

Tobacco Use and Electronic Vapor Product Use among Public High School Students in Oklahoma: Youth Risk Behavior Survey 2003 to 2017

Maternal & Child Health Service, Oklahoma State Department of Health
Thad Burk, MPH, Child and Adolescent Health Epidemiologist

BACKGROUND

Tobacco use is a serious public health concern among youth in Oklahoma. While decreases in tobacco use have been seen in both Oklahoma and the U.S. as a whole, the prevalence of tobacco use among youth in Oklahoma remains high.

METHODS

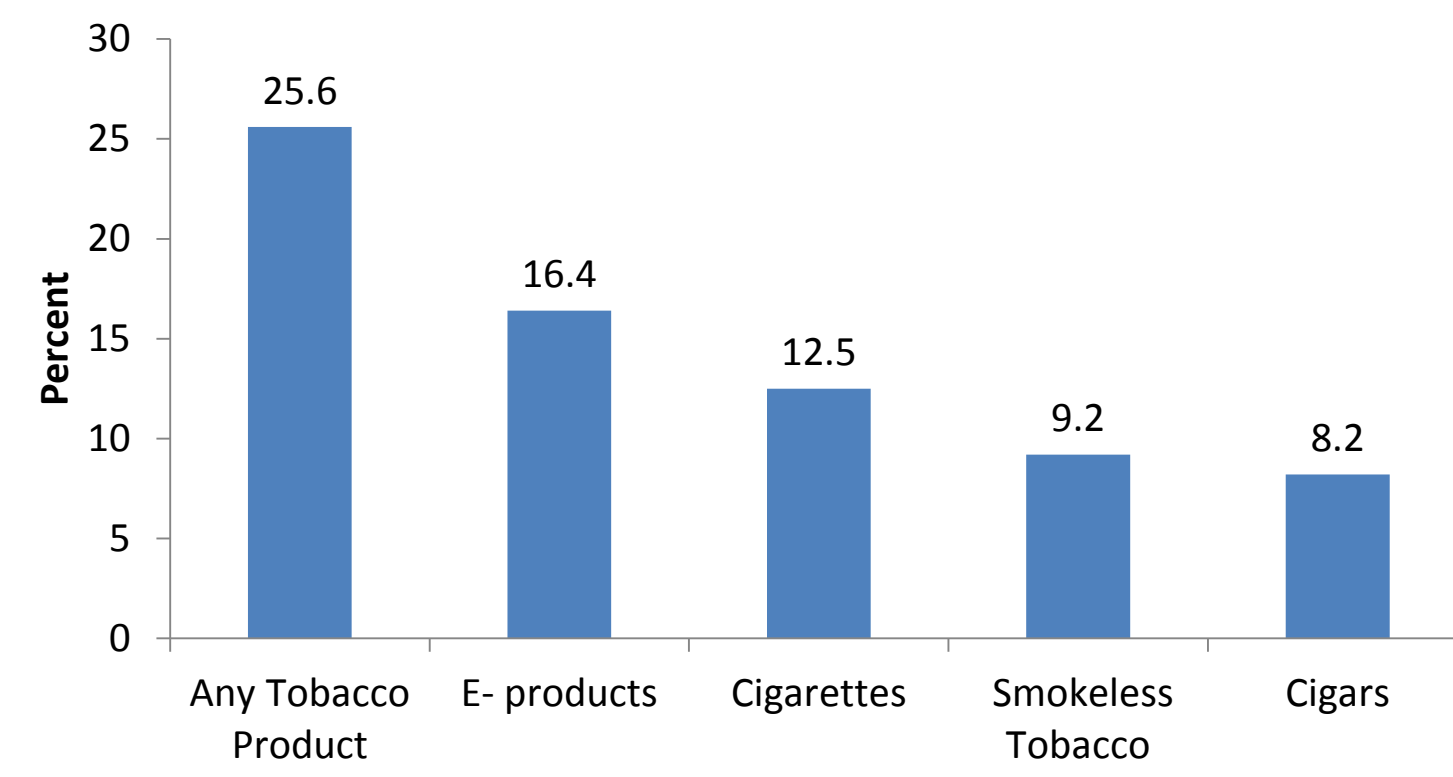
Data are from the Oklahoma Youth Risk Behavior Survey (YRBS). The statewide, randomized YRBS is conducted biennially on odd-numbered years. The 2017 survey had 1,649 participating students from 45 of 50 selected schools. The average number of respondents was 1,629 students per year from 2003 to 2017. Differences in proportions were based on chi-squared analyses, $p < 0.05$. Trend analyses for cigarette use and cigar use were conducted using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$. Current use is defined as use during the thirty days before the survey.

