



2018 Healthy Youth Survey Interpretive Guide

*Making the Most of Your Survey Data:
A Guide for Exploring and Interpreting the Results of the
Washington State Healthy Youth Survey (2018)*

Sponsoring Washington State Agencies:
Health Care Authority
Department of Health
Office of Superintendent of Public Instruction
Liquor and Cannabis Board

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Report Contents

- Introduction 2
 - Participation in the Survey 2
 - About the Interpretive Guide 3
- Statistical Issues 4
 - Validity and Reliability 4
 - How Can the Data be Used? 6
 - What are Confidence Intervals? 6
 - Why Conduct Significance Tests? 7
 - Summary 9
- Local Report Overview 10
 - Types of Local Reports 10
 - Survey Versions 11
 - Number of Respondents 12
 - Highlights of the Local Results 13
 - Selected Results by Gender 13
 - Item Results 14
 - Risk and Protective Factors 15
- Using Your Data 16
 - Implement a Review Team 16
 - Look at the Survey Results as a Whole 17
 - Become Familiar with the Survey Questions 17
 - Find Questions of Interest 17
 - Communicate the Results 17
- References 19

Introduction

The Washington State Healthy Youth Survey (HYS) is an effort to measure health risk behaviors that contribute to morbidity, mortality, and social problems among youth in Washington State. The survey includes questions on alcohol, marijuana, tobacco, and other drug use; behaviors that result in unintentional and intentional injuries (e.g., violence); dietary behaviors and physical activity; mental health; school climate; and related risk and protective factors.

Washington State conducted student surveys in 1988, 1990, 1992, 1995, 1998, 1999, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016, and 2018 to better understand the nature and extent of adolescent health behaviors in Washington. The current survey, known as the Healthy Youth Survey (2018), was sponsored by the Department of Health (DOH); the Office of Superintendent of Public Instruction (OSPI); the Health Care Authority - Division of Behavioral Health and Recovery (DBHR); and the Liquor Control Board (LCB). Representatives from each of these agencies worked together to develop, plan, and implement the survey. The survey was administered under contract with Looking Glass Analytics, Inc.

The results of the Healthy Youth Survey (2018) meet a wide variety of state and local needs for:

- Empirical needs assessment data necessary for planning prevention and early intervention programs.
- Information on trends in student substance use and abuse as well as associated risk and protective factors.
- Information on the progress of drug education programs funded under the federal Safe and Drug-Free Schools and Communities Act and the state Omnibus Alcohol and Controlled Substances Act.
- Information on the progress of the state's attainment of the national public health objectives contained in Healthy People 2020 and the progress of state-funded programs.
- Data on risk and protective factors that can be used by state agency staff and local school and community members as they plan or refine school- and community-based prevention and intervention programs.

Participation in the Survey

All schools in Washington State with students in Grades 6, 8, 10, or 12 were invited to participate in the survey. Individual student participation was anonymous and voluntary; participating schools provided

alternative activities for students who chose not to participate. The statewide results presented in the local reports are based on a sample chosen to be representative of students statewide. A detailed description of the sampling plan and other sampling issues appears in the Healthy Youth Survey (2018) Analytic Report.

About the Interpretive Guide

Each school, district, county, and educational service district (ESD) with sufficient student participation in the Healthy Youth Survey (2018) had the option to receive survey results. These results, which are highly specific to the local area, can be of enormous value in planning, implementing, and evaluating programs to address adolescent behavior. In order to assist data users, an Interpretive Guide has been distributed with the local data. This guide provides information that will help those involved in local program planning make the most of their survey results. Readers are encouraged to keep their survey results close by as they read this guide and to refer often to these results. As you review them, think about how the results can help inform decisions regarding local program planning, implementation, and evaluation.

Statistical Issues

Validity and Reliability

A survey item is *valid* if it accurately measures the concept it is intended to measure. A survey item is *reliable* if it consistently produces the same results under the same circumstances. We attempted to maximize the validity and reliability of the Healthy Youth Survey (2018) by using questions from established surveys, ensuring standardized administration procedures, and discarding answer sheets containing unlikely or impossible results.

