampled women are first mailed the survey approximately 2-6 months after delivery of their baby; if they do not respond after several mailings, women are contacted and interviewed by telephone. To limit recall bias, participants must have responded <275 days postpartum (before 9 months) to be included.

Data Source (Abbreviation)	Description
Alaska Youth Risk Behavior Survey (**YRBS**)	YRBS data are collected from students in grades 9-12 using anonymous and voluntary school-based questionnaires coordinated and sponsored by the Centers for Disease Control (CDC). The survey is conducted in the spring of odd-numbered years and participation requires parental consent. The YRBS includes questions about tobacco use and related factors. Statewide estimates in this report are from a sample of traditional high schools across the state; data from alternative schools and correctional schools are not included in this report. The 2021 Alaska Youth Risk Behavior Survey was canceled due to challenges Alaska school districts and schools faced during the COVID-19 pandemic. For this reason, the most recent YRBS data in this report is from 2019. The Alaska YRBS was conducted during the 2022-2023 school year with data scheduled to be available in the fall of 2024.

Measures

This report describes tobacco use indicators among various groups of people. Below is a summary of how groups are defined per the surveys featured in this report. Additional detail about measures is available in Appendix.

Current tobacco or nicotine use

- BRFSS: Current cigarette smoking is defined as having ever smoked at least 100 cigarettes (5 packs) and currently smoking “every day” or “some days”. Current smokeless tobacco use is defined only based on now using “every day” or “some days”. Electronic vapor product use was defined as having used on one or more of the past 30 days in 2014-2015; since 2016 current use is defined as using “every day” or “some days”.
- PRAMS: Use in the 3 months prior to pregnancy, during the last 3 months of pregnancy, and after pregnancy are specifically defined as any positive amount of smoking (starting at < 1 cigarette on average during the timeframe specified). Though the percentages reported are for the entire population, only women who had smoked “any” cigarettes in the past 2 years answered these perinatal questions. E-cigarette use is initially measured by those who used “any" e-cigarettes or other electronic nicotine products in the past 2 years. Also shared are the percentages of those who used e-cigarettes at least “1 day a week or less” on average in either the 3 months prior to pregnancy or during the last 3 months of pregnancy. In similar fashion to cigarette use, though the percentages reported are for the entire population, only women who had used “any” e-cigarettes in the past 2 years answered these perinatal questions. Smokeless tobacco use during pregnancy is defined as use at any time (not specified) during the pregnancy.

- YRBS: Current use of all tobacco and nicotine products by youth is defined as use on one or more of the past 30 days.

Race and Ethnicity

- BRFSS: Race and ethnicity are combined for reporting. Alaska Native race is defined as self-identification with American Indian or Alaska Native (AIAN) race, either alone or in combination with another race or Hispanic ethnicity. The comparison group "non-Native" includes adults who reported any other race group or Hispanic (and not AIAN). In the expanded race and ethnicity reporting, those in self-identified race categories of African American, Asian, Pacific Islander, and White are a single race and do not include respondents of Hispanic ethnicity. Those who report being Hispanic or Latino are listed as "Hispanic" unless they also self-identified as AIAN.
- PRAMS: Maternal race is self-reported on a child's birth certificate. Alaska Native race is based on any mention of American Indian or Alaska Native race. For this report, maternal race is categorized as Alaska Native women and non-Native women.
- YRBS: Race and ethnicity are combined for reporting. Alaska Native race is defined based on any mention of American Indian/Alaska Native race (regardless of Hispanic ethnicity). White students are identified based on only reporting White race and non-Hispanic ethnicity. Participants who identified as Hispanic ethnicity and any race category except Alaska Native (as well as those who did not report race) are reported as Hispanic. For this report, insufficient numbers of students were available to report by any other race groups meaningfully.

Sexual Orientation

- BRFSS: Adults self-report whether they are gay (men), lesbian (women), bisexual, or straight. Sexual orientation comparisons are stratified by sex, so that gay men and bisexual men are compared to straight men, and lesbian women and bisexual women to straight women.
- PRAMS: Not asked on this survey.
- YRBS: Not asked on this survey.

Frequent Mental Distress. See page 7 "Tobacco Use Inequities" for discussion.

- BRFSS: Adults self-report the number of days in the past 30 when their mental health was "not good" in response to the question "Now, thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?" A person who reported 14 or more days was identified as having frequent mental distress.
- PRAMS: Not asked on this survey.
- YRBS: Not asked on this survey.

Social Determinants of Health

- BRFSS: Highest level of educational attainment, current employment status, and socioeconomic status (SES). SES is characterized as "low" or "high". "Low SES" is defined as household income at 185% or less of the Alaska Poverty Level Guideline (which is based on total annual household income and total number of household members).
- PRAMS: Highest level of educational attainment and whether Medicaid or Denali KidCare was a source of prenatal care health insurance.
- YRBS: No social determinants of health measures are explored for youth.

Region

- BRFSS: 7 Public Health Regions, based on boroughs and census areas of residence (see map in Appendix, BRFSS section). These regions are similar to the Alaska Department of Labor and Workforce Development's 6 Economic Regions, except that Anchorage and Mat-Su are separated.
- PRAMS: 10 Behavioral Health Regions, based on maternal residence at the time of the child's birth (see map in Appendix: Data Source Detail, PRAMS section).
- YRBS: Only statewide representative data are reported.

Analytic approaches

Survey estimates. A great deal of this report relies on data collected through surveys. Data from surveys are referred to as "estimates" because we have responses from only a sample of the population and not the whole population. We match respondent characteristics such as age, gender, and race to known characteristics of the state population, and statistically adjust the estimates to represent the true population. Sometimes this is called "weighting" the data. For example, more women than men usually participate in surveys, so more survey respondents are women although the actual populations of women and men are about equal in size. Since women often report different information on surveys than men, statistical processes are used to create estimates that balance the answers from women and men equally when reporting on the whole population. In order to report data by race-ethnicity groups and by sexual orientation, we combined years of data to increase the number of records contributing to the estimates. In those instances, we are reporting the average weighted mean estimate across the combined years.[11]

Statistically significant differences. Formal statistical tests were done for all subgroup comparisons in this report, and "differences" are only mentioned in the text if they were statistically significant. Statistical significance is a determination that a relationship (difference) between two or more groups or observations is a true difference, caused by something other than chance. We used a p-value of <.05 as our threshold for "significance", which is a commonly used level for scientific reports. When shown, the p-value reported with significance tests is the probability of observing results as extreme

[11] For reporting the average weighted mean, the annual weight is used and year is specified in the stratification for analyses. This approach is different from that currently used in Alaska's BRFSS reporting estimates from combined years of data, which uses an adjusted weight as suggested by the CDC BRFSS.

as those in the data due to chance alone. For example, a p-value of .05 indicates there is a 5% chance that the "difference" observed between groups may be due only to chance. The p-value is interpreted as a "yes/no" threshold for whether significance is achieved; the magnitude of the p-value is not typically interpreted.

Whether differences are statistically significant depends both on the measured value and the precision of that measurement. Sometimes differences may look large, but the estimates may have wide confidence intervals (described below) and so we cannot be sure that the values are truly different, beyond just chance.

Whenever regional estimates are statistically different from one another based on formal statistical comparisons, that is noted in the text describing the data or figure. Although differences between groups may look large, they are not statistically significant unless noted in the text – in other words, though large, the difference may be due to chance unless a statistical test indicates otherwise.

Trends. Regression tests were used to determine whether tobacco use prevalence indicators were changing over time. We used the 95% confidence level, with a p-value of <.05 to determine whether trends were significantly increasing or decreasing (different from a "flat" trend). Although for many data sources we have had data available for longer periods of time, we conducted trend tests only to identify significant changes during recent years, up to the past 10 years. As readers can see from representative data points included from earlier years, there have been large reductions in many tobacco use indicators in the long term. Focusing on the most recent years helps to isolate current trends, which are most meaningful for program planning.

Confidence intervals. Our report uses 95% confidence intervals. Confidence intervals show a range that is likely to contain the true value for the population; we can be 95% sure (95 out of 100 times) that the range of the interval contains the "true value" of the indicator being measured. Confidence intervals also help to compare whether results from one group are significantly different from another group: when confidence intervals for two estimates in the same data system do not overlap, those two estimates are "significantly" different from one another – meaning we can be reasonably sure there is a true difference.[12] In this report, confidence intervals are shown visually in different ways: as shaded areas around lines in trend graphs, as "whiskers" around the estimates in bar graphs, and as a numeric range in tables. Although these two visual depictions of confidence intervals are different, they mean the same thing.

Larger samples typically have smaller, more precise confidence intervals. Regional and subgroup confidence intervals will always be wider or larger than statewide confidence intervals.

Data suppression and statistical instability. To ensure confidentiality and data quality, estimates from surveys with small numbers are suppressed based on guidelines from the State of Alaska.[13] For BRFSS, a minimum denominator of 50 unweighted respondents is required for reporting. For YRBS, a minimum of 100 was required in 2019 (when the original analysis was done for this report) but for data collected in 2021 or later, the minimum is 30. For PRAMS a minimum of 30 is required. For

[12] Formal tests are more precise than confidence interval comparisons. We conducted formal statistical tests for this report, so sometimes differences are described as significant even when confidence intervals overlap to some degree.
[13] Note that the Alaska suppression guidelines for BRFSS and YRBS data were revised in 2022, and this report uses older guidelines than those currently in use.

YBRS and PRAMS, surveys also require a minimum numerator of 5 to report estimates. Measures that do not meet these minimum requirements are not included in this report. In some cases, we have combined multiple years of data to provide enough respondents to report prevalence estimates within small groups. Estimates with sufficient numbers within the denominator but which are still considered statistically unstable may also be flagged or suppressed. In Alaska, determination of such instability is based on relative standard error (RSE), which is the standard error of an estimate divided by the estimate and then multiplied by 100.

Source	***Suppression Guidelines***	***Flagging for Unstable Estimates***
BRFSS	Estimates with a denominator less than 50, and/or relative standard error (RSE) greater than 0.5 are suppressed.	Estimates a RSE between 0.3 and 0.5 are considered unstable.
YRBS	Estimates with a denominator less than 100 and/or numerator less than 5 are suppressed.	Estimates a RSE between 0.3 and 0.5 are considered unstable. Estimates with RSE greater than 0.5 are considered very unstable.
PRAMS	Estimates with a denominator of less than 30 are suppressed.	Estimates based on the number of respondents between 30 and 60 are reported with a note that the estimates may be unreliable.

Rounded estimates. Survey data shown in figures or tables within the main body of this report are rounded to whole numbers. This is for two reasons: first, because this more simply conveys information for most users of this report; second, because survey estimates for smaller numbers of people in subgroups often have wide confidence intervals, rounded estimates are one way of showing that sub-group estimates are less precise the estimates for the entire population. Tables of estimates reported to one decimal place, with confidence intervals, are available by request.

Numbers of tobacco users. This report provides estimates of the number of adults, pregnant women, and youth who are at risk from tobacco use. This is a direct estimate, applying the most current prevalence of use to total population numbers, and rounding to the nearest hundred. These estimates are intended to give a sense of the large numbers of people who are affected at the current time. Notably, because populations typically grow over time, total numbers of people who are affected can increase even if the prevalence of tobacco use stays the same or declines.

Limitations

Local area data. This report includes regional estimates for BRFSS and PRAMS data. Notably, regional analyses of these datasets use different regional definitions: BRFSS data are reported by 7 Public Health Regions, and PRAMS data are reported by 10 Behavioral Health Regions. Maps of these different regions are included in the Appendix.

Regional YRBS data are not reported because scientific samples were not done systematically in all regions such that they could be compared with one another.

Stakeholders working in tobacco control within local communities would likely be interested in more specific data about borough or census areas, cities, and villages. Unfortunately, most surveys do not have enough respondents to report local-level results; however, the TPC program provides a separate *Regional Profiles* series of reports that integrates other data sources to provide as much relevant local area information as possible. Those reports can be found here.

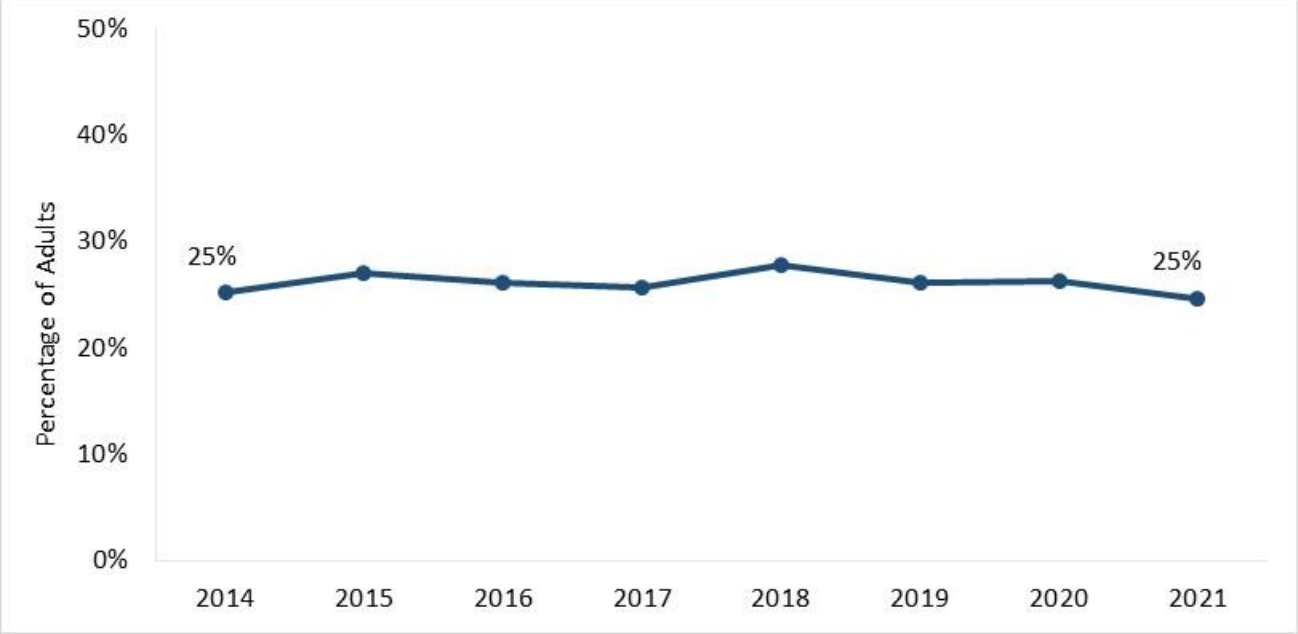
Reporting biases. This report provides data from surveys. In these surveys, people are asked about their tobacco use behaviors; none of these surveys uses physical measures or other means to verify whether people have used tobacco or not. If people perceive societal disapproval, they may be less likely to accurately report their tobacco use. Sometimes this is called "social desirability bias". Alaska's surveys attempt to reduce these biases by making sure that participants know their information is anonymous or confidential, depending on the survey, that accurate information is important for providing results that help the people of Alaska, and by using questions that are phrased neutrally and do not convey judgement about behaviors. However, it is possible that as tobacco use has become less common in society, people may feel uncomfortable reporting truthfully about their tobacco-related behaviors and this could affect the quality of our reporting.

Adult Tobacco Use

Healthy Alaskans 2030

Reducing the use of any tobacco or nicotine product among adults is an important priority in the State of Alaska. *Healthy Alaskans 2030*[14] includes the following indicator that is monitored to assess progress: *Reduce the percentage of adults who currently smoke cigarettes, use electronic vapor products, or use smokeless tobacco.*

Figure 1. The percentage of adults who use any tobacco or nicotine product did not change during the last 8 years in Alaska.

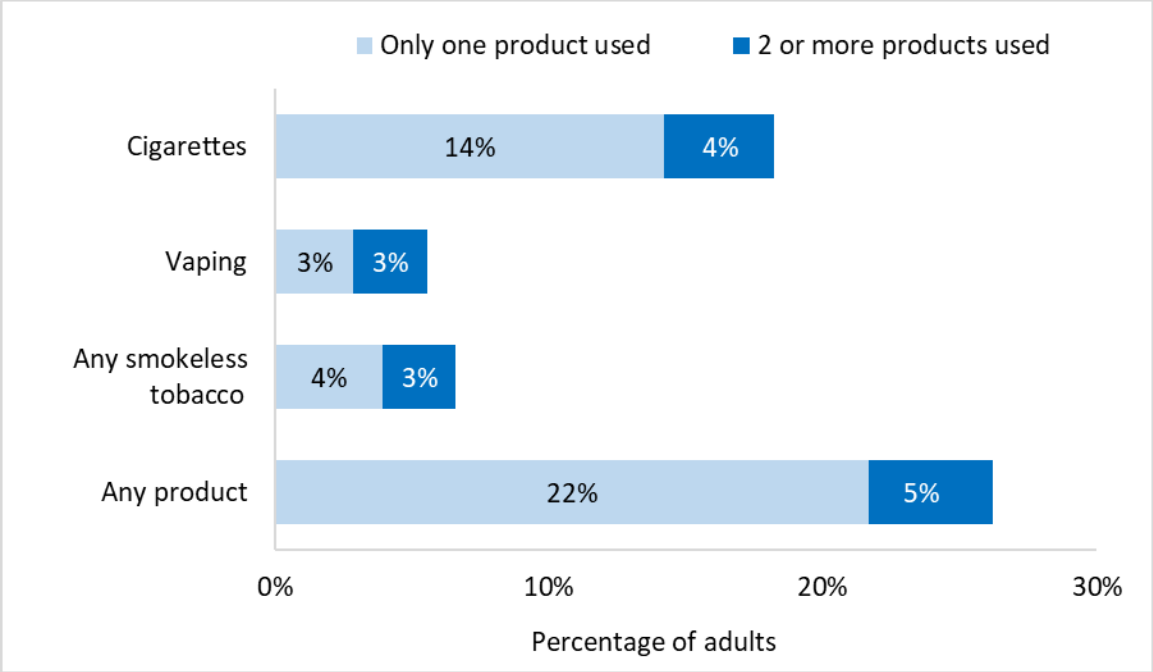


Source: Alaska BRFSS 2014-2021.

- Between 2014 and 2021, the percentage of adults who currently use any tobacco or nicotine product remained stable. In 2021, 25% of adults statewide currently used some form of tobacco or nicotine.
- Based on these most recent data, we estimate there are more than 136,500 adults in Alaska who are at risk for poor health outcomes due to tobacco or nicotine products.

[14] For more information about Healthy Alaskans 2030, see https://www.healthyalaskans.org/

Figure 2: Cigarettes remain the most commonly used tobacco product among adults in Alaska. Many adults who use tobacco products use more than one product.

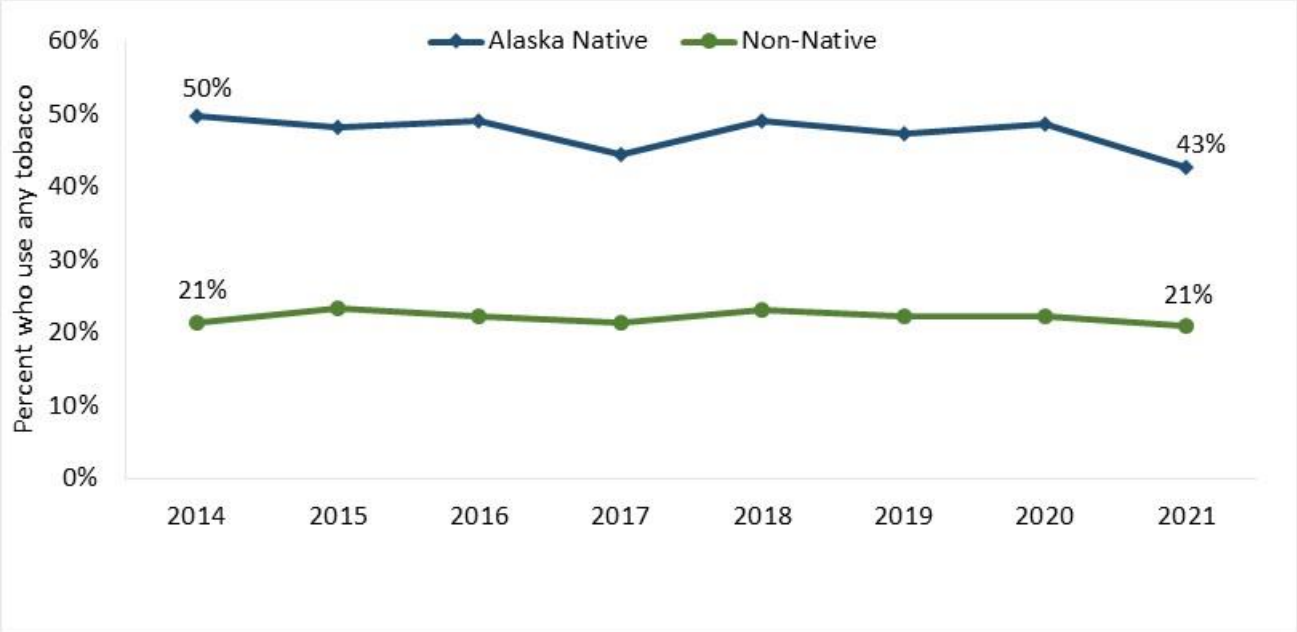


Product type	*Only one product used*	*Used multiple products*	*Used alone or in combination**
Cigarettes	14%	4%	18%
Vaping products	3%	3%	6%
Any smokeless tobacco	4%	3%	7%
Any tobacco product	22%	5%	26%

Source: AK BRFSS, 2019-2021.
*Numbers may not match sum of "one product" and "multiple product" values due to rounding.

- In Alaska, 26% of adults currently used some form of tobacco or nicotine product during 2019-2021.
- Cigarettes are the most commonly used product. 18% of Alaska adults smoked cigarettes. Fewer adults used electronic vaping products like e-cigarettes (6%) and smokeless tobacco (7%).
- The majority of Alaska adults who smoked cigarettes used only that tobacco product.
- About half of adults who used smokeless tobacco or vaping products were also using other tobacco products.

Figure 3. Tobacco use among Alaska Native adults was significantly greater than among non-Native adults in each of the last 8 years in Alaska.



Source: Alaska BRFSS 2014-2021.

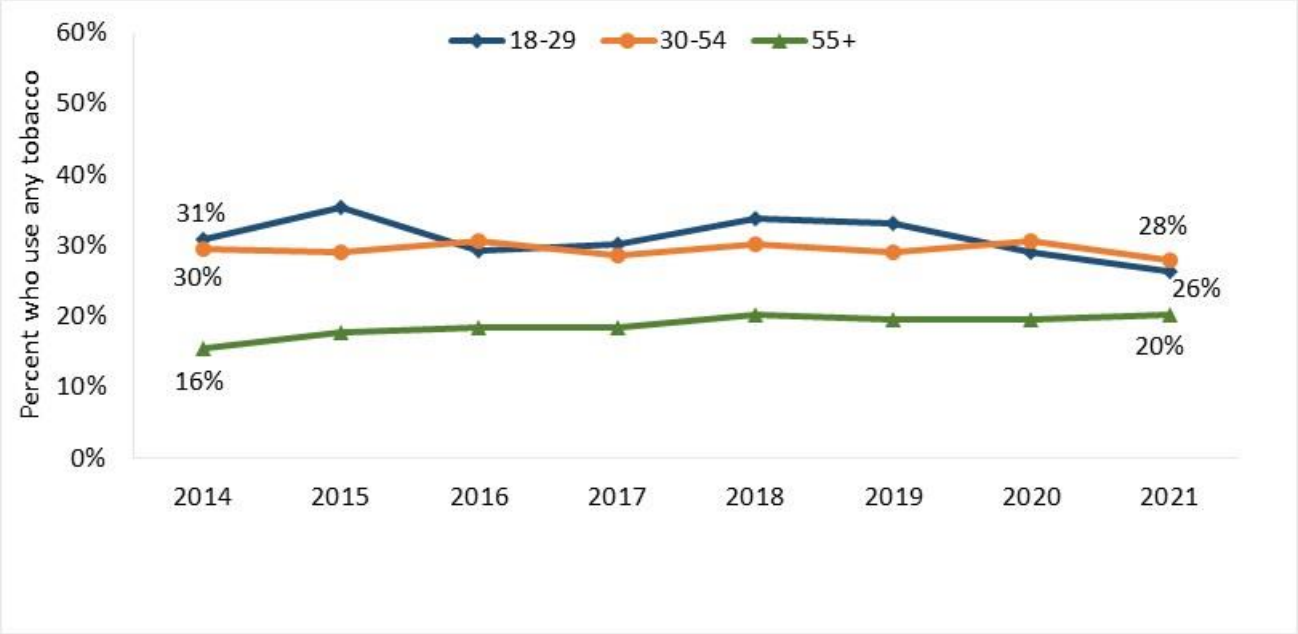
- Among both Alaska Native and non-Native adults, the percentage who use any tobacco did not change significantly from 2014 to 2021.
- Tobacco use among Alaska Native adults was significantly greater than among non-Native adults in all years, including 2021.

Figure 4. Tobacco use among low socioeconomic status (SES) adults was significantly greater than among higher SES adults in each of the last 8 years in Alaska.

Source: Alaska BRFSS 2014-2021.
Socioeconomic Status (SES) measure: "Low SES" is defined as living in a household that is at or below 185% of the Alaska Poverty Level Guideline. See Appendix for more information.

- Among adults with either low socioeconomic status (SES) or higher SES, the percentage of adults who used any tobacco or nicotine product did not change significantly from 2014 to 2021.
- Tobacco use among adults with low SES was significantly greater than among adults with higher SES in all years, including 2021.

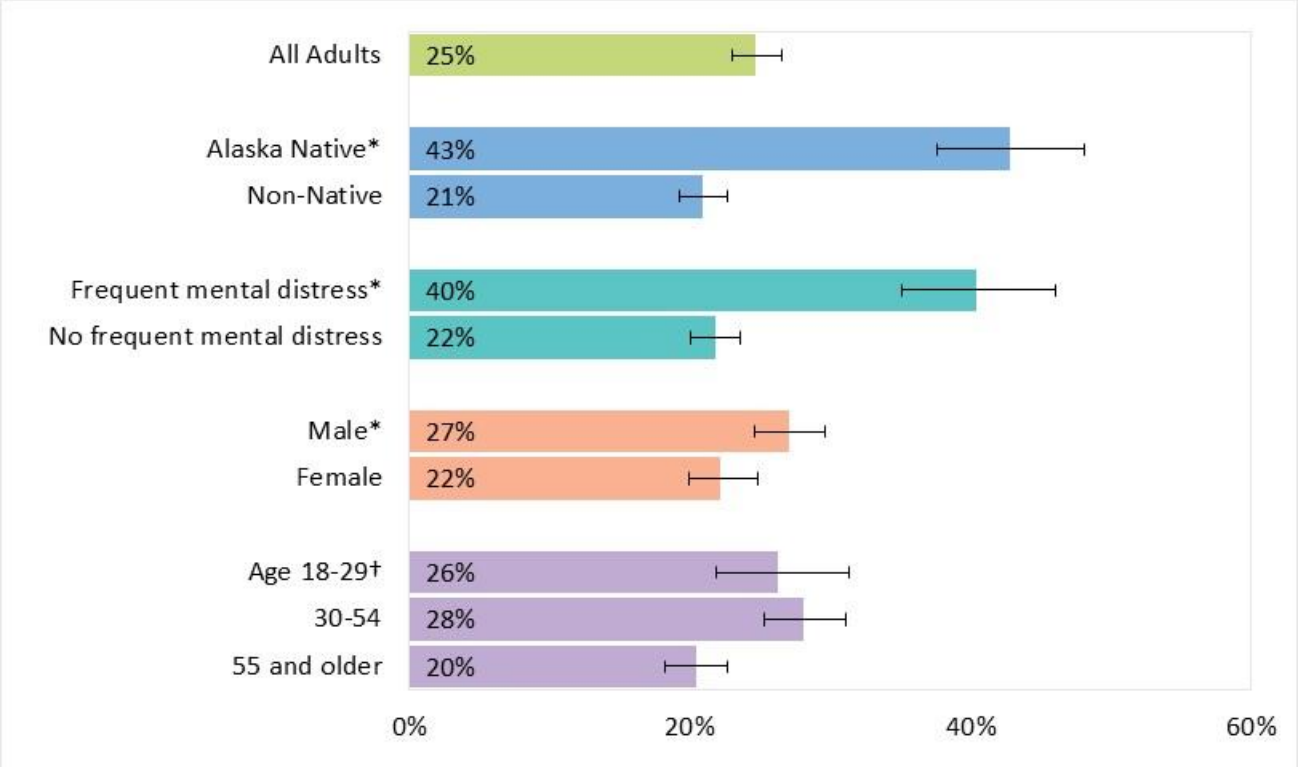
Figure 5. Tobacco use among adults ages 55 and older has been significantly lower than among other age groups during the last 8 years in Alaska.



Source: Alaska BRFSS 2014-2021.

- Among adults ages 18 to 29 and adults ages 30 to 54, tobacco use did not significantly change from 2014 to 2021. Among adults ages 55 and older tobacco use did increase significantly from 2014 to 2021.
- In 2021, and consistently over time, tobacco use among those ages 18 to 29 was significantly greater than among those ages 55 and older.
- Likewise, tobacco use among those ages 30 to 54 was consistently and significantly greater than those ages 55 and older.

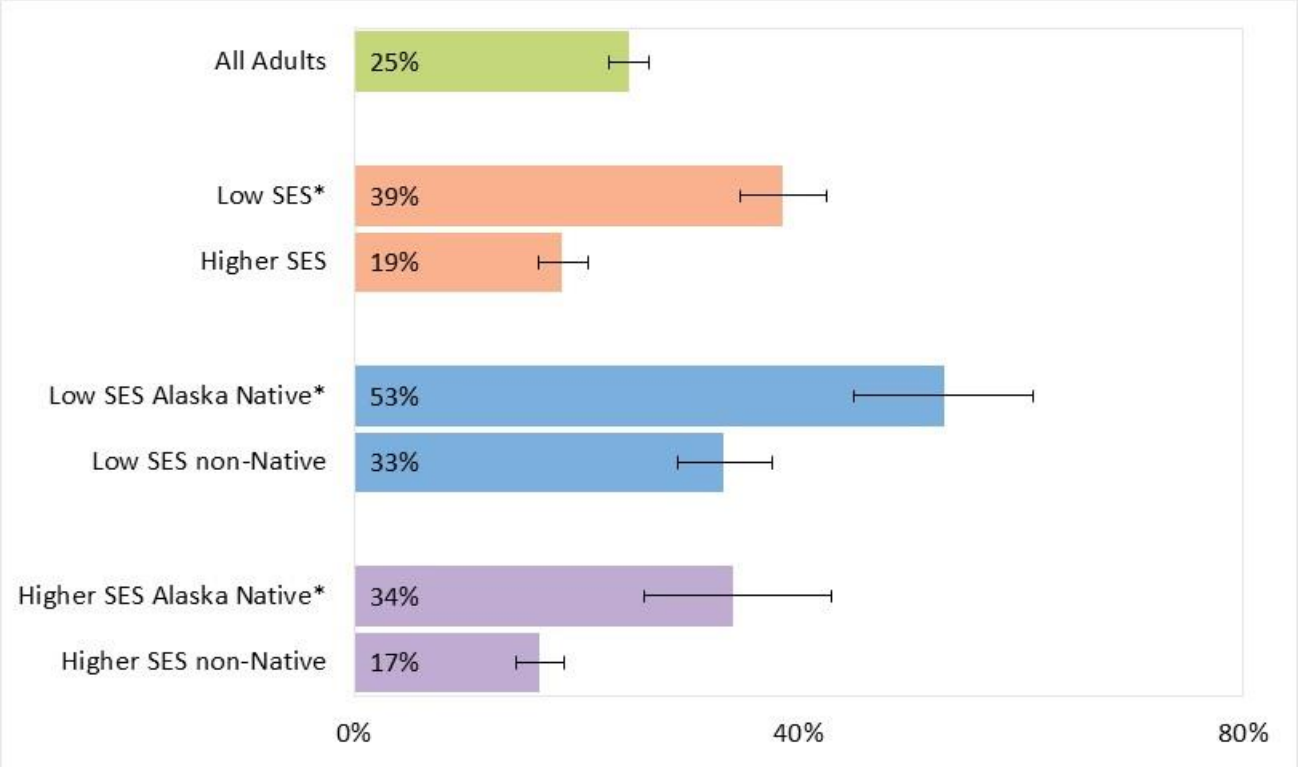
Figure 6. In Alaska, the percentage of adults who currently use any tobacco or nicotine product varies by subgroup.



Source: Alaska BRFSS, 2021.
* Significant difference between the two sub-groups.
† Significant differences between individual sub-groups, as described below.

- In 2021, the percentage of adults who used any tobacco or nicotine product was significantly higher among Alaska Native adults than among non-Native adults (43% vs. 21%).
- Adults experiencing frequent mental distress (14 or more days of poor mental health in the past month) were significantly more likely than those not experiencing frequent mental distress to use a tobacco product (40% vs. 22%).
- Men were significantly more likely than women to use a tobacco product (27% vs. 22%).
- Tobacco use prevalence was not significantly different between young adults ages 18 to 29 and adults ages 30 to 54 (26% and 28%). Adults in both age groups were significantly more likely to use a tobacco product than adults ages 55 and older (20%).

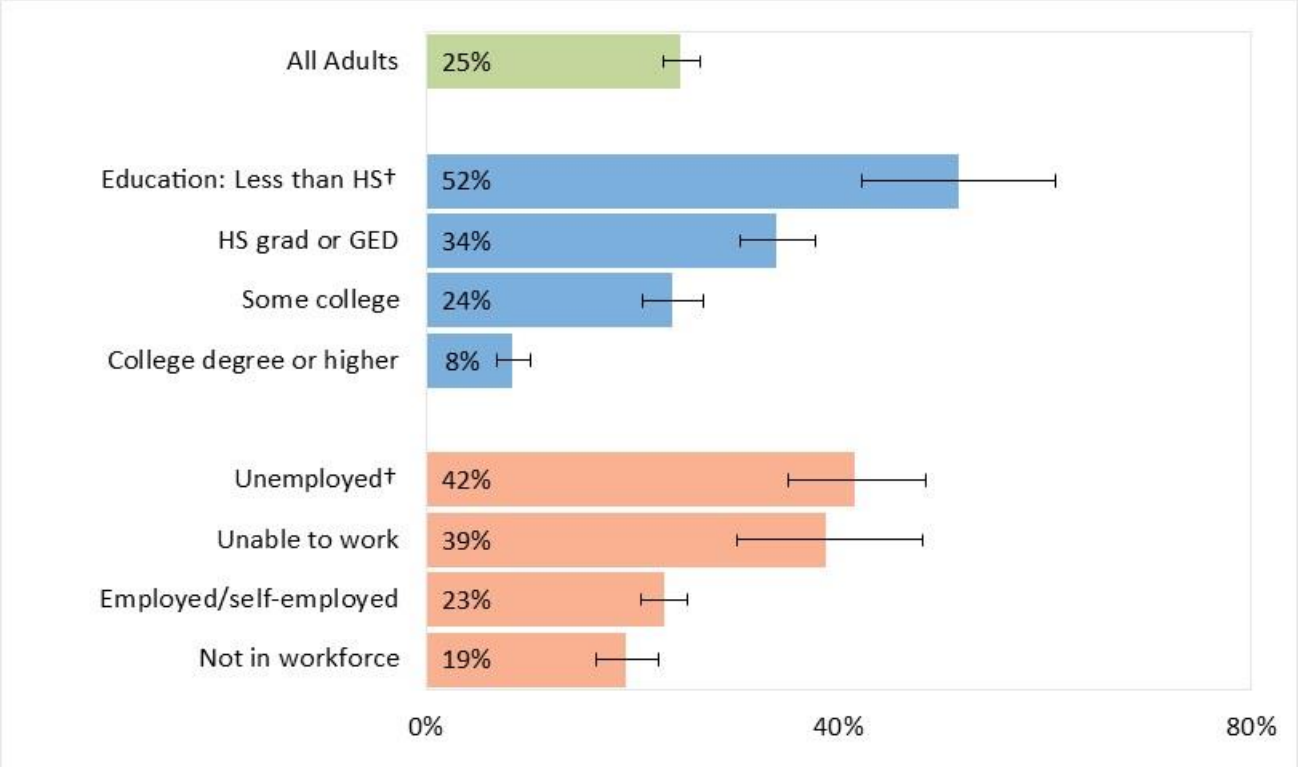
Figure 7. In Alaska, the percentage of adults who currently use any tobacco or nicotine product varies by Socioeconomic Status (SES).



Source: Alaska BRFSS, 2021.
* Significant difference between the two sub-groups.
Socioeconomic Status (SES) measure: "Low SES" is defined as living in a household that is at or below 185% of the Alaska Poverty Level Guideline. See Appendix for more information.

