

## METHODOLOGY

The Health Division and the Department of Education had several operational goals for the 1999 YRBS: 1) to give all Oregon public high schools the opportunity to participate as volunteers and obtain their own site-specific data; 2) to obtain a participation rate of at least 60 percent from a randomly selected statewide sample of approximately 50 high schools; and 3) to provide a framework for comparing operational methods between the Youth Risk Behavior Survey (YRBS) and the Oregon Student Alcohol and Drug Survey, sponsored by the Office of Alcohol and Drug Abuse Prevention.

Participation in the YRBS was *voluntary* at every level. District school superintendents for each of Oregon's 233 public schools that include grades 9, 10, 11, or 12 were initially contacted in the fall of 1998 to invite their participation and to request permission to contact their school principals. If district approval was obtained, the school's principal was contacted to obtain approval and the name of a survey contact. Schools and districts received a copy of the 1999 questionnaire. The first operational goal, to give all Oregon public high schools an opportunity to participate, was achieved.

Fliers or letters announcing the survey were prepared to provide notification of the survey two weeks before the survey date at each school. Distribution of the notification was the responsibility of each school – some sent it home with students while others mailed it directly to parents with grade reports. If parents did *not* wish their student to participate in the survey, they were to return the letter or contact the school. Copies of the survey were available at the school office if parents wanted to read the survey. Oregon SafeNet provided a toll-free number to call for information about the survey. When contacted, the Health Division sent copies of the survey to parents who were unable to go to their school's office to review the survey. The Health Division also posted a copy of the survey on its internet website<sup>1</sup>. Finally, individual students could choose not to participate or skip any question they did not wish to answer.

The Health Division started out by employing the two-stage cluster sample design recommended by the CDC and Westat, randomly sampling schools and then working with schools to randomly select classes to participate. However, the second operational goal was not achieved; because the participation rate did not meet the CDC requirement of 60 percent, the Oregon data are not included in national analysis. Of the 47 schools randomly selected by Westat, a statistical consulting firm working with the CDC, only 26 chose to participate -- a school participation rate of 55 percent.

The sampling procedure was designed to allow equal probability, or the same chance of selection for each high school student in the listed Oregon schools of the sampling frame, but schools were selected with a probability proportional to their enrollment size. Therefore, larger schools were more likely to be in the sample, because they have a greater number of students.

Districts and schools declined to participate for various reasons, including a feeling of being over-surveyed by outside groups and competition for use of classroom time. Some did not wish to take the project to their school board because of anticipated controversies over questions concerning sexual activity or because of scheduling and other local school board issues. In addition, the "Oregon Certificate of Mastery (CIM)" testing, an evaluation of both students and the school system, was initiated across the state starting in the 1998-99 school year. Many districts expressed operational stresses due to the new testing system, and declined to participate in the survey.

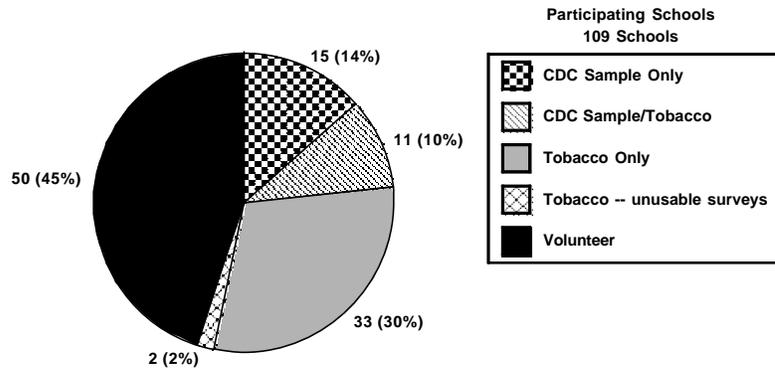
Because of low school participation, the two-stage cluster sample design was not followed for all schools that chose to participate in the 1999 Oregon YRBS. The Health Division requested that schools draw a random number of classes in which every student in all grades had an equal chance of being selected to participate. For schools with less than 700 students, the Health Division also suggested that the entire school population be surveyed to provide enough data for

assessment at the local level. However, participating schools ultimately chose their own method for meeting the second stage of sampling. While not all the participating schools had a site-specific representative sample across all grades, all but two schools were able to provide usable surveys that were included in state-wide analysis and reporting.

