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TEENS NICOTINE & TOBACCO PROJECT

Results of the California Teens Nicotine and Tobacco Project Online Survey

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Results of the California Teens Nicotine and Tobacco Project Online Survey 2022

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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 Control Program (CTCP). 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/CTCP 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/CTCP directives, recommendations, guidance, and priorities.

About This Report

This report summarizes selected results from the 2022 TNT Project Online Survey, which was conducted June - December 2022. A total of 5127 eligible participants completed the 2022 wave.

Results of the previous survey wave (conducted in July 2021 - February 2022) can be found here:

2021-2022 TNT Online Survey Report (https://escholarship.org/uc/item/6qf8f8x1)

EXECUTIVE SUMMARY

This report summarizes the main results from the second wave of the Teens, Nicotine, and Tobacco (TNT) Project Online Survey, which was a statewide online survey conducted in California during 2022. Data collection occurred in two cycles: spring/summer (June - July 2022) and fall (November - December 2022), 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 5127 eligible participants completed the 2022 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, compared to the general population, survey panel members may also 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 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)

- Over one-fourth of participants (26.5%) selected ever using at least one tobacco product in their life.
- 11.4% of participants reported current use of at least one tobacco product.
- Vapes were, by far, the most commonly used tobacco product: 9.5% of participants were current vape users.
- Combustible cigarettes were the next most used tobacco product after vapes (3.7% current use), followed by any kind of cigar (2.9%) and smokeless tobacco (2.4%).
- Of all participants, 19.2% selected having ever heard of nicotine pouches and 14.3% selected having ever heard of nicotine tablets or lozenges.
- Current use of any tobacco product was approximately equal among male-identifying (11.4%) and female-identifying (11.2%) participants.
- By race/ethnicity, current use of any tobacco product was highest among participants who identified as African American or Black (14.6%), followed by Hispanic or Latino (13.3%) and White (11.7%).
- Current use of any tobacco product was higher among participants who were categorized as LGBTQ+ (12.5%) than among participants who were not categorized as LGBTQ+ (11.0%).
- The prevalence of current use of any tobacco product was 10.4% among participants who rated their mental health status as “good,” “very good,” or “excellent” and was higher (14.2%) 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.
- 10.7% of current vape users reported using vapes on all 30 days in the past 30 days.
- Among all participants, 5.2% used two or more tobacco products within the past 30 days.
- Of all current tobacco users, less than half (45.7%) used multiple tobacco products.

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, Bang, Blu, and Elfbar.
- 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 (69.7%) reported that the vapes they used contained nicotine.
- Over a third (35.3%) of current vapers reported using a vape at least once in the past 30 days and not being sure what it contained.
- 34.1% of current vape users reported using a vape in the past 30 days that contained marijuana with THC.

Flavored Products (Chapter 3)

- 72.0% of current cigarette smokers reported that they used menthol cigarettes in the past 30 days.
- Over 80% of current users of cigars (87.2%) and hookah (88.1%) used flavored products.
- Over 90% of current users of vapes (91.0%) and smokeless tobacco (93.1%) used flavored products.
- About half (51.0%) 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 (78.2%), presumably through the use of flavored cigars or blunt wraps.
- 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.

Tobacco Endgame (Chapter 4)

- Most participants (75% - 78%) 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 - 46%) than for a statement related to ending the sale of all tobacco products (39%).
- Most participants (74% - 83%) 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 applied to smoking tobacco (48%) than using vapes (43%).
- Most participants either strongly agreed or agreed that all apartment buildings should be completely smoke-free (79%).
- Between 60% and 66% of participants “strongly agreed” and between 32% and 35% “agreed” that cigarette litter is harmful to the environment, animals, and water.

Marijuana Use (Chapter 5)

- Overall, 20.4% of TNT Online Survey participants had ever used marijuana and 10.0% were current marijuana users.
- Current use of marijuana was similar among male-identifying (10.0%) and female-identifying (9.8%) participants but higher among participants categorized as LGBTQ+ (14.7%).
- By race/ethnicity, current use of marijuana was lowest among participants who identified as Asian (3.2%).
- 40.2% of current marijuana users reported smoking a marijuana joint in the past 30 days. Small pipes (27.2%), edibles (26.9%), vaped wax, oil, or liquid (26.8%), and blunts (23.8%) were the next most common modes of use.
- Overall, current marijuana and tobacco co-use (5.6%) was more common than marijuana only use (4.4%).
- 49.5% 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 (75.0%), cigarettes (84.6%), cigars (89.2%), hookah (85.2%), smokeless tobacco (91.1%), or marijuana (69.0%) 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 57.8% 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. 23.0% of participants indicted living with someone who smokes cigarettes.
- Most participants (78.2%) indicated that the use of tobacco and nicotine products is not allowed anywhere or at any time inside their home; similarly, most participants (83.8%) indicated that marijuana use is not allowed anywhere or at any time inside their home.
- The majority of participants (61.5%) indicated that they had seen advertisements promoting vaping in the past 12 months. Approximately half of participants (50.3%) indicated they had seen advertisements promoting marijuana in the past 12 months and 52.3% has seen advertisements promoting cigarettes or other tobacco.
- 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 cigar users got their products.
- "I bought it from another person" was the single most-selected way that current smokeless tobacco users got their product.

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. Popular brands include Marlboro, Camel, Newport, and American Spirit.

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 or lozenges 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+ (Yes): 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.

LGBTQ+ (No): Participants who were categorized as identifying their gender as male or female and 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 2022 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 2022 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	26.5 (24.8, 28.1)	11.4 (10.3, 12.4)
Vapes	21.0 (19.5, 22.4)	9.5 (8.5, 10.4)
Cigarettes	11.7 (10.6, 12.8)	3.7 (3.2, 4.2)
Either cigar below	6.9 (6.0, 7.8)	2.9 (2.4, 3.4)
Little cigars or cigarillos	6.0 (5.2, 6.8)	2.5 (2.1, 3.0)
Big cigars	2.7 (2.2, 3.3)	1.1 (0.8, 1.4)
Hookah	4.7 (3.9, 5.4)	1.8 (1.5, 2.2)
Any smokeless below	3.7 (3.2, 4.2)	2.4 (2.0, 2.9)
Moist snuff	2.9 (2.5, 3.4)	1.7 (1.4, 2.1)
Chewing tobacco	2.6 (2.2, 3.0)	1.7 (1.3, 2.0)
Snus	2.4 (2.0, 2.8)	1.6 (1.3, 2.0)
Nicotine pouches	2.2 (1.8, 2.7)	1.2 (0.9, 1.4)
Nicotine tablets or lozenges	0.8 (0.5, 1.1)	0.4 (0.3, 0.5)
Heated tobacco	1.5 (1.1, 2.0)	1.0 (0.6, 1.4)

Abbreviation: CI = confidence interval

- More than one-fourth of participants (26.5%) selected ever using at least one tobacco product in their life.
- 11.4% of participants reported current use of at least one tobacco product
- Vapes were, by far, the most commonly used tobacco product: 9.5% of participants were current vape users.
- Combustible cigarettes were the next most used tobacco product after vapes (3.7% current use).
- Current use of any kind of cigar (2.9%) followed vapes and cigarettes as the next most used product. No other product exceeded 3% in current use.
- Nicotine pouches, tablets, and lozenges (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, 19.2% selected having ever heard of nicotine pouches and 14.3% selected having ever heard of nicotine tablets or lozenges.

Demographic Categories

In addition to male and female, TNT Online Survey participants were presented with the following gender identity response options: Transgender; Something else, please describe; and I'm not sure yet. Participant could also choose not to answer the question by leaving the item unmarked. Of the participants who viewed this item, 0.5% left it unmarked; another 5.0% of all participants did not view this item because they closed the survey before completion (percentages unweighted). For this report, marked response options other than male or female were combined into a single category ("identified another way").

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 2022 TNT Online Survey sample (N=5127) 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 gender, race/ethnicity, and age.

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

	Sample size N[1]	Weighted %	Ever Use (95% CI)	Current Use (95% CI)
Overall	5127	100	26.5 (24.8, 28.1)	11.4 (10.3, 12.4)
Gender				
Male	2359	38.0	25.2 (22.9, 27.6)	11.4 (10.0, 13.0)
Female	2333	58.2	27.3 (25.0, 29.7)	11.2 (9.8, 12.7)
Identified Another Way[2]	156	3.9	25.9 (18.5, 35.0)	12.0 (7.2, 19.3)
Race/Ethnicity				
White	1846	22.2	26.7 (24.0, 29.6)	11.7 (10.2, 13.5)
African American/Black	334	4.2	29.2 (23.5, 35.6)	14.6 (10.9, 19.2)
Hispanic/Latino	1856	51.8	29.6 (27.1, 32.2)	13.3 (11.6, 15.1)
Asian	456	14.2	15.8 (12.2, 20.3)	4.5 (2.8, 7.0)
Other[3]	109	2.3	28.3 (18.9, 40.0)	6.9 (3.6, 12.9)*
More Than One	223	5.2	20.9 (15.2, 28.0)	7.4 (4.5, 12.1)
Age				
12	457	17.6	17.5 (13.3, 22.5)	7.9 (5.4, 11.5)
13	711	17.1	17.7 (14.5, 21.5)	8.9 (6.8, 11.4)
14	879	13.5	27.1 (23.1, 31.6)	13.0 (10.3, 16.2)
15	819	13.5	33.2 (28.9, 37.9)	16.0 (13.1, 19.3)
16	1095	19.4	32.8 (29.3, 36.5)	10.7 (8.8, 12.9)
17	1162	19.0	30.9 (27.7, 34.4)	13.0 (10.9, 15.5)

1. Sample sizes (N) are unweighted; percentages are weighted for response quality and participant demographic characteristics
2. Includes participants indicating their gender was Transgender, Something else, or I'm not sure yet
3. Includes participants who indicated their race was American Indian / Alaska Native, Native Hawaiian / Other Pacific Islander, or "Other." 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.

- Current use of any tobacco product was similar among male-identifying (11.4%) and female-identifying (11.2%) participants.
- By race/ethnicity, current use of any tobacco product was highest among participants who identified as African American or Black (14.6%), followed by Hispanic or Latino (13.3%) and White (11.7%).
- Generally, tobacco use was lowest among the youngest participants. Both ever use and current use of any tobacco product were much higher at age 17 years than age 12 years.
- The age with the single-highest prevalence of current tobacco use was 15 years (16.0%), but this finding may be a result of online opt-in sampling.

Table 3 presents the prevalence of current tobacco use (any product, at least one day in the past 30 days) according to self-identified gender.

Table 3. Prevalence of current tobacco product use by gender

	Male % (95% CI)	Female % (95% CI)
Any tobacco product below	11.4 (10.0, 13.0)	11.2 (9.8, 12.7)
Vapes	9.4 (8.1, 10.8)	9.4 (8.0, 10.7)
Cigarettes	4.5 (3.6, 5.3)	3.3 (2.6, 3.9)
Either cigar below	3.6 (2.6, 4.5)	2.5 (1.9, 3.1)
Little cigars or cigarillos	3.1 (2.3, 4.0)	2.2 (1.6, 2.9)
Big cigars	1.7 (1.1, 2.3)	0.7 (0.3, 1.0)
Hookah	2.3 (1.7, 2.9)	1.5 (1.1, 2.0)
Any smokeless below	3.4 (2.7, 4.2)	1.9 (1.3, 2.4)
Moist snuff	2.5 (1.9, 3.2)	1.3 (0.9, 1.7)
Chewing tobacco	2.4 (1.8, 3.1)	1.2 (0.9, 1.6)
Snus	2.2 (1.6, 2.8)	1.3 (0.9, 1.7)
Nicotine pouches	1.7 (1.2, 2.2)	0.8 (0.5, 1.1)
Nicotine tablets or lozenges	0.7 (0.4, 0.9)	0.3 (0.2, 0.4)
Heated tobacco	1.3 (0.8, 1.8)	0.8 (0.3, 1.4)

Abbreviation: CI = confidence interval

Note: Participants who did not identify as male or female comprised a relatively small portion of the total sample (3.9%). This resulted in unreliable estimates of tobacco use prevalence due to small sample size. Therefore, these results are not reported

- Current use of any tobacco was about the same among male participants (11.4%) and female participants (11.2%).
- For each individual tobacco product, current use prevalence was equal or higher among males than females.
- A notable gender difference in tobacco use was found for smokeless tobacco. Smokeless tobacco use prevalence was 3.4% among male participants but only 1.9% among female participants.

Table 4 presents the prevalence of current use of any tobacco and individual tobacco products according to LGBTQ+ status. Among the 4843 participants with no missing data needed to categorize their LGBTQ+ status, 20.1% (unweighted N = 845) were categorized as a LGBTQ+ (See List of Terms for details).

