Behavioral Risk Factor Surveillance System

2002

Year-to-Date Data Quality Report Handbook

Version 3.0.0
March 28, 2003

Behavioral Risk Factor Surveillance System
2002 Year-to-Date Data Quality Report Handbook

Table of Contents

Documentation for 2002 Year-to-Date Data Quality Report

Introduction

This document discusses the tables found in the 2002 Year-to-Date Quality Control Report. The main target audience is State[*] BRFSS Coordinators, especially those who do not have day-to-day responsibility for data collection. The data may be collected by a contractor or in the state health department.

The rest of this document is divided into four sections. Section B, *Definitions of Variables*, defines unfamiliar variables. *General Questions the Tables below Can Help Answer* lists several general questions and identifies the tables that can help answer them. The next section, *Standards of Comparison*, identifies the types of standards that can be used to evaluate the data in the tables. Next is *Specific Guidelines for Interpretation of 2002 BRFSS Year-to-Date Data Quality Report Tables*, which identifies things to look for and, as much as possible, standards for comparison for each table. Finally, the *Appendices* provide supplemental information, including a list of the title of each table in the report.

Definitions of Variables

Assigned Month
BRFSS protocol calls for states to submit related pre-screened sample records that they never called along with sample records that they did call. Sometimes states fail to do so. For states that receive their sample through the Behavioral Surveillance Branch (BSB), we are able to identify related pre-screened records they may have failed to send and to add them to their data files. Assigned month is the month of the file in which a record was submitted or the month of the file in which a related pre-screened record should have been submitted but was not.

File Month
Each data file submitted to CDC contains the name of a month in the filename. The file month of a record is month of the file in which it was submitted.

Household Roster Status
None = Number of adults, number of men, number of women are all missing.
Partial = One or two of number of adults, number of men, number of women are missing.
Inconsistent (But Complete) = Number of adults, number of men, number of women are all non-missing but number of adults does not equal the sum of number of men and number of women.
Consistent (And Complete) = Number of adults, number of men, number of women are all non-missing and number of adults equals the sum of number of men and number of women.

Number of Residential Telephone Numbers
Missing = "Do you have more than one telephone number in your household?" or "How many residential telephone numbers do you have?" was refused.
Otherwise, the reported number of residential telephone numbers.

Density Status
Categorized as Listed, Not listed one-plus block, or Zero block.

---

[*] "State" refers to the 50 states, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands.

Disposition Codes

The 2002 final BRFSS disposition codes are

1.   Interview
       110   Complete
       120   Partial Complete

2.   Eligible, Non-Interview
       210   Termination within questionnaire
       220   Refusal after respondent selection
       230   Selected respondent never reached or was reached but did not begin interview during interviewing period
       240   Selected respondent away from residence during the entire interviewing period
       250   Language problem after respondent selection
       260   Selected respondent physically or mentally unable to complete an interview during the entire interviewing period
       270   Hang up or termination after number of adults recorded but before respondent selection
       280   Household contact after number of adults recorded but before respondent selection

3.   Unknown Eligibility, Non-Interview
       305   Household members away from residence during entire interviewing period
       310   Hang-up or termination, housing unit, unknown if eligible respondent
       315   Household contact, eligibility undetermined
       320   Language problem before respondent selection
       325   Physical or mental impairment before respondent selection
       330   Hang-up or termination, unknown if private residence
       332   Contact, unknown if private residence
       335   Telephone answering device, message confirms private residential status
       340   Telecommunication technological barrier, message confirms private residential status
       345   Telephone answering device, not sure if private residence
       350   Telecommunication technological barrier, not sure if private residence
       355   Telephone number is no longer in service or has been changed
       360   No answer
       365   Busy
       370   On never call list

4.   Not Eligible
       405   Out-of-state
       410   Household, no eligible respondent
       420   Not a private residence
       430   Dedicated fax/data/modem line with no human contact
       440   Fast busy
       450   Non-working/disconnected number

5.   Interim Disposition Codes
       505   Refusal: hang-up or termination
       510   Appointment
       515   Language problem
       520   Physical or mental impairment
       525   Answering machine, message confirms residential status
       530   Technological barrier other than answering machine, message confirms residential status
       535   Answering machine, not sure if private residence
       540   Technological barrier other than answering machine, not sure if private residence

545	Phone number temporarily out of service
550	No answer
555	Busy
560	Fax/data/modem
565	Fast busy
570	Possible non-working number
575	Circuit busy
580	Null attempt
585	Requires supervisor attention

In the tables below, these codes are categorized as follows:

<u>Household</u> records are records with disposition codes of 110, 120, 210, 220, 230, 240, 250, 260, 270, 280, 305, 310, 315, 320, 325, 330, 332, 335, 340, 345, 350, 355, 370, 410.

