Teens and Tobacco in Minnesota, 2014 Update

Data Book for the Minnesota Youth Tobacco Survey

Minnesota Department of Health Center for Health Equity
Center for Health Statistics

November, 2014

TEENS AND TOBACCO IN MINNESOTA, 2014 UPDATE: DATA BOOK FOR THE MINNESOTA YOUTH TOBACCO SURVEY

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We express our thanks to the thousands of students who completed the Minnesota Youth Tobacco Survey in 2014 and in previous years for their willingness to answer questions about their experiences with tobacco use. We are equally indebted to the principals, teachers and staff who worked to make sure the survey went smoothly at 70 schools around the state. ICF Macro, Inc. and its team of local survey administrators made all the arrangements with schools and administered the survey in the

selected classrooms. Our colleagues at the Office on Smoking and Health at the Centers for Disease Control and Prevention (CDC) provided the core survey questions, drew the school samples, scanned the survey booklets, and prepared the initial data file.

Financial support for the 2014 Minnesota Youth Tobacco Survey was provided by the Centers for Disease Control and Prevention as part of grant 5U58DP001974-05.

Finally, we would like to thank the many dedicated people throughout the state who support the well-being of our young people by encouraging them to reject tobacco use and other threats to health and growth. We hope this information will help all of us better understand the trends and characteristics of teen tobacco use in Minnesota.

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1.1 INTRODUCTION

Tobacco use continues to be the leading cause of premature death in the U.S. Cigarette smoking was responsible for the death of an estimated 5, 135 Minnesotans in 2007, and excess medical costs due to smoking reached $2.87 billion.[1] Tobacco use begins its damaging work early in life, with about 80 percent of adult smokers reporting that they began smoking before the age of 18.[2] One of the best strategies for reducing the harm caused by tobacco use is to discourage young people from taking it up in the first place.

This report describes major findings from the 2014 Minnesota Youth Tobacco Survey and, where possible, changes over time since 2000. The Minnesota Department of Health has been conducting the Minnesota Youth Tobacco Survey (MYTS) to provide comprehensive information needed to understand tobacco use among young people and to design and evaluate prevention efforts. In addition to the 2014 survey, the survey has also been conducted in 2000, 2002, 2005, 2008, and 2011. Questions cover the use of various tobacco products, exposure to secondhand smoke, use of new tobacco-related products such as electronic cigarettes, media awareness, access to tobacco products, and other topics. Completed surveys were obtained from 4,243 public school students from grades 6 through 12.

The MYTS is designed to provide statewide estimates and does not have the large sample size needed to provide reliable results for students from relatively small racial or ethnic groups. However, the Minnesota Student Survey has a large number of participants and includes a handful of tobacco questions. Appendix A includes data on disparities in tobacco use from the 2013 Minnesota Student Survey.

This report presents results separately for middle school students (grades 6-8) and high school students (grades 9-12). Trend results have been tested for statistical significance, and significant differences between the 2000 and 2014 results and between the 2011 and 2014 results are noted in the tables.

1.2 SURVEY METHODS

The Minnesota Youth Tobacco Survey is a cooperative project between the Minnesota Department of Health (MDH) and the U.S. Centers for Disease Control and Prevention (CDC). To ensure comparability between state and national results, states follow CDC specifications in designing and carrying out their surveys. Since the late 1990's, over 40 states have conducted youth tobacco surveys using CDC's procedures.

Survey questions

The MYTS is built around a set of core questions defined by CDC. Of the 65 questions on the survey, 52 are CDC core questions. MDH added thirteen questions, primarily to strengthen the sections on electronic cigarettes and on media exposure. Three questions about asthma were included but are not analyzed in this report. Some of the questions had several sub-parts. The 65 numbered questions actually provide154 separate data elements.

Three years ago, CDC overhauled the set of core questions. Many questions were dropped, new questions were added, and the wording of some of the remaining questions was changed. The changes were needed to respond to the changing world of tobacco use. As a result, however, many of the trend lines that could once be reported from the survey are no longer available. Fortunately, trend lines for the use of conventional tobacco products are still available and are included in this report.

Sample

Students are selected for the survey in two stages. First, 50 public middle schools (grades 6-8) and 49 public high schools (grades 9-12) were randomly selected, with probability of selection based on size of enrollment. Alternative schools and charter schools were included. Next, two to four classrooms within each participating school were randomly selected, and all students in these classrooms were invited to participate.

Notification and confidentiality

Parents are informed by letter about the survey and can notify the school if they do not want their student to participate. Students are also informed that the survey is voluntary on their part and that they can decide not to participate or not to answer specific questions. Students are assured that their answers are anonymous and confidential and are reminded not to write their name, ID number or any other identifying information in the survey booklet. The study was reviewed and approved by the Minnesota Department of Health Institutional Review Board.

Timing

As in previous survey years, the 2014 survey was administered primarily in January, February and March, with a handful of school giving the survey in April. The exact survey date was set by each school.

Analysis

Completed surveys were sent to the survey contractor, which reviewed the survey booklets and prepared them for scanning. CDC scanned the surveys, edited the data, created the weighted dataset, and prepared a series of tables. The Department of Health analyzed the data using SPSS and SPSS Complex Samples software and prepared this report.

Participation rates

In 2014, 70 percent of the sampled middle schools and 69 percent of the sampled high schools agreed to participate. Among the schools that did participate, 91 percent of middle school students and 88 percent of high school students enrolled in the selected classrooms provided usable surveys. (Table 1) The main reasons why students do not participate are that they are absent from class on the survey date (due to illness, truancy, make-up tests, field trips, or other activities) or they decide not to take the survey.

Table 1. Survey participation statistics for Minnesota youth tobacco surveys, 2000-2014.

Year	Number of schools selected	Number of schools participating	School participation rate	Student participation rate*	Total surveys
2000					
Middle school	58	46	79.3%	87.9%	4,751
High school	77	57	74.0%	84.6%	7,625
2002					
Middle school	58	51	87.9%	85.6%	4,751
High school	77	50	64.9%	83.2%	6,806
2005					
Middle school	57	39	68.4%	88.3%	4,119
High school	77	60	77.9%	81.4%	6,562
2008					
Middle school	48	36	75.0%	90.0%	2,322
High school	51	32	62.7%	74.3%	2,267
2011					
Middle school	48	27	56.3%	83.3%	1,474
High school	52	27	51.9%	83.4%	1,972
2014					
Middle school	50	36	72.0%	91.2%	1,978
High school	49	34	69.4%	88.5%	2,265

* Number of students who took the survey divided by student enrollment in the selected classrooms.

Limitations

The Minnesota Youth Tobacco Survey is a survey of public school students and thus does not represent all young people. Students in private schools, juvenile correctional facilities, and residential treatment centers are not included in the study. Moreover, teens who have dropped out of school are not represented, and students who frequently miss school due to truancy, illness or other reasons are under-represented. Another limitation is the content of the survey. The MYTS focuses on tobacco use and does not provide information on many of the life experiences and behaviors that are often associated with tobacco use. Finally, the survey is a fixed-choice self-report survey and provides no opportunity for youth to write more detailed responses in their own words.

2.1 INITIATION OF CONVENTIONAL TOBACCO USE

Trying or experimenting with tobacco is a first step that may eventually lead to regular use. Public health organizations want to reduce the number of youth who take this initial step. In this section, we look at the proportion of students who have tried or ever used cigarettes and other tobacco products, even if it was only one or two puffs. Conventional products include cigarettes, cigars, smokeless tobacco, pipes, bidis, and kreteks.

Initiation of conventional tobacco use (table 2)

- In 2014, 12.1 percent of middle school students and 40.2 percent of high school students reported that they had ever used one or more of the conventional forms of tobacco.
- Among high school students, 44.4 percent of males and 35.7 percent of females had ever tried any form of tobacco.
- Males are more likely than females to try different forms of tobacco besides cigarettes. Among high school students, males were twice as likely as females to have ever smoked cigars, cigarillos or little cigars, and were three times as likely to have ever used chewing tobacco, snuff or dip.

Table 2. Percent of students who have ever used conventional tobacco products in lifetime, by gender, 2014.

	Middle School			High School		
	Female	Male	Total	Female	Male	Total
Any tobacco products	10.5	13.5	12.1	35.7	44.4	40.2
Cigarettes	8.3	9.9	9.1	29.8	32.9	31.5
Cigars, cigarillos, little cigars	3.3	4.3	3.8	16.7	31.1	24.2
Smokeless tobacco	2.4	4.1	3.3	6.5	21.6	14.2
Pipes	2.6	3.3	3.0	8.4	15.2	11.8
Bidis or kreteks*	.7	1.2	1.0	2.3	3.9	3.1

* Bidis are small brown cigarettes wrapped in a leaf and tied with a thread. Kreteks are clove cigarettes.
Source: Minnesota Youth Tobacco Survey, 2014

Age started to use tobacco products (table 3)

- Among high school students who had ever smoked a cigarette, even one or two puffs, 28.0 percent tried their first cigarette at the age of 12 or younger. The average age of smoking their first cigarette was 13.6 years.
- Among high school students who had ever used smokeless tobacco, 17.0 percent used smokeless tobacco for the first time at age 12 or younger. The average age of trying smokeless tobacco for the first time was 14.3 years

Table 3. Age at which high school students first smoked a cigarette, first tried cigar products, or first used smokeless tobacco (among all who have ever tried each form of tobacco), 2014.

Age of first use:	**Has ever smoked a cigarette**	**Has ever smoked a cigar**	**Has ever used smokeless tobacco**
10 years old or younger	14.5%	7.2%	10.3%
11 or 12 years old	13.5%	6.2%	6.7%
13 or 14 years old	31.3%	23.4%	29.5%
15 or 16 years old	31.4%	43.9%	41.5%
17 years old or older	9.8%	19.3%	12.0%
TOTAL	100.0%	100.0%	100.0%
Percent who first tried product at age 12 or younger	28.0%	13.4%	17.0%
Average age first tried product	13.6 yrs	14.7 yrs	14.3 yrs

Source: Minnesota Youth Tobacco Survey, 2014

Trends in initiation of tobacco use (table 4; figure 1)

- Initiation of tobacco use has fallen dramatically since 2000. The percentage of middle school students who have ever used tobacco fell from 41.3 percent in 2000 to 12.1 percent in 2014, and the percent of high school students who have ever used tobacco fell from 69.5 percent to 40.2 percent.
- The long-term decline in initiation of tobacco use has continued in recent years. Between 2011 and 2014, ever use of any tobacco fell from 15.0 percent to 12.1 percent among middle school students and from 46.2 percent to 40.2 percent among high school students.
- Ever use of cigarettes, cigar products and smokeless tobacco dropped significantly among high school students between 2011 and 2014. Ever use of cigarettes fell from 39.5 to 31.5 percent, ever use of cigars, cigarillos or little cigars fell from 31.0 to 24.2 percent, and ever use of chewing tobacco, snuff or dip fell from 20.0 to 14.2 percent.

