



Oklahoma Youth Tobacco Survey

2013 Report

Center for the Advancement of Wellness
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Executive Summary

The overwhelming majority of individuals begin using tobacco products, most often cigarettes, by age 18¹⁻². The remaining individuals who smoke usually begin by age 26¹⁻². This being the case, there is a critical window of time in which tobacco initiation might be prevented, and that window is during adolescence and early adulthood. Therefore, it is essential to monitor tobacco use among youth. Monitoring will allow a determination of where to target prevention campaigns, how effective various campaigns are, and when and where usage is increasing for whatever reason. In Oklahoma, this is particularly true because our state has one of the highest rates of youth tobacco use in the entire nation. For example, 15.1% of Oklahoma high school students were currently smoking cigarettes in 2013. This compares to 12.7% nationally. Among middle school students, 4.8% of Oklahoma students were currently smoking, compared to 2.9% nationally.

This report presents data from the Oklahoma Youth Tobacco Survey (1999-2013) and the National Youth Tobacco Survey (2000-2013). A major finding was that the percentage of all students (middle school and high school) who have ever used any tobacco product has generally declined over time. In 2011, these numbers went up slightly, but in 2013 they have dropped from 2011 levels. Cigarettes, cigars, and smokeless tobacco remain the most commonly used products at this time. Bidi, kretek, hookah, snus, and pipe tobacco use are relatively rare for both middle school and high school students. The use of electronic cigarettes is also not that common but is the most popular among these other tobacco products.

Youth opinions about tobacco tend to be negative. The vast majority (85.9%) of all students agree or strongly agree that all tobacco products are dangerous. Most students in both high school and middle school think smoking should never be allowed in the home or in a vehicle. Only 8.1% of high school students and 7.9% of middle school students think smoking probably or definitely makes young people look cool or fit in. Finally, among those youth who *do* smoke, the majority would like to quit.

This report contains selected items from the Oklahoma Youth Tobacco Survey and National Youth Tobacco Survey for the years 1999 through 2013. Additional survey data is available upon request from the Center for the Advancement of Wellness.

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Introduction

Design and Purpose of the Survey

The Oklahoma Youth Tobacco Survey (OYTS) is a statewide school-based survey of public school students in grades 6-12. It was conducted in the spring of 1999, 2002 and every two years since 2005 by the Oklahoma State Department of Health, in cooperation with the Centers for Disease Control and Prevention, the Oklahoma State Department of Education, and numerous partners from local health agencies, community organizations and school districts. This comprehensive survey of tobacco use, knowledge and attitudes among Oklahoma youth provides important data for tracking changes and to guide youth tobacco use prevention programs.

The National Youth Tobacco Survey (NYTS) is a national school-based survey of students in public and private schools in grades 6-12. It provides nationally representative data about middle and high school students' tobacco-related beliefs, attitudes, behaviors, and exposure to pro- and anti-tobacco influences. It was conducted in 1999, 2000, 2002, 2004, 2006, 2009, 2011, 2012 and 2013. The NYTS serves as a national comparison to state youth tobacco survey results.

Methodology

The OYTS uses a two-stage sampling procedure to select schools and students to be surveyed. Two samples were drawn – one from grades 6-8 and one from grades 9-12. Schools in each sample are selected with a probability proportional to enrollment. Then, a random sample of classrooms is selected within each selected school; all students in those classes are invited to participate. The data have been weighted to adjust for non-response at the school and student levels to reflect the prevalence of tobacco usage in Oklahoma public schools.

The NYTS uses a three-stage sampling procedure to select schools and students to be surveyed. One sample was drawn of students in grades 6-12. Primary sampling units of large counties or smaller, adjacent counties were selected with probability proportional to weighted school enrollment. Schools were selected from within the sampling units proportional to weighted school enrollment, and classes were randomly selected from within these selected schools. The data have been weighted to adjust for nonresponse and varying probabilities of selection.

Data in this report are statewide and national estimates of prevalence. They are computed based on survey results, probability of respondent selection, and demographics of students in those grades. The minimum overall response rate for weighted data is 60%. Weighted data allows statewide and national estimates to be inferred from the sample to the population of Oklahoma and United States adolescents.

School and Student Response Rates

The 2013 OYTS middle school sample consisted of 50 middle schools out of 58 selected (86.2% response rate) with 3,080 completed student questionnaires among 3,684 eligible (83.6% response rate). The overall response rate for middle schools was 72.1%. The 2013 OYTS high school sample consisted of 33 high schools out of 50 selected (66.0% response rate) with 1,531 completed student questionnaires among 1,855 eligible (82.5% response rate). The overall response rate for high schools was 54.5%. Thus, for 2013 OYTS middle school data is weighted and high school data is unweighted. Due to this, 2013 high school data should be interpreted with some caution since the lack of weighting might result in small changes on the values in this report. Since there is a requirement to have a 60% response rate for weighting, it is critical to obtain high participation rates from schools and students in future survey administrations.