Definitions and Labels for Disposition Code Categories

Category	Definition	Format in Tables
Completed interview	Disposition Codes (110, 120)	Completed Interview
Eligible Household, Incomplete	Disposition Codes (210, 220, 230, 240, 250, 260, 270, 280)	Elig HH
Household or Probable Household, Eligibility Unknown	Disposition Codes (305, 310, 315, 320, 325, 330, 332, 335, 340, 345, 350, 355, 370)	HH or Prob HH, Elig Unkn
Household, No Eligible Respondent	Disposition Code = 410	HH, No Elig Resp
Non-Contact	Disposition Codes (360, 365)	Non-Contact
Non-Household	Disposition Codes (405, 420, 430, 440, 450)	Non-HH

General Questions the Tables below Can Help Answer

The tables are generally organized around questions that a state BRFSS Coordinator, as the ultimate state person responsible for assuring and assessing the quality of BRFSS data should ask.

Is there evidence of significant bias in the data?
The tables in Section II address this question. Specific guidelines for assessing biases are given in Section E of this handbook.

Is the data collector calling numbers frequently enough and according to the BRFSS callback rules?
Tables III.1 to III.5 address these questions. The discussion for these tables in the *Specific Guidelines for Interpretation* section, below, identifies the patterns to look for.

How consistent Is the data collection effort from month to month?
Every table that is run by month can help answer this question. The primary ones to look at are Tables III.6B, III.7B, and III.8B. The percentage of records in each disposition code category in Tables III.8B should vary by less than two points from month to month. If these show less consistency than you think appropriate, verify that the same patterns exist in Tables III.6B and III.7B**.** These latter tables should show more month-to-month variability, since their bases are smaller.

Is the data collector dispositioning numbers according to their definitions?
There are a number of different ways, which vary by disposition code, to approach this question. The first place to look is in Section IV, Proper Assignment of Disposition Codes. By looking at the disposition codes of various sets of numbers, you can identify codes that are being assigned to more or fewer

records than they should be (Tables IV.1 and IV.2). For example, in Table IV.2, at least 98% of records in zero blocks should be assigned a Non-Contact or Non-Household disposition code. Another way to assess if disposition codes are being appropriately assigned is to determine the consistency between the household roster status and the disposition code (Tables IV.3 to IV.5). A third way is to determine the consistency between the number of attempts and the disposition code (Tables IV.6 and IV.7).

Disposition code 410 'No eligible respondent at this number' is especially prone to being assigned when another code would be more appropriate. This code should be applied to well under 2% of households. You can check this primarily by looking at Table IV.1. Also, Table IV.4 should show that all records assigned a disposition code of 410 have no household roster.

Are the interviewers adequately trained, supervised, or monitored?
Sections VI and IX can be used to address this question. The standards for comparison in this case are standing relative to other states. Other indications that interviewers are not adequately trained, supervised, or monitored would be: (1) Relatively large percentages of records missing income or weight in Section VI. (2) A relatively large percentage of Hispanics coded "Other race" and relatively large biases in Section I.

Are there particular interviewers who seem to be deviating from sound practices?
The tables in Section IX can address this question. The easiest way to approach it is to look, first, for outliers (interviewers with 0s or *s next to their records in the boxplots). Because, however, a flat distribution can mask true outliers, you should also look for records with values that are separated from the others, even if they are not marked at outliers. Please remember that there may be valid reasons for deviations from a statistical norm, so these findings should be treated more as indicators of a need for further investigation rather than conclusive proof of inappropriate interviewer practices.

Standards of Comparison

Various standards of comparison are appropriate for different tables.

In many cases, the standard is defined by **BRFSS protocol**. For example, 100% of records dispositioned 'No answer' should have received at least 15 call attempts.

In other cases, a standard cannot be exactly determined but **logic or data may indicate that only values within a fairly narrow range seem reasonable**. In such cases, I have usually set an exact standard as a guideline, based on knowledge about the population of households with telephones and an arbitrarily defined precise threshold.

An **outside standard** is appropriate in bias measures. Bias is measured by the difference between a sample value and a population value. For example, a sample with 60% female respondents drawn from a population that is 52% female shows a selection bias of 8 percentage points. The *2002 Year-to-Date Data Quality Report* contains population data that serve as comparison standards for selection bias measures.

There are cases where the best that can be done is to determine if a state is an **outlier** in a distribution. For example, there is no particular standard that can be determined for the percent of completes among household records by examination of the BRFSS calling rules and protocols. The best that can be done is to see if a state is an outlier compared to other states.

