

South Dakota



2017

Youth Tobacco Survey Report

April 2018

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The 2017 South Dakota Youth Tobacco Survey was completed by

Office of Nursing Research,
South Dakota State University

SD YTS Contract Team

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This report is available at: <http://doh.sd.gov/prevention/tobacco/>

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“If smoking continues at current rates, 5.6 million—or 1 out of every 13—of today’s children will ultimately die prematurely from a smoking-related illness.” (U.S. Department of Health and Human Services, 2014)

The 2017 South Dakota Youth Tobacco Survey (SD YTS) results reflect the changing landscape of tobacco use among youth nationwide. Rates of *ever* using cigarette and cigar among South Dakota (SD) middle school students are trending downward with a significant change in the use of these tobacco product. However, rates of ever use of alternative forms of tobacco and nicotine, especially electronic cigarettes, increased over 2015 rates. The following key findings are presented with an associated call to action to reduce the health risks associated with tobacco use and second hand smoke exposure among the youth of South Dakota.

Key Findings

Trends in Tobacco Use among Middle School Students

- Nine out of every 100 SD middle school students (9.0%) reported using cigarettes at least one time, a 27% decrease from 2015 findings at 12.4%. Current use of cigarettes is at 2.0% in the last 30 days, compared to 2.8% in 2015.
- Use of electronic cigarettes continues to increase. In 2017, about 8 of every 100 middle school students (8.2%) reported using e-cigarettes at least one time, a 64% increase from 2015 at 5.0%. Current use is at 2.5%, compared to 2.0% in 2015.
- Current use of pipe tobacco use followed a significant downward trend, 1.7% in 2017, compared to the 2015 rate of 2.7%.
- American Indian students continue to have the highest rates of current tobacco use at 20.4%, compared to White students at 1.4%, and other race students at 5.0%.
- Poly-tobacco use was reported by 47.2% of current middle school tobacco users.
- Among current cigarette smokers, interest in quitting saw a large increase in 2017, with nearly 75.6% stating that they want to stop smoking for good compared to 60% in 2015.
- Of the 9.0% of SD middle school students who had ever tried cigarettes, 42.1% reported they did so before age 11.

***Environmental
Factors
Contributing to
Initiation and
Ongoing Use of
Tobacco***

- Of the middle school students that made an attempt to purchase cigarettes on their own, 94.4% reported they were not refused to purchase due to their age. Gas stations remain the most common place of purchase.
- More than 1 in 4 middle school students were exposed to secondhand smoke in vehicles or at home (26.0%) for at least one day during the past 7 days.
- Among current cigarette smokers, 77.8% rode in a vehicle with someone who was smoking a tobacco product in the past week
- Among middle school students, 6.3% report either smoking or seeing someone smoke on school property in the past 30 days. American Indian students reported highest use or observation of use on school property, with observation of tobacco at 13.8%, compared to 4.2% of White students.
- Nearly nine out of 10 middle school current tobacco users have at least one close friend who uses tobacco, at 88.0% of cigarette users and 83.1% of smokeless tobacco users.
- Cigarette smokers were much more likely to agree that students who use cigarettes have more friends at 54.2% compared to non-smokers at 12.5%.
- Among middle school students, 59.8% observed promotion of tobacco products in retail stores, while TV and movie promotion of tobacco followed closely at 57.2% and internet at 44.0%.

***Anti-Tobacco
Messaging***

- Hearing an anti-tobacco message from at least one source (parent, healthcare provider, school, organized activity, or ReThink It media) slightly declined to a rate of 79.7% from 81.6% in 2015.
- Among middle school students, 44.0% reported a parent had talked with them about not using tobacco in the past year.
- Education on the dangers of tobacco use in school curriculum was reported by 42.7% of students, a slight decrease from 2015 at 43.2%.
- Among students who had seen a healthcare provider in the past year, just 29.8% reported the provider asked about tobacco use. Only 30.8% of students reported that the provider advised them about the dangers of tobacco.
- Among all SD middle school students, 41.6% reported hearing the “Rethink It. Seriously.” slogan. This is a decline from the 2015 rate of 48.2% and 2013 rate of 59.2%.

Recommendations

Based on the 2017 South Dakota Youth Tobacco Survey, the following recommendations are offered for consideration, with further description and explanation in the full report:

- 1) Discourage use of alternative tobacco products, including electronic cigarettes.***
- 2) Monitor youth poly-tobacco users.***
- 3) Decrease tobacco use and secondhand smoke exposure among American Indian youth.***
- 4) Support tobacco prevention and cessation education in schools.***
- 5) Encourage implementation of the South Dakota model policy for tobacco-free schools.***
- 6) Target healthcare providers for education on assessment of tobacco use for youth patients, including assessment of tobacco use in the household.***
- 7) Support a comprehensive ban on tobacco advertising and promotion.***
- 8) Eliminate tobacco sales to underage youth.***
- 9) Target parents for cessation.***
- 10) Promote the South Dakota QuitLine in schools.***

SECTION 1: BACKGROUND



2017 SOUTH DAKOTA YOUTH TOBACCO SURVEY

Although the use of tobacco among youth in any form is considered unsafe, everyday more than 3,200 children smoke their first cigarette in the U.S.^[1] Initiation of tobacco use during adolescence is a primary indicator for adult smoking status, as nearly 90% of cigarette smokers report having first tried smoking by age 18.^[1] Various factors within an adolescents' social and physical environment, biological and genetic factors, mental health, personal perceptions, and other influences are associated with the initiation and maintenance of tobacco use among youth.^[1]

The landscape of youth tobacco use has changed in recent years. From 2015 to 2016, use of tobacco products among youth has declined in the United States (U.S.), including a reduction in e-cigarette use among middle and high school students. However, according to national data from 2016, 7.2% of middle school students reported smoking any tobacco product in the past 30 days, with e-cigarette being the most commonly used tobacco product, used by 4.3% of middle school students in the past 30 days. The other tobacco products were cigarettes (2.2%), followed by cigars (2.2%), smokeless tobacco (2.2%), hookah (2.0%), pipe tobacco (0.7%) and bidis (0.3%).^[2] Males (8.3%) were more likely to smoke than females (5.9%). Overall, 3.1% (42.4% of current tobacco users) reported the use of two or more tobacco products in the past 30 days.^[2] Youth who use multiple tobacco products are at higher risk for developing nicotine dependence and might be more likely to continue using tobacco into adulthood.^[1]

The Youth Tobacco Survey (YTS) began in 1997 to assess the prevalence of tobacco use and examine environmental factors that contribute to tobacco use among school-age youth. Data from the YTS serves to enhance the capacity of state agencies and organizations to design, implement, and evaluate tobacco prevention and control programs. South Dakota (SD) began statewide youth tobacco surveillance in 2003 using the South Dakota Youth Tobacco Survey (SD YTS). The SD YTS is an adaptation of the national YTS and includes state-added questions specific to programming and youth tobacco use trends in SD. After the 2003 baseline survey, the SD YTS was repeated in 2005, 2007, 2009, 2011, 2013 and 2015. Repeating the survey on an every other year basis provides valuable data that is used to track tobacco use trends among youth in the state.

METHODS

Survey

The 2017 SD YTS survey included 74 questions about tobacco use prevalence, access to tobacco, knowledge and attitudes about tobacco, cessation, exposure to secondhand tobacco smoke, future intent to use tobacco products and exposure to pro- and anti-tobacco media messages. It also included additional questions related to use of e-cigarettes. The findings of the 2017 SD YTS are representative of all 6th through 8th grade public, non-public, and tribal school students in SD. The *2017 South Dakota Youth Tobacco Survey Report* summarizes current tobacco use patterns among SD youth using results from the most recent SD YTS. These results are compared with data collected from previous SD YTS administrations as well as national trends.

Description of the South Dakota Sample Selection

(This section was provided by the Centers for Disease Control Office of Smoking and Health.)

All regular public schools in South Dakota containing grades 6, 7, or 8 were included in the sampling frame. A two-stage cluster sample design was used to produce a representative sample of students in grades 6-8.

School Level - The first-stage sampling frame consisted of all public schools containing any of grades 6-8. Schools were selected with probability proportional to school enrollment size.

Class Level - The second sampling stage consisted of systematic equal probability sampling (with a random start) of classes from each school that participated in the survey. All 2nd period classes in the selected schools were included in the sampling frame. All students in the selected classes were eligible to participate in the survey.

Weighting and Analysis:

A weight has been associated with each questionnaire to reflect the likelihood of sampling each student and to reduce bias by compensating for differing patterns of nonresponse. The weight used for estimation is given by:

$$W = W1 * W2 * f1 * f2 * f3 * f4$$

W1 = the inverse of the probability of selecting the school

W2 = the inverse of the probability of selecting the classroom within the school

f1 = a school-level nonresponse adjustment factor calculated by school size category (small, medium, large).

f2 = a class adjustment factor calculated by school.

f3 = a student-level nonresponse adjustment factor calculated by class.

f4 = a post stratification adjustment factor calculated by gender, race and grade.

Use of the Weighted Results:

Weighted data was carried to calculate Prevalence estimates and 95% confidence intervals (CIs) using SAS 9.4 to account for the complex survey design.

Statistical tests for differences in tobacco use and gender, race and grades were assessed and p-values <0.05 were considered statistically significant. In addition, we calculated the Relative Standard Error (RSE) of the calculated percentage to determine the reliability of percentages for sample sizes of 30. If the RSE for the percentage being tested was smaller than 25%, then the calculated percentage was considered unreliable and not presented.

Additional Notes on Methodology outside of CDC OSH Analysis

Categorization of Race/Ethnicity for the South Dakota Youth Tobacco Survey

The classification of students by race and ethnicity was conducted using methodology from the National Youth Tobacco Survey.^[3] First, ethnicity was classified by response to the Hispanic or Latino ethnicity question. All respondent answering “yes” to Hispanic/Latino were classified as such regardless of selection on the race question that followed. For the remaining students, if only one of the races available were selected, students were classified into that race. If the student selected two or more races then the following hierarchy was followed:

“If a respondent selected multiple races and they selected “White” as one of those races, then they are categorized as “White”. If a respondent selected multiple races but did NOT select “White” and they selected “Black or African American” as one of those races, then they are categorized as “Black or African American”. If a respondent selected multiple races but did NOT select “White” or “Black or African American” and they selected “Asian” as one of those races, then they are categorized as “Asian”. If a respondents selected multiple races but did NOT select “White”, “Black or African American”, or “Asian”, and they selected “American Indian or Alaska Native” as one of those races, then they are categorized as “American Indian or Alaska Native”. If a respondent selected “Native Hawaiian or Other Pacific Islander” and any other race category, the respondent would be categorized as that other race.”⁶

To reflect the population demographics of South Dakota, a three level race/ethnicity categorization (“White”, “American Indian”, and “all other races”) was created by merging Latino, Black or African American, Asian, and Native Hawaiian or Other Pacific Islander into a single category. Throughout the report, race/ethnicity that does not fall within the “White” or “American Indian” categorization will be referred to as “other races”.

Categorization of Any Tobacco Product in the South Dakota Survey

At various points throughout the report, multiple tobacco product use is combined together to form a single category “any tobacco”. This category was created using the 2015 YTS methodology.

Definitions of Youth Tobacco Use	
<i>Ever tobacco use</i>	Ever trying a tobacco product, even a puff or a pinch, on one occasion.
<i>Current tobacco use</i>	Trying a tobacco product at least one day during the 30 days before the survey.
<i>Any tobacco</i>	Defined as cigarettes, smokeless tobacco, cigars, pipe and bidis.

Historical South Dakota Youth Tobacco Survey Data

Throughout this report, historical data is provided from survey years 2005, 2007, 2009, 2011, 2013 and 2015. Except where noted, all of this data is drawn from printed reports.^[4-7] The actual data was not reanalyzed, so the authors rely on the accuracy of previous reports for this information.

A full list of the 2017 YTS questions including the unweighted frequencies for each response is available as a separate document, by submitting a request to the South Dakota Department of Health Tobacco Control Program.

RESPONSE RATES AND DEMOGRAPHICS OF THE MIDDLE SCHOOL POPULATION

School and Student Response Rates:

A total of 68 middle schools were randomly selected to participate in the South Dakota Youth Tobacco Survey. Among these 68 schools, 55 schools agreed to administer the survey, resulting in 80.9% school response rate. The survey was then administered to 3,739 middle school students (grades 6-8) in these 55 participating schools, of which 3,242 students completed the questionnaires during the fall of 2017, resulting in a student response rate of 86.7%. The overall response rate for the SD YTS was 70.1%.