Nearly all the questions included in the 2002, 2004, 2008, 2010, 2012, 2014, 2016, and 2018 editions of the Healthy Youth Survey originated from 4 established surveys that have been used throughout the United States, some for more than 25 years:

- Monitoring the Future survey sponsored by National Institute on Drug Abuse (2018)
- The University of Washington Social Development Research Group's Risk and Protective Factor Assessment instrument (Arthur, Hawkins, Catalano, & Pollard, 1998)
- The U.S. Centers for Disease Control and Prevention's Youth Risk Behavior Survey (2017)
- The U.S. Centers for Disease Control and Prevention's Youth Tobacco Survey (2017)

Each of these surveys has been subjected to scientific research regarding reliability and validity and has been field tested extensively. Field testing addressed such issues as the content and structure of questions, the ordering of questions, the types and ordering of response options, and the survey length. In addition, a pilot version of Washington's Healthy Youth Survey was field tested during fall 2001; information from this effort was used to refine and improve the survey. Most of the items on the 2018 edition appeared on previous versions of the statewide survey, although some were added or modified for the current survey administration. New survey questions were tested with youth focus groups.

The validity of self-report student surveys often comes under question, especially when reported rates of behavior seem higher than might be expected. According to the Centers for Disease Control and Prevention, "Research indicates that data of this nature may be gathered as credibly from adolescents as from adults." Internal reliability checks help identify the small percentage of students who falsify their answers. To obtain truthful answers, students must perceive the survey as important and know procedures have been developed to protect their privacy and allow for anonymous participation" (Centers for Disease Control and Prevention, 2017).

How do I know my school's data are valid?

The HYS questions come from standardized instruments that have been used over multiple years and tested for validity. New HYS questions are field tested with youth to make sure they understand the questions correctly. Research shows that surveys like the HYS can give valid results if youth are given a safe and confidential environment to take the survey. To determine if your school results are valid, you need to think about how the survey was administered and who took the survey at your school. The three important things to consider are:

- Were the administration procedures followed so that your students felt safe that their answers were confidential?
- Was the survey administered during a time when certain groups of students were missing? (i.e., were honor students attending a college fair, or was the football team dismissed early for an away game?)
- Did most of the students in the surveyed grade take the survey—at least 70%?

Several steps were taken in the administration of the Healthy Youth Survey (2018) to ensure validity of the student answers:

- The survey was administered during a single class period of the school day to eliminate the effects of discussion among students. No attempt was made to have absent students complete the survey at a later time.
- Students were informed of the importance of the survey and adults administering the survey were instructed not to wander around the room as students marked their answers.
- Nowhere on the survey were students asked for their name or any other identifying information.
- Students placed their own completed answer sheets, along with those from other students in the class, in an envelope that was then sealed.

If administration procedures were not followed, if groups of students were missing, or if there was a low participation rate, then your survey results might not represent the students in your school and you should use caution when interpreting the results.

If administration procedures were followed, groups of students were not missing, and you had a good participation rate then you should feel confident that your results are representative of your school.

During data processing and analysis, further steps were taken to ensure the validity of the data. Student responses were carefully screened for evidence of falsifying a high level of use, answering dishonestly, or answering inconsistently.

How Can the Data be Used?

Schools can use the data from the Healthy Youth Survey (2018) to:

- Learn the prevalence of health-related behaviors among students.
- Understand the school climate.
- Contribute to the School Improvement Planning process.
- Assist with creating Principles of Effectiveness plans.
- Help inform other needs assessments.
- Help justify new school programs or projects.
- Assist with evaluating or improving existing school programs or projects.
- Provide information for grant applications.

There is mounting evidence supporting the concept that reducing students' health-risk behaviors can have a positive impact on their academic performance. The HYS measures a number of health-related issues such as substance use, poor nutrition, lack of physical activity, asthma, depression, violence, and safety. Any of these issues can distract students from school. Survey results may help identify areas where students need help so that they can be successful at school. However, the usefulness of the data depends on several factors, described below.

What are Confidence Intervals?

Responses to the Healthy Youth Survey (2018) are displayed as a percentage of the students who gave an answer and a *margin of error* for the percentage (e.g., 83% plus or minus 5%), which can be used to form a *confidence interval*. Briefly, use of a confidence interval acknowledges that the percentage is an estimate, and we can be reasonably certain that the true percentage falls within the range defined by the confidence interval.

Confidence intervals give an estimate of how variable the results are. Specifically, the 95% confidence interval gives the range that contains the true value 95 percent of the time. Thus for a result of 83% plus

or minus 5%, 95 percent of the time the true percentage falls somewhere between 78% and 88%. The size of the confidence intervals in the Healthy Youth survey will be smaller when:

- There are more students taking the survey.
- The prevalence rates are farther from a 50%/50% split.

