Wyoming Survey & Analysis Center
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2023 Wyoming Adult Tobacco Survey

Wyoming Adults' Use of and Attitudes about Commercial Tobacco and Nicotine Products

Muneyuki Kato, MA, Associate Research Scientist
Laura Vanatta, MSc, Researcher
Tashina Lemons, MPH, Associate Research Scientist
Angel Phillips, Project Manager
Laran H. Despain, PhD, Senior Research Scientist

With the assistance of
Brian Harnisch, MBA, Senior Research Scientist
Michael Dorssom, MA Survey Research Manager
Brittany Cangialosi, MA, Assistant Research Scientist
Nicholas Cramer, BA, Call Center Operations Manager
Trish DugDug, MA, Assistant Research Scientist

Wyoming Survey & Analysis Center
University of Wyoming
1000 E. University Avenue, Department 3925
Laramie, Wyoming 82071
307.766.2189 | wysac@uwyo.edu
www.uwyo.edu/wysac

Wyoming Department of Health | PUBLIC HEALTH DIVISION | COMMUNITY PREVENTION UNIT

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122 West 25th Street, 3rd Floor West
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Phone: 307-777-6541

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Executive Summary

The 2023 Wyoming Adult Tobacco Survey (ATS) provides insights into Wyoming adults' use and attitudes regarding commercial tobacco and nicotine products. The survey, conducted by the Wyoming Survey & Analysis Center (WYSAC), tracks progress toward commercial tobacco and nicotine prevention goals.

ENDS (Electronic Nicotine Delivery Systems), cigarettes, and smokeless tobacco are the most commonly used products in Wyoming.

Deterring youth from starting to use tobacco is a key strategy for tobacco prevention. Almost all (90%) adults who ever smoked started before age 21, with an average age of 16.

Key Findings

➔ **ENDS:**
- Most adults (70%) have never tried ENDS, but current use has increased from 7% in 2015 to 10% in 2023, nearing the cigarette smoking rate.
- Perceived harm of ENDS has increased, with 72% of adults saying it is very harmful.

➔ **Cigarette Smoking:**
- Current smoking rate is 12%, down from 21% in 2006.
- Nearly all adults (over 99%) acknowledge that smoking cigarettes is harmful.

➔ **Secondhand Smoke:**
- Most adults (88%) support smokefree indoor air policies for restaurants, and 83% for workplaces. Support for bars and casinos/clubs is over 50%.
- Most employed adults (93%) report working in smokefree indoor workplaces.
- About one in three adults report exposure to secondhand smoke in public places (34%).

➔ **Quitting Efforts:**
- Most adults who smoke want to quit (66%), and many have tried at some time in their life (87%).
- About 63% of current adult ENDS users have tried to quit.

➔ **Emerging tobacco/nicotine products:**
- The use of new and emerging products remains low among Wyoming adults with the exception of nicotine pouches. One in twenty adults reports using nicotine pouches (5%).

The ATS reveals a decline in cigarette smoking rates but a rise in ENDS use among Wyoming adults. Public awareness of the harms of smoking is high, and there is considerable support for smokefree policies. Targeted efforts are needed to prevent new tobacco or nicotine use, particularly among youth, and to continue to monitor new and emerging tobacco and nicotine product use.

Background

In this report, we refer to the use of commercial tobacco, not ceremonial or traditional use of tobacco by Indigenous peoples such as the Eastern Shoshone or Northern Arapaho. Smoking refers to the use of commercial cigarettes. Smokeless tobacco refers to commercial products such as chew, moist snuff, and snus. Legally, the U.S. Food and Drug Administration has deemed electronic nicotine delivery systems (ENDS, also known as e-cigarettes or vaping devices) to be commercial tobacco products and subject to their regulation. Wyoming Statute (Wyo. Stat. § 14-3-301, 2013/2020) also includes ENDS in the legal definition of commercial tobacco products.

Smoking is the leading preventable cause of death in the United States, annually causing more than 480,000 deaths. In Wyoming, smoking leads to approximately 800 deaths from smoking-related illnesses each year (Centers for Disease Control and Prevention [CDC], 2014a). In 2019, commercial tobacco use costs in Wyoming totaled $1.5 billion (State Epidemiological Outcomes Workgroup [SEOW], 2024). In addition, scientists have known since the 1950s that smoking can cause lung cancer. The Surgeon General widely publicized this link between smoking and cancer in the landmark 1964 report Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service (U.S. Department of Health, Education, and Welfare, 1964). Since then, further research has established that smoking cigarettes and breathing secondhand smoke causes multiple cancers and chronic diseases (U.S. Department of Health and Human Services [USDHHS], 2010, 2014).

The Surgeon General declared vaping (the use of ENDS) an epidemic among youth and young adults in 2018 (USDHHS, 2018). Research indicates that vaping can lead to cigarette smoking (Berry et al., 2019; Hair et al., 2021). However, the CDC also states that vaping could be better than smoking for non-pregnant adult smokers if they completely switch from smoked commercial tobacco products to ENDS (CDC, 2024e). More research is needed to learn about the long-term effects of vaping and breathing secondhand aerosol exhaled by someone who is using ENDS.

Certain groups of people are more at risk of suffering the impacts of commercial tobacco use than others. Research has repeatedly shown that commercial tobacco companies have targeted promotional efforts toward specific neighborhoods, people with lower incomes, people of color, Indigenous people, people experiencing behavioral health conditions, and other communities (D'Silva et al., 2018; Farber & Folan, 2017; Lee et al., 2015; Prochaska et al., 2017). As a result, people in these groups are more likely to smoke. That puts these populations at a disproportionate risk of smoking-related disease and death.

JUUL's rapid rise in the ENDS market has raised significant concerns about its targeted marketing towards youth and young adults. JUUL uses approaches similar to traditional cigarette advertising, such as lower prices, price discounts, and attractive advertising. The Federal Trade Commission reported that e-cigarette companies, including JUUL, spent over $859 million on advertising and promotions in 2021, focusing on price discounts, promotional allowances, and point-of-sale advertising—all strategies that appeal to youth by making e-cigarettes more accessible and affordable

(Counter Tobacco, 2024). A large portion of JUUL's Twitter (now X) followers were underage, indicating exposure of minors to age-restricted content (Kim et al., 2019). JUUL's marketing attracted high school and college students (Willis & Mindicino, 2020). As a result, increased exposure to ENDS marketing is linked to high usage among youth, suggesting effective targeting of this demographic and contributing to youth experimentation, sustained use, and difficulties in quitting (Willett et al., 2019). A significant portion of JUUL's 2018 profits came from underage users, highlighting the need for stricter regulations to prevent youth e-cigarette use (Kaplan et al., 2021).

The Wyoming Substance Use and Tobacco Prevention Program (SUTPP) and the Centers for Disease Control and Prevention (CDC) share four goals:

- ➔ Preventing initiation of commercial tobacco use (CDC, 2014b)
- ➔ Eliminating exposure to secondhand smoke for people who do not smoke (CDC, 2017)
- ➔ Promoting quitting among adults and young people (CDC, 2015)
- ➔ Identifying and eliminating disparities related to commercial tobacco use (CDC, 2014b, 2015, 2017, 2021b)

The SUTPP uses various strategies to focus on reducing the impact of commercial tobacco and nicotine use in Wyoming by achieving these goals. The SUTPP monitors its progress on these goals by tracking the use and availability of commercial tobacco and nicotine products, including cigarettes, ENDS, and other forms of commercial tobacco.

The achievement of commercial tobacco prevention outcomes is the collective result of the work of many organizations over time. The efforts of state government programs, including the SUTPP, multiple federal agencies, county prevention specialists, and other groups, have all played a part in Wyoming's commercial tobacco prevention and control. Key federal agencies include the U.S. Food and Drug Administration (FDA), the Substance Abuse and Mental Health Services Administration (SAMHSA), and the CDC. Non-governmental groups include the Robert Wood Johnson Foundation, the Campaign for Tobacco-Free Kids, the American Nonsmokers' Rights Foundation, the American Cancer Society, and the American Lung Association. Changes also reflect the influences of the commercial tobacco and nicotine industry, such as changes in marketing practices or the release of new products such as ENDS.

The Wyoming Adult Tobacco Survey is administered by the Wyoming Survey & Analysis Center (WYSAC) at the University of Wyoming under contract to the Wyoming Department of Health (WDH), Public Health Division (PHD). Its purpose is to collect state- and county-level data about commercial tobacco and nicotine use, the aforementioned four specific goals, and the broader goal of reducing disease and death related to commercial tobacco and nicotine use. In addition to analyzing the 2023 data, WYSAC used data from previous survey versions to analyze trends.

2023 Adult Tobacco Survey Methods

This report summarizes results from the 2023 Adult Tobacco Survey and trend analyses using previous versions of the Adult Tobacco Survey.

In this section, WYSAC provides a general summary of the methods used to collect and analyze the data for the 2023 Adult Tobacco Survey. For statistical analysis, WYSAC performed logistic regression and multinomial logistic regression to identify associations with time (difference since a reference year or other changes over time longer than two years). Relationships and linear trends noted as significant in the body of the report are statistically significant, $p < .05$.

Appendix A provides tables reporting Wyoming's state-level unweighted counts, weighted percentages, and 95% confidence intervals (CIs) for weighted percentages for every survey item and WYSAC-calculated variable.

Appendix B provides the technical details of the methods used to collect the data for the 2023 Adult Tobacco Survey as reported by WYSAC's Survey Research Center.

Appendix C provides details of statistical analyses summarized in the body of this report.

WYSAC purchased a random sample of telephone numbers in Wyoming and (new to 2023) requested that email and postal mail addresses be connected to the phone numbers. First, on May 2, 2023, WYSAC sent an email with an invitation to complete the survey online when emails were available for the numbers selected. On May 9, 2023, WYSAC sent an email reminder to those who had not responded to the initial email invite.

Second, on May 8, 2023, WYSAC mailed an invitation to complete the survey online to people who had postal addresses in the list and either did not have an email address or had undeliverable email addresses from the initial email invites. On May 23, 2023, WYSAC sent a second invitation letter to those who had not responded.

Finally, WYSAC called people who had not completed a survey online regardless of whether they had email or postal addresses in the sample list. Trained WYSAC telephone interviewers conducted the telephone interviews. Calling began on May 29, 2023, and ended on August 24, 2023. WYSAC completed a total of 2,733 surveys. Adult Tobacco Survey participants completed 1,144 surveys online. WYSAC callers completed 1,589 surveys (75% on cell phones; 25% on landlines).

This three-tier approach maintained the basic sampling process as in previous versions of the survey and sped up data collection by providing adults with options on how to respond.

In some figures and tables, percentages may not total 100% because respondents could choose more than one response. Occasionally, rounding of the actual percentages may result in reporting percentages that do not total 100.

Key Limitations

Most Adult Tobacco Survey items have been tested and validated by the CDC and reused over time. However, the Adult Tobacco Survey relies on self-reported data, respondents' memory of events, and their interpretation of the survey items. Therefore, the results presented here might include recall errors or respondent bias (such as not reporting embarrassing or unpopular behaviors).

Unlike previous iterations of the Wyoming Adult Tobacco Survey, which were conducted exclusively via phone, the 2023 Adult Tobacco Survey introduced two response modes: online and phone. In 2023, 42% of respondents completed the survey online, while 58% responded via phone. WYSAC examined the demographic characteristics of respondents (unweighted frequencies) by mode:

- ➔ The online survey had a lower proportion of young adults (ages 18-29) than the phone survey.
- ➔ The online survey had a higher proportion of women than the phone survey.
- ➔ The online survey had a lower proportion of American Indian respondents than the phone survey.
- ➔ The online survey had a lower proportion of respondents with low income (annual household income less than $30,000) than the phone survey.
- ➔ The online survey had a lower proportion of respondents with behavioral health conditions than the phone survey.

The Adult Tobacco Survey has a complex skip pattern which means not all respondents are asked each question. For example, people who have never smoked are not asked about quitting smoking. In some cases, fewer than 50 people were asked a question. Estimates generated from such small groups are extremely imprecise, so WYSAC does not report them in the body of the report. This follows the example set by the CDC in reporting Behavioral Risk Factor Surveillance System (BRFSS) statistics (https://www.cdc.gov/brfss/brfssprevalence/).

Electronic Nicotine Delivery Systems (ENDS)

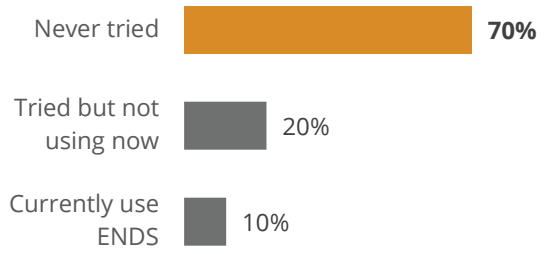
2023 ENDS Use in Wyoming

In previous iterations of the Adult Tobacco Survey, ENDS use has been more common among young adults than other adults. A limitation of the Adult Tobacco Survey is the difficulty of getting young adults to respond. With a small subset of the respondents being young adults, reporting on the total adult population is necessary. That may hide some key findings that would be clearer in a survey of only young adults.

Most Wyoming adults (70%) have never tried ENDS, and few are current ENDS users (10%; Figure 1). For this report, current ENDS users are the respondents who said they use ENDS every day or some days.

Figure 1: Most Adults Have Never Tried ENDS

2023 Wyoming adult ENDS use



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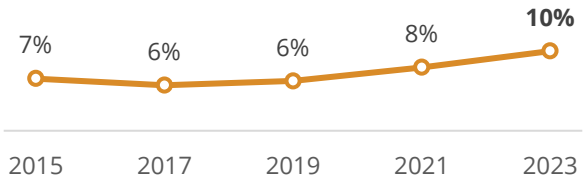
However, current ENDS use has increased significantly from 7% in 2015 to 10% in 2023. ENDS use is now approaching the cigarette smoking rate (12% in 2023; Figure 2).

Figure 2: Adult ENDS Use Has Increased Since 2015

Percentage of adults who currently use ENDS in survey years



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Flavored ENDS Use

In 2023, the use of flavored ENDS was common for Wyoming adults:

➔ 86% of adults who currently use ENDS had used products flavored to taste like mint, candy, fruit, chocolate, or other flavors besides tobacco in the past 30 days.

➔ 40% of adults who currently use ENDS had used products flavored to taste like menthol in the past 30 days.

➔ 49% of adults who had tried ENDS in their lifetime did so for the flavoring.

Wyoming adults' use of flavored ENDS products has not significantly changed between 2017 and 2023, despite regulations implemented by the FDA in 2020 when the FDA partially banned ENDS flavors except menthol and tobacco. However, the ban has loopholes. It only applies to the cartridge ENDS style, like JUUL. These products have closed, pre-filled e-liquid cartridges that the user replaces when empty. The ban does not include ENDS with refillable e-liquid tanks or single-use or disposable products, like Juice Head. According to the FDA, these exceptions avoided restricting all flavor options for adults who may be using ENDS to stop smoking (FDA, 2020). However, research shows that youth and young adults are using menthol instead of mint and are switching to the types of ENDS that can still have flavors (Truth Initiative, 2020).

Reasons for Trying ENDS

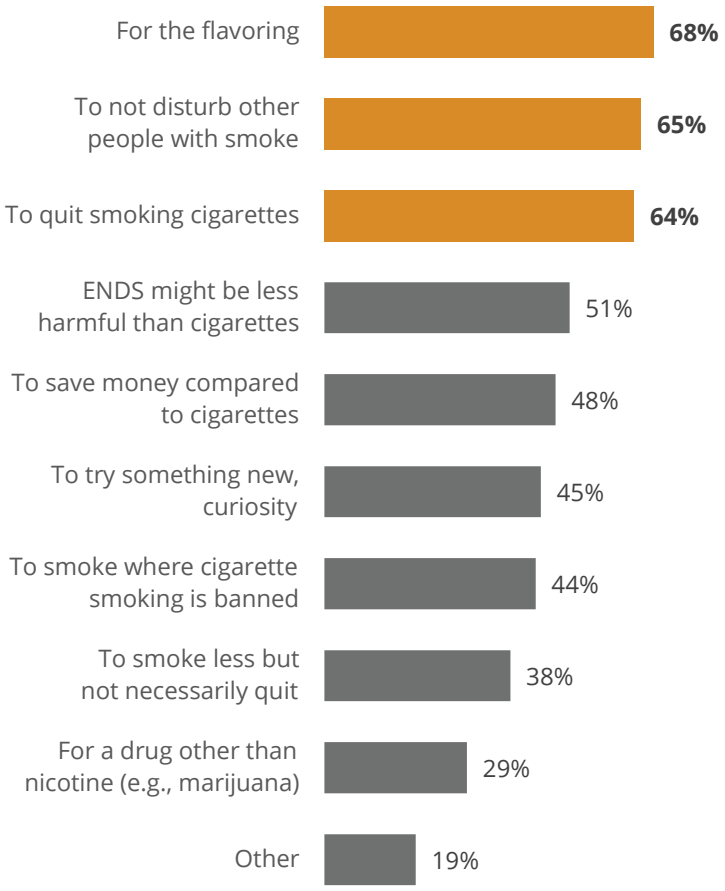
For adults, the top three reasons for trying ENDS were for the flavoring (68%), to not disturb other people with smoke (65%), and to quit smoking cigarettes (64%; Figure 3). The pattern of these results has not changed significantly since these questions were first asked in 2015, except the "for the flavoring" response, which was added in 2017.

However, comparisons using data between 2015 and 2023 may indicate some emerging trends among adults who currently use ENDS. There was a significant decrease in trying ENDS because they think ENDS might be less harmful than cigarettes, from 64% in 2015 to 51% 2023. Trying ENDS for a drug other than nicotine (such as marijuana) increased significantly from 5% in 2017 to 29% in 2023.

Some research suggests that use of ENDS with nicotine is associated with quitting smoking.

Figure 3: Adults Who Use ENDS Do So for the Flavor and to Avoid Smoking Near Others

Reasons for using ENDS among adults who currently use ENDS



Note: Percentages do not add up to 100% because respondents could choose more than one response option.

WYSAC changed the response wording from "To reduce cigarette consumption" (used prior to 2023 ATS) to "To smoke less but not necessarily quit" in 2023 ATS.

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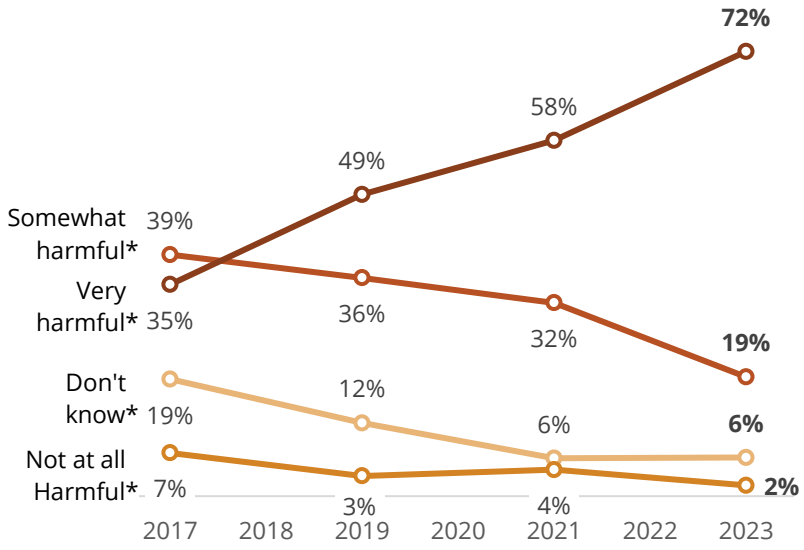
The CDC has said that adults who smoke may see benefits from completely switching from smoking to ENDS (CDC, 2024e). However, there is not enough evidence to be sure (CDC, 2020, 2024e). More research is needed to learn if ENDS are a broadly successful tobacco-related harm reduction tool. The FDA has not approved ENDS as a cessation aid (FDA, 2023).

Do People Think ENDS Use Is Harmful?

Figure 4: Since 2017, More Adults See ENDS Use as Very Harmful

Do you think using e-cigarettes or vape pens is very harmful, somewhat harmful, or not at all harmful to one's health?



Note: *denotes a significant change over time 2017-2023.

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The Adult Tobacco Survey includes a question regarding how harmful people think ENDS use is to one's health. Perceived harmfulness of ENDS has significantly increased since 2017, with most adults saying it is very harmful (72%; Figure 4).

One reason for this change may be that the public health community, including the SUTPP and county partners, sponsored media messaging about the harms of ENDS use after 2017.