The 2013 NYTS³ consisted of 187 out of the 250 selected schools (74.8% response rate) with 18,406 completed questionnaires among 20,301 eligible (90.7% response rate). The overall response rate for the 2013 NYTS was 67.8%. All data from previous years of the OYTS and NYTS is weighted.

Definitions

- Any tobacco: use of at least one type of tobacco product. It can include cigarettes, smokeless or spit tobacco, cigars, pipe tobacco, bidis* or kreteks*. Beginning in 2012, hookah, snus, dissolvable tobacco and electronic cigarettes were included in the definition of “any tobacco” in the NYTS⁴, but not the OYTS. Therefore, it is best not to directly compare “any tobacco” in Oklahoma vs. the nation in 2012 or later. Youth may have used more than one type of product in the category of “any tobacco”.
- Bidis*: small, hand-rolled cigarettes produced in India and southeastern Asian countries. They may be flavored or unflavored.
- Current use: youth who used the product on at least one day during the past thirty days. Current use does not include the use of tobacco for ceremonial use.
- Dissolvable tobacco: a relatively new product that can be formed of strips or lozenges, for example, and melts in the mouth. Dissolvable tobacco was first assessed by the NYTS in 2011 and OYTS in 2013.
- Electronic cigarettes: battery-powered devices that provide doses of nicotine and other additives to the user in an aerosol. Depending on the brand, e-cigarette cartridges typically contain nicotine, a component to produce the aerosol (e.g., propylene glycol or glycerol), and flavorings (e.g., fruit, mint, or chocolate).⁵ Electronic cigarettes were first assessed in the 2011 NYTS and the 2013 OYTS.
- Ever use: youth who reported use of the product on at least one occasion, even if it was just one or two puffs.
- High school students: public school students who were in 9th, 10th, 11th, or 12th grade at the time of the survey.
- Hookah: a smoking device consisting of a water chamber with a long flexible tube. Tobacco (or occasionally herbs) is heated with indirect heat through coals. Also known as a waterpipe, narghile, or shisha. Hookah was first assessed in the 2011 NYTS and OYTS.
- Kreteks*: clove cigarettes produced in Indonesia. They are a mixture of tobacco, cloves and other additives.
- Middle school students: public school students who were in 6th, 7th, or 8th grade at the time of the survey.
- Pipe tobacco: loose tobacco smoked in a pipe.
- Prevalence: the proportion of youth using a particular tobacco product at a specific point in time.
- Snus: a moist powder tobacco product that typically does not need to be spit out as smokeless or spit tobacco does. Snus was first assessed by the NYTS in 2011 and OYTS in 2013.

*The use of bidis and kreteks was not assessed in 1999.

Note: All categories of tobacco use include only non-ceremonial use.

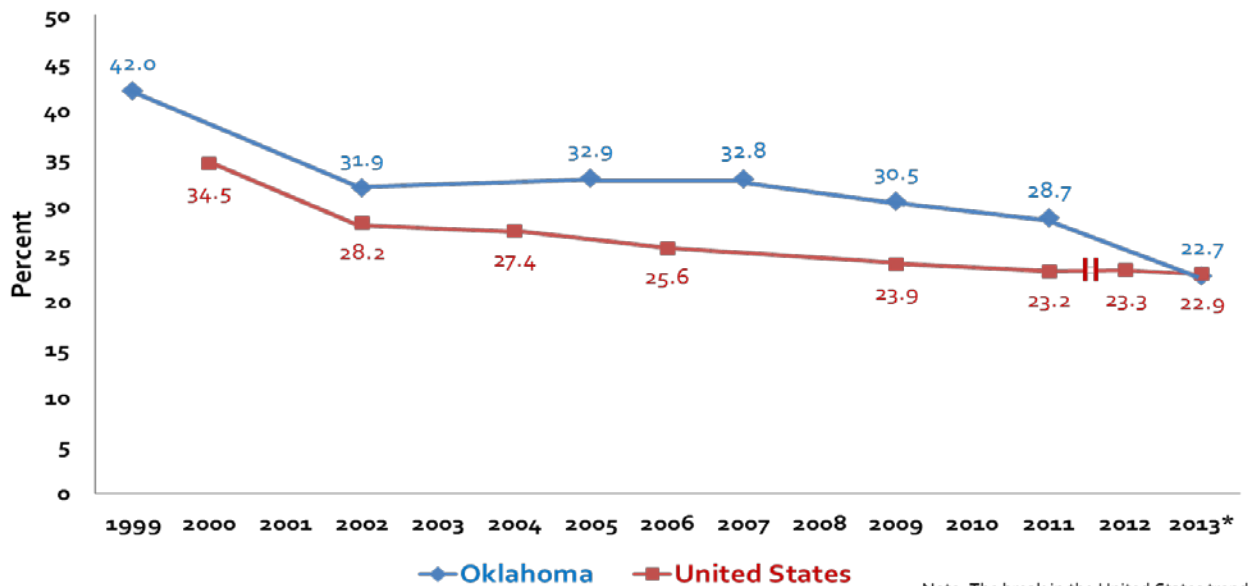
Results and Trends

Any Tobacco Product

Current use of any tobacco product has gradually declined among high school students in most years in which the OYTS was conducted (Figure 1). In 1999, current use of tobacco was 42.0%, as compared to 22.7% in 2013. This is a decrease of 46% over that time span. This gradual decline in tobacco use has been true in Oklahoma and in the United States generally. Usage of tobacco products is now at the lowest point it has been since the NYTS and OYTS data collection started. Since the definition of “any tobacco” for the NYTS and the OYTS is different, the percentages cannot be directly compared after 2012, however.

