Results of the California Teens Nicotine and Tobacco Project Online Survey 2023

Results of the California Teens Nicotine and Tobacco Project Online Survey 2023

Benjamin W. Chaffee, DDS MPH PhD
Elizabeth T. Couch, RDH MS
Nancy Fan Cheng, MS MS
Niloufar Ameli, MS
Stuart A. Gansky, MS DrPH

Principal Investigator: Benjamin W. Chaffee, DDS MPH PhD
Institution: Regents of the University of California San Francisco
Address: 95 Kirkham Street, Box 1361
San Francisco, CA 94143
Phone: (415) 476-9226
E-mail: benjamin.chaffee@ucsf.edu

Contract #: CDPH-20-10026 Contract Period: 3/1/2021–2/29/2024

Suggested citation: Chaffee BW, Couch ET, Cheng NF, Ameli N, Gansky SA. (2024). Results of the California Teens Nicotine and Tobacco Project Online Survey 2023. San Francisco, California: University of California San Francisco. Available at: https://escholarship.org/uc/item/06g1d0rx

Made possible by funds received from the California Department of Public Health - California Tobacco Prevention Program, contract # CDPH-20-10026.

TABLE OF CONTENTS

List of Tables

List of Figures

The Teens Nicotine and Tobacco (TNT) Project

The Teens, Nicotine, and Tobacco (TNT) Project is designed to uncover and understand tobacco, nicotine, and marijuana (cannabis) product use behaviors, perceptions, and terminology among California adolescents ages 12–17. This information will inform ongoing surveillance, messaging, and evaluation activities of the California Department of Public Health (CDPH), California Tobacco Prevention Program (CTPP). There are two primary components to the TNT Project: TNT Focus Groups and the TNT Online Survey, which is conducted twice annually with California residents from ages 12 to 17. Within the context of a changing tobacco landscape, the TNT Project can provide flexible and rapid surveillance of California adolescents' perceptions and behaviors related to tobacco, nicotine, and cannabis products. Some specific objectives include:

TNT Project Objectives

- Inform questionnaire development and design for the California Youth Tobacco Survey (CYTS), particularly to assure inclusion of relevant terminology and products
- Inform other CDPH/CTPP tobacco control activities and priorities with up-to-date information related to youth tobacco perceptions, attitudes, and behaviors
- Integrate qualitative and quantitative data: for example, a focus group might uncover new trends to examine in surveys, or survey findings can be confirmed in focus groups
- Be responsive to changes in tobacco product landscape, including new products, brands, devices, and use patterns
- Be responsive to CDPH/CTPP directives, recommendations, guidance, and priorities.

About This Report

This report summarizes selected results from the 2023 TNT Project Online Survey, which was conducted May–December 2023. A total of 5015 eligible participants completed the 2023 wave.

Results of the 2021 survey wave (conducted in July 2021–February 2022) can be found here:
2021-2022 TNT Online Survey Report (https://escholarship.org/uc/item/6qf8f8x1)

Results of the 2022 survey wave (conducted in June 2022–December 2022) can be found here:
2022 TNT Online Survey Report (https://escholarship.org/uc/item/1rs8k7km)

EXECUTIVE SUMMARY

This report summarizes the main results from the third wave of the Teens, Nicotine, and Tobacco (TNT) Project Online Survey, which was a statewide online survey conducted in California during 2023. Data collection occurred in two cycles: spring (May–June 2023) and fall (November–December 2023), which are combined in this report. To be eligible for the TNT Online Survey, participants must be residents of California from ages 12 to 17 years. A total of 5015 eligible participants completed the 2023 survey wave.

Participant recruitment and data collection occurred entirely online through the use of commercial survey panels. Survey panels are an increasingly common and valid method of conducting behavioral health sciences research. In most instances, panel members have opted to receive invitations to complete surveys in exchange for modest incentives, such as redeemable merchandise reward points. Survey eligibility criteria were matched to the demographic profiles of panel members. Potential TNT Online Survey participants ages 12 or 13 were recruited through invitations to their parents. Potential participants ages 14 to 17 were invited through their parents or contacted directly. The TNT Online Survey relied on multiple panel partners to recruit potential participants, with care taken to avoid duplicate invitations.

The results of this report are weighted for response quality and demographic factors to improve the representativeness of the findings for youth ages 12–17 living in California. However, panel survey results should not be considered a perfect reflection of the statewide general population. Survey panel members represent a wide range of geography, age, income levels, and racial/ethnic groups; however, participants should be considered a non-probability sample. Compared to the general population, survey panel members may be more computer/internet savvy, and, in the case of the TNT Online Survey, teen participants (and their parents) may be more willing to complete a survey related to tobacco, nicotine, and marijuana products. Thus, the prevalence of tobacco use within the TNT Online Survey is likely an overestimate of tobacco use prevalence among all California 12–17 year-olds.

One goal of the TNT Online Survey was to provide detailed information about the tobacco, nicotine, and marijuana products being used by California youth. Another goal was to collect information that could lead to improvements in the way tobacco use behaviors are monitored in California. For example, findings from the TNT Online Survey could inform the way questions are worded in other statewide tobacco surveys, such as the California Youth Tobacco Survey that is administered in California schools. Therefore, the TNT Online Survey includes some questions worded in more than one way. Some questions included a larger number of response options than a survey typically includes to help be sure no reasonable answers were missed. In general, the TNT Online Survey prioritized flexibility and responsiveness to an evolving tobacco marketplace over consistency in question wording between waves and cycles. This report presents results from more than one version of a question to show how changing question wording might affect the way participants respond.

The Appendix to this report provides further information related to the survey methodology.

Key Findings

Tobacco Use Behavior (Chapter 1)

- More than one-fourth of participants (29.2%) indicated ever using at least one tobacco product in their life.
- 12.2% of participants reported current use of at least one tobacco product.
- Vapes were, by far, the most commonly used tobacco product: 9.7% of participants were current vape users.
- Cigars (little cigars or cigarillos and big cigars combined) were the next most used tobacco product after vapes (3.4% current use), followed by cigarettes (2.8%). No other product exceeded 2% in current use.
- Current use of any tobacco product was 12.8% among male participants and 11.6% among female participants. Use was higher among LGBTQ+ participants (18.0%) than non-LGBTQ+ participants (11.3%).
- By race/ethnicity, current use of any tobacco product was highest among participants who identified as African American or Black (15.0%), followed by White (13.6%) and Hispanic or Latino (13.3%).
- The prevalence of current use of any tobacco product was 10.7% among participants who rated their mental health status as "excellent", "very good", or "good" and was higher (19.6%) among participants who rated their mental health as "fair" or "poor."
- For all tobacco products, current users most commonly used their product on 1 or 2 days in the past 30 days; categories of more frequent use were less common.
- 15.4% of current vape users reported using vapes on all 30 days in the past 30 days.
- Among all participants, 4.8% used two or more tobacco products within the past 30 days.
- Among all current tobacco users, 39.4% used multiple tobacco products.
- Of all participants, 21.2% selected having ever heard of nicotine pouches and 19.1% selected having ever heard of nicotine tablets, lozenges, or gummies.

Vape Product Details (Chapter 2)

- When asked which vape brands are popular among people their age, Juul was the brand participants selected most often, followed by Puff Bar, Elfbar, and Blu.
- Puff Bar-like disposable devices and Juul-like pod devices were the two most commonly used device types. It was common for current vapers to report using more than one vape device type in the past 30 days.
- The majority of current vapers (73.4%) reported that the vapes they used contained nicotine.
- About one-third (33.6%) of current vapers reported that at least once in the past 30 days they used a vape and were not sure what it contained.
- 38.5% of current vape users reported using a vape in the past 30 days that contained marijuana with THC.

Flavored Products (Chapter 3)

- 57.2% of current cigarette smokers reported that they used menthol cigarettes in the past 30 days, while 67.4% of current cigar smokers reported using flavored cigars.
- Over 80% of current users of smokeless tobacco (83.1%) and hookah (85.6%) used flavored varieties of these products.
- Over 90% of current users of vapes (90.7%) used flavored vapes.
- Only 22.0% of participants reported that they were aware that flavored tobacco and vape sales were not allowed in California. Awareness was greater among current tobacco users (44.1%).
- The majority of participants reported that stores they visit have flavored vapes (61.3%), that vape ads they see have flavored vapes (63.7%), and that people their age use flavored vapes (74.5%).
- Less than one-third of current vapers thought it would be either "somewhat" difficult (19.3%) or "very" difficult (11.5%) to find vapes in flavors that they like.
- For vapes, cigars, hookah, and smokeless tobacco, fruit was the most commonly used type of flavor among current users of each product.
- Fruit, candy, dessert, and fruit-ice combination flavors were each either somewhat or strongly liked by more than 50% of all vape ever users.
- Excluding edibles, 40.6% of current marijuana users consumed some form of flavored marijuana in the past 30 days. Blunts were the non-edible method of marijuana consumption most likely to be flavored (63.2%), presumably through the use of flavored cigars or blunt wraps.

Ending the Tobacco Use Epidemic (Chapter 4)

- Most participants (72%–75%) agreed or strongly agreed with various statements that called to end the sale of all tobacco products or flavored tobacco products.
- Strong agreement was slightly greater for statements related to ending flavored tobacco sales (42%–45%) than for a statement related to ending the sale of all tobacco products (39%).
- Most participants (73%–82%) agreed or strongly agreed with various statements that called for the use of tobacco or marijuana products in public places to end.
- Strong agreement was slightly greater for a statement that called for the end of smoking cigarettes in public places (49%) than the end of using vapes in public places (43%).
- Most participants either strongly agreed or agreed that all apartment buildings should be completely smoke-free (78%).
- The majority of participants (66% or 73%, depending on item wording) "strongly agreed" or "agreed" with a tobacco-free generation policy that would gradually raise the legal age for tobacco sales.

Marijuana Use (Chapter 5)

- Overall, 18.4% of TNT Online Survey participants had ever used marijuana and 9.4% were current marijuana users.
- Current use of marijuana was similar among male (9.8%) and female (9.0%) participants but higher among participants categorized as LGBTQ+ (16.0%) than non-LGBTQ+ (8.4%).
- By race/ethnicity, current use of marijuana was lowest among participants who identified as Asian (1.1%).
- 51.5% of current marijuana users reported smoking a marijuana joint in the past 30 days. Vaped wax, oil, or liquid (28.6%), small pipes (26.5%), edibles (26.1%), blunts (23.4%), and bongs (23.1%) were the next most common modes of use.
- Overall, current marijuana and tobacco co-use (6.3%) was more common than marijuana only use (3.2%).
- 51.7% of current tobacco product users (any product) were also current marijuana users.

Tobacco and Marijuana Perceptions (Chapter 6)

- Among all TNT Online Survey participants, most indicated that they would "definitely not" be using vapes (76.2%), cigarettes (85.4%), cigars (90.0%),hookah (87.2%), smokeless tobacco (92.1%), or marijuana (72.2%) one year in the future.
- Participants were more likely to indicate they would "definitely not" use a product when thinking about one year in the future than when thinking about themselves at age 25.
- Among all participants, only 61.2% indicated that they would "definitely not" use marijuana use at age 25.
- For vapes, cigarettes, and marijuana, current users of those products expected a lower chance of bad outcomes happening to them and a greater chance of potentially good outcomes than non-users expected.
- Both current users and non-users expected the greatest chance of bad outcomes happening to them from cigarettes and the lowest chance of bad outcomes from marijuana.
- Both current users and non-users expected the greatest chance of good outcomes from marijuana and the lowest chance of good outcomes from cigarettes.

Tobacco Home and Marketing Environment (Chapter 7)

- 41.2% of TNT Online Survey participants indicated that someone who lives with them uses tobacco or marijuana. 22.9% of participants indicted living with someone who smokes cigarettes.
- Most participants (81.7%) indicated that the use of tobacco and nicotine products is not allowed anywhere or at any time inside their home; similarly, most participants (79.8%) indicated that marijuana use is not allowed anywhere or at any time inside their home.
- Nearly half of participants indicated that they had seen advertisements promoting vaping in the past 12 months. Likewise, approximately half of participants indicated they had seen advertisements promoting cigarettes or other tobacco in the past 12 months and >40% had seen advertisements promoting marijuana.
- The most common place to see vape and cigarette or other tobacco advertisements was at gas stations or convenience stores. The most common place to see marijuana

advertisements was billboards.

- Less than 10% of participants indicated that they had received a discount code or coupon for tobacco products or marijuana.
- "Someone offered it to me" was the single most-selected way that current vape, cigarette, and marijuana users got their products.

Other Influence of Tobacco Use (Chapter 8)

- Tobacco and marijuana use were generally more common among participants who reported a worse family financial situation or lower parent educational attainment.
- There was not consistent relationship between rural/urban geography and tobacco or marijuana use.
- About two-thirds (67.7%) of participants reported experiencing at least one form of perceived discrimination at least "a few times" in the past month. The most common reported reasons for discrimination were age, race/ethnicity, and physical appearance.
- Current tobacco users reported experiencing discrimination (for any reasons) more often than those who had not used tobacco in the past 30 days.

LIST OF TERMS

Tobacco Products and Marijuana

These product descriptions were shown to TNT Online Survey participants along with representative images of each product.

Vapes: Vaping or vapes, sometimes called e-cigarettes. Vapes usually contain a nicotine liquid that is vaporized and inhaled. You may also know them as JUULs, Puff Bars, hookah pens, e-hookahs, mods, or pods. They come in different shapes and sizes. All are battery powered and make vapor instead of smoke. Some brands are JUUL, Bang, Blu, Vuse, and Puff Bar.

> Disposable Vapes: "Disposable" vapes are ready to use, can be used for a few hundred puffs and then thrown out. Some disposable vape brands are Puff Bar, Flum Float, and Bang.
>
> Pod Vapes: "Pod" vapes come with small "pods" or cartridges that fit in and out of the device. The pods get used up, but the device can be reused. Common brands are JUUL and Suorin.
>
> Refillable or Modifiable Vapes: "Refillable" vapes can be refilled with different e-liquids. Some can be adjusted and customized. Some refillable vapes are called mods or tanks or rebuildables.

Cigarettes: Cigarettes are sold in packs and cartons. Popular brands include Marlboro, Newport, Pall Mall, Camel, and Winston.

Cigars: *Either of the two types of cigar products below:*

> Little cigars or cigarillos: Little cigars and cigarillos are smaller than big cigars. Some are the same size as cigarettes, and some come with plastic or wooden tips. Some common brands are Black & Mild, Swisher Sweets, Dutch Masters, and Backwoods.
>
> Big cigars: Big cigars (also called "traditional", "regular", or "premium" cigars) contain tobacco tightly wrapped in a tobacco leaf. Some brands include Macanudo, Romeo y Julieta, and Cohiba, but there are many others.

Hookah: Hookah is a kind of water pipe used to smoke tobacco. Other names for hookah are shisha and narghile. People sometimes smoke tobacco hookahs at cafes or hookah bars.

Smokeless Tobacco: Smokeless tobacco is placed in the mouth and held under the lip or chewed. There are three main types of smokeless tobacco: chewing tobacco, moist snuff ("dip"), and snus. *In this report, smokeless tobacco refers to any of the three products below:*

Moist snuff: Moist snuff (also called "dip") is finely ground tobacco sold in a round can. Sometimes it is sold as small pouches, but it is NOT snus. Some brands are Copenhagen, Grizzly, and Skoal.

Chewing tobacco: Chewing tobacco is coarsely shredded and dried tobacco. It is usually sold in a large pouch. Some brands are Redman, Levi Garrett, and Beechnut.

Snus: Snus is usually sold as pouches that are placed in the mouth and don't require much spitting. Some brands are Camel Snus and General Snus.

Nicotine pouches: Nicotine pouches are flavored pouches that contain nicotine but do not contain tobacco plant. They are placed in the mouth. Some brands are ZYN, On! and VELO.

Nicotine tablets or lozenges: Nicotine tablets, lozenges, gums, and gummies are placed in the mouth and chewed or held in place. Some brands are Rogue and Velo.

Heated tobacco: Heat-not-burn tobacco products (also called heated tobacco) heat tobacco sticks or capsules instead of burning. Some brands are IQOS, glo, Eclipse, and Ploom Tech. They are different from vapes.

Marijuana: Marijuana, also called cannabis, hash, THC, CBD, grass, pot, or weed, comes in many forms and can be smoked, vaped, or eaten (edible). The term marijuana (instead of cannabis) is used throughout this report, as youth were asked specifically about their marijuana use in the survey instrument. TNT focus groups and interviews with youth indicated that “marijuana” was a more familiar term than “cannabis” for this age group.

Product Use

Ever use: Used within a lifetime, even once.

Current use: Used within the last 30 days (1 or more days).

Multiple product use: Used two or more tobacco products within the last 30 days (each product used 1 or more days, not necessarily on the same day).

Any tobacco use: Used at least one of the following in the last 30 days: vapes, cigarettes, cigars, hookah, smokeless tobacco, nicotine pouches, nicotine tablets or lozenges, or heated tobacco.

Flavored tobacco product use: Used a flavored tobacco product within the last 30 days, excluding “unflavored” or “tobacco” flavored products.

Co-use: Used marijuana and at least one tobacco product within the last 30 days (each product used 1 or more days, not necessarily on the same day).

Never user: A participant who reported never using the tobacco product(s).

Current user: A participant who reported using the tobacco or marijuana product(s) within the last 30 days (1 or more days).

Current non-user: A participant who reported no use of the tobacco or marijuana product(s) within the last 30 days (0 days).

Other Terms and Categories

Gender identified another way: Participants who marked their gender identity as Transgender; Something else, please describe; or I'm not sure yet.

LGBTQ+: Participants who were categorized as identifying their gender in another way (see above definition) and/or reported their sexual orientation as Gay or lesbian; Bisexual; Something else, please describe; or I'm not sure yet. This also included individuals who reported a gender that differed from their sex at birth.

Non-LGBTQ+: Participants who were categorized as identifying their gender as male or female and the same as their sex at both. These individuals reported their sexual orientation as Straight, not gay or lesbian; or Don't know what this question means.

Hispanic / Latino: Responded yes to the ethnicity question: "Are you of Hispanic or Latino/Latina/Latinx/Latine origin?", regardless of race(s) reported.

Non-Hispanic single race: Responded no to the ethnicity question (see above definition) and selected only one of the following races when asked "How would you describe yourself?": American Indian or Alaska Native; Asian; African American or Black; Native Hawaiian or Other Pacific Islander (e.g., Samoan); or White.

Other race: Responded no to the ethnicity question and selected "Other race."

More than one race: Responded no to the ethnicity question and selected two or more races.

CHAPTER 1 – TOBACCO USE BEHAVIOR

This chapter presents tobacco use behavior data from the 2023 Teens, Nicotine, and Tobacco (TNT) Online Survey. Use includes both ever use and current use of various tobacco products. Ever use is defined as use within a lifetime (even once), and current use is defined as use on at least one day within the past 30 days. This chapter also provides the prevalence of tobacco product use across various demographic characteristics (e.g., gender, race/ethnicity), frequency of current use, and the use of multiple tobacco products.

Tobacco Product Categories

For the prevalence estimates included in this report, "vape" use includes all participants who selected use of any vape or e-cigarette product, including disposable, pod, refillable, or other device types, including vapes that did not contain nicotine, but excluding vapes used only for marijuana. For the exact wording used when presenting tobacco products in the TNT Online Survey questionnaire, see List of Terms.

