2019 CONNECTICUT SCHOOL HEALTH SURVEY

TOBACCO AND MARIJUANA USE FINDINGS

CONNECTICUT DEPARTMENT OF PUBLIC HEALTH
TOBACCO CONTROL PROGRAM

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2019
CONNECTICUT SCHOOL HEALTH SURVEY
TOBACCO AND MARIJUANA USE FINDINGS

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DEFINITIONS

TOBACCO PRODUCTS AND MARIJUANA

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

Cigars: Tobacco wrapped in a tobacco leaf; also called "big cigars".

E-Cigarettes or Vaping Products: Electronic devices like vape pens, e-cigarettes, e-hookah, hookah pens, e-vaporizers, tanks, pods or mods used to inhale an aerosol. Can be used to vape nicotine, marijuana or just a flavoring. Popular brands are Juul, Suorin, SMOK, Starbuzz E-Hookah, Zodiac Constellation, Stiiizy, Brass Knuckles, and Heavy Hitters. In this report, all vaping products are classified as e-cigarettes, since questions on previous surveys only asked about e-cigarettes.

Hookahs: Waterpipe used to smoke specially made tobacco (shisha) that comes in different flavors, such as apple, mint, cherry, chocolate, coconut, licorice, cappuccino and watermelon. Popular brands are Fumari, Starbuzz, Tanigers, Al-Fakher, Trifecta, Roman and Social Smoke.

Little Cigars or Cigarillos (LCC): Tobacco wrapped in tobacco leaf or brown paper. May be flavored. Popular brands are Swisher Sweets, Backwoods, Dutch Masters, Captain Black, Prime Time, White Owl, and Black & Mild. Throughout this report LLCs are included with cigars.

Marijuana (including joints, blunts, vapes and edibles): Commonly known as cannabis, weed, pot, hash, and grass. Tetrahydrocannabinol (THC) is the principal psychoactive constituent of marijuana, and cannabidiol (CBD), the second most prevalent of the active ingredients—marijuana is sometimes referred to as THC or CBD, as well. Marijuana can be smoked (joint, blunt, bong), vaped, eaten (baked goods, candies), drunk (tea, cola, alcohol) or dabbed. The term marijuana (instead of cannabis) is used in this report, as youth were asked specifically about their marijuana use in the survey instrument.

Other Tobacco: Due to low prevalence use rates of smokeless tobacco and traditional pipes, they were combined and classified as "other tobacco" in some tables. This allowed for additional subgroup analysis.

Pipes: Traditional type of pipe used to smoke tobacco.

Secondhand Smoke Exposure: Reported exposure to secondhand tobacco smoke or aerosol from e-cigarettes or other electronic vaping devices during the past seven days.

Smokeless Tobacco (chew, dip, snuff, snus or dissolvable): Loose leaf or ground tobacco leaves that come in a large pouch (bag) or in tins. Popular brands are Copenhagen, Grizzly and Skoal. Snus comes in a small pouch that resembles a tea bag. Popular brands are General, Marlboro and Camel. Dissolvable tobacco comes in orbs, pellets, sticks, strips and lozenges. Popular brands are Camel, Ariva and Stonewall.

PRODUCT USE

Ever use: Used within a lifetime.

Current use: Used within the 30 days prior to the survey.

INTRODUCTION

The Connecticut School Health Survey (CSHS), known nationally as the Youth Risk Behavior Survey (YRBS), is a school-based survey of students in grades 9 – 12, with randomly chosen classrooms within selected schools. It is anonymous and confidential. The health survey previously had two components—the Youth Behavior Component (YBC) and Youth Tobacco Component (YTC)—and has been successfully administered in Connecticut since 2005. Starting in 2019, the YTC was discontinued and key tobacco-related questions were added to the YBC, the remaining component of CSHS.

SURVEY SUMMARY

The 2019 CSHS was completed by 2,015 students in 33 public, charter and vocational high schools in Connecticut during the spring of 2019. The school response rate was 66%, the student response rate was 82%, and the overall response rate was 54%. The results are representative of all students in grades 9 – 12.

The weighted demographic characteristics of the sample are as follows:

• Female	48.9%	• 9th grade	26.0%	• Black*	12.5%
• Male	51.1%	• 10th grade	25.5%	• Hispanic/Latino	23.0%
		• 11th grade	24.2%	• White*	56.4%
		• 12th grade	24.1%	• All other races*	4.0%
		• other	0.2%	• Multiple races*	4.1%

*non-Hispanic

Students completed a self-administered, anonymous, 99-item questionnaire. Survey procedures were designed to protect the privacy of students by allowing for anonymous and voluntary participation. Local parental permission procedures were followed before survey administration. When sample size and prevalence rates allow, results are presented by various demographics.

The YRBS is one component of the Youth Risk Behavior Surveillance System (YRBSS) developed by the Centers for Disease Control and Prevention in collaboration with representatives from state and local departments of education and health, other federal agencies, and national education and health organizations. The YRBSS was designed to focus the nation on behaviors among youth related to the leading causes of mortality and morbidity among both youth and adults and to assess how these risk behaviors change over time. The YRBSS measures behaviors that fall into the following six categories:

1. Behaviors that contribute to unintentional injuries and violence;
2. Sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases, including HIV infection;
3. Alcohol and other drug use;
4. Tobacco use;
5. Unhealthy dietary behaviors; and
6. Inadequate physical activity.

The YRBS also measures asthma and self-reported height and weight to allow calculation of body mass index for assessment of overweight and obesity. More information about the YRBS can be found at http://www.cdc.gov/yrbss.

Statistical analyses were conducted on weighted data using SAS® software to account for the complex sampling designs. Prevalence estimates and 95% confidence intervals were computed for all variables and datasets. Differences between prevalence estimates were considered statistically significant based on t-test analysis, $p<0.05$. Subgroup comparisons that are statistically significant are highlighted in this report. Please note that throughout this report, any difference noted as "significant" is referring to a **statistical** difference. For this report, data are suppressed if there were fewer than 50 students in a subgroup or the relative standard error (RSE) was greater than 30%. Connecticut's sampling design does not allow for analysis at the school or district level.

This document focuses on summarizing the survey results for tobacco and marijuana use. For purposes of this report, tobacco products include cigarettes, cigars (i.e., big cigars, little cigars and cigarillos), e-cigarettes (vaping products), hookahs (waterpipes), traditional tobacco pipes, and smokeless (i.e., chew, dip, snuff, snus or dissolvable). Due to low prevalence rates for pipe and smokeless tobacco, these products are occasionally combined and classified as "other tobacco" to allow for larger sample sizes. The survey also included questions on marijuana use, which is summarized in a separate chapter in this report.

Chapter 1 presents data covering tobacco use behavior. This chapter examines use of tobacco products by making comparisons across students' personal characteristics such as demographics, depressive symptoms, academic achievement, and risk-taking behaviors. Chapter 2 looks at environmental influences that may be triggers for youth to use tobacco products. Chapter 3 provides a historical context by comparing the 2019 tobacco prevalence rates to data from earlier administrations of the Connecticut Youth Tobacco Survey (YTS); national trend comparisons are also made. Chapter 4 provides an overview of marijuana use and marijuana-tobacco co-use, including making comparisons by demographics and other characteristics. The Conclusion summarizes the overall tobacco findings and highlights progress that has been made and work that is being done in Connecticut to address tobacco use and secondhand smoke exposure. The Appendix provides the definition for race/ethnicity and the sample description of students who participated in the 2019 survey.

KEY FINDINGS

Tobacco Use Behavior

- High school students' current use (i.e., use in the last 30 days) of any tobacco products was 27.8%, representing approximately 44,300 students.
- The current use prevalence among high school students was highest for e-cigarettes (27.0%), followed by hookahs (4.8%) and cigars (3.9%).
- The rate of current e-cigarette use increased significantly between 2017 and 2019 from 14.7% to 27.0%.
- The current e-cigarette use rate of 27.0% was more than seven times the prevalence of cigarette smoking (3.7%).
- Use of multiple tobacco products was not common among students. In high school, 7.5% reported currently using more than one tobacco product.
- Significant declines in the prevalence of cigarette smoking among high school students occurred between 2000 and 2005 (25.6% → 17.0%); between 2005 and 2013 (17.0% → 8.9%); and between 2013 and 2017 (8.9% → 3.5%).

Tobacco Use by Personal Characteristics

- Rates of current tobacco use for White (31.0%) and Hispanic (26.8%) students were significantly higher than that for Black (19.7%) students. White students prevalence of tobacco use was also significantly higher than it was for students of Other races (23.3%).
- Female high school students (31.2%) had a significantly higher rate of current tobacco use than their male counterparts (24.6%).
- As grade increased, tobacco product use increased as well. It went from 21.4% in 9th to 35.8% in 12th. Students in 12th grade were significantly more likely than students in all other grades to currently use tobacco.
- Students who identified as gay, lesbian or bisexual (40.1%) were significantly more likely than heterosexual (26.5%) students to report using tobacco.
- Other personal characteristics associated with a significantly greater rate of tobacco use among high school students include low academic achievement, depressive symptoms, school absenteeism, and poor mental health.
- Engaging in certain risky behaviors was correlated with higher tobacco use, such as texting or e-mailing while driving, carrying a gun on school property, and self-harming.

Environmental Influences

- Students who were current tobacco users were significantly more likely to have been exposed to secondhand smoke or aerosol.
- Understanding students' primary reasons for using vaping products was not clear from the survey findings since the most common response for students who had ever used vaping products was "I used them for some other reason".

- The influence of family and friends who use vaping products appears to be a prominent factor because nearly one-third selected this as the main reason for use.
- Approximately 60% of students who went to buy tobacco products in a store were not asked to show any proof of age at the time of purchase.

Marijuana and Tobacco Co-Use

- Current (last 30 day) marijuana use among Connecticut high school students was about 22%.
- Among those who used marijuana in the last 30 days, about 73% also used some form of tobacco.
- Co-use of marijuana and tobacco was more prevalent than marijuana use alone.
- Higher rates of co-use were found among females, Whites, 9th graders; and students who identify as gay, lesbian or bisexual.
- Students who have other health-risk factors and engage in risky behaviors are significantly more likely than their counterparts without these personal characteristics to have used marijuana in the last 30 days.

CHAPTER 1 – Tobacco Use Behavior

This chapter presents high school student tobacco use behavior data from the 2019 Connecticut Youth Risk Behavior Survey (YRBS), which includes current use of various tobacco products. Current use is defined as use within the last 30 days. This chapter also provides overall prevalence rates of tobacco products and the use of specific products across various demographics (e.g., sex, race/ethnicity and grade).

Use of Specific Tobacco Products Among High School Students

Table 1 examines current use of tobacco products by high school students. The first row of Table 1 indicates the use of any of the listed products. Current use of any tobacco was 27.8%. This represents approximately 44,300 students. The two products with highest current usage rates in descending order were electronic cigarettes (27.0%) and hookahs (4.8%). Cigars (includes big cigars, little cigars and cigarillos), and cigarettes had nearly equal usage rates, 3.9% and 3.7%, respectively. Current e-cigarette use for high school students in Connecticut was more than seven times the rate of current cigarette smoking.

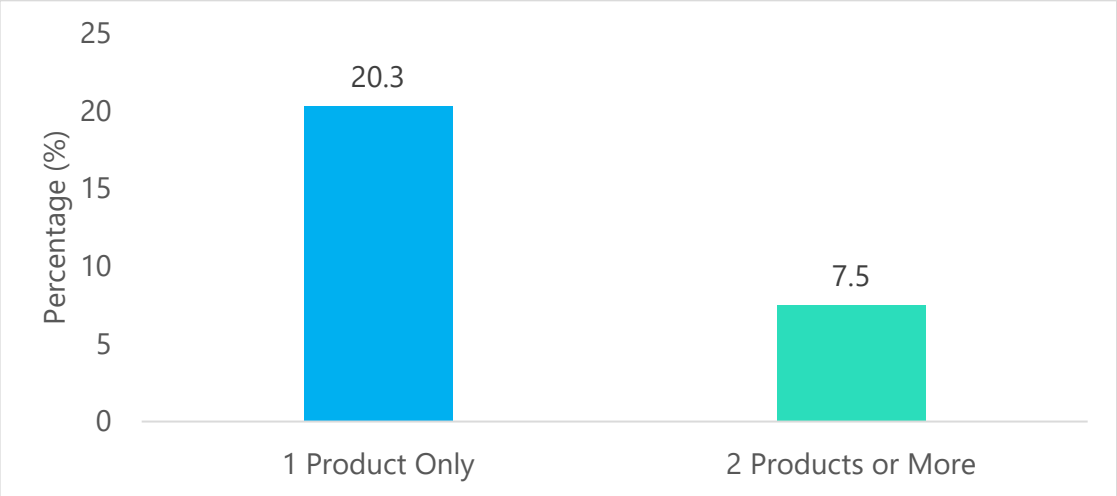
Table 1: Current use of tobacco products among high school students

	%	(95% CI)
Any of the below	**27.8**	(23.6 – 31.9)
E-Cigarette	**27.0**	(22.5 – 31.5)
Hookah	**4.8**	(3.4 – 6.2)
Cigar	**3.9**	(2.9 – 4.8)
Cigarette	**3.7**	(2.2 – 5.3)
Pipe	**2.9**	(1.9 – 4.0)
Smokeless	**2.6**	(1.3 – 3.8)

Multiple Tobacco Product Use

Figure 1 examines the current use of multiple tobacco products, which is also referred to as poly-tobacco use. For our purposes, current multiple or poly-tobacco use is defined as any use of two or more of the tobacco products listed in Table 1 *(see above)*, on the same day or separate days, within the 30 days prior to the survey. An estimated 7.5% of high school students had used multiple tobacco products in the past 30 days, while 20.3% were not poly-tobacco users, since they reported current use of one product exclusively.

Figure 1. Current use of multiple tobacco products among high school students



Use of Any Tobacco Product by Demographics

Table 2 examines high school student current tobacco use prevalence by demographics. Female students (31.2%) were significantly more likely to be current users of tobacco than male students (24.6%). There were clear differences in tobacco use by race/ethnicity. White and Hispanic students (see Appendix for demographic definitions) had the highest rates of current tobacco use (31.0% and 26.8%, respectively), significantly higher compared to Black students (19.7%). Whites were also significantly more likely than students of Other races (23.3%) to use tobacco. As expected, use of tobacco increased by grade—it was significantly higher in 11th (30.3%) and 12th (35.8%) than in 9th (21.4%); and significantly higher in 12th than in 10th (24.2%).

