

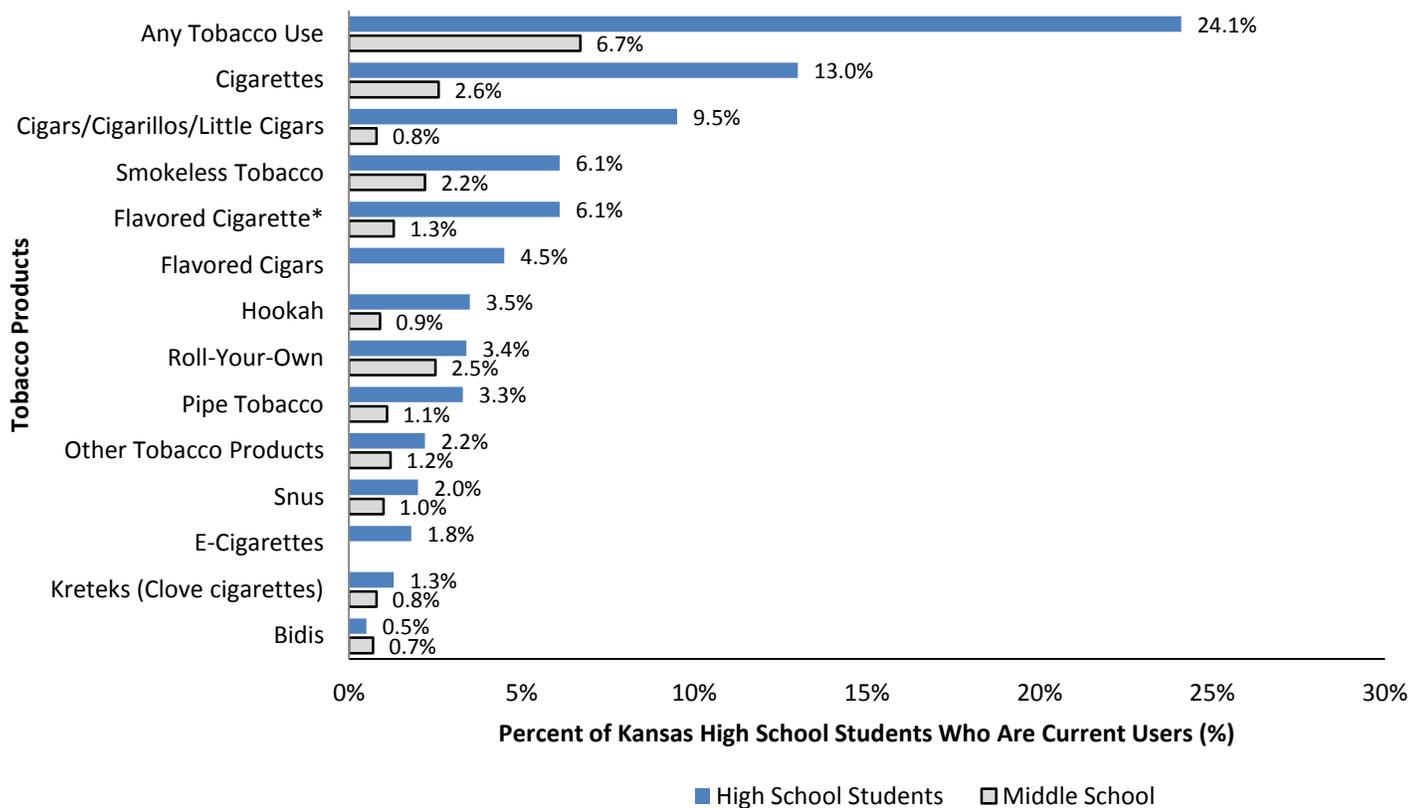
**Kansas Youth Tobacco Survey 2011-2012**  
Distribution of Youth Tobacco Use

# BACKGROUND

The Kansas Youth Tobacco Survey (YTS) contains in-depth information on the use of tobacco products, knowledge/beliefs of the impact of tobacco use, attitudes surrounding tobacco and exposure to secondhand smoke among Kansas youth. It is a statewide survey conducted every two years by the Kansas Department of Health and Environment (KDHE) in partnership with the Kansas State Department of Education (KSDE) among students in grades 6-8 (Middle School/MS) and 9-12 (High School/HS). The results are used by organizations across the state in program evaluation and planning.

This document contains information on the distribution of tobacco use among Kansas youth. The 2011/2012 Kansas Youth Tobacco Survey included a variety of questions on new and emerging tobacco products that have never before been assessed. Because there are so many products and because students are more likely to use tobacco as they get older, subpopulation analysis of tobacco use is limited to the three most popular product categories and a composite measure of any tobacco use among high school students (figure 1). Response categories with less than five respondents have been censored.

**Figure 1. Percent of Kansas Youth That Use Tobacco by Product Category, Youth Tobacco Survey 2011/2012**



\*With the exception of menthol, flavored cigarettes are illegal. Students who report using flavored cigarettes are most likely thinking of mentholated cigarettes or flavored cigars, which are often small and sold in packs much like cigarettes.