Participants were asked about 11 different tobacco products, including vapes. Use of at least one of the 11 products was calculated as "any tobacco." Use of either little cigars/cigarillos or big cigars was calculated as "either cigar." Use of moist snuff, chewing tobacco, or snus was calculated as "any smokeless."

Tobacco Product Use

Table 1 presents the overall prevalence of tobacco product use among participants in the 2023 TNT Online Survey.

Table 1. Prevalence of ever and current use of tobacco products

	Ever Use (95% CI)	Current Use (95% CI)
Any tobacco product below	29.2 (27.1, 31.5)	12.2 (10.9, 13.7)
Vapes	24.4 (22.3, 26.5)	9.7 (8.5, 11.0)
Cigarettes	14.6 (13.0, 16.3)	2.8 (2.4, 3.3)
Either cigar below	7.7 (6.5, 9.0)	3.4 (2.7, 4.2)
Little cigars or cigarillos	6.9 (5.9, 8.2)	3.2 (2.5, 4.0)
Big cigars	2.9 (2.2, 3.6)	0.9 (0.6, 1.4)
Hookah	3.7 (3.1, 4.5)	1.6 (1.2, 2.1)
Any smokeless below	2.5 (2.1, 3.1)	1.2 (1.0, 1.5)
Moist snuff	1.7 (1.3, 2.1)	0.8 (0.6, 1.0)
Chewing tobacco	1.5 (1.2, 1.9)	0.8 (0.6, 1.0)
Snus	1.6 (1.3, 2.0)	0.8 (0.7, 1.1)
Nicotine pouches	1.9 (1.4, 2.5)	0.8 (0.6, 1.2)
Nicotine tablets, lozenges, or gummies	1.0 (0.7, 1.4)	0.6 (0.4, 0.8)
Heated tobacco	1.6 (1.1, 2.2)	1.0 (0.7, 1.5)

Abbreviation: CI=confidence interval

- More than one-fourth of participants (29.2%) reported ever using at least one tobacco

product in their life.

- 12.2% of participants reported current use of at least one tobacco product.
- Vapes were, by far, the most used tobacco product: 9.7% of participants were current vape users.
- Cigars (little cigars or cigarillos and big cigars combined) were the next most used tobacco product after vapes (3.4% current use).
- Current use of cigarettes (2.8%) followed vapes and cigars as the next most used product. No other product exceeded 2% in current use.
- Nicotine pouches, tablets, lozenges, and gummies (excluding approved tobacco cessation aids) are relatively new products that do not appear to have reached widespread use among California adolescents. Although not shown in Table 1, of all participants, 21.2% indicated having ever heard of nicotine pouches and 19.1% indicated having ever heard of nicotine tablets or lozenges.

Demographic Categories

TNT Online Survey participants were asked in separate questions about their sex (biological sex at birth), gender identity, and sexual orientation. Participants were categorized as LGBTQ+ if they identified their gender as other than male or female, reported their sexual orientation as Gay or lesbian; Bisexual; Something else, or I'm not sure yet, or if they reported a gender that differed from their sex at birth.

For race/ethnicity, participants were asked whether they were of Hispanic or Latino/Latina/Latinx/Latine origin (i.e., ethnicity). Those who indicated yes were classified as Hispanic or Latino regardless of race(s) reported. Participants who selected no to the ethnicity question were classified as Non-Hispanic and were asked to select all races with which they identified from a list of six, including "Other." If participants selected more than one race, they were classified as "More than one" race. Free-text responses were collected but not recoded. Due to the small number of participants who selected "American Indian / Alaska Native" or "Native Hawaiian / Other Pacific Islander," these two categories were combined with "Other" into a single category for reporting results in Tables.

Throughout the survey, missing data could arise if participants chose to leave a survey item unmarked or if participants closed the survey before completion (but still answered a sufficient number of items to meet inclusion criteria). In this report, missing values are excluded from prevalence estimates. Thus, for some table rows and columns, the total sample size is less than the total 2023 TNT Online Survey sample (N=5015) due to missing data.

Prevalence of Tobacco Use by Demographic Categories

Table 2 presents the prevalence of tobacco product use (any product, See List of Terms for details) among participants according to their sex, gender/sexual identity, race/ethnicity, and age.

Table 2. Prevalence of any tobacco use by sex, gender/sexual identity, race/ethnicity, and age

	Sample size N[1]	Weighted %	Ever Use (95% CI)	Current Use (95% CI)
Overall	5015	100	29.2 (27.1, 31.5)	12.2 (10.9, 13.7)
Sex				
Male	2551	49.8	29.0 (25.8, 32.4)	12.8 (10.8, 15.1)
Female	2453	50.2	29.5 (26.7, 32.6)	11.6 (10.0, 13.5)
Gender/Sexual Identity				
Non-LGBTQ+	4032	87.0	27.8 (25.4, 30.2)	11.3 (9.9, 12.8)
LGBTQ+[2]	718	13.0	39.1 (33.3, 45.3)	18.0 (13.8, 23.1)
Race/Ethnicity				
White	2035	20.7	31.1 (27.8, 34.6)	13.6 (11.6, 15.9)
African American/Black	359	4.1	31.6 (24.0, 40.2)	15.0 (10.1, 21.9)
Hispanic/Latino	1560	53.7	30.6 (27.2, 34.1)	13.3 (11.3, 15.5)
Asian	407	14.0	21.2 (15.6, 28.3)	6.0 (3.5, 10.2)
Other[3]	351	7.5	26.0 (20.1, 32.9)	8.0 (5.4, 11.6)
Age				
12–13 years	1380	35.0	21.7 (18.4, 25.4)	9.3 (7.2, 12.0)
14–15 years	1734	31.8	28.1 (24.4, 32.2)	12.1 (10.1, 14.5)
16–17 years	1901	33.1	38.2 (34.3, 42.3)	15.3 (12.9, 18.1)

1. Sample sizes (N) are unweighted; percentages are weighted for response quality and participant demographic characteristics
2. Includes participants who indicated their gender was Transgender, Something else, or I'm not sure yet, whose gender was different than their sex at birth, or who indicated their sexual orientation was Gay or lesbian, Bisexual, or Something else
3. Includes participants who indicated their race was American Indian / Alaska Native, Native Hawaiian / Other Pacific Islander, Other, or selected more than one race. Categories were combined to increase sample size.

Abbreviation: CI=confidence interval

- Current use of any tobacco product was 12.8% among male participants and 11.6% among female participants.
- Current use of any tobacco product was higher among LGBTQ+ participants (18.0%) than non-LGBTQ+ participants (11.3%).
- By race/ethnicity, current use of any tobacco product was highest among participants who identified as African American or Black (15.0%), followed by White (13.6%) and Hispanic or Latino (13.3%).
- Tobacco use was lowest among the youngest participants. Both ever use and current use

of any tobacco product were higher at ages 16–17 years than at ages 12–13 years.

Table 3 presents the prevalence of current tobacco use (any product, at least one day in the past 30 days) according to sex (biological sex at birth).

Table 3. Prevalence of current tobacco product use by sex

	Male % (95% CI)	Female % (95% CI)
Any tobacco product below	12.8 (10.8, 15.1)	11.6 (10.0, 13.5)
Vapes	9.9 (8.3, 11.8)	9.5 (8.0, 11.2)
Cigarettes	3.5 (2.8, 4.3)	2.2 (1.6, 2.9)
Either cigar below	4.1 (2.9, 5.7)	2.6 (2.0, 3.5)
Little cigars or cigarillos	3.9 (2.7, 5.5)	2.4 (1.8, 3.3)
Big cigars	1.2 (0.7, 2.0)	0.7 (0.4, 1.2)
Hookah	1.8 (1.2, 2.6)	1.4 (1.0, 2.0)
Any smokeless below	1.6 (1.2, 2.0)	0.9 (0.6, 1.3)
Moist snuff	1.1 (0.8, 1.4)	0.5 (0.3, 0.8)
Chewing tobacco	0.9 (0.7, 1.2)	0.6 (0.4, 1.0)
Snus	1.1 (0.8, 1.5)	0.6 (0.4, 0.9)
Nicotine pouches	0.6 (0.5, 0.8)	1.0 (0.6, 1.9)*
Nicotine tablets or lozenges	0.6 (0.4, 0.8)	0.6 (0.4, 0.9)
Heated tobacco	1.5 (0.9, 2.5)	0.6 (0.4, 0.8)

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

- Current use of any tobacco was slightly higher among male (12.8%) than female (11.6%) participants.
- For all but one individual tobacco product (nicotine pouches), current use prevalence was equal or higher among male participants.
- On a relative basis, the gender difference in tobacco use was larger for cigarettes, cigars, and smokeless tobacco than for vapes. Vape use was similar between male (9.9%) and female (9.5%) participants.

Table 4 presents the prevalence of current use of any tobacco and individual tobacco products according to gender/sexual identity. Among the 4750 participants with no missing data needed to categorize their gender/sexual identity, 13.0% (unweighted N=718) were categorized as a LGBTQ+ (See List of Terms and Table 2 for details).

Table 4. Prevalence of current tobacco product use by gender/sexual identity

	Non-LGBTQ+ % (95% CI)	LGBTQ+ % (95% CI)
Any tobacco product below	11.3 (9.9, 12.8)	18.0 (13.8, 23.1)
Vapes	9.0 (7.8, 10.4)	13.9 (10.3, 18.5)
Cigarettes	2.8 (2.3, 3.4)	3.0 (1.9, 4.6)
Either cigar below	3.3 (2.5, 4.3)	3.5 (2.1, 5.8)
Little cigars or cigarillos	3.1 (2.3, 4.1)	3.1 (1.9, 5.3)
Big cigars	0.9 (0.6, 1.4)	0.9 (0.4, 2.2)*
Hookah	1.6 (1.2, 2.1)	1.4 (0.6, 3.0)*
Any smokeless below	1.2 (1.0, 1.5)	1.0 (0.5, 2.0)*
Moist snuff	0.8 (0.6, 1.1)	0.5 (0.2, 1.1)*
Chewing tobacco	0.8 (0.6, 1.0)	0.4 (0.2, 1.0)*
Snus	0.8 (0.6, 1.1)	0.6 (0.3, 1.5)*
Nicotine pouches	0.7 (0.5, 1.0)	1.7 (0.5, 5.3)*
Nicotine tablets or lozenges	0.5 (0.4, 0.7)	0.7 (0.4, 1.4)*
Heated tobacco	1.1 (0.7, 1.7)	0.5 (0.2, 1.2)*

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

- Current use of any tobacco product was higher among participants who were categorized as LGBTQ+ (18.0%) than among participants who were not categorized as LGBTQ+ (11.3%).
- For each individual product, there was not a consistent pattern in current use prevalence according to LGBTQ+ status. The largest difference between groups was for vape products: vape use prevalence was 13.9% among LGBTQ+ participants and 9.0% among non-LGBTQ+ participants.

Table 5 presents the prevalence of current use of specific tobacco products according to self-identified race and ethnicity. Not all race/ethnicity categories are included in the table due to small sample sizes for some categories.

Table 5. Prevalence of current tobacco product use by race/ethnicity

	White % (95% CI)	African American /Black % (95% CI)	Hispanic/Latino % (95% CI)	Asian % (95% CI)
Any tobacco product below	13.6 (11.6, 15.9)	15.0 (10.1, 21.9)	13.3 (11.3, 15.5)	6.0 (3.5, 10.2)
Vapes	11.0 (9.2, 13.0)	9.4 (5.6, 15.4)	11.3 (9.4, 13.4)	4.3 (2.3, 7.9)*
Cigarettes	4.9 (3.8, 6.2)	2.0 (1.3, 3.3)	2.9 (2.2, 3.8)	0.6 (0.3, 1.3)*
Either cigar below	2.3 (1.7, 3.2)	6.1 (3.3, 11.1)*	4.0 (3.0, 5.2)	0.4 (0.1, 1.4)*
Little cigars or cigarillos	2.1 (1.5, 3.0)	6.1 (3.3, 11.1)*	3.7 (2.8, 4.8)	0.4 (0.1, 1.4)*
Big cigars	1.0 (0.6, 1.7)	0.5 (0.2, 1.0)*	1.2 (0.7, 2.1)	0.1 (0.0, 0.4)*
Hookah	1.8 (1.3, 2.5)	1.8 (1.0, 3.3)*	1.8 (1.2, 2.7)	0.3 (0.1, 0.6)*
Any smokeless below	2.4 (1.7, 3.2)	1.3 (0.7, 2.5)*	0.9 (0.6, 1.3)	0.5 (0.2, 1.4)*
Moist snuff	1.6 (1.1, 2.3)	0.6 (0.3, 1.2)*	0.6 (0.4, 0.9)	0.3 (0.1, 0.8)*
Chewing tobacco	1.4 (1.0, 1.9)	0.9 (0.4, 2.1)*	0.5 (0.3, 0.8)	0.5 (0.2, 1.4)*
Snus	1.6 (1.1, 2.3)	0.6 (0.3, 1.4)*	0.7 (0.5, 1.0)	0.2 (0.1, 0.5)*
Nicotine pouches	1.5 (1.0, 2.1)	0.8 (0.4, 1.8)*	0.6 (0.4, 1.0)	1.2 (0.3, 5.1)*
Nicotine tablets or lozenges	1.1 (0.8, 1.6)	0.7 (0.2, 2.2)*	0.4 (0.3, 0.7)	0.3 (0.1, 0.8)*
Heated tobacco	1.0 (0.7, 1.6)	0.6 (0.2, 1.6)*	1.3 (0.8, 2.3)	0.4 (0.1, 1.0)*

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

Note: Race/ethnicity categories reported in the table exclude American Indian / Alaska Native, Native Hawaiian / Other Pacific Islander, Other, or selected more than one race due to insufficient sample size

- Across all race/ethnicity categories, vapes were the most used tobacco product.
- Current use of any tobacco (15.0%) was highest among participants who identified as African American or Black.
- Current use of any tobacco (6.0%) and current use of most of the individual products was lowest among participants who identified as Asian. However, many estimates were unreliable due to small sample size.
- Current use of cigarettes and each of the three types of smokeless tobacco was highest among participants who identified as White.
- Current use of cigars, particularly little cigars or cigarillos, was highest among participants who identified as African American or Black.

Table 6 presents the prevalence of current use of any tobacco product according to age. Results are reported according to age and not grade in school because TNT Online Survey participants are not necessarily students. Age categories are collapsed into 2-year increments to increase sample size.

Table 6. Prevalence of current tobacco product use by age

	12–13 years % (95% CI)	14–15 years % (95% CI)	16–17 years % (95% CI)
Any tobacco product below	9.3 (7.2, 12.0)	12.1 (10.1, 14.5)	15.3 (12.9, 18.1)
Vapes	6.3 (4.8, 8.2)	10.4 (8.5, 12.7)	12.5 (10.3, 15.1)
Cigarettes	2.3 (1.6, 3.2)	3.4 (2.5, 4.6)	2.8 (2.2, 3.6)
Either cigar below	2.6 (1.4, 4.8)*	3.6 (2.5, 5.1)	3.9 (3.0, 5.2)
Little cigars or cigarillos	2.4 (1.3, 4.6)*	3.4 (2.4, 4.9)	3.6 (2.7, 4.9)
Big cigars	0.7 (0.4, 1.2)*	1.5 (0.8, 2.8)*	0.7 (0.4, 1.3)*
Hookah	1.6 (0.9, 2.6)	1.4 (0.9, 2.2)	1.8 (1.2, 2.8)
Any smokeless below	1.2 (0.8, 1.8)	1.6 (1.2, 2.1)	0.9 (0.6, 1.4)
Moist snuff	0.9 (0.6, 1.4)	1.1 (0.7, 1.5)	0.5 (0.3, 0.8)
Chewing tobacco	0.8 (0.6, 1.3)	1.0 (0.7, 1.4)	0.4 (0.2, 0.8)
Snus	0.8 (0.5, 1.2)	1.1 (0.8, 1.7)	0.6 (0.4, 1.0)
Nicotine pouches	0.6 (0.3, 0.9)	0.8 (0.5, 1.2)	1.2 (0.6, 2.4)*
Nicotine tablets or lozenges	0.5 (0.3, 0.9)	0.7 (0.4, 1.0)	0.5 (0.3, 0.9)
Heated tobacco	1.6 (0.8, 3.2)*	0.9 (0.6, 1.4)	0.5 (0.3, 0.8)

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

- Current use of any tobacco product was lowest among participants who were 12 or 13 years old (9.3%) and highest among participants who were 16 or 17 years old (15.3%).
- The prevalence of current vaping was lowest among participants who were 12 or 13 years old (6.3%) and highest among participants who were 16 or 17 years old (12.5%).

Table 7 presents the prevalence of current use of any tobacco and individual tobacco products according to level of mental health status. Participants selected the adjective that best defined their mental health (See Variable Definitions for details). Ratings of "excellent," "very good," or "good" and ratings of "fair" or "poor" were combined to increase sample size. Overall, among the 4869 participants who reported their mental health status, 83.2% (unweighted N=4040) rated their mental health as "excellent," "very good," or "good," and 16.8% (unweighted N=829) rated their mental health as "fair" or "poor."

Table 7. Prevalence of current tobacco product use by self-rated mental health status

	Excellent, Very Good, or Good % (95% CI)	Fair or Poor % (95% CI)
Any tobacco product below	10.7 (9.3, 12.2)	19.6 (15.7, 24.1)
Vapes	8.0 (6.9, 9.2)	18.0 (14.3, 22.5)
Cigarettes	2.7 (2.3, 3.3)	3.1 (1.9, 5.0)
Either cigar below	3.2 (2.5, 4.2)	4.0 (2.6, 6.2)
Little cigars or cigarillos	3.1 (2.4, 4.1)	3.3 (2.1, 5.3)
Big cigars	1.0 (0.6, 1.5)	0.9 (0.4, 2.2)*
Hookah	1.6 (1.2, 2.2)	1.3 (0.6, 2.6)*
Any smokeless below	1.4 (1.1, 1.7)	0.5 (0.2, 1.1)*
Moist snuff	0.9 (0.7, 1.2)	0.3 (0.1, 0.9)*
Chewing tobacco	0.9 (0.7, 1.1)	0.2 (0.1, 0.5)*
Snus	0.9 (0.7, 1.2)	0.4 (0.1, 1.0)*
Nicotine pouches	0.9 (0.6, 1.3)	0.6 (0.2, 1.6)*
Nicotine tablets or lozenges	0.6 (0.4, 0.8)	0.6 (0.3, 1.2)*
Heated tobacco	1.1 (0.7, 1.6)	0.8 (0.3, 2.6)*

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

- The prevalence of current use of any tobacco product was 10.7% among participants who rated their mental health status as "excellent", "very good", or "good" and was higher (19.6%) among participants who rated their mental health as "fair" or "poor."
- Current vaping was higher among participants who rated their mental health as "fair" or "poor" (18.0%).
- Current use of cigarettes and cigars was also slightly higher among participants who rated their mental health status as "fair" or "poor." Small sample sizes make it difficult to compare differences in the use of other products.

In Table 8 are the number of days in the past 30 days participants reported using each tobacco product (among participants who used each individual tobacco product on at least one day in the past 30 days).