Table 2: Tobacco use among high school students, by sex, race/ethnicity and grade

	%	(95% CI)
Overall	**27.8**	(23.6 – 31.9)
Sex		
Male	**24.6**	(20.6 – 28.5)
Female	**31.2**	(25.9 – 36.6)
Race/Ethnicity		
Black	**19.7**	(14.3 – 25.0)
Hispanic	**26.8**	(23.3 – 30.3)
White	**31.0**	(25.8 – 36.1)
Other	**23.3**	(17.2 – 29.3)
Grade		
9th	**21.4**	(16.9 – 26.0)
10th	**24.2**	(17.6 – 30.7)
11th	**30.3**	(24.9 – 35.6)
12th	**35.8**	(30.1 – 41.6)

Notes: All Hispanic students are included in the Hispanic category. All other races are non-Hispanic. For definition of "Other", see Appendix.

Use of Specific Tobacco Products by Demographics

The following section (Tables 3-6) examines tobacco product use across various participant characteristics including sex, race/ethnicity, grade and sexual orientation.

Tobacco Use by Sex

Table 3 indicates that among high school students, current use of any tobacco product and e-cigarettes was higher among female than among male students (31.2% and 24.6%; 30.0% and 24.1%, respectively). Males were three (3) times more likely to smoke cigars than were females (5.7% and 1.9%). The difference in use by sex was statistically significant for any product, e-cigarettes and cigars. The largest difference was for cigars, which were almost exclusively used by males. The rate of cigarette smoking was equal for males and females (3.7%), while hookah and traditional pipe smoking rates did not differ significantly. Due to poor validity, no comparison in smokeless use rates between males and females could be made.

Table 3: Current use of tobacco products among high school students, by sex

	Male		Female	
	%	(95% CI)	%	(95% CI)
Any of the below	**24.6**	(20.6 – 28.5)	**31.2**	(25.9 – 36.6)
E-Cigarette	**24.1**	(19.9 – 28.3)	**30.0**	(24.5 – 35.4)
Hookah	**4.5**	(3.0 – 5.9)	**5.3**	(3.3 – 7.3)
Cigar	**5.7**	(4.4 – 7.1)	**1.9**	(1.8 – 3.8)
Cigarette	**3.7**	(1.8 – 5.5)	**3.7**	(2.3 – 5.2)
Pipe	**3.0**	(1.6 – 4.5)	**2.8**	(1.8 – 3.8)
Smokeless	**4.1**	(2.2 – 6.1)	*	—

*Prevalence estimates based on unweighted cases fewer than 50 or with an RSE greater than 30% are suppressed due to poor validity.

Tobacco Use by Race/Ethnicity

Table 4 presents the current use of tobacco products by race/ethnicity for 2019. Among high school students, White and Hispanic students were significantly more likely than Black students to have been current users of any tobacco and e-cigarettes. White students also were significantly more likely than students of Other races to have used any tobacco and e-cigarettes. Hispanic students were significantly more likely than White and Black students to have used hookahs—the rate among Hispanics was about 2.5 times higher than it was for Whites and Blacks. Due to poor validity, the prevalence estimate for hookah use among students of Other races cannot be used for comparisons. Use rates of cigarettes, cigars and other tobacco did not vary significantly by race/ethnicity. For these tobacco products, estimates for Black and Other race students were not statistically valid, so no comparisons could be made.

Table 4: Current use of tobacco products among high school students, by race/ethnicity

	Black	Hispanic	White	Other
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Any of the Below	**19.7** (14.3 – 24.1)	**26.8** (23.3 – 30.3)	**31.0** (25.8 – 36.1)	**23.3** (17.2 – 29.3)
E-Cigarette	**19.4** (14.8 – 24.1)	**26.0** (21.5 – 30.5)	**30.0** (24.5 – 35.5)	**21.9** (15.3 – 28.6)
Hookah	**3.7** (1.9 – 5.5)	**9.3** (5.5 – 13.0)	**3.4** (2.1 – 4.7)	* –
Cigar	* –	**3.9** (1.8 – 6.0)	**4.3** (3.3 – 5.4)	* –
Cigarette	* –	**4.8** (2.0 – 7.6)	**3.4** (2.0 – 4.8)	* –
Other Tobacco	* –	**5.9** (3.6 – 8.2)	**3.9** (2.4 – 5.4)	* –

*Prevalence estimates based on unweighted cases fewer than 50 or with an RSE greater than 30% are suppressed due to poor validity.

Notes: All Hispanic students are included in the Hispanic category. All other races are non-Hispanic. For definition of "Other", see Appendix.

Tobacco Use by Grade

Table 5 examines the differences in product choice by grade among high school students. Any tobacco, e-cigarette and cigar use increased by grade, while hookah and other tobacco use varied by grade. Between 9th and 12th grade, e-cigarette use increases 75%. From 10th to 12th grade, cigar smoking more than doubles. For cigarette smoking, a valid estimate was available only for 12th grade, so no differences by grade could be determined. For any tobacco and e-cigarettes, 11th and 12th grade students were significantly more likely than those in 9th grade to have been current users; the use rate for these products among 12th graders was also significantly higher than it was for 10th graders. For other tobacco, use in 12th grade was significantly higher than in 10th. The rate of use for cigars and hookahs did not vary significantly by grade.

Table 5: Current use of tobacco products among high school students, by grade

	9th	10th	11th	12th
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Any of the Below	**21.4** (16.9 – 26.0)	**24.2** (17.6 – 30.7)	**30.3** (24.9 – 35.6)	**35.8** (30.1 – 41.6)
E-Cigarette	**20.2** (15.6 – 24.7)	**23.8** (17.2 – 30.4)	**29.6** (24.4 – 34.8)	**35.3** (28.9 – 41.6)
Hookah	**4.8** (2.5 – 7.1)	**3.7** (1.7 – 5.7)	* –	**6.6** (4.4 – 8.8)
Cigar	* –	**2.7** (1.2 – 4.3)	**4.5** (1.7 – 7.2)	**6.2** (3.4 – 9.0)
Cigarette	* –	* –	* –	**6.6** (4.1 – 9.1)
Other Tobacco	**3.6** (1.6 – 5.7)	**3.0** (1.7 – 4.3)	**4.1** (1.5 – 6.6)	**5.7** (3.7 – 7.7)

*Prevalence estimates based on unweighted cases fewer than 50 or with an RSE greater than 30% are suppressed due to poor validity.

Tobacco Use by Sexual Orientation

Table 6 shows the differences in product choice by sexual orientation among high school students. Students who identified as gay, lesbian or bisexual were significantly more likely than heterosexual students to have currently used any tobacco product, e-cigarettes, hookahs and cigarettes. No determination could be made in the difference in cigar usage due to poor data validity for gay, lesbian and bisexual students.

Table 6: Current use of tobacco products among high school students, by sexual orientation

	Heterosexual		Gay, Lesbian, Bisexual	
	%	(95% CI)	%	(95% CI)
Any of the below	26.5	(22.4 – 30.6)	40.1	(30.3 – 50.0)
E-Cigarette	26.0	(21.6 – 30.4)	38.9	(29.4 – 48.3)
Hookah	3.9	(2.7 – 5.1)	9.3	(6.1 – 12.5)
Cigar	3.3	(2.2 – 4.4)	*	—
Cigarette	2.3	(1.1 – 3.6)	9.2	(5.5 – 12.8)
Other Tobacco	3.5	(2.3 – 4.7)	5.2	(2.1 – 8.3)

*Prevalence estimates based on unweighted cases fewer than 50 or with an RSE greater than 30% are suppressed due to poor validity.

Use of Any Tobacco Product by Personal Characteristics

Tobacco Use by Academic Achievement

Table 7 shows the relationship between tobacco use and students' reported academic achievement. High school students who reported higher academic achievement had significantly lower tobacco use rates than those who had lower academic achievement. Students who indicated they received mostly Ds or Fs were 89% more likely to be current tobacco users than were those who received mostly As or Bs (48.1% and 25.4%, respectively).

Table 7: Tobacco use among high school students, by reported academic achievement

	Current Tobacco Use	
	%	(95% CI)
Mostly As and Bs	25.4	(20.6 – 30.2)
Mostly Cs	36.0	(30.2 – 41.7)
Mostly Ds or Fs	48.1	(38.3 – 57.8)

Tobacco Use by School Absenteeism

Students were asked: "*During the past 30 days, on how many days did you miss school? (Count days you missed with or without permission, days you were sick, or days missed due to a school suspension.)"*. In this survey, no attempt was made to determine the reason for the absences.

Table 8 shows that absenteeism was associated with higher rates of tobacco use among high school students. Current use of tobacco was 20.2% for students who had not missed any school in the past month compared to 41.7% for those with 5 days or more of absence; this group had the highest rate of tobacco use. Tobacco use was significantly lower among students missing no days of school than it was among those who missed at least 1 day.

Table 8: Tobacco use among high school students, by school absence in the past 30 days

	Current Tobacco Use	
	%	(95% CI)
Missed 0 days	20.2	(16.1 – 24.3)
Missed 1-4 days	32.3	(27.0 – 37.7)
Missed 5 days or more	41.7	(31.2 – 52.3)

Tobacco Use by Poor Mental Health Days

Students were asked: "*During the past 30 days, on how many days was your mental health not good? (Mental health includes stress, depression, and problems with emotions.)"*.

Table 9 shows that poor mental health was associated with higher rates of tobacco use among high school students. Current use of tobacco was 16.8% for students who had no poor mental health days in the past month compared to 40.4% for those with two weeks or more; this group had the highest rate of tobacco use. Students who had zero days of poor mental health were significantly less likely to use to tobacco than were students who reported that on at least 1 of the past 30 days their mental health was not good.

Table 9: Tobacco use among high school students, by frequency of poor mental health in the past 30 days

	Current Tobacco Use	
	%	(95% CI)
0 days	16.8	(13.5 – 20.1)
1 or 2 days	24.3	(18.2 – 30.5)
3-6 days	34.5	(26.1 – 42.9)
7-13 days	32.5	(23.5 – 41.5)
14 days or more	40.4	(33.7 – 47.0)

Tobacco Use by Depressive Symptoms

Students were asked: "*During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?*"

Table 10 shows that students who reported having felt sad or hopeless (i.e., had depressive symptoms) in the past 12 months were about twice as likely than those who had not had depressive symptoms to have used tobacco in the past 30 days (41.9% and 21.5%, respectively). The difference is statistically significant.

Table 10: Tobacco use among high school students, by depressive symptoms in the past 12 months

	Current Tobacco Use	
	%	(95% CI)
No depressive symptoms	21.5	(18.0 – 25.0)
Had depressive symptoms	41.9	(35.3 – 48.5)

Use of Any Tobacco Product by Risk-Taking Behaviors

Tobacco Use by Frequency of Texting or E-Mailing While Driving a Vehicle

In the survey, students were asked the following question: "*During the past 30 days, on how many days did you text or e-mail while driving a car or other vehicle?*"

Table 11 shows that a higher frequency of texting or e-mailing while driving was associated with increased rates of tobacco use among high school students (among those who had driven a vehicle in the past 30 days). Current use of tobacco was 26.1% for students who had not texted or e-mailed while driving in the past month compared to 45.6% for those who had on 1-9 days. Those who texted or e-mailed 10 days or more had the highest rate of tobacco use at 65.1%. Tobacco use was significantly lower among students who had not texted or e-mailed while driving than it was for students who had on at least 1 day during the past 30 days.

Table 11: Tobacco use among high school students, by frequency of texting or e-mailing while driving a car or other vehicle in the past 30 days

	Current Tobacco Use	
	%	(95% CI)
0 days	26.1	(20.8 – 31.4)
1-9 days	45.6	(33.3 – 57.9)
10 days or more	65.1	(50.3 – 79.8)

Tobacco Use by Frequency of Carrying a Weapon on School Property

Students were asked: "*During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club on school property?*"

Table 12 shows that students who reported having carried a weapon one or more times on school property in the past month were nearly 2.5 times more likely than those who had not carried a weapon to be current tobacco users (62.9% and 26.5%, respectively). The difference is statistically significant.

Table 12: Tobacco use among high school students, by frequency of carrying a weapon on school property in the past 30 days

	Current Tobacco Use	
	%	(95% CI)
0 days	26.5	(22.8 – 30.3)
1 day or more	62.9	(46.8 – 78.9)

Tobacco Use by Frequency of Self-Harming

Students were asked: "*During the past 12 months, how many times did you do something to purposely hurt yourself without wanting to die, such as cutting or burning yourself on purpose?*"

Table 13 shows that self-harming 1 or more times in the past 12 months was associated with significantly higher rates of tobacco use among high school students. Current use of tobacco was 24.7% for students who had not self-harmed in the past year compared to 40.7% for those who harmed themselves once. Those who harmed themselves 6 times or more in the past 12 months had the highest rate of tobacco use at 54.6%.

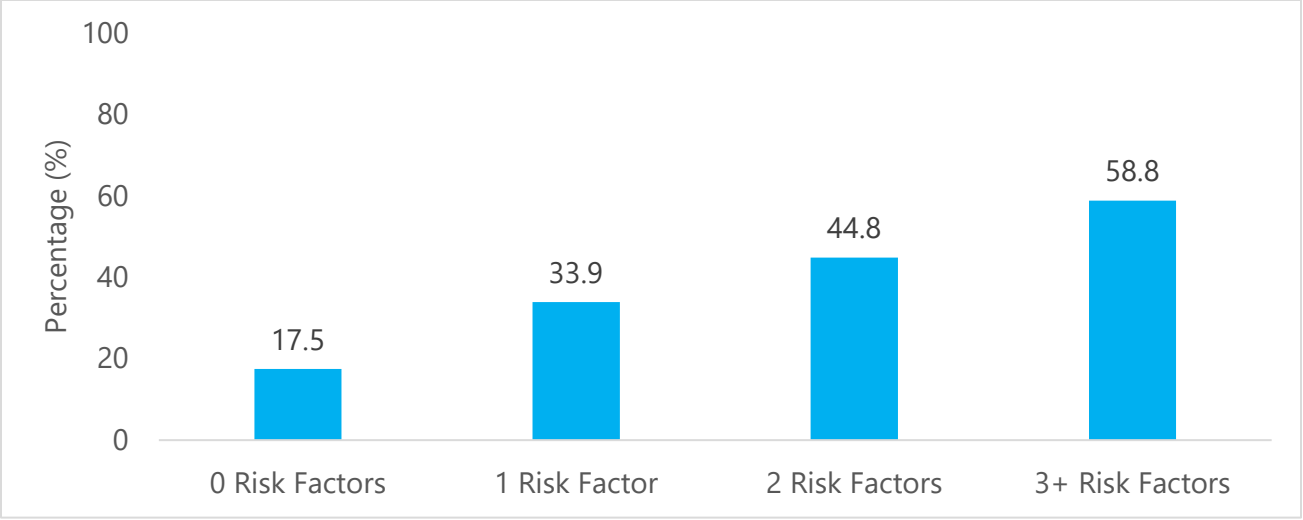
Table 13: Tobacco use among high school students, by frequency of self-harming in the past 12 months

	Current Tobacco Use	
	%	(95% CI)
0 times	**24.7**	(20.9 – 28.4)
1 time	**40.7**	(29.1 – 52.2)
2-5 times	**44.2**	(28.0 – 60.4)
6 times or more	**54.6**	(42.3 – 66.9)

Use of Any Tobacco Product by Risk Factors

Figure 2 shows analyses of tobacco use prevalence by risk factors among high school students. The bars show the prevalence for students who had reported use of any tobacco in the last 30 days. Risk factors included (1) low academic achievement (receiving mostly Ds or Fs); (2) school absenteeism (missing 5 days or more in the past 30 days); (3) poor mental health on 14 days or more in the past 30 days; (4) depressive symptoms in the past 12 months; (5) texting or e-mailing while driving on 10 days or more in the past 30 days; (6) carrying a weapon on school property at least once in the past 30 days; and (7) self-harming 6 times or more in the past 12 months. Students with zero risk factors are compared to those with one, two and three or more risk factors. Prevalence was highly correlated with the number of risk factors for current use of tobacco. Tobacco use increases as the number of risk factors increases. Students with no risk factors are significantly less likely than students with one or more to report current tobacco use.

