

2018 New Jersey Youth Tobacco Survey

A Statewide Report

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Highlights

The 2018 New Jersey Youth Tobacco Survey assessed ever (i.e., any use, even 1 time) and current (i.e., on 1 or more of the previous 30 days) use of cigarettes, cigars, smokeless tobacco (SLT), snus, hookah, and electronic cigarettes (e-cigarettes), as well as exposure to secondhand smoke and experience with tobacco prevention and cessation.

Among New Jersey public high school students in the 2018 school year:

- 40.8% had ever sampled at least one of the above listed tobacco products.
- The most common product ever tried was e-cigarettes (28.7%), followed by hookah (14.1%), cigars (13.3%), and cigarettes (11.6%).
- 21.7% were currently using at least one tobacco product.
- 7% (about a third of current tobacco users) were currently using 2 or more tobacco products.
- The most common currently used products were e-cigarettes (17.8%), hookah (6.4%), cigars (4%), and cigarettes (2.9%).
- 2.2% (about 65.1% of current cigar smokers) were currently smoking a flavored cigar product.
- 2% (about 87% of SLT users) were currently using a flavored SLT product.
- 38% had experienced exposure to secondhand smoke in public spaces.
- 23.1% had experienced exposure to secondhand smoke at school.
- 44.6% had been taught in school in the past year why they should not use tobacco.
- 40.1% of those who had seen a healthcare professional in the previous year were asked about tobacco use.
- 34.6% of those who had seen a healthcare professional in the previous year were advised against tobacco use.
- 50.7% of current cigarette smokers expressed a desire to quit.

Background and Methodology

Since 1999, New Jersey has conducted biennial surveillance of tobacco use among New Jersey youth. The New Jersey Youth Tobacco Survey (NJYTS) is an adaptation of the National Youth Tobacco Survey (NYTS) developed by the Centers for Disease Control and Prevention (CDC), consisting of both CDC-recommended “core” questions and “state-added questions” specific to New Jersey. The 2018 NJYTS included questions about ever and past-30-day use of cigarettes, cigars, smokeless tobacco (SLT), hookah, snus, and electronic cigarettes (e-cigarettes), as well as questions that assess susceptibility to tobacco use, exposure to secondhand smoke, and access to tobacco. Questions about the use of bidis were excluded from this iteration of the survey so measures of any or current tobacco use no longer include bidi use.

The NJYTS employed a 2-stage cluster design to obtain a representative sample of students in grades 9-12. The first-stage sampling frame consisted of all public schools in New Jersey enrolling students in grades 9, 10, 11, or 12, and schools were selected with a probability proportional to size (PPS), without replacement, for a total of 50 schools. Subsequently, a simple random sample of 3 to 4 mandatory classes was selected within each participating school, and all students in selected classes were selected for participation. Thirty-eight of 50 selected schools (76%) agreed to participate and 4,223 of 4,820 (86.8%) selected students consented and completed questionnaires; 4,183 total surveys were usable. The overall participation rate, calculated by multiplying the school participation rate by the student participation rate, was 66.0%. The data were weighted to adjust for non-response and the varying probabilities of selection, thus providing results representative of New Jersey's 9th-12th grade student population.

Prevalence estimates and 95% confidence intervals (CI) were computed using SAS 9.4 (SAS Institute, Cary, NC) survey procedures, which account for the complex sample design of the survey.

Results

Results from the 2018 New Jersey Youth Tobacco Survey are presented below.

Ever-Use of Tobacco Products

The 2018 NJYTS assessed ever-use of cigarettes, cigars, smokeless tobacco (SLT), snus, hookah, and electronic cigarettes (e-cigarettes), defined as any use (even just one time) of a respective product. Overall, 40.8% of high school students had ever used at least one of these tobacco products. Ever-use of any tobacco product was significantly more prevalent among Hispanic students (48.0%), followed by non-Hispanic white (41.5%) and non-Hispanic black (37.4%) students. Prevalence increased consistently with grade level from 27.8% among 9th graders to 52% among 12th graders and was slightly more prevalent among females (42.1%) than males (39.6%).