Starting ENDS Use

Findings about first using cigarettes or ENDS are somewhat limited because many people in the Adult Tobacco Survey sample would have started using commercial tobacco or nicotine before ENDS became popular in the US (roughly 2012). Adults who had ever tried smoking (see Table 1 for a summary of the four smoking status categories) and had also tried ENDS were asked whether they used cigarettes or ENDS first. In 2023, 18% of adults who currently smoke and had also tried ENDS used ENDS first, with no significant change from 2017 to 2023. Similarly, 20% of adults who used to smoke and had also tried ENDS used ENDS first, also with no significant change.

Table 1: Definitions of Smoking Status

Responses to the Adult Tobacco Survey led to four key categories of smoking status

	Adults Who Currently Smoke	Adults Who Used to Smoke	Adults Who Ex-perimented with Smoking	Adults Who Never Smoked
	Adults Who Smoke or Have Smoked Regularly			
Now smoke daily or some days	✓			
Smoked at least 100 cigarettes in lifetime	✓	✓		
Ever tried smoking	✓	✓	✓	

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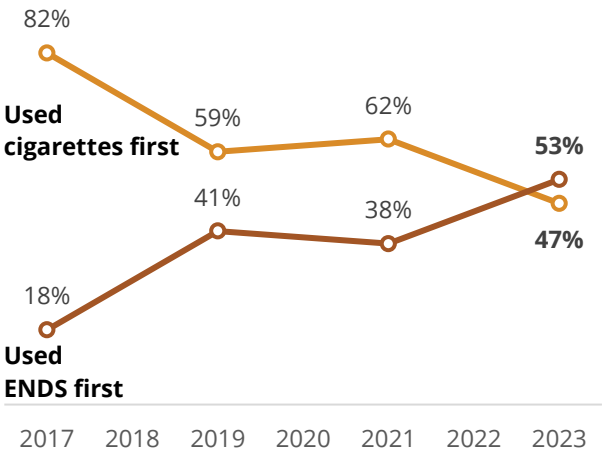
Figure 5: Experimentation with Nicotine May Be Shifting from Cigarettes to ENDS

Percentage of adults who experimented with smoking and also tried ENDS



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However, among adults who experimented with smoking and had also tried ENDS, the trend may be shifting: experimenting with ENDS before smoking increased from 18% in 2017 to 53% in 2023. The six percentage-point difference between ENDS first and cigarettes first in 2023 was not significant (Figure 5).

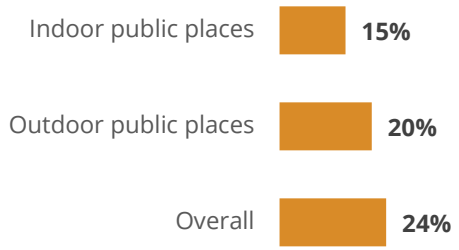
Eliminating Secondhand Exposure

Exposure to Secondhand ENDS Aerosol in Public Places

About one in four (24%) adults were exposed to secondhand aerosol from ENDS use in public places, indoors or outdoors (Figure 6). Fewer adults (15%) reported breathing someone else's secondhand aerosol in indoor public places. One in five (20%) adults were exposed to secondhand aerosol in outdoor public places. These may be underestimates if the short-lived cloud or smell from secondhand aerosol is not noticed.

Figure 6: About One in Four Adults Were Exposed to Secondhand ENDS Aerosol in Public Places

Percentage of adults who had been exposed to someone else's secondhand ENDS aerosol in indoor or outdoor public places in the past seven days



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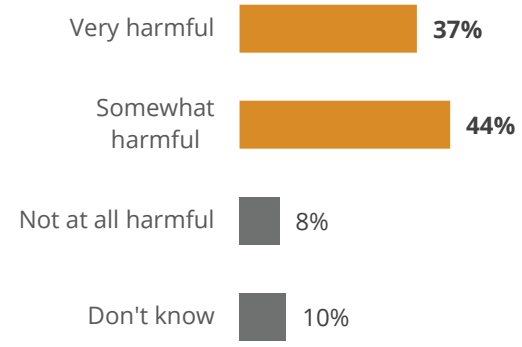
Opinions about the Harms of Secondhand ENDS Aerosol

In 2023, most adults (81%) agreed that breathing someone else's secondhand aerosol was very or somewhat harmful (Figure 7). Consistent with a lack of firm research findings, a few (10%) said they were unsure about the harmfulness.

Figure 7: Most Adults Think that Secondhand ENDS Aerosol Is Harmful

Do you think that breathing vapor or aerosol from other people's e-cigarettes or vape pens is very harmful, somewhat harmful, or not at all harmful to one's health?



Note: Percentages do not add up to 100% because of rounding.

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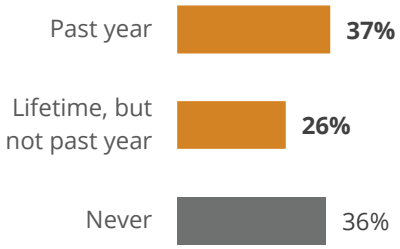
Quitting ENDS Use

In 2023, about two in three (63%) adults who currently used ENDS had tried to quit in the past year or in their lifetime (Figure 8). This is nearly double the estimate from 2021 (34%).

Figure 8: Almost Two in Three Adults Who Currently Used ENDS Tried to Quit in the Past Year or in Their Lifetime

Timing of quit attempts by adults who currently use ENDS in 2023



Note: Percentages do not add up to 100% because of rounding.

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Conclusion

These findings reflect the total adult population of Wyoming. Surveys focused on young adults or youth may find different patterns.

Current ENDS use among adults has increased since 2015, now approaching the cigarette smoking rate (12% in 2023).

Many adults who currently use ENDS tried ENDS for the flavor, to not disturb other people with smoke, or to quit smoking cigarettes. Current research (CDC, 2020, 2024e) does not show a consistent benefit of using ENDS to quit smoking. The FDA has not approved ENDS as a cessation aid (FDA, 2023).

Perceived harm of ENDS has grown over time. Compared to 2017, more Wyoming adults said vaping is harmful.

Many adults who currently use ENDS want to quit. Nearly two in three current ENDS users had tried to quit ENDS in the past year or in their lifetime.

Cigarette Smoking and Use of Other Commercial Tobacco and Nicotine Products

Cigarette Smoking in 2023

Adult Tobacco Survey responses were divided into four key categories of smoking status, described in Table 2.

Table 2: Definitions of Smoking Status

Responses to the Adult Tobacco Survey led to four key categories of smoking status

	Adults Who Currently Smoke	Adults Who Used to Smoke	Adults Who Experimented with Smoking	Adults Who Never Smoked
	Adults Who Smoke or Have Smoked Regularly			
Now smoke daily or some days	✓			
Smoked at least 100 cigarettes in lifetime	✓	✓		
Ever tried smoking	✓	✓	✓	

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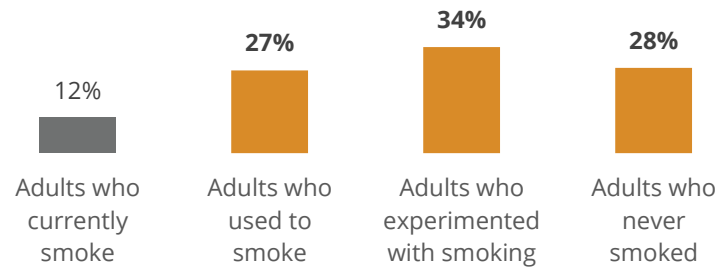
Most adults (88%) do not currently smoke and nearly two in three adults (62%) have never smoked regularly. That is, they have not smoked at least 100 cigarettes in their lifetime. More than one in four (28%) adults had never tried smoking or (27%) used to smoke, and about one in three (34%) had experimented with smoking (Figure 9). Although current cigarette smoking has decreased from 21% in 2006 to 12% in 2023, nearly one in eight Wyoming adults currently smoke.

Figure 9: Most Adults Do Not Currently Smoke

2023 Wyoming adult smoking status



Note: Percentages do not add up to 100% because of rounding.

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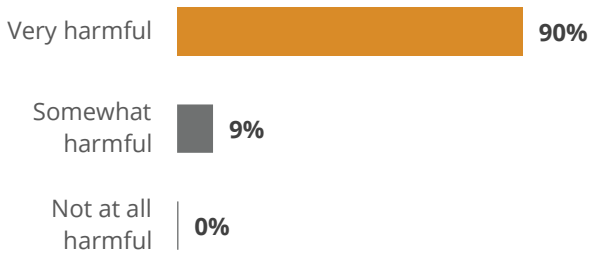
Do People Think Smoking Cigarettes Is Harmful?

Sixty years ago (January 11, 1964), the U.S. Surgeon General first released an official report documenting links between smoking and two diseases: cancer and chronic bronchitis (U.S. Department of Health, Education, and Welfare, 1964). Since then, the list of smoking-related diseases has grown dramatically (USDHHS, 2014). Additionally, CDC, SUTPP, county, and other public health efforts have worked to educate the public about the potential harms of commercial tobacco use. Key components of these education efforts include warning labels on packaging and advertising, sharing research findings, and sharing educational content in various forms from print to social media (CDC, 2024a; USDHHS, 2014). These efforts have succeeded in Wyoming; in 2023, less than 1% of adults said smoking was "not at all harmful" (Figure 10).

Figure 10: Almost All Adults Know Smoking Cigarettes Is Harmful

Percentage of adults who think smoking cigarettes is harmful to one's health



Note: Percentages do not add up to 100% because of rounding.

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Other Commercial Tobacco and Nicotine Products (Including ENDS)

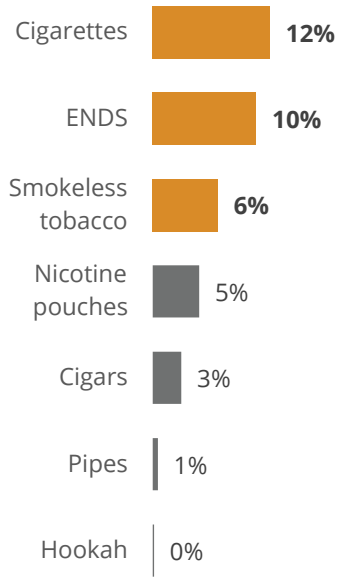
Cigarettes, ENDS, and smokeless tobacco were the most commonly used commercial tobacco and nicotine products among Wyoming adults. Cigarettes have remained the preferred product throughout the history of the Adult Tobacco Survey (Figure 11).

From 2015 to 2023, current ENDS use increased from 7% to 10% and is approaching the same level as cigarette use. The use of cigars and hookah have significantly decreased since 2010, while the use of smokeless tobacco and pipes have remained consistent.

The use of new and emerging commercial tobacco and nicotine products (e.g., heated tobacco, nicotine pouches, dissolvable nicotine, nicotine gel, and any other types) remains low among adults. The most common of these emerging products was nicotine pouches, such as ZYN; 5% of adults used these products. Surveys specific to youth or young adults, who might be more likely to try new and emerging products, could have different results.

Figure 11: Cigarettes, ENDS, and Smokeless Tobacco Were the Most Commonly Used Established Commercial Tobacco and Nicotine Products Among Adults

Percentage of adults reporting current cigarette, ENDS, smokeless tobacco, or other commercial tobacco and nicotine use



Note: Cigars also include cigarillos and very small cigars that look like cigarettes. Prior to 2023 ATS, two separate item sets asked about lifetime and past 30-day use of smokeless tobacco: (1) chewing tobacco, moist snuff, or dip and (2) snus. Starting in 2023, WYSAC consolidated these items, combining chewing tobacco, moist snuff, or dip and snus under the term smokeless tobacco.

For smokeless tobacco, cigars, pipe, and hookahs, WYSAC revised the 30-day use questions to simplify response format. Now, the questions ask whether adults used each product in the past 30 days rather than asking about how many days adults had used the product in the past 30 days.

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Conclusion

The public is very aware that smoking is harmful. Less than 1% of adults said that smoking is not at all harmful.

The adult smoking rate, as measured by the Adult Tobacco Survey, has decreased significantly to 12% compared to 21% in 2006. Since 2010, the use of other commercial tobacco and nicotine products has remained fairly consistent or decreased, except for ENDS use approaching the same level as cigarette use.

In 2023, cigarettes, ENDS, and smokeless tobacco were the most popular commercial tobacco and nicotine products for adults.

Cigarettes, ENDS, and smokeless tobacco were the three most popular commercial tobacco and nicotine products for adults. ENDS are a subject of concern for youth and young adults because of national trends showing increased use (Gentzke et al., 2022) and the potential for them to lead to cigarette smoking (Berry et al., 2019; Hair et al., 2021). Their relative popularity is also increasing.

There is developing evidence that newer commercial tobacco and nicotine products (such as nicotine pouches) may become more popular than more established types (such as hookah or cigars).

Commercial Tobacco and Nicotine Taxes

Preventing new cigarette smoking and decreasing the use of other commercial tobacco and nicotine products are key goals of the SUTPP and the CDC.

According to the CDC, increasing commercial tobacco product prices is an effective way to prevent youth from starting to smoke (CDC, 2014b). It also encourages adults to quit smoking (CDC, 2015).

Taxes are one way that federal and state governments can influence commercial tobacco prices. Nationally, every 10% increase in cigarette prices decreases cigarette use by 3–5%. Raising cigarette prices prevents youth and people with lower incomes from smoking and reduces the average number of cigarettes smoked (USDHHS, 2014).

In one study of adults aged 50 years and older, a $1 increase in the price of cigarettes was associated with a 6% higher quit rate (Stevens et al., 2017). Increasing cigarette taxes could encourage quitting among adults and could decrease the risk of smoking-related diseases.

Commercial Tobacco and Nicotine Tax Rates

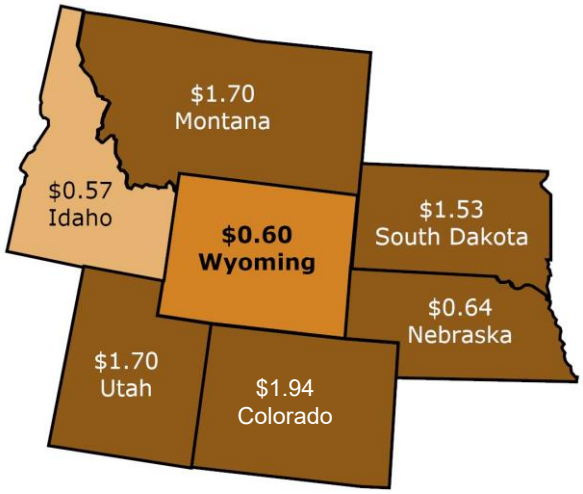
Cigarettes

At the time of data collection, Wyoming's cigarette excise tax was $0.60 per pack, the second lowest among neighboring states (Figure 12). Wyoming ranks 44th out of the 50 states and the District of Columbia on cigarette taxes and 51st out of the 58 states and territories (CDC, 2023b). Wyoming's cigarette excise tax has not changed since 2003.

Smokeless Tobacco

At the time of data collection, Wyoming's smokeless tobacco (chewing tobacco, dip, or snus) tax had a minimum tax of $0.60 per ounce, with an additional $0.60 per ounce for packaging larger than one ounce.

Figure 12: Wyoming's Cigarette Tax Second Lowest Among Neighboring States



Source: CDC, 2023b.

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Electronic Nicotine Delivery Systems (ENDS)

Since July 2020 and through the time of data collection, Wyoming has had a default ENDS tax at the rate of 15% of the wholesale purchase price. If the tax is not paid by the wholesaler, consumers pay 7.5% of the retail purchase price (Wyo. Stat. § 39-18-104[g], 2021).

Support for Evidence-Based Policy

More than half of adults support tax increases for each major class of commercial tobacco and nicotine products: cigarettes (56%), smokeless tobacco (chewing tobacco, moist snuff, dip, or snus; 56%), and ENDS (60%; Table 3).

Table 3: Over Half of Adults Supported Increasing the Taxes on Cigarettes, Smokeless Tobacco, and ENDS Products

Percentage of adults who would support an increase in the tax

	Support for an increase in the tax on …		
	Cigarettes	**Chewing tobacco, moist snuff, dip, or snus**	**ENDS**
For an increase	56%	56%	60%
Against an increase	28%	30%	27%
Don't know	16%	14%	13%

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Costs of Smoking

Smoking is the leading preventable cause of illness and death in the United States. In 2018, the costs of smoking-related illness totaled more than $600 billion. These costs included more than $240 billion for direct medical care and more than $372 billion in lost productivity (CDC, 2022b).

- ➔ In 2019 (SEOW, 2024), commercial tobacco use costs in Wyoming totaled $1.5 billion. This total comes from four categories of costs:
  - ◆ $814.1 million for intangible costs such as reduced quality of life because of sickness and disability
  - ◆ $629.4 million for indirect costs such as premature death and reduced efficiency or lost time at work
  - ◆ $62.2 million for direct healthcare costs
  - ◆ $3.8 million for other direct costs such as fires

To provide additional context, the approximate size of Wyoming's economy in 2019 was $38.6 billion as measured by the gross domestic product (GDP). Total costs for commercial tobacco use were

about 4% the size of Wyoming's economy. An alternative perspective is that smoking costs the Wyoming economy about $2,600 per person (regardless of smoking status) in 2019.

Conclusion

Wyoming's cigarette excise tax has remained at $0.60 per pack since 2003. Over half of Wyoming adults support increasing taxes on commercial tobacco or nicotine.

Higher commercial tobacco taxes are an evidence-based way to keep youth from starting to smoke (CDC, 2014b). Increasing commercial tobacco product pricing through taxation, minimum price laws, or other means is an evidence-based strategy for encouraging people to quit using commercial tobacco products (CDC, 2015). Wyoming could further reduce negative outcomes from smoking by raising its commercial tobacco or nicotine taxes.

Goal Area 1: Preventing New Commercial Tobacco Use

The SUTPP and the CDC share the goal of reducing the health burdens of commercial tobacco use by preventing new commercial tobacco use (CDC, 2014b). A success related to this goal was raising the legal age of purchase from 18 (or 19 in some areas) to 21 (see https://tobacco21.org/). Federal law implemented this change in 2019 (FDA, 2021), and Wyoming law followed in 2020 (Wyo. Stat. § 14-3-305). Broad surveys, such as the Adult Tobacco Survey, with few young adults in the sample are not strong methods for showing short-term effects of Tobacco 21, though patterns in the data may change over time.

A key limitation of this section's findings is that many survey questions ask about events (such as when someone first smoked a whole cigarette) that happened years before data collection. Responses to such questions are especially subject to memory errors. However, precise recall is not critical to the conclusions in this report.

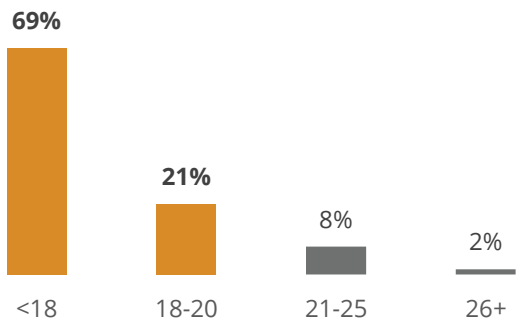
Age of Smoking a Whole Cigarette for the First Time

The age of first smoking a whole cigarette is related to long-term smoking habits. Those who start smoking at an early age are more likely to smoke as adults (CDC, 2014b).

In 2023, almost all (90%) adults who had ever smoked an entire cigarette smoked their first one before the age of 21 (Figure 13). Moreover, the vast majority of them smoked their first cigarette before they were 18, with an average age of 16. This pattern has remained consistent since similar questions were first asked in 2010.

Figure 13: Almost All Smoking Begins Before the Age of 21

Age of smoking first whole cigarette, of those who had smoked a whole cigarette



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Conclusion

The vast majority of adults who have ever smoked an entire cigarette first smoked when they were under the legal minimum age of 21, especially under the age of 18. Adult Tobacco Survey data are consistent with other research findings that the earlier someone starts smoking, the more likely they are to continue smoking (Dierker et al., 2012; Sharapova et al., 2020). Wyoming may benefit from continued commercial tobacco prevention efforts focusing on youth, though Adult Tobacco Survey data may not show results until years after success with youth happens.

The vast majority of adults who smoke started when they were younger than 21.