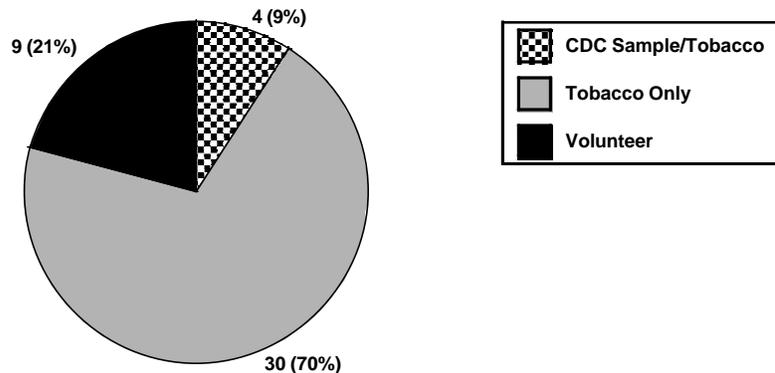
In all, a total of 25,255 surveys were returned to the Health Division from 111 high schools. Twenty-six schools from the random sample and 50 “volunteer” schools participated. In addition, 46 schools with Tobacco Prevention and Education Program funding were surveyed. Eleven of these were also selected for the random sample. Two of the schools did not provide usable data, and therefore the 160 surveys were removed from analysis. Consequently, the 1999 YRBS data includes 109 Oregon public high schools (see Figure 1).

The 1999 YRBS was administered in part by professional proctors and also by classroom teachers who were asked to use procedures designed to assure students’ privacy and anonymity while taking the survey. A total of 30 schools (28 percent of the original 111 schools) were professionally proctored, yielding a total of 3,405 valid surveys from proctored schools (15 percent of the total surveys). See Figure 2 for information on proctored schools.

Subsequent references to “the sample” or “sampled” schools refer to the 109 participating schools and not a statistically random sample of Oregon high schools.



**Figure 1**



**Figure 2**

## DID OREGON TEENS TELL THE TRUTH?

Although the extent of under-reporting or over-reporting of behaviors by students cannot be determined, many of the survey questions have demonstrated good test-retest reliability<sup>2</sup>. Certainly some YRBS participants did misrepresent their true behavior, but the most egregious are not included in these data. Specific computer syntax was created to verify the validity of responses. Out of 25,095 surveys from participating schools, 2,182 were excluded for a total of 22,913 usable surveys.

Surveys were eliminated based on five criteria. 1) one drug-use verification question; 2) over 62 blank or unknown answers; 3) more than ten discrepancies among answers (i.e., reported having drunk more alcohol in last month than reported drinking in lifetime); 4) over 30 outrageous or socially negative responses; and 5) missing gender, invalid age, invalid race or grade other than 9<sup>th</sup> - 12<sup>th</sup>. Many surveys were rejected for multiple reasons (see Table 1).

<b>Editing Criteria</b>	<b>Number</b>	<b>Percent</b>
<b>Total Scanned Surveys</b>	<b>25095</b>	<b>100.00</b>
Eliminated due to:		
Drug verification question	650	2.6
Non-response or blanks	337	1.3
Discrepancies among questions	616	2.5
Outrageous answers	71	0.3
Missing demographic data	508	2.0
<b>Total Eliminated Surveys</b>	<b>2182</b>	<b>8.7</b>
<b>Total Usable Surveys</b>	<b>22913</b>	<b>91.3</b>

Some surveys were not excluded from analysis but still had some answers that contained inconsistent pairs, out of range answers, or multiple responses to non-multiple response questions. These data were converted to unknown/missing data for those individual questions.

A combined total of nine percent of the surveys were eliminated during the editing process. Excluding the surveys with 30 or more outrageous answers is a new edit this year. However, the procedure accounted for less than half of the two percent increase from the seven percent eliminated in the 1997 YRBS<sup>3</sup>. This is more than the six percent eliminated in a 1998 statewide high school survey used by the Department of Human Services, Office of Alcohol and Drug Abuse Programs<sup>4</sup>.

## DEMOGRAPHICS

Although the sample obtained for the 1999 Oregon YRBS is not a random sample, it is highly representative of the population of Oregon high school students. The graphs on this page compare the characteristics of four groups of high schools:

- 1) the total Oregon public high school enrollment as of October 1, 1999,
- 2) the 109 schools that participated in the survey,
- 3) the schools which were selected in the CDC sample but declined to participate, and
- 4) the participating schools that were selected in the CDC sample.

The demographic characteristics of the surveyed population were found to be very similar to the statewide public school enrollment for grade. The 12<sup>th</sup> grade participants were under-sampled when compared to the state because of an emphasis on sampling 9<sup>th</sup> and 11<sup>th</sup> graders for the participating tobacco program schools (see Figure 3).