An examination of middle school students’ data shows a similar pattern for decreased use of tobacco products over the last 14 years (Figure 2). In 1999, 21.0% of middle school students reported current use of any tobacco product, as compared to 9.8% in 2013. This is a reduction of 53%, which is a tremendous improvement that will result in much better health in the state.

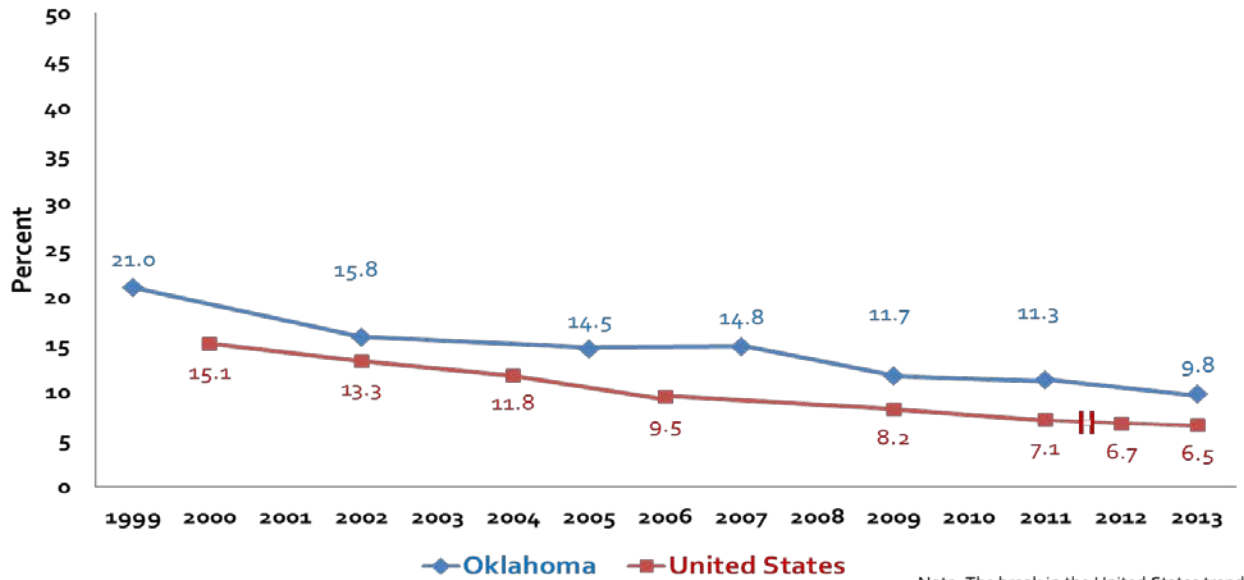
Figure 1. Current Tobacco Use Among Oklahoma and United States High School Students, 1999-2013



* Oklahoma high school data is unweighted for 2013

Note: The break in the United States trend line between 2011 and 2012 indicates a definition change of any tobacco product to include hookah, snus, dissolvable tobacco and electronic cigarettes.

Figure 2. Current Tobacco Use Among Oklahoma and United States Middle School Students, 1999-2013