Schools - 80.9% 55 of the 68 sampled schools participated.

Students- 86.7% 3,242 of the 3,739 sampled students completed usable questionnaires

Overall response rate - $80.9\% * 86.7\% = 70.1\%$

Demographics

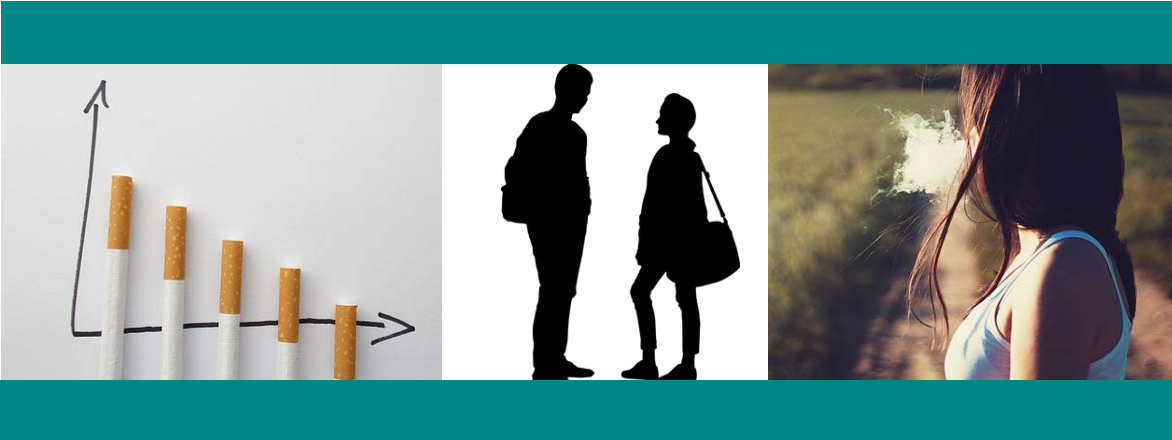
Demographical information collected in the 2017 SD YTS included gender, age, race/ethnicity, and grade level. The SD YTS is conducted only with middle school students; therefore, 99.2% of the sample was between the ages of 11 and 14. More demographic information is presented in Figure 1. Participation in the survey by grade was similar with approximately one-third of the students from each of the three grades (six, seven and eight).

Figure 1. Middle School Participation by Gender, Race/Ethnicity and Grade level, South Dakota Youth Survey 2017



‡Non-Hispanic

***SECTION 2: PREVALENCE AND TRENDS
IN TOBACCO USE AMONG MIDDLE
SCHOOL STUDENTS***



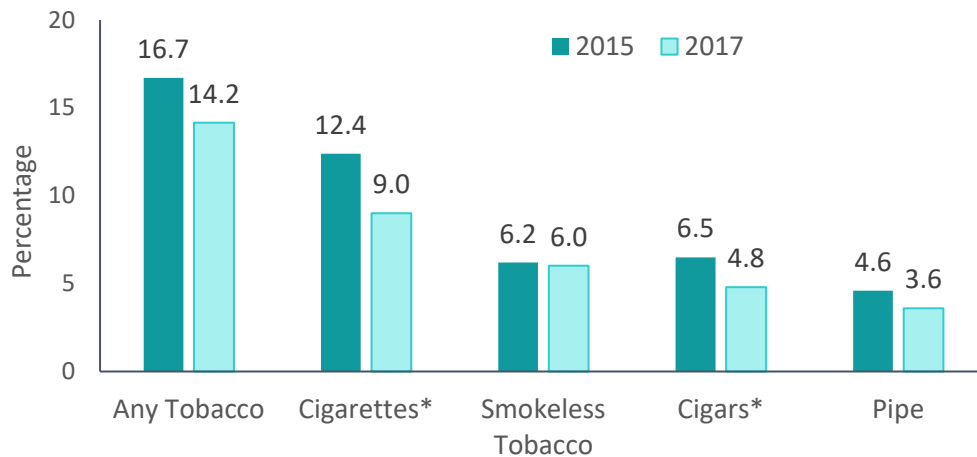
PREVALENCE OF TOBACCO USE

Ever Tobacco Use

Ever tobacco use is defined as use of tobacco products of any kind, including **cigarettes, smokeless tobacco, cigars, pipe and bidis** on at least one occasion. This measurement provides information on how many middle school students in SD have tried tobacco products.

- The percentage of SD middle school students who have ever used a tobacco product of any kind on at least one occasion was 14.2%, a decrease from 16.7 in 2015 ($p < 0.01$). This reduction is related to a decrease in use of all tobacco products as shown in Figure 2.
- Among the middle school students, cigarettes were the most commonly used tobacco product in 2017, followed by smokeless tobacco, cigars, pipe and bidis (not shown).

Figure 2. Percent of Students Who Have Ever* Used Tobacco Product on at Least One Occasion by Type of Product- South Dakota Youth Tobacco Survey, 2015 and 2017



*Ever any tobacco use was defined as trying a tobacco product, even a puff or a pinch, on one occasion. For the SD YTS, tobacco products included under the "any tobacco use" category included cigarettes, smokeless tobacco, cigars, pipe, and bidis.

**Any tobacco, cigarettes and cigars $p < 0.05$ *

In South Dakota, 14 out of 100 middle school students reported trying a tobacco product on at least one occasion.

Among American Indian students, the rate was 40 of every 100 students.

- Differences in ever tobacco use also existed by race, as White (7.5%) students were less likely to have ever used tobacco than American Indian (40.2%) or other race students (16.3%) ($p < 0.0001$)(Figure 3).
- Among SD middle school students, the percentage of any tobacco use among females was 13.1% and 15.2% among males ($p = 0.15$). Notably, a 25.0% decrease in tobacco use among females occurred from 2015 (17.5%) to 2017 (13.1%) ($p < 0.001$)(Figure 4).
- Although the prevalence of any tobacco use increases as school grade increases ($p < 0.001$), a 23% decrease in tobacco use among 8th grade is observed from 2015 to 2017 ($p < 0.01$).

Figure 3. Percent of Students Who Have Ever Used Tobacco Product on at Least One Occasion by Race/Ethnicity - South Dakota Youth Tobacco Survey, 2015 and 2017

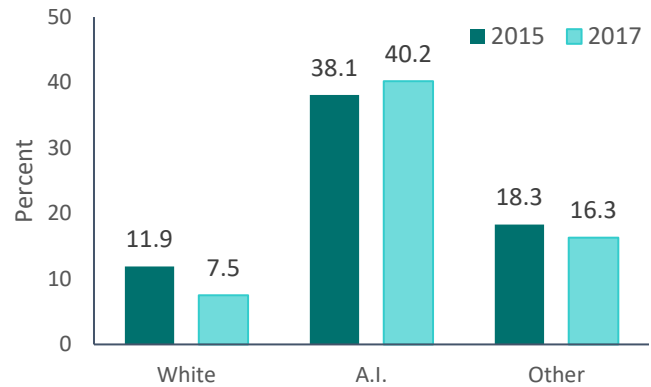
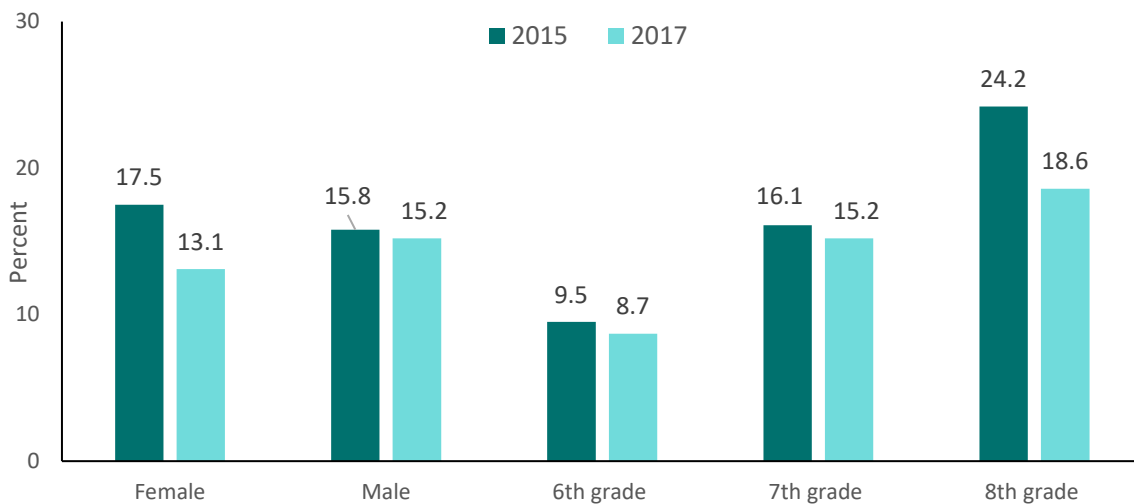


Figure 4. Percent of Students Who Have Ever Used Tobacco Product* on at Least One Occasion by Gender and Grade - South Dakota Youth Tobacco Survey, 2015 and 2017



*Any Tobacco category includes cigarettes, smokeless tobacco, cigars, pipe, and bidis

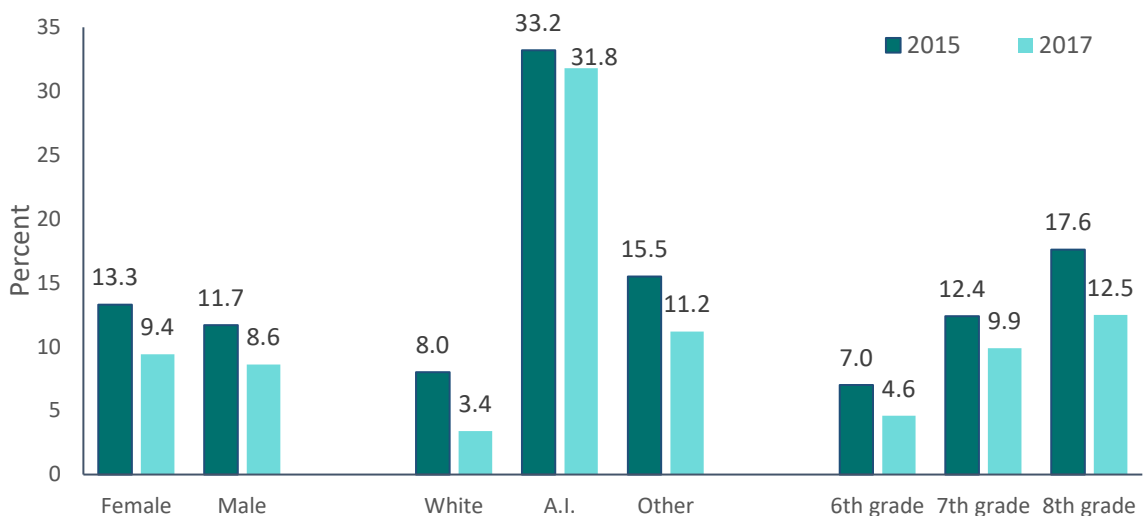
Ever Cigarette Use

Overall, 9.0% of middle school students had tried smoking a cigarette on at least one occasion, a 27.0% decrease from 2015 findings (12.4%) ($p < 0.001$).

42.0% of the students who tried cigarettes had their first cigarette before age 11

- Although no difference was found in ever cigarette use by gender, an approximate 30.0% reduction in ever trying a cigarette is observed among both males and females (2015 to 2017) (Figure 5).
- Significant differences still exist by race, with White students having the lowest rate of ever cigarette use (3.4%) and American Indian students having the highest rates of ever cigarette use at 31.8%, with other races at 11.2% ($p < 0.0001$). From 2015-2017, a disproportional reduction in ever trying cigarettes is observed among Whites (58%), other races (28%) and American Indians (4%).
- Following the same trend as 2015, in 2017, trying cigarettes significantly increased between the sixth, seventh and eighth grade students with rates of 4.6%, 9.9%, and 12.5%, respectively ($p < 0.001$).
- Of the 9.0% of SD middle school students who had ever tried cigarettes, 42.1% reported they did so before age 11. This varied by gender, with 40.2% of females smoking a whole cigarette before age 11 compared to 44.2% of males.
- The percent of ever smokers who smoked about $\frac{1}{2}$ a pack (6-15 cigarettes) of cigarettes was 9.7% while 4.5% reported smoked 100 or more cigarettes in their lifetime.

