

Racial and Ethnic Approaches to Community Health across the U.S. (REACH US) Evaluation

Supporting Statement Part B (2nd Revision)

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B. Collections of Information Employing Statistical Methods

1. Respondent Universe and Sampling Methods

Each REACH U.S. grantee has defined a geographic region for intervention activities. For each community, the contractor, the National Opinion Research Center (NORC) at the University of Chicago, will be using an address-based sampling (ABS) approach. The source of the ABS frame is the US Postal Service delivery sequence file (or “DSF”) as provided by the vendor Valassis, formerly known as ADVO. The DSF contains nearly all addresses in the United States that receive mail, including city-style addresses, P.O. Boxes, and rural-route addresses. While the DSF also contains business addresses, we will only be using the residential portion of the file for our REACH sampling purposes. NORC will use geographic information systems (GIS) technology to geocode the DSF and so determine the longitude and latitude for each address. In this way it is possible to target very specific geographies, down to the census block level, for those addresses that are city-style. The target geography is translated into census blocks, which are linked to the Valassis database to construct a sampling frame from which the sample is drawn. To increase sampling efficiency, for some communities NORC will stratify the non-overlapping target geography into strata based on the density of the targeted minority populations.

We oversample middle-aged women in REACH communities that focus on breast and cervical cancer and oversample older adults in communities that focus on adult immunization. For these communities we will also be using supplemental lists provided by the vendor InfoUSA to target certain types of households, specifically those with members in particular race/ethnicity, age, and gender categories. InfoUSA maintains a comprehensive household file which is created by aggregating data from numerous sources, including residential directory listings, administrative data, and consumer transactions. When two frames (one general ADVO frame and another age/gender-targeted InfoUSA frame) are needed for one community, we will remove the age/gender-targeted frame from the general ADVO frame to create two completely unique and non-overlapping frames from which to select the sample in each community. Each eligible adult could be selected into the study sample once and only once from each frame. The use of mutually exclusive frames is equivalent to a stratified design in those communities that require an ADVO and InfoUSA frame.

NORC will assign the sampled addresses to replicates each containing 100 addresses. Each replicate is a random subsample of the original sample of addresses. Initially, approximately 50 percent of the sample NORC expects to use will be released and worked. Replicates will continue to be released as needed for data collection to manage the workload and to achieve the targeted number of completed cases with a minimum of excess. Monitoring reports will be reviewed during data collection to assure the optimal number of replicates is used; later replicates will be worked only after performance in the early batches is evaluated to the greatest extent possible and the number of replicates for subsequent release will be adjusted accordingly. Standard ABS (ADVO) and InfoUSA samples will be assigned to separate sequences of replicates in order to track how many of each type are released.

2. Procedures for the Collection of Information

Sampled addresses will be submitted to “find and locate” databases, such as Accurint and Targus, in order to match the addresses to phone numbers in preparation for computer-assisted telephone interviewing (CATI). The project advance letter will be mailed to the addresses that are matched to a telephone number, and then the household will be contacted by phone to complete the telephone survey.

For cases that have completed the household screener, are known to meet the REACH US interview eligibility criteria for the community, half of the sample in each REACH community will receive a refusal conversion letter that addresses the respondent’s concerns and a \$5 incentive after the second CATI refusal. Another half of the sample will receive the refusal conversion letter only. Respondents who complete the interview after receiving the refusal conversion letter with \$5 will receive a thank you letter with an additional \$10 token of appreciation. If the respondent refuses again after receiving the refusal conversion letter mailing, the contractor will cease all telephone contact with the respondent.

In cases where the "find-and-locate" databases do not yield a telephone number for a sampled address, the contractor will mail these potential REACH participants a postcard (**Attachment 8 Postcard**). The postcard is to gather the household language preference, telephone number and the best time to call. Information in the returned postcards will be entered into the REACH U.S. database so that contact attempts can begin via CATI.

If respondents do not return the postcard, do not complete the CATI interview after eligibility has been established, or if respondents have been unreachable during CATI (i.e., the household remains unscreened in CATI), they will be mailed a Self-Administered Questionnaire (SAQ) study booklet. The SAQ will be available in all interview languages and will contain the same exact questions as in the CATI interview, including the informed consent statement. This packet will also include confidentiality envelopes to maintain the confidential nature of the individual SAQs. The individual SAQs will be returned within a postage-paid business reply envelope that will be provided to the household. As an experiment, a \$5 incentive will be included in the SAQ package for half the household sample. For another half of the households, no incentive will be included in the SAQ package. Within the experimental group (i.e., those received the \$5 incentive), half of the households will receive a promise of an additional \$10 upon return of the completed SAQ. Additional information on the incentive experiments is provided in **Attachment 11**.