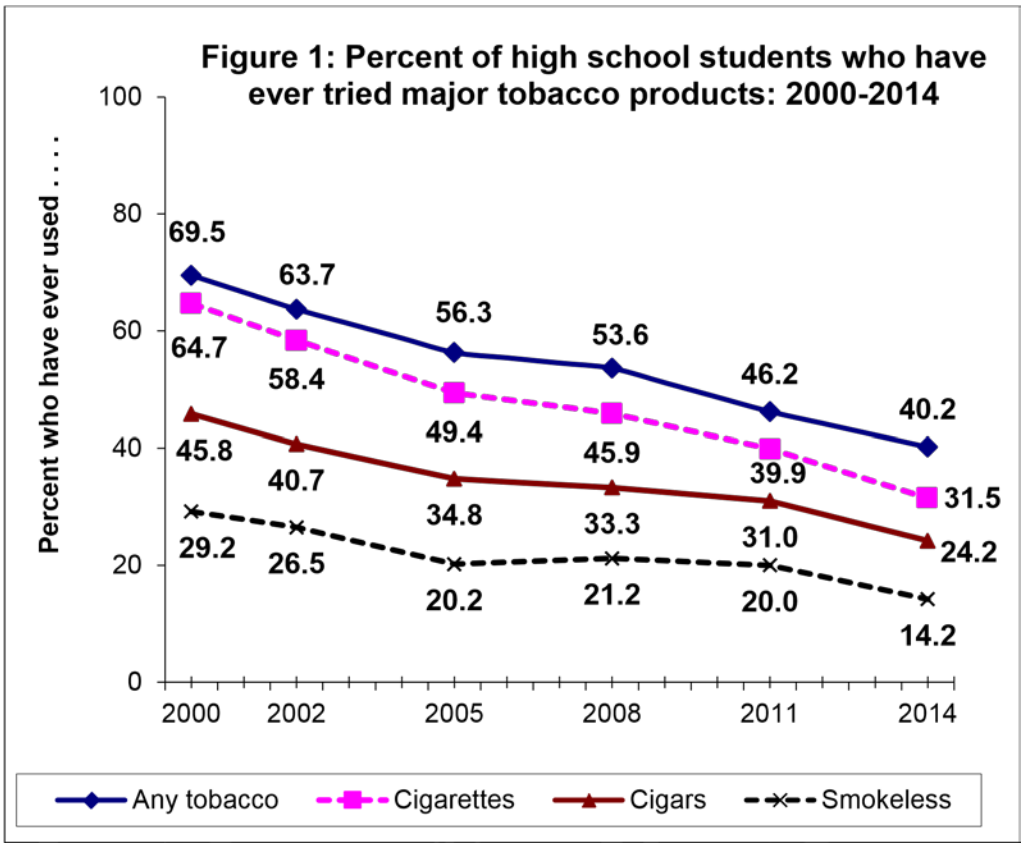
Table 4. Change in percent of students who have <u>ever</u> used various tobacco products in lifetime, 2000-2014.

Percent ever used . . .	2000 (%)	2002 (%)	2005 (%)	2008 (%)	2011 (%)	2014 (%)	Percent Change 2000-14		Percent Change 2011-14
Middle School									
Any form of tobacco	41.3	36.5	27.8	22.5	15.0	12.1	-71%	ψ	-19%
Cigarettes	33.3	27.4	19.7	14.8	12.7	9.1	-73%	ψ	-28%

Cigars, cigarillos	18.3	16.3	12.8	9.5	7.1	3.8	-79%	ψ	-44%	ψ
Smokeless tobacco	12.4	11.2	9.8	8.3	5.6	3.3	-73%	ψ	--	
High School										
Any form of tobacco	69.5	63.7	56.3	53.6	46.2	40.2	-42%	ψ	-13%	
Cigarettes	64.7	58.4	49.4	45.9	39.9	31.5	-51%	ψ	-21%	ψ
Cigars, cigarillos	45.8	40.7	34.8	33.3	31.0	24.2	-47%	ψ	-22%	ψ
Smokeless tobacco	29.2	26.5	20.2	21.2	20.0	14.2	-51%	ψ	-29%	ψ

-- Percent change is not shown when baseline percentage is below 10%, unless statistically significant.

ψ Differences between the stated years are statistically significant at p<.05. Source: Minnesota Youth Tobacco Surveys, 2000 through 2014.



Source: Minnesota Youth Tobacco Survey, 2000-2014.

Trends in initiation of tobacco use by gender (table 5)

- Initiation of tobacco use has declined for both males and females in the long-term (since 2000) and the short-term (since 2011). However, the declines for males between 2011 and 2014 appear to be slightly stronger than the declines for females, both at the middle school and high school levels.

- At the high school level, the percent of males who had ever used tobacco fell significantly from 51.8 to 44.4 percent between 2011 and 2014, and the percent of males who had ever smoked a cigarette fell significantly from 42.5 to 32.9 percent.

Table 5. Change in percent of students who <u>ever</u> used any form of tobacco and who ever tried cigarettes in their lifetime, by gender, 2000-2014.

Middle School	2000 (%)	2002 (%)	2005 (%)	2008 (%)	2011 (%)	2014 (%)	Percent Change 2000-14		Percent Change 2011-14	
Ever used any tobacco										
Females	38.1	32.9	25.2	20.1	12.1	10.5	-72%	ψ	-15%	
Males	44.2	39.8	30.3	24.5	17.8	13.5	-69%	ψ	-24%	
Ever smoked a cigarette										
Females	31.2	25.2	18.5	14.2	10.4	8.3	-73%	ψ	-20%	
Males	35.2	29.4	20.7	15.1	15.0	9.9	-72%	ψ	-34%	
High School										
Ever used any tobacco										
Females	66.0	58.9	53.6	47.5	40.1	35.7	-46%	ψ	-11%	
Males	72.7	68.3	58.7	58.9	51.8	44.4	-39%	ψ	-14%	ψ
Ever smoked a cigarette										
Females	63.7	56.3	49.2	42.2	37.1	29.8	-53%	ψ	-20%	
Males	65.5	60.4	49.3	49.1	42.5	32.9	-50%	ψ	-23%	ψ

ψ Differences between the stated years are statistically significant at p<.05. Source: Minnesota Youth Tobacco Surveys, 2000 through 2014.

2.2 CURRENT USE OF CONVENTIONAL TOBACCO PRODUCTS

Adolescents are defined as current users of tobacco if they have used tobacco products on one or more days in the past 30 days. Current use is the most important measure of the tobacco threat because it tells how many youth have not only tried tobacco products but are continuing to use them.

Extent of current tobacco use (table 6)

- 3.6 percent of middle school students and 19.3 percent of high school students reported that they have used any form of conventional tobacco in the past 30 days. These are the lowest percentages since the beginning of the Youth Tobacco Survey in 2000.
- Cigarettes are still the most commonly used tobacco product. In 2014, 1.6 percent of middle school students and 10.6 percent of high school students smoked cigarettes in the past 30 days. Among male high school students, however, the percentages using cigarettes (10.8%), cigar products (10.9%), and smokeless tobacco (10.8%) in the past 30 days were virtually identical.
- Males are more likely than females to be current users of tobacco products. Among high school students, 23.3 percent of males and 15.1 percent of females reporting using tobacco in the past 30 days. Male and female high school students are equally likely to smoke cigarettes, but males are twice as likely as females to smoke cigar products and seven times as likely as females to use smokeless tobacco.

Table 6. Percent of students who used various tobacco products on one or more of the past 30 days, by gender, 2014.

	Middle School			High School		
	Female	Male	Total	Female	Male	Total
Any tobacco products	3.5%	3.8%	3.6%	15.1%	23.3%	19.3%
Cigarettes	2.3%	1.1%	1.6%	10.4%	10.8%	10.6%
Cigars, cigarillos, little cigars	1.5%	1.5%	1.5%	5.3%	10.9%	8.2%
Smokeless tobacco	.6%	1.6%	1.1%	1.5%	10.8%	6.2%
Pipe	1.6%	1.4%	1.5%	4.2%	5.6%	4.9%
Bidis or kreteks*	.2%	.8%	.5%	1.2%	2.4%	1.8%

* Bidis are small brown cigarettes wrapped in a leaf and tied with a thread. Kreteks are clove cigarettes. Source: Minnesota Youth Tobacco Survey, 2014

Trends in current tobacco use (table 7)

The substantial progress that has been made in reducing conventional tobacco use since 2000 continued and deepened during the last three years.

- The percentage of middle school students using any tobacco in the past 30 days fell from 5.6 percent in 2011 to just 3.6 percent in 2014, and the percentage of high school students using tobacco in the past 30 days fell from 25.8 percent to 19.3 percent. For high school students, this was the sharpest drop ever recorded by the survey.

- The percent of high school students who smoked cigarettes in the past 30 days dropped from 18.1 percent in 2011 to 10.6 percent in 2014, again the steepest decline recorded by the survey.
- The percent of high school students smoking cigars, cigarillos, or little cigars fell from 13.0 percent in 2011 to 8.2 percent in 2014. This is the first time any progress in reducing the use of cigar products has been recorded by the survey.
- The percent of high school students using chewing tobacco, snuff, or dip in the past 30 days declined from 8.4 percent in 2011 to 6.2 percent in 2014.
- Among high school students, the declines in any tobacco use, cigarette smoking, and cigar smoking between 2011 and 2014 were all statistically significant.

Table 7. Change in percent of students who used various tobacco products on one or more days in the past 30 days, 2000-2014.

	2000 (%)	2002 (%)	2005 (%)	2008 (%)	2011 (%)	2014 (%)	Percent Change 2000-14	Percent Change 2011-14
Middle School								
Any tobacco use	12.6	11.2	9.5	6.9	5.6	3.6	-71% ψ	--
Cigarettes	9.1	7.2	5.2	3.4	3.7	1.6	-82% ψ	-57% ψ
Cigars, cigarillos	3.7	2.7	3.0	2.7	2.5	1.5	-59% ψ	--
Smokeless tobacco	2.2	2.2	2.8	2.2	2.7	1.1	-50% ψ	-59% ψ
Pipe	2.7	2.6	2.4	2.2	1.3	1.5	--	--
Bidis*	2.8	2.8	2.8	1.8	0.9	0.3	-89% ψ	--
High School								
Any tobacco use	38.7		34.4 29.3 27.0 25.8 28.9 22.4 19.1 18.1			19.3	-50% ψ	-25% ψ
Cigarettes	32.4					10.6	-67% ψ	-41% ψ
Cigars, cigarillos	13.0	12.3	12.0	12.9	13.0	8.2	-37% ψ	-37% ψ
Smokeless tobacco	10.2	9.7	7.9	9.4	8.4	6.2	-39% ψ	--
Pipe	5.0	5.4	3.7	5.0	4.3	4.9	--	--
Bidis*	4.8	5.5	3.9	4.2	2.1	1.3	-73% ψ	--

* Bidis are small brown cigarettes wrapped in a leaf and tied with a thread.

-- Percent change is not shown when baseline percentage is below 10%, unless statistically significant.

ψ Differences between the stated years are statistically significant at p<.05. Source: Minnesota Youth Tobacco Surveys, 2000 through 2014.

Trends in current tobacco use by gender (table 8)

Both male and female high school students experienced substantial declines in any tobacco use and in cigarette smoking between 2011 and 2014. Males posted larger declines than females.

- The percentage of high school males who used any tobacco in the last 30 days fell from 31.9 percent in 2011 to 23.3 percent in 2014, a statistically significant decline.
- The percentage of high school males who smoked cigarettes in the past 30 days fell sharply from 19.9 percent to 10.8 percent between 2011 and 2014, while the percentage of females smoking cigarettes fell from 16.2 percent to 10.4 percent. The declines in cigarette smoking for male and female high school students were both statistically significant.