Goal Area 2: Eliminating Exposure to Secondhand Smoke for People Who Do Not Smoke

Support for Smokefree Indoor Air Policies at Restaurants, Workplaces, Casinos and Clubs, and Bars

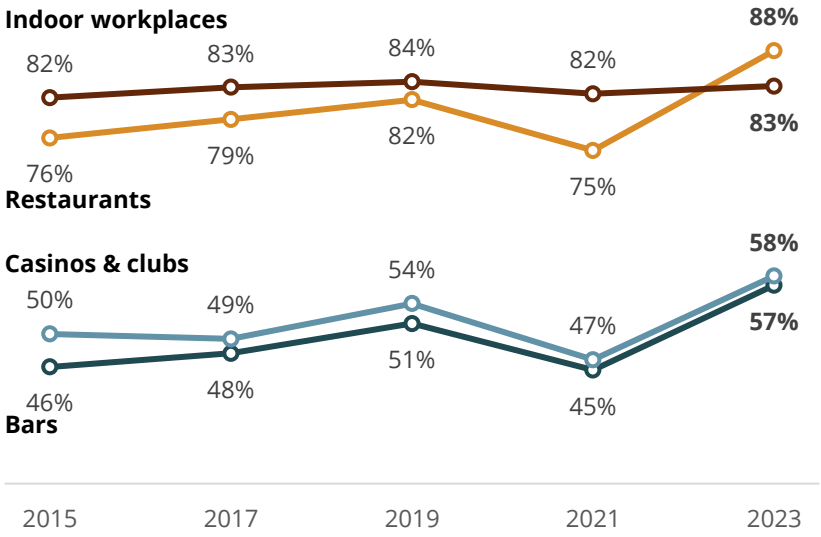
The Adult Tobacco Survey questions about smokefree indoor air policies asked adults if they think smoking should be allowed indoors at workplaces, restaurants, bars, and casinos and clubs. Casinos and clubs were combined in one item on the survey, so WYSAC treated them as a single venue type.

In 2023, most adults (88%; Figure 14) supported smokefree indoor air policies for restaurants. Most (83%) adults supported smokefree indoor air policies for workplaces. More than half (58%) of adults supported smokefree indoor air policies for casinos and clubs. More than half (57%) of adults supported smokefree indoor air policies for bars.

Support for indoor workplaces has remained stable since 2015. Support for smokefree indoor air policies for restaurants, casinos and clubs, and bars significantly increased between 2015 and 2023. For these venues, the increase in support from 2021 to 2023 was also significant.

Figure 14: Adult Support for Smokefree Indoor Air Policies Remained Strong

Percentage of adults who said that smoking should never be allowed in restaurants, bars, indoor workplaces, or casinos and clubs



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Support for Other Smokefree Air Policies

Commercial Tobacco-Free School Policies

In 2023, most adults (86%; Figure 15) thought that commercial tobacco should be completely banned at schools. This support has been consistent since 2010.

Figure 15: Most Adults Support Commercial Tobacco-Free Schools

Percentage of adults who said commercial tobacco use should be completely banned on school grounds, including fields and parking lots, and at all school events, including for teachers and other adults

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Smokefree Park Policies

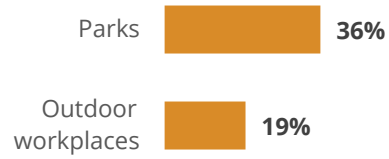
In 2023, the majority of Wyoming adults (86%) thought smoking should be restricted at outdoor parks, at least in some manner. About one in three (36%; Figure 16) of adults thought that smoking should never be allowed, and half (50%) thought that smoking should be allowed only at some times or in some places. Support for any level of regulation has increased significantly since 2010 (76%).

Smokefree Outdoor Workplace Policies

Support for policies making outdoor workplaces smokefree was substantially lower than support for policies making indoor workplaces smokefree. In 2023, only 19% (Figure 16) of adults supported a smokefree air policy for outdoor workplaces, compared to 83% for indoor workplaces. The level of support for such a policy has not changed significantly since 2015.

Figure 16: Support for Smokefree Parks and Outdoor Workplaces Is Low

Percentage of adults who said that smoking should never be allowed at parks or outdoors at workplaces



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Exposure to Secondhand Smoke

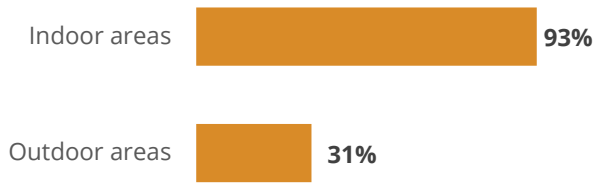
Smoking Policies at Work

In 2023, most employed adults (93%; Figure 17) reported that smoking was never allowed in indoor areas (including inside a vehicle) at their place of work. This is a significant increase from 87% in 2019.

About one in three (31%; Figure 17) adults reported that smoking was not allowed in outdoor areas. This has significantly increased since 2012 (25%). Workers are better protected by smoking regulations indoors than outdoors.

Figure 17: Most Adults Are Protected by Smokefree Indoor Air Regulations at Their Workplace

Percentage of employed adults who responded that smoking was never allowed indoors or outdoors at their workplaces



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Exposure to Secondhand Smoke at Work and in Public Places

In 2023, most employed adults (83%) were not exposed to secondhand smoke at their workplace. Still, 17% of employed adults reported experiencing secondhand smoke indoors or outdoors at their workplace. There has been no significant change between 2010 and 2023.

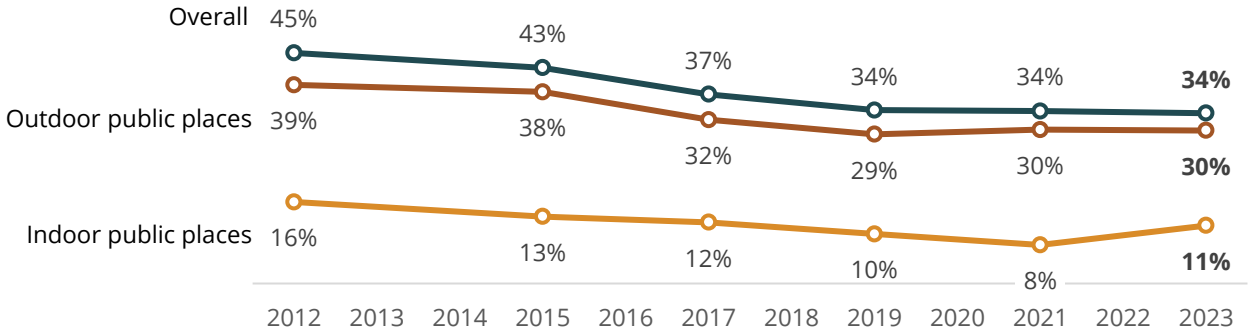
In 2023, about one in three (34%; Figure 18) adults reported breathing someone else's secondhand smoke in public places, indoors, and outdoors. Most adults (66%) were not exposed to secondhand smoke. Almost one in three (30%) adults reported exposure to secondhand smoke in outdoor public places. Few (11%) adults reported exposure to secondhand smoke in indoor public places. Although still a cause for concern, exposure to secondhand smoke has significantly decreased in public places, indoors or outdoors, between 2012 and 2023.

In 2023, the chances of being exposed to secondhand smoke while in a public place were not significantly different between adults who currently smoke and those who do not smoke:

- ➔ 41% of adults who currently smoke reported exposure to secondhand smoke
- ➔ 33% of adults who do not smoke reported exposure to secondhand smoke

Figure 18: Most Secondhand Smoke Exposure Occurs in Outdoor Public Places

Percentage of adults who had been exposed to someone else's smoke in indoor or outdoor public places in the past seven days



Note: Overall combined exposure at indoor and outdoor public places.

Prior to the 2023 Adult Tobacco Survey, the questions asked for the number of days exposed to secondhand smoke in the past 7 days. Starting from 2023 ATS, the questions simply asked whether respondents were exposed to secondhand smoke in the past 7 days.

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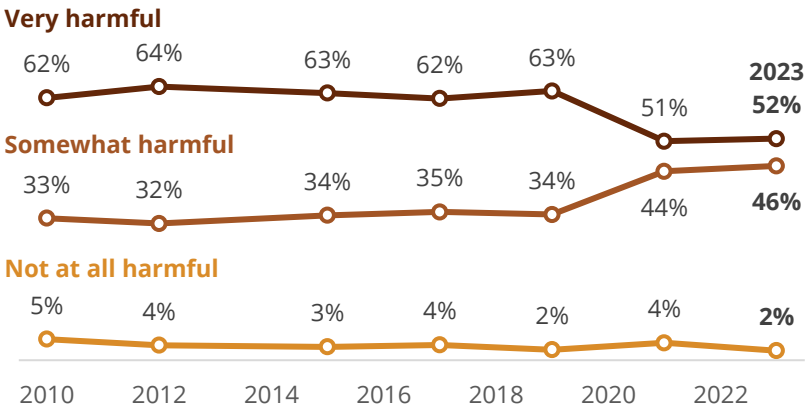
Opinions about the Harms of Secondhand Smoke

Over the years, nearly all adults have agreed that exposure to secondhand smoke is harmful to one's health. In 2023, 98% (Figure 19) believed secondhand smoke was very or somewhat harmful to one's health. Only 2% believed that it was not harmful. These levels of agreement have not changed significantly between 2010 and 2023.

However, opinions about the harmfulness of secondhand smoke have shifted in recent years. Adults who think breathing secondhand smoke is very harmful significantly decreased between 2019 and 2023.

Figure 19 Most Adults Think Secondhand Smoke Is Harmful

Do you think that breathing smoke from other people's cigarettes or from other tobacco products is very harmful, somewhat harmful, or not at all harmful to one's health?



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Conclusion

Over the years, exposure to secondhand smoke has significantly decreased in public places, indoors and outdoors. Two-thirds of adults reported not being exposed to secondhand smoke in public places, indoors or outdoors.

Adults have consistently and strongly supported smokefree indoor air policies for workplaces and restaurants. In addition, support for smokefree indoor air policies for casinos and clubs and bars has increased. Wyoming adults continue to support a complete ban on commercial tobacco use at schools. Most adults thought that smoking should be restricted at parks, at least in some manner. Most employed adults are not exposed to secondhand smoke at work, indoors or outdoors.

Most adults thought commercial tobacco use should be completely banned at schools.

Wyoming still has room for improvement. Smoking policies in outdoor areas, including at work and in public places, are less protective of adults. Adult support for outdoor policies at work and indoor air policies at adult-oriented establishments has shown improvement. Wyoming may benefit from focusing on prevention efforts in these areas. Recent decreases in reports of seeing secondhand smoke as "very harmful" may indicate a need for revisiting education about the harms of secondhand smoke.

Goal Area 3: Promoting Quitting

The CDC says that quitting smoking is difficult because of the addictive nicotine that cigarettes rapidly deliver to the brain. Smoking leads to dependence, and quitting often leads to withdrawal. Smoking also becomes part of a person's daily routine, making it even harder to stop.

The SUTPP and the CDC share the goal of reducing the health burdens of commercial tobacco and nicotine use by promoting and supporting quitting among adults and youth.

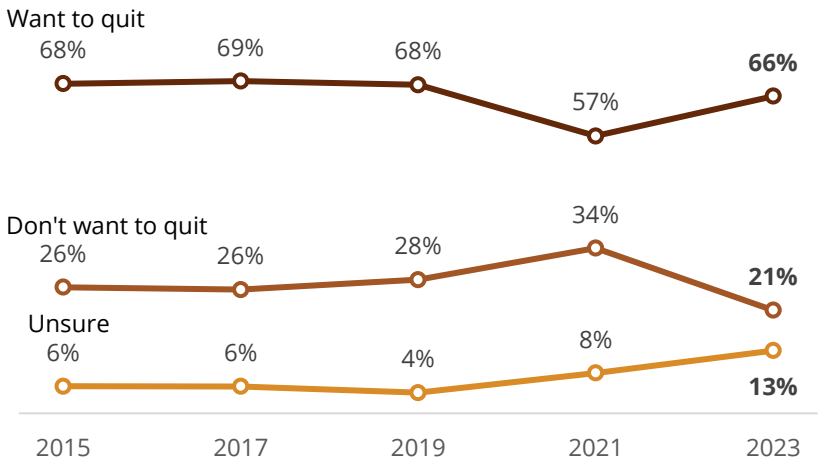
In this section, WYSAC explores the desire to quit among adults who currently use commercial tobacco and their quit attempts. WYSAC looks at awareness of quitlines, use of quit aids, and barriers to quitting. This section also covers visits to healthcare providers and conclusions and recommendations based on the data and best practices in helping people quit.

Efforts to Quit Smoking

Desire to Quit Among Adults Who Smoke

Figure 20: Most Adults Who Smoke Want to Quit

Percentage of adults who smoke who want to quit smoking cigarettes for good from 2015 to 2023



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More than half (66%) of adults who currently smoke want to quit smoking cigarettes. The nine percentage-point difference between 2021 and 2023 was not significant. There were no significant changes from 2015 to 2023 (Figure 20).

Quit Attempts Among Adults Who Smoke

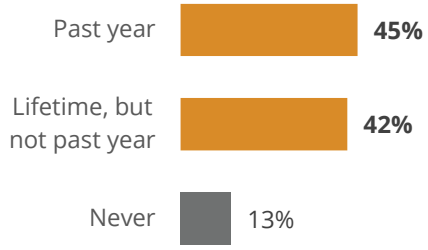
At some point in their lives, the majority of adults who currently smoke (87%) had stopped smoking for at least one day because they were trying to quit for good.

Nearly half (45%) of adults who currently smoke have tried to quit smoking at least once in the past year because they were trying to quit for good (Figure 21).

Smokers' quit attempts have not changed significantly between 2010 and 2023.

Figure 21: Most Adults Who Smoke Have Tried to Quit

Percentage of adults who smoke who tried to quit in the past year, tried in their lifetime but not in the past year, or never tried to quit



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Aids to Quit Smoking

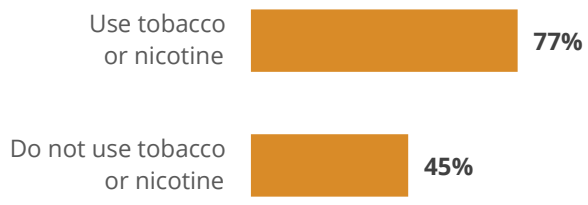
Awareness of Quitlines

Most (77%) adults who use commercial tobacco or nicotine (including ENDS) were aware of telephone quitline services (Figure 22). About half (45%) of adults who do not use commercial tobacco or nicotine were aware of telephone quitline services.

This may demonstrate the success of media campaigns by SUTPP and their partners, including county-level efforts.

Figure 22: Most Adults Who Use Commercial Tobacco or Nicotine Were Aware of the Quitline

Percentage of adults who were aware of telephone quitline services by commercial tobacco or nicotine use



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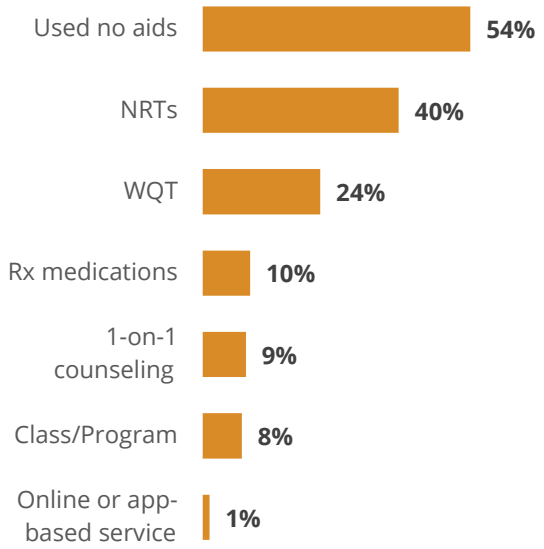
Use of Quit Aids Among Adults Who Currently Smoke

More than half (54%) of adults who currently smoke and tried to quit in the last year did not use any quit aids. Nicotine replacement therapy (NRT) was the most popular aid used by adults who smoke (Figure 23). This may have included people buying them over the counter themselves or getting them from the Wyoming Quit Tobacco (WQT) program.

Adults who smoke could benefit from using quit aids when they try to quit.

Figure 23: Most Adults Who Tried to Quit Did Not Use a Quit Aid

Percentage of adults who smoke and said they used the quit aid the last time they tried to quit in the last year



Note: Percentages do not equal 100% because respondents could identify more than one option. Respondents could not choose "used no aids" combined with any aids.

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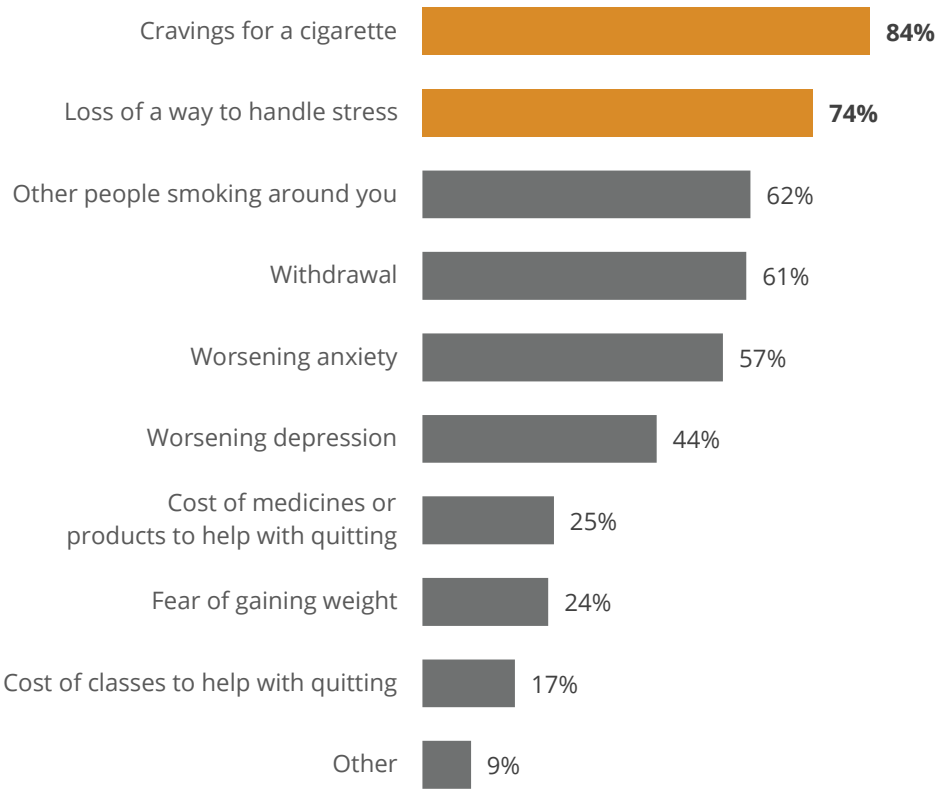
Obstacles to Quitting Cigarettes Among Adults Who Smoke

Cravings for a cigarette was the most common obstacle for adults who smoke and tried to quit in their lifetime or wanted to quit (84%; Figure 24). The second most common obstacle to quitting cigarettes was the loss of a way to handle stress (74%). The WQT program specifically targets the most common obstacle to quitting smoking (https://www.quitwyo.org). In particular, the medications provided are designed to reduce cravings. Coaching can include strategies to deal with other obstacles, such as losing a way to handle stress.

In addition, 62% reported that other people smoking around them is an obstacle to quitting smoking. These adults could benefit from increased smokefree air policies in their environments.

Figure 24: Most Obstacles to Quitting Smoking Are Addressed by the WQT

Percentage of adults who smoke and had tried to quit in their lifetime or wanted to quit faced obstacles to quitting smoking



Note: Percentages do not add up to 100% because respondents could choose more than one option.

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Health Professionals' Involvement in Quitting Commercial Tobacco or Nicotine Use

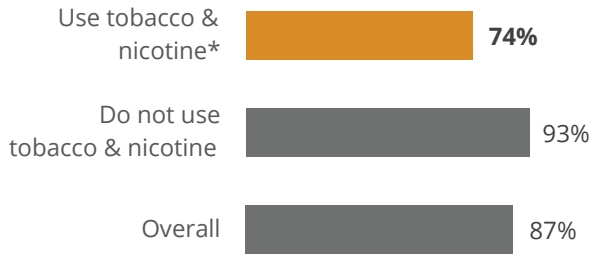
Visits with Health Professionals

The 2023 Adult Tobacco Survey asked respondents if they had seen a health professional (a doctor, dentist, nurse, or another health professional) in the past year and, if so, if the health professional asked if they smoked cigarettes or used any other commercial tobacco or nicotine products, including ENDS.

In 2023, 28% of adults used commercial tobacco or nicotine while 72% did not. Most adults who use commercial tobacco or nicotine had seen a health professional in the past year (74%; Figure 25). Commercial tobacco or nicotine use was related to lower likelihood of seeing a health professional. This difference might be due, in part, to barriers to seeking care that might be linked to other related factors, such as lower income.