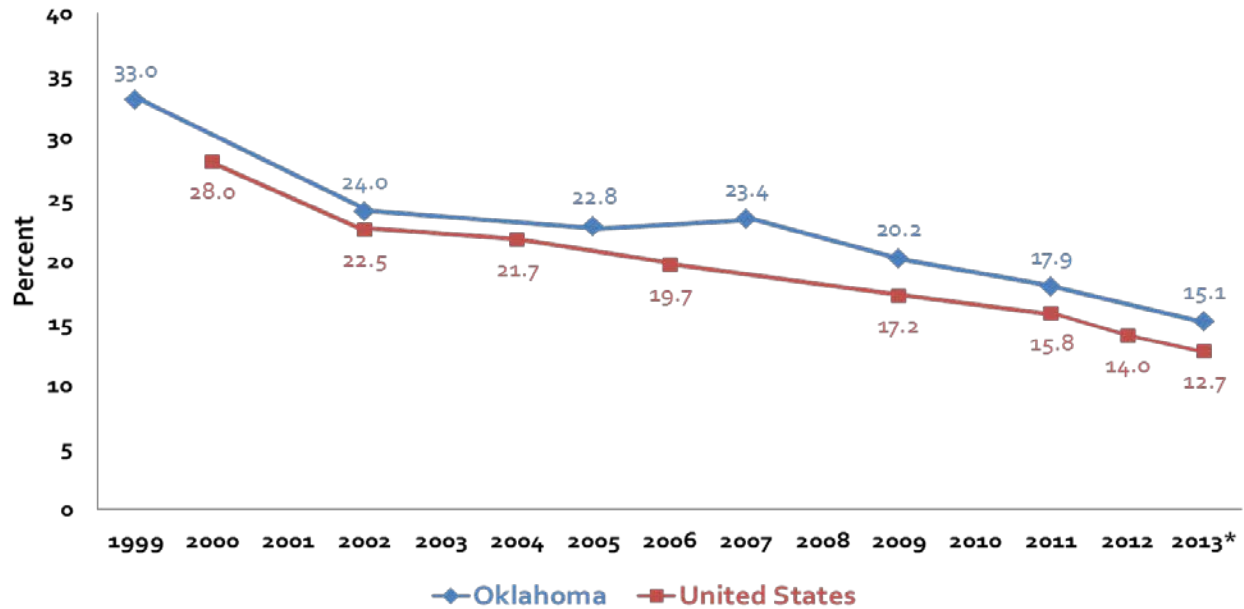
Note: The break in the United States trend line between 2011 and 2012 indicates a definition change of any tobacco product to include hookah, snus, dissolvable tobacco and electronic cigarettes.

Cigarette Smoking

Since 1999, the percentage of high school students who currently smoke cigarettes has been decreasing both in Oklahoma and nationally. About 1 in 3 Oklahoma high school students (33.0%) reported smoking cigarettes on at least one day in the past 30 days in 1999. By 2013, this percentage had declined to about 1 in 7 high school students (15.1%; note that for 2013 only, Oklahoma data is not weighted due to lower sample size than needed for weighting, so this percentage should be interpreted with some caution). The national estimates are slightly lower than in Oklahoma but follow a similar trend: the percentage of current smokers declined from 28.0% in 2000 to 12.7% in 2013 (Figure 3).

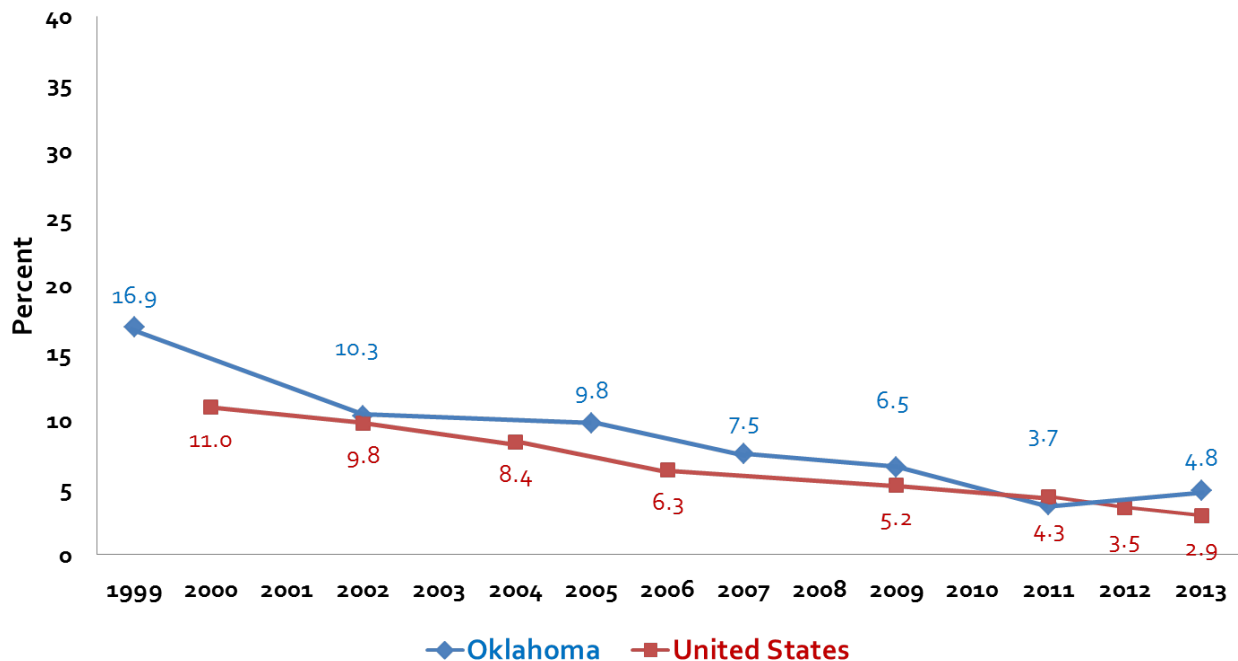
Smoking prevalence also generally decreased over time among middle school students. In 1999, 16.9% of middle school students in Oklahoma were current smokers, as compared to 4.8% in 2013. National estimates have also decreased from 11.0% in 2000 to 2.9% in 2013 (Figure 4).