- In 2021, the percentage of adults who used any tobacco or nicotine product was significantly higher among low SES adults than among higher SES adults (39% vs. 19%).
- Among low SES adults, Alaska Native adults were significantly more likely than non-Native adults to use a tobacco product (53% vs. 33%).
- Likewise, among higher SES adults, Alaska Native adults were significantly more likely than non-Native adults to use a tobacco product (34% vs. 17%).

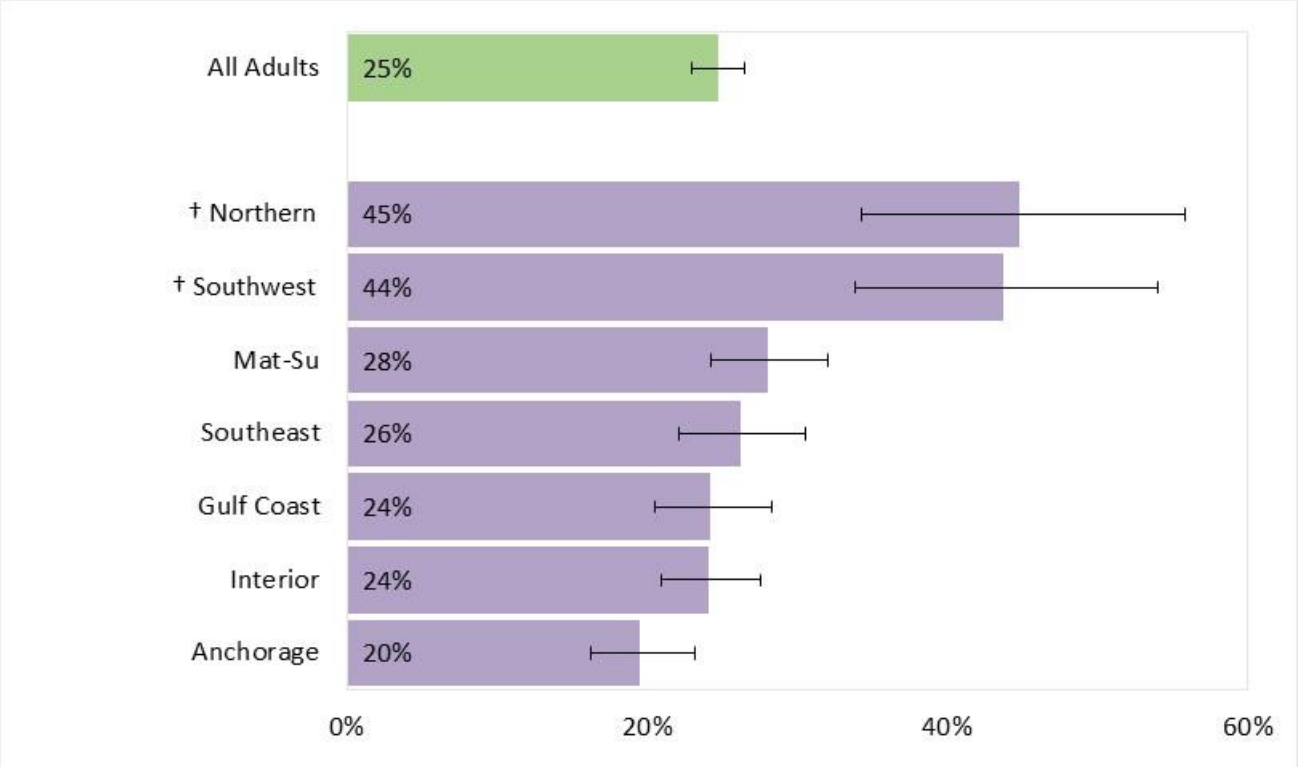
Figure 8. In Alaska, the percentage of adults who currently use any tobacco or nicotine product varies by formal education and employment status.



Source: Alaska BRFSS, 2021.
† Significant differences between sub-groups, as described below.

- In 2021, the percentage of adults who used any tobacco or nicotine product was progressively lower among adults with greater levels of formal education. For example, adults with less than a high school education were significantly more likely to use a tobacco product than those with a high school education (52% vs. 34%). Those with a high school education or GED were significantly more likely to use a tobacco product than those with some college education (34% vs. 24%). Those with some college education were significantly more likely to use a tobacco product than those with a college degree or higher (24% vs. 8%).
- Adults who were not in the workforce (retirees, students, and homemakers) were significantly less likely to use any tobacco product than those who were unemployed or unable to work (19% vs. 39% among those who were unable to work, and 42% among those who were unemployed). Likewise, adults who were employed were significantly less likely to use any tobacco product than those who were unemployed or unable to work (23% vs. 39% among those who were unable to work, and 42% among those who were unemployed).

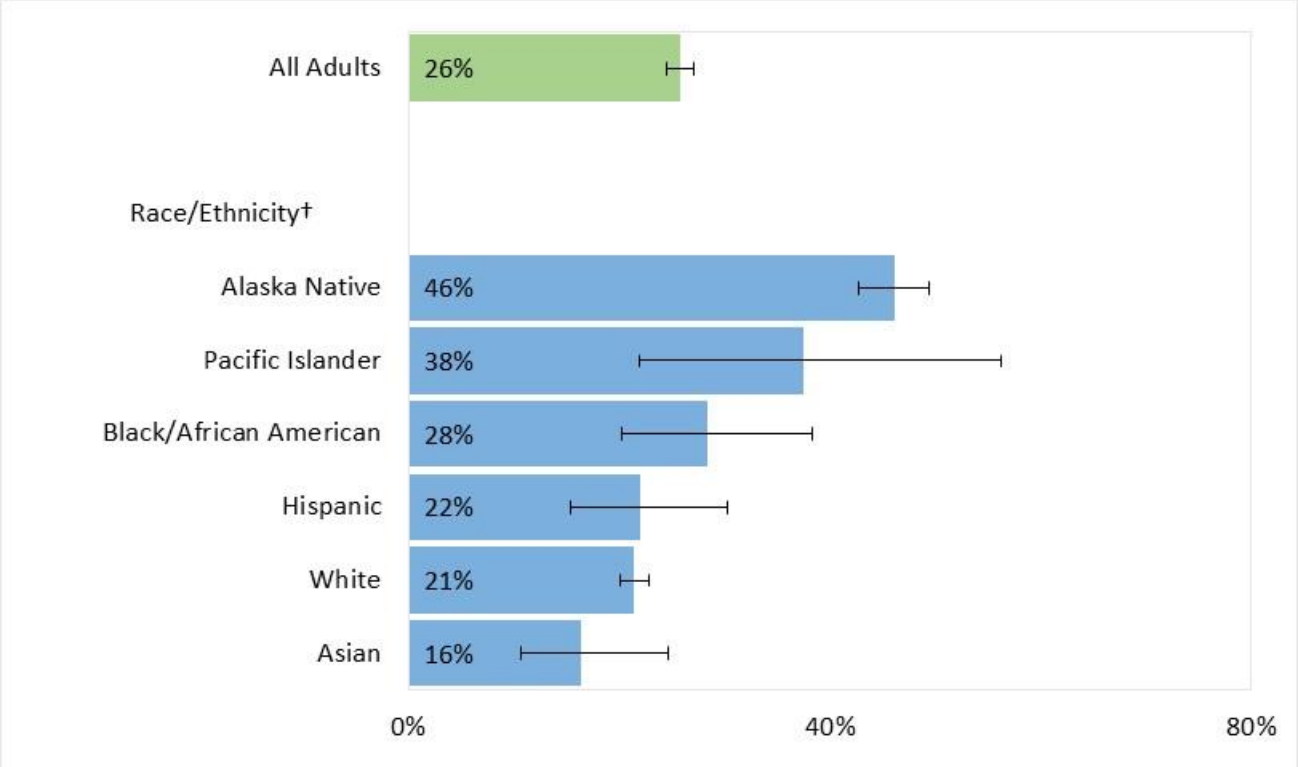
Figure 9. In Alaska, the percentage of adults who currently use any tobacco or nicotine product varies by region.



Source: Alaska BRFSS, 2021.
† Significant differences between sub-groups, as described below.
See Appendix for a map of Alaska's Public Health regions, within the BRFSS data description.

- In 2021, there was variation by Alaska region in the percentage of adults who used any tobacco or nicotine product. Prevalence within the Southwest and Northern regions was significantly higher than in all the other regions. Moreover, prevalence was higher in both the Mat-Su and the Southeast regions compared to the Anchorage region.

Figure 10. In Alaska, the percentage of adults who currently use any tobacco or nicotine product varies by race/ethnicity.

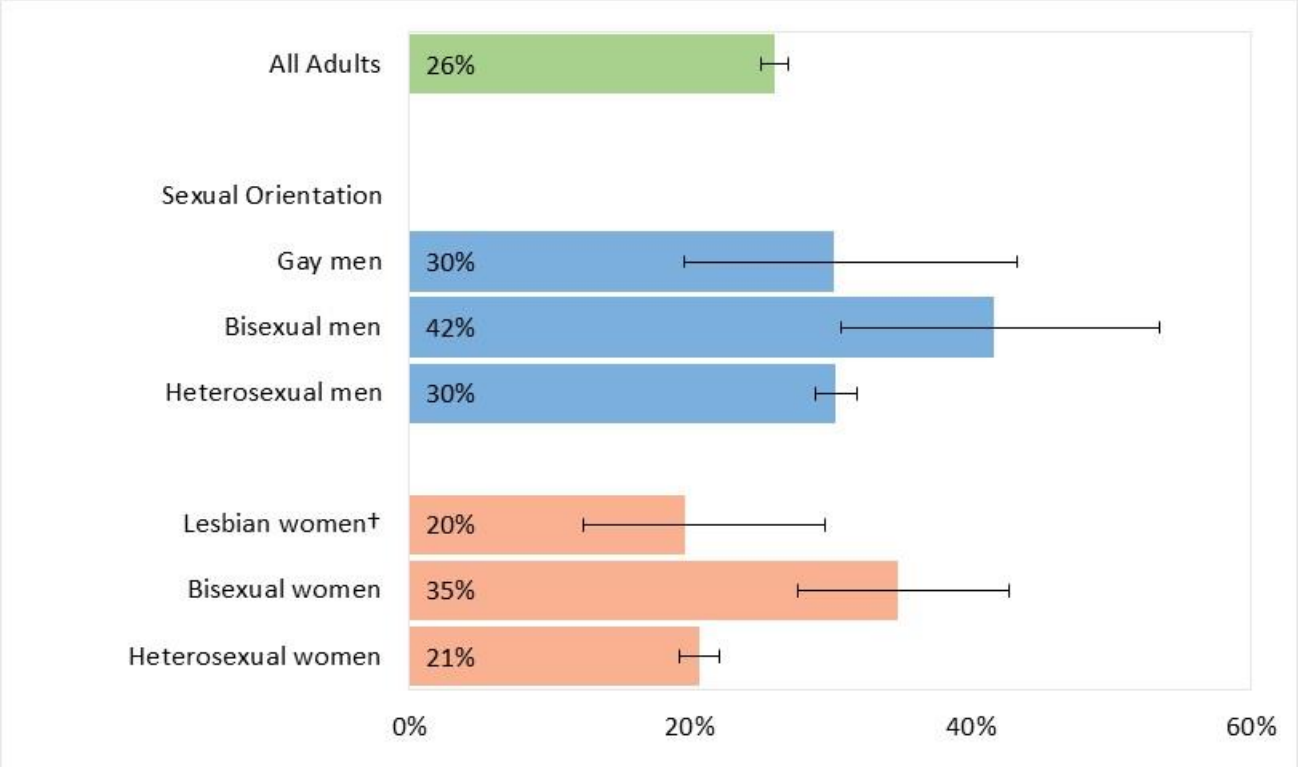


Source: Alaska BRFSS, 2019-2021.
† Significant differences between sub-groups, as described below.
Note: The race category of Alaska Native includes those who self-identified as Alaska Native, alone or in combination with other races or ethnicity. The race categories of African American, Asian, Pacific Islander, and White include those who reported one race only and do not include respondents who self-identified as Hispanic or Latino. Percentages reported in this graph are for 2019-2021 combined and may differ from those reported elsewhere for 2021 only.

In 2019-2021:

- Alaska Native adults were significantly more likely to use a tobacco or nicotine product than were adults from any other race or ethnicity group except for Pacific Islander adults.
- Pacific Islander adults were significantly more likely to use a tobacco or nicotine product than were Asian adults.
- African American adults were significantly more likely to use a tobacco or nicotine product than were Asian adults.

Figure 11. In Alaska, the percentage of adults who currently use any tobacco or nicotine product varies by gender and sexual orientation.



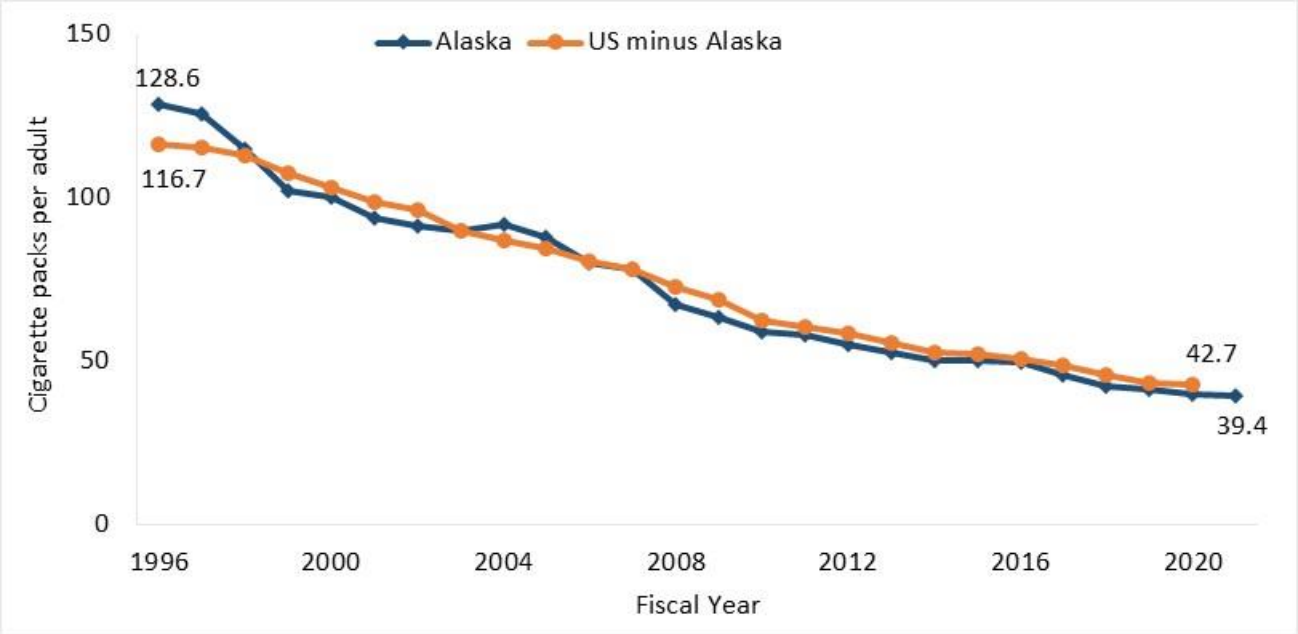
Source: Alaska BRFSS, 2017-2021.
† Significant differences between sub-groups, as described below.
Note: Percentages reported in this graph are for 2017-2021 combined and may differ from those reported elsewhere for 2021 only.

In 2017-2021:

- There were no significant differences in tobacco use prevalence among men, regardless of sexual orientation.
- Women who identified as bisexual were significantly more likely to use a tobacco product than women who identified as lesbian or heterosexual/straight (35% vs. 20% and 21%, respectively).

Cigarette Use

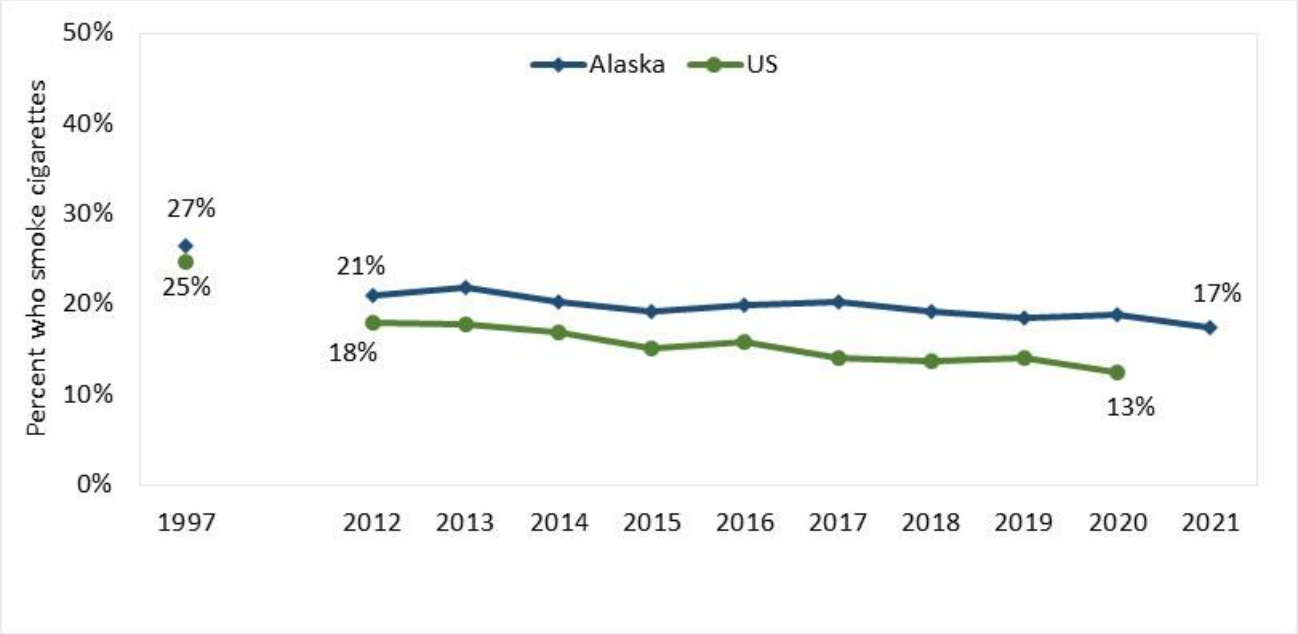
Figure 12. Annual sales of cigarettes per adult have been decreasing in Alaska and at the National level.



Sources: Alaska Department of Revenue, Tax Division FY21 Reports;
Orzechowski & Walker, *The Tax Burden on Tobacco*, 2022 (vol 57); note 2020 data is the most recent available data at time of publication.

- The number of cigarette packs sold per adult in Alaska dropped by 69%, from 128.6 packs per adult in 1996 to 39.4 packs per adult in fiscal year 2021.
- This drop in cigarette sales translates to 614 million fewer cigarettes sold in Alaska in 2021 than in 1996.

Figure 13. The percentage of Alaska adults who currently smoke cigarettes decreased statewide during the past 10 years.

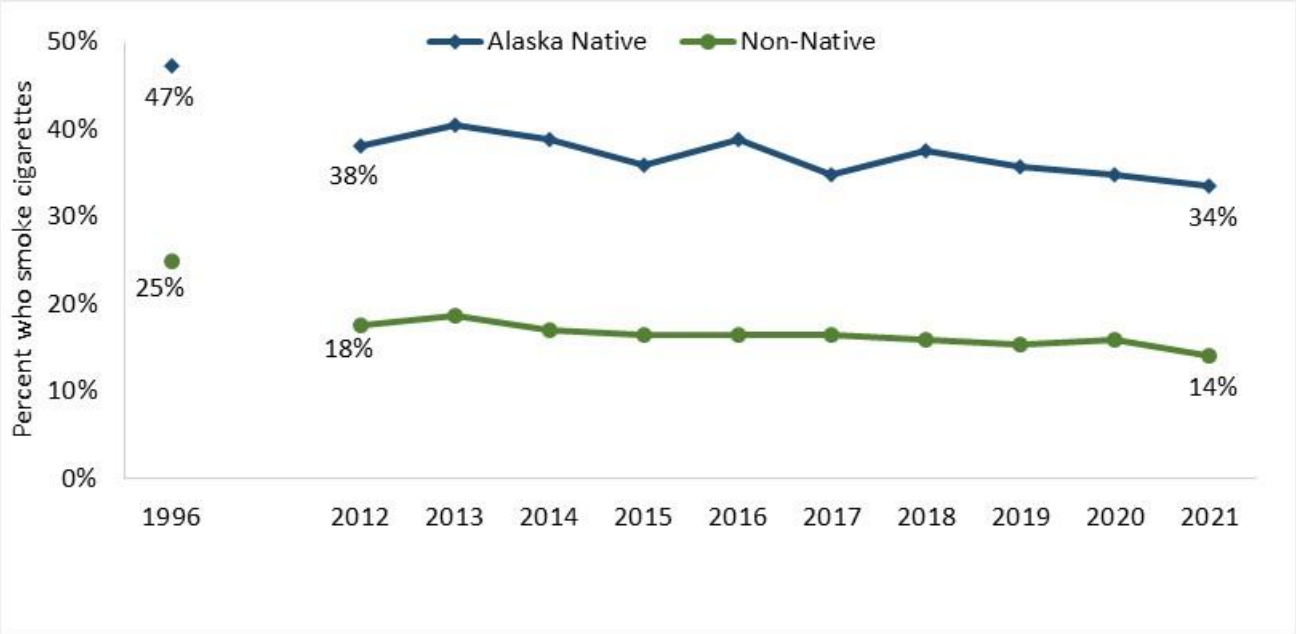


Sources: Alaska BRFSS 1997, 2012-2021. US data is from CDC and is the most recent available at time of publication.

- Smoking prevalence among adults has declined significantly in the long term, from 27% in 1997 to 17% in 2021 in Alaska. Adult smoking prevalence has also declined in the United States overall.
- In Alaska, the percentage of adults who smoke has significantly declined in the past 10 years alone, from 21% in 2012 to 17% in 2021.
- Based on the most recent estimate of the percentage of adults who smoke, there are approximately 96,100 adults in Alaska who are at risk for poor health outcomes due to cigarette smoking.
- Reductions in smoking prevalence since 1997, which was just prior to the start of Alaska's Tobacco Prevention and Control Program, translate to just over 50,000 fewer Alaska adults who smoke.[15]

[15] Had the adult smoking prevalence in 2021 been 26.5% (prevalence of adult smoking in 1997) there would be an estimated 50,300 more adults who smoke in 2021.

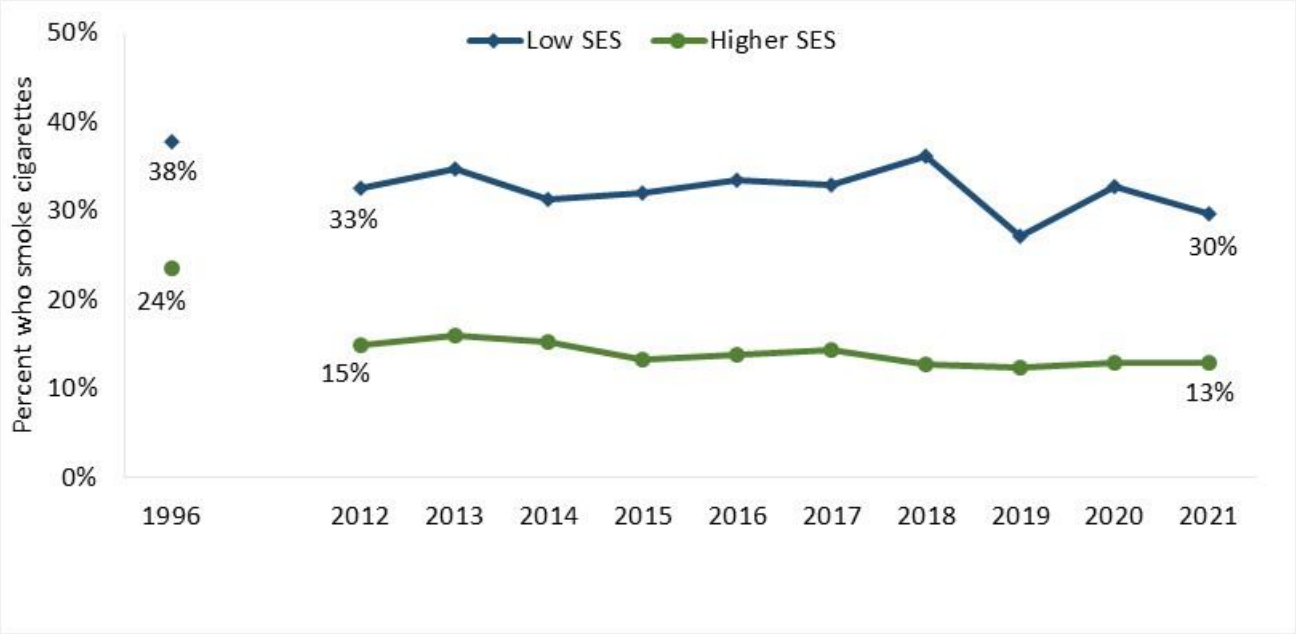
Figure 14. The percentage of Alaska adults who currently smoke cigarettes differs by race.



Source: Alaska BRFSS 1996, 2012-2021.

- Among Alaska Native adults, there was no significant change in the percentage of adults who smoke from 2012 to 2021.
- Among non-Native adults, smoking decreased significantly from 18% in 2012 to 14% in 2021.

Figure 15. The percentage of Alaska adults who currently smoke cigarettes differs by socioeconomic status (SES).

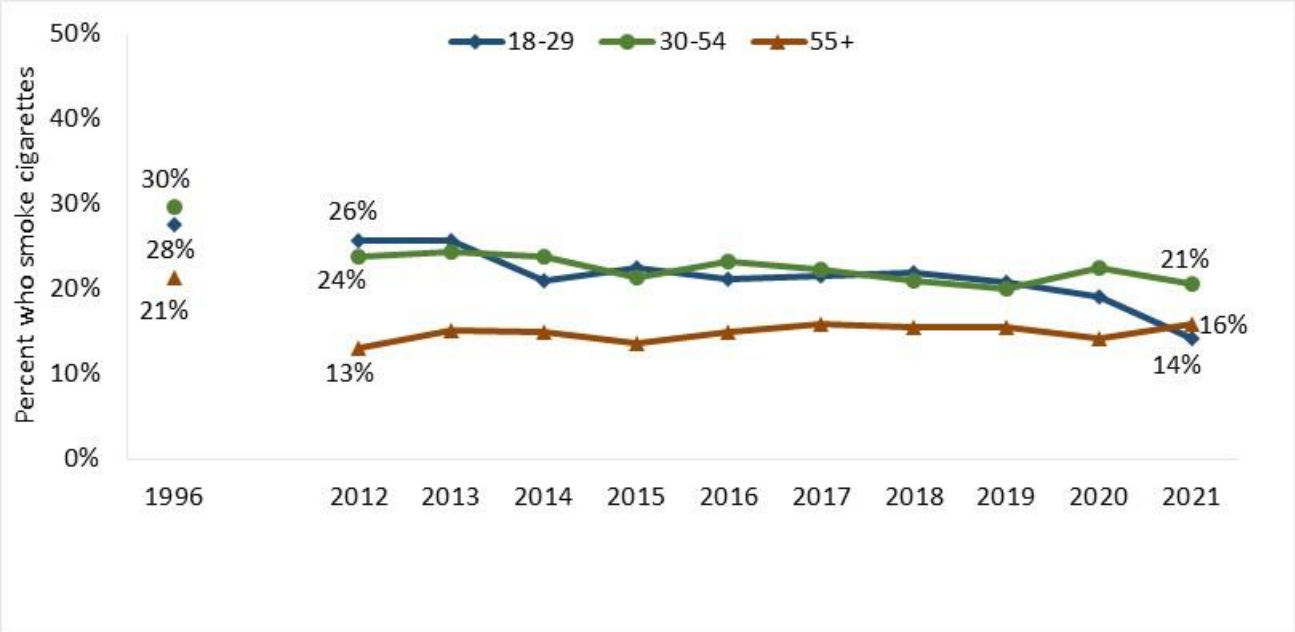


Source: Alaska BRFSS 1996, 2012-2021.

"Low SES" is defined as household income at 185% or less of the Alaska Poverty Level Guideline. See Appendix for more information.

- Among adults with lower socioeconomic status (SES), smoking prevalence did not change significantly between 2012 and 2021.
- Among adults with higher SES, smoking prevalence decreased significantly between 2012 and 2021.

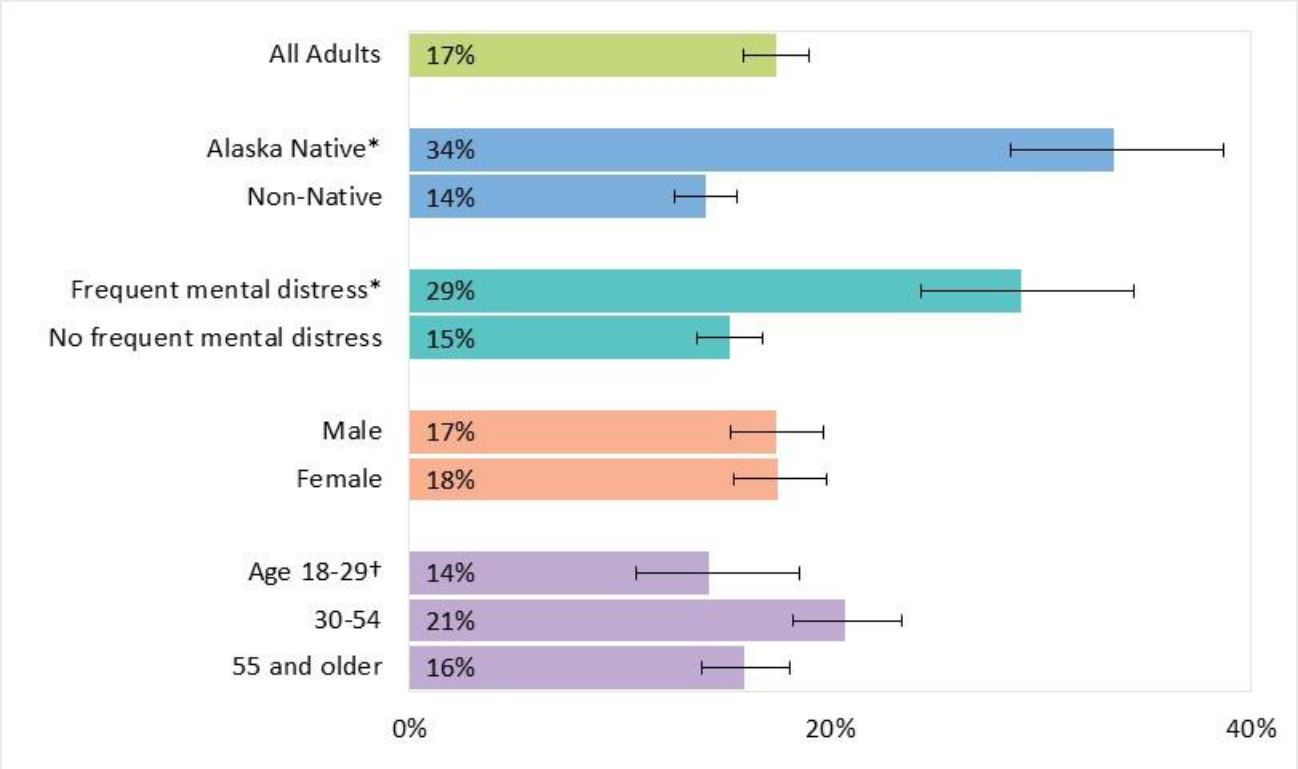
Figure 16. The percentage of Alaska adults who currently smoke cigarettes varies by age group.



Source: Alaska BRFSS 1996, 2012-2021.

- Among adults ages 18 to 29, smoking decreased significantly from 26% in 2012 to 14% in 2021.
- Among adults ages 30 to 54, smoking decreased significantly from 24% in 2012 to 21% in 2021.
- Smoking did not change significantly among adults ages 55 and older from 2012 to 2021, however prevalence among those ages 55 and older remained significantly less than among adults ages 30 to 54 in 2021.

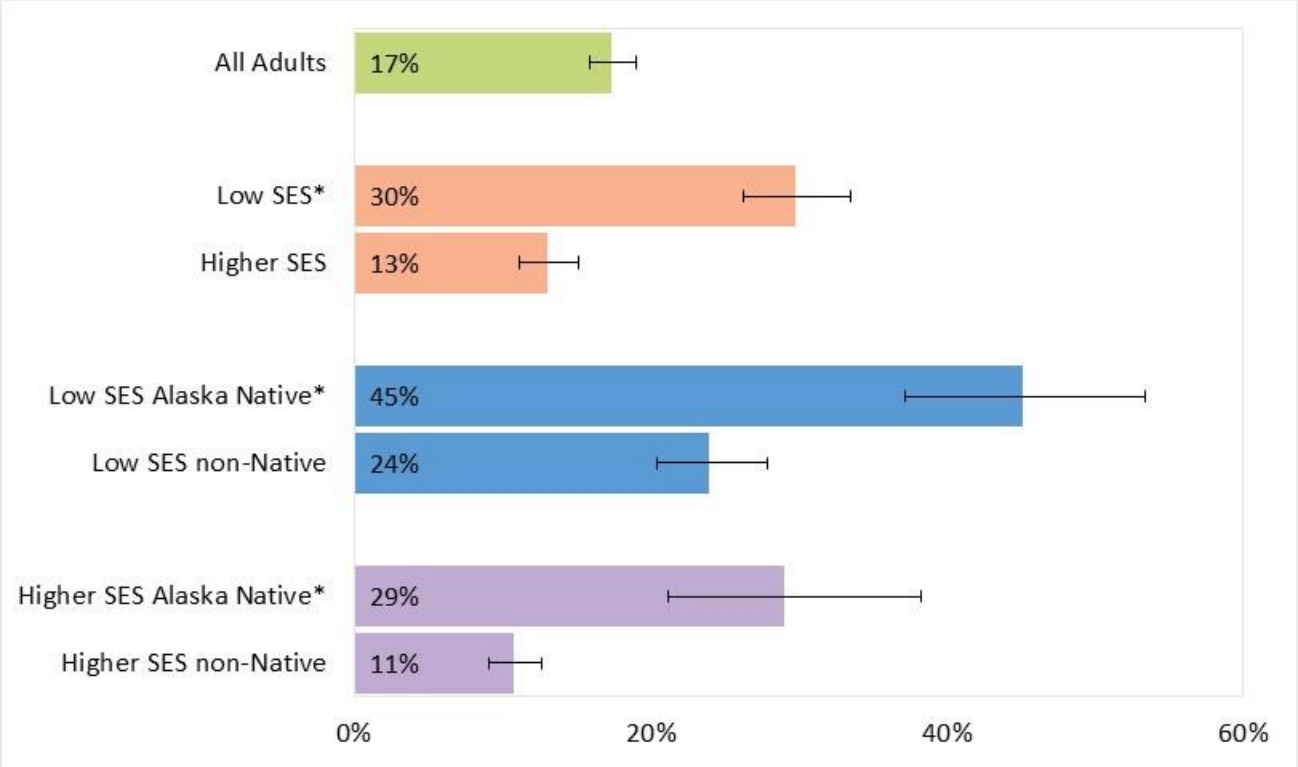
Figure 17. In Alaska, the percentage of adults who currently smoke cigarettes varies by subgroup.



Source: Alaska BRFSS, 2021.
* Significant difference between the two sub-groups.
† Significant differences between sub-groups, as described below.

- In 2021, adult smoking was significantly higher among Alaska Native adults than among non-Native adults (34% vs. 14%).
- Adults experiencing frequent mental distress (14 or more days of poor mental health in the past month) were significantly more likely to currently smoke than those not experiencing frequent mental distress (29% vs. 15%).
- There was no difference between men and women.
- Young adults ages 18 to 29 were significantly less likely to smoke as compared to adults ages 30 to 54 (14% and 21%, respectively). Moreover, adults ages 30 to 54 were significantly more likely to currently smoke than adults ages 55 and older (21% vs. 16%).

