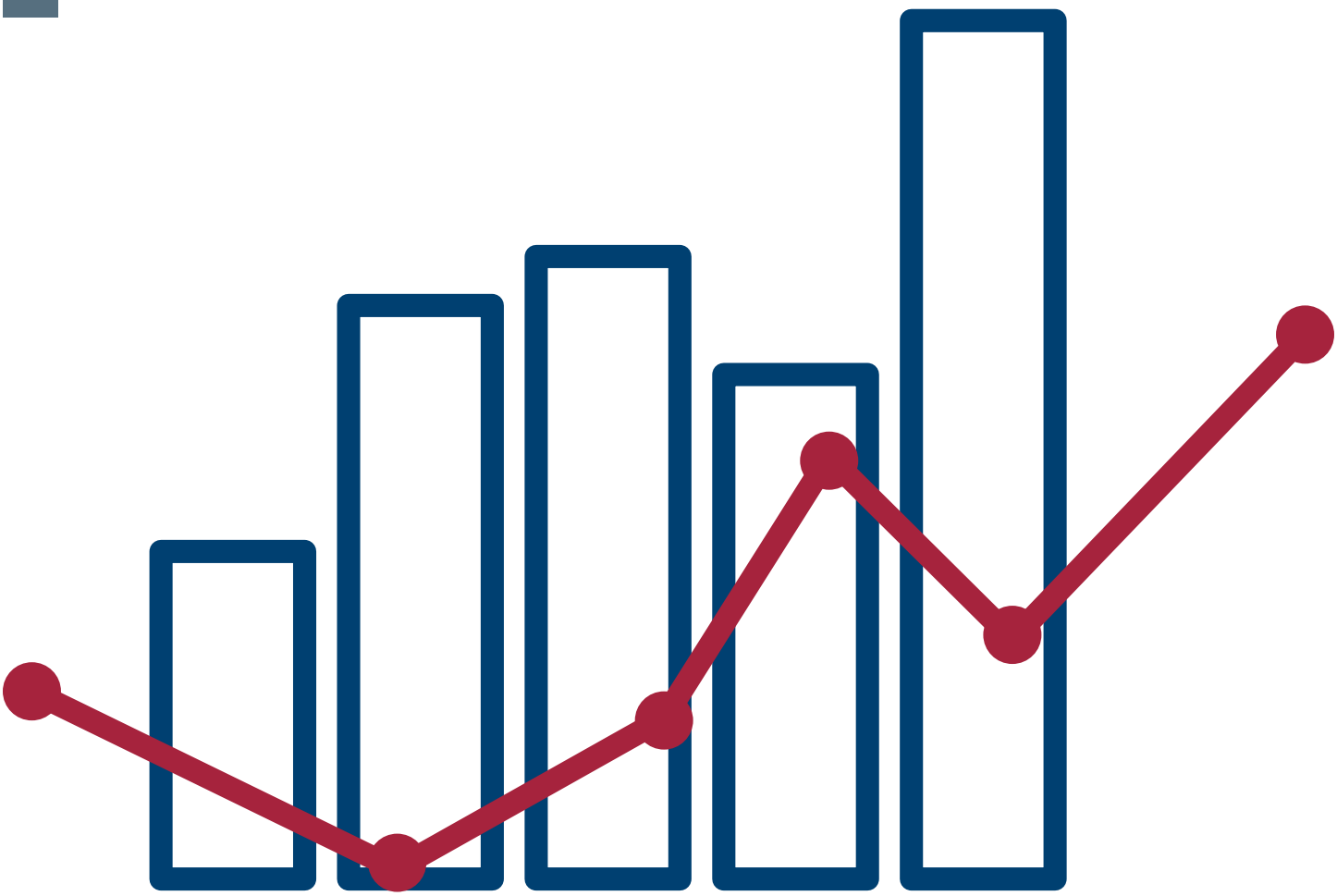
WEST VIRGINIA YOUTH RISK BEHAVIOR SURVEY, 2015:

Disease Prevention



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West Virginia Youth Risk Behavior Survey, 2015: Disease Prevention Report

Birgit A. Shanholtzer, M.A.