Figure 3. Current Cigarette Smoking Among Oklahoma and United States High School Students, 1999-2013



*Oklahoma high school data is unweighted for 2013

Figure 4. Current Cigarette Smoking Among Oklahoma and United States Middle School Students, 1999-2013

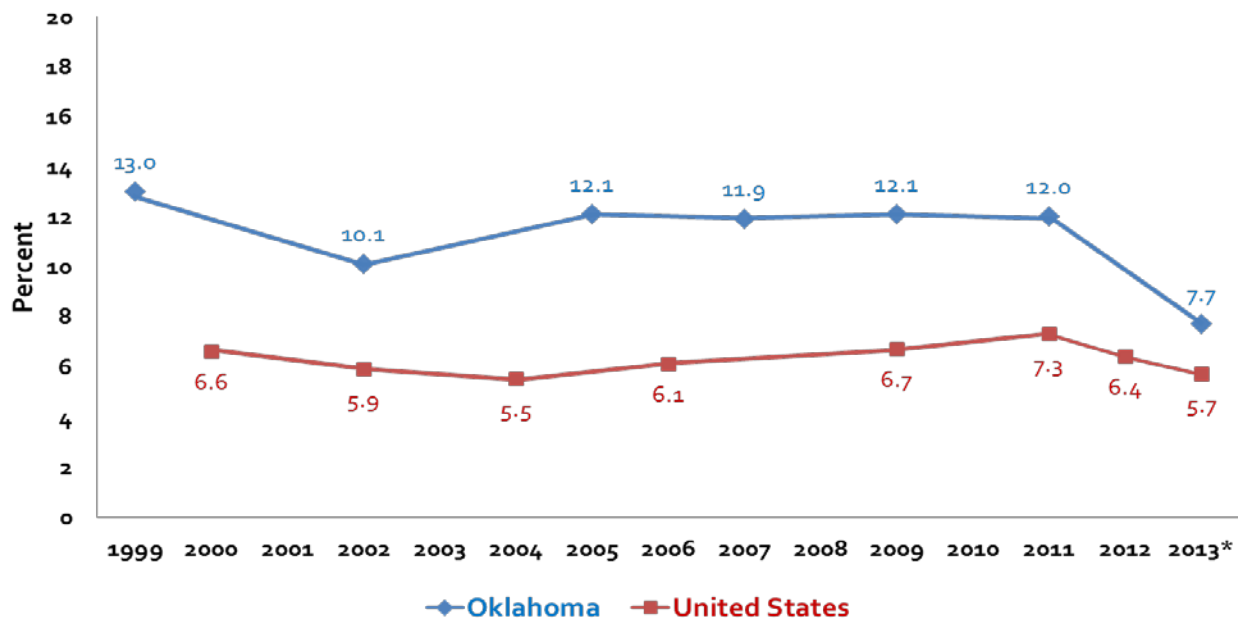


Smokeless Tobacco

Smokeless tobacco use among high school students is relatively prevalent in Oklahoma, compared to the nation (Figure 5). Use of smokeless tobacco is much more common among males (14%) than females (1.3%) in Oklahoma (Table 1). A similar pattern is seen in the nation as a whole. In Oklahoma, use of smokeless tobacco has been relatively steady since 1999, but did decrease from 12.0% in 2011 to 7.7% in 2013 (note again that for 2013, Oklahoma high school data is unweighted so this finding should be viewed with caution). Time will be needed to determine if this drop will be sustained.