RESULTS

- In 2017, electronic vapor products (e-products) were the most commonly used tobacco product among youth in Oklahoma at 16.4%.
- Cigarettes were the second most used product at 12.5%, followed by smokeless tobacco (9.2%) and cigars (8.2%).
- One in four (25.6%) public high school students currently used any type of tobacco product.

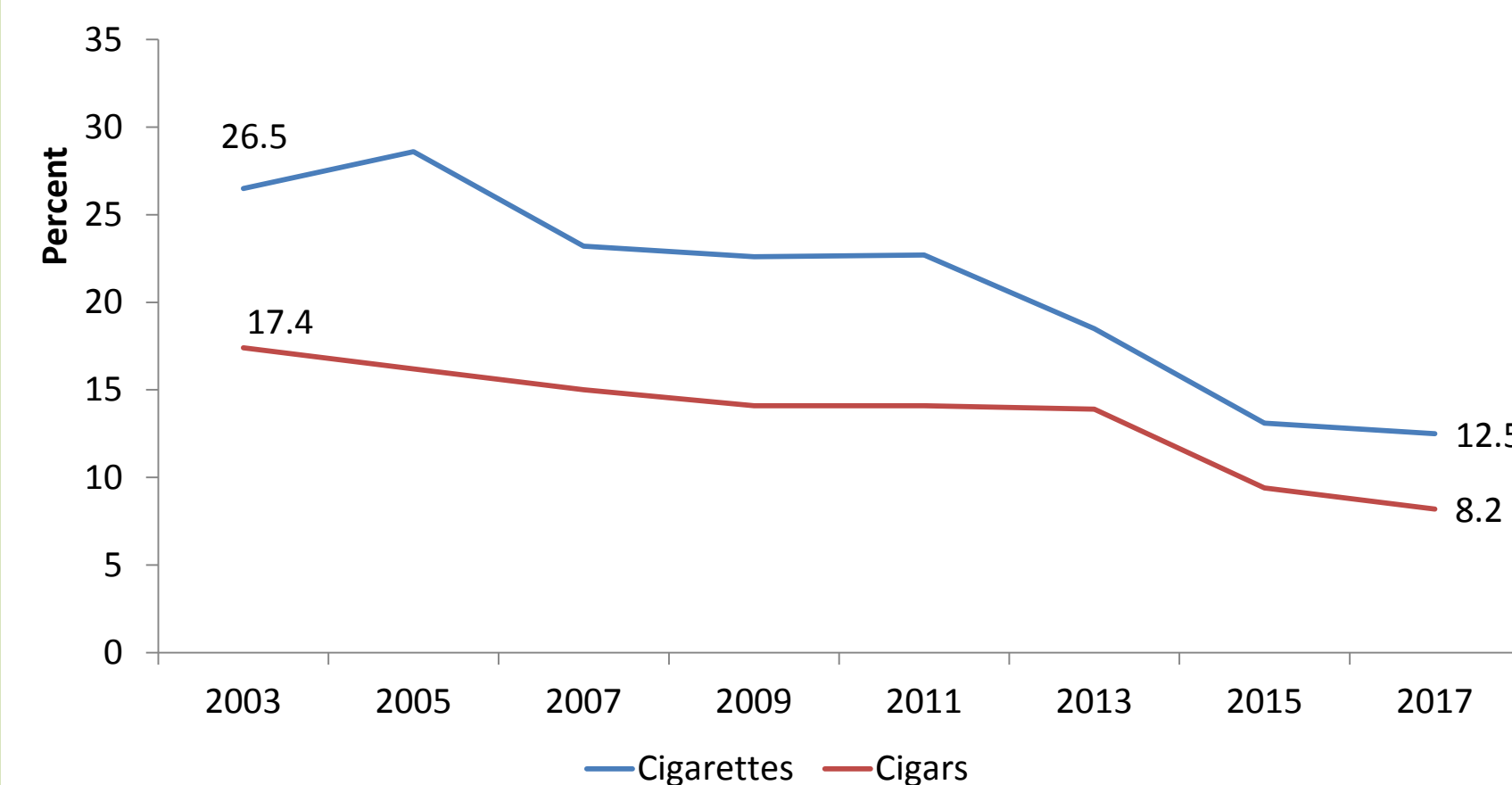
RESULTS

Tobacco Product Use by Type of Product: Oklahoma YRBS 2017