West Virginia Department of EDUCATION

West Virginia Department of Education

Division of Technology
Office of Research, Accountability, and Data Governance
Building 6, Suite 825, State Capitol Complex
1900 Kanawha Boulevard East
Charleston, WV 25305
http://wvde.state.wv.us/research

March 2017

Steven L. Paine, Ed.D.
State Superintendent of Schools

Warren Patterson
Chief Information Officer

Andy Whisman, Ph.D.
Executive Director
Office of Research, Accountability, and Data Governance

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Content Contact
Birgit A. Shanholtzer, M.A.
Coordinator, Research and Evaluation
Office of Research, Accountability, and Data Governance
birgit.shanholtzer@k12.wv.us

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Introduction

The Youth Risk Behavior Surveillance System was developed by the Centers for Disease Control and Prevention (CDC) in collaboration with state and local departments of education and health, national education and health organizations, and other federal agencies. The Youth Risk Behavior Survey (YRBS), the state and local level component of this system, assesses how certain youth risk behaviors change over time. The YRBS focuses on priority health risk behaviors established during youth that may affect academic performance and result in significant mortality and morbidity rates during both youth and adulthood. It assesses behaviors in six categories: (a) injury and violence, (b) tobacco use, (c) alcohol and other drug use, (d) sexual behaviors, (e) dietary behaviors, and (f) physical activity.

With funding from CDC and with the assistance of the RESA Regional School Wellness Specialists, the YRBS has been conducted by the West Virginia Department of Education (WVDE) since 1993 for high schools and since 1999 for middle schools.

The following series of YRBS topical reports, available at http://wvde.state.wv.us/research/reports2017.html, give a detailed snapshot of particular student risk behaviors across programmatic levels from high school back to early middle school ages:

- West Virginia Youth Risk Behavior Survey, 2015: Alcohol Use
- West Virginia Youth Risk Behavior Survey, 2015: Bullying and Suicidal Ideation
- West Virginia Youth Risk Behavior Survey, 2015: Dietary Behavior
- West Virginia Youth Risk Behavior Survey, 2015: Disease Prevention
- West Virginia Youth Risk Behavior Survey, 2015: Drug Use
- West Virginia Youth Risk Behavior Survey, 2015: Injury Risk
- West Virginia Youth Risk Behavior Survey, 2015: Physical Activity
- West Virginia Youth Risk Behavior Survey, 2015: Sexual Behavior
- West Virginia Youth Risk Behavior Survey, 2015: Tobacco Use
- West Virginia Youth Risk Behavior Survey, 2015: Violence
- West Virginia Youth Risk Behavior Survey, 2015: Weight Management

Methods

See the Appendix, page 8 for details about sampling procedures, sample characteristics, questionnaires, weighting of the raw data, data analysis, and interpretation of the results.

Results

The results include time trend graphs to show how youth behaviors have changed over time through 2015. Results include prevalence by demographic characteristics such as gender and grade level. High school results are presented first, followed by middle school data where applicable. Results are not available for high school students for 2001 and middle school students for 2003 and 2005.

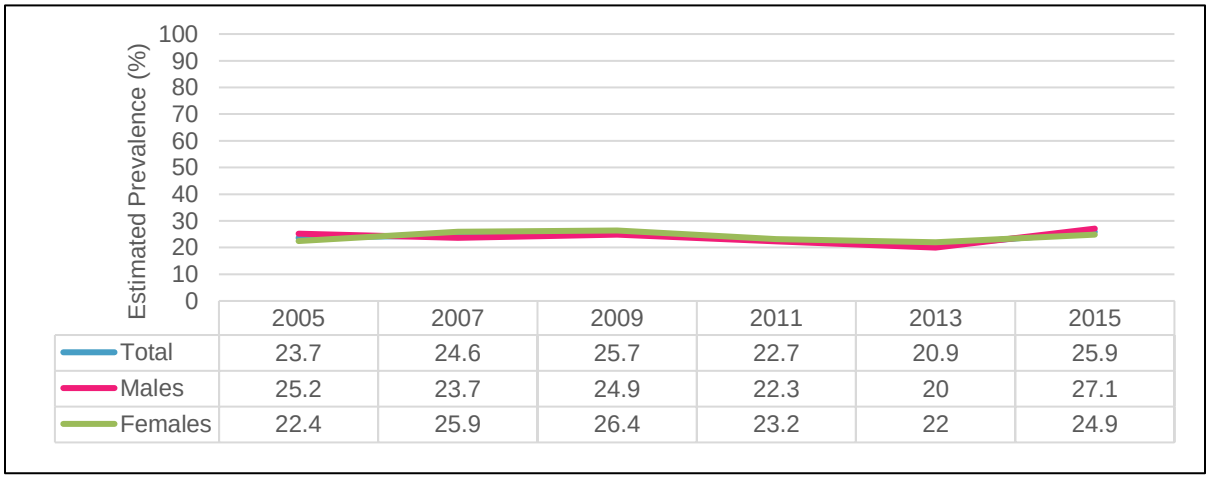
Have Asthma

Definition: Weighted percentage of students who had ever been told by a doctor or nurse that they had asthma.