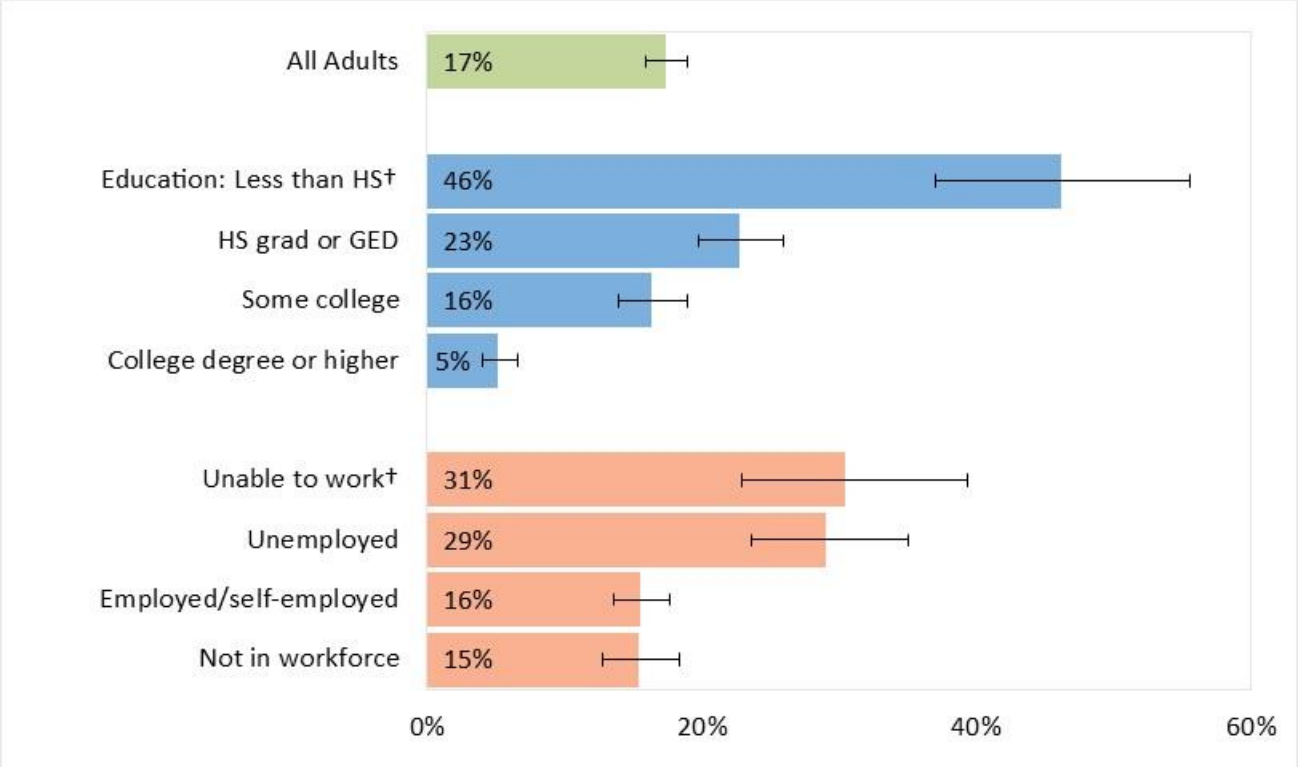
Figure 18. In Alaska, the percentage of adults who currently smoke cigarettes varies by race and socioeconomic status.



Source: Alaska BRFSS, 2021.
* Significant difference between the two sub-groups.
"Low SES" is defined as household income at 185% or less of the Alaska Poverty Level Guideline. See Appendix for more information.

- In 2021, the percentage of adults who smoked was significantly greater among low SES adults than among higher SES adults (30% vs. 13%).
- Among low SES adults, Alaska Native adults were significantly more likely than non-Native adults to currently smoke (45% vs. 24%).
- Likewise, among higher SES adults, Alaska Native adults were significantly more likely than non-Native adults to currently smoke (29% vs. 11%).

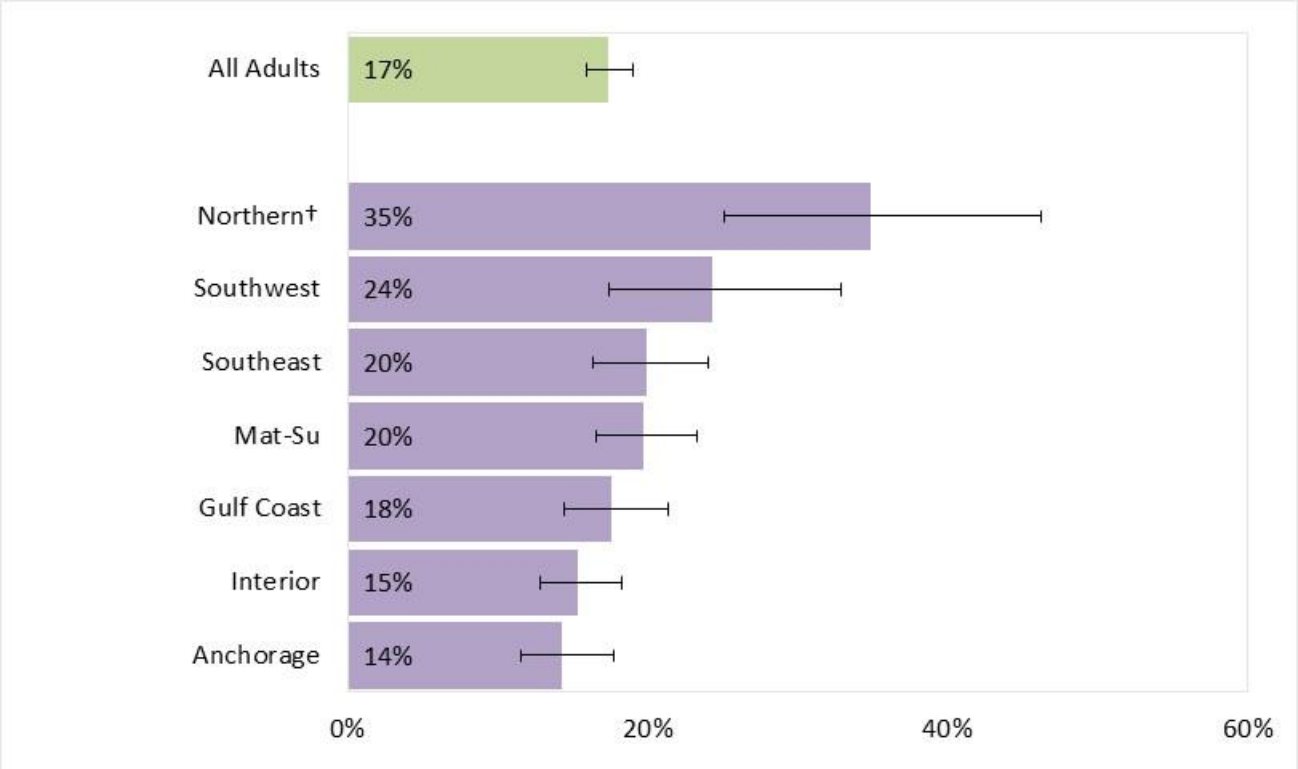
Figure 19. In Alaska, the percentage of adults who currently smoke cigarettes varies by both formal education and employment status.



Source: Alaska BRFSS, 2021.
† Significant differences between sub-groups, as described below.

- In 2021, the percentage of adults who smoked was progressively lower among adults with greater levels of formal education. For example, adults with less than a high school education were significantly more likely to smoke than those with a high school education (46% vs. 23%). Those with a high school education or GED were significantly more likely to smoke than those with some college education (23% vs. 16%). Those with some college education were significantly more likely to smoke than those with a college degree or higher (16% vs. 5%).
- Adults who were not in the workforce (retirees, students, and homemakers) were significantly less likely to smoke than adults who were unemployed or unable to work (15% vs. 29% and 31%, respectively). Likewise, adults who were employed or self-employed were significantly less likely to smoke than those who were unemployed or unable to work (16% vs. 29% and 31%, respectively).

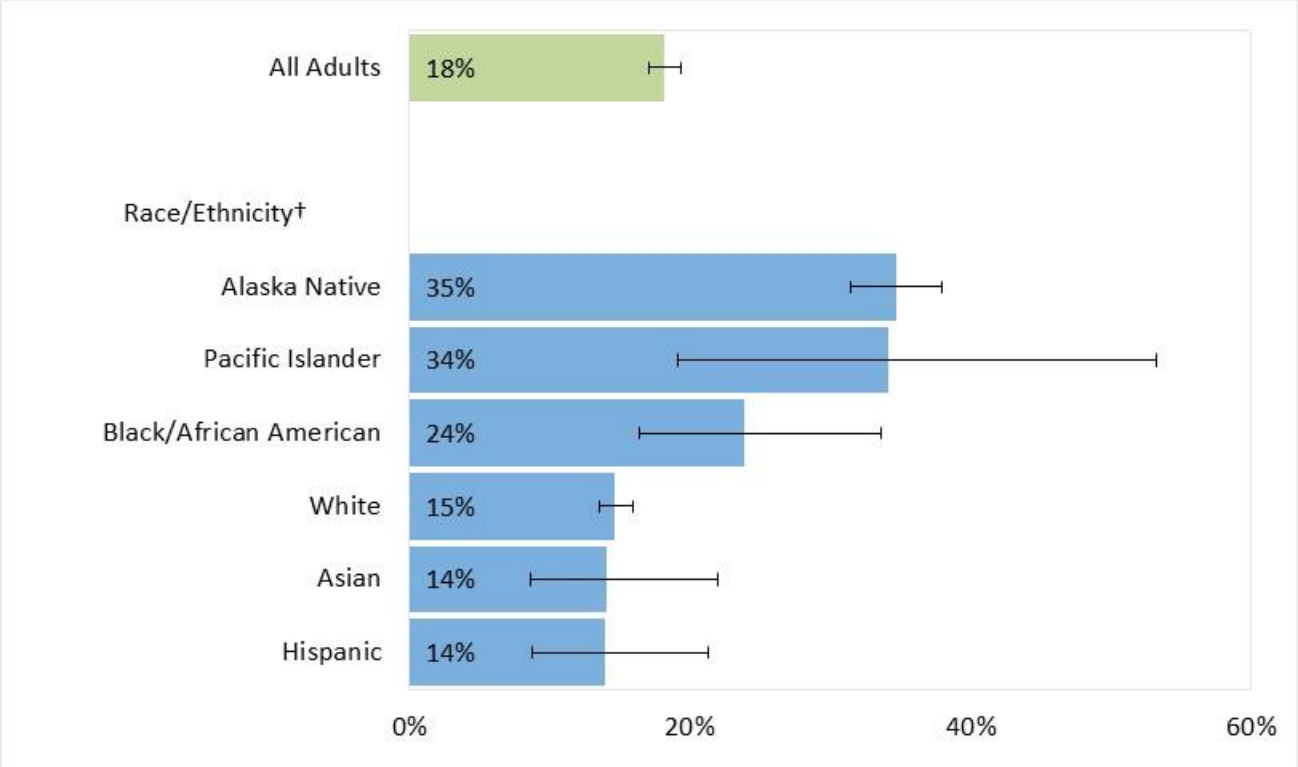
Figure 20. In Alaska, the percentage of adults who currently smoke cigarettes differs by region.



Source: Alaska BRFSS, 2021.
† Significant differences between sub-groups, as described below.

- In 2021, adults in the Northern region were significantly more likely to smoke than adults in all other regions except for the Southwest region.
- Adults in the Southwest region were significantly more likely to smoke than adults in both the Interior and Anchorage regions.
- Adults in the Anchorage region were significantly less likely to smoke than adults in both the Southeast and Mat-Su regions.

Figure 21. In Alaska, the percentage of adults who currently smoke cigarettes varies by race/ethnicity.

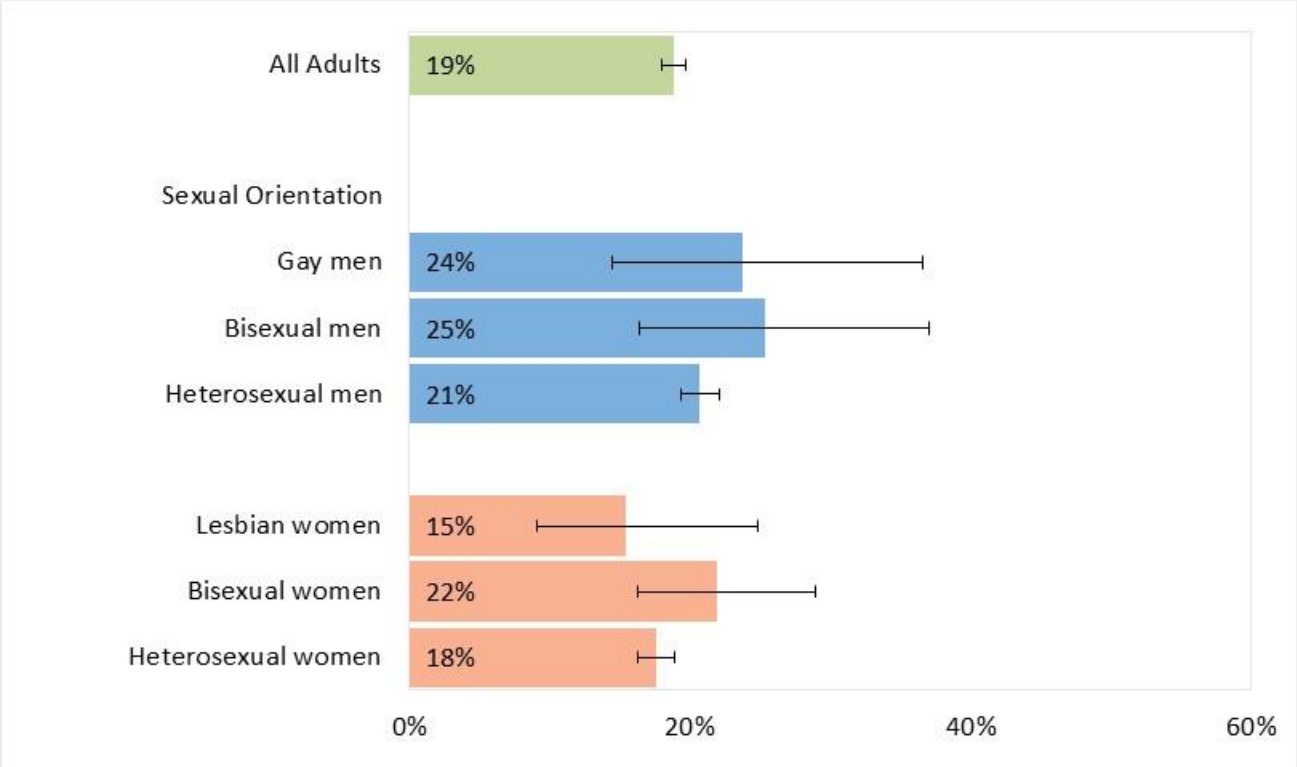


Source: Alaska BRFSS, 2019-2021.
† Significant differences between sub-groups, as described below.
Note: The race category of Alaska Native includes those who self-identified as Alaska Native, alone or in combination with other races or ethnicity. The race categories of African American, Asian, Pacific Islander, and White include those who reported one race only and do not include respondents who self-identified as Hispanic or Latino. Percentages reported in this graph are for 2019-2021 combined and may differ from those reported elsewhere for 2021 only.

In 2019-2021:

- Alaska Native adults were significantly more likely to smoke than adults from any other race or ethnicity group except Pacific Islander adults.
- Pacific Islander adults were significantly more likely to smoke than Asian, White, or Hispanic adults
- African American adults were significantly more likely to be smokers than White adults.

Figure 22. In Alaska, the percentage of adults who currently smoke cigarettes varies by gender and sexual orientation.



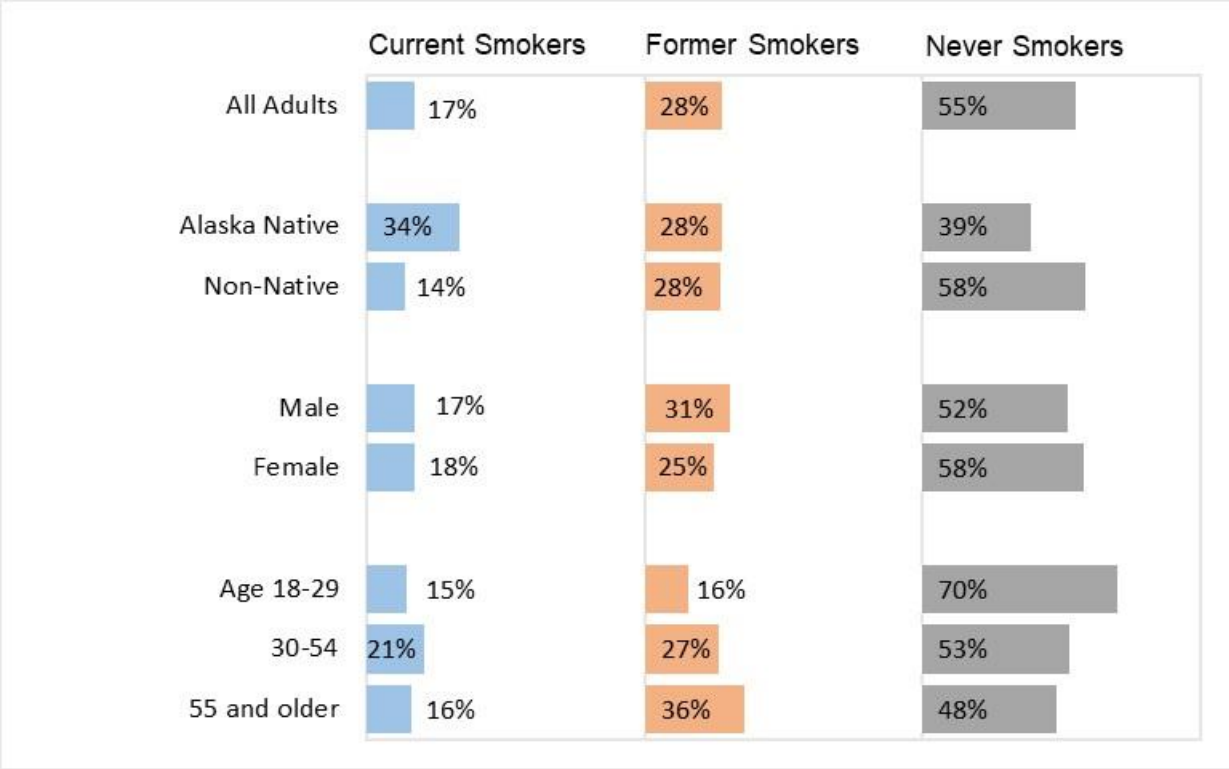
Source: Alaska BRFSS, 2017-2021.
Note: Percentages reported in this graph are for 2017-2021 combined so the All Adults estimate may differ from those reported elsewhere for 2021 only.

In 2017-2021:

- Among men, there were no significant differences in smoking prevalence by sexual orientation.
- Likewise, among women there were no significant differences in smoking prevalence by sexual orientation.

Quitting Cigarettes

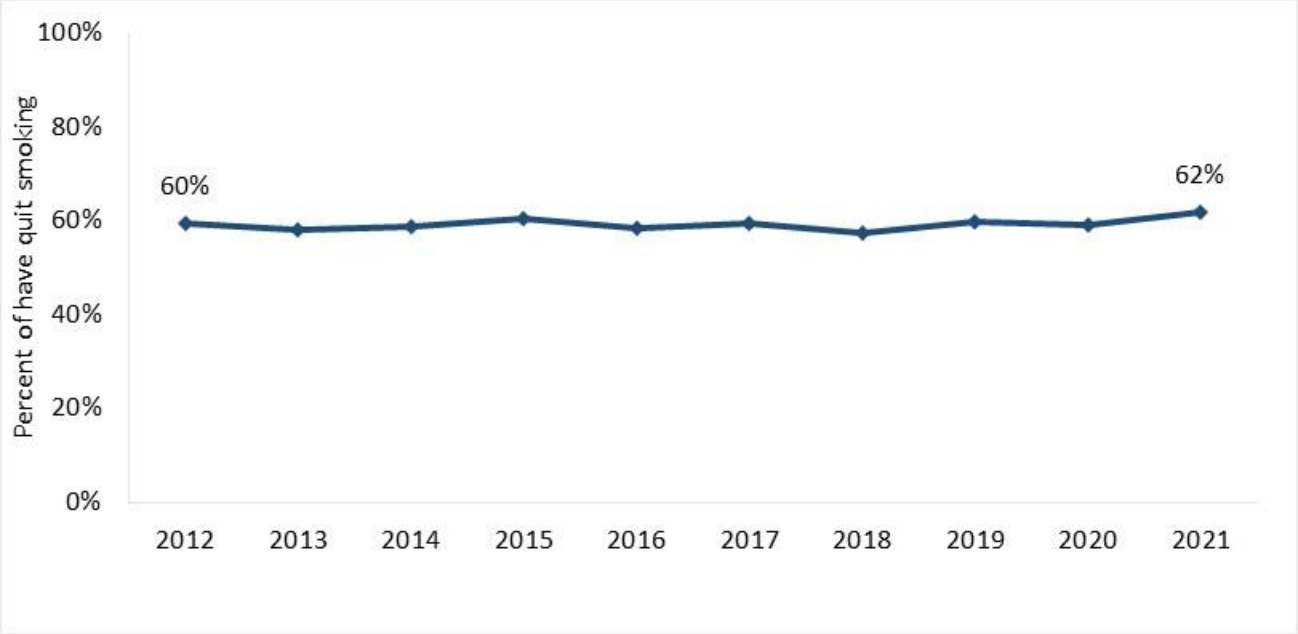
Figure 23. In Alaska, the percentage of adults who currently smoke, formerly smoked, and never smoked varies by subgroup.



Source: Alaska BRFSS, 2021.

- In 2021, there were significant differences in the percentages of current and never-smoking status among Alaska Native and non-Native adults. Additionally, there was a significant difference in the percentage of males and females for former and never smokers.
- Young adults (ages 18-29) and older adults (ages 55+) were significantly less likely to be current smokers as compared to middle-aged adults (age 30-54). The percentage of former smokers was significantly different in among all three age groups. Young adults (age 18-29) were significantly more likely to be never smokers as compared to both older adult age groups.

Figure 24. The percentage of Alaska adults ages 25 or older who ever smoked cigarettes but have now quit smoking (also known as the "quit ratio") has not increased significantly in the past 10 years.

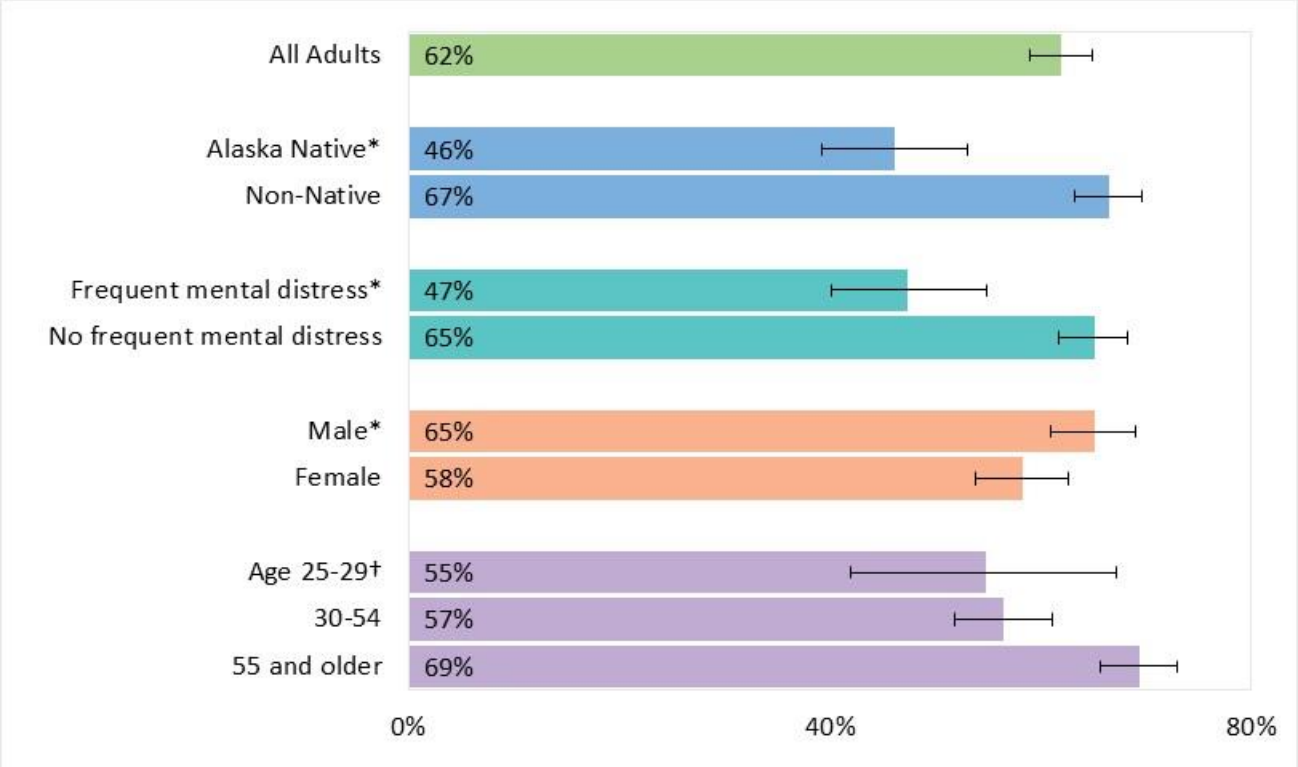


Source: Alaska BRFSS 2012-2021.
The "quit ratio" is the proportion of people who have quit smoking among those who have ever smoked. This measure is reported among adults who are age 25 or older, so that the trend is less likely to be affected by changes in initiation of smoking occurring in those who are less than 25 years of age.[16]

- In Alaska, the quit ratio has not increased significantly from 2012 to 2021 among all adults.
- Moreover, the quit ratio did not change significantly from 2012 to 2021 among subgroups of adults, including by gender, Alaska Native/non-Native, SES status, region, or education level. (data not shown).

[16] This is different than "quit attempts" which is reported for all ages who currently smoke (see Figure 26).

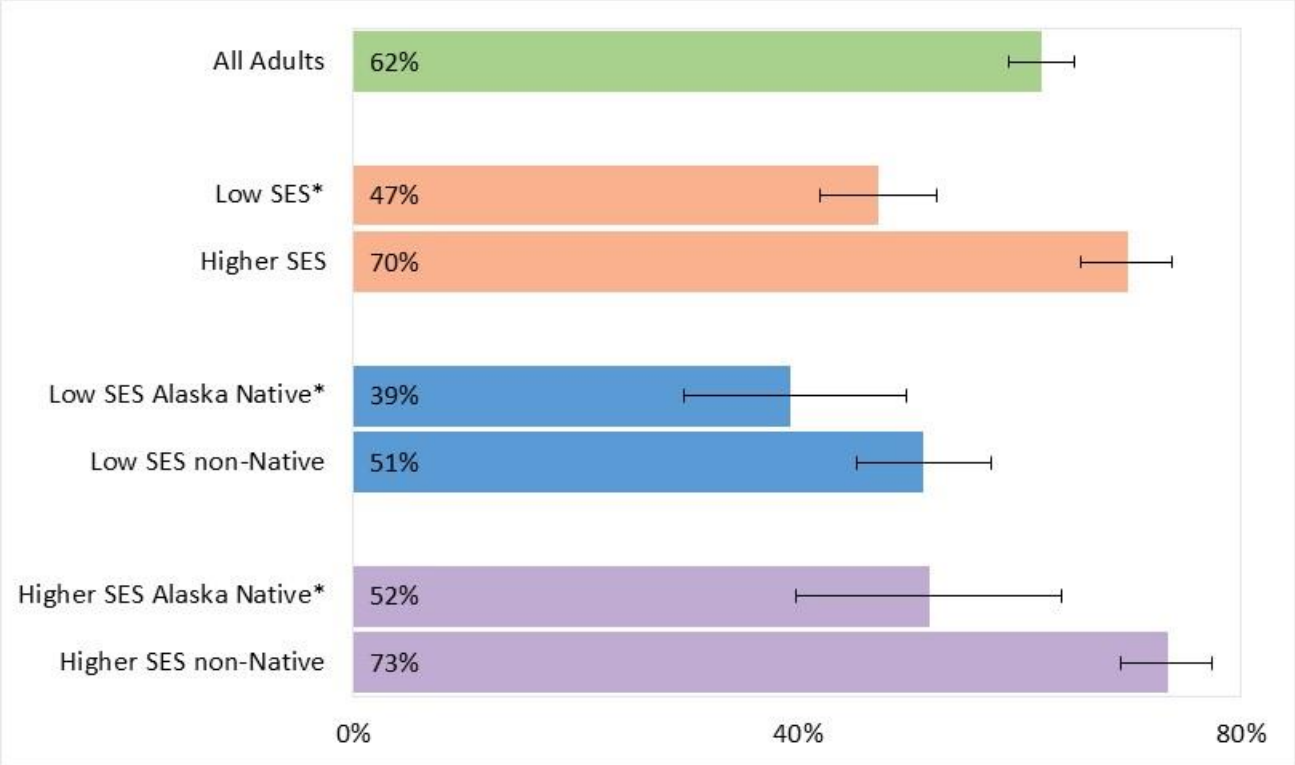
Figure 25. The percentage of Alaska adults ages 25 or older who ever smoked cigarettes but have now quit smoking (the "quit ratio") varies by subgroup.



Source: Alaska BRFSS, 2021.
* Significant difference between the two sub-groups
† Significant differences between sub-groups, as described below.
The quit ratio is the proportion of people who have quit smoking among those who have ever smoked. This measure is reported among adults who are age 25 or older.

- In 2021, non-Native adults were significantly more likely to have quit than Alaska Native adults (67% vs. 46%).
- Adults who did not experience frequent mental distress (14 or more days of poor mental health in the past month) were significantly more likely to have quit smoking than those experiencing frequent mental distress (65% vs. 47%).
- Males were significantly more likely to have quit smoking than females (65% vs. 58%).
- Adults ages 55 and older were significantly more likely to have quit than adults ages 25-29 or adults ages 30 to 54 (69% vs. 55% and 57%, respectively).

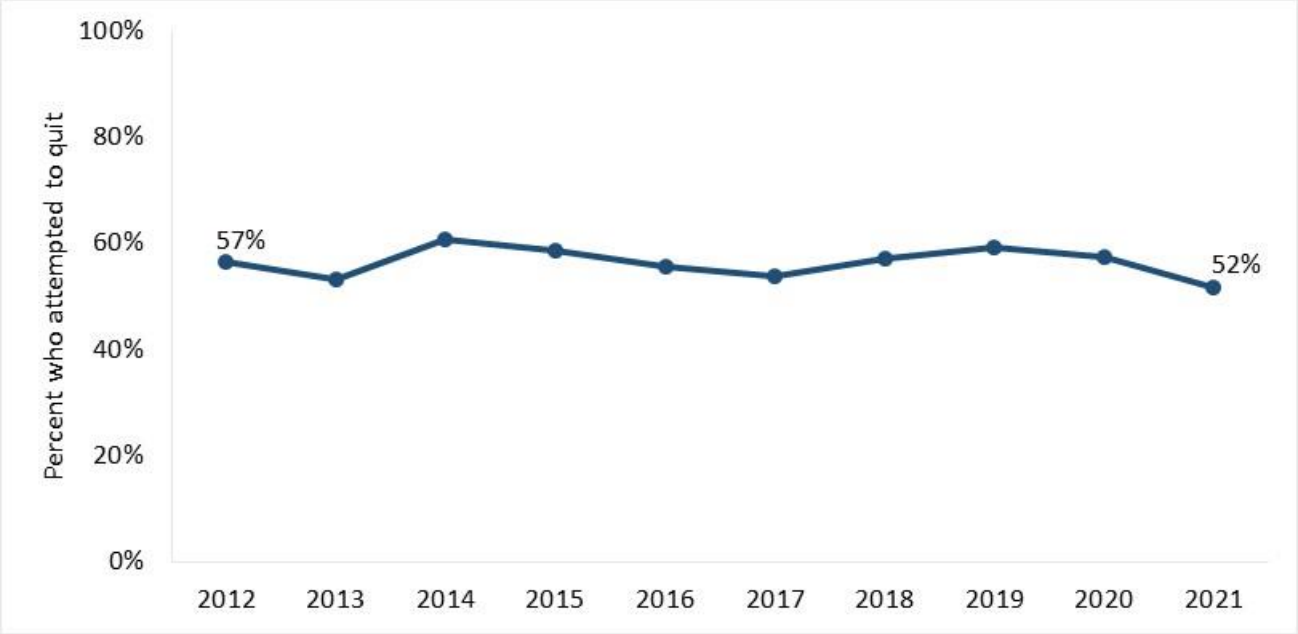
Figure 26. The percentage of Alaska adults ages 25 or older who ever smoked cigarettes but have now quit smoking (the "quit ratio") varies by socioeconomic status.



Source: Alaska BRFSS, 2021.
* Significant difference between the two sub-groups.
"Low SES" is defined as household income at 185% or less of the Alaska Poverty Level Guideline. See Appendix for more information.
Quit ratio is the proportion of people who have quit smoking among those who have ever smoked. This measure is reported among adults who are age 25 or older.

- In 2021, those in the higher SES group were significantly more likely to have quit than those in the lower SES group (70% compared to 47%).
- There was a significant difference in the likelihood of having quit smoking between low SES Alaska Native (39%) and low SES non-Native adults (51%). Likewise, there was a significant difference in the likelihood of having quit smoking between higher SES Alaska Native (52%) and higher SES non-Native adults (73%).

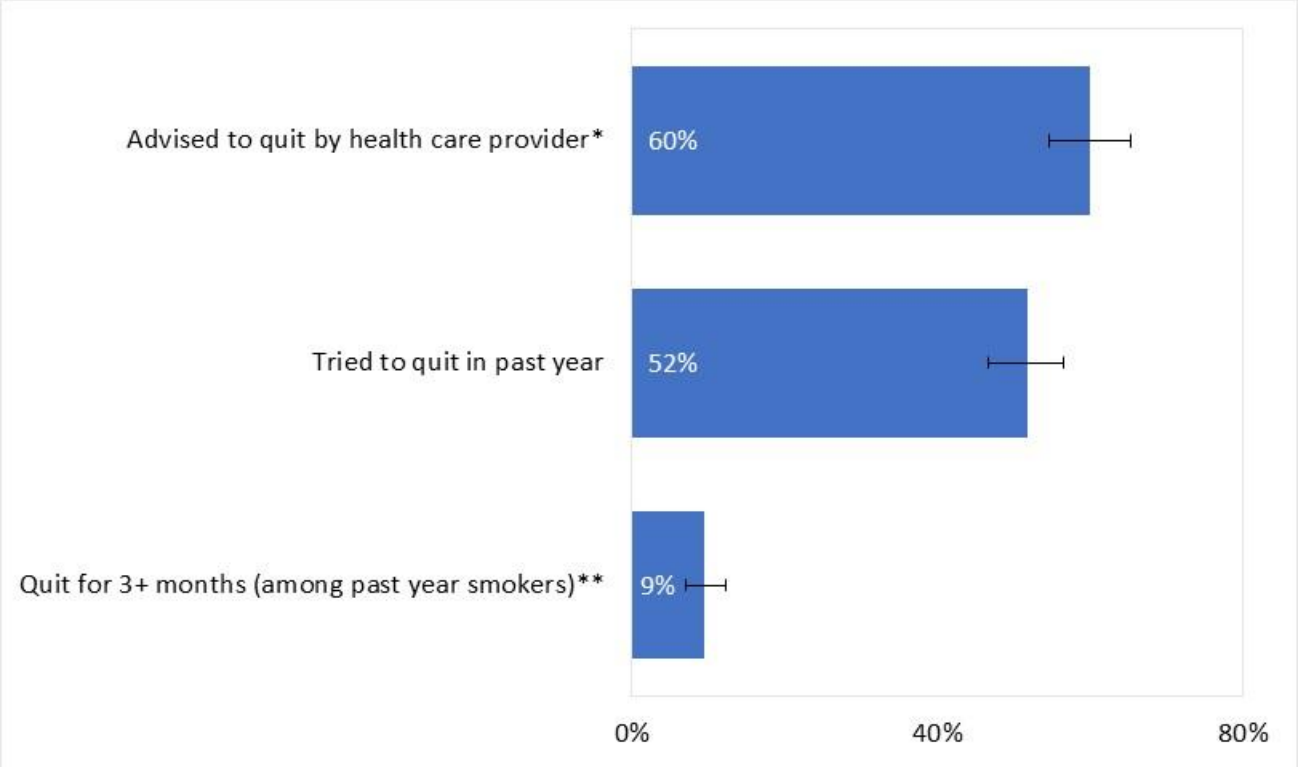
Figure 27. The percentage of Alaska adults who currently smoke and attempted to quit in the past year has not changed significantly in the past 10 years.



Source: Alaska BRFSS 2012-2021.

- The percentage of Alaska adults who currently smoke and tried to quit in the past year has remained relatively stable for the past 10 years.
- More than half of adults who smoke had tried to quit during the past year in 2012 (57%) and in 2021 (52%).