Table 1. Ever-Use of Tobacco Products, NJYTS 2018

	Cigarette	Cigar	SLT	Hookah	Snus	E-cig
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Gender						
Male	12.5 (10.6-14.4)	16.4 (14.4-18.4)	7.7 (6.5-9.0)	13.8 (12.0-15.5)	4.3 (3.1-5.5)	27.8 (25.1-30.5)
Female	10.7 (9.0-12.4)	10.2 (8.7-11.7)	3.9 (2.9-5.0)	14.5 (13.0-16.1)	4.1 (3.0-5.1)	29.6 (26.9-32.3)
Race/Ethnicity						
White	11.1 (9.3-12.9)	14.2 (12.1-16.3)	6.6 (5.4-7.8)	9.5 (8.1-10.9)	4.0 (3.0-5.1)	33.8 (31.1-36.6)
Black	10.6 (7.6-13.6)	13.3 (9.7-16.8)	6.3 (3.7-8.9)	15.5 (12.0-19.0)	5.1 (2.6-7.7)	20.5 (16.8-24.2)
Hispanic	15.7 (13.5-17.8)	13.7 (11.7-15.7)	4.9 (3.8-6.1)	24.7 (22.0-27.5)	4.6 (3.3-5.9)	28.8 (25.8-31.8)
Other	6.5 (3.9-9.0)	8.0 (5.7-10.3)	3.6 (1.8-5.3)	9.4 (6.3-12.6)	2.6 (1.3-4.0)	17.2 (13.4-21.0)
Grade						
9	5.1 (3.6-6.6)	7.6 (5.9-9.3)	4.2 (2.7-5.6)	7.9 (6.0-9.8)	3.4 (1.5-5.3)	18.5 (15.9-21.1)
10	9.1 (6.8-11.4)	10.1 (7.8-12.4)	4.5 (3.1-6.0)	12.6 (9.6-15.6)	3.6 (2.2-5.0)	28.7 (24.8-32.5)
11	13.0 (9.9-16.1)	16.0 (12.9-19.2)	6.4 (4.4-8.4)	15.7 (12.3-19.2)	4.3 (3.0-5.6)	31.3 (26.8-35.7)
12	19.1 (16.4-21.8)	19.7 (17.4 – 22.1)	8.0 (6.7-9.3)	20.4 (17.8-23.0)	5.2 (3.7-6.7)	36.7 (33.2-40.2)
Overall	11.6 (10.3-13.0)	19.7 (17.4 – 22.1)	5.9 (5.1-6.6)	14.2 (12.9-15.4)	5.2 (3.7-6.7)	28.7 (26.8-30.6)

SLT: Smokeless tobacco (Snuff or Chew); E-cig: Electronic cigarette; CI: 95% Confidence Interval

Ever-use prevalence estimates and 95% confidence intervals (CI) are presented overall and by gender, race/ethnicity, and grade level for each product type in **Table 1**. The most common tobacco products ever tried by New Jersey high school students were e-cigarettes (28.7%), followed by cigarettes (11.6%), cigars (13.3%), and hookah (14.2%). Notably more males than females had tried cigars (16.4% vs 10.2%) and SLT (7.7% vs 3.9%). By race/ethnicity, ever-use of cigarettes (15.7%) and hookah (24.7%) were most prevalent among Hispanic students; e-cigarettes were most prevalent among non-Hispanic white students (33.8%). In general, ever-use prevalence increased with grade level for all products, with several notable differences observed when comparing 9th to 12th graders including cigarettes (5.1% vs. 19.1%), cigars (7.6% vs 19.7%), hookah (7.9% vs 20.4%), and e-cigarettes (18.5% vs 36.7%).

Current Use of Tobacco Products

The 2018 NJYTS assessed current use of cigarettes, cigars, smokeless tobacco (SLT), snus, hookah, and electronic cigarettes (e-cigarettes), defined as use on one or more of the 30 days preceding the survey. Current use prevalence estimates and 95% CIs for each product are presented overall and by gender, race/ethnicity, and grade level in **Table 2**. Current use prevalence estimates for each product over the last 10 years are shown in **Figure 1**.