However, with respect to the school size and socioeconomic level, surveyed schools were fairly similar to all Oregon public schools (see Figures 4 and 5). As noted earlier, since CDC sampled schools were selected with a probability proportional to size, larger schools were more likely to be in the sample.

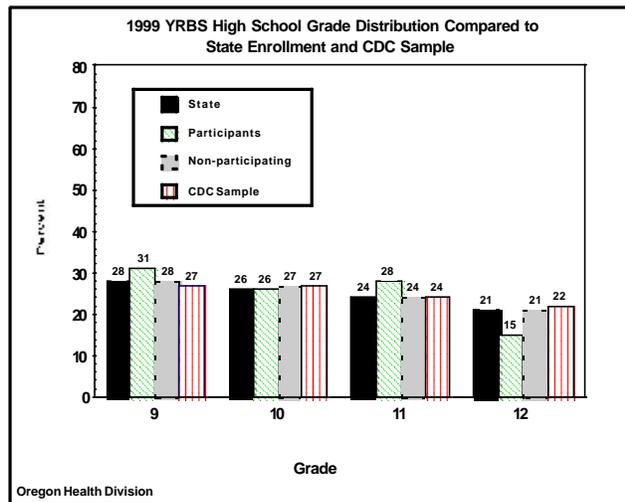


Figure 3

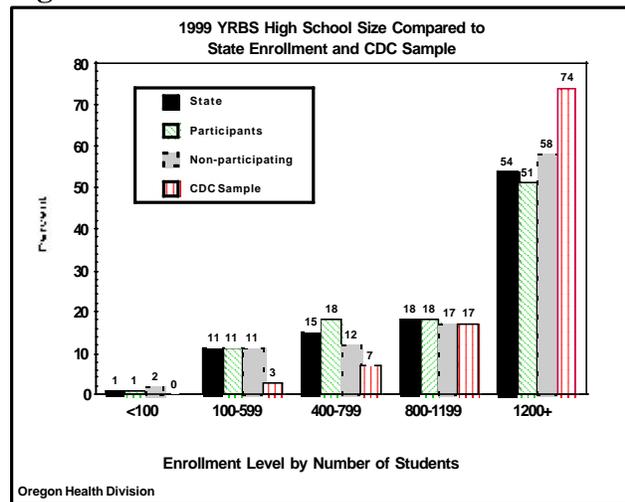


Figure 4

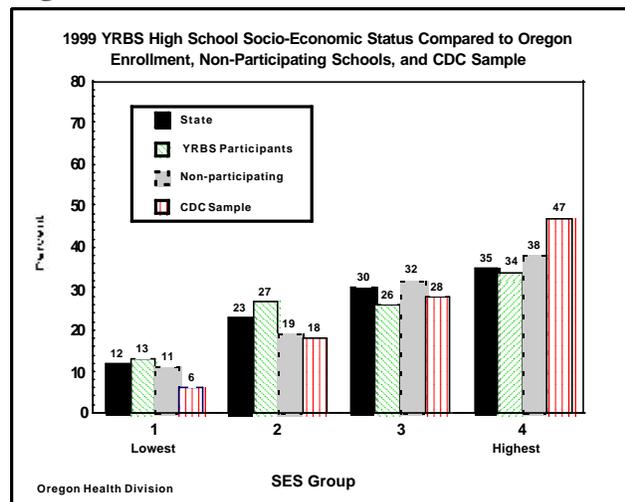


Figure 5

In terms of geographic distribution, no students of Gilliam, Josephine, Klamath, Tillamook, or Wheeler counties (8,284 high school student population) participated in the survey. And Coos, Deschutes, Hood River, Malheur, Multnomah, Wallowa and Washington counties were under represented, with less than 10% of the high school population from those counties completed a

valid survey. See Table 2 for information regarding percentage of surveys coming from individual counties or Educational Service Districts (ESD) in relation to the percentage of high school student population of each area.