High school students

The prevalence of asthma among high school students was 25.9% in 2015. West Virginia ranked third highest in the nation for high school students with asthma (Kann et al., 2016).

Figure 1 displays the prevalence of asthma for the years 2005-2015. The results indicate the asthma prevalence significantly increased between 2013 and 2015 for the total population and among males. The asthma prevalence among females has remained stable over the past 10 years.



	2005	2007	2009	2011	2013	2015
Total	23.7	24.6	25.7	22.7	20.9	25.9
Males	25.2	23.7	24.9	22.3	20	27.1
Females	22.4	25.9	26.4	23.2	22	24.9

Figure 1. Prevalence of Asthma Among WV High School Students
Data source: West Virginia Department of Education, Youth Risk Behavior Survey

Table 1 displays the prevalence of asthma among high school students by demographic characteristics for 2015. The results show no significant gender or grade differences for this indicator.

Table 1. Prevalence of Asthma Among West Virginia High School Students by Gender and Grade Level, 2015

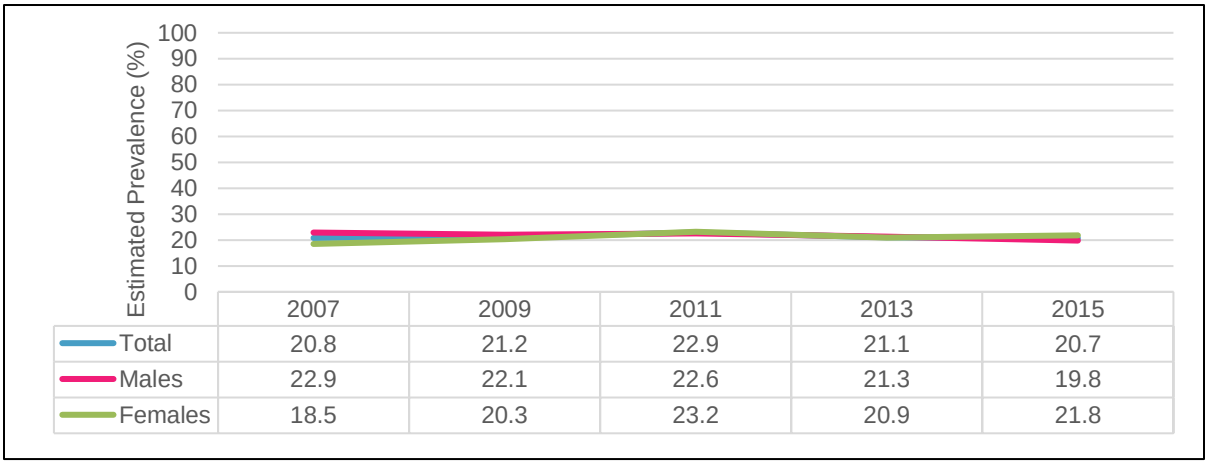
Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	25.9	23.0-28.9	19,829
Male	27.1	22.9-31.2	10,538
Female	24.9	21.7-28.0	9,279
9th	25.1	19.1-31.1	5,277
10th	23.7	16.7-30.7	4,603
11th	25.0	20.1-29.9	4,502
12th	30.7	16.7-30.7	5,412

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

Middle school students

The prevalence of asthma among middle school students was 20.7% in 2015.

Figure 2 shows no significant change in the prevalence of asthma among middle school students between 2007 and 2015.



	2007	2009	2011	2013	2015
Total	20.8	21.2	22.9	21.1	20.7
Males	22.9	22.1	22.6	21.3	19.8
Females	18.5	20.3	23.2	20.9	21.8

Figure 2. Prevalence of Asthma Among WV Middle School Students
Data source: West Virginia Department of Education, Youth Risk Behavior Survey

Table 2 displays the prevalence of asthma among middle school students by demographic characteristics. The results indicate there were no significant gender or grade differences for this indicator.