Figure 25: Adults Who Use Commercial Tobacco or Nicotine Were Less Likely to See a Health Professional than Those Who Do Not Use Commercial Tobacco or Nicotine

Percentage of adults who had seen a health professional by commercial tobacco or nicotine use status



Note: *denotes a significant difference by commercial tobacco or nicotine use.

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Patient Experiences with Health Professionals' Support for Quitting Commercial Tobacco and Nicotine Use

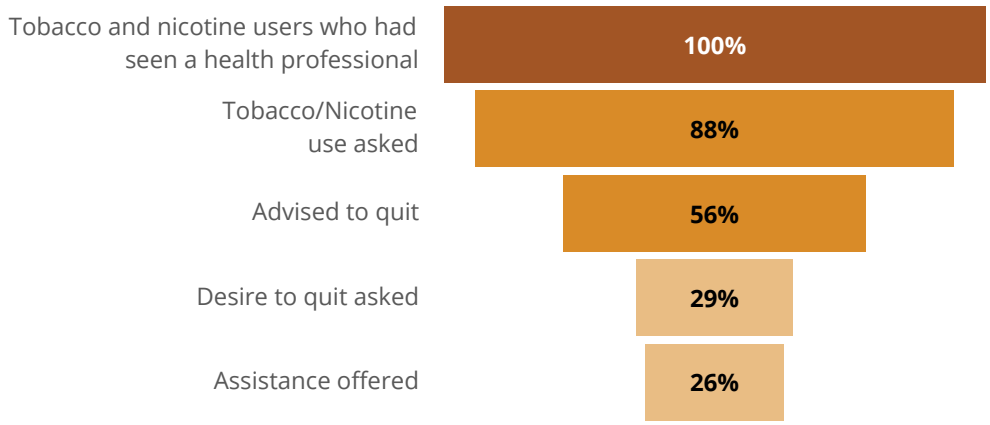
Adults are often asked about their commercial tobacco or nicotine use when visiting a health professional. In 2023, 78% of all adults were asked if they smoked cigarettes or used any other commercial tobacco or nicotine products. Adults who used commercial tobacco or nicotine (88%) were more likely to be asked if they smoked cigarettes or used any other commercial tobacco or nicotine products than adults who did not use commercial tobacco or nicotine (74%).

WYSAC does not know to what extent health professionals use medical records to screen for commercial tobacco or nicotine use during a visit. This may have been a limitation when health professionals did not ask about commercial tobacco or nicotine use because they already had records of it.

Less than half (26%) of commercial tobacco or nicotine users were offered assistance with quitting, even when focusing on those who say a professional asked them about their commercial tobacco or nicotine use (Figure 26).

Figure 26: About One Fourth of Adults Who Use Commercial Tobacco or Nicotine Received Assistance from Health Professionals

Percentage of adults who use commercial tobacco or nicotine who had seen a health professional in the past year



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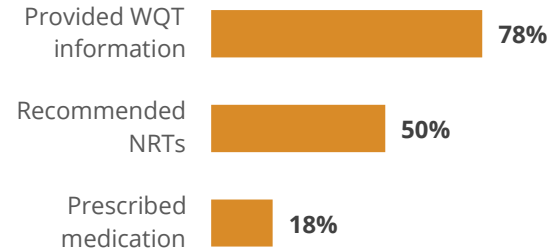
When adults who use commercial tobacco or nicotine were offered assistance, health professionals provided WQT information (78%; Figure 27), recommended NRTs (50%), and prescribed medication (18%). These protocols align with best practices in support of quitting.

Figure 27: Adults Who Use Commercial Tobacco or Nicotine May Be Less Likely to Be Prescribed Medication

Percentage of adults who use commercial tobacco or nicotine who were advised to quit and were offered assistance by a health professional to help them quit

A health professional …



Note: Respondents were allowed to indicate more than one response.

Medication may include Wellbutrin, Zyban, bupropion, Chantix, or varenicline.

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Opportunities exist to increase the number of adults who are offered assistance by their healthcare provider to quit.

Conclusion

Most smokers want to quit smoking cigarettes and have tried to quit at some point in their lives. When they try to quit or want to quit, adults who use commercial tobacco or nicotine face obstacles such as cravings for a cigarette, loss of a way to handle stress, and others smoking around them. The WQT program is designed to assist with most of these obstacles.

Most adults who use commercial tobacco or nicotine are aware of quitline services. Nearly half of adults who had tried to quit in the last year used a quit aid the last time they tried to quit. However, only one in four (26%) reported using WQT the last time they tried to quit.

Education and media emphasizing how the WQT program addresses common barriers to quitting smoking may increase enrollment in the WQT program. Additionally, the use of WQT program offerings (such as NRT and medications) can then increase the chances of adults quitting.

Visits to health professionals are opportunities for connecting current commercial tobacco or nicotine users to available resources and addressing barriers to quitting. Most adults were asked by a health professional if they used commercial tobacco or nicotine products. Adults who use commercial tobacco or nicotine were less likely to report that health professionals followed up or offered help with quitting than being asked about their use. Greater collaboration with health professionals could result in more commercial tobacco or nicotine users becoming aware of, and receptive to, services that could increase their chances of quitting (CDC, 2015).

Goal Area 4: Identifying and Eliminating Commercial Tobacco and Nicotine-Related Disparities

Generations-long social, economic, and environmental disparities contribute to poor health outcomes. Breakdowns by race, ethnicity, socioeconomic status, or other demographic variables may reflect where a person lives, works, or plays rather than the individual's characteristics or personal choices (CDC, 2022c). These disparities have a greater impact on health outcomes than individual choices. The pressures of discrimination, poverty, and other social conditions can increase commercial tobacco use and increase health problems.

Addressing these health disparities is the fourth goal of the SUTPP and the CDC to reduce commercial tobacco or nicotine use and the related health burdens among populations disproportionately impacted by commercial tobacco-related disease and death.

Starting in 2019, the SUTPP identified four populations of focus in Wyoming that were unequally impacted by commercial nicotine use: people with low incomes, people who self-identify as American Indian, people reporting behavioral health conditions, and young adults (aged 18-29). The sampling methods described in 2023 Adult Tobacco Survey Methods section included extra effort to recruit people identified as American Indian in the sampling frame WYSAC purchased.

For ENDS within each population, WYSAC analyzed three key indicators: the prevalence of use, ENDS quit attempts, and exposure to secondhand ENDS aerosol in public places.

For commercial tobacco within each population, WYSAC analyzed three key indicators: the prevalence of smoking cigarettes, smoking quit attempts, and exposure to secondhand smoke at work.

Because the Adult Tobacco Survey is primarily designed to obtain state-level data for the full adult population, WYSAC does not recruit people from these populations of focus in a way that allows for all analyses in the main body of the report or for intersectionality (such as estimates for young adults with low incomes). Specifically, because of the small number of Adult Tobacco Survey respondents who currently use commercial tobacco or nicotine products within each population of focus, there is a high degree of uncertainty around the estimates for most of these groups. Therefore, WYSAC took a cautious approach and chose not to provide interpretations for statistical tests in which WYSAC had a low degree of confidence, including when fewer than 50 adults responded to a question. Because of this issue, WYSAC does not report ENDS quit attempts among all populations of focus (including adults with low annual household income, American Indian adults, adults

who reported behavioral health conditions, and young adults) or cigarette quit attempts among these populations except for adults with behavioral conditions.

Acknowledgement

Proportion plots in the following sections are adapted from a template distributed by Stephanie Evergreen: https://stephanieevergreen.com/proportion-plots/

Population of Focus: Adults with Low Annual Household Income

An ideal measure for identifying people with low incomes would be the poverty level. However, this varies by size of household and other factors not included in the Adult Tobacco Survey. Based on practical considerations such as survey sample size, WYSAC and the SUTPP used a threshold of $30,000 in annual household income to identify adults with a low annual household income.

For context, the median household income for Wyoming adults is $65,304 (U.S. Census Bureau, 2021). By definition, half of the adults in the state have an annual income less than the median.

ENDS and Adults with Low Annual Household Income

Evidence on ENDS marketing targeting people with low income is limited. Still, there is some indication that people with low socioeconomic status are more likely to see and be influenced by ENDS advertising (Addo Ntim et al., 2022). More research is needed to understand if the ENDS industry is using focused marketing toward people with low incomes.

ENDS Use

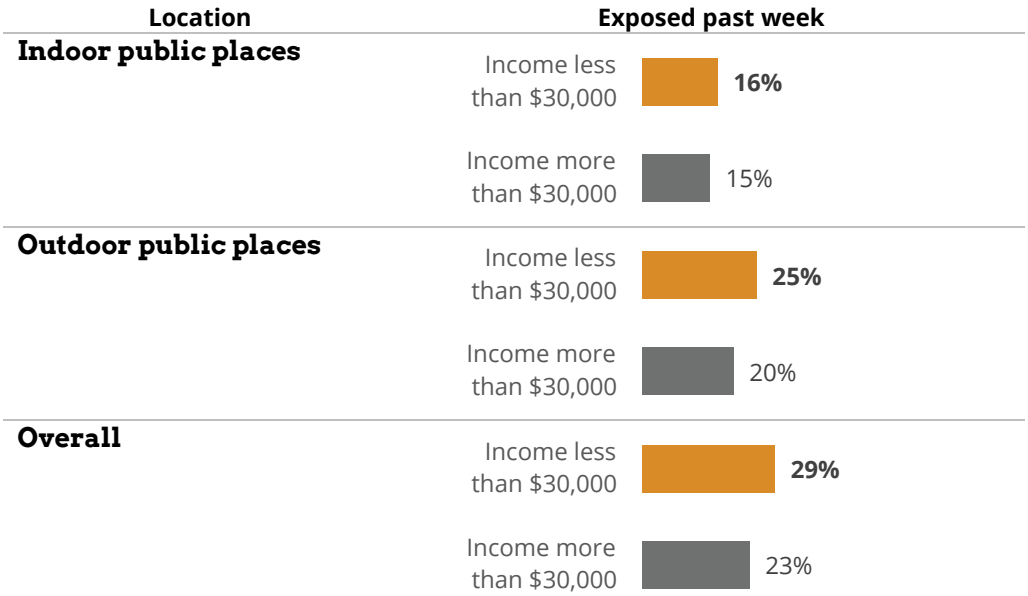
In 2023, 14% of adults with annual household incomes less than $30,000 used ENDS every day or some days. Among adults with an annual household income of $30,000 or more, 10% reported using ENDS every day or some days. Partly because the Adult Tobacco Survey did not sample a large number of adults with an annual income of less than $30,000, the difference in ENDS use was not significant.

Exposure to Secondhand Aerosol in Public Places

Partly because the Adult Tobacco Survey did not sample a large number of adults with an annual income of less than $30,000, the differences between reports of secondhand aerosol exposure in public places, indoors or outdoors, in the last seven days were not significant (Figure 28).

Figure 28: Exposure to Secondhand ENDS Aerosol in Public Places Was About the Same for Adults Living in Households Making Less than $30,000 per Year and Those Making $30,000 or More

Percentage of adults who had been exposed to someone else's ENDS aerosol in public places in the past seven days by household income



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Cigarettes and Adults with Low Annual Household Income

Commercial tobacco industry marketing has a documented history of targeting lower-income neighborhoods (Lee et al., 2015). This targeted marketing has included giving free cigarettes to children in low-income neighborhoods. Along with the increased marketing, low-income neighborhoods typically have a higher commercial tobacco outlet density than higher-income neighborhoods (CDC, 2024c; Truth Initiative, 2018). With the commercial tobacco industry's pointed strategies toward people with lower incomes, adults with lower incomes have a disproportionately high rate of commercial tobacco or nicotine use.

Cigarette Use

In 2023, adults with annual household incomes less than $30,000 were significantly more likely to smoke cigarettes every day or some days (24%) than those with higher incomes (10%; see Table 4 for a summary of the four smoking status categories).

Table 4: Definitions of Smoking Status

Responses to the Adult Tobacco Survey led to four key categories of smoking status

	Adults Who Currently Smoke	Adults Who Used to Smoke	Adults Who Experimented with Smoking	Adults Who Never Smoked
	Adults Who Smoke or Have Smoked Regularly			
Now smoke daily or some days	✓			
Smoked at least 100 cigarettes in lifetime	✓	✓		
Ever tried smoking	✓	✓	✓	

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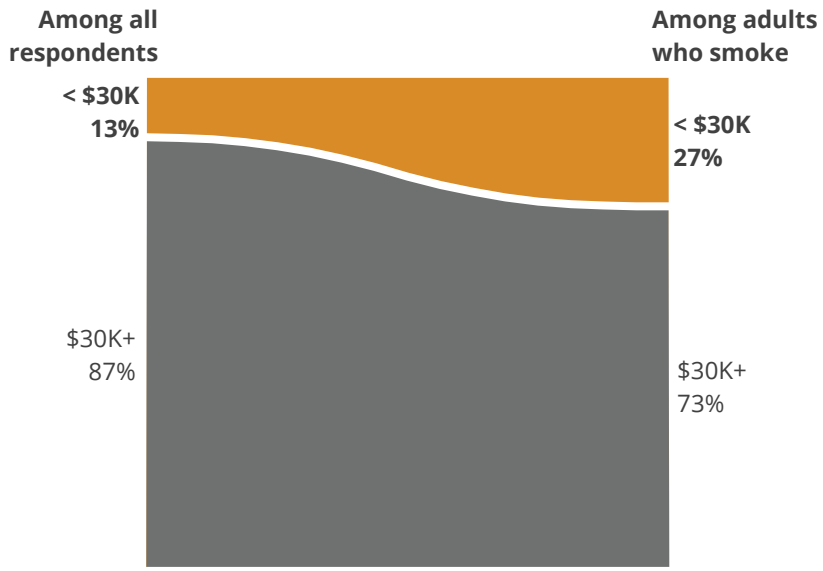
Figure 29: Adults Living in Households Making Less than $30,000 per Year Were Over-Represented Among Adults Who Smoke

Percentage of adults who smoke by household income.

If there was no disparity, the proportions on each side of the graph would be equal, or the line would be straight.



Note: The commercial tobacco industry has targeted lower-income households (Lee et al., 2015).

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Adults living in households making less than $30,000 per year were over-represented among adults who smoke. While only 13% of survey respondents were living in households with an income of less than $30,000, they made up 27% of adults who currently smoke in the survey (Figure 29).

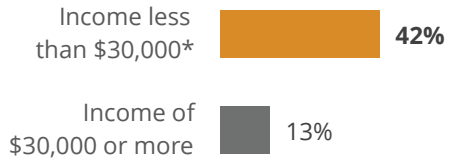
Exposure to Secondhand Smoke at Work

In 2023, 42% of adults with an annual household income less than $30,000 were exposed to someone else's secondhand smoke at work. Adults with an annual income less than $30,000 were significantly more likely to be exposed to secondhand smoke at work than adults with an annual income of $30,000 or more (Figure 30).

Occupational differences might explain this difference. For example, adults working in service industries are at a higher risk of exposure to secondhand smoke than those working in other industries (Holmes & Ling, 2017; Su et al., 2019), and they might have lower incomes. However, the 2023 Adult Tobacco Survey did not collect information about specific occupations.

Figure 30: Exposure to Secondhand Smoke at Work Is Significantly Higher for Adults with Annual Household Incomes Less Than $30,000

Percentage of adults who had been exposed to someone else's secondhand smoke at work by household income



Note: * indicates a significant difference by household income.

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Conclusion

The 2023 ATS data highlights the impact of the commercial tobacco industry's targeted efforts to engage already vulnerable populations in commercial tobacco use (Lee et al., 2015). People with an annual income of less than $30,000 are disproportionately affected by smoking.

Partly due to the low sample size of adults with an annual income of less than $30,000, differences in ENDS use and exposure to secondhand ENDS aerosol in public places were not significant.

Adults with an annual income of less than $30,000 are significantly more likely to smoke every day or some days than those with an annual income greater than $30,000. Commercial tobacco is marketed at a higher rate in low-income neighborhoods (Lee et al., 2015).

At workplaces, adults with an annual income of less than $30,000 were also more likely to be exposed to secondhand smoke than those with a higher income. Without details about where Adult Tobacco Survey respondents work, we cannot explore reasons for this relationship.

Population of Focus: American Indians

WYSAC acknowledges that different terms, such as Native American, refer to the Indigenous populations of the U.S. when not referring to specific tribes. In this report, use of the term American Indian mirrors the CDC-suggested survey item (which does not ask about tribal affiliation) used for the Adult Tobacco Survey.

WYSAC considered respondents as American Indian when they self-identified as American Indian or multiracial including American Indian, regardless of whether they reported Hispanic ethnicity. This approach allowed for a larger sample from which to draw conclusions.

ENDS and American Indians

ENDS Use

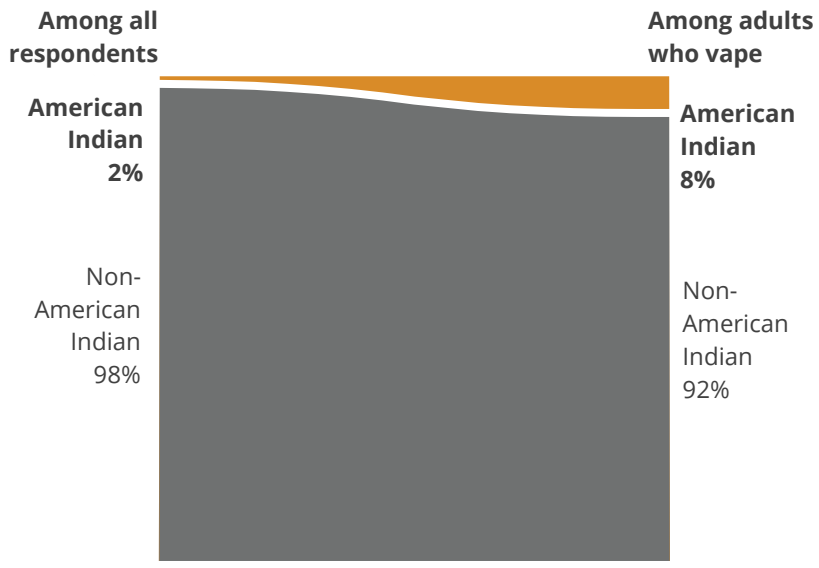
In 2023, 33% of American Indian adults used ENDS every day or some days. American Indian adults (33%) were significantly more likely to use ENDS than non-American Indian adults (9%).

American Indian adults were over-represented among adults who use ENDS. While only 2% of survey respondents were American Indian, they made up 8% of adults who currently use ENDS in the survey (Figure 31).

Figure 31: American Indian Adults Were Over-Represented Among Adults Who Use ENDS

Percentage of adults who currently vape by self-reported American Indian identity

If there was no disparity, the proportions on each side of the graph would be equal, or the line would be straight.



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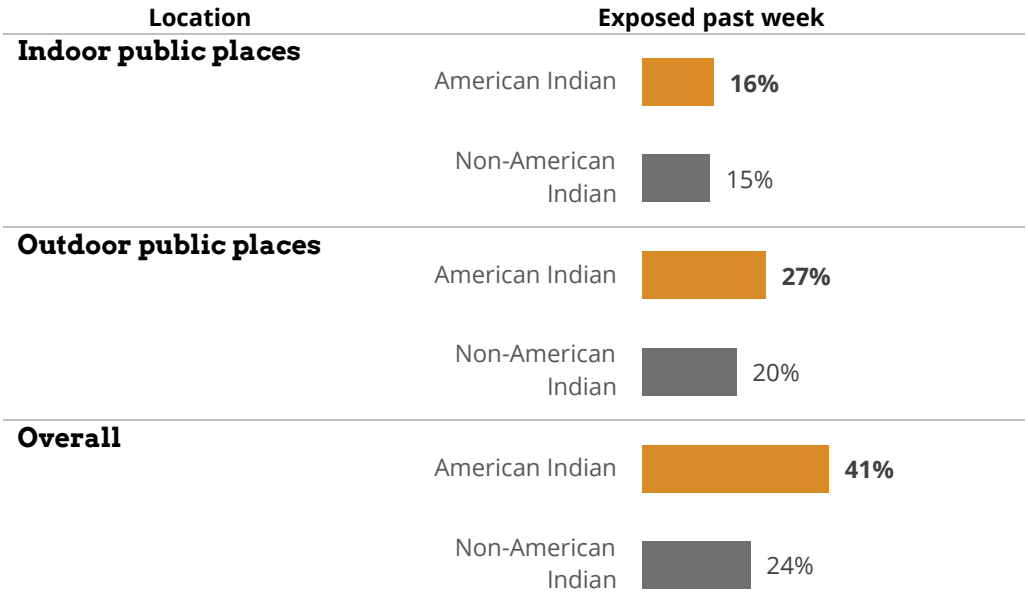
Exposure to ENDS Aerosol in Public Places

Partly because the Adult Tobacco Survey did not sample a large number of American Indian adults, the differences between reports of secondhand aerosol exposure in public places, indoors or outdoors, in the last seven days was not statistically significant, though the estimates may look quite different (Figure 32).