For example, if 200 students take the survey and 30% report using marijuana (a core item on both Forms A and B), the 95% confidence interval will be around 24% to 36% (that is, $30\% \pm$ [plus or minus] 6).

However, only half of the 200 students will answer the question on using e-cigarettes/vaping products, as this question is only on one of the forms. If 30% of the 100 students report using e-cigarettes/vaping, the 95% confidence interval will be around 21% to 39% (that is, $30\% \pm 9$).

Why Conduct Significance Tests?

Sometimes, people look at trends over time or compare two groups. A statistical test can tell you whether the difference between groups or over time is greater than would be expected by chance. Commonly, if a difference as large as the one we see occurs less than 5% of the time by chance, we say that the difference is statistically significant. As the number of students taking the survey gets smaller, you need larger differences to rule out chance. For example, using a common statistical test, a statistically significant difference can be found comparing 30% to about:

- 21% if there are 200 students per group
- 17% if there are 100 students per group
- 7% if there are 30 students per group

If a difference is not statistically significant, it may be due to chance, making it more difficult to interpret.

In some cases, we can also use confidence intervals to determine whether the difference between a local rate (percent) and the state sample is *statistically significant* —that is, whether the county truly has a different rate of a particular behavior from the state or the apparent difference was likely to have resulted by chance.

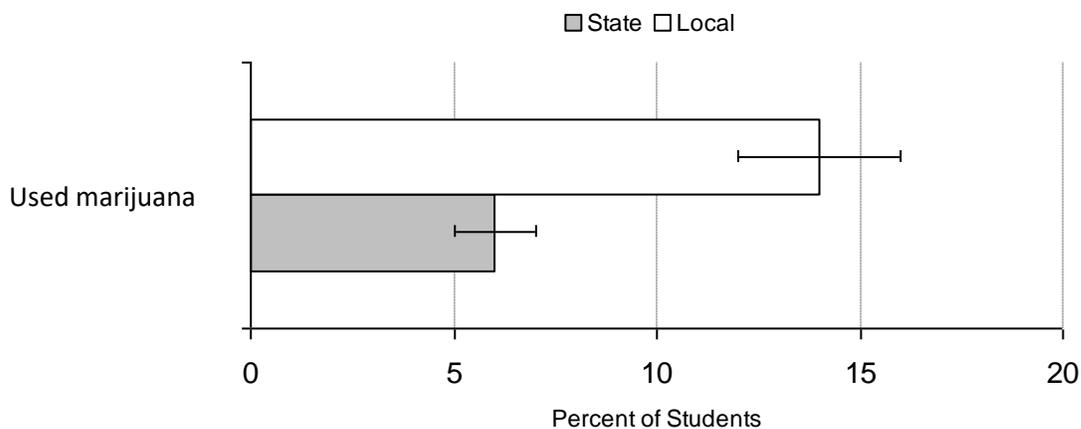
Using this approach, we examine whether the confidence intervals overlap each other, and whether either of them overlaps the point estimate (rate) of the other group. If the confidence intervals do NOT overlap each other, the difference is statistically significant. That is, probably not due to chance. If a confidence interval DOES overlap the point estimate (the rate) in the other group, there is not a

significant difference. If the two confidence intervals overlap each other, but do not overlap the other point estimate, then it is necessary to do a statistical test to determine whether the two groups are different.

See <http://www.doh.wa.gov/DataandStatisticalReports/HealthBehaviors/HealthyYouthSurvey/TechnicalNotes/ConfidenceIntervals> for more information. An excel tool for determining statistical significance is posted at <http://www.askhys.net/Training> for this purpose.

Suppose the percentage of 8th Grade students at a Washington middle school who used marijuana in the past 30 days is $14\% \pm 2$ (between 12% and 16%) and the percentage of 8th Grade students in the statewide sample who used marijuana is $7\% \pm 1$ (between 6% and 8%, see Chart 1). Because the statewide marijuana use rate is unlikely to be more than 8% and the school marijuana rate is unlikely to be less than 12%, we can be reasonably certain that marijuana use rates at the school are greater than those statewide. Note that in Chart 1 the error bars (representing the confidence interval) at the end of each bar of the graph *do not* overlap, and the difference is considered statistically significant.