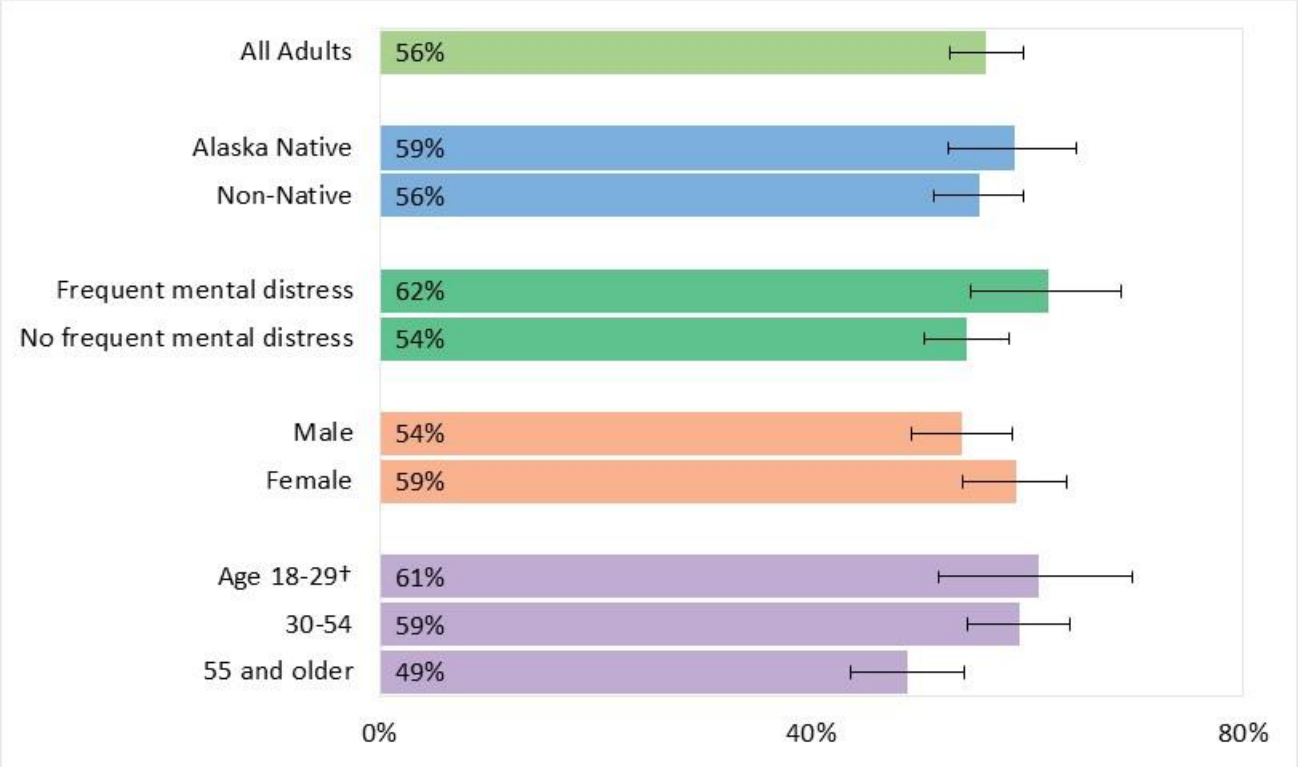
Figure 28. In Alaska, more than half of adults who currently smoke cigarettes were advised to quit and tried to quit in the past year.



Sources: Alaska BRFSS, 2021.
*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.

- The majority of adults who smoke and who have had a health care visit in the past 12 months were advised to quit by a health care provider (60%).
- In 2021, more than half of current smokers (52%) attempted to quit in the past 12 months.
- In 2021, 9% of Alaska adults who smoked in the past year had successfully sustained quitting for 3 or more months.

Figure 29. In Alaska, among adults who currently smoke, the percentage of adults who attempted to quit in the past year varies by subgroup.

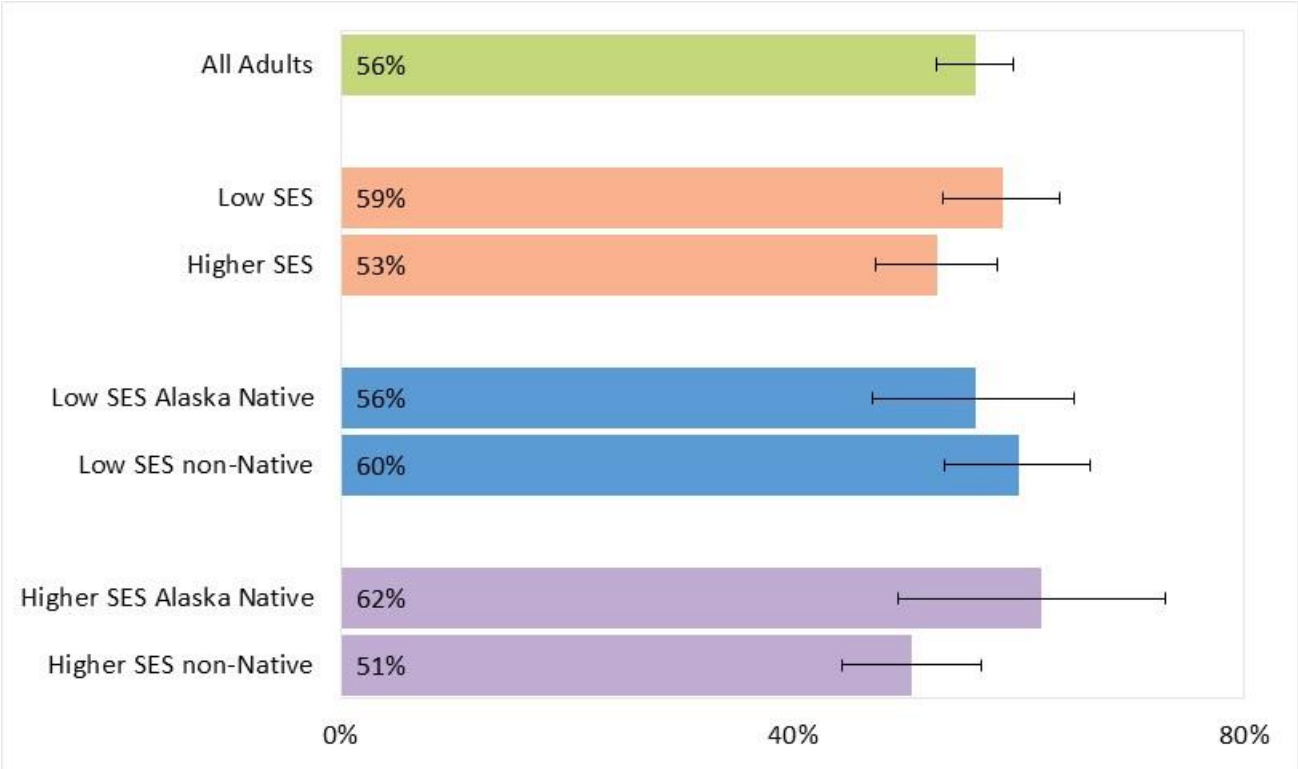


Source: Alaska BRFSS, 2019-2021.
† Significant differences between sub-groups, as described below.
Although there are disparities in the percentage of adults who are able to sustain quitting (see Figures 24 and 25), interest in quitting is relatively uniform across groups.

For 2019-2021 combined:

- More than half of adults who currently smoke cigarettes had tried to quit in the past year (56%).
- The percentage of adults who currently smoke and had tried to quit was similar for Alaska Native and non-Native adults, for those experiencing frequent mental distress and no frequent mental distress as well as for men and women.
- The percentage of adults who attempted to quit was different by age group. The percentage of young adults (ages 18-29) who tried to quit was greater than for adults ages 55+ (61% vs. 49%). Likewise, a significantly higher percentage of adults ages 30-54 attempted to quit as compared to the percentage of adults ages 55+ who attempted to quit (59% vs. 49%).

Figure 30. In Alaska, among adults who currently smoke, the percentage of adults who attempted to quit during the past year varies by socioeconomic status.



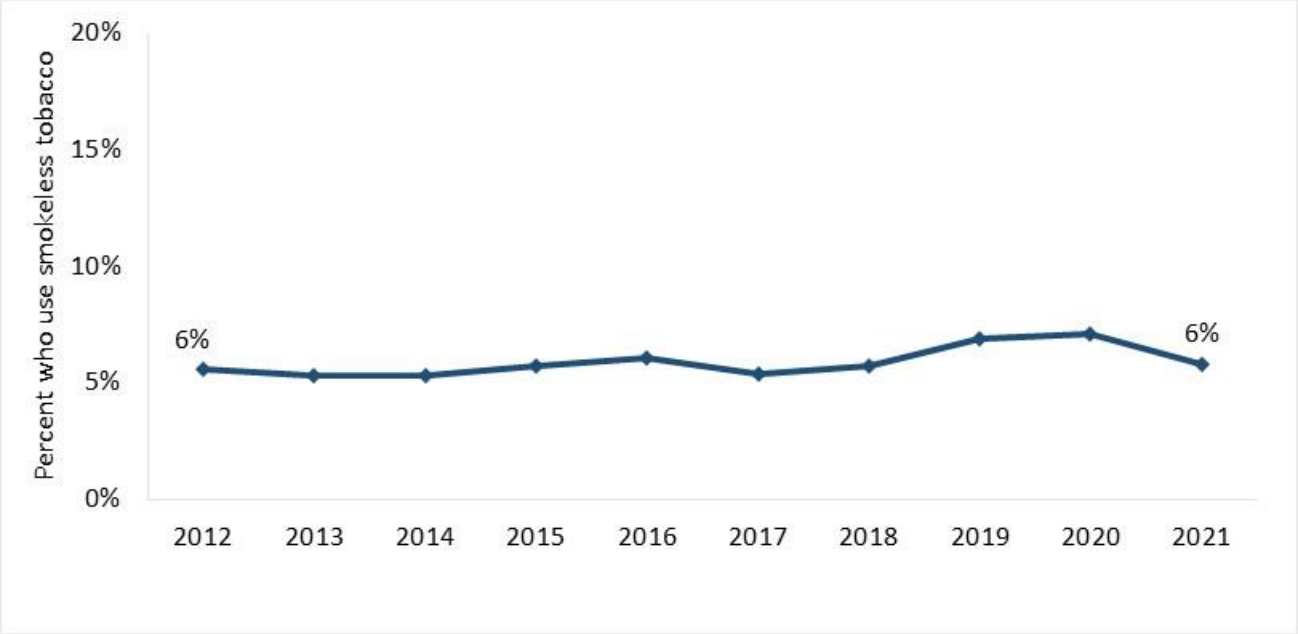
Source: Alaska BRFSS, 2019-2021.
"Low SES" is defined as household income at 185% or less of the Alaska Poverty Level Guideline. See Appendix for more information.

For 2019-2021 combined:

- There was no difference in attempts to quit smoking between low and higher SES adults (59% vs. 53%).
- There was no significant difference in attempts to quit smoking between low SES Alaska Native and low SES non-Native adults. Likewise, there was not a significant difference in attempts to quit smoking between higher SES Alaska Native and higher SES non-Native adults.

Smokeless Tobacco Use

Figure 31. Smokeless tobacco use among Alaska adults has not changed much in the past 10 years.

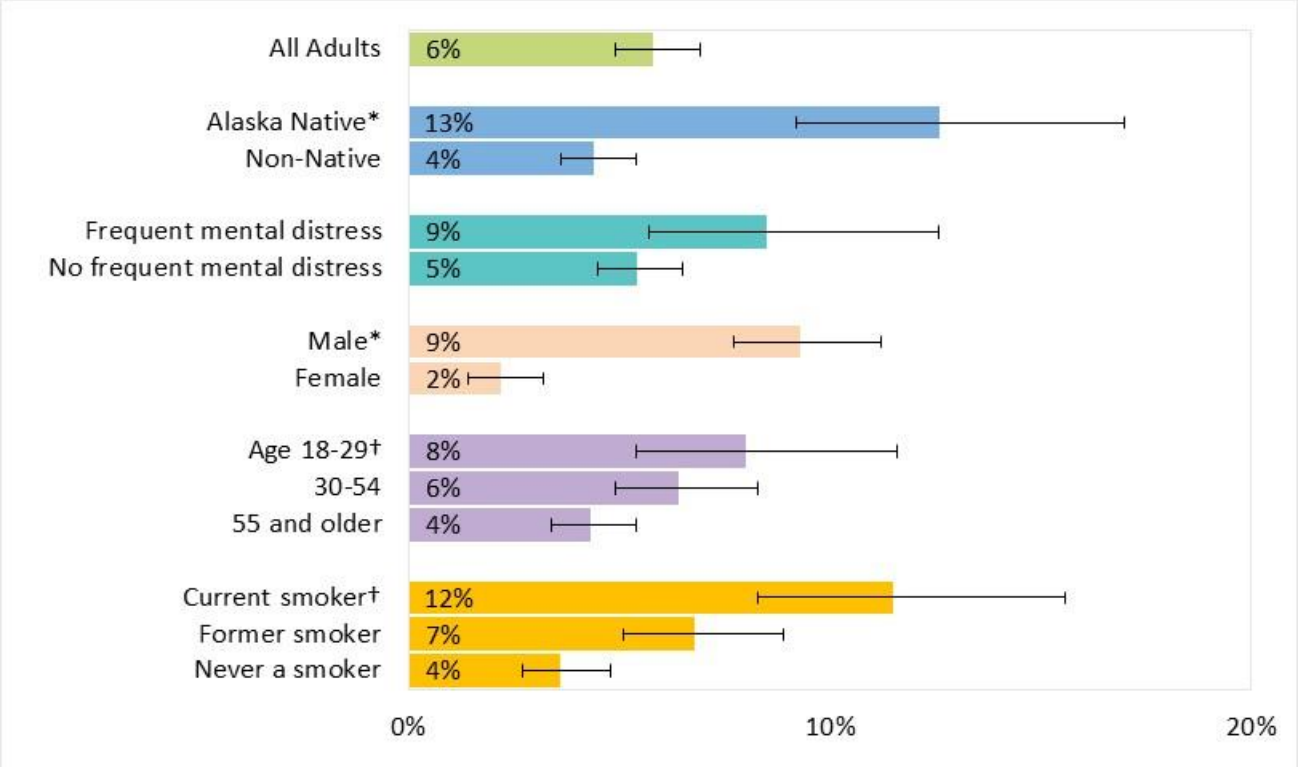


Source: Alaska BRFSS 2012-2021.
Note: Question about smokeless tobacco (SLT) use in Alaska includes the variant known as iqmik (see Introduction of this report).

- Statewide, over the past 10 years the prevalence of smokeless tobacco use (SLT, including chew, dip, snus, snuff, and iqmik) among Alaska adults has not changed meaningfully. The prevalence of SLT use was 6% in both 2012 and 2021. Formal statistical testing does show significant but small increases over the whole period, likely driven by the trend between 2013 and 2019.[17]
- 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 questions. In 2021, NHIS data show that nationally, 2% of U.S. adults (both sexes) and 4% of adult men currently used SLT,[18] suggesting that Alaska SLT use may be greater than in the general U.S. population.
- Based on the most recent percentage of adults who use SLT, there are over 32,000 adults in Alaska who are at risk for poor health outcomes due to smokeless tobacco products.

[17] The ability to detect significant trends depends both on the magnitude of the trend and the size of the sample. This trend increase is minor but significant. See Appendix for additional detail.
[18] Cornelius ME, Loretan CG, Jamal A, et al. *Tobacco Product Use Among Adults – United States, 2021*. MMWR Morb Mortal Wkly Rep 2023;72:475–483. DOI: http://dx.doi.org/10.15585/mmwr.mm7218a1. Accessed June 12, 2023.

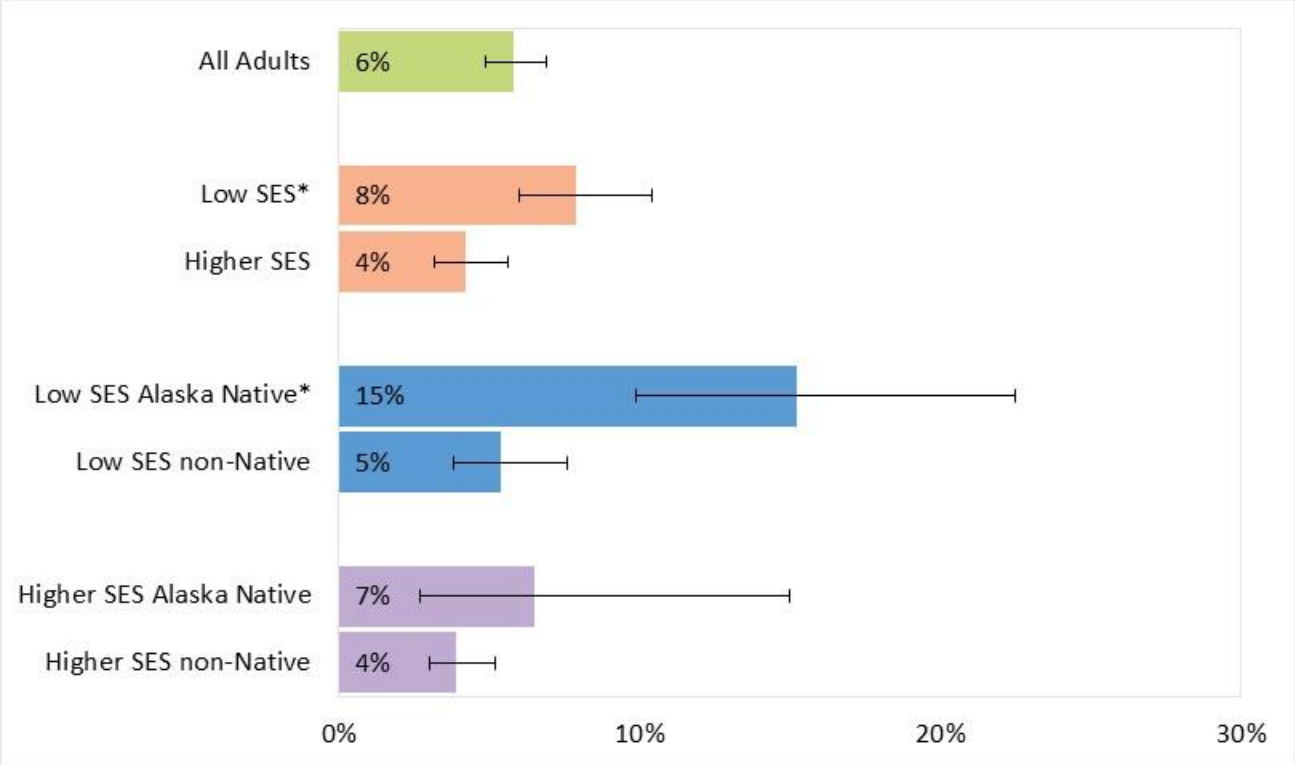
Figure 32. In Alaska, the percentage of adults who currently use smokeless tobacco varies by subgroup and current smoking status.



Source: Alaska BRFSS, 2021.
* Significant difference between the two sub-groups.
† Significant differences between sub-groups, as described below.
Note: Question about SLT use in Alaska includes the variant known as iqmik (see Introduction of this report).

- Use of smokeless tobacco (SLT) was significantly higher among Alaska Native adults than non-Native adults (13% vs. 4%) in 2021.
- Men were significantly more likely than women to use SLT (9% vs. 2%).
- Younger adults (ages 18-29) and middle-aged adults (ages 30 to 54) were significantly more likely than older adults (ages 55 and older) to use SLT.
- Adults who were current smokers or former smokers were significantly more likely to use SLT than were never smokers.

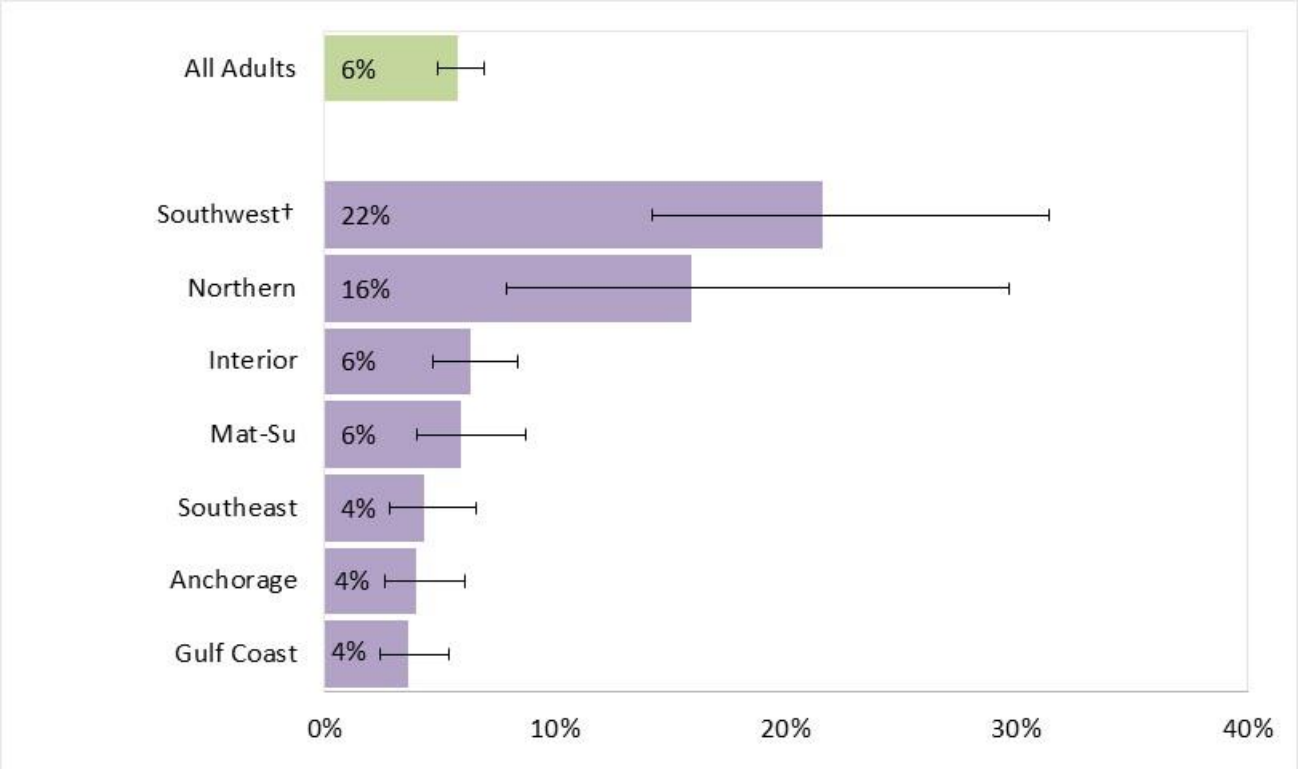
Figure 33. In Alaska, the percentage of adults who currently use smokeless tobacco differs by socioeconomic status.



Source: Alaska BRFSS, 2021.
* Significant difference between the two sub-groups.
Note: Question about SLT use in Alaska includes the variant known as iqmik (see Introduction of this report).
"Low SES" is defined as household income at 185% or less of the Alaska Poverty Level Guideline. See Appendix for more information.

- Use of smokeless tobacco (SLT) was significantly greater among adults with lower socioeconomic status (SES, 8% vs. 4%) in 2021.
- Among adults with lower SES, Alaska Native adults were significantly more likely to use SLT than were non-Native adults (15% vs. 5%).

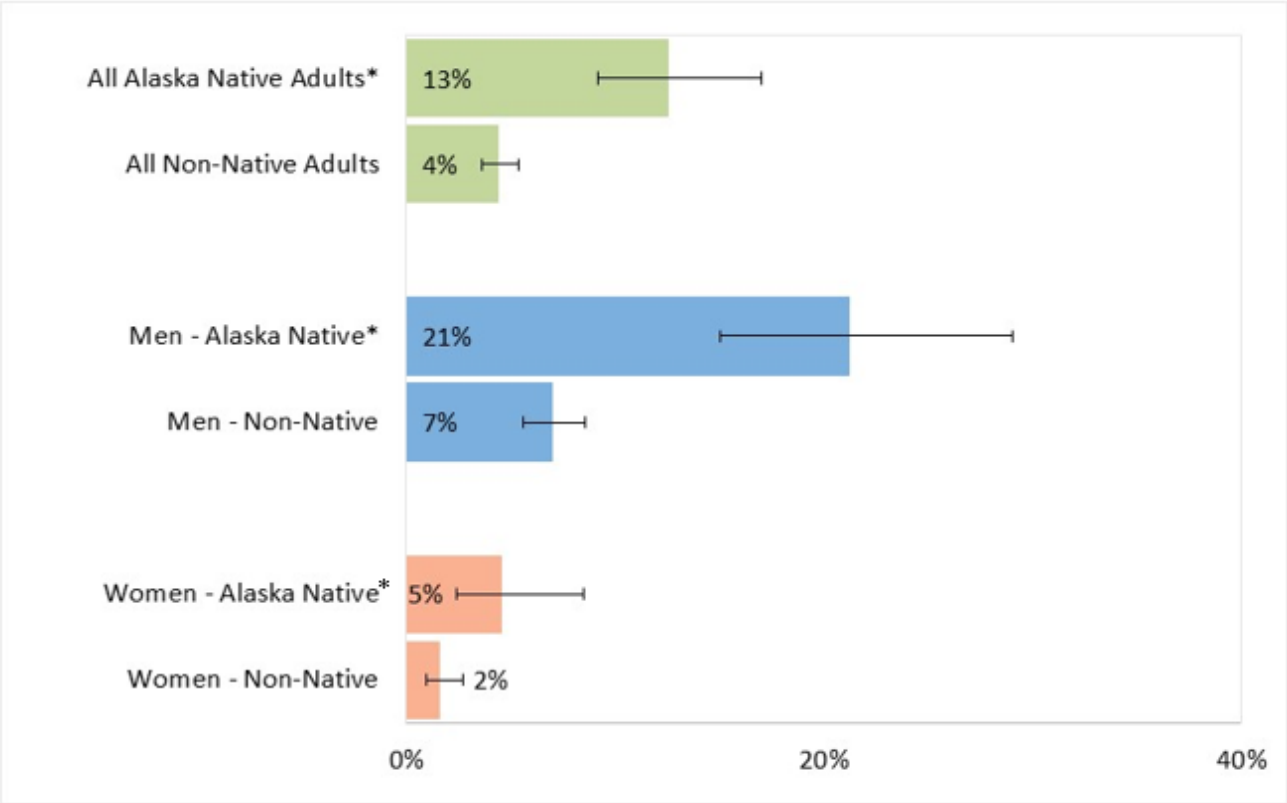
Figure 34. The percentage of Alaska adults who currently use smokeless tobacco varies by region.



Source: Alaska BRFSS, 2021.
† Significant differences between sub-groups, as described below.
Note: Question about SLT use in Alaska includes the variant known as iqmik (see Introduction of this report).

- In 2021, adults in the Southwest region were significantly more likely to use smokeless tobacco (SLT) than adults in all other regions except for the Northern region.
- Adults in the Northern region were significantly more likely to use SLT than adults in the Anchorage, Gulf Coast, or Southeast regions (16% compared to 4%).
- Adults in the Interior region were significantly more likely to use SLT than adults in the Gulf Coast region (6% compared to 4%).

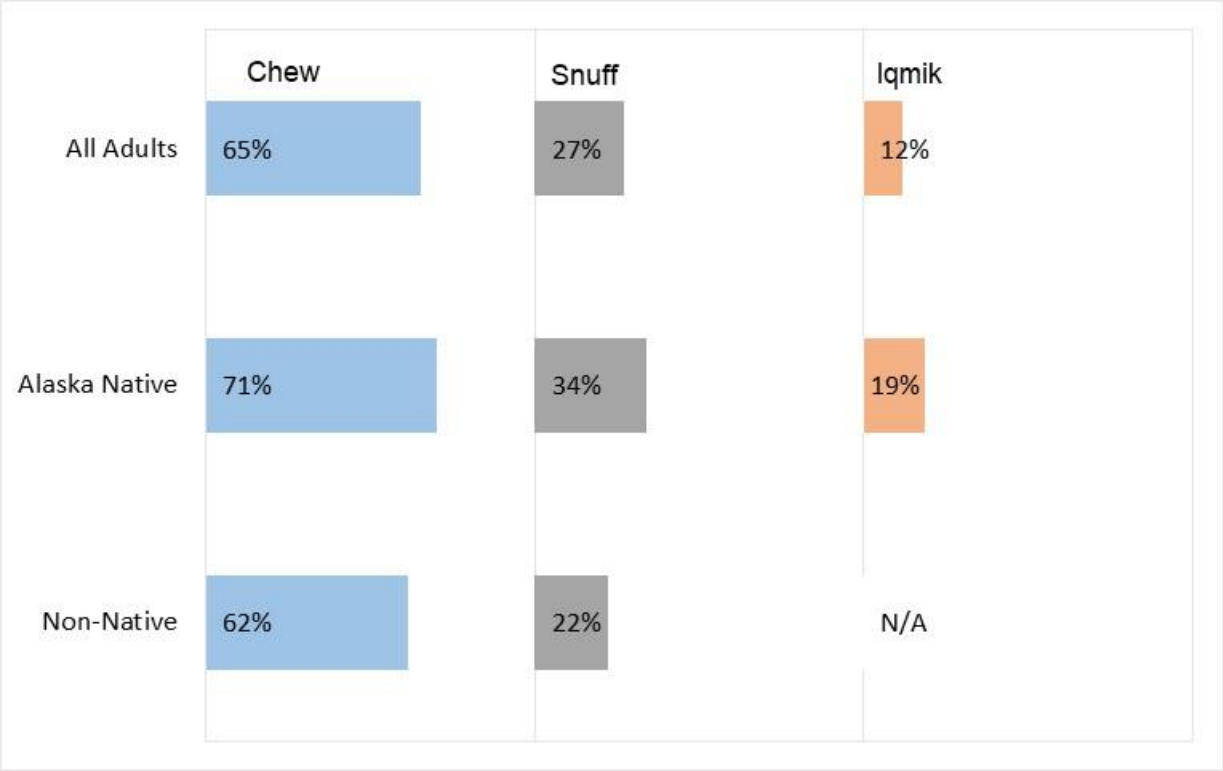
Figure 35. The percentage of Alaska adults who currently use smokeless tobacco differs by gender and race.



Source: Alaska BRFSS, 2021.
* Significant difference between the two sub-groups.
Note: Question about SLT use in Alaska includes the variant known as iqmik (see Introduction of this report).

- In 2021, smokeless tobacco (SLT) use among Alaska Native adults was higher than among non-Native adults (13% vs. 4%).
- In 2021, Alaska Native men were more likely to use SLT than non-Native men (21% vs. 7%).
- Alaska Native women were significantly more likely to use SLT than non-Native women (5% vs. 2%).

Figure 36. The types of smokeless tobacco currently used by Alaska adults differs by race.

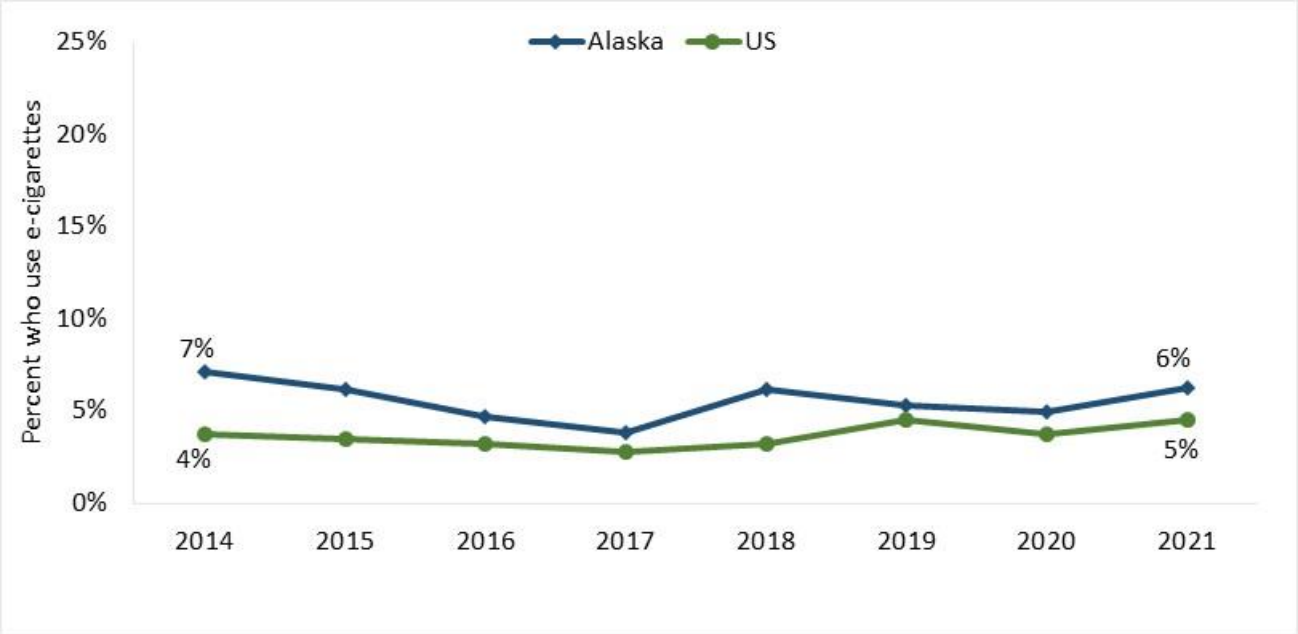


Source: Alaska BRFSS 2021.
N/A: Not available due to small numbers.

- In 2021, 65% of all Alaska adults who used smokeless tobacco (SLT) reported using "chewing tobacco" either alone or in combination with another 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 (see Introduction of this report). Among the total population of adults who use SLT, 12% reported using iqmik as their only type of SLT or in combination with another type. However, use by Alaska Native adults was greater than use by non-Native adults. Iqmik is used primarily by Alaska Native people in the Southwest region of Alaska (see Figure 33).

Electronic Vapor Product Use

Figure 37. The percentage of Alaska adults who currently use electronic vapor products has not changed in the past 8 years.

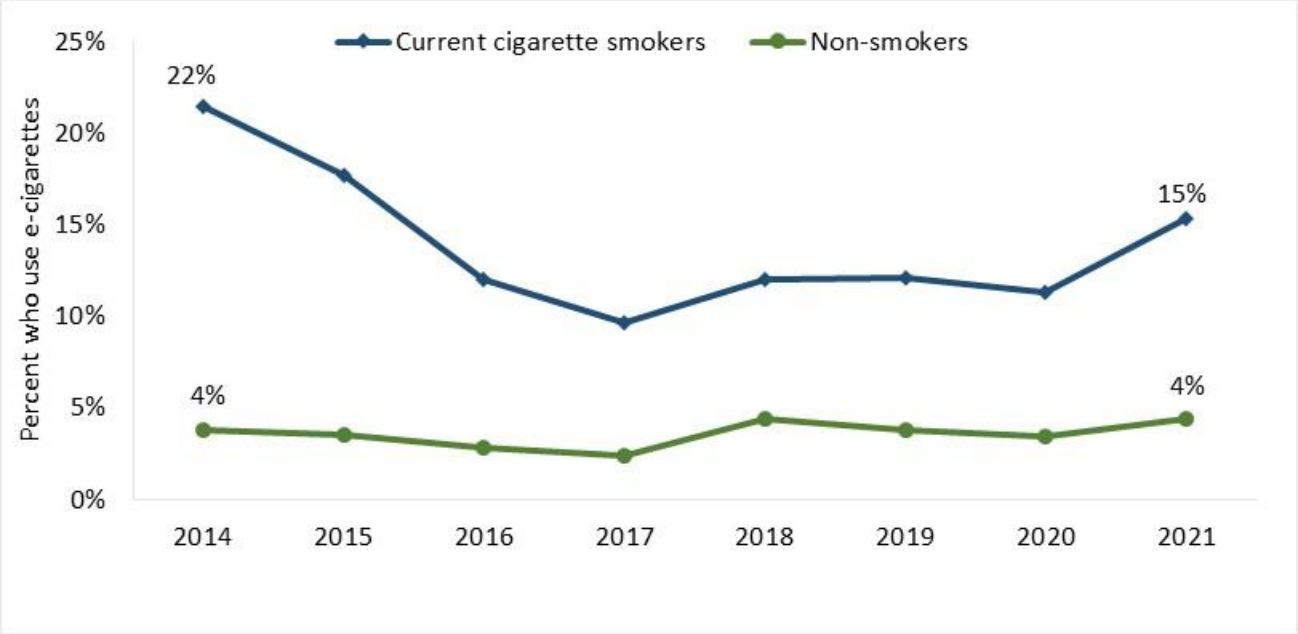


Source for AK data: Alaska BRFSS 2014-2021.
Source for U.S. data 2014-2021: National Health Interview Survey (see Appendix).