Finally, regardless of how a standard is determined for an individual measure, **consistency** in that measure **is important**. A measure may or may not be consistent at an acceptable level but inconsistency itself can be an indicator of inconsistent or poor quality data **collection** practices.

Standards are indicated by **bold** print.

Specific Guidelines for Interpretation of 2002 BRFSS Year-to-Date Data Quality Report Tables

I. Sample Generation, Release, and Submission

Table I.1. Density Status
This table presents the percentages of listed, not-listed one-plus block, and zero block numbers in the sample. Other things equal, increases in percent listed and decreases in percent zero block numbers should increase efficiency. This table will help in assessing the extent to which changes in sample composition may be responsible for changes in efficiency.

Table I.2. Number of Records in Replicate
Standard: All replicates should contain fifty records.
Telephone sample records should be released by replicate and all records, including those pre-screened as non-working or business, should be sent to BSB. Large numbers of replicates with fewer than fifty records indicate that one or the other protocol is not being followed. Small numbers of replicates with fewer than fifty records probably indicate processing problems, either in the CATI software or in post-data collection processing.

Table I.3. Interview Month By File Month.
BRFSS protocol states that data collectors should attempt to complete a monthly survey within the prescribed month but that it is more important to call numbers fully according to the BRFSS callback rules than it is to finish within a prescribed month. **The BRFSS standard is that 100% of records in a given file month should be in the identical interview month.** Nevertheless, because of the priority of calling telephone numbers fully according to the BRFSS callback rules, an occasional few percentage points below 100% is not a matter for concern. A substantial deviation from the 100% standard should, however, be an occasion for an inquiry. A chronic deviation from the 100% standard is an indicator that the data collector needs to devote more resources (for example, more hours of calling per month or more interviewers) to the BRFSS in order to complete the survey on time.

Table I.4. File Month By Assigned Month.
This table shows whether the data collector is submitting sample records prescreened by GENESYS as non-working or business. BRFSS Policy Memo 98-3 specified that such records should be submitted to BSB.
Standard: 100% of the records in an assigned month should be in the identical file month.

II. Bias

Is there evidence of significant bias in the data?

Table II.1, II.2, II.3. Gender, Age, and Race/Ethnicity Biases.
These tables show the unweighted percentages among completes of gender, age, and race/ethnicity compared to the 2002 population estimates from Claritas. Large selection biases are a strong indicator of possible biases in the data. They do not, however, indicate anything about the source of the possible biases. The source could be any source of non-sampling error, which causes data to not be representative of the sample. Some sources of non-sampling errors under the control of the data collector are not working the sample hard enough or according to BRFSS protocol, interviewer misconduct (e.g., fabrication of interviews, recording one adult in a household in order to be able to

interview the person on the phone), a staff of interviewers without the training or skill to induce hard to interview respondents to complete an interview.

Standards: Acceptable ranges for gender, age, and race/ethnicity biases are given below. A value above or below the acceptable range should trigger a search for possible causes and remedies. These ranges are based on observed biases in 2000.

Variable	Category	Acceptable Bias Range
Gender	Female	3% to 9%
Age	18–24	-4% to 1%
Age	25–34	-5% to 3%
Age	35–44	-1% to 3%
Age	45–54	-1% to 3%
Age	55–64	-1% to 3%
Age	65+	-3% to 1%
Race/Ethnicity	White/Non-Hispanic	-2% to 3%

Table II.4. Race by Hispanic Origin
Hispanics tend to approach race from a different perspective than non-Hispanics. For this reason, it is difficult to get Hispanics to name one of the standard race categories as their race. As a result, many Hispanics receive a race of Other. In the 2000 Census, about 42% of Hispanics indicated their race as Other.
Standard: More than about 50% of Hispanics with a race of Other may indicate that interviewers have not received appropriate training on probing for the race of Hispanic respondents. Fewer than about 20% of Hispanics with a race of Other may indicate that interviewers are imputing the race of Hispanics.

Table II.5. Geo-Stratum by month
This table presents the number of interviews for each Geo-stratum for each month.

III. Sample Management: Magnitude and Consistency of Effort

Is the data collector calling numbers frequently enough and according to the BRFSS callback rules?

