

## Food Safety and Health, and Diet Survey

0910-0345

### SUPPORTING STATEMENT

#### B. Statistical Methods (used for collection of information employing statistical methods)

##### 1. Respondent Universe and Sampling Methods

The Food Safety, Health, and Diet survey will use a multi-mode approach, a random-digit-dial (RDD) telephone survey of both landline and cell phones and an addressed-base, mail push-to-web survey. Previously, for both the Food Safety and Health and Diet Surveys, only RDD sampling techniques and telephone interviewing were used. By using both phone and address-based survey methods, we will be able to explore the effects of survey mode and sampling frames on question responses with the goal of potentially transitioning the survey entirely to an address-based, mail push-to-web survey. A nationally representative sample of 2,000 adults will be selected at random to complete the telephone survey. For the addressed-based survey, a total of 4,000 respondents will be surveyed. Additionally, methods will be employed to see if response bias is a problem in the survey. Participation in the survey will be voluntary. Cognitive interviews and a pre-test will be conducted prior to fielding the survey. FDA is only planning on conducting this survey one time in the next three years.

Respondents to this collection include individuals or households who are randomly sampled. The respondents are adults, age 18 and older, drawn from the 50 states and the District of Columbia.

#### **Telephone frame:**

The participant universe for the telephone survey is all adults in the United States with either a cell phone and/or landline residential telephone number.

Both the landline and cell phone sample will be drawn by our contractor, Westat, using the Marketing Systems Group (MSG) GENESYS product, a database-assisted sampling system. The design calls for overlapping samples from both landline and cell phone RDD frames such that a household containing both landline and cell phone numbers could be sampled from either frame.

One adult will be selected from all the adults in each landline household. Selection will take place per the Rizzo method (Rizzo, et al., 2004), which is standard for RDD designs and results in a true probability sample of adults, thereby eliminating some of the biases that have been found to exist when the birthday methods (most-recent-birthday or next birthday) are used (Gaziano, 2005). There will

be no additional sampling once a cell number is reached. Most cell phone numbers are associated with individuals rather than households. Therefore, if an adult answers the cell phone, that adult will be selected. If a child answers, the interviewer will inquire whether an adult uses the phone. If an adult does not use the phone, the case will be coded as ineligible. If an adult does use the phone, the interviewer will request to talk to that adult.

For both the landline and cell phone samples, eligible respondents are defined as being aged 18 years or older, speaking English or Spanish, and in sufficiently good health for a telephone interview.

To boost the number of interviews completed with African Americans and with Hispanics, we will stratify the sample of telephone numbers by minority concentration (the percent of the population that is African American or Hispanic), and sample telephone numbers in the high-density stratum at a rate higher than that in the low-density stratum. We will set the rates such as to complete an expected 400 interviews with each of these two subgroups, split equally between the two questionnaire versions.

The target sample size is 2,000 completed interviews. Since 50% of U.S. adults now live in cell phone only households, half (1,000) of the completed interviews will come from cell phone numbers, and the remaining 1,000 from landline numbers.

**Address based sample frame:**

The participant universe for this sample is all households with addresses in the United States. Eligible participants are defined as: aged 18 years or older, read English or Spanish, sufficiently good health to complete either an online or mail survey.

The sample of addresses will be selected from the ABS frame maintained by Marketing Systems Group (MSG), derived from the USPS Computerized Delivery Sequence (CDS) file and updated monthly. The sampling frame will be restricted to addresses identified in the CDS as residential (i.e., will exclude addresses identified in the CDS as business addresses).

We will randomize the assignment of questionnaire versions at the address level at the time of address sampling. Each sampled address will be assigned to receive one of the two versions, and the assignment will be such that one-half of sampled addresses are assigned to receive version 1 and the other half are assigned to receive version 2.

An invitation to complete the survey will be mailed to each address with instructions requesting that the person with the most recent birthday who is over the age of 18 complete the questionnaire via the Web. The same instructions will be used with the nonresponse, follow-up, hard copy questionnaire we will send if a representative from the household has not yet completed the survey.

## 2. Procedures for the Collection of Information

The telephone surveys will be collected via a trained interviewer who reads the survey questions from a programmed script. All answers will be recorded directly into the CATI system.

For the address-based sample, sampled addresses will be sent a letter on FDA letterhead explaining the study and inviting them to respond to the survey via the Web at a URL provided in the letter and including two \$1 bills. Two follow-up attempts containing similar information to the letter encouraging response via the Web will be sent. The first will be a reminder/thank-you postcard sent 5 days later to all households, and the second will be a postcard sent to all non-respondents 10 days after the first postcard. Next, a hard-copy questionnaire will be mailed to non-respondents 10 days later and finally, a reminder postcard for the mail survey will be sent 10 days after the mail survey to non-respondents encouraging them to participate in the study.

## 3. Methods to Maximize Response Rates and Deal with Non-response

To help ensure that the response rate is as high as possible, we will employ all appropriate methods demonstrated in the scientific literature on survey methodology. These procedures include the following:

- Design a questionnaire that minimizes participant burden (short in length, written in easy-to-understand language).
- Test the draft questionnaire using cognitive interviews to ensure that participants can properly understand the questions and that the response options are robust.
- Test the draft questionnaire in a pre-test to ensure that it is working as expected.