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

- Electronic vapor product use among adults in Alaska has not changed significantly since 2014. The percentage of adults who used electronic vapor products was 7% in 2014 and 6% in 2021.
- During this same time period, electronic vapor product use among adults nationwide increased slightly from 4% in 2014 to 5% in 2021.
- Based on the most recent estimate of adults who use electronic vapor products, there are just over 34,800 adults in Alaska who are at risk for poor health outcomes due to electronic vapor products.

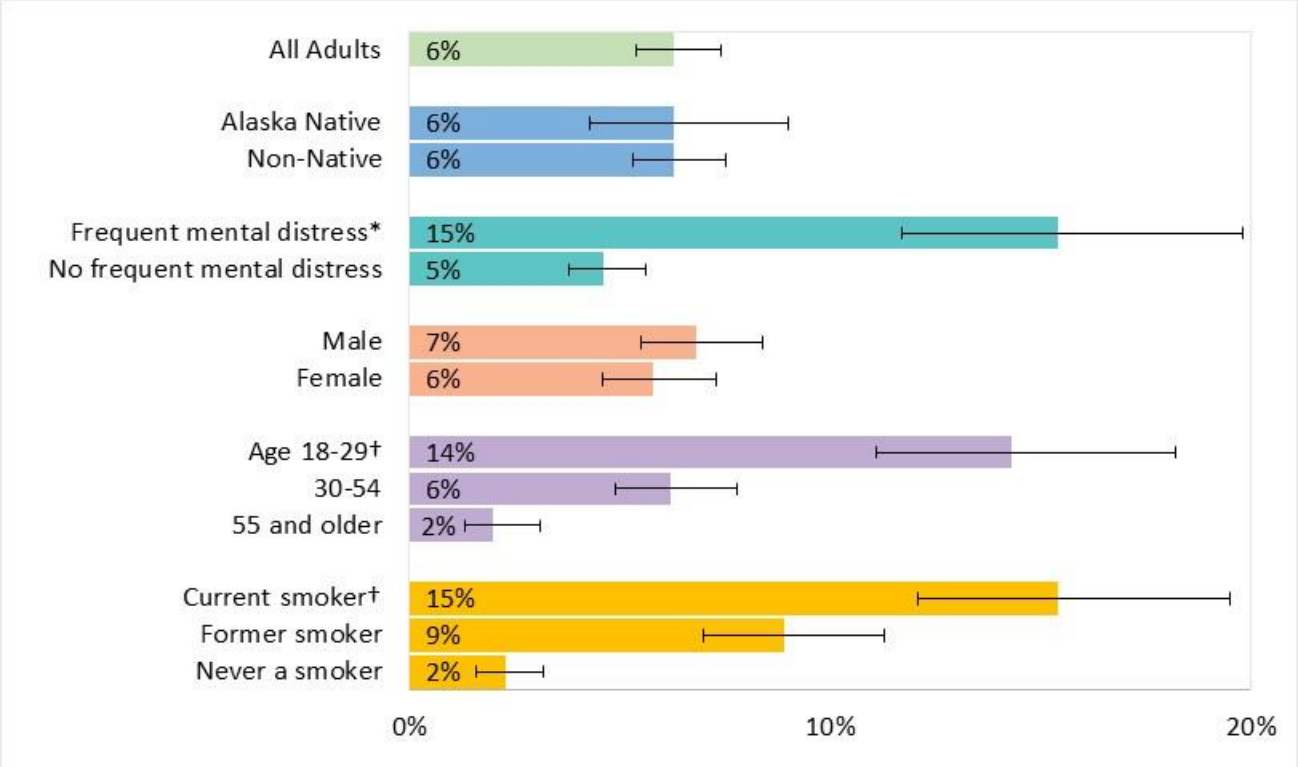
Figure 38. Among Alaska adults who currently smoke cigarettes, the percentage who also currently use electronic vapor products decreased in the past 8 years.



Source: Alaska BRFSS 2014-2021.

- Among adults who currently smoke cigarettes, the percentage who also use electronic vapor products significantly decreased from 22% in 2014 to 15% in 2021.
- Among adults who do not smoke cigarettes, the percentage who use electronic vapor products did not change significantly from 2014 to 2021.

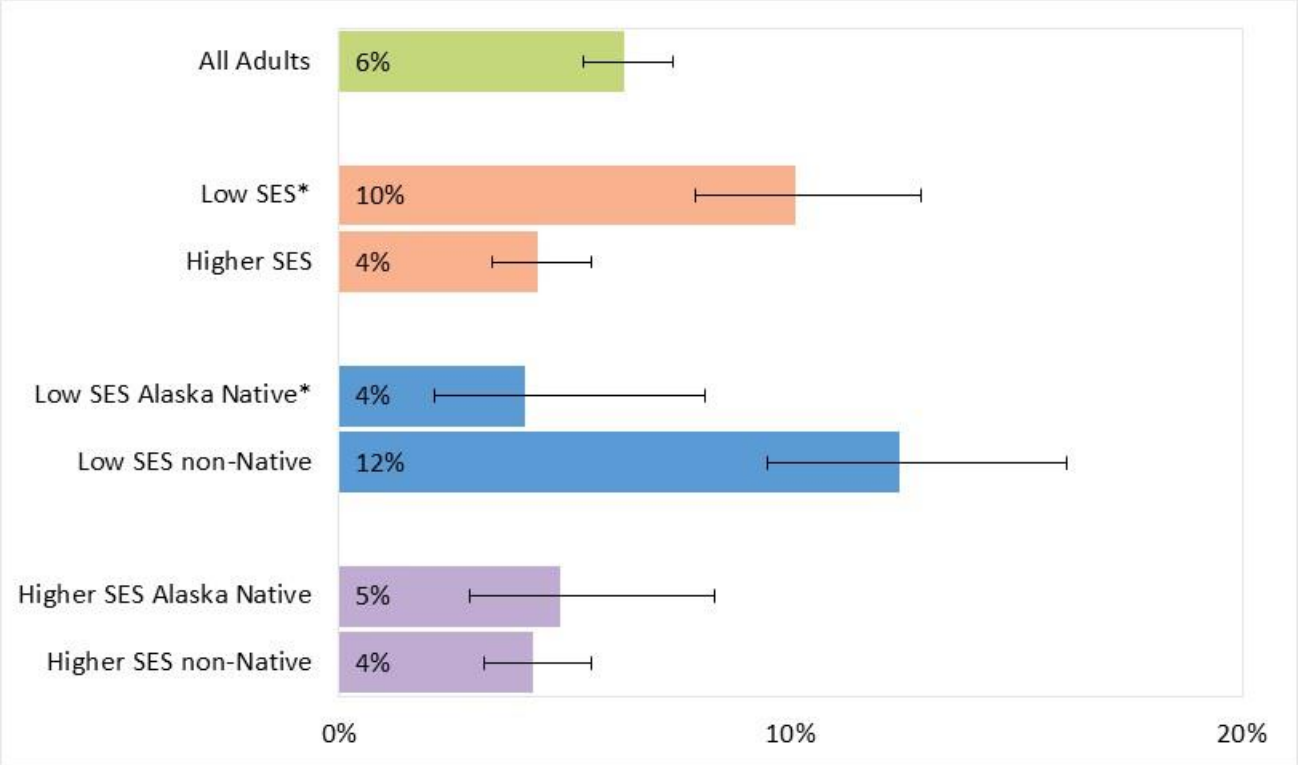
Figure 39. In Alaska, the percentage of adults who currently use electronic vapor products varies by subgroup.



Source: Alaska BRFSS, 2021.
† Significant differences between sub-groups, as described below.

- In 2021, Alaskans experiencing frequent mental distress were significantly more likely to use electronic vapor products as compared to those who were not experiencing frequent mental distress, 15% as compared to 5%.
- Alaskans ages 55 and older were significantly less likely than adults ages 18-54 to use electronic vapor products; additionally, those ages 30 to 54 were also significantly less likely than younger adults (ages 18 to 29) to use electronic vapor products.
- Adults who currently smoke combustible cigarettes were significantly more likely to use electronic vapor products than both adults who formerly and never smoked (15% vs. 9% and 2%). Adults who were former smokers were significantly more likely to use electronic vapor products than were adults who were never smokers.
- There were no significant differences in electronic vapor product use among adults by Alaska Native race or gender.

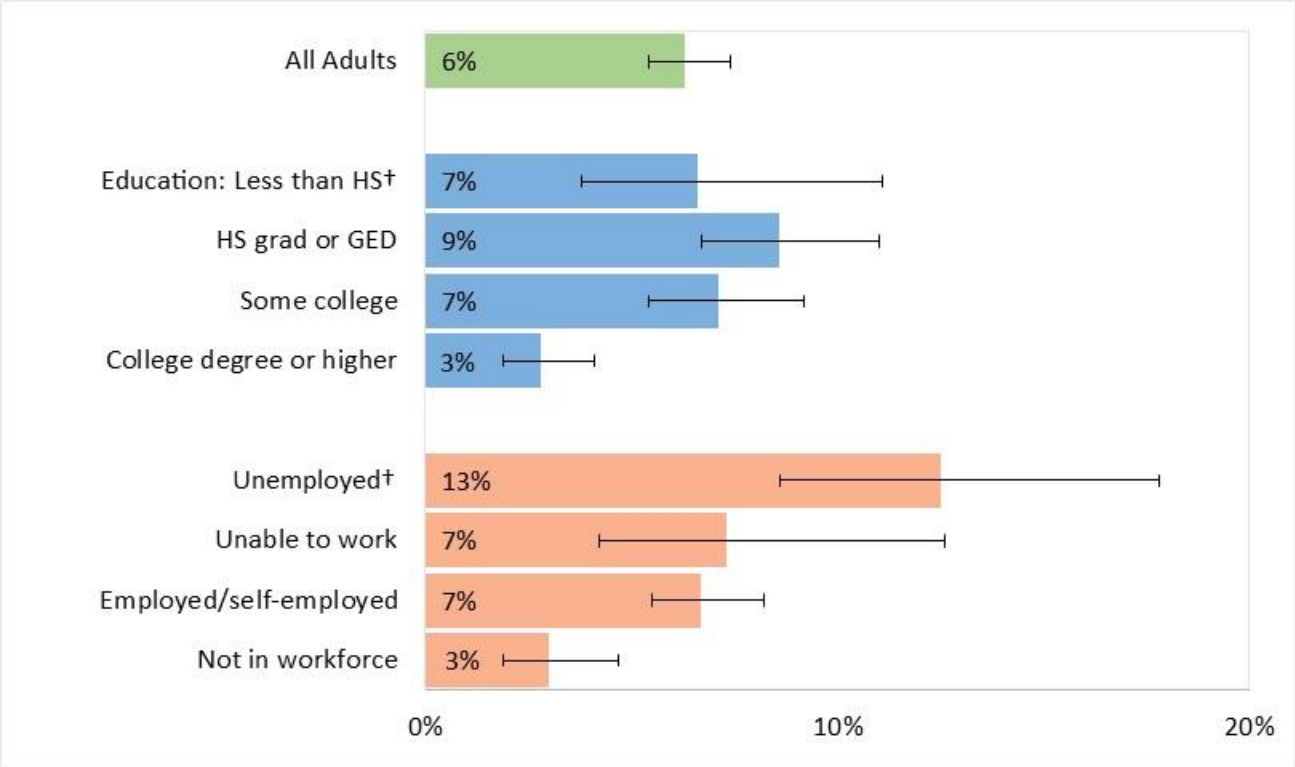
Figure 40. The percentage of Alaska adults who use e-cigarettes or other vapor products differs by socioeconomic status.



Source: Alaska BRFSS, 2021.
"Low SES" is defined as household income at 185% or less of the Alaska Poverty Level Guideline. See Appendix for more information.

- In 2021, adults who were in the lower socioeconomic status (SES) group were significantly more likely to use e-cigarettes or other vapor products as compared to adults in the higher SES group (10% vs. 4%).
- In 2021, non-Native adults who were in the lower socioeconomic group were significantly more likely to use e-cigarettes or other vapor products than were Alaska Native adults in the lower socioeconomic group (12% vs. 4%).

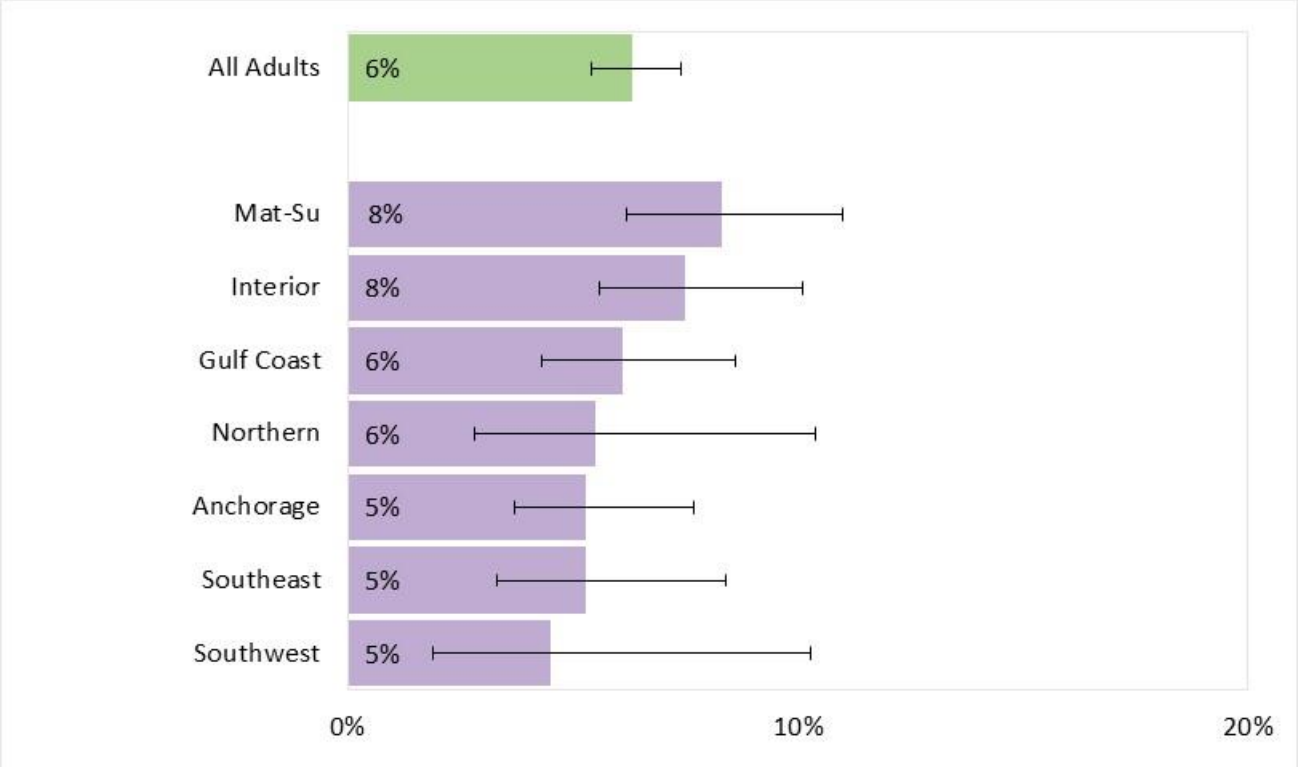
Figure 41. The percentage of Alaska adults who currently use electronic vapor products varies by formal education and employment status.



Source: Alaska BRFSS, 2021.
† Significant differences between sub-groups, as described below.

- In 2021, adults with a college degree or higher were significantly less likely to use electronic vapor products than were adults with some college education, adults with a high school diploma, or those with less than a high school diploma.
- Adults who were not in the workforce (students, homemakers, retirees) were significantly less likely to use electronic vapor products than were adults who were unemployed, unable to work or employed.
- Adults who were unemployed were significantly more likely to use e-cigarettes or other vapor products as compared to those adults who were employed (13% vs. 7%).

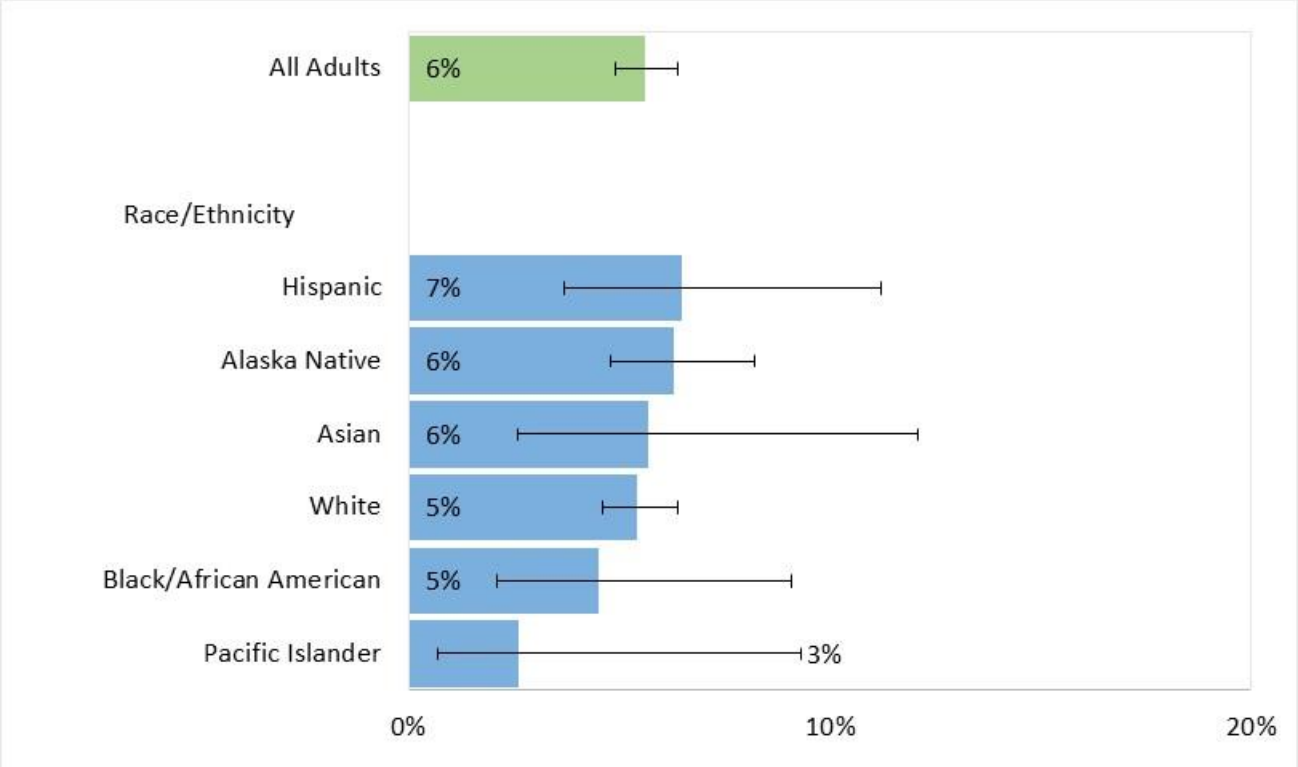
Figure 42. In Alaska, the percentage of adults who currently use electronic vapor products did not vary significantly by region.



Source: Alaska BRFSS, 2021.

- In 2021, there were no significant differences in the percentage of adults who used electronic vapor products by region.

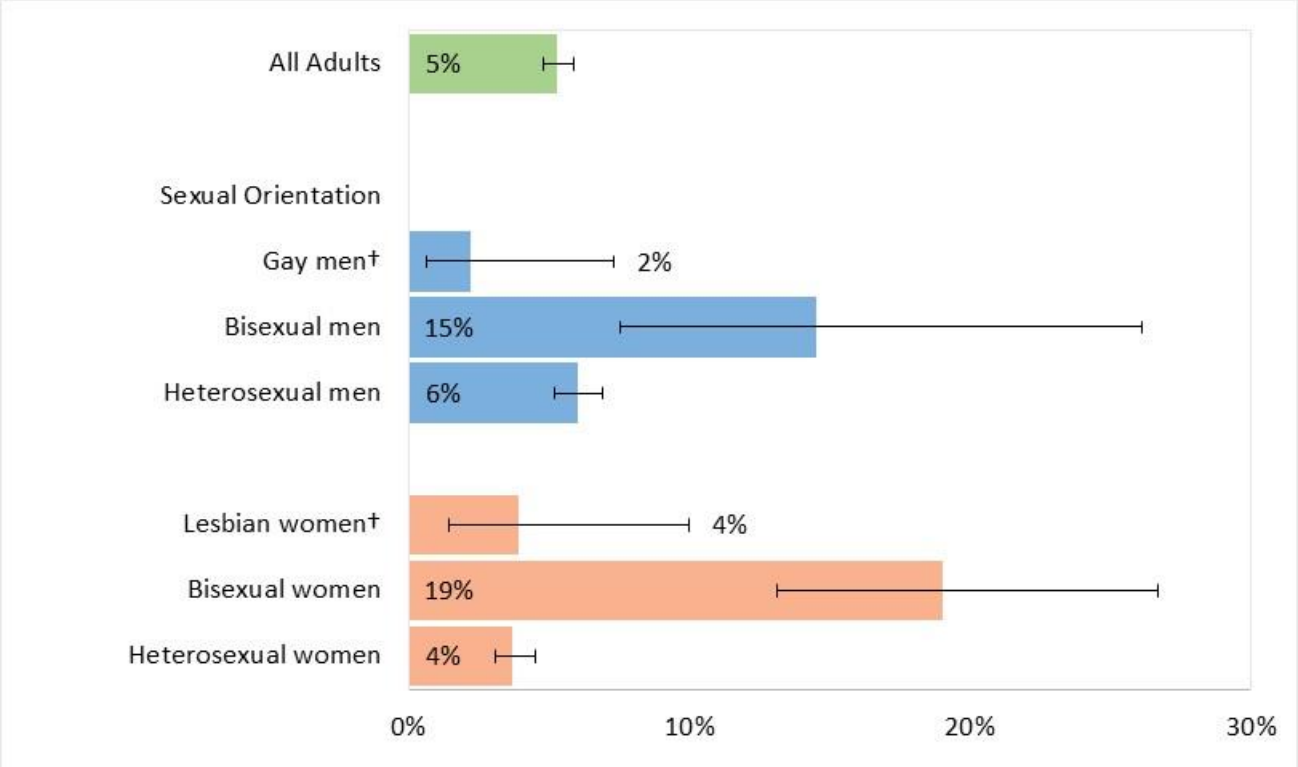
Figure 43. The percentage of Alaska adults who currently use electronic vapor products did not vary by race or ethnicity.



Source: Alaska BRFSS, 2019-2021.

- In 2019-2021, there were no significant differences in e-cigarette or other vapor product use among Alaska adults by race or ethnicity.

Figure 44. In Alaska, the percentage of adults who currently use electronic vapor products differs by gender and sexual orientation.



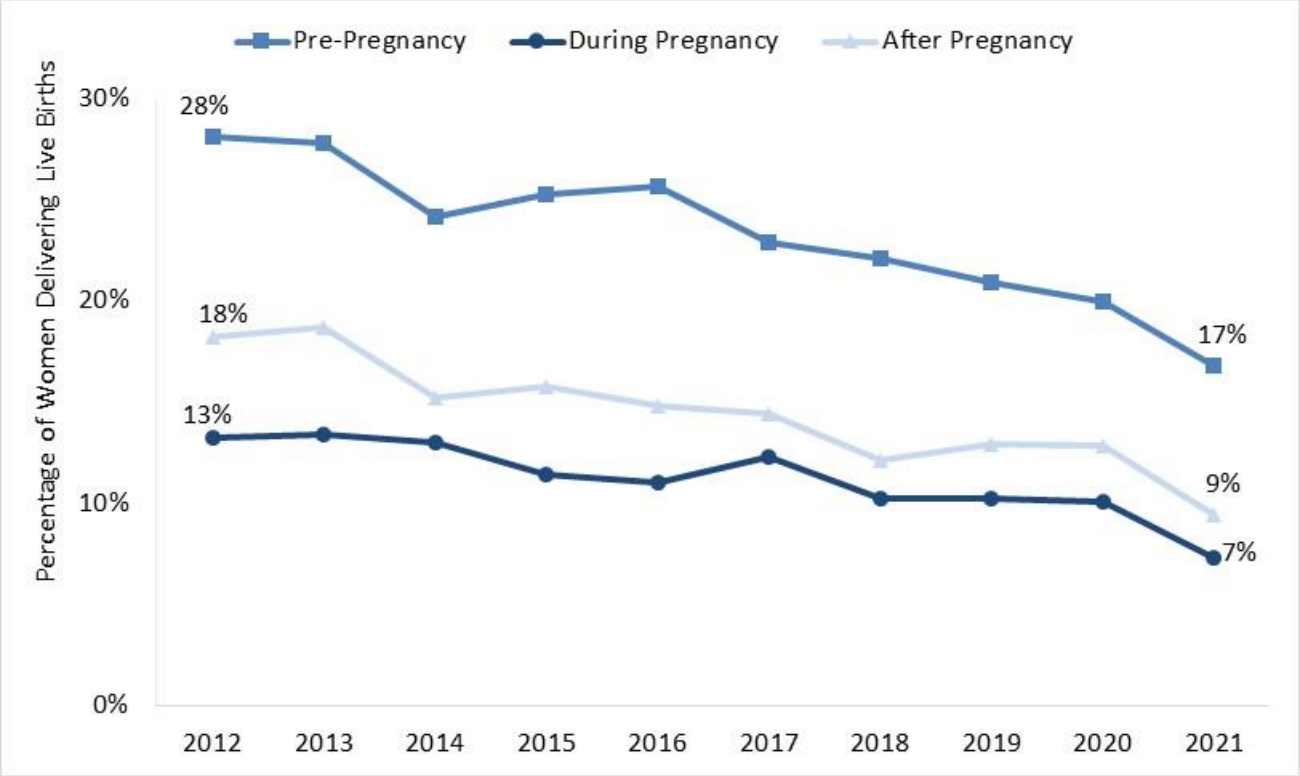
Source: Alaska BRFSS, 2017-2021.
† Significant differences between sub-groups, as described below.

For 2017-2021 combined:

- Women who identified as bisexual were significantly more likely to use electronic vapor products than both lesbian and heterosexual/straight women (19% vs. 4% and 4%, respectively).
- Likewise, men who identified as bisexual were significantly more likely to use electronic vapor products than both gay and heterosexual/straight men (15% vs. 2% and 6%, respectively).

Tobacco Use During Pregnancy

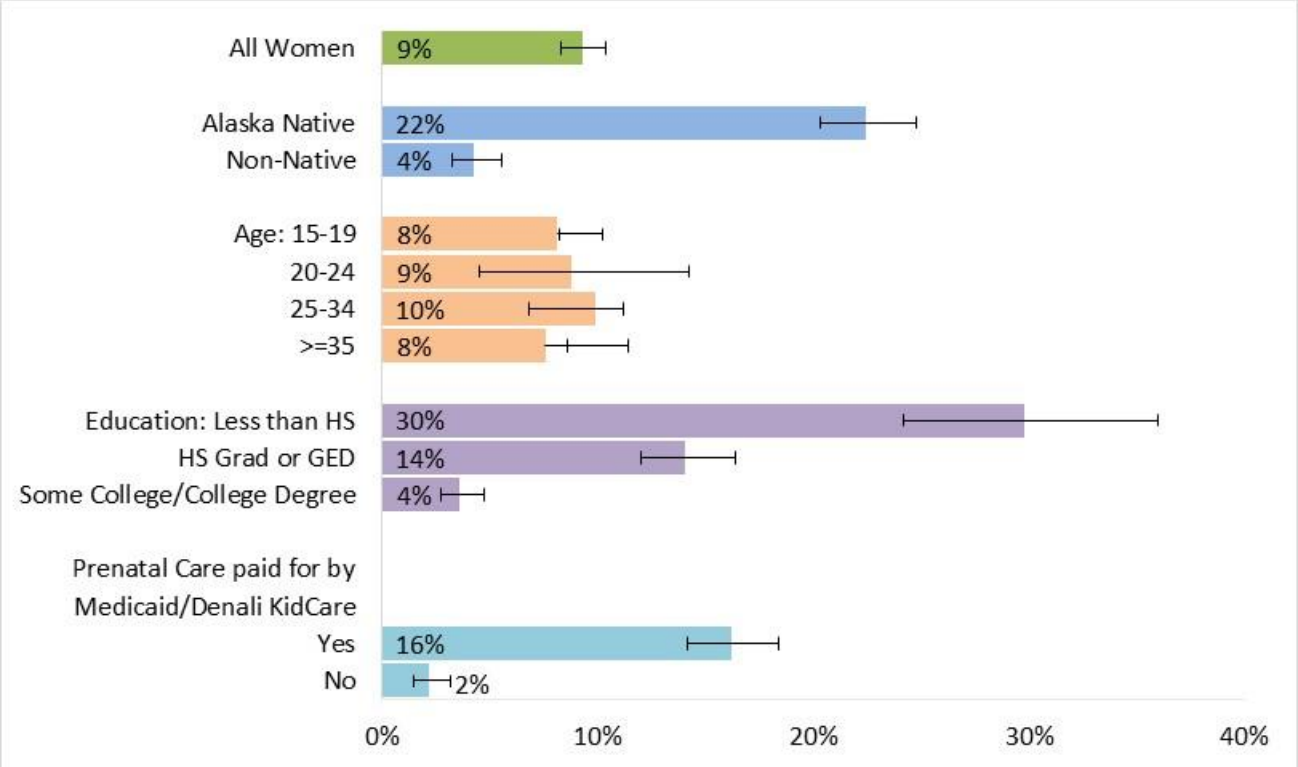
Figure 45. The percentage of Alaska mothers who smoked cigarettes before, during, or after pregnancy all decreased the past 10 years.



Source: Alaska PRAMS 2012-2021.
Definitions: "Pre-Pregnancy" or "Before pregnancy" is 3 months before pregnancy; "During pregnancy" is during the last 3 months prior to delivery; "After pregnancy" is approximately 4 months after delivery.

- Among women who recently delivered a child, smoking before pregnancy decreased significantly during the past 10 years, from 28% in 2012 to 17% in 2021.
- Smoking during the last 3 months of pregnancy has also decreased significantly during the past 10 years, from 13% in 2012 to 7% in 2021.
- Smoking after pregnancy (about 4 months after the birth of a child) has also decreased significantly during the same time period, from 18% in 2012 to 9% in 2021.
- Data in 2021 suggest that over half of mothers are quitting smoking during pregnancy: pre-pregnancy smoking was 17%, dropping to 7% during pregnancy. Some mothers appear to take up smoking again after delivery: 9% smoke after delivery vs. 7% during pregnancy. However, smoking immediately after delivery does not return to the same level as pre-pregnancy smoking.

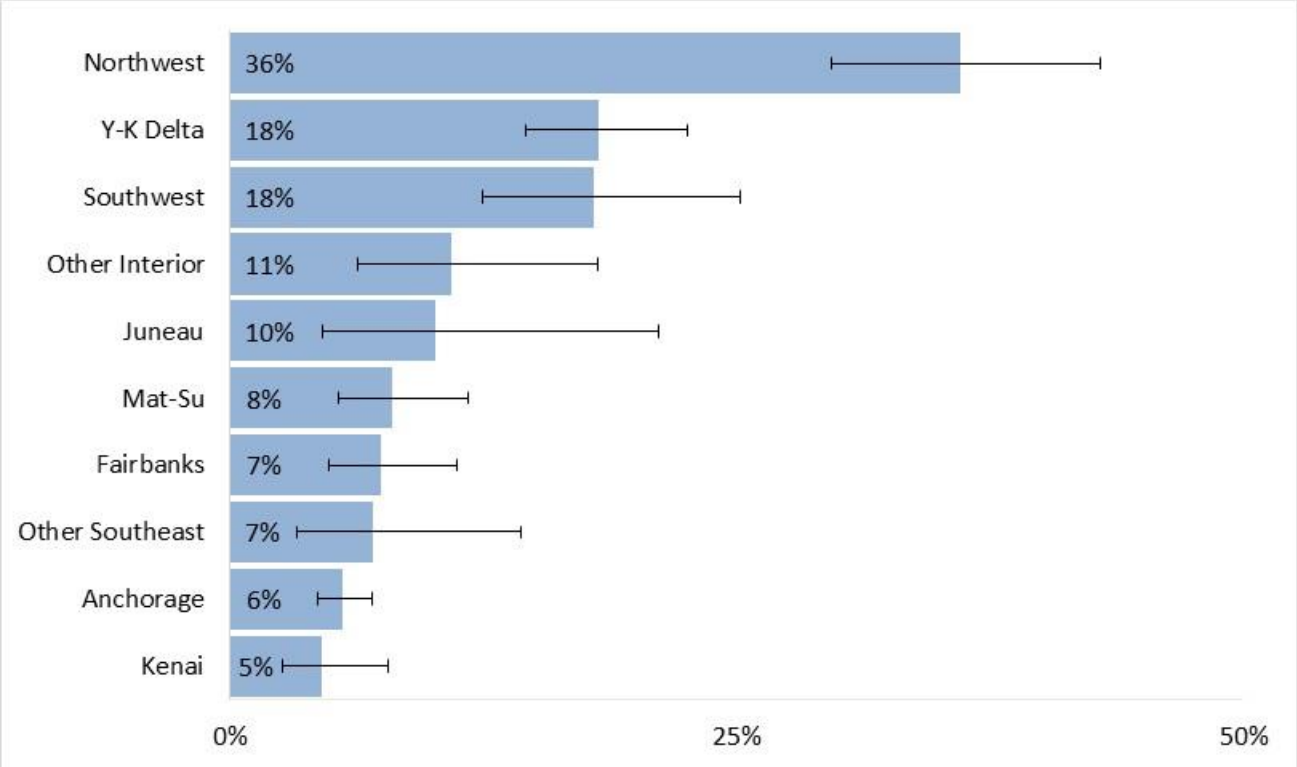
Figure 46. The percentage of Alaska mothers who smoked cigarettes during pregnancy varies by subgroup.



Source: Alaska PRAMS , 2019-2021.
"Smoking during pregnancy" is defined as having smoked during the last 3 months of pregnancy.

- During 2019-2021 combined, Alaska Native mothers were more likely to smoke during their pregnancy than were non-Native mothers (22% vs. 4%).
- In 2019-2021, mothers who had completed less formal education were more likely to smoke during their pregnancies than those who had completed more: 30% of mothers with less than a high school (HS) education smoked, compared to 14% of mothers who had graduated or had a GED. Smoking during pregnancy was lowest among women who had attended college (4%).
- Mothers who had at least part of their prenatal care paid for by Medicaid or Denali KidCare were more likely to smoke during pregnancy (16% vs. 2%). These programs support people with lower incomes, so enrollment in them is a proxy measure for low socioeconomic status (SES).

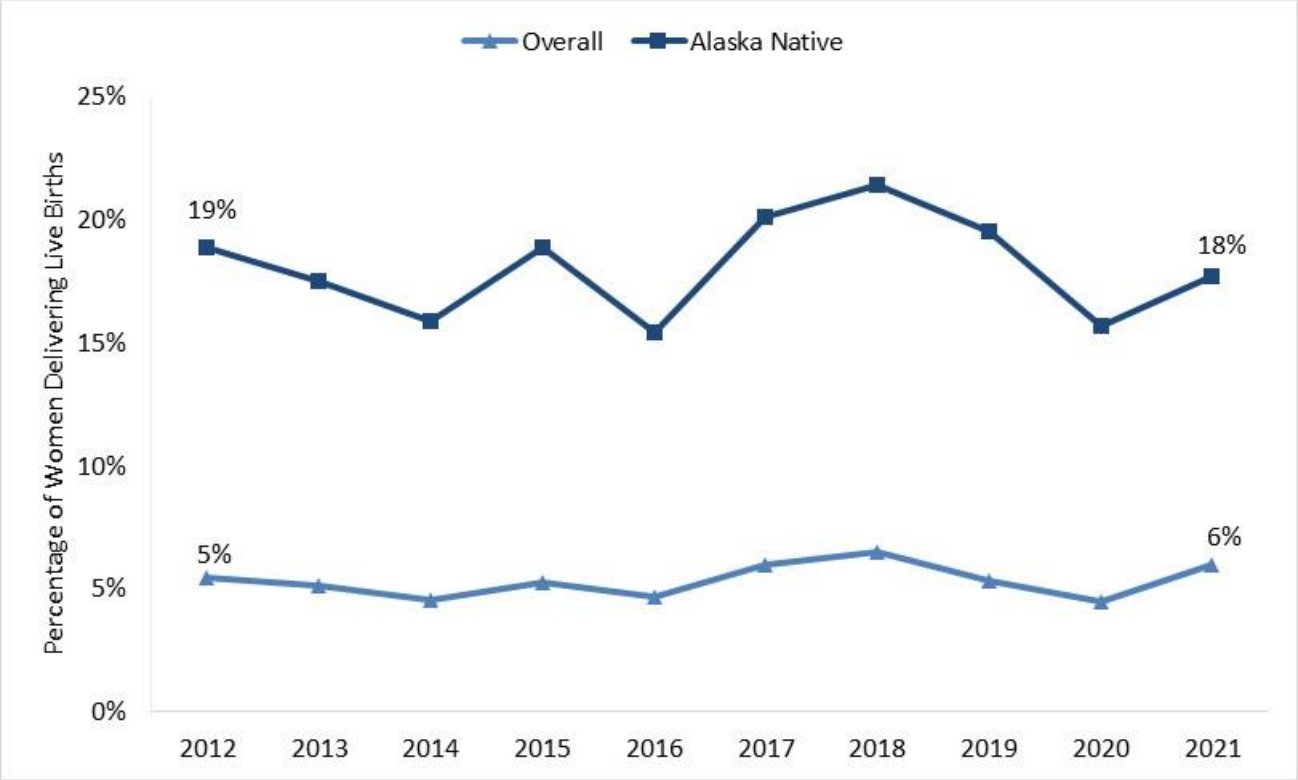
Figure 47. The percentage of Alaska mothers who smoked cigarettes during pregnancy varies by behavioral health systems region.