Tables III.1 to III.3. Date and Day of Week of Final Disposition and Minimum, Mean, and Maximum Number of Attempts for Completes, One-Plus Block Numbers, and Zero Block Numbers Respectively.
A good rule-of-thumb is that about 85% of the completes and 75% of one-plus block numbers should received a final disposition in the first half of the interviewing days. For zero block numbers the pattern should be even more pronounced: **About 80% of zero block numbers should receive a final disposition in the first two days of interviewing.** (States that follow the recommendation of calling all the zero block numbers once during the first weekday afternoon of interviewing will disposition almost all of them in a single day.) A bulge in the number of (especially zero-block number) dispositions after the beginning to the interviewing period could be an indicator that additional telephone numbers were released. This should occur early enough in the interviewing period that there is time to fully call all the released numbers according to the BRFSS callback rules. A relatively large number of dispositions per day well into the interviewing period or, worse, an increase in the number of dispositions per day at the end of the interviewing period is probably an indication that the data collector needs to devote more resources (for example, more hours of calling per month or more interviewers) to the BRFSS in order to fully call all the released numbers according to the BRFSS callback rules. The tables also indicate the day of the week on which numbers receive a final disposition. The day of the week can be used to check on weekend calling. During the last half, or at least the last several days, of the interviewing period, the number of final dispositions by day should be in the single digits.

In Tables III.1 and III.2, after about the third interviewing day, the minimum number of attempts should go above 1 and keep going up until it levels off at close to 15 near the end of the interviewing period. (There may be an occasional number with only a few call attempts, but the large majority of records dispositioned close to the end of the interviewing period should have close to 15 call attempts.) **Similarly, the mean number of attempts should be in the 6–8 range by the fifth interviewing day.**

In Table III.3, the minimum number of attempts should go above 1 after the second interviewing day and the mean number of attempts should be in the 6–8 range by the fourth interviewing day.

The Appendix contains Tables II.1 to III.3 for a state which meets the above standards.

Table III.4. Date and Day of Week of First and Last Dispositions in Replicate and File Month, Number of Days Since First Disposition Date in File Month, Number of Days to Last Disposition Date in File Month, and Number of Days in Field for Replicate and File Month, By File Month for Replicates in Play Fourteen or Fewer Days.

The frequencies of completes and incomplete households should be heavily concentrated in the first half of the interviewing days. The frequencies of non-working and non-private residences should be heavily concentrated in the first two or three days of the interviewing period. The frequencies of non-contacts should be concentrated toward the end but not at the very end of the interviewing period. You should also look at the extent and pattern of weekend interviewing. The hours for weekend interviewing are more limited than for weekdays and weeknights. At the same time, more people tend to be at home during the weekend. For these reasons, weekend calling should be approached strategically. **In particular, weekend calling should be heavy enough to call all available numbers during a weekend but it should not be wasted on numbers that have not been called before.**

How consistent Is the data collection effort from month to month?

Tables III.5A to III.8B Disposition Codes
The A versions of these tables are Year-to-Date to give you baseline percentages for the year. The B versions are By Month to give you the monthly variability in the distributions. You can these use disposition codes to measure consistency and, to a lesser extent, the quality of the data collection effort. Because the base of the percentages in Tables III.8A to III.8B is all records, a difference of even 2 percentage points from one month to the next could be meaningful.

IV. Proper Assignment of Disposition Codes

Is the data collector dispositioning numbers according to their definitions?

Table IV.1. Disposition Codes for Household or Probable Household Records by Density Status
The treatment of the new disposition codes of Technological Barrier and Hang-Up or Termination Before Respondent Selection as households in 2001 is significantly lowering the percentage of completes among households compared to 2000. As a result, **the following standards should be treated as very rough estimates**: The percent complete should be roughly 30% to 60% among listed households, 25% to 55% among not listed one-plus block numbers, and 20% to 55% among zero block numbers. In addition, the difference in percent complete between listed and zero block numbers should be no greater than about 20 percentage points. Household completion rates below these standards and large differences between listed and zero block rates could indicate that the data collector is not working the sample hard enough or is inappropriately dispositioning non-household numbers as households. Household completion rates above these standards could indicate that the data collector is

inappropriately dispositioning household numbers as non-households. Household completion rates are also influenced by characteristics of the population.

<u>Table IV.2. Disposition Codes for All Records by Density Status</u>
The percent household or probable household should be 65% to 80% among listed numbers, 15% to 30% among not listed one-plus block numbers, and 0.25% to 1.0% among zero block numbers. A smaller percentage of households, especially for listed numbers, could indicate that sample records are not being called enough or that records which actually ring to households are receiving a non-household disposition. A larger percentage could indicate that records which do not ring to households are receiving a household disposition. A review of one state's 2001 data showed a substantially larger percentage of households for zero block numbers in 2001 compared to 2000. The problem seemed to be due to the inappropriate dispositioning of non-household records as Technological Barrier or Hang-Up or Termination Before Respondent Selection. Keep in mind that household identification rates are influenced by characteristics of the telephone system and of the population. Thus, data outside of these ranges may not be due to any inappropriate practices by the data collector. That, however, can only be determined by a close review of data collection practices.

