

**UNIVERSITY HEALTH CENTER SURVEY  
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SURVEY METHODOLOGY**

SURVEY INSTRUMENT DEVELOPMENT, SAMPLING,  
DATA COLLECTION, DATA PROCESSING, QUALITY  
CONTROL, DATA REDUCTION, CODING, PLANS FOR  
THE FUTURE



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## **INTRODUCTION**

This report summarizes the University of Oregon Survey Research Laboratory's (OSRL's) survey methodology for the twelfth annual University Health Center (UHC) Survey. Working with UHC representatives, Director Tom Ryan, Gerald Fleischli, Anne Mattson, and Paula Staight, OSRL planned, pre-tested, and implemented a telephone survey of 404 randomly selected University of Oregon (UO) students.

## **BACKGROUND**

Now in its twelfth year, the annual UHC survey tracks trends in student knowledge, attitudes, and behaviors concerning an array of topics, including sexual behavior, emotional health, UHC use, and knowledge of the UHC services and programs (such as FPEP). The UHC and OSRL have developed three broad groups of survey questions:

1. Core questions asked annually,
2. Periodic questions asked in either odd or even years, and
3. Topical, once-only questions, intended to tap issues of the moment.

With a decade of data collected utilizing the above-described structure, the UHC expects that significant changes will be made to the 2005 survey. Thus far it is expected that the core question group will be evaluated and, more than likely, significantly altered. The survey methodology may change as well: OSRL has recommended that the UHC consider moving some portion of the survey to an "online" format, where students may complete the survey confidentially through a web-browser. OSRL is also working with University leadership to create a student panel that might serve as a lower cost alternative to a stand-alone survey. It is anticipated that future meetings during the winter and spring will determine the direction of this study in coming years.

## SURVEY METHODOLOGY

This section describes OSRL's procedures for developing and implementing the telephone survey instrument and sample for this study.

### SURVEY INSTRUMENT DEVELOPMENT

In the spring of 2004 UHC and OSRL staff collaborated in weekly meetings to identify the repeated and "ad hoc" questions that would be included in the 2004 instrument. In addition, several questions were added or rewritten, some adapted from the NCHA survey. The new or modified questions concerned relationship status, knowledge (or use) of the UHC FPEP program, drinking behavior, and (prescribed or non-prescribed) use of Adderall. The 2004 UHC Survey included the following topics:

1. **Physical and mental health and wellness**, including overall assessments, suicidal thoughts, suicide attempts, stress, experience of discrimination, and attention deficit hyperactivity disorder (ADHD);
2. **Health maintenance** activities, including pap smear checks and cholesterol and blood pressure screening;
3. **Tobacco, alcohol, and drug use**, deleterious effects of drinking (e.g. fights, unprotected sexual intercourse, etc.); frequency of binge drinking; perceptions concerning average student alcohol use, age at which respondent began drinking;
4. **Sexual activity**, including use of contraception, condom use, pregnancy, rape, sexual orientation, and sexually transmitted diseases;
5. **UHC use and knowledge**, reasons for non-use, suggestions for improving services, cost comparisons and knowledge of the UHC's FPEP program;
6. **Health insurance** coverage, who pays for it, medical expenses, and insurance opinions;

All survey questions underwent OSRL's pretest procedure, involving members of the survey population and survey experts from our staff. Individual questions were pretested for clarity, accuracy, and validity. The entire instrument was pretested for flow, comprehensiveness, length, and factors which affect respondents' cooperation and attention.

Section 2 of this report provides a facsimile of the telephone survey instrument, with embedded "topline" results and all skip logic.

### SAMPLING

OSRL randomly selected 700 currently enrolled UO graduate, law, and undergraduate students from the Registrar's records as the sample for this survey. As in prior years, we

excluded Continuing Education Program students from the sample. Additionally, the 16% of students lacking a local telephone number were excluded.

One week before data collection commenced, OSRL sent via email a pre-contact letter to the 700 randomly sampled students (see Section 3 for a copy of the letter). Whereas in previous years the precontact letter was delivered via the USPS, this year the letter was sent electronically to students' preferred email address. This methodology proved advantageous, as many students were able to respond to the email in order to provide us with new information, e.g., an updated local phone number.

In order to obtain human subjects approval for this study, and due to certain survey questions' sensitive subject matter, UO's Committee for the Protection of Human Subjects requires OSRL to establish this presurvey contact with the respondent. The pre-contact email introduced the study's goals and purpose, explained its importance, described how respondents were selected, identified the potentially sensitive subject areas in the survey interview, assured confidentiality and voluntariness, and provided contact names, email addresses, and telephone numbers for respondents who had questions.

Sampling error for a study of this size is moderate to small. The survey sampling error statistic assists users of these data in assessing how much confidence to place in a particular survey result. Moderately large random samples, as in this study, reduce sampling error. Survey results with low variability also produce less sampling error; e.g., a variable with a 5/95 proportional split has narrower confidence intervals than a variable with a 50/50 proportional split.

For this study, the confidence interval is  $\pm 4.8$  percentage points on variables with a 50/50 proportional split (at the 95% confidence level). This means analysts can be 95% sure that the true population figure lies between 45.2% and 54.8% (i.e.,  $50\% \pm 4.8$  percentage points). For variables with a 5/95 proportional split, the confidence interval is  $\pm 2.1\%$ , which means analysts can be 95% sure that the true population figure lies between 92.9% and 97.1% (i.e.,  $95\% \pm 2.1$  percentage points). For details, see OSRL's "Sampler" at <http://osrl.uoregon.edu/papers/sampler/>.