Table 8. Frequency of current use among current users of a given tobacco product

	1 or 2 days % (95% CI)	3–5 days % (95% CI)	6–19 days % (95% CI)	20–29 days % (95% CI)	All 30 days % (95% CI)
Vapes	33.3 (27.6, 39.5)	26.7 (21.3, 32.8)	16.5 (12.6, 21.4)	8.1 (5.2, 12.4)	15.4 (11.4, 20.5)
Cigarettes	34.6 (26.5, 43.7)	20.0 (14.5, 27.0)	24.9 (18.7, 32.4)	5.8 (3.8, 8.8)	14.7 (8.9, 23.3)
Little cigars or cigarillos	58.7 (47.0, 69.4)	22.1 (14.6, 32.1)	15.2 (9.3, 23.9)	1.4 (0.6, 3.2)*	2.7 (1.4, 5.0)*
Big cigars	77.6 (63.2, 87.5)	13.6 (6.0, 27.9)*	6.9 (3.9, 11.7)	0.4 (0.1, 1.3)*	1.5 (0.4, 5.8)*
Hookah	70.9 (60.0, 79.7)	20.8 (13.3, 30.9)	6.1 (3.9, 9.6)	1.3 (0.5, 3.8)*	0.9 (0.2, 3.4)*
Moist snuff	64.0 (53.0, 73.7)	21.0 (13.5, 31.0)	11.6 (7.0, 18.6)	2.5 (0.7, 8.0)*	0.9 (0.3, 3.4)*
Chewing tobacco	64.1 (52.7, 74.1)	14.8 (9.6, 22.1)	17.8 (10.4, 28.7)	1.8 (0.7, 4.9)*	1.5 (0.3, 6.6)*
Snus	63.6 (51.7, 74.0)	14.8 (9.7, 21.9)	16.7 (9.1, 28.7)	3.8 (1.4, 10.2)*	1.1 (0.2, 6.6)*
Nicotine pouches	58.5 (41.2, 73.9)	23.4 (13.1, 38.1)	11.2 (6.3, 19.1)	5.1 (2.0, 12.5)*	1.9 (0.5, 7.0)*
Nicotine tablets or lozenges	51.9 (38.9, 64.6)	20.0 (11.6, 32.2)	24.8 (14.6, 38.9)	1.8 (0.7, 4.9)*	1.6 (0.2, 9.4)*
Heated tobacco	70.1 (54.3, 82.2)	18.7 (10.1, 32.2)	8.2 (3.7, 17.2)*	0.9 (0.3, 2.8)*	2.0 (0.6, 6.3)*

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

Notes: Frequency refers to number of days a product was used in the past 30 days

- For all tobacco products, the most common frequency of use among current users was 1 or 2 days in the past 30 days.
- 15.4% of current vape users reported using vapes on all 30 days in the past 30 days.
- Other than vapes or cigarettes, it was uncommon for current users to report using their product 20 or more days in the past 30 days. Other than vapes, cigarettes, and nicotine pouches, less than 5% of current users used their product 20 or more days in the past 30 days.

Table 9 presents the prevalence of any tobacco use and use of multiple tobacco products, overall and according to participant characteristics. See List of Terms for details on how multiple product use was calculated.

Table 9. Prevalence of current use of at least one product and of multiple tobacco products by sex, gender/sexual identity, race/ethnicity, and age

	Sample Size[1] N	Weighted %	Current Use ≥1 product % (95% CI)	Current Use ≥2 products % (95% CI)
Overall	5015	100	12.2 (10.9, 13.7)	4.8 (4.1, 5.7)
Sex				
Male	2551	49.8	12.8 (10.8, 15.1)	5.9 (4.8, 7.3)
Female	2453	50.2	11.6 (10.0, 13.5)	3.8 (3.0, 4.7)
Gender/Sexual Identity				
Non-LGBTQ+	4032	87.0	11.3 (9.9, 12.8)	4.9 (4.1, 5.8)
LGBTQ+[2]	718	13.0	18.0 (13.8, 23.1)	4.4 (3.0, 6.4)
Race/Ethnicity				
White	2035	20.7	13.6 (11.6, 15.9)	6.0 (4.9, 7.4)
African American/Black	359	4.1	15.0 (10.1, 21.9)	3.8 (2.4, 5.9)
Hispanic/Latino	1560	53.7	13.3 (11.3, 15.5)	5.8 (4.6, 7.3)
Asian	407	14.0	6.0 (3.5, 10.2)	0.9 (0.5, 1.7)
Other[3]	351	7.5	8.0 (5.4, 11.6)	2.2 (1.2, 4.0)*
Age				
12–13 years	1380	35.0	9.3 (7.2, 12.0)	3.8 (2.7, 5.3)
14–15 years	1734	31.8	12.1 (10.1, 14.5)	5.8 (4.4, 7.5)
16–17 years	1901	33.1	15.3 (12.9, 18.1)	5.0 (3.9, 6.3)

1. Sample sizes (N) are unweighted; percentages are weighted for response quality and participant demographic characteristics. Current use of at least one product and current use of at least two products are calculated among the entire survey population and in each gender, race/ethnicity, and age category.
2. Includes participants who indicated their gender was Transgender, Something else, or I'm not sure yet, whose gender was different than their sex at birth, or who indicated their sexual orientation was Gay or lesbian, Bisexual, or Something else
3. Includes participants who indicated their race was American Indian / Alaska Native, Native Hawaiian / Other Pacific Islander, Other, or selected more than one. Categories were combined to increase sample size.

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

Note: For purpose of defining multiple product use, all conventional smokeless tobacco (i.e., moist snuff, chewing tobacco, and snus) was considered "one" product. Likewise, big cigars and little cigars/cigarillos were considered "one" product. For example, someone who used only moist snuff and snus would not be considered a multiple product user.

- Among all participants, 4.8% used two or more tobacco products within the past 30 days.
- Less than half of all current tobacco users were multiple tobacco product users (39.6%,

not shown in Table 9).

- Multiple product use was higher among male (5.9%) than female (3.8%) participants.
- Among all race/ethnicity categories, multiple product use was highest among White (6.0%) participants.
- By age, multiple product use was lowest among age 12–13 participants (3.8%).

CHAPTER SUMMARY

In the 2023 TNT Online Survey, 12.2% of California youth ages 12–17 reported current use of at least one tobacco product. The most commonly used tobacco product was vapes (9.7% current use prevalence). More than half (59.9%) of current vape users reported vaping no more than 5 days in the last 30 days, while 23.5% reported vaping 20–30 days. By race/ethnicity, current use of any tobacco product was highest among participants who identified as African American or Black and lowest among participants who identified as Asian. Among all current tobacco users, less than half (39.6%) reported use of more than one tobacco product in the past 30 days.

CHAPTER 2 – VAPE PRODUCT DETAILS

This chapter presents data from the 2023 TNT Online Survey related to vape products, also known as electronic cigarettes (e-cigarettes). This chapter includes vape brands, device types, the substances contained in vapes, and symptoms of vaping dependence.

Vape Brands

All TNT Online Survey participants were asked to identify various brands of vape products. They were asked, "What vaping brands do you think are popular among people your age? Select all you think are popular right now." Participants were shown a list of 28 brands they could select, plus "something else" (with a write-in option). Participants also had the option to select "I don't know." Table 10 presents the results of this vape brand question.

Table 10. Vape brands perceived as most popular

Most-Selected Brands	Among All Participants N=5008 % (95% CI)	Among Current Vape Users N=1082 % (95% CI)	Among Current Vape Non-Users N=3924 % (95% CI)
I don't know	54.1 (51.6, 56.6)	7.7 (5.0, 11.7)	59.1 (56.4, 61.8)
Juul	28.8 (26.6, 31.2)	50.2 (43.9, 56.5)	26.5 (24.2, 29.1)
Puff Bar	14.1 (12.6, 15.8)	49.1 (42.8, 55.4)	10.4 (9.0, 11.9)
Elfbar	11.7 (10.2, 13.3)	36.7 (30.8, 43.0)	9.0 (7.5, 10.7)
Blu	10.5 (9.2, 12.0)	29.3 (23.8, 35.6)	8.5 (7.3, 9.9)
Bang	7.3 (6.1, 8.6)	22.9 (17.7, 29.1)	5.6 (4.5, 6.9)
Vuse	6.9 (5.8, 8.2)	18.2 (13.8, 23.6)	5.7 (4.6, 7.1)
NJOY	6.5 (5.4, 7.8)	14.0 (10.3, 18.8)	5.7 (4.6, 7.1)
Flum	6.3 (5.3, 7.6)	24.2 (18.9, 30.5)	4.4 (3.5, 5.7)
SMOK	4.5 (3.6, 5.7)	11.9 (8.8, 16.0)	3.7 (2.8, 5.0)
eSmoke	4.4 (3.5, 5.6)	9.8 (6.4, 14.7)	3.8 (2.9, 5.1)
Vapor King	4.3 (3.4, 5.3)	8.8 (5.7, 13.5)	3.8 (2.9, 4.9)
Puff Plus	3.9 (3.1, 4.9)	13.8 (9.8, 19.1)	2.8 (2.1, 3.9)
Lost Mary[1]	3.0 (2.3, 4.0)	13.6 (9.4, 19.1)	1.7 (1.2, 2.6)
ProVape	2.9 (2.2, 3.9)	8.0 (5.2, 12.2)	2.4 (1.6, 3.4)
Mi-Pod	2.9 (2.0, 4.1)	6.0 (4.1, 8.7)	2.6 (1.7, 3.9)
Breeze[1]	2.9 (2.2, 3.8)	9.6 (6.1, 14.8)	2.1 (1.4, 3.0)
E-Swisher	2.7 (2.0, 3.6)	8.7 (5.7, 12.9)	2.0 (1.4, 2.9)
Hyppe	2.6 (2.0, 3.4)	8.9 (5.7, 13.8)	1.9 (1.4, 2.7)
Pop	2.4 (1.8, 3.1)	7.2 (4.4, 11.5)	1.9 (1.4, 2.5)
Cali	2.3 (1.5, 3.5)	6.2 (4.1, 9.4)	1.9 (1.1, 3.3)
Mr. Fog[1]	2.3 (1.6, 3.2)	6.3 (3.6, 10.7)	1.8 (1.2, 2.7)
Hyde	2.1 (1.5, 2.9)	7.7 (4.9, 11.8)	1.5 (1.0, 2.3)
Esco Bar[1]	2.1 (1.6, 2.9)	8.8 (5.5, 13.8)	1.3 (0.9, 2.0)
Bolt	1.7 (1.2, 2.5)	2.7 (1.3, 5.5)*	1.6 (1.1, 2.5)
Posh	1.6 (1.1, 2.3)	4.1 (2.6, 6.5)	1.3 (0.9, 2.0)
Fogg	1.3 (1.0, 1.8)	4.7 (2.7, 8.0)	1.0 (0.6, 1.4)
Maskking	0.8 (0.5, 1.3)	3.1 (1.7, 5.4)	0.6 (0.3, 1.1)*
Suorin	0.7 (0.4, 1.3)	2.1 (1.2, 3.6)	0.6 (0.3, 1.2)*
Something Else[2]	1.8 (1.3, 2.7)	4.2 (2.2, 7.8)*	1.6 (1.0, 2.5)

1. Brand added in the fall cycle; estimates in table restricted to fall cycle for this brand
2. Other brands listed by >1 participant included: Cake (n=7), Elfbar (n=3), Lost Mary (n=3), Breeze (n=2), Flum (n=2), and Stiizy (n=2); Brands are included here if listed by participants as a write-in response, even if the brand was an available to select above.

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

Notes: Brands were presented to participants in alphabetical order. Order in this table is based on the most-selected brands among all participants. Participants could select more than one brand; therefore, percentages add to >100%.

- When asked to identify vape brands popular among people their age, half of participants overall (54.1%) indicated that they did not know.
- Among all participants, the most-selected vape brands (in order) were Juul, Puff Bar, Elfbar, and Blu. Among current vape users, the most-selected vape brands (in order) were also Juul, Puff Bar, Elfbar, and Blu.
- Elfbar, a brand added to the 2022 survey before the fall cycle, ranked among the 3 most-selected brands in 2023.

Vape Devices

All TNT Online survey participants were asked if they had ever used a vape device. Those who reported that they had ever vaped were then asked on how many days they had used a vape device the past 30 days. Those who indicated using a vape device at least one day in the past 30 days were then given a brief description of the most common types of vape devices (disposable, pod, or mod/refillable). They were then asked to indicate which device types they had used in the past 30 days, with the additional option of "something else" (with a write-in option). Those who selected more than one device type were then asked which of their selections they used the most. Table 11 presents the results of these vape device questions. For the wording used when presenting tobacco products in the TNT Online Survey questionnaire, see List of Terms.

Table 11. Vape device types used by current vape users

	Device Type: Any Use[1] in Past 30 Days % (95% CI)	Device Type: Used the Most[2] in Past 30 Days % (95% CI)
Disposable (like Puff Bar)	72.6 (67.2, 77.4)	64.1 (58.2, 69.6)
Pod (like Juul)	35.1 (29.7, 41.0)	22.0 (17.6, 27.1)
Refillable or modifiable	22.5 (18.0, 27.7)	10.6 (7.8, 14.4)
Something else[3]	2.5 (1.1, 5.7)*	1.6 (0.6, 4.2)*

1. Participants could select more than one device type. Therefore, percentages add to >100%.
2. Participants who selected 2 or more device types were subsequently asked which one they used the most. To calculate percentages in this column, participants were classified according to the device type they used the most, whether using 1 device type or 2 or more device types. Percentages add to 98% because 2% of participants indicated that they used 2 or more device types "about the same amount."
3. Other device types listed by >1 participant: Elfbar (n=3) and Rechargeable (n=2)

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

Note: Based on N=1083 current vape users

- Among all current vapers, disposable devices (like Puff Bar) comprised the most commonly used device type, followed by pod devices (like Juul), and then refillable or modifiable devices.
- Participants rarely indicated that they used other device types not listed on the survey.
- Disposable devices were the most used device type regardless of whether participants were asked to indicate all the device types they used in the past 30 days or to indicate which single device type they used the most.

Vape Contents, Including Nicotine and Other Substances

Current vapers (N=1083) were asked a series of questions about what substances, such as nicotine, were in the vapes they used. The questions were presented in different parts of the survey. First, current vapers were asked, "In the PAST 30 DAYS, how often did the vapes you used contain nicotine?" A subset of current vapers (N=289) was also asked, "In the PAST 30 DAYS, did any of the vapes that you used contain the following substances?" and were given a list of substances they could select. Finally, current vapers were asked, "Was there ever a time in the PAST 30 DAYS that you used a vape and were not sure what it contained?" The weighted responses to each of these questions are presented in Table 12. Most current vapers reported that the vapes they used always (33.6%) or mostly (33.8%) contained nicotine. Some current vapers (33.6%) reported at least one time in the past 30 days using a vape and not being sure what it contained.

Table 12. Vape contents among current vapers

Question	Response Selected % (95% CI)
In the PAST 30 DAYS, how often did the vapes you used contain nicotine?	
Always had nicotine	33.6 (28.0, 39.6)
Mostly had nicotine	33.8 (28.0, 40.1)
Mostly did not have nicotine	13.9 (10.4, 18.4)
Never had nicotine	9.2 (5.8, 14.1)
I don't know	9.6 (6.5, 14.0)
In the PAST 30 DAYS, did any of the vapes that you used contain the following substances? Select all that apply.[1]	
Nicotine	73.4 (64.4, 80.7)
Marijuana with THC	38.5 (29.3, 48.5)
Marijuana without THC	5.8 (2.9, 11.3)*
Melatonin	3.6 (1.3, 9.7)*
Vitamins	2.7 (0.8, 8.5)*
Aroma Therapy	0.4 (0.1, 1.3)*
Something else	0.6 (0.2, 1.5)*
None of these	13.9 (8.5, 21.9)
Was there ever a time in the PAST 30 DAYS that you used a vape and were not sure what it contained?	
Yes	33.6 (27.8, 39.8)
No	66.4 (60.2, 72.2)

1. Question presented to a subset (N=289) of current vapers

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

- Combined, about two-thirds of current vapers reported that the vapes they used always (33.6%) or mostly (33.8%) contained nicotine. Asked in another way, 73.4% of current vapers reported that any of the vapes they used in the past 30 days contained nicotine.
- Some current vapers reported using vapes containing substances other than nicotine. From a list of five substances, marijuana with THC was selected the most (38.5%).
- Melatonin (3.6%), vitamins (2.7%), and aroma therapy (0.4%) were other substances occasionally used in vapes among small percentages of current vapers.
- About one-third of current vapers (33.6%) reported at least one time in the past 30 days using a vape and not being sure what it contained.

CHAPTER SUMMARY

Juul, Puff Bar, Elfbar, and Blu were the vape brands participants reported as most popular among their peers. Among all current vapers, disposable devices (like Puff Bar) and pod devices (like Juul) were the most commonly used device types, but it was common to use more than one type of vape device during the past 30 days. The majority of current vapers reported that the vapes they used contained nicotine. However, about a third of current vapers reported using a vape in the past 30 days and not being sure what it contained. Besides nicotine, participants reported that the vapes they used sometimes contained marijuana. Other than nicotine or marijuana, other potential vape contents, like vitamins, melatonin, or aroma therapy, were not used commonly by participants.

CHAPTER 3 – FLAVORED PRODUCTS

This chapter presents data from the 2023 TNT Online Survey related to the current use of flavored tobacco and marijuana products. It also examines the use of specific flavors for certain tobacco products. For vapes, preferred flavors and perceived ease of access to flavored products are also presented.

Flavored Tobacco Use

In November 2022, California voters approved Proposition 31, a ballot referendum upholding Senate Bill (SB)-793, allowing for the implementation of a statewide ban on the sale of almost all forms of flavored tobacco; this ban went into effect on December 21, 2022. The 2023 TNT Online Survey, which collected data in May-June 2023 and November-December 2023, included multiple items related to flavored tobacco. Current users of vapes, cigarettes, cigars, hookah, and smokeless tobacco were asked about their use of flavored products in the past 30 days. Cigarette smokers were asked whether any of the cigarettes they smoked were menthol-flavored (the only characterizing flavor permissible in cigarettes under federal law) with yes, no, or don't know response options. Separately for each other tobacco product, current users were asked, "In the PAST 30 DAYS: What flavor(s), if any, were the [tobacco product] you used? Select all that apply." Participants then selected from a list of flavors (lists were tailored to each type of product and included 9 to 13 options). Participants who indicated that they only used "unflavored" or "tobacco flavored" products or did not know what flavor they used in the past 30 days were considered not to have used flavored products. All other indicated flavors, such as mint, fruit, candy, and "other," were categorized as flavored product use. No flavor questions were included related to heated tobacco, nicotine pouches, or nicotine tablets, lozenges, or gummies. Of note, the definition of flavored products used in the survey differs from how the statewide tobacco sales restriction law was interpreted and enforced. For example, flavored hookah used in hookah lounges and flavored premium cigars were exempted from the law but were considered use of a flavored tobacco product in this survey. New "cooling sensation" products introduced in 2023 were counted as flavored for this survey but whether the law applies to them was under legal dispute at the time of this report. Table 13 shows the prevalence of current flavored tobacco use among current users of various products in the 2023 TNT Online Survey.