Source: Alaska PRAMS, 2019-2021.
Behavioral Health Systems Regions are not the same as Public Health Regions. See Appendix for map.
"Smoking during pregnancy" is defined as having smoked cigarettes during the last 3 months of pregnancy.

- For the period of 2019-2021, prenatal smoking was higher in the Northwest region than in any other region; 36% of mothers in that region reported smoking cigarettes during the last 3 months of pregnancy, compared to between 5% and 18% in the other regions.

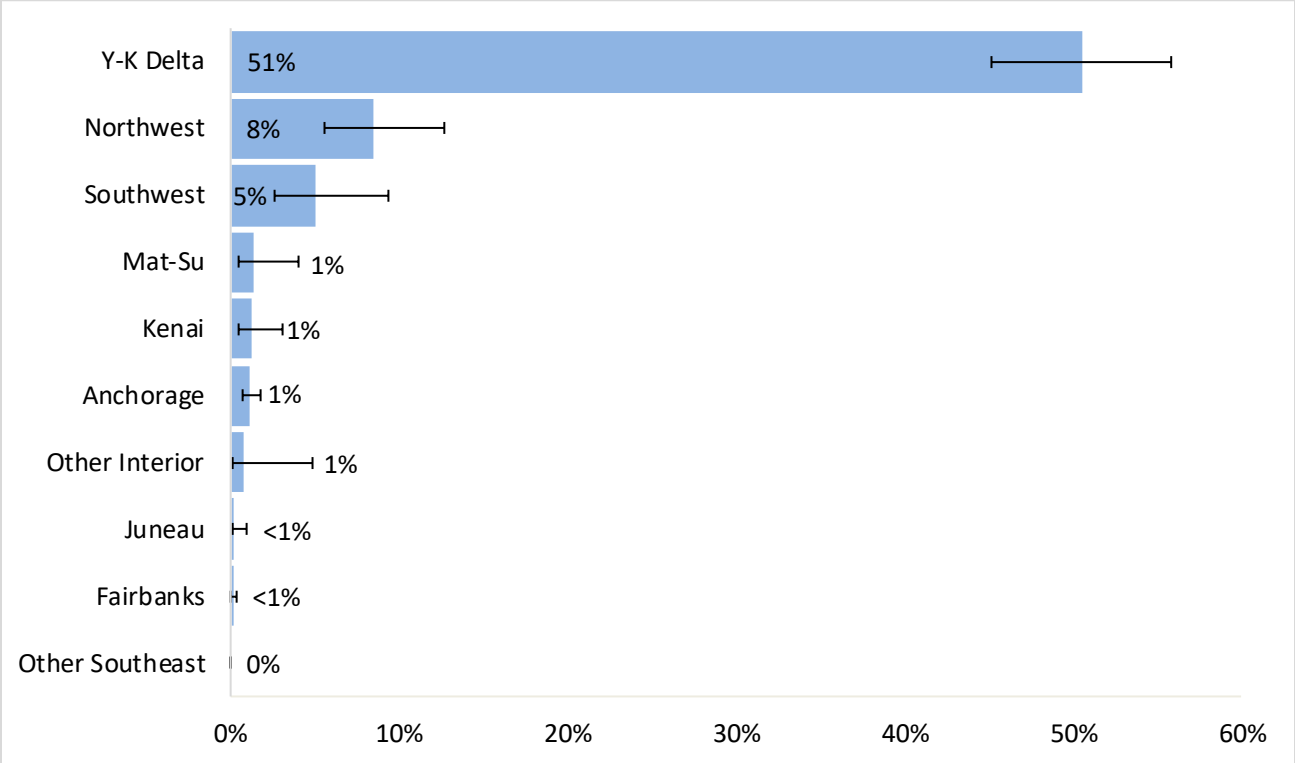
Figure 48. The percentage of Alaska mothers who used smokeless tobacco (SLT) during pregnancy has not changed in the past 10 years.



Source: Alaska PRAMS 2012-2021.
Note: Smokeless tobacco (SLT) includes chew, snuff, snus, and iqmik, a unique Alaska SLT variant (see report Introduction). Questions about use of SLT during pregnancy cover the entire prenatal period.

- The percentage of all Alaska women who used smokeless tobacco (SLT) during pregnancy has remained at around 5% from 2012 to 2021.
- Prenatal SLT use among Alaska Native women has been consistently higher than for women overall.
- The prevalence of SLT use during pregnancy among Alaska Native women did not change significantly during this time period: the percentage who used SLT during pregnancy was 19% in 2012 and 18% in 2021.

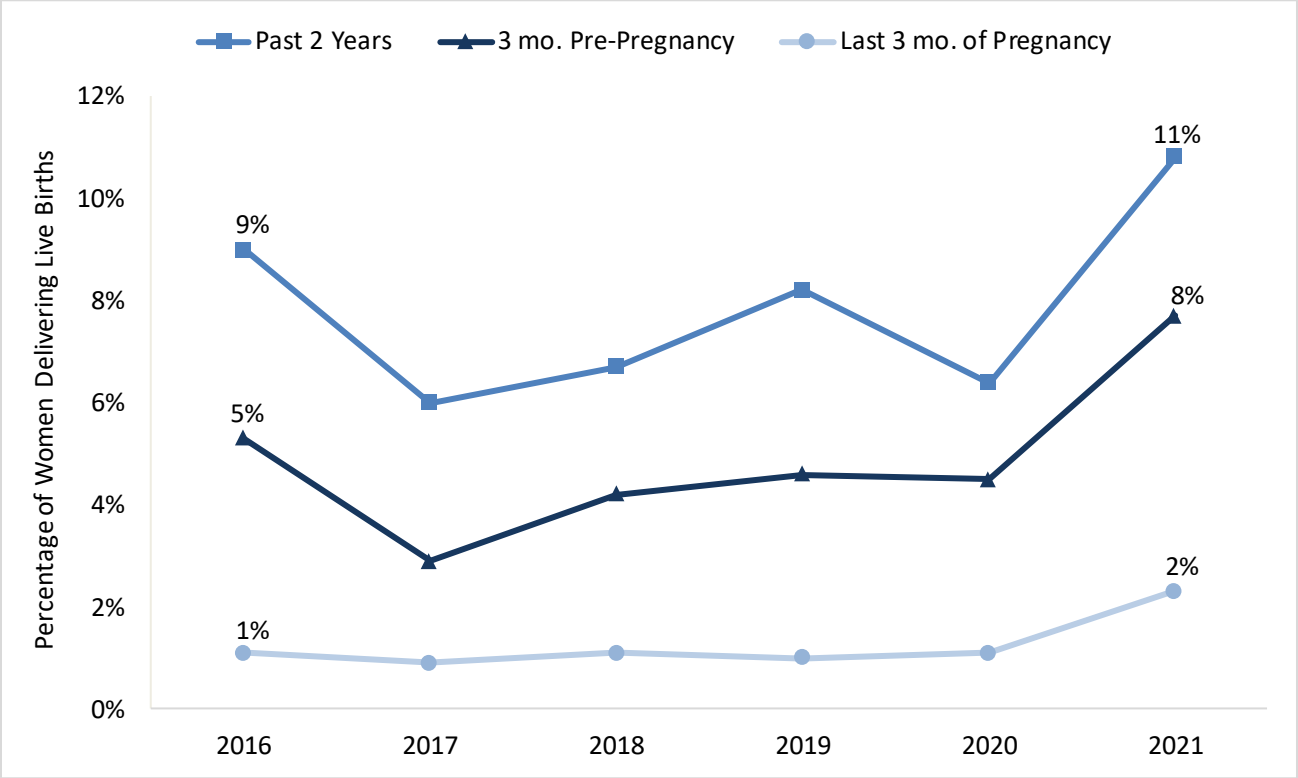
Figure 49. The percentage of Alaska mothers who used smokeless tobacco (SLT) during pregnancy varies by behavioral health systems region.



Source: Alaska PRAMS, 2019-2021.
Behavioral Health Systems Regions are not the same as Public Health Regions. See Appendix for map.
"Smokeless tobacco (SLT) use during pregnancy" means using chew, snuff, snus, or iqmik at any time during pregnancy.
Note: Iqmik is a unique SLT variant in Alaska (see Introduction of this report).

- In the Yukon-Kuskokwim (Y-K) Delta region, 51% of mothers reported using SLT during pregnancy, which was higher than in any other region. Use of iqmik occurs primarily in this region.
- Although lower than the Y-K Delta region, prenatal SLT use was somewhat higher in the Northwest (8%) and Southwest (5%) regions, in comparison to other regions.

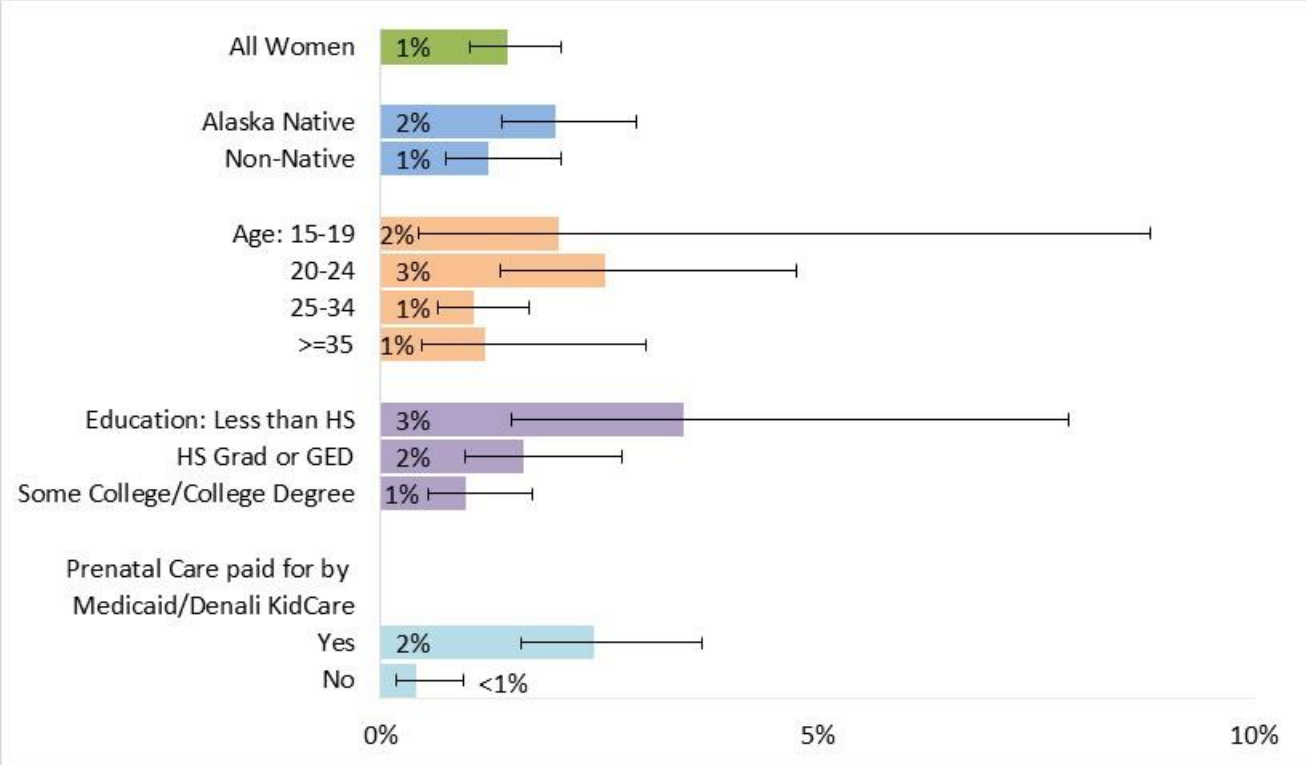
Figure 50. The percentage of Alaska mothers who used e-cigarettes or other electronic nicotine products 3 months before pregnancy is increasing.



Source: Alaska PRAMS 2016-2021.
Pre-pregnancy is defined as 3 months prior to pregnancy and during pregnancy is defined as the last 3 months of pregnancy.

- There was no significant change from 2016-2021 in the prevalence of e-cigarette or vapor product use among Alaska mothers in the past 2 years or during the last 3 months of pregnancy, however, e-cigarette use in the 3 months prior to pregnancy increased significantly from 5% to 8%.
- In 2021, fewer mothers used e-cigarettes or other vapor products during the last three months of pregnancy as compared to three months pre-pregnancy or during the past two years during 2021 (2% compared to 8% and 11%, respectively).

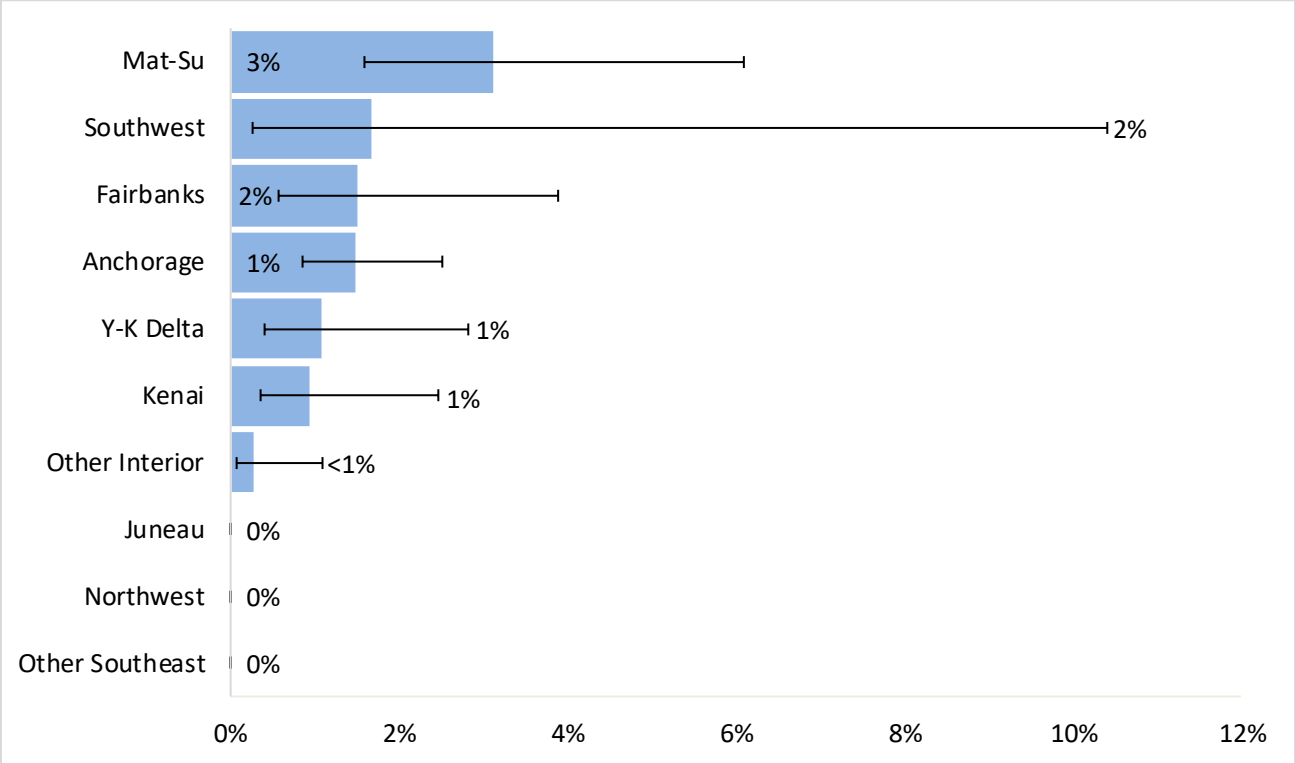
Figure 51. The percentage of Alaska mothers who used e-cigarettes or other electronic nicotine products during the last three months of pregnancy varies by subgroup.



Source: Alaska PRAMS, 2019-2021.

- In 2019-2021, mothers who had completed less formal education were more likely to use e-cigarettes or other electronic nicotine products during their pregnancies than those who had completed more, although the magnitude of this difference was small: 3% of mothers with less than a high school (HS) education did so, compared to 2% of mothers who had graduated or had a GED. E-cigarette use during pregnancy was lowest among women who had attended college (1%).

Figure 52. The percentage of Alaska mothers who used e-cigarettes or other electronic nicotine products during the last three months of pregnancy did not differ significantly by region.



Source: Alaska PRAMS, 2019-2021.

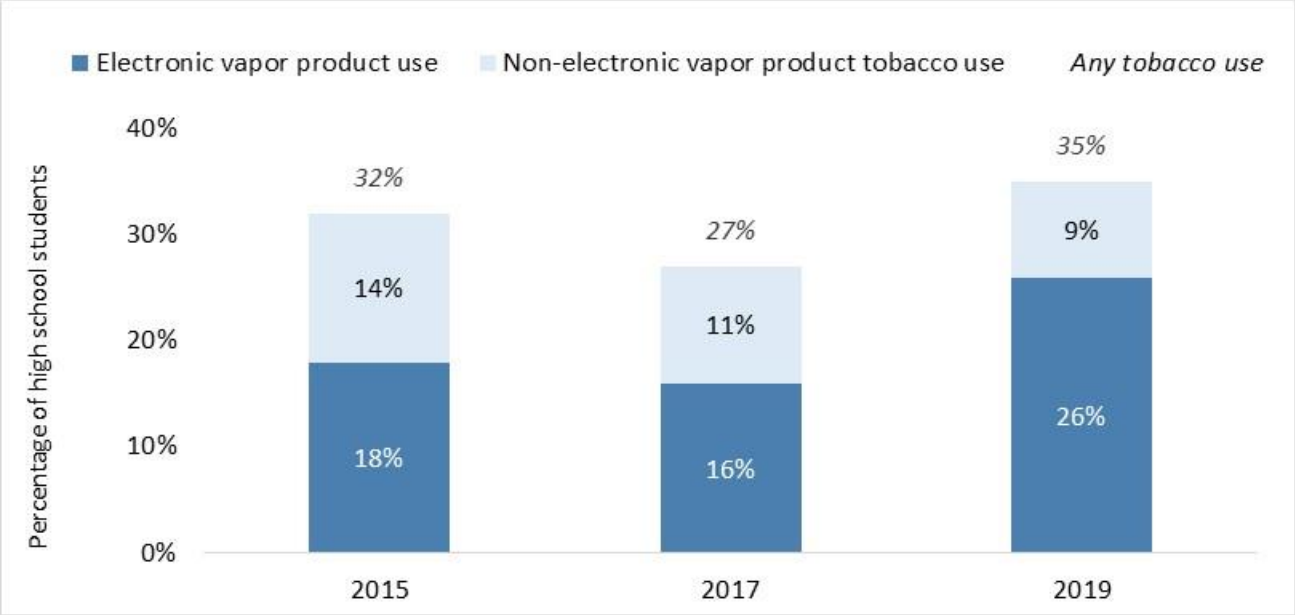
- In 2019-2021, use of e-cigarettes or other electronic nicotine products by mothers during the last three months of pregnancy did not differ greatly by region, ranging from 3% in Mat-Su to 0% in Juneau, Northwest, and Other Southeast.

Youth Tobacco Use

Healthy Alaskans 2030

Reducing the use of any tobacco or nicotine product among adolescents is an important priority in the State of Alaska. *Healthy Alaskans 2030*[19] includes the following indicator that is monitored to assess progress: *Reduce the percentage of adolescents who currently smoke cigarettes or use electronic vapor products, smokeless tobacco, or other tobacco products.*

Figure 53. Use of any tobacco or nicotine product among Alaska high school students did not change significantly during the past five years.



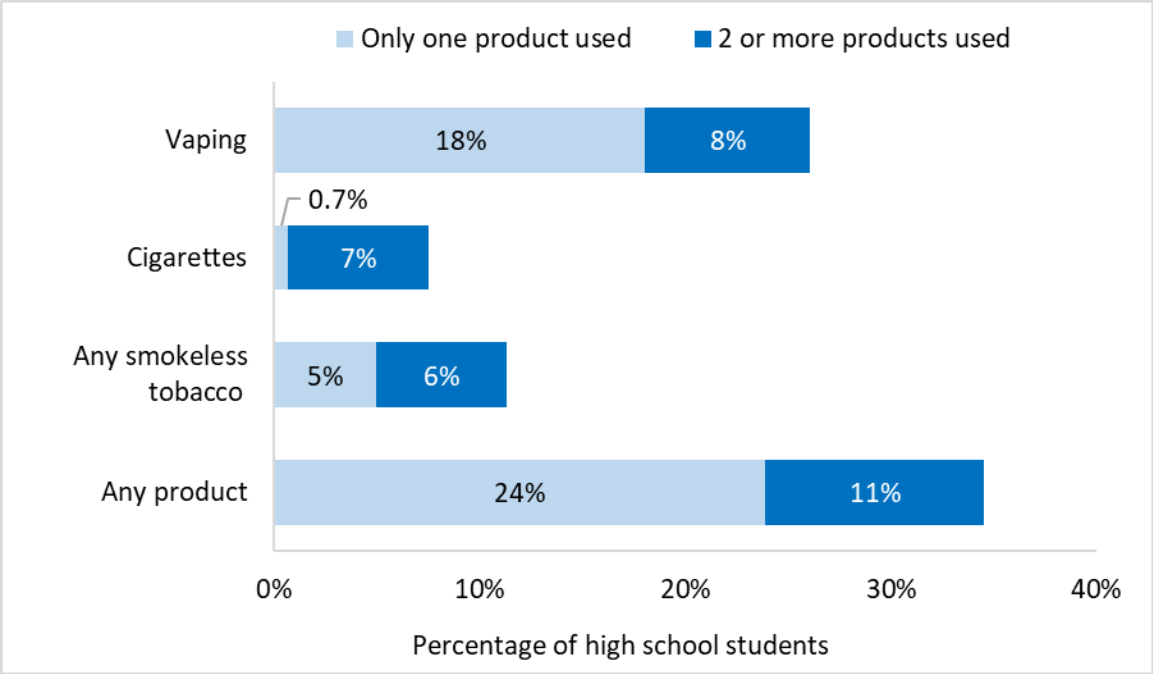
Source: Alaska YRBS, state sample of traditional high school students. Includes the percentage of students who used cigarettes, smokeless tobacco (including iqmik), electronic vapor products, or cigars in the past 30 days. Questions about electronic vapor product use—with example products, such as Vuse and blu, listed in the instructions—were added to the Alaska YRBS in 2015. JUUL was added as an example product in 2019. Non-electronic vapor product tobacco use includes cigarettes, chewing tobacco products, cigars, and iqmik.

- 2015 was the first year that questions about electronic vapor products were added to the Alaska YRBS.
- The percentage of high school students who currently used electronic vapor products increased statewide, from 18% in 2015 to 26% in 2019.
- Between 2015 and 2019, the percentage of high school students who currently used any tobacco or nicotine product statewide varied, but the change over time is non-significant (32% in 2015 vs. 35% in 2019).
- Based on the most recent percentage of students who use tobacco or nicotine products, there are more than 13,300 students in Alaska who are at risk for poor health outcomes due to

[19] For more information about Healthy Alaskans 2030, see https://www.healthyalaskans.org/

tobacco or nicotine products. This includes 9,900 students who are at risk for poor health outcomes due to vaping.

Figure 54. Electronic vaping products like e-cigarettes were the most commonly used tobacco products among Alaska high school students in 2019. Students who use electronic vapor products are the most likely to use those tobacco products exclusively.



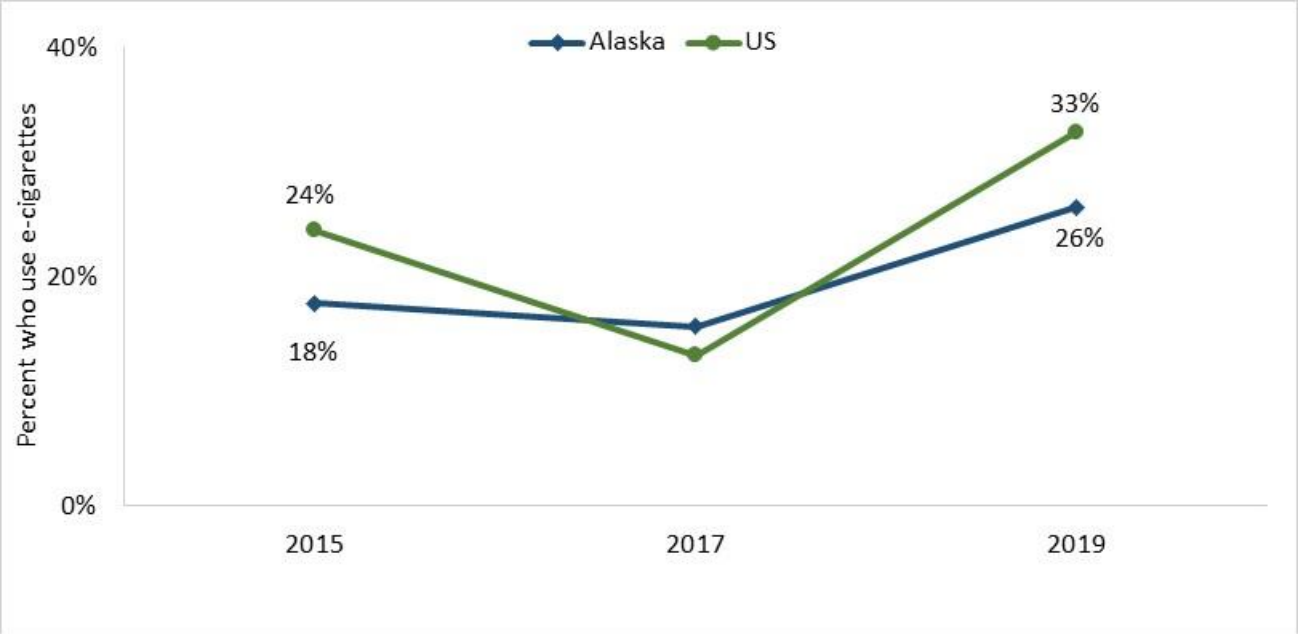
Product type	*Only one product used*	*Used multiple products*	*Used alone or in combination**
Electronic Vaping products	18%	8%	26%
Cigarettes	0.7%	7%	8%
Any smokeless tobacco	5%	6%	11%
Any tobacco product	24%	11%	35%

Source: AK YRBS 2019, all participating traditional high schools from the region.
*Numbers may not match sum of "one product" and "multiple product" values due to rounding.

- In Alaska, 35% of high school students currently used some form of tobacco or nicotine product in 2019.
- Electronic vaping products were the most commonly used product (26% of all students); fewer students used cigarettes (8%) or smokeless tobacco (11%).
- Most students who used electronic vaping products used only those products (18% of students used electronic vaporing products only). Most students who currently used cigarettes or smokeless tobacco were using more than one product.
- 5% of students currently used cigars. Nearly all of the students surveyed who used cigars also used other tobacco or nicotine products (data not shown).

Electronic Vapor Product Use

Figure 55. The percentage of Alaska and U.S. high school students who currently use electronic vapor products increased in the past five years.



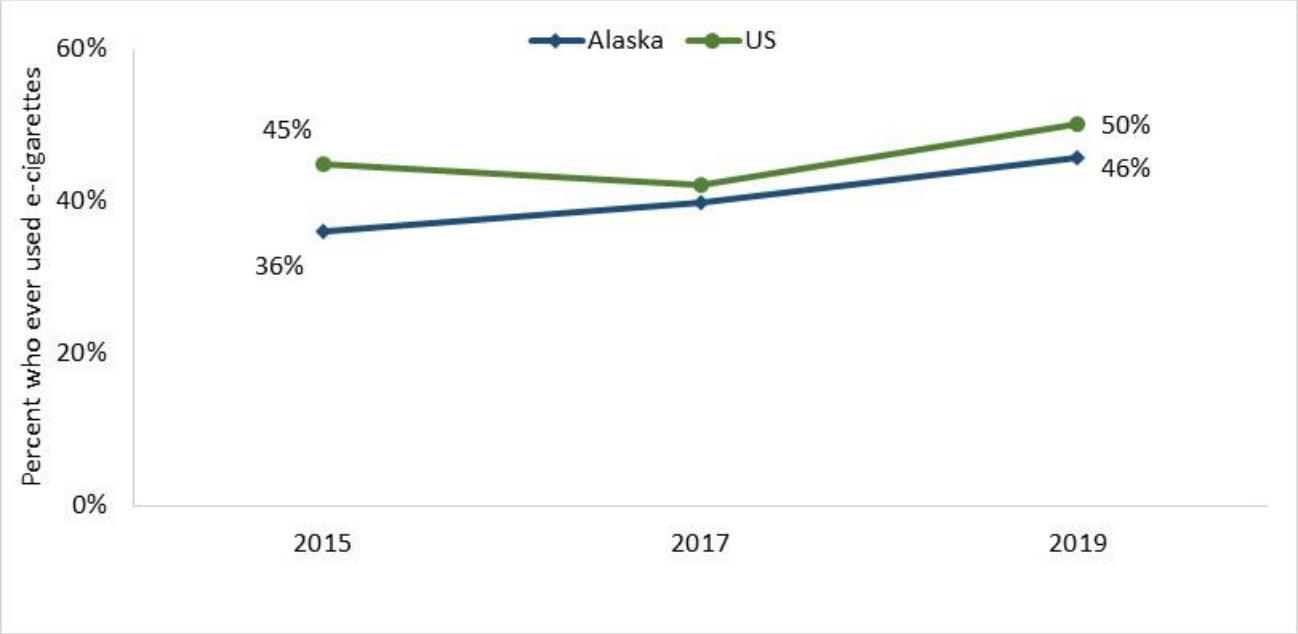
Source: Alaska YRBS and National YRBS 2015, 2017, 2019.
"Current use" among youth is defined as using on one or more of the past 30 days.

Electronic vapor products are battery-operated nicotine devices that that heat a liquid solution containing nicotine, flavorings and other chemicals into an aerosol that is inhaled. The YRBS asks about these products with the following introduction: "The next questions ask about electronic vapor products, such as JUUL, Vuse, MarkTen, and blu. Electronic vapor products include e-cigarettes, vapes, vape pens, e-cigars, e-hookahs, hookah pens, and mods."

The Alaska YRBS has included a question about electronic vapor product use since 2015.

- Youth electronic vapor product use in Alaska increased significantly from 18% in 2015 to 26% in 2019.
- Nationally, the proportion of high school students who used electronic vapor products increased from 24% in 2015 to 33% in 2019.
- Based on the most recent percentage of students who use tobacco or nicotine products, there are more than 9,900 students in Alaska who are at risk for poor health outcomes due to using electronic vapor products.

Figure 56. The percentage of Alaska high school students who ever used electronic vapor products has increased during recent years.



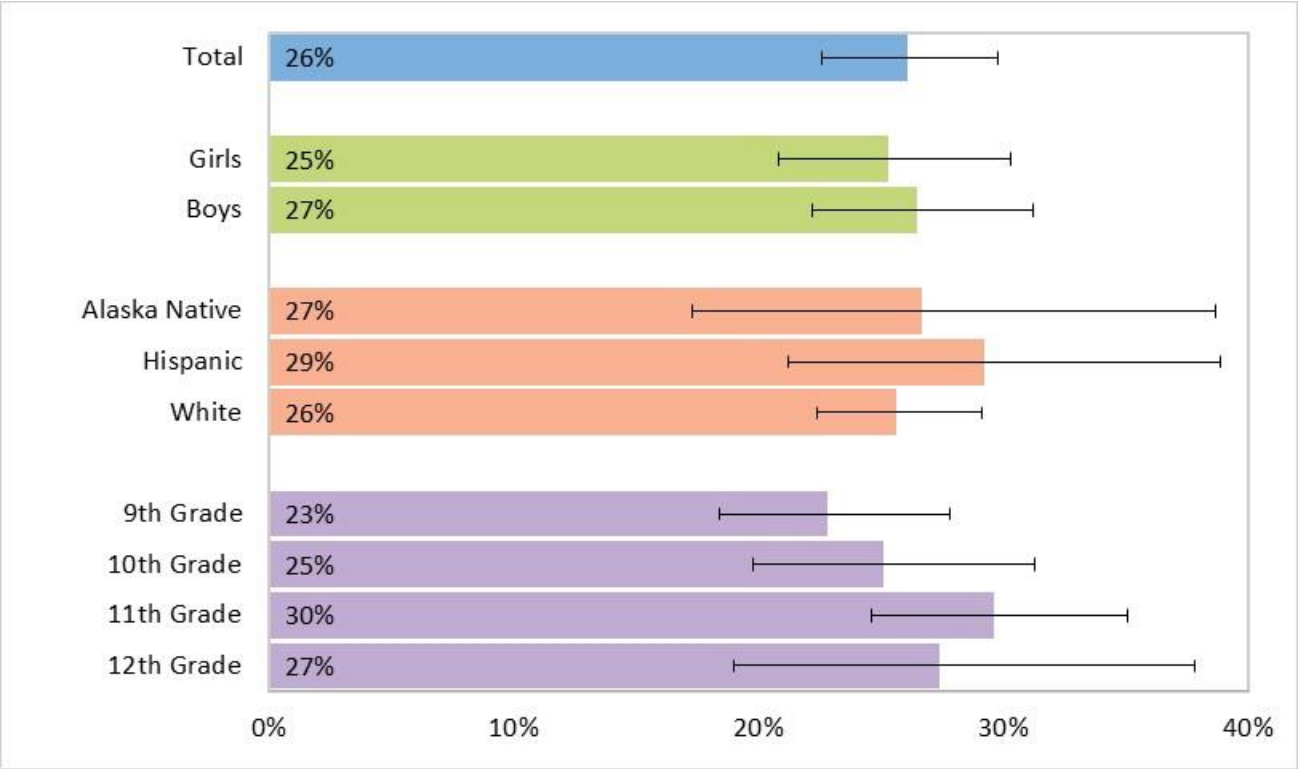
Source: Alaska YRBS and National YRBS 2015, 2017, 2019.

- Overall, the percentage of Alaska high school students who ever tried electronic vapor products increased significantly between 2015 and 2019 (36% vs. 46%).
- Nationally, the percentage also increased, from 45% in 2015 to 50% in 2019.

Among specific populations in Alaska (data not shown):

- The percentage of female students who ever tried electronic vapor products increased significantly between 2015 and 2019 (32% vs. 47%); the percentage of male students who had ever tried electronic vapor products did not change significantly.
- Between 2015 and 2019, the percentage of students who ever tried electronic vapor products increased significantly among both Alaska Native students (from 33% to 50%) and White non-Hispanic students (from 35% to 43%).