#### **DATA COLLECTION, DATA PROCESSING, AND QUALITY CONTROL**

OSRL timed the survey to fall more than four weeks after the end of Spring Break (since students' Spring Break activities could artificially inflate reports of certain types of behavior, such as alcohol consumption).

OSRL conducted interviewer training on Thursday, April 29, 2004; see Section 3 for interviewer instructions. Interviewing commenced on Friday, April 30, and continued until Tuesday, May 24 when the target sample size was achieved,  $n=404$ . Interviewers called between 8 a.m. and 11 p.m. all days of the week, with the exception of Sunday morning. Interviews averaged 12.7 minutes. On average, about 16.3 telephone dial attempts were required for each completed interview, but up to 40 calls were made. All interviews were conducted in English. Only experienced interviewers were employed for this study.

Altogether, OSRL interviewers made 6,587 telephone calls to complete 404 interviews. Among the original 700 telephone numbers chosen, 31 were unusable because the number was wrong, disconnected, non-working, nonresidential, or a fax/modem telephone number. In addition six sampled students were gone for the study dates and, therefore, could not be interviewed. Lastly, three students were not contacted because, in response to our precontact email, they refused to participate in the study.

OSRL routinely reports a CASRO-type response rate, according to the highest industry standards (source: Robert M. Groves, *Survey Errors and Survey Costs*, 1989). The formula for calculating this response rate requires that each telephone dial attempt be assigned a call disposition code. At the completion of the survey project, the final disposition code for each telephone number is used for response rate calculation. The overall survey response rate was 65%, and the refusal rate was 6%<sup>1</sup>. Section 4 provides the study's complete sample, call disposition, and response rate report.

The survey was conducted using OSRL's WinCATI system, in which sampling, interviewing, and entry of data is accomplished interactively and seamlessly. Interviews are pre-programmed and appear automatically at each workstation. The programmed survey instrument contains all survey questions, interviewer probes for consistency, and pre-coded answer categories. Skip logic is programmed into the system, preventing inappropriate or incorrect questions from being asked. The WinCATI system eliminates out-of-range responses and wild codes by validating each response interactively and disallowing the entry of inappropriate responses.

In administering the survey instrument, trained interviewers use telephone headsets in sound-reduced carrels at computer workstations connected by an NT network. Randomly distributed telephone numbers appear automatically at each workstation and are mated to the survey instrument. Interviewers place telephone calls with a computer keystroke, preventing dialing errors. As respondents answer questions, interviewers enter the data into the WinCATI data file. Telephone numbers and names are automatically stripped from the interview records to ensure confidentiality. Thus, the WinCATI system eliminates many routine and error-prone coding and entry of data tasks and enables OSRL to maintain the highest standards of quality.

Interviewer training is a key aspect of quality control at OSRL. We employ highly trained, skilled and motivated interviewers. General interviewer training begins with an extensive program of general interviewing skills, neutral probing, bias-free responses, telephone etiquette, practice interviews, role-playing and testing by supervisors. We also completely train and test interviewers in WinCATI so that interviewers and the data collection system work together flawlessly. General training is followed by several hours of project-specific training for each survey. Project-specific training includes an overview of the project goals and sample, unusual features of the study, respondents' commonly-asked questions revealed in pretesting and interviewers' scripted responses, as well as role-playing using

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<sup>1</sup> Response rate was calculated in following manner: Completed interview / (Eligible sample + ((Eligible sample / (Eligible sample + Ineligible sample)) \* Sample with unknown status))

both paper and WinCATI versions of the survey. Finally, at the beginning of each interviewing shift, OSRL's Interviewer Supervisors hold a 5-10 minute mini-training to review and refresh interviewing techniques and to address any new developments in the survey process.

Project management and supervision is another key element to OSRL's quality control. OSRL Supervisors continuously monitor the interface between respondents, interviewers, and the computer systems that record respondents' answers. Interviewers are routinely evaluated, tested and provided with constructive criticism. Interviewers are provided pre-scripted answers to respondents' common objections or questions as part of their training, but supervisors also are always available to help should the need arise. Finally, OSRL's laboratory setting has created a valuable sense of teamwork among interviewers, which in turn provides peer monitoring and mutual helpfulness dedicated to quality.

#### DATA REDUCTION AND CODING

After the collection of data, a Project Director transfers the raw data from WinCATI into SPSS and Excel with appropriate variable and value labels, and makes corrections (if necessary).

This instrument included several open-ended survey questions. OSRL interviewers record open-ended responses exactly as spoken by respondents, word for word. After data collection two experienced coders transformed these open-ended responses into numerical categories to aid survey analysis (specifically, for the variables "HRISSUE," "HCONCERN," and "OPNSTRES"). Where the two coders assigned a different numerical value to an open-ended response, Deborah McGeehan, an OSRL supervisor with considerable experience working on the UHC survey, selected the coding she determined to be most appropriate to the given response. For accuracy and consistency, she also inspected one in ten open-ended response codings of each coder. The coded open-ended answers were then joined with the survey database.

Coders used previously developed open-ended code categories for this year's study to maximize compatibility with previous results. Section 7 provides these answer categories, along with the frequency distributions of answers.

#### PLANS FOR THE FUTURE

As discussed in the introduction, the annual UHC survey is likely to undergo significant revisions in the coming year. Now that a ten-year sequence of the "core" questions has been collected, UHC staff have indicated an interest in significantly revising the core, ad hoc, and periodic questions. In addition, OSRL has recommended that the UHC consider changing to a mixed mode RDD/online survey format, where students are given the option to complete the survey online before they are contacted by OSRL. This method would likely offer respondents a greater sense of confidentiality when responding to the survey's more sensitive topical areas, and could reduce the overall cost of the project.