Figure 2. Prevalence of current tobacco use among high school students by number of risk factors



Summary

In 2019, the two most frequently currently used tobacco products among Connecticut high school students were e-cigarettes (27.0%) and hookahs (4.8%). Cigars and cigarettes had similar use rates (3.9% and 3.7%, respectively). Poly-use of tobacco products was not common. Tobacco use was higher among certain races/ethnicities (for example, White and Hispanic), females, older students, especially those in 12th grade, and students who identify as gay, lesbian or bisexual. Product use differed significantly across demographics with higher e-cigarette use among females and higher cigar use among males. The prevalence of e-cigarette use was higher among White and Hispanic students. Hispanic students also had a higher rate of hookah smoking. Significantly higher use rates of e-cigarettes were seen for students in grades 11 and 12. Gay, lesbian and bisexual students were significantly more likely than their heterosexual counterparts to have used e-cigarettes, hookahs and cigarettes. Tobacco use also varied with personal characteristics. Personal characteristics, such as low academic achievement, school absenteeism, poor mental health and depressive symptoms, along with risk-taking behaviors, such as driving while distracted, carrying a weapon and self-harming, were related to higher rates of tobacco use. These personal characteristics and risk-taking behaviors were used to identify students with multiple risk factors. Students with three or more risk factors were about 3.4 times more likely than students with no risk factors, and 73% more likely than those with only one risk factor to currently use tobacco.

CHAPTER 2 – Environmental Influences

This chapter focuses on environmental influences of tobacco product use. It examines whether students had exposure to secondhand tobacco smoke or aerosol and their reasons for using vaping products. Additionally, the survey included a question about whether students had been asked for proof of age when trying to purchase tobacco products in a store. We compare all students, students who currently use and those who do not currently use tobacco products when examining secondhand smoke and aerosol exposure. Comparisons by certain demographics are also examined.

Exposure to Secondhand Tobacco Smoke or Aerosol in the Last 7 Days

In the survey, students were asked: "*During the past 7 days, on how many days did you breathe the smoke or aerosol from someone who was smoking or vaping tobacco products indoors or outdoors?*"

Tables 14-16 report on high school students' exposure to secondhand tobacco smoke and aerosol. For students overall, nearly one-third (30.5%) were exposed to secondhand smoke or vapor. Current tobacco users had significantly higher rates of exposure. Even though it was lower for non-current tobacco users, nearly a quarter (22.8%) of these students breathed the smoke or aerosol from someone who was smoking or vaping a tobacco product on at least one day during the seven days prior to the survey. Secondhand smoke and aerosol exposure was significantly higher for females and White students. Exposure varied by grade from 26.0% in 10th to 34.6% in 9th; the difference between these grades was statistically significant (*data by grade not displayed in tables*).

Table 14: Last 7 days exposure to secondhand tobacco smoke or aerosol among high school students

	All Students	Non-Current Tobacco Users	Current Tobacco Users
	% (95% CI)	% (95% CI)	% (95% CI)
No exposure	**69.5** (64.9 – 74.2)	**77.2** (72.6 – 81.8)	**49.7** (45.5 – 54.0)
1-3 days exposure	**21.0** (17.6 – 24.3)	**17.3** (13.3 – 21.2)	**30.4** (27.3 – 33.5)
4-7 days exposure	**9.5** (7.5 – 11.5)	**5.5** (3.7 – 7.3)	**19.9** (15.6 – 24.1)

Table 15: Last 7 days exposure to secondhand tobacco smoke or aerosol among high school students, by sex

	Male	Female
	% (95% CI)	% (95% CI)
No exposure	**75.6** (70.9 – 80.3)	**63.4** (57.9 – 68.8)
1-3 days exposure	**16.7** (12.9 – 20.4)	**25.2** (21.4 – 29.1)
4-7 days exposure	**7.7** (5.7 – 9.7)	**11.4** (8.7 – 14.1)

Table 16: Last 7 days exposure to secondhand tobacco smoke or aerosol among high school students, by race/ethnicity

	Black	Hispanic	White	Other
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
No exposure	**82.9** (75.2 – 90.7)	**72.2** (68.5 – 75.9)	**65.0** (59.6 – 70.5)	**72.9** (65.5 – 80.3)
1-3 days exposure	**12.3** (7.4 – 17.3)	**17.2** (14.5 – 19.8)	**24.2** (20.0 – 28.4)	**21.1** (13.8 – 28.5)
4-7 days exposure	**4.8** (0.7 – 8.8)	**10.6** (7.2 – 14.1)	**10.8** (8.7 – 12.8)	**6.0** (2.8 – 9.1)

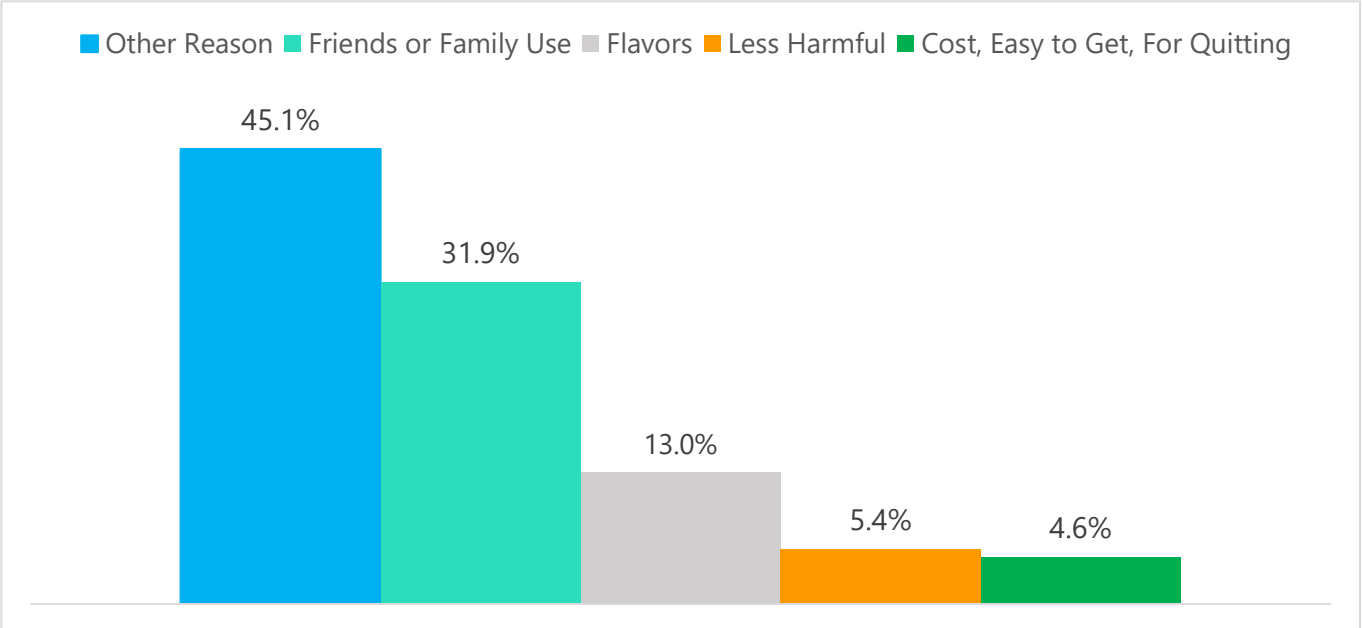
Notes: All Hispanic students are included in the Hispanic category. All other races are non-Hispanic. For definition of "Other", see Appendix.

Primary Reason for Using Vaping Products Among Ever Users

In the survey, students were asked: "*What is the main reason you have used electronic vapor products?*" Students could choose only one of the following: *(1) I have never tried an electronic vapor product; (2) Friend or family member used them; (3) To try to quit using other tobacco products; (4) They cost less than other tobacco products; (5) They are easier to get than other tobacco products; (6) They are less harmful than other forms of tobacco; (7) They are available in flavors, such as mint, candy, fruit, or chocolate; (8) I used them for some other reason.* In this survey, no attempt was made to determine the other reason for using the products if that was selected by the respondent.

Figure 3 shows the responses, by percentage, that high school students who had ever tried using electronic vapor products gave as their primary reason for using these devices. Nearly one-half (45.1%) answered they mainly used them for some reason that was not among the choices on the survey. The second most prevalent choice was a friend or family member used them (31.9%). The third was they are available in flavors (13.0%). The other selections combined equaled 10% of the responses.

Figure 3: Primary Reason for using electronic vaping products among ever users in high school



Asked for Proof of Age When Buying Tobacco Products in a Store

Students were asked: *"When you bought or tried to buy any tobacco products, including cigarettes, cigars, smokeless tobacco, shisha or hookah tobacco, and electronic vapor products, in a store during the past 30 days, were you asked to show proof of age?"* Among students who had bought or tried to buy tobacco products in a store during the past 30 days, only 40.7% were asked for proof of age. Of the students who had purchased or tried to purchase tobacco products in a store in the 30 days before the survey, 85.3% reported current e-cigarette use.

Summary

This chapter examined the tobacco environment of students. It assessed the exposure to secondhand tobacco smoke and aerosol, reasons for using e-cigarettes and other vaping products, and whether students were asked to show proof of age when buying tobacco products in a store. Students who were current tobacco users were significantly more likely to have been exposed to secondhand smoke or aerosol in the week prior to the survey; nonetheless, nearly one-quarter of students who did not currently use tobacco products had been exposed. Overall, about one in three high school students had at least one day of exposure in the past week. Understanding students' primary reasons for using vaping products was not clear from the survey findings since the most common response for students who had ever used vaping products was *"I used them for some other reason"*. The "other reason" for using them was not explored further on this survey. Although, the influence of family and friends who use vaping products appears to be a prominent factor because nearly one-third selected this as the main reason for use. Perhaps most problematic in the "tobacco environment" was students' ease in being able to purchase tobacco products in a store. In the 30 days prior to the survey, 6 of 10 students who went to buy tobacco products in a store were not asked to show any proof of age at the time of purchase. And, of the students who reported having gone to a store in the past month to buy tobacco products, more than 85% were current e-cigarette users—the most commonly used tobacco product among Connecticut high school students.

CHAPTER 3 – Trends of Tobacco Use Among High School Students

To provide a larger context for understanding the results from the 2019 Connecticut YRBS relating to tobacco use, we compared tobacco prevalence rates across time and surveys. Estimates prior to 2019 were collected from the Connecticut Youth Tobacco Survey (YTS), and the questions used on the 2019 YRBS were adapted from the YTS to obtain the best comparable trend data as possible. However, we advise using caution when interpreting these comparisons, since the estimates were collected using different survey instruments. Comparisons to national data were also made.

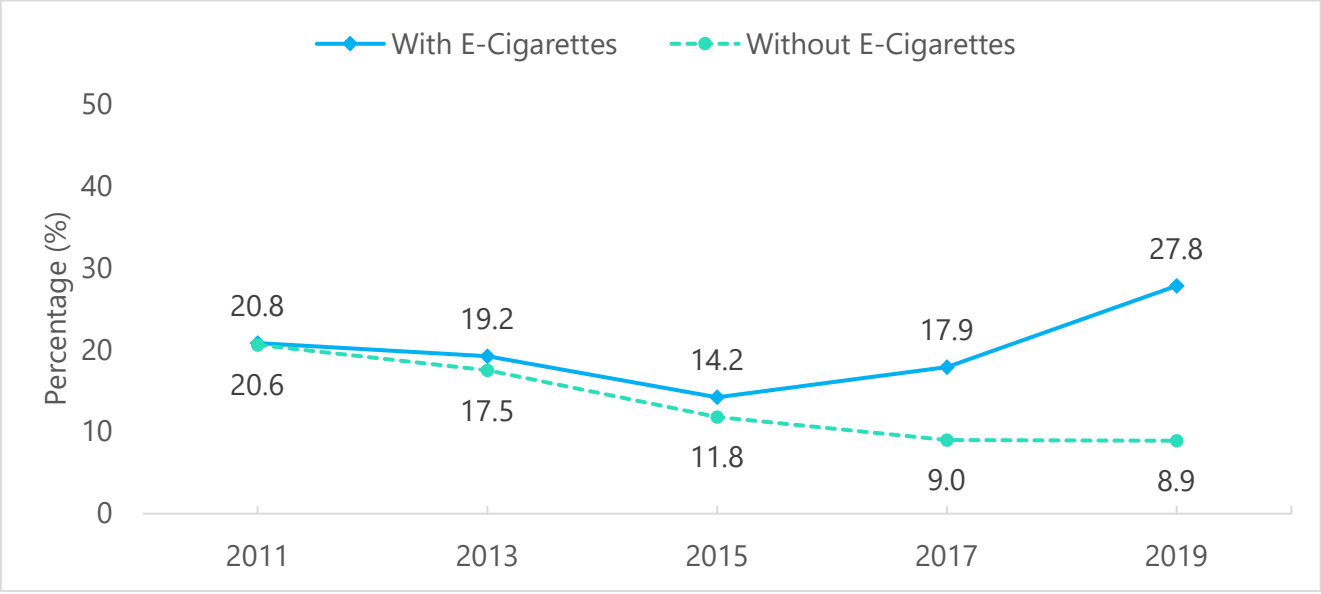
Connecticut High School Tobacco Use Trends (2000-2019)

Figures 4-10 examine the trend in use of tobacco among high school students from 2000-2019 or 2011-2019. Each trend graph graphically describes whether the prevalence of a behavior has increased, decreased or stayed the same over time, and shows the weighted percentage of students who reported each behavior by year. Furthermore, it will be noted whether there was a statistically significant change in prevalence between 2017 and 2019. Notice there was no survey conducted in 2004. After the 2002 survey, Connecticut started administering it biennially on odd years beginning in 2005. Additionally, questions regarding e-cigarettes and hookahs were first asked in 2011; therefore, the trend line for overall tobacco use begins in 2011. Also, no trend analysis for secondhand tobacco smoke and aerosol exposure can be presented since "aerosol" was added to the question in 2019.