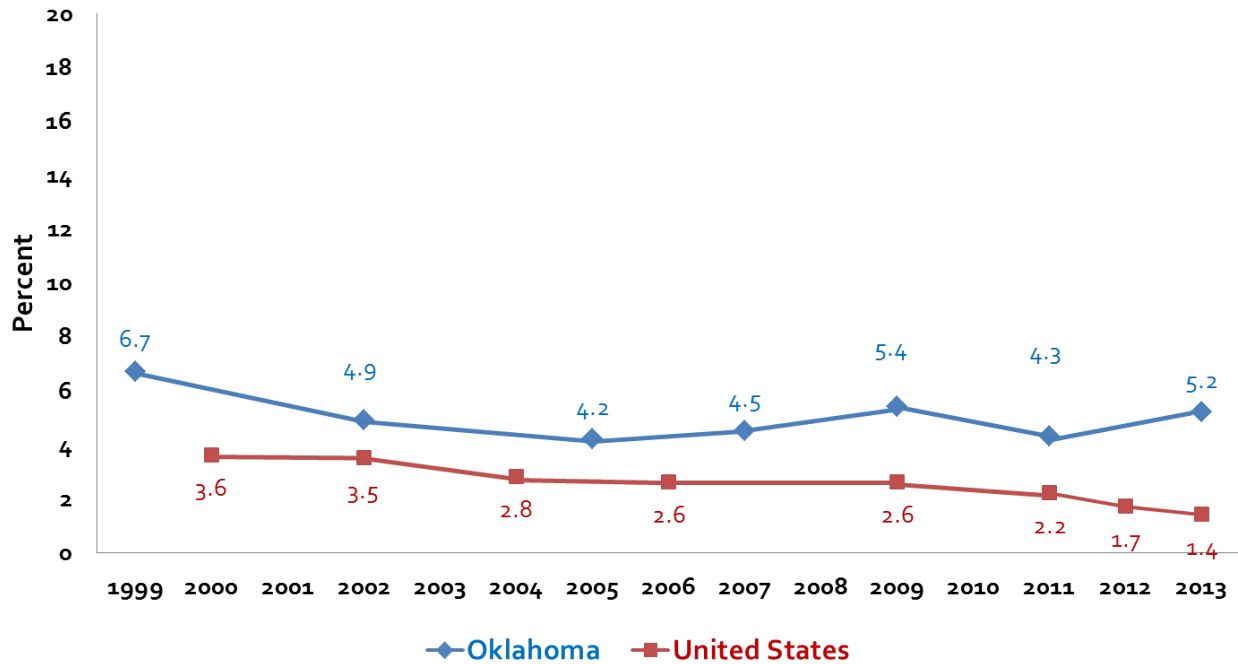
In middle school, current use of smokeless tobacco is reported by 5.2% of students in Oklahoma and only 1.4% of students in the nation (Figure 6). Again, there is a notable difference in usage by sex with 7.6% of males reporting use as compared to 2.6% of females (Table 2).

Figure 5. Current Smokeless Tobacco Use Among Oklahoma and United States High School Students, 1999-2013



*Oklahoma high school data is unweighted for 2013

Figure 6. Current Smokeless Tobacco Use Among Oklahoma and United States Middle School Students, 1999-2013

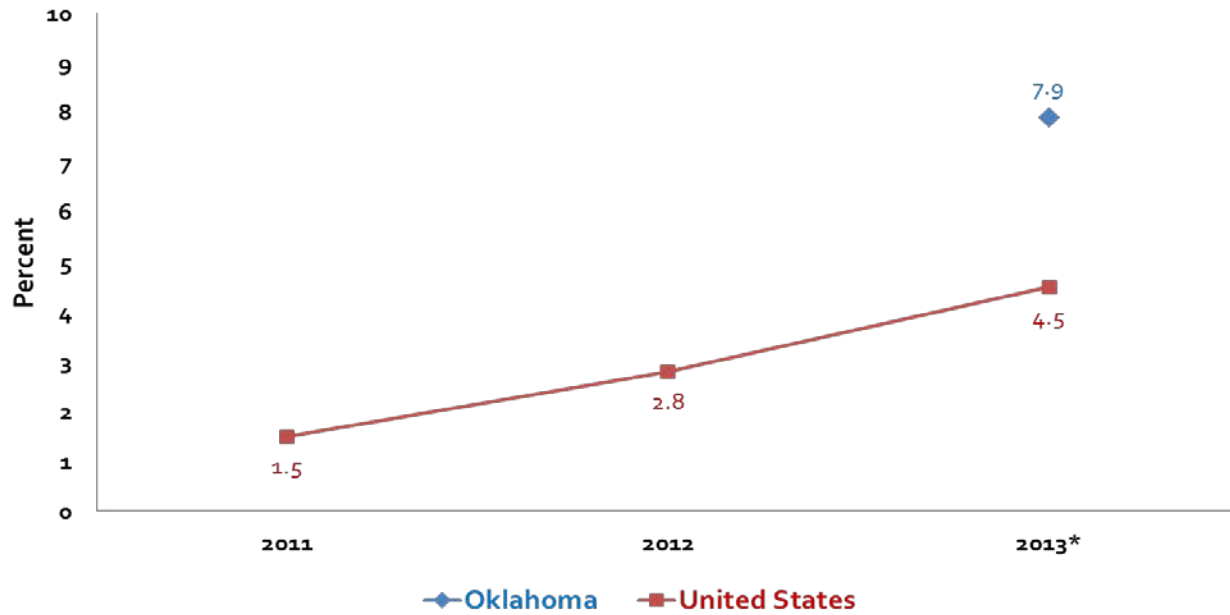


Electronic Cigarettes

The use of electronic cigarettes on at least one day in the past 30 days was first asked on the NYTS in 2011 and was only asked on the OYTS in 2013. Nationally, current use of electronic cigarettes among high school students increased from 1.5% in 2011 to 4.5% in 2013. In Oklahoma, usage is notably higher with 7.9% of high school students who reported current use of electronic cigarettes in 2013 (Figure 7; note that this is unweighted data).