Table 2. Prevalence of Asthma Among West Virginia Middle School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	20.7	18.0-23.4	11,975
Male	19.8	16.3-23.3	5,920
Female	21.8	18.0-25.7	6,055
6th	16.3	11.5-21.0	2,950
7th	21.1	17.5-24.7	4,179
8th	24.0	17.5-24.7	4,681

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

Ever Tested for HIV

Definition: Weighted percentage of students who were ever tested for HIV (not including tests done when donating blood).

High school students

The prevalence of ever tested for HIV among high school students was 13.1% in 2015.

No time trend results are available for this indicator as it was first assessed in 2015.

Table 3 displays the prevalence of ever tested for HIV among high school students by demographic characteristics for 2015. The results indicate no significant gender or grade differences for this indicator.

Table 3. Prevalence of Ever Tested for HIV Among West Virginia High School Students by Gender and Grade Level, 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	13.1	10.8-15.5	9,964
Male	12.9	10.0-15.9	4,924
Female	13.4	9.8-17.0	5,023
9th	11.9	8.3-15.5	2,491
10th	10.8	7.3-14.4	2,064
11th	11.8	7.9-15.7	2,131
12th	17.9	12.7-23.1	3,132

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

Had a Dental Visit in the Past Year

Definition: Weighted percentage of students who had a dental visit (check-up, cleaning, exam, or other dental work) during the 12 months before the survey.

High school students

The prevalence of had a dental visit in the past year among high school students was 73.3% in 2015.

No time trend results are available for this indicator as it was first assessed in 2015.

Table 4 displays the prevalence of had a dental visit in the past year among high school students by demographic characteristics. The results indicate no significant gender or grade differences for this indicator.

Table 4. Prevalence of Had a Dental Visit in the Past Year Among West Virginia High School Students by Gender and Grade Level , 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	73.3	69.4-77.2	56,818
Male	72.3	67.8-76.8	28,534
Female	74.3	69.8-78.8	28,148
9th	73.8	68.9-78.6	15,799
10th	68.9	60.1-77.7	13,616
11th	75.6	70.7-80.6	13,826
12th	75.7	70.3-81.0	13,364

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

Eight or More Hours of Sleep

Definition: Weighted percentage of students who had 8 or more hours of sleep during an average school night.

High school students

The prevalence of 8 or more hours of sleep among high school students was 17.5% in 2015. West Virginia ranked the lowest in the nation for the prevalence of 8 or more hours of sleep among high school students in 2015 (Kann et al., 2016).

No time trend results are available for this indicator as it was first assessed in 2015.

Table 5 displays the prevalence of 8 or more hours of sleep among high school students by demographic characteristics for 2015. There was no significant gender difference for this indicator. The prevalence was significantly higher among 9th-grade students than among 12th-grade students.

Table 5. Prevalence of 8 or More Hours of Sleep Among West Virginia High School Students by Gender and Grade Level , 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	17.5	14.5-20.5	13,509
Male	18.9	15.5-22.2	7,373
Female	16.2	12.5-19.9	6,119
9th	22.7	18.0-27.5	4,818
10th	20.4	14.3-26.5	3,995
11th	15.1	11.8-18.3	2,747
12th	11.0	6.1-15.9	1,948

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

Middle school students

The prevalence of 8 or more hours of sleep among middle school students was 47.1% in 2015.

No time trend results are available for this indicator as it was first assessed in 2015.

Table 6 displays the prevalence of 8 or more hours of sleep among middle school students by demographic characteristics for 2015. The prevalence was significantly higher among males than among females. The results also indicate the prevalence was significantly higher among 6th- and 7th-grade students than among 8th-grade students.

Table 6. Prevalence of 8 or More Hours of Sleep Among West Virginia Middle School Students by Gender and Grade Level , 2015

Characteristic	Estimated prevalence (%)	95% confidence interval	Weighted frequency
Total	47.1	43.3-50.9	27,199
Male	52.3	47.8-56.8	15,485
Female	41.8	36.8-46.9	11,664
6th	55.0	50.3-59.7	10,023
7th	50.6	46.5-54.7	9,938
8th	36.4	30.4-42.3	7,091

Data source: West Virginia Department of Education, Youth Risk Behavior Survey, 2015

Discussion

The research base indicates that many risky behaviors in adolescence are interrelated. Banspach et al (2016) recommend a variety of family-based approaches, school-based approaches, and health services to help prepare adolescents for lifelong health and wellness.