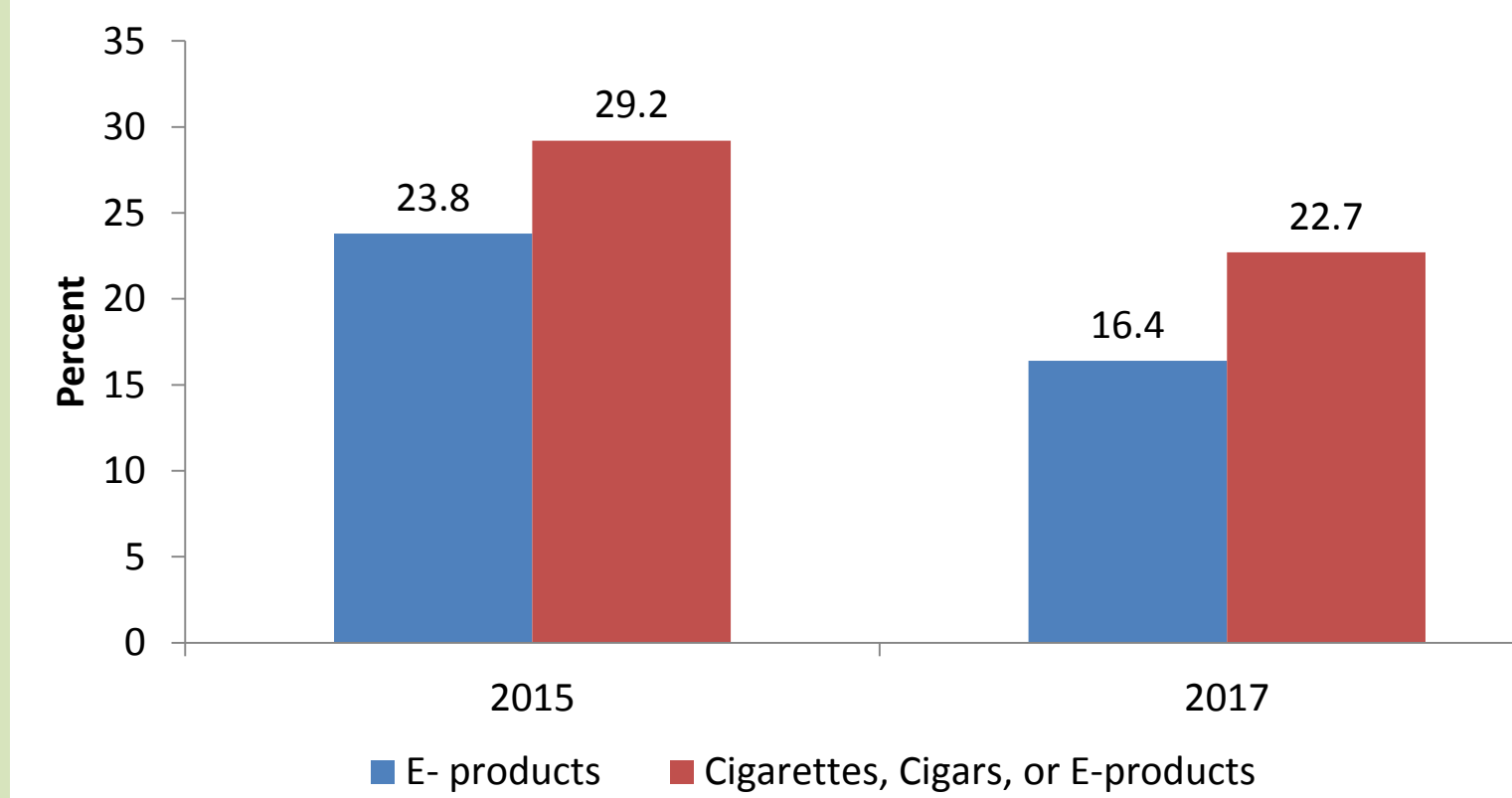
- Current cigarette smoking (past 30 days) decreased significantly from 26.5% in 2003 to 12.5% in 2017.
- Current cigar smoking decreased significantly from 17.4% in 2003 to 8.2% in 2017.
- Current electronic vapor product use decreased significantly from 23.8% in 2015 to 16.4% in 2017.
- The combined use of cigarettes, cigars, or electronic vapor products decreased significantly from 29.2% in 2015 to 22.7% in 2017.