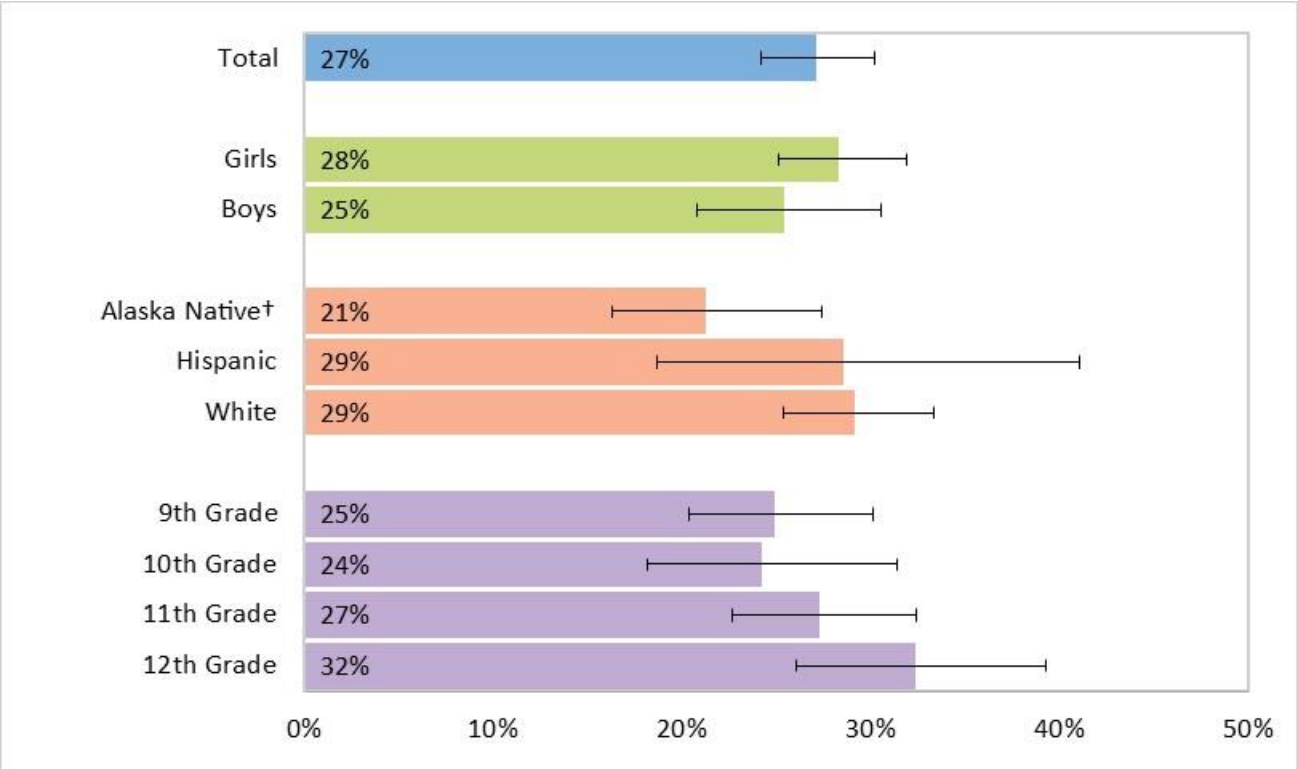
Figure 57. The percentage of Alaska high school students who currently use electronic vapor products does not vary by subgroup.



Source: Alaska YRBS 2019.
"Current use" among youth is defined as using on one or more of the past 30 days.

- In 2019, 26% of high school students reported using an electronic vapor product in the past 30 days.
- There were no significant differences in electronic vapor product use by gender, race/ethnicity group, or grade.

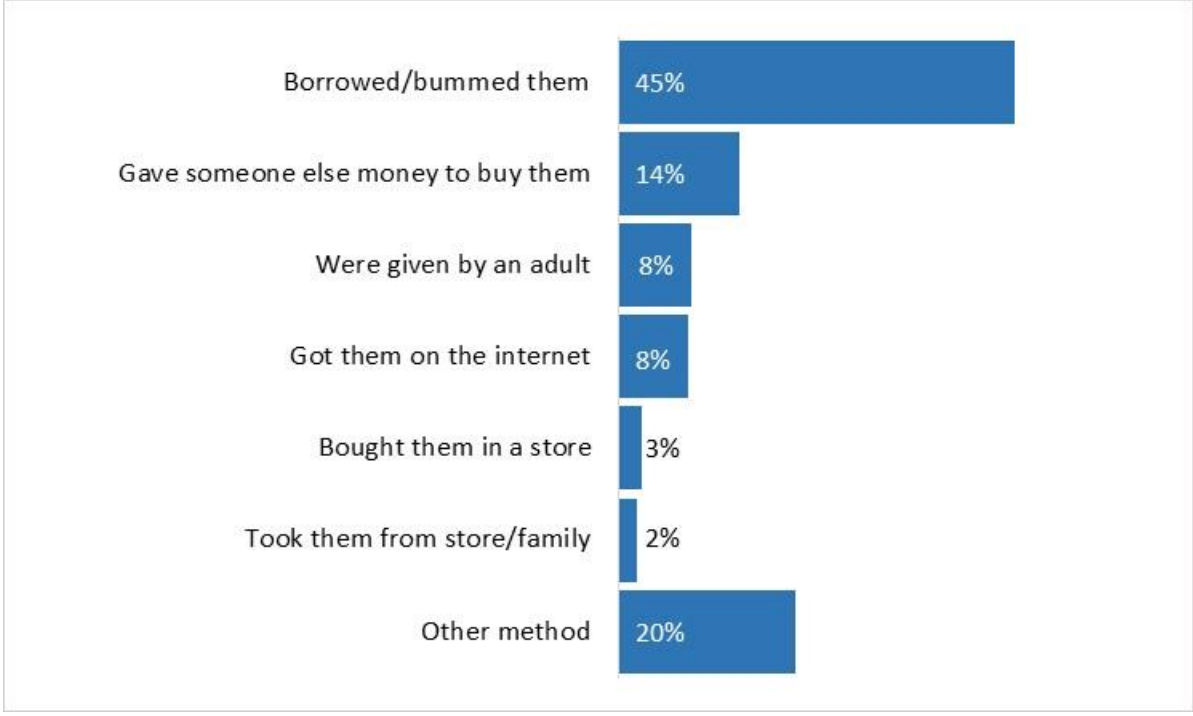
Figure 58. There is some variation among Alaska high school students for believing that people take a great risk harming themselves if they use electronic vapor products every day.



Source: Alaska YRBS 2019.
† Significant difference between the Alaska Native and White sub-groups.

- In 2019, Alaska Native students were significantly less likely than White non-Hispanic students to think that people take a great risk in using electronic vapor products daily (21% vs. 29%).
- There were no significant differences in perceived harm of electronic vapor product use between genders or grades.

Figure 59. Among Alaska high school students who currently use electronic vapor products, more than two-thirds usually got their electronic vapor products with help from other people.

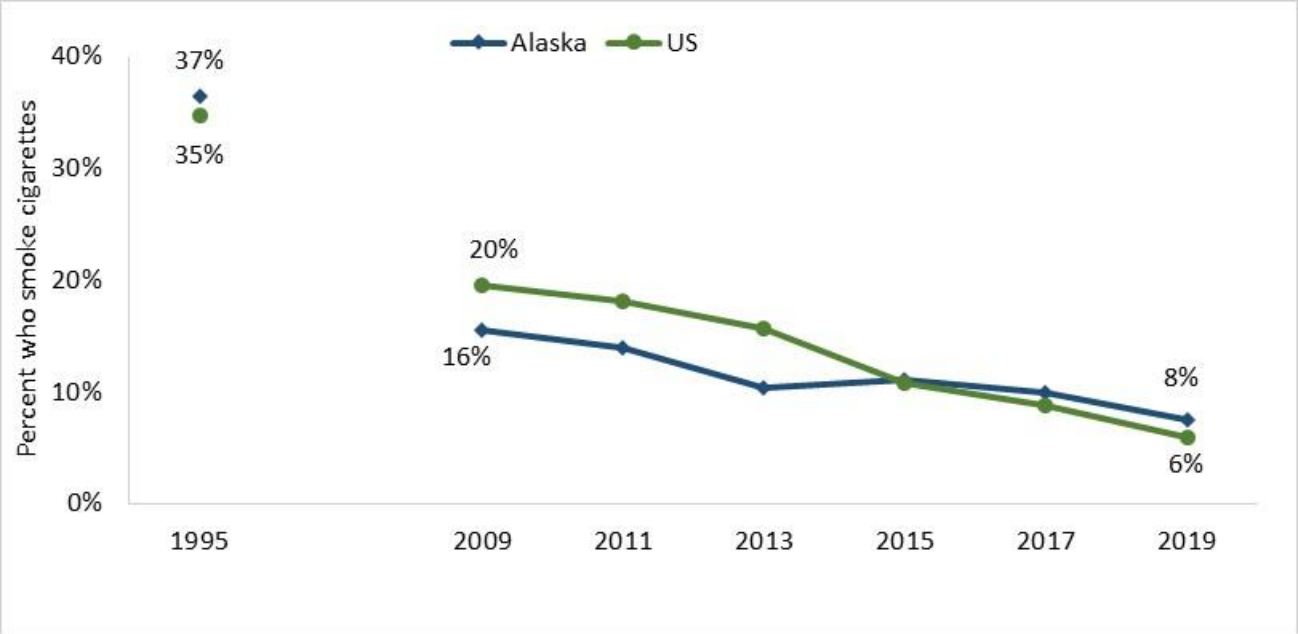


Source: Alaska YRBS 2019.
"Current use" among youth is defined as using on one or more of the past 30 days.

- In 2019, more than two-thirds of high school students who currently used electronic vapor products reported that they usually got their products with help from other people. This includes 45% who usually borrowed or "bummed" them and 14% who gave money to someone else to buy them, and 8% who were given electronic vapor products by an adult.
- 8% of high school students who used electronic vapor products said that they usually got them online.
- Few high school students who used electronic vapor products said that they bought them from a store (3%) or took them from a store or family member (2%).
- About one in five (20%) high school students who used electronic vapor products said that they got them some other way.

Cigarette Use

Figure 60. The percentage of Alaska high school students who currently smoke cigarettes has decreased during the past 10 years.

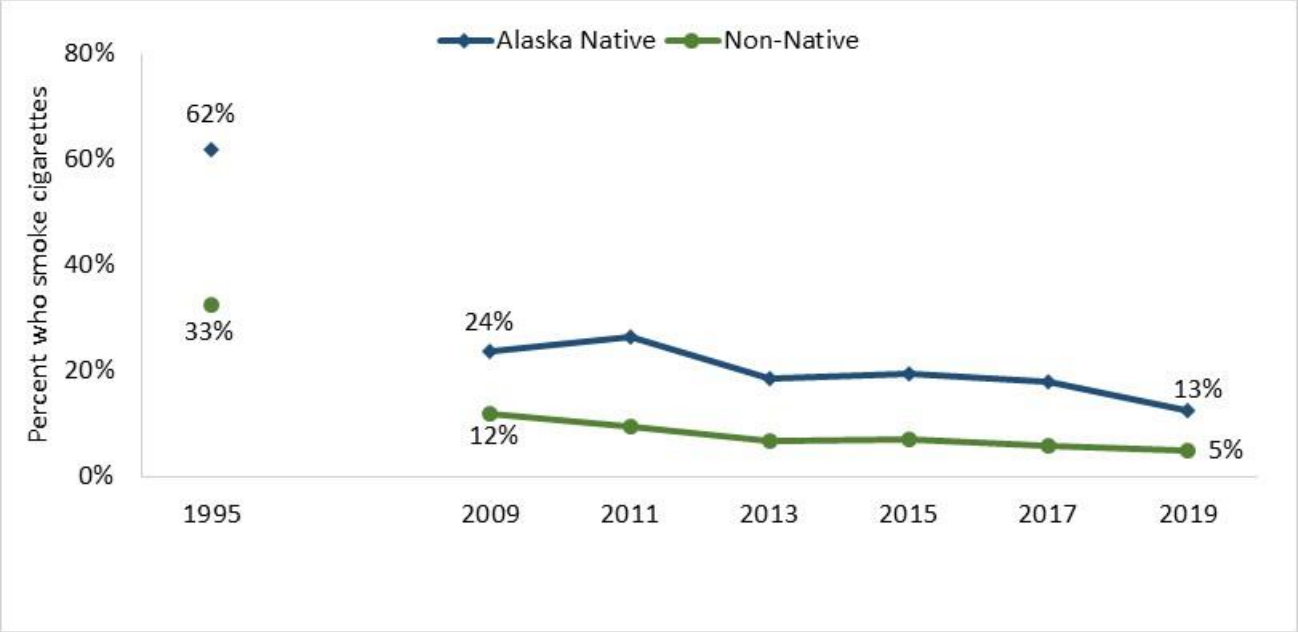


Source: Alaska YRBS and National YRBS 1995, 2009-2019.
"Current smoking" among youth is defined as smoking on one or more of the past 30 days.

- Smoking has decreased nationally and in Alaska since 1995. Smoking among Alaska high school students fell significantly from 37% in 1995 to 8% in 2019.
- Smoking has decreased significantly among high school students in Alaska during the past 10 years alone, from 16% in 2009 to 8% in 2019.
- Based on the most recent percentage of students who smoke cigarettes, there are more than 3,000 students in Alaska who are at risk for poor health outcomes due to smoking cigarettes.
- Reductions in student smoking prevalence since 1995, which was just prior to the start of Alaska's Tobacco Prevention and Control Program, translate to nearly 12,000 fewer youth who smoke in the state.[20]

[20] Had the youth smoking prevalence in 2019 been 36.5% (prevalence of youth smoking in 1995) there would be an estimated 11,900 more Alaska youth who smoke in 2019.

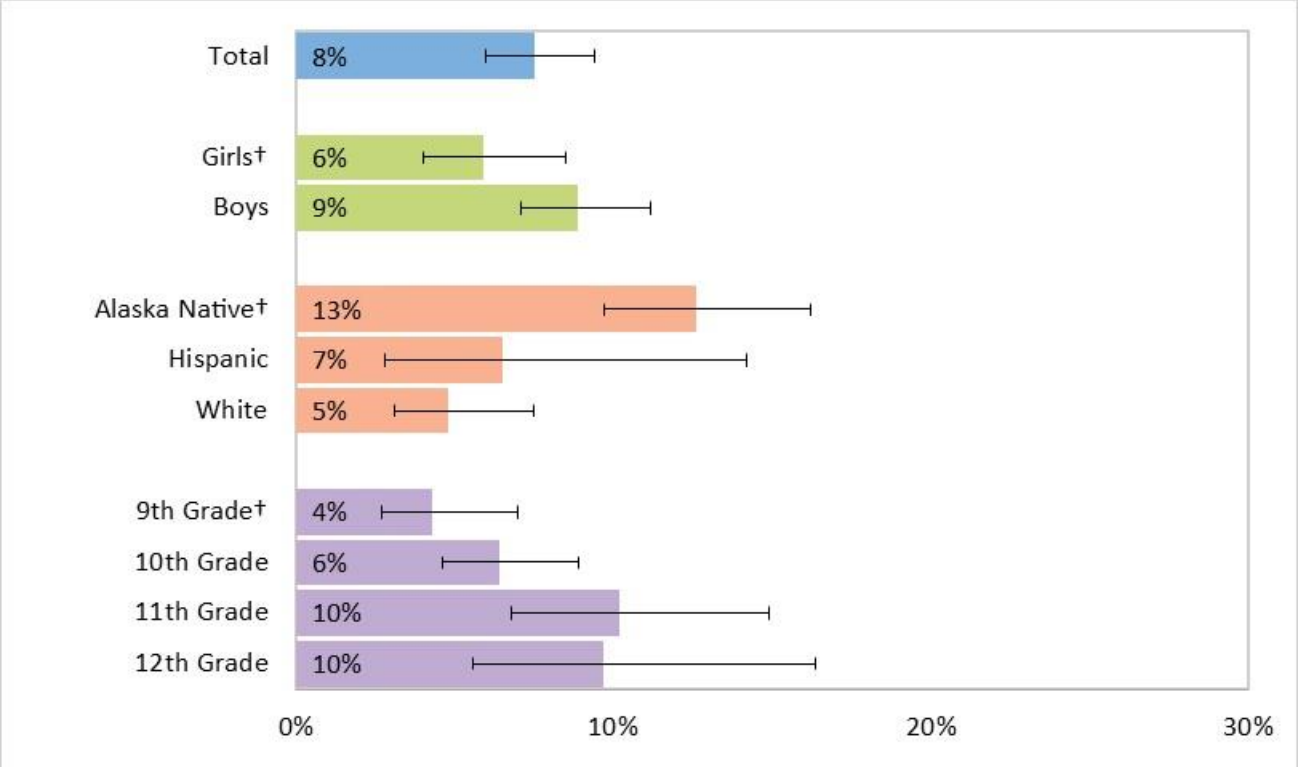
Figure 61. The percentage of both Alaska Native and non-Native high school students who currently smoke cigarettes has decreased during the past 10 years.



Source: Alaska YRBS 1995, 2009-2019.
"Current smoking" among youth is defined as smoking on one or more of the past 30 days.

- Between 1995 and 2019, significant declines in current youth cigarette smoking occurred among both Alaska Native (from 62% to 13%) and non-Native high school students (from 33% to 5%).
- Declines were also significant during the past 10 years alone. From 2009 to 2019 Alaska Native student smoking prevalence declined from 24% to 13%; non-Native student smoking declined from 12% to 5%.

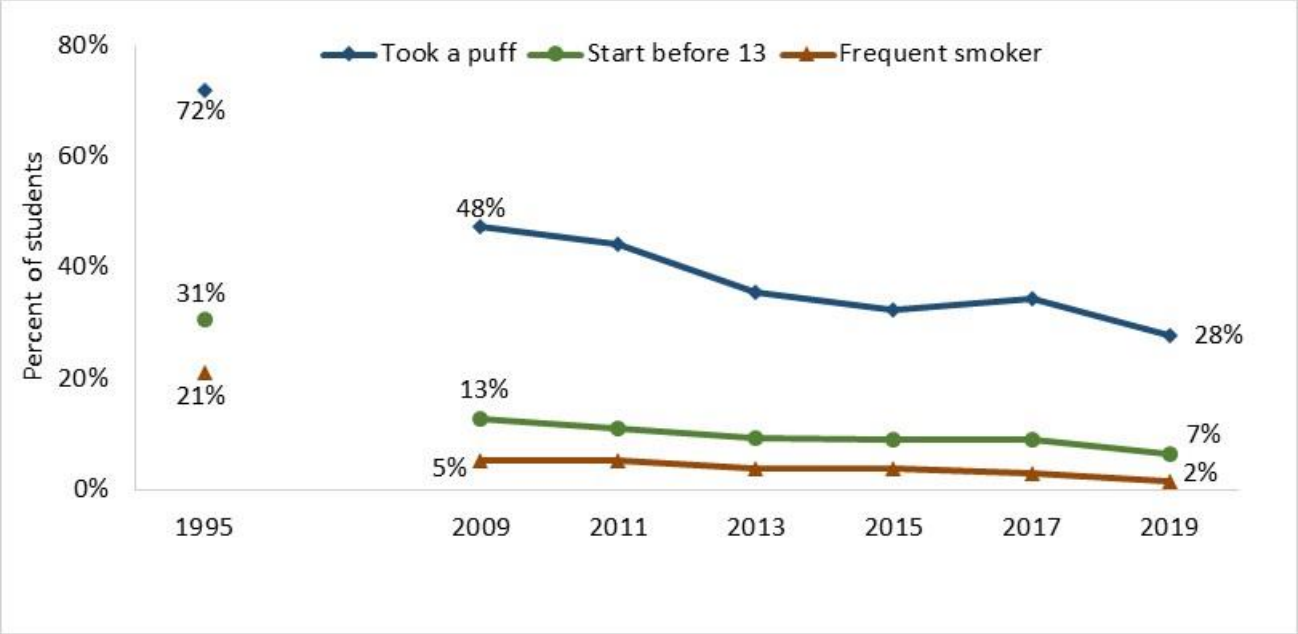
Figure 62. The percentage of Alaska high school students who currently smoke cigarettes varies by subgroup.



Source: Alaska YRBS 2019.
† Significant differences between sub-groups, as described below.
"Current smoking" among youth is defined as smoking on one or more of the past 30 days.

- Male students were more likely than female students to smoke cigarettes in 2019 (9% vs. 6%).
- Alaska Native students were more likely than White students to be current smokers (13% vs. 5%).
- Smoking prevalence was higher among older students than among younger students (10% among 11th and 12th grade students vs. 4% among 9th grade students).

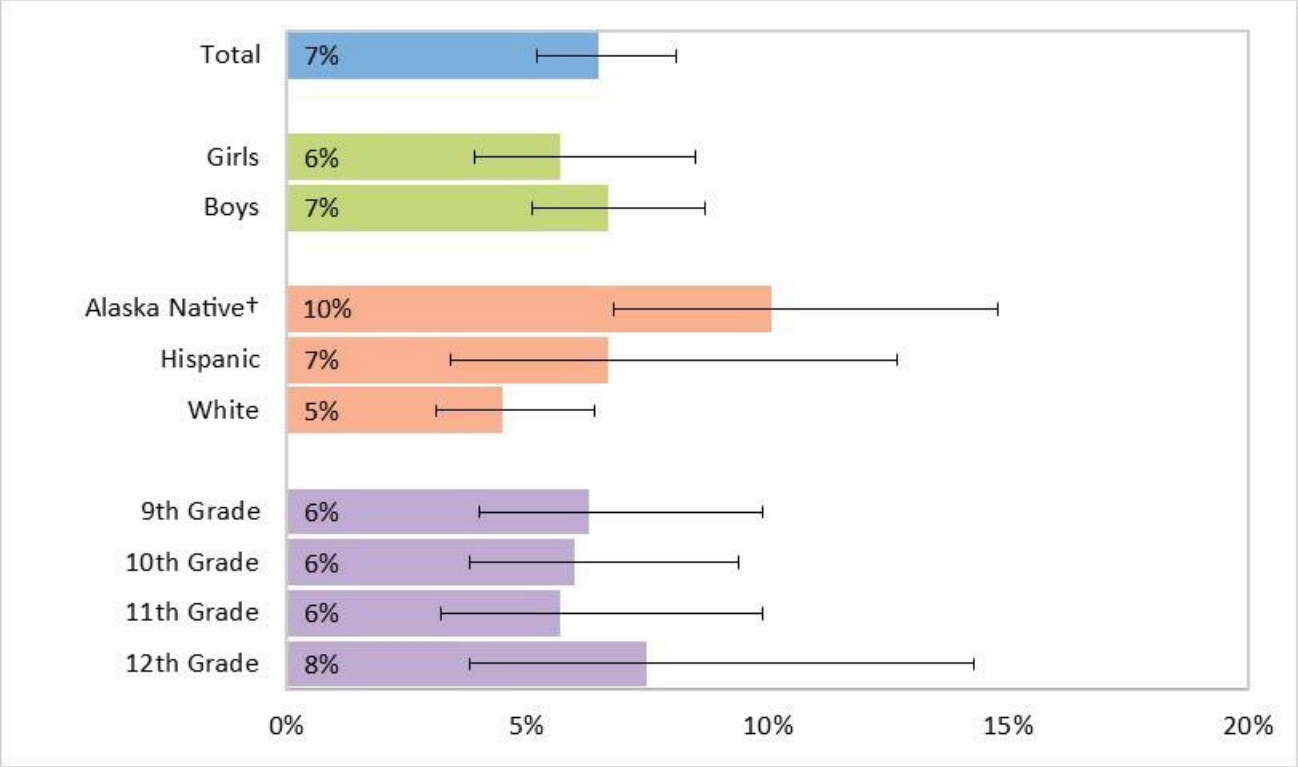
Figure 63. In the past 10 years, fewer Alaska high school students have ever tried cigarettes, started smoking before age 13, or become frequent smokers*.



Source: Alaska YRBS 1995, 2009-2019.
*Frequent smoking is defined as having smoked on 20 or more of the past 30 days.

- Among Alaska high school students, the percentage who reported ever trying smoking (even a puff) decreased from 72% of students in 1995 to 28% in 2019. Declines in ever smoking cigarettes were significant during the past 10 years alone: the percentage of youth who ever smoked dropped from 48% in 2009 to 28% in 2019.
- The percentage of Alaska high school students who started smoking before age 13 decreased from 31% in 1995 to 7% of students in 2019. The percentage of high school students who started smoking before age 13 declined significantly during the past 10 years alone: from 13% in 2009 to 7% in 2019.
- The percentage of Alaska high school students who are frequent smokers (defined as smoking on 20 or more of the past 30 days) decreased from 21% in 1995 to 2% in 2019. The percentage of high school students who smoke frequently declined significantly during the past 10 years alone: from 5% in 2009 to 2% in 2019.

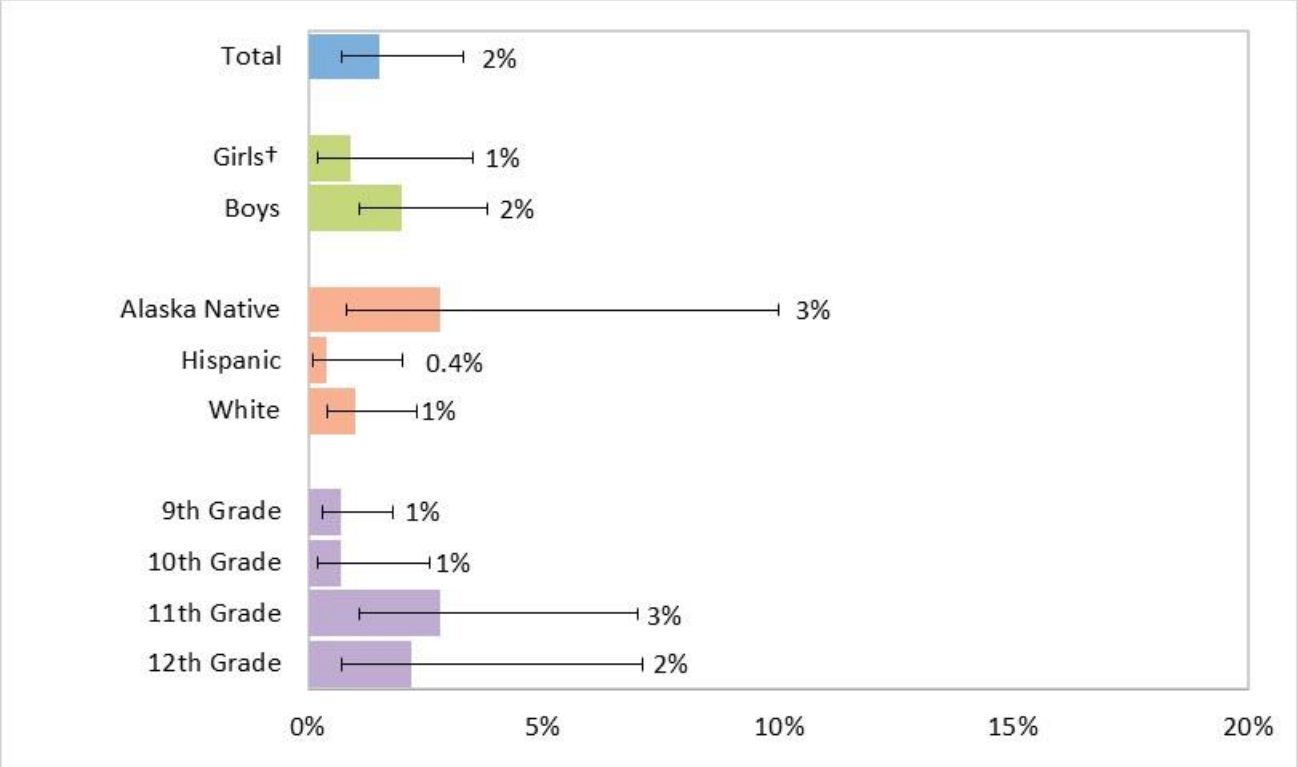
Figure 64. There is some variation among Alaska high school students in trying smoking cigarettes before age 13.



Source: Alaska YRBS 2019.
† Significant differences between sub-groups, as described below.

- In 2019, Alaska Native students were significantly more likely than White students to have started smoking before age 13 (10% vs. 5%).
- There were no significant differences in early initiation of smoking by gender or among grade groups.

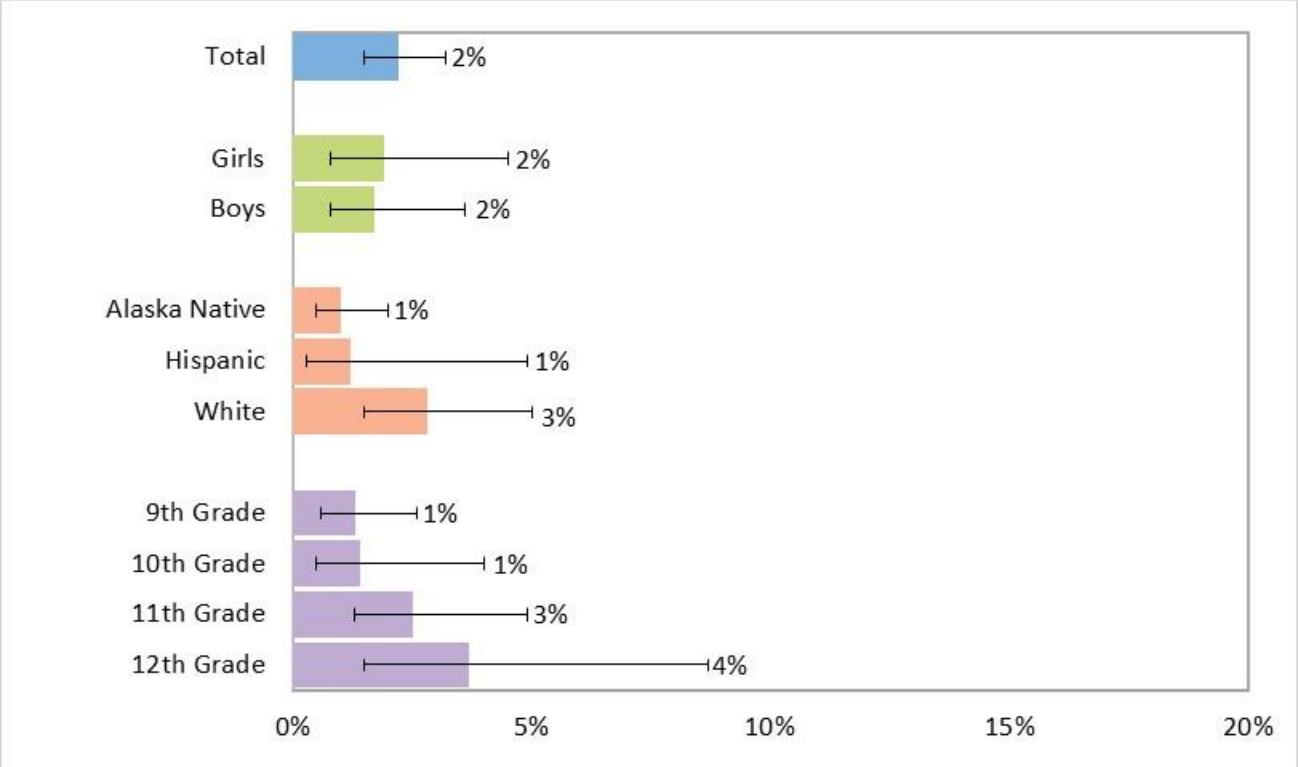
Figure 65. In Alaska, high school boys were more likely to frequently smoke* cigarettes than were high school girls.



Source: Alaska YRBS 2019.
† Significant differences between sub-groups, as described below.
*"Frequent smoking" among youth is defined as smoking on 20 or more of the past 30 days.

- Although not a large difference, Alaska male high school students were significantly more likely than female students to frequently smoke cigarettes in 2019 (2% vs. 1%).
- There were no significant differences in frequent smoking by race/ethnicity or among grade groups.

Figure 66. The percentage of Alaska high school students who smoked cigarettes on school property in the past 30 days did not vary significantly by subgroup.

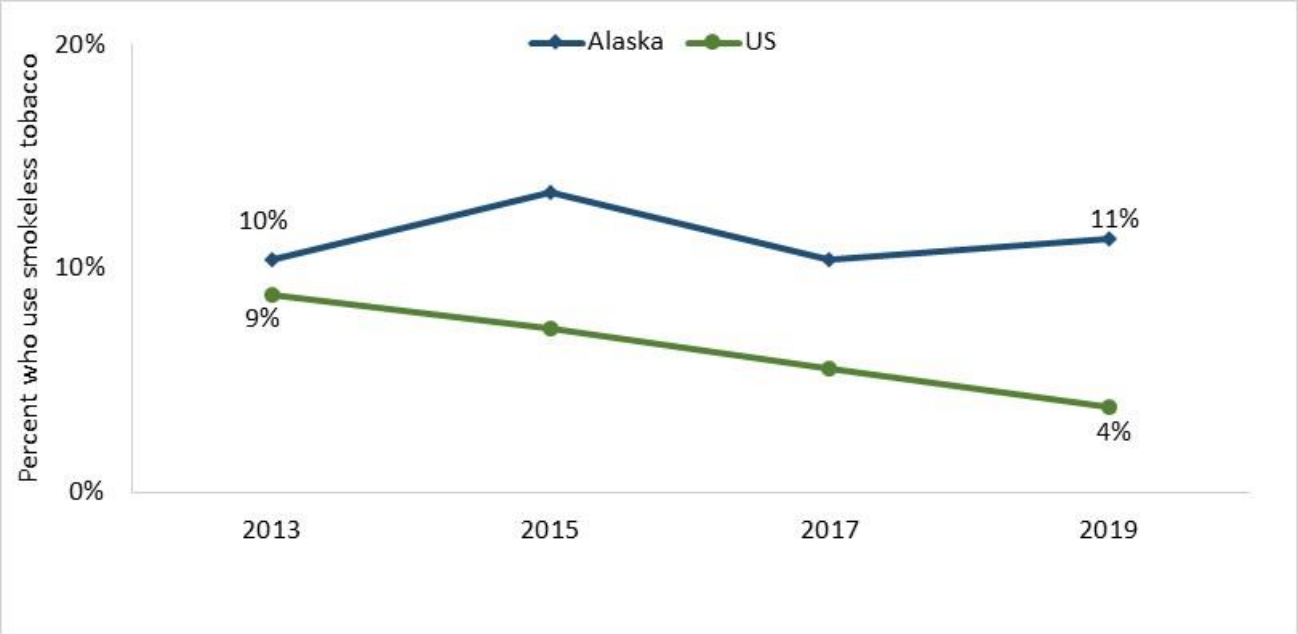


Source: Alaska YRBS 2019.

- In 2019, 2% of Alaska high school students said they had smoked cigarettes on school property in the past 30 days.
- There were no significant differences in the percentage of youth who had smoked on school property by gender, race/ethnicity, or among grade groups.

Smokeless Tobacco Use

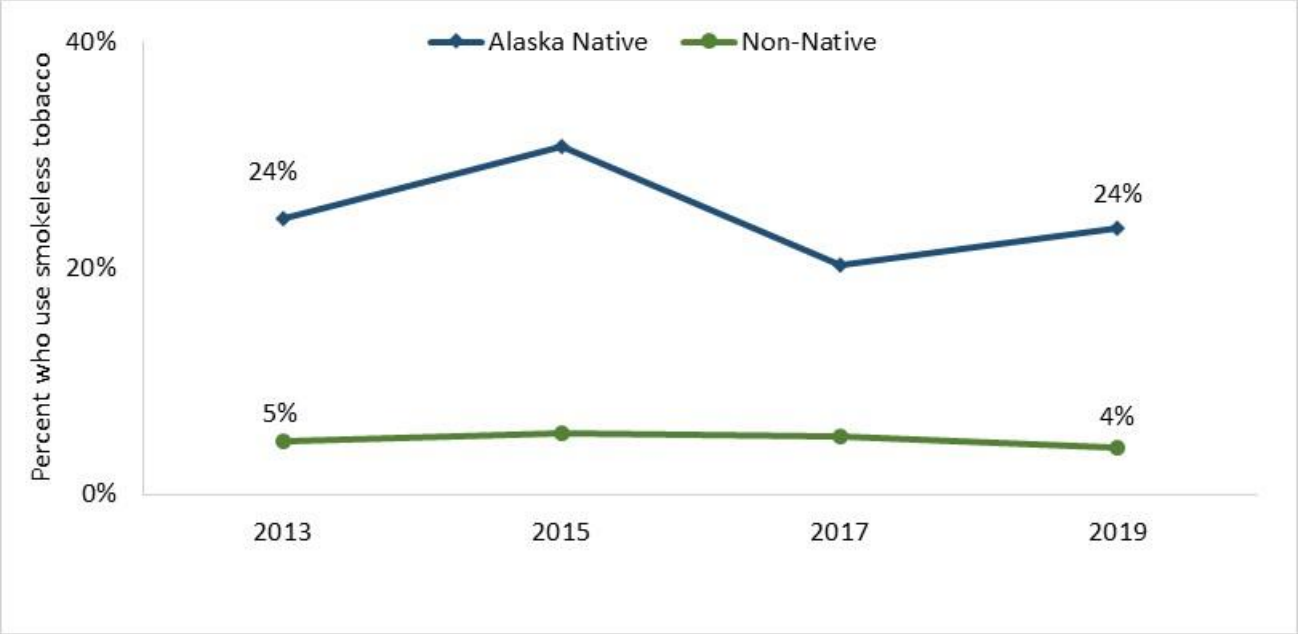
Figure 67. The percentage of Alaska high school students who currently use smokeless tobacco (SLT) has not changed in the past seven years.



Source: Alaska YRBS and National YRBS 2013-2019.
Note: Smokeless tobacco (SLT) use in Alaska includes chew, dip, snuff, and iqmik (see description in Figure 30). In 2017, snus and dissolvable tobacco were added to the YRBS question.
"Current use" among youth is defined as using on one or more of the past 30 days.