Table 2. Current (Past 30-days) Use of Tobacco Products, NJYTS 2018

	Cigarette	Cigar	SLT	Hookah	Snus	E-cig
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Gender						
Male	3.5 (2.6-4.4)	5.5 (4.3-6.8)	4.0 (2.8-5.2)	6.2 (4.9-7.5)	3.1 (2.0-4.2)	18.5 (16.2-20.8)
Female	2.2 (1.4-2.9)	2.4 (1.7-3.1)	1.4 (0.8-2.0)	6.5 (5.4-7.6)	1.7 (1.0-2.4)	17.0 (14.9-19.1)
Race/Ethnicity						
White	2.4 (1.7-3.2)	3.6 (2.5-4.7)	2.2 (1.4-3.0)	3.0 (2.0-3.9)	1.6 (0.9-2.3)	22.3 (19.9-24.8)
Black	2.6 (0.9-4.3)	4.2 (2.0-6.3)	2.8 (1.1-4.5)	7.1 (4.5-9.8)	3.6 (1.6-5.7)	9.6 (6.6-12.5)
Hispanic	4.6 (3.3-5.9)	5.8 (4.4-7.3)	4.4 (3.0-5.8)	13.5 (11.6-15.4)	4.0 (2.7-5.3)	16.7 (14.1-19.3)
Other	1.5 (0.4-2.6)	1.7 (0.7-2.7)	1.3 (0.3-2.3)	3.7 (2.0-5.4)	1.5 (0.4-2.6)	10.7 (7.4-14.1)
Grade						
9	1.5 (0.4-2.5)	2.0 (0.9-3.1)	1.6 (0.7-2.5)	3.8 (2.3-5.3)	1.7 (0.7-2.7)	10.5 (8.3-12.7)
10	2.1 (1.1-3.2)	2.9 (1.4-4.4)	1.8 (0.6-3.0)	4.9 (2.9-7.0)	1.9 (0.9-2.9)	17.4 (13.7-21.0)
11	2.7 (1.5-3.9)	4.5 (2.8-6.1)	3.2 (1.7-4.8)	6.8 (4.7-8.9)	3.0 (1.5-4.5)	18.5 (15.3-21.7)
12	5.1 (3.9-6.3)	6.5 (4.7-8.3)	3.9 (2.7-5.2)	9.6 (7.3-11.8)	2.9 (1.8-4.1)	24.7 (21.6-27.7)
Overall	2.9 (2.3-3.6)	4.0 (3.2-4.8)	2.7 (2.1-3.4)	6.4 (5.5-7.2)	2.5 (1.8-3.2)	17.8 (16.3-19.3)

SLT: Smokeless tobacco (Snuff or Chew); E-cig: Electronic cigarette; CI: 95% Confidence Interval