Table 13. Prevalence of using flavored products among participants who were current users of a given tobacco product

	N[1]	Any Flavored Product Use % (95% CI)
Any tobacco product below	1328	86.4 (80.5, 90.7)
Vapes	1083	90.7 (86.0, 93.9)
Cigarettes[2]	722	57.2 (48.3, 65.6)
Cigars[3]	451	67.4 (53.6, 78.7)
Hookah	367	85.6 (73.9, 92.6)
Smokeless Tobacco[4]	427	83.1 (71.4, 90.6)

1. Sample size (N) is unweighted
2. Menthol cigarettes
3. Includes big cigars and/or little cigars or cigarillos
4. Includes moist snuff, chewing tobacco, and/or snus

Abbreviation: CI=confidence interval

- Use of flavored tobacco products was common among current tobacco users.
- 57.2% of current cigarette smokers used menthol cigarettes in the past 30 days.
- 67.4% of current cigar smokers used flavored cigars.
- Over 90% of current users of vapers used flavored vapes. More than 80% of current users of hookah and smokeless tobacco used flavored varieties of these products.

Menthol or Cooling Cigarettes and Vapes

In 2023, current cigarette smokers and current vapers were asked new questions about specific types of flavored products they might have used in the past 30 days. These questions referred to menthol, “cooling,” or non-food “concept” flavors and allowed participants to select “yes,” “no,” or “I don’t know” (Table 14). Asking smokers explicitly about “menthol” cigarettes yielded similar results as asking about cigarettes with a cool, crisp, fresh, or cold sensation; however, “cooling” vape use was more common than menthol vape use.

Table 14. Use of specific flavor types among current cigarette smokers and current vapers

Question	Response Selected % (95% CI)
In the PAST 30 DAYS, were any of the cigarettes you smoked flavored to taste like menthol or mint? Common mint/menthol brands include Newport, Salem, and Kool.[1]	
Yes	57.2 (48.3, 65.6)
No	39.1 (30.8, 48.0)
I don't know	3.7 (1.2, 10.7)*
Did any of the cigarettes you smoked in the PAST 30 DAYS have a cool, crisp, fresh, or cold sensation?[1]	
Yes	53.7 (44.8, 62.3)
No	40.8 (32.5, 49.7)
I don't know	5.5 (1.7, 16.8)*
Were any of the cigarettes you smoked in the PAST 30 DAYS menthol?[1]	
Yes	46.7 (38.5, 55.2)
No	45.5 (36.9, 54.4)
I don't know	7.8 (4.1, 14.3)*
Did any of the vapes you used in the PAST 30 DAYS have a cool, crisp, fresh, or cold sensation?[2]	
Yes	65.9 (59.9, 71.5)
No	27.5 (22.5, 33.2)
I don't know	6.6 (4.0, 10.6)
Were any of the vapes you used in the PAST 30 DAYS menthol?[2]	
Yes	35.2 (29.4, 41.5)
No	47.8 (41.6, 54.1)
I don't know	16.9 (12.6, 22.4)
Did any of the vapes you used in the PAST 30 DAYS have a non-food flavor, like "sunset" "unicorn" or "fantasy" that isn't an actual food, drink, or dessert?[2]	
Yes	36.2 (30.6, 42.1)
No	52.2 (46.0, 58.4)
I don't know	11.6 (8.2, 16.2)

1. Question presented to current cigarette smokers
2. Question presented to current vapers

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

Awareness and Perceptions of California Tobacco Prevention Policies

Additional questions were added to the 2023 TNT Online Survey related to Proposition 31 and the legal age for tobacco product sales in California (Table 15). Nearly half of the total sample (45.6%) correctly identified that 21 is the minimum age for tobacco sales. More than half of participants indicated they did not know whether it was legal to buy flavored vapes (53.5%) or flavored other tobacco (51.5%) in California. Only 22.0% of participants reported that they were aware that flavored tobacco and vape sales were not allowed in California. Awareness was greater among current tobacco users (44.1%).

Table 15. Awareness of statewide California tobacco prevention policies

	Response Selected, % (95% CI)		
Question	Total Sample N=5014	Any Tobacco Current Users N=1366	Any Tobacco Current Non-Users N=3648
What is the minimum age to buy cigarettes and other tobacco where you live?			
18 years old	35.2 (32.7, 37.7)	29.7 (24.5, 35.3)	36.0 (33.3, 38.7)
21 years old	45.6 (43.1, 48.1)	61.2 (55.3, 66.8)	43.4 (40.7, 46.1)
25 years old	0.5 (0.3, 0.9)	0.9 (0.3, 3.2)*	0.5 (0.3, 0.8)
I don't know	18.7 (16.8, 20.8)	8.2 (5.4, 12.3)	20.2 (18.1, 22.5)
Is it legal to buy flavored nicotine vapes in California?[1]			
Yes	27.0 (24.7, 29.4)	35.3 (29.7, 41.4)	25.8 (23.4, 28.4)
No	19.5 (17.7, 21.5)	33.1 (28.0, 38.7)	17.6 (15.7, 19.7)
I don't know	53.5 (51.0, 56.0)	31.5 (26.4, 37.1)	56.5 (53.8, 59.3)
Is it legal to buy flavored cigarettes, little cigars and cigarillos, dip, and other tobacco in California?[1]			
Yes	30.8 (28.4, 33.3)	38.3 (32.5, 44.5)	29.8 (27.2, 32.5)
No	17.7 (15.9, 19.6)	28.6 (23.8, 33.9)	16.2 (14.3, 18.2)
I don't know	51.5 (49.0, 54.0)	33.1 (27.9, 38.7)	54.1 (51.3, 56.8)
As of 2023, all cigarettes, cigars, dip, and nicotine vapes sold in California are not allowed to have any added flavors, like fruit, candy, mint, or menthol. Before this survey, were you aware of this law?			
Yes	22.0 (20.0, 23.9)	44.1 (38.2, 50.1)	18.9 (17.0, 20.9)
No	78.0 (76.1, 79.9)	55.9 (49.9, 61.8)	81.1 (79.1, 83.0)

1. These questions were presented prior to revealing (in the subsequent question) that flavored tobacco is not allowed to be sold in California

Abbreviation: CI=confidence interval

*Data statistically unreliable because relative variance is greater than 30%. Interpret with caution.

Perceived Access to Flavored Vapes

All participants were asked about the availability and access to flavored nicotine vapes for people their age (Table 16). Responses generally indicated widespread availability of flavored vape products.

Table 16. Perceived availability and access to flavored nicotine vapes

For this question, flavored means an added taste, like fruit, mint, or candy. Please indicate how often the following happen.	Almost always % (95% CI)	Sometimes % (95% CI)	Rarely % (95% CI)	Never % (95% CI)
When I go to stores that sell nicotine vapes, they have **flavored** vapes	32.6 (30.2, 35.0)	28.8 (26.5, 31.1)	12.0 (10.5, 13.7)	26.7 (24.5, 29.0)
When I see ads for nicotine vapes, they include **flavored** vapes	30.8 (28.5, 33.2)	32.9 (30.5, 35.4)	11.9 (10.5, 13.4)	24.5 (22.3, 26.7)
When people my age vape nicotine, they use **flavored** vapes	45.6 (43.1, 48.2)	28.9 (26.7, 31.3)	7.9 (6.7, 9.3)	17.6 (15.7, 19.6)
People my age who vape have a hard time finding **flavored** nicotine vapes	11.0 (9.6, 12.6)	25.8 (23.6, 28.1)	32.5 (30.2, 34.8)	30.7 (28.4, 33.2)

Abbreviation: CI=confidence interval

- Most participants reported that stores they visit “almost always” or “sometimes” have flavored vapes (61.3%), that vape ads they see “almost always” or “sometimes” have flavored vapes (63.7%), and that people their age “almost always” or “sometimes” use flavored vapes (74.5%).
- Participants were less likely to report that people their age “almost always” or “sometimes” have a hard time finding flavored vapes (36.8%).

All survey participants were asked to describe how easy (or difficult) they perceived it to be to find flavored vapes (Table 17). This question was worded differently for current vape non-users. For non-users, the question asked them to assume they had access to vapes and wanted to get one, before asking how easy or difficult they thought it would be to find vapes in "flavors that you like." Non-users were also given the option to select "I don't know."

Table 17. Perceived ease or difficulty of finding vapes in appealing flavors among vape users and non-users.

Question	Response Selected % (95% CI)
Vape Users: "…how easy or difficult is it to get vapes in flavors that you like?"	
Very Difficult	11.5 (8.3, 15.8)
Somewhat Difficult	19.3 (15.0, 24.4)
Somewhat Easy	35.1 (29.2, 41.5)
Very Easy	34.1 (28.4, 40.3)
Vape Non-Users: "If you had access… and wanted… how easy or difficult would it be to get vapes in flavors that you like?"	
Very Difficult	6.0 (4.9, 7.3)
Somewhat Difficult	5.4 (4.3, 6.7)
Somewhat Easy	17.1 (15.2, 19.2)
Very Easy	18.9 (16.8, 21.3)
I don't know	52.6 (49.9, 55.3)

Abbreviation: CI=confidence interval

- Most current vapers thought it would be either "somewhat" (35.1%) or "very" easy (34.1%) to find vapes in flavors that they like.
- Less than one-third of current vapers thought it would be either "somewhat" (19.3%) or "very" difficult (11.5%) to find vapes in flavors that they like.
- About half (52.6%) of vape non-users indicated that they do not know how easy or difficult it would be to find vapes in flavors that they like.
- Among vape non-users that indicated a response other than "I don't know," it was much more common to indicate that it would be "somewhat" or "very" easy to find vapes in flavors that they like than it was to indicate it would be "somewhat" or "very" difficult.

Specific Flavors of Tobacco Products

For vapes, cigars, smokeless tobacco, and hookah, current users were asked about *any* of the flavors they used in the past 30 days.

Table 18. Prevalence of using specific flavors of tobacco products among current users of a given tobacco product

	Vapes (95% CI)	Cigars (95% CI)	Smokeless Tobacco (95% CI)	Hookah (95% CI)
Unflavored	8.8 (5.9, 12.9)	30.2 (18.9, 44.5)	29.9 (21.1, 40.6)	17.1 (10.6, 26.4)
Tobacco Flavored	8.8 (6.4, 12.0)	N/A	N/A	N/A
Menthol, Frost, Ice	25.6 (20.7, 31.3)	12.9 (8.5, 19.2)	28.7 (21.2, 37.6)	20.1 (13.3, 29.2)
Mint (Not Frost, Ice)	8.4 (5.6, 12.4)	10.6 (6.4, 17.0)	37.9 (28.6, 48.3)	14.2 (9.2, 21.2)
Wintergreen (Not Frost, Ice)	N/A	N/A	26.4 (19.4, 34.8)	N/A
Fruit-Ice Combination	38.4 (32.5, 44.6)	N/A	N/A	N/A
Fruit	54.0 (47.7, 60.2)	51.6 (39.8, 63.2)	37.1 (28.1, 47.0)	65.7 (53.4, 76.2)
Dessert	20.1 (15.8, 25.2)	17.1 (10.9, 25.9)	N/A	22.0 (14.3, 32.3)
Candy	37.8 (32.0, 44.0)	N/A	N/A	N/A
Spice	5.9 (4.0, 8.5)	15.4 (8.8, 25.6)	17.8 (11.9, 25.8)	11.2 (6.9, 17.5)
Alcohol	2.0 (1.4, 3.0)	5.5 (3.1, 9.7)	10.4 (6.9, 15.4)	4.6 (2.5, 8.4)*
Non-Alcoholic Drink	6.1 (3.8, 9.6)	3.8 (1.7, 8.3)*	N/A	N/A
Other	1.8 (0.7, 4.7)*	0.5 (0.1, 3.3)*	0	0.6 (0.1, 4.0)*
Don't Know	3.6 (1.6, 8)*	9.6 (5.4, 16.4)	5.2 (1.8, 13.8)*	6.8 (2.3, 18.5)*

Abbreviations: CI=confidence interval; N/A=Not applicable (some flavor categories were not presented for all products)
*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

- For vapes, cigars, and hookah, fruit was the most used type of flavor among current users of each product. For smokeless tobacco, the most common flavor was mint.
- After fruit, the most used vape flavors were fruit-ice combination and candy.

Preferences for Specific Vape Flavors

All vape product ever-users were asked how much they liked or disliked certain flavors for vapes. Table 19 presents how much the 11 listed flavor categories were liked or disliked.

Table 19. Liking and disliking of various flavors for vapes among vape ever users

	Strongly Like 95% CI	Somewhat Like 95% CI	Somewhat Dislike 95% CI	Strongly Dislike 95% CI
Fruit	40.9 (36.3, 45.7)	33.4 (28.7, 38.4)	10.0 (7.5, 13.2)	15.7 (12.6, 19.4)
Candy	37.9 (33.2, 42.8)	32.1 (27.8, 36.8)	10.7 (8.4, 13.6)	19.2 (15.6, 23.4)
Dessert	31.4 (27.1, 36.1)	32.5 (27.9, 37.3)	15.0 (12.1, 18.5)	21.1 (17.5, 25.2)
Fruit-Ice Combination	28.1 (24.0, 32.7)	34.0 (29.7, 38.7)	14.9 (11.3, 19.4)	22.9 (19.3, 27.0)
Mint (Not Frost, Ice)	11.1 (8.6, 14.3)	31.1 (26.9, 35.8)	17.0 (13.6, 20.9)	40.7 (36.0, 45.6)
Menthol, Frost, Ice	10.3 (8.0, 13.1)	25.6 (21.6, 29.9)	20.6 (16.9, 24.9)	43.6 (38.8, 48.5)
Non-Alcoholic Drink	10.0 (7.5, 13.2)	22.7 (18.8, 27.1)	15.1 (12.2, 18.5)	52.2 (47.4, 57.0)
Tobacco Flavored	5.2 (3.4, 7.9)	7.3 (5.7, 9.4)	15.4 (12.4, 19.1)	72.1 (67.8, 76.0)
Spice	5.1 (3.5, 7.4)	13.1 (10.5, 16.3)	26.9 (22.9, 31.3)	54.8 (50.0, 59.6)
Alcohol	4.9 (3.3, 7.1)	9.6 (6.9, 13.2)	15.7 (12.6, 19.4)	69.8 (65.2, 74.1)
Unflavored	3.5 (2.3, 5.3)	14.3 (11.2, 18.0)	18.7 (15.4, 22.6)	63.5 (58.8, 68.0)

Abbreviations: CI=confidence interval

- Among vape ever users, fruit was the vape flavor that was most often strongly liked (40.9%) and least often strongly disliked (15.7%).
- Fruit, candy, dessert, and fruit-ice combination flavors were each either liked or strongly liked by more than 60% of all vape ever users.
- Unflavored, alcohol, spice, and tobacco flavored were the least liked vape flavors. The majority of vape ever users strongly disliked tobacco flavored vapes (72.1%).

Flavored Marijuana Use

This section discusses the use of flavored marijuana products. For more information about marijuana use, in general, see Chapter 5. A subset of current marijuana users was asked about whether the products they used in the past 30 days were flavored. The questions differed depending on the way that participants consumed marijuana. All edible marijuana products (like cookies, candies, and drinks) were assumed to be "flavored." Participants who used any combustible form of marijuana and/or a dry leaf vaporizer were asked whether the marijuana flower, bud, or leaf they used contained added flavors. Participants who vaped or dabbed marijuana oil, wax, or concentrate were asked whether the liquid they used was flavored.

Participants who smoked blunts were asked about flavored blunts or blunt wraps. Participants who used joints or spliffs were asked about flavored rolling paper. Participants who consumed marijuana in more than one way were asked the flavor questions about each way they consumed marijuana. Using flavors one or more of the above ways was considered "any" flavored marijuana use. Table 20 presents the prevalence of flavored marijuana product use among current marijuana users.

Table 20. Prevalence of using flavored marijuana products among participants who were current users of a given marijuana product

	N[1]	Flavored Marijuana Product Use % (95% CI)
Any marijuana, including edibles	235	59.9 (49.4, 69.6)
Any marijuana, excluding edibles	220	40.6 (30.9, 51.1)
Marijuana flower, bud, or leaf	207	10.8 (6.4, 17.7)
Vaped or dabbed marijuana oil or liquid	93	37.1 (24.0, 52.5)
Blunt cigar or blunt wraps	83	63.2 (42.7, 79.8)
Joint or spliff rolling paper	179	20.1 (12.9, 29.8)

1. Sample size (N) is the unweighted number of current marijuana users who were asked to identify the mode(s) of marijuana consumption they used in the past 30 days
Abbreviation: CI=confidence interval

- Many current marijuana users consumed some form of flavored marijuana in the past 30 days. This was true whether edible marijuana products were included (59.9%) or excluded (40.6%) in calculating flavor use.
- Blunts were the method of marijuana consumption most likely to be flavored (63.2%), presumably through the use of flavored cigars or blunt wraps.
- Flavor added to the marijuana flower, bud, or leaf itself was the least common way to consumed flavored marijuana (10.8%) among the methods included in the survey.

CHAPTER SUMMARY

Tobacco and marijuana users commonly used flavored products. Most participants reported being unaware of that flavored tobacco and vape products could no longer be legally sold in California. About 57% of current cigarette smokers used menthol cigarettes in the past 30 days. About two-thirds of current users of cigars used flavored cigars in the past 30 days. Over 80% of current users of smokeless tobacco and hookah used flavored versions of these products. Over 90% of current vape users used flavored versions of these products.

There are several possible reasons why there was a relatively high prevalence of flavored product use despite the approval of Senate Bill (SB)-793. Importantly, more time for implementation and enforcement may be needed to see full policy impact. SB-793 took effect at the very end of 2022, just a few months before the 2023 TNT Online Survey began data collection. In the short term, tobacco retailers may have excess inventory of flavored products, consumers may stock-up on preferred products, or tobacco companies may increase marketing in advance of a flavor ban. Individuals may need time to quit using tobacco successfully. There was no official state-level enforcement agency for the flavored tobacco sales law until January 2024. SB-793 implementation focused on brick-and-mortar retail locations, leaving open the possibility of evading flavored tobacco restrictions via online sales. Additionally, previously enacted local flavored tobacco policies (e.g., city or county level) might have already reduced youth tobacco use to some degree. Finally, there could be impacts of the statewide flavored tobacco law on adolescent tobacco use that were not fully captured in the TNT Online Survey. The present report includes the prevalence of using any flavored tobacco at least once within the past 30 days. However, it is possible that under a flavor ban, adolescents might have used flavored tobacco on fewer occasions within a 30-day period.

Among participants who were current users of vapes, cigars, or hookah, fruit was the flavor that they used most often. Fruit, candy, dessert, and fruit-ice combination flavors were each either liked or strongly liked by more than 60% of all vape ever users. Both vape users and non-users were much more likely to report it would be somewhat or very easy to find vapes in flavors that they like than to report it would be somewhat or very difficult. Use of flavored marijuana products was common, even if edible marijuana products were excluded. Blunts were the method of marijuana consumption most likely to be flavored.

CHAPTER 4 – ENDING THE TOBACCO USE EPIDEMIC

This chapter presents data from the 2023 TNT Online Survey related to the ending the tobacco use epidemic. California has set a goal of eliminating tobacco use statewide. This will be achieved through a number of policy priorities to strengthen tobacco control efforts. The TNT Online Survey included several questions intended to assess participants' attitudes related to some of these policies.

Tobacco Endgame Policy Statements

All TNT Online Survey participants were asked to indicate how much they agreed or disagreed with nine different policy statements. Three of the statements related to the sale of tobacco products, five statements related to the use of tobacco or marijuana products in public places or in multiunit housing, and one statement related to a "tobacco-free generation" policy that would gradually raise the legal age for tobacco sales. Table 21 shows how participants responded to policy statements related to potential restrictions on tobacco sales. Table 22 shows how participants responded to policy statements related to tobacco or marijuana use in public places or multiunit housing. Table 23 examines two differently worded items related to a hypothetical tobacco-free generation policy.