Tobacco: Figure 4 shows the trend for current tobacco use, with and without e-cigarettes. From 2011 to 2019, current (past 30 day) tobacco use, when e-cigarettes are included (solid blue line), went up among high school youth. Nearly 30 of every 100 students (27.8%) reported in 2019 that they had used tobacco in the past 30 days—a significant increase from 20.8% in 2011. Between 2017 and 2019, the rate also increased significantly. The prevalence in 2017 was 17.9%.

If e-cigarettes are removed from the analysis (dotted green line), between 2011 and 2019, tobacco use decreased significantly from 20.6% to 8.9%—a drop of approximately 57%. Between 2017 and 2019, there was essentially no change in the rate of use. In 2017, overall tobacco use without e-cigarettes was 9.0%.

Figure 4. Trend in current tobacco use, with and without e-cigarettes, among high school students (2011-2019)



Cigarettes: Figure 5 shows the trend for current cigarette smoking. From 2000 to 2019, current cigarette use decreased significantly among high school youth. About 4 of every 100 students (3.7%) reported in 2019 that they had smoked cigarettes in the past 30 days—a significant decrease from 25.6% in 2000. Between 2011 and 2019, the rate decreased significantly. The prevalence in 2011 was 14.0%. From 2017 to 2019, the rate did not change much. The prevalence in 2017 was 3.5%.

Figure 5. Trend in current cigarette smoking among high school students (2000-2019)

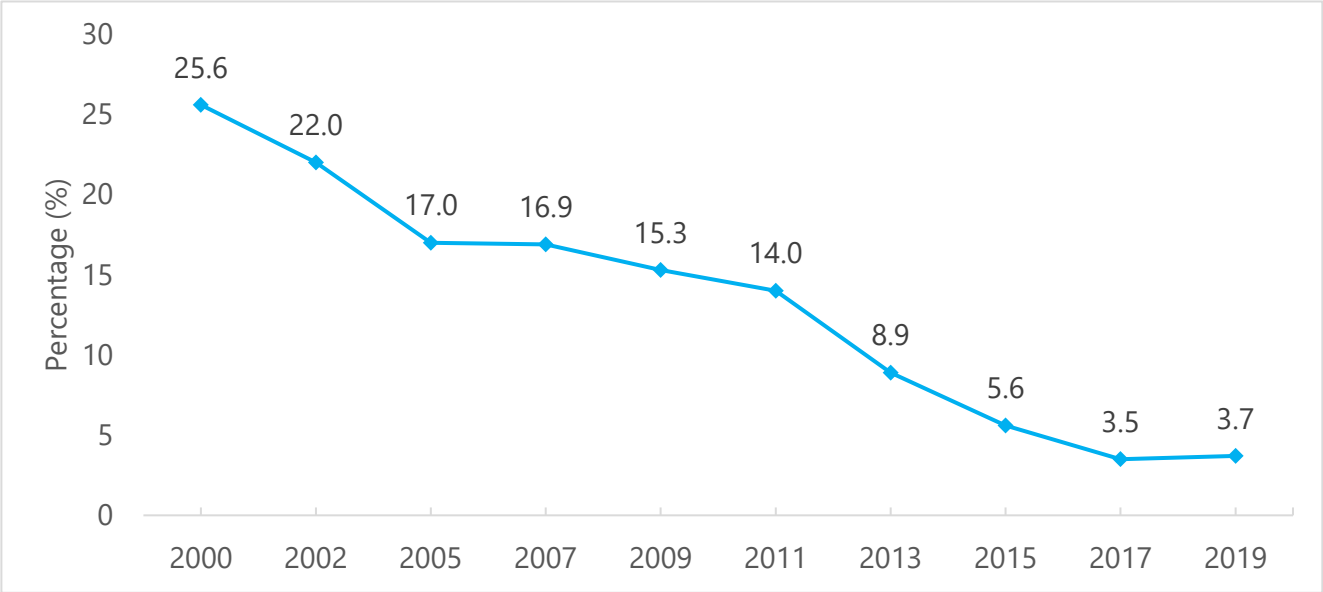
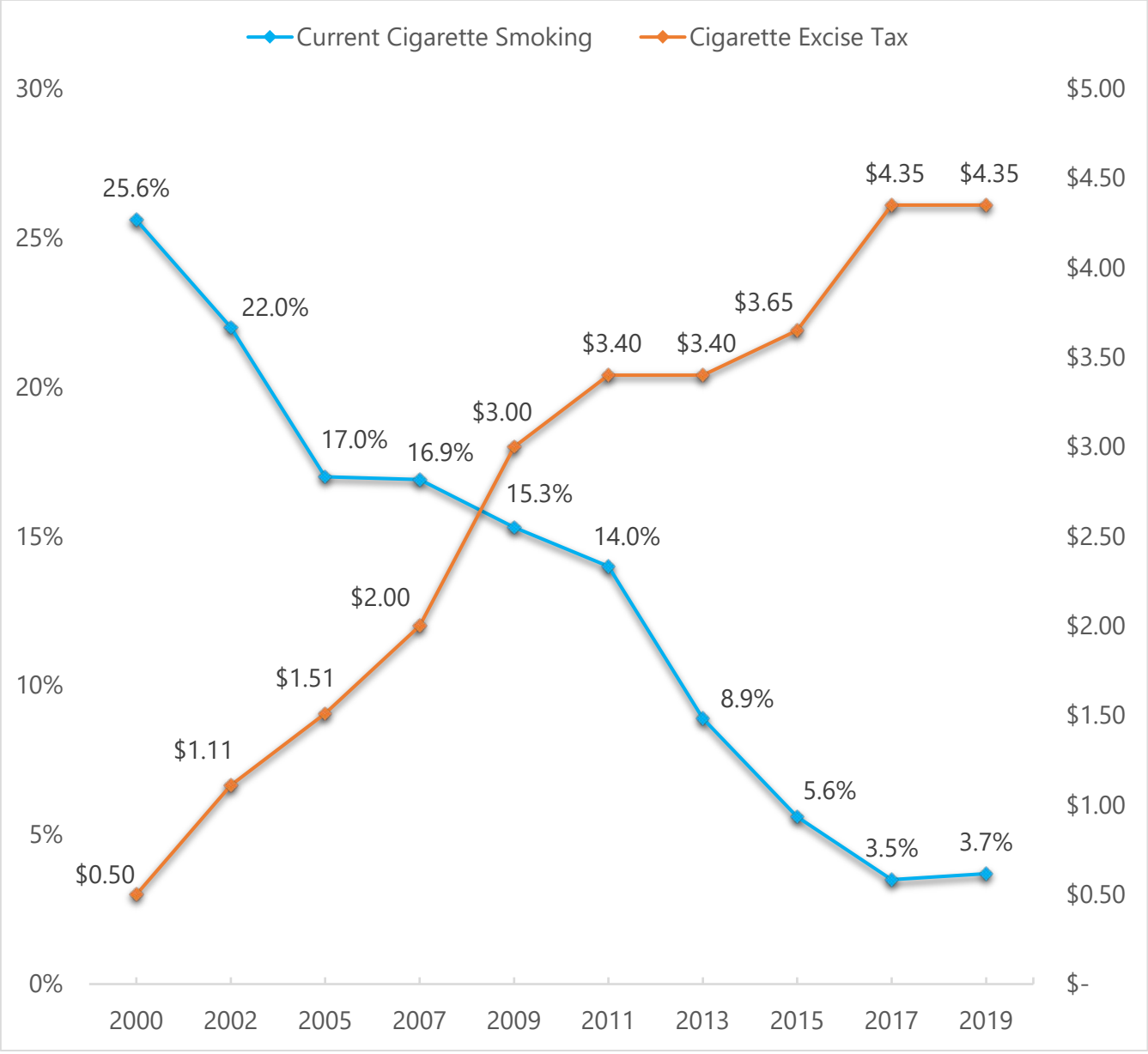


Figure 6 shows the trend in current cigarette smoking (blue line) versus the change in Connecticut's cigarette excise tax (orange line) from 2000 through 2019. In 2000, the cigarette smoking rate was 25.6% and the excise tax was $0.50 per pack of cigarettes. By 2019, the prevalence of smoking had decreased about 86% to 3.7%, and the excise tax had increased 870% to $4.35. Between 2017 and 2019, the cigarette smoking rate among high school students essentially did not change, nor did Connecticut's excise tax. Increasing taxes on cigarettes has been shown to be an effective way to decrease smoking among youth.[1] The tax increases in Connecticut may have played a crucial role in the drastic drop in the rate of cigarette smoking among its youth.

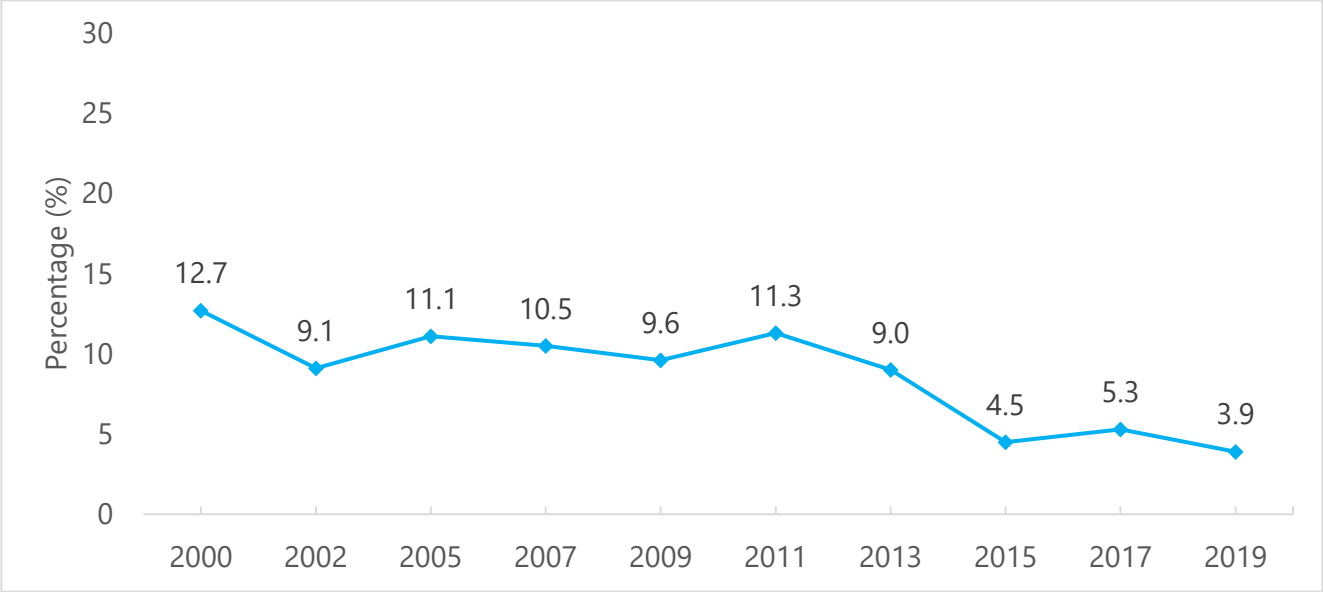
Figure 6. Trend in current cigarette smoking among high school students and the CT Cigarette Excise Tax (2000-2019)



[1] https://truthinitiative.org/research-resources/tobacco-prevention-efforts/importance-tobacco-taxes

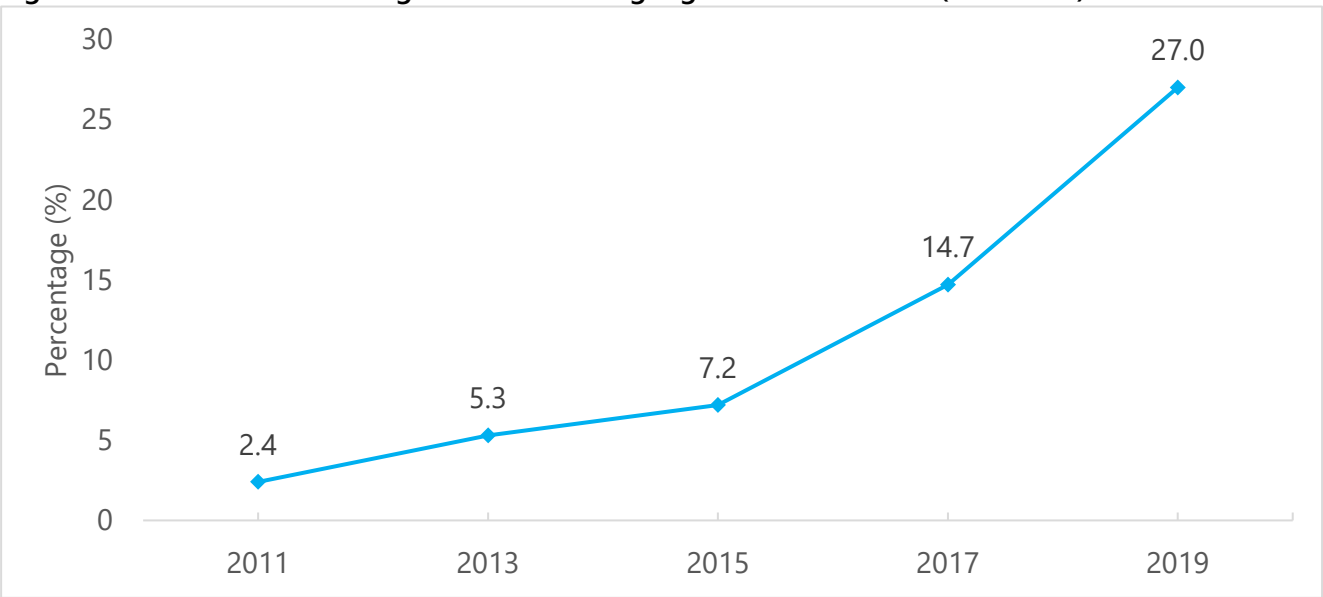
Cigars: Figure 7 shows the trend for current cigar smoking. From 2000 to 2019, current use of cigars, including little cigars and cigarillos, went down significantly among high school youth. About 4 of every 100 students (3.9%) reported in 2019 that they had smoked cigars in the past 30 days—a significant decrease from 12.7% in 2000. Between 2011 and 2019 the rate decreased significantly. The prevalence in 2011 was 11.3%. From 2017 to 2019, the rate went down, although the change was not significant. The prevalence in 2017 was 5.3%.