Current Use of Any Tobacco

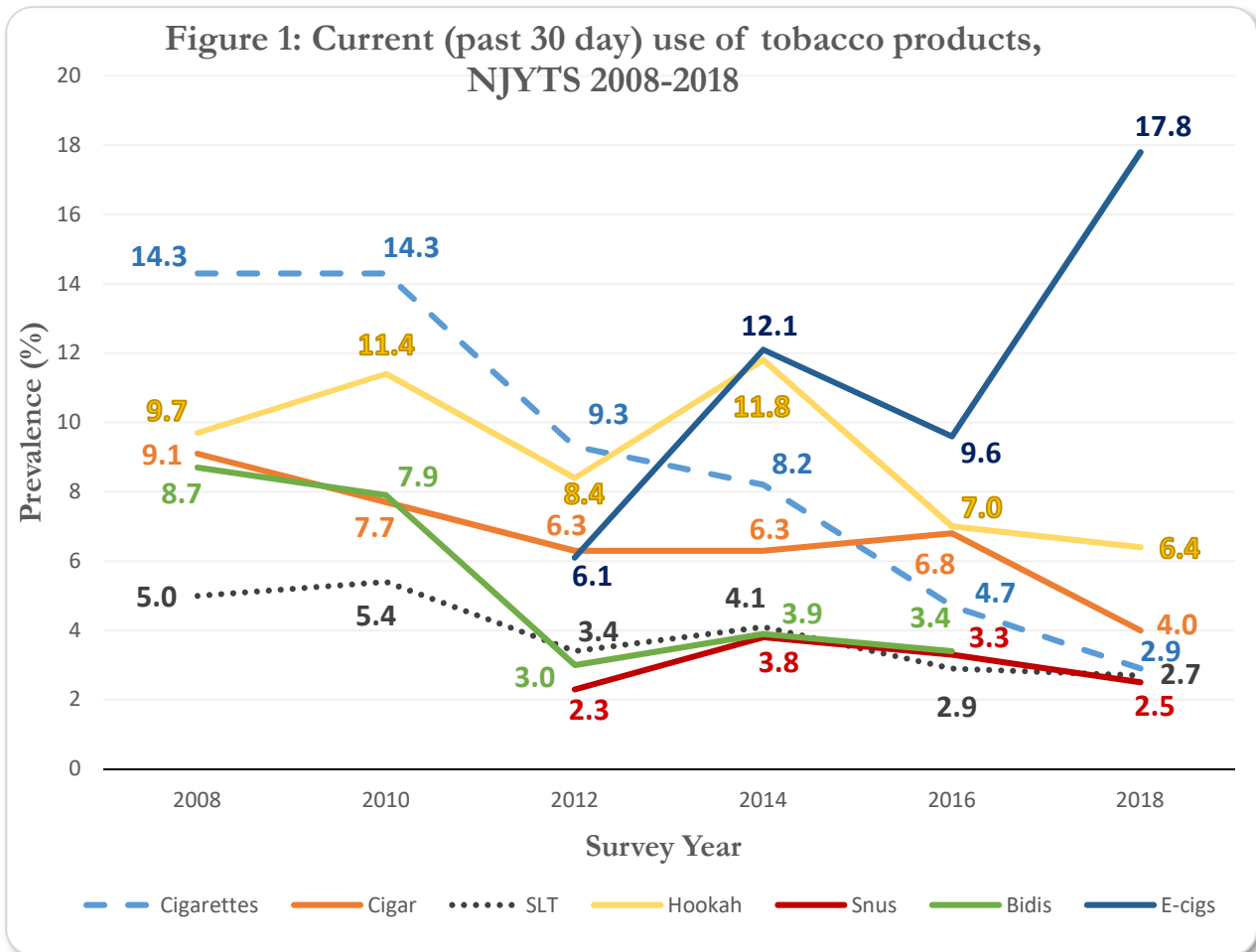
Overall, 21.7% of New Jersey high school students had used at least one tobacco product within 30 days prior to the survey. The products included in this measure are cigarettes, cigars, smokeless tobacco, snus, hookah, and e-cigarettes. Current tobacco use was similar between males (22.0%) and females (21.1%), and higher among Hispanics (24.6%) and non-Hispanic whites (23.7%) than non-Hispanic blacks (16.8%), and increased with grade level from 13% among 9th graders to 29.6% among 12th graders.

Current Cigarette Use

Current cigarette use prevalence estimates dropped significantly from 14.3% (12.4-16.2) in 2010 to 2.9% (2.3-3.6) in 2018. More Hispanic students currently used cigarettes (4.6%) than non-Hispanic white (2.4%) and non-Hispanic black (2.6%) students. Notably more 12th grade students compared to 9th grade students currently used cigarettes (5.1% vs 1.5%). The top brands among current cigarette smokers were Marlboro (23.9%, 15.1-32.7), Newport (15.2%, 7.2-23.2), and Camel (11.0%, 4.9-17.1). About a third of current cigarette smokers (31.0%, 22.6-39.3) indicated that the cigarettes they usually smoked within the past month were menthol.