Table 4. Prevalence of current tobacco product use by LGBTQ+ status

	LGBTQ+: No % (95% CI)	LGBTQ+: Yes % (95% CI)
Any tobacco product below	11.0 (9.9, 12.2)	12.5 (10.1, 15.5)
Vapes	9.2 (8.2, 10.3)	10.3 (8.3, 12.8)
Cigarettes	4.0 (3.4, 4.6)	2.4 (1.7, 3.4)
Either cigar below	2.9 (2.4, 3.5)	2.7 (1.7, 4.2)
Little cigars or cigarillos	2.5 (2.0, 3.0)	2.6 (1.7, 4.1)
Big cigars	1.2 (0.9, 1.6)	0.5 (0.2, 1.3)*
Hookah	2.0 (1.6, 2.5)	0.9 (0.5, 1.9)*
Any smokeless below	2.7 (2.3, 3.3)	1.2 (0.7, 2.2)
Moist snuff	2.0 (1.7, 2.5)	0.4 (0.2, 0.8)*
Chewing tobacco	1.9 (1.6, 2.4)	0.7 (0.4, 1.3)
Snus	1.8 (1.4, 2.2)	0.8 (0.4, 1.7)*
Nicotine pouches	1.3 (1.0, 1.7)	0.4 (0.2, 0.8)*
Nicotine tablets or lozenges	0.5 (0.4, 0.6)	0.1 (0.0, 0.3)*
Heated tobacco	0.9 (0.7, 1.3)	1.3 (0.4, 3.9)*

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 slightly higher among participants who were categorized as LGBTQ+ (12.5%) than among participants who were not categorized as LGBTQ+ (11.0%).
- For each individual product, current use prevalence was slightly higher, nearly the same, or slightly lower among participants who were categorized as LGBTQ+ compared to those who were not.

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	11.7 (10.2, 13.5)	14.6 (10.9, 19.2)	13.3 (11.6, 15.1)	4.5 (2.8, 7.0)
Vapes	9.8 (8.3, 11.4)	11.6 (8.3, 16.0)	11.1 (9.6, 12.8)	3.8 (2.3, 6.3)
Cigarettes	5.9 (4.9, 7.0)	3.6 (2.2, 5.7)	3.8 (3.1, 4.7)	1.3 (0.6, 2.5)*
Either cigar below	2.6 (2.0, 3.5)	6.4 (4.2, 9.5)	3.4 (2.6, 4.3)	0.8 (0.3, 1.8)*
Little cigars or cigarillos	2.3 (1.7, 3.1)	6.0 (3.9, 9.1)	2.8 (2.2, 3.7)	0.8 (0.3, 1.8)*
Big cigars	1.3 (0.9, 1.9)	0.6 (0.3, 1.5)*	1.3 (0.8, 1.9)	0.4 (0.1, 1.5)*
Hookah	2.6 (1.9, 3.4)	3.3 (1.9, 5.7)	1.9 (1.4, 2.5)	0.5 (0.1, 1.8)*
Any smokeless below	3.0 (2.4, 3.9)	1.8 (1.0, 3.2)	3.0 (2.4, 3.8)	0.4 (0.1, 1.3)*
Moist snuff	2.5 (1.9, 3.3)	0.9 (0.4, 1.8)*	2.0 (1.5, 2.6)	0.4 (0.1, 1.3)*
Chewing tobacco	2.4 (1.8, 3.1)	1.2 (0.6, 2.2)*	2.0 (1.5, 2.6)	0.4 (0.1, 1.3)*
Snus	2.1 (1.6, 2.7)	1.0 (0.4, 2.2)*	2.0 (1.5, 2.7)	0.2 (0.1, 1.2)*
Nicotine pouches	1.8 (1.3, 2.4)	0.6 (0.3, 1.2)*	1.2 (0.8, 1.7)	0.5 (0.2, 1.5)*
Nicotine tablets or lozenges	0.5 (0.4, 0.8)	0.3 (0.2, 0.7)*	0.5 (0.3, 0.7)	0.1 (0.0, 0.4)*
Heated tobacco	1.3 (0.9, 1.9)	0.6 (0.3, 1.1)*	1.2 (0.7, 2.1)	0.3 (0.1, 1.2)*

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 “Other” and “More Than One” due to insufficient sample size

- Across all race/ethnicity categories, vapes were the most used tobacco product.
- Current use of any tobacco (14.6%) was highest among participants who identified as African American or Black.
- Current use of any tobacco (4.5%) 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	8.4 (6.7, 10.5)	14.5 (12.5, 16.7)	11.8 (10.4, 13.5)
Vapes	6.8 (5.3, 8.6)	12.1 (10.3, 14.3)	10.0 (8.7, 11.5)
Cigarettes	3.5 (2.7, 4.7)	5.3 (4.4, 6.5)	2.7 (2.2, 3.4)
Either cigar below	2.7 (1.9, 3.8)	3.2 (2.4, 4.3)	2.8 (2.2, 3.7)
Little cigars or cigarillos	2.3 (1.6, 3.3)	3.0 (2.2, 4.1)	2.4 (1.8, 3.2)
Big cigars	1.5 (0.9, 2.3)	1.2 (0.8, 1.7)	0.7 (0.4, 1.2)
Hookah	2.0 (1.4, 2.8)	2.4 (1.8, 3.2)	1.3 (0.9, 1.8)
Any smokeless below	2.0 (1.4, 2.9)	3.8 (3.1, 4.8)	1.9 (1.3, 2.6)
Moist snuff	1.5 (1.0, 2.2)	2.7 (2.1, 3.5)	1.3 (0.9, 1.9)
Chewing tobacco	1.4 (1.0, 2.2)	2.8 (2.1, 3.6)	1.2 (0.8, 1.7)
Snus	1.2 (0.7, 1.9)	2.9 (2.2, 3.7)	1.2 (0.8, 1.7)
Nicotine pouches	1.1 (0.7, 1.8)	1.9 (1.4, 2.7)	0.6 (0.4, 0.9)
Nicotine tablets or lozenges	0.4 (0.3, 0.7)	0.8 (0.5, 1.1)	0.2 (0.1, 0.3)
Heated tobacco	1.5 (0.8, 2.8)*	1.3 (0.9, 1.9)	0.4 (0.2, 0.7)

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 (8.4%) and highest among participants who were 14 or 15 years old (14.5%).
- The prevalence of current vaping was lowest among 12-13 year old participants (6.8%) and highest among 14-15 year old participants (12.1%).
- Several influences may have contributed to the unexpected finding that tobacco use was higher among 14-15 year old participants than 16-17 year old participants. It is not known whether these issues occurred, but it is possible that: 1) Interest in the survey may have varied by age and tobacco use status, such that interest in the survey was lower among older, tobacco-using youth; 2) Inattentive survey taking may have led some participants to select ages and tobacco responses in a haphazard manner; 3) Undetected ineligible responses may exist in the sample and these respondents could have been more likely to report tobacco use and being ages 14 or 15; 4) Online survey panelists differ from the general population in their tobacco use behaviors; and 5) Other factors (Please see the Appendix sub-section, Generalizability of TNT Online Survey Findings).

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 4985 participants who reported their mental health status, 76.3% (unweighted N = 3914) rated their mental health as "excellent," "very good," or "good," and 23.7% (unweighted N = 1071) 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	10.4 (9.3, 11.6)	14.2 (12.0, 16.7)
Vapes	8.7 (7.7, 9.8)	11.9 (9.9, 14.3)
Cigarettes	3.7 (3.2, 4.3)	3.5 (2.6, 4.6)
Either cigar below	3.0 (2.4, 3.6)	2.5 (1.7, 3.6)
Little cigars or cigarillos	2.6 (2.1, 3.2)	2.3 (1.5, 3.3)
Big cigars	1.3 (1.0, 1.7)	0.4 (0.2, 0.9)*
Hookah	2.0 (1.6, 2.5)	1.0 (0.6, 1.9)*
Any smokeless below	2.8 (2.4, 3.4)	1.0 (0.5, 1.8)
Moist snuff	2.1 (1.7, 2.6)	0.4 (0.2, 0.8)*
Chewing tobacco	2.1 (1.7, 2.5)	0.4 (0.2, 0.9)*
Snus	1.9 (1.6, 2.4)	0.5 (0.2, 1.2)*
Nicotine pouches	1.4 (1.1, 1.8)	0.4 (0.2, 0.8)*
Nicotine tablets or lozenges	0.5 (0.4, 0.7)	0.2 (0.1, 0.5)*
Heated tobacco	1.2 (0.8, 1.8)	0.4 (0.2, 1.0)*

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 10.4% among participants who rated their mental health status as "excellent", "very good", or "good" and was higher (14.2%) 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" (11.9%).
- Current use of cigarettes, cigars, hookah, smokeless tobacco, nicotine pouches, nicotine tablets or lozenges, and heated tobacco was slightly higher among participants who rated their mental health status as "excellent", "very good", or "good."

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	38.1 (33.1, 43.4)	19.7 (16.1, 23.8)	22.8 (19.0, 27.2)	8.7 (6.0, 12.3)	10.7 (8.2, 14.0)
Cigarettes	29.2 (23.6, 35.6)	18.7 (14.2, 24.2)	25.1 (19.9, 31.1)	13.1 (9.4, 17.9)	13.9 (9.3, 20.3)
Little cigars or cigarillos	46.4 (37.3, 55.8)	29.1 (21.7, 37.7)	13.3 (8.5, 20.1)	5.8 (3.2, 10.3)	5.4 (2.8, 10.4)*
Big cigars	51.9 (38.4, 65.2)	29.8 (18.4, 44.4)	12.9 (7.4, 21.4)	5.4 (1.4, 18.6)*	0.0 (0.0, 0.1)*
Hookah	41.7 (32.2, 51.8)	30.5 (22.3, 40.0)	24.9 (17.0, 34.9)	2.2 (0.9, 5.1)*	0.8 (0.2, 3.2)*
Moist snuff	38.9 (30.2, 48.5)	34.1 (25.4, 44.0)	22.7 (15.9, 31.3)	2.4 (0.9, 5.8)*	1.9 (0.7, 5.4)*
Chewing tobacco	48.3 (38.9, 57.8)	23.7 (16.6, 32.7)	26.3 (19.5, 34.4)	0.9 (0.4, 1.7)*	0.9 (0.2, 5.1)*
Snus	48.2 (38.2, 58.3)	29.8 (21.3, 39.9)	20.6 (14.7, 28.1)	0.9 (0.3, 2.5)*	0.5 (0.1, 3.5)*
Nicotine pouches	38.3 (28.1, 49.6)	31.8 (21.2, 44.8)	28.3 (19.1, 39.8)	1.1 (0.5, 2.3)*	0.4 (0.1, 1.4)*
Nicotine tablets or lozenges	47.6 (35.1, 60.4)	19.8 (12.2, 30.5)	23.9 (16.1, 33.8)	4.1 (2.1, 7.8)*	4.7 (0.8, 24)*
Heated tobacco	56.2 (38.7, 72.3)	20.8 (11.6, 34.6)	18.7 (9.1, 34.7)*	1.6 (0.8, 3.1)*	2.7 (0.6, 11.6)*

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.
- 10.7% 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, cigars, and nicotine tablets or lozenges, 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 gender, race/ethnicity, and age

	Sample Size[1] N	%	Current Use ≥1 product % (95% CI)	Current Use ≥2 products % (95% CI)
Overall	5127	100	11.4 (10.3, 12.4)	5.2 (4.6, 5.8)
Gender				
Male	2359	38.0	11.4 (10.0, 13.0)	6.2 (5.1, 7.2)
Female	2333	58.2	11.2 (9.8, 12.7)	4.7 (3.9, 5.5)
Identified Another Way	156	3.9	12.0 (7.2, 19.3)	2.8 (3.9, 5.3)*
Race/Ethnicity				
White	1846	22.2	11.7 (10.2, 13.5)	6.3 (5.2, 7.5)
African American/Black	334	4.2	14.6 (10.9, 19.2)	7.4 (4.6, 10.1)
Hispanic/Latino	1854	51.8	13.3 (11.6, 15.1)	5.9 (4.8, 6.9)
Asian	456	14.2	4.5 (2.8, 7.0)	1.7 (0.7, 2.8)*
Other[2]	111	2.3	6.9 (3.6, 12.9)*	1.7 (0, 3.8)*
More Than One	223	5.2	7.4 (4.5, 12.1)	3.2 (0.9, 5.6)*
Age				
12	457	17.6	7.9 (5.4, 11.5)	4.1 (2.4, 5.7)
13	711	17.1	8.9 (6.8, 11.4)	4.7 (3.3, 6.1)
14	879	13.5	13.0 (10.3, 16.2)	6.5 (4.7, 8.2)
15	819	13.5	16.0 (13.1, 19.3)	7.6 (5.7, 9.5)
16	1095	19.4	10.7 (8.8, 12.9)	4.8 (3.5, 6.1)
17	1162	19.0	13.0 (10.9, 15.5)	4.5 (3.2, 5.7)

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 race was American Indian / Alaska Native, Native Hawaiian / Other Pacific Islander, or "Other." 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, 5.2% used two or more tobacco products within the past 30 days.
- Less than half of all current tobacco users were multiple tobacco product users (45.7%, not shown in Table 9).