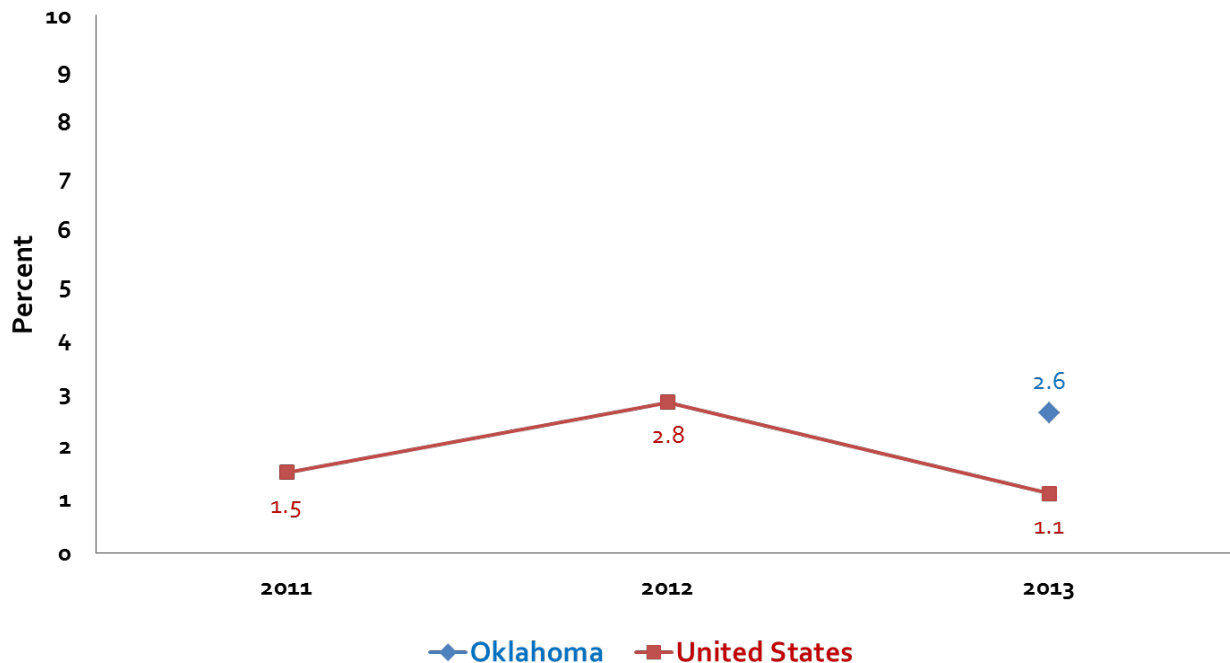
Use of electronic cigarettes among middle school students occurs less frequently than in high school. However, Oklahoma has greater usage of these products than in the nation as a whole. Among Oklahoma middle school students, 2.6% reported current use of electronic cigarettes compared to 1.1% of middle school students in the nation. Since 2011 when tracking began, use of electronic cigarettes has been less than 3% among middle school students nationally (Figure 8).

Figure 7. Current Electronic Cigarette Smoking Among Oklahoma and United States High School Students, 2011-2013



*Oklahoma high school data is unweighted for 2013

Figure 8. Current Electronic Cigarette Smoking Among Oklahoma and United States Middle School Students, 2011-2013



Conclusions

This report contains selected items from the OYTS and NYTS for the years from 1999 through 2013. Additional survey data is available upon request from the Center for the Advancement of Wellness.

The data indicate that use of various tobacco products in Oklahoma continues to slowly decline but still occurs at a higher rate when compared to national use. Nonetheless, the vast majority of Oklahoma youth do not use tobacco of any kind, and overwhelming majorities of students in both high school and middle school agree that tobacco products are dangerous. Furthermore, the majority of students who do smoke want to quit. Therefore, there is reason to hope that tobacco use will continue to decline in the future. The advent of electronic cigarettes and other alternative tobacco products are a challenge to public health efforts that will need to be studied in the next several administrations of the OYTS to determine their impact.

Appendix

Table 1. Estimates of Current Use of Tobacco Products Among High School Students* in 2013

Note: All table cells show OYTS (top row), followed by NYTS in parentheses (bottom row)

Tobacco Product	Overall %	Females %	Males %
Any tobacco product†	22.7 (22.9)	17.1 (18.5)	28.0 (27.2)
Cigarettes	15.1 (12.7)	13.5 (11.2)	16.6 (14.1)
Cigars	10.4 (11.9)	6.3 (8.3)	14.3 (15.4)
Smokeless tobacco	7.7 (5.7)	1.3 (1.7)	14.0 (9.6)
Pipes	4.5 (4.1)	4.3 (3.3)	4.7 (5.0)
Kreteks	1.5 (0.8)	0.7 (0.5)	2.3 (1.2)
Bidis	1.1 (0.6)	0.5 (0.5)	1.6 (0.8)
Hookah	4.0 (5.2)	3.3 (4.8)	4.7 (5.6)
Snus	3.4 (1.8)	1.3 (0.9)	5.4 (2.7)
Electronic cigarettes	7.9 (4.5)	5.6 (3.5)	10.1 (5.5)

*Oklahoma high school data was unweighted for 2013 only.