Current Cigar Use

About 4% of high school students reported current use of cigars. The prevalence of current cigar use decreased from 2016 (6.8%, 5.4-8.2) after being fairly constant since 2008. Notably more males than females reported current use of cigars (5.5% vs 2.4%). Current cigar use was also higher in 12th grade students than 9th graders (6.5% vs 2.0%).



Current Smokeless Tobacco Use

Current smokeless tobacco use maintains a low trend, continuing from 2016 (2.7% vs 2.9%). More males currently used smokeless tobacco than females (4.0% vs. 1.4%).

Current Snus Use

Snus use within the past 30 days remains low and constant since snus use was first measured in 2012 (2.5% in 2019 vs 2.3% in 2012). Current snus use among males was higher than females (3.1% vs 1.7%), as well as among Hispanic students (4.0%) than among non-Hispanic white (1.6%) and non-Hispanic black (3.6%) students.

Current Hookah Use

Overall, 6.4% of high school students reported using hookah in the past 30 days preceding the survey, a significant reduction from 11.8% (10.1-13.5) reported in 2014. More Hispanic students currently used hookah (13.5%) than non-Hispanic white (3.0%) or non-Hispanic Black (7.1%) students. More 12th graders than 9th graders reported current hookah use (9.6% vs 3.8%).

Current E-cigarette Use

E-cigarettes were the most common currently used products in 2018, with a prevalence at 17.8%; this is a significant increase from 9.6% (7.8-11.3) in 2016. Non-Hispanic white students reported the highest current use of e-cigarettes (22.3%). More than twice as many 12th grade students than 9th grade students reported current use of e-cigarettes (24.7% vs 10.5%). The most common reasons students gave for currently using e-cigarettes were that they were curious (37.7%, 33.6-41.7), a friend or family member used them (23.4%, 19.9-26.9), or that they are available in flavors such as mint or candy (17.9%, 14.5-21.2). The top brands among current e-cigarette users were JUUL (69.8%, 65.5-74.0), Suorin (13.0%, 10.0-16.0), blu (11.0%, 8.6-13.5), and Myle (8.8%, 6.3-11.4).

Frequent Use

Frequent use, defined as use on at least 20 of the previous 30 days, of any particular product was generally uncommon, with overall prevalence estimates ranging from 0.6% (0.3-0.9) for frequent SLT use to 5.1% (4.3-5.9) for frequent e-cigarette use. However, a large percentage of current SLT and e-cigarette users were frequently engaging in the behavior, such that about 1 in 5 (21.6%, 13.3-29.9) SLT users were frequent users, compared to about 1 in 3 e-cigarette users (28.5%, 25.0-31.9).

Poly-Tobacco Use

About 1 in 6 (17.6%, 14.7-20.5) current tobacco users had used 2 different products in the 30 days preceding the survey, and an additional 14.4% (11.4-17.5) had used 3 or more different products. Although the overall prevalence of single-product use did not differ much by sex, current use of multiple products was notably more common among males than females. A substantially higher proportion of male than female tobacco users were using 2 or more product types (36.8%, 31.9-41.8 vs. 26.6%, 22.1-31.2). Poly-tobacco use was most prevalent among Hispanic students (10.6%, 8.6-12.6), followed by non-Hispanic white (6.1%, 4.7-7.4) and non-Hispanic black (5.9%, 3.5-8.2) students, and increased with grade level from 4.0% (2.6-5.4) among 9th graders to 11.7% (9.7-13.7) among 12th graders.

Notably, only 1.4% (0.6-2.3) of current tobacco users were exclusive cigarette smokers, whereas more than three-quarters (86.5%, 83.9-89.2) were instead using one or more non-cigarette tobacco products. This is consistent with the previously noted observation that cigarettes are no longer among the most popular tobacco products among NJ high school students.