Table 8. Change in percent of students who used any form of tobacco and who smoked cigarettes on one or more days in the past 30 days, by gender, 2000-2014.

	2000 (%)	2002 (%)	2005 (%)	2008 (%)	2011 (%)	2014 (%)	Percent Change 2000-14		Percent Change 2011-14	
Middle School										
Current tobacco user										
Females	12.3	10.7	8.0	5.7	4.8	3.5	-72%	ψ	-	
Males	12.9	11.5	10.8	8.0	6.5	3.8	-71%	ψ	--	
Current cigarette smoker										
Females	9.5	8.0	5.2	3.5	3.5	2.3	-76%	ψ	--	
Males	8.7	6.4	5.0	3.2	4.0	1.1	-87%	ψ	-73%	ψ
High School										
Current tobacco user										
Females	34.1	28.8	25.9	19.5	19.1	15.1	-56%	ψ	-21%	
Males	42.7	39.5	32.3	33.3	31.9	23.3	-45%	ψ	-27%	ψ
Current cigarette smoker										
Females	32.6	27.4	22.9	15.9	16.2	10.4	-68%	ψ	-36%	ψ
Males	32.0	30.1	21.7	21.6	19.9	10.8	-66%	ψ	-46%	ψ

-- Percent change is not shown when baseline percentage is below 10%, unless statistically significant.

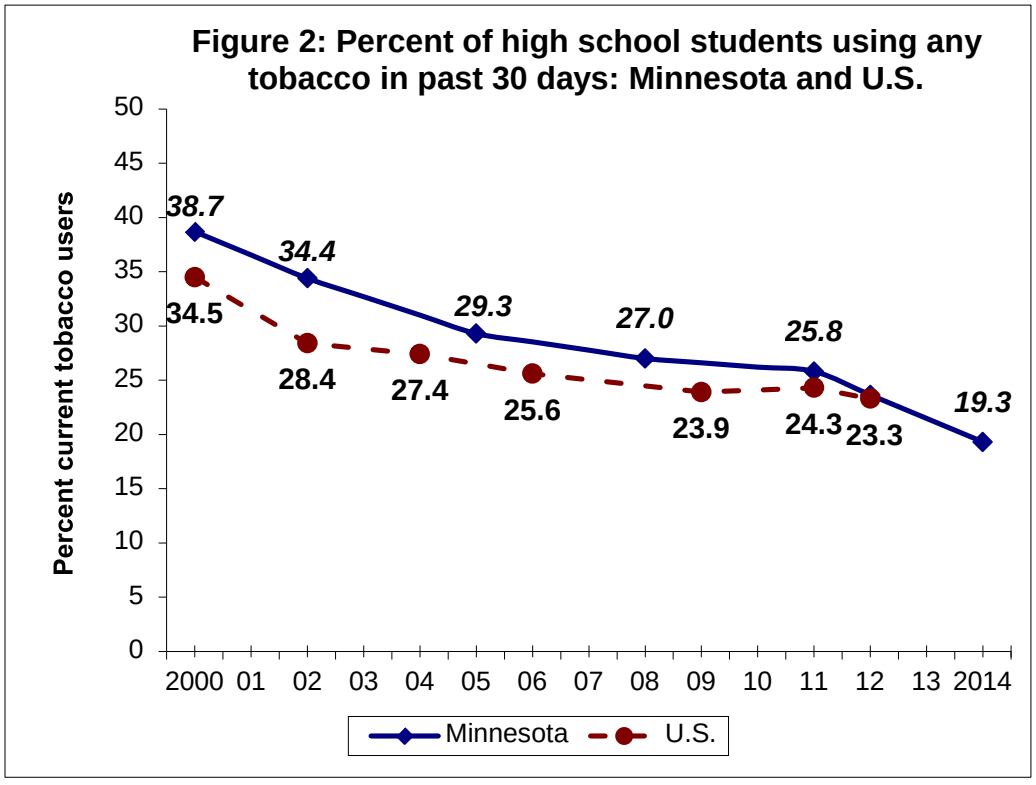
ψ Differences between the stated years are statistically significant at p<.05. Source: Minnesota Youth Tobacco Surveys, 2000 through 2014.

Comparison with national trends (figures 2, 3, and 4)

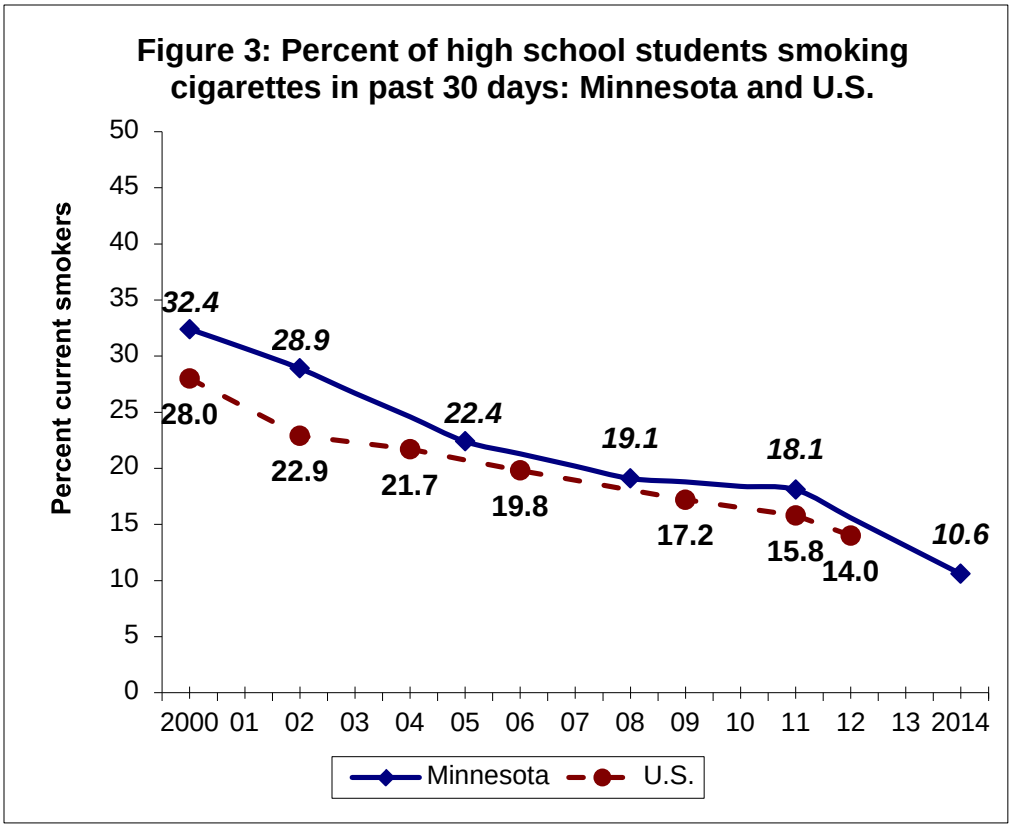
The long-term trends for youth tobacco use in Minnesota are in line with trends at the national level. The National Youth Tobacco Survey sponsored by the U.S. Centers for Disease Control and Prevention

(CDC) uses the same questions, sampling methods, and editing procedures as the Minnesota Youth Tobacco Survey. The state and national surveys are not always conducted during the same year, and the most recent national data available is from 2012.

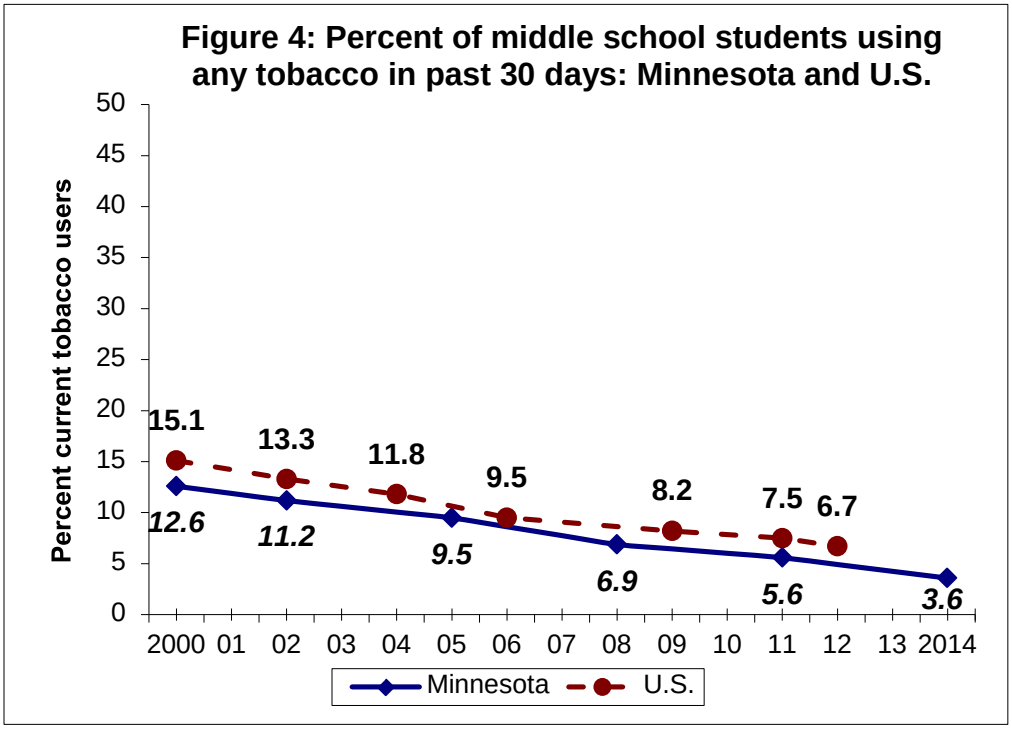
- The percentage of high school students using any form of tobacco in the past 30 days has always been slightly higher in Minnesota than in the U.S. as a whole. However, that may be changing. The recent sharp decrease in tobacco use in Minnesota may put us on a trajectory that brings us below the national level. Confirmation of that result will have to wait until the results of the 2014 national survey are released.
- The percentage of high school students smoking cigarettes in the past 30 days has also tracked closely with and just slightly above the national trend line. Again, the recent sharp decrease in cigarette use may put us at or below the U.S. percentage once those national results for 2014 are released.
- In contrast to high school students, the percentages of middle school students using any tobacco and smoking cigarettes in the past 30 days have always been slightly lower than in the U. S. as a whole.



Sources: Minnesota Youth Tobacco Survey, 2000-2014, and National Youth Tobacco Survey, 2000-2012.



Sources: Minnesota Youth Tobacco Survey, 2000-2014, and National Youth Tobacco Survey, 2000-2012.



