Behavioral Risk Factor Surveillance System 2015

OVERVIEW

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

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Health Data NY

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Behavioral Risk Factor Surveillance System

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 selecting 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 with cell phones only.

New York State's BRFSS sample is designed to be representative of the non-institutionalized adult household population, aged 18 years and older, who have either a landline or cellular telephone. 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). The 2015 BRFSS was also designed to support regional analysis, based on the eleven Delivery System Reform Improvement Payment (DSRIP) regions (https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/performance_data/salient_performance_data.htm). Survey results are analyzed and disseminated as reports to inform disease prevention and control statewide and in community settings. See "**Additional Information**" below.

The 2015 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 2015 BRFSS (version 1/A and Survey 2/B) to accommodate as many topics as possible. The core questions were included in both questionnaire versions. Respondents were randomly assigned to a questionnaire version, so approximately half of the respondents were asked version 1/A and half were asked version 2/B.

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The 2015 BRFSS included questions on the following optional CDC topics:
- Pre-Diabetes
- Diabetes
- Caregiver
- Cognitive Decline
- Arthritis Management
- Colorectal Cancer Screening
- Industry and Occupation
- Sexual Orientation and Gender Identity
- Random Child Selection
- Childhood Asthma Prevalence

The 2015 NYS BRFSS questionnaire included state-added questions on the following topics:
- Health Care Access
- Workers' Compensation Coverage
- Mental Health and Stigma
- Sugar Drinks
- Hepatitis Testing Law
- Participation in Chronic Disease Self-Management
- Participation in Life-style Change Program
- Oral Health
- Hearing Disability
- Access to Fruits and Vegetables
- Social Context

All applicable questions (core, optional, and state-added) were asked of respondents, regardless of whether they were reached on a landline telephone or a cellular telephone.

Refer to the next section on "**Data Weighting**" for information on weighting questions that are only included on questionnaire version 1/A or questionnaire version 2/B.

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.

Analyzing the data collected only in one questionnaire requires use of the appropriate weight as follows:

The _LLCPWT variable should be used to analyze all questions asked on both versions of the questionnaire that are directly related to the adult respondent.

The _LCPWTV1 variable should be used to analyze questions asked only on version 1 of the questionnaire that are directly related to the adult respondent.

The _LCPWTV2 variable should be used to analyze questions asked only on version 2 of the questionnaire that are directly related to the adult respondent.

The _CLCWTV1 variable should be used to analyze all questions (core, optional, and state-added) that are related to a child in the respondent's household. Note that this weight is used because all child-related questions on the 2015 BRFSS were asked on questionnaire version 1.

Statistical and Analytic Issues

Please see "NYSDOH_BRFSS_ExampleProgram_2015.sas" for sample coding using SAS and SUDAAN, including use of weights and suppression criteria.

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 unless:

- They come from a total sample (n) of 50 or more observations in the denominator and 6 or more observations in the numerator.
- They have a coefficient of variation of less than 30 and a confidence interval with a half width less than or equal to 10.

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/annual_data/2015/pdf/2015-sdqr.pdf

Documentation of general survey methodology and weighting is available from CDC at: http://www.cdc.gov/brfss/annual_data/2015/pdf/overview_2015.pdf

Additional weighting information may be 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 User's Manual, Release 7.5.

For information about Epi Info, see *Epi Info, Version 6.0.*

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