



Prevention Research Center for Healthy Neighborhoods
at Case Western Reserve University

2017 Cuyahoga County Youth Risk Behavior Survey Tobacco Use and Electronic Vapor Use

Introduction

The Prevention Research Center for Healthy Neighborhoods (PRCHN) at Case Western Reserve University has administered the Youth Risk Behavior Survey (YRBS) in school districts throughout Cuyahoga County since 2000. The YRBS is a cross-sectional tool developed by the Centers for Disease Control and Prevention (CDC) to track adolescent risk behavior over time. In spring of 2017, the PRCHN conducted the YRBS among 9th through 12th grade students in Cuyahoga County high schools. A more detailed description of the methodology is available at our website, www.prchn.org/YRBSDataCollectionAnalysis.aspx.

This brief report presents results from the 2017 Cuyahoga County High School Youth Risk Behavior Survey, with a particular focus on Tobacco Use. This includes questions pertaining to tobacco use behavior as well as perceptions of tobacco use. In this brief report, we present:

- [Overall Prevalence](#)
- [Regional Prevalence](#)
- [Demographic Prevalence](#)
- [Trend Report](#)

Data for similar behaviors can be found at our website, www.prchn.org/yrbs_home.aspx.

Tobacco Use and Electronic Vapor Use

Using tobacco can have serious effects on long-term health. The use of cigarettes is the single leading preventable cause of death in the United States.ⁱ Almost 90% of adult smokers initiate use before or at age 18.ⁱⁱ Hookah smoking can lead to cardiovascular disease and cancer. Per a report from the World Health Organization (WHO), one hookah smoking session may be equivalent to smoking 100 cigarettes.ⁱⁱⁱ Tobacco use in adolescence is associated with many other health risk behaviors, including higher-risk sexual behavior and use of alcohol or other drugs.^{iv}

Overall Prevalence

The following table summarizes tobacco use among the 13,907 high school students who completed the 2017 Cuyahoga County YRBS. Prevalence estimates and 95% confidence intervals were computed for all dichotomous variables.

Risk Behavior	% (95% Confidence Interval)
Ever smoked cigarettes (Smoked a cigarette, even 1 or 2 puffs, on at least 1 day during their life.)	20.4 (19.5-21.4)
Current cigarette use (Smoked a cigarette on at least 1 day during the 30 days before the survey.)	6.2 (5.7-6.8)
Smoked more than 10 cigarettes (Per day, on the days smoked; among the students who smoked 30 days before the survey.)	10.3 (7.5-14.0)
Current cigar use (Smoked a cigar, cigarillo, little cigar, or flavored cigar on at least 1 day during the 30 days before the survey.)	13.1 (12.2-14.0)
Smoked more than 10 cigars, cigarillos, little cigars, or flavored cigars per day (On the days smoked; among the students who smoked 30 days before the survey.)	6.5 (5.4-7.9)
Current use of tobacco in a waterpipe (Smoked from a hookah, narghile or water pipe on at least 1 day during the 30 days before the survey.)	7.4 (6.7-8.0)
Tried first tobacco product before age 13 years (Including cigarettes, cigars, little cigars, flavored cigars, shisha or hookah tobacco, and chewing tobacco.)	10.9 (10.1-11.7)
Ever tried to quit using all tobacco products (Among students who smoked during the 12 months before the survey.)	42.8 (40.5-45.1)
Ever used an electronic vapor product	35.5 (34.3-36.8)
Current electronic vapor product use (Used at least 1 day during the 30 days before the survey.)	15.7 (14.8-16.7)

Regional Prevalence

The overall response rate for inner and outer ring east (57% and 52%, respectively) **did not** reach the standard of 60%, which allows for the data to be considered representative of all students, even those that did not complete the survey. Since the overall response rate was close to the standard of 60%, we have included weighted estimates for these regions. A weight was applied to each record to adjust for student non response and the distribution of students by grade, gender, race/ethnicity, and geographic region within Cuyahoga County. The stability of the data should be considered, given the lower than required overall response rate, and results should be interpreted with caution. In addition, the overall response rate for outer ring west was insufficient for analysis.