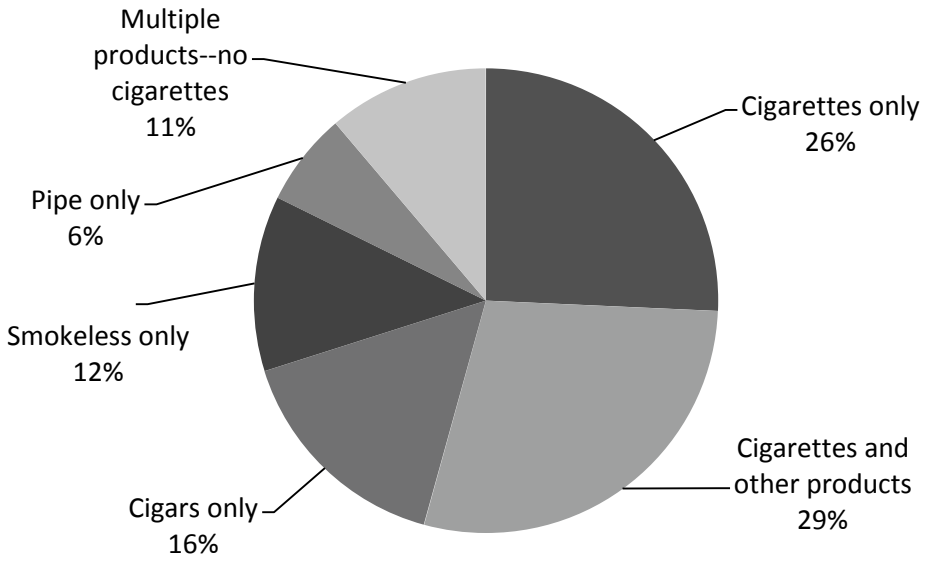
Sources: Minnesota Youth Tobacco Survey, 2000-2014, and National Youth Tobacco Survey, 2000-2012.

The mix of conventional tobacco products used by adolescents (figure 5)

Adolescents are experimenting and using many different kinds of tobacco, and patterns of tobacco use appear to be more fluid and less rigid than patterns among adults.

- 60.2 percent of current tobacco users in high school report using one kind of tobacco in the past 30 days, but 25.9 percent reported using two kinds of products, and 13.9 percent used three or more kinds.
- Among current high school tobacco users, 54.3 percent smoked cigarettes in the last 30 days (25.7 percent smoked cigarettes only and 28.6% smoked cigarettes and used at least one other form of tobacco). Other students used cigar products only (15.8%) or smokeless tobacco only (12.2%), and 11.2 percent used two or more kinds of tobacco, none of which were cigarettes.

Figure 5: Mix of products used by current high school tobacco users, 2014



Source: Minnesota Youth Tobacco Survey, 2014.

Trends in the mix of tobacco products (table 9)

As the number of adolescent tobacco users has shrunk in the past 15 years, the mix of products has become more fluid, moving away from cigarettes and towards other forms of tobacco.

- Among current high school tobacco users, the percentage who used cigarettes either alone or in addition to other forms of tobacco fell from 68.8 percent in 2011 to 54.3 percent in 2014, a statistically significant decline. This continues a long-term trend – in 2000, four out of five high school current tobacco users (80.9%) smoked cigarettes.
- The percentage of current high school tobacco users who only smoked cigarettes in the past 30 days fell from 29.7 percent in 2011 to 26.3 percent in 2014.

- The percentage of high school current tobacco users who used cigarettes plus another product in the past 30 days remained stable for most of the decade but then fell sharply from 39.1 percent in 2011 to 28.0 percent in 2014.
- Cigars products and smokeless tobacco have increased their share of the shrinking market among high school users. For example, the percentage of high school current tobacco users who only smoked cigar products in the past 30 days rose from 10.9 percent in 2011 to 15.8 percent in 2014.

Table 9. Change in the percentage of high school current tobacco users who used different combinations of tobacco products in the past 30 days, 2000-2014.

Percent share:	2000 (%)	2002 (%)	2005 (%)	2008 (%)	2011 (%)	2014 (%)	Percent Change 2000-14		Percent Change 2011-14	
Cigarettes only	45.7	41.6	38.1	31.2	29.7	26.3	-42%	ψ	-11%	
Multiple products, including cigarettes	35.2	39.1	36.6	38.4	39.1	28.0	-20%		-28%	
Cigar products only	5.5	4.9	8.4	10.0	10.9	15.8	--	ψ	+45%	
Smokeless tobacco only	5.1	5.2	5.9	6.6	9.7	12.2	--	ψ	--	
Pipe only	0.9	0.9	1.4	2.4	1.6	7.3	--	ψ	--	ψ
Bidis only	2.1	2.2	3.7	1.7	0.7	0.0	--		--	
Multiple products, no cigarettes	5.5	6.1	5.7	9.6	8.2	10.4	--	ψ	--	
Total	100	100	100	100	100	100				
Cigarettes only or in combination with other products	80.9	80.7	74.7	69.7	68.8	54.3	-33%	ψ	-21%	ψ

-- Percent change is not shown when baseline percentage is below 10%. ψ
Differences between the stated years are statistically significant at p<.05.
Source: Minnesota Youth Tobacco Surveys, 2000 through 2014.

2.3 CHARACTERISTICS OF CIGARETTE SMOKERS

Smoking tends to develop in stages, from trying that first cigarette to experimental smoking to regular, habitual use. Many adolescents are just starting out on this path while others have already moved on to regular use. This section presents information about the frequency of smoking and about an issue of great importance to the development of adolescent smokers – menthol cigarettes. This section focuses on high school smokers only, since there were too few middle school smokers for reliable analysis.

Frequency of smoking (table 10)

- High school smokers tend to be either infrequent smokers or very regular smokers, clustering around the low and high ends of the smoking spectrum. Nearly half of current smokers (43.6%) smoked on just 1-5 days during the past 30 days, while 38.7 percent smoked on 20 or more days of the past 30. Only 17.7 percent of smokers were found in the broad middle range, smoking between 6 and 19 days of the past 30.
- One-third of high school smokers reported smoking an average of just one cigarette on the days they smoked, and another 43.6 percent smoked 2-5 cigarettes per day. Just under one quarter (22.6%) reported smoking six or more cigarettes per day.

Table 10. Characteristics of high school students who smoked cigarettes in the past 30 days, 2014.

	Percent
During the past 30 days, on how many days did you smoke cigarettes?	
. . .1 or 2 days	27.4%
. . .3 to 5 days	16.2%
. . .6 to 9 days	9.3%
. . .10-19 days	8.4%
. . .20 days or more	38.7%
. . .Total	100.0%
On the days you smoked, how many cigarettes did you smoke per day?	
. . .One or part of one cigarette per day	33.8%
. . .2 to 5 cigarettes per day	43.6%
. . .6 to 10 cigarettes per day	12.5%
. . .11 or more cigarettes per day	10.0%
. . .Total	100.0%
Percent who smoked six or more cigarettes per day on the days they smoked:	22.6%
Percent who smoked first cigarette at age 12 or younger	32.2%
Menthol cigarettes are cigarettes that taste like mint. During the past 30 days, were the cigarettes that you usually smoked menthol?	
. . .Yes	44.3%
. . .No	46.2%
. . .Not sure	9.5%
. . .Total	100.0%

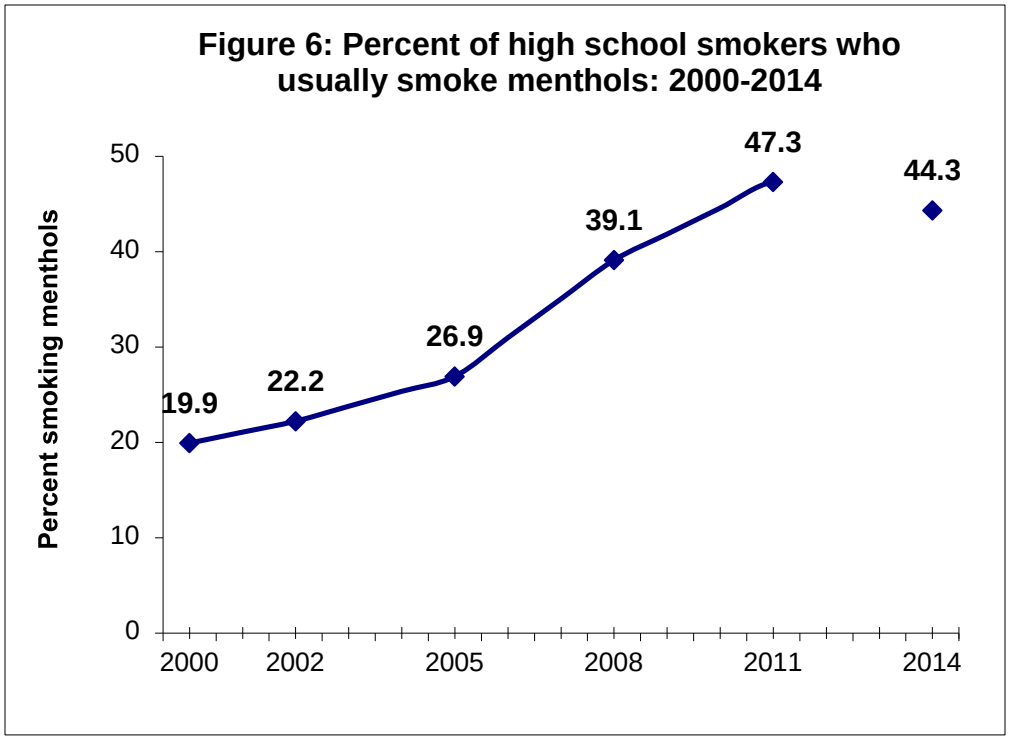
Source: Minnesota Youth Tobacco Survey, 2014

Menthol cigarettes (table 10, figure 6)

Menthol is an ingredient derived from peppermint or other mint oils that has been added to cigarettes for decades. Menthol serves to mask the harshness and irritation that smokers, especially new or younger smokers, may feel when they inhale cigarette smoke. The tobacco industry has devoted much research to finding the right amount of menthol that is attractive to youth and other market segments.[3]

Studies of tobacco industry documents show that the industry sees adding menthol to cigarettes as a key strategy in attracting new smokers and helping inexperienced smokers transition into regular smokers.[4] Menthol cigarettes have also been marketed as being cleaner and healthier than regular cigarettes.[5] The Tobacco Products Scientific Advisory Committee of the Food and Drug Administration (FDA) concluded in 2011 that menthol cigarettes represent a distinct harm to public health. The Committee stated: "Removal of menthol cigarettes from the marketplace would benefit public health in the United States."[6] Though it has banned other flavors from cigarettes, the FDA has not yet made a decision about menthol.

- Adolescent smokers are more likely to prefer menthols than adult smokers. Nearly half of current high school smokers (44.3%) reported in 2014 that they usually smoked menthols. In contrast, less than one quarter of Minnesota adult smokers (22.0%) usually smoke menthols.[7]
- Preference for menthol cigarettes among high school smokers has more than doubled since 2000, when only one in five smokers preferred menthols.



Notes: From 2000-2011, the survey asked: "Are the cigarettes you usually smoke menthol cigarettes?" (Yes/No). In 2014, the question was changed to read: "Menthol cigarettes are cigarettes that taste like mint. During the past 30 days, were the cigarettes that you usually smoked menthol?" (Yes/No/Not sure) Because of the change in wording, the trend line is left broken.

Source: Minnesota Youth Tobacco Survey, 2000-2014.

2.4 HOME ENVIRONMENT, FRIENDS, AND TOBACCO USE

The social surroundings of teens have an important influence on whether they become tobacco users. The example and acceptance of smoking and other tobacco use at home and by friends can lead young people to take up and continue tobacco use. When tobacco use is prominent among family and friends, it can seem like the normal thing to do. Experimentation is easy when tobacco products can be found at home or are available from friends.