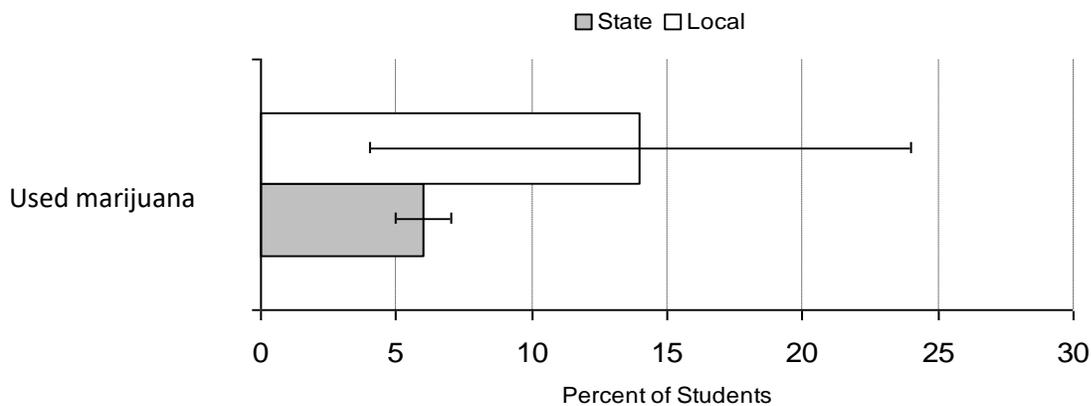
Chart 1: Example of a significant difference



If the margin of error for the Washington middle school in Chart 1 was 10% rather than 2%, then the true marijuana use rate could fall anywhere between 4% and 24% (see Chart 2). Thus, the school rate could be less than the statewide rate (e.g., 4% compared to a statewide rate of 6%), more than the statewide rate (e.g., 24% compared to a statewide rate of 8%), or the same as the statewide rate (e.g., both 7%). Note that in Chart 2 the error bar at the end of the bar for the local sample *does* overlap the point estimate for the state sample, and the difference is not considered statistically significant. As noted earlier, if the confidence intervals overlap each other but not the point estimates, it is necessary

to do a statistical test to determine whether the difference is significantly significant.

Chart 2: Example of a non-significant difference



Readers should note that differences in results may be considered from either a statistical or a practical point of view. *Statistical significance* is influenced by several factors including the number of students who participated in the survey and how similar or different the answers the students gave were.

Practical significance is a judgment of whether differences are programmatically meaningful. For instance, the difference between a school marijuana use rate of 11% and a statewide rate of 10% could, depending on the margins of error, be statistically significant. From a practical point of view, however, this difference is probably not large enough to justify programmatic changes at the school. Readers are encouraged to consider both the practical and statistical significance of their results and not to focus on small differences that may be statistically, but not practically, significant.

Summary

To help interpret data, reports from the Healthy Youth Survey (2018) include 95% confidence intervals. As long as there is not a lot of missing data (such as non-participating classrooms) and there are at least 15 valid surveys per grade, the Healthy Youth Survey (2018) can provide prevalence estimates of behaviors among students at your school. Generally, larger schools will have smaller confidence intervals, indicating more precise estimates. In looking at trends over time or comparing two groups, confidence intervals will give an idea of how much difference is needed to detect a difference, but more formal statistical tests may be needed.

Local Report Overview

The following topics are covered in the local report, as detailed in its Table of Contents:

- Demographics and general information
- Alcohol, tobacco, and other drug use
- Other health concerns
- School climate
- Risk and protective factors

Additional information about each topic area appears in the Healthy Youth Survey (2018) Analytic Report of the statewide survey results. For general information about these topics, readers are encouraged to contact the sponsoring agencies or to visit the web sites of relevant federal and state agencies.

Types of Local Reports

Before 2014, one main type of frequency report was created with two columns of individual grade results, one column for local results and another column for statewide results. Results for a school, district, county, or ESD are referred to as *local* results. Results from the statewide sample are referred to as *statewide* results. In 2014, new reports were created to present multiple-grade-level local results without a statewide comparison. Reports include four columns – one for 6th grade results, one for 8th grade results, one for 10th grade results, and another for 12th grade results. A statewide multiple-grade report was also generated and can be used for comparison with local results. These reports are also available for 2018.