- Multiple product use was higher among male (6.2%) than female (4.7%) participants.
- Among all race/ethnicity categories, multiple product use was highest among White (6.3%) and African American or Black participants (7.4%).
- Multiple product use was lowest among age 12 participants (4.1%) and highest among age 15 participants (7.6%).

CHAPTER SUMMARY

In the 2022 TNT Online Survey, 11.4% of California youth ages 12-17 reported current use of at least one tobacco product. The most commonly used tobacco product was vapes (9.5% current use prevalence). More than half (57.8%) of current vape users reported vaping no more than 5 days in the last 30 days, while 19.4% 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 (45.7%) reported use of more than one tobacco product in the past 30 days.

CHAPTER 2 – VAPE PRODUCT DETAILS

This chapter presents data from the 2022 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 20 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=5117 % (95% CI)	Among Current Vape Users N=1207 % (95% CI)	Among Current Vape Non-Users N=3904 % (95% CI)
I don't know	50.1 (48.1, 52.1)	12.7 (8.9, 16.5)	54.0 (51.9, 56.1)
Juul	35.8 (33.9, 37.7)	40.3 (35.2, 45.4)	35.3 (33.3, 37.3)
Puff Bar	19.0 (17.5, 20.5)	42.6 (37.4, 47.8)	16.5 (15.0, 18.0)
Bang	10.6 (9.4, 11.8)	27.6 (23.0, 32.2)	8.8 (7.6, 10.0)
Blu	9.5 (8.5, 10.6)	24.5 (20.0, 28.9)	8.0 (6.9, 9.0)
Elfbar[1]	8.4 (6.9, 10.1)	20.2 (14.3, 27.6)	6.9 (5.5, 8.7)
Vuse	7.6 (6.7, 8.7)	16.8 (12.8, 20.9)	6.7 (5.7, 7.7)
NJOY	6.6 (5.7, 7.6)	18.6 (14.9, 22.3)	5.4 (4.4, 6.3)
Puff Plus	6.1 (5.3, 7.0)	17.9 (13.9, 21.8)	4.9 (4.1, 5.7)
eSmoke	6.1 (5.2, 7.0)	9.8 (6.9, 12.7)	5.6 (4.7, 6.6)
Flum Float	4.8 (4.1, 5.6)	17.6 (13.7, 21.5)	3.4 (2.7, 4.2)
SMOK	4.5 (3.8, 5.3)	17.0 (13.4, 20.7)	3.2 (2.5, 3.9)
ProVape	4.3 (3.6, 5.1)	11.2 (8.1, 14.4)	3.6 (2.8, 4.3)
Vapor King	4.0 (3.4, 4.9)	6.8 (4.3, 9.3)	3.7 (2.9, 4.5)
Pop	3.8 (3.1, 4.6)	9.7 (7.0, 12.4)	3.1 (2.4, 3.9)
Hyppe	3.5 (2.9, 4.2)	14.4 (10.8, 18.0)	2.4 (1.8, 3.0)
E-Swisher	3.3 (2.7, 4.1)	8.0 (4.9, 11.2)	2.8 (2.2, 3.5)
Mi-Pod	3.0 (2.4, 3.7)	6.9 (4.4, 9.3)	2.6 (1.9, 3.2)
Hyde	2.3 (1.9, 2.9)	6.4 (3.9, 8.9)	1.9 (1.4, 2.4)
Posh	2.3 (1.8, 3.0)	7.1 (4.7, 9.5)	1.8 (1.2, 2.4)
Bolt	2.2 (1.7, 2.8)	7.0 (4.7, 9.4)	1.7 (1.2, 2.2)
Cali	2.0 (1.5, 2.5)	5.1 (3.3, 7.0)	1.6 (1.1, 2.2)
Fogg	2.0 (1.6, 2.6)	6.4 (4.1, 8.7)	1.6 (1.1, 2.1)
Logic	1.3 (0.9, 1.7)	3.2 (1.6, 4.8)	1.1 (0.7, 1.5)
Vaporesso	1.3 (1.0, 1.7)	4.7 (2.6, 6.9)	0.9 (0.6, 1.3)
Suorin	0.9 (0.7, 1.3)	3.6 (1.7, 5.5)	0.7 (0.3, 1.0)
Something Else[2]	1.6 (1.2, 2.2)	1.9 (0.3, 3.5)*	1.6 (1.0, 2.1)

1. Brand "Elfbar" added in fall cycle; estimates in table restricted to fall cycle for this brand
2. Other brands listed by >1 participant included: Cake (n=8), Elfbar (n=7), Flum (n=5), and Stiizy (n=5)

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 most-selected brands. 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 (50.1%) indicated that they did not know.
- Among all participants, the most selected vape brands (in order) were Juul, Puff Bar, Bang, and Blu. Among current vape users, the most selected vape brands (in order) were Puff Bar, Juul, Bang, and Blu.
- Elfbar, a brand added to the survey before the fall cycle, ranked among the 5 most-selected brands

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 once 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 among 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)	62.3 (57.3, 67.3)	52.4 (47.2, 57.5)
Pod (like Juul)	39.1 (34.1, 44.1)	27.3 (23.0, 32.1)
Refillable or modifiable	25.5 (21.3, 29.7)	15.3 (12.1, 19.1)
Something else[3]	4.2 (1.8, 6.7)	3.1 (1.4, 6.4)*

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 98.0% because 2.0% of participants indicated that they used 2 or more device types "about the same amount."
3. Other device types listed by >1 participant: Puff Bar (n=4), Don't know (n=4), Pen (n=2), Marijuana (n=2), Stiizy (n=2)

Abbreviation: CI = confidence interval

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

Note: Based on N=1207 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 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?" Later in the survey, current vapers were also asked, "In the PAST 30 DAYS, did any of the vapes that you used contain nicotine?" These two different ways of asking about nicotine were included in the survey to help understand how question wording might affect the way people answer. Current vapers were 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?" "Was there ever a time in the PAST 30 DAYS that you used a vape and were not sure whether it contained nicotine?" and "Was there ever a time in the PAST 30 DAYS that you used a vape and were not sure how much nicotine it contained?" The weighted responses to each of these questions are presented in Table 12. For comments and recommendations related to designing survey items related to vape contents, see Appendix.

Table 12. Vape contents among current vapers

Question	% (95% CI)
In the PAST 30 DAYS, how often did the vapes you used contain nicotine?	
Always had nicotine	35.2 (30.4, 40.3)
Mostly had nicotine	32.4 (27.8, 37.3)
Mostly did not have nicotine	15.2 (12.1, 18.9)
Never had nicotine	7.8 (5.3, 11.3)
I don't know	9.5 (6.6, 13.4)
In the PAST 30 DAYS, did any of the vapes that you used contain nicotine?[1]	
Yes	69.7 (62.5, 76.0)
No	23.6 (18.1, 30.0)
I don't know	6.7 (3.5, 12.7)
In the PAST 30 DAYS, did any of the vapes that you used contain the following substances? Select all that apply.[2]	
Nicotine[3]	57.2 (41.8, 72.5)
Marijuana with THC	34.1 (24.8, 43.4)
Marijuana without THC	10.8 (4.7, 16.9)
Melatonin	9.7 (4.2, 15.3)
Vitamins	7.9 (2.3, 13.4)*
Aroma Therapy	7.2 (2.3, 12.2)*
Something else[4]	6.1 (0, 12.8)*
None of these	27.2 (17.1, 37.5)
Was there ever a time in the PAST 30 DAYS that you used a vape and were not sure what it contained?	
Yes	35.3 (30.7, 40.2)
No	64.7 (59.8, 69.3)
Was there ever a time in the PAST 30 DAYS that you used a vape and were not sure whether it contained **nicotine**?[5]	
Yes	35.2 (28.0, 43.2)
No	64.8 (56.8, 72.0)
Was there ever a time in the PAST 30 DAYS that you used a vape and were not sure **how much** nicotine it contained?[5]	
Yes	49.8 (42.2, 57.5)
No	50.2 (42.5, 57.8)

1. Item included in the spring/summer cycle only (N=571)
2. Item asked of a subset of current vape users only (N=270)
3. Response option included in the fall cycle only (N=148)
4. Other responses listed by >1 participant: Don't know (n=2)
5. Item included in the fall cycle only (N=603)

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 (35.2%) or mostly (32.4%) contained nicotine. Asked in another way, 69.7% of current vapers reported that any 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 (34.1%).
- Melatonin (9.7%), vitamins (7.9%), and aroma therapy (7.2%) were other substances sometimes used in vapes among current vapers.
- More than one-third of current vapers (35.3%) reported at least one time in the past 30 days using a vape and not being sure what it contained. A similar percentage (35.2%) reported using a vape and being unsure whether it contained nicotine. About half (49.8%) reported using a vape and being unsure how much nicotine it contained.

CHAPTER SUMMARY

Juul, Puff Bar, Bang, 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 vape device type during the past 30 days. The majority of current vapers reported that the vapes they used contained nicotine. However, about half of current vapers reported using a vape in the past 30 days and not being sure how much nicotine it contained. Besides nicotine, participants reported that the vapes they used sometimes contained marijuana. Participants did not often select vitamins, melatonin, or aroma therapy as other vape contents.

CHAPTER 3 – FLAVORED PRODUCTS

This chapter presents data from the 2022 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 and use of flavors in various modes of marijuana consumption. For vapes, perceived ease of access to flavored products is presented.

Flavored Tobacco Use

All current users of vapes, cigarettes, cigars, hookah, and smokeless tobacco were asked about their use of flavored products in the past 30 days. Please note that flavored cigarette use in this chapter reflects use of menthol-flavored cigarettes (the only characterizing flavor permissible in cigarettes under federal law). Separately by tobacco product, participants who used those products were asked, "In the PAST 30 DAYS: What flavor(s), if any, were the [product] you used?" ("Product" in these questions could be "cigars," "hookah," etc., depending on what participants reported using.) Participants selected flavors from a list. Those who indicated that they only used "unflavored" or "tobacco flavored" products or do 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. The 2022 TNT Online Survey did not include flavor questions related to heated tobacco, nicotine pouches, or nicotine tablets or lozenges. Participants who currently used only these products are not included in this chapter. Table 13 shows the prevalence of current flavored tobacco use among current users of various products.

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	1411	90.3 (87.5, 92.6)
Vapes	1207	91.0 (87.5, 93.6)
Cigarettes	768	72.0 (66.1, 77.2)
Cigars[2]	478	87.2 (81.3, 91.5)
Hookah	437	88.1 (81.2, 92.7)
Smokeless Tobacco[3]	618	93.1 (89.0, 95.8)

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

Abbreviation: CI = confidence interval

- Use of flavored tobacco products was very common among current tobacco users.
- More than 70% of current cigarette smokers used menthol cigarettes in the past 30 days.
- Over 80% of current users of cigars and hookah used flavored products.
- Over 90% of current users of vapes and smokeless tobacco used flavored products.

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 were 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 14 presents the prevalence of flavored marijuana product use among current marijuana users.

Table 14. 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	267	51.0 (42.1, 59.9)
Any marijuana, excluding edibles	267	34.3 (26.5, 43.0)
Marijuana flower, bud, or leaf	169	20.6 (13.2, 30.9)
Vaped or dabbed marijuana oil or liquid	75	49.8 (34.1, 65.6)
Blunt cigar or blunt wraps	71	78.2 (62.9, 88.4)
Joint or spliff rolling paper	143	27.9 (18.7, 39.5)

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 (51.0%) or excluded (34.3%) in calculating flavor use.
- Blunts were the method of marijuana consumption most likely to be flavored (78.2%), 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 (20.6%) among the methods included in the survey.

Specific Flavors of Tobacco Products

For vapes, cigars, smokeless tobacco, and hookah, current users were asked which flavors they used in the past 30 days. Current users were asked about *any* of the flavors they used in the past 30 days. Table 15 presents the results.