Figure 7. Trend in current cigar smoking among high school students (2000-2019)



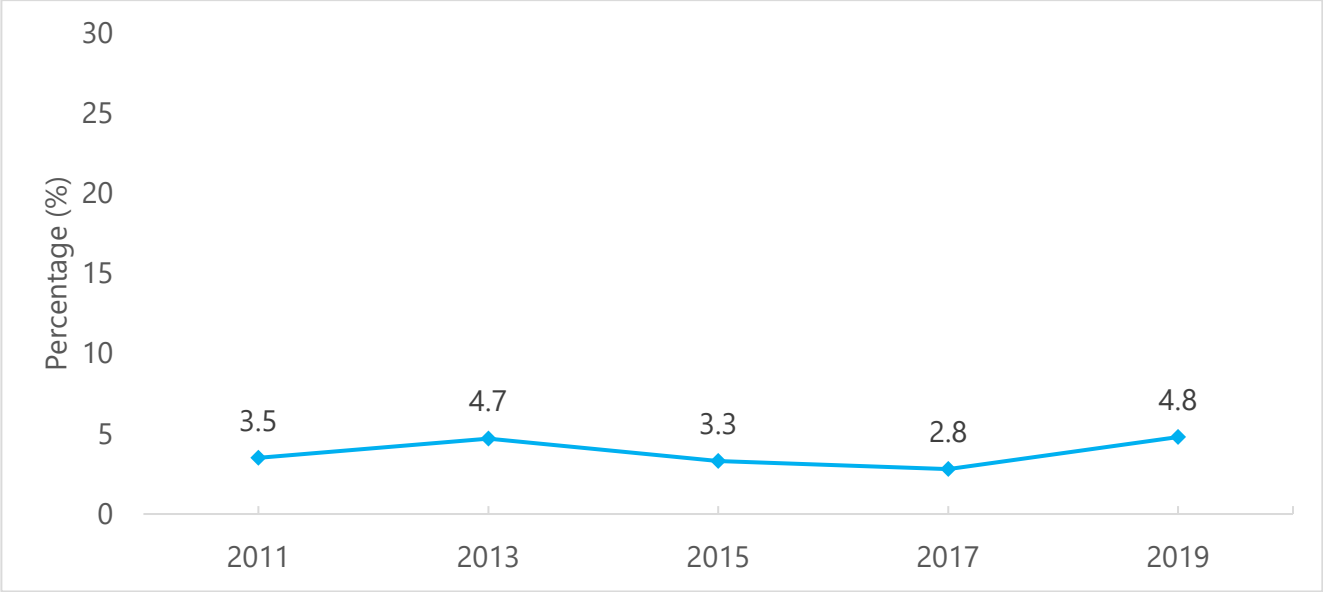
E-Cigarettes: Figure 8 shows the trend for current use of e-cigarettes. E-cigarettes, along with other types of vaping products, have been the most commonly used tobacco product among Connecticut high school students since 2015. From 2011 to 2019, current e-cigarette use increased steadily among high school youth. About 3 of every 10 students (27.0%) reported in 2019 that they had used e-cigarettes in the past 30 days—a significant increase from 2.4% in 2011. Between 2017 and 2019, the rate increased significantly. The prevalence in 2017 was 14.7%.

Figure 8. Trend in current e-cigarette use among high school students (2011-2019)



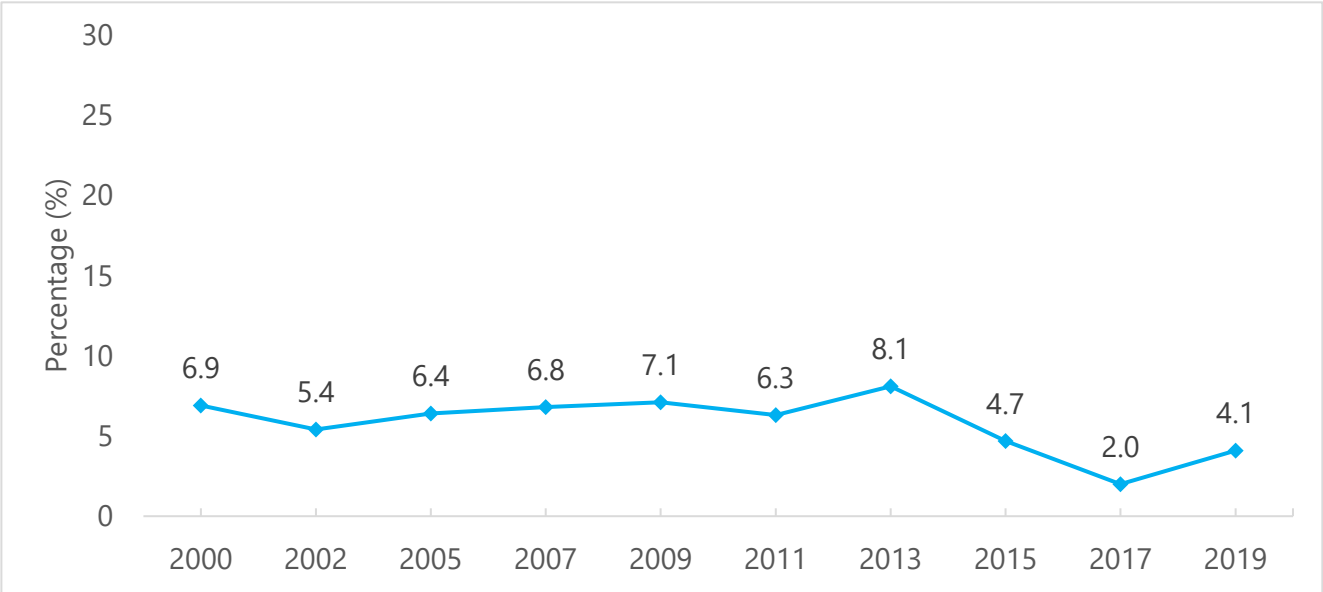
Hookahs: Figure 9 shows the trend for current hookah smoking. From 2011 to 2019, current use of hookahs (waterpipes) increased among high school youth, although the change was not significant. About 5 of every 100 students (4.8%) reported in 2019 that they had smoked from a hookah in the past 30 days. The prevalence was 3.5% in 2011. Between 2017 and 2019, the rate increased significantly. The prevalence in 2017 was 2.8%.

Figure 9. Trend in current hookah smoking among high school students (2011-2019)



Other Tobacco: Figure 10 shows the trend for current other tobacco use. From 2000 to 2019, current use of other tobacco, which includes smokeless tobacco and traditional pipes, decreased significantly. About 4 of every 100 students (4.1%) reported in 2019 that they had used other tobacco. The prevalence in 2000 was 6.9%. Between 2011 and 2019, the rate decreased but not significantly. The prevalence in 2011 was 6.3%. From 2017 to 2019, the rate increased significantly. The prevalence in 2017 was 2.0%.

Figure 10. Trend in current other tobacco use among high school students (2000-2019)



National Comparisons (2000-2019)

This section compares the trends found in the Connecticut YTS (2000-2017) and YRBS (2019) to those from the National Youth Tobacco Survey (NYTS). The NYTS gathered information, among high school students nationwide, on current use of all the tobacco products covered in this report. National data are not available for 2005 or 2007, since the survey was not conducted during those years, but it was administered in 2004 and 2006, so those years are used to compare to Connecticut's results for 2005 and 2007. On the charts, the years are displayed as 2004/05 and 2006/07.

Figures 11-17 show the tobacco use comparisons between Connecticut high school students and national averages.

Tobacco: Figure 11 shows the trend of current tobacco use among Connecticut and US high school students. From 2011 to 2019, when e-cigarettes are included, current (past 30 day) tobacco use went up significantly among students in our state and nationwide; the same significant increase was seen between 2017 and 2019.

Figure 11. Current use of tobacco, including e-cigarettes, by high school students, CT vs. US (2011-2019)

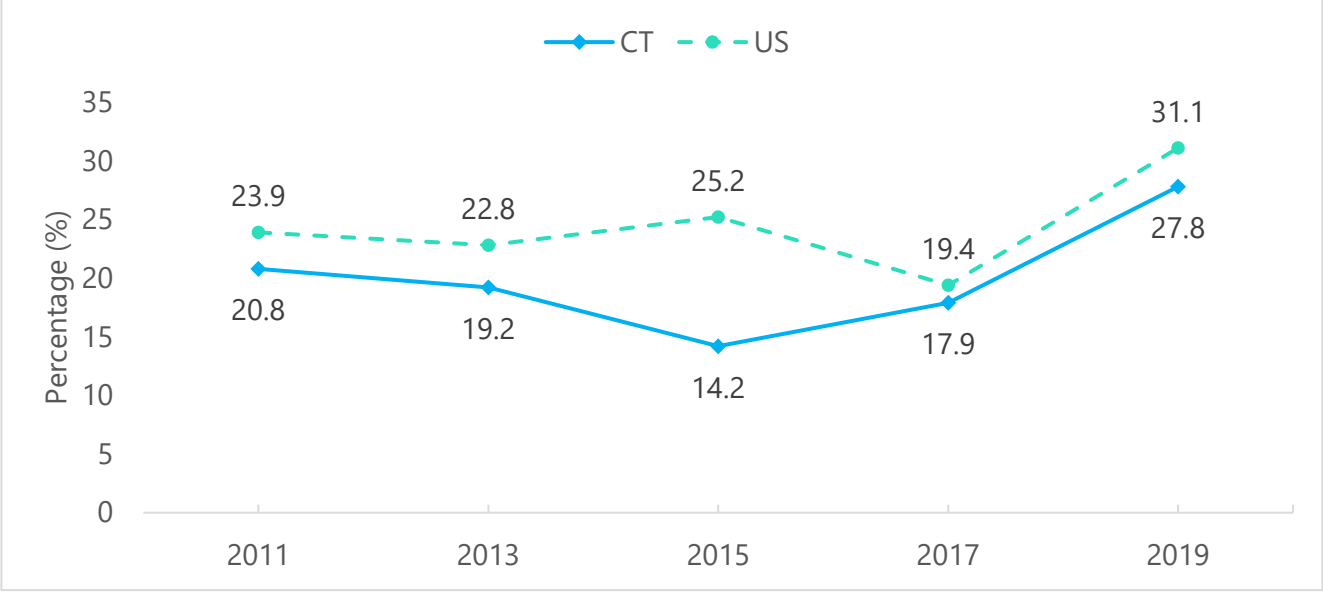
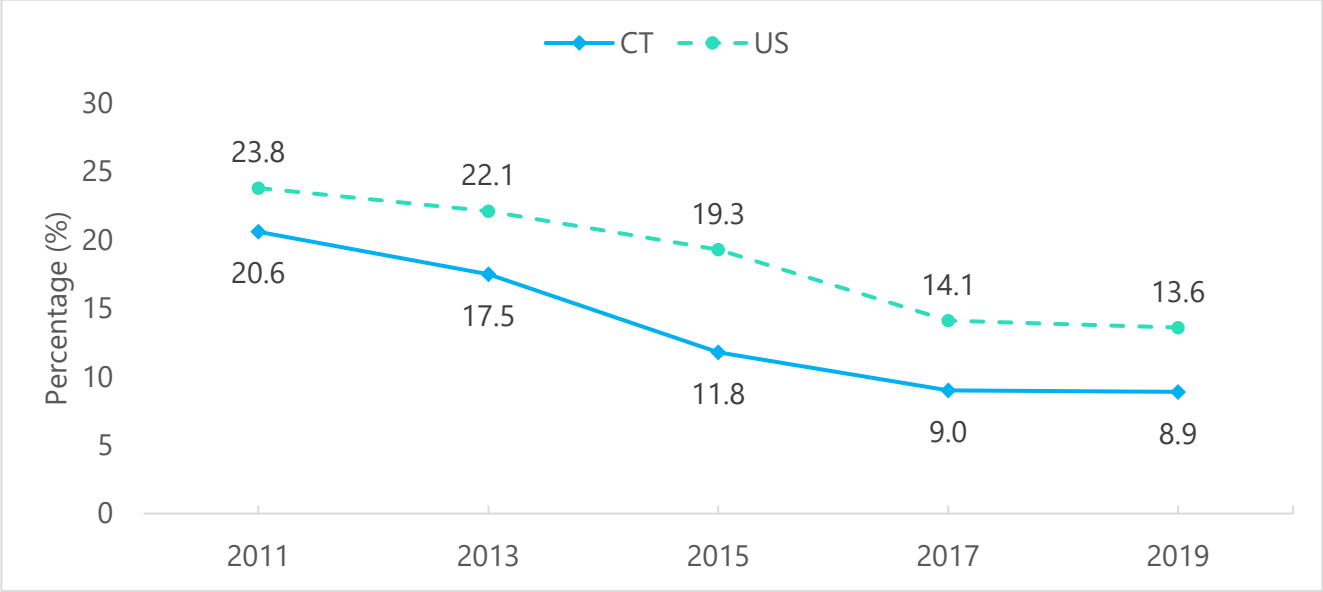


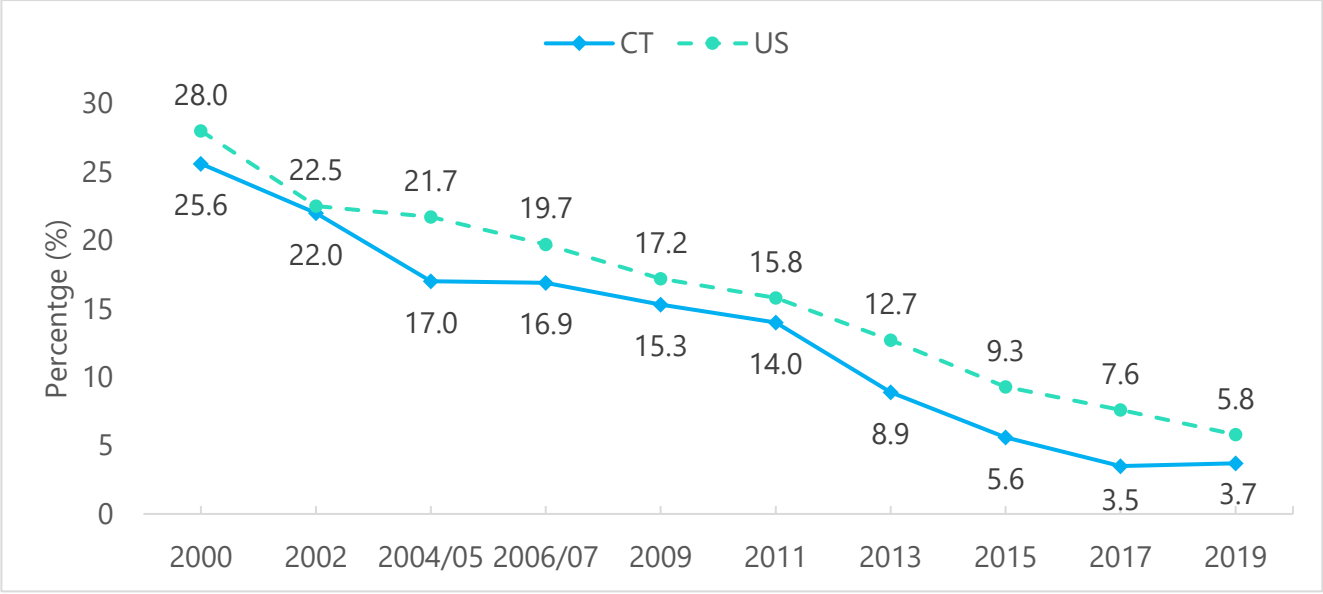
Figure 12 shows the comparison trend between Connecticut and US students when e-cigarettes are removed from the analysis. Between 2011 and 2019, without e-cigarettes, tobacco use decreased significantly in Connecticut and nationwide, and between 2017 and 2019, no significant change was seen in our state or nationally.