Living with a tobacco user (table 11)

- 36.3 percent of middle school students and 39.4 percent of high school students report that they live with someone who uses tobacco products. This person could be a parent, a brother or sister, a relative, or anyone else who lives in the same home. Most tobacco users living with a student were cigarette smokers. At the high school level, 29.7 percent of students said they lived with someone who smokes cigarettes, and 9.3 percent said they lived with someone who uses smokeless tobacco.
- Students who use tobacco are about twice as likely as non-users to live with someone who also uses tobacco. In fact, 79.8 percent of middle school tobacco users and 60.6 percent of high

school tobacco users live with another tobacco user – this is the normal condition for teen tobacco users. These findings point to the powerful influence of home environment on initiation and continuation of tobacco use.

Table 11. Living with someone who uses tobacco products, by current tobacco use*, 2014.

	Middle School			High School		
	Current tobacco user*	Non-tobacco user*	Total	Current Tobacco user*	Non-tobacco user*	Total
Percent who live with someone who…?						
• Smokes cigarettes	60.8	27.6	28.8	43.9	26.5	29.7
• Uses chewing tobacco, snuff or dip	28.3	8.2	8.9	16.3	7.8	9.3
• Uses snus	7.8	.4	.7	3.2	.5	1.0
• Smokes cigars, cigarillos or little cigars						
• Smokes tobacco using a hookah or waterpipe	16.8	1.1	1.7	8.0	3.1	4.0
• Smokes tobacco in a pipe other than a hookah or waterpipe	15.0	.8	1.3	3.6	.9	1.4
• Smokes bidis	4.5	.2	.4	2.5	.3	.7
• Smokes kreteks	2.9	.1	.2	.6	.2	.3
• Uses any other form of tobacco	9.5	1.9	2.1	1.3	2.2	2.1
Someone who lives with you uses at least one of the tobacco products listed above:						
. . .Yes	79.8	34.6	36.3	60.6	34.7	39.4
. . .No	20.2	65.4	63.7	39.4	65.3	60.6

* Current tobacco users are students who have smoked cigarettes, cigars, pipes, bidis or kreteks or who have used smokeless tobacco in the past 30 days. Non-tobacco users have not used any of these products in the past 30 days.
Source: Minnesota Youth Tobacco Survey, 2014

Trends in living with a smoker (table 12)

Trend data is available only for students who lived with someone who smoked cigarettes. Questions about living with someone who used other kinds of tobacco besides cigarettes were only added in 2014.

- Since 2000, there has been a gradual decline in the percentage of students who reported living with someone who smokes cigarettes. In 2000, 40.5 percent of middle school students and 39.9 percent of high school students lived with someone who smokes, while in 2014 28.8 percent of middle school students and 29.7 percent of high school students lived with someone who smokes. This finding is consistent with the gradual decline in adult smoking rates during this time period.
- For high school students who currently smoke cigarettes, however, there has been no change in the percentage who live with someone who smokes.

Table 12. Change in percent of students who live with someone who smokes cigarettes, 20002014.

	2000 (%)	2002 (%)	2005 (%)			2008 (%)	2011 (%)	2014 (%)	Percent Change 2000-14	Percent Change 2011-14
All middle school students	40.5	40.4	38.2	32.5	34.2			28.8	-29% ψ	-16%
All high school students	39.9	39.7	37.0			38.9	36.0	29.7	-26% ψ	-18% ψ
. . .Current smokers	52.9	57.2	56.4			58.3	57.8	56.1	+6%	-3%
. . .Non-smokers*	33.7	32.6	31.6			34.1	31.0	26.2	-22% ψ	-15%

*Non-smokers have not smoked any cigarettes in the past 30 days. Results for middle school current smokers and non-smokers are not presented because the number of current smokers is too small for analysis. ψ Differences between the stated years are statistically significant at p<.05. Source: Minnesota Youth Tobacco Surveys, 2000 through 2014.

Having friends who use tobacco (tables 13 and 14)

Cigarette smoking and tobacco use generally play an important role in the formation and maintenance of social groups among teens. Smokers tend to find one another and hang out together.

- Among high school students, 69.3 percent of current cigarette smokers report that at least two of their four closest friends are also cigarette smokers; in contrast, only 9.4 percent of nonsmokers have two or more cigarette smokers among their closest friends.
- Similarly, 71.1 percent of smokeless tobacco users have at least two of their four closest friends who also use chewing tobacco, snuff or dip, while only 6.9 percent of non-users have two or more close friends who use smokeless tobacco.

Table 13. Percent of high school students having friends who are cigarette smokers, by current smoking status, 2014.

	igh School		
	Current cigarette smoker	Non-cigarette smoker	Total
How many of your four closest friends smoke cigarettes? . . .None	17.0%	77.7%	71.5%
. . .One	13.7%	12.9%	13.0%
. . .Two	29.2%	5.8%	8.2%
. . .Three	13.9%	2.3%	3.6%
. . .Four	26.2%	1.3%	3.7%
. . .Total	100.0%	100.0%	100.0%

Percent of students for whom at least two of four closest friends smoke cigarettes	69.3%	9.4%	15.5%

Source: Minnesota Youth Tobacco Survey, 2014

Table 14. Percent of high school students having friends who use chewing tobacco, snuff or dip, by current smokeless tobacco use, 2014.

	igh School		
	Current smokeless tobacco user	Nonsmokeless user	Total
How many of your four closest friends use chewing tobacco, snuff, or dip?			
. . .None	15.3%	82.7%	78.5%
. . .One	13.6%	10.4%	10.6%
. . .Two	22.8%	4.2%	5.3%
. . .Three	18.2%	1.1%	2.2%
. . .Four	30.2%	1.6%	3.4%
. . .Total	100.0%	100.0%	100.0%
Percent of students for whom at least two of four closest friends use chewing tobacco, snuff, or dip	71.1%	6.9%	10.9%

Source: Minnesota Youth Tobacco Survey, 2014

Trends in peer smoking environment (table 15)

Trends in tobacco use within one's circle of closest friends can only be tracked for cigarette smoking, since questions about smokeless tobacco use by friends have only appeared occasionally on the survey.

- There has been a strong downward trend in the number of students who have close friends who are smokers. Between 2011 and 2014 alone, the percentage of students with at least two close friends who smoke fell from 8.2 to 4.2 percent among middle school students and from 25.7 to 15.2 percent among high school students. These trends are most likely due to the dramatic decline in cigarette use in recent years. There are simply fewer cigarette smokers available to be potential friends.
- However, the differences between the friend groups of cigarette smokers and the friend groups of non-smokers remain very strong.

Table 15. Change in percent of students who report that two or more of their four closest friends smoke cigarettes, 2000-2014.

	2000 (%)	(%) 2002	2005 (%)	2008 (%)	2011 (%)	2014 (%)	Percent Change 2000-14	Percent Change 2011-14
All middle school students	13.2	12.0	8.9	6.5	8.4	4.5	-66% ψ	-46% ψ
All high school students	39.8	35.5	28.0	24.9	25.9	15.5	-61% ψ	-40% ψ
. . .Current smokers	78.4	75.2	74.4	70.7	78.5	69.3	-12%	-12%
. . .Non-smokers*	21.3	18.9	15.2	13.9	14.7	9.4	-56% ψ	-36% ψ

*Non-smokers have not smoked any cigarettes in the past 30 days. Results for middle school current smokers and non-smokers are not presented because the number of current smokers is too small for analysis. ψ Differences between the stated years are statistically significant at p<.05. Source: Minnesota Youth Tobacco Surveys, 2000 through 2014.

2.5 ACCESS TO TOBACCO PRODUCTS

Most adolescent underage smokers usually obtain their tobacco products, whether cigarettes, cigars or smokeless tobacco, through other people rather than by walking into a store and buying them.

- For all three of the major tobacco products, the most widespread way of obtaining tobacco is to give someone else money to make the purchase. About two of every five tobacco users, regardless of product, reported getting tobacco this way. Borrowing or bumming tobacco from other people was also common.
- Even though it is illegal to sell tobacco to someone under 18, 14.6 percent of underage cigarette smokers, 9.9 percent of cigar smokers, and 17.2 percent of smokeless tobacco users said they were able to buy their products directly in a store.

Table 16. Access to tobacco products by high school current tobacco users under the age of 18, 2014. (Students could check more than one source, so totals for each product add to more than 100%.)

Percent who obtained their product by . . .	**Cigarette smokers**	**Cigar smokers**	**Smokeless tobacco users**
Direct Purchase:			
. . .Bought them myself	14.6%	9.9%	17.2%
Social sources:			
. . .Had someone else buy them for me	41.4%	39.4%	38.4%
. . .Borrowed or bummed them	37.1%	18.3%	29.1%
. . .Someone gave them to me without my asking	11.7%	13.5%	19.3%
Other sources:			

. . .Took them from a store or another person	2.8%	6.2%	4.5%
. . .Got them some other way	14.3%	21.4%	8.0%

Source: Minnesota Youth Tobacco Survey, 2014

2.6 EXPOSURE TO TOBACCO ADVERTISING AND PROMOTION

The tobacco industry has been using old media and new media such as the internet and social networking sites to get young people interested in their products. Despite restrictions on targeting people under 18 for tobacco promotions, young people have no difficulty finding tobacco advertising and promotion in all kinds of media.

Movies and TV (table 17)

For decades, movies and television have frequently depicted smoking, often in ways that glamorize it and make it seem attractive to children and teens. Teens who report substantial exposure to depictions of smoking in movies are more likely to take up smoking themselves than teens who report less exposure.[8]

- More than two-thirds of adolescents (67.8% middle school; 70.8% high school) report seeing actors using tobacco “sometimes”, “most of the time”, or “always” when they watch TV or go to the movies.

Internet (table 17)

- More than one-third of adolescents (35.8% middle school; 35.6% high school) report seeing ads for tobacco products “sometimes”, “most of the time”, or “always” when they are using the internet.

In-store advertising (table 17)

Advertising and promotion within stores is an often overlooked source of media exposure for children and teens. People approaching and entering stores are met with a barrage of signs and displays that give the impression that lots of people want and use these products.

- Roughly three-fourths of adolescents (73.4% middle school; 79.2% high school) say they see ads or promotions for tobacco products “sometimes”, “most of the time”, or “always” when they go to a convenience store, supermarket, or gas station.

Table 17. Media exposure to tobacco advertising and promotion in movies and TV, on the internet, and at stores, 2014.