Figure 32: Exposure to Secondhand ENDS Aerosol in Public Places Was About the Same Between American Indian Adults and Non-American Indian Adults

Percentage of adults who had been exposed to someone else's ENDS aerosol in public places in the past seven days by American Indian self-identification



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Cigarettes and American Indians

Commercial tobacco companies have long used the ceremonial significance of tobacco to encourage American Indians to use their commercial tobacco products (D'Silva et al., 2018). Commercial tobacco companies have a history of targeting this community, beginning with using American Indian imagery and symbols in marketing, often depicting negative stereotypes. The commercial tobacco industry misled these communities by providing financial support for their cultural events and providing highly discounted prices on commercial tobacco or nicotine products (Lempert & Glantz, 2019). The commercial tobacco industry's focused efforts have contributed to disproportionately high smoking rates for American Indians (D'Silva et al., 2018).

Cigarette Use

In 2023, 19% of American Indian adults smoked cigarettes every day or some days. Among non-American Indian adults, 11% reported smoking every day or some days (see Table 5) for a summary of the four smoking status categories). Partly because the Adult Tobacco Survey did not sample a large number of American Indian adults, the difference in cigarette use between American Indian adults and non-American Indian adults was not significant.

Table 5: Definitions of Smoking Status

Responses to the Adult Tobacco Survey led to four key categories of smoking status

	Adults Who Currently Smoke	Adults Who Used to Smoke	Adults Who Experimented with Smoking	Adults Who Never Smoked
	Adults Who Smoke or Have Smoked Regularly			
Now smoke daily or some days	✓			
Smoked at least 100 cigarettes in lifetime	✓	✓		
Ever tried smoking	✓	✓	✓	

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Exposure to Secondhand Smoke at Work

In 2023, 45% of American Indian adults were exposed to someone else's secondhand smoke at work. American Indian adults were more likely to be exposed to secondhand smoke at work than non-American Indian adults (Figure 33).

Figure 33: Exposure to Secondhand Smoke at Work Is Significantly Higher for American Indian Adults

Percentage of adults who had been exposed to someone else's secondhand smoke at work by American Indian identification

* Indicates a significant difference by American Indian identification.

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Conclusion

The 2023 Adult Tobacco Survey data highlighted the impact of the commercial tobacco industry's targeted efforts to engage already vulnerable populations in commercial tobacco or nicotine use. American Indian adults are disproportionately affected by ENDS use, though the 2023 sample did not show disproportionate effects of cigarette smoking. American Indian

adults were also more likely to report secondhand smoke exposure at work. Without details about where Adult Tobacco Survey respondents work, we cannot explore reasons for this relationship.

Continuing to partner with representatives from the two main tribes in Wyoming (Northern Arapaho and Eastern Shoshone) will support sensitive approaches to reducing the burdens of commercial nicotine use and secondhand exposure for this population.

Population of Focus: Behavioral Health

For this report, we use the term "behavioral health" and recognize that subject matter experts may use, and distinguish between, terms such as behavioral or mental health, and these may have changed over time. The CDC-suggested item is as follows: "Do you have any mental health conditions, such as an anxiety disorder, depression disorder, bipolar disorder, schizophrenia, attention-deficit/hyperactivity disorder (ADHD), post-traumatic stress disorder (PTSD) or substance use disorder?" About 25% of adults reported having at least one behavioral health condition.

People experiencing behavioral health conditions have been harmed by unjust practices related to the sale of commercial tobacco and nicotine. These practices include promoting the false idea that tobacco and nicotine can be used to treat behavioral or mental health conditions and promoting unhealthy policies in behavioral healthcare facilities (CDC, 2024d). These misperceptions may affect healthcare providers' willingness to offer cessation treatments to adults with behavioral health conditions and increase smoking among people with behavioral health conditions (CDC, 2024b).

As with any self-report data, it is possible that people under-reported health conditions on the Adult Tobacco Survey, especially those conditions that may have stigma attached such as behavioral health conditions.

ENDS and Behavioral Health

Historically, the commercial tobacco industry has targeted people experiencing behavioral health conditions (such as depressive disorder, bipolar disorder, substance use disorder, and psychotic disorder; Campbell et al., 2016; Prochaska et al., 2017). The ENDS industry might also be targeting those experiencing behavioral health conditions by claiming benefits of using ENDS (Spears et al., 2019). For example, an online ENDS store claimed that "eCigs may help to cure depression" (ePuffer Inc., 2018). Medical research, however, has shown that vaping is associated with more reports of depression for adults (Obisesan et al., 2019) and youth (Lechner et al., 2017). More research is needed to understand if the ENDS industry is also using focused marketing toward people experiencing behavioral health conditions.

ENDS Use

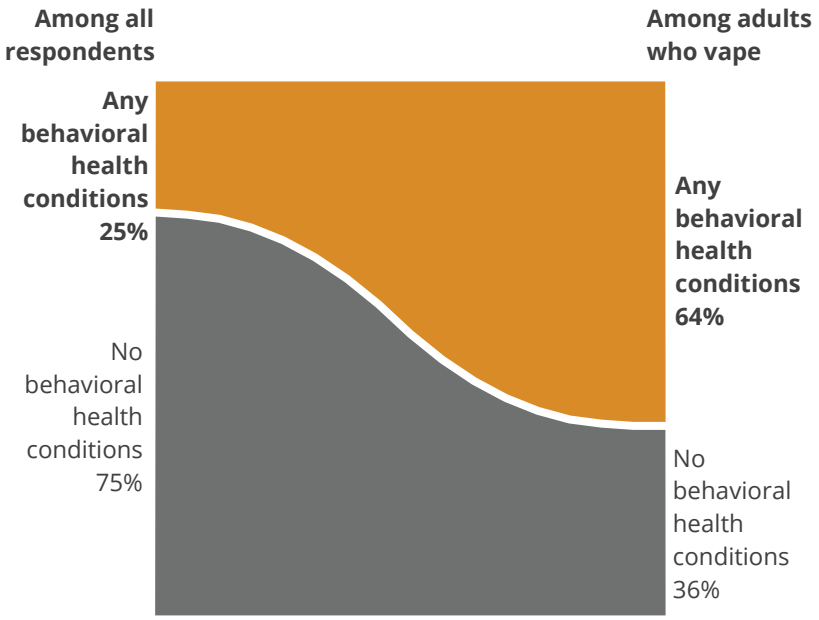
In 2023, adults who said they had at least one behavioral health condition were significantly more likely to use ENDS every day or some days than adults who did not have at least one behavioral health condition: 27% of adults who reported having behavioral health conditions used ENDS every day or some days, compared to 5% of adults who did not report having behavioral health conditions.

Adults with behavioral health conditions were over-represented among adults who use ENDS. While only 25% of survey respondents said they had a behavioral health condition, they made up 64% of adults who currently use ENDS in the survey (Figure 34).

Figure 34: Adults with Behavioral Health Conditions Were Over-Represented Among Adults Who Use ENDS

Percentage of adults who use ENDS by self-reported behavioral health conditions

If there was no disparity, the proportions on each side of the graph would be equal, or the line would be straight.



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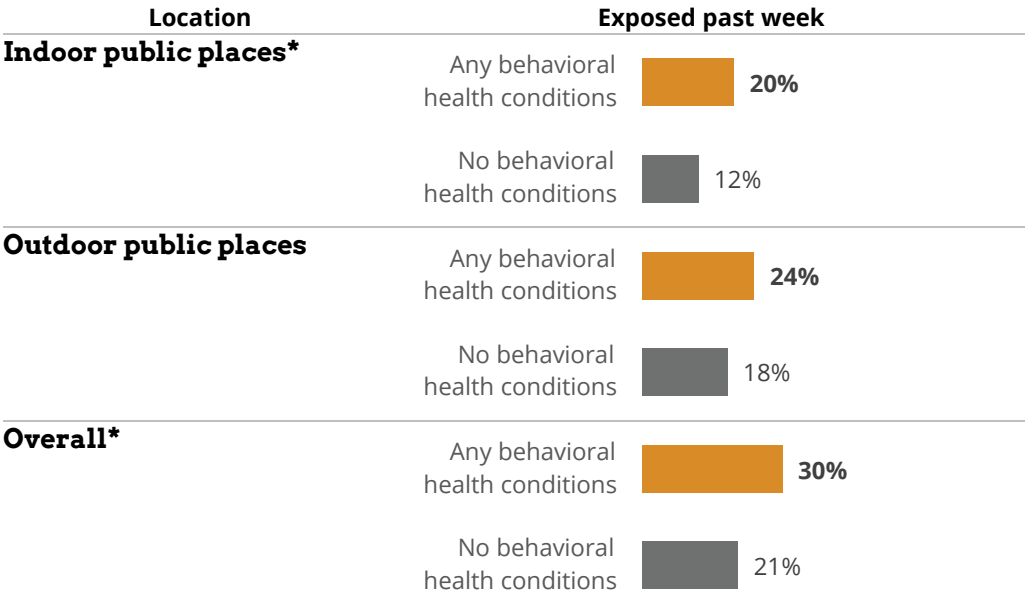
Exposure to Secondhand Aerosol in Public Places

In 2023, 30% of adults who reported having behavioral health conditions reported being exposed to someone else's ENDS aerosol in public places, indoors or outdoors, in the past seven days. Overall, exposure to secondhand aerosol in public places was significantly more likely for adults who reported behavioral health conditions than those who did not report behavioral health conditions (Figure 35). In indoor public places, adults who reported behavioral health conditions (20%) were significantly more likely to report exposure to secondhand aerosol. The difference between secondhand aerosol exposure in outdoor public places was not statistically significantly different for adults with reported behavioral health conditions and those with no reported behavioral health conditions, though the estimates may look quite different.

Figure 35: Exposure to ENDS Aerosol in Indoor Public Places Was Significantly Higher for Adults Who Reported a Behavioral Health Condition

Percentage of adults who had been exposed to someone else's ENDS aerosol in public places in the past seven days by behavioral health condition.



Note: * indicates a significant difference by behavioral health condition.

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Exposure to secondhand aerosol from ENDS is particularly concerning for adults who reported behavioral health conditions as it may be a barrier to their efforts to quit. The specific impact of ENDS aerosol exposure on individuals with behavioral health conditions requires further research.

Cigarettes and Behavioral Health

Historically, the commercial tobacco industry has targeted people experiencing behavioral health conditions (such as depressive disorder, bipolar disorder, substance use disorder, and psychotic disorder; Campbell et al., 2016; Prochaska et al., 2017).

For this reason, studies (such as the Center for Behavioral Health Statistics and Quality, 2020, and Talati et al., 2016) have demonstrated an association between cigarette smoking and behavioral health conditions. People who report behavioral health conditions are more likely to smoke, and adults with these conditions who smoke tend to smoke more cigarettes than adults who do not report behavioral health conditions (Center for Behavioral Health Statistics and Quality, 2020).

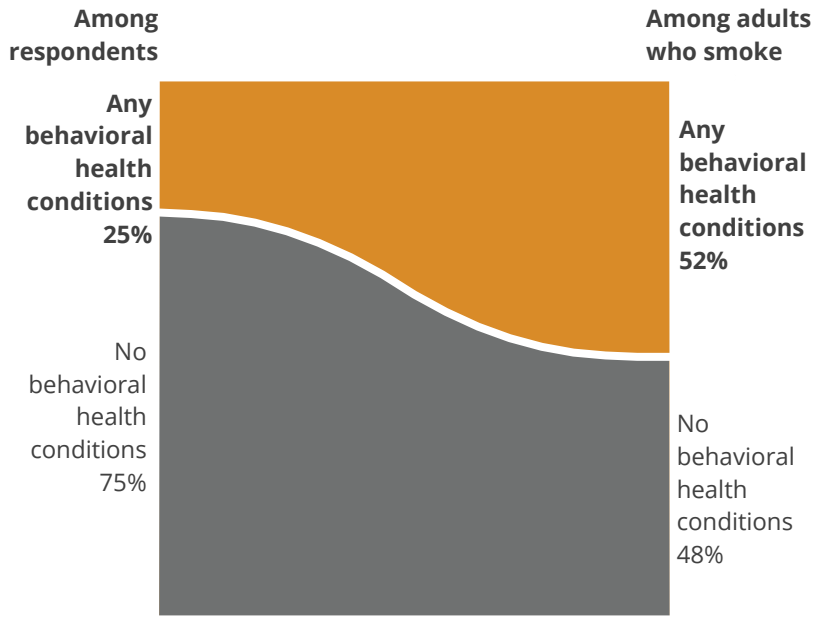
Cigarette Use

In 2023, adults with behavioral health conditions (23%) were significantly more likely to smoke cigarettes than adults with no behavioral health conditions (7%).

Figure 36: Adults with Behavioral Health Conditions Were Over-Represented Among Adults Who Smoke

Percentage of adults who smoke by self-reported behavioral health conditions

If there was no disparity, the proportions on each side of the graph would be equal, or the line would be straight.



Note: Adults with behavioral health conditions have been targeted by commercial tobacco companies (Prochaska et al., 2017).

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Adults with behavioral health conditions were over-represented among adults who smoke while only 25% of adults who responded to the survey reported having behavioral health conditions, they made up 52% of adults in the survey who smoke (Figure 36; see Table 6 for a summary of the four smoking status categories).

Table 6: Definitions of Smoking Status

Responses to the Adult Tobacco Survey led to four key categories of smoking status

	Adults Who Currently Smoke	Adults Who Used to Smoke	Adults Who Experimented with Smoking	Adults Who Never Smoked
	Adults Who Smoke or Have Smoked Regularly			
Now smoke daily or some days	✓			
Smoked at least 100 cigarettes in lifetime	✓	✓		
Ever tried smoking	✓	✓	✓	

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Quit Attempts: Lifetime and Past Year

Partly because the Adult Tobacco Survey did not sample a large number of adults with behavioral health conditions, the difference in quit attempts (including lifetime and past year) between adults who smoke and who reported behavioral health conditions and those who did not report such conditions was not statistically significant, though the estimates may look quite different.

Lifetime quit attempts:

- ➔ 88% of adults who reported behavioral health conditions had stopped smoking for at least one day because they were trying to quit for good, and
- ➔ 85% of adults who did not report behavioral health conditions had stopped smoking for at least one day because they were trying to quit for good.

Past year quit attempts:

- ➔ 61% of adults who reported behavioral health conditions had tried to quit smoking at least once in the past year, and
- ➔ 30% of adults who did not report behavioral health conditions had tried to quit smoking at least once in the past year.

Obstacles to Quitting Smoking Cigarettes

Adults who smoke and who reported behavioral health conditions were more likely to report obstacles to quitting than those who did not report such conditions, particularly in managing cravings and handling stress. In 2023, cravings for a cigarette (99%) and loss of a way to handle stress (95%) were significantly more common among adults with behavioral health conditions than those without behavioral health conditions (Table 7). Partly because the Adult Tobacco Survey did not sample a large number of adults who reported having behavioral health conditions, the differences in the other obstacles between adults who reported behavioral health conditions and those who did not report such conditions were not significant based on statistical testing. When working to reduce barriers to healthy behaviors, connecting people to evidence-based resources to address those barriers can be justified regardless of the results of statistical tests. The Wyoming Quit Tobacco (WQT) is an evidence-based program designed to address the common barriers that adults face when quitting smoking, including adults with behavioral health conditions.

Table 7: Adults Who Smoke and Who Reported Behavioral Health Conditions Were More Likely to Report Obstacles to Quitting than Those Without Such Conditions, Particularly in Managing Cravings and Handling Stress

Percentage of adults who smoke who had tried to quit in their lifetime or wanted to quit and faced obstacles to quitting smoking by reported behavioral health condition.

	Any behavioral health conditions	No behavioral health conditions
Cravings for a cigarette*	99%	76%
Loss of a way to handle stress*	95%	56%
Withdrawal	66%	61%
Other people smoking around you	64%	55%
Worsening depression	64%	26%
Worsening anxiety	60%	48%
Cost of medicines or products to help with quitting	31%	20%
Fear of gaining weight	26%	13%
Cost of classes to help with quitting	12%	15%
Other	12%	6%

Note: Percentages do not add up to 100% because respondents could report more than one obstacle.

* Indicates a significant difference.

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Exposure to Secondhand Smoke at Work

Adults who reported behavioral health conditions were more likely to be exposed to secondhand smoke at work (28%) than those who did not report such conditions (12%; Figure 37).

Figure 37: Exposure to Secondhand Smoke at Work Is Significantly Higher for Adults Who Reported a Behavioral Health Condition

Percentage of adults who had been exposed to secondhand smoke at work by behavioral health condition

Note: * indicates a significant difference by behavioral health condition.

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Conclusion

People experiencing behavioral health conditions are disproportionately affected by smoking and ENDS use. Particularly for cigarette smoking, this is likely related at least in part to the commercial tobacco industry's targeted marketing (Campbell et al., 2016; Prochaska et al., 2017). More research is needed to understand if the ENDS industry is also using focused marketing toward people experiencing behavioral health conditions.

Adults who reported behavioral health conditions were more likely to use ENDS than those who did not report a behavioral health condition. They are also more often exposed to someone else's ENDS aerosol in public places, particularly indoors.

Adults who report behavioral health conditions are more likely to smoke cigarettes than those who do not report such conditions. They are also more likely to be exposed to secondhand smoke at work than those who did not report such a condition. Without details about where Adult Tobacco Survey respondents work, we cannot explore reasons for this relationship.

In 2023, the Adult Tobacco Survey sampled too few adults who smoke and reported behavioral health conditions to detect a disparity in smoking quit attempts. Adults who smoke and reported behavioral health conditions were more likely to report obstacles to quitting smoking than those who did not report such conditions, particularly cravings for a cigarette and loss of a way to handle stress.

Population of Focus: Young Adults

WYSAC considered respondents as young adults when they were between the ages of 18 and 29.

ENDS and Young Adults

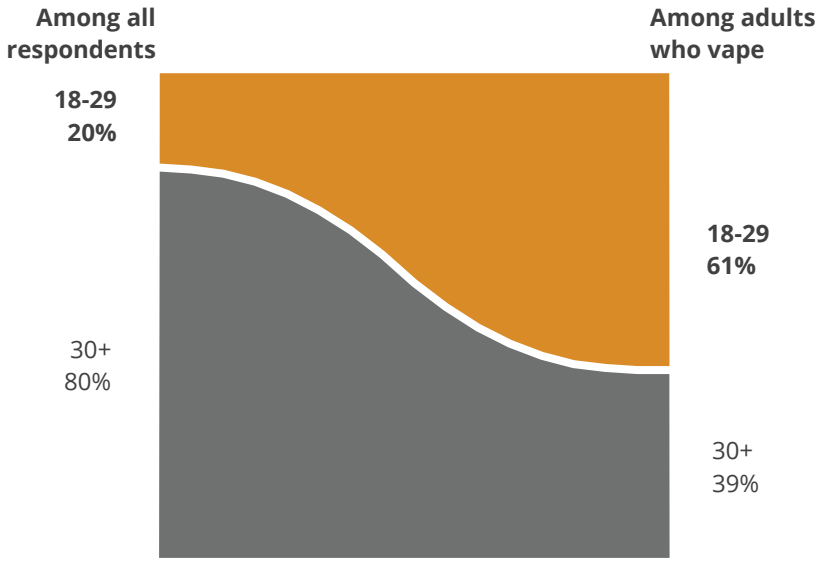
Young adults (aged 18-29) are a population of focus because young adulthood is an impressionable stage when people may begin a lifelong smoking or vaping habit (Biener & Albers, 2004; Lee et al.,

2020). Additionally, nicotine use as the brain develops through the age of 25 (roughly) can change the brain to make it more vulnerable to additional addictions, cause difficulties in attention and thinking, and increase risk for behavioral health issues (USDHHS, 2016). Much like the commercial tobacco industry has targeted youth (Farber & Folan, 2017), the ENDS industry has targeted young adults with advertising and marketing that are attractive to them and has used social media as a pathway to reach young adults (Lee et al., 2020; Willis & Mindicino, 2020). The ENDS industry's focused efforts have contributed to disproportionately higher ENDS use rates for young adults (Willett et al., 2019).

