



Prevention Research Center for Healthy Neighborhoods
at Case Western Reserve University

2018 Cuyahoga County Youth Risk Behavior Survey: Tobacco 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 Fall of 2018, the PRCHN conducted the YRBS among 7th and 8th grade students in Cuyahoga County middle schools. A more detailed description of the methodology is available at our website, http://prchn.org/yrbs_home.aspx.

This brief report presents results from the 2018 Cuyahoga County Middle 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, http://prchn.org/yrbs_home.aspx.

Tobacco Use

These questions measure lifetime and current tobacco-use patterns. Cigarette smoking is the leading cause of preventable death in the United Statesⁱ and accounts for approximately 440,000 deaths each year.^{i, ii} Each day across the United States more than 3,800 youth under 18 years of age start smoking and more than 80% of adult smokers begin before the age of 18.ⁱⁱⁱ Cigarette smoking increases risk of heart disease; chronic obstructive pulmonary disease; acute respiratory illness; stroke; and cancer.^{i, iii} In addition, as compared to nonsmokers, cigarette smokers are more likely to drink alcohol, use marijuana and cocaine, engage in risky sexual behaviors, engage in physical fighting, carry a weapon, and attempt suicide.^{iii, iv}

In 2018, 1 in 14 (7.2%) middle school students were currently using a tobacco product (using at least once in the 30 days prior to taking the National Youth Tobacco Survey (NYTS)), a significant increase from the 2017 reported ratio of 1 in 18 (5.6%).^v Like cigarettes, cigar smoking can cause lung cancer, coronary heart disease, and chronic obstructive pulmonary disease.^{vi} Of the 7.2% of middle school students reporting current use of any tobacco product in 2018, 1.6% used cigars - a significant decrease from 3.5% in 2011.^v According to the NYTS, e-cigarettes remained the most commonly used tobacco product among middle school students since 2014, rising from 2011 to 2018 from 0.6% to 4.9%.^v Current use of e-cigarettes (used within 30 days prior to taking the NYTS) by middle school students significantly increased by 48.5% between 2017 and 2018.^v

Overall Prevalence

The following table summarizes tobacco use among the 12,936 middle school students who completed the 2018 Cuyahoga County YRBS. Prevalence estimates and 95% confidence intervals were computed for all 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.)	8.4 (7.8 - 9.0)
Current cigarette use (Smoked a cigarette on at least 1 day during the 30 days before the survey.)	2.5 (2.2 - 2.9)
Current cigar use (Smoked a cigar, cigarillo, or little cigar on at least 1 day during the 30 days before the survey.)	(5.1) (4.7 - 5.6)
Current use of tobacco in a waterpipe (Smoked from a hookah or water pipe on at least 1 day during the 30 days before the survey.)	2.4 (2.1 - 2.8)
Tried first tobacco product before age 11 years (Including cigarettes, cigars, little cigars, flavored cigars, hookah, and chewing tobacco.)	4.5 (4.0 - 4.9)
Current electronic vapor product use (Used at least 1 day during the 30 days before the survey.)	10.1 (9.3 - 10.9)

Regional Prevalence

The table below represents tobacco use in the six regions of Cuyahoga County. This division was conducted to provide a geographic representation of the prevalence of different risk behaviors in Cuyahoga County. In 2014, we were able to weight to 4 of 6 regions in Cuyahoga County. The columns under Outer Ring—West and Outer Ring—East do not include data because school participation within these regions was insufficient to permit weighting.

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 one or two puffs, on at least 1 day during their life.)	11.0 (9.2 - 13.1)	14.2 (12.0 - 16.6)	10.6 (9.4 - 11.8)	10.7 (9.2 - 12.4)	N/A	N/A
Current cigarette use (Smoked a cigarette on at least 1 day during the 30 days before the survey.)	1.9 (1.3 - 2.7)	4.4 (3.3 - 5.9)	2.5 (2.0 - 3.1)	4.5 (3.7 - 5.4)	N/A	N/A
Current cigar use (Smoked a cigar, cigarillo, or little cigar on at least 1 day during the 30 days before the survey.)	10.9 (9.3 - 12.7)	8.7 (7.2 - 10.4)	6.5 (5.6 - 7.5)	5.5 (4.5 - 6.7)	N/A	N/A
Current use of tobacco in a waterpipe (Smoked from a hookah or water pipe on at least 1 day during the 30 days before the survey.)	3.7 (2.7 - 5.0)	4.1 (3.3 - 5.2)	2.6 (2.0 - 3.3)	3.1 (2.3 - 4.2)	N/A	N/A
Tried first tobacco product before age 11 years (Including cigarettes, cigars, little cigars, flavored cigars, hookah, and chewing tobacco.)	7.5 (6.1 - 9.2)	7.6 (6.0 - 9.5)	6.5 (5.6 - 7.6)	4.7 (3.8 - 5.8)	N/A	N/A
Current electronic vapor product use (Used at least 1 day during the 30 days before the survey.)	6.9 (5.6 - 8.5)	12.9 (10.9 - 15.1)	7.4 (6.3 - 8.5)	16.8 (14.7 - 19.1)	N/A	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	8.8	7.9	- 9.7
Male	7.9	7.1	- 8.8
Race/Ethnicity			
White	6.5	5.7	- 7.3
Black	10.0	9.0	- 11.1
Hispanic	15.4	12.7	- 18.6
Other/Multiple	11.8	9.4	- 14.8
Grade			
7th	6.7	5.9	- 7.7
8th	9.5	8.4	- 10.6
Total	8.4	7.8	- 9.0