	Middle School	High School
When you watch TV or go to the movies, how often do you see actors or actresses using cigarettes or other tobacco products?		
. . .Don't watch TV or go to the movies	1.1%	2.2%
. . .Never	8.3%	6.4%
. . .Rarely	22.7%	20.5%
. . .Sometimes	44.2%	46.0%
. . .Most of the time	18.5%	19.8%
. . .Always	5.2%	5.0%
. . .Total	100.0%	100.0%
Percent who see actors using tobacco sometimes, most of the time or always when they watch TV or go to the movies	67.8%	70.8%
When you are using the Internet, how often do you see ads for tobacco products?		
. . .Don't use the Internet	2.5%	2.2%
. . .Never	21.0%	18.6%
. . .Rarely	40.7%	43.6%
. . .Sometimes	27.4%	28.7%
. . .Most of the time	6.0%	4.4%
. . .Always	2.5%	2.5%
. . .Total	100.0%	100.0%
Percent who see ads for tobacco products sometimes, most of the time or always when they are using the internet	35.8%	35.6%
When you go to a convenience store, supermarket, or gas station, how often do you see ads or promotions for tobacco products?		
. . .Don't go to convenience stores, supermarkets or gas stations	3.3%	2.4%
. . .Never	7.5%	4.2%
. . .Rarely	15.8%	14.2%
. . .Sometimes	27.2%	28.3%
. . .Most of the time	26.2%	28.6%
. . .Always	20.0%	22.4%
. . .Total	100.0%	100.0%
Percent who see ads or promotions for tobacco products sometimes, most of the time or always when they go to a convenience store, supermarket, or gas station	73.4%	79.2%

Source: Minnesota Youth Tobacco Survey, 2014

3.1 EXPOSURE TO SECONDHAND SMOKE

Secondhand smoke exposure causes an estimated 49,300 deaths of adult non-smokers due of heart disease, stroke, and lung cancer each year in the U.S.[9] Smoking during pregnancy results in more than 1,000 infant deaths annually.[10] Breathing secondhand smoke can also cause health problems in children, such as increased severity of asthma attacks, respiratory illnesses, chronic cough, bronchitis, and middle ear problems.[11]

Current exposure (table 18)

The great majority of smokers also are exposed to secondhand smoke. Adolescent smokers are likely to live with someone else who smokes and tend to hang out and share cigarettes with other smokers, making exposure almost inevitable. For that reason, we are focusing the analysis of secondhand smoke exposure on those who have not smoked any form of tobacco in the last 30 days.

- 41.7 percent of middle school non-smokers and 47.8 percent of high school non-smokers still reported some exposure to secondhand smoke during the previous 7 days.
- Among high school non-smokers, 15.3 percent reported exposure in their home, 19.4 percent were exposed in a vehicle, 6.3 percent were exposed at their workplace, and 33.5 percent were exposed at an indoor or outdoor public place.
- 20.6 percent of middle school non-smokers and 19.9 percent of high school non-smokers reported repeated exposure, defined as being exposed to secondhand smoke on at least three days of the previous seven days.
- The most commonly reported location for repeated exposure was the home – 12.6 percent of middle school non-smokers and 11.4 percent of high school non-smokers reported exposure at home on three or more days in the previous week.

Table 18. Percent of tobacco non-smokers* who were exposed to secondhand smoke in various locations, 2014.

During the past 7 days….	**Middle School**	**High School**
on how many days did someone smoke tobacco in your home while you were there?		
. . .0 days	82.9	84.7
. . .1 or 2 days	4.5	3.9
. . .3 or more days	12.6	11.4
on how many days did you ride in a vehicle where someone was smoking tobacco?		
. . .0 days	79.7	80.6
. . .1 or 2 days	9.7	10.8
. . .3 or more days	10.6	8.5

on how many days did you breathe the smoke from someone who was smoking tobacco where you work?		
. . .0 days**	98.9	93.7
. . .1 or 2 days	.3	4.4
. . .3 or more days	.8	1.9
on how many days did you breathe the smoke from someone who was smoking tobacco in an indoor or outdoor public place?		
. . .0 days	71.2	66.5
. . .1 or 2 days	18.7	23.8
. . .3 or more days	10.1	9.7
Percent of non-smokers with any exposure in past 7 days	41.7	47.8
Percent of non-smokers with repeated exposure in past 7 days***	20.6	19.9

*Tobacco non-smokers are those who did not smoke cigarettes, cigars, pipes, bidis or kreteks in the past 30 days.

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

***Repeated exposure is 3 or more days of exposure in any of these settings: home, vehicle, workplace, or public place.

Source: Minnesota Youth Tobacco Survey, 2014.

Trends in secondhand smoke exposure (table 19)

Exposure to secondhand smoke declined substantially between 2000 and 2011. The sharpest decline occurred between 2005 and 2008, a period which saw the implementation of local ordinances and a state law banning smoking in bars, restaurants, and workplaces. Progress slowed between 2008 and 2011, and there was very little change in reported exposure.[12] Changes to the survey questions in 2014 make it impossible to examine overall trends in secondhand smoke exposure through 2014. Trends are presented only for exposure in a vehicle, and then only with a cautionary note that slight changes to the question about vehicle exposure may have affected the results.

- Exposure to secondhand smoke in a vehicle appears to have decreased between 2011 and 2014. In 2011, 23.1 percent of middle school non-smokers and 26.0 percent of high school nonsmokers rode in a car with someone who was smoking cigarettes. In 2014, 20.3 percent of middle school non-smokers and 19.4 percent of high school non-smokers rode in a vehicle with someone who was smoking tobacco.

Table 19. Change in percent of tobacco non-smokers* who were exposed to secondhand smoke in a vehicle on one or more of the past 7 days, 2000-2014.**

	2000 (%)	2002 (%)	2005 (%)	2008 (%)	2011 (%)	2014 (%)	Percent Change 2000-14		Percent Change 2011-14	
Middle school nonsmokers	34.5	33.5	30.1	20.7	23.1	20.3	-41%	ψ	-12%	
High school nonsmokers	35.6	33.5	31.1	27.1	26.0	19.4	-46%	ψ	-25%	ψ

*Tobacco non-smokers are those who did not smoke cigarettes, cigars, pipes, bidis or kreteks in the past 30 days. ** From 2000 through 2011, the survey asked: "During the past 7 days, on how many days did you ride in a car with someone who was smoking cigarettes?" In 2014, the question was changed to read: "During the past 7 days, on how many days did you ride in a vehicle where someone was smoking a tobacco product?" ψ Differences between the stated years are statistically significant at p<.05. Source: Minnesota Youth Tobacco Surveys, 2000 through 2014.

3.2 RULES AND OPINIONS ABOUT SECONDHAND SMOKE

Having smoke-free rules in homes and vehicles protects people from secondhand smoke and sends the message that smoking is not a desirable or welcome activity.

Smoke-free rules at home (table 20)

- 86.3 percent of middle school students and 84.5 percent of high school students report that smoking is never allowed inside their homes.
- Students who smoke tobacco are much less likely to have smoke-free rules at home. Only 44.9 percent of middle school tobacco smokers and 67.4 percent of high school tobacco smokers say smoking is never allowed at home. This finding is due in part to the fact that young smokers are much more likely than non-smokers to live with parents or other adults who smoke.

Smoke-free rules in vehicles (table 20)

- More than three-fourths of adolescents (79.6 % middle school; 76.1% high school) report that smoking is not allowed in their family vehicles.
- Again, young tobacco smokers are much less likely to have rules prohibiting smoking in family vehicles. Only about half of tobacco smokers (47.2% middle school; 52.3% high school) say their families do not allow smoking in vehicles.

Table 20. Smoking restrictions at home and in vehicles, by current tobacco smoking status,* 2014.

	Middle School			High School		
	Tobacco Smokers*	Non-smokers*	Total	Tobacco Smokers*	Non-smokers*	Total
Inside your home (not counting decks, garages, or porches) is smoking…						
. . .Always allowed	15.9%	5.0%	5.3%	13.8%	6.1%	7.4%

. . .Allowed only at some times or in some places	39.1%	7.4%	8.4%	18.7%	6.1%	8.2%
. . .Never allowed	44.9%	87.5%	86.3%	67.4%	87.8%	84.5%
. . .Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
In the vehicles that you and family members who live with you own or lease, is smoking … .						
. .Always allowed	25.4%	8.7%	9.2%	28.8%	8.7%	12.0%
. . .Sometimes allowed	27.4%	10.7%	11.2%	18.9%	10.6%	11.9%
. . .Never allowed	47.2%	80.6%	79.6%	52.3%	80.8%	76.1%
. . .Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* "Tobacco Smokers" are those who have smoked cigarettes, cigars, pipes, bidis or kreteks in the past 30 days. "Non-smokers" are those who have not smoked any of these forms of tobacco in the past 30 days.
Source: Minnesota Youth Tobacco Survey, 2014

Trends in smoke-free rules (table 21)

The percentage of adolescents with rules against smoking inside their home and vehicles, already high in 2011, rose even higher between 2011 and 2014.

- The percentage of high school students with rules prohibiting smoking inside the home rose from 79.7 percent in 2011 to 84.5 percent in 2014.
- In 2011, 64.0 percent of high school students said that smoking is never allowed in the vehicle they drive or ride in the most. In 2014, 76.1 percent of high school students said that smoking is never allowed in vehicles that they or family members own or lease.

Table 21. Change in percent of students who report that smoking is never allowed in their homes or family vehicles, 2008-2014.

Smoking is	2000 (%)	2002 (%)	2005 (%)	2008 (%)	2011 (%)	2014 (%)	Percent Change 2008-14		Percent Change 2011-14	
never allowed in home:										
middle school students				81.9	81.0	86.3	+5%	ψ	+7%	ψ
high school students				77.0	79.7	84.5	+10%	ψ	+6%	ψ
never allowed in vehicles:										
middle school students				76.3	74.6	79.6	+4%		+7%	
high school students				65.1	64.0	76.1	+17%	ψ	+19%	ψ

ψ Differences between the stated years are statistically significant at p<.05. Source: Minnesota Youth Tobacco Surveys, 2000 through 2014.

Opinions about smoke-free rules (table 22)

- Young people strongly endorse smoke-free rules. About nine of ten adolescents (91.1% middle school; 86.3% high school) agree that smoking should never be allowed inside their home.

Similar large majorities (89.6% middle school; 78.1% high school) agree that smoking should never be allowed in their family vehicles.

- Tobacco smokers are much less likely to agree with rules that prohibit smoking at home or in vehicles.

Table 22. Percent of students who believe that smoking should never be allowed in various locations, by current tobacco smoking status*, 2014.

	Middle School			High School		
Percent who agree that smoking tobacco products should never be allowed…	Tobacco Smokers*	Non-smokers*	Total	Tobacco Smokers*	Non-smokers*	Total
…inside their home	44.0%	92.5%	91.1%	59.9%	91.4%	86.3%
…in their vehicles	39.6%	91.1%	89.6%	42.2%	85.1%	78.1%

* "Tobacco Smokers" are those who have smoked cigarettes, cigars, pipes, bidis or kreteks in the past 30 days. "Non-smokers" are those who have not smoked any of these forms of tobacco in the past 30 days.
Source: Minnesota Youth Tobacco Survey, 2014

Trends in opinions about smoke-free rules (table 23)

Support among adolescents for smoke-free rules has been high for many years and continued to increase between 2011 and 2014.

- The percentage of high school students saying that smoking should never be allowed inside the home increased from 83.7 percent in 2011 to 86.3 percent in 2014. The percentage saying smoking should never be allowed in family vehicles rose from 70.9 percent in 2011 to 78.1 percent in 2014.

Table 23. Change in percent of students who believe that smoking should never be allowed in their homes or family vehicles, 2008-2014.

Smoking should	2000 (%)	2002 (%)	2005 (%)	2008 (%)	2011 (%)	2014 (%)	Percent Change 2008-14		Percent Change 2011-14	
never be allowed in home										
middle school students				88.6	89.0	91.1	+3%		+2%	
high school students				79.4	83.7	86.3	+9%	ψ	+3%	
never be allowed in vehicles middle school students				87.0	86.1	89.6	+3%		+4%	
high school students				71.0	70.9	78.1	+10%	ψ	+10%	ψ

ψ Differences between the stated years are statistically significant at p<.05. Source: Minnesota Youth Tobacco Surveys, 2000 through 2014.