Figure 12. Current use of tobacco, not including e-cigarettes, by high school students, CT vs. US (2011-2019)



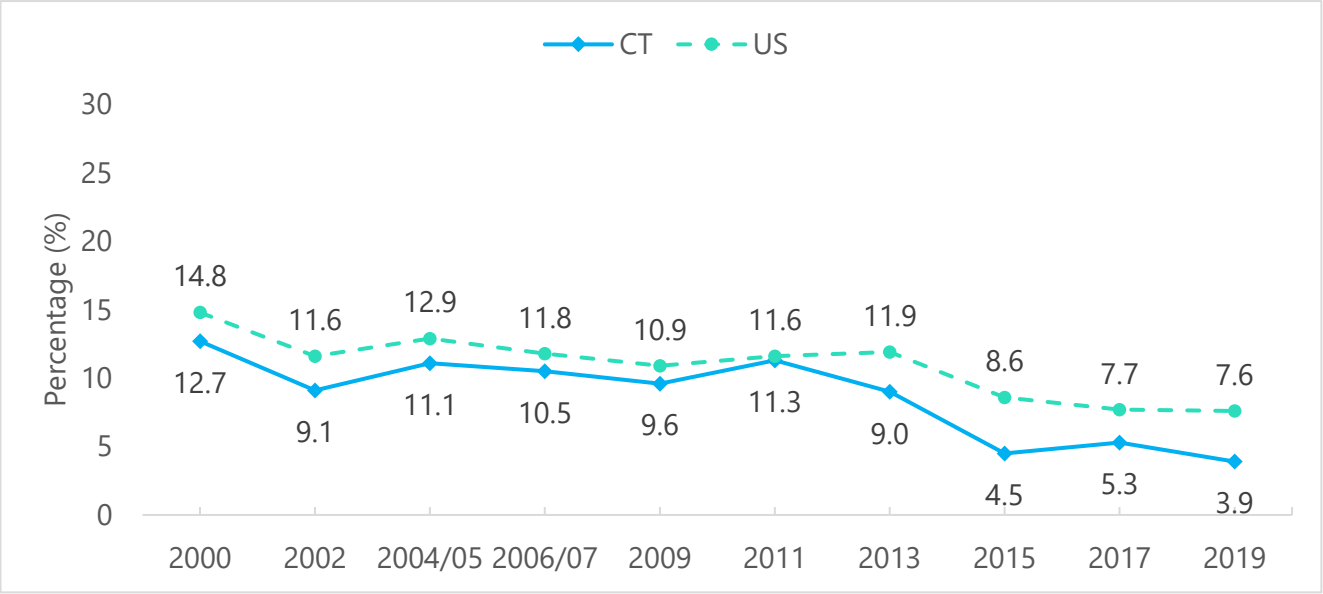
Cigarettes: Figure 13 shows the comparison trend for current cigarette smoking among Connecticut and US students. From 2000 to 2019, current cigarette use decreased significantly among high school youth in our state and nationwide. While a significant decline in the rate was seen between 2011 and 2019, from 2017 to 2019, there was no significant change in Connecticut or nationally.

Figure 13. Current use of cigarettes by high school students, CT vs. US (2000-2019)



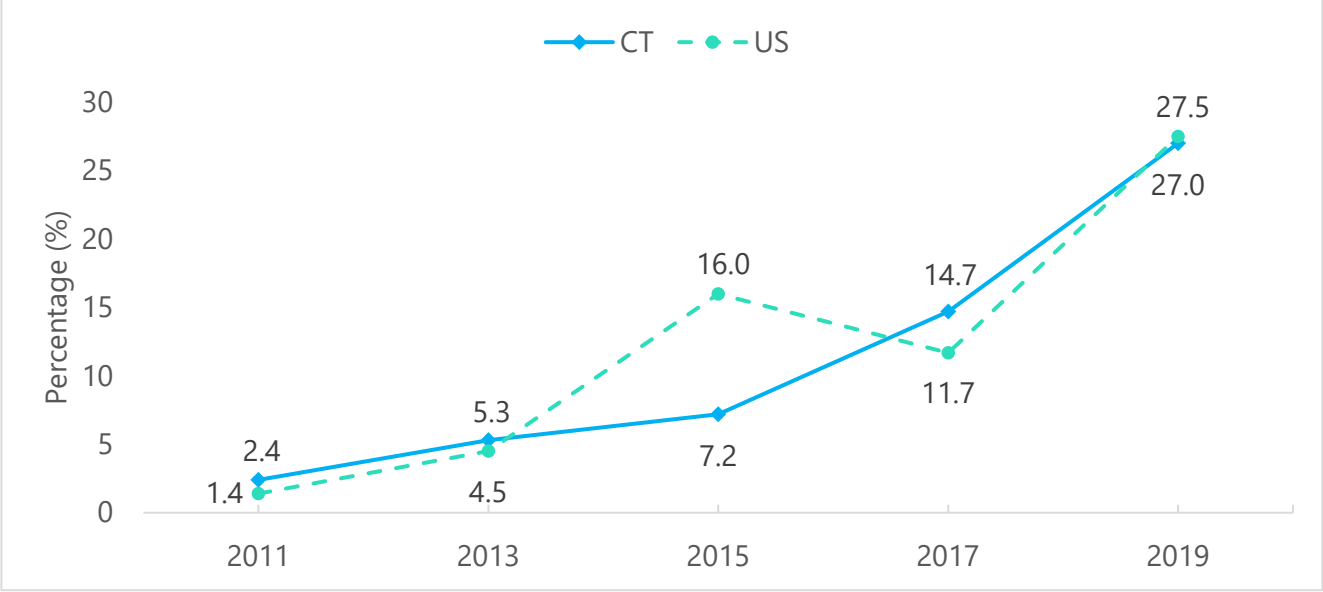
Cigars: Figure 14 shows the comparison trend for current cigar smoking. From 2000 to 2019, current use of cigars, including little cigars and cigarillos, went down significantly among high school youth in Connecticut and nationwide. For our state and nationally, between 2011 and 2019, the use rate decreased significantly, but from 2017 to 2019, no significant change occurred.

Figure 14. Current use of cigars by high school students, CT vs. US (2000-2019)



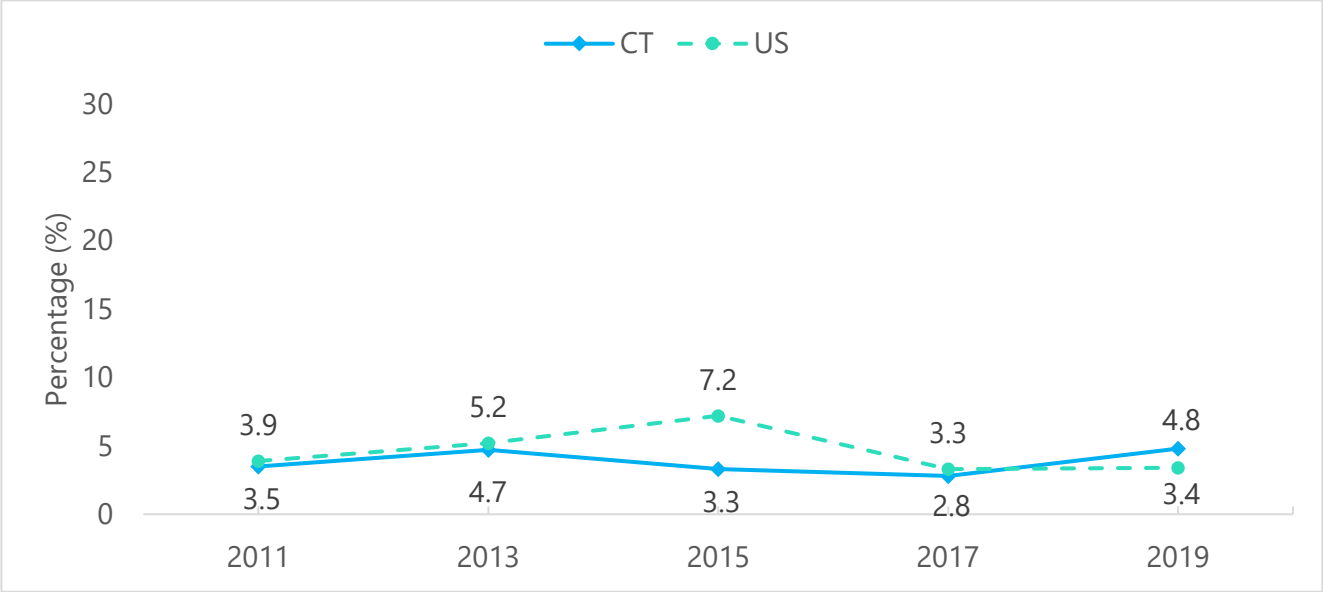
E-Cigarettes: Figure 15 shows the trend for current use of e-cigarettes for high school students in Connecticut and nationwide. In our state and the US, current e-cigarette use increased significantly from 2011 to 2019 and between 2017 and 2019.

Figure 15. Current use of e-cigarettes by high school students, CT vs. US (2000-2019)



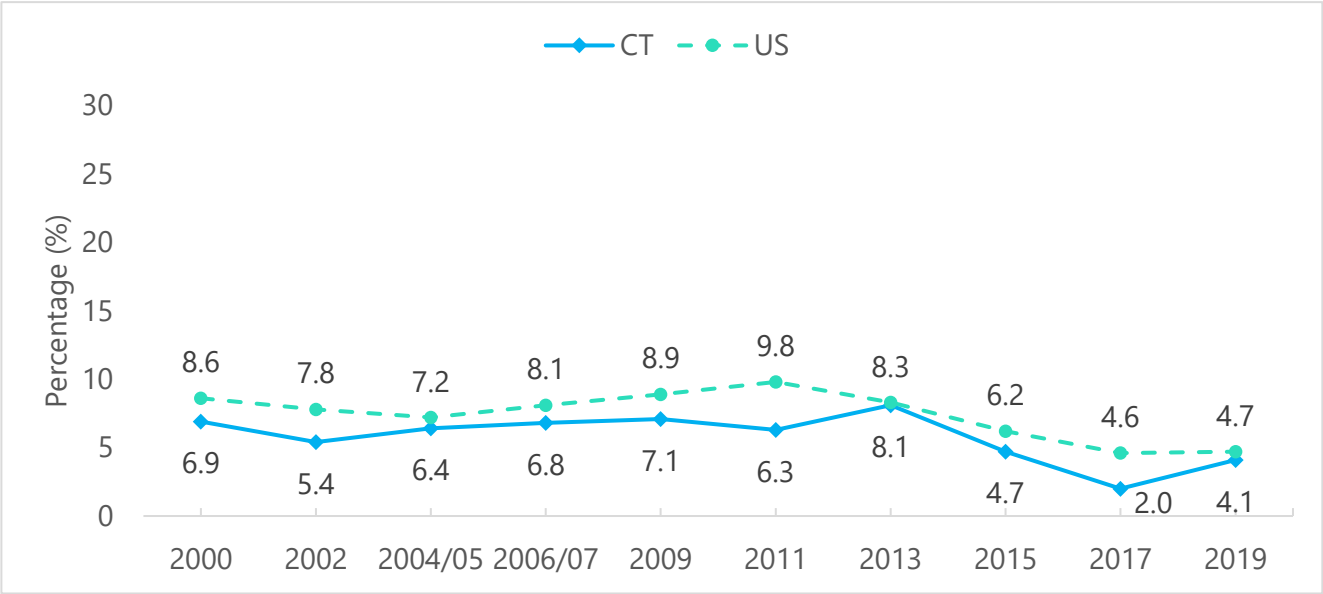
Hookahs: Figure 16 shows the comparison trend for current hookah smoking. From 2011 to 2019, current use of hookahs (waterpipes) increased among high school youth in Connecticut but decreased for students nationwide. Neither change was statistically significant. Between 2017 and 2019, the rate went up significantly for Connecticut students but remained relatively unchanged for students nationally.

Figure 16. Current use of hookahs by high school students, CT vs. US (2011-2019)



Other Tobacco: Figure 17 shows the trend for current other tobacco use. From 2000 to 2019, current use of other tobacco, which includes smokeless tobacco and traditional pipes, decreased significantly in Connecticut and nationwide. Between 2011 and 2019 the rate decreased for Connecticut students, but the change was not significant, while the decrease among students nationwide was statistically significant. From 2017 to 2019, the rate went up significantly for Connecticut students but remained relatively unchanged for students nationally.

Figure 17. Current use of other tobacco by high school students, CT vs. US (2000-2019)



Summary

This chapter examined tobacco use trends for high school students in Connecticut and comparisons to students nationwide. For Connecticut, when e-cigarettes are included in overall tobacco use, between 2011 and 2019, the rate increased significantly, and between 2017 and 2019, the prevalence also went up significantly; it increased 55%. If e-cigarettes are not included, since 2011, the rate of current tobacco use declined dramatically—a reduction of approximately 57%—while the rate was ostensibly unchanged between 2017 and 2019. A similar overall tobacco use trend was seen nationwide. In Connecticut, for individual tobacco products, between 2011 and 2019, use of cigarettes and cigars decreased significantly, while e-cigarette and other tobacco (i.e., smokeless and traditional pipes) use increased significantly, and hookah use increased but not significantly. Since 2017, there was a significant increase in the use of e-cigarettes, hookahs and other tobacco. No significant change in use rates for cigarettes or cigars was found during that period. Similar use trends were seen for most products among high school youth nationwide.