To further increase response rates and reduce bias, we will conduct follow-up face-to-face computer assisted personal interviews (CAPI) in a subsample of non-respondents in each community. The CAPI survey instrument is the same as that for the CATI interview.

To be eligible for the REACH US Risk Factor Survey, a person must be 18 years of age or older, live in a sampled household, and be in the targeted population for the community. NORC will collect this information about each member of the sampled households in the Screening Instrument. This information will then be used to determine member eligibility. Our goal is to complete 900 interviews with adults in each community.

When collecting data via telephone or in person, all eligible persons within each sampled household will have an equal chance of selection. Up to two adults will be selected at random in communities that do not require age or gender oversampling. In those communities that need oversampling, we will take all eligible adults who meet the oversampling requirements (e.g., all women aged 40-64 years or all adults aged 65 years and older) plus up to two additional other adults (i.e., adults who did not meet the gender/age oversample requirements but do meet the race/ethnicity screening requirements for a community). For those cases with data collected via mail surveys, completed interviews will be requested from all adult household members, and eligibility determination and the selection algorithm will take place after data collection. Because of the complexities of the screening algorithm, it is neither practical nor prudent to ask a household respondent to attempt to determine eligibility and select household members. Instead, by collecting data from all household members in all mailed households, we will be able to determine eligibility post hoc and apply the random selection algorithm to the respondents then. For eligible households, it is unlikely that we will need to discard many completed interviews.

3. Methods to Maximize Response Rates and Deal with Nonresponse

To increase the response rate, advance letters describing the survey are sent to sampled households. The letter is in English as well as in Spanish, Vietnamese, Chinese, Haitian Creole or Khmer depending on the surveyed community and targeted minority population. Trained and certified interviewers who speak the language of the respondent conduct telephone and in-person interviews. Multiple attempts are made over approximately a one-month period to contact the sampled household. These attempts are made at different times of the day and on different days of the week, including weekdays and weekend days.

If an interviewer encounters a refusal, the interviewing supervisor and Project Manager will determine whether to re-contact the respondent. Respondents who are extremely hostile or verbally abusive will not be re-contacted. All others will be considered for conversion. A refusal conversion attempt will be made on these refusals by a more experienced interviewer who is a refusal conversion specialist. After the second CATI refusal, a refusal conversion letter that addresses the respondents concerns will be mailed to the eligible CATI respondents. Among them, half of the sample will also receive a \$5 incentive. Respondents who complete the interview after receiving the \$5 incentives will receive a thank you letter with an additional \$10 token of appreciation.

If respondents do not return the postcard, do not complete the CATI interview after eligibility has been established, or if respondents have been unreachable during CATI (i.e., the household remains unscreened in CATI), they will be mailed a Self-Administered Questionnaire (SAQ) study booklet. This packet will also include a postage-paid business reply envelope that will be provided to the household. A \$5 token of appreciation payment will be also included in half of these households. Within this group, half of the households will receive a promise of an additional \$10 upon return of the completed SAQ. The token of appreciation will be given to the REACH U.S. household and not individual respondent to avoid encouraging the completion of questionnaires for ineligible respondents.

Person-to-person interviews will be conducted in a subsample of non-respondents to the telephone and mail questionnaires. The interviewers will be trained, locally-based community members who have knowledge of their communities.

In **Attachment 7 (Non-Response Plan)**, we describe how we will monitor unit nonresponse pattern, analyze unit nonresponse bias, and calculate unit response rate. Nonresponse patterns will be analyzed separately for each community. An assessment will be made for each community in terms of the mean square error of some key estimates. The impact of the variance increase that would be introduced by the additional variability in the weights will be compared to the impact of the component of nonresponse bias that would be eliminated by using the weights.

4. Tests of Procedures or Methods to be Undertaken

The questions used in this survey have been used in BRFSS, a state-based telephone survey, as well as in our previous REACH 2010 evaluation. The telephone interview procedures for the collection of information in this application have been used in the past 5 years in the REACH 2010 evaluation. NORC was the contractor conducting the survey in the first 4 years. Languages other than English (Spanish, Vietnamese, Khmer, and Mandarin Chinese) have been used in our previous REACH 2010 Risk Factor Survey.

NORC has been at the forefront of development and use of ABS. The following are examples of projects that employed an ABS approach: The Neighborhood Organization, Aging, and Health (NOAH), the Chicagoland Catholics Project, and Survey of Consumer Finance (SCF). NORC's Senior Technical Advisor for Sampling, Colm O'Muircheartaigh, is an acknowledged leader and pioneer in using ABS and has written numerous technical papers. CDC has also conducted studies comparing ABS and RDD surveys. Michael Link, who served as CDC lead technical expert in the design, conduct and analysis of methodological studies related to ABS for BRFSS, is currently the Senior Advisor for our survey.

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

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