In 2014, the HYS conducted a Small School District Pilot project. Schools in eligible small school districts were allowed to survey additional grade levels – grades 7, 9 and 11. If schools surveyed these additional grades and met the Pilot requirements they also received additional individual grade-level reports for the additional grades, combined grade reports for “middle school” that presented grades 6, 7 and 8 combined together and combined grade reports for “high school” that presented grades 9, 10, 11 and 12 combined together. They could also receive multiple-grade reports that included grades 6, 7, 8 and middle school combined and grades 9, 10, 11 and 12 and high school combined. For more information about the small school district pilot project, see the Small School District Pilot Summary Report online at <http://www.askhys.net/Reports>. These reports are also available for participating small districts in 2018.

Survey Versions

The 2018 survey was administered in 3 versions, see Table 1 for details.

Table 1: 2018 HYS Survey Versions

Form	Grade Level*	Content
A	Secondary (Grades 8, 10, and 12)	Core items** Risk and protective factor items Additional alcohol/drug-related items Questions on gender identity and sexual orientation question were optional. Schools could remove these two questions from their survey form.
B	Secondary (Grades 8, 10, and 12)	Core items** Nutrition, fitness, health conditions, health care, unintentional injury behaviors, intentional injury behaviors, quality of life and hopefulness Eight questions on sexual behavior, sexual orientation, gender identity, and sexual abuse were optional. Schools could remove these questions from their survey form.
C	Elementary (Grade 6)	Subset of the core items Subset of the noncore items from both Forms A and B

*For the Small School District Pilot, Grade 7 students received the Elementary version and Grades 9 and 11 students received the Secondary version.

**Core items are questions that are asked on both Forms A and B. They include questions about demographics; alcohol, marijuana, tobacco and other drugs; bullying and school climate; fighting, gangs and weapons; mental health; and texting and driving.

Two secondary versions were administered to allow for a greater number of questions to be asked in the limited time allotted (one class period). To accommodate the wishes of some schools to avoid asking the questions about sexual behavior, orientation and abuse, those questions were placed on a perforated page at the end of the survey so schools could remove them. Certain *core* items were included on all three versions. Two versions were administered in every participating secondary classroom, with alternating students receiving Form A or Form B. The elementary version was shorter and less detailed, Form C.

Items from all survey versions were combined and presented by topic in the local report. Although no version of the survey included more than 135 items (Form A had 133 plus two optional question, Form B

had 114 plus eight optional questions, and Form C had 91), a total of 244 items were administered and are included in the local report.

Number of Respondents

The “Number of students surveyed” on page 2 of the local report refers to the total number of survey forms that were submitted and scanned. The “Number of valid surveys” refers to those surveys retained after the data were run through a variety of validity checks and surveys found to be invalid were removed. Only the results of the valid surveys are presented in your report. The estimated participation rate is also reported. This rate compares the number of valid surveys to the number of students enrolled, based on the most recent enrollment figures. This means that for the 2018 survey, the participation rates in the reports are based on October 2018 enrollment figures.

The number of respondents is also listed for each survey item. The number of respondents to a specific item is usually fewer than the number of valid surveys and differs between items for several reasons:

- In Grades 8, 10, and 12, only core items were included on all versions of the survey; consequently, items included on only one version could be completed by, at most, half of the students.
- The optional items were included at the discretion of the school or district. Some students were presented with these items to complete whereas others were not. These items are marked with a dagger symbol (†) throughout the report.
- Any student may have chosen to skip any item. Further, any student may have made a mark on the answer sheet that was too light for the scanner to read or marked more than one answer; in both cases the response was treated as if the item had been left blank.
- The survey was lengthy and students may not have reached the end, so that items near the end of the survey were generally completed by fewer students. Because the survey was given in 3 versions (and the items were ordered differently in Form A compared to Forms B), questions near the end of the local report may or may not have been near the end of the survey completed by the students (e.g., the last item on Form A of the survey is numbered 98 on the local report, the last item on Form B is numbered 99, and the last item on Form C is numbered 71).

Caution about Participation Rates, Bias and Small Numbers

Readers should exercise caution with reviewing results and comparing them to other results. There may be limitations to your results if participation in the survey was low. The following guidelines are recommended:

- 70% or greater participation—Results are probably representative of students in this grade
- 40–69% participation—Results may be representative of students in this grade
- Less than 40% participation—Results are likely not representative of students in this grade but do reflect students who completed the survey

There may be limitations to your results even if you have a high participation rate. For instance, a particular group of students (say, the school orchestra) may have been away from school the day of the survey, and that could bias the results. It is important to acknowledge the potential limitations when using the results in this report. For reports summarizing results at the county or School District or County level, you should also consider whether the schools that participated represent all students in that area.