<u>Tables IV.3 to IV.7. Household Rosters or Number of Attempts</u>
The standards for these tables are indicated in the titles.

V. Unit Nonresponse

<u>Table V.1. Resolution, Screening Completion, Interview Completion, Cooperation, Overall Response, and CASRO Response Rates</u>
The Resolution Rate is the proportion of all telephone numbers in the sample for which the status of the cases as households with working numbers has been resolved. Cases for which household status remains unknown are excluded from the numerator. The Screening Completion Rate is the proportion of all known households in which the presence of an eligible respondent has been determined. Households in which the presence or absence of an adult is unknown are excluded. The Interview Completion Rate is the proportion of contacted eligible respondents who successfully complete an interview. This rate is a type of cooperation rate. Minimal guidelines for these three completion rates are 75 percent for the Resolution Rate, 45 percent for the Screening Completion Rate, and 67 percent for the Interview Completion Rate.

The CASRO Rate is a measure of respondent cooperation and is generally defined as the proportion of all eligible respondents in the sample for whom an interview has been completed. This rate includes completed interviews and partial interviews in which at least 50 percent of the core questionnaire has been completed in the numerator. The proportion of cases of unknown eligibility that are actually eligible is estimated to be the same as the proportion of cases of known eligibility that are eligible. The Overall Response Rate is a conservative response rate that includes a higher percentage of all households in the denominator.

A CASRO Rate below 40% or an Overall Response Rate below 30% should cause review of data collector practices that could impact it, especially sample management and interviewer recruitment, retention, training, supervision, and monitoring. Fluctuations of more than about 5 percentage points in these outcome rates or a downward trend for three or more months should occasion an inquiry into the data collector's practices.

The Cooperation Rate is the proportion of all cases interviewed of all eligible units that were actually contacted. Non-contacts are excluded from the denominator. This rate is based on contacts with households containing an eligible respondent. The denominator of the rate includes completed interviews plus the number of non-interviews that involve the identification of and contact with an eligible respondent. A Cooperation Rate below 65 percent indicates some problem with interviewing techniques.

Table V.2. Percent Contact, By File Month
This table shows the percent of contacted telephone numbers (final disposition codes 110–355, 370–450).

Table V.3. Percent Eligible Households or Probable Households with Undetermined Eligibility
This table tells you the percentage of possibly eligible households answer the Number of Adults question. It indicates the amount of nonresponse before a household roster is begun. (Records with Final Disposition Codes of 110–355,370)

Table V.4. Percent With Determined Household Eligibility
(Records with Final Disposition Codes of 110–280)

Table V.5. Percent With Selected Respondent
(Records with Final Disposition Codes of 110–260)
This table tells you the percentage of households for which a respondent is selected once a household roster is begun. **This percentage should be at or very close to 100%.**

Table V.6. Percent Began Interview
(Records with Final Disposition Codes of 110–210)

Table V.7. Percent Complete or Partial Complete
(Records with Final Disposition Codes of 110–120)

Table V.8. Percent Complete
(Records with Final Disposition Code of 110)

VI. Item Nonresponse

Are the interviewers adequately trained, supervised, and monitored?

Tables VI.1A to VI.1B. Income Missing Values for Men
States should try to stay below 15% missing values on income for men. States with a percentage of missing values above 15% should review their training and monitoring of interviewers with respect to income missing values.

Tables VI.2A to VI.2B. Income Missing Values for Women
States should try to stay below 20% missing values on income for women. States with a percentage of missing values above 20% should review their training and monitoring of interviewers with respect to income missing values.

VII. Household Rosters and Number of Phones

Tables VII.1A and VII.1B. Household Roster Status, Records With Partial or Complete Household Rosters
States should have well under 1% of records with a partial household status and no records with an inconsistent household status.

Tables VII.2A and VII.2B. Number of Adults, Records With Non-Missing Number of Adults
Generally, about one-third of records should indicate one adult and about one-half two adults. Records with six or more adults should be questioned.

Tables VII.3A and VII.3B. Number of Phones

Generally, about 85-90% of records should indicate one phone line. Records with three or more phones should be questioned.

Table VII.4. Number of Phones, By Number of Adults
The percentage of records with one phone line should decrease as the number of adults increases. Improbable combinations, for example, one adult and five phones, should be questioned.