Figure 5. Percent of Students Who Have Ever Used Cigarettes on at Least One Occasion by Gender, Grade and Race/Ethnicity - South Dakota Youth Tobacco Survey, 2015 and 2017



Ever Smokeless Tobacco Use

- Smokeless tobacco use on at least one occasion was reported by 6.0% of middle school students (Table 1), similar to 2015 findings at 6.2%.
- Ever use of smokeless tobacco was 7.7% among males, and 4.3% among females ($p<0.001$).
- Differences in ever use of smokeless tobacco existed by grade level: 3.6% among sixth grade students, 6.0% among seventh, and 8.3% eighth grade students.
- American Indian (20.5%) students were significantly more likely to report using smokeless tobacco than White (2.7%) and other race students (5.8%) ($p<0.001$).
- Of the 6.0% of SD middle school students who had ever tried smokeless tobacco, 35.0% reported they did so before age 11, compared to 25.0% in 2015.

A 27.0% decrease in cigarette use occurred from 2015 to 2017.

Ever Cigar and Pipe Use

- Among middle school students, 4.8% had tried cigars (Table 1), a 21.0% reduction over the 6.0% reported in 2013 ($p<0.007$), following a downward trend of other types of tobacco products.
- Pipe use was reported by 3.6% of middle school students.
- Rates of ever using a pipe or cigars did not differ by gender.
- Cigar use was significantly higher among American Indian students (16.8%) as compared to both White (1.9%) students and other races (5.7%) ($p=0.032$).
- White students (1.4%) were significantly less likely to use a pipe compared to American Indian students (12.9%) ($p<0.001$). The rate of ever pipe use among American Indian students should be interpreted carefully since the YTS question does not clearly exclude the ceremonial use of a pipe. It is unknown how many of the students who report ever using a pipe were using a pipe for only ceremonial purposes.
- Cigar use was significantly higher among 8th grade students than among 6th grade students ($p=0.02$). The percentage of students reporting trying a pipe was also double from the 6th grade to the 8th grade.

Table 1. Percent of Students Who Have Ever Used Tobacco by Product, Gender, Race/Ethnicity and Grade Level, South Dakota Youth Tobacco Survey, 2017

		SMOKELESS TOBACCO	CIGARS	PIPES
		% (95% CI ^b)	% (95% CI ^b)	% (95% CI ^b)
GENDER				
	FEMALE	4.3% (1.8-6.7)	4.7% (2.4-7.0)	3.7% (1.4-6.1)
	MALE	7.7% (5.1-10.3)	4.9% (3.1-6.7)	3.5% (1.8-5.3)
RACE				
	WHITE	2.7% (2.1-3.4)	1.9% (1.3-2.5)	1.4% (0.8-2.1)
	AMERICAN INDIAN	20.5% (13.3-27.7)	16.8% (11.4-22.2)	12.9% (5.9-19.9)
	OTHER	5.8% (2.9-8.7)	5.7% (3.1-8.3)	4.0% (1.7-6.2)
GRADE				
	6TH	3.6% (1.9-5.4)	2.8% (1.1-4.4)	2.4% (0.8-4.1)
	7TH	6.0% (3.3-9.4)	5.5% (2.7-8.3)	4.2% (1.7-6.7)
	8TH	8.3% (4.1-12.4)	6.0% (3.4-8.5)	4.3% (1.7-6.8)
OVERALL		6.0% (3.6-8.4)	4.8% (2.9-6.7)	3.6% (1.7-5.5)

a Any Tobacco category includes cigarettes, smokeless tobacco, cigars, pipe, and bidis, per 2015 YTS methodology.⁵

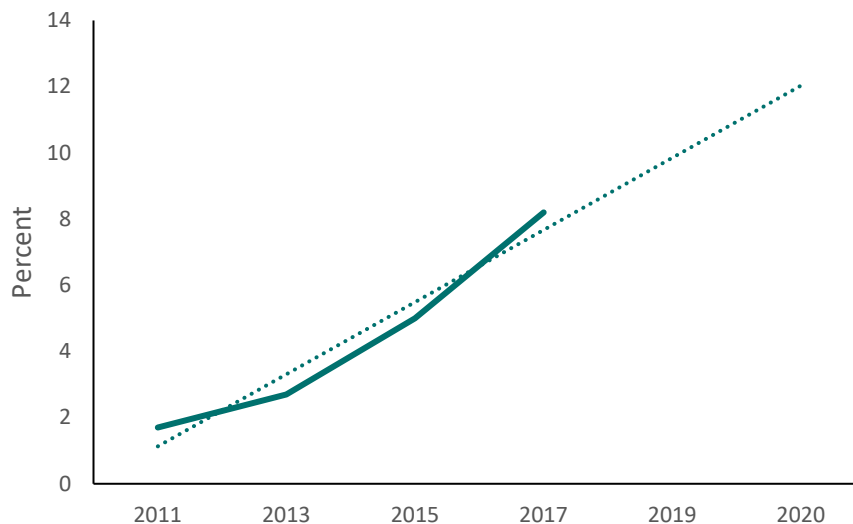
b Confidence Interval

E-cigarette

Although the number of middle school students trying any tobacco product has dropped, data shows that ever use of e-cigarettes is strikingly increasing.

Ever use of e-cigarettes among middle school students has increased from 1.7% in 2011 to 8.2% in 2017 ($p < 0.0001$) (Figure 6).

Figure 6. Percent of Students Who Have Ever Used Electronic Cigarettes - South Dakota Youth Tobacco Survey, 2011-2017 (projected to 2020)

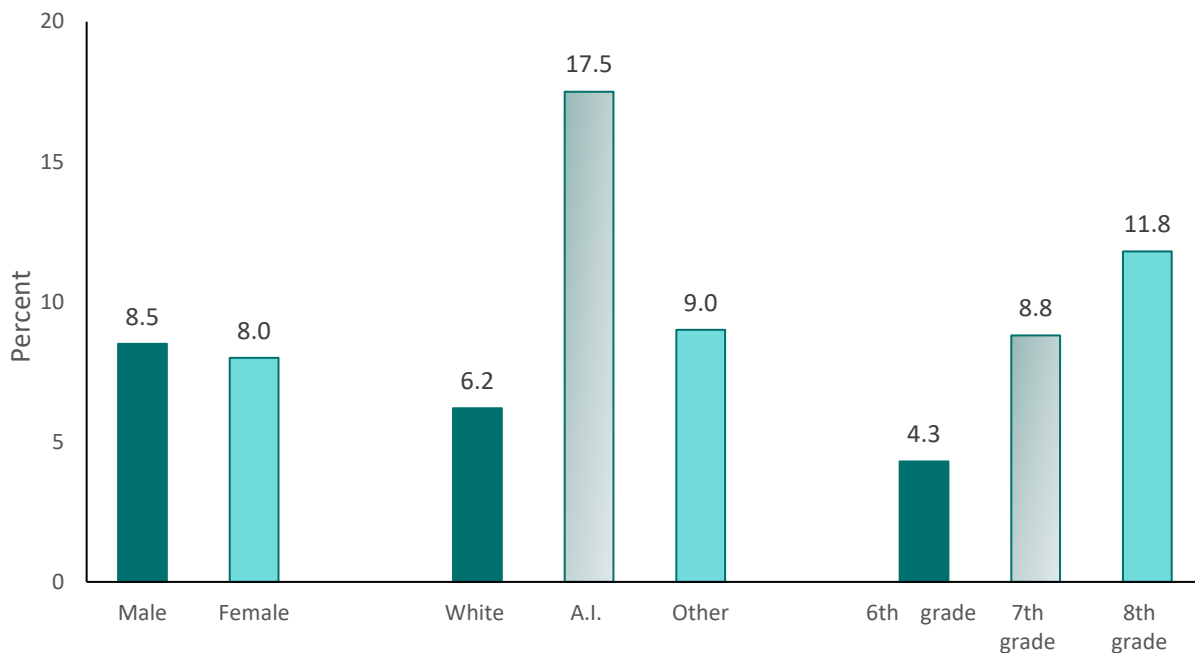


- No differences existed by gender and ever use of e-cigarette.
- Prevalence of e-cigarette use was higher among middle school American Indian (17.5%) when compared to White students (6.2%) and other race students (9.0%)($p < 0.001$).
- Prevalence increased as school grades increased ($p < 0.001$) (Figure 7).
- Of the 8.2% middle school students who had ever tried e-cigarettes, 28% reported they did so before age 11.



Figure adapted from the E-cigarette use among youth and young adults: A major public health concern (Murthy, Vivek H, 2017)

Figure 7. Percent of Students Who Have Ever Used Electronic Cigarettes on at Least One Occasion by Gender, Race/Ethnicity and Grade- South Dakota Youth Tobacco Survey, 2017



“Use of e-cigarettes can expose young people to nicotine. Nicotine can be highly addictive and can harm brain development. Nicotine use may also lead to the use of other tobacco or nicotine-containing products”
(Murthy, Vivek H, 2017)

Other Tobacco Products

- Hookah and or water pipe, roll-your-own cigarettes, and flavored cigars, cigarillos, or little cigars were the top three alternative tobacco or nicotine products used by SD middle school students (Table 2). Use of Hookah in 2017 was at 3.0%, compared to 2.6% in 2015.

Table 2. Percent of Students Who Have Ever Used of Other Tobacco Products among SD Middle School Students, 2017

Product	Middle school population % (95%CI) ^a
Smoking tobacco from hookah or water pipe	3.0% (1.6-4.4)
Roll-your-own cigarettes	2.6% (1.6-3.7)
Flavored cigars, cigarillos, or little cigars	2.2% (1.3-3.1)
Snus	1.9% (1.1-2.7)
Pipes filled with tobacco	0.8% (0.5-1.2)
Dissolvable tobacco products	0.7% (0.3-1.2)

^a Confidence Interval

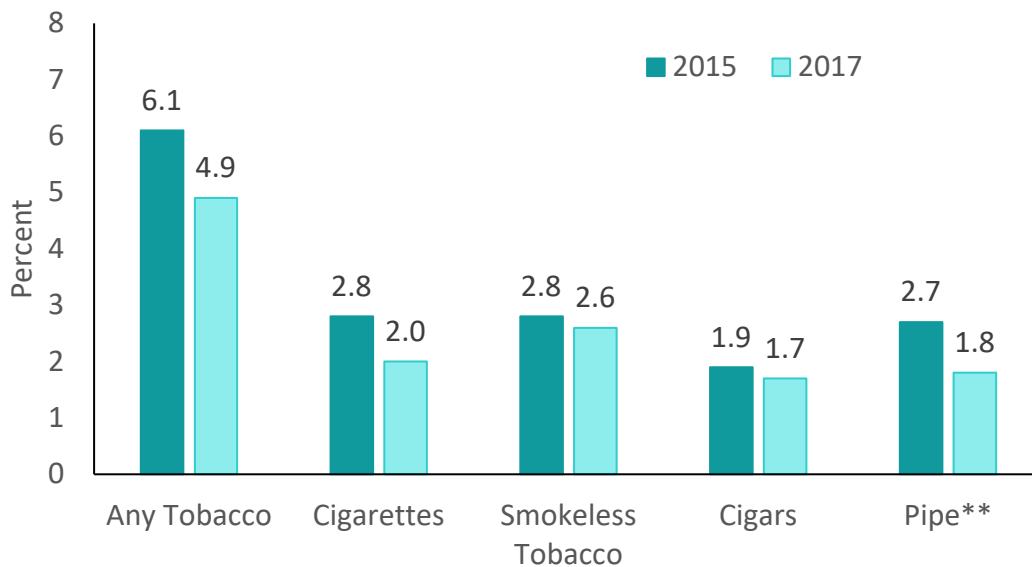
PREVALENCE OF TOBACCO USE

Current Tobacco Use

Current tobacco use was defined as use of one or more tobacco products, including **cigarettes, smokeless tobacco, cigars, pipe and bidis**, on one or more days in the past 30 days. This measurement provides information on recent use but also may reflect more regular use.

- In 2017, 4.9% middle school students reported using one or more tobacco products in the past 30 days (Figure 8).
- Among the five tobacco products, smokeless tobacco was the most commonly used followed by cigarettes, cigars and pipe.
- From 2015 to 2017, a significant decrease occurred in current pipe use among middle school students in SD.