Results based on small numbers of students answering a question are unstable---that is, they could easily change with the absence from school of only a couple of students. This is especially the case when only a few students choose a particular answer option. Also, in this situation, the reported 95% confidence interval might be too narrow. Thus, use caution if fewer than 30 students answered a question and fewer than 5 students selected a given response option. For example, if 20 students answered a question and of those 20 only 3 students answered “Yes”, the estimate is unreliable.

Highlights of the Local Results

The Highlights section provides a summary for quick reference. The sponsoring agencies chose to highlight eight items they felt would be of interest to the majority of readers. The same items are highlighted in all reports and were not specifically chosen for your school, district, county, or ESD.

Selected Results by Gender

Selected items are presented by gender to highlight any differences between females and males. The *p*-values reported after each item can be used to examine whether differences in the local data between females and males are statistically significant (see the Healthy Youth Survey [2018] Analytic Report for

more details). To ensure student anonymity, local results are suppressed in cases where any cell (e.g., females who reported smoking) represents fewer than 10 students.

Item Results

Table 2 demonstrates each question in the report is reprinted as it appeared in the survey booklet along with the corresponding answer choices.

Table 2: Sample Frequency Report Item

5. What language is usually spoken at home?	Local (n = 511)	State (n = 7,833)
a. English	87.9% (± 4.9)	75.2% (± 5.5)
b. Spanish	2.3% (± 2.2)	11.2 % (± 5.0)
c. Russian	1.7% (± 2.0)	1.3% (± 0.3)
d. Ukrainian	1.7% (± 2.0)	0.8% (± 0.2)
e. Vietnamese	0.6% (± 1.2)	2.5% (± 1.0)
f. Chinese	0.6% (± 1.2)	1.5% (± 0.9)
g. Korean	0.0% (± 0.0)	0.6% (± 0.6)
h. Japanese	0.6% (± 1.2)	0.2% (± 0.2)
i. Other	4.6% (± 3.1)	6.5% (± 2.3)

To the right of each question are 4 columns showing local and statewide results. (Results for a school, district, county, or ESD are referred to as *local* results. This term is used to differentiate these results from the *statewide* results.) The first column displays the percentage of local students who selected each answer choice. The second column displays the margin of error for the percentage. For example, in Table 2, 87.9% plus or minus 4.9% of the local students spoke English in the home. The third and fourth columns contain comparative statewide results and margins of error based only on the results of those students from the schools drawn for the statewide sample. Note that 511 local students and 7,833 students in the state sample responded to this item.

Multi-grade reports include four or five columns showing statewide or local results only. Each column displays the percentage of students who selected the answer choice and the 95% confidence interval.

There is a column for each grade-level or combination of grade levels:

- Grades 6, 8, 10, and 12
- Grades 6, 7, 8, and 6/7/8 combined
- Grades 9, 10, 11, 12, and 9/10/11/12 combined

Item results may be presented with asterisks (*) replacing the numbers for 3 reasons:

- No students responded to the item. The item may have been an optional survey question, near the end of the survey, or simply skipped by all of the students.
- Item 83 (Overweight). This item poses a challenge to student anonymity because being overweight is a visibly identifiable trait. Consequently, local results were suppressed at the building level. These results are provided at the district, county, and ESD levels unless there is only one school.
- Select results by gender. Breaking down the students' responses by gender poses a challenge to student anonymity. If, for example, only one girl in a building at a certain grade took the survey, she would be uniquely identified in this section. Consequently, local results were suppressed for these items if any cell (i.e., item in the results table) represented fewer than 10 students.

Readers are advised that item wording may have changed over time and results may not be comparable across survey administrations. For example, the definition of watching TV was expanded from “watching TV” to watching “TV shows or movies or stream videos (such as YouTube, Netflix, Hulu) on any electronic device (Computer, TV set, tablets or smartphone)”. For a detailed description of HYS questions since 2002, see the HYS Data Dictionary and Crosswalk at: <http://www.askhys.net/Analyzer>

Risk and Protective Factors

The risk and protective factor model of prevention, pioneered by Drs. Hawkins and Catalano (Hawkins, Catalano, & Miller, 1992), has been applied to the prevention of alcohol, tobacco, and other drug use and other problem behaviors. Several risk and protective factors have been identified and grouped into 4 domains: community, family, school, and peer-individual. The University of Washington's Social Development Research Group developed questions used in the Healthy Youth Survey (2010) to examine students' levels of risk and protection. More information about the risk and protective factors is available at <http://www.askhys.net/Reports/Additional>. The *History of Risk and Protective Factor Scales Included in the Healthy Youth Survey* describes changes made from one survey to the next (due to changes in the length of the survey or other considerations).