VIII. Recruitment, Retention, and Assignment of Interviewers

Tables VIII.1 and VIII.2. Recruitment and Retention of Interviewers
These tables will give you an idea of the stability of the interviewer workforce. **If the turnover seems excessive, you should inquire about the data collectors recruitment base and practices and about their working conditions.**

Table VIII.3. Minimum, Median, Mean, and Maximum Numbers of Completed Interviews per Interviewer
This table will give you an indication of how much BRFSS interviewers are getting with the current year BRFSS survey. **Continuing small median and mean numbers of completed interviews per interviewer as the interviewer year progresses indicates that interviewers are not assigned enough to the survey to gain experience with it.** This could indicate either high turnover or an excessively large number of interviewers assigned to the BRFSS.

Table VIII.4. Number of Completed Interviews by Interviewer

IX. Interviewer Outliers

Are there particular interviewers who seem to be deviating from sound practices?

Tables IX.1 to IX.21
These tables should be approached from a systemic and from an individual perspective. From a systemic perspective, the question is whether or not management provides appropriate training, supervision, and monitoring of interviewers. For several variables, one indication that this could be the case would be a poor showing on a global measure from an earlier section coupled with a flat distribution and a large standard deviation among interviewers. For example, **a percent missing income of over 15% in Table VI.1A coupled with a standard deviation of over 5 percentage points in IX.9 should trigger questions about the training, supervision, and monitoring of interviewers in general with respect to asking and probing for income.**

From an individual perspective, the question is whether or not a particular interviewer is following protocol. From this perspective, **the data should be examined with a view toward finding interviewers who are outliers**. Interviewers who are outliers on several measures should be monitored especially carefully, even more especially if they consistently beat the norm. *Appendix B: Explanations of Stem-and-Leaf Displays and Boxplots* in this document, explains how to read these graphs.

Appendix A: List of Tables in the 2002 BRFSS Year-to-Date Data Quality Control Report

List of Tables

Note: Each table title has three sections: the name of the dependent variable (with categories in parentheses, if appropriate), either the phrase Year-to-Date or the name of a By-Variable, and a description of the records in the table (the base).

I. Sample Generation, Release, and Submission

Table I.1. Density Status, By Assigned Month, Base = All Records

Table I.2. Number of Records in Replicate, By Assigned Month, Base = All Records

Table I.3. Interview Month By File Month, Base = Completes Only

Table I.4. File Month By Assigned Month, Base = All Records

II. Bias

Table II.1. Discrepancy in Gender Between 2002 Claritas Population Estimates and Unweighted BRFSS Data, Year-to-Date, Base = Completes Only

Table II.2. Discrepancy in Age Between 2002 Claritas Population Estimates and Unweighted BRFSS Data, Year-to-Date, Base = Completes Only

Table II.3. Discrepancy in Race/Ethnicity Between 2002 Claritas Population Estimates and Unweighted BRFSS Data, Year-to-Date, Base = Completes Only

Table II.4. Race by Hispanic Origin, Year-to-Date, Base = Completes Only

Table II.5. Geo-Stratum by Month, Year-to-Date, Base = Completes Only

III. Magnitude and Consistency of Effort

Table III.1. Date, Day of Week, and Final Disposition Code, By File Month, Base = Records With One or More Attempts

Table III.2. Date and Day of Week of Final Disposition and Minimum, Mean, and Maximum Number of Attempts, By File Month, Base = One-Plus Block Numbers With One or More Attempts

Table III.3. Date and Day of Week of Final Disposition and Minimum, Mean, and Maximum Number of Attempts, By File Month, Base = Zero Block Numbers With One or More Attempts

Table III.4. Date and Day of Week of First and Last Dispositions in Replicate and File Month, Number of Days Since First Disposition Date in File Month, Number of Days to Last Disposition Date in File Month, and Number of Days in Field for Replicate and File Month, By File Month, Base = Replicates in Play Fourteen or Fewer Days

Table III.5A. Disposition Code, (Categorized as: Completed Interview: Eligible Household: Household or Probable Household, Eligibility Unknown: Household, No Eligible Respondent: Non-Contact: Non-Household), Year-to-Date, Base = Listed Records

Table III.5B. Disposition Code, (Categorized as: Completed Interview: Eligible Household: Household or Probable Household, Eligibility Unknown: Household, No Eligible Respondent: Non-Contact: Non-Household), By File Month, Base = Listed Records

Table III.6A. Disposition Code (Categorized as Completed Interview; Eligible Household; Household or Probable Household, Eligibility Unknown; Household, No Eligible Respondent; Non-Contact; Non-Household), Year-to-Date, Base = Listed Records

Table III.6B. Disposition Code (Categorized as Completed Interview; Eligible Household; Household or Probable Household, Eligibility Unknown; Household, No Eligible Respondent; Non-Contact; Non-Household), By File Month, Base = Listed Records