Table 21. Agreement with policy statements related to ending the tobacco use epidemic – tobacco sales restrictions

How much do you agree or disagree with the following statements?	I strongly agree % (95% CI)	I agree % (95% CI)	I disagree % (95% CI)	I strongly disagree % (95% CI)
The sale of all tobacco products, including cigarettes, cigars, chewing tobacco, and vapes should end.	39.4 (36.9, 41.9)	32.6 (30.3, 35.1)	22.1 (20.1, 24.3)	5.8 (4.9, 7.0)
Menthol cigarettes taste like mint. The sale of menthol cigarettes should end.	42.0 (39.5, 44.5)	33.4 (31.0, 35.8)	18.3 (16.4, 20.3)	6.4 (5.3, 7.6)
The sale of FLAVORED tobacco, like cigarettes, chew, cigars, and vapes that taste like mint, fruit, or candy, should end.	44.5 (42.0, 47.0)	30.3 (28.1, 32.7)	18.3 (16.5, 20.3)	6.8 (5.7, 8.1)

Abbreviation: CI=confidence interval

- Most participants supported statements calling for the sale of all tobacco products or flavored tobacco products to end.
- Between 39% and 45% of participants “strongly agreed” and between 30% and 33% “agreed” that sales should end.
- Strong agreement was somewhat greater for policy statements related to flavored tobacco sales than for the statement related to the sales of all tobacco products.

Table 22. Agreement with policy statements related to ending the tobacco use epidemic – public places and multiunit housing

How much do you agree or disagree with the following statements?	I strongly agree % (95% CI)	I agree % (95% CI)	I disagree % (95% CI)	I strongly disagree % (95% CI)
Smoking cigarettes, little cigars, or cigarillos in all public places should end.	49.1 (46.6, 51.7)	33.2 (30.8, 35.6)	13.2 (11.7, 14.9)	4.5 (3.7, 5.5)
Smoking marijuana in all public places should end.	45.8 (43.3, 48.4)	32.1 (29.7, 34.5)	14.5 (13.0, 16.2)	7.5 (6.4, 8.9)
Using vapes in all public places should end.	43.2 (40.7, 45.7)	30.7 (28.3, 33.1)	19.6 (17.7, 21.6)	6.6 (5.6, 7.7)
All apartment buildings should be completely smoke-free.	47.6 (45.0, 50.1)	31.0 (28.8, 33.4)	15.6 (13.9, 17.4)	5.8 (4.9, 7.0)
All apartment buildings should be completely free of marijuana smoke and vapor (for example, joints, blunts, bongs, and dab pens).	46.6 (44.0, 49.1)	29.5 (27.2, 31.8)	17.5 (15.8, 19.4)	6.5 (5.4, 7.7)

Abbreviation: CI=confidence interval

- Most participants supported statements that called for the use of tobacco or marijuana products in public places to end.
- Between 43% and 49% of participants “strongly agreed” and between 29% and 33% “agreed” that tobacco or marijuana use in public places should end.
- Strong agreement was slightly greater when statements applied to smoking tobacco than using vapes or marijuana.
- Most participants either “strongly agreed” or “agreed” that all apartment buildings should be completely smoke-free and completely free of marijuana smoke and vapor. There was slightly more agreement that apartments should be smoke-free than marijuana-free.

The wording of the policy statement related to a potential tobacco-free generation policy differed between the spring and fall cycles of the 2023 TNT Online Survey. Based on feedback obtained in focus groups and survey cognitive testing, a simpler statement was presented in the fall cycle. Table 23 presents the results.

Table 23. Agreement with a tobacco-free generation policy

Spring 2023 wording: Some cities and states are considering laws that end the sale of all tobacco to anyone born after a certain date. In the future, no one born after 2013 could ever buy tobacco, no matter how old they become. Eventually, no one would be old enough to buy tobacco. How much do you agree or disagree that the sale of all tobacco products to anyone born after 2013 should end?	% (95% CI)
I strongly agree	41.9 (37.7, 46.3)
I agree	31.4 (27.6, 35.5)
I disagree	19.2 (16.0, 22.9)
I strongly disagree	7.5 (5.8, 9.6)
Fall 2023 wording: I support a policy that would prohibit anyone born after a certain date from ever being sold tobacco products. For example, everyone born after December 31, 2012 would never be able to buy cigarettes or vapes, even after they turn 21.	% (95% CI)
I strongly agree	33.3 (30.5, 36.1)
I agree	32.6 (29.8, 35.5)
I disagree	23.8 (21.0, 26.9)
I strongly disagree	10.3 (8.8, 12.1)

Abbreviation: CI=confidence interval

- Most participants "strongly agreed" or "agreed" with a tobacco-free generation policy that would gradually raise the legal age for tobacco sales.
- There was less support for the policy in the fall 2023 cycle. However, the difference in policy wording may be a reason for the difference in support.

Participants were also asked how often they notice tobacco product litter (Table 24).

Table 24. Frequency of noticing tobacco product litter

How often do you notice tobacco product litter (such as cigarette butts, cigar wrappers, or vape packaging) in public spaces such as sidewalks, streets, parks, and beaches?	% (95% CI)
Almost always	44.6 (42.1, 47.1)
Sometimes	41.8 (39.4, 44.4)
Every once in awhile	10.3 (8.9, 11.9)
Never	3.3 (2.5, 4.3)

Abbreviation: CI=confidence interval

- Nearly half of participants (44.6%) reported noticing tobacco product litter "almost always"

CHAPTER SUMMARY

Most participants supported statements that called for the sale of all tobacco products or flavored tobacco products to end. Strong agreement was slightly greater for policy statements related to flavored tobacco sales than for statements related to the sales of all tobacco products. Most participants supported statements that called for the use of tobacco or marijuana products in public places to end. Agreement was slightly greater when statements applied to smoking tobacco than using vapes or marijuana. Most participants either "strongly agreed" or "agreed" with policies to make multiunit housing completely smoke-free or free of marijuana smoke or vapor. There was strong support for a hypothetical tobacco-free generation policy, albeit at slightly lower levels of support than policies addressing tobacco use in public spaces or sales of flavored tobacco.

CHAPTER 5 – MARIJUANA USE

This chapter presents data from the 2023 TNT Online Survey related to marijuana products, also known as cannabis. It examines who ever and current users of marijuana products were, the usual mode of marijuana use, as well as current marijuana and tobacco co-use (i.e., use of both marijuana and tobacco in the past 30 days). Information about exposure to marijuana marketing, marijuana use by another household member, flavored marijuana use, and how participants acquired marijuana products can be found in other chapters.

Marijuana Use

All TNT Online Survey participants were asked whether they had ever used marijuana and on how many days they used marijuana in the past 30 days (current use was defined as use of marijuana on at least one day in the past 30 days). For the wording used when presenting marijuana in the TNT Online Survey questionnaire, see List of Terms. Table 25 presents the prevalence of marijuana product use (in any mode of consumption) among participants according to their gender, race/ethnicity, and age.

Table 25. Prevalence of marijuana use by sex, gender/sexual identity, race/ethnicity, and age

	Sample Size N[1]	%	Ever Use % (95% CI)	Current Use % (95% CI)
Overall	4981	100	18.4 (16.6, 20.4)	9.4 (8.4, 10.6)
Sex				
Male	2533	49.8	17.9 (15.3, 20.8)	9.8 (8.2, 11.7)
Female	2437	50.2	18.9 (16.5, 21.7)	9.0 (7.6, 10.5)
Gender/Sexual Identity				
LGBTQ+	715	12.9	29.9 (24.3, 36.1)	16.0 (12.4, 20.3)
Non-LGBTQ+	4030	87.1	16.7 (14.8, 18.8)	8.4 (7.3, 9.6)
Race/Ethnicity				
White	2033	20.7	16.7 (14.3, 19.5)	9.9 (8.3, 11.9)
African American / Black	359	4.1	21.4 (15.6, 28.6)	14.5 (10.0, 20.6)
Hispanic / Latino	1558	53.7	22.3 (19.3, 25.5)	11.5 (9.7, 13.5)
Asian	407	14.0	6.8 (3.6, 12.4)*	1.1 (0.6, 2.1)*
Other[2]	349	7.5	17.1 (12.5, 23.0)	6.6 (4.3, 10.0)
Age				
12–13 years	1371	35.0	9.2 (7.3, 11.6)	4.4 (3.3, 5.9)
14–15 years	1724	31.8	20.4 (17.0, 24.3)	10.8 (8.7, 13.2)
16–17 years	1886	33.2	26.3 (22.8, 30.1)	13.5 (11.4, 15.8)

1. Unweighted sample size (N); percentage weighted for response quality and demographic characteristics
2. Includes participants who indicated their race was American Indian / Alaska Native, Native Hawaiian / Other Pacific Islander, Other, or selected more than one option. Categories were combined to increase sample size.

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

- Overall, 18.4% of TNT Online survey participants had ever used marijuana and 9.4% were current marijuana users.
- Current use of marijuana was slightly higher among male (9.8%) than female (9.0%) participants and higher among participants categorized as LGBTQ+ (16.0%).
- By race/ethnicity, current use of marijuana was lowest among participants who identified as Asian (1.1%) and highest among participants who identified as African American or Black (14.5%)
- Marijuana use increased with age. Both ever use and current use of marijuana were highest among participants at ages 16–17 years.

Modes of Marijuana Use

There are multiple modes through which marijuana products can be consumed, which include combustible, non-combustible, edible, and other methods. A subset of current marijuana users in the TNT Online Survey were asked to report on how many days in the past 30 days they used marijuana in various modes from a list of 12 possibilities. Only a subset of participants was asked about modes of consumption in order to reduce the length of the survey overall. Table 26 presents the prevalence of using marijuana in various modes at least one day in the past 30 days among current marijuana users.

Table 26. Modes of marijuana use among current marijuana users

	Mode of Marijuana Use (select all) % (95% CI)
Joint (marijuana-only cigarette)	51.5 (42.5, 60.4)
Vaped wax, oil, or liquid	28.6 (21.4, 37.0)
Small pipe	26.5 (19.7, 34.7)
Edible (cookie, candy, other food or drink)	26.1 (19.2, 34.5)
Blunt (marijuana insides a cigar)	23.4 (16.5, 32.2)
Bong (waterpipe)	23.1 (16.4, 31.6)
Dabbed oil, wax, shatter, extract, concentrate	7.0 (3.9, 12.2)
Vaped flower or leaf in a vaporizer	4.0 (2.2, 7.4)*
Tincture (drops or spray)	3.0 (1.5, 5.8)*
Moke (marijuana and tobacco mixed waterpipe)	2.2 (1.1, 4.4)*
Synthetic marijuana	1.7 (0.4, 7.6)*
Spliff (marijuana and tobacco mixed cigarette)	1.6 (0.8, 3.1)*
Other	0.8 (0.1, 5.7)*

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

Note: Results based on N=293 (unweighted) current marijuana users who were asked to identify the mode(s) of marijuana consumption they used in the past 30 days.

- Among current marijuana users, 51.5% reported smoking a marijuana joint in the past 30 days.
- Vaped wax, oil, or liquid (28.6%), small pipes (26.5%), edibles (26.1%), blunts (23.4%), and bongs (23.1%) were the next most common modes of use.

Marijuana Use and Tobacco Co-Use

Table 27 further categorizes current marijuana use based on whether participants used marijuana only or co-used marijuana and any tobacco product. Co-use was considered use of both marijuana (any mode of consumption) and tobacco (any product, including vapes) on at least one day in the past 30 days (not necessarily on the same day).

Table 27. Prevalence of current marijuana only use and co-use of marijuana and any tobacco product by sex, race/ethnicity, and age

	Sample Size N[1]	%	Marijuana Only Use % (95% CI)	Marijuana and Tobacco Co-Use % (95% CI)
Overall	4979	100	3.2 (2.6, 3.9)	6.3 (5.4, 7.2)
Sex				
Male	2531	49.8	3.1 (2.2, 4.3)	6.7 (5.5, 8.3)
Female	2437	50.2	3.1 (2.4, 4.1)	5.8 (4.8, 7.1)
LGBTQ+ Status				
LGBTQ+	714	12.9	6.5 (4.3, 9.7)	9.5 (6.8, 13.1)
Non-LGBTQ+	4030	87.1	2.6 (2.1, 3.4)	5.8 (4.9, 6.8)
Race/Ethnicity				
White	2032	20.7	3.3 (2.4, 4.4)	6.7 (5.3, 8.3)
African American / Black	359	4.1	5.1 (2.6, 9.6)*	9.5 (6.0, 14.5)
Hispanic / Latino	1558	53.7	3.8 (2.8, 5.1)	7.7 (6.3, 9.4)
Asian	407	14.0	0.5 (0.2, 1.5)*	0.6 (0.3, 1.2)*
Other[2]	349	7.5	2.5 (1.4, 4.7)*	4.1 (2.3, 7.0)
Age				
12–13 years	1370	35.0	1.2 (0.7, 2.1)	3.2 (2.3, 4.5)
14–15 years	1723	31.8	4.2 (3.0, 5.9)	6.6 (5.1, 8.5)
16–17 years	1886	33.2	4.2 (3.2, 5.6)	9.2 (7.5, 11.3)

1. Sample size (N) is unweighted; percentages are weighted for response quality and participant demographic characteristics.
2. Includes participants who indicated their race was American Indian / Alaska Native, Native Hawaiian / Other Pacific Islander, Other, or selected more than one option. Categories were combined to increase sample size.

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

- Overall, current marijuana and tobacco co-use (6.3%) was more common than marijuana only use (3.2%).
- Current marijuana and tobacco co-use was elevated among participants categorized as LGBTQ+ (9.5%) and participants identifying as African American or Black (9.5%).

Table 28 presents the prevalence of current marijuana use among current users of various tobacco products.

Table 28. Prevalence of current marijuana use among current users of tobacco products

	Current Marijuana Use % (95% CI)
Current Any Tobacco Product Users	51.7 (45.7, 57.6)
Current Vape Users	56.6 (50.2, 63.0)
Current Cigarette Smokers	49.2 (40.7, 57.7)
Current Cigar Smokers	73.2 (60.3, 86.2)
Current Hookah Users	61.0 (46.8, 75.3)
Current Smokeless Tobacco Users	45.2 (35.1, 55.3)

Abbreviations: CI=confidence interval

Notes: Tobacco use categories are not mutually exclusive. Participants could appear in more than one row if they used more than one tobacco product in the past 30 days.

Nicotine pouches, nicotine tablets or lozenges, and heated tobacco excluded due to small sample sizes.

- Approximately half (51.7%) of current tobacco product users (any product) were also current marijuana users.
- Among current tobacco product users, current marijuana use was most common among cigar smokers: 73.2% of current cigar smokers were also current marijuana users.

CHAPTER SUMMARY

Overall, 18.4% of TNT Online survey participants had ever used marijuana and 9.4% were current marijuana users. The prevalence of current use of marijuana increased with age and was greatest among participants categorized as LGBTQ+ or as African American or Black. Among current marijuana users, the most common way to consume marijuana was smoking a marijuana joint, followed by small pipes, edibles, vaped, and blunts. About two-thirds (66.4%) of current marijuana users co-used tobacco and marijuana in the past 30 days. Nearly half (51.7%) of current tobacco product users were also current marijuana users.

CHAPTER 6 – TOBACCO AND MARIJUANA PERCEPTIONS

This chapter presents data from the 2023 TNT Online Survey related to what participants thought about tobacco and marijuana products and their future use expectations.

Tobacco and Marijuana Future Use Expectations

All TNT Online Survey participants were posed a series of questions that asked whether they think they will be using various tobacco products and marijuana in the future. One set of questions asked participants about whether they think they will be using products in one year. Another set of questions asked about product use at age 25. Possible response options ranged from definitely not to definitely yes. Table 29 presents participants' use expectations for one year in the future. Table 30 presents participants' future use expectations at age 25.

Table 29. Participants' expectations for tobacco and marijuana use in one year

Do you think you will be using any of the following products one year from now?	Definitely Not % (95% CI)	Probably Not % (95% CI)	Probably Yes % (95% CI)	Definitely Yes % (95% CI)
Among All Participants				
Vapes	76.2 (74.0, 78.3)	14.3 (12.5, 16.4)	6.7 (5.7, 7.9)	2.8 (2.2, 3.4)
Cigarettes	85.4 (83.5, 87.1)	10.6 (9.1, 12.4)	2.6 (1.9, 3.4)	1.4 (1.1, 1.9)
Cigars	90.0 (88.4, 91.5)	6.4 (5.2, 7.9)	2.7 (2.0, 3.7)	0.8 (0.6, 1.1)
Hookah	87.2 (85.4, 88.8)	8.4 (7.1, 10.1)	3.3 (2.6, 4.2)	1.1 (0.8, 1.6)
Smokeless Tobacco	92.1 (90.5, 93.4)	5.0 (3.8, 6.4)	1.8 (1.3, 2.5)	1.2 (0.9, 1.6)
Marijuana	72.2 (69.9, 74.3)	14.7 (12.9, 16.6)	8.4 (7.2, 9.8)	4.7 (3.9, 5.7)
Among Current Users of Each Product				
Vapes	21.0 (16.1, 27.0)	24.4 (19.3, 30.3)	35.5 (29.6, 41.9)	19.0 (14.7, 24.3)
Cigarettes	28.7 (20.8, 38.1)	29.1 (22.3, 37.0)	22.3 (16.6, 29.3)	20.0 (13.5, 28.4)
Cigars	53.0 (41.2, 64.4)	27.6 (18.6, 38.9)	12.4 (7.6, 19.6)	7.0 (4.4, 11.0)
Hookah	31.4 (18.5, 48.0)	24.3 (14.7, 37.3)	32.4 (21.6, 45.4)	11.9 (7.5, 18.4)
Smokeless Tobacco	35.4 (25.5, 46.6)	17.2 (11.5, 25.1)	29.6 (20.9, 39.9)	17.8 (11.8, 26.1)
Marijuana	11.1 (7.9, 15.4)	15.0 (11.1, 19.8)	35.8 (30.2, 41.8)	38.1 (32.4, 44.1)
Among Current Non-Users of Each Product				
Vapes	82.1 (79.8, 84.2)	13.3 (11.4, 15.4)	3.6 (2.8, 4.7)	1.0 (0.7, 1.4)
Cigarettes	87.0 (85.1, 88.8)	10.1 (8.5, 11.9)	2.0 (1.4, 2.8)	0.9 (0.6, 1.3)
Cigars	91.3 (89.6, 92.7)	5.7 (4.5, 7.2)	2.4 (1.7, 3.3)	0.6 (0.4, 0.9)
Hookah	88.0 (86.2, 89.6)	8.2 (6.8, 9.8)	2.8 (2.2, 3.7)	0.9 (0.6, 1.4)
Smokeless Tobacco	92.8 (91.2, 94.0)	4.8 (3.7, 6.3)	1.5 (1.0, 2.1)	1.0 (0.7, 1.4)
Marijuana	78.5 (76.2, 80.7)	14.7 (12.8, 16.8)	5.5 (4.5, 6.9)	1.2 (0.8, 1.9)

Abbreviation: CI=confidence interval

- Among all survey participants, most indicated that they would "definitely not" be using tobacco products or marijuana one year in the future.
- Smokeless tobacco was the product with highest percentage of "definitely not" responses (92.1%).
- Marijuana was the product with highest percentage of "definitely yes" (4.7%) and "probably yes" (8.4%) responses.