In the following tables, the relative size of the point prevalence of an indicator is represented graphically to aid the reader. It is important to note, however, that the colored bars in each table do not denote statistically significant differences. To determine whether two weighted percents are significantly different from one another, the reader must compare the upper and lower confidence limits. For instance, as shown in table 2, there is no significant difference between the percent of female high school students who smoke cigarettes (13.3 percent) and the percent of male high school students who smoke cigarettes (12.6 percent) because the upper confidence limit of the estimate for males overlaps with the lower confidence limit of the estimate for females. There is, however, a significant difference between the percent of 12<sup>th</sup> grade students who smoke cigarettes (22.8 percent) and 10<sup>th</sup>

grade students who smoke cigarettes (10.1 percent) because the confidence limits do not overlap. Based on this, one could assert that 12<sup>th</sup> graders have a higher smoking prevalence than 10<sup>th</sup> grade students.

## DISTRIBUTION OF TOBACCO USE

Overall, 24.1 percent<sup>1</sup> (95% CI:  $\pm 3.3\%$ ) of Kansas high school students were current users of some tobacco product during the 2011/2012 school year. In youth, current tobacco use is any use in the past 30 days. Table 1 gives estimates of high school current tobacco use by different demographic characteristics. Despite the varying size of the bars to the left of the estimates, many of these weighted percents are not significantly different from each other. There is, for instance, no significant difference between 12<sup>th</sup> grade current tobacco use prevalence (38.3%, 95% CI:  $\pm 7.9\%$ ) and the 11<sup>th</sup> grade tobacco use prevalence (24.4%, 95% CI:  $\pm 6.9\%$ ) as evidenced by overlapping confidence limits. However, one can still see how tobacco use increases as students progress from 9<sup>th</sup> through 12<sup>th</sup> grade. Twelfth grade students have a significantly larger prevalence of tobacco use than 9<sup>th</sup> and 10<sup>th</sup> grade students. Current tobacco use does not seem to vary meaningfully by gender, race, ethnicity, or disability status. Not surprisingly, students age 18 and older are much more likely to be current tobacco users than students who are less than 18 years old.

**Table 1. Percent of high school students who currently use any kind of tobacco product (excludes e-cigarettes).**

Demographic Group	Weighted Percent	95% Confidence Limits	
Female	21.4%	17.5%	25.3%
Male	26.6%	22.3%	30.9%
9th grade	14.6%	9.8%	19.5%
10th grade	20.2%	15.7%	24.7%
11th grade	24.4%	17.5%	31.3%
12th grade	38.3%	30.5%	46.2%
Black or African American Only	17.1%	8.6%	25.6%
Not White or African American Only	26.9%	16.9%	36.8%
White Only	24.4%	20.8%	28.0%
Hispanic	27.3%	20.3%	34.3%
Non-Hispanic	23.5%	19.6%	27.4%
No Physical Disability	23.8%	19.7%	27.9%
Physical Disability	25.3%	13.5%	37.2%
18 years old or older	46.5%	34.0%	58.9%
Under 18 years old	21.7%	18.7%	24.8%

Table 2 provides estimates of high school current cigarette smoking by different demographic categories. Overall, 13.0 percent (95% CI:  $\pm 3.2\%$ ) of Kansas high school students were current cigarette smokers during the 2011/2012 school year. Cigarette smoking is still the most common type of tobacco use among high school students, which probably accounts for much of the similar distribution seen in Table 1 with any tobacco use. Again, there is no meaningful difference in cigarette smoking by gender, ethnicity or disability status. There may be a difference by race, but there was an insufficient sample to calculate reliable estimates of current cigarette smoking among Kansas African American high school students. As with current tobacco use, cigarette smoking seems to be more common as students get older.

<sup>1</sup> The estimate of 24.1 percent is derived by including all tobacco product categories available in the 2011/2012 YTS. This differs from the estimate reported in the document *Kansas Youth Tobacco Survey 2011-2012: Trends in Youth Tobacco Use*. The estimate of any current tobacco use from the trends document (20.8 percent) is based on a limited number of tobacco product categories to facilitate comparison of estimates to previous surveys that did not assess as many tobacco product categories.