Figure 8. Percent of Students Who Current Use Tobacco* by Type of Product in the Past 30 Days- South Dakota Youth Tobacco Survey, 2015 and 2017



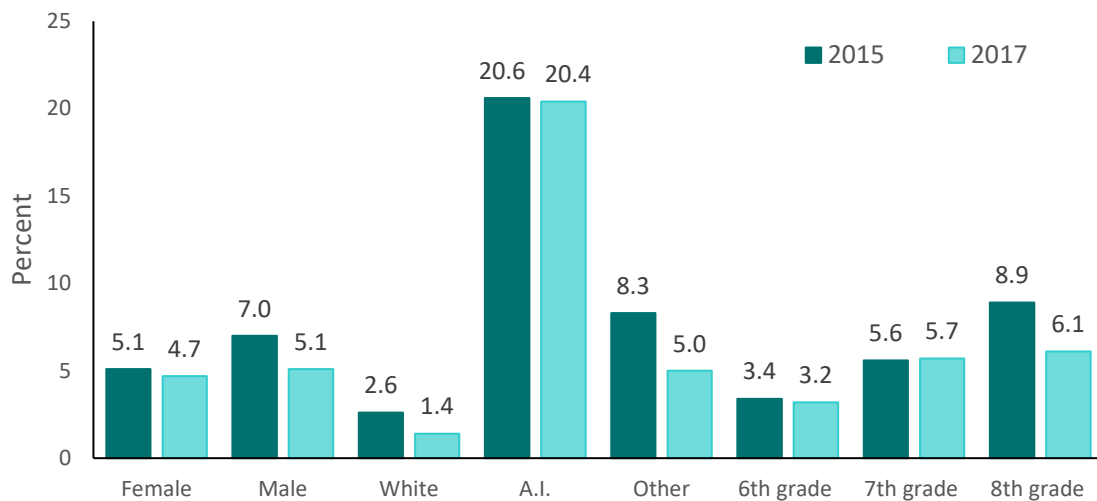
*Current tobacco use was defined if middle school students in SD were asked if they had used various types of tobacco, including cigarettes, smokeless tobacco, cigars, pipe and bidis, in the past 30 days.

**pipe $p < 0.05$

Among students using tobacco products in the past 30 days, 44.2% had used multiple types of tobacco.

- No significant difference in current tobacco use was found by gender and grade.
- Rates of current tobacco use were higher among American Indian (20.4%) and other races (5.0%) as compared to White (1.4%) middle school ($p<0.0001$) (Figure 9).
- From 2015 to 2017, a significant decrease in the prevalence of current use of any tobacco product occurred among males, white students and other races, and 8th grade students ($p<0.05$).

Figure 9. Percent of Students Who Current Use Any Type of Tobacco Product in the Past 30 Days by Gender, Race/Ethnicity and Grade - South Dakota Youth Tobacco Survey, 2015 and 2017

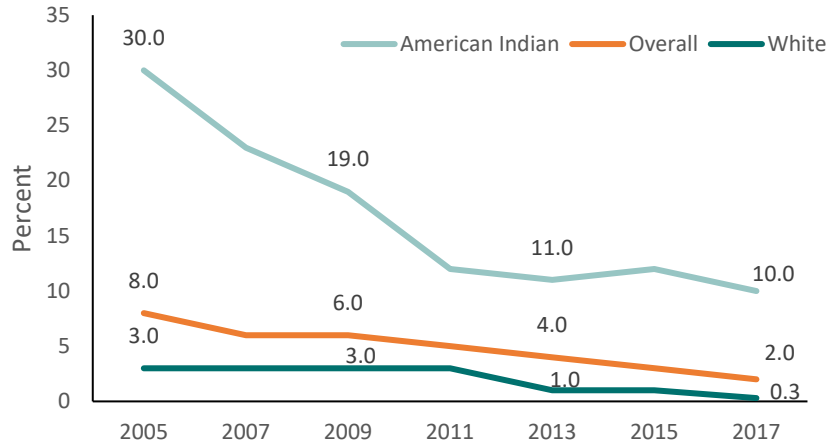


Current tobacco use was defined if middle school students in SD were asked if they had used various types of tobacco, including cigarettes, smokeless tobacco, cigars, pipe and bidis, in the past 30 days.

Current Cigarette Use

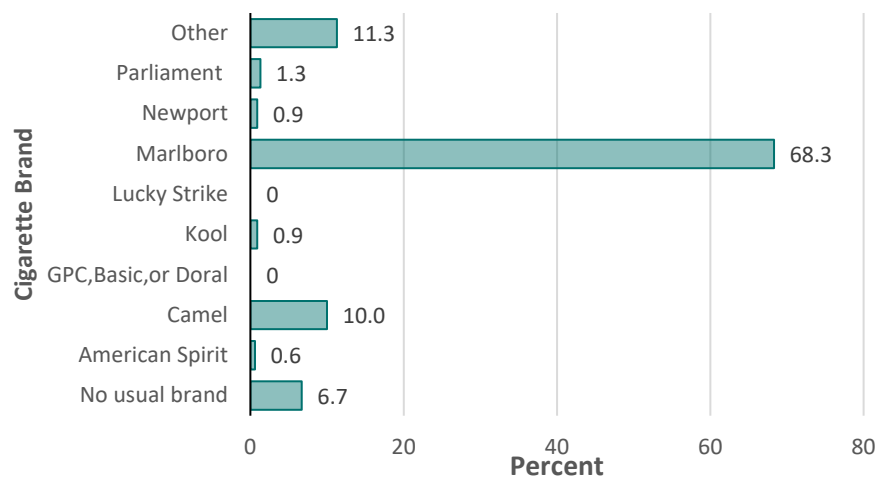
- The current 30-day point prevalence of cigarette smoking was 2.0%. This rate is trending downward slightly from the 2015 rate of 2.8% (Figure 10).
- No differences were found by gender in rates of smokeless tobacco use.
- Rates of current cigarette use significantly increased by grade level ($p<0.05$).
- Significant differences also existed by race, with White students having significantly lower rates of current cigarette use (0.3%) compared to both American Indian students (10%) and other race students (1.8%), ($p<0.0001$).

Figure 10. Trends in Current Cigarette Use among SD Middle School Students, by Race, 2005-2017



- Current frequent use of cigarettes (at least 20 of the past 30 days) was at 0.2% in the weighted sample of the entire SD middle school population.
- Among the 2.0% of students who reported current cigarette use, most were non-daily users, with just under half of the group (49.4%) smoking on only one or two of the past 30 days.
- Current cigarette users were asked about type of cigarette used. Brand preference is displayed in Figure 11, with Marlboro, other, Camel and no usual brand being the most commonly used. This finding was consistent with 2015 data.

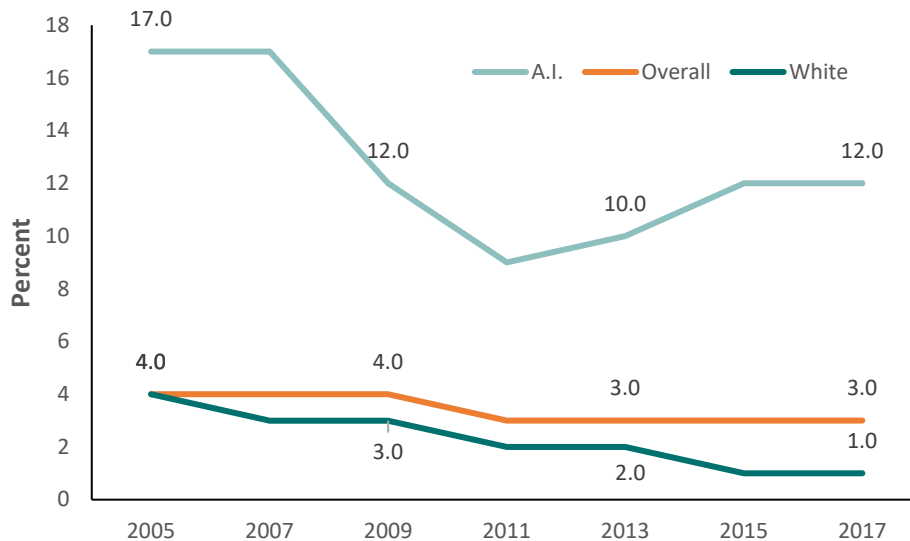
Figure 11. Usual cigarette brand by current middle school smokers, 2017



Current Smokeless Tobacco Use

- The 30 day point prevalence of smokeless tobacco use among SD middle school youth was 2.6%.
- Differences were found by gender, race and grade level in rates of smokeless tobacco use.
- More males (3.3%) than females (2.0%) reported using smokeless tobacco ($p < 0.01$).
- Prevalence of smokeless tobacco remained higher among American Indian (12.0%) than other races (2.1%) and White students (0.6%) ($p < 0.001$).
- Trend data in rates of smokeless tobacco use among middle school students is displayed in Figure 12.

Figure 12. Trends in Current Smokeless Tobacco Use by Race, 2005-2017



- Among the 2.6% of students who reported current smokeless tobacco use, 44.0% used smokeless tobacco on only 1 or 2 of the past 30 days, a 24.0% decrease from 2015 (58.3%).
- In 2017, current frequent use of smokeless tobacco (20+ days of the past 30 days) was reported by 0.4% of the weighted sample of the entire SD middle school population, compared to 0.1% in 2015.
- Among users of smokeless tobacco, frequent use (at least 20 of the past 30 days) increased from 2015 (5.3%) to 2017 (13.3%).

Current Cigar and Pipe Use

- The 30 day point prevalence of cigar use among middle school youth overall was 1.8% (Table 4).
- No differences in current cigar use were found by gender or grade level.

- American Indian (7.6%) students were more likely to use cigars than White (0.4%) or other race (1.6%) middle school students ($p < 0.001$).
- Among the students who reported current cigar use, most were non-daily users, with 7.0% reporting smoking cigars on at least 20 of the past 30 days.

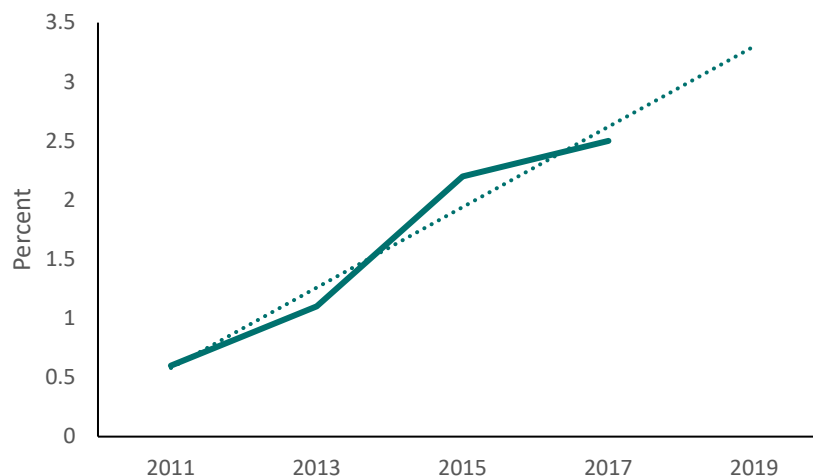
Pipe Use

- The 30 day point prevalence of pipe use among middle school youth was 1.7%, compared to 2.7% in 2015 findings.
- No differences in current pipe use were found by gender and grade.
- Regarding race/ethnicity, American Indian and other race students were more likely to use a pipe than White middle school students ($p < 0.001$). As noted earlier in the report, ceremonial tobacco use is not explicitly excluded in the YTS questions.
- Among the 1.7% students who reported current pipe use, most were non-daily users, with only 11.0% using a pipe on at least 20 of the past 30 days which represents 0.2% of the weighted sample of the entire SD middle school population.

Current E-cigarette Use

- The current rate of electronic cigarette use among middle school youth in SD increased from 0.6% in 2011 to 2.5% in 2017 (Figure 13).
- No differences in current e-cigarette use were found by gender and grade.
- American Indians reported higher use of e-cigarettes than other race students and White middle school students with rates at 8.5%, 2.9% and 1.2% respectively ($p < 0.0001$).
- Among the 2.5% of students who reported current use of e-cigarettes, 6.8% reported using e-cigarettes for 20 or more days.

Figure 13. Percent of Students Who Currently Use Electronic Cigarettes - South Dakota Youth Tobacco Survey, 2011-2017 (projected to 2019)



In South Dakota, current e-cigarette use has surpassed cigarette and is now is the second most commonly used tobacco product after smokeless tobacco among middle school students.