Table 15. 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	7.0 (4.6, 9.4)	20.5 (14.0, 27.1)	20.6 (13.4, 27.8)	17.3 (9.6, 25.0)
Tobacco Flavored	14.9 (11.8, 18.0)	N/A	N/A	N/A
Menthol, Frost, Ice	25.0 (20.8, 29.2)	17.2 (11.4, 23.0)	34.5 (26.7, 42.3)	33.9 (24.5, 43.3)
Mint (Not Frost, Ice)	10.6 (7.7, 13.6)	21.9 (14.9, 28.9)	31.4 (23.4, 39.4)	26.7 (18.1, 35.3)
Wintergreen (Not Frost, Ice)	N/A	N/A	24.5 (17.6, 31.4)	N/A
Fruit-Ice Combination	37.5 (32.5, 42.6)	N/A	N/A	N/A
Fruit	45.1 (40.0, 50.2)	59.9 (51.9, 67.9)	38.7 (30.6, 46.9)	48.0 (38.0, 58.0)
Dessert	21.4 (17.3, 25.5)	23.9 (16.8, 31.0)	N/A	28.2 (18.7, 37.7)
Candy	31.4 (26.7, 36.2)	N/A	N/A	N/A
Spice	7.0 (4.8, 9.2)	19.0 (13.0, 25.0)	24.5 (17.4, 31.7)	20.4 (12.3, 28.6)
Alcohol	3.5 (2.1, 4.9)	13.2 (8.3, 18.0)	12.0 (8.0, 16.1)	16.3 (9.3, 23.3)
Non-Alcoholic Drink	6.8 (4.3, 9.4)	7.3 (2.5, 12.2)*	N/A	N/A
Other	2.1 (0.7, 3.5)*	7.0 (2.0, 12.1)*	0.4 (0, 1.3)*	2.4 (0, 7.1)*
Don't Know	4.3 (1.7, 6.9)*	1.8 (0.2, 3.5)*	2.1 (0, 4.3)*	9.3 (2.9, 15.7)*

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 all four products (vapes, cigars, smokeless tobacco, and hookah), fruit was the most commonly used type of flavor among current users of each product.
- After fruit, the most used flavors among vape users were fruit-ice combination, candy, and menthol.

Perceived Access to Flavored Vapes

All participants in the TNT Online Survey were asked how easy or difficult they thought it would be to find vapes in "flavors that you like" (Table 16). 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 16. Current vape users and non-users who think it is easy or difficult to find vapes in flavors that they like

	Vape Current Users % (95% CI)	Vape Current Non-Users % (95% CI)
Very difficult to find flavors I like	10.0 (7.2, 13.9)	4.6 (3.8, 5.6)
Somewhat difficult to find flavors I like	20.7 (17.0, 25.0)	5.2 (4.3, 6.3)
Somewhat easy to find flavors I like	34.2 (29.5, 39.3)	19.1 (17.5, 20.8)
Very Easy to find flavors I like	35.0 (30.3, 40.1)	19.8 (18.2, 21.6)
I don't know	N/A	51.2 (49.1, 53.3)

Abbreviations: CI = confidence interval; N/A = Not applicable (option not available for current users)

- Most current vapers thought it would be either "somewhat" (34.2%) or "very" easy (35.0%) to find vapes in flavors that they like.
- Less than one-third of current vapers thought it would be either "somewhat" (20.7%) or "very" difficult (10.0%) to find vapes in flavors that they like.
- About half (51.2%) 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 approximately 4-times as common to indicate that it would be "somewhat" (19.1%) or "very" (19.8%) easy to find vapes in flavors that they like than it was to indicate it would be "somewhat" (5.2%) or "very" (4.6%) difficult.

Preferences for Specific Vape Flavors

All vape product ever-users were asked how much they liked or disliked certain flavors for vapes. Table 17 presents how much the 11 listed flavor categories were liked or disliked.

Table 17. 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	40.6 (36.9, 44.4)	36.4 (32.8, 40.1)	7.3 (5.7, 9.4)	15.8 (13.2, 18.7)
Candy	33.1 (29.7, 36.8)	36.3 (32.7, 40.0)	12.1 (9.6, 15.0)	18.5 (15.7, 21.6)
Dessert	29.2 (25.8, 32.8)	33.8 (30.3, 37.5)	14.6 (12.2, 17.5)	22.4 (19.3, 25.8)
Fruit-Ice Combination	25.1 (22.0, 28.5)	42.5 (38.8, 46.4)	11.8 (9.6, 14.4)	20.6 (17.6, 23.9)
Mint (Not Frost, Ice)	14.6 (12.4, 17.2)	28.9 (25.6, 32.4)	20.9 (17.9, 24.2)	35.6 (31.9, 39.5)
Non-Alcoholic Drink	14.0 (11.6, 16.7)	24.5 (21.4, 27.9)	16.8 (14.0, 20.1)	44.7 (40.9, 48.5)
Menthol, Frost, Ice	11.6 (9.7, 13.9)	26.3 (23.2, 29.6)	20.5 (17.5, 23.8)	41.6 (37.8, 45.6)
Alcohol	8.4 (6.6, 10.5)	12.2 (9.9, 14.8)	17.5 (14.7, 20.7)	62.0 (58.2, 65.6)
Tobacco Flavored	6.9 (5.5, 8.6)	10.3 (8.5, 12.4)	13.7 (11.5, 16.4)	69.1 (65.7, 72.2)
Spice	6.7 (5.2, 8.5)	15.7 (13.2, 18.5)	27.2 (24.0, 30.7)	50.5 (46.6, 54.3)
Unflavored	5.2 (3.9, 6.8)	16.3 (14.0, 18.8)	19.6 (16.7, 22.8)	59.0 (55.3, 62.6)

Abbreviations: CI = confidence interval

- Among vape ever users, fruit was the vape flavor that was most often strongly liked (40.6%) and least often strongly disliked (15.8%).
- Fruit, candy, dessert, and fruit-ice combination flavors were each either liked or strongly liked by more than 50% of all vape ever users.
- Unflavored, spice, and tobacco flavored were the least liked vape flavors. The majority of vape ever users strongly disliked tobacco flavor (69.1%) and unflavored (59.0%) vapes.

CHAPTER SUMMARY

Tobacco and marijuana users commonly used flavored products. About 70% of current cigarette smokers used menthol cigarettes in the past 30 days. Over 80% of current users of cigars and hookah used flavored versions of these products. Over 90% of current vape and smokeless tobacco users used flavored versions of these products. 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. Fruit was the flavor used most often by current users of vapes, cigars, hookah, and smokeless tobacco. Fruit, candy, dessert, and fruit-ice combination flavors were each either liked or strongly liked by more than 50% 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.

CHAPTER 4 – TOBACCO ENDGAME

This chapter presents data from the 2022 TNT Online Survey related to the Tobacco Endgame. 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 apartment buildings, and four statements related to environmental harms of tobacco litter (cigarette butts). Table 18 shows how participants responded to the Tobacco Endgame policy statements related to potential restrictions on tobacco sales. Table 19 shows how participants responded to the Tobacco Endgame policy statements related to tobacco or marijuana use in public places and apartment buildings. Table 20 shows how participants responded to the Tobacco Endgame policy statements related tobacco litter in the environment.

Table 18. Agreement with tobacco endgame policy statements - tobacco sales restrictions

	Strongly Agree % (95% CI)	Agree % (95% CI)	Disagree % (95% CI)	Strongly Disagree % (95% CI)
The sale of all tobacco products, including cigarettes, cigars, chewing tobacco, and vapes, should end	39.1 (37.1, 41.1)	35.7 (33.8, 37.6)	19.6 (18.1, 21.2)	5.6 (4.9, 6.5)
Menthol cigarettes taste like mint. The sale of menthol cigarettes should end	41.6 (39.6, 43.5)	36.0 (34.1, 38.0)	16.9 (15.5, 18.4)	5.5 (4.7, 6.4)
The sale of FLAVORED tobacco, like cigarettes, chew, cigars, and vapes that taste like mint, fruit, or candy, should end	45.7 (43.7, 47.7)	31.9 (30.1, 33.8)	16.6 (15.2, 18.1)	5.8 (5.0, 6.7)

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 46% of participants “strongly agreed” and between 32% and 36% “agreed” that sales should end.
- Strong agreement was somewhat greater for endgame statements related to flavored tobacco sales than for the statement related to the sales of all tobacco products.

Table 19. Agreement with tobacco endgame policy statements - public places and apartment buildings

	Strongly Agree % (95% CI)	Agree % (95% CI)	Disagree % (95% CI)	Strongly Disagree % (95% CI)
Smoking cigarettes, little cigars, or cigarillos in all public places should end	48.3 (46.3, 50.3)	34.9 (33.0, 36.8)	12.9 (11.7, 14.3)	3.9 (3.2, 4.7)
Smoking marijuana in all public places should end	44.8 (42.9, 46.8)	30.7 (28.9, 32.5)	17.1 (15.7, 18.6)	7.4 (6.5, 8.4)
Using vapes in all public places should end	42.9 (41.0, 44.9)	32.1 (30.2, 34.0)	18.9 (17.5, 20.4)	6.1 (5.2, 7.1)
All apartment buildings should be completely smoke-free	46.5 (44.5, 48.5)	32.0 (30.2, 33.9)	15.8 (14.5, 17.2)	5.7 (4.9, 6.6)
All apartment buildings should be completely free of marijuana smoke and vapor (for example, joints, blunts, bongs, and dab pens)	44.6 (42.6, 46.6)	29.7 (27.9, 31.5)	18.9 (17.4, 20.4)	6.8 (6.0, 7.8)

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 48% of participants “strongly agreed” and between 31% and 35% “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 strong agreement that apartments should be smoke-free than marijuana-free.

Table 20. Agreement with tobacco endgame policy statements - tobacco litter and the natural environment

	Strongly Agree % (95% CI)	Agree % (95% CI)	Disagree % (95% CI)	Strongly Disagree % (95% CI)
Cigarette butts damage the environment	62.1 (60.2, 64.0)	34.2 (32.3, 36.0)	2.9 (2.3, 3.6)	0.8 (0.5, 1.3)
Cigarette butts are poisonous to children, pets, and wildlife	64.4 (62.4, 66.2)	32.9 (31.1, 34.8)	2.0 (1.6, 2.5)	0.7 (0.4, 1.2)
Cigarettes release chemicals that pollute our water	60.4 (58.4, 62.3)	35.2 (33.3, 37.2)	3.3 (2.7, 4.1)	1.0 (0.7, 1.6)
Cigarettes are harmful when eaten by animals (including pets, ocean animals, and forest animals)	65.6 (63.7, 67.5)	32.1 (30.2, 34.0)	1.7 (1.3, 2.3)	0.6 (0.4, 0.9)

Abbreviation: CI = confidence interval

- Nearly all participants supported statements that cigarette butts or other waste is damaging to the environment.
- Between 60% and 66% of participants “strongly agreed” and between 32% and 35% “agreed” that cigarette litter is harmful to the environment, animals, and water.

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 endgame 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. 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 free of marijuana smoke or vapor. Over 95% of participants "strongly agreed" or "agreed" with statements that cigarette litter is harmful to the environment, animals, and water.

CHAPTER 5 – MARIJUANA USE

This chapter presents data from the 2022 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 21 presents the prevalence of marijuana product use (in any mode of consumption) among participants according to their gender, race/ethnicity, and age.

Table 21. Prevalence of any marijuana use by gender, race/ethnicity, and age

	Sample Size N[1]	%	Ever Use % (95% CI)	Current Use % (95% CI)
Overall	5086	100	20.4 (19.0, 21.9)	10.0 (9.1, 10.9)
Gender				
Male	2359	38.0	16.8 (14.9, 18.9)	10.0 (8.6, 11.7)
Female	2329	58.2	22.1 (20.0, 24.3)	9.8 (8.6, 11.1)
Identified Another Way	156	3.9	31.3 (23.0, 41.0)	12.8 (8.0, 19.8)
LGBTQ+ Status				
LGBTQ+ (yes)	842	20.1	29.0 (25.3, 33.1)	14.7 (12.3, 17.4)
LGBTQ+ (no)	3996	79.9	18.2 (16.7, 19.9)	8.8 (7.9, 9.9)
Race/Ethnicity				
White	1844	22.2	20.0 (17.5, 22.7)	10.8 (9.1, 12.7)
African American / Black	334	4.2	23.1 (18.0, 29.1)	12.1 (8.8, 16.5)
Hispanic / Latino	1851	51.8	23.8 (21.5, 26.2)	11.4 (10.0, 13)
Asian	456	14.2	9.1 (6.1, 13.2)	3.2 (2.0, 5.2)
Other[2]	111	2.3	17.6 (11.0, 26.9)	9.1 (5.0, 15.9)*
More Than One	223	5.2	19.8 (14.2, 26.8)	9.4 (6.0, 14.4)
Age				
12	454	17.6	10.3 (7.3, 14.3)	5.7 (3.8, 8.6)
13	710	17.1	11.1 (8.6, 14.3)	6.1 (4.6, 8.2)
14	872	13.5	17.5 (14.1, 21.5)	9.2 (7.1, 11.8)
15	815	13.5	25.2 (21.2, 29.7)	11.2 (8.8, 14.0)
16	1091	19.5	27.5 (24.2, 31.0)	11.5 (9.5, 13.7)
17	1144	18.9	29.7 (26.4, 33.2)	15.7 (13.4, 18.3)

1. Sample size (N) and percentage are weighted for response quality and demographic characteristics
2. Includes participants who indicated their race was American Indian / Alaska Native, Native Hawaiian / Other Pacific Islander, or "Other." 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, 20.4% of TNT Online survey participants had ever used marijuana and 10.0% were current marijuana users.
- Current use of marijuana was similar among male-identifying (10.0%) and female-identifying (9.8%) participants but higher among participants categories as LGBTQ+ (14.7%).
- By race/ethnicity, current use of marijuana was lowest among participants who identified as Asian (3.2%).
- Generally, marijuana use increased with age. Both ever use and current use of marijuana were approximately three times as high at age 17 years as at age 12 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 were asked about modes of consumption in order to reduce the length of the survey overall. Table 22 presents the prevalence of using marijuana in various modes at least one day in the past 30 days among current marijuana users.

