



A Guide to Using the 2002 County BRFSS Data

This report provides an overview of the Behavioral Risk Factor Surveillance System (BRFSS), a population-based telephone survey. A guide to interpreting the data from the 2002 County BRFSS survey is also provided. The 2002 County BRFSS survey was conducted from September 2002 to January 2003, with at least 500 completed interviews for each of Florida's 67 counties.

The BRFSS: A Brief Overview

The Centers for Disease Control and Prevention (CDC) began the BRFSS in the early 1980s, with a handful of states. Today all states, as well as the District of Columbia and Puerto Rico, participate. The Virgin Islands and Guam participate by conducting point-in-time surveys. Data gathered through the BRFSS provide important information for the development of public health programs. BRFSS data can be used for:

- assessing risk for chronic diseases
- identifying demographic differences
- measuring trends in health-related behaviors
- designing and monitoring health intervention and services
- addressing emergent and critical health issues
- formulating policy and proposing legislation for health initiatives
- measuring progress toward achieving state and national health objectives

Purpose of 2002 County BRFSS Survey

BRFSS survey data have been widely used to monitor health behavior and health status at the state and national levels. However, due to small sample sizes, the statewide BRFSS cannot provide accurate and reliable data at the county level for public health program planning and evaluation. Therefore, with support from county health departments and others, the Bureau of Epidemiology designed and implemented the 2002 County BRFSS to provide data on behavioral risk factors and chronic disease conditions for every one of Florida's 67 counties.

The County BRFSS is comparable to the State BRFSS. The County BRFSS survey methodology followed the State BRFSS protocol and adapted its questions from the State BRFSS. Both the protocol and the questions were developed by the CDC. The County BRFSS was designed to achieve approximately 500 completed interviews in order to obtain stable estimates of prevalence. In many cases, analyses can be conducted for subpopulations within each county; however, some subpopulations in some counties may have sample sizes too small to generate stable estimates.

Survey Protocol

The BRFSS is an anonymous telephone survey of a sample of adults (age 18 and older) in households with telephones. Survey respondents are randomly selected to ensure that the survey data will be representative of all adults in Florida. The CDC has developed a detailed survey protocol to ensure the quality of the survey and comparability of the data. Detailed information on the protocol can be found at the CDC website (<http://www.cdc.gov/brfss/training.htm>).

The standardized interview takes 10 to 20 minutes, depending on the number of questions being asked. For the 2002 County BRFSS, which has 76 questions, interviews took, on average, 13 minutes. Responses are entered directly into the computer by interviewers.

Survey Estimates

BRFSS survey data are adjusted, or "weighted," so that the resulting estimates can be generalized to a county's entire population, not just to those who responded to the survey. Data weighting is a statistical process that includes the consideration of factors such as: (1) number of residential telephones in household; (2) number of adults in household; (3) geographic or density stratification; and (4) age, race, and sex distribution of the population.

Strengths and Limitations of the BRFSS

In order to use the BRFSS correctly, users should be aware of the strengths and limitations of the data. The major strengths of the BRFSS include: (1) it is flexible and relatively inexpensive for collecting public health data; (2) it is a population-based survey, allowing the data to be generalized to overall adult populations; and (3) the BRFSS has been conducted in many states annually for many years. Thus, states can compare their data with each other as well as analyze the data for trends over time. However, the BRFSS has limitations: (1) the survey is a telephone survey, so households without a land-line telephone are not included in the survey sample; (2) the data collected consists of self-reported information that has not been verified; (3) the survey has a limited number of completed interviews and the sample size may be too small for analysis on sub-populations; and, finally, (4) the BRFSS survey uses complex sampling methods and the data from the survey are subject to sampling errors.

How to Interpret the Data

As noted above, prevalence from the BRFSS survey is an **estimate** of the real population prevalence. When prevalence is derived from a sample rather than a census of a population, **sampling errors** occur. Because sampling errors are inherent in these types of surveys, we calculate 95% **confidence intervals (CIs)** for each prevalence estimate to determine the accuracy of that estimate. Simply, a 95% confidence interval is the range in which the real population prevalence is likely to be found 95% of the time. The smaller the confidence interval, the more accurate the estimated prevalence. For example, the table below shows that 22.1% of adults in Florida are current smokers. The CI is 21.1 to 23.2; just 1 percentage point below and above the prevalence of 22.1%, suggesting that the real population prevalence is very likely to be in the narrow range and close to the estimate of 22.1%.

Current Smoker	%	CI	
All	22.1	21.1	23.2
Men	24.4	22.7	26.0
Women	20.1	18.8	21.4

The CIs are determined by many factors, in particular the sample size. Compare the CIs for men and women in the above table. As we divide the data for analysis by sex, race/ethnicity, age, etc., the sample size for each group becomes smaller, and the CIs become larger and the estimates less reliable.

In addition to estimating the accuracy of the prevalence, the CIs are used to compare prevalence between populations. As a rule, the difference between the prevalence of two populations is statistically significant if the CIs of the two prevalence estimates do not overlap. From the above example, we can see that the CI for men (22.7-26.0) and CI for women (18.8-21.4) do not overlap. We can thus conclude that there is a significant difference in the prevalence of current smoking between men and women, and that men have a higher prevalence of current smoking than women.

When making comparisons among groups of survey respondents, always compare the CIs, not just the estimates. This way you can accurately use and interpret the data.

For more information about your County BRFSS data, please contact:

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