Risk Behavior	CMSD-East % (95% CI)	CMSD- West % (95% CI)	Inner Ring-East % (95% CI)	Inner Ring-West % (95% CI)	Outer Ring-East % (95% CI)	Outer Ring-West % (95% CI)
Ever smoked cigarettes (Smoked a cigarette, even 1 or 2 puffs, on at least 1 day during their life.)	16.1 (14.6-17.7)	25.2 (23.0-27.6)	14.2 (12.4-16.2)	28.1 (24.9-31.5)	15.6 (12.9-18.7)	n/a
Current cigarette use (Smoked a cigarette on at least 1 day during the 30 days before the survey.)	2.7 (2.0-3.5)	6.7 (5.7-7.9)	2.7 (1.9-3.9)	10.6 (8.6-13.0)	4.4 (3.0-6.4)	n/a
Smoked more than 10 cigarettes (Per day, on the days smoked; among the students who smoked 30 days before the survey.)	7.5 (4.5-12.0)	8.0 (4.7-13.2)	12.0 (7.0-19.9)	5.4 (3.3-8.9)	23.2 (7.9-51.4)	n/a
Current cigar use (Smoked a cigar, cigarillo, little cigar, or flavored cigar on at least 1 day during the 30 days before the survey.)	16.8 (15.3-18.5)	16.7 (14.5-19.1)	15.1 (12.8-17.8)	14.5 (12.0-17.4)	10.3 (8.6-12.3)	n/a
Smoked more than 10 cigars, cigarillos, little cigars, or flavored cigars per day (On the days smoked; among the students who smoked 30 days before the survey.)	6.0 (4.2-8.4)	9.3 (6.4-13.4)	9.4 (6.7-12.9)	4.5 (2.6-7.4)	2.4 (2.0-3.0)	n/a
Current use of tobacco in a waterpipe (Smoked from a hookah, narghile or water pipe on at least 1 day during the 30 days before the survey.)	6.5 (5.4-7.8)	10.5 (8.9-12.4)	7.1 (5.6-9.1)	9.3 (7.7-11.3)	7.2 (5.7-9.0)	n/a

Risk Behavior	CMSD-East % (95% CI)	CMSD- West % (95% CI)	Inner Ring-East % (95% CI)	Inner Ring-West % (95% CI)	Outer Ring-East % (95% CI)	Outer Ring-West % (95% CI)
Tried first tobacco product before age 13 years (Including cigarettes, cigars, little cigars, flavored cigars, shisha or hookah tobacco, and chewing tobacco.)	17.7 (16.1-19.5)	18.4 (16.4-20.7)	13.6 (11.2-16.5)	10.9 (9.4-12.5)	5.2 (4.4-.2)	n/a
Ever tried to quit using all tobacco products (Among students who smoked during the 12 months before the survey.)	45.1 (41.6-48.5)	49.4 (45.8-53.0)	44.3 (38.4-50.4)	45.6 (40.4-50.9)	36.1 (33.2-39.0)	n/a
Ever used an electronic vapor product	25.1 (23.2-27.2)	41.1 (38.5-43.8)	27.8 (25.2-30.5)	40.8 (37.3-44.3)	37.9 (34.1-41.8)	n/a
Current electronic vapor product use (Used at least 1 day during the 30 days before the survey.)	8.0 (6.9-9.1)	16.3 (14.7-18.0)	9.0 (7.4-11.0)	17.7 (15.2-20.5)	19.8 (17.4-22.5)	n/a

Demographic Prevalence

The tables below allow for further comparisons of tobacco use between demographic groups. Data are presented by gender, race/ethnicity, and grade level. A statistically significant difference exists between groups if the 95% confidence intervals do not overlap.