Flavored Tobacco Use

An estimated 2.2% (1.7-2.8) of New Jersey high school students – or nearly two-thirds (65.1%, 56.2-

73.9) of current cigar smokers – were smoking flavored (i.e., menthol/mint, fruit, alcohol/wine, or sweet candy-like flavor) cigars in 2018. Current flavored cigar smoking was more prevalent among males than females (3.1%, 2.2-3.9 vs 1.2%, 0.8-1.7). The highest prevalence of flavored cigar use was observed for Hispanics (3.6%, 2.5-4.7), followed by non-Hispanic blacks (2.0%, 0.8-3.2), and non-Hispanic whites (1.9%, 1.1-2.7). Among those who smoked flavored cigars in the past 30 days, fruit was the most popular flavor (22%, 15.8-28.1).

Use of flavored (i.e., mint/wintergreen, fruit, other flavor) SLT products in the previous 30 days was also assessed, and 2.0% (1.4-2.6) of all students – or 86.8% (80.1-93.5) of current SLT users – were currently using flavored SLT. As with flavored cigar use, males had higher prevalence of flavored SLT use compared to females (2.9%, 1.9-4.0 vs 1.0%, 0.4-1.5). Prevalence of flavored SLT use was greatest among Hispanic students (2.9%, 1.8-4.0), followed by non-Hispanic black (2.1%, 0.5-3.7) and non-Hispanic white (1.6%, 1.0-2.3) students. There was minimal variation in prevalence of flavored SLT use by grade besides 10th grade current SLT users, who reported 67.5% prevalence of flavored SLT use. Among current flavored SLT users, Wintergreen/Mint (40.3%, 29.5-51.1) was the most common flavor.

Strategies to Reduce Youth Exposure to Tobacco

Approaches to reducing youth tobacco use include strategies and projects that endeavor to change social standards, accessibility, and/or tobacco regulations. This section focuses on youth access to tobacco, exposure to environmental tobacco smoke (secondhand smoke), familiarity with prevention activities, and willingness to attempt smoking cessation among New Jersey youth.

Access to Cigarettes

As of November 1st, 2017, New Jersey became the third state to raise the purchasing age for tobacco products to 21. Nonetheless, 27.5% (18.5-36.5) of high school smokers under the age of 19 were able to purchase cigarettes in the month preceding the survey. Current high school smokers also obtained cigarettes by “bumming” or borrowing (20.6%, 12.8-28.5), having someone else purchase them (19.0%, 10.6-27.3), or being given without asking (14.1%, 7.2-20.9).

Secondhand Smoke

The 2006 New Jersey Smoke-Free Air Act banned smoking in public places to reduce risk of exposure to secondhand smoke (SHS). Despite this 12-year-old mandate, a notable proportion of high school students were exposed to SHS in public spaces (38.0%, 36.3-39.7) and at school (23.1%, 21.6-24.6). Though less prevalent, students also reported being exposed to secondhand smoke in a vehicle (17.7%, 16.1-19.2), at home (15.0%, 13.6-16.3), and at work (6.1%, 5.2-7.0). SHS exposure prevalence did not differ greatly by race/ethnicity or grade level; however, prevalence of exposure in public spaces was notably higher for females than males (44.3%, 41.8-46.8 vs 31.9%, 29.4-34.4).

About 57% of students (54.6-58.9) reported seeing JUUL use specifically at school in the past 30 days. A similar proportion of male and female students (56.5% and 57.1%) were exposed to JUUL use at school, while a higher number of 12th grade students were exposed at school than 9th graders (65.9%, 62.5-69.3 vs 50.8%, 46.5-55.1). Non-Hispanic white students reported the highest exposure to JUUL use at school (65.7%, 63.0-68.4), followed by Hispanic students (49.9%, 46.3-53.3) and non-Hispanic black students (39.6%, 33.8-45.4).

A fifth (20.6%, 19.2-22.0) of high school students reported currently living with a smoker, though this did not vary by gender, race/ethnicity, or grade level. Cigarette smoking was “never allowed” in 86.3% (85.0-87.6) of high school students’ homes. Prevalence of such “household no smoking rules” did not differ notably by gender or grade level but was highest for other race students (89.1%, 85.5-92.8) followed by non-Hispanic white (87.4%, 85.7-89.2) and Hispanic (84.4%, 82.2-86.7) students. For 85.1% (83.7-86.6) of high school students, smoking was “never allowed” in vehicles that they or their family members owned or leased. Prevalence of “vehicle no smoking rules” did not differ by gender and grade level, but was higher for other (92.6%, 89.7-95.4) compared to non-Hispanic white (85.7%, 83.8-87.7), non-Hispanic black (83.9%, 79.3-88.5), and Hispanic (81.5%, 79.3-83.7) students.