Figure 38: Young Adults (Ages 18–29) Were Over-Represented Among Adults Who Currently Use ENDS

Percentage of adults who currently vape by age

If there was no disparity, the proportions on each side of the graph would be equal, or the line would be straight



Note: The ENDS industry has targeted young adults (Lee et al., 2020).

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ENDS Use

Young adults (32%) were significantly more likely to use ENDS than other adults (5%). ENDS use may lead to later initiation of smoking, but more research is needed to investigate this potential pathway to smoking and, potentially, other commercial tobacco or nicotine products.

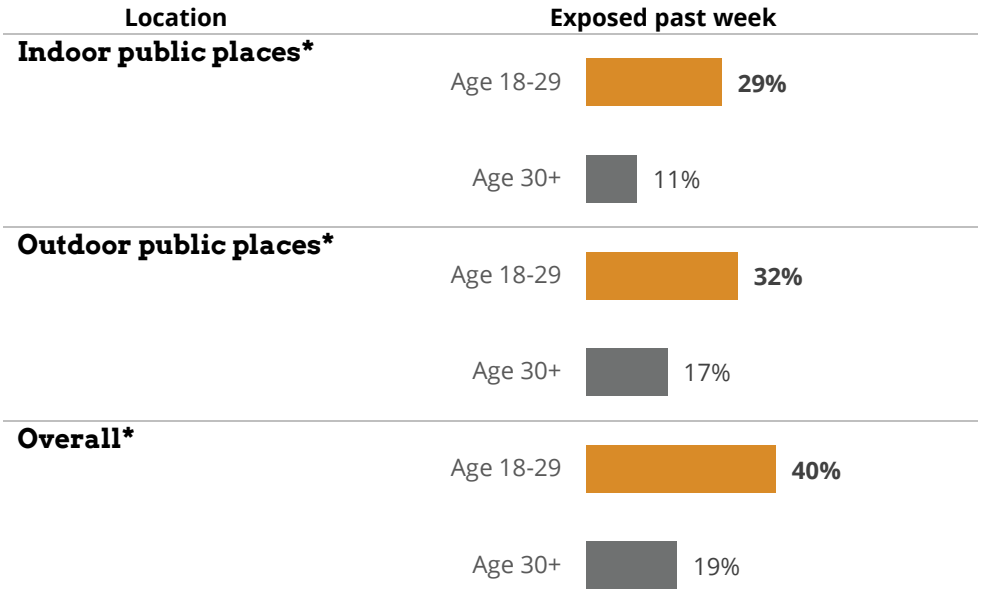
Young adults were over-represented among adults who used ENDS every day or some days. While only 20% of adults who responded to the survey reported being ages 18-29, they made up 61% of adults who currently used ENDS in the survey (Figure 38).

Exposure to ENDS Aerosol in Public Places

In 2023, young adults (40%) were nearly twice as likely to report being exposed to someone else's ENDS aerosol in public places, indoors or outdoors, in the past seven days, compared to other adults (19%; Figure 39). In indoor public places, young adults (29%) were significantly more likely to report exposure to secondhand aerosol. Secondhand aerosol exposure in outdoor public places was also significantly higher among young adults (32%).

Figure 39: Exposure to ENDS Aerosol in Public Places Was Significantly Higher for Young Adults

Percentage of adults who had been exposed to someone else's ENDS aerosol in public places in the past seven days by age



Note: * indicates a significant difference by age.

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Cigarettes and Young Adults

Adult Tobacco Survey data (see Goal Area 1: Preventing Commercial Tobacco Use) show that most adults who smoke start smoking as youths or young adults. Young adulthood is an impressionable stage when people may begin a lifelong smoking habit, or a habit that had begun during adolescence could become set (Biener & Albers, 2004; Lee et al., 2020), making them a population of focus. The commercial tobacco industry has targeted young adults with advertising and marketing that promises to help them create the attractive, successful, and popular personas they seek (Farber & Folan, 2017). Industry campaigns promote messages, values, and product features designed specifically for young adults (Lee et al., 2020). Commercial tobacco companies place these campaigns in places young adults frequent most, such as colleges, fraternities, and bars (Ling & Glantz, 2002). With such

targeted industry efforts, young adults are a population of focus and require equally targeted efforts for control strategies aimed at commercial tobacco and nicotine prevention.

Cigarette Use

The smoking rate of young adults (16%) was similar to the smoking rate of other adults (10%; Figure 40).

Young adults were more likely to have never tried a cigarette: 38% of young adults have never tried a cigarette, compared to 25% of other adults. Because so few adults begin smoking after the age of 21 (see the Goal Area 1: Preventing Commercial Tobacco Use section), this difference between age cohorts may indicate that experimentation with cigarettes is becoming less common over time.

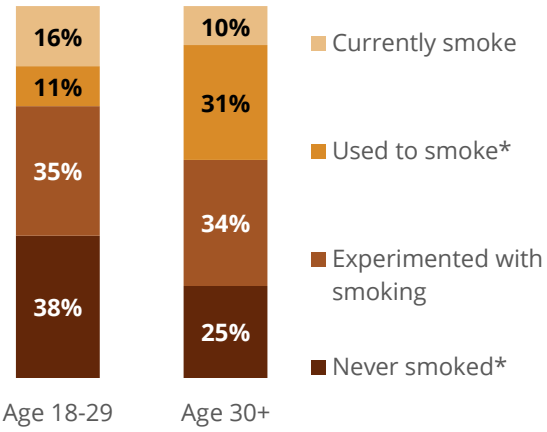
Young adults were significantly less likely to have smoked regularly and then quit (11%), compared to other adults (31%).

As shown in the ENDS Use section above, young adults are more likely to use ENDS (32%), which may lead to later initiation of smoking cigarettes. More research is needed to investigate this potential pathway to smoking or the use of new and emerging commercial nicotine products (such as nicotine pouches). Research about potentially complex relationships between the use of various commercial tobacco and nicotine products is currently lacking.

Table 8 details the four categories of smoking status used in Figure 40.

Figure 40: Young Adults Are More Likely to Have Never Tried a Cigarette

Smoking status by age: Adults or young adults who …



Note: * indicates a significant difference by age.

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Table 8: Definitions of Smoking Status

Responses to the Adult Tobacco Survey led to four key categories of smoking status

	Adults Who Currently Smoke	Adults Who Used to Smoke	Adults Who Experimented with Smoking	Adults Who Never Smoked
	Adults Who Smoke or Have Smoked Regularly			
Now smoke daily or some days	✓			
Smoked at least 100 cigarettes in lifetime	✓	✓		
Ever tried smoking	✓	✓	✓	

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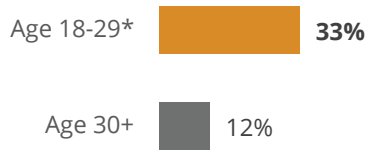
Exposure to Secondhand Smoke at Work

In 2023, 33% of young adults were exposed to someone else's secondhand smoke at work. Young adults were more likely to be exposed to secondhand smoke at work than other working adults (Figure 41).

A possible explanation for this is an occupational disparity, as young adults who work in the service, maintenance, and transportation industries are at a higher risk of exposure to secondhand smoke than those working in other industries (Holmes & Ling, 2017). However, the 2023 Adult Tobacco Survey did not collect information about specific occupations.

Figure 41: Exposure to Secondhand Smoke at Work Is Significantly Higher for Young Adults

Percentage of adults who had been exposed to secondhand smoke at work by age



Note: * indicates a significant difference by age.

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Conclusion

The 2023 Adult Tobacco Survey data highlight the impact of the commercial tobacco industry's targeted efforts to engage already vulnerable populations in commercial tobacco or nicotine use.

Young adults were significantly more likely to use ENDS than other adults (age 30 and older).

Young adults were significantly more likely than other adults to have been exposed to secondhand ENDS aerosols in public places or secondhand smoke at work in the last week. Without details about where Adult Tobacco Survey respondents work, we cannot explore the reasons for this relationship.

Young adults were more likely to have never tried a cigarette compared to other adults.

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Appendix A: 2023 Adult Tobacco Survey Frequency Tables

Appendix A consists of tables reporting Wyoming's state-level unweighted counts, weighted percentages, and 95% confidence intervals (CIs) for weighted percentages for every survey item and WYSAC-calculated variable. The unweighted counts represent the number of respondents who gave each response. The weighted 2023 Adult Tobacco Survey data are reflective of the Wyoming adult population; therefore, WYSAC uses them when reporting percentages and throughout the body of the report. Using a logit transform, Stata's confidence intervals for percentages will range between 0% and 100% and do not cross those endpoints. Cues for telephone interviewers are included in the spreadsheet to clarify the interviewees' experiences. Similar text was used in the online survey.

In 2023, for randomly sampled phone numbers with a valid email or postal address, WYSAC offered the option to complete the survey online, rather than by phone with an interviewer. Due to this change in data collection methods (see Appendix B: 2023 Adult Tobacco Survey Data Collection Methods for details), there are three tables for each variable: an overall table of estimates, a table of estimates for online respondents, and a table of estimates for telephone respondents. A separate document will explore differences by mode of completion (online or phone). WYSAC suppressed tables for questions with fewer than 50 respondents and for variables calculated from such questions. Additionally, WYSAC suppressed tables for phone and online respondents when either mode had fewer than 50 respondents, while retaining the overall table if it included 50 or more respondents.

WYSAC lists questions and response options in the order they were asked of the 2,733 respondents (except where the response option order was randomized, as indicated in the tables). WYSAC also includes the abbreviated variable names used in the data file in parentheses following each question.

WYSAC generally treated responses of "don't know/not sure" and "refused/no answer/blank" as missing data. However, if "don't know/not sure" accounted for at least 5% of all responses, including "don't know/not sure," then WYSAC did not treat the answers as missing. For example, WYSAC treated "don't know/not sure" as a valid response for the item about opinions on whether using ENDS is harmful to one's health (see wyharmecig_dk). Overall, this item included 199 respondents who answered "don't know/not sure" while 2,528 respondents provided their opinions. For this item, "don't know/not sure" accounted for about 7% (199/2,727) of all responses.

The survey involved a complex skip pattern; certain respondents were asked particular questions based on their answers to earlier survey questions. Respondents who were not asked a particular question are excluded from the percentage calculations. In the tables, "system missing" generally means that respondents were not asked a given question based on their prior responses. For example, smokers who had not tried to quit in the past year were not asked about what they used to try

to quit smoking in the past year. They appear in the "system missing" row of the relevant tables. Any other respondents without a recorded answer are also included in the totals for system missing.

Percentages will not total 100% on variables where respondents could choose more than one response option. On other items, reported percentages may not total 100% because of rounding. Estimates with few observations in the frequency column may appear as 0% due to rounding.

The survey reminded respondents that tobacco use in the survey referred specifically to commercial tobacco and not the ceremonial, sacred, or traditional use of tobacco by some American Indian communities. Traditional tobacco is tobacco and/or other plant mixtures grown or harvested and used by American Indians and Alaska Natives for ceremonial or medicinal purposes. Additionally, WYSAC categorized smoking status into four groups (Table A1):

Table A1: Definitions of Smoking Status

Responses to the Adult Tobacco Survey led to four key categories of smoking status

	Adults Who Currently Smoke	**Adults Who Used to Smoke**	**Adults Who Experimented with Smoking**	**Adults Who Never Smoked**
	Adults Who Smoke or Have Smoked Regularly			
Now smoke daily or some days	✓			
Smoked at least 100 cigarettes in lifetime	✓	✓		
Ever tried smoking	✓	✓	✓	

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As a general reference, Table A2 shows the smoking rate for the overall sample. Tables for telephone and online respondents are in the spreadsheet.

Table A2: Current smoking status (Calculated)

Calculated percentages of all respondents

	Estimate	Lower CI	Upper CI	Frequency
Currently smoke every day or some days	12%	9%	15%	175
Currently do not smoke	88%	85%	91%	2,542
Valid total	100%			2,717
Unknown				16
System missing				0
Total				2,733

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The size and number of the tables for this appendix would not be conducive to printing, so they are available online here: https://wysac.uwyo.edu/wysac/reports/View/7737

Appendix B: 2023 Adult Tobacco Survey Data Collection Methods

Summary and Limitations

In this appendix, WYSAC provides the technical details of the methods used to collect the data for the 2023 Adult Tobacco Survey as reported by WYSAC's Survey Research Center experts Brian Harnish, Michael Dorssom, and Brittany Cangialosi.

Protocols for the 2023 Adult Tobacco Survey and earlier iterations of the Adult Tobacco Survey (2002, 2004, annually 2006–2010, 2012, 2015, 2017, 2019, and 2021) were generally similar in that they were based on a random sample of telephone numbers for noninstitutionalized adults 18 years of age and older in Wyoming, which allowed WYSAC to perform analyses of trends for comparable questions on the surveys. New in 2023, for sampled phone numbers with valid email or postal addresses, WYSAC offered an option to complete the survey online.

WYSAC and the SUTPP developed the 2023 Adult Tobacco Survey items based on the 2021 Adult Tobacco Survey questionnaire including CDC's earlier core and supplemental survey items as well as state-added questions to meet the SUTPP's data needs. The changes made for the 2023 Adult Tobacco Survey reflect an emphasis on collecting data that the SUTPP can use to assess their efforts and on reducing the burden of data collection for people who complete the survey. The 2023 Adult Tobacco Survey included the following key changes:

- ➔ Dropping a question about the intention to quit smoking cigarettes completely
- ➔ Dropping questions about the age of starting daily smoking
- ➔ Dropping a question about buying cigarettes for themselves in the past 30 days
- ➔ Modifying questions about the use of chewing tobacco, snuff, or dip to add snus while dropping questions specifically about snus use
- ➔ Modifying questions about the number of days using non-cigarette commercial tobacco products in the past 30 days to yes/no questions about the past 30-day use (including chewing tobacco, snuff, dip, or snus; cigars, cigarillos, or very small cigars; a regular pipe; and a hookah or other water pipe)
- ➔ Dropping a question about using chewing tobacco, snuff, dip, or snus in places where cigarette smoking was not allowed
- ➔ Dropping a question about whether ENDS were on the market when starting cigarette smoking
- ➔ Adding a question about using menthol-flavored ENDS
- ➔ Dropping a question about the brands of ENDS used most often
- ➔ Modifying a question about reasons for using ENDS:

  - Changing the wording of a reason from "To reduce cigarette consumption" to "To smoke less but not necessarily quit" and
  - Dropping the reason "E-cigarette or vape pens taste better"
- ➔ Modifying a question about using heat-not-burn or heated tobacco products like IQOS to add Eclipse as an example
- ➔ Modifying questions about using quit aids such as a class or program, one-on-one counseling, and an online or app-based service to specify quit aids other than the Wyoming Quit Tobacco program for quitting smoking and using ENDS
- ➔ Dropping "lack of support from others to quit" from a question about obstacles that made it hard to quit smoking cigarettes
- ➔ Dropping a question about someone else smoking cigarettes inside the respondent's home
- ➔ Modifying a question about the number of days exposed to secondhand cigarette smoke at the workplace in the past seven days to a yes/no question about the past seven-day exposure at their workplace
- ➔ Dropping questions about support for a state law in Wyoming banning smoking in indoor workplaces, outdoor workplaces, restaurants, bars, or casinos and clubs
- ➔ Adding a question about exposure to secondhand ENDS aerosol in outdoor public places
- ➔ Modifying questions about the number of days exposed to secondhand cigarette smoke or secondhand ENDS aerosol in public places in the past seven days to yes/no questions about the past seven-day exposure in public places
- ➔ Adding a question about the perceived harmfulness in breathing in secondhand ENDS aerosol
- ➔ Adding a question about the perceived harmfulness in smoking cigarettes
- ➔ Dropping a question about the opinion on how healthy it is to completely switch from cigarette smoking to using ENDS
- ➔ Dropping a question about the perceived harmfulness of using ENDS compared to smoking cigarettes
- ➔ Dropping questions about the presence of children aged 17 or younger in the home and smoking cigarettes in front of them
- ➔ Modifying a question about support for increasing Wyoming's cigarette tax from asking for the dollar amount of the increase to asking for whether they support an increase
- ➔ Made modifications to questions asking about gender identity and sexual orientation

Data Limitations

Most Adult Tobacco Survey items have been tested and validated by the CDC and reused over time. However, the Adult Tobacco Survey relies on self-reported data, respondents' recollection of past events, and their interpretation of the survey items. Therefore, the results presented in WYSAC's reporting might include recall errors or respondent bias (such as underreporting undesirable behaviors).

The ATS does not look at causation. While correlation can imply causation in some cases, it is important to remember that the ATS cannot show causation.

Unlike previous iterations of the Wyoming Adult Tobacco Survey, which were conducted exclusively via phone, the 2023 Adult Tobacco Survey introduced two response modes: online and phone. In 2023, 42% of respondents completed the survey online, while 58% responded via phone. WYSAC examined the demographic characteristics of respondents (unweighted frequencies) by mode:

- ➔ The online survey had a lower proportion of young adults (ages 18-29) than the phone survey.
- ➔ The online survey had a higher proportion of women than the phone survey.
- ➔ The online survey had a lower proportion of American Indian respondents than the phone survey.
- ➔ The online survey had a lower proportion of respondents with low income (annual household income less than $30,000) than the phone survey.
- ➔ The online survey had a lower proportion of respondents with behavioral health conditions than the phone survey.

Also, not all estimates have the same level of precision due to survey skip patterns, analysis of subgroups, and the combination of both. For example, questions asked only of smokers tend to have smaller sample sizes than other questions asked of everyone. A small sample size reduces the precision of an estimate. Estimates for small subgroups, such as people who identify as African American in Wyoming, are less precise than estimates for larger subgroups, such as people who identify as White/Caucasian Americans. In some cases, fewer than 50 people were asked a question. Estimates generated from such small groups are extremely imprecise, so WYSAC does not report them in the body or appendices of the report. WYSAC is available to discuss estimates for these items.

The remainder of this appendix is the technical summary produced by WYSAC's Survey Research experts noted above.

Approach and Methodology

Questionnaire Design

The questionnaire used for the 2023 Wyoming Adult Tobacco Survey (ATS) is based on the list of core and supplemental questions originally from CDC Office on Smoking and Health (OSH) State Adult Tobacco Survey Questions. For every past iteration, the core CDC questions are asked along with a number of optional questions provided by the CDC, as well as questions added at the discretion of each state. The questionnaire used for the 2023 iteration is based on the questionnaire used in the 2021 iteration, with slight modifications of addition and subtraction of a few questions of interest, as well as a few wording changes. The current iteration of the survey underwent a significant change in that a dual-mode was introduced in 2023. The questionnaire was programmed for web data collection, as well as computer-aided telephone interviews. Where possible, questions were identical in both modes, and all efforts were made to stay as consistent as possible in cases where mode differences necessitated wording changes to either questions or choices.

Sample Design

The ATS is an overlapping dual-frame Random Digit Dialing (RDD) telephone survey. "Dual-frame" refers to sampling both the landline and cell phone frames. "Overlap" refers to the telephone survey methodology where dual users, individuals who can be reached on both the cell phone and the landline frames, can come from either frame.[1]

The eligible population was non-institutionalized adults 18 years of age and older. Sufficient data was collected to make precise estimates of various smoking-related health outcomes for the Wyoming state population. This data will be combined with data from other iterations of the ATS to estimate ATS outcomes for all 23 Wyoming counties.

For landline telephone numbers, one adult aged 18 or older was randomly selected from households with at least one adult aged 18 or older. Cell phones were treated as a single-user device. The adult aged 18 or older reached via a cell phone that answered the phone was selected. For records with an email address and/or a mailing address appended, those who had completed the survey online were treated as single users and no random selection within the household was performed.

A telephone sample for this project was purchased from our scientific survey sample vendor, Marketing Systems Group (MSG). The two frames utilized were Listed Landline frame (Listed LL), and the Advanced Cellular Frame (ACF). The Listed LL frame consists of all listed landline telephone numbers in Wyoming. The Advanced Cellular Frame, a proprietary MSG product, includes both listed and RDD frames, providing the best opportunity to include nearly every cellular telephone in

[1] An overlap design is distinguished from a screened design. In a screened design dual-users selected from the cell phone frame are screened out.

our target geography. Importantly, this frame includes the in-ward migration population in Wyoming that may have a number from another geography.

For both sample frames (Listed LL and ACF), MSG appended known mailing address and known email address, where possible. MSG updates this information daily from over 200 authoritative sources, such as those used in identity authentication and validation of digital transactions.