Current cigarette use			
Category	%	CI	
Gender			
Female	2.4	2.0	- 2.9
Male	2.5	2.0	- 3.0
Race/Ethnicity			
White	2.2	1.8	- 2.7
Black	2.0	1.6	- 2.4
Hispanic	7.3	5.0	- 10.7
Other/Multiple	4.4	2.9	- 6.6
Grade			
7th	2.0	1.6	- 2.4
8th	2.5	2.0	- 3.1
Total	2.5	2.2	- 2.9

Current cigar use		
Category	%	CI
Gender		
Female	5.4	4.8 - 6.1
Male	4.7	4.1 - 5.4
Race/Ethnicity		
White	2.8	2.3 - 3.3
Black	7.7	6.9 - 8.6
Hispanic	11.5	8.8 - 14.8
Other/Multiple	8.2	6.2 - 10.7
Grade		
7th	3.8	3.3 - 4.5
8th	5.8	5.0 - 6.6
Total	5.1	4.7 - 5.6

Current hookah use		
Category	%	CI
Gender		
Female	2.5	2.1 - 3.1
Male	2.2	1.8 - 2.6
Race/Ethnicity		
White	1.2	0.9 - 1.5
Black	2.8	2.3 - 3.4
Hispanic	9.4	7.0 - 12.7
Other/Multiple	5.9	4.1 - 8.3
Grade		
7th	1.7	1.3 - 2.1
8th	2.6	2.1 - 3.1
Total	2.4	2.1 - 2.8

Used first tobacco product before age 11 years		
Category	%	CI
Gender		
Female	3.7	3.2 - 4.3
Male	5.0	4.4 - 5.8
Race/Ethnicity		
White	2.6	2.1 - 3.2
Black	6.4	5.7 - 7.3
Hispanic	9.7	7.2 - 13.0
Other/Multiple	6.9	5.2 - 9.1
Grade		
7th	3.9	3.3 - 4.6
8th	4.5	3.8 - 5.2
Total	4.5	4.0 - 4.9

Current electronic vapor product use		
Category	%	CI
Gender		
Female	9.5	8.6 - 10.5
Male	10.4	9.3 - 11.7
Race/Ethnicity		
White	10.9	9.7 - 12.2
Black	7.1	6.2 - 8.1
Hispanic	18.8	15.9 - 22.0
Other/Multiple	12.6	10.3 - 15.3
Grade		
7th	6.8	5.9 - 7.7
8th	12.8	11.7 - 14.0
Total	10.1	9.3 - 10.9

Cuyahoga County Trend Data

The following table presents the prevalence of tobacco use behaviors and attitudes among Cuyahoga County middle school students in 2010, 2012, 2014, 2016, and 2018. The prevalence for each year is given (when available), with 95% confidence intervals below.¹

Cuyahoga County, 2010	Cuyahoga County, 2012	Cuyahoga County, 2014	Cuyahoga County, 2016	Cuyahoga County, 2018
Ever smoked cigarettes (Smoked a cigarette, even one or two puffs, on at least 1 day during their life.)				
11.9% (10.8 - 13.0)	8.8% (8.1 - 9.5)	11.9% (11.2 - 12.6)	7.8% (7.4 - 8.2)	8.4% (7.8 - 9.0)
*Smoked a whole cigarette before age 11 years				
3.4% (2.8 - 3.9)	2.5% (2.2 - 2.9)	N/A	N/A	N/A
*Used first tobacco product before age 11 years				
N/A	N/A	4.6% (4.2 - 5.0)	3.7% (3.4 - 4.0)	4.5% (4.0 - 4.9)
Current cigarette use (Smoked a cigarette on at least 1 day during the 30 days before the survey.)				
4.2% (3.7 - 4.7)	3.7% (3.3 - 4.0)	3.3% (3.0 - 3.6)	2.1% (1.9 - 2.3)	2.5% (2.2 - 2.9)
Current cigar use (Smoked a cigar, cigarillo, little cigar, or flavored cigar on at least 1 day during the 30 days before the survey.)				
9.0% (8.2 - 9.9)	6.7% (6.1 - 7.3)	4.8% (4.4 - 5.2)	4.5% (4.2 - 4.9)	5.1% (4.7 - 5.6)
Current hookah use (Smoked hookah at least 1 day during the 30 days before the survey.)				
N/A	N/A	4.3% (3.9 - 4.8)	2.9% (2.7 - 3.1)	2.4% (2.1 - 2.8)
Current electronic vapor product use (Used at least 1 day during the 30 days before the survey.)				
N/A	N/A	N/A	5.4% (5.1 - 5.6)	10.1% (9.3 - 10.9)
Students believe it is very wrong for someone their age to smoke cigarettes				
68.9% (67.2 - 70.6)	72.5% (71.4 - 73.6)	N/A	N/A	N/A

¹ The YRBS questions with two or more data points over 2010-2018 are included. The new 2018 questions are not included for the purpose of demonstrating trends. For those questions not asked in 2018, refer to the PRCHN archives at www.prchn.org.aspx for more detailed information.

Cuyahoga County, 2010	Cuyahoga County, 2012	Cuyahoga County, 2014	Cuyahoga County, 2016	Cuyahoga County, 2018
Students perceive that their parents believe it is very wrong for them to smoke cigarettes				
87.9% (86.9-89.0)	89.0% (88.3-89.8)	N/A	N/A	N/A

*Smoked a whole cigarette before age 11 years was revised in 2016 to include all tobacco products. Both items are included in this table.

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