Prevention

About 45% (44.7%, 42.3-46.9) of students were taught in school in the previous year why they should not use tobacco. Roughly 1 in 8 students (13.0%, 11.6-14.1) had participated in organized activities designed to prevent youth tobacco use. Non-Hispanic black high school students were slightly more likely to have been involved in tobacco prevention activities compared to non-Hispanic whites (14.2%, 10.1-18.3 vs 12.7%, 11.1-14.3), but there were no substantial differences by gender. Students in 9th grade had higher participation in prevention activities than students in 12th grade (14.4%, 11.3-17.4 vs 10.9%, 9.0-12.9).

Among students who had seen a healthcare professional (i.e. doctor, dentist, or nurse) in the previous 12 months, 40.1% (38.2-42.1) were asked about tobacco consumption and 34.6% (32.7-36.5) were advised against use. These estimates were higher for current tobacco users (51.4%, 41.4-61.5 and 48.5%, 40.3-56.7, respectively) but did not differ by gender, race/ethnicity, or grade level.

Cessation

An estimated 50.7% (38.8-62.5) of current cigarette smokers expressed a desire to stop smoking.

Summary

Importantly, New Jersey has seen notable reductions among young people in the use of the most dangerous tobacco products. The prevalence of current cigarette smoking among high school students is very low (2.9%), having decreased 38% from 2016 (4.7%) and nearly 80% in the last decade. In addition, the prevalence of current cigar smoking among high school students, which had stalled since 2012, fell to 4.0% in 2018 from 6.8% in 2016. Nationally, the CDC reported that 8.1% of high school students in 2018 reported smoking cigarettes in the past 30 days and 7.6% reported that they smoked cigars in the past 30 days (1). New Jersey has far exceeded its Healthy New Jersey 2020 objective to reduce smoking among high school students to 7.4% by 2020 (2) and the prevalence of cigarette and cigar smoking are lower than national estimates.

While there was a downward trend in the use of nearly all tobacco products, electronic cigarette use was the notable exception. Since 2014, e-cigarettes have been the most commonly used tobacco product among high school students nationally and in New Jersey. Among high school students in New Jersey, 17.8% reported the use of e-cigarettes in the past 30 days; this is an 85% increase in current e-cigarette use between 2016 and 2018. In addition, nearly a third of high school e-cigarette users reported frequent use or using the product on at least 20 of the last 30 days. The recent increase in e-cigarette use is very likely due to the extraordinary popularity of pod-based e-cigarettes, such as JUUL, that held over 70% of the e-cigarette market share in September 2018 (3). The pre-filled pods contain high concentrations of nicotine, are available in popular flavors such as mint, and are discreet to use, resembling a USB device and emitting little odor or vapor.

Flavors play a significant role in drawing young people to all tobacco products. Adolescents tend to use flavored tobacco products more than other age groups and flavored products are often the first tobacco products they try (4). Indeed, 65% of New Jersey high school cigar smokers and 86% of smokeless tobacco users were currently using flavored products. In addition, many young people use two or more tobacco products. Poly-tobacco use continues to be common among high school tobacco users, suggesting that youth may be experimenting with a variety of products.

The 2018 NJYTS data was collected approximately one year following the implementation of the statewide law to increase the age of sale from 19 to 21 in November 2017. However, there were no significant declines in the proportion of high school smokers under the age of 19 who reported being able to purchase cigarettes at retail or obtain their cigarettes from social sources.