CHAPTER 4 – Marijuana

Questions about marijuana are included in the YRBS. Marijuana was described in the survey as also being called pot, weed or cannabis. This chapter presents data on the prevalence of marijuana and marijuana/tobacco co-use across demographics. It compares personal characteristics (such as academic achievement, absenteeism and risky behaviors) of students who have never used marijuana to those who currently use marijuana (within the last 30 days) or who had used marijuana in the past but not within the last 30 days (i.e., former users).

Prevalence of Marijuana and Marijuana/Tobacco Co-Use

Table 17 presents rates of current (last 30 days) marijuana use among high school students by sex, race/ethnicity, grade and sexual orientation. It shows overall marijuana use and rates based on whether students used marijuana but not tobacco or if they used both marijuana and tobacco. Tobacco use consisted of one or more of cigarettes, cigars, e-cigarettes, hookahs, smokeless or traditional pipe tobacco. Overall, a total of 21.7% of high school students reported currently using marijuana. Overall and across all demographic variables, current use of both marijuana and tobacco was more common than use of marijuana only. Females had slightly higher rates of overall marijuana use than males and were more likely to currently use both marijuana and tobacco, although the differences are not statistically significant. Whites and Hispanics were more likely to use marijuana and use increased by grade. Students who identify as gay, lesbian or bisexual were significantly more likely than heterosexual students to use marijuana and to co-use marijuana and tobacco.

Table 17: Current marijuana use and current marijuana/tobacco co-use among high school students, by sex, race/ethnicity, grade and sexual orientation

	Overall Marijuana Use	Marijuana Without Tobacco	Both Marijuana and Tobacco
	% (95% CI)	% (95% CI)	% (95% CI)
Overall	**21.7** (18.6 – 24.8)	**5.8** (3.9 – 7.6)	**15.9** (12.9 – 19.0)
Sex			
Male	**20.5** (17.6 – 23.4)	**6.2** (4.1 – 8.2)	**14.4** (11.4 – 17.3)
Female	**22.9** (18.6 – 27.2)	**5.3** (3.0 – 7.7)	**17.5** (13.4 – 21.5)
Race/Ethnicity			
Black	**15.5** (9.2 – 21.8)	* —	* —
Hispanic	**24.3** (19.4 – 29.2)	**8.1** (4.6 – 11.6)	**16.0** (12.8 – 19.2)
White	**22.4** (18.4 – 26.4)	**4.4** (2.9 – 6.0)	**18.0** (14.4 – 21.6)
Other	**20.6** (12.9 – 28.3)	* —	* —
Grade			
9th	**12.1** (9.5 – 14.7)	**2.3** (1.2 – 3.5)	**9.6** (7.3 – 11.8)
10th	**18.9** (13.2 – 24.6)	**4.1** (2.1 – 6.2)	**14.8** (9.7 – 19.9)
11th	**25.6** (21.3 – 29.8)	**8.8** (4.9 – 12.8)	**16.8** (12.5 – 21.0)
12th	**31.0** (26.9 – 35.1)	**8.2** (5.1 – 11.2)	**22.8** (18.2 – 27.4)
Sexual Orientation			
Heterosexual	**20.8** (17.9 – 23.6)	**5.9** (4.0 – 7.8)	**14.8** (12.1 – 17.6)
Gay, Lesbian, Bisexual	**33.1** (26.5 – 39.7)	**7.6** (2.9 – 12.3)	**25.5** (17.7 – 33.3)

*Prevalence estimates based on unweighted cases fewer than 50 or with an RSE greater than 30% are suppressed due to poor validity.

Notes: All Hispanic students are included in the Hispanic category. All other races are non-Hispanic. For definition of "Other", see Appendix.

Use of Marijuana by Personal Characteristics

Marijuana Use by Academic Achievement

Table 18 shows student-reported academic grades by marijuana use status, comparing never users, former users, and current users of marijuana. Overall, students who had never used marijuana reported higher academic achievement, while current users tended to report lower academic achievement. Students whose grades were mostly As and Bs were significantly more likely to have never used marijuana and significantly less likely to currently use marijuana than were students whose grades were mostly Cs or lower.

Table 18: Marijuana use among high school students, by reported academic achievement

	Never Users		Former Users		Current Users	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
Overall	**64.3**	(60.1 – 68.5)	**13.7**	(11.8 – 15.6)	**22.0**	(18.8 – 25.2)
Mostly As and Bs	**66.3**	(61.4 – 71.2)	**13.8**	(11.6 – 16.0)	**19.9**	(16.0 – 23.7)
Mostly Cs	**53.3**	(46.2 – 60.4)	**18.2**	(12.4 – 24.1)	**28.5**	(24.6 – 32.3)
Mostly Ds and Fs	**44.0**	(31.4 – 56.6)	**12.0**	(4.4 – 19.6)	**44.0**	(35.1 – 53.0)

Marijuana Use by School Absenteeism

Students were asked: "*During the past 30 days, on how many days did you miss school? (Count days you missed with or without permission, days you were sick, or days missed due to a school suspension.)"*. In this survey, no attempt was made to determine the reason for the absences.

Table 19 shows that absenteeism was associated with higher rates of marijuana use among high school students. Current use of marijuana was 14.6% for those students who had not missed any school in the past month compared to 24.7% for those with 1-4 days absence. Those who had been absent five or more days had the highest rates of marijuana use at 42.4%, which is nearly three times higher than among students who missed no school.

Table 19: Marijuana use among high school students, by school absence in the past 30 days

	Never Users		Former Users		Current Users	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
Overall	**64.3**	(60.1 – 68.5)	**13.7**	(11.8 – 15.6)	**22.0**	(18.8 – 25.2)
Missed 0 days	**73.0**	(68.2 – 77.9)	**12.3**	(9.7 – 15.0)	**14.6**	(11.3 – 18.0)
Missed 1-4 days	**59.8**	(54.8 – 64.7)	**15.5**	(12.5 – 18.5)	**24.7**	(20.7 – 28.7)
Missed 5 days or more	**43.2**	(30.5 – 55.9)	**14.4**	(5.1 – 23.6)	**42.4**	(31.3 – 53.5)

Marijuana Use by Poor Mental Health Days

On the survey, students were asked: "*During the past 30 days, on how many days was your mental health not good? (Mental health includes stress, depression, and problems with emotions.)"*

Table 20 shows that poor mental health was associated with higher rates of marijuana use among high school students. Current use of marijuana was 14.2% for students who had no poor mental health days in the past month compared to 34.6% for those with two weeks or more; this group had the highest rate of marijuana use. Students who had zero days of poor mental health were significantly less likely to use to marijuana than were students who reported that on at least 3 of the past 30 days their mental health was not good.

Table 20: Marijuana use among high school students, by frequency of poor mental health in the past 30 days

	Never Users		Former Users		Current Users	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
Overall	**64.3**	(60.1 – 68.5)	**13.7**	(11.8 – 15.6)	**22.0**	(18.8 – 25.2)
0 days	**75.3**	(70.3 – 80.3)	**10.5**	(7.7 – 13.3)	**14.2**	(10.2 – 18.2)
1 or 2 days	**70.1**	(64.3 – 76.0)	**13.4**	(10.0 – 16.9)	**16.4**	(11.3 – 21.6)
3-6 days	**59.7**	(51.5 – 67.9)	**15.5**	(9.6 – 21.3)	**24.8**	(19.1 – 30.6)
7-13 days	**57.8**	(49.5 – 66.1)	**16.2**	(12.5 – 19.8)	**26.0**	(18.5 – 33.5)
14 days or more	**48.3**	(42.8 – 53.7)	**17.2**	(14.2 – 20.1)	**34.6**	(29.7 – 39.4)

Marijuana Use by Depressive Symptoms

Students were asked: "*During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?*"

Table 21 shows that students who reported having felt sad or hopeless (i.e., had depressive symptoms) in the past 12 months were more than twice as likely than those who had not had depressive symptoms to have used marijuana in the past 30 days (34.5% and 16.2%, respectively). The difference is statistically significant.

Table 21: Marijuana use among high school students, by depressive symptoms in the past 12 months

	Never Users		Former Users		Current Users	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
Overall	**64.3**	(60.1 – 68.5)	**13.7**	(11.8 – 15.6)	**22.0**	(18.8 – 25.2)
No depressive symptoms	**72.2**	(67.9 – 76.4)	**11.7**	(9.3 – 14.1)	**16.2**	(13.1 – 19.3)
Had depressive symptoms	**46.9**	(40.8 – 53.1)	**18.6**	(16.3 – 21.0)	**34.5**	(29.1 – 39.8)

Use of Marijuana by Risk-Taking Behaviors

Marijuana Use by Frequency of Texting or E-Mailing While Driving

In the survey, students were asked the following question: "*During the past 30 days, on how many days did you text or e-mail while driving a car or other vehicle?*"

Table 22 shows that a higher frequency of texting or e-mailing while driving was associated with increased rates of marijuana use among high school students (among those who had driven a vehicle in the past 30 days). Current use of marijuana was 20.0% for students who had not texted or e-mailed while driving in the past month compared to 38.8% for those who had on 1-9 days. Those who texted or e-mailed 10 days or more had the highest rate of marijuana use at 63.1%. Marijuana use was significantly lower among students who had not texted or e-mailed while driving than it was for students who had on at least 1 day during the past 30 days.

Table 22: Marijuana use among high school students, by frequency of texting or e-mailing while driving in the past 30 days

	Never Users		Former Users		Current Users	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
Overall	**64.3**	(60.1 – 68.5)	**13.7**	(11.8 – 15.6)	**22.0**	(18.8 – 25.2)
0 days	**64.4**	(59.0 – 69.8)	**15.6**	(12.7 – 18.5)	**20.0**	(16.5 – 23.5)
1-9 days	**40.2**	(27.5 – 52.9)	**21.0**	(14.2 – 27.8)	**38.8**	(31.4 – 46.1)
10 days or more	**23.1**	(13.9 – 32.4)	*	—	**63.1**	(49.5 – 76.7)

*Prevalence estimates based on unweighted cases fewer than 50 or with an RSE greater than 30% are suppressed due to poor validity.

Marijuana Use by Frequency of Carrying a Weapon on School Property

Students were asked: "*During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club on school property?*"

Table 23 shows that students who reported having carried a weapon one or more times on school property in the past month were more than 2.5 times more likely than those who had not carried a weapon to be current marijuana users (54.1% and 20.9%, respectively). The difference is statistically significant.

Table 23: Marijuana use among high school students, by frequency of carrying a weapon on school property in the past 30 days

	Never Users		Former Users		Current Users	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
Overall	**64.3**	(60.1 – 68.5)	**13.7**	(11.8 – 15.6)	**22.0**	(18.8 – 25.2)
0 days	**65.2**	(61.2 – 69.3)	**13.8**	(11.9 – 15.7)	**20.9**	(18.0 – 23.9)
1 day or more	**34.3**	(19.2 – 49.4)	*	—	**54.1**	(38.4 – 69.8)

*Prevalence estimates based on unweighted cases fewer than 50 or with an RSE greater than 30% are suppressed due to poor validity.

Marijuana Use by Frequency of Self-Harming

Students were asked: "*During the past 12 months, how many times did you do something to purposely hurt yourself without wanting to die, such as cutting or burning yourself on purpose?*"

Table 24 shows that self-harming 2 or more times in the past 12 months was associated with significantly higher rates of marijuana use among high school students. Current use of marijuana was 19.1% for students who had not self-harmed in the past year compared to 37.9% for those who harmed themselves 2-5 times. Those who harmed themselves 6 times or more in the past 12 months had the highest rate of marijuana use at 48.6%.

Table 24: Marijuana use among high school students, by frequency of self-harming in the past 12 months

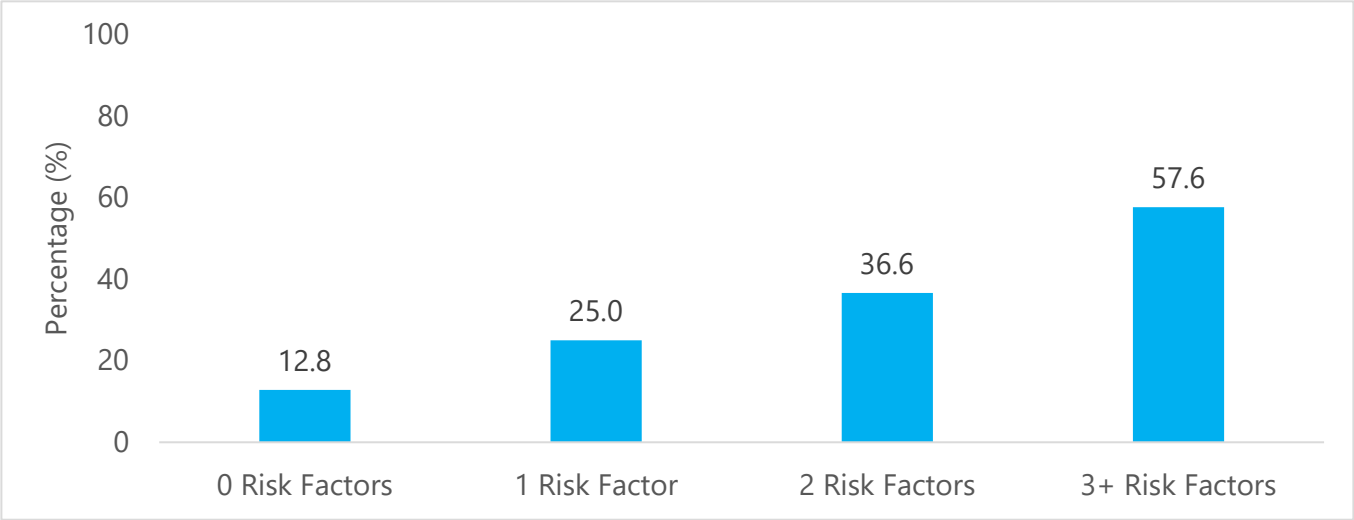
	Never Users		Former Users		Current Users	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
Overall	**64.3**	(60.1 – 68.5)	**13.7**	(11.8 – 15.6)	**22.0**	(18.8 – 25.2)
0 times	**66.9**	(62.8 – 70.9)	**14.0**	(11.7 – 16.3)	**19.1**	(16.4 – 21.8)
1 time	**56.8**	(42.6 – 70.9)	*	—	**30.9**	(17.2 – 44.7)
2-5 times	**49.3**	(38.2 – 60.4)	**12.8**	(6.0 – 19.6)	**37.9**	(26.2 – 49.6)
6 times or more	**38.6**	(25.7 – 49.7)	**12.8**	(6.6 – 18.9)	**48.6**	(37.5 – 59.8)

*Prevalence estimates based on unweighted cases fewer than 50 or with an RSE greater than 30% are suppressed due to poor validity.