### **Phone Survey:**

- After the landline sample is drawn, all households for which an address can be matched to the telephone number will be sent a letter letting them know that they have been selected to participate in the survey (Attachment B).
- In addition to general training, all interviewers and supervisors will be trained on the specifics of the survey by a member of the project's professional staff. This will include an explanation of the importance and purpose of the survey, as well as a thorough review and practice reading of the entire survey instrument.
- A Spanish-speaking interviewer will re-contact all households in which the interview could not be completed because of a language barrier. Households in which neither

English nor Spanish is spoken sufficiently to allow for completion of the interview will be excluded.

- All interviews are continuously monitored by supervisors who listen to a portion of each call to ensure that each interview is conducted properly. Production rates and sample dispositions will be monitored each day to detect and resolve any problems or discrepancies quickly.
- A reasonable number of call attempts will be made to determine whether an "initial contact"—the establishment of the identity of a telephone number (residential or non-residential)—is made. For example, if the first three attempts received no response and the fourth attempt received a busy signal, the number will be called for a few more times to try to make an initial contact because the fourth attempt suggests this number has the potential of being a residential number. Only when there is certainty that a number is not a residential number will the limit of five attempts be applied. If a voicemail or answering machine indicates the number is residential, then an initial contact is considered made.
- No-answers after these attempts at initial contact will be regarded as non-households and eliminated from the sample. Households that initially refuse to participate will be sent a letter acknowledging the initial contact and asking again for the household's participation. Addresses will be obtained through a commercial list of known telephone number/address combinations. The letter will identify FDA as the sponsor of the survey, give a brief explanation of the study topic, and stress the importance of participation. Refusal conversion calls will be scheduled several days after the letters are sent out, to give the letter ample time to arrive, but close enough to the arrival date to be remembered by the participant (Attachment C).
- When possible, screening and extended interviews with designated participants will be completed during the same call. If the participant is not available at the time of the screening call, additional callbacks will be made to complete the interview. Participants who are not reached will be included in the denominator for the calculation of the response rate. Participants who initially refused will be sent a letter encouraging participation if an address match can be made.

**Address-based survey:**

- We will send respondent invitations on FDA letterhead to participate in the survey. The letter will identify FDA as the sponsor of the survey, give a brief explanation of the study topic, and stress the importance of participation. Moreover, the letter will be signed by an FDA official at a level sufficiently high enough that they can be located on the FDA website, should the potential respondent desire to do this.
- We will allow respondents to choose their preferred method for responding to the survey; online or on paper. By using a multimode approach, those who are more comfortable filling out the survey online can do so, while those without access to the internet or who are less comfortable taking an online survey can respond via a paper and pencil version of the survey.
- We plan to use a [fda.gov](http://fda.gov) web address as a landing page for the survey. This will further promote the legitimacy of the survey since it will be a government webpage.

**Non-response analysis:**

Because survey estimates are calculated from the answers of those who complete the survey, there is potential for bias in the estimates if those who did not complete the survey differ systematically from those who do. Statistical adjustments used in computing survey weights may reduce such nonresponse biases, however, it is important to first assess the extent to which any biases exist. A variety of methods are available for evaluating nonresponse bias.

For the RDD and ABS modes, we will conduct two separate but parallel nonresponse bias analyses. To the extent possible, we will use the same nonresponse bias analysis methods so that we can compare the extent of nonresponse bias across modes. We plan on conducting the following types of analysis: (1) benchmarking to external estimates; (2) examination of response rates for subgroups; and (3) comparison of base-weighted and final-weighted estimates. For each of these approaches, we will compare the findings from the RDD survey nonresponse bias analysis to those from the ABS survey nonresponse bias analysis. The fourth approach (*nonresponse follow-up survey*), for the ABS only, will be an analysis of hard-copy vs. online survey responses.

#### 4. Test of Procedures or Methods to be Undertaken

FDA plans to perform both cognitive interviews and pre-tests to minimize collection burden on participants and improve quality of collected information.

The survey will be pre-tested with up to 40 participants shortly after OMB approval of the information collection. Scheduling the pretest close to the beginning of data collection will improve efficiency by using interviewer training for both the pretest and the complete data collection.

Representatives of FDA and the contractor will monitor the pretest interviews. Few changes to the questionnaire are expected from the pre-test, because many of the questions are carryovers from previous survey waves and have been pre-tested multiple times. OMB will be provided with copies of the final questionnaires prior to implementation of the study.

#### 5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data

The contractor, Westat, will collect the information on behalf of FDA as a task order under the Quick Turn Around Survey Data Collection contract. Jocelyn Newsome, Ph.D. will serve as the project manager for the address-based survey and Ms. Martha Stapleton will serve as the project manager for the phone survey. Data analysis and dissemination will be led by Amy Lando, MPP, Consumer Science Specialist at FDA, telephone 240-402-1996.

#### **References:**

Gaziano, C. (2005). Comparative Analysis of Within-Household Respondent Selection Techniques. *The Public Opinion Quarterly*, 69(1), 124-157.

Rizzo, L., Brick, J.M., and Park, I. (2004). A minimally intrusive method for sampling persons in random digit dial surveys. *Public Opinion Quarterly*, 68(2), 267-274.

**List of Appendices:**

- a. Food Safety, Health, and Diet Survey questionnaire
- b. Phone prenotification letter
- c. Phone conversion letters
- d. Address-based mailings