Current Use of Other Tobacco Products

- Use of alternative forms of tobacco and nicotine products in the past 30 days was also examined. Overall, 5.4% of SD middle school students reported using one or more alternative tobacco products in the past 30 days.
- Table 3 indicates that roll-your-own cigarettes, use of a hookah or water pipe and use of snus are the top three other tobacco or nicotine products currently used by SD middle school students.

Table 3. Current Use of Other Tobacco Products among SD Middle School Students, 2017

Product	middle school population % (95%CI)^a
Roll-your-own cigarettes	1.6% (0.9-2.3)
Smoking tobacco from hookah or water pipe	1.3% (0.6-1.9)
Snus such as Camel or Marlboro, or general Snus	1.0% (0.5-1.4)
Pipe filled with tobacco	0.3% (0.1-0.4)
Dissolvable tobacco products	0.5% (0.2-0.8)
Bidis	0.3% (0.2-0.4)

^a Confidence Interval

OBTAINING TOBACCO PRODUCTS

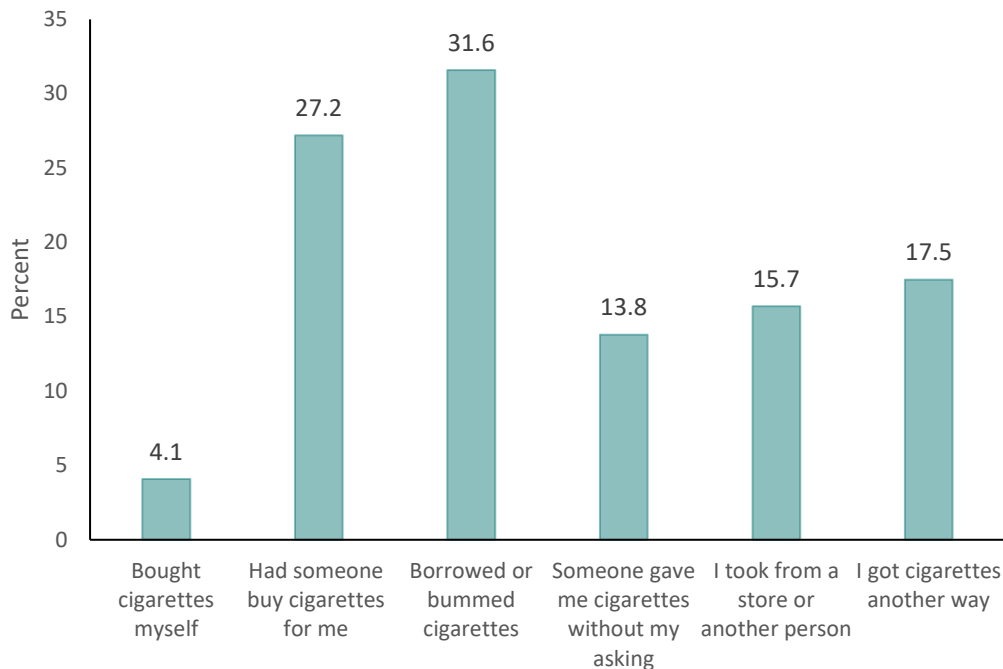
The entire sample for the SD YTS was under age 18, which is the legal age in SD to purchase or use tobacco products. A reduction in the odds of smoking of up to 20.0% has been attributed to a better compliance with underage tobacco regulations.^[8]

- Overall, 84.6% of the middle school students did not try to buy any tobacco products during the past 30 days.
- Among those who tried to buy during the past 30 days, 5.6% of the students reported they were refused to buy any tobacco product because of their age.*
- Figure 14 shows how the cigarettes were obtained among current cigarette smokers. The most common method was to borrow or bum cigarettes (31.6%), followed by having someone else buy them (27.2%).

Among student's ages 11 to 14 who attempted to purchase any tobacco product during the past 30 days, 94.4% were not refused. The most common specified place of purchase was a gas station.

**Denominator includes only students trying to buy tobacco products.*

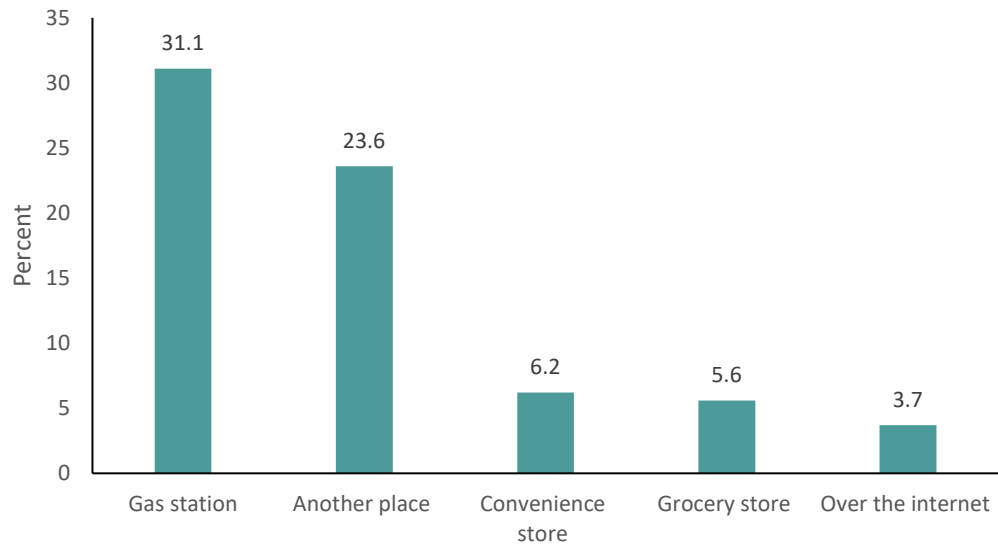
Figure 14. How Current SD Middle School Cigarette Smokers Obtained Cigarettes*, 2017



**Students could check more than one source, so percentages add more than 100%.*

- Current middle school cigarette smokers that attempted a cigarette purchase reported buying cigarettes mainly from a gas station (31.1%) (Figure 15).

Figure 15. Location of Youth Cigarette Purchase, 2017



TOBACCO CESSATION

Current tobacco users were asked about their past tobacco quit attempts, excluding the use of e-cigarettes.

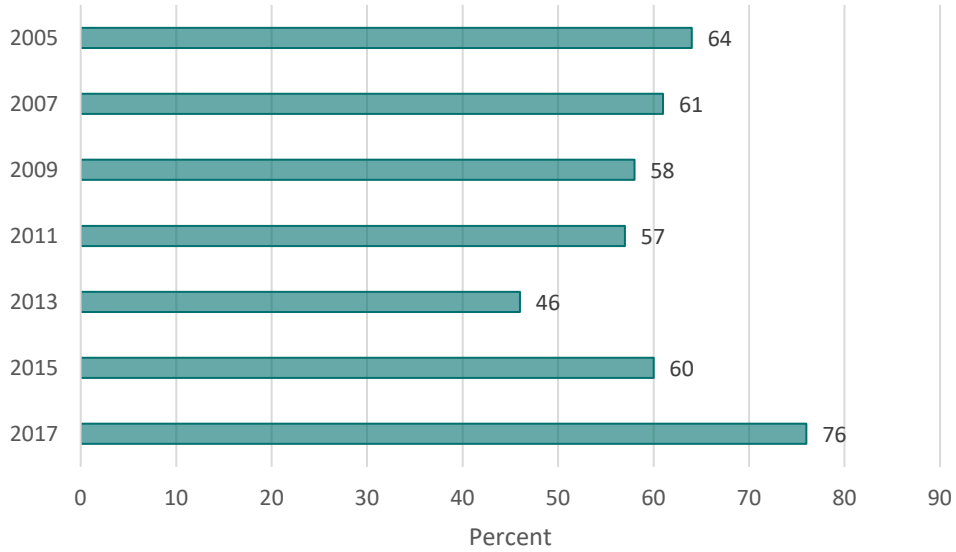
- Most tobacco users (70.5%) reported an attempt in quitting tobacco products at least one time in the past 12 months. Among cigarette users the rate was at 75.6%.
- Among middle school students using tobacco and trying to quit, 15.0% reported more than 10 quit attempts in the last 12 months.
- Students were also asked about types of resources utilized in the past year to assist with quitting tobacco. The most commonly reported method of quitting among those using cigarettes or any tobacco product was “cold turkey” and help from family and friends (Table 4).

Table 4. Quit Intent, Middle School Current Tobacco and Cigarette Use, 2017

Statement	Current tobacco users (%)	Current cigarette use (%)
I did not try to quit during the past 12 months.	23.1	31.1
Tried to quit on my own or quit "cold turkey"	18.2	29.4
Got help from family or friends	5.3	8.5
Used nicotine gum	4.2	7.5
Used nicotine patch	2.1	3.3
Attended a program at my school	3.2	4.5
Called a telephone help line or telephone	1.5	2.6
Attended a program in the community	2.3	2.2
Internet quit site	0.8	1.7
Use another method as Hypnosis or acupuncture	0.8	1.9
Used any medicine	0.5	0.9

- Figure 16 shows a marked increase over 2013 rates in interest in quitting among middle cigarettes school smokers.

Figure 16. Interest in Quitting by Current SD Middle School Cigarette Smokers, 2005-2017



**This question about quitting tobacco products excludes e-cigarettes products.*

SECONDHAND SMOKE EXPOSURE

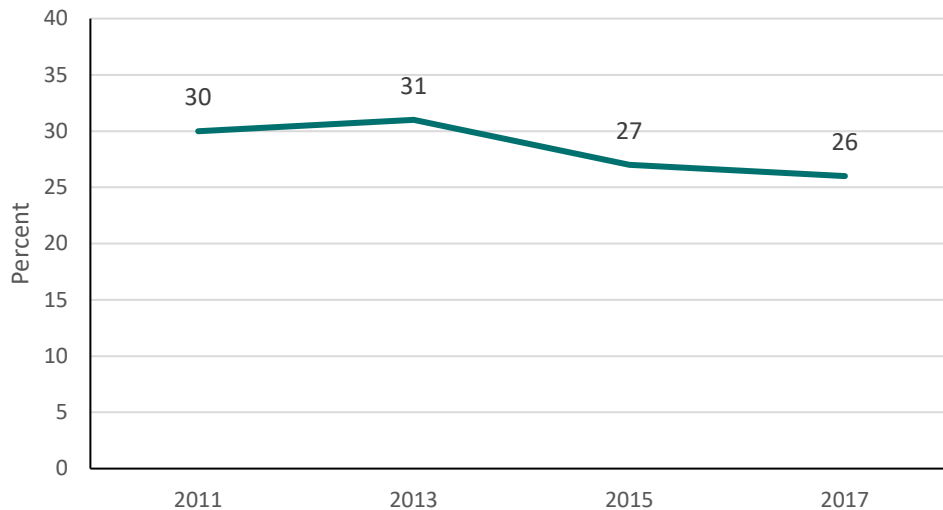
Secondhand smoke exposure is an attributable factor in the occurrence of numerous diseases, particularly cardiovascular and respiratory diseases in children^[9]. Exposure, even without direct use of tobacco, can lead to death and the development of chronic diseases.^[9] Middle school students were asked about beliefs about the harm of secondhand smoke and exposure to secondhand smoke.

- In the overall sample, 83.1% of students thought breathing smoke from other people's cigarettes or other tobacco products was "very" or "somewhat" harmful, a decrease from 94.7% in 2015 data.
- In addition, no difference was found by gender and grade level.
- Significant differences existed by race, with 85.8% of White students agreeing that secondhand smoke is very or somewhat harmful, 71.0% of American Indian, and 83.4% of students of other races agreeing the same ($p < 0.001$).
- A notable difference was found in perception of harm from secondhand smoke between cigarette smokers and (53.5%) and non-smokers (84.0%; $p < 0.001$).