Trends of Cigarette and Cigar Use: Oklahoma YRBS 2003 to 2017



RESULTS

Electronic Vapor Product Use and Combined Use of Electronic Vapor Products, Cigarettes, or Cigars: Oklahoma YRBS 2015 and 2017



- Males were more likely than females to have used electronic vapor products, smokeless tobacco, or cigars.
- Older students were more likely than younger student to have currently smoked cigarettes.
- Differences were observed by Race/Ethnicity for current smokeless tobacco use and current cigar smoking.

Current Tobacco Use by Type of Product and Demographic Characteristics: Oklahoma YRBS 2017

	Any tobacco product		E-products		Cigarettes		Smokeless tobacco		Cigars	
	%	p value	%	p value	%	p value	%	p value	%	p value
Gender										
Female	21.9		13.8		11.9		2.7		5.6	
Male	29.0	0.02	18.9	0.03	13.1	0.54	15.2	<0.05	10.8	<0.05
Age										
15 or younger	22.1		14.6		9.7		7.2		6.7	
16-17	25.3		14.9		12.4		9.6		8.5	
18 or older	34.4	0.18	25.9	0.07	19.4	0.03	11.3	0.31	10.8	0.21
Race/Ethnicity										
White NH	26.9		17.9		13.7		9.9		9.1	
Native American NH	28.7		19.5		12.6		12.9		3.7	
Multiple NH	24.7		16.7		11.0		4.1		7.1	
Hispanic	21.4	0.37	14.4	0.63	10.7	0.66	6.6	0.01	9.9	0.01
Total	25.6		16.4		12.5		9.2		8.2	

NH= Non-Hispanic

Current use is any product use during the 30 days before the survey

RESULTS

- Lifetime cigarette smoking decreased significantly from 64.1% in 2003 to 38.8% in 2017.
- In 2017 Native Americans were more likely than Whites to have ever tried cigarette smoking at 51.3% and 37.1%, respectively, and were also more likely than Whites to have first tried cigarette smoking before 13 years of age at 23.0% and 10.6%, respectively.

LIMITATIONS

The YRBS is a cross-sectional study; therefore, the measured associations reflect one point in time and do not imply a causal relationship. These data were representative of public school students in grades 9 through 12 in Oklahoma.

PUBLIC HEALTH IMPLICATIONS

- Although improvements have been observed for all types of tobacco use and among all demographic groups, tobacco use, specifically inhaled product use, remains high.
- While the prevalence of all tobacco use is decreasing, many youth view electronic vapor products as a safer alternative to traditional smoking.
- Most current adult smokers smoked for the first time as a teen. Delaying first time use can improve the chances of never becoming a smoker.
- Among adolescents who continue to smoke into adulthood, a third will die prematurely from smoking.