Table 2.	Population % of STATE	Surveys % of County or ESD	County or ESD % of SURVEYS
BAKER	0.60	27.29	1.02
BENTON-LINCOLN-LINN	8.40	15.78	6.92
CLACKAMAS	8.68	22.56	12.20
CLATSOP	1.19	61.65	4.59
COLUMBIA	1.66	45.34	4.69
COOS	2.06	3.29	0.42
CROOK	0.60	18.41	0.69
CURRY	0.65	74.93	3.04
DESCHUTES	2.59	8.33	1.34
DOUGLAS	3.41	19.18	4.08
GILLIAM	0.08	0.00	0.00
GRANT	0.31	79.42	1.54
HARNEY	0.28	47.52	0.84
HOOD RIVER	0.72	3.74	0.17
JACKSON	5.70	12.95	4.60
JEFFERSON	0.55	11.79	0.40
JOSEPHINE	2.27	0.00	0.00
KLAMATH	2.04	0.00	0.00
LAKE	0.31	59.47	1.15
LANE	9.22	14.47	8.31
MALHEUR	1.06	4.51	0.30
MARION	9.25	19.64	11.32
MORROW-UMATILLA	2.78	41.22	7.16
MULTNOMAH	15.73	8.90	8.72
POLK	1.23	55.64	4.25
SHERMAN	0.08	85.16	0.43
TILLAMOOK	0.83	0.00	0.00
UNION	0.94	28.12	1.65
WALLOWA	0.30	9.94	0.18
WASCO	0.78	20.16	0.98
WASHINGTON	12.59	5.82	4.57
WHEELER	0.07	0.00	0.00
YAMHILL	3.03	23.51	4.44
<b>Total</b>	<b>100.00</b>		<b>100.00</b>

For tabulations, the survey data were weighted to more accurately represent Oregon's high school students. Each student's survey was assigned a weight based on their school's enrollment, socioeconomic ranking, and grade. School socioeconomic status was based on school-level SES rankings listed in the Oregon Department of Education's website, on the pages where the Statewide Assessment 10<sup>th</sup> grade math score was reported<sup>5</sup>. The weighting of data adjusts for the statewide distribution of school sizes and socioeconomic level. It does not account for the probability of being sampled as a school or as a classroom in a participating school.

## REPORTING OF DATA

Risk behaviors are summarized by students' grade level and gender. However, there is no summarization by race/ethnicity, because this year's race/ethnicity data reporting differs substantially from prior years. This year, the race question, "How do you describe yourself?" was asked as a multiple response question. This is a different method of collecting race data and is not easily comparable with the race data collected from the Department of Education.

New this year, however, are data trend graphs for selected questions for both Oregon and National data. In addition, the report includes graphs which compare five enrollment size groups for selected risk behaviors.

The YRBS summary report also contains written comments of the students who took the survey. Over 7,300 comments were collected from students. These comments were then categorized according to the general topic to which they most related. Staff members read the comments and grouped them according to topic or theme. The comments selected for inclusion in this report have been edited for readability but not altered in content. Where necessary, misspellings were corrected and expletives deleted. Because some topics and sections of the survey elicited more student comments than others, the length of the comments portion of each section varies. Due to the large volume of comments, not all entries were included in the report. For those sections with the most comments, staff selected entries that spoke to the same themes raised by other students and were considered representative entries.

Goals and leading health indicators for the Year 2000 from the *Oregon Benchmarks*<sup>6</sup> and *U.S. Healthy People 2000*<sup>7</sup> are included at the beginning of each section where applicable. When available, telephone survey data from adults responding to the 1997 and 1999 Oregon Behavior Risk Factor Surveys<sup>8</sup> are included for comparison. In addition, when questions are similar enough for comparison, survey data from the 1997 Oregon<sup>3</sup> and national YRBS<sup>9</sup> is also referenced.

## REFERENCES AND ENDNOTES

1. Survey is available at <http://www.ohd.hr.state.or.us/chs/yrbs/99/99yrb12.pdf>.
2. Brener ND, Collins JL, Kann L, Warren CW, Williams BI. Reliability of the Youth Risk Behavior Survey questionnaire. *American Journal of Epidemiology*, 1995; 141:575-80.
3. Oregon Department of Human Services, Health Division, Center for Health Statistics. *1997 Oregon Youth Risk Behavior Survey*, 1997.
4. Oregon Department of Human Services, Office of Alcohol & Drug Abuse Programs. *1998 Oregon Public School Drug Use Survey*, 1998.
5. Scores are available <http://www.ode.state.or.us/asmt/results/index.htm>. The school SES rank was developed by the Oregon Department of Education as a composite index consisting of: the percent of students eligible for free or reduced price lunch, student mobility rate, student attendance rate, and the level of education of the most educated parent.
6. Oregon Progress Board. *Oregon Benchmarks: Standards for Measuring Statewide Progress and Institutional Performance*. Report to the Legislative Assembly. March 1999.
7. National Center for Health Statistics. *Healthy People 2000 Review, 1998-99*. Hyattsville, Maryland: Public Health Service, 1999.
8. Behavioral Risk Factor Surveillance System, data from the 1997, 1998, and 1999 telephone survey of adult Oregonians.
9. Centers for Disease Control and Prevention. *CDC Surveillance Summaries*, June 9, 2000. *Morbidity and Mortality Weekly Report* 2000;49(No. SS-5).