Involuntary Exposure to Tobacco Smoke

- Middle school students were asked how often they were exposed to secondhand smoke at home and in vehicles.
- More than 1 in 5 were exposed to secondhand smoke in vehicles (20.7%) for at least one day, a slightly higher rate than secondhand smoke exposure at home (17.6%).
- Combining home AND vehicle exposure, 12.2% of middle school students reported exposure to secondhand smoke at home AND in a vehicle for at least one day of the past week.
- Overall, a steady decreasing trend in secondhand exposure at home OR in vehicles is noted from the 2015 data (Figure 17).^[9]

Figure 17. Exposure to Secondhand Smoke at Least One Day of the Past Week at Home or in a Vehicle, 2011-2017



- Significant differences were found by secondhand exposure at home by race. Among American Indian students, 30.2% reported exposure to secondhand smoke at home on at least one day in the past week, compared to 19.8% of other race students and 14.6% of White students reporting the same ($p < 0.0001$).
- Exposure in a vehicle also differed significantly by race with 37.6% of American Indian students reporting exposure in a vehicle compared to 17.5% of White students and 17.7% of other race students ($p < 0.0001$).
- In addition, significant differences were found by secondhand exposure and current cigarette use. Of current smokers, 63.3% were at home while someone else smoked a tobacco product at least one time in the past week versus 16.1% among non-cigarette users ($p < 0.0001$).
- Among current cigarette smokers, 77.8% rode in a vehicle with someone who was smoking a tobacco product in the past week compared to no cigarette smokers, among whom only 14.8% reported the same ($p < 0.0001$).

Students were also asked about other places where secondhand smoke exposure could occur.

- When asked about breathing smoke from someone else smoking a tobacco product in a public indoor or outdoor area, 25.0% stated this had occurred on at least one day of the past week, and 3.3% stated it occurred daily.
- Among students who work, exposure to cigarette smoke at work place on at least one day in the past week was reported by 24.8% of middle school students.*
- Interestingly, over 9.7% of students stated they had breathed smoke from someone else's tobacco product on school property in the past week, with 1.5% stating this occurred daily.

**Denominator does not include those who do not have a job or who did not work during the past 7 days.*

Close to 10.0% of middle school students in South Dakota reported breathing smoke from someone else's tobacco product on school property at least one time in the past week.

*SECTION 3: ENVIRONMENTAL FACTORS
PROMOTING TOBACCO USE AMONG
MIDDLE SCHOOL STUDENTS*



HOUSEHOLD TOBACCO USE

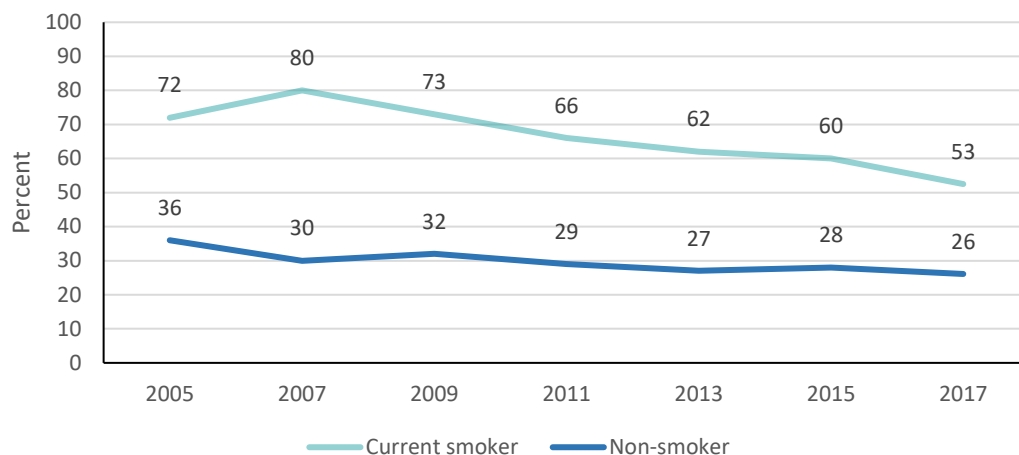
Observation of others using tobacco is a promoting factor in initiation of tobacco use among youth

- Among all middle school students, more than 1 in 3 (35.6%) reported someone in their household using at least one tobacco product.
- The three most common tobacco products used by household members and reported by middle school students were cigarettes (26.8%) followed by smokeless tobacco (9.4%), and e-cigarettes (3.9%).
- No differences were found by gender in prevalence of household tobacco use.
- Among all middle school students, 26.8% reported living with someone who currently smokes cigarettes.
- Significant differences existed by race. Among White students, 23.5% reported someone in the household smoke cigarettes. Similarly, 28.1% of other race students reported living with someone who smokes cigarettes. Rates were higher among American Indian students, with 40.7% reporting someone using cigarette in the household ($p < 0.001$).

Among middle school cigarette smokers, 52.5% reported living with someone who also smokes cigarette.

- Important differences were found in student cigarette status by household member use. Among those not using cigarettes, 26.1% reported living with a cigarette smoker in the household, compared to 52.5% of students using cigarettes and living with a cigarette smoker in their household ($p < 0.0001$) (Figure 18).

Figure 18. Trends in Household Member Cigarette Smoking, by Student Current Cigarette Smoking Status, 2005-2017



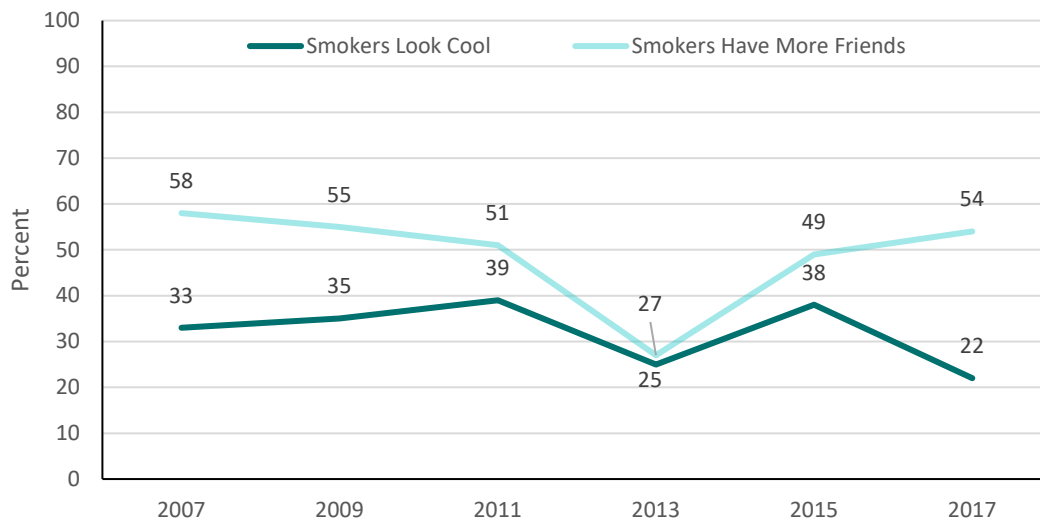
PERCEPTION OF TOBACCO, TOBACCO USE AT SCHOOL AND AMONG PEERS

Perceptions of Tobacco Use

Middle school students were asked questions about their perception of students who smoke cigarettes.

- Agreement that smoking made young people look cool or fit in was reported by 6.9% of students.
- No differences in perception of “coolness” were found by gender nor grade level.
- Perceived “coolness” of smoking varied by race, with the lowest rates among White students at 4.5% and the highest rates among American Indian students at 16.2% and 7.4% among other races ($p < 0.0001$).
- Not surprisingly, rates also varied significantly by cigarette smoking status, with 22.4% of current smokers noting smoking made people look cool, as compared to only 6.3% of non-smokers ($p < 0.0001$).
- Students were also asked if those who smoke cigarettes have more friends, with 13.6% in agreement.
- Substantial differences in perception of number of friends and tobacco use were found by race with a lower number of White students agreeing (9.5%) compared to American Indian (29.5%) and other race students (16.5%) ($p < 0.001$).
- Cigarette smokers were much more likely to agree that students who use cigarettes have more friends at 54.2% compared to non-smokers at 12.5%.
- A trend in perceptions about cigarette use among current cigarette smokers is shown in Figure 19.

Figure 19. Perceptions about Cigarette Smoking among Students who are Current Cigarette Smokers, 2007-2017



- Regarding e-cigarettes, 15.0% of middle school students reported that students who use e-cigarettes have more friends. Differences were found by race with a lower number of White students agreeing (12.0%) compared to American Indian (26.2%) and other race students (17.2%) ($p < 0.001$).

Tobacco Use at School

- Smoking, or observing someone smoking, on school property in the past 30 days was reported by 6.3% of middle school students, a decrease from the 2015 rate of 7.4%.
- Girls (7.5%) reported more people, including themselves, smoking tobacco products on school property than boys (5.1%).
- American Indian students were also more likely to smoke or observe someone smoking a tobacco product at school with 13.8%, compared to 4.2% of White students, and 8.3% of students of other races ($p < 0.001$).
- Other tobacco use (that is, tobacco that is not smoked) was reported on school property by 4.5% of middle school students in the past 30 days.
- Rates of other tobacco use at school did not vary by gender or grade level.
- American Indian students reported highest use or observation of use of other tobacco use on school property at 13.5%, compared to 2.5% of White students ($p < 0.001$).

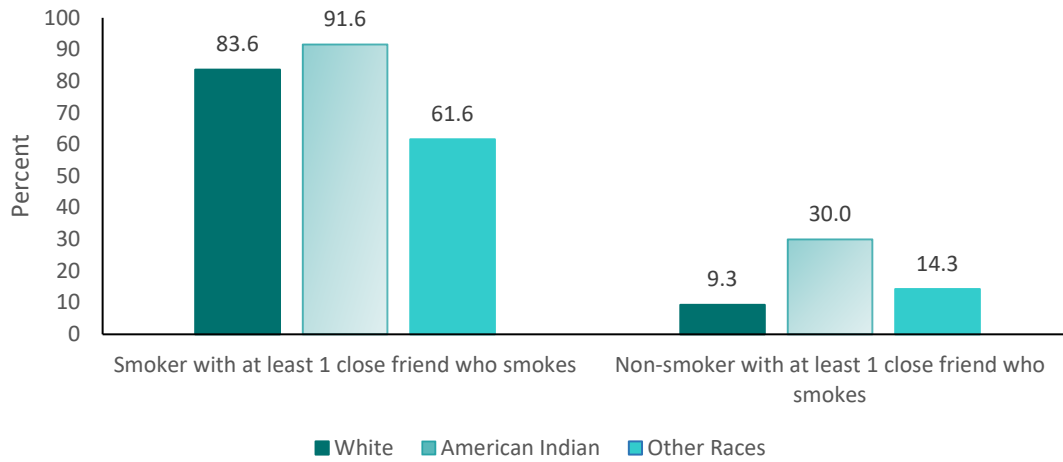
**Estimate for other races not reported since RSE (relative standard error) >25% which is considered unreliable.*

Peer Tobacco Use

Middle school students were asked about peer use of tobacco products.

- Among the overall sample, most did not have close friends that smoked cigarettes (85.5%) or used smokeless tobacco (87.6%) or e-cigarettes (88.0%).
- These 2017 findings are similar to 2015, 2013 and 2011 reports.
- Variations in peer tobacco use existed by race. Among middle school students, American Indian students had the highest rates of reporting close friends who used cigarettes at 37.2%. This was significantly different from both White students at 9.4% and other race students at 15.1% ($p < 0.001$).
- Among current cigarette smokers, the vast majority (88.0%) had at least one close friend that smoked cigarette. Rates of peer cigarette use by current cigarette status and race is shown on Figure 20.
- Among current smokeless tobacco users, 83.1% had one or more close friend(s) that used smokeless tobacco.