Ever smoked cigarettes			
Category	%	CI	
Gender			
Female	20.5	19.2	- 22.0
Male	20.2	19.0	- 21.5
Race/Ethnicity			
White	23.5	22.1	- 24.9
Black	15.7	14.4	- 17.1
Hispanic	26.2	23.4	- 29.2
Other/Multiple	20.9	16.7	- 26.0
Grade			
9th	12.9	11.8	- 14.2
10th	18.5	16.7	- 20.6
11th	24.2	22.2	- 26.4
12th	27.2	24.8	- 29.7
Total	20.4	19.5	- 21.4

Current cigarette use			
Category	%	CI	
Gender			
Female	5.7	4.9	- 6.5
Male	6.7	5.9	- 7.6
Race/Ethnicity			
White	8.7	7.8	- 9.7
Black	2.8	2.1	- 3.8
Hispanic	7.4	6.1	- 9.1
Other/Multiple	7.6	5.1	- 11.2
Grade			
9th	3.5	2.7	- 4.6
10th	5.8	4.8	- 7.1
11th	7.0	5.6	- 8.6
12th	8.8	7.5	- 10.3
Total	6.2	5.7	- 6.8

Smoked more than 10 cigarettes			
Category	%	CI	
Gender			
Female	5.8	4.4	- 7.7
Male	13.5	8.9	- 20.1
Race/Ethnicity			
White	6.1	4.2	- 8.8
Black	14.7	7.1	- 28.0
Hispanic	16.6	10.1	- 26.2
Other/Multiple	24.2	17.3	- 32.7
Grade			
9th	5.0	2.8	- 9.0
10th	5.3	2.8	- 10.1
11th	18.0	9.9	- 30.4
12th	7.1	4.8	- 10.2
Total	10.3	7.5	- 14.0

Current cigar use			
Category	%	CI	
Gender			
Female	12.3	11.1	- 13.7
Male	13.7	12.6	- 14.9
Race/Ethnicity			
White	10.3	9.3	- 11.4
Black	16.5	15.1	- 18.1
Hispanic	14.7	12.8	- 16.8
Other/Multiple	13.0	10.4	- 16.0
Grade			
9th	9.0	7.8	- 10.3
10th	10.6	9.1	- 12.3
11th	13.9	12.1	- 16.0
12th	20.2	18.2	- 22.4
Total	13.1	12.2	- 14.0

Smoked more than 10 cigars, cigarillos, little cigars, or flavored cigars per day			
Category	%	CI	
Gender			
Female	4.1	2.9	- 6.0
Male	8.2	6.6	- 10.3
Race/Ethnicity			
White	3.8	2.5	- 5.7
Black	7.4	5.6	- 9.6
Hispanic	15.7	10.6	- 22.7
Other/Multiple	17.6	12.4	- 24.4
Grade			
9th	6.9	4.3	- 11.0
10th	3.6	2.5	- 5.1
11th	8.4	5.4	- 12.8
12th	5.4	3.9	- 7.4
Total	6.5	5.4	- 7.9

Current use of tobacco in a waterpipe			
Category	%	CI	
Gender			
Female	6.9	6.1	- 7.9
Male	7.7	6.8	- 8.7
Race/Ethnicity			
White	6.1	5.4	- 6.9
Black	8.0	6.9	- 9.2
Hispanic	12.1	10.2	- 14.3
Other/Multiple	10.6	7.7	- 14.4
Grade			
9th	5.0	4.0	- 6.2
10th	5.8	4.7	- 7.2
11th	8.1	6.8	- 9.7
12th	11.0	9.7	- 12.5
Total	7.4	6.7	- 8.0

Tried first tobacco product before age 13 years		
Category	%	CI
Gender		
Female	9.5	8.6 - 10.5
Male	12.2	11.2 - 13.3
Race/Ethnicity		
White	7.1	6.4 - 7.8
Black	15.1	13.6 - 16.7
Hispanic	18.2	15.6 - 21.2
Other/Multiple	11.4	8.9 - 14.4
Grade		
9th	10.8	9.2 - 12.6
10th	10.7	9.4 - 12.1
11th	10.3	8.9 - 11.9
12th	11.2	9.3 - 13.5
Total	10.9	10.1 - 11.7

Ever tried to quit using all tobacco products		
Category	%	CI
Gender		
Female	45.7	42.6 - 48.9
Male	40.3	37.3 - 43.4
Race/Ethnicity		
White	40.8	37.0 - 44.8
Black	44.5	41.1 - 47.9
Hispanic	48.3	43.5 - 53.2
Other/Multiple	31.3	24.0 - 39.6
Grade		
9th	46.2	42.3 - 50.2
10th	45.6	40.3 - 50.9
11th	39.3	36.0 - 42.7
12th	40.9	36.4 - 45.7
Total	42.8	40.5 - 45.1