- The percentage of Alaska high school students who use smokeless tobacco (SLT) has not changed significantly during recent years: 10% in 2013 vs. 11% in 2019.
- Nationally, youth SLT use has decreased from 9% in 2013 to 4% in 2019.
- Based on the most recent percentage of students who use tobacco or nicotine products, there are more than 4,200 students in Alaska who are at risk for poor health outcomes due to smokeless tobacco products.

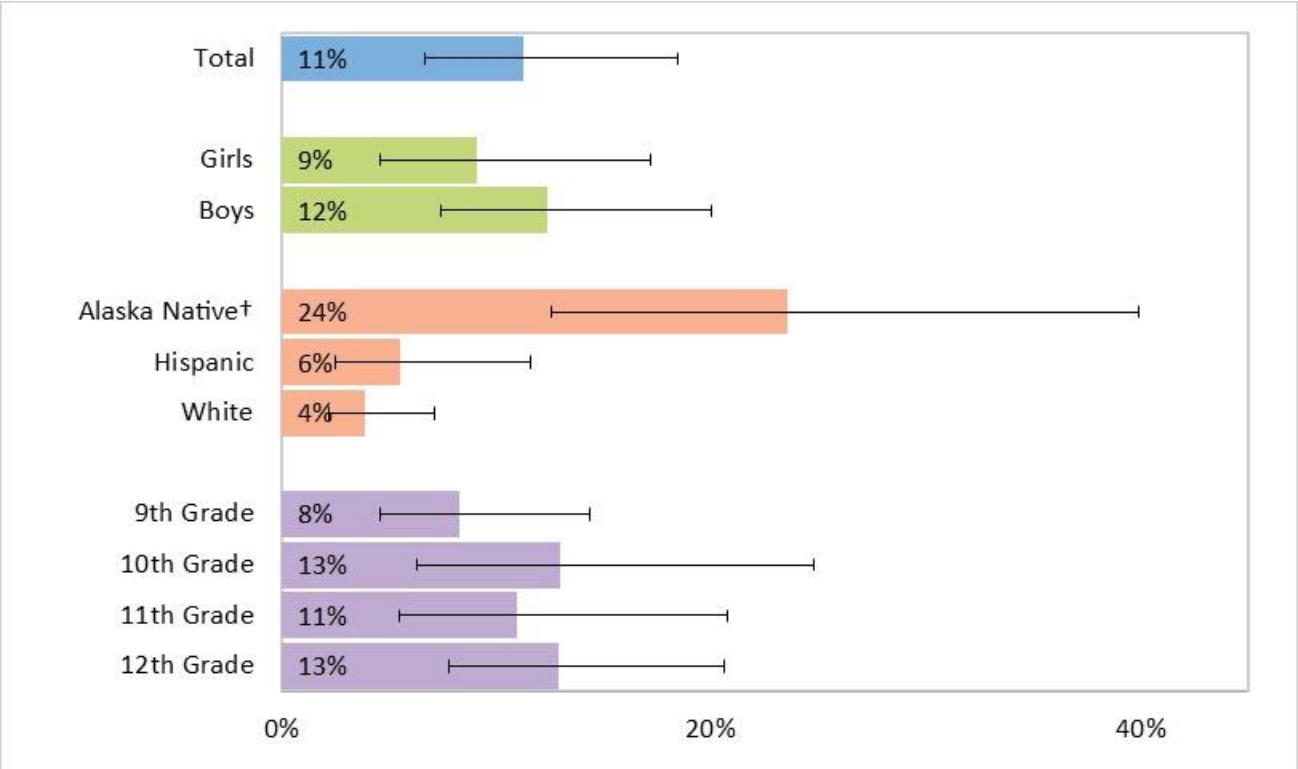
Figure 68. Alaska Native high school students are more likely than non-Native students to currently use smokeless tobacco.



Source: Alaska YRBS 2013-2019.
Note: Smokeless tobacco (SLT) use in Alaska includes chew, dip, snuff, and iqmik.
In 2017, snus and dissolvable tobacco were added to the YRBS question.
"Current use" among youth is defined as using on one or more of the past 30 days.
Note: Question about SLT use in Alaska includes the variant known as iqmik (see Introduction of this report).

- The percentage of high school students who use SLT has not changed significantly among both Alaska Native and non-Native students from 2013 to 2019.
- The percentage of Alaska Native students who use SLT has been consistently greater than for non-Native students.

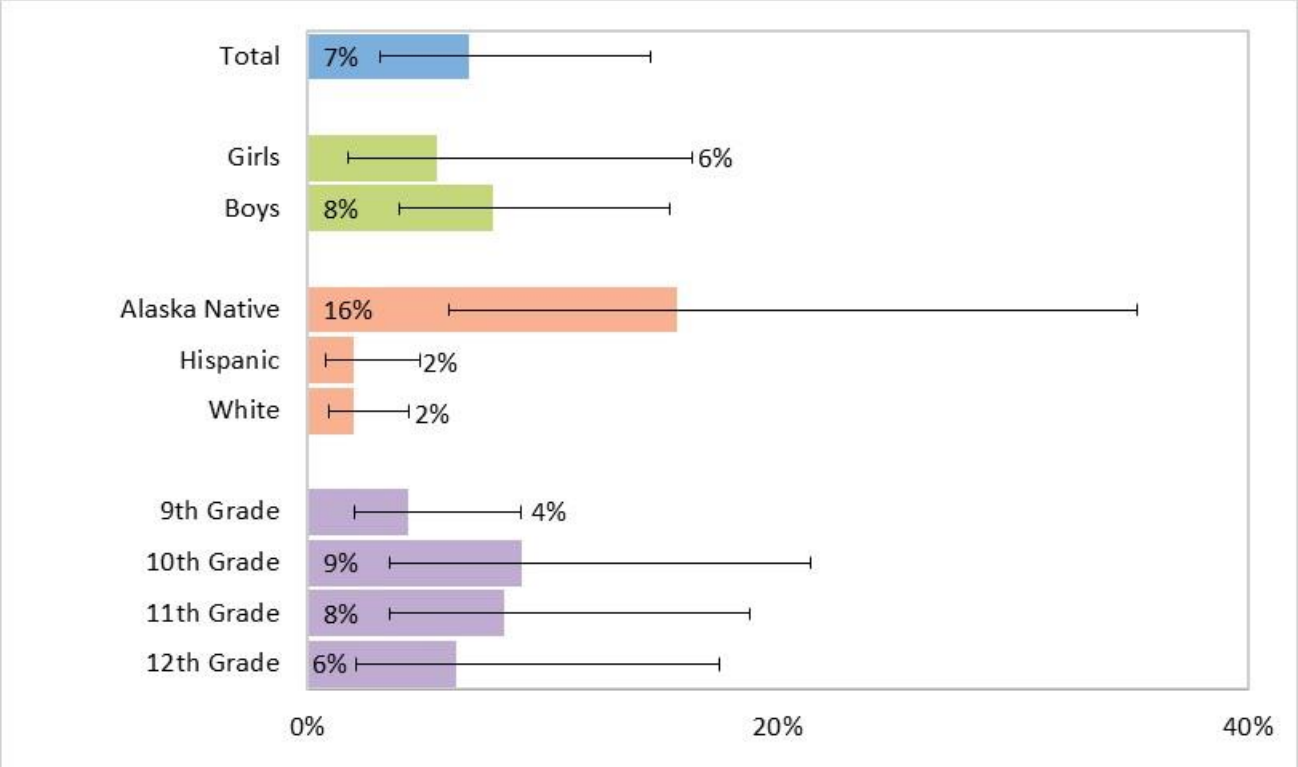
Figure 69. There is some variation among Alaska high school students for current use of smokeless tobacco.



Source: Alaska YRBS 2019.
Smokeless tobacco (SLT) use in Alaska includes chew, dip, snuff, and iqmik.
† Significant differences between sub-groups, as described below.
"Current use" among youth is defined as using on one or more of the past 30 days.
Note: Question about SLT use in Alaska includes the variant known as iqmik (see Introduction of this report).

- In 2019, Alaska Native students were significantly more likely than White students to use SLT (24% vs. 4%).
- There were not significant differences in the percentage of students who use SLT by gender or among grade groups.

Figure 70. There is some variation among Alaska high school students for currently using smokeless tobacco on school property.

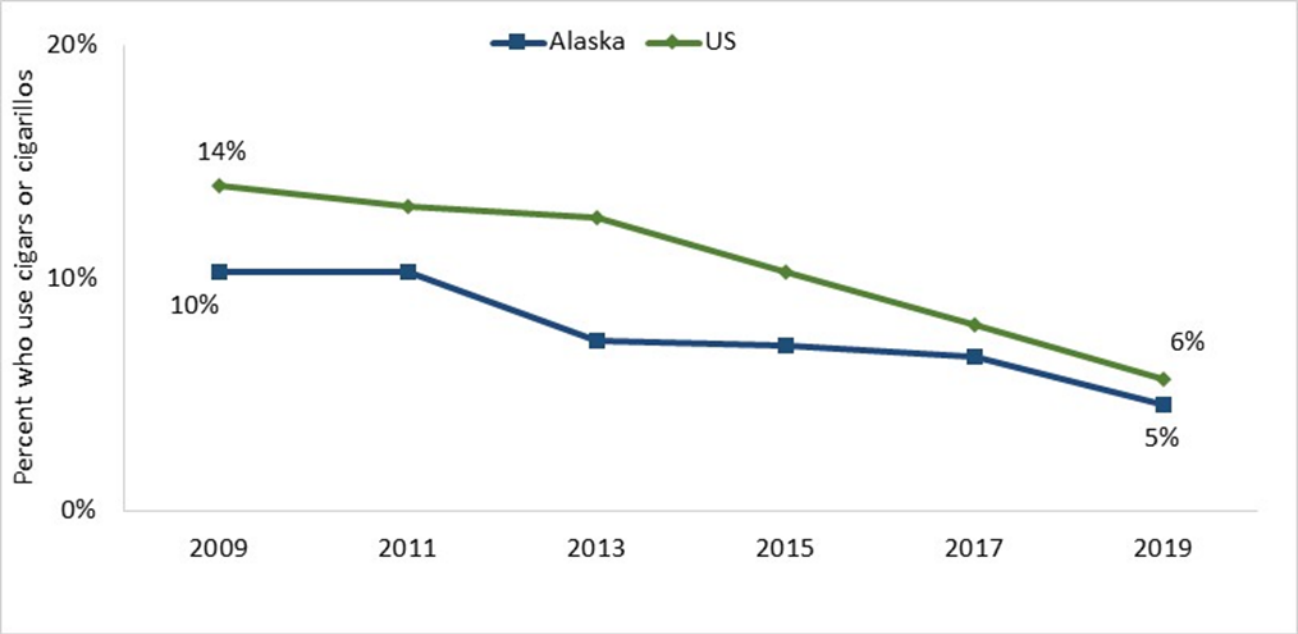


Source: Alaska YRBS 2019.
Smokeless tobacco (SLT) use in Alaska includes iqmik.
"Current use" among youth is defined as using on one or more of the past 30 days.
Note: Question about SLT use in Alaska includes the variant known as iqmik (see Introduction of this report).

- In 2019, 7% of Alaska high school students reported using smokeless tobacco (SLT) on school property on one or more of the past 30 days.
- Alaska Native students were significantly more likely than White and Hispanic students to report using SLT on school property (16% vs. 2%).
- There were no significant differences in use of SLT on school property by gender or among grade groups.

Cigar Use

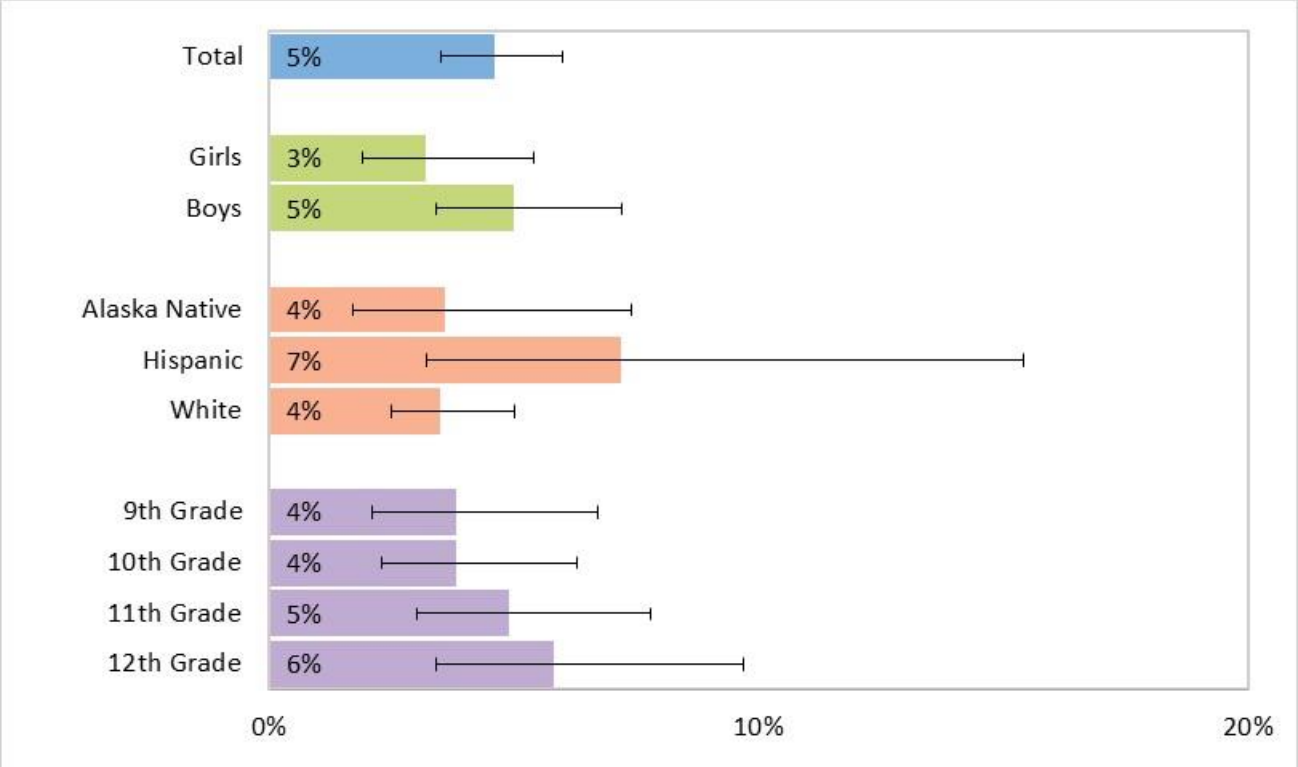
Figure 71. The percentage of Alaska high school students who currently smoke cigars or cigarillos has declined by half in the past 10 years.



Source: Alaska YRBS and National YRBS 2009-2019.
Note: Question was first included in the Alaska YRBS in 2003.
"Current smoking" among youth is defined as smoking on one or more of the past 30 days.

- Nationally, the percentage of high school students who smoke cigars or cigarillos decreased significantly from 22% in 1997 to 6% in 2019.
- The Alaska YRBS has included a question about cigar or cigarillo use since 2003. Youth cigar or cigarillo use in Alaska declined significantly between 2009 (10%) and 2019 (5%).
- Cigar/cigarillo use declined significantly for both male and female students in Alaska during the past 10 years. Among male students the decline was from 14% in 2009 to 5% in 2019, and among female students, from 6% in 2009 to 3% in 2019 (data not shown).

Figure 72. The percentage of Alaska high school students who currently smoke cigars or cigarillos does not vary by subgroup.



Source: Alaska YRBS 2019.

- In 2019, there were no significant differences in cigar/cigarillo use by gender, race/ethnicity group or grade.
- Among students who were currently smoking cigarettes, 34% reported also smoking cigars/cigarillos in the past 30 days, whereas only 1% of students who do not smoke cigarettes reported smoking cigars/cigarillos (data not shown).

Appendix: Data Source Detail

Alaska 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. 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

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://live.laborstats.alaska.gov/pop/index.cfm.

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 and Prevention (CDC). It aims to estimate in the general adult population, the prevalence of health-related risk behaviors, chronic health conditions, and use of preventive services that address leading causes of morbidity and mortality. The BRFSS has operated continuously in Alaska since it began in 1991. Additional information on Alaska's BRFSS is available at https://health.alaska.gov/dph/Chronic/Pages/brfss/default.aspx

Until 2010, the BRFSS used a probability (or randomized) sample in which all non-institutionalized Alaska households with landline telephones have a known, nonzero chance of selection. The sample is stratified into regions, with roughly equal numbers of interviews conducted in each region. This method deliberately over-samples rural areas of the state. Respondents are randomly selected from among the adult members of each household reached through a series of random telephone calls. In 2011, the sampling frame expanded to include a random sample of cell phone owners as well as landline or household phones. This step was important because the proportion of households served only by cellular telephones has increased rapidly since 2010. In 2010, about 22% of Alaska adults lived in cell-only households,[21] and by 2019, 63% of Alaska adults reported only having cell

[21] Blumberg SJ, Luke JV, Ganesh N, et al. Wireless substitution: State-level estimates from the National Health Interview Survey, 2010–2011. National health statistics reports; no 61. Hyattsville, MD: National Center for Health Statistics. 2012. https://www.cdc.gov/nchs/data/nhsr/nhsr061.pdf

phones.[22] Since 2011, Alaska's cell phone sample has been large enough to include it in weighting and reporting of data. In 2021, approximately 80% of all BRFSS interviews in Alaska were obtained through the cell phone sample.

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.

BRFSS data are weighted to adjust the distribution of the sample data to reflect the area's total population, and to compensate for the over-representation or under-representation of persons in various subgroups. Beginning with the 2011 BRFSS, the CDC uses a 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. The changes will help ensure that the BRFSS can continue to be a valuable source of information for health planning and improvement.

Changes to Availability of Tobacco Questions in BRFSS

Prior to 2021, Alaska's BRFSS Program also supported a survey version that contained mostly tobacco-related questions. This version was entirely planned by the state of Alaska. Beginning in 2021, Alaska discontinued the tobacco-focused survey version. Many tobacco-related questions that were formerly included on BRFSS are now being collected using an online survey of Alaska adults, the Online Adult Tobacco Survey (OATS). This change offers benefits such as rapid data collection and reduced burden on BRFSS. However, the change in methodology means that data for these factors may not be comparable to data previously collected using the BRFSS. For this reason, the *Alaska Tobacco Facts 2022 Update* and more recent updates (including this 2023 update) do not include previously reported information from these survey questions. This includes measures such as exposure to secondhand smoke, and attitudes about harm from secondhand smoke. Data from the new OATS survey questions are included in *Regional Profiles* reports for each Alaska region and statewide. These are available on the TPC website https://health.alaska.gov/dph/Chronic/Pages/Tobacco/publications.aspx#regional

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 smokers are those who have smoked at least 100 cigarettes in their life and now smoke every day or some days. Former smokers are those who have smoked at least 100 cigarettes in their entire life but currently do not smoke at all.

Information about electronic vapor product (e-cigarette or "vape") use has been collected since 2010. Beginning in 2016, the question about e-cigarette use includes an optional clarifying statement: "Electronic cigarettes (e-cigarettes) and other electronic 'vaping' products include electronic hookahs (e-hookahs), vape pens, e-cigars, and others. These products are battery-powered and usually contain

[22] Blumberg SJ, Luke JV. Wireless substitution: Early release of estimates from the National Health Interview Survey, July-December 2019. National Center for Health Statistics. September 2020. Available from: https://www.cdc.gov/nchs/nhis.htm https://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless_state_202108-508.pdf

nicotine and flavors such as fruit, mint, or candy." Respondents are asked if they have ever used e-cigarettes or other electronic vapor products, if they currently use them every day, some days, or not at all, and on how many days of the past 30 they used them. Current electronic vapor product use is defined as using e-cigarettes or other electronic vapor products on some days or every day. Former electronic vapor product use is defined as ever having used these products, but not currently using them.

For smokeless tobacco use, respondents are asked if they currently use chewing tobacco, snuff, snus and/or iqmik every day, some days, or not at all. Since 2004, iqmik 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 Race and Ethnicity

Race and ethnicity are combined for reporting. "Alaska Native" includes all individuals who reported being American Indian/Alaska Native (AIAN) alone or in combination with other race groups, regardless of Hispanic ethnicity. This is a revision from past reports, where this subgroup included only those who reported AIAN only or as their preferred or primary race group. "Non-Native" includes adults of all other (non-AIAN) race groups, including those who reported multiple races (but not AIAN), as well as those who did not report a race but did report being Hispanic. Estimates in this report will be slightly different than older estimates due to the change in defining the subgroups.

In order to monitor disparities in tobacco use among other racial/ethnic groups, adult tobacco use is also reported in 6 race/ethnicity categories (including AIAN), using combined years of data. In the expanded race and ethnicity reporting, those who self-identified as one race only and did not report Hispanic ethnicity are reported in their respective categories of African American, Asian, Pacific Islander, and White. Those who report being Hispanic or Latino are listed as "Hispanic" unless they also self-identified as AIAN. 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 Socioeconomic Status (SES)

Poverty level (calculated from household income and number of people in household) was identified as a key indicator of SES that is available using BRFSS. The poverty guidelines, issued each year in the Federal Register by the Department of Health and Human Services (HHS), are a simplified version of the federal poverty thresholds and are used for administrative purposes — for instance, determining financial eligibility for certain federal programs.[23] The Alaska-specific guideline totals were used to create a cut-point of household incomes at or below the 185% poverty guideline[24] for this report, because this percent corresponds with eligibility criteria for the Supplemental Nutrition Assistance Program (SNAP), the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and some parts of Medicaid, among other programs.

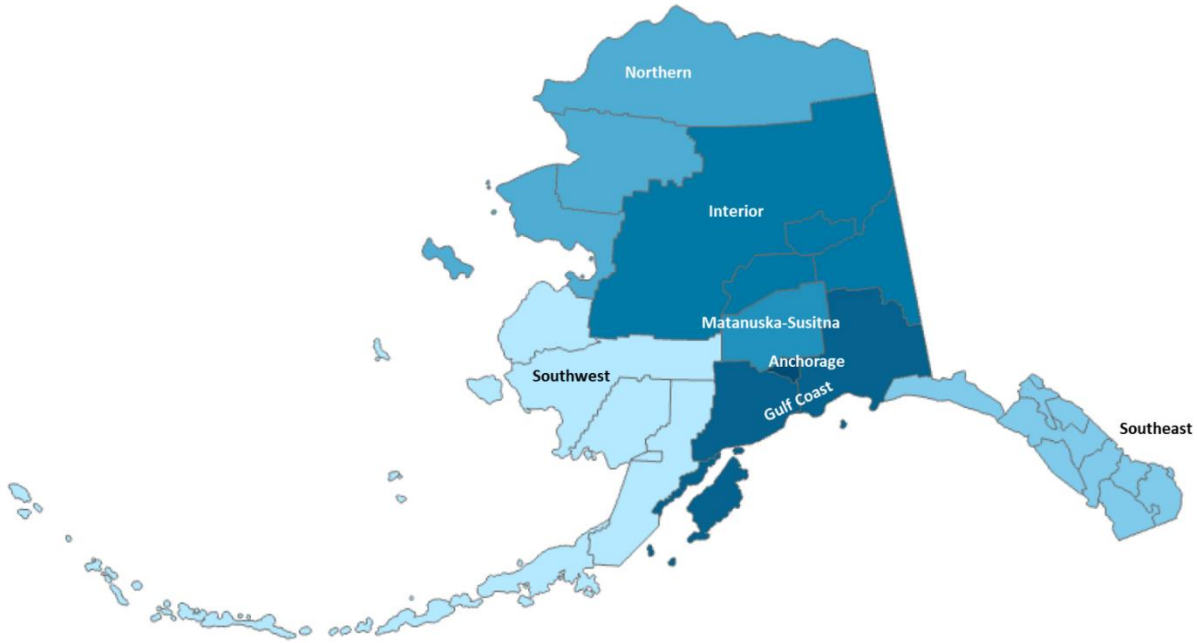
[23] More information about the poverty guideline can be found here: https://aspe.hhs.gov/poverty-guidelines
[24] In Alaska in 2021, a family of three with a household income of $50,782 would be at 185% of the HHS poverty guideline.

There are limitations in using income or percent of poverty guideline in the BRFSS. Respondents select a range of income categories and therefore the percent of poverty guideline is sometimes approximate. In addition, many respondents either decline to answer or report that they do not know their household income level. Between 2018-2020, about 18% of Alaska BRFSS respondents were missing information about income.

Regional Reporting

As the BRFSS survey data do not provide sufficient representation for reporting by most of the individual boroughs and census areas, we combined boroughs and census areas for analysis by seven Public Health Regions in Alaska (see Figure below).

Alaska's Public Health Regions



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

Alaska Public Health Regions are defined using borough and census area designations as follows:

1. **Anchorage.** Municipality of Anchorage
2. **Matanuska-Susitna (or Mat-Su).** Matanuska-Susitna Borough
3. **Gulf Coast**. Kenai Peninsula Borough, Kodiak Island Borough, and Valdez-Cordova Census Area
4. **Interior**. Denali Borough, Fairbanks North Star Borough, Southeast Fairbanks Census Area, and Yukon-Koyukuk Census Area
5. **Northern.** Nome Census Area, North Slope Borough, and Northwest Arctic Borough
6. **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

7. **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 (formerly Wade Hampton Census Area)

For more on Alaska's Public Health Regions see:
https://health.alaska.gov/health/dph/Chronic/Pages/Data/geo_phr.aspx

Youth Risk Behavior Survey (YRBS)

The YRBS is a systematic biennial survey of high school students that assesses prevalence of behaviors related to the leading causes of mortality, morbidity, and social problems among adolescents. The Centers for Disease Control and Prevention (CDC) sponsors national and state surveys every two years, typically in the spring of odd-numbered years, most recently in 2023. However, the Alaska YRBS was canceled in 2021 due to the unprecedented challenges Alaska school districts and schools were facing due to the COVID-19 pandemic, and the 2023 data are still being processed by CDC to determine if they will be weighted. Therefore, Alaska's most recent YRBS data is from the 2019 survey.

The statewide Alaska traditional high school YRBS is conducted using a two-stage sampling design. The sampling frame is traditional public schools containing grades 9, 10, 11, and 12. 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. Since 2001, active parental consent is required for each student participating in the Alaska YRBS. On the selected survey day, students complete written questionnaires and returne them in class in unmarked, sealed envelopes.

In a typical YRBS administration, about 1,200 to 1,800 students are surveyed from about 40 to 45 high schools that are scientifically selected to represent all public traditional high schools (excluding boarding schools, alternative schools, correspondence and home study schools, and correctional schools) in Alaska. Data are weighted to reflect the true distribution of Alaska traditional high school students by gender, race/ethnicity, and grade level, but not by region of the state. These results are considered representative of Alaska's more than 30,000 students in grades 9-12 in traditional public high schools.

One limitation of YRBS is that it does not estimate risk behaviors for adolescents who are not in traditional high schools because they dropped out or do not attend school. Beginning in 2009, about 1,000 students from around a dozen alternative high schools in Alaska have been surveyed in each survey cycle to evaluate and address the health risks of this unique population. However, this report uses data only from traditional high schools to assure comparability of the state sample over time.

Further information about the YRBS, including survey results for the statewide traditional high school sample and alternative high school sample are available at https://health.alaska.gov/dph/Chronic/Pages/yrbs/results.aspx#results.

Reporting by Race and Ethnicity

We report race/ethnicity by whether the survey participant reported being Alaska Native, Hispanic, and/or White. All YRBS survey participants who report being American Indian or Alaska Native, either alone or in combination with other race groups or Hispanic ethnicity, are categorized in this

report as being Alaska Native. Participants who identified as Hispanic ethnicity and any race category except Alaska Native (as well as those who did not report race) are reported as Hispanic. Participants who identified as non-Hispanic and White are reported as White. We also combine all non-Alaska Native race groups to report a "Non-Native" category. This category includes students who report being White, Hispanic, African American, Asian, Hawaiian or Other Pacific Islander, or who report multiple race groups (excluding Alaska Native). Those who did not report both a race and ethnicity are not included in the race group reporting.

Reporting by other individual races or groups is limited by the relatively small number of students in the YRBS sample.

Logical Consistency Edits

To ensure the quality of YRBS results, the CDC and the Alaska YRBS Program use logical consistency edits as part of the YRBS data cleaning process. For each survey respondent, these logic edits check for agreement across logically related questions and responses (e.g., a student responding in one question that they have never smoked and responding in a subsequent question that they smoke 10 cigarettes a day). Responses that conflict are removed from the YRBS dataset. The same logic edits are applied to Alaska statewide traditional high school data, statewide alternative high school data, and local YRBS datasets.

Beginning in 2017, the Alaska YRBS Program identified several additional logic edits that could be used to clean Alaska statewide and local YRBS data. These edits resulted in small differences between CDC and Alaska-produced prevalence estimates and confidence intervals for select YRBS measures. Although this change primarily affected YRBS results in 2017 and after, prior-year prevalence estimates for current smoking (2003-2013) and current smokeless tobacco use (2013-2015) were also affected. For more information about this change, please contact the Alaska YRBS program at yrbs@alaska.gov.

Pregnancy Risk Assessment Monitoring System (PRAMS)

PRAMS data were used in this report to document perinatal tobacco use, including cigarettes, smokeless tobacco, and e-cigarette use. PRAMS is a population-based survey of Alaska women who have recently delivered a live-born infant. It gathers information on the health risk behaviors and circumstances of pregnant and postpartum women. PRAMS is conducted in collaboration with the CDC. Forty-six states, the District of Columbia, New York City, Northern Mariana Islands, and Puerto Rico currently participate in PRAMS, representing approximately 81% of all U.S. live births.

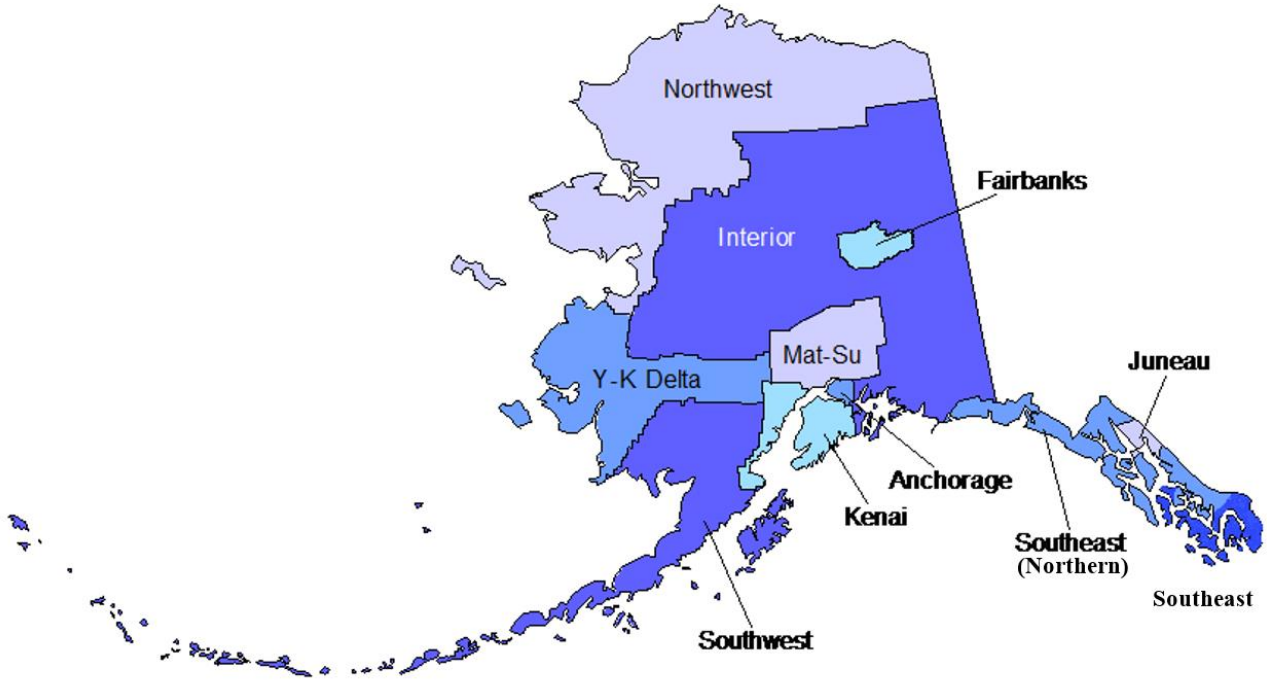
In Alaska, the Division of Public Health has administered PRAMS since 1990. A stratified systematic sample is drawn each month from the state's live birth records for infants between two and six months of age. Sampled mothers receive up to three mailed questionnaires to solicit a response, and since 1997, telephone follow-up occurs among those who do not respond by mail. Sampling is not limited to adult women, so PRAMS data does include responses from teenage mothers.

In addition to maternal tobacco use, the PRAMS questionnaire addresses such topics as prenatal care content, maternal alcohol use, 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 49% in 2021.

See https://health.alaska.gov/dph/wcfh/Pages/mchepi/prams/default.aspx for more information about PRAMS questionnaires and methodology.

Regional Reporting

Figure: Alaska Behavioral Health Systems Regions Map



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

Some PRAMS information in this report is presented by Behavioral Health Systems Region, which are defined as follows:

1. **Anchorage** – Municipality of Anchorage
2. **Fairbanks** – Fairbanks North Star Borough
3. **Juneau** – Juneau City and Borough
4. **Kenai** – Kenai Peninsula Borough
5. **Mat-Su** – Matanuska-Susitna Borough
6. **Northwest** – Nome Census Area, North Slope Borough, and Northwest Arctic Borough
7. **Interior** – Denali Borough, Southeast Fairbanks Census Area, Valdez-Cordova Census Area, and Yukon-Koyukuk Census Area
8. **Southeast (Northern and Southern combined)*** – *Northern*: Haines Borough, Hoonah-Angoon Census Area, Petersburg Census Area, Sitka City and Borough, Skagway Municipality, Wrangell City and Borough, and Yakutat City and Borough; *Southern*: Ketchikan Gateway Borough, Prince of Wales-Hyder Census Area
9. **Southwest** – Aleutians East Borough, Aleutians West Census Area, Bristol Bay Borough, Dillingham Census Area, Kodiak Island Borough, and Lake and Peninsula Borough
10. **Y-K Delta** – Bethel Census Area and Kusilvak Census Area

* Southeast is typically reported as 2 Behavioral Health regions (Northern and Southern), but in this report these regions were combined for reporting on PRAMS data due to small numbers of respondents within individual regions.

National Health Interview Survey (NHIS)

The National Health Interview Survey (NHIS) has been given in the U.S. since 1957 and is currently administered by the U.S. Census Bureau. NHIS uses household-based interviews to collect data on a variety of health topics, including healthcare access, health conditions, and behaviors, and provides results used for tracking U.S. national health objectives.

For this report, NHIS individual-year estimates for U.S. e-cigarette use prevalence were obtained from the following publications:

- 2014: 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: 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.
- 2016: QuickStats: Percentage of Adults Who Ever Used an E-cigarette and Percentage Who Currently Use E-cigarettes, by Age Group — National Health Interview Survey, United States, 2016. MMWR Morb Mortal Wkly Rep 2017;66:892. DOI: http://dx.doi.org/10.15585/mmwr.mm6633a6
- 2017 NHIS estimate: Tobacco Product Use Among Adults — United States, 2017. MMWR Morb Mortal Wkly Rep 2018;67:1225-1232. DOI: http://dx.doi.org/10.15585/mmwr.mm6744a2
- 2018 NHIS estimate: Creamer MR, Wang TW, Babb S, et al. Tobacco Product Use and Cessation Indicators Among Adults — United States, 2018. MMWR Morb Mortal Wkly Rep 2019;68:1013–1019. DOI: http://dx.doi.org/10.15585/mmwr.mm6845a2
- 2019 NHIS estimate: Cornelius ME, Wang TW, Jamal A, Loretan CG, Neff LJ. Tobacco Product Use Among Adults — United States, 2019. MMWR Morb Mortal Wkly Rep 2020;69:1736–1742. DOI: http://dx.doi.org/10.15585/mmwr.mm6946a4
- 2020 NHIS estimate: Cornelius ME, Loretan CG, Wnag TW, Jamal A, Homa DM. Tobacco Product Use Among Adults — United States, 2020. MMWR Morb Mortal Wkly Rep 2022;71: 397-405. https://www.cdc.gov/mmwr/volumes/71/wr/pdfs/mm7111a1-H.pdf
- 2021 NHIS estimate: Cornelius ME, Loretan CG, Jamal A, et al. Tobacco Product Use Among Adults – United States, 2021. MMWR Morb Mortal Wkly Rep 2023;72:475–483. DOI: http://dx.doi.org/10.15585/mmwr.mm7218a1.

NHIS data are age-adjusted. Results are directly standardized to the age distribution of the 2000 U.S. Standard Population using the following age groups: 18-39, 40-59, 60+.

For more information on the NHIS, visit https://www.cdc.gov/nchs/nhis/index.htm

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