Table III.7A. Disposition Code, (Categorized as: Completed Interview: Eligible Household: Household or Probable Household, Eligibility Unknown: Household, No Eligible Respondent: Non-Contact: Non-Household), Year-to-Date, Base = All Records

Table III.7B. Disposition Code, (Categorized as: Completed Interview: Eligible Household: Household or Probable Household, Eligibility Unknown: Household, No Eligible Respondent: Non-Contact: Non-Household), By File Month, Base = All Records

Table III.8A. Disposition Code (Categorized as Completed Interview; Eligible Household; Household or Probable Household, Eligibility Unknown; Household, No Eligible Respondent; Non-Contact; Non-Household), Year-to-Date, Base = All Records

Table III.8B. Disposition Code (Categorized as Completed Interview; Eligible Household; Household or Probable Household, Eligibility Unknown; Household, No Eligible Respondent; Non-Contact; Non-Household), By File Month, Base = All Records

IV. Proper Assignment of Disposition Codes

Table IV.1. Disposition Code, (Categorized as: Completed Interview: Eligible Household: Household or Probable Household, Eligibility Unknown: Household, No Eligible Respondent), By Density Status, Base = Household or Probable Household Records

Table IV.2. Disposition Code, (Categorized as: Completed Interview: Eligible Household: Household or Probable Household, Eligibility Unknown: Household, No Eligible Respondent: Non-Contact: Non-Household), By Density Status, Base = All Records

Table IV.3. Household Roster Status, By Assigned Month, Base = Records With Final Disposition Codes of 110 to 260, (Should Have Only Consistent Household Roster)

Table IV.4. Household Roster Status, By Assigned Month, Base = Records With Final Disposition Codes of 270 or 280, (Should Have No or Partial Household Roster)

Table IV.5. Household Roster Status, By Assigned Month, Base = Records With Final Disposition Codes of 305 to 450, (Should Have No Household Roster)

Table IV.6. Number of Attempts, By Assigned Month, Base = Records With Final Disposition Codes of 315,332,325,340,345,350,360,365, (Should 15+ Attempts)

Table IV.7. Number of Attempts, By Assigned Month, Base = Records With Final Disposition Codes of 370, (Should 0 Attempts)

V. Unit Non-response

Table V.1. Resolution, Screening Completion, Interview Completion, Cooperation, Overall Response, and CASRO Response Rates, Year-to-Date and by Assigned Month, Base = All Records

Table V.2. Percent Contact, By File Month, Base = All Records

Table V.3. Percent Eligible Households or Probable Households With Undetermined Eligibility, By File Month, Base = Contacted Telephone Numbers (Records With Final Disposition Codes of 110-355, 370-450)

Table V.4. Percent With Determined Household Eligibility, Base = Eligible Households and Households with Undetermined Eligibility, (Records with Final Disposition Codes of 110-355,370)

Table V.5. Percent With Selected Respondent, By File Month, Base = Eligible Households (Records With Final Disposition Codes of 110-280)

Table V.6. Percent Began Interview, By File Month, Base = Households With Selected Respondent (Records With Final Disposition Codes of 110-260)

Table V.7. Percent Complete or Partial Complete, By File Month, Base = Households with Begun Interview (Records with Final Disposition Codes of 110-210)

Table V.8. Percent Complete, By File Month, Base = Completes or Partial Completes, (Records with Final Disposition Codes of 110-120)

VI. Item Non-response

Table VI.1A. Income (77 and 99 Collapsed), Year-to-Date, Base = Men Only

Table VI.1B. Income (77 and 99 Collapsed), By File Month, Base = Men Only,

Table VI.2A. Income (77 and 99 Collapsed), Year-to-Date, Base = Women Only

Table VI.2B. Income (77 and 99 Collapsed), By File Month, Base = Women Only

VII. Household Rosters, Number of Adults, and Number of Phones

Table VII.1A. Household Roster Status, Year-to-Date, Base = Records With Partial or Complete Household Rosters

VIII. Recruitment, Retention, and Assignment of Interviewers

IX. Interviewer Outliers — A. Bias

IX. Interviewer Outliers — B. Item Non-response

BRFSS 2002 Year-to-Date Data Quality Report Handbook

Table IX.9. Distribution of Percent Income Missing (77 and 99 Collapsed), By Interviewer ID, Base = Men Only

Table IX.10. Distribution of Percent Income Less Than $10,000, By Interviewer ID, Base = Men Only

Table IX.11. Distribution of Percent Income Greater Than $75,000, By Interviewer ID, Base = Men Only