Table 30. Participants' expectations for tobacco and marijuana at age 25

Do you think you will be using any of the following products when you are age 25?

	Definitely Not % (95% CI)	Probably Not % (95% CI)	Probably Yes % (95% CI)	Definitely Yes % (95% CI)
Among All Participants				
Vapes	71.4 (69.1, 73.7)	17.3 (15.4, 19.4)	8.8 (7.4, 10.3)	2.5 (2.0, 3.1)
Cigarettes	80.1 (78.0, 82.0)	13.9 (12.2, 15.8)	4.6 (3.7, 5.6)	1.5 (1.0, 2.1)
Cigars	85.9 (84.1, 87.6)	9.9 (8.4, 11.5)	3.6 (2.8, 4.5)	0.7 (0.5, 0.9)
Hookah	82.2 (80.2, 84.0)	12.2 (10.6, 14.0)	4.5 (3.6, 5.6)	1.1 (0.8, 1.5)
Smokeless Tobacco	88.5 (86.7, 90.0)	8.8 (7.4, 10.5)	1.6 (1.2, 2.2)	1.1 (0.7, 1.6)
Marijuana	61.2 (58.7, 63.7)	20.8 (18.7, 23.0)	12.8 (11.3, 14.5)	5.2 (4.4, 6.2)
Among Current Users of Each Product				
Vapes	28.7 (23.1, 35.2)	24.3 (19.3, 30.1)	33.2 (27.5, 39.5)	13.8 (10.2, 18.4)
Cigarettes	27.7 (20.5, 36.2)	28.8 (21.9, 36.8)	25.2 (18.0, 34.2)	18.3 (12.6, 25.8)
Cigars	53.8 (42.0, 65.1)	22.4 (14.3, 33.3)	19.2 (12.8, 27.7)	4.6 (2.9, 7.3)
Hookah	29.1 (18.1, 43.3)	25.7 (13.8, 42.7)	25.1 (16.6, 36.2)	20.1 (12.0, 31.6)
Smokeless Tobacco	31.7 (22.4, 42.7)	22.4 (14.6, 32.7)	35.1 (25.9, 45.5)	10.9 (7.3, 15.9)
Marijuana	10.7 (7.5, 15.1)	12.6 (9.0, 17.4)	37.8 (32.1, 43.8)	38.9 (33.2, 45.0)
Among Current Non-Users of Each Product				
Vapes	76.0 (73.5, 78.3)	16.6 (14.6, 18.8)	6.1 (4.9, 7.7)	1.3 (0.9, 1.8)
Cigarettes	81.6 (79.5, 83.5)	13.5 (11.7, 15.4)	4.0 (3.1, 5.0)	1.0 (0.6, 1.6)
Cigars	87.0 (85.2, 88.7)	9.4 (8.0, 11.1)	3.0 (2.3, 4.0)	0.5 (0.4, 0.8)
Hookah	83.0 (81.0, 84.9)	12.0 (10.4, 13.8)	4.2 (3.3, 5.3)	0.8 (0.5, 1.2)
Smokeless Tobacco	89.2 (87.4, 90.7)	8.6 (7.2, 10.4)	1.2 (0.9, 1.7)	1.0 (0.6, 1.5)
Marijuana	66.5 (63.8, 69.1)	21.6 (19.4, 24.0)	10.2 (8.7, 12.0)	1.7 (1.2, 2.4)

Abbreviation: CI=confidence interval

- Generally, participants were less likely to indicate that they would "definitely not" use each of five different tobacco products and marijuana at age 25 compared to one year in the future (Table 29).
- Overall, smokeless tobacco was the product with highest percentage of "definitely not" responses (88.5%).

- Overall, marijuana was the product with highest percentage of “definitely yes” (5.2%) and “probably yes” (12.8%) responses.
- There were large differences according to whether participants were using each product. For all products (except cigars), more than 40% of current users of each product indicated that they would “probably” or “definitely” be using one year in the future (Table 29).
- Current users of marijuana (38.9%) were the most likely to indicate that they would “definitely” be using their product at age 25.
- The majority of current non-users indicated that they would “definitely not” be using tobacco products at age 25.
- Smokeless tobacco was the product with highest percentage of “definitely not” responses among non-users (89.2%).
- Marijuana was the product with lowest percentage of “definitely not” responses among non-users (66.5%).
- 11.9% of current marijuana non-users indicated that they “probably” or “definitely” would use marijuana at age 25, which was more than for any other product.

Conditional Risk Perceptions

All TNT Online Survey participants were posed a series of questions in which they were asked to imagine that they use certain products. Specifically, in separate questions, they were asked to imagine that they use vapes, cigarettes, or marijuana 2 to 3 times per day. For each product, they were then asked to move a slider on the screen to show the chance that certain things would happen to them, from 0% chance to 100% chance of happening. These types of questions are called conditional risk perception items because the questions measure what someone thinks will happen (their perception) under the *condition* that they used a certain product. In the TNT Online Survey, participants reported the chances of bad outcomes (for example, getting into trouble or having worse health) and the chances of potentially good outcomes, like getting along with friends. The average chance that participants assigned to a certain outcome is not necessarily an accurate prediction of the probability something will happen. However, comparing different outcomes and different products can be helpful to researchers who want to know what people think about the possible risks and benefits of different products relative to each other. Table 31 presents the findings from conditional risk perception questions about vapes, cigarettes, and marijuana.

Table 31. Participants' perceptions that certain outcomes would happen to them if they used vapes, cigarettes, or marijuana

	Mean Perceived Probability Event Would Happen (range: 0–100) Mean (95% CI)		
	Total Sample	Current Users[1]	Current Non-Users[1]
Vapes			
Get into trouble	73.0 (71.4, 74.7)	51.8 (47.7, 55.9)	75.3 (73.6, 77.1)
Get lung cancer	71.8 (70.3, 73.4)	51.1 (46.6, 55.6)	74.1 (72.4, 75.7)
Have worse health in general	75.3 (73.7, 76.8)	51.4 (47.4, 55.5)	77.8 (76.2, 79.4)
Have fun while using	39.4 (37.7, 41.1)	64.6 (60.9, 68.3)	36.7 (34.9, 38.5)
Get along with friends	43.5 (41.7, 45.2)	64.3 (60.3, 68.3)	41.2 (39.3, 43.1)
Cigarettes			
Get into trouble	74.1 (72.4, 75.8)	51.6 (44.9, 58.3)	74.7 (73.0, 76.5)
Get lung cancer	81.0 (79.6, 82.4)	54.8 (49.0, 60.5)	81.7 (80.3, 83.2)
Have worse health in general	83.5 (82.3, 84.8)	56.9 (50.9, 63.0)	84.3 (83.1, 85.6)
Have fun while using	31.3 (29.7, 32.8)	54.4 (48.4, 60.5)	30.6 (29.0, 32.2)
Get along with friends	36.7 (35.1, 38.3)	57.5 (51.5, 63.5)	36.1 (34.4, 37.7)
Marijuana			
Get into trouble	74.5 (72.8, 76.1)	50.8 (46.5, 55.0)	77.0 (75.3, 78.7)
Get lung cancer	59.8 (58.0, 61.7)	34.9 (30.6, 39.2)	62.5 (60.6, 64.4)
Have worse health in general	64.1 (62.3, 65.9)	36.2 (31.9, 40.6)	67.1 (65.2, 69.0)
Have fun while using	46.3 (44.6, 48.1)	79.5 (76.0, 83.0)	42.8 (41.0, 44.7)
Get along with friends	47.5 (45.7, 49.3)	76.7 (73.5, 79.9)	44.5 (42.5, 46.4)

1. Use status refers to the specific product. The column "Current Users" shows vape users' perceptions of vapes, cigarette smokers' perceptions of cigarettes, and marijuana users' perceptions of marijuana. The column "Current Non-Users" shows vape non-users' perceptions of vapes, cigarette non-smokers' perceptions of cigarettes, and marijuana non-users' perceptions of marijuana

Abbreviation: CI=confidence interval

- For all three products (vapes, cigarettes, and marijuana), current users expected a lower chance of bad outcomes happening to them than non-users expected. This included getting into trouble, getting lung cancer, and having worse general health.
- For all three products (vapes, cigarettes, and marijuana), current users expected a greater chance of potentially good outcomes happening to them than non-users expected. This included having fun while using and getting along with friends.
- Both current users and non-users expected the greatest chance of bad outcomes happening to them from cigarettes and the lowest chance of bad outcomes from marijuana.
- Both current users and non-users expected the greatest chance of potentially good outcomes happening to them from marijuana and the greatest chance of bad outcomes from cigarettes.
- These findings indicate not only large differences in risk and benefit perceptions between users and non-users of tobacco and marijuana but also that both users and non-users perceive cigarettes, vapes, and marijuana to have distinct risk and benefit profiles.

CHAPTER SUMMARY

Most TNT Online Survey participants indicated that they would "definitely not" be using each of vapes, cigarettes, cigars, hookah, smokeless tobacco and marijuana one year in the future. Participants were somewhat less likely to report that they would "definitely not" be using these products at age 25 than one year in the future. Marijuana was the product that participants were least likely to strongly reject for future use. Participants had different perceptions of the potential risks and benefits of vapes, cigarettes, and marijuana. Current users perceived lower chances of risks and greater chances of benefits than did non-users. Both users and non-users perceived cigarettes as offering the greatest chance of bad outcomes and lowest chance of potential good outcomes. Marijuana was perceived as having the greatest chance of potential good outcomes and lowest chance of bad outcomes.

CHAPTER 7 – TOBACCO HOME AND MARKETING ENVIRONMENT

This chapter presents data from the 2023 TNT Online Survey related to situations and other factors that might have influenced participants' willingness to use tobacco and marijuana products. This includes participants' home life, such as living with someone else who uses a tobacco or marijuana product or living in a home that sets certain rules about using tobacco or marijuana. This chapter also presents information about what kinds of tobacco or marijuana advertisements participants might have seen recently and whether they ever received coupons to buy tobacco products. In addition, for a subset of participants who were current tobacco or marijuana users, this chapter shows how they said they acquired those products.

Tobacco and Marijuana Use in the Home

All TNT Online Survey participants were asked whether someone who lives with them now uses various tobacco products or marijuana. Participants indicated which products anyone who lives with them now uses. Table 32 presents the results from this question.

Table 32. Prevalence of tobacco and marijuana product use by someone who lives with you

Not including yourself, does anyone who lives with you now use any of the following?	Use by Someone Living with You % (95% CI)
Vapes	17.0 (15.3, 18.7)
Cigarettes	22.9 (21.1, 24.9)
Cigars	4.8 (3.9, 5.9)
Hookah	2.5 (2.0, 3.2)
Smokeless Tobacco	2.6 (2.0, 3.3)
Marijuana	21.6 (19.7, 23.5)
No one who lives with me now uses any of these	58.8 (56.4, 61.2)

Abbreviation: CI=confidence interval

- Nearly one-fourth of TNT Online Survey participants (22.9%) indicated currently living with someone who smokes cigarettes.
- 21.6% of TNT Online Survey participants indicated currently living with someone who uses marijuana.
- In total, 58.8% of TNT Online Survey participants indicated that no one who lives with them uses any of these tobacco products or marijuana, suggesting that more than 40% of participants do live with someone who uses at least one of these products.

Rules About Tobacco Use Inside the Home

All TNT Online Survey participants were asked about rules in their home about using tobacco products. Participants were asked to think about rules that apply inside the home and to think about everyone who might be in the home, including children, adults, and visitors. The survey first asked about rules about all tobacco and nicotine, then asked whether the rules differ depending on whether the product is burned or consumed some other way, like vaping or chewing. Table 33 presents the results related to these household rules questions.

Table 33. Rules about use of tobacco products inside the home

Question	Response, % (95% CI)
For all tobacco and nicotine, including cigarettes, cigars, chewing tobacco, and vapes, which statement best describes the rules about using these products inside your home?	
It is not allowed anywhere or at any time	81.7 (79.9, 83.4)
It is allowed in some places, at some times, or by some people	13.0 (11.6, 14.5)
It is allowed anywhere and at any time	3.2 (2.6, 4.0)
I don't know	2.1 (1.5, 3.0)
Are the rules in your home about tobacco and nicotine different if it is smoked by burning it or consumed some other way, like vaping or chewing?	
Rules are the same for all tobacco and nicotine	87.4 (85.9, 88.8)
Different rules for smoked or other ways	7.5 (6.5, 8.7)
I don't know	5.0 (4.1, 6.1)

Abbreviation: CI=confidence interval

- Most participants (81.7%) indicated that the use of tobacco and nicotine products is not allowed anywhere or at any time inside their home.
- Most participants (87.4%) indicated that there was no difference in the rules for smoked tobacco or tobacco consumed in some other way.

Rules About Marijuana Use Inside the Home

A subset of survey participants (N=1778) was asked about rules in their home about using marijuana. Participants were asked to think about rules inside the home and everyone who might be in the home, including children, adults, and visitors. Table 34 presents the results.

Table 34. Rules about use of marijuana products inside the home

Question	Response, % (95% CI)
For marijuana (also called weed, pot, or cannabis), which statement best describes the rules about using inside your home?	
It is not allowed anywhere or at any time	79.8 (76.9, 82.5)
It is allowed in some places, at some times, or by some people	15.6 (13.3, 18.2)
It is allowed anywhere and at any time	2.9 (2.0, 4.1)
I don't know	1.7 (0.9, 3.1)*
Are the rules in your home about marijuana different if the marijuana is smoked by burning it or consumed some other way?	
Rules are the same for all marijuana	87.9 (85.3, 90.1)
Different rules for smoked or other ways	7.2 (5.5, 9.4)
I don't know	4.8 (3.5, 6.7)

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

- Most participants (79.8%) indicated that marijuana use is not allowed anywhere or at any time inside their home.
- Most participants (87.9%) indicated that rules in their home related to marijuana were the same no matter whether the marijuana was burned or consumed some other way.

Advertisements for Tobacco and Marijuana Products

All participants were asked where they had recently seen advertisements promoting vapes, advertisements promoting marijuana, and advertisements promoting cigarettes or tobacco. Participants were asked to think about places they might have seen advertisements in the past 30 days. Participants could select multiple locations from a list or indicate that they had not seen any ads during this time period. Tables show the percentages of participants that noticed advertisements at each location for vape ads (Table 35), cigarette or other tobacco ads (Table 36), and marijuana ads (Table 37).

Table 35. Prevalence of noticing advertisements promoting vapes in various places

	Noticed an Ad in the Past 30 Days % (95% CI)
I Have Not Seen Any Ads	52.6 (50.1, 55.1)
Gas Stations or Convenience Stores	28.4 (26.1, 30.8)
Vape Shops	14.9 (13.3, 16.7)
Social Media Ads from Companies	13.7 (12.1, 15.5)
Tobacco/Smoke Shops	11.9 (10.5, 13.5)
Billboards	10.9 (9.5, 12.6)
Social Media Plugs or Shoutouts from People	10.5 (9.1, 12.1)
Television	9.8 (8.5, 11.3)
Websites (Not Social Media)	5.1 (4.1, 6.2)
Newspapers or Magazines	4.0 (3.2, 4.9)
Radio	3.8 (3.0, 4.9)
Festivals, Concerts, Sports, or Other Events	3.7 (2.9, 4.8)
Somewhere Else[1]	1.0 (0.6, 1.6)

1. Free-text responses entered by >1 participant: Friends/school/other people (n=7), Store (n=5), Online media like YouTube or podcast (n=3), Social media, like Snapchat or TikTok (n=3), Don't know (n=2), None (n=2); Places are included here if listed by participants as a write-in response, even if the option was an available to select above.

Abbreviation: CI=confidence interval

- Just over half of participants (52.6%) indicated not seeing any advertisements that were promoting vaping in the past 30 days, suggesting that nearly half of participants had seen such ads.
- The most common place to see vape advertisements was gas stations or convenience stores, followed by vape shops, and social media ads from companies.

Table 36. Prevalence of noticing advertisements promoting cigarettes or other tobacco in various places

	Noticed an Ad in the Past 30 Days % (95% CI)
I Have Not Seen Any Ads	47.9 (45.3, 50.4)
Gas Stations or Convenience Stores	37.8 (35.4, 40.4)
Tobacco/Smoke Shops	14.6 (13.0, 16.4)
Billboards	12.1 (10.6, 13.7)
Television	11.8 (10.3, 13.5)
Social Media Ads from Companies	10.7 (9.3, 12.4)
Vape Shops	9.7 (8.5, 11.2)
Social Media Plugs or Shoutouts from People	7.8 (6.5, 9.4)
Newspapers or Magazines	5.6 (4.6, 6.7)
Websites (Not Social Media)	4.9 (3.9, 6.1)
Radio	3.8 (2.9, 4.8)
Festivals, Concerts, Sports, or Other Events	3.0 (2.3, 3.8)
Somewhere Else[1]	0.7 (0.4, 1.3)

1. Free-text responses entered by >1 participant: Stores/retail (n=6), Other people/friends/school (n=5), None/haven't seen (n=2); Places are included here if listed by participants as a write-in response, even if the option was an available to select above.

Abbreviation: CI=confidence interval

- Fewer than half of participants (47.9%) indicated they had noticed advertisements in the past 30 days that were promoting cigarettes or other tobacco, suggesting that more than half of participants did see such ads.
- The most common place to see cigarette or other tobacco advertisements, by far, was gas stations or convenience stores.

Table 37. Prevalence of noticing advertisements promoting marijuana in various places

	Noticed an Ad in the Past 30 Days % (95% CI)
I Have Not Seen Any Ads	59.2 (56.7, 61.6)
Billboards	18.6 (16.7, 20.7)
Cannabis Dispensaries	13.4 (11.8, 15.2)
Social Media Ads from Companies	10.9 (9.5, 12.4)
Social Media Plugs or Shoutouts from People	9.4 (8.1, 10.9)
Gas Stations or Convenience Stores	9.3 (8.0, 10.7)
Tobacco/Smoke Shops	7.4 (6.3, 8.6)
Vape Shops	6.1 (5.2, 7.2)
Television	5.5 (4.6, 6.6)
Websites (Not Social Media)	4.7 (3.8, 5.7)
Festivals, Concerts, Sports, or Other Events	4.1 (3.3, 5.1)
Newspapers or Magazines	4.0 (3.3, 5.0)
Radio	2.8 (2.2, 3.5)
Somewhere Else[1]	0.9 (0.6, 1.6)

1. Free-text responses entered by >1 participant: Other people/friends (n=5), Mailed advertisements (n=3), Movies/television (n=3), Physical fliers/business cards (n=3), Clothing (n=2), None/haven't seen (n=2); Places are included here if listed by participants as a write-in response, even if the option was an available to select above.
Abbreviation: CI=confidence interval

- The majority of participants (59.2%) indicated they had noticed advertisements in the past 30 days that were promoting marijuana, suggesting that more than 40% of participants did see such ads.
- The most common place to see marijuana advertisements was billboards. The next-most common places to see marijuana ads were cannabis dispensaries, social media ads from companies, and social media plugs or shoutouts from people.

Coupons for Tobacco and Marijuana Products

All 2023 TNT Online Survey participants were asked whether they had received coupons or discount codes for tobacco products in the past 12 months. Table 38 presents the percentage of participants who indicated that they received coupons or discount codes for various tobacco products or marijuana. Among the participants who indicated that they did receive a discount code or coupon, Table 39 presents where or how they received it.