Sample Management

Upon receipt of the survey sample from MSG, email invitations were fielded to all who had a valid email address associated with the phone record. Then, an invitation letter that encouraged completing the survey on the web was sent to all with a valid mailing address appended (who did not respond to the email, if applicable). Sample with no email or mailing address information was fielded immediately in the phone mode. For records with email append and/or mailing address append, records were moved to the phone mode after the email and/or mailing efforts occurred and no final disposition was achieved.

In the telephone mode, sample was released and worked, following CDC guidelines[2]. For the landline sample, only numbers which were not pre-screened as disconnected, cellphone, or businesses were released for calling. For the cellular sample, MSG's screening service was used to prescreen non-working cellular numbers from the cellular sample prior to telephone fielding. All numbers were attempted until a final disposition was achieved for most sample members. Final disposition codes were assigned to telephone numbers which had not already received a final disposition only after 9 or more call attempts consist of at least 3 weekday calls, 3 weeknight calls, and 3 weekend calls. The rules governing the assignment of final disposition codes are imbedded in the Ci3 program of the questionnaire and follow the CDC guidelines.

The CDC's guidelines require attempting soft refusals again in an effort at refusal conversion. These were handled by our most experienced and specially trained interviewers. These numbers were attempted until receiving a second refusal (final), a completed survey, or other final disposition.

In total, 87,060 cellular telephone numbers were generated for this study from the ACF frame and 17,760 landline telephone numbers were generated from the Listed LL frame. After removing those sample members pre-screened by the sample provider as disconnected, non-working, or business numbers, 42,126 valid cellular numbers and 9,886 valid landline numbers remained for fielding (52,012 total records).

A total of 15,731 sample records had an email match to which were sent a single email invitation and one reminder. A total of 22,353 records had a valid mailing address match, making them eligible for a paper invite to the web – this includes all of the 15,731 sample members with an email address. Paper invitations were sent to all records for which no final disposition was achieved during the email effort. Finally, a total of 105,724 attempts were made by phone to those that did not respond

[2] See Guidelines for Conducting General Population State Adult Tobacco Telephone Surveys, November 2011.

via email or letter in an effort to reach a final disposition. Some numbers were called up to 15 times before they were assigned a final disposition code, which resulted in a 2.28 average number of call attempts per record.

Fielding Period

Individuals who had valid emails were invited to complete the survey via email. Initial email invites were emailed to individuals on 5/2/2023. An email reminder was sent to those who did not respond to the initial email invite on 5/9/2023.

On 5/8/2023, invite letters that encouraged individuals to complete the survey via the web were mailed to individuals who had mailing addresses and either did not have an email address or had undeliverable email addresses from the initial email invites. A second invitation letter was mailed to those who had not responded on 5/23/23.

Sample members who did not have email or mailing information were fielded in the phone mode at the project start. After completion of the email and mailing efforts, all records with no final disposition were moved to the phone mode. Well-trained WYSAC telephone interviewers conducted the telephone interviews. Most callers have significant experience on previous Adult Tobacco Surveys conducted by WYSAC for other states in recent years. Calling began on 5/29/2023 and concluded on 8/24/2023. Throughout the fielding period, calling took place on Sunday through Thursday evenings until 9 PM, as well as Friday and Saturday afternoons beginning at noon.

Response Rates

A total of 2,733 surveys were completed during the fielding period. A total of 1,144 surveys were completed via the web. A total of 1,184 surveys were completed on cellular phones, while 405 surveys were completed on landlines. The average phone interview length was 17 minutes and 42 seconds. Response rates are reported by sample frame, regardless of mode of completion.

The AAPOR3 response rate formula is:

$$e = \frac{r + n}{r + n + i}$$

$$\text{AAPOR3RR} = \frac{r}{r + n + e * u}$$

Where, *r*=respondents, *n*=nonrespondents, *u*=unknown response status, and *i*=ineligible. Response rates are presented in Tables B1 and B2. The overall response rate is the weighted average of the response rates in the three frames by listed/not-listed combinations, where the weight is the total sample fielded.

Table B1: Response Rates with Percentages

Frame	Respondent (%)	Nonrespondent (%)	Unknown (%)	Ineligible (%)	E (%)	AAPOR RR3
Landline	10.3	3.1	65.1	21.5	38.4	26.9
Cell—listed	7.4	2.6	69.5	20.4	33.0	22.5
Cell—not listed	1.7	1.5	52.1	44.7	6.7	25.0
Overall						24.4

Table B2: Response Rates with Quantities

Frame	Respondent	Nonrespondent	Unknown	Ineligible	E (%)	AAPOR RR3
Landline	1,018	305	6,429	2,125	38.4	26.9
Cell—listed	1,399	495	13,091	3,841	33.0	22.5
Cell—not listed	316	289	9,757	8,374	6.7	25.0
Overall						24.4

Appendix C: Statistical Analysis Methods and Detailed Results

Appendix C provides details of statistical analyses summarized in the body of the report. WYSAC does not provide interpretations of the statistical test results in Appendix C because they are provided in the body of the report.

WYSAC analyzed the data using Stata, version 16.1 with the complex sample survey methods available in that statistical package. Relationships and linear trends noted as significant in the body of the report are statistically significant, $p < .05$.

WYSAC generally treated responses of "don't know/not sure" and "refused/no answer/blank" as missing data. However, if "don't know/not sure" accounted for at least 5% of all responses, including "don't know/not sure," then WYSAC did not treat the answers as missing. For example, WYSAC treated "don't know/not sure" as a valid response for the item about opinions on whether using ENDS is harmful to one's health. Overall, this item included 199 respondents who answered "don't know/not sure" while 2,528 respondents provided their opinions. For this item, "don't know/not sure" accounted for about 7% (199/2,727) of all responses.

For statistical analysis, WYSAC performed logistic regression and multinomial logistic regression to identify associations with time (difference since a reference year or other changes over time longer than two years).

WYSAC also used logistic regression and multinomial logistic regression to test for associations between a dependent variable and respondent's characteristics (independent variables) such as smoking status for different demographic groups. Details about how we defined each group are in the main body of the report, with brief reminders in these appendices. For logistic regression, a model is a contrast between a given outcome and the base outcome of a dichotomous dependent variable with the outcome of interest coded as 1 and the base outcome coded as 0. For multinomial logistic regression, a dependent variable has more than two categorical outcomes. A multinomial logistic regression model with a three-category dependent variable has two contrasts, each comparing a given outcome and a selected base outcome.

For logistic and multinomial logistic regression analyses, WYSAC centered the year variable at 2000 by subtracting 2000 from each year value (for example, 2023 becomes 23). This centering does not change the relationship between year and the dependent variable (the slope) but changes the intercept, making 0 correspond to the year 2000 instead of Year 0. This approach generally reduces intercept values, avoiding extremely large or small intercepts that might be expressed in scientific notation, which can be difficult to interpret.

Each table within this appendix reports the coefficients (Bs) for each level of independent variable (except for reference groups), their standard errors (SEs), Odds Ratios (ORs) for logistic regression,

relative-risk ratios (RRR) for multinomial logistic regression, t-statistics, and their p-values. When an independent variable is dummy coded, its reference group is indicated in the table.

Because odds ratios from logistic regression are less intuitive than relative risk, and thus less useful to lay audiences of the main report body, WYSAC provides odds ratios in this appendix for technical audiences and relative risk estimates in the main body.

When a multinomial logistic regression model was statistically significant, WYSAC additionally calculated a table of average marginal effects to help with interpretation; in the table, coefficients (Bs) are the average marginal effects. However, when the model was not statistically significant, WYSAC did not generate the table of average marginal effects. WYSAC presents the tables in the order the relevant summaries appear in the main body of the report.

Electronic Nicotine Delivery System (ENDS)

2023 ENDS Use in Wyoming

Table C1: Logistic Regression of Current ENDS Use: Change over Time 2015–2023

Variable	B	SE	OR	t	p
Year	0.069	0.027	1.071	2.557	0.011
Intercept	-3.840	0.495	0.021	-7.757	<0.001

Table C2: Logistic Regression of Current ENDS Use: Difference between 2021 and 2023

Variable	B	SE	OR	t	p
2021 (reference)					
2023	0.251	0.255	1.286	0.985	0.324
Intercept	-2.426	0.185	0.088	-13.124	<0.001

Flavored ENDS Use

Table C3: Logistic Regression of Flavored ENDS Use in the Past 30 Days among Adults Who Currently Use ENDS: Change over Time 2017–2023

Variable	B	SE	OR	t	p
Year	0.001	0.083	1.001	0.013	0.990
Intercept	1.659	1.632	5.255	1.017	0.310

Table C4: Logistic Regression of Trying ENDS for the Flavoring among Adults Who Had Tried ENDS in Their Lifetime: Change over Time 2017–2023

Variable	B	SE	OR	t	p
Year	0.027	0.036	1.028	0.745	0.456
Intercept	-0.781	0.710	0.458	-1.101	0.271

Reasons for Trying ENDS

Table C5: Logistic Regression of the Reason for Using ENDS among Adults Who Currently Use ENDS: For the Flavoring: Change over Time 2017–2023

Variable	B	SE	OR	t	p
Year	-0.009	0.069	0.991	-0.128	0.898
Intercept	0.705	1.360	2.024	0.518	0.604

Table C6: Logistic Regression of the Reason for Using ENDS among Adults Who Currently Use ENDS: To not Disturb Other People with Smoke: Change over Time 2015–2023

Variable	B	SE	OR	t	p
Year	0.029	0.047	1.029	0.604	0.546
Intercept	-0.420	0.875	0.657	-0.480	0.631

Table C7: Logistic Regression of the Reason for Using ENDS among Adults Who Currently Use ENDS: To Quit Smoking Cigarettes: Change over Time 2015–2023

Variable	B	SE	OR	t	p
Year	0.034	0.048	1.035	0.724	0.469
Intercept	-0.294	0.880	0.745	-0.334	0.738

Table C8: Logistic Regression of the Reason for Using ENDS among Adults Who Currently Use ENDS: ENDS Might Be Less Harmful than Cigarettes: Change over Time 2015–2023

Variable	B	SE	OR	t	p
Year	-0.109	0.052	0.896	-2.087	0.037
Intercept	2.304	0.971	10.019	2.374	0.018

Table C9: Logistic Regression of the Reason for Using ENDS among Adults Who Currently Use ENDS: For a Drug Other than Nicotine (e.g., Marijuana): Change over Time 2017–2023

Variable	B	SE	OR	t	p
Year	0.260	0.118	1.297	2.208	0.027
Intercept	-6.910	2.418	<0.001	-2.858	0.004

Do People Think ENDS Use Is Harmful?

Table C10: Multinomial Logistic Regression of Opinion on Whether Using ENDS Is Harmful to One's Health: Change over Time 2017–2023

Variable	B	SE	RRR	t	p
Not at all harmful					
Year	0.026	0.071	1.026	0.363	0.717
Intercept	-1.462	1.288	0.232	-1.136	0.256
Somewhat harmful					
Year	0.113	0.027	1.120	4.124	<0.001
Intercept	-1.115	0.513	0.328	-2.172	0.030
Very harmful					
Year	0.339	0.026	1.403	12.899	<0.001
Intercept	-5.101	0.495	0.006	-10.314	<0.001
Don't know (base outcome)					

Table C11: Marginal Effects of Year on Opinion on Whether Using ENDS Is Harmful to One's Health: Change over Time 2017–2023

Variable	B	SE	t	p
Not at all harmful	-0.007	0.002	-3.479	<0.001
Somewhat harmful	-0.030	0.003	-9.715	<0.001
Very harmful	0.059	0.003	19.008	<0.001
Don't know	-0.022	0.002	-10.289	<0.001

Starting ENDS Use

Table C12: Logistic Regression of Using ENDS Before Ever Trying Cigarette Smoking among Adults Who Currently Smoke (1 = Trying ENDS First vs. 0 = Trying Cigarettes First): Change over Time 2017–2023

Variable	B	SE	OR	t	p
Year	0.054	0.059	1.056	0.923	0.356
Intercept	-2.258	1.123	0.105	-2.010	0.044

Table C13: Logistic Regression: Using ENDS Before Ever Trying Cigarette Smoking among Adults Who Used to Smoke (1 = Trying ENDS First vs. 0 = Trying Cigarettes First): Change over Time 2017–2023

Variable	B	SE	OR	t	p
Year	0.106	0.061	1.112	1.733	0.083
Intercept	-3.586	1.248	0.028	-2.872	0.004

Table C14: Logistic Regression: Using ENDS Before Ever Trying Cigarette Smoking among Adults Who Experimented with Smoking (1 = Trying ENDS First vs. 0 = Trying Cigarettes First): Change over Time 2017–2023

Variable	B	SE	OR	t	p
Year	0.224	0.081	1.251	2.770	0.006
Intercept	-5.054	1.614	0.006	-3.132	0.002

Quitting ENDS Use

Table C15: Logistic Regression of Trying to Quit ENDS Use in the Past Year or in Their Lifetime among Adults Who Currently Use ENDS: Difference between 2021 and 2023

Variable	B	SE	OR	t	p
2021 (reference)					
2023	1.213	0.516	3.363	2.352	0.019
Intercept	-0.648	0.392	0.523	-1.654	0.098

Cigarette Smoking and Use of Other Commercial Tobacco and Nicotine Products

Cigarette Smoking in 2023

Table C16: Logistic Regression of Current Smoking: Change over Time 2006–2023

Variable	B	SE	OR	t	p
Year	-0.033	0.006	0.967	-5.474	<0.001
Intercept	-1.152	0.080	0.316	-14.469	<0.001

Other Commercial Tobacco and Nicotine Products (Including ENDS)

Table C17: Logistic Regression of Current ENDS Use: Change over Time 2015–2023

Variable	B	SE	OR	t	p
Year	0.069	0.027	1.071	2.557	0.011
Intercept	-3.840	0.495	0.021	-7.757	<0.001

Table C18: Logistic Regression of Chewing Tobacco, Snuff, Dip, or Snus Use in the Past 30 Days Change over Time 2010–2023

Variable	B	SE	OR	t	p
Year	-0.017	0.014	0.983	-1.268	0.205
Intercept	-2.081	0.231	0.125	-8.992	<0.001

Table C19: Logistic Regression of Cigar Use in the Past 30 Days: Change over Time 2010–2023

Variable	B	SE	OR	t	p
Year	-0.049	0.022	0.952	-2.267	0.023
Intercept	-2.180	0.373	0.113	-5.852	<0.001

Table C20: Logistic Regression of Regular Pipe Use in the Past 30 Days: Change over Time 2010–2023

Variable	B	SE	OR	t	p
Year	-0.061	0.048	0.940	-1.281	0.200
Intercept	-3.592	0.826	0.028	-4.348	<0.001

Table C21: Logistic Regression of Water Pipe Use in the Past 30 Days: Change over Time 2010–2023

Variable	B	SE	OR	t	p
Year	-0.121	0.031	0.886	-3.873	<0.001
Intercept	-2.991	0.499	0.050	-5.991	<0.001

Goal Area 1: Preventing New Commercial Tobacco Use

Age of Smoking a Whole Cigarette for the First Time

Table C22: Logistic Regression of Smoking a Whole Cigarette for the First Time Before Age 21 (1 = Ages < 21 vs. 0 = Ages 21+): Change over Time 2010–2023

Variable	B	SE	OR	t	p
Year	-0.005	0.014	0.995	-0.383	0.702
Intercept	2.371	0.214	10.712	11.079	<0.001

Goal Area 2: Eliminating Exposure to Secondhand Smoke for People Who Do Not Smoke

Support for Smokefree Indoor Air Policies at Restaurants, Workplaces, Casinos and Clubs, and Bars

Table C23: Logistic Regression of Support for Smokefree Indoor Workplace Policies: Change over Time 2015–2023

Variable	B	SE	OR	t	p
Year	0.008	0.016	1.008	0.477	0.633
Intercept	1.433	0.294	4.193	4.870	<0.001

Table C24: Logistic Regression of Support for Smokefree Indoor Workplace Policies: Difference between 2021 and 2023

Variable	B	SE	OR	t	p
2021 (reference)					
2023	0.073	0.173	1.075	0.420	0.675
Intercept	1.540	0.113	4.665	13.594	<0.001

Table C25: Logistic Regression of Support for Smokefree Indoor Restaurant Policies: Change over Time 2015–2023

Variable	B	SE	OR	t	p
Year	0.061	0.014	1.063	4.334	<0.001
Intercept	0.234	0.250	1.264	0.936	0.349

Table C26: Logistic Regression of Support for Smokefree Indoor Restaurant Policies: Difference between 2021 and 2023

Variable	B	SE	OR	t	p
2021 (reference)					
2023	0.919	0.172	2.508	5.356	<0.001
Intercept	1.085	0.101	2.958	10.708	<0.001

Table C27: Multinomial Logistic Regression of Support for Smokefree Indoor Bar Policies: Change over Time 2015–2023

Variable	B	SE	RRR	t	p
Allowed					
Year	0.019	0.029	1.019	0.667	0.504
Intercept	1.966	0.510	7.139	3.856	<0.001
Never allowed					
Year	0.057	0.028	1.059	2.034	0.042
Intercept	1.309	0.502	3.703	2.606	0.009
Don't know (base outcome)					

Table C28: Marginal Effects of Year on Support for Smokefree Indoor Bar Policies: Change over Time 2015–2023

Variable	B	SE	t	p
Allowed	-0.008	0.003	-2.977	0.003
Never allowed	0.010	0.003	3.616	<0.001
Don't know	-0.002	0.001	-1.445	0.149

Table C29: Multinomial Logistic Regression of Support for Smokefree Indoor Bar Policies: Difference between 2021 and 2023

Variable	B	SE	RRR	t	p
Allowed					
2021 (reference)					
2023	0.019	0.314	1.019	0.059	0.953
Intercept	2.362	0.198	10.612	11.919	<0.001
Never allowed					
2021 (reference)					
2023	0.474	0.307	1.607	1.544	0.123
Intercept	2.262	0.198	9.599	11.447	<0.001
Don't know (base outcome)					

Table C30: Marginal Effects of Year on Support for Smokefree Indoor Bar Policies: Difference between 2021 and 2023

Variable	B	SE	t	p
Allowed	-0.103	0.030	-3.448	<0.001
Never allowed	0.114	0.030	3.836	<0.001
Don't know	-0.010	0.012	-0.868	0.385

Table C31: Logistic Regression of Support for Smokefree Indoor Casino & Club Policies: Change over Time 2015–2023

Variable	B	SE	OR	t	p
Year	0.026	0.011	1.026	2.307	0.021
Intercept	-0.425	0.203	0.654	-2.093	0.036

Table C32: Logistic Regression of Support for Smokefree Indoor Casino and Club Policies: Difference between 2021 and 2023

Variable	B	SE	OR	t	p
2021 (reference)					
2023	0.452	0.121	1.572	3.730	<0.001
Intercept	-0.135	0.084	0.874	-1.606	0.108

Support for Other Smokefree Air Policies

Commercial Tobacco-Free School Policies

Table C33: Logistic Regression of Support for Tobacco-Free Schools: Change over Time 2010–2023

Variable	B	SE	OR	t	p
Year	-0.009	0.011	0.991	-0.827	0.408
Intercept	1.942	0.179	6.974	10.843	<0.001

Smokefree Park Policies

Table C34: Logistic Regression of Support for Smokefree Parks (1 = Smoking Should Never Be Allowed or Restricted in Some Manner vs. 0 = Smoking Should Always Be Allowed): Change over Time 2010–2023

Variable	B	SE	OR	t	p
Year	0.033	0.010	1.034	3.319	<0.001
Intercept	0.910	0.163	2.483	5.587	<0.001

Smokefree Outdoor Workplace Policies

Table C35: Logistic Regression of Support for Smokefree Outdoor Workplace Policies (1 = Smoking Should Never Be Allowed vs. 0 = Smoking Should Always Be Allowed or Allowed in Some Manner): Change over Time 2015–2023

Variable	B	SE	OR	t	p
Year	0.006	0.015	1.006	0.388	0.698
Intercept	-1.912	0.269	0.148	-7.105	<0.001

Exposure to Secondhand Smoke

Smoking Regulations at Work

Table C36: Logistic Regression of Smoking Prohibited Indoors at Work (1 = Smoking Never Allowed vs. 0 = Smoking Always Allowed or Allowed in Some Manner): Change over Time 2019–2023

Variable	B	SE	OR	t	p
Year	0.158	0.055	1.171	2.858	0.004
Intercept	-1.135	1.151	0.322	-0.986	0.324