4.1 NONCONVENTIONAL PRODUCTS AND ELECTRONIC CIGARETTES

As cigarettes have fallen out of favor with large segments of the population, the tobacco and related industries have developed and introduced several new products and re-positioned other products that have been around for a while. Flavors, especially teen-friendly sweet flavors, have been introduced to all kinds of tobacco products. The Food and Drug Administration has banned the use of flavors (except menthol) in traditional cigarettes but not in cigar products or smokeless tobacco. Snus was introduced in Minnesota in 2008. Snus is moist, smokeless tobacco that comes in small pouches that can be placed in the mouth between the gum and cheek. When finished, the pouch can be discarded, removing the need for spitting. Dissolvable products in the form of sticks, strips and tablets were test-marketed in several states around the same time, but have never been seriously marketed in Minnesota. Electronic cigarettes, which vaporize a solution containing nicotine and other chemicals, were introduced in U.S. markets in 2007. (See next section for more about electronic cigarettes.)

Trying nonconventional products (table 24)

- Many adolescents have tried some of the newer or nonconventional products. More than onefourth of high school students (28.4%) have tried electronic cigarettes, 18.4 percent have tried a hookah or waterpipe, and 12.2 percent have tried flavored little cigars. At the high school level, males are more likely than females to try most of these nonconventional products.

Table 24. Percent of students who have ever tried newer or non-conventional tobacco products, by gender, 2014.

	Middle School			High School		
	Female	Male	Total	Female	Male	Total
Roll-your-own cigarettes	2.0	2.7	2.3	7.7	11.0	9.4
Flavored cigarettes, like Camel Crush	2.0	2.3	2.1	10.3	12.1	11.2
Clove cigars	.1	.9	.5	.7	2.5	1.6
Flavored little cigars	1.1	2.0	1.5	7.7	16.7	12.2
Hookah or waterpipe	2.8	2.2	2.5	17.4	19.6	18.4
Snus*	1.6	1.9	1.7	3.7	10.6	7.3
Dissolvable tobacco (strips, sticks)**	.4	.3	.3	.6	1.7	1.1
Electronic cigarettes or e-cigs***	7.3	8.2	7.7	24.9	31.8	28.4
Other new product	1.5	1.6	1.6	2.5	4.4	3.5

* Snus (rhymes with "Moose") is a form of oral, moist snuff contained in a pouch that users put in the front of the mouth.

** Dissolvable tobacco is processed, compressed tobacco in the form of tablets, sticks and strips that users put in their mouths and allow to dissolve.

*** Electronic cigarettes, also called e-cigarettes, vaping pens and e-hookahs, are battery-powered devices that allow users to inhale a vaporized solution of nicotine, flavors, and other chemicals. Source: Minnesota Youth Tobacco Survey, 2014

Current use of nonconventional products (table 25)

- Of all the nonconventional products included in the survey, electronic cigarettes are the most widely used – 3.1 percent of middle school students and 12.9 percent of high school students reported using an electronic cigarette at least once in the past 30 days. Hookahs were the second most used product, with 1.0 percent of middle school students and 5.4 percent of high school students reporting use in the last 30 days.

Table 25. Percent of students who have used newer or non-conventional tobacco products on at least one day in past 30 days, by gender, 2014.

	Middle School			High School		
	Female	Male	Total	Female	Male	Total
Roll-your-own cigarettes	.8	.7	.8	2.8	3.3	3.0
Flavored cigarettes, like Camel Crush	1.0	.6	.8	3.8	3.4	3.6
Clove cigars	.1	.4	.2	.1	.5	.3
Flavored little cigars	.3	.8	.6	2.1	3.4	2.7
Hookah or waterpipe	1.3	.6	1.0	4.9	5.9	5.4
Snus*	.5	.4	.4	.5	2.8	1.7
Dissolvable tobacco (strips, sticks)**	.2	.1	.1	.1	.3	.2
Electronic cigarettes or e-cigs***	2.3	3.9	3.1	10.6	15.1	12.9
Other new product	.3	.5	.4	.3	1.5	.9

* Snus (rhymes with "Moose") is a form of oral, moist snuff contained in a pouch that users put in the front of the mouth.

** Dissolvable tobacco is processed, compressed tobacco in the form of tablets, sticks and strips that users put in their mouths and allow to dissolve.

*** Electronic cigarettes, also called e-cigarettes, vaping pens and e-hookahs, are battery-powered devices that allow users to inhale a vaporized solution of nicotine, flavors, and other chemicals. Source: Minnesota Youth Tobacco Survey, 2014

4.2 ELECTRONIC CIGARETTES

Instead of burning tobacco, electronic cigarettes (also known as e-cigarettes, vaping pens, and ehookahs) use a battery-powered heater to vaporize a liquid solution usually containing nicotine, flavors, and other chemicals such as propylene glycol. For this reason, using an e-cigarette is sometimes called "vaping". The nicotine in the e-cigarette liquid or "juice" is derived from tobacco.

Since coming on the market in the U.S. in 2007, electronic cigarettes have enjoyed rapid growth. Sales in the U.S. in 2013 were expected to go above $1 billion[13] and global spending was estimated at $3 billion.[14]

By January 2014, researchers counted 466 distinct brands of e-cigarettes that are sold online.[15] The product mix appears to be changing over time. Newer brands offer more flavors (an average of 49 per brand) and are less likely than older brands to mimic the design and look of conventional cigarette smoking. Newer brands are also more likely to offer devices that allow users to manipulate nicotine content and add other ingredients.[16] Though started by smaller companies, the e-cigarette industry is increasingly coming under the control of traditional tobacco companies who are either buying out ecigarette companies or establishing their own products.

E-cigarette devices and e-cigarette "juice" are unregulated. There is much variation in the amount of nicotine and other chemicals in the "juice", even within samples from the same brand.[17] The industry has promoted the idea that e-cigarettes are far safer than traditional cigarettes, but no rigorous study has been conducted to demonstrate that claim.

Independent researchers have tested the vapors or aerosols produced by a small number of brands, but with so many brands on the market it is difficult to paint a picture of the entire industry. These tests have found some carcinogenic chemicals, including tobacco-specific nitrosamines, acetaldehyde and formaldehyde. Tests have often found amounts that are far lower than amounts produced by conventional burnt cigarettes.[18] However, recent research has found that the production of some carcinogens depends on the voltage of the battery used to heat the "juice". The 3.2 volt battery produces relatively low levels of certain carcinogens. The 4.8 volt battery produces many times more carcinogens than the less powerful battery. This study found that "The levels of formaldehyde in vapors from high voltage devices were in the range of levels reported in tobacco smoke."[19]

Aside from production of some carcinogens and toxic chemicals, nicotine itself is a major cause for concern, especially for adolescents. Nicotine, whether delivered by conventional tobacco products or newer electronic products, is known to harm fetal and adolescent brain development. The 2014 Surgeon General's report states: "The evidence is suggestive that nicotine exposure during adolescence, a critical window for brain development, may have lasting adverse consequences for brain development."[20] Nicotine is also highly addictive. Another major concern is that e-cigarettes may introduce some young people to the world of nicotine or may provide additional doses of nicotine to youth already using conventional tobacco products. The more doses of nicotine, the greater the risk of eventual addiction. The availability of flavors (including menthol), the sleek design, the technology, and the ability to hide or disguise use make e-cigarettes an ideal vehicle for making nicotine use more attractive to youth.

Minnesota has taken some steps to moderate the use of e-cigarettes among youth. In 2010, the state legislature stated that e-cigarettes must be treated as a tobacco product, meaning that e-cigarettes could not be sold to youth under 18 and were subject to the excise tax on non-cigarette tobacco products. In 2014, the legislature required any business that sells e-cigarettes or devices to obtain a local license and required that e-cigarette products must be kept behind the counter like other tobacco products. Sellers would be subject to unannounced compliance checks. E-cigarettes are now prohibited in schools, day care facilities, health care facilities and most government buildings. Several counties and cities have passed laws that place additional restrictions on use of e-cigarettes. Duluth, Ely, Mankato,

and Waseca, for example, ban the use of e-cigarettes everywhere that smoking is prohibited, including bars and restaurants.

Use of e-cigarettes by Minnesota youth (table 26)

Questions about electronic cigarettes had not appeared on the MYTS prior to the 2014 survey. The survey found that most Minnesota adolescents have heard of e-cigarettes, many have tried them, and a large number have used them in the past 30 days.

- 54.3 percent of middle school students and 71.7 percent of high school students say they have heard of e-cigarettes.
- 7.7 percent of middle school students and 28.4 percent of high school students have tried an electronic cigarette in their lifetime.
- 3.1 percent of middle school students and 12.9 percent of high school students have tried or used an electronic cigarette on at least one day in the past 30 days.
- An estimated 85,900 public school students in grades 6-12 have tried an e-cigarette and an estimated 38,400 students used an e-cigarette in the past 30 days.

It would be premature to compare these figures for e-cigarette use with similar measures of conventional cigarette smoking and other tobacco product use. When a new product like e-cigarettes is spreading so rapidly, it is possible that some of the users in the past 30 days were just trying it out and may not continue using it. The 2014 MYTS unfortunately does not provide the same detailed information about e-cigarettes as we have about conventional tobacco. For example, we know little about how often and how regularly these students are using e-cigarettes and how much nicotine they are inhaling during the 30 day window.

[This report stated earlier that the percent of high school students who used conventional tobacco products in the past 30 days – cigarettes, cigars, smokeless tobacco, pipes – fell from 25.8 percent in 2011 to 19.3 percent in 2014. If we were to add e-cigarettes into the mix of tobacco products, the percent who used any products in the past 30 days in 2014 is 24.2 percent, not far below the conventional tobacco rate for 2011.]

Table 26. Percent who have heard of e-cigarettes, tried e-cigarettes at least once, and used an e-cigarette in the past 30 days, 2014.

	Middle School	High School
Percent who have ever heard of an e- cigarette	54.3%	71.7%
Percent who have ever used an e- cigarette, even just one time	7.7%	28.4%
Percent who have tried or used an e- cigarette on at least one day in the past 30 days	3.1%	12.9%

Source: Minnesota Youth Tobacco Survey, 2014

Characteristics of e-cigarette users (table 27)

- Current use of e-cigarettes increases as grade in school increases, just as it does for traditional cigarettes. In 12th grade, 17.8 percent of students reported using an e-cigarette in the past 30 days.
- Males are somewhat more likely to try and use e-cigarettes than females.
- The percentage of students using e-cigarettes is higher in the Twin Cities Metro Area than in the rest of the state. This result is to be expected when a new product is introduced and is heavily promoted in the larger media markets.

Table 27. Percent who have ever tried an electronic cigarette and percent who have used an electronic cigarette in the past 30 days, by grade, gender, and region, 2014.

	Percent ever tried an e-cigarette		Percent used an ecigarette in past 30 days	
	Middle School	**High School**	**Middle School**	**High School**
Grade				
. . .6th	3.6%		0.6%	
. . .7th	6.3%		2.5%	
. . .8th	13.4%		6.1%	
. . .9th		17.4%		8.3%
. . .10th		24.9%		12.2%
. . .11th		30.8%		13.5%
. . .12th		40.6%		17.8%
Gender				
. . .Male	8.2%	31.8%	3.9%	15.1%
. . .Female	7.3%	24.9%	2.3%	10.6%
Region				
. . .Twin Cities metro (7 counties)	10.0%	31.9%	4.3%	15.5%
. . .Greater Minnesota (80 counties)	4.4%	21.5%	1.4%	7.8%

Source: Minnesota Youth Tobacco Survey, 2014

E-cigarettes and conventional tobacco use (table 28)

Students who have already used conventional tobacco products are the most likely to try a new product like e-cigarettes, but thousands of students who have no experience with conventional tobacco have been introduced to nicotine through e-cigarettes.