Table 38. Prevalence of receiving a coupon or discount code for various products

	Among All Participants N=4928 % (95% CI)	Among Current Users of Any Tobacco N=1348 % (95% CI)	Among Current Non-Users of Any Tobacco N=3580 % (95% CI)
I Did Not Receive Any Codes or Coupons	94.7 (93.7, 95.5)	79.7 (75.1, 83.7)	96.8 (95.8, 97.5)
Vapes	2.2 (1.8, 2.8)	10.3 (7.8, 13.4)	1.1 (0.8, 1.6)
Cigarettes	2.0 (1.5, 2.5)	7.0 (5.2, 9.3)	1.3 (0.8, 1.9)
Marijuana	1.9 (1.4, 2.7)	8.4 (5.5, 12.4)	1.0 (0.6, 1.7)
Cigars	0.5 (0.4, 0.8)	3.0 (1.9, 4.5)	0.2 (0.1, 0.4)*
Smokeless Tobacco	0.4 (0.2, 0.6)	1.2 (0.5, 2.5)*	0.3 (0.1, 0.5)*
Hookah	0.3 (0.2, 0.6)	1.4 (0.9, 2.1)	0.2 (0.1, 0.5)*
Some Other Type of Tobacco Product	0.4 (0.2, 0.8)*	0.3 (0.1, 1.0)*	0.4 (0.2, 0.9)*

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

- More than 90% of participants indicated that they did not receive any discount codes or coupons for any of the listed tobacco products or marijuana in the past 12 months.
- Vapes, cigarettes, and marijuana were the products for which participants reported receiving a discount code or coupon the most.
- Current users of any tobacco product were more likely to report receiving coupons or discount codes than were tobacco non-users.

Table 39. Ways that participants received coupons or discount codes for tobacco or marijuana products among those who received coupons

	Got It This Way N=705 % (95% CI)
Social Media	32.9 (25.0, 41.8)
Postal Mail	25.6 (18.8, 33.8)
E-Mail	24.4 (18.3, 31.7)
Text Message	19.4 (13.2, 27.5)
Website (Not Social Media)	16.9 (12.5, 22.6)
Someone I Know Gave It to Me	15.1 (10.7, 21.0)
Someplace Else[1]	5.1 (2.2, 11.4)*

1. Free-text responses entered by >1 participant: Point of sale (n=4), Family member (n=2); Methods are included here if listed by participants as a write-in response, even if the option was an available to select above.

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution

- Participants who indicated that they received a discount code or coupon for at least one tobacco product or marijuana received the code or coupon in various ways.
- Social media (32.9%), postal mail (25.6%), and e-mail (24.4%) were the most common ways of receiving a code or coupon.

How Tobacco Users Accessed Various Products

A subset of current users of vapes, cigarettes, cigars, marijuana, or smokeless tobacco were asked to select from a list all the ways that they got the products that they used. Table 40 presents how tobacco product users indicated that they accessed their product within the past 30 days. The results for cigars and smokeless tobacco are not shown in the table due to statistically unreliable estimates (small sample sizes).

Table 40. Ways that current tobacco product users got the products that they used

	Vape Users N[1]=292 % (95% CI)	Cigarette Smokers N[1]=178 % (95% CI)	Marijuana Users N[1]=232 % (95% CI)
Someone offered it to me	30.5 (22.1, 40.5)	32.7 (20.5, 47.9)	55.3 (45.2, 65)
I bought it from another person	29.5 (21.4, 39.0)	25.2 (15.0, 39.1)	36.9 (27.9, 46.8)
I gave someone else money to buy it	28.8 (20.7, 38.5)	33.2 (20.6, 48.6)	19.4 (12.7, 28.6)
I asked someone to give it to me	16.6 (9.9, 26.5)	18.3 (9.6, 32)*	19 (12.4, 28.1)
I bought it myself from a store	11.7 (7.0, 19.0)	10.7 (5.6, 19.5)*	3.1 (1.6, 5.7)*
I bought it myself online	10.2 (5.5, 18.2)*	2.9 (1.4, 6)*	5.9 (2.3, 14.7)*
Social media connection	1.8 (0.8, 4.0)*	2.5 (0.6, 9.8)*	5.3 (2.3, 11.5)*
I found it	0.9 (0.3, 2.9)*	2.4 (0.8, 6.9)*	5.6 (2, 14.5)*
I took it from a store or another person	0.8 (0.3, 1.9)*	3.8 (2, 7.3)*	4.3 (1.7, 10.3)*
I used someone else's vape[2]	22.8 (15.6, 32.0)	N/A	N/A
I used a medical marijuana card[2]	N/A	N/A	0.6 (0.2, 2)*
Some other way	1.7 (0.3, 10.1)*	0.4 (0.1, 1.8)*	5.3 (2.5, 10.7)*

1. Sample size (N) is the unweighted number of participants who viewed and answered this question
2. This option only provided for one of the products

Abbreviations: CI=confidence interval; N/A=not applicable

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

- "Someone offered it to me" was the single most-selected way that current vape and marijuana users got their products (and second-most selected way for cigarettes).
- It was common for participants to select multiple ways of getting their product.
- Other than "someone offered it to me" among marijuana users, no single way of getting any product was selected by more than 50% of current users.

Familiarity with Kick It California and Other Resources

All participants were asked whether they had heard of selected tobacco cessation resources. Table 41 shows these results, overall and among tobacco users and non-users. This table includes "The Real Cost" and "Truth Initiative," which do not offer cessation services but do support national tobacco messaging campaigns. Participants' familiarity with these two options served as points of reference.

Table 41. Familiarity with selected tobacco cessation resources

Have you ever heard of the following? (Select all that apply)	All Participants % (95% CI)	Current Tobacco Users % (95% CI)	Current Tobacco Non-Users % (95% CI)
1-800-Quit-Now	59.3 (56.6, 62.0)	52.2 (46.1, 58.4)	60.4 (57.4, 63.3)
California Smokers Helpline	28.5 (26.1, 31.0)	35.9 (30.3, 42.0)	27.3 (24.8, 30.1)
Kick It California	22.2 (20.0, 24.5)	29.4 (23.8, 35.8)	21.1 (18.8, 23.5)
The Real Cost	19.2 (17.1, 21.5)	20.8 (16.4, 25.9)	19.0 (16.7, 21.5)
Truth Initiative	15.4 (13.6, 17.4)	20.0 (15.8, 25.0)	14.7 (12.7, 17.0)
California Smokers Helpline and/or Kick It California[1]	45.3 (42.6, 48.0)	55.9 (49.8, 61.9)	43.7 (40.7, 46.7)

1. Selected either or both of these two options

Abbreviation: CI=confidence interval

- The majority of all participants (59.3%) had heard of the national 1-800-Quit-Now helpline, but fewer had heard of the California Smokers Helpline (28.5%) or its newer name, Kick It California (22.2%).
- Hearing of either or both the California Smokers Helpline or Kick It California was selected by 45.3% of participants overall.
- Current tobacco users were more likely than non-users to be familiar with the California Smokers Helpline or Kick It California but not with 1-800-Quit-Now.

CHAPTER SUMMARY

Approximately 40% of TNT Online Survey participants indicated that someone who lives with them uses at least one tobacco product or marijuana. Most participants indicated that their home has rules that prohibit the use of all tobacco and marijuana inside the home at all times. About half of participants indicated that they had recently seen advertisements promoting vapes or cigarettes, most often at gas stations or convenience stores. Nearly half of participants indicated that they had recently seen advertisements promoting marijuana, most often on billboards. Less than 10% of participants indicated that they received a discount code or coupon for tobacco products or marijuana. The single most-selected way that current vape and marijuana users got their products was "someone offered it to me."

CHAPTER 8 – OTHER INFLUENCES OF TOBACCO USE

This chapter presents data from the 2023 TNT Online Survey related to differences in tobacco and marijuana use prevalence according to socioeconomic context and according to perceived experiences of discrimination. These findings speak partly to inequities in tobacco use by geography, socioeconomic position, race/ethnicity, and other factors.

Tobacco and Marijuana Use by Geographic and Socioeconomic Context

Table 42 shows the prevalence of current (past 30 day) tobacco and marijuana use according to geography, family financial situation, and parent educational attainment. Geography, financial status, and parent education were based on participant self-report.

Table 42. Prevalence of tobacco and marijuana use by geography and socioeconomic status

	Sample size N[1]	Weighted %	Any Tobacco Current Use (95% CI)	Marijuana Current Use (95% CI)
Overall	5015	100	12.2 (10.9, 13.7)	9.4 (8.4, 10.6)
Geography				
City	2302	42.3	13.8 (11.8, 16.2)	9.5 (7.9, 11.4)
Suburb	1670	41.9	9.9 (8.2, 11.9)	7.9 (6.4, 9.6)
Small Town	489	10.1	14.1 (9.9, 19.7)	14.2 (10.3, 19.2)
Rural	283	5.8	13.8 (6.9, 25.6)*	12.0 (7.3, 19.2)
Family Financial Situation				
Lives comfortably	1937	32.9	11.4 (9.3, 13.8)	7.2 (5.7, 9.0)
Meets needs	1657	40.1	10.7 (8.9, 12.7)	8.3 (6.9, 10.0)
Just meets basics	851	20.5	15.1 (11.9, 19.0)	12.7 (9.9, 16.1)
Does not meet basics	170	3.9	23.8 (13.2, 39.2)	23.3 (14.7, 35.0)
Prefer not to say	121	2.6	6.2 (2.0, 17.9)	7.9 (2.8, 20.2)*
Parent/Guardian Education				
Less than high school	549	8.3	16.9 (12.5, 22.6)	12.8 (8.9, 18.0)
High school / some college	1645	40.0	15.2 (12.6, 18.2)	11.7 (9.8, 14.0)
College or graduate degree	2467	51.7	9.1 (7.8, 10.7)	7.1 (5.9, 8.5)

1. Sample sizes (N) are unweighted; percentages are weighted for response quality and participant demographic characteristics

Abbreviation: CI=confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution.

- There was not a consistent gradient of tobacco or marijuana use by rural/urban geography, but use was lowest among participants living in suburbs.
- In contrast, tobacco and marijuana use were generally more common among participants who reported a worse family financial situation or lower parent educational attainment.

Self-Perceived Experiences of Discrimination

As a measure of experiencing discrimination, all participants were asked how often they had perceived or experienced mistreatment from other people in the past month (Table 43). This type of measure is known as "everyday discrimination." All participants who reported experiencing mistreatment were then asked why they believed they had been treated this way (Table 44). Finally, Table 45 shows experiences of discrimination in the past month according to current tobacco use status.

Table 43. Experiences of discrimination in the past month

In the past month, how often have the following things happened to you?	Almost every day % (95% CI)	At least once a week % (95% CI)	A few times % (95% CI)	Not at all % (95% CI)
You were treated with less courtesy or respect than other people.	5.9 (4.9, 7.0)	12.9 (11.4, 14.6)	32.6 (30.2, 35.0)	48.7 (46.2, 51.2)
You received poorer service than other people at restaurants or stores.	1.8 (1.3, 2.5)	4.8 (3.9, 6.0)	17.1 (15.4, 19.1)	76.3 (74.1, 78.3)
People acted as if they think you are not smart.	5.9 (4.9, 7.1)	10.0 (8.7, 11.5)	36.2 (33.8, 38.7)	47.8 (45.3, 50.3)
People acted as if they are afraid of you.	2.3 (1.7, 3.0)	5.0 (4.2, 6.1)	12.9 (11.4, 14.6)	79.8 (77.8, 81.6)
You were threatened or harassed.	1.9 (1.4, 2.5)	5.2 (4.3, 6.4)	17.9 (16.0, 19.9)	75.1 (72.9, 77.1)

Abbreviation: CI=confidence interval

- About half of participants reported being treated with less courtesy or respect or perceiving people to act as if they are not smart at least "a few times" in the past month.
- However, other forms of mistreatment were less common.
- Of the five different questions asked, 67.7% of participants reported experiencing at least one of the five situations at least "a few times" in the past month (data not shown in Table).

Table 44. Perceived reasons for experiencing discrimination in the past month

Reason for discrimination (Select all that apply)	Total Sample N=3426 % (95% CI)	Tobacco Users N=1048 % (95% CI)	Tobacco Non-Users N=2378 % (95% CI)
Age	44.9 (41.9, 48.0)	43.1 (36.9, 49.6)	45.2 (41.8, 48.6)
Race or ethnicity	32.1 (29.3, 35.0)	34.1 (27.9, 41.0)	31.7 (28.7, 34.9)
Some other aspect of physical appearance	27.4 (24.8, 30.1)	29.3 (23.8, 35.4)	27.1 (24.3, 30.1)
Gender	22.1 (19.8, 24.6)	25.2 (19.5, 32.0)	21.6 (19.1, 24.2)
Weight	19.0 (16.9, 21.4)	20.4 (15.9, 26.0)	18.8 (16.4, 21.4)
Height	17.6 (15.5, 19.9)	17.0 (12.9, 22.3)	17.7 (15.3, 20.3)
Ancestry or national origins	14.6 (12.4, 17.0)	16.1 (11.1, 22.8)	14.3 (12.0, 17.0)
Household or family education or income	12.0 (10.1, 14.2)	17.9 (13.5, 23.4)	11.0 (8.9, 13.5)
Sexual orientation	6.2 (5.2, 7.5)	10.3 (7.1, 14.8)	5.5 (4.5, 6.9)
Religion	5.1 (4.1, 6.4)	6.2 (4.1, 9.1)	5.0 (3.9, 6.4)
Other[1]	15.7 (13.5, 18.2)	12.6 (8.3, 18.7)	16.2 (13.8, 19.1)

1. Reasons listed in open-text field (limited to reasons reported by ≥4 participants; N=189 participants wrote in 90 different reasons): I don't know, etc. (n=35), My personality, etc. (n=23), Autism (n=23), People are rude/mean, etc. (n=21), Bullying (n=13), Other people's problems, jealousy, etc. (n=12), Nothing, none, etc. (n=11), Just happens, part of life, etc. (n=10), Physical disability or illness (n=10), Drug or tobacco-related (n=8), Appearance (n=8), Joking, being funny, etc. (n=7), Romantic relationships, etc. (n=6), Rumors, drama, etc. (n=5), Mental disorder or illness (n=5), Hair (n=4), ADHD (n=4), Someone having a bad day (n=4)

Abbreviation: CI=confidence interval

Note: Based on responses from participants who reported experiencing at least one form of mistreatment at least "a few times" in the past month (Table 43).

- The most endorsed reasons for mistreatment were age (44.9%), race/ethnicity (32.1%), and physical appearance (27.4%).
- For most of the reported reasons for mistreatment, there were not large differences by tobacco use status.
- The reasons "household or family education or income" and "sexual orientation" were reported more often among tobacco users; however, even among tobacco users, these reasons were not as common as others, like age or race/ethnicity.

Table 45. Experiences of discrimination in the past month by tobacco use status

In the past month, how often have the following things happened to you?	Almost every day % (95% CI)	At least once a week % (95% CI)	A few times % (95% CI)	Not at all % (95% CI)
You were treated with less courtesy or respect than other people.				
Past 30-day tobacco users	12.5 (9.2, 16.6)	18.5 (14.6, 23.2)	32.7 (27.2, 38.6)	36.3 (30.9, 42.1)
Past 30-day tobacco non-users	4.9 (4.0, 6.2)	12.1 (10.5, 13.9)	32.5 (30.0, 35.2)	50.4 (47.7, 53.2)
You received poorer service than other people at restaurants or stores.				
Past 30-day tobacco users	3.9 (2.5, 6.2)	15.3 (10.6, 21.6)	22.6 (18.4, 27.4)	58.1 (52.1, 63.9)
Past 30-day tobacco non-users	1.5 (1.0, 2.3)	3.4 (2.6, 4.3)	16.4 (14.4, 18.5)	78.8 (76.5, 80.9)
People acted as if they think you are not smart.				
Past 30-day tobacco users	14.6 (11.0, 19.2)	14.5 (11.1, 18.6)	35.3 (29.7, 41.3)	35.7 (30.3, 41.4)
Past 30-day tobacco non-users	4.7 (3.8, 5.9)	9.4 (8.0, 11.1)	36.4 (33.7, 39.1)	49.5 (46.7, 52.3)
People acted as if they are afraid of you.				
Past 30-day tobacco users	6.2 (4.3, 8.9)	14.3 (10.3, 19.4)	20.0 (15.2, 25.9)	59.6 (53.5, 65.4)
Past 30-day tobacco non-users	1.7 (1.2, 2.5)	3.8 (3.0, 4.7)	11.9 (10.4, 13.7)	82.6 (80.6, 84.4)
You were threatened or harassed.				
Past 30-day tobacco users	4.7 (2.8, 7.7)	11.6 (8.4, 15.9)	20.7 (16.9, 25.2)	63.0 (57.4, 68.3)
Past 30-day tobacco non-users	1.5 (1.0, 2.1)	4.3 (3.4, 5.6)	17.5 (15.5, 19.7)	76.7 (74.3, 79.0)

Abbreviation: CI=confidence interval

- Overall, past 30-day tobacco users reported experiencing discrimination more often than those who had not used tobacco in the past 30 days.
- This was true for all five types of mistreatment included on the survey.

APPENDIX

Survey Methodology

The primary goal of the Teens Nicotine and Tobacco (TNT) Project is to uncover and understand tobacco, nicotine, and cannabis product use behaviors, perceptions, and terminology among California adolescents (ages 12–17). This information will inform ongoing surveillance, messaging, and evaluation activities of the California Tobacco Prevention Program (CTPP) of the California Department of Public Health (CDPH).

The TNT Online Survey is one component of the TNT Project. The TNT Online Survey is administered entirely electronically via online recruitment strategies. Each annual wave of the TNT Online Survey includes approximately 5000 participants and is comprised of two cycles, completed approximately 6 months apart. The 2023 TNT Online Survey Wave consisted of a spring/summer cycle (data collection: May–June 2023) and fall cycle (data collection: November–December 2023). Participants are not followed between cycles; each cycle is an independent sample, which together can be combined into a single cross-sectional wave. While most survey items are consistent between cycles, some additions, deletions, and revisions occurred to allow the TNT Online Survey to be responsive to a changing tobacco policy and marketing landscape and to serve emerging CDPH/CTPP priorities.

To enhance California representation, each cycle of survey sampling sets a minimum quota of 100 respondent per region over the 7 regions defined in the California Health Interview Survey (Figure 1). The unweighted counts of participant responses by region in the 2023 TNT Online Survey Wave are shown in Table 46.

Figure 1. California Sampling Regions, TNT Online Survey

Figure 1 Legend. Survey sampling covers seven California regions. A minimum quota of 100 responses per region per cycle (200 responses per wave) is set to enhance statewide representation.

Table 46. Participant responses by California region, 2023 TNT Online Survey Wave

	Spring Cycle (unweighted N)	Fall Cycle (unweighted N)	2023 Wave (unweighted N)
Northern & Sierra	251	156	407
Greater Bay Area	342	408	750
Sacramento Area	203	185	388
San Joaquin Valley	278	373	651
Central Coast	125	110	235
Los Angeles	773	653	1426
Other Southern	536	622	1158
All Regions (Total)	2508	2507	5015

Recruitment: Commercial research panels were the main source of participant samples. Primarily, samples came from traditional, actively managed market research panels, such as members of e-commerce discount programs or member reward clubs. Panel members must "opt-in for market research," requiring respondents to submit an initial registration form requesting to participate in market research studies. Potential respondents build a demographic profile from a standardized list of questions. Panel operators use the profiles to select studies that would best fit the case specifications. Panelist participation in an online survey includes a double opt-in requirement. Individuals who do not reconfirm will not be contacted to participate in a survey. While a third-party vendor provides recruiting services, TNT Online Survey researchers maintain full control over and complete access to all questionnaires and all uncleaned, raw survey data collected.