Using Your Data

Readers are encouraged to consider the following approach to reviewing their report prior to delving into the details of individual survey items.

Implement a Review Team

Using a team approach to reviewing your report can help you make the greatest use of your results.

Ideally, the team will include representatives of many segments of the community such as district staff, school staff, community service agencies, law enforcement, parents, and students themselves. There are many advantages to using a team approach, one of which is that each member of the team can contribute his or her own perspective on problems and their solutions. In addition, a broad-based team conveys the message that the entire community is responsible for promoting adolescent health rather than it being the sole responsibility of a single institution (e.g., schools or school districts). Some common steps in the team approach include the following:

- **Create a core leadership group.** This group is made up of key persons who are knowledgeable about or interested in student health risk behaviors and will respond to the challenge of addressing the identified health risk behaviors.
- **Assess needs and resources.** The core leadership group will need to determine which student behaviors are of concern because of the severity and frequency of those behaviors. In addition, the group will want to identify the services that are available to help youth live free of alcohol, tobacco, and other drugs.
- **Develop a prevention and intervention plan.** After determining needs and resources, the core leadership group will want to develop a plan that addresses behaviors of concern. This plan should address stated goals and measurable objectives related to the behaviors identified as highest priority.
- **Implement the plan.** The first step in implementation is to gain key leader and community support for the plan. The plan can be implemented once support has been obtained.
- **Evaluate the plan.** The core leadership team should conduct ongoing evaluation of the programs implemented to fulfill the prevention and intervention plan. Key elements of the evaluation include (a) identifying those with an interest in the program (i.e., the stakeholders) and involving them in the evaluation, (b) posing evaluation questions related to the program's goals and objectives, (c) deciding what data to collect and how to collect those data, (d) analyzing the data that have been collected, and (e) preparing and disseminating reports.

Look at the Survey Results as a Whole

Because the survey covers a variety of topics, you should familiarize yourself with the report before reading it in detail. First, look at the cover and the top of the first page of the report to determine whether you are looking at an ESD, county, district, or school report. Next, look at the Table of Contents to see the major groupings of questions.

Become Familiar with the Survey Questions

Once you have identified the major survey topics, you can become better acquainted with the individual survey questions. At this point you should go directly to the topic area that is of greatest interest to you and read each of the questions in that area. Notice that the questions are grouped within the topic areas. This organization helps make the large number of questions more manageable. Because many items address more than one topic, you should also consult the index on the last page of the report to locate additional items related to your topic of interest.

Find Questions of Interest

You may make decisions about which questions are of greatest interest once you are familiar with the content of the survey and have a sense about where in the report each content area is covered. Any local prevention or intervention program will be able to address only a limited number of concerns. In addition, when speaking before a group or preparing a written report, you are encouraged to limit the presentation to those few results of the most immediate interest. Items may be selected for further presentation and discussion because of program-related interests, special concerns or interests, or noticeable differences in comparison to other data.

Communicate the Results

A wide variety of audiences may be interested in learning about the survey results, and different audiences will be interested in different topics. Nelson, Brownson, Remington, and Parvanta (2002, pp. 213–215) outlined a 9-step planning guide for communicating public health information:

- What is the scientific evidence? Describe the problem to be addressed, the strength of the scientific evidence, and the extent of the scientific consensus behind the communication activity.
- Why is the communication necessary? What is the purpose of the communication?
- Who is the audience (primary, secondary, and tertiary)?

- What is the message (the main idea condensed into 1 or 2 sentences)?
- How and where should the message be delivered?
- When should the message be delivered?
- Implement the communication plan.
- Did the audience receive the information and was it effective?
- Other considerations (e.g., resources, other priorities, barriers).

You may also wish to consider the Single Overriding Communication Objectives approach to communicating information (Howard, 2000). This approach involves identifying the key point of the message, the three facts you would like the audience to remember, who the main audience is, the single message the audience needs to take away from the communication, and a primary point of contact for further information.

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