**Table 2. Percent of high school students who currently smoke cigarettes.**

Demographic Group	Weighted Percent	95% Confidence Limits	
Female	13.3%	8.8%	17.7%
Male	12.6%	9.3%	15.9%
9th grade	7.5%	4.1%	10.9%
10th grade	10.1%	5.8%	14.4%
11th grade	12.4%	6.8%	18.0%
12th grade	22.8%	16.3%	29.4%
Black or African American Only	.	.	.
Not White or African American Only	10.9%	4.3%	17.6%
White Only	14.7%	11.0%	18.4%
Hispanic	15.2%	9.0%	21.3%
Non-Hispanic	12.6%	9.0%	16.1%
No Physical Disability	12.8%	9.4%	16.3%
Physical Disability	15.6%	7.3%	24.0%
18 years old or older	24.6%	13.4%	35.8%
Under 18 years old	11.8%	8.8%	14.8%

Table 3 provides estimates of high school current cigar smoking by different demographic categories. Overall, 9.5 percent (95% CI:  $\pm 1.9\%$ ) of Kansas high school students were current cigarette smokers during the 2011/2012 school year. Much like cigarette smoking, cigar smoking is relatively common. Although there is no significant difference in current cigar smoking prevalence between male and female high school students, other surveys in Kansas, and nationally, have found that male students are more likely to smoke cigars than female students<sup>2</sup>. There is no meaningful difference in cigar smoking by race, ethnicity or disability status. As with any tobacco use and cigarette smoking, cigar smoking seems to be more common as students get older.

**Table 3. Percent of high school students who currently smoke cigars.**

Demographic Group	Weighted Percent	95% Confidence Limits	
Female	7.3%	5.2%	9.3%
Male	11.8%	9.2%	14.4%
9th grade	5.0%	3.3%	6.8%
10th grade	8.2%	3.4%	13.1%
11th grade	10.5%	7.0%	14.0%
12th grade	15.0%	11.0%	19.1%
Black or African American Only	7.8%	1.7%	13.9%
Not White or African American Only	10.7%	5.2%	16.1%
White Only	9.4%	6.8%	12.0%
Hispanic	10.3%	6.0%	14.6%
Non-Hispanic	9.2%	6.9%	11.6%
No Physical Disability	9.6%	7.5%	11.7%
Physical Disability	8.2%	2.4%	14.0%
18 years old or older	17.9%	9.2%	26.6%
Under 18 years old	8.7%	6.5%	10.8%

Table 4 provides estimates of male high school current smokeless tobacco use by different demographic categories. Overall, 6.1 percent (95% CI:  $\pm 1.7\%$ ) of Kansas high school students were current smokeless tobacco users during

<sup>2</sup> Kansas Youth Risk Behavior Survey, 2011.

the 2011/2012 school year. There is a striking disparity in smokeless tobacco use between female and male high school students. Male students (11.1%, 95% CI:  $\pm 3.8\%$ ) are much more likely to use smokeless tobacco than female students (1.0%, 95% CI:  $\pm 0.8\%$ ). It is common to exclude female responses from the analysis of smokeless tobacco use for this reason. Among high school males, there is no meaningful difference in smokeless tobacco use by race, ethnicity or disability status. Although there is no significant difference in smokeless tobacco use by grade level, smokeless tobacco likely follows the same pattern of increased use as male students get older.

**Table 4. Percent of MALE high school students who currently use smokeless tobacco.**

Demographic Group	Weighted Percent	95% Confidence Limits	
9th grade	6.4%	1.9%	11.0%
10th grade	8.8%	3.8%	13.7%
11th grade	10.2%	3.3%	17.1%
12th grade	19.7%	8.8%	30.5%
Black or African American Only	.	.	.
Not White or African American Only	9.1%	1.7%	16.6%
White Only	12.2%	7.5%	16.9%
Hispanic	7.9%	2.6%	13.1%
Non-Hispanic	11.7%	7.3%	16.1%
No Physical Disability	11.1%	6.3%	15.8%
Physical Disability	13.4%	1.6%	25.1%
18 years old or older	24.6%	7.7%	41.4%
Under 18 years old	9.5%	6.2%	12.7%

\*Table 4 excludes females. All estimates are male-specific: 9<sup>th</sup> grade males, Hispanic high school males, etc.

## DISCUSSION

Despite limiting the analysis to a few select product categories, some themes in tobacco use become apparent. Grade level and age appear to be the strongest demographic predictors of tobacco use. As youth age, they appear to increasingly experiment with and adopt tobacco into their lives. Another important factor to consider is gender. A much larger percentage of male students use smokeless tobacco than females and there is evidence that a larger percentage of males smoke cigars than females. In contrast, female students may be more likely to use flavored tobacco products than male students. Additional research is needed in this area.

Larger national studies have found differences in tobacco use among racial and ethnic groups, and we know from adult risk behavior surveillance that persons with a disability are more likely to smoke cigarettes than persons without a disability, but the present analysis found no such relationships among Kansas students. Although it is possible tobacco use does not vary in these groups, it is more likely a question of sample size. The Kansas Youth Tobacco Survey does not oversample along racial, ethnic or other demographic categories, so analysis on these variables is often limited. Achieving a larger state sample would improve the accuracy and analytic power of these types of subpopulation analyses. Improved subgroup analysis would, in turn, better support targeted tobacco prevention efforts among youth.

To improve the overall response rate, KDHE has partnered with KSDE to coordinate student survey sampling. Coordinated samples will reduce the burden surveys place on schools and hopefully improve response rates. These two state agencies are also working to improve communication with schools and better disseminate the results of Kansas student risk behavior surveys such as the Kansas Youth Tobacco Survey.

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