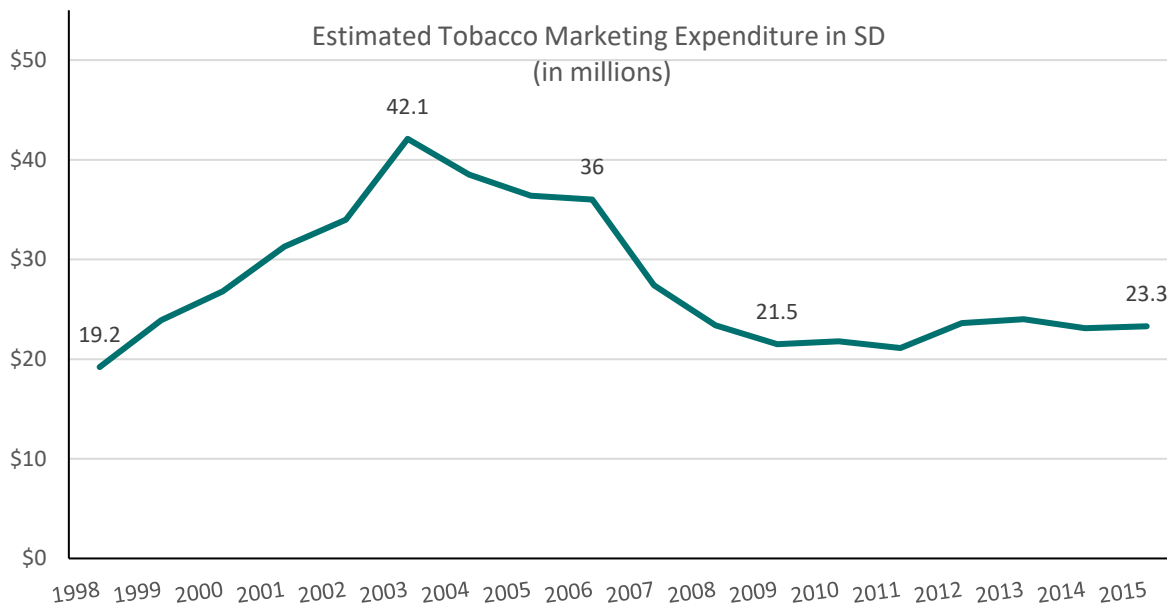
Figure 20. Rates of Peer Cigarette Use, by Current Cigarette Smoking Status and Race, 2017



TOBACCO PRODUCT MARKETING

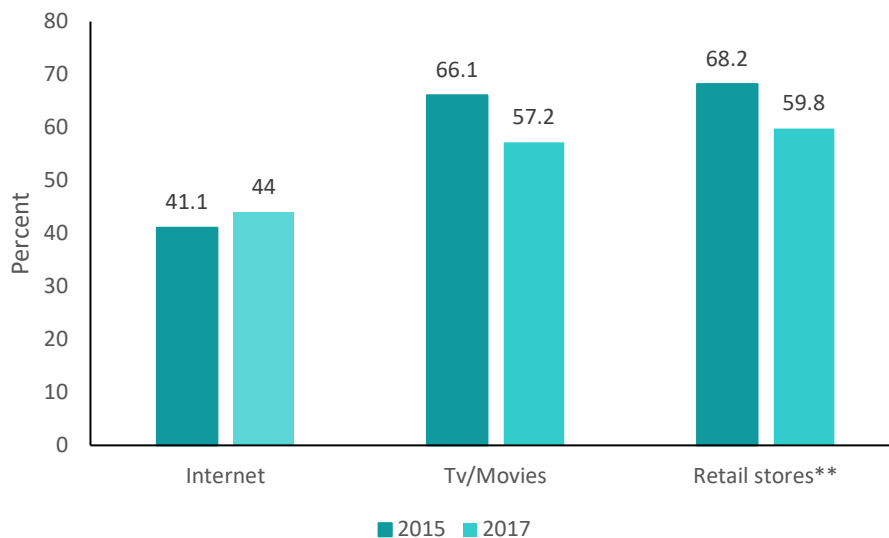
Tobacco product marketing aimed at youth continues, and marketing influences contribute to initiation of use among youth. In 2015, the most recent year of available data, the tobacco industry spent an estimated \$24 million *per day* in marketing products nationwide, with an estimated annual \$23.3 million marketing expenditures in SD alone.^[10, 11] Figure 21 shows the annual tobacco marketing expenditures in SD from 1998-2015.

Figure 21. Estimated Annual Tobacco Marketing Expenditures in South Dakota, 1998-2015



- Middle school students were asked if tobacco companies marketed products to young people, finding 69.6% of students agreed that tobacco companies target youth. This rate increased from 65.2% of students agreeing in 2015.
- No difference in the perception that tobacco companies target youth varied by gender and race
- Agreement also varied by grade level with just 61.9% of sixth grade students agreeing, and 72.2% of seventh and 74.9% of eighth grade students agreeing (p<0.001).
- Students were also asked where, if anywhere, they had seen various types of tobacco product marketing.
- As Figure 22 shows, retail stores (e.g., convenience stores, supermarket or gas station) and actors/actresses on TV and movies were the most common ways SD middle school students saw the promotion of tobacco, followed by the internet for both 2015 and 2017 data. Media remains a significant source of pro-tobacco messaging.

Figure 22. Tobacco Product Advertising Viewed by Middle School Students*, by Location, 2015 and 2017



*Exposed to cigarettes ads included those answering sometimes, most of time and always.

**Retail stores includes convenience store, supermarket, or gas station

- Finally, students were also asked where, if anywhere, they had seen various types of e-cigarette product marketing. Overall, 22.6% of the middle school students were exposed to e-cigarette ads.
- Similarly to cigarette exposure, convenience stores/ supermarket/ gas station were the most common place to see e-cigarette ad exposure (36.8%).

SECTION 4: ANTI-TOBACCO EDUCATION AND MESSAGING



EDUCATION AND MESSAGES ABOUT TOBACCO USE

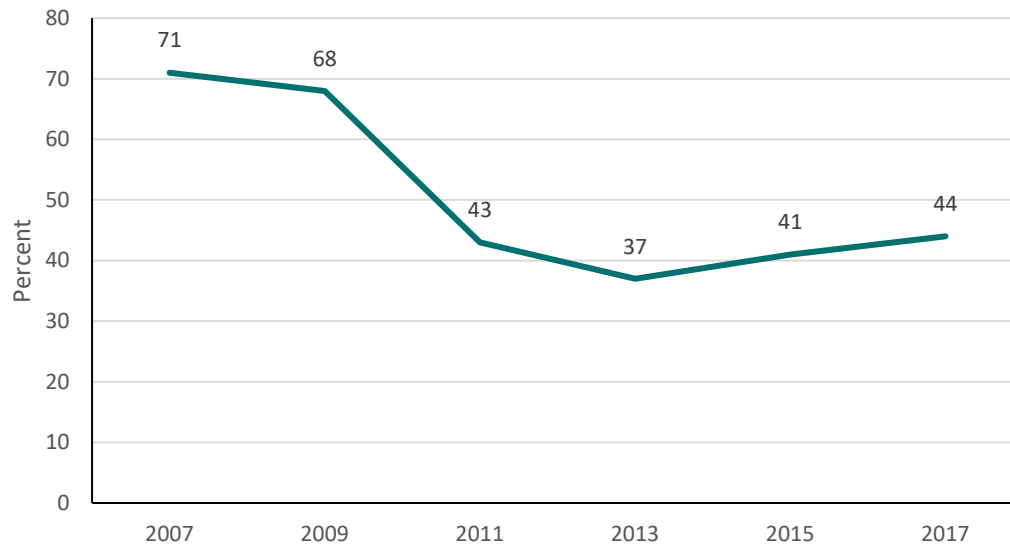
Strong media and community based messaging about the dangers of tobacco use are included as best practice guidelines to effectively reduce tobacco initiation among youth.^[12] Prevention among youth is critical, and a publication from the Surgeon General specifically points to parents, schools, and mass media as key sources of information on the dangers of tobacco use for our youth. Strategies to include in a comprehensive, sustained, multi-component program include mass media campaigns, higher tobacco prices, smoke-free laws and policies, evidence-based school programs, and sustained community-wide efforts.^[13]

- Survey findings show that among SD middle school students, nearly 8 in 10 reported hearing an anti-tobacco message from at least one source (parent, healthcare provider, school, organized activity, or ReThink It media (79.7%)). This is a slight decline over last survey's finding at 81.6%.

Parental Messaging about Tobacco Use

- Among middle school students, 44.0% reported a parent had talked with them about not using tobacco in the past year. This rate did not vary by gender, race or tobacco use status.
- After a drastic decrease in parental discussion on the dangers of tobacco use from 2007 to 2013, the percent of students reporting discussing dangers of tobacco with parents is slightly increasing again (Figure 23).

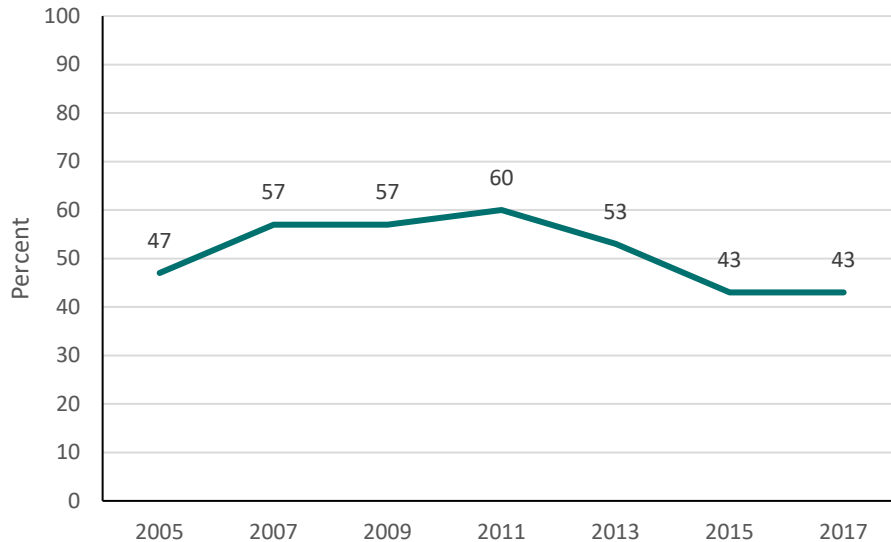
Figure 23. Trends in Parent(s) Discussing the Dangers of Tobacco Use, 2007-2017



Tobacco Education at School

- In 2017, 42.7% reported anti-tobacco education at school. This did not vary by gender or race by those currently using tobacco and those not using tobacco.
- Figure 24 displays the trends of anti-tobacco education in schools over the past decade.

Figure 24. Trends in Number of Students Receiving School-based Education about the Dangers of Tobacco Use, 2005-2017



Organized Activities Discouraging Tobacco Use

- Involvement in an organized activity to keep young people away from tobacco use was reported by 19.2% of middle school students, a slight decrease from the 2015 findings at 21.0%
- Examples of anti-tobacco organized activities in SD include Teens against Tobacco Use (TATU) groups and groups organized at local Boys and Girls Clubs.
- No differences were found by gender, race or tobacco use status.

Healthcare Professional Messaging about Tobacco Use

- Clinical practice guidelines recommend that clinicians ask both pediatric and adolescent patients about tobacco use and provide abstinence advice.^[14] This recommendation is further expanded by the requirements of Stage 1 Meaningful Use, mandating that smoking status be recorded for all patients 13 years or older.^[15]
- Students were asked about discussions with healthcare providers (including doctors, dentists or nurses) regarding tobacco. Most students (92.4%) reported seeing a healthcare provider in the past year.

- Among those who had seen a healthcare professional, 29.8% said this provider asked about use of tobacco products.
- Differences occurred by gender. Girls (32.0%) were more likely to be asked versus boys (27.9%)
- Differences were found by race. More American Indians (36.0%) compared to white (28.5%) and other race (30.1%) were asked by a health care provider about tobacco use.
- Differences were also found by tobacco use status. Among current tobacco users, 45.9% were asked by a health care provider about tobacco use versus 29.3% among non-users.
- Students were also asked if a healthcare professional had advised them not to use tobacco. Among those who had seen a healthcare professional in the past year, 30.8% reported this person advised against the use of tobacco products.
- This did not vary by gender, but did vary by race and tobacco use status with more American Indian students (38.9%) compared to White (29.5%) and other race students (29.2%) advised ($p < 0.001$), and more current tobacco users advised (43.9%) compared to non-users (30.4%) ($p < 0.01$).

Anti-Tobacco Media

- The SD Department of Health Tobacco Control Program has designed media aimed at providing information about the dangers of tobacco use, cessation information, and how tobacco companies target youth. This media is available at <http://rethinktobacco.com>.
- Among all SD middle school students, 41.6% reported hearing the “Rethink It. Seriously.” slogan.
- This is a decline from the 2015 rate of 48.2% and 2013 rate of 59.2%.
- No differences in hearing the slogan were found by race.
- Conversely, girls (45.6%) reported hearing the slogan more than boys (37.9%).
- Differences were also found in awareness of the Rethink It brand among current cigarette smokers (58.5%) and non-smokers (41.5%).