Limitations

First, these weighted results are only applicable to comparisons within public high schools in New Jersey since private and alternative schools were not included in the sampling frame. Second, the removal of questions about the use of bidi cigarettes prevent comparisons between past year measures of any tobacco use prevalence where bidis were previously included in this measure. Finally, given the cross-sectional nature of the NJYTS, these data cannot be used to determine causality.

Recommendations

Since JUUL became available at retail stores in 2017, e-cigarette use among high school students nationally and in New Jersey increased substantially. The most commonly reported brand among youth using e-cigarettes is JUUL, both nationwide (5) and here in New Jersey. While flavors are appealing to youth, a ban on flavored e-cigarettes alone is unlikely to alter the trajectory of youth e-cigarette use in New Jersey if e-cigarettes continue to be sold to minors. Flavors were the third common reason for current use of e-cigarettes, after use by family or friends or simple curiosity; reducing access and normalization of these products would go further to reduce youth use.

The tobacco age of sale law in New Jersey must be strengthened to improve enforcement and protect youth from all tobacco products, including e-cigarettes. As a result of New Jersey's Tobacco 21 bill (S359), the legal age for purchase of tobacco products is 21; however, retailers are allowed to use a "reasonable" judgement of a purchaser's age to defend against prosecution of underage sales (6). Currently, penalties start at \$250 for the first offense and increase to \$1000. The law relies on the municipality to recommend suspension or revocation of the retailer's license. Consolidation of enforcement authority into one state agency may enable consistent implementation of the law and reduce the burden on under-resourced municipalities. In addition, penalties for non-compliant tobacco retailers can be more severe, including automatic license revocations for repeat offenders. The sale of flavored, pod-based, and/or high nicotine concentration e-cigarettes can also be restricted to adult only (age 21 and over) facilities to reduce youth access. Finally, New Jersey can encourage or require the use of electronic age-verification systems at the point of sale to prevent illegal sales of tobacco products to minors.

The combination of a high dose nicotine delivery device like JUUL that is both popular and easily accessible puts New Jersey youth at increased risk for nicotine dependence. Yet there are no evidence-based programs for the treatment of nicotine dependence from e-cigarette use. Therefore, targeted evidence-based tobacco treatment is needed. In addition, health care providers should consistently ask adolescents about tobacco use, including e-cigarettes, and advise adolescents against trying or using these products.

Several sources of funding could support improved statewide tobacco age of sale enforcement for all retailers as well as the development and dissemination of tailored treatment programs. For example, the state has not increased the cigarette excise tax since 2009 when it was raised to \$2.70; the tax rate now ranks 14th among all states and U.S territories.

To effectively address the problem of e-cigarette use among young people, New Jersey must employ a range of strategies implemented on multiple levels. Policy, research, and individual-level interventions are warranted to make swift and meaningful impact on tobacco initiation and cessation among New Jersey adolescents.

Glossary

Bidis	Small, brown, hand-rolled cigarettes primarily made in India and other Southeast Asian countries; often flavored.
CDC	Centers for Disease Control and Prevention; an agency of the US Department of Health and Human Services.
Current Use	Defined as the use of tobacco on one or more of the 30 days preceding the survey.
E-cigarette	Electronic cigarette, also electronic vaping device, personal vaporizer, or electronic nicotine delivery system (ENDS); a battery-powered device which simulates tobacco smoking.
Ever Use	Defined as the use of a tobacco product over the course of one's lifetime.
Frequent Use	Defined as the use of a tobacco product on 20 or more days of the past 30.
High School Students	Students who were in 9th, 10th, 11th, or 12th grade at the time of the survey.
Hookah	A water pipe that is used to smoke tobacco and flavored tobacco usually in a group setting; also called hubble-bubble, water-pipe or narghile.
NJYTS	The New Jersey Youth Tobacco Survey is a population-based survey to monitor tobacco use among New Jersey youth.
SHS	Secondhand smoke; a mixture of the smoke given off by the burning end of a cigarette, pipe, or cigar and smoke exhaled from the lungs of smokers.
SLT	Smokeless tobacco (such as chew, snuff or dip).
Snus	Pronounced "snoose," a moist powder smokeless tobacco product used by placing under the upper lip.

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