

New York Behavioral Risk Factor Surveillance Survey

2011
Overview

Center for Community Health
Division of Chronic Disease Prevention
Bureau of Chronic Disease, Evaluation and Research

N Y S D O H

Behavioral Risk Factor Surveillance Survey

General description

The Behavioral Risk Factor Surveillance System (BRFSS) is an annual statewide telephone surveillance system designed and funded by the Centers for Disease Control and Prevention (CDC), and conducted by the NYSDOH, Division of Chronic Disease and Prevention, Bureau of Chronic Disease Evaluation and Research.

The BRFSS collects data on preventive health practices and risk behaviors that affect chronic diseases, injuries, and preventable infectious diseases. Examples include tobacco use, health care coverage, HIV/AIDS knowledge and prevention, physical activity, and consumption of fruits and vegetables. Demographic information is also collected to permit analyses of specific populations. While all data collected are self-reported, some variables are calculated based on given responses. For example, obesity is calculated based on the respondent's reported height and weight. Current smoking status and leisure time physical activity are also calculated variables. Questions about the health of a child are answered by the parent. There is a process for randomly selected the child, if there is more than one child in the household.

Interviews are conducted throughout the year in both English and Spanish, using standard calling procedures. Beginning in 2011, BRFSS began reaching households with landline telephones and households which only had cell phones.

New York State's BRFSS is designed to be representative of the non-institutionalized adult household population, aged 18 years and older. The BRFSS is designed to provide information for New York State, New York State, excluding New York City and New York City (5 boroughs combined). Survey results are analyzed and disseminated as reports to inform disease prevention and control statewide and in community settings.

The 2011 NYS BRFSS Questionnaire

The questions on the BRFSS are not the same every year, although there is a set of core questions that CDC requires to be asked in all states either every year, or on a regular rotating basis, such as every other year. States may also include questions from a list of optional CDC questions or may add additional questions to serve their own specific state needs.

Two separate questionnaires were used to administer the 2011 BRFSS (Survey 1 and Survey 2) to accommodate as many topics as possible. The core required questions are included in both questionnaires. The 2011 BRFSS included questions on the following optional CDC topics:

- Anxiety and depression (Survey 1);
- Asthma prevalence in child (Survey 1);
- Child immunization for influenza (Survey 1);
- Pre-diabetes (Survey 1);
- Tetanus and diphtheria immunization (Survey 1);
- Actions to control high blood pressure (Survey 2);
- Cardiovascular health (Survey 2);
- Cognitive impairment (Survey 2); and

Random child selection (Surveys 1 and 2);

Only respondents reached on landline telephones are asked the CDC optional questions. Refer to the section on **Statistical and analytic issues** for information on weighting topics that are only in either Survey 1 or Survey 2.

The 2011 NYS BRFSS questionnaire included state-added questions on the following topics:

Employment in health care setting (Survey 1);

Family history of diabetes (Survey 1);

Offered an HIV test in various health care settings (Survey 1);

Sexual behavior and STD awareness (Survey 1);

Perception of access to low-fat milk (Survey 2);

Access to dental insurance (Survey 2);

Access to enough to eat (Survey 2);

Arthritis management (Survey 2);

Awareness of appropriate number of calories to consume and use in decision making (Survey 2);

Fast food consumption and awareness and use of calorie posting information (Survey 2);

Milk consumption on cereal (Survey 2);

Perception of neighborhood as a place to be active (Survey 2);

Perception of access to healthy foods in neighborhood (Survey 2);

Sodium reduction (Survey 2); and

Sweetened beverages consumption (Survey 2).

Only respondents reached on landline telephones are asked the state-added questions. Refer to the section on **Statistical and analytic issues** for information on weighting questions that are only included in either Survey 1 or Survey 2.

Data Weighting

Unweighted BRFSS data represent the actual responses of each respondent, before any adjustment is made for variation in respondents' probability of selection, disproportionate selection of population subgroups relative to the state's population distribution, or nonresponse. Weighted BRFSS data represent results that have been adjusted to compensate for these issues. Use of the final weight in analysis is necessary if generalizations are to be made from the sample to the population.

Because the BRFSS data are obtained using a complex sample design use of specific statistical techniques is needed for data analysis. There are computer programs available that take such complex sample designs into account. SAS Version 8 + SURVEYMEANS and SURVEYREG procedures, SUDAAN, and Epi Info's C-Sample are among those suitable for analyzing BRFSS data. SAS and SUDAAN can be used for tabular and regression analyses. SUDAAN also has

these and additional options. When using these software products, users must know the stratum, the primary sampling units, and the record weight; these are all variables on the data file.

Statistical and analytic issues

Analyzing subgroups

Although the overall number of respondents in the BRFSS is large enough to make statistical inferences, care is needed in conducting analyses of smaller subgroups. Users need to pay particular attention to the subgroup sample size when analyzing subgroup data, especially within a single data year or geographic area. Reliability of an estimate depends on the actual unweighted number of respondents in a category, not on the weighted number. Interpreting and reporting weighted numbers that are based on a small, unweighted number of respondents can make a given finding appear to be much more precise than it actually is. The BRFSS follows a rule of not reporting or interpreting percentages based upon a denominator of fewer than 50 respondents in the unweighted sample.

Multiple questionnaires

Two separate questionnaires were used to administer the 2011 BRFSS (Survey 1 and Survey 2). Analyzing the data collected only in one questionnaire requires use of the appropriate weight as follows:

To analyze the core questions which are asked on both questionnaires, the `_FINALWT` variable should be used.

To analyze optional CDC questions and state-added questions asked only on Survey 1, the `_FINALQ1` variable should be used for records in which variable `QSTVER` equals 1.

To analyze optional CDC questions and state-added questions asked only on Survey 2, the `_FINALQ2` variable should be used for records in which variable `QSTVER` equals 2.

Additional information

Reports using BRFSS information can be found at:

<http://www.health.ny.gov/statistics/brfss/reports/>

http://www.health.ny.gov/statistics/prevention/injury_prevention/information_for_action/

Detailed information on overall response rates and response rates to specific questions are discussed in quality control reports produced by the CDC, available at:

http://www.cdc.gov/brfss/technical_infodata/quality.htm.

[Note: 2011 Quality Control reports should be posted by 3/2013.]

Specific details describing the disproportionate stratified sampling design are provided at:

http://www.cdc.gov/brfss/technical_infodata/weighting.htm

Additional weighting information maybe obtained from the following CDC report:

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6122a3.htm>

For more information on calculating variance estimations using SAS, see the *SAS/STAT Users Guide, Version 8*. For information about SUDAAN, see the SUDAAN Users Manual, Release 7.5. For information about Epi Info, see *Epi Info, Version 6.0*

A report on telephone coverage in U.S. households is available at:

<http://www.fcc.gov/wcb/iatd/trends.html>.