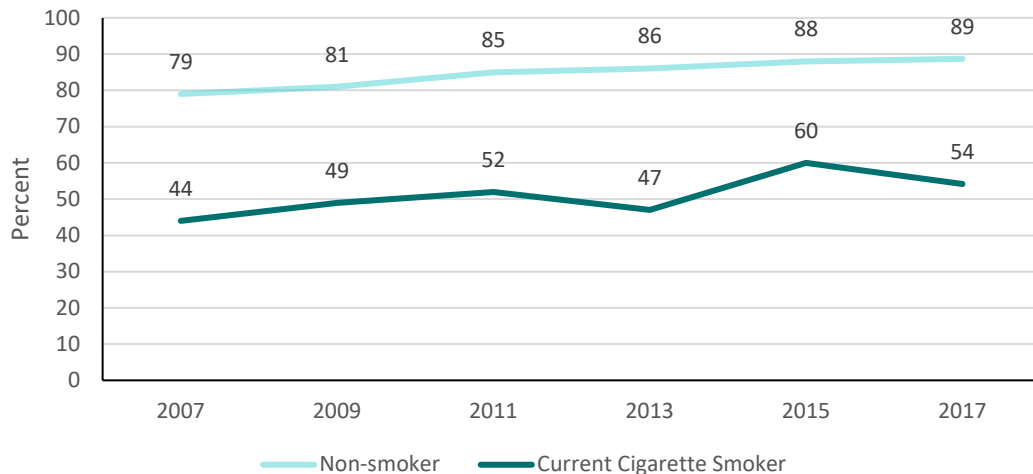


HOUSEHOLD INDOOR SMOKING RULES

Home rules that prohibit smoking tobacco products indoors and in vehicles aid in reducing, but do not eliminate, the health impact to youth^[1]. Home rules about smoking indoors were assessed as both a protective factor in secondhand smoke exposure, and also as a message against smoking.

- Nearly 9 in 10 students (87.9%) lived in a home where smoking was *never* allowed inside, a similar finding from 2013 data (87.3%).
- No differences in home smoking rules existed by gender.
- Results did vary significantly by race. Among American Indian students, only 75.0% reported home rules, followed by other race students of which 86.0% reported home rules ($p < 0.001$). Among White students, 91.3% reported home rules prohibiting smoking indoors ($p < 0.0001$).
- Notably, differences also existed by current cigarette smoking status, with home rules reported by only 54.2% of students who smoke cigarettes compared to 88.7% of non-smokers (Figure 25).

Figure 25. Trends in Home Rules Prohibiting Cigarette Smoking Indoors, by Smoking Status*, 2007-2017



*Includes cigarette smoking only

- Rules about smoking inside vehicles had similar rates. Overall, 79.0% of middle school students reported a rule that prohibited smoking inside vehicles.
- This did not vary by gender, but did vary significantly by race and smoking status.
- American Indian students reported significantly lower rates of rules prohibiting smoking in vehicles at 59.7% compared to White students at 83.1% and other race students at 81.3% ($p < 0.0001$).
- Non-smokers reported vehicle rules at a rate of 80.2% compared to smokers at 32.1% ($p < 0.0001$).

COMPARISON WITH NATIONAL FINDINGS

The prevalence of youth tobacco use in South Dakota is in line with national rates. The South Dakota Youth Tobacco Survey uses the same questions, sampling methods, and editing procedures as the National Youth Tobacco Survey (NYTS) which is also sponsored by the U.S. Centers for Disease Control and Prevention (CDC). The state survey and the national surveys are not always conducted during the same year, and the most recent national data available is from 2016.^[2]

The comparison of the prevalence of tobacco use between South Dakota and the NYTS is shown in table 5.

- The state prevalence of most tobacco products used among middle school students in the past 30 days was lower than the national, except for the use of smokeless tobacco and pipe.
- The percentage of students reporting use of any tobacco product, two or more tobacco products and any combustible were lower than the national rate.

Table 5. Prevalence of Current Tobacco Use Among Youth (grades 6-8) in the Past 30 Days, by Product in SD (SD YTS 2017) and U.S. (National Youth Tobacco Survey, United States, 2016)

	South Dakota		United States	
	Prevalence (%)	95% CI	Prevalence (%)	95% CI
E-cigarettes	2.5	1.8-3.2	4.3	3.7-4.9
Cigarettes	2.0	0.9-3.1	2.2	1.7-2.7
Cigars	1.8	0.8-2.7	2.2	1.7-2.9
Smokeless tobacco [†]	2.6	1.0-4.2	2.2	1.6-3.1
Hookah	1.3	0.6-1.9	2.0	1.6-2.5
Pipe tobacco	1.7	0.8-2.7	0.7	0.5-1.0
Bidis	0.3	0.2-0.4	0.3	0.2-0.5
Any tobacco Product*	6.2	3.9-8.5	7.2	6.1-8.4
≥ 2 tobacco products**	2.9	1.5-4.4	3.1	2.5-3.8
Any combustible tobacco product***	3.6	2.0-5.5	4.3	3.5-5.2

Abbreviation: CI= Confidence Interval.

[†]Smokeless tobacco was defined as use of chewing tobacco, snuff, dip, snus, and/or dissolvable tobacco products.

“In the past 30 days, which of the following products did you use on at least one day: snus, dissolvable tobacco products?” Responses from these questions were combined to derive overall smokeless tobacco use. Past 30-day use of pipe tobacco and bidis were determined by asking, “In the past 30 days, which of the following products have you used on at least one day: pipe filled with tobacco (not water pipe), bidis (small brown cigarettes wrapped in a leaf)?”

*Any tobacco product is define as use of any tobacco product (electronic cigarettes, cigarettes, cigars, smokeless tobacco, hookahs, pipe tobacco, and/or bidis) on at least one day in the past 30 days.

**≥2 tobacco products is define as use of two or more tobacco products (electronic cigarettes, cigarettes, cigars, smokeless tobacco, hookahs, pipe tobacco, and/or bidis) on at least one day in the past 30 days.

***Any Combustible tobacco product is define as use of cigarettes, cigars, hookahs, pipe tobacco, and/or bidis on at least one day in the past 30 days.

SECTION 5: KEY FINDINGS AND RECOMMENDATIONS



2017 YOUTH TOBACCO SURVEY RECOMMENDATIONS

Based on results of the 2017 South Dakota YTS, the following recommendations are offered toward reducing the health risks associated with tobacco use and secondhand smoke exposure among the youth of South Dakota:

1) Discourage use of alternative tobacco products, including electronic cigarettes.

Nationwide, e-cigarette use among youth continues to be a growing trend even among those who never tried a cigarette. It has been reported that the prevalence of e-cigarette use among youth increased 900% from 2011-2015.^[16] The number of middle school students in SD that have *ever* used an e-cigarette increased from 0.6% in 2011 to 8.2% in 2017. Current use of e-cigarettes by middle school students has also doubled since 2013 and is now at a rate of 2.5%. Continued efforts to prohibit access to e-cigarettes among youth are needed and prevalence should be monitored in future years.

2) Monitor youth poly-tobacco users.

Among students using tobacco products in the past 30 days, 47.0% had used multiple types of tobacco. Research suggests that youth who use multiple tobacco products are at higher risk for developing nicotine dependence and might be more likely to continue using tobacco into adulthood.^[13]

3) Decrease tobacco use and secondhand smoke exposure among American Indian youth.

Rates of current tobacco use continue to be higher among American Indian middle school students. American Indian students also reported higher secondhand smoke exposure at home and in vehicles. Efforts to reduce initiation and access to cessation service need to continue for this population. Encouraging findings were noted for this population, as American Indian students were more likely to report a health care provider advising against tobacco use.

4) Support tobacco education in schools.

Among SD middle school students, approximately 43.0% report receiving anti-tobacco education in school, a similar percentage from the 2015 data and a decline from the 53.0% in 2013. Tobacco use increases significantly between sixth and seventh grades. Anti-tobacco messaging to students grade six and younger may prove helpful.

5) Encourage implementation of the SD model policy for tobacco-free schools.

Display, promote, and encourage implementation of the model policy for tobacco-free schools among administrators and school boards. Nearly 10% of middle school students in SD report involuntary exposure to secondhand smoke *on school property* in the last week, with 1.5% stating this occurred daily. Additionally, 6.3% report using or observing someone using a tobacco product on school property in the past 30 days. Tobacco use needs to be eliminated on all school property, at all school events, at all times.

6) *Target healthcare providers for education on assessment of tobacco use for youth patients, including assessment of tobacco use in the household.*

Clinical practice guidelines recommend that all healthcare providers ask pediatric and adolescent patients about the use of, and exposure to, tobacco products. Meaningful use stage one criteria requires smoking status to be recorded for patients 13 years of age and older.^[15] Of middle school students who had seen a healthcare professional in the last year, approximately 30.0% were asked about use of tobacco products. Trends suggest e-cigarettes are an emerging product of choice among this age group, and should be included in the tobacco use assessment. The dangers of secondhand smoke exposure should also be discussed with the family during patient visits. Pediatric providers play an important role in tobacco reduction among youth by asking about and addressing the use of tobacco not only among youth they care for but the parents who are smokers^[17].

7) *Support a comprehensive ban on tobacco advertising and promotion.*

Exposure to pro-tobacco-marketing influences tobacco use among youth. More than half of middle school students in SD reported seeing tobacco product advertising in convenience stores. More than 70.0% reported seeing actors using tobacco product on TV or in movies or who see ads for tobacco products on the internet. Evidence shows that a comprehensive ban on tobacco advertising and promotion reduce tobacco use. Continued efforts to prohibit marketing of tobacco products among youth are needed^[18].

8) *Eliminate tobacco sales to underage youth.*

The legal age in SD to purchase tobacco products is 18 years. Among middle school students (ages 11-14) who attempted to purchase tobacco products during the past 30 days on their own, 94.6% report they were not refused to purchase due to their age. The primary location of purchase was gas stations. More efforts are needed to enforce consequences for owners or employees who sell tobacco products to minors.

9) *Target parents for cessation.*

Among middle school students, 35.6% reported living with someone who use at least one tobacco product. Parental cessation should continue to be a focus in order to improve health outcomes for families. A decline has been seen in rates of household smoking in the past decade, and use of cigarettes by middle school students follows that trend.

10) *Promote the SD QuitLine in schools.*

An interest in quitting tobacco use was reported by 70.5% of current middle school tobacco users. Unfortunately, the majority of students who made a quit attempt in the past year did so without assistance. Promotion of the SD QuitLine among school counselors, nurses, and staff is needed in order to help youth quit before tobacco causes long-term health consequences.

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APPENDIX A: Status of SD Tobacco Control Program Strategic Plan Goals

Status: **Improved**
Unchanged

The current rate of change is 5% or greater over baseline, moving in the right direction.
The current rate remained largely unchanged (less than 5% change over baseline)

Reduce Current Use of Tobacco among Young People

OBJECTIVE:

- Reduce the percentage of youth grades 6-8 that currently smoke from 3.5% to 3.0% by 2020.
- Reduce the percentage of youth grades 6-8 that currently use spit tobacco from 3.3% to 2.0% by 2020.

STATUS:

- **IMPROVED**— In 2017, 2.0% of middle school youth reported current use of cigarettes, compared to 3.5% in 2013
- **IMPROVED**— In 2017, 2.6% of middle school youth reported current use of spit tobacco, compared to 3.3% in 2013.

Decrease Initiation of Tobacco Use among Young People

OBJECTIVE:

- Decrease the percentage of youth grades 6-8 who report ever smoking cigarettes from 12.9% to 11.0% by 2020.
- Decrease the percentage of American Indian youth grades 6-8 who report ever smoking cigarettes from 33.4% to 32.0% by 2020.

STATUS:

- **IMPROVED**— In 2017, 9.0% of middle school youth reported ever smoking a cigarette, compared to 12.9% in 2013.
- **UNCHANGED**— In 2017, 31.8% of American Indian middle school youth reported ever smoking a cigarette, compared to 33.4% in 2013.

Eliminate Non-Smokers' Exposure to Secondhand Smoke

OBJECTIVE:

- Reduce the percentage of youth grades 6-8 that were in the same room or car as someone smoking from 31.1% to 27.0% by 2020.

STATUS:

- **IMPROVED**— In 2017, 26.0% of middle school youth reported exposure to secondhand smoke at home or in a vehicle during the past week, compared to 31.1% in 2013.

Electronic Cigarette Use

STATUS:

The use of electronic cigarettes among middle school youth continues to increase at an alarming rate. In 2017, 8.2% of South Dakota middle school students reported trying an electronic cigarette at least once in their lifetime, an increase from 2.7% in 2013. Current use of an electronic cigarette, or use in the last 30 days, was reported by 2.5% of SD youth in 2017, compared to 1.1% in 2013.