Use of Marijuana by Risk Factors

Figure 18 shows analyses of marijuana use prevalence by risk factors among high school students. The bars show the prevalence for students who had reported using marijuana in the last 30 days. Risk factors included (1) low academic achievement (receiving mostly Ds or Fs); (2) school absenteeism (missing 5 days or more in the past 30 days); (3) poor mental health on 14 days or more in the past 30 days; (4) depressive symptoms in the past 12 months; (5) texting or e-mailing while driving on 10 days or more in the past 30 days; (6) carrying a weapon on school property at least once in the past 30 days; and (7) self-harming 6 times or more in the past 12 months. Students with zero risk factors are compared to those with one, two and three or more risk factors. Prevalence was highly correlated with the number of risk factors for current use of marijuana. Marijuana use increases as the number of risk factors increases. Students with no risk factors are significantly less likely than students with one or more to report current marijuana use.

Figure 18. Prevalence of current marijuana use among high school students, by number of risk factors



Summary

Current (last 30 day) marijuana use among Connecticut high school students was about 22%. Among those who used marijuana in the last 30 days, about 73% also used some form of tobacco, which includes one or more of cigarettes, cigars, e-cigarettes, hookahs, smokeless or traditional pipe tobacco. Across all demographics (where statistically valid estimates are available), co-use of marijuana and tobacco was more prevalent than marijuana use alone. Among students who are current marijuana users, by demographic, higher rates of co-use were found among females (76%); Whites (80%); 9th graders (79%); and students who identify as gay, lesbian or bisexual (77%). As seen among high school students who use tobacco, students who have other health-risk factors and engage in risky behaviors are significantly more likely than their counterparts without these personal characteristics to have used marijuana in the last 30 days.

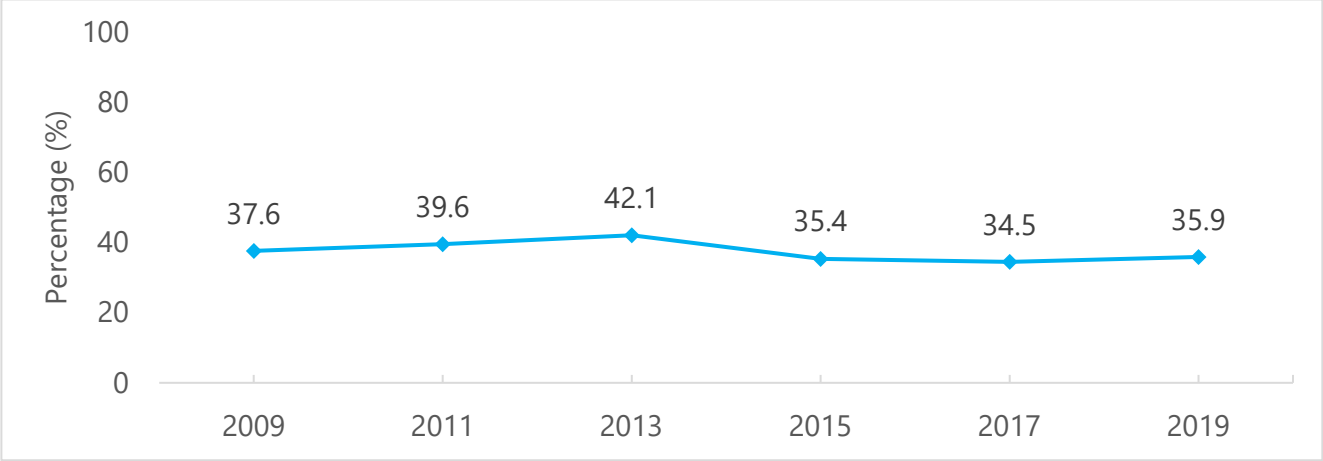
CHAPTER 5 – Trends of Marijuana Use Among High School Students

Connecticut High School Marijuana Use Trends (2009-2019)

Figures 19 and 20 examine the trends in use of marijuana among high school students from 2009-2019. Each trend graph graphically describes whether the prevalence of use has increased, decreased or stayed the same over a 10-year period, and shows the weighted percentage of students who reported use by year. Furthermore, it will be noted whether there was a statistically significant change in prevalence between 2017 and 2019.

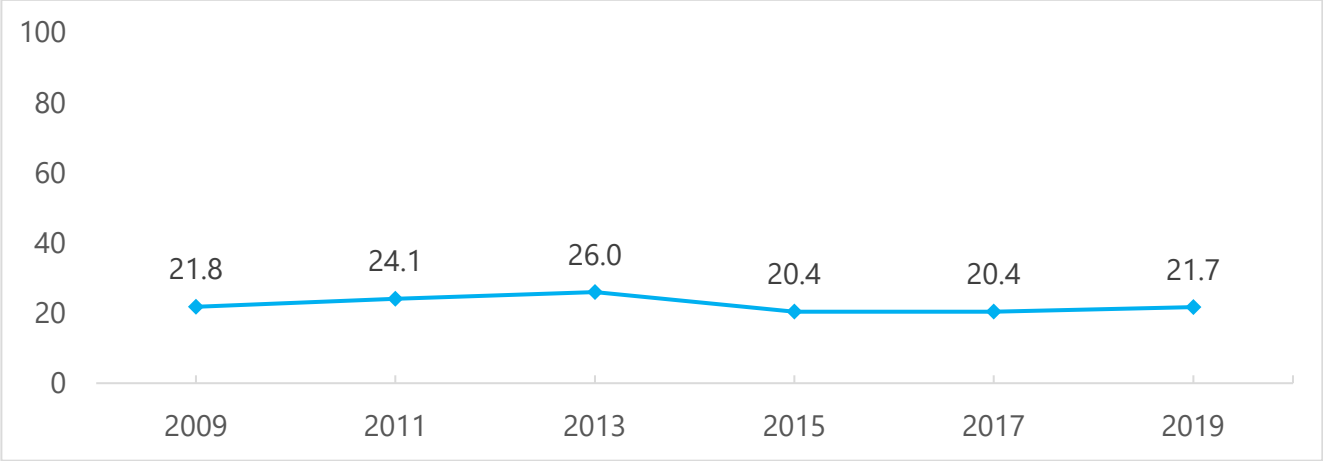
Ever Marijuana Use: Figure 19 shows the trend for ever marijuana use. From 2009 to 2019, ever use of marijuana decreased significantly from 37.6% to 35.9%. Between 2017 and 2019 the prevalence increased, but the change was not significant. The rate in 2017 was 34.5%.

Figure 19. Trend in ever marijuana use among high school students (2009-2019)



Current Marijuana Use: Figure 20 shows the trend for current marijuana use. From 2009 to 2019, current use of marijuana essentially did not change. In 2009, the prevalence was 21.8%, and in 2019, it was 21.7%. Between 2017 and 2019, use decreased slightly, but the change was not significant. The rate in 2017 was 20.4%.

Figure 20. Trend in current marijuana use among high school students (2009-2019)



CONCLUSION

Overall Findings for 2019

Results from the 2019 Connecticut Youth Risk Behavior Survey (YRBS), concerning tobacco and marijuana use among high school students, were encouraging as well as troubling. From 2011 (when data collection on hookahs and e-cigarettes began) to 2019, there were some substantial changes in prevalence of use. While the reduction of cigarette and cigar smoking was significant and promising, the increase in use of e-cigarettes and other electronic vaping products was staggering and worrisome. Between 2011 and 2019, a decrease of 74% in cigarette use and 65% in cigar use occurred. During that same period, e-cigarette use increased 1125%. E-cigarettes have been the most widely used tobacco product among Connecticut high school youth since 2015.

Eliminating the Tobacco Problem in Connecticut

Risk factors and costs associated with tobacco use have a widespread impact on all Connecticut residents. The problem remains that cigarette smoking is the leading cause of preventable death and disability in the United States, despite a significant decrease in the number of people who smoke, especially in Connecticut. According to the Centers for Disease Control and Prevention (CDC), more than 16 million Americans have at least one disease caused by smoking. If youth were prevented from starting tobacco use and every person who smokes were to quit, approximately $170 billion in direct medical costs could be saved each year.[2]

State of Connecticut Key Facts for 2019

In 2019, 27.8% of Connecticut high school youth reported currently using any tobacco product, which includes e-cigarettes. Current cigarette smoking prevalence was 3.7% for youth and 12.1% for adults (aged 18 years or older). From the most recent estimates available, about 4,900 adults die from smoking-related illnesses each year in Connecticut and approximately $2.0 billion was spent on healthcare costs due to smoking.[3]

The Connecticut Department of Public Health's Role in Reducing Tobacco Use and Related Costs

For fiscal year 2021, Connecticut received nearly $1.2 million from the CDC for advancing its tobacco prevention and control activities. The CDC describes tobacco prevention and control activities as a public health "best buy", so the Connecticut Department of Health (DPH) has adopted an evidence-based statewide tobacco control program that is comprehensive, sustained and accountable. This type of program has been shown to reduce the number of people who smoke, as well as decrease tobacco-related diseases and deaths. For every dollar Connecticut spends on tobacco prevention, tobacco-related healthcare and hospitalization expenditures can be reduced by as much as $55.[4] Our state's continued investment is vital to reduce youth and adult tobacco use. In alignment with the CDC's National Tobacco Control Program Goals, our comprehensive tobacco control program coordinates state and local initiatives to 1) prevent initiation of tobacco products, including e-cigarettes and other emerging products, among youth and young adults; 2) promote cessation and assist tobacco users to quit; 3) protect people from secondhand smoke; and 4) advance health equity by identifying and eliminating commercial tobacco product-related inequities and disparities.

[2,3,4]Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion; "Extinguishing the Tobacco Epidemic in Connecticut"; www.cdc.gov/tobacco/stateandcommunity/state-fact-sheets/connecticut/index.html

The Tobacco Control Program also works with other chronic disease programs at DPH to collectively address the more than 2 million Connecticut residents who suffer from one or more chronic diseases, many of which can be attributed to tobacco use, such as cardiovascular disease and cancer. Chronic disease programs collaborate within DPH and with partners to make healthy choices, easier choices. Connecticut DPH strives to lessen the burden of chronic diseases and their risk factors through multiple CDC cooperative agreements and grants, including CDC's Office on Smoking and Health's (OSH) National and State Tobacco Control Program (NTCP), which provides funds to states to achieve the comprehensive tobacco control efforts.

The Connecticut Tobacco Quitline and Tips® Campaign

Despite significant progress in the State of Connecticut and across the United States, tobacco use remains the leading cause of death and disease. The promising news is that in 2020, data from Connecticut's Behavioral Risk Factor Surveillance Survey showed that more than 6 out of 10 adult cigarette smokers in the state tried to quit smoking cigarettes in the past year because they wanted to quit smoking for good. Since 2012, CDC has been educating the public about the consequences of smoking and exposure to secondhand smoke and encouraging smokers to quit and help prevent initiation of tobacco use through a federally funded, national tobacco education campaign, **Tips From Former Smokers.**®

The campaign features former smokers suffering with the real consequences from smoking. The **Tips®** campaign connects smokers with resources to help them quit, including a Quitline number (1-800-QUIT-NOW, 1-855-DEJELA-YA), which routes callers to their state Quitline. DPH supplements the national **Tips®** campaign with state-produced media campaigns that target specific disparate populations with prevention and cessation messages.

DPH funds the Connecticut Quitline to provide evidence-based tobacco cessation services at no cost to all Connecticut residents 13 years of age and over. The Quitline is available 24 hours a day, 7 days a week, and offers proactive telephone counseling, web-based programs, text messaging, and specialized programs for pregnant women and youth. Cessation medications are also provided to persons 18 years of age and older. These services have been shown to be effective in improving health outcomes and reducing healthcare costs. DPH is currently working to offer additional digital quit services that may be more appealing to youth and young adults.

Furthermore, DPH advocated for the legislation that raised the legal age to buy tobacco in Connecticut from 18 to 21. This is a key factor in helping prevent initiation of tobacco use among youth.

Public Health Response to Secondhand Smoke Exposure in Connecticut

There is no safe level of exposure to secondhand tobacco smoke. It has been shown to cause stroke, lung cancer and coronary heart disease in adults. Connecticut provides technical assistance to communities, multi-unit housing operators, hospitals, businesses, and colleges and universities that want to implement tobacco-free polices to protect residents, patients, customers, staff and students from secondhand smoke and aerosol from vaping products, such as e-cigarettes. In addition to protecting the health of non-tobacco users, tobacco-free policies have been shown to reduce initiation of tobacco use among youth and help tobacco users to quit.

In Connecticut, as of February 2022, at least 16 colleges and universities have a campus tobacco-free policy, and of the 108 public housing authorities, a minimum of 62 have adopted smoke-free policies for all

housing units and common areas. Additionally, at least 15 towns and cities have enacted ordinances that prohibit all tobacco use in municipal parks and recreational areas.

To further protect the people of Connecticut, the state has passed comprehensive smoke-free indoor air legislation that bans smoking and use of vaping products in worksites, restaurants, bars, and any area of public and private school buildings and grounds (grades K-12). In addition, the state recently enacted legislation banning smoking and vaping in outside areas that are within 25 feet of doors, windows or air intake vents of any facilities where smoking and vaping are prohibited.

APPENDIX

Race/Ethnicity

Race/Ethnicity was determined using two questions. The first question asked, "Are you Hispanic or Latino?". The second question asked, "What is your race?", and the selection options were (A) American Indian or Alaska Native; (B) Asian; (C) Black or African American; (D) Native Hawaiian or Other Pacific Islander; and (E) White. Students could select one or more responses to this second question. For this report, all students who answered "Yes" to the Hispanic/Latino question are "Hispanic", regardless of their answer to the second question. Students who answered "No" or did not answer are "non-Hispanic", and their race is based on their answer, if any, to the second (i.e., race) question. Due to low numbers of non-Hispanic American Indians/Alaska Natives; Asians; Native Hawaiians/Other Pacific Islanders; and multi-racial students, they were combined to form an "Other" race category. Therefore, there are four race/ethnicity demographic categories used in this report: (1) Black (2) Hispanic (3) White (4) Other.

Survey Sample

Table 25 provides information about the students in the 2019 survey sample.

Table 25. Sample Demographics

Demographic Characteristics	Unweighted Frequency	(%) Percentage
Total	2,015	100
Sex		
Male	1,025	50.9
Female	979	48.6
missing	11	0.5
Race/Ethnicity		
Black*	188	12.3
Hispanic	616	22.8
White*	977	55.8
Other*	211	8.0
missing	23	1.1
Grade		
9th	567	25.9
10th	510	25.4
11th	466	24.1
12th	459	24.0
ungraded or other grade	4	0.2
missing	9	0.4
Age		
14 years or younger	333	15.7
15 years	513	24.2
16 years	445	22.9
17 years	485	25.2
18 years or older	230	11.5
missing	9	0.4

*non-Hispanic

Note: Due to rounding, total percentages might not equal 100.