- In high school, 77.6 percent of students who have tried an e-cigarette have also tried conventional tobacco products, including 65.6 percent who have tried cigarettes.
- However, nearly one quarter of high school students who have tried e-cigarettes (22.4%) have never tried any conventional tobacco products. An estimated 15,300 Minnesota public high school students have tried an e-cigarette without ever having tried any tobacco product.

- 16.4 percent of high school students who have used an e-cigarette at least once in the past 30 days have never tried any of the conventional tobacco products.

Most students who have used an e-cigarette in the past 30 days are also using one or more of the conventional tobacco products.

- 60.1 percent of high school students who used an e-cigarette in the past 30 days also used conventional tobacco in the past 30 days, including 40.3 percent who smoked cigarettes.

Table 28. Conventional tobacco use by high school students who have never used electronic cigarettes, who have tried e-cigarettes, and who have used e-cigarettes in the past 30 days, 2014.

Percent who	**Student has never tried e-cig**	**Student has tried an e-cig**	**Student has used e-cig in past 30 days**
have ever tried any conventional tobacco products:			
. . .Yes	24.2%	77.6%	83.6%
. . .No	75.8%	**22.4%**	**16.4%**
. . .Total	100.0%	100.0%	100.0%
have ever smoked cigarettes:			
. . .Yes	16.5%	65.6%	75.8%
. . .No	83.5%	34.4%	24.2%
. . .Total	100.0%	100.0%	100.0%
have used conventional tobacco products in past 30 days:			
. . .Yes	8.0%	45.1%	**60.1%**
. . .No	92.0%	54.9%	39.9%
. . .Total	100.0%	100.0%	100.0%
have smoked cigarettes in past 30 days:			
. . .Yes	3.6%	26.7%	**40.3%**
. . .No	96.4%	73.3%	59.7%
. . .Total	100.0%	100.0%	100.0%

Source: Minnesota Youth Tobacco Survey, 2014

4.3 ELECTRONIC CIGARETTE ADVERTISING AND PROMOTION

Cigarettes cannot be advertised on TV, radio, or on billboards, but there are no limits on the advertising of electronic cigarettes. E-cigarettes are marketed extensively on TV, through celebrity promotion, over the internet and through YouTube and twitter.[21] The 2014 MYTS shows that this advertising and promotion has reached young people in Minnesota.

Movies and TV (table 29)

E-cigarette companies have been able to embed their products within movies and TV shows, much as the large tobacco companies have been able to do with cigarettes for decades.[22]

- One of every six students (16.1% middle school; 16.2% high school) report that they see actors using e-cigarettes “sometimes”, “most of the time”, or “always” when they watch TV or go to the movies.

Internet (table 29)

- About one in four students (23.2% middle school; 28.7% high school) report seeing ads for ecigarettes “sometimes”, “most of the time”, or “always” when they are on the internet. This is not much lower than the percentage who report seeing ads for cigarettes and other conventional tobacco products on the internet.

Current exposure to advertising in different media and locations (table 29)

Students were asked if they had seen ads for e-cigarettes in various kinds of media or in various locations in the past 30 days.

- More than half of students (59.1% middle school; 57.4% high school) had seen ads for ecigarettes on TV in the past 30 days.
- Almost half of students (44.5% middle school; 47.5% high school) had seen ads in convenience stores or other kinds of stores in the past 30 days.
- About one-third of students (30.0% middle school; 33.9% high school) had seen ads on the internet in the past 30 days.
- Among high school students, 27.3 percent had seen ads in magazines, 15.2 percent had seen ads on billboards, and 14.2 percent had heard ads on the radio in the past 30 days.

Table 29. Exposure to advertising for electronic cigarettes in movies and TV, on the internet, and other media, 2014.

	Middle School	**High School**
When you watch TV or go to the movies, how often do you see actors or actresses using **electronic cigarettes or E-cigarettes**?		
. . .Don’t watch TV or go to the movies	1.5%	2.8%
. . .Never	57.1%	53.0%
. . .Rarely	25.3%	27.9%
. . .Sometimes	12.1%	12.6%
. . .Most of the time	3.1%	2.4%
. . .Always	.9%	1.3%
. . .Total	100.0%	100.0%
Percent who see actors using **electronic cigarettes** sometimes, most of the time or always when they watch TV or go to the movies	16.1%	16.2%

When you are using the Internet, how often do you see ads for **electronic cigarettes or E-cigarettes**? . . .Don't use the Internet	1.9%	2.1%
. . .Never	40.7%	29.9%
. . .Rarely	34.3%	39.2%
. . .Sometimes	18.7%	23.4%
. . .Most of the time	3.5%	3.6%
. . .Always	1.0%	1.7%
. . .Total	100.0%	100.0%
Percent who see ads for **electronic cigarettes** sometimes, most of the time or always when they are using the internet	23.2%	28.7%
Percent who have seen ads for **electronic cigarettes or Ecigarettes** during the past 30 days in the following places:		
. . .On TV	59.1%	57.4%
. . .On the radio	11.4%	14.2%
. . .On the Internet (including You Tube)	30.0%	33.9%
. . .On billboards	15.9%	15.2%
. . .In magazines	25.9%	27.3%
. . .In convenience stores or other stores	44.5%	47.5%

Source: Minnesota Youth Tobacco Survey, 2014

APPENDIX A: DISPARITIES IN TOBACCO USE

The Minnesota Youth Tobacco Survey offers great detail on tobacco use and tobacco prevention, but the sample size is too small to provide reliable estimates of tobacco use among Minnesota's racial/ethnic groups and other small population groups. The Minnesota Student Survey (MSS), on the other hand, is many times larger than the MYTS and can provide data on a handful of tobacco use indicators for racial/ethnic groups and other groups.

The Minnesota Student Survey (MSS) has been conducted every three years since 1989. Tobacco use questions were asked of students in grades 8, 9, and 11. In 2013, 84 percent of public school districts participated, and 71 percent of all 8th graders, 69 percent of all 9th graders, and 62 percent of all 11th graders in Minnesota's regular public schools took the survey.

Current Tobacco Use (table A-1)

In 2013, 5.5 percent of 8th graders, 10.4 percent of 9th graders, and 18.9 percent of 11th graders reported using cigarettes, cigar products or smokeless tobacco in the past 30 days. The Student Survey identifies several groups with tobacco use rates well above the statewide average.

- Among racial-ethnic groups, American Indian students had the highest tobacco use rates in all three grades – 29.2 percent of American Indian 11th grade students had used tobacco in the past

30 days. African American and Hispanic students had rates slightly above average in 8th and 9th grades.

- Students who did not identify as heterosexual had exceptionally high tobacco use rates, reaching 37.1 percent among bisexual 11th grade students and 29.2 percent among gay or lesbian 11th grade students.
- Students from low-income households as identified by receiving free or reduced-price school lunch reported tobacco use rates that were substantially above average in 8th and 9th grades.
- Students experiencing economic distress had very high rates of tobacco use; 34.5% of 11th grade students who had to skip meals in the past month and 38.7% of 11th grade students who were homeless at some time in the past year reported using tobacco in the past 30 days.
- Smaller school districts in Greater Minnesota had tobacco use rates slightly above average.

Secondhand smoke exposure (table A-2)

The same race, economic and demographic groups with higher rates of tobacco use also showed above average exposure to secondhand smoke in a room or in a vehicle during the previous seven days.

Table A-1. Percent of Minnesota students who used any tobacco products* in the past 30 days, by grade and population groups: 2013.

POPULATION GROUP	Grade 8	Grade 9	Grade 11
ALL STUDENTS	5.5%	10.4%	18.9%
RACE-ETHNIC GROUP			
American Indian or Alaska Native	**11.6%**	**21.3%**	**29.2%**
Asian	3.6%	6.1%	8.9%
Black, African or African American	**7.9%**	**12.8%**	14.8%
Hispanic	**8.9%**	**14.0%**	18.4%
White	5.2%	10.3%	20.0%
SEXUAL ORIENTATION**			
Heterosexual	N/A	9.5%	18.1%
Bisexual	N/A	**33.4%**	**37.1%**
Gay or Lesbian	N/A	**29.5%**	**29.2%**
Not Sure (questioning)	N/A	12.2%	**23.8%**

ECONOMIC HARDSHIP			
Receives free or reduced-price school lunch	**9.3%**	**15.1%**	20.5%
Had to skip meals because family did not have enough money to buy food.	**19.0%**	**28.7%**	**34.5%**
Homeless in past 12 months	**16.2%**	**28.3%**	**38.7%**
PLACE AND DISTRICT SIZE			
Twin Cities Metro area (seven counties)	4.6%	9.0%	16.2%
Greater MN: district enrollment of 5,000 or more	4.4%	9.9%	19.6%
Greater MN: district enrollment of 2,000-4,999	6.5%	11.1%	20.2%
Greater MN: district enrollment of 1,000-1,999	6.9%	**12.8%**	**23.9%**
Greater MN: district enrollment of less than 1,000	7.3%	**13.0%**	**22.6%**

*Based on three questions that asked about use of cigarettes; cigars, cigarillos, or little cigars; and chewing tobacco, snuff, or dip in the past 30 days.

**Grades 9 and 11 only

Source: Minnesota Student survey, 2013

Table A-2. Percent of Minnesota students who were exposed to secondhand smoke* in the past 30 days, by grade and population groups: 2013.

POPULATION GROUP	Grade 8	Grade 9	Grade 11
ALL STUDENTS	32.3%	35.4%	39.6%
RACE-ETHNIC GROUP			
American Indian or Alaska Native	**53.4%**	**56.5%**	**61.2%**
Asian	23.5%	26.0%	31.1%
Black, African or African American	**36.1%**	**39.7%**	40.1%
Hispanic	34.3%	37.4%	39.2%
White	32.8%	36.1%	40.5%
SEXUAL ORIENTATION**			
Heterosexual	N/A	34.3%	38.7%
Bisexual	N/A	**63.2%**	**64.0%**
Gay or Lesbian	N/A	**56.4%**	**54.7%**
Not Sure (questioning)	N/A	**38.2%**	**43.3%**
ECONOMIC HARDSHIP			
Receives free or reduced-price school lunch	**47.1%**	**50.5%**	**52.4%**

Had to skip meals because family did not have enough money to buy food.	**63.3%**	**65.1%**	**65.4%**
Homeless in past 12 months	**48.8%**	**57.1%**	**63.7%**
PLACE AND DISTRICT SIZE			
Twin Cities Metro area (seven counties)	27.2%	30.3%	34.3%
Greater MN: district enrollment of 5,000 or more	31.1%	35.1%	40.8%
Greater MN: district enrollment of 2,000-4,999	35.8%	38.1%	41.5%
Greater MN: district enrollment of 1,000-1,999	**39.0%**	**42.2%**	**46.5%**
Greater MN: district enrollment of less than 1,000	**42.8%**	**45.0%**	**51.1%**

*Based on two questions: "During the last 7 days, on how many days were you in the same room as someone who was smoking cigarettes", and "During the last 7 days, on how many days did you ride in a car with someone who was smoking cigarettes"?

**Grades 9 and 11 only

Source: Minnesota Student survey, 2013

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