Market research panels allow targeting based on geographic location and sociodemographic and attitudinal profiles. Each panelist enters or updates their profile information during registration and upon sign-in. To ensure profiles are consistently updated, each profiling question has a set expiration date. Members may unsubscribe at any time. The TNT Online Survey draws from multiple panel providers. Only panel providers that adhere to ESOMAR standards for ethical conduct of market research are included.

To assemble the TNT Project survey sample, potential participants whose panel profiles fit qualifying demographic and geographic criteria are matched to the survey invitation. Panel members routinely receive email invitations for survey opportunities, but with limited frequency to avoid overcontact fatigue. The email invitation sent to potential respondents comes from the panel and informs them that the survey is for research purposes only, how long the survey is expected to take, and what incentives are available. To reduce self-selection bias, the survey invitation does not include specific details about the contents of the survey. Children ages 12–13 years are recruited through invitations to their parents. Invitations for children are only sent to households where children in the relevant age window reside. Children ages 14–17 years are recruited through parents or invited directly, depending on the specific practices and policies of each panel provider.

Data Quality Checks: Multiple methods were implemented to enhance data quality.

Incomplete Responses: Research participation is voluntary. Given that some questionnaire items,

particularly those related to tobacco or marijuana use, could make some respondents feel uncomfortable, forced completion of items was not implemented. However, each questionnaire page included an automated reminder to request completion of any items initially left unfilled. A participants' questionnaire was considered "complete" if sufficient information was provided to classify the respondent's past 30-day use status (user or non-user) for ≥75% of assessed tobacco, nicotine, and cannabis products. Thus, some participants who did not mark responses for all items or who retired prior to completion of the entire survey were included in the final sample.

Response Formatting: The vast majority of response options in the TNT Online Survey are multiple choice, objective, closed responses. When possible, validation was added to any brief open-response options such that only appropriately formatted responses (e.g., numeric vs. text) within plausible and permissible ranges (e.g., 5-digit US postal code) could be entered.

Free-Text Responses: Free-text response options, which allow participants to type a response manually without validation restrictions, are important for allowing the TNT Project to uncover newly emerging tobacco brands, products, product features, or behaviors. However, it is expected that some adolescent participants will provide responses that are intentionally irrelevant or inappropriate. Therefore, free-text items will be used judiciously throughout the survey questionnaire. To maintain participant anonymity, free-text responses are redacted from Public Use datafiles.

Duplicate Responses: Potential participants receive personalized unique survey invitation links that cannot be reused. Social Media recruitment featured a delay between survey completion and incentive payment to allow checking for duplicate email addresses and ineligible or incomplete responses before issuing incentive payments. While care was taken to recruit participants from separate, independent research panels, it is possible that some duplicate responses were recorded, if for example, an individual has memberships with different email addresses in more than one commercial panel.

Fraudulent Responses: Commercial research panels use multiple methods to attain sample integrity and confirm respondent identity within the panels, including digital fingerprinting technology, TrueSample, Verity, SmartSample, and US Postal Service verification. All commercial panels verify respondent mailing address, demographic information, and email address. Social media recruitment safeguards included a multiple-step recruitment process. Specifically, rather than provide a direct anonymous survey link within posted advertisements, potential participants were directed to "screener" survey to assess eligibility and collect contact information (email address). Once contact information was collected, invitations to the main survey were distributed as single-use personalized survey links. All TNT Online Survey questionnaires included a ReCAPTCHA challenge item and a "hidden" item that were viewable only to nonhuman (computer “bot”) responses but not shown on screens. Failure to achieve a minimum ReCAPTCHA challenge score or provision of any response to a hidden item resulted in removal from the TNT Online Survey sample. Free-text items were also reviewed subjectively for gibberish responses potentially indicative of bot responses. Clearly suspicious free-text responses resulted in removal of a survey response from the TNT Online Survey sample. Given the ability of bots to adapt to the strategies used against them over time, challenge questions were replaced with new ones periodically.

The TNT Online Survey was hosted on the Qualtrics XM Survey Platform. This platform includes two automated scoring programs for data quality: a duplicate response algorithm and a fraudulent response algorithm. Any response scoring below the minimum quality threshold on either program was removed from the TNT Online Survey sample.

Attention Checks: The TNT Online Survey questionnaire included an item that directed participants to provide a particular response (e.g., “For this question, select the choice "somewhat agree" to show that you are reading carefully”). Participant responses that failed this attention check were not removed from the TNT Online Survey sample, but attention check response was one of several factors incorporated in survey quality weights (see below).

Weights: Any analysis of TNT Online Survey data should incorporate the provided weights to improve the generalizability and quality of obtained estimates. Further details regarding weighting procedures can be found in the *TNT Online Survey Technical Report*.

Geographic-demographic weights are intended to make survey findings representative of the geographic, gender, and race/ethnicity distribution of California adolescents ages 12–17. Initial geodemographic weights account for the following post-stratification factors: sex, race/ethnicity, and region of the state. American Community Survey (source: US Census Bureau) Public Use Microdata Sample (PUMS) files for California 2017–2021 (approximately 136,000 responses) were used to estimate cross-classified population count totals for sex, race/ethnicity, and California region for post-stratification weights developed to account for non-response bias and provide inference to the overall population, as well as subgroups of interest. Raking with trimming was used to adjust the initial weights for sex, age, race/ethnicity, and region factors to the full cross-classification of all the factors for the full wave 2023 weights and the spring cycle weights. Raking without trimming was used for the fall cycle weights (trimming not required).

Quality weights are intended to decrease the contribution of potential survey responses the nominally meet all eligibility criteria and pass all quality checks but share attributes with known fraudulent responses without being automatically disqualifying. For example, completion time in the hours from midnight to 4:00 am or ReCAPTCHA score <0.8 would not independently disqualify a response from the TNT Online Survey sample but, as a group, surveys with these attributes are more likely to include fraudulent responses, such as those from computer bots. To decrease the overall contribution to project findings from these potentially lower quality responses, all survey responses meeting eligible criteria were assigned a probability of being a fraudulent response using multivariable regression modeling. The inverse of that probability was assigned as the quality weight. Factors included in modeling were ReCAPTCHA score, Qualtrics XM RelevantID fraud score, geographic location, time of day of survey completion, sex, age, current use of cigarettes, marijuana, or vapes, attention check pass, ambiguous free-text entry, panel vendor, and contradictory responses. These factors were selected because they were shown to be associated with known fraudulent responses in the full (eligible and ineligible) dataset.

Full weights: Survey weights were calculated as the product of geographic-demographic weights and quality weights.

The 2023 TNT Online Survey Wave includes 9 weight variables:

GD_WEIGHT_W3C2	Geographic-demographic weight, spring/summer cycle only
Q_WEIGHT_W3C2	Quality weight, spring/summer cycle only
WEIGHT_W3C2	Full weight, spring/summer cycle only
GD_WEIGHT_W3C2	Geographic-demographic weight, fall cycle only
Q_WEIGHT_W3C2	Quality weight, fall cycle only
WEIGHT_W3C2	Full weight, fall cycle only
GD_WEIGHT_W3	Geographic-demographic weight, wave 2023
Q_WEIGHT_W3	Quality weight, wave 2023
WEIGHT_W3	Full weight, wave 2023

The cycle-specific weights are intended for use only with survey items that appeared in only one of the two cycles. For items that were consistent across cycles, the full 2023 wave weights should be used.

Generalizability of TNT Online Survey Findings

TNT Online Survey results are not necessarily directly comparable to findings from other youth tobacco surveillance occurring across California or nationally, including school-based surveys. In general, online research panels include participants representing a wide range of socioeconomic, demographic, and geographic profiles, but should be considered a non-probability, convenience sampling method due to the lack of a population-based sampling frame. It is reasonable to expect that panel members would differ from the general population in their degree of engagement in online activities and willingness to participate in survey research. Although geographic-demographic weights have been applied to the TNT Online Survey sample to match geographic, gender, and race/ethnicity distribution of California adolescents ages 12–17, the weights do not account for potential attitudinal, behavioral, or socioeconomic differences between the TNT Online Survey participants and the general population.

Notably, the prevalence of current cigarette smoking among TNT Online Survey participants (3.7%) is higher than cigarette smoking prevalence estimated in the 2022 California Youth Tobacco Survey (< 1%). Speculatively, but not conclusively, several influences may have contributed to the higher smoking prevalence, among them: 1) Although the survey topic was not part of initial survey invitations, a brief description of the survey content appeared after accepting the invitation; interest in completing the survey may have been greater among tobacco-using youth; 2) Parental permission was required to participate; more permissive parents with regard to tobacco use may have been more inclined to allow their child to take part; 3) Despite survey language indicating otherwise, parents may have mistakenly believed questions applied to their own tobacco use; 4) Undetected fraudulent responses may exist in the sample and these bot respondents were more likely to report tobacco use; 5) Despite survey language indicating otherwise, participants may have mistakenly believed use of tobacco was a study eligibility criterion; 6) Online survey panelist differ from the general population in their tobacco use behaviors; 7) Participants report their behavior differently at home than in school-based surveys; and 8) Other factors.

Despite the above reasons for caution in generalizing TNT Online Survey prevalence estimates to the general population of California adolescents ages 12–17, results can be expected to have

adequate internal validity, for example, for examining associations between tobacco-related perceptions and behaviors *within* the TNT Online Survey sample. Additionally, achieving the primary project goals of uncovering and understanding patterns in tobacco-related behaviors, perceptions, and terminology is not necessarily reliant on generalizable prevalence estimates. Thus, when interpreting and contextualizing the TNT Online Survey findings, one can have confidence in within-study results but should take caution when comparing results across other sources of youth tobacco surveillance data.

Results of TNT Online Survey Experiments & Recommendations for Future Surveys

One goal of the TNT Online Survey was to collect information that could lead to improvements in the way tobacco use behaviors are monitored in California. For example, findings from the TNT Online Survey could lead to improvements in the way questions are worded in other statewide tobacco surveys, such as the California Youth Tobacco Survey. Therefore, the TNT Online Survey included some questions worded in more than one way. Participants saw only one question version or another. Which version they were shown was randomly assigned by the computer survey (i.e., an embedded randomized experiment). In this section, we summarize the results of these survey question experiments (among other related design features of the TNT Online Survey) and discuss potential implications for future tobacco surveys.

Experiments to examine include:
(Table 47) How including the option “not sure” affects reported use of novel nicotine products
(Table 48) How asking about sharing your vape affects reported use of someone else’s vape
(Table 49) Effect using one-part vs. two-part survey items for assessing past 30-day use
(Table 50) Effect on missing data of moving selected demographic items near the survey start

The TNT Online Survey included three types of novel nicotine products: nicotine pouches, nicotine tablets, lozenges, or gummies, and heated tobacco. For these three products, participants were provided a brief description and product image then asked whether they had ever heard of this product. In a randomized design, approximately half of participants were given the options "yes" or "no;" the other half were given the options "yes," "no," or "I'm not sure." Those who responded "yes" were then asked whether they had ever used these products; ever users were the asked about past 30-day use. Ever and past 30-day use items never included a "not sure" option. Table 47 show the prevalence of awareness and use of these products, according to whether participants had the option of answering "I'm not sure."

Table 47. Effect of an "I'm not sure" option on novel nicotine product awareness and use

	Ever-heard-of response options include "I'm not sure" N=2500	Ever-heard-of response options: "Yes" or "No" only N=2515
Nicotine pouches		
Ever heard of	21.0 (18.4, 23.8)	21.5 (19.0, 24.3)
Ever use	2.2 (1.4, 3.4)	1.5 (1.1, 2.2)
Current use	0.9 (0.5, 1.6)	0.8 (0.5, 1.2)
Nicotine tablets, lozenges, or gummies		
Ever heard of	17.8 (15.2, 20.6)	20.5 (17.8, 23.5)
Ever use	1.0 (0.6, 1.7)	1.0 (0.7, 1.5)
Current use	0.5 (0.4, 0.8)	0.6 (0.4, 0.9)
Heated Tobacco		
Ever heard of	18.2 (15.6, 21.3)	18.6 (16.2, 21.3)
Ever use	1.6 (1.0, 2.5)	1.6 (1.0, 2.5)
Current use	1.3 (0.8, 2.2)	0.8 (0.4, 1.3)

- Most participants had not heard of these nicotine products, and very few participants reported ever trying them.
- It was slightly more common for participants to indicate that they had heard of these products when there was no option to select, "I'm not sure."
- The overall reported prevalence of ever use or current use was similar between participants who saw each format of the ever-heard-of question.
- Implications: For the purpose of estimating prevalence of ever use and current use of these products, there is no evidence from this experiment to suggest that there is any impact of including an "I'm not sure" option within the ever-heard-of question. Either wording can be expected to yield equivalent results.

The TNT Online Survey asked about sharing vapes with others. All participants who reported current vape use were asked, "In the past 30 days, how often did you use a vape that belonged to someone else?" At random, prior to viewing this question, half of participants had previously been asked, "In the past 30 days, how often did you let someone else use your vape?" The goal was to assess whether asking someone about sharing their own vape had any influence on how they subsequently responded about sharing someone else's vape. Table 48 displays the results of this experiment.

Table 48. Sharing your own vape with others and using a vape belonging to someone else

	Group 1: Asked Two Questions N=527		Group 2: Asked One Question N=556
Response Options	Let Someone Else Use Your Vape	Use a Vape Belonging to Someone Else	Use a Vape Belonging to Someone Else
I do not have or own a vape	25.5	N/A	N/A
Never	13.5	13.4	10.8
Rarely	17.3	22.7	25.9
Sometimes	28.4	34.9	32.9
Often	7.1	18.2	17.8
Very often	8.2	10.9	12.7

Abbreviation: N/A=Not applicable

- For all questions, the most common reported frequency of sharing vapes was "sometimes." Among those current vapers who did not select "I do not have or own a vape," 38.1% reported "sometimes" letting someone else use their vape.
- There was no effect of being asked about sharing your own vape on reported prevalence of using a vape that belonged to someone else. Overall, 29.7% of participants reported "often" or "very often" using a vape that belonged to someone else.
- Implications: Sharing vape devices appears to be common among adolescent vape users. There does not appear to be any influence of being asked about their own sharing on how adolescents report using vapes that belong to someone else.

A vitally important metric in youth tobacco surveillance in use of a product at least once in the past 30 days (called "past 30-day" use or "current" use). For cigarettes and vapes, two different approaches were included in the TNT Online Survey and assigned to cigarette ever users or vape ever users at random. In one version, participants who reported ever using the product were asked "In the last 30 DAYS, how many days did you [use the product]?" and had the option to enter "0" if they did not use it. In the second version, participants were presented with a series of two questions. The first question asked, "Have you [used the product] in the LAST 30 DAYS?" with response options yes and no. Those who reported "yes" were then asked to indicate how many days (from 1 to 30) they used the product. Table 49 shows the results from this experiment.

Table 49. Current use of cigarettes and vapes estimated from a single question or a two-question series

	Single Question Format		Two-Question Series	
Among Ever Users, Current use of:	N	%	N	%
Cigarettes	647	19.1	657	19.4
Vapes	919	43.5	898	36.1

- Overall, participants who had ever tried vapes were more likely to report using vapes in the past 30 days compared to past 30-day use of cigarettes among participants who had ever tried cigarettes.
- Among product vape ever-users, the prevalence of past 30-day vape use was 43.5% when using the single question format and 36.1% when using the two-question series.
- Among cigarette ever-users, prevalence of past 30-day cigarette use was about the same under each question format.
- Implications: Using a single question format could result in a slightly higher prevalence of past 30-day use among ever users. Speculatively, it could be that for past 30-day non-users, the option to enter "0" days in the last 30 days is not as clear as the option to select "no" to indicate non-use. However, the magnitude of this effect is likely small, was observed only for vapes (not for cigarettes), and should be weighed against the potential advantage of requiring one fewer question assess product use.

Participant sociodemographic information, particularly sex and gender, is important for youth tobacco surveillance. For one, gender identity may be a risk factor for tobacco use. Additionally, sex at birth is a key component of constructing survey weights. For a design perspective, some surveys elect to place sociodemographic items near the start of a survey to reduce the percentage of missing responses on these critical items. Other surveys are designed to place these potentially sensitive items near the end to avoid any discomfort related to these items being a factor that discourages respondents from continuing. The 2023 TNT Online Survey placed questions related to sex and gender near the start of the survey. In 2022, these items had been near the survey's conclusion. Table 50 presents the percentages of missing data for these and other sociodemographic questions in the 2022 and 2023 survey waves.

Table 50. Missing data for select sociodemographic variables according to item position

	2022 TNT Online Survey			2023 TNT Online Survey		
Survey Item	Position within survey	% missing data overall[1,2]	% missing data in-item[1,3]	Position within survey	% missing data overall[1,2]	% missing data in-item[1,3]
Sex at birth	Near end	5.5	0.6	Near start	0.2	0.2
Gender identity	Near end	5.4	0.6	Near start	0.1	0.1
Age[4]	Near start	0	0	Near start	0	0
Racial identity	Near end	5.9	0.9	Near end	6.1	0.7
Sexual orientation	Near end	5.5	0.6	Near end	5.5	0.2

1. Unweighted percentage
2. Missing percentage among all survey participants
3. Missing percentage among survey participants who viewed this question
4. Age must be reported to be eligible for survey participation

- Placing sex and gender identity items near the start of the 2023 TNT Online Survey resulted in dramatically less missing data on these items compared to the 2022 TNT Online Survey, in which these items appeared near the end.
- There was very little attrition immediately following these items within the 2023 TNT Online Survey. Among participants who viewed either of these items, 99.8% completed all three of the questions that followed them.
- Implications: Placing items near the start of a survey dramatically reduces missing data. There is no strong evidence to suggest that viewing these potentially sensitive items increases overall survey attrition. For future survey waves, a design aspect to consider is whether to move items related to ethnicity/race and sexual orientation near the start of the survey.

Components of the TNT Online Survey Not Included in This Report

There were several items and topics included in the 2023 TNT Online Survey that were not summarized for this report. Those survey components are listed in Table 51. For more information about these components, please refer to the TNT Online Survey Codebook or contact the Principal Investigator.

Table 51. TNT Online Survey components not reported

Component	Further Details
General health status	self-report, from “excellent” to “poor”
School performance	grades in school (e.g., “mostly A’s”)
Grade in school	e.g., 9th, 10th, 11th grade, etc.
Parent proximity during survey	whether survey was complete with a parent
Lifetime use of various products	for example, use of vapes once, 2–10 times, 11–50 times, 51–99 times, 100 times or more
Alcohol and binge drinking	prevalence of alcohol-related behaviors
Sharing a vape	how often participants used vapes belonging to others
Flavored tobacco availability	when participants enter stores, do they see flavored vapes? other flavored tobacco?, etc.
Sensation seeking	to measure preference for exciting, risky behaviors; a known predictor of future tobacco use
Reasons for vaping	reasons that apply to you (among vape users) or perceived reasons that others use vapes
Cessation attempts and intentions	attempts, intentions, and methods of quitting
Vape dependence	validated e-cigarette dependence item
Race/ethnicity details	specific Asian background; specific Native Hawaiian or Other Pacific Islander background