Ever used an electronic vapor product		
Category	%	CI
Gender		
Female	35.1	33.5 - 36.7
Male	35.9	34.3 - 37.6
Race/Ethnicity		
White	39.4	37.6 - 41.2
Black	29.1	27.4 - 30.8
Hispanic	47.4	44.0 - 50.8
Other/Multiple	37.8	32.5 - 43.3
Grade		
9th	24.1	22.3 - 26.0
10th	33.7	31.1 - 36.4
11th	40.6	38.3 - 42.8
12th	45.8	43.3 - 48.3
Total	35.5	34.3 - 36.8

Current electronic vapor product use		
Category	%	CI
Gender		
Female	15.0	13.9 - 16.3
Male	16.3	15.1 - 17.6
Race/Ethnicity		
White	19.6	18.0 - 21.3
Black	9.9	8.9 - 10.9
Hispanic	19.4	17.4 - 21.6
Other/Multiple	22.4	18.4 - 27.0
Grade		
9th	10.6	9.5 - 11.9
10th	14.8	13.0 - 16.7
11th	16.6	14.8 - 18.7
12th	21.5	19.5 - 23.6
Total	15.7	14.8 - 16.7

Cuyahoga County Trend Data

The following table presents the prevalence of tobacco use behaviors and attitudes among Cuyahoga County high school students in 2009, 2011, 2013, 2015, and 2017. The prevalence for each year is given (when available), with 95% confidence intervals below.

Cuyahoga County, 2009	Cuyahoga County, 2011	Cuyahoga County, 2013	Cuyahoga County, 2015	Cuyahoga County, 2017
Ever smoked cigarettes (Smoked a cigarette, even 1 or 2 puffs, on at least 1 day during their life.)				
39.4 (37.1-41.7)	30.6 (29.2-32.0)	30.7 (29.2-32.2)	30.2 (28.6-31.8)	20.4 (19.5-21.4)
Current cigarette use (Smoked a cigarette on at least 1 day during the 30 days before the survey.)				
12.5 (10.7-14.3)	11.4 (10.5-12.3)	10.4 (9.4-11.4)	9.8 (8.8-10.8)	6.2 (5.7-6.8)
Smoked more than 10 cigarettes (Per day, on the days smoked; among the students who smoked during the 30 days before the survey.)				
n/a	9.3 (7.5-11.5)	12.2 (9.6-14.9)	n/a	10.3 (7.5-14.0)
*Current cigar use (Smoked a cigar, cigarillo, little cigar, or flavored cigar on at least 1 day during the 30 days before the survey.)				
19.4 (17.2-21.5)	16.9 (15.7-18.3)	15.1 (14.1-16.2)	15.0 (13.7-16.5)	13.1 (12.2-14.0)
*Smoked more than 10 cigars, cigarillos, little cigars, or flavored cigars per day (On the days smoked; among the students who smoked during the 30 days before the survey.)				
n/a	5.2 (3.7-7.2)	5.4 (3.9-6.9)	n/a	6.5 (5.4-7.9)
**Current hookah use (Smoked from a hookah or water pipe on at least one day during the 30 days before the survey.)				
n/a	9.1 (8.3-9.9)	10.6 (9.5-11.8)	13.0 (12.0-14.1)	n/a
**Current use of tobacco in a water pipe (Smoked from a hookah, narghile or water pipe on at least 1 day during the 30 days before the survey.)				
n/a	n/a	n/a	n/a	7.4 (6.7-8.0)
Tried first tobacco product before age 13 years (Including cigarettes, cigars, little cigars, flavored cigars, shisha or hookah tobacco, and chewing tobacco.)				
n/a	n/a	n/a	8.9 (8.2-9.7)	10.9 (10.1-11.7)
Ever used an electronic vapor product				
n/a	n/a	n/a	38.0 (36.2-39.8)	35.5 (34.3-36.8)
Current electronic vapor product use (Used at least 1 day during the 30 days before the survey.)				
n/a	n/a	n/a	18.7 (17.4-20.0)	15.7 (14.8-16.7)

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