Collaborations among community organizations, local social networks, school health centers, public health departments, and effective school programs can play a large role in prevention of many of these high-risk behaviors among adolescents. Promoting healthy behaviors during adolescence can lead to healthy lifestyle and behavioral choices in adulthood thereby preventing major chronic diseases and leading to less disability and greater health-related quality of life in adulthood and through the aging continuum.

Appendix: Survey Methods

The West Virginia Youth Risk Behavior Survey (YRBS) was most recently administered in public middle schools and high schools during the spring of 2015. The following sections describe the methodology of the YRBS.

Sampling Procedures

Because it is not feasible to administer the YRBS questionnaire to all students in the state, a sample of students complete the questionnaires. The West Virginia Department of Education (WVDE) and The Centers for Disease Control and Prevention (CDC) employ a two-stage, cluster sample design. All public high schools and middle schools in the state were included in the sampling frame, which includes enrollment by grade for each school. During the 2015 YRBS administration, a total of 35 randomly selected public high schools and 49 middle schools from around the state participated in the survey. In sampled schools, the survey was administered in a random selection of second period classes.

Sample Characteristics, 2015

A total of 1,622 students enrolled in Grades 9–12, participated in the survey, representing a school response rate of 100% and a student response rate of 77%. A total of 1,854 students enrolled in Grades 6–8, participated in the survey, representing a school response rate of 100% and a student response rate of 75%.

Data Collection

Survey procedures protected the privacy of students by allowing for anonymous and voluntary participation. Passive parental permission was obtained before surveys were administered to students. Data collection was conducted by regional education service agency (RESA) school wellness specialists with coordination by the YRBS coordinator with the WVDE Office of Research, Accountability, and Data Governance. Completed response forms were sent to CDC for processing and weighting.

Questionnaires

Standard questionnaires for middle school students and high school students are provided by CDC. The WVDE modifies the questionnaires by adding or deleting questions based on the needs of WVDE offices and external stakeholders such as the WV Bureau for Public Health. The standard questionnaires are changed by CDC for each administration. The standard high school questionnaire provided by CDC included 89 questions. The 2015 West Virginia version of the high school questionnaire was a 92-item self-administered questionnaire that included all of the topics mentioned in the Introduction as well as three state added questions about dieting practices. The standard middle school questionnaire included 49 questions covering the standard topics listed previously. The West Virginia version of the 2015 middle school questionnaire was 48 questions in length and excluded questions regarding sexual behavior and included three state-added questions about dieting practices.

Weighting of Raw Data

The student responses were scientifically weighted, which allows the results to be generalized to all public middle school and high school students in West Virginia. West Virginia YRBS data have been weighted for high school students each year the survey has been conducted, except 2001, while the middle school data was weighted for all years conducted except 2003 and 2005. The raw data collected are weighted to West Virginia's public school student population based on grade, sex, and race/ethnicity.

Data Analysis

Once the raw data are processed by CDC, WVDE receives the weighted middle school and high school datasets. CDC also provides time trend analyses and standard tables detailing student behavior by demographic characteristics including sex, age, grade, and race/ethnicity. The WVDE YRBS coordinator then performs analyses of the datasets to produce weighted prevalence estimates and weighted frequencies. In general terms, the prevalence is the proportion or percentage of the population that has a specific characteristic or displays a specific behavior during a given time frame. Because the YRBS data are collected from a sample of students, and not all students, and are weighted in order to apply to the population of all students, a prevalence estimate is generated. The prevalence estimate is the weighted percentage of students who engaged in the behavior during a specific period of time. A weighted frequency is calculated based on the prevalence estimate, and estimates the number of students who engage in a specific behavior during a given time period. Additionally, analyses of comorbid behaviors (i.e. behaviors that occur simultaneously) are conducted.

Interpretation of Results

Once the weighted data are analyzed, the results must be interpreted in a scientifically acceptable manner. For comparison of prevalence estimates by demographic characteristics such as gender, age, grade, and race/ethnicity, a conservative statistical procedure is used that involves comparison of 95% confidence intervals. The 95% confidence interval is a range of prevalence estimates within which it is expected that the actual prevalence falls. If the 95% confidence intervals of two prevalence estimates overlap, the estimates are considered to be statistically equivalent or the same. If the 95% confidence intervals of two prevalence estimates do not overlap, the estimates are considered to be significantly different from a statistical perspective. When examining changes in prevalence estimates over time, logistic regression analysis is conducted in order to determine if the changes are statistically significant.

References

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Steven L. Paine, Ed.D.
State Superintendent of Schools