†Any tobacco product included cigarettes, cigars, smokeless tobacco, pipes, bidis, and kreteks in the OYTS. In the NYTS, any tobacco product included all of these plus the additional products of hookahs, electronic cigarettes, snus, and dissolvable tobacco.

Note: Current use is defined as use of a product on at least one day during the past thirty days.

Table 2. Estimates of Current Use of Tobacco Products Among Middle School Students in 2013

Note: All table cells show OYTS (top row), followed by NYTS in parentheses (bottom row)

Tobacco Product	Overall %	Females %	Males %
Any tobacco product†	9.8 (6.5)	8.4 (6.5)	11.2 (6.5)
Cigarettes	4.8 (2.9)	5.2 (2.8)	4.4 (3.0)
Cigars	3.8 (3.1)	2.5 (2.9)	4.8 (3.3)
Smokeless tobacco	5.2 (1.4)	2.6 (0.8)	7.6 (1.9)
Pipes	3.2 (1.9)	2.3 (2.2)	3.9 (1.6)
Kreteks	2.4 (0.4)	2.0 (--)	2.8 (0.5)
Bidis	1.7 (0.4)	1.3 (0.4)	2.0 (0.5)
Hookah	0.9 (1.1)	0.8 (1.3)	1.0 (0.9)
Snus	1.8 (0.4)	1.6 (--)	2.0 (0.7)
Electronic cigarettes	2.6 (1.1)	2.3 (0.9)	2.8 (1.4)

†Any tobacco product included cigarettes, cigars, smokeless tobacco, pipes, bidis, and kreteks in the OYTS. In the NYTS, any tobacco product included all of these plus the additional products of hookahs, electronic cigarettes, snus, and dissolvable tobacco.

Note: Current use is defined as use of a product on at least one day during the past thirty days.

Table 3. Estimates of Ever Use of Tobacco Products Among High School* Students in 2013

Note: All table cells show OYTS (top row), followed by NYTS in parentheses (bottom row)

Tobacco Product	Overall %	Females %	Males %
Any tobacco product†	45.2 (46.0)	41.0 (41.8)	49.4 (50.1)
Cigarettes	39.3 (34.7)	38.5 (33.0)	40.1 (36.3)
Cigars	26.6 (30.5)	19.0 (24.5)	34.1 (36.4)
Smokeless tobacco	17.6 (13.4)	7.1 (5.6)	27.9 (20.8)
Pipes	12.2 (9.7)	8.8 (7.4)	15.5 (12.0)
Kreteks	2.8 (2.8)	1.9 (1.4)	3.8 (4.2)
Bidis	3.1 (2.6)	1.9 (1.4)	4.3 (3.8)
Hookah	11.5 (14.3)	10.6 (13.5)	12.4 (15.1)
Snus	8.3 (6.2)	4.0 (2.9)	12.5 (9.4)
Electronic cigarettes	18.1 (11.9)	14.8 (9.9)	21.1 (13.8)

*Oklahoma high school data was unweighted for 2013 only.

†Any tobacco product included cigarettes, cigars, smokeless tobacco, pipes, bidis, and kreteks in the OYTS. In the NYTS, any tobacco product included all of these plus the additional products of hookahs, electronic cigarettes, snus, and dissolvable tobacco.

Note: Ever use is defined as use of a product on at least one occasion, even if it was just one or two puffs.

Table 4. Estimates of Ever Use of Tobacco Products Among Middle School Students in 2013

Note: All table cells show OYTS (top row), followed by NYTS in parentheses (bottom row)

Tobacco Product	Overall %	Females %	Males %
Any tobacco product†	26.0 (17.7)	23.9 (16.2)	27.9 (19.0)
Cigarettes	21.1 (12.7)	21.1 (12.0)	21.0 (13.5)
Cigars	10.4 (8.9)	8.3 (7.5)	12.5 (10.2)
Smokeless tobacco	10.6 (3.6)	6.6 (1.9)	14.4 (5.2)
Pipes	5.7 (4.1)	4.7 (4.1)	6.6 (4.0)
Kreteks	2.4 (0.6)	1.9 (0.5)	2.8 (0.8)
Bidis	3.0 (0.8)	2.2 (0.6)	3.8 (1.1)
Hookah	2.5 (3.0)	2.2 (3.0)	2.8 (2.9)
Snus	3.1 (1.3)	2.6 (0.9)	3.6 (1.7)
Electronic cigarettes	6.4 (3.0)	6.0 (2.8)	6.7 (3.1)

†Any tobacco product included cigarettes, cigars, smokeless tobacco, pipes, bidis, and kreteks in the OYTS. In the NYTS, any tobacco product included all of these plus the additional products of hookahs, electronic cigarettes, snus, and dissolvable tobacco.

Note: Ever use is defined as use of a product on at least one occasion, even if it was just one or two puffs.

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