Table C37: Logistic Regression of Smoking Prohibited Outdoors at Work (1 = Smoking Never Allowed vs. 0 = Smoking Always Allowed or Allowed in Some Manner): Change over Time 2012–2023

Variable	B	SE	OR	t	p
Year	0.035	0.011	1.036	3.190	0.001
Intercept	-1.583	0.187	0.205	-8.444	<0.001

Exposure to Secondhand Smoke at Work and in Public Places

Table C38: Logistic Regression of Workplace Secondhand Smoke (SHS) Exposure: Change over Time 2010–2023

Variable	B	SE	OR	t	p
Year	-0.012	0.013	0.988	-0.927	0.354
Intercept	-1.214	0.213	0.297	-5.705	<0.001

Table C39: Logistic Regression of SHS Exposure in Indoor Public Places: Change over Time 2012–2023

Variable	B	SE	OR	t	p
Year	-0.055	0.015	0.946	-3.711	<0.001
Intercept	-1.053	0.241	0.349	-4.373	<0.001

Table C40: Logistic Regression of SHS Exposure in Outdoor Public Places: Change over Time 2012–2023

Variable	B	SE	OR	t	p
Year	-0.042	0.009	0.959	-4.891	<0.001
Intercept	0.052	0.145	1.053	0.355	0.722

Table C41: Logistic Regression of SHS Exposure in Indoor or Outdoor Public Places: Change over Time 2012–2023

Variable	B	SE	OR	t	p
Year	-0.050	0.009	0.951	-5.849	<0.001
Intercept	0.397	0.144	1.487	2.762	0.006

Table C42: Logistic Regression of SHS Exposure in Indoor or Outdoor Public Places: Difference by Current Smoking Status in 2023

Variable	B	SE	OR	t	p
Adults who currently smoke	0.378	0.332	1.460	1.140	0.254
Adults who do not currently smoke (reference)					
Intercept	-0.722	0.100	0.486	-7.247	<0.001

Opinions about the Harms of Secondhand Smoke

Table C43: Logistic Regression of Opinion on Harmfulness of Secondhand Smoke (1 = Very or Somewhat Harmful vs. 0 = Not at All Harmful): Change over Time 2010–2023

Variable	B	SE	OR	t	p
Year	0.038	0.022	1.039	1.721	0.085
Intercept	2.720	0.377	15.178	7.210	<0.001

Table C44: Multinomial Logistic Regression of Opinion on Harmfulness of Secondhand Smoke: Change over Time 2019–2023

Variable	B	SE	RRR	t	p
Not at all harmful (base outcome)					
Somewhat harmful					
Year	0.089	0.069	1.093	1.284	0.199
Intercept	0.776	1.476	2.172	0.525	0.599
Very harmful					
Year	-0.031	0.068	0.970	-0.447	0.655
Intercept	3.583	1.454	35.976	2.465	0.014

Table C45: Marginal Effects of Year on Opinion on Harmfulness of Secondhand Smoke: Change over Time 2019–2023

Variable	B	SE	t	p
Not at all harmful	-0.001	0.002	-0.303	0.762
Somewhat harmful	0.028	0.007	4.222	<0.001
Very harmful	-0.028	0.007	-4.121	<0.001

Goal Area 3: Promoting Quitting

Efforts to Quit Smoking

Desire to Quit among Adults Who Smoke

Table C46: Multinomial Logistic Regression of Desire to Quit among Adults Who Currently Smoke: Change over Time 2015–2023

Variable	B	SE	RRR	t	p
Want to quit					
Year	-0.129	0.065	0.879	-1.980	0.048
Intercept	4.677	1.178	107.486	3.970	<0.001
Do not want to quit					
Year	-0.110	0.067	0.896	-1.630	0.103
Intercept	3.444	1.225	31.314	2.811	0.005
Don't know (base outcome)					

Table C47: Multinomial Logistic Regression of Desire to Quit among Adults Who Currently Smoke: Difference between 2021 and 2023

Variable	B	SE	RRR	t	p
Want to quit					
2021 (reference)					
2023	-0.310	0.652	0.734	-0.475	0.635
Intercept	1.931	0.504	6.894	3.830	<0.001
Dot not want to quit					
2021 (reference)					
2023	-0.916	0.693	0.400	-1.323	0.186
Intercept	1.412	0.512	4.106	2.757	0.006
Don't know (base outcome)					

Quit Attempts among Adults Who Smoke

Table C48: Multinomial Logistic Regression of Quit Attempts among Adults Who Currently Smoke: Change over Time 2010–2023

Variable	B	SE	RRR	t	p
Never tried to quit (base outcome)					
Tried to quit in lifetime, not past year					
Year	0.029	0.035	1.030	0.841	0.401
Intercept	0.454	0.593	1.575	0.767	0.443
Tried to quit in past year					
Year	0.019	0.035	1.019	0.551	0.582
Intercept	0.608	0.572	1.836	1.063	0.288

Health Professionals' Involvement in Quitting Commercial Tobacco or Nicotine Use

Visits with Health Professionals

Table C49: Logistic Regression of Seeing a Healthcare Provider in the Past Year: Association with Tobacco/ENDS Use in 2023

Variable	B	SE	OR	t	p
Used tobacco/ENDS	-1.492	0.258	0.225	-5.775	<0.001
Did not use tobacco/ENDS (reference)					
Intercept	2.546	0.139	12.759	18.258	<0.001

Patient Experiences with Health Professionals' Support for Quitting Commercial Tobacco and Nicotine Use

Table C50: Multinomial Logistic Regression of Patients Being Asked by Health Professional about Tobacco or Nicotine Use: Association with Tobacco/ENDS Use in 2023

Variable	B	SE	RRR	t	p
Patients being asked					
Used tobacco/ENDS	1.030	0.334	2.801	3.080	0.002
Did not use tobacco/ENDS (reference)					
Intercept	1.185	0.105	3.271	11.317	<0.001
Patients not being asked (base outcome)					
Unknown					
Used tobacco/ENDS	0.508	0.664	1.662	0.764	0.445
Did not use tobacco/ENDS (reference)					
Intercept	-2.051	0.222	0.129	-9.225	<0.001

Table C51: Marginal Effects of Tobacco/Nicotine Use on Patients Being Asked by Health Professional about Tobacco/Nicotine Use: Association with Tobacco/ENDS Use in 2023

Variable	B	SE	t	p
Patients being asked	0.140	0.035	3.963	<0.001
Patients not being asked	-0.131	0.033	-3.956	<0.001
Unknown	-0.009	0.013	-0.673	0.501

Goal Area 4: Identifying and Eliminating Commercial Tobacco and Nicotine-Related Disparities

Population of Focus: Adults with Low Annual House Household Income

ENDS and Adults with Low Annual Household Income

Table C52: Logistic Regression of Current ENDS Use: Difference between Annual Household Income <$30,000 and $30,000+ in 2023

Variable	B	SE	OR	t	p
<$30,000	0.403	0.486	1.497	0.829	0.407
$30,000+ (reference)					
Intercept	-2.212	0.206	0.110	-10.747	<0.001

Table C53: Logistic Regression of Secondhand ENDS Aerosol Exposure in Indoor Public Places: Difference between Annual Household Income <$30,000 and $30,000+ in 2023

Variable	B	SE	OR	t	p
<$30,000	0.129	0.415	1.138	0.310	0.756
$30,000+ (reference)					
Intercept	-1.761	0.142	0.172	-12.399	<0.001

Table C54: Logistic Regression of Secondhand ENDS Aerosol Exposure in Outdoor Public Places: Difference between Annual Household Income <$30,000 and $30,000+ in 2023

Variable	B	SE	OR	t	p
<$30,000	0.292	0.385	1.339	0.759	0.448
$30,000K+ (reference)					
Intercept	-1.397	0.121	0.247	-11.587	<0.001

Table C55: Logistic Regression of Secondhand ENDS Aerosol Exposure in Indoor or Outdoor Public Places: Difference between Annual Household Income <$30,000 and $30,000+ in 2023

Variable	B	SE	OR	t	p
<$30,000	0.286	0.358	1.332	0.801	0.423
$30,000+ (reference)					
Intercept	-1.192	0.113	0.304	-10.571	<0.001

Cigarettes and Adults with Low Annual Household Income

Table C56: Logistic Regression of Current Cigarette Smoking: Difference between Annual Household Income <$30,000 and $30,000+ in 2023

Variable	B	SE	OR	t	p
<$30,000	1.083	0.392	2.953	2.763	0.006
$30,000+ (reference)					
Intercept	-2.224	0.199	0.108	-11.162	<0.001

Table C57: Logistic Regression of Secondhand Smoke (SHS) Exposure at Work: Difference between Annual Household Income <$30,000 and $30,000+ in 2023

Variable	B	SE	OR	t	p
<$30,000	1.575	0.619	4.830	2.545	0.011
$30,000+ (reference)					
Intercept	-1.877	0.173	0.153	-10.822	<0.001

Population of Focus: American Indians (Including Multi-Racial People that Self-Identified as American Indian and Any Other Race or Ethnicity)

ENDS and American Indians

Table C58: Logistic Regression of Current ENDS Use: Difference between American Indian and Non-American Indian in 2023

Variable	B	SE	OR	t	p
American Indian	1.622	0.498	5.064	3.257	0.001
Non-American Indian (reference)					
Intercept	-2.337	0.172	0.097	-13.603	<0.001

Table C59: Logistic Regression of Secondhand ENDS Aerosol Exposure in Indoor Public Places: Difference between American Indian and Non-American Indian in 2023

Variable	B	SE	OR	t	p
American Indian	0.064	0.437	1.066	0.146	0.884
Non-American Indian (reference)					
Intercept	-1.753	0.133	0.173	-13.149	<0.001

Table C60: Logistic Regression of Secondhand ENDS Aerosol Exposure in Outdoor Public Places: Difference between American Indian and Non-American Indian in 2023

Variable	B	SE	OR	t	p
American Indian	0.354	0.528	1.424	0.670	0.503
Non-American Indian (reference)					
Intercept	-1.356	0.114	0.258	-11.916	<0.001

Table C61: Logistic Regression of Secondhand ENDS Aerosol Exposure in Indoor or Outdoor Public Places: Difference between American Indian and Non-American Indian in 2023

Variable	B	SE	OR	t	p
American Indian	0.795	0.414	2.215	1.922	0.055
Non-American Indian (reference)					
Intercept	-1.178	0.107	0.308	-11.033	<0.001

Cigarettes and American Indians

Table C62: Logistic Regression of Current Cigarette Smoking: Difference between American Indian and Non-American Indian in 2023

Variable	B	SE	OR	t	p
American Indian	0.704	0.503	2.023	1.401	0.161
Non-American Indian (reference)					
Intercept	-2.140	0.154	0.118	-13.920	<0.001

Table C63: Logistic Regression of Secondhand Smoke Exposure at Work: Difference between American Indian and Non-American Indian in 2023

Variable	B	SE	OR	t	p
American Indian	1.424	0.523	4.153	2.722	0.007
Non-American Indian (reference)					
Intercept	-1.619	0.185	0.198	-8.758	<0.001

Population of Focus: People with Behavioral Health Conditions (BHCs)

ENDS and Behavioral Health

Table C64: Logistic Regression of Current ENDS Use: Difference between Adults with BHCs and Those with No BHCs in 2023

Variable	B	SE	OR	t	p
With BHCs	1.949	0.365	7.018	5.334	<0.001
No BHCs (reference)					
Intercept	-2.965	0.269	0.052	-11.006	<0.001

Table C65: Logistic Regression of Secondhand ENDS Aerosol Exposure in Indoor Public Places: Difference between Adults with BHCs and Those with No BHCs in 2023

Variable	B	SE	OR	t	p
With BHCs	0.584	0.268	1.793	2.180	0.029
No BHCs (reference)					
Intercept	-1.976	0.171	0.139	-11.562	<0.001

Table C66: Logistic Regression of Secondhand ENDS Aerosol Exposure in Outdoor Public Places: Difference between Adults with BHCs and Those with No BHCs in 2023

Variable	B	SE	OR	t	p
With BHCs	0.349	0.242	1.418	1.442	0.149
No BHCs (reference)					
Intercept	-1.483	0.137	0.227	-10.857	<0.001

Table C67: Logistic Regression of Secondhand ENDS Aerosol Exposure in Indoor or Outdoor Public Places: Difference between Adults with BHCs and Those with No BHCs in 2023

Variable	B	SE	OR	t	p
With BHCs	0.511	0.229	1.667	2.235	0.026
No BHCs (reference)					
Intercept	-1.338	0.129	0.262	-10.337	<0.001

Cigarettes and Behavioral Health

Table C68: Logistic Regression of Current Cigarette Smoking: Difference between Adults with BHCs and Those with No BHCs in 2023

Variable	B	SE	OR	t	p
With BHCs	1.355	0.331	3.875	4.095	<0.001
No BHCs (reference)					
Intercept	-2.547	0.199	0.078	-12.823	<0.001

Table C69: Multinomial Logistic Regression of Cigarette Quit Attempts among Adults Who Currently Smoke Cigarettes: Difference between Adults with BHCs and Those with No BHCs in 2023

Variable	B	SE	RRR	t	p
Never tried to quit (base outcome)					
Tried to quit in lifetime, not past year					
With BHCs	-0.511	0.674	0.600	-0.758	0.449
No BHCs (reference)					
Intercept	1.306	0.448	3.690	2.914	0.004
Tried to quit in past year					
With BHCs	0.921	0.774	2.512	1.189	0.234
No BHCs (reference)					
Intercept	0.697	0.548	2.007	1.272	0.204

Table C70: Logistic Regression of Obstacles to Quitting among Adults Who Currently Smoke: Cost of Medicines or Products to Help with Quitting: Difference between Adults with BHCs and Those with No BHCs in 2023

Variable	B	SE	OR	t	p
With BHCs	0.538	0.658	1.712	0.817	0.414
No BHCs (reference)					
Intercept	-1.356	0.475	0.258	-2.852	0.004

Table C71: Logistic Regression of Obstacles to Quitting among Adults Who Currently Smoke: Cost of Classes to Help with Quitting: Difference between Adults with BHCs and Those with No BHCs in 2023

Variable	B	SE	OR	t	p
With BHCs	-0.302	0.746	0.739	-0.405	0.685
No BHCs (reference)					
Intercept	-1.706	0.556	0.182	-3.068	0.002

Table C72: Logistic Regression of Obstacles to Quitting among Adults Who Currently Smoke: Fear of Gaining Weight: Difference between Adults with BHCs and Those with No BHCs in 2023

Variable	B	SE	OR	t	p
With BHCs	0.839	0.636	2.313	1.318	0.187
No BHCs (reference)					
Intercept	-1.879	0.435	0.153	-4.319	<0.001

Table C73: Logistic Regression of Obstacles to Quitting among Adults Who Currently Smoke: Loss of a Way to Handle Stress: Difference between Adults with BHCs and Those with No BHCs in 2023

Variable	B	SE	OR	t	p
With BHCs	2.725	0.763	15.249	3.570	<0.001
No BHCs (reference)					
Intercept	0.250	0.435	1.284	0.574	0.566

Table C74: Logistic Regression of Obstacles to Quitting among Adults Who Currently Smoke: Other People Smoking Around You: Difference between Adults with BHCs and Those with No BHCs in 2023

Variable	B	SE	OR	t	p
With BHCs	0.383	0.659	1.467	0.582	0.561
No BHCs (reference)					
Intercept	0.202	0.428	1.224	0.472	0.637

Table C75: Logistic Regression of Obstacles to Quitting among Adults Who Currently Smoke: Cravings for a Cigarette: Difference between Adults with BHCs and Those with No BHCs in 2023

Variable	B	SE	OR	t	p
With BHCs	3.567	0.808	35.425	4.418	<0.001
No BHCs (reference)					
Intercept	1.146	0.517	3.144	2.215	0.027

Table C76: Logistic Regression of Obstacles to Quitting among Adults Who Currently Smoke: Worsening Depression: Difference between Adults with BHCs and Those with No BHCs in 2023

Variable	B	SE	OR	t	p
With BHCs	1.587	0.820	4.890	1.936	0.053
No BHCs (reference)					
Intercept	-1.024	0.546	0.359	-1.874	0.061

Table C77: Logistic Regression of Obstacles to Quitting among Adults Who Currently Smoke: Worsening Anxiety: Difference between Adults with BHCs and Those with No BHCs in 2023

Variable	B	SE	OR	t	p
With BHCs	0.492	0.726	1.636	0.678	0.498
No BHCs (reference)					
Intercept	-0.077	0.440	0.926	-0.174	0.862

Table C78: Logistic Regression of Obstacles to Quitting among Adults Who Currently Smoke: Withdrawal: Difference between Adults with BHCs and Those with No BHCs in 2023

Variable	B	SE	OR	t	p
With BHCs	0.206	0.770	1.229	0.268	0.789
No BHCs (reference)					
Intercept	0.460	0.435	1.583	1.056	0.291

Table C79: Logistic Regression of Obstacles to Quitting among Adults Who Currently Smoke: Other: Difference between Adults with BHCs and Those with No BHCs in 2023

Variable	B	SE	OR	t	p
With BHCs	0.771	0.655	2.162	1.177	0.239
No BHCs (reference)					
Intercept	-2.782	0.442	0.062	-6.288	<0.001

Table C80: Logistic Regression of Secondhand Smoke Exposure at Work: Difference between Adults with BHCs and Those with No BHCs in 2023

Variable	B	SE	OR	t	p
With BHCs	1.062	0.366	2.893	2.905	0.004
No BHCs (reference)					
Intercept	-2.009	0.204	0.134	-9.844	<0.001

Population of Focus: Young Adults (18-29 Years of Age)

ENDS and Young Adults

Table C81: Logistic Regression of Current ENDS Use: Difference between Ages 18-29 and Ages 30+ in 2023

Variable	B	SE	OR	t	p
18-29	2.166	0.357	8.727	6.065	<0.001
30+ (reference)					
Intercept	-2.943	0.227	0.053	-12.971	<0.001

Table C82: Logistic Regression of Secondhand ENDS Aerosol Exposure in Indoor Public Places: Difference between Ages 18-29 and Ages 30+ in 2023

Variable	B	SE	OR	t	p
18-29	1.203	0.306	3.329	3.934	<0.001
30+ (reference)					
Intercept	-2.110	0.144	0.121	-14.667	<0.001

Table C83: Logistic Regression of Secondhand ENDS Aerosol Exposure in Outdoor Public Places: Difference between Ages 18-29 and Ages 30+ in 2023

Variable	B	SE	OR	t	p
18-29	0.821	0.284	2.273	2.895	0.004
30+ (reference)					
Intercept	-1.567	0.123	0.209	-12.713	<0.001

Table C84: Logistic Regression of Secondhand ENDS Aerosol Exposure in Indoor or Outdoor Public Places: Difference between Ages 18-29 and Ages 30+ in 2023

Variable	B	SE	OR	t	p
18-29	1.038	0.270	2.824	3.841	<0.001
30+ (reference)					
Intercept	-1.432	0.115	0.239	-12.431	<0.001

Cigarettes and Young Adults

Table C85: Multinomial Logistic Regression of Smoking Status: Difference between Ages 18-29 and Ages 30+ for 2023

Variable	B	SE	RRR	t	p
Adults who currently smoke					
18-29	-0.002	0.465	0.998	-0.003	0.997
30+ (reference)					
Intercept	-0.858	0.176	0.424	-4.872	<0.001
Adults who used to smoke					
18-29	-1.497	0.415	0.224	-3.607	<0.001
30+ (reference)					
Intercept	0.222	0.121	1.249	1.835	0.067
Adults who experimented with smoking					
18-29	-0.409	0.286	0.664	-1.432	0.152
30+ (reference)					
Intercept	0.318	0.114	1.374	2.795	0.005
Adults who never smoked					

Table C86: Marginal Effects of Age on Smoking Status: Difference between Ages 18-29 and Ages 30+ in 2023

Variable	B	SE	t	p
Adults who currently smoke	0.057	0.059	0.969	0.333
Adults who used to smoke	-0.202	0.042	-4.822	<0.001
Adults who experimented with smoking	0.009	0.062	0.153	0.879
Adults who never smoked	0.135	0.058	2.340	0.019

Table C87: Logistic Regression of Secondhand Smoke Exposure at Work: Difference between Ages 18-29 and Ages 30+ in 2023

Variable	B	SE	OR	t	p
18-29	1.296	0.366	3.654	3.536	<0.001
30+ (reference)					
Intercept	-1.984	0.246	0.137	-8.074	<0.001