Table IX.12. Distribution of Percent Income Missing (77 and 99 Collapsed), By Interviewer ID, Base = Women Only

Table IX.13. Distribution of Percent Income Less Than $10,000, By Interviewer ID, Base = Women Only

Table IX.14. Distribution of Percent Income Greater Than $75,000, By Interviewer ID, Base = Women Only

Table IX.15. Distribution of Percent Income Don't Know/Not Sure (77), By Interviewer ID, Base = Men Only

Table IX.16. Distribution of Percent Income Refused (99), By Interviewer ID, Base = Men Only

Table IX.17. Distribution of Percent Income Don't Know/Not Sure (77), By Interviewer ID, Base = Women Only

Table IX.18. Distribution of Percent Income Refused (99), By Interviewer ID, Base = Women Only

Table IX.19. Distribution of Percent Weight Missing (777 and 999 Collapsed), By Interviewer ID, Base = Women Only

Table IX.20. Distribution of Percent One Adult, By Interviewer ID, Base = Records With Non-Missing Number of Adults

IX. Interviewer Outliers — C: Household Rosters

Table IX.21. Distribution of Percent Skip Responses Among Key Skip Questions, By Interviewer ID, Base = Completes Only

Appendix B: Explanations of Stem-and-Leaf Displays and Boxplots

Stem-and-leaf displays and boxplots allow the examination of a distribution for the purpose of identifying extreme values, or outliers. Stem-and-leaf displays and boxplots are found in the output of Section IX. They also appear in the discussions of Tables VI.1A to VI.2B on pages 11 and 12 of this document.

In a stem-and-leaf display, the first column of numbers is the stem. In these tables, the stem usually represents a whole percentage number. The second sets of numbers are the leaves. Each observation is represented by one digit (leaf). In these tables, the leaves usually represent rounded tenths of a percent. As a whole, a stem-and-leaf can be thought of as a vertical histogram in that the lengths of the leaves are proportional to the relative frequencies in an interval. Immediately to the right of the stem-and-leaf display proper is a column showing the number of observations in each interval. Observations toward the ends of a distribution that are separated from other observations by one or more blank intervals are candidates to be considered as outliers.

A box plot provides a more formal statistical approach to identifying outliers. "The bottom and top edges of the box correspond to the sample 25th (Q1) and 75th (Q3) percentiles. The box length is one interquartile range (Q3-Q1). The center horizontal line with asterisk endpoints corresponds to the sample median. The central plus sign (+) corresponds to the sample mean. If the mean and median are equal, the plus sign falls on the line inside the box. The vertical lines that project out from the box are called whiskers; they extend as far as the data extend, up to a distance of 1.5 interquartile ranges. Values farther away are potential outliers. The procedure identifies the extreme values with a zero or an asterisk (*). If zero appears, the value is between 1.5 and 3 interquartile ranges from the top or bottom edge of the box. If an asterisk appears, the value is more extreme." (SAS Institute Inc., SAS Procedures Guide, Version 8, Cary, NC: SAS Institute Inc., 1999. 1643 pp. Page 1389.)

Appendix C: BRFSS CASRO Response Rate Formula

Completes = Completed or Partially Completed Interviews
Completes = (110+120+(210*.32))

Eligible=All respondents with known eligibility status categorized as eligible
Eligible = (110+120+210+220+230+240+250+260+270+280)

Ineligible= All respondents with known eligibility status categorized as ineligible
Ineligible=(405+410+420+430+440+450)

Unknown=All respondents with unknown eligibility status
Unknown=(305+310+315+320+325+330+332+335+340+345+350+355+360+365+370)

UNKNDNOM=Unknown respondents added to the denominator
UNKNDNOM = (Eligible/(Eligible + Ineligible)) * Unknown

CASRO = (Completes / (Eligible + UNKNDNOM))

Appendix D: BRFSS Overall Response Rate Formula

Completes = Completed or Partially Completed Interviews
Completes = (110+120+(210*.32))

Break-offs and Refusals = ((210*.68)+220)
Known Households = (230+240+250+260+270+280+305+310+315+335)
Ineligible Households = 410
All Likely Households= (345+350+320+325+330+332+340+370+355)

Households = (Known Households + Ineligible Households + Completes + Break-offs and Refusals + (.90*All Likely Households))

Eligible Households = (.98*Households)

Overall Response Rate = (Completes/Eligible Households)

Appendix E: BRFSS Cooperation Rate Formula

Completes = Completed or Partially Completed Interviews
Completes = (110+120+(210*.32))

Break-offs and Refusals = ((210*.68)+220)

Cooperation Rate = (Completes / (Completes + Break-offs and Refusals +250+260))