Table 22. Modes of marijuana use among current marijuana users

	Mode of Marijuana Use (select all) % (95% CI)
Joint (marijuana-only cigarette)	40.2 (31.5, 48.9)
Small pipe	27.2 (19.9, 34.5)
Edible (cookie, candy, other food or drink)	26.9 (19.4, 34.5)
Vaped wax, oil, or liquid	26.8 (19.0, 34.5)
Blunt (marijuana insides a cigar)	23.8 (16.8, 30.8)
Bong (waterpipe)	20.5 (14.0, 27.0)
Dabbed oil, wax, shatter, extract, concentrate	10.5 (5.7, 15.4)
Vaped flower or leaf in a vaporizer	7.0 (3.1, 10.9)
Spliff (marijuana and tobacco mixed cigarette)	4.9 (1.4, 8.4)*
Tincture (drops or spray)	3.4 (0.9, 5.8)*
Moke (marijuana and tobacco mixed waterpipe)	2.4 (0.4, 4.4)*
Other	2.0 (0, 4.5)*
Synthetic marijuana	0.1 (0, 0.4)*

Abbreviation: CI = confidence interval

*Data are statistically unreliable because relative variance is greater than 30%. Interpret with caution. Note: Results based on N = 210 (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, 40.2% reported smoking a marijuana joint in the past 30 days.
- Small pipes (27.2%), edibles (26.9%), vaped wax, oil, or liquid (26.8%), and blunts (23.8%) were the next most common modes of use.

Marijuana Use and Tobacco Co-Use

Table 23 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 23. Prevalence of current marijuana only use and co-use of marijuana and any tobacco product by gender, race/ethnicity, and age

	Sample Size N[1]	%	Marijuana Only Use % (95% CI)	Marijuana and Tobacco Co-Use % (95% CI)
Overall	5079	100	4.4 (3.8, 5.1)	5.6 (5.0, 6.3)
Gender				
Male	2358	38.0	3.8 (2.9, 5.0)	6.2 (5.2, 7.5)
Female	2327	58.2	4.6 (3.8, 5.5)	5.2 (4.4, 6.2)
Identified Another Way	155	3.8	7.1 (3.9, 12.5)	5.7 (2.7, 11.7)*
LGBTQ+ Status				
LGBTQ+ (yes)	841	20.1	7.4 (5.8, 9.5)	7.2 (5.6, 9.3)
LGBTQ+ (no)	3994	79.9	3.6 (3.0, 4.4)	5.2 (4.5, 6.0)
Race/Ethnicity				
White	1841	22.1	5.8 (4.6, 7.5)	4.9 (4.0, 6.1)
African American / Black	334	4.2	3.2 (1.6, 6.0)*	9.0 (6.2, 12.8)
Hispanic / Latino	1852	51.8	4.7 (3.8, 5.9)	6.7 (5.6, 7.9)
Asian	456	14.2	1.8 (1.0, 3.3)*	1.4 (0.7, 3.1)*
Other[2]	109	2.3	3.5 (1.3, 8.6)*	5.7 (2.7, 11.6)*
More Than One	223	5.2	3.8 (1.9, 7.3)*	5.6 (3.1, 10.0)*
Age				
12	453	17.6	2.5 (1.3, 5.0)*	3.2 (1.9, 5.3)
13	710	17.1	2.2 (1.2, 3.7)	4.0 (2.8, 5.6)
14	872	13.5	2.7 (1.6, 4.5)	6.5 (4.9, 8.7)
15	813	13.5	4.3 (2.9, 6.2)	6.9 (5.1, 9.3)
16	1089	19.4	5.3 (4.1, 7.0)	6.1 (4.8, 7.9)
17	1138	18.9	8.5 (6.8, 10.6)	7.2 (5.7, 9.1)

1. Sample size (N) and percentage are weighted for response quality and participant demographic characteristics. Current marijuana only-use and current marijuana and tobacco co-use are calculated among the entire survey population and in each gender, race/ethnicity, and age category. The weighted sample sizes presented are less than the total TNT Online survey sample size because some participants did not answer the questions related to marijuana use.
2. Includes participants who indicated their race was American Indian / Alaska Native, Native Hawaiian / Other Pacific Islander, or "Other." 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 (5.6%) was more common than marijuana only use (4.4%).
- Current marijuana and tobacco co-use was elevated among participants categorized as LGBTQ+ (7.2%) and participants identifying as African American or Black (9.0%).

Table 24 presents the prevalence of current marijuana use among current users of various tobacco products.

Table 24. Prevalence of current marijuana use among current users of tobacco products

	Current Marijuana Use % (95% CI)
Current Any Tobacco Product Users	49.5 (44.8, 54.3)
Current Vape Users	52.0 (46.8, 57.2)
Current Cigarette Smokers	51.5 (44.8, 58.2)
Current Cigar Smokers	67.6 (58.9, 76.4)
Current Hookah Users	60.8 (51.0, 70.5)
Current Smokeless Tobacco Users	43.7 (35.3, 52.1)

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 (49.5%) 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: 67.6% of current cigar smokers were also current marijuana users.

CHAPTER SUMMARY

Overall, 20.4% of TNT Online survey participants had ever used marijuana and 10.0% 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. More than half (56.1%) of current marijuana users co-used marijuana and tobacco in the past 30 days. Nearly half (49.5%) of current tobacco product users were also current marijuana users.

CHAPTER 6 – TOBACCO AND MARIJUANA PERCEPTIONS

This chapter presents data from the 2022 TNT Online Survey related to what participants thought about and expected regarding use of tobacco and marijuana products.

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 25 presents participants' use expectations for one year in the future. Table 26 presents participants' use expectations at age 25

Table 25. Participants' expectations for using various tobacco products and marijuana 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	75.0 (73.3, 76.6)	15.3 (13.9, 16.8)	7.5 (6.6, 8.5)	2.2 (1.8, 2.7)
Cigarettes	84.6 (83.2, 85.9)	10.7 (9.5, 11.9)	3.5 (2.9, 4.1)	1.2 (1.0, 1.6)
Cigars	89.2 (88.0, 90.2)	6.7 (5.8, 7.7)	2.5 (2.0, 3.1)	1.7 (1.3, 2.1)
Hookah	85.2 (83.8, 86.5)	9.2 (8.1, 10.4)	4.0 (3.3, 4.7)	1.6 (1.3, 2.1)
Smokeless Tobacco	91.1 (90.0, 92.1)	5.4 (4.6, 6.3)	2.1 (1.6, 2.6)	1.5 (1.1, 1.9)
Marijuana	69.0 (67.2, 70.8)	15.2 (13.8, 16.6)	10.5 (9.5, 11.7)	5.3 (4.6, 6.0)
Among Current Users of Each Product				
Vapes	19.5 (15.3, 24.4)	22.1 (18.0, 26.9)	42.0 (37.0, 47.2)	16.4 (13.2, 20.2)
Cigarettes	20.8 (15.6, 27.1)	25.2 (20.0, 31.4)	40.7 (34.1, 47.6)	13.3 (9.9, 17.8)
Cigars	39.9 (31.6, 48.9)	19.7 (13.2, 28.5)	21.3 (15.4, 28.6)	19.1 (13.3, 26.6)
Hookah	17.8 (10.8, 28.0)	26.3 (17.6, 37.4)	34.7 (26.3, 44.3)	21.1 (14.5, 29.8)
Smokeless Tobacco	15.2 (9.9, 22.8)	21.2 (14.5, 29.8)	29.4 (22.6, 37.3)	34.2 (26.7, 42.5)
Marijuana	9.2 (6.6, 12.7)	14.4 (11.3, 18.0)	42.3 (37.6, 47.2)	34.1 (29.7, 38.8)
Among Current Non-Users of Each Product				
Vapes	80.8 (79.0, 82.4)	14.6 (13.1, 16.1)	3.9 (3.2, 4.8)	0.7 (0.5, 1.1)
Cigarettes	87.1 (85.7, 88.3)	10.1 (9.0, 11.4)	2.0 (1.6, 2.6)	0.8 (0.5, 1.2)
Cigars	90.7 (89.6, 91.8)	6.2 (5.4, 7.2)	2.0 (1.5, 2.5)	1.1 (0.8, 1.5)
Hookah	86.5 (85.1, 87.8)	8.8 (7.7, 10.0)	3.4 (2.8, 4.2)	1.3 (0.9, 1.7)
Smokeless Tobacco	93.0 (92.0, 93.9)	5.0 (4.3, 5.9)	1.4 (1.0, 2.0)	0.6 (0.4, 1.0)
Marijuana	75.8 (73.9, 77.5)	15.2 (13.8, 16.8)	7.0 (6.0, 8.1)	2.0 (1.6, 2.6)

Abbreviation: CI = confidence interval

- Among all survey participants, most indicated that they would "definitely not" be using tobacco products and marijuana one year in the future.
- Smokeless tobacco was the product with highest percentage of "definitely not" responses (91.1%).
- Marijuana was the product with highest percentage of "definitely yes" (5.3%) and "probably yes" (10.5%) responses.

Table 26. Participants' expectations for using various tobacco products 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	70.8 (69.0, 72.5)	18.5 (17.0, 20.1)	8.2 (7.3, 9.2)	2.5 (2.0, 3.1)
Cigarettes	79.4 (77.8, 81.0)	14.4 (13.0, 15.8)	4.9 (4.2, 5.8)	1.3 (1.0, 1.6)
Cigars	84.6 (83.2, 85.9)	10.7 (9.6, 12.0)	3.2 (2.6, 3.8)	1.5 (1.2, 1.8)
Hookah	80.8 (79.2, 82.3)	12.8 (11.5, 14.2)	5.0 (4.3, 5.8)	1.4 (1.1, 1.7)
Smokeless Tobacco	87.7 (86.4, 88.9)	8.9 (7.9, 10.1)	2.0 (1.5, 2.5)	1.4 (1.1, 1.8)
Marijuana	57.8 (55.8, 59.8)	20.7 (19.2, 22.4)	15.5 (14.2, 17.0)	5.9 (5.2, 6.8)
Among Current Users of Each Product				
Vapes	26.3 (21.7, 31.5)	21.7 (17.6, 26.3)	35.2 (30.5, 40.1)	16.8 (13.2, 21.2)
Cigarettes	25.8 (20.0, 32.6)	23.7 (18.2, 30.2)	33.9 (27.9, 40.4)	16.6 (12.6, 21.6)
Cigars	37.5 (29.4, 46.4)	21.1 (14.2, 30.2)	25.8 (19.0, 34.0)	15.6 (10.8, 22.1)
Hookah	24.9 (16.4, 35.9)	11.8 (7.4, 18.3)	42.9 (33.2, 53.2)	20.5 (13.9, 29.0)
Smokeless Tobacco	17.6 (11.4, 26.0)	22.3 (15.9, 30.3)	25.1 (18.8, 32.6)	35.0 (27.4, 43.5)
Marijuana	8.8 (6.3, 12.2)	13.0 (10.2, 16.4)	43.4 (38.6, 48.2)	34.8 (30.3, 39.5)
Among Current Non-Users of Each Product				
Vapes	75.4 (73.5, 77.2)	18.2 (16.6, 19.9)	5.4 (4.5, 6.4)	1.0 (0.7, 1.5)
Cigarettes	81.5 (79.9, 83.0)	14.0 (12.6, 15.5)	3.8 (3.1, 4.7)	0.7 (0.5, 1.0)
Cigars	86.1 (84.7, 87.4)	10.4 (9.3, 11.7)	2.5 (2.0, 3.1)	1.0 (0.8, 1.3)
Hookah	81.8 (80.2, 83.3)	12.8 (11.5, 14.3)	4.3 (3.6, 5.1)	1.0 (0.8, 1.4)
Smokeless Tobacco	89.5 (88.2, 90.6)	8.6 (7.6, 9.8)	1.4 (1.0, 1.9)	0.6 (0.4, 0.8)
Marijuana	63.3 (61.2, 65.4)	21.6 (19.9, 23.4)	12.4 (11.0, 13.9)	2.7 (2.2, 3.4)

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 25).
- Overall, smokeless tobacco was the product with highest percentage of "definitely not" responses (87.7%).

- Overall, marijuana was the product with highest percentage of “definitely yes” (5.9%) and “probably yes” (15.5%) responses.
- There were large differences according to whether participants were using each product. For all products (except cigars), a majority of current users of each product indicated that they would “probably” or “definitely” be using one year in the future (Table 25).
- Current users of smokeless tobacco (35.0%) and marijuana (34.8%) were the most likely to indicate that they would “definitely” be using their product at age 25.
- The vast 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 (89.5%).
- Marijuana was the product with lowest percentage of “definitely not” responses among non-users (63.3%).
- 15.1% 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, gettinginto 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 27 presents the findings from conditional risk perception questions about vapes, cigarettes, and marijuana.

Table 27. 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	73.8 (72.6, 75.0)	54.1 (50.7, 57.5)	75.9 (74.6, 77.2)
Get lung cancer	73.8 (72.6, 74.9)	56.8 (53.3, 60.3)	75.5 (74.3, 76.7)
Have worse health in general	77.1 (76.0, 78.2)	57.6 (54.2, 60.9)	79.1 (77.9, 80.3)
Have fun while using	38.9 (37.5, 40.3)	63.1 (59.8, 66.5)	36.3 (34.9, 37.8)
Get along with friends	43.4 (42.1, 44.8)	62.7 (59.5, 65.9)	41.4 (40.0, 42.8)
Cigarettes			
Get into trouble	75.5 (74.2, 76.7)	50.1 (45.6, 54.7)	76.4 (75.1, 77.7)
Get lung cancer	82.4 (81.4, 83.4)	60.5 (56.4, 64.6)	83.2 (82.2, 84.2)
Have worse health in general	85.0 (84.1, 85.9)	63.8 (60.0, 67.6)	85.8 (84.9, 86.8)
Have fun while using	30.4 (29.1, 31.6)	56.2 (52.2, 60.2)	29.4 (28.1, 30.6)
Get along with friends	36.2 (34.9, 37.5)	54.3 (50.4, 58.2)	35.5 (34.1, 36.8)
Marijuana			
Get into trouble	74.2 (72.9, 75.5)	49.1 (45.8, 52.4)	77.0 (75.7, 78.3)
Get lung cancer	61.1 (59.7, 62.5)	38.1 (34.8, 41.4)	63.7 (62.2, 65.1)
Have worse health in general	65.5 (64.1, 66.8)	39.3 (36.2, 42.4)	68.4 (66.9, 69.8)
Have fun while using	47.3 (45.9, 48.8)	76.8 (73.9, 79.6)	44.0 (42.4, 45.5)
Get along with friends	47.1 (45.7, 48.5)	73.7 (71.1, 76.3)	44.1 (42.6, 45.6)

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 2022 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 28 presents the results from this question.

Table 28. 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	16.9 (15.4, 18.3)
Cigarettes	23.0 (21.3, 24.6)
Cigars	4.2 (3.5, 4.9)
Hookah	2.3 (1.8, 2.8)
Smokeless Tobacco	2.5 (2.0, 2.9)
Marijuana	20.8 (19.2, 22.4)
No one who lives with me now uses any of these	58.8 (56.9, 60.8)

Abbreviation: CI = confidence interval

- More than one-fifth of TNT Online Survey participants (23.0%) indicated living with someone who now smokes cigarettes.
- 20.8% of TNT Online Survey participants indicated living with someone who now 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 29 presents the results related to these household rules questions.

Table 29. Rules about use of tobacco products inside the home

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?	
	% (95% CI)
It is not allowed anywhere or at any time	78.2 (76.6, 79.8)
It is allowed in some places, at some times, or by some people	15.8 (14.4, 17.3)
It is allowed anywhere and at any time	3.5 (2.7, 3.9)
I don't know	2.7 (2.2, 3.4)
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?	
	% (95% CI)
Rules are the same for all tobacco and nicotine	83.8 (82.4, 85.2)
Different rules for smoked or other ways	8.2 (7.2, 9.4)
I don't know	7.9 (7.0, 9.0)

Abbreviation: CI = confidence interval

- Most participants (78.2%) indicated that the use of tobacco and nicotine products is not allowed anywhere or at any time inside their home.
- Most participants (83.8%) 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=1438) were 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 30 presents the results.

Table 30. Rules about use of marijuana products inside the home

For marijuana (also called weed, pot, or cannabis), which statement best describes the rules about using inside your home?	
	% (95% CI)
It is not allowed anywhere or at any time	78.2 (75.0, 81.2)
It is allowed in some places, at some times, or by some people	16.4 (13.9, 19.3)
It is allowed anywhere and at any time	2.9 (1.9, 4.4)
I don't know	2.5 (1.4, 4.3)
Are the rules in your home about marijuana different if the marijuana is smoked by burning it or consumed some other way?	
	% (95% CI)
Rules are the same for all marijuana	86.1 (83.1, 88.6)
Different rules for smoked or other ways	9.2 (7.1, 11.7)
I don't know	4.8 (3.4, 6.8)

Abbreviation: CI = confidence interval

- Most participants (78.2%) indicated that marijuana use is not allowed anywhere or at any time inside their home.
- Most participants (86.1%) 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 and advertisements promoting marijuana. In the fall cycle, participants were also asked about advertisements promoting cigarettes or tobacco. In the spring/summer cycle, the questions asked participants to think about places they might have seen advertisements in the past 12 months. In the fall cycle, the questions asked participants to think about places they might have seen ads in the past 30 days. Participants could select multiple locations from a list or indicate that they had not seen any vape or marijuana ads during this time period. Tables show the percentages of participants that noticed advertisements at each location for vape ads (Table 31), marijuana ads (Table 32), and cigarette or tobacco ads (Table 33).

Table 31. Prevalence of noticing advertisements promoting vapes in various places

	Spring/Summer Cycle: In the Past 12 Months N[1] = 2494 % (95% CI)	Fall Cycle: In the Past 30 Days N[1] = 2541 % (95% CI)
I Have Not Seen Any Ads	39.5 (36.8, 42.2)	48.5 (45.7, 51.4)
Gas Stations or Convenience Stores	37.6 (34.9, 40.2)	30.4 (27.7, 33.0)
Social Media Ads from Companies	26.6 (24.2, 29.0)	16.9 (14.7, 19.1)
Vape Shops	20.7 (18.5, 22.9)	17.4 (15.2, 19.5)
Social Media Plugs or Shoutouts from People	19.7 (17.5, 21.8)	11.4 (9.6, 13.3)
Television	18.4 (16.3, 20.5)	11.6 (9.7, 13.5)
Billboards	18.3 (16.2, 20.4)	10.7 (8.9, 12.4)
Tobacco/Smoke Shops	17.1 (15.1, 19.1)	13.2 (11.3, 15.2)
Websites (Not Social Media)	11.3 (9.6, 13.1)	7.3 (5.8, 8.9)
Newspapers or Magazines	7.2 (5.8, 8.6)	5.7 (4.3, 7.2)
Festivals, Concerts, Sports, or Other Events	7.1 (5.8, 8.5)	4.5 (3.2, 5.7)
Radio	5.5 (4.3, 6.7)	5.2 (3.7, 6.6)
Somewhere Else[2]	1.1 (0.6, 1.6)	0.7 (0.3, 1.1)

1. Sample size (N) is the unweighted number of participants who viewed and answered this question
2. Free-text responses entered by >1 participant: Have not seen (n=6), School (n=6), YouTube (n=4), Buses (n=3), Other people/friends (n=3), Movie theatre (n=2)
Abbreviation: CI = confidence interval

- Approximately half of participants indicated that they had seen advertisements that were promoting vaping in the past 30 days, and more than 60% indicated having seen an advertisement in the past 12 months.
- The most common place to see vape advertisements was gas stations or convenience stores, followed by social media ads from companies and vape shops.

Table 32. Prevalence of noticing advertisements promoting marijuana in various places

	Spring/Summer Cycle: In the Past 12 Months N[1] = 2482 % (95% CI)	Fall Cycle: In the Past 30 Days N[1] = 2534 % (95% CI)
I Have Not Seen Any Ads	49.7 (46.9, 52.4)	55.1 (52.2, 57.9)
Billboards	23.6 (21.3, 26.0)	21.1 (18.8, 23.5)
Cannabis Dispensaries	18.1 (16.1, 20.2)	12.9 (11.0, 14.9)
Social Media Plugs or Shoutouts from People	16.8 (14.7, 18.9)	11.5 (9.7, 13.3)
Social Media Ads from Companies	15.8 (13.7, 17.8)	13.1 (11.2, 15.0)
Gas Stations or Convenience Stores	12.8 (11.0, 14.7)	12.0 (10.1, 14.0)
Tobacco/Smoke Shops	11.2 (9.5, 12.9)	8.0 (6.4, 9.5)
Television	9.8 (8.2, 11.3)	6.9 (5.5, 8.3)
Vape Shops	9.2 (7.7, 10.7)	7.5 (6.0, 9.0)
Websites (Not Social Media)	8.7 (7.1, 10.3)	4.1 (3.1, 5.1)
Festivals, Concerts, Sports, or Other Events	8.0 (6.5, 9.5)	4.2 (3.1, 5.4)
Radio	6.0 (4.6, 7.4)	5.0 (3.8, 6.3)
Newspapers or Magazines	5.9 (4.6, 7.2)	4.6 (3.4, 5.9)
Somewhere Else[2]	0.9 (0.4, 1.5)	1.0 (0.5, 1.4)

1. Sample size (N) is the unweighted number of participants who viewed and answered this question
2. Free-text responses entered by >1 participant: None/haven't seen (n=7), Other people/friends (n=5), Mail fliers (n=4), Street corners/streets (n=3), Billboards (n=2), Spotify (n=2), Dispensaries (n=2), Stores (n=2), Websites (n=2)

Abbreviation: CI = confidence interval

- Nearly half of participants indicated they had seen advertisements in the past 30 days that were promoting marijuana; approximately half indicated seeing advertisements in the past 12 months.
- The most common place to see marijuana advertisements was billboards. The next-most common places to see marijuana ads were cannabis dispensaries, social media plugs or shoutouts from people, and social media ads from companies.

Table 33. Prevalence of noticing advertisements promoting cigarettes or tobacco in various places

	Fall Cycle:[1] In the Past 30 Days N[2] = 2537 % (95% CI)
I Have Not Seen Any Ads	47.7 (44.8, 50.6)
Gas Stations or Convenience Stores	37.7 (34.9, 40.5)
Tobacco/Smoke Shops	14.6 (12.6, 16.6)
Social Media Ads from Companies	13.9 (11.8, 16.0)
Television	12.5 (10.5, 14.4)
Billboards	12.4 (10.5, 14.3)
Vape Shops	10.6 (8.8, 12.4)
Social Media Plugs or Shoutouts from People	8.9 (7.3, 10.5)
Newspapers or Magazines	6.3 (4.8, 7.7)
Websites (Not Social Media)	5.1 (3.9, 6.2)
Radio	4.6 (3.4, 5.8)
Festivals, Concerts, Sports, or Other Events	3.7 (2.6, 4.8)
Somewhere Else[3]	0.9 (0.5, 1.4)

1. The question related to ads promoting cigarettes or other tobacco was not included in the Spring/Summer cycle.
2. Sample size (N) is the unweighted number of participants who viewed and answered this question
3. Free-text responses entered by >1 participant: None/haven't seen (n=4), Other people/friends (n=2), Mail fliers (n=2), Websites (n=2)
Abbreviation: CI = confidence interval

- More than half of participants indicated they had noticed advertisements in the past 30 days that were promoting cigarettes or other tobacco.
- The most common place to see cigarette or other tobacco advertisements, by far, was gas stations or convenience stores.

Coupons for Tobacco and Marijuana Products

All 2022 TNT Online Survey participants were asked whether they had received coupons or discount codes for tobacco products in the past 12 months. Table 34 presents the percentage of participants who indicated that they received coupons or discount codes for various tobacco products or marijuana. Among participants who indicated that they did receive a discount code or coupon, Table 35 presents where or how they received it.

Table 34. Prevalence of receiving a coupon or discount code for various products

	Among All Participants N = 5021 % (95% CI)	Among Current Users of Any Tobacco N = 1376 % (95% CI)	Among Current Non-Users of Any Tobacco N = 3645 % (95% CI)
I Did Not Receive Any Codes or Coupons	91.5 (90.5, 92.5)	65.9 (61.5, 70.2)	94.8 (93.8, 95.7)
Vapes	3.7 (3.1, 4.4)	13.7 (10.9, 16.5)	1.9 (1.4, 2.5)
Cigarettes	3.2 (2.7, 3.8)	15.5 (12.4, 18.6)	2.2 (1.6, 2.8)
Marijuana	3.2 (2.6, 3.9)	11.3 (8.5, 14.0)	2.2 (1.6, 2.9)
Cigars	1.6 (1.1, 2.1)	6.9 (4.6, 9.1)	0.9 (0.4, 1.4)
Hookah	1.1 (0.7, 1.5)	4.9 (3.1, 6.6)	0.6 (0.2, 1.1)*
Smokeless Tobacco	1.0 (0.6, 1.3)	3.8 (2.0, 5.7)	0.6 (0.3, 0.9)
Some Other Type of Tobacco Product	0.5 (0.2, 0.7)	1.6 (0.2, 2.9)*	0.3 (0.1, 0.6)*

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 that participants reported receiving a discount code or coupon most.
- Current users of any tobacco product were more likely to report receiving coupons or discount codes than were tobacco non-users.

Table 35. Ways that participants received coupons or discount codes for tobacco or marijuana products among those who received coupons

	Got It This Way N = 960 % (95% CI)
Social Media	34.0 (28.2, 39.7)
E-Mail	31.4 (25.7, 37.0)
Postal Mail	27.9 (22.6, 33.2)
Website (Not Social Media)	20.2 (15.0, 25.4)
Text Message	19.5 (14.2, 24.8)
Someone I Know Gave It to Me	19.3 (14.6, 24.1)
Someplace Else[1]	5.6 (2.4, 8.8)

1. Free-text responses entered by >1 participant: Point of sale (n=4), postal mail (n=2)
Abbreviation: CI = confidence interval

- Participants who indicated that they received a discount code or coupon for at least one tobacco product or marijuana reported receiving the code or coupon in various ways.
- Social media (34.0%), e-mail (31.4%), and postal mail (27.9%) were the most common ways of receiving a code or coupon.

How Tobacco Users Got Various Products

A subset of current users of vapes, cigarettes, cigars, or smokeless tobacco were asked to select from a list all the ways that they got the products that they used. Table 36 presents how tobacco product users indicated that they got their product within the past 30 days.

Table 36. Ways that current tobacco product users got the products that they used

	Vape Users N[1] = 271 % (95% CI)	Cigarette Smokers N[1] = 171 % (95% CI)	Cigar Smokers N[1] = 108 % (95% CI)	Smokeless Tobacco Users N[1] = 110 % (95% CI)
Someone offered it to me	49.8 (36.3, 63.2)	28.6 (17.1, 40.1)	35.5 (17.8, 53.2)	19.8 (5.5, 34.1)*
I bought it from another person	29.3 (18.4, 40.3)	24.8 (13.6, 35.9)	23.4 (7.3, 39.5)*	30.4 (10.1, 50.6)*
I gave someone else money to buy it for me	24.3 (14.1, 34.6)	19.0 (9.5, 28.5)	30.3 (12.1, 48.4)*	21.5 (2.5, 40.4)*
I bought it myself online	14.6 (5.9, 23.3)*	18.8 (6.7, 30.9)*	4.3 (0.7, 8.0)*	27.7 (9.3, 46.1)*
I asked someone to give it to me	12.8 (5.6, 19.9)	24.0 (13.0, 35.0)	20.6 (4.2, 37.0)*	8.8 (1.3, 16.3)*
I bought it myself from a store	8.8 (4.0, 13.6)	23.4 (11.0, 35.8)	12.2 (1.7, 22.7)*	21.5 (5.4, 37.7)*
I found it	6.1 (0, 13.9)*	2.1 (0, 5.8)*	2.9 (0, 7.6)*	8.0 (0, 18.9)*
I took it from a store or another person	2.7 (0, 5.8)*	4.8 (0, 9.8)*	8.9 (0, 19.1)*	4.2 (0, 9.1)*
Snapchat, TikTok, Instagram, or other social media	0.3 (0, 0.8)*	1.5 (0.1, 3.0)*	12.7 (0, 27.6)*	2.1 (0.3, 3.8)*
Some other way	2.7 (0, 6.8)*	0.1 (0, 0.2)*	0.1 (0, 0.2)*	0.1 (0, 0.4)*

1. Sample size (N) is the unweighted number of participants who viewed and answered this question

Abbreviation: CI = confidence interval

*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, cigarette, and cigar users got their products.
- "I bought it from another person" was the single most-selected way that current smokeless tobacco users got their products.
- It was common for participants to select multiple ways of getting their product.
- No single way of getting any product was selected by more than 50% of current users.

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. More than 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, cigarette, and cigar users got their products was “someone offered it to me.”

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 Control Program (CTCP) 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 2022 TNT Online Survey Wave consisted of a spring/summer cycle (data collection: June - July 2022) and fall cycle (data collection: November - December 2022). 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 CTCP/CDPH 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 2022 TNT Online Survey Wave are shown in Table 37.

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 37. Participant responses by California region, 2022 TNT Online Survey Wave

	Spring/Summer Cycle (unweighted N)	Fall Cycle (unweighted N)	2022 Wave (unweighted N)
Northern & Sierra	114	140	254
Greater Bay Area	364	353	717
Sacramento Area	171	177	348
San Joaquin Valley	342	347	689
Central Coast	110	120	230
Los Angeles	839	846	1685
Other Southern	609	595	1204
All Regions (Total)	2549	2578	5127

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 socio-demographic 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 non-human (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 2016-2020 (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 was used to adjust the initial weights for sex, age, race/ethnicity, and region factors to the full cross-classification of all the factors.

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, gender, age, current use of cigarettes, marijuana, vapes, and nicotine lozenges, 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 2022 TNT Online Survey Wave includes 9 weight variables:

GD_WEIGHT_W2C2	Geographic-demographic weight, spring/summer cycle only
Q_WEIGHT_W2C2	Quality weight, spring/summer cycle only
WEIGHT_W2C2	Full weight, spring/summer cycle only
GD_WEIGHT_W2C2	Geographic-demographic weight, fall cycle only
Q_WEIGHT_W2C2	Quality weight, fall cycle only
WEIGHT_W2C2	Full weight, fall cycle only
GD_WEIGHT_W2	Geographic-demographic weight, wave 2022
Q_WEIGHT_W2	Quality weight, wave 2022
WEIGHT_W2	Full weight, wave 2022

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 2022 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.

Also, the prevalence of tobacco use was not necessarily greater with each increasing year of age.

Speculatively, but not conclusively, several influences may have contributed to this unexpected pattern by age: 1) Interest in the survey may have varied by age and tobacco use status, such that interest in the survey was lower among older, tobacco-using youth; 2) Inattentive survey taking may have led some participants to select ages and tobacco responses in a haphazard manner; 3) Undetected fraudulent responses may exist in the sample and these bot respondents were more likely to report tobacco use and report being ages 14 or 15; 4) Online survey panelists differ from the general population in their tobacco use behaviors; and 5) 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 and novel questions to examine include:
(Table 38) Whether taking the survey with a parent nearby affects reported tobacco use
(Table 39) Whether measures of lifetime use of a product that include language like “even one or two puffs” or “even once” have an impact of reported use
(Table 40) Sharing vapes and effects of question wording
(Table 41) Reasons for using vapes
(Tables 42-44) Perceived discrimination items and relationship with tobacco use
(Table 45) Familiarity with Kick It California and other resources

Survey Completion Near a Parent

Depending on the panel vendor and participant age, adolescents may have been invited to complete the TNT Online Survey via an invitation message first sent to their parents. Therefore, participants in the Fall Cycle were asked "Which of the following describes how you are answering this survey?" Response options ranged from "I am a teenager answering this survey on my own" to "I am a parent answering on behalf of my teen who is not here" (See Table 38).

Table 38. Participant age and current tobacco use by parent proximity during the survey

Which of the following describes how you are answering this survey?	N[1]	%	Mean Age (years)	Current Cigarette Use	Current Vape Use	Current Marijuana Use
I am a teenager answering this survey on my own	1216	49.0	14.9	4.1	10.7	11.3
I am a teenager answering this survey but my parent is nearby	869	30.2	14.3	4.3	11.0	8.1
I am a parent answering on behalf of my teen who is nearby	399	16.6	14.1	4.1	11.1	10.2
I am a parent answering on behalf of my teen who is not here	81	3.7	13.9	5.8*	10.9*	10.1*
Other	12	0.5*	--[2]	--[2]	--[2]	--[2]

1. Sample sizes (N) are unweighted; percentages are weighted for response quality and participant demographic characteristics
2. Data not reported due to small denominator size

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

- Most participants (79.2%) reported answering the survey on their own, either alone (49.0% of total sample) or with a parent nearby (30.2%).
- Participants who reported being teenagers taking the survey on their own tended to be older than what was reported for participants whose parents took the survey on their behalf.
- There was no obvious pattern in the overall pattern of current tobacco or marijuana use according to how participants answered the survey. Marijuana use was lower when teenagers reported taking the survey with a parent nearby (8.1% vs. 11.3% when answering on their own), but vape use and cigarette use were slightly higher.
- Implications: For most products assessed in the survey, self-reported parent proximity was not strongly associated with tobacco use prevalence estimates. However, this finding should be interpreted with caution given that some estimates were unreliable due to small sample size, the difference in age between those answering with or without parents nearby, and possible self-selection effects.

Formatting Effects: "Even One or Two Puffs" and Related Wording

The TNT Online Survey set out to test whether adding the words "even one or two puffs" to the question, "Have you EVER smoked cigarettes?" had an effect on the prevalence of ever cigarette smoking estimated by the survey. Half of participants were randomly asked about ever using cigarettes with the added words "even one or two puffs," and the remainder of participants were asked about ever use without these added words. Similarly, questions about ever use of big cigars, little cigars or cigarillos, and hookah were also randomized to include or not include the words "even one or two puffs." Ever use of vapes, moist snuff, chewing tobacco, and snus was assessed differently. Participants were asked how many times they had used these products in their entire lives. However, these questions were also randomly display either to include the words "even once" or to not include "even once." Table 39 displays the results of these experiments.

Table 39. Tobacco product ever use when questions include or exclude "even once"

Product[1]	Ever Use, with "Even Once[2]"	Ever Use, without "Even Once"	Difference (95% CI)
Vapes	21.4	20.5	0.9 (-2.0, 3.8)
Cigarettes	13.0	10.3	2.7 (0.4, 5.0)
Little cigars or cigarillos	6.6	5.5	1.0 (-0.6, 2.7)
Big cigars	3.1	2.3	0.8 (-0.4, 2.0)
Hookah	4.2	5.1	-0.9 (-2.3, 0.6)
Moist snuff	3.2	2.7	0.5 (-0.4, 1.5)
Chewing tobacco	2.8	2.4	0.4 (-0.4, 1.3)
Snus	2.7	2.1	0.6 (-0.3, 1.4)

1. For cigarettes, little cigars or cigarillos, big cigars, and hookah, participants were asked they had ever used the product. For vapes, moist snuff, chewing tobacco, and snus, participants were asked how many times they had used the product in their lives.
2. For vapes, cigarettes, little cigars or cigarillos, big cigars, and hookah, these tested wording was "even one or two puffs." For moist snuff, chewing tobacco, and snus, the tested language was "even once."

- For every tobacco product except hookah, the estimated prevalence of ever use was higher when survey questions included specific wording about using "even once" or "even one or two puffs."
- The size of the "even once" effect was modest: 2.7 percentage points for cigarettes, and 1.0 percentage points or less for all other products.
- Implications: Including clarifying wording about using a tobacco product even once will likely lead to a small increase in the prevalence of ever use. The fact that this formatting effect was detected suggests that many survey participants pay close attention and answers questions accordingly.

Priming Effect: Sharing Vapes with Friends

The TNT Online Survey set out to assess the extent to which participants share vapes among their friends. Another goal was to test whether answers to a question about using someone else's vape differ depending on whether participants are first asked about sharing their own vape with someone else. At random, two-thirds of current vape users saw up to two questions related to sharing vapes. All of this subset of participants was asked "In the past 30 days, how often did you use a vape that belonged to someone else?" However, immediately before seeing this question, half of the subset additionally was asked the question, "In the past 30 days, how often did you let someone else use your vape?" Table 40 shows the responses to these questions.

Table 40. Sharing your own vape and using someone else's vape.

	Saw One Question: "how often did you use a vape that belonged to someone else?" N[1]=390	Saw Two Questions: "how often did you use a vape that belonged to someone else?" N[1]=405	Saw Two Questions: "how often did you let someone else use your vape?" N[1]=409
Never	12.3	25.0	14.9
Rarely	13.4	17.1	15.8
Sometimes	29.1	29.2	20.8
Often	27.0	14.0	16.9
Very Often	18.2	14.6	7.2
I do not have or own a vape	--[2]	--[2]	24.3

1. Sample sizes (N) are unweighted; percentages are weighted for response quality and participant demographic characteristics
2. This response option was not displayed for this question

- There was a somewhat even distribution across response options, suggesting a wide variety of behaviors related to the frequency of sharing vapes. The single-most selected response option for each question was "sometimes."
- When participants were first asked about letting someone else use their vape, they subsequently selected "never" or "rarely" more than "often" or "very often" when asked about using a vape that belonged to someone else.
- When participants were not first asked about letting someone else use their vape, they subsequently selected "often" or "very often" more than "never" or "rarely" when asked about using a vape that belonged to someone else.
- Implications: It may be challenging to characterize vape sharing behaviors from these questions. There appears to be a "priming" effect, in which first asking participants about letting someone else use their vape affects how they respond to a question about using someone else's vape.

Reasons for Using Vapes

All TNT Online Survey Participants were presented with the question, “Below are some reasons people use vapes. Please select which reasons you think are important for OTHER PEOPLE your age who vape. (Select all that you think are important).” Prior to seeing this question, current vape users were also asked, “Below are some reasons people use vapes. Please select which reasons apply to you. (Select all that apply to you).” Table 41 shows the results.

Table 41. Reasons for using vapes among current vape users and non-users

Current Vape Users (Reasons That Apply to You)[1]	%	Current Vape Users (Reasons That Apply to Others)[1]	%	Current Vape Non-Users (Reasons That Apply to Others)[1]	%
friend uses them	53.3	friend uses them	52.4	friend uses them	53.2
curious	45.2	curious	44.1	curious	48.1
flavors	36.6	flavors	39.9	flavors	45.5
easy to get	34.5	easy to get	37.0	peer pressure	40.4
help relax	25.9	use unnoticed at home	34.4	easy to get	33.7
bored	23.8	help relax	31.6	use unnoticed at school	32.8
affordable	23.7	peer pressure	31.2	use unnoticed at home	31.1
use unnoticed at home	23.4	use unnoticed at school	30.9	bored	28.9
deal with stress	21.9	affordable	28.9	something to do with friends	27.2
use unnoticed at school	19.7	buzz or high	28.2	deal with stress	27.2
something to do with friends	19.3	bored	27.3	help relax	26.8
buzz or high	19.0	deal with stress	26.5	family uses them	24.7
less harmful v. smoking	18.1	no smell	25.8	buzz or high	21.0
vape tricks	17.4	vape tricks	24.6	people on TV, online, movies	18.8
no smell	16.6	family uses them	23.9	hard to stop	18.7
use where can't smoke	15.7	something to do with friends	23.8	use where can't smoke	17.8
family uses them	14.7	use where can't smoke	23.2	less harmful v. smoking	16.9
peer pressure	14.4	less harmful v. smoking	21.9	no smell	16.5
less harmful to people near me	13.8	less harmful to people near me	21.0	vape tricks	16.2
hard to stop	11.2	people on TV, online, movies	17.1	affordable	14.5
help concentrate	9.1	hard to stop	16.8	less harmful to people near me	10.4

Table 41 (Continued). Reasons for using vapes among current vape users and non-users

Current Vape Users (Reasons That Apply to You)	%	Current Vape Users (Reasons That Apply to Others)	%	Current Vape Non-Users (Reasons That Apply to Others)	%
help concentrate	9.1	hard to stop	16.8	less harmful to people near me	10.4
people on TV, online, movies	8.7	help concentrate	15.0	help concentrate	8.6
don't bother non-users	7.2	to quit other tobacco	14.4	saw advertisement	8.6
lose weight	6.0	lose weight	13.3	to quit other tobacco	8.1
to quit other tobacco	5.9	don't bother non-users	13.2	feels like cigarette	7.8
feels like cigarette	4.9	saw advertisement	9.9	don't bother non-users	7.7
saw advertisement	4.4	feels like cigarette	8.8	lose weight	4.3
other[2]	2.2	other[2]	1.4	other[2]	5.4

1. Some reasons listed in the table have been condensed for ease of presentation
2. Free-text responses entered by >1 participant: Don't Know, don't vape (n=83), Look cool (n=15), Vaping is unhealthy or bad idea (n=12), Addiction (n=5), Ignorance (n=3), Popularity (n=3), Distraction (n=2), Many reasons (n=2)

- The most-selected reasons for vaping were: use by friends, curiosity, flavors, and easy of acquisition. These four reasons were among the top-5 responses regardless of whether the question was asked of current vape users or non-users or in reference to one's own behavior or someone their age.
- Peer pressure was a highly selected reason among vape non-users when asked about reasons that others vape. However, peer pressure was not selected as often among vape users, particularly in reference to their own behavior.
- Current vape users were more likely than non-users to endorse help relaxing and affordability as reasons to vape.
- On average, current vape users selected 5.2 reasons to vape from the list in reference to themselves and 6.2 reasons in reference to others. Vape non-users selected 6.9 reasons in reference to others.
- Implications: Participants endorse many different reasons to vape. Any survey item attempting to capture all reasons would need to be quite long. Vape non-users may provide useful information about adolescent perceptions if given the opportunity to respond to a question of this type. Future research directions might include examining whether any patterns in selected response (e.g., clusters of reasons for vaping) are associated with certain behaviors (e.g., susceptibility to vaping, vaping frequency, dependence).

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. These results are in Table 42. Table 43 shows experiences of discrimination in the past month by tobacco use status. All participants who reported experiencing discrimination were then asked why they believed they had been treated this way. Table 44 shows these findings.

Table 42. 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.	5.4 (4.6, 6.2)	14.1 (12.7, 15.5)	30.6 (28.8, 32.4)	49.9 (47.9, 51.9)
You received poorer service than other people at restaurants or stores.	1.4 (1.1, 1.8)	6.2 (5.3, 7.1)	17.9 (16.4, 19.4)	74.5 (72.8, 76.2)
People acted as if they think you are not smart.	7.0 (6.0, 8.0)	10.5 (9.2, 11.7)	32.6 (30.7, 34.4)	49.9 (48.0, 51.9)
People acted as if they are afraid of you.	2.5 (1.9, 3.1)	5.4 (4.6, 6.2)	14.7 (13.3, 16.1)	77.4 (75.8, 79.0)
You were threatened or harassed.	2.4 (1.9, 2.9)	5.2 (4.3, 6.1)	17.2 (15.7, 18.8)	75.2 (73.5, 76.9)

Abbreviation: CI = confidence interval

- About half of participants responded “not at all” to being treated with less courtesy or respect (49.9%) and perceiving people to act as if they are not smart (49.9%), indicating that about half of participants experienced these events at least “a few times.”
- Other forms of mistreatment were less common. About three-fourths of participants selected “not at all” for prompts related to poor service, people acting afraid, and threats or harassment.
- Of the five different questions asked, 66.7% of participants reported experiencing at least one of the five situations at least “a few times” in the past month.

Table 43. 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	11.4 (9.0, 14.3)	21.2 (17.6, 25.0)	33.0 (28.5, 37.9)	34.5 (30.1, 39.2)
Past 30-day tobacco non-users	4.6 (3.8, 5.6)	13.3 (11.8, 14.8)	30.3 (28.3, 32.3)	51.8 (49.7, 54.0)
You received poorer service than other people at restaurants or stores.				
Past 30-day tobacco users	5.7 (4.2, 7.8)	19.8 (16.5, 23.5)	19.9 (16.4, 24.0)	54.6 (49.8, 59.2)
Past 30-day tobacco non-users	0.9 (0.6, 1.3)	4.5 (3.6, 5.5)	17.6 (16.1, 19.4)	77.0 (75.1, 78.8)
People acted as if they think you are not smart.				
Past 30-day tobacco users	18.3 (15.0, 22.1)	16.7 (13.3, 20.6)	32.4 (27.9, 37.2)	32.7 (28.5, 37.2)
Past 30-day tobacco non-users	5.6 (4.6, 6.7)	9.7 (8.5, 11.1)	32.6 (27.9, 37.2)	52.2 (50.0, 54.3)
People acted as if they are afraid of you.				
Past 30-day tobacco users	7.8 (1.3, 2.6)	16.6 (13.6, 20.1)	22.5 (18.8, 26.8)	53.2 (48.4, 57.9)
Past 30-day tobacco non-users	1.8 (1.3, 2.6)	3.9 (3.2, 4.8)	13.7 (12.3, 15.3)	80.5 (78.8, 82.2)
You were threatened or harassed.				
Past 30-day tobacco users	9.6 (7.3, 12.5)	11.6 (9.4, 14.3)	20.4 (16.9, 24.4)	58.4 (53.8, 62.9)
Past 30-day tobacco non-users	1.5 (1.1, 2.1)	4.4 (3.5, 5.4)	16.8 (15.3, 18.5)	77.3 (75.4, 79.1)

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 pattern held for all five types of mistreatment.

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

Reason for discrimination (Select all that apply)	Total Sample N[1]=3500 % (95% CI)	Tobacco Users N[1]=1158 % (95% CI)	Tobacco Non-Users N[1]=3542 % (95% CI)
Age	50.6 (48.2, 53.0)	51.2 (48.5, 53.9)	46.8 (41.5, 52.1)
Race or ethnicity	35.4 (33.1, 37.8)	35.0 (32.4, 37.6)	38.0 (32.7, 43.3)
Gender	33.2 (30.9, 35.5)	32.9 (30.4, 35.4)	34.7 (29.8, 39.7)
Some other aspect of physical appearance	29.0 (26.8, 31.2)	28.6 (26.2, 31.0)	31.5 (26.5, 36.5)
Weight	21.5 (19.6, 23.5)	21.4 (19.2, 23.6)	22.3 (18.0, 26.6)
Height	18.8 (16.9, 20.6)	18.9 (16.8, 20.9)	18.2 (14.2, 22.1)
Ancestry or national origins	16.7 (14.9, 18.6)	16.8 (14.7, 18.8)	16.5 (12.3, 20.7)
Household or family education or income	13.4 (11.8, 15.1)	13.6 (11.8, 15.4)	12.4 (8.9, 15.8)
Sexual orientation	10.4 (9.0, 11.9)	9.8 (8.3, 11.4)	13.9 (10.1, 17.7)
Religion	7.7 (6.3, 9.0)	6.7 (5.3, 8.1)	13.7 (10.1, 17.3)
Other	9.8 (8.5, 11.2)	10.6 (9.1, 12.2)	5.1 (2.9, 7.2)

1. N is the unweighted number of responses from participants who reported experiencing at least one form of mistreatment at least "a few times" in the past month (Table 42)

Abbreviation: CI = confidence interval

- In the overall sample, the most selected reasons for experiencing mistreatment were age (50.6%), race/ethnicity (35.4%), and gender (33.2%).
- Reported reasons for experiencing discrimination did not differ meaningfully by tobacco use status.

Familiarity with Kick It California and Other Resources

All participants were asked whether they had heard of selected tobacco cessation resources. Table 45 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 45. Familiarity with selected tobacco cessation resources

Have you ever heard of the following? (Select all that apply)	% (95% CI)
Among all participants:	
1-800-Quit-Now	59.6 (57.5, 61.7)
The Real Cost	29.8 (27.9, 31.8)
California Smokers Helpline	25.5 (23.7, 27.4)
Kick It California	19.9 (18.2, 21.6)
Truth Initiative	16.4 (14.9, 18.0)
California Smokers Helpline and/or Kick It California[1]	40.0 (37.9, 42.1)
Among current tobacco users (any product):	
1-800-Quit-Now	47.1 (42.1, 52.1)
The Real Cost	30.6 (26.1, 35.0)
California Smokers Helpline	33.2 (28.4, 38.1)
Kick It California	25.4 (21.5, 29.3)
Truth Initiative	17.2 (13.5, 20.9)
California Smokers Helpline and/or Kick It California[1]	52.0 (47.0, 57.0)
Among current tobacco non-users:	
1-800-Quit-Now	61.3 (59.1, 63.6)
The Real Cost	29.7 (27.6, 31.8)
California Smokers Helpline	24.5 (22.4, 26.5)
Kick It California	19.1 (17.2, 20.9)
Truth Initiative	16.3 (14.7, 18.0)
California Smokers Helpline and/or Kick It California[1]	38.3 (36.1, 40.6)

1. Selected either or both of these two options

Abbreviation: CI = confidence interval

- The majority of all participants (59.6%) had heard of the national 1-800-Quit-Now helpline, but fewer had heard of the California Smokers Helpline (25.5%) or its newer name, Kick It California (19.9%).
- Hearing of either or both the California Smokers Helpline or Kick It California was selected by 40.0% 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.

Components of the TNT Online Survey Not Included in This Report

There were several items and topics included in the 2022 TNT Online Survey that were not summarized for this report. Those survey components are listed in Table 46. For more information about these components, please refer to the TNT Online Survey Codebook or contact the Principal Investigator.

Table 46. TNT Online Survey components not reported

Component	Further Details
General health status	self-report, from “excellent” to “poor”
School performance	grades in school
Educational aspirations	highest level of education would like to complete
Parents’ education	highest level of education attained
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
Sensation seeking	to measure preference for exciting, risky behaviors; a known predictor of future tobacco use
Tobacco litter	where and how often participants see tobacco litter (e.g., cigarette butts)
Cessation attempts and intentions	attempts, intentions, and methods of quitting
Marijuana acquisition	how product was obtained (subset of current users)
Vape dependence	validated e-cigarette dependence item
Race/ethnicity details	specific Asian background; specific